120 West Fir Street · Ft. Bragg · California · 95437

JULIA KROG, PLANNING DIRECTOR
PHONE: 707-234-6650
FAX: 707-463-5709
FB PHONE: 707-964-5379

FB FAX: 707-961-2427 pbs@mendocinocounty.org/pbs www.mendocinocounty.org/pbs

August 15, 2023

## PUBLIC NOTICE OF PENDING ACTION COASTAL DEVELOPMENT ADMINISTRATIVE PERMIT

The Mendocino County Coastal Permit Administrator will report proposed issuance of the below described project located in the Coastal Zone to the Board of Supervisors at its meeting to be held on August 29, 2023 at 9:00 a.m. or as soon thereafter as the item may be considered. This meeting will be held in the Mendocino County Board Chambers, 501 Low Gap Road, Ukiah, California 95482.

**CASE#**: CDP\_2022-0027 **DATE FILED**: 7/27/2022

**OWNER/APPLICANT: PENELOPE & DANIEL ELIA** 

**AGENT: NEWBERGER & ASSOCIATES** 

**REQUEST:** Administrative Coastal Development Permit application to construct a single-family

residence.

**ENVIRONMENTAL DETERMINATION:** Categorically Exempt

**LOCATION:** In the Coastal Zone, 1.6 miles south of Little River and 500 feet east of the intersection of State Route 1 and Carson Hill Road (Private) at 33850 Carson Hill Road, Little

River (APN 121-140-12).

SUPERVISORIAL DISTRICT: 5 (Williams)
STAFF PLANNER: DIRK LARSON

**Virtual Attendance**: Meetings are live streamed and available for viewing on the Mendocino County YouTube page, at <a href="https://www.youtube.com/MendocinoCountyVideo">https://www.youtube.com/MendocinoCountyVideo</a> or by toll-free, telephonic live stream at 888-544-8306.

Mendocino County provides for digital attendance through Zoom. Zoom webinar information will be provided on the published agenda for the meeting. Remote Zoom participation for members of the public is provided for convenience only. In the event that the Zoom connection malfunctions for any reason, the Board reserves the right to conduct the meeting without remote access. Therefore, the only ways to guarantee that your participation or comments are received and considered by Board are to attend the meeting in person or submit your comment in writing in advance of the meeting.

Comments can be submitted using our online eComment platform at <a href="https://mendocino.legistar.com/Calendar.aspx">https://mendocino.legistar.com/Calendar.aspx</a>. All submitted eComments will be made available to the Supervisors, staff, and the general public immediately upon submittal.

For details and a complete list of the latest available options by which to engage with agenda items, please visit:

https://www.mendocinocounty.org/government/board-of-supervisors/public-engagement.

Coastal Development Administrative Permits are considered on the consent calendar, and the Board of Supervisors will not conduct a public hearing on this item.

If, at the meeting, at least one (1) member of the Board of Supervisors so requests, the permit shall not go into effect, and it shall be referred back to the Department of Planning and Building Services to be scheduled for a hearing by the Coastal Permit Administrator. Public notice for the time and place of the public hearing will be provided.

Action on this permit is <u>not</u> appealable to the Coastal Commission. Therefore, the permit will become effective and action will be final upon approval by the Board of Supervisors. If the permit is referred to the Coastal Permit Administrator the decision of the Administrator shall be final unless a written appeal is

submitted to the Board of Supervisors with a filing fee within ten calendar days of the Administrator's action.

If you challenge the above case in court, you may be limited to raising only those issues described in this notice or that you or someone else raised at the meeting, or in written correspondence delivered to the Board of Supervisors or the Department of Planning and Building Services at, or prior to, the meeting.

Additional information regarding the above noted case may be obtained prior to the Board of Supervisors meeting by calling the Department of Planning and Building Services at 964-5379, Monday through Friday.

The County of Mendocino complies with ADA requirements and upon request, will attempt to reasonably accommodate individuals with disabilities by making meeting material available in appropriate alternative formats (pursuant to Government Code Section 54953.2). Anyone requiring reasonable accommodation to participate in the meeting should contact the Department by calling 463-4441 at least five days prior to the meeting.

JULIA KROG, Director of Planning and Building Services

## COASTAL PERMIT ADMINISTRATOR STAFF REPORT- ADMINISTRATIVE CDP

AUGUST 15, 2023 CDP\_2022-0027

#### **SUMMARY**

OWNER/APPLICANT: PENELOPE & DANIEL ELIA

30632 MARILYN DR

LAGUNA BEACH, CA 92651

AGENT: NEWBERGER & ASSOCIATES

435 N MAIN ST

FORT BRAGG, CA 95437

**REQUEST:** Administrative Coastal Development Permit to construct

a 2,233± square foot single-family residence, 470± square foot attached garage, 704± square foot raised deck, 927± square feet of patio and landing slabs, pump

house, and septic system.

**LOCATION:** In the Coastal Zone, 1.6± miles south of Little River and

500± feet east of the intersection of State Route 1 (SR 1) and Carson Hill Road (private), located at 33850 Carson

Hill Road, Little River; APN 121-140-12.

**TOTAL ACREAGE:** 5.34± Acres

GENERAL PLAN: Rural Residential 5-Acre Minimum (RR5)

**ZONING:** RR:5 (Rural Residential)

**SUPERVISORIAL DISTRICT**: 5<sup>th</sup> (Williams)

**ENVIRONMENTAL DETERMINATION:** Categorically Exempt

**RECOMMENDATION:** APPROVE WITH CONDITIONS

STAFF PLANNER: DIRK LARSON

### BACKGROUND

**PROJECT DESCRIPTION**: Administrative Coastal Development Permit to construct a 2,233± square foot single-family residence, 470± square foot attached garage, 704± square foot raised deck, 927± square feet of patio and landing slabs, pump house, and septic system. The project will include minor grading work, installation of ground mount solar system, and removal of five (5) smaller trees located within the developed site area not considered to be Major Vegetation Removal. There is an existing well on the property and additional water storage is being proposed.

### **RELATED APPLICATIONS:**

**MS 21-89-** Minor Subdivision of an original 23.6± acre parcel in which four (4) new parcels created. The subject property is identified as 'Parcel 1' on the subdivision map.

<u>SITE CHARACTERISTICS</u>: Located within the Coastal Zone, the subject property is situated along the east side of State Route 1 (SR 1). The subject parcel is located within a subdivision created in 1989 with all adjacent parcels similar in size and currently developed with Single Family Residences. Sitting approximately 300 feet above sea level, a clearing situated in the northeast portion of the parcel designated for residential development at the time the subdivision was created and located within a

Coastal Development Permit Exclusion Zone, is being proposed as the area for construction of the new residence. A Bishop Pine Forest exists along the edges of the clearing and recently a number of native trees were planted along the western portion of the clearing to further enhance the immediate and surrounding forestland. The proposed development does not contain any wetland features and is not located within an area that would impact any Environmentally Sensitive Habitat Areas (ESHA).

## **SURROUNDING LAND USE AND ZONING:**

	GENERAL PLAN	ZONING	LOT SIZES	USES
NORTH	Rural Residential (RR5)	Rural Residential (RR:5)	2± Acres	Residential
EAST	Rural Residential (RR5)	Rural Residential (RR:5)	5± Acres	Residential
SOUTH	Rural Residential (RR5)	Rural Residential (RR:5)	5± Acres	Residential
WEST	Rural Residential (RR5)	Rural Residential (RR:5)	7± Acres	Residentail

### **PUBLIC SERVICES:**

Access: Carson Hill Road (Private)
Fire District: Albion-Little River Fire Protection

Water District: NONE Sewer District: NONE

School District: Mendocino Unified

**AGENCY COMMENTS:** On March 29, 2023 project referrals were sent to the following responsible or trustee agencies with jurisdiction over the Project. Any comments triggering denial, conditions of approval, required permits, or a project modification are discussed in full in the following section below.

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REFERRAL AGENCIES	COMMENT	
Department of Transportation	No Comments	
Planning-Ukiah	Comments	
Environmental Health-FB	Comments	
Archaeological Commission Comments		
Regional Water Quality Control Board	No Response	
Sonoma State University-NWIC	Comments	
Building Services-FBPBS	Comments	
Little River Fire District	No Response	
Assessor's Office	No Response	
Forestry Advisor	No Response	
County Addresser	No Comments	
CAL FIRE (Land Use)  No Response		
Ca. Dept. of Fish & Wildlife	No Comments	
California Coastal Commission	No Response	
CalTrans	No Response	
US Dept. of Fish & Wildlife	No Response	
Cloverdale Rancheria	No Response	
Redwood Valley Rancheria.	No Response	
Sherwood Valley Band of Pomo Indians	Comments	

## **LOCAL COASTAL PROGRAM CONSISTENCY**

<u>Land Use:</u> The subject lot is classified as Rural Residential (RR) by the Mendocino County Coastal Element Chapter 2.2: Land Use Classifications (see attached *General Plan Classifications*). The Rural Residential classification is intended...

"...to encourage local small scale food production (farming) in areas which are not well suited for large scale commercial agriculture, defined by present or potential use, location, mini-climate, slope, exposure, etc. The Rural Residential classification is not intended to be a growth area and residences should be located as to create minimal impact on agricultural viability.

Principal Permitted Use: Residential and associated utilities, light agriculture, home occupation."

The proposed project includes a single-family residence, an attached garage, a new septic tank with primary and secondary leach fields, water tank, pump house, patio areas and a ground mount solar system. These uses are all associated with the principal permitted single-family residence. The size of the lot is like surrounding lots, and surrounding uses include other single-family residences. Environmental constraints such as the wetland and forested areas on site limit feasible building locations and a building envelope was designated at the time the subdivision in which the subject property is located was developed. The location of the lot in a subdivision with relatively small parcels and primarily residential uses indicates that future agricultural use is unlikely. Lot coverage requirements outlined in the Mendocino County Coastal Zoning Code ensure that the building envelope would not inhibit the potential of the lot for agricultural use. Indeed, the proposed building envelope would not cover all potential agricultural land (see attached *Site Plan*). The proposed project, as a permitted use, is therefore consistent with the intent of the Coastal Element RR land use classification.

Zoning: The subject lot is within the Rural Residential (RR) zoning district as outlined in Mendocino County Coastal Zoning Code (MCC) Chapter 20.376 (see attached Zoning Display Map). The Rural Residential district is intended "to encourage and preserve local small-scale farming in the Coastal Zone on lands which are not well-suited for large scale commercial agriculture. Residential uses should be located as to create minimal impact on the agricultural viability."

The proposed single-family residence is considered a "Family Residential: Single Family" use type as defined in MCC Section 20.316.010. Pursuant to MCC Section 20.376.010(A), this is a principally permitted use in the RR district. MCC Chapter 20.456 establishes accessory use types that are encompassed by principal permitted uses. The proposed pumphouse, water storage tank(s) and ground mount solar system are all accessory uses which are specifically identified in Section 20.456.015(A), (B), and (F). The proposed septic tank, leach field, water tank, well, and pump house are all customarily associated with a single-family residence. These accessory uses are allowable pursuant to MCC Section 20.456.015(O).

All proposed structures for the project are sited greater than thirty (30) feet from any property boundary (see attached *Site Plan*). In addition, the single-family residence has a maximum height of twenty-eight (28) feet (see attached *Floor Plans & Elevations*). The proposed project is not mapped within a Highly Scenic Area. The subject lot has an area of 5.34± acres. The total lot coverage of the proposed project is 4,087± square feet. This renders a lot coverage of about 1.75%. Pursuant to MCC Chapter 20.376, minimum setbacks for conforming parcels containing at least five (5) acres and which is zoned RR:5 are thirty (30) feet. The building height limit in this district is twenty-eight (28) feet above natural grade in non-Highly Scenic Areas, and maximum lot coverage is fifteen (15) percent for parcels between two (2) and five (5) acres in size. As proposed, all structures for the project meet the requirements for setbacks, height limits, and lot coverage for the Rural Residential district. The proposed structure, Single Family Dwelling, is over 2000 square feet and is similar in size and character to the surrounding developed properties.

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The proposed project includes an attached garage with two (2) parking spaces and an uncovered area for at least two (2) parking spaces. The uncovered parking space would be twelve (12)) by fifteen (15) feet to meet accessibility requirements. Per MCC Section 20.472.015, a single-family detached dwelling requires two (2) parking space. As such, the proposed project is consistent with off-street parking requirements.

<u>Van Damme State Park to Dark Gulch Planning Area:</u> The project site is within the Van Damme State Park to Dark Gulch Planning Area as described in Mendocino County Coastal Element Chapter 4.8. However, situated on the east side of State Route 1 (SR 1) the site is not located on or adjacent to any designated access points, trails, or recreation areas outlined in the chapter.

<u>Visual Resources:</u> The project is not mapped within a Highly Scenic or Conditionally Highly Scenic Area (see attached *Highly Scenic & Tree Removal Areas*). The western property boundary for the parcel has frontage on State Route 1 (see attached *Aerial Imagery*). All proposed exterior lighting will be shielded and downcast (see attached *Lighting Specs*). In addition, proposed lighting would not exceed the height of any structure on which it would be placed (see attached *Floor Plans & Elevations*). Per MCC Section 20.504.025, the designated scenic corridor along State Route 1 extends a maximum of three hundred fifty (350) feet from the shoulder of the road. This is known as a Special Treatment Area. Per MCC Section 20.504.035, no light shall exceed the height limit for the zoning district in which the light is located, and where possible, all lights shall be shielded in a manner that will not shine light or allow light glare to exceed the boundaries of the parcel on which it is placed. In addition, no lights shall be installed so that they distract motorists as the building envelope is located approximately 500 ft from the highway corridor. Staff finds that the proposed project is not within a Special Treatment Area, and that the proposed exterior lighting would not conflict with the standards of MCC Section 20.504.035. Therefore, the project is consistent with the visual resource requirements of MCC Chapter 20.504.

<u>Hazards Management:</u> Mapping does not associate the project site with any of the following: faults, bluffs, landslides, erosion, or flood hazards (see attached *LCP Land Capabilities & Natural Hazards*). The project site plan contains several notes identifying stormwater and erosion control techniques to be implemented during construction, including drainage swales and subsurface drainage piping. In addition, the site plan notes that the project will conform to the 2019 California Building Standards Code.

MCC Section 20.500.025 states that all new development shall be sited taking into consideration the fire hazard severity of the site, the type of development and the risk added by the development to the fire hazard risk. The project site is located in an area classified as Moderate Fire Hazard (see attached *Fire Hazard Zones & Responsibility Areas*). Fire protection services are provided by Albion-Little River Fire Protection District and the California Department of Forestry and Fire Protection (CAL FIRE). On March 29, 2023, the application was referred to Albion-Little River Fire District and CAL FIRE for input. No comments were received from either agency, but the project will be required to adhere to the applicable sections off the SRA/VHFHSZ Fire Safe Regulations." Staff recommends that a condition of approval be added requiring the applicant to conform to these standards in order to align the project with State Fire Safe Regulations.

Staff finds that due to the lack of mapped hazards, the planned use of stormwater and erosion control techniques, and the inclusion of CAL FIRE conditions of approval, the proposed project does not conflict with MCC Chapter 20.500 – Hazard Areas.

Habitats and Natural Resources: Local Coastal Program mapping does not associate the lot with rare or endangered plant or wildlife habitat and classifies the habitat as 'barren' (see attached *LCP Land Use Map 18: Albion* and *LCP Habitats and Resources*). The nearest record of special status species contained in the California Natural Diversity Database (CNDDB) occurs more than 300± feet south of the parcel (*Speyeria zerene behrensii*). National Wetlands Inventory mapping shows no mapped wetlands within the site area and no wetland features exist therein. The survey found that no mapped wetlands are located within the site area and ground surveys found no wetland features within the proposed development area either. Steams are present north and south of the proposed development area but situated at a distance that would not be affected by the development.

## STAFF REPORT FOR ADMINISTRATIVE COASTAL DEVELOPMENT PERMIT

A Biological Scoping Survey was prepared by Wynn Coastal Planning & Biology for the subject lot and submitted as part of the initial application. The survey identified potential Environmentally Sensitive Habitat Area of Bishop pine forest and recommended measures to minimize impact to the forest habitat for nesting birds.

MCC Chapter 20.496 establishes regulations for ESHAs and other resource areas. Upon identification of any ESHA, MCC Section 20.496.020 requires a buffer to be established adjacent to all ESHA to protect the habitat from impacts of future development. Per MCC Section 20.496.020(A)(1), this buffer shall be a minimum of one hundred (100) feet unless the applicant can adequately demonstrate that a one hundred (100) foot buffer is not necessary. MCC Section 20.496.020(A)(1)(a-g) established standards for determining the appropriate width of the buffer area.

The Survey Analysis identifies a Bishop pine and Grand fir with some Douglas fir present in some areas. The analysis concludes that the Grand fir and Bishop pine forest would be considered an ESHA but with appropriate mitigation the impact of development in the proposed building envelope would be a less than significant. Due to the types of habitats present in the project area and on site the likelihood of the occurrence of special status plants is low. To minimize impacts from development to animals that may be seasonally or temporarily present within the study area, mitigation measures are recommended to avoid disturbance of nesting habitat for special-status bird species. These potential impacts can be avoided through the avoidance measures presented in the analysis and listed under Condition #10 of the Conditions of Approval. Further justification within the analysis states that surrounding development suggests wildlife in the area is reasonably adapted to human disturbance. The proposed residential use of the site is like existing uses, and construction of the Single-Family Residence would require minimal vegetation removal.

The location of development was designated and chosen to minimize removal of healthy native trees and minimize impacts to sensitive areas. The proposed development is in an area previously designated as a building envelope when the subdivision was created due to these concerns. It was recommended that the least number of native coniferous trees should be removed unless necessary for development of the Single-Family Residence and related improvements. It is proposed that three (3) standing dead trees located in the home site area will be removed for public safety purposes and three (3) Bishop pines of less the 16 inches in diameter at breast height located within the planned development be removed. This would have minimal impact on the surrounding forestland and additionally, many Bishop pines have already been planted to the lower clearing area.

The analysis provides avoidance measures to minimize the impacts from development to animals that may be seasonally or temporarily present within the site area as removal of vegetation and construction activity near the forested area can disrupt nesting birds known to occupy the region. Upon reviewing the analysis, staff concurs that the proposed location of development is the most feasible to minimize ESHA impacts, and that the avoidance measures included be incorporated as a condition of approval to minimize any potential impacts.

On March 29, 2023, the project application (including the biological report) was referred to CDFW for comments. On April 12, 2023, Staff received comments back from CDFW that they were in agreement with the recommendations and avoidance measures outlined in the March 8, 2023, Biological Report and provided no additional comments.

Archaeological/Cultural Resources: On March 29, 2023, the project was referred to the Northwest Information Center at Sonoma State University (NWIC) to determine if the project could adversely affect cultural resources. NWIC responded with comments on April 10, 2023, with recommendations that further archival and field study of the project area be performed to identify any cultural resources. On June 29, 2023, the applicant provided an Archaeological Survey Report prepared by Alta Archaeological Consulting for the subject parcel. The report is dated June 9, 2023, and notes that no cultural resources were identified because of the archaeological field survey. The report states that the project, as presently designed, is not anticipated to have an adverse effect on significant cultural resources.

## STAFF REPORT FOR ADMINISTRATIVE COASTAL DEVELOPMENT PERMIT

On July 12, 2023, the Archaeological Survey Report was presented to the Mendocino County Archaeological Commission, who determined that the survey was acceptable, and that the project shall adhere to the 'Discovery Clause'. The Discovery Clause requires that, upon any discovery of cultural resources during construction or other project activities, those activities shall cease and notification of the discovery shall be made to the Director of Planning and Building Services. The Discovery Clause has been added as a condition of approval to ensure consistency with MCC Section 22.12.090.

The project was also referred to three local tribes on April 7, including the Cloverdale Rancheria, Redwood Valley Rancheria, and Sherwood Valley Band of Pomo Indians. A comment was received from Sherwood Valley Band of Pome Indians representative regarding the Geotech report and whether the bore samples were tested or monitored for any possible cultural artifacts and also expressed support that a new Archaeological Survey be done. In response to those concerns, we received comments from the Geologist who performed the Geo Tech Survey stating that it is their practice to monitor for such artifacts and report any items showing up in their surveys. It was declared that no such artifacts were present which is further supported by the new survey in which no resources were discovered or believed to be located within the site area. We have received no response or comments from the other tribes to date.

<u>Groundwater Resources:</u> The project site is not located within the jurisdiction of a district that provides water supply or sanitation services. The project site is located in an area mapped Marginal Water Area (see attached *Ground Water Resources*). The proposed project would include construction of a well, pump house, water tank, and septic system. On March 29, 2023, the project was referred to the Mendocino County Division of Environmental Health (EH). EH Staff recommends adoption of conditions of approval which would require the applicant to secure all necessary permits for the proposed water and sewer facilities. The proposed project is not commercial in nature and is not expected to be a major water user.

As conditioned, the project would be consistent with EH regulations and would not conflict with the Local Coastal Program policies related to groundwater resources found in Chapter 3.8 and MCC Section 20.516.015.

<u>Grading, Erosion, and Runoff:</u> The proposed project would involve grading for the driveway on a moderate downslope and grading for the single-family residence on a moderate downslope. The application states that a total of 50 cubic yards of cut and fill would occur. Fill shall be 90% compacted and no organic material nor rock or similar irreducible material with a maximum dimension greater than 4" shall be buried or placed in fill. Grading shall comply with all requirements in the Geotechnical Investigation Report prepared by Brushing Associated, Inc dated June 1, 2022.

MCC Chapter 20.492 regulates impacts of grading, erosion, and runoff in the Coastal Zone. Section 20.492.005 states that "the approving authority shall determine the extent to which the following standards should apply to specific projects, and the extent to which additional studies and/or mitigation are required..."

Staff finds that the proposed erosion control measures, along with standard and proposed BMPs, are sufficient to address grading, erosion, and runoff concerns for construction and operation of the project. Staff recommends a condition of approval memorializing these measures in order to ensure consistency with MCC Chapter 20.492.

<u>Transportation</u>, <u>Utilities</u>, <u>and Public Services</u>: The project would have minimal impacts to traffic and regional roadways. The cumulative effects of traffic resulting from the single-family residence and its associated development were considered when the Coastal Element land use designations were assigned. The project site is accessed via Carson Hill Road, a private road. Carson Hill Road is located directly off State Route 1. The proposed single-family residence and associated development is greater than twenty-five (25) feet from the center of Carson Hill Road. The proposed project includes an approximate twelve (12) foot wide, ninety (80) foot long driveway of permeable gravel (see attached *Site Plan*). The proposed project would not create any new parcels.

On March 29, 2023, the project application was referred to the Mendocino County Department of Transportation (DOT). On April 3, 2023, DOT responded with no comment on the project. As proposed, the project is consistent with MCC Section 20.516.015(C) regarding transportation systems.

<u>Public Access:</u> LCP mapping does not associate the project site with any proposed shoreline access or other minimum access locations. As proposed, the project does not conflict with MCC Chapter 20.528.

**PROJECT FINDINGS AND CONDITIONS:** Pursuant to the provisions of Chapter 20.532 and Chapter 20.536 of the Mendocino County Code, the Coastal Permit Administrator approves the proposed project and adopts the following findings and conditions.

#### **FINDINGS:**

- 1. Pursuant to MCC Section 20.532.095(A)(1), the proposed development is in conformity with the certified local coastal program. The project is located within the Rural Residential land use classification, which is outlined in Chapter 2.2 of the Mendocino County Coastal Element. The proposed project involves principal permitted and accessory uses that are intended for the Rural Residential classification, including a single-family residence, garage, well, pump house, water tank, septic system, and driveway. The proposed Single-Family Dwelling is similar in size and character to the neighboring properties and the small size of the proposed development in relation to the parcel as a whole would not significantly detract from the small-scale agricultural potential of the lot; and
- 2. Pursuant to MCC Section 20.532.095(A)(2), the proposed development will be provided with adequate utilities, access roads, drainage and other necessary facilities. Residential use of the lot is not expected to result in major water extraction, and the proposed well, water tank, septic tank, and leach field are sufficient to provide water supply and sanitation to the project provided all necessary permits are obtained. The project would utilize a Ground Mount Solar System as well as new extension of service from a utility company for electrical service. Gas would be provided through a utility company and/or tank. The proposed single-family residence would be accessed via a proposed driveway extending from Carson Hill Road, a private road. The project is conditioned to require Best Management Practices during construction to ensure adequate drainage; and
- 3. Pursuant to MCC Section 20.532.095(A)(3), the proposed development is consistent with the purpose and intent of the zoning district applicable to the property, as well as the provisions of this Division and preserves the integrity of the zoning district. Single-family residential use is a principal permitted use within the Rural Residential district. All other proposed development is considered a permitted accessory use. The project conforms to other standards within the Rural Residential district, including maximum dwelling density, yard setbacks, building height, and lot coverage and is similar in size and character to the Single-Family Dwellings in the surrounding area. Physical and regulatory constraints resulted in the proposed building location, which nevertheless allows for future agricultural use of the remaining available land; and
- 4. Pursuant to MCC Section 20.532.095(A)(4), the proposed development will not have significant adverse impacts on the environment within the meaning of the California Environmental Quality Act. The proposed single-family residence and accessory structures meet the criteria to be Categorically Exempt from further review under the California Environmental Quality Act and would therefore not have any significant adverse impacts on the environment within the meaning of the Act; and
- 5. Pursuant to MCC Section 20.532.095(A)(5), the proposed development will not have any adverse impacts on any known archaeological or paleontological resource. An archaeological survey was prepared for the project and deemed adequate by the Mendocino County Archaeological Commission. No cultural resources were identified as a result of the survey. The project has been conditioned to require that any discovery of archaeological or paleontological resources during construction or other activities would be handled properly in accordance with State and local regulations; and

6. Pursuant to MCC Section 20.532.095(A)(6), other public services, including but not limited to, solid waste and public roadway capacity have been considered and are adequate to serve the proposed development. Construction of a single-family residence and accessory structures is not expected to significantly affect demands on public services. The nearest solid waste facility is the Caspar Transfer Station. Incremental contributions to traffic volumes resulting from the proposed project were considered when the Rural Residential LCP land use designation was assigned to the site; and

#### **CONDITIONS OF APPROVAL:**

- 1. This action shall become final on the 11<sup>th</sup> day following the decision unless an appeal is filed pursuant to Section 20.544.015 of the Mendocino County Coastal Code. The permit shall become effective after the 10th working day appeal period to the Coastal Commission has expired and no appeal has been filed with the Coastal Commission. This Coastal Development Permit shall expire and become null and void at the expiration of two years after the effective date, except where construction and use of the property in reliance on such permit has been initiated prior to its expiration.
- 2. The use and occupancy of the premises shall be established and maintained in conformance with the provisions of Division II of Title 20 of the Mendocino County Code (MCC).
- 3. The application, along with supplemental exhibits and related material, shall be considered elements of this permit, and that compliance therewith is mandatory, unless an amendment has been approved by the Coastal Permit Administrator.
- 4. This permit shall be subject to the securing all necessary permits for the proposed development from County, State and Federal agencies having jurisdiction.
- 5. The applicant shall secure all required Building Permits for the proposed project as required by the Building Division of the Department of Planning and Building Services.
- 6. This permit shall be subject to revocation or modification upon a finding of any one or more of the following:
  - a. The permit was obtained or extended by fraud.
  - b. One or more of the conditions upon which the permit was granted have been violated.
  - c. The use for which the permit was granted is conducted so as to be detrimental to the public health, welfare or safety, or to be a nuisance.
  - d. A final judgment of a court of competent jurisdiction has declared one or more conditions to be void or ineffective or has enjoined or otherwise prohibited the enforcement or operation of one or more such conditions.
- 7. This Coastal Development 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.
- 8. 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 one hundred (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 Coastal Code.

- 9. Conditions approving this Coastal Development Permit shall be attached to any building permit application and shall be a part of on-site construction drawings.
- 10. Prior to final inspection of the building permit for the single-family residence, written verification shall be submitted from the Department of Forestry and Fire Protection (CAL FIRE) to the Department of Planning and Building Services that all conditions as Part of the Fire Safe Regulations has been met to their satisfaction.
- 11. The applicant shall adhere to the measures and recommendations of the Biological Survey prepared by Wynn Coastal Planning & Biology dated November 30, 2022 and found in Section 1.1 of the report for Potential Impacts to Nesting Birds.
  - Seasonal Avoidance-If vegetation removal or development is to occur during the breeding season (Feb - Aug) a pre-construction survey shall be done within 14 days of the onset of vegetation removal or construction.
  - b. If active native birds nests are observed, no vegetation removal or construction shall occur within a 100-ft exclusion zone. A Biologist should monitor the weekly to assure the buffer is sufficient to protect the nest site from disturbance.
  - c. Construction activity only during daylight hours to limit disturbance associated with construction and to minimize artificial lights.
  - d. Potential Impacts to Bats-If any adult trees are proposed for removal, a bat survey shall be done by a qualified Biologist 14 days prior to the onset of development activities. Tree removal and construction should occur between September 1-October 31.
    - If active bats roosts are observed, no tree removal or construction activities shall occur within a 50 ft exclusion zone.
    - Construction activity should occur during the daylight hours to limit disturbance.
  - e. Potential Impacts to Sonoma Tree Voles
    - I. Remove the least number of trees necessary
    - II. If adult trees must be removed, a qualified biologist should conduct a protocol level STV (Sonoma Tree Vole) survey within 14 days prior to removal of trees.
- 12. Standard erosion control Best Management Practices (BMPs) shall be employed during construction activities to avoid or minimize impacts to nearby wetlands. BMPs shall be shown on submitted site plans for all building permits associated with this project.
- 13. Prior to issuance of the building permit, the applicant shall specify BMPs to be implemented to reduce erosion and sedimentation from construction activities. If the amount of grading on the site exceeds fifty (50) cubic yards, the applicant shall cease construction activities and develop a Grading and Erosion Control Plan for the site and submit it to the Department of Planning & Building Services for review and approval.
- 14. In accordance with MCC Chapter 20.492, a building permit, or grading permit exemption, shall be required for any grading, including but not limited to, any excavation or filling or combination thereof involving transfer of more than two (2) cubic yards of material. The Coastal Permit Administrator, or their designee, shall review and approve grading permits to determine their consistency with MCC Chapters 20.492, 20.496, and 20.500 regulations. Grading activities, including maintaining driveway and parking areas, and any work associated with an Encroachment Permit, shall comply with MCC Chapters 20.492, 20.496, and 20.500 regulations.

## **ENVIRONMENTAL DETERMINATION**

The California Natural Resources Secretary has found that certain classes of projects have been determined not to have a significant effect on the environment and are therefore exempt from the requirement for the preparation of environmental documents. This project involves the construction of a 2,233 square foot single-family residence, 470 square foot attached garage, well, pump house, water tank, and septic system. The project would also involve construction of an attached deck and gravel driveway, connection to utilities, and minor grading of less than fifty (50) cubic yards of material and the installation of a Ground Mount Solar system. CCR Section 15303, New Construction or Conversion of Small Structures, outlines several examples of exemptions: Class 3(a) for one single-family residence, Class 3(d) for utility extensions and street improvements to serve construction, and Class 3(e) for appurtenant structures such as garages, patios, and swimming pools. CCR Section 15304, Minor Alterations to Land, includes the Class 4(a) exemption for grading on land with a slope of less than ten (10) percent. As proposed, the project features are consistent with these classes of exemption. Therefore, the project is exempt from further environmental review.

DATE

DIRK LARSON PLANNER II

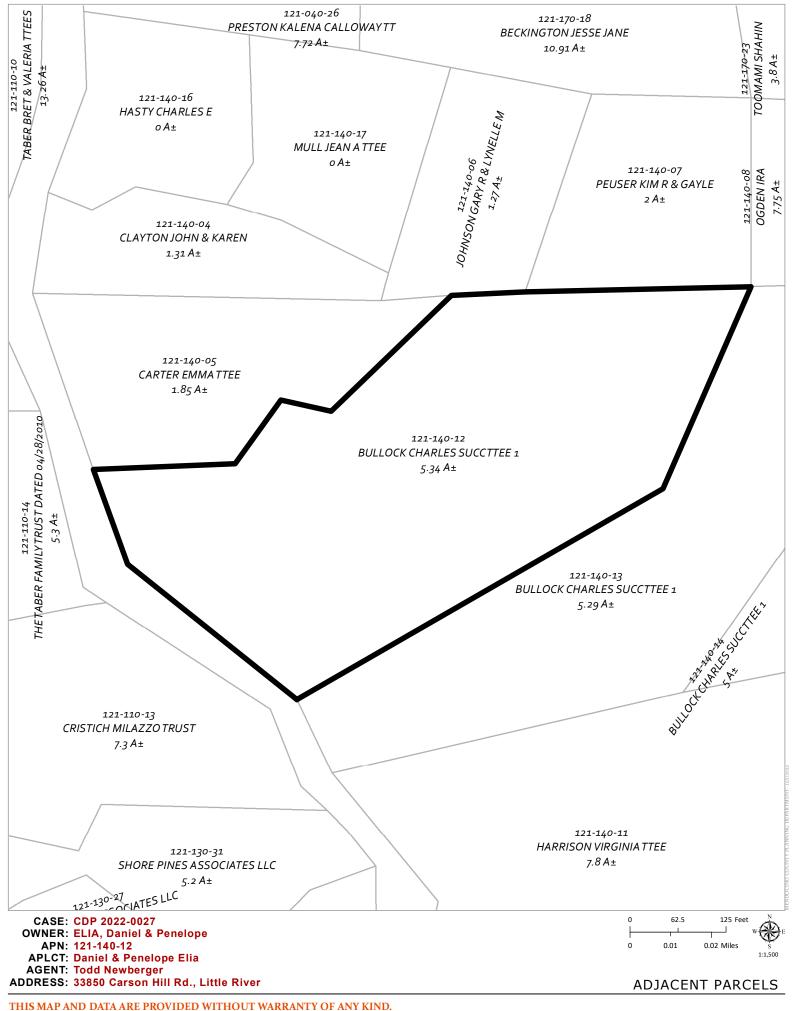
AUGUST 15, 2023

DATE

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COASTAL PERMIT ADMINISTRATOR

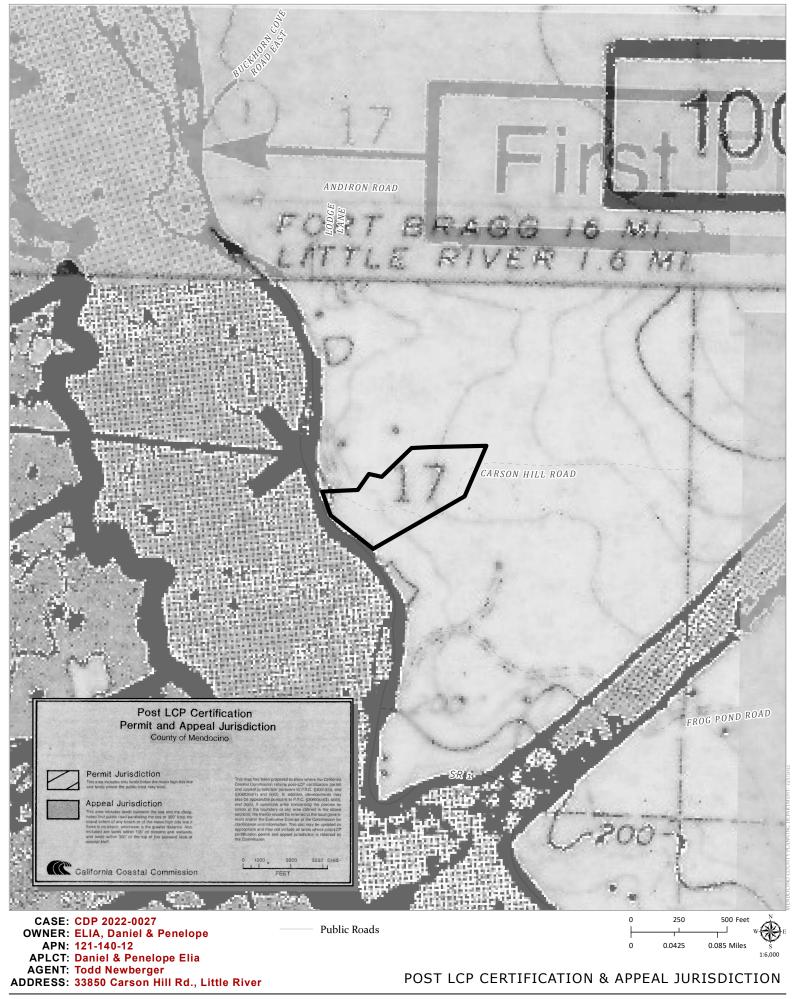
Appeal Period: 10 Days Appeal Fee: \$2,674.00

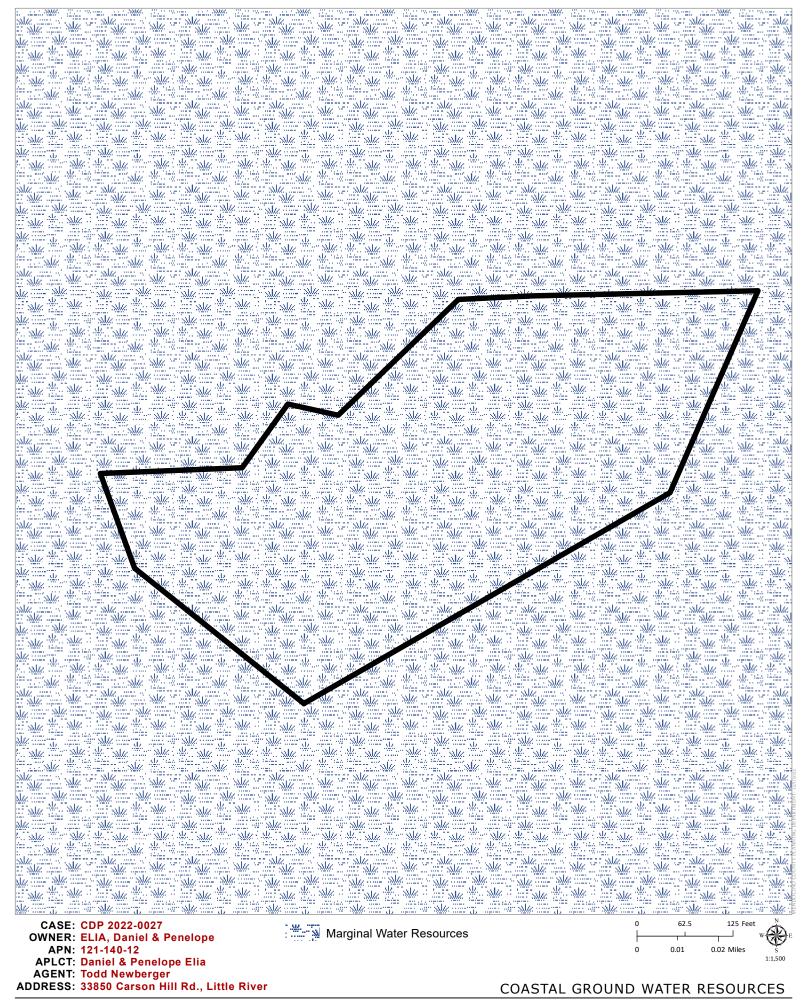
- A. Adjacent Parcels
- B. Aerial Map
- C. Post LCP Certification and Appeal Jurisdiction
- D. Coastal Ground Water Resources
- E. Important Farmlands
- F. Fire Hazards Zones
- G. General Plan
- H. LCP Habitats & Resources Map'
- I. LCP Land Capabilities & Natural Hazards
- J. LCP Land Use Map
- K. Location
- L. Highly Scenic Area Map
- M. Estimated Slope
- N. Western Soils Map
- O. State Parks
- P. Topographic Map
- Q. Wetlands
- R. WUI Map
- S. Zoning
- T. Fire Hazards Map
- U. Building Plans
- V. Site Plan Map
- W. Bio Survey

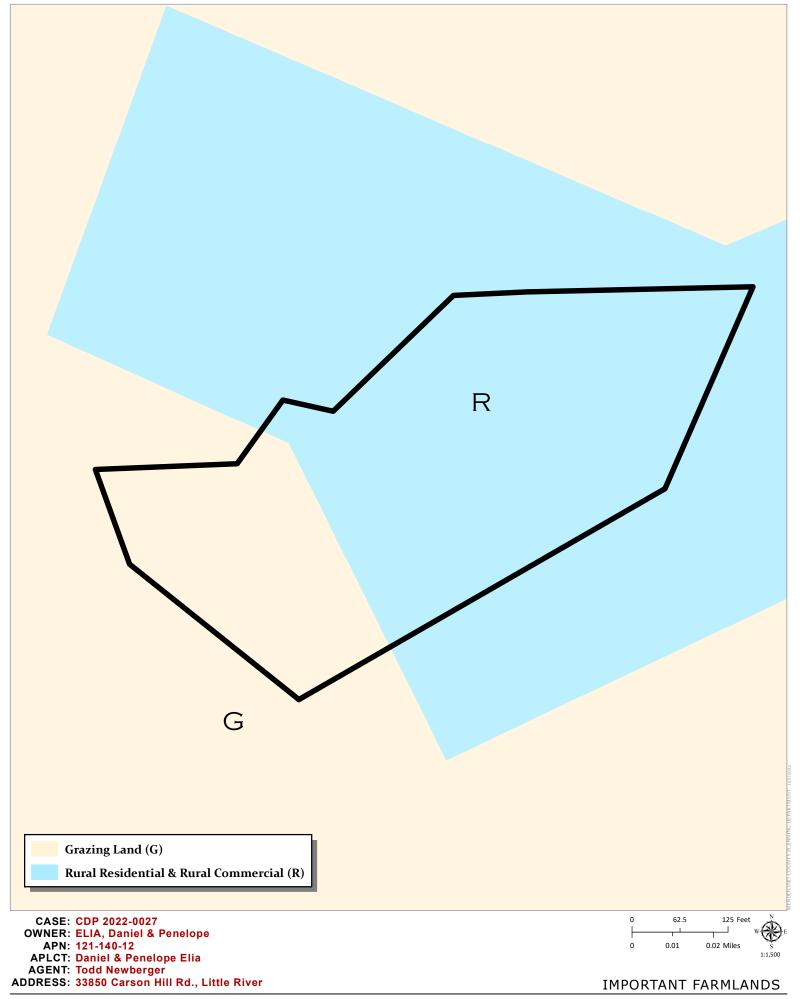


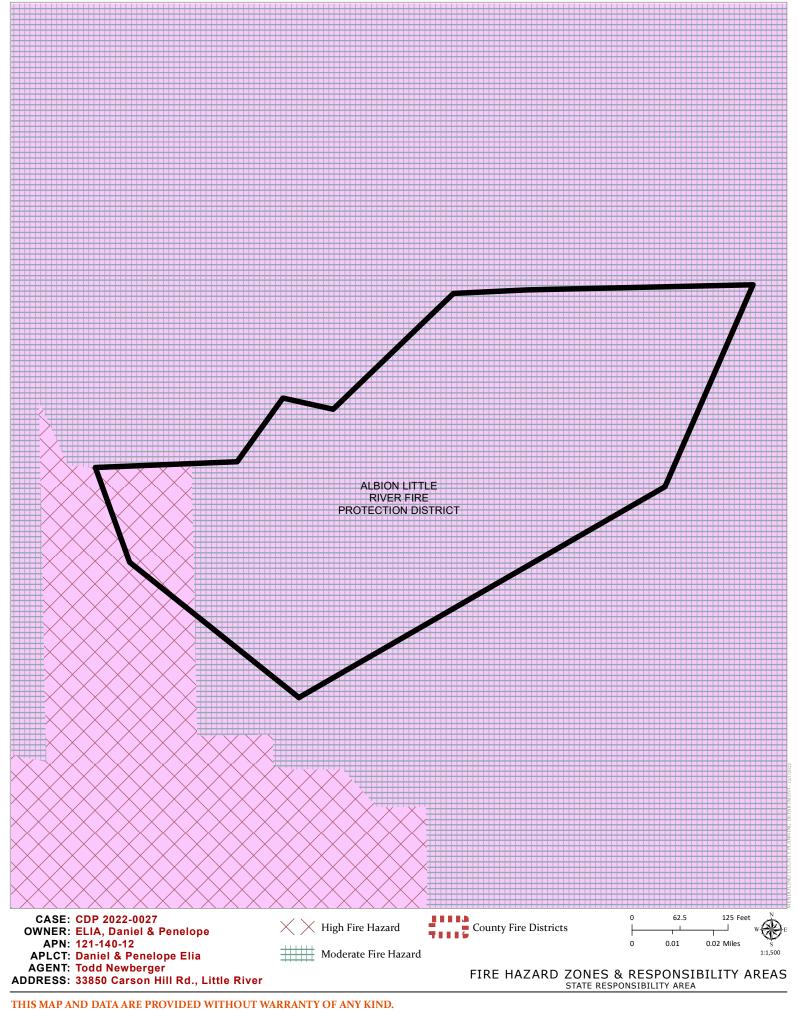


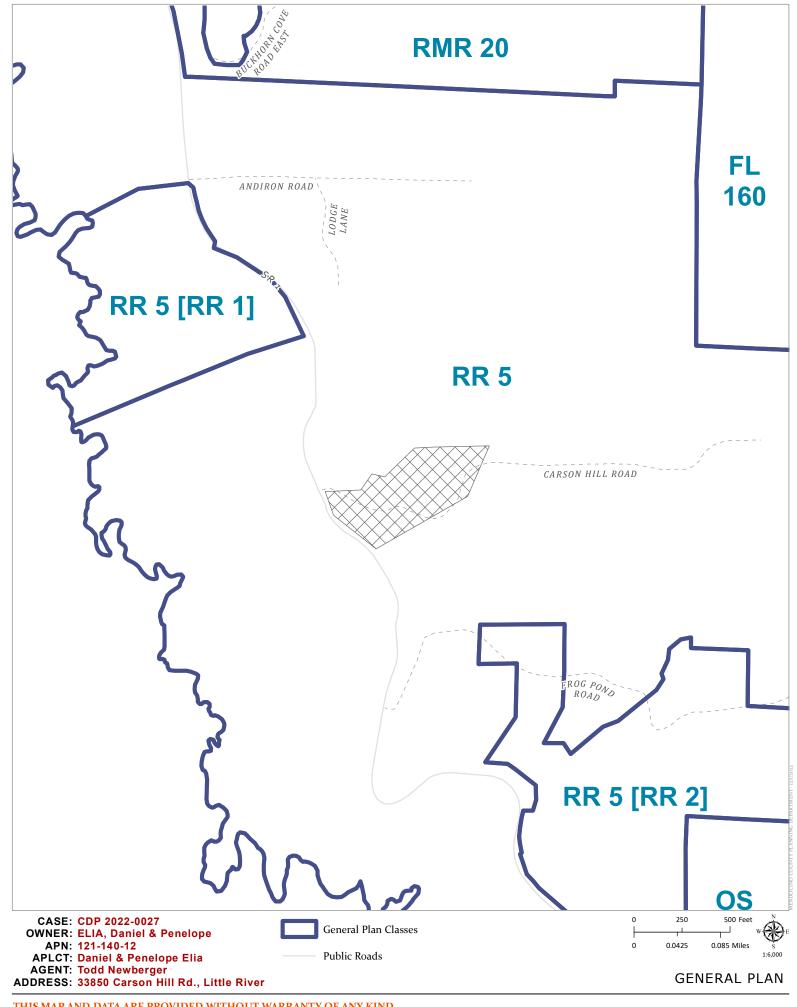
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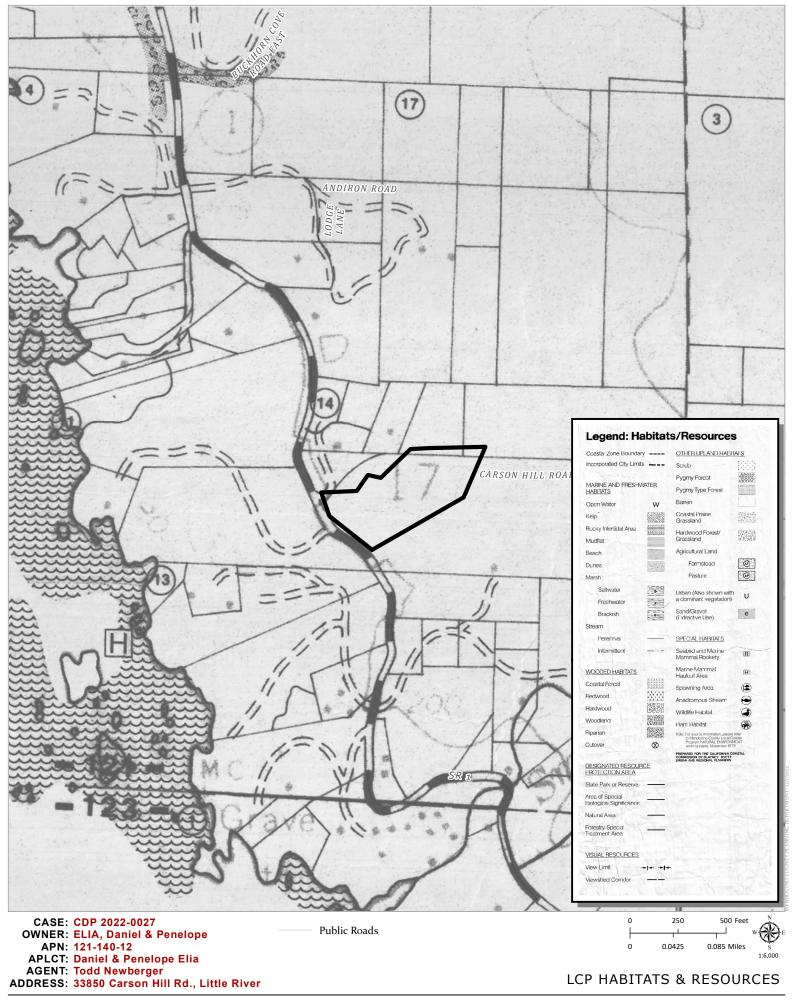


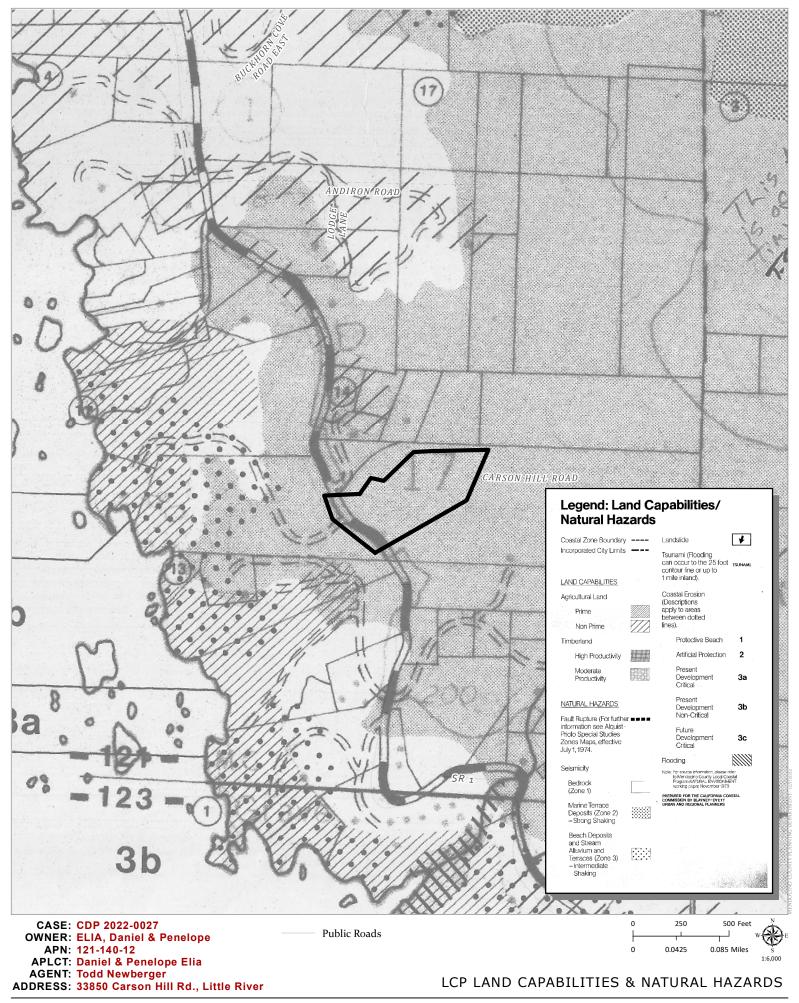


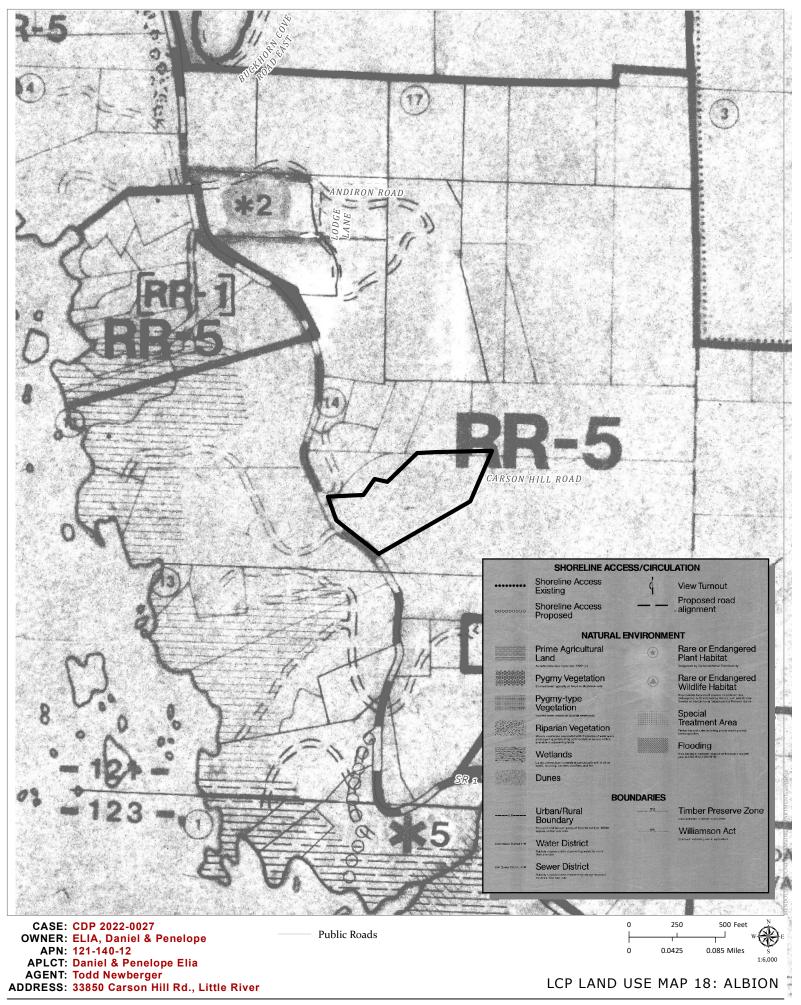


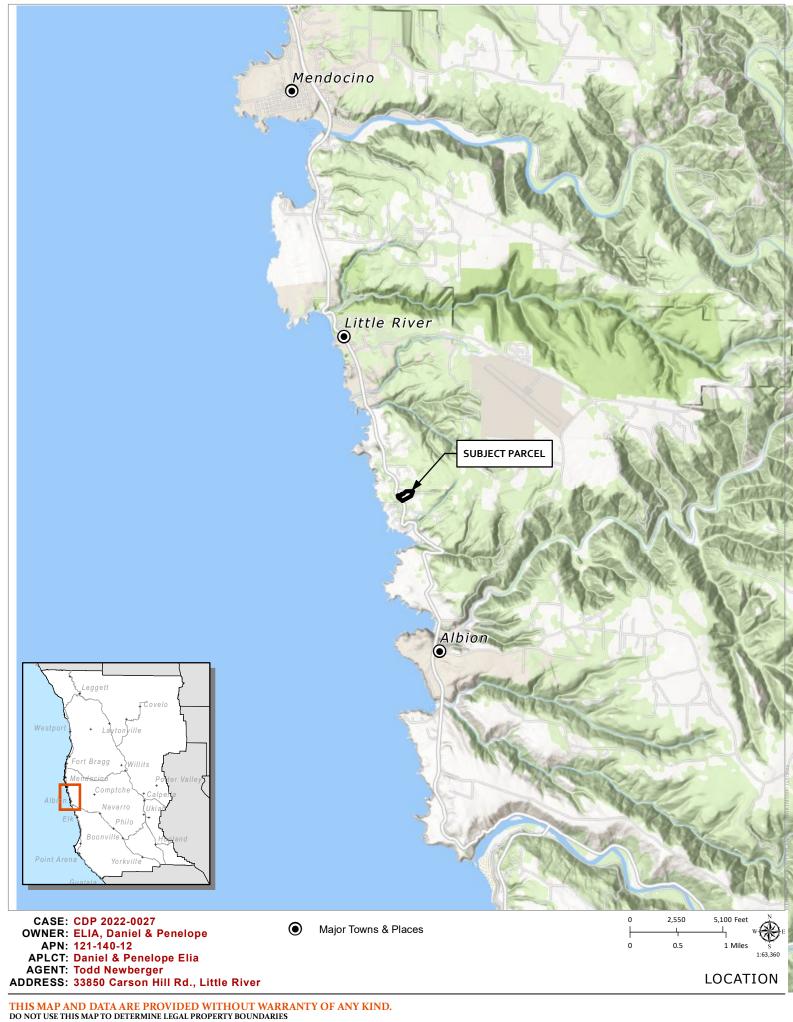


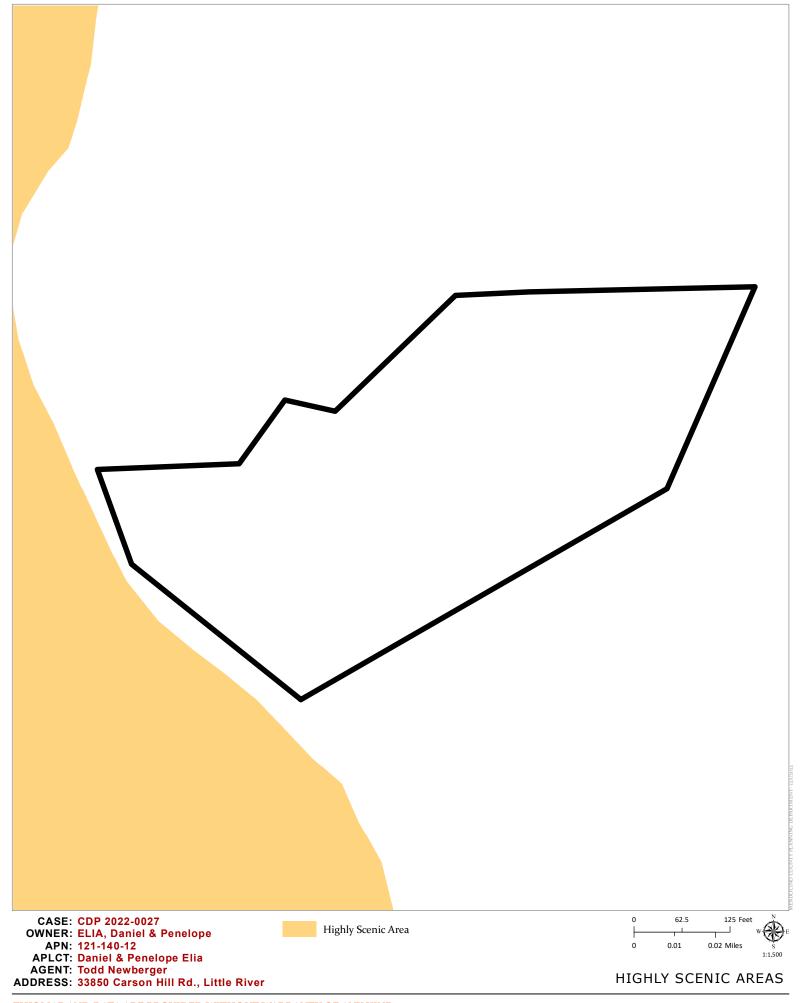


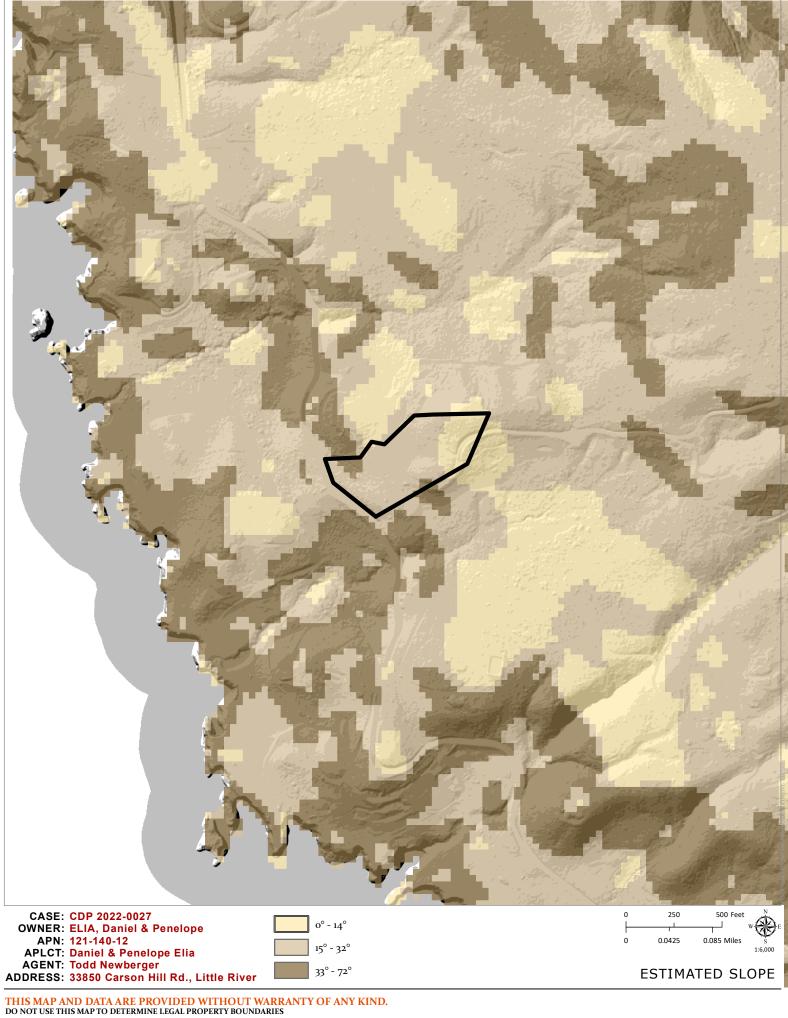


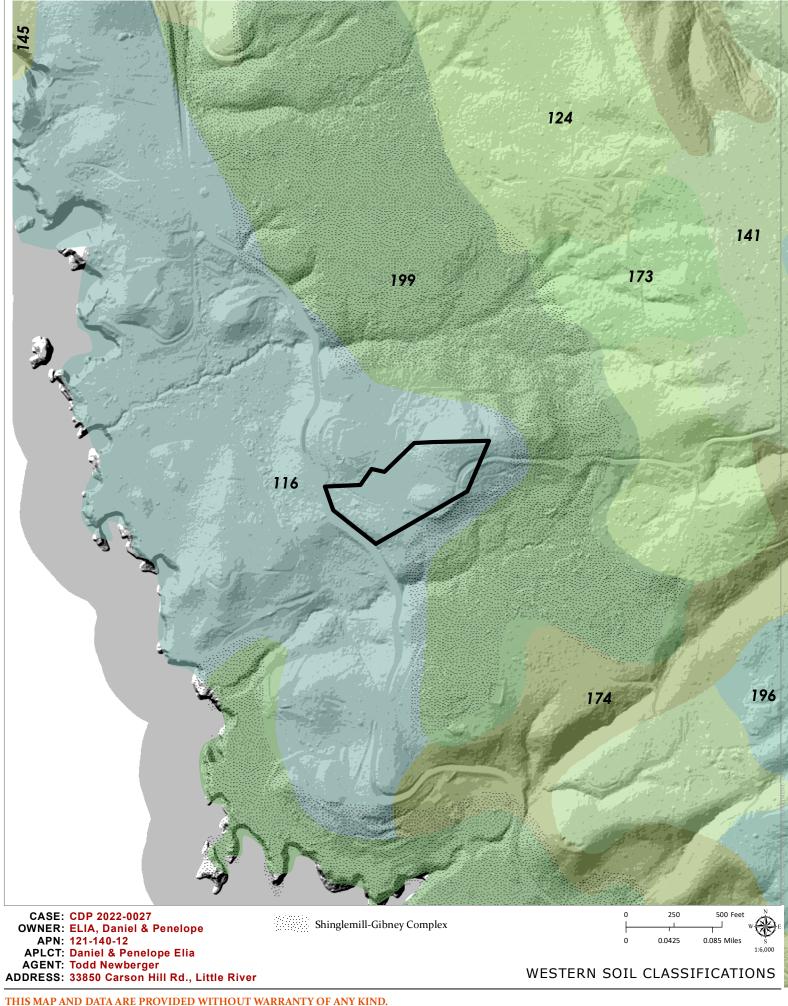


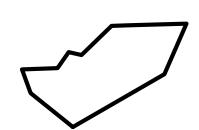












State Parks

## Van Damme SP

CASE: CDP 2022-0027 **OWNER: ELIA, Daniel & Penelope** 

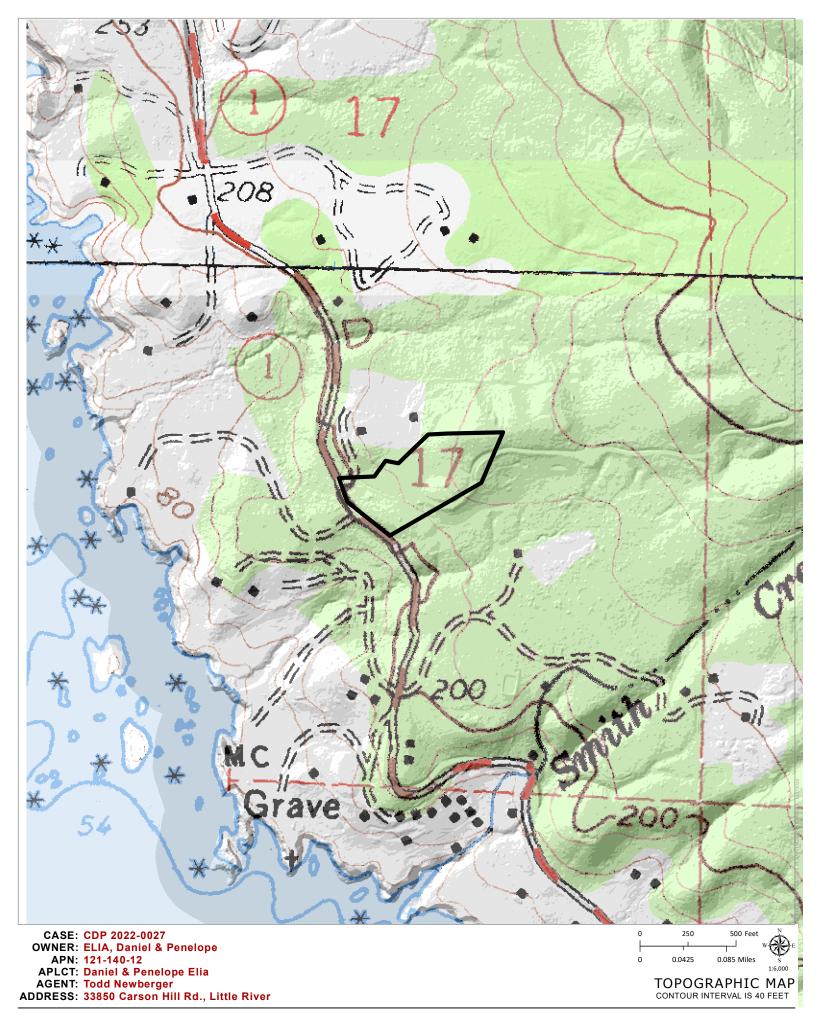
APN: 121-140-12

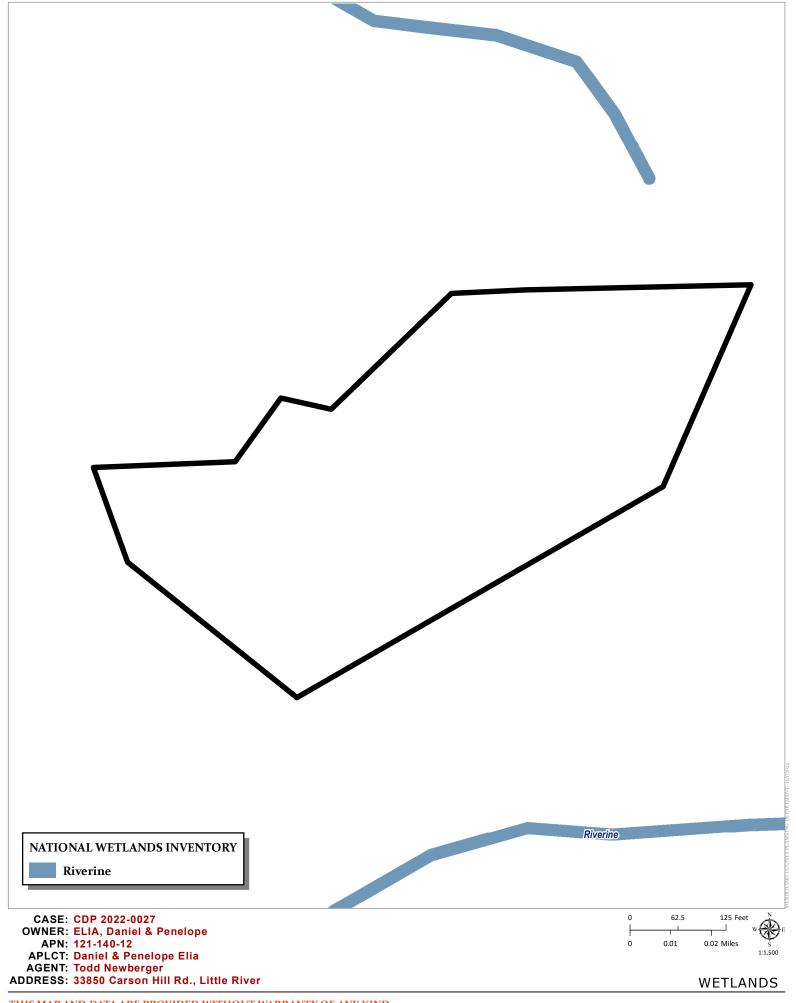
**APLCT: Daniel & Penelope Elia** AGENT: Todd Newberger

ADDRESS: 33850 Carson Hill Rd., Little River

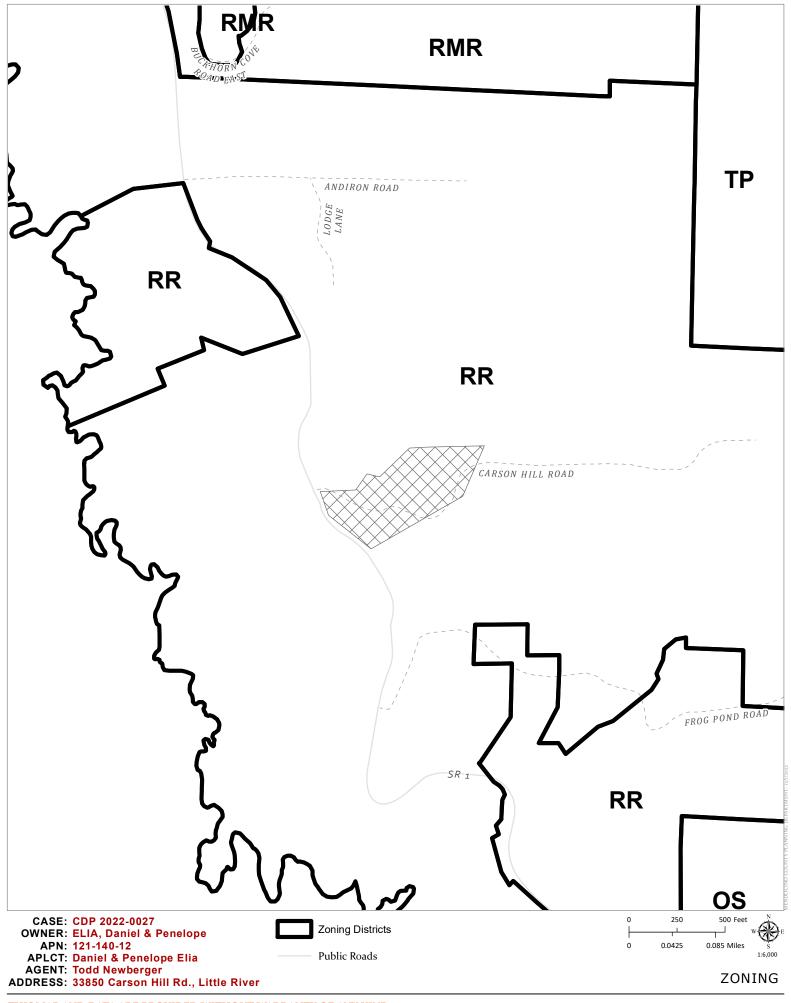
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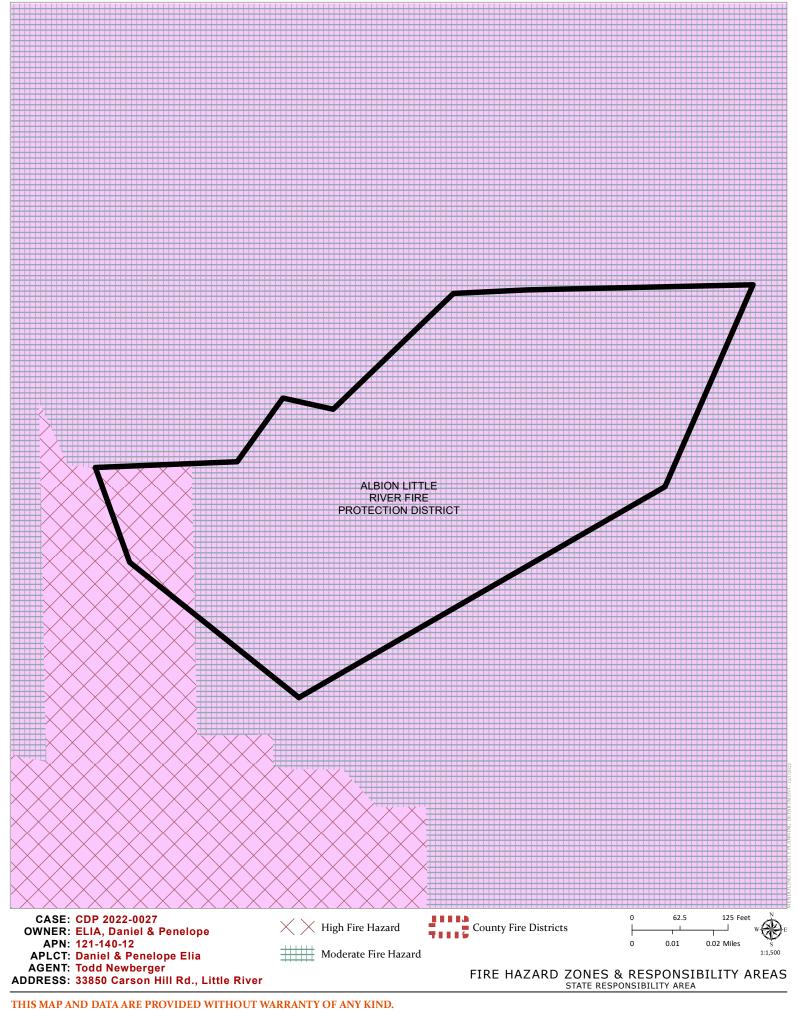
STATE PARKS







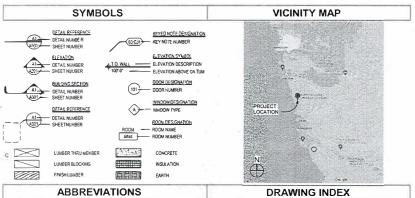




## A NEW SINGLE FAMILY RESIDENCE FOR:

# DANIEL AND PENELOPE ELIA

33850 CARSON HILL ROAD LITTLE RIVER, CA 95456



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CO	DE ANALYSIS				
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ASSESSIONS PARCEL	No. 121-140-12	MAIN LEVEL	1.896 SF	RESIDENCE L'OARNOR	E.104.5Q.17 The SC FT
CODE AUTHORITY APPLICABLE CODES	COUNTY OF NEWDOONS 2019 CBC CPC CEC, CMC, CFC, CRC, 2019 CB CRCSEN BURG STANDARES.	LOWER LEVEL GARAGE	347 SF 479 SF	PATRO & CARRONGS SCARS	887 50.17. 100 50.17.
OCCUPANCY GROUP	2019 CA BLDG ENERGY EFFICIENCY STOS.	TOTAL GROSS SF	2.703 SF		GREET CE.
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COUNTY SETBACKS	30	CONSTRUED AS A BINDING AREA OR FOR		TOTAL LOT COVERIGE PERCENTAGE	18%
CDF SETBACKS	30				





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LO PENELOPE
ROAD





Architectural Plans

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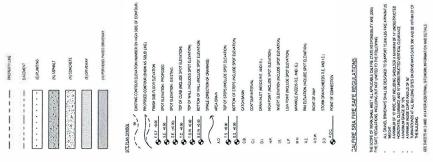
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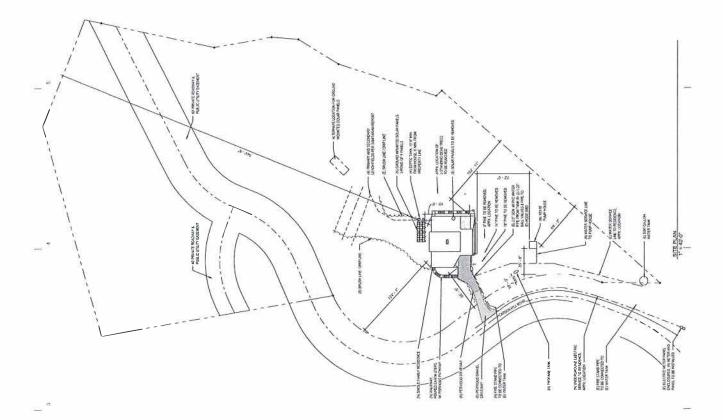
TILLLE RIVER, CA 95456 33850 CARSON HILL ROAD

AIJ=DANIEL AND PENELOPE

CDP 2022-0027 Page 2

A NEW SINGLE FAMILY RESIDENCE FOR





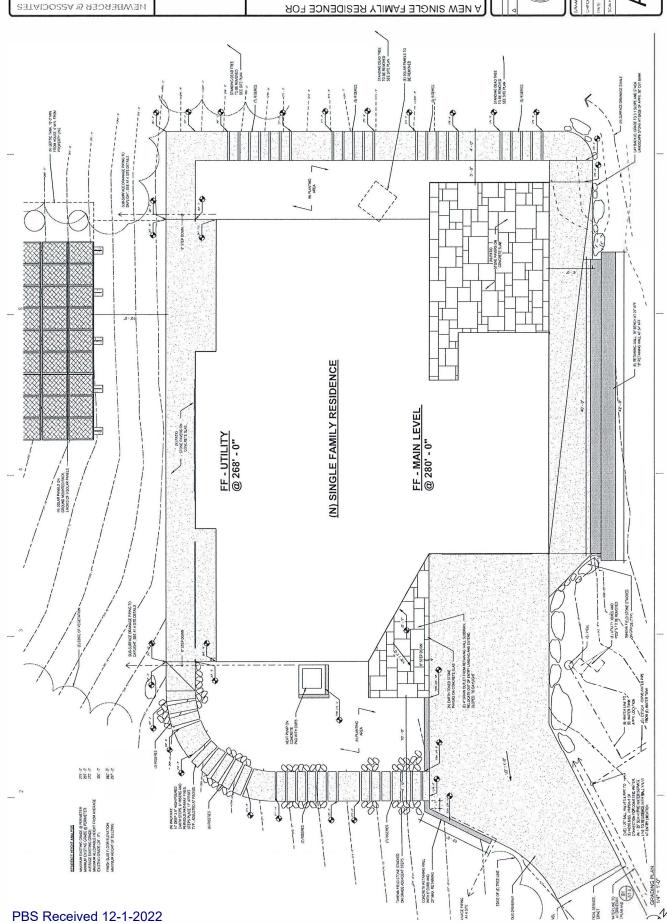
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FILLLE RIVER, CA 95456 33850 CARSON HILL ROAD

**DANIEL AND PENELOPE** 

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FZNDESICN'CON Architectural Plans TODD NEWBERGER NEWBERCER & ASSOCIATES

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SITE PLAN NOTES

SITE DETAILS

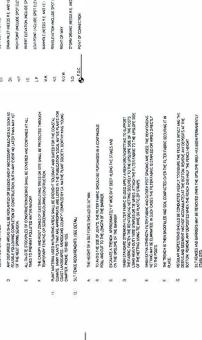
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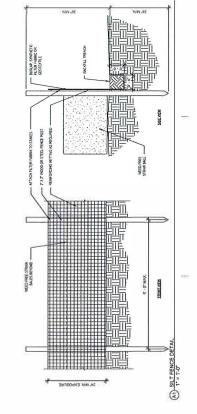
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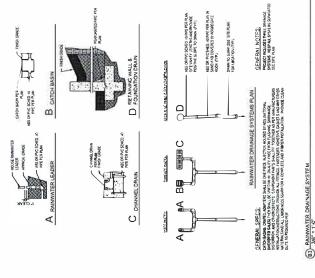


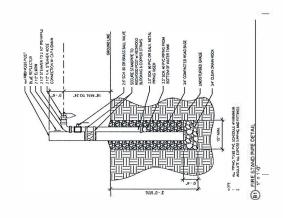


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PUMP HOUSE

ELITTE RIVER, CALIFORNIA 95456

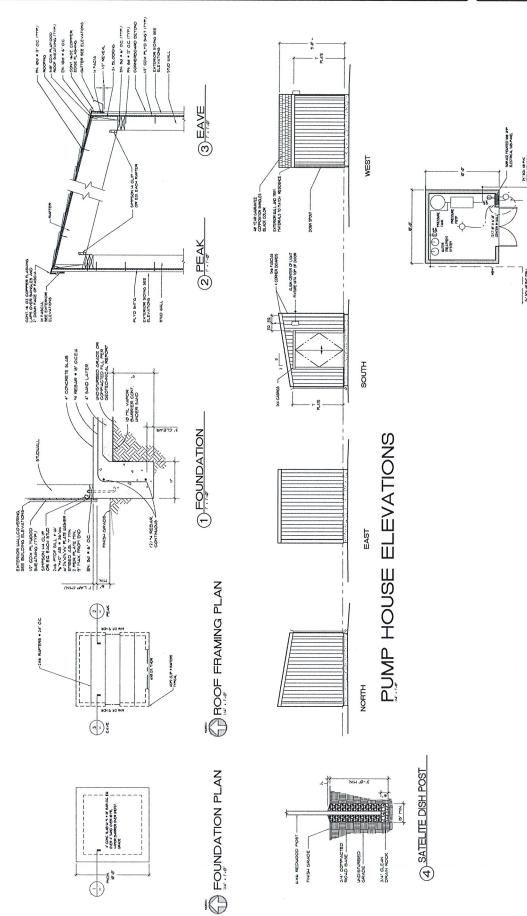
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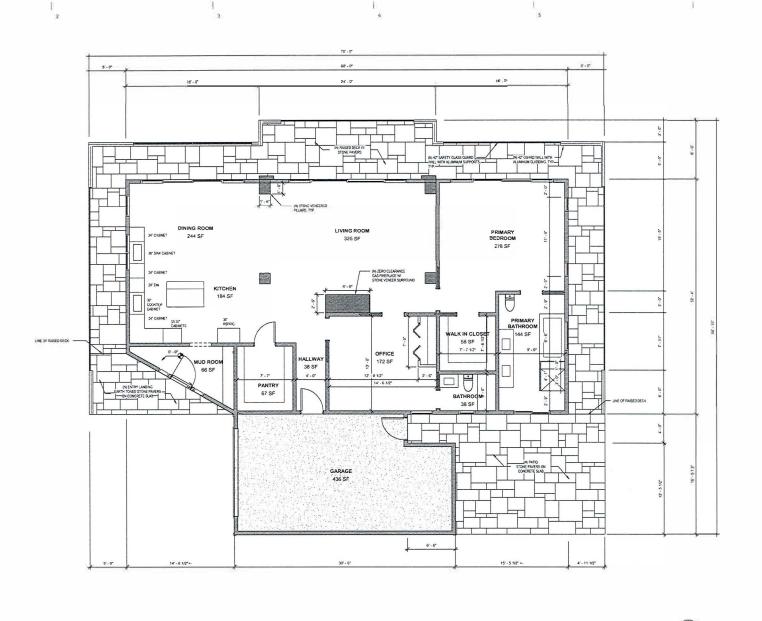
New Single Family residence for:



27 Page 5

PUMP HOUSE FLOOR PLAN









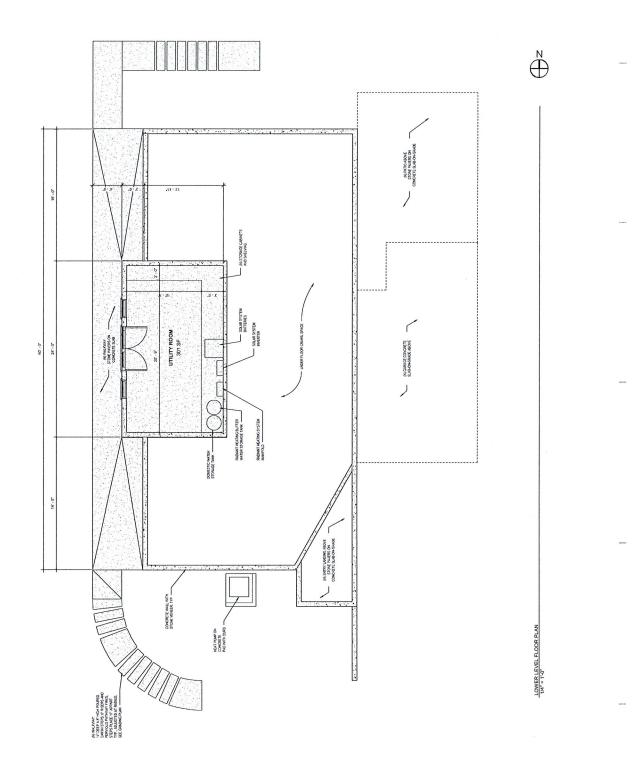


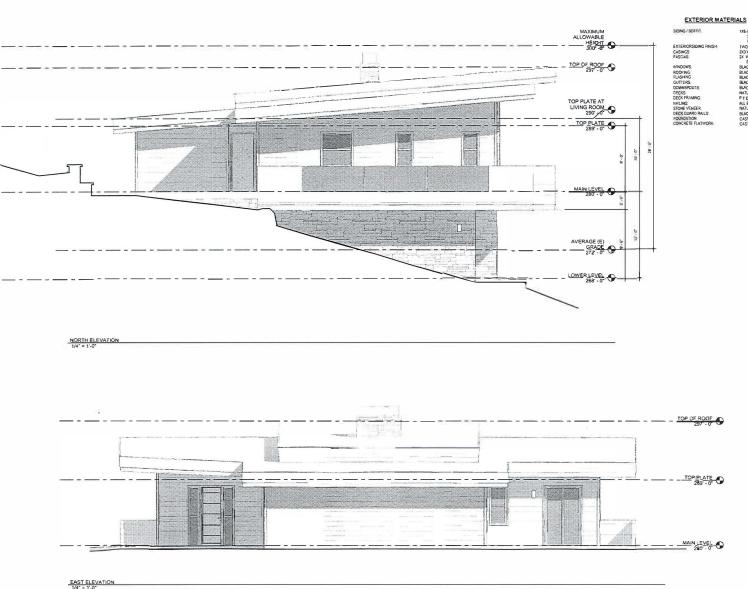
FLOOR PLAN -LOWER LEVEL 33850 CARSON HILL ROAD

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ELIA

A NEW SINGLE FAMILY RESIDENCE FOR





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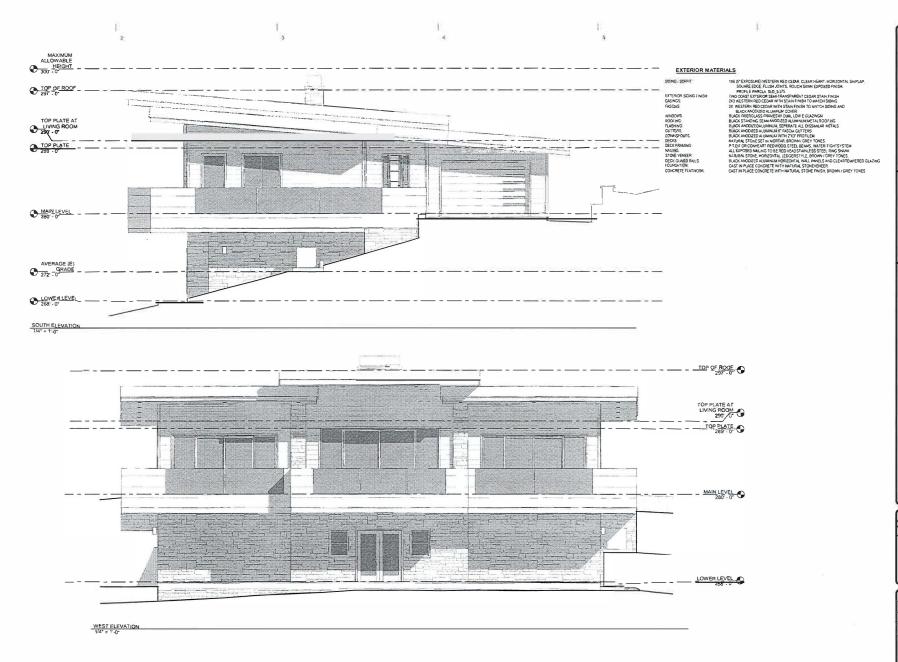
A NEW SINGLE FAMILY RESIDENCE FOR DANIEL AND PENELOPE ELIA

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33850 CARSON HILL ROAD
LITTLE RIVER, CA 95456

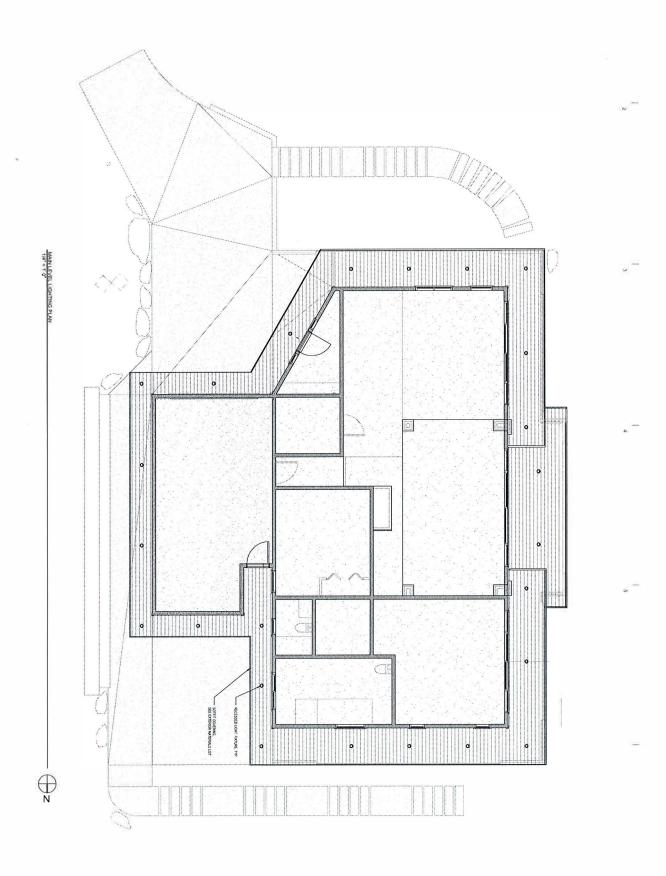








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A NEW SINGLE FAMILY RESIDENCE FOR

DANIEL AND PENELOPE

ELIA

33850 CARSON HILL ROAD
LITTLE RIVER, CA 95456

EXTERIOR LIGHTING PLAN -MAIN LEVEL NEWBERGER & ASSOCIATES

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EXTERIOR LIGHTING PLAN LOWER LEVEL

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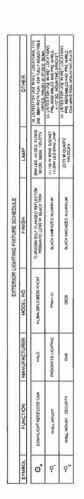
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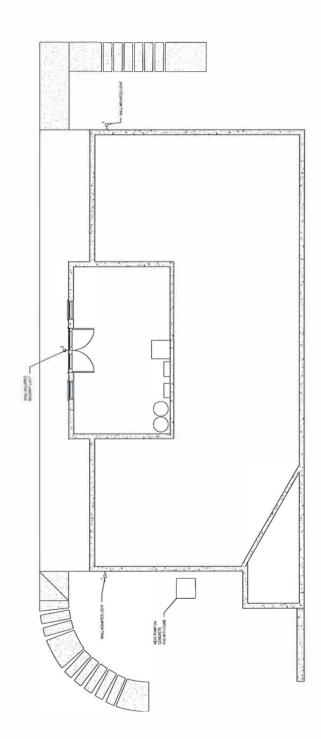
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A NEW SINGLE FAMILY RESIDENCE FOR





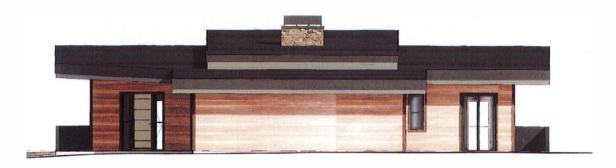




**Architectural Plans** 

CDP\_2022-0027 Page 12





EAST ELEVATION

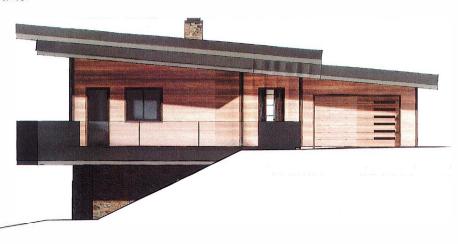


WEST ELEVATION

NEWBERGER & ASSOCIATES







SOUTH ELEVATION

NEWBERGER & ASSOCIATES

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Architectural Plans

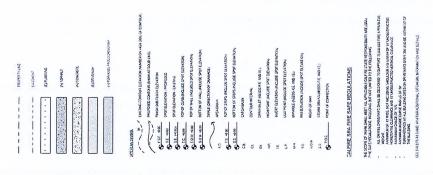
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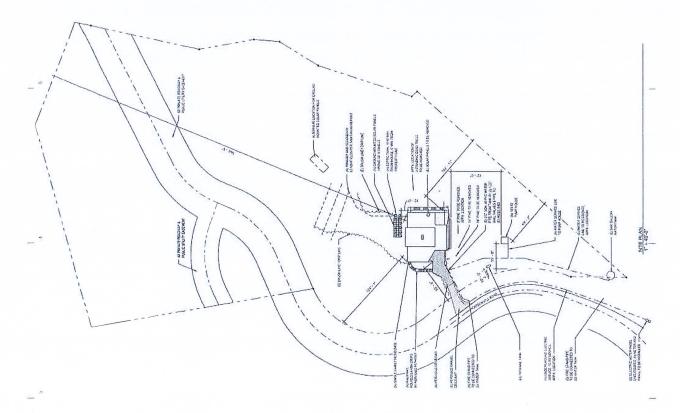
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ELIA Daniel and penelope A NEW SINGLE FAMILY RESIDENCE FOR





# BIOLOGICAL SCOPING SURVEY REPORT

for

33850 Carson Hill Road Little River, CA 95456 APN 121-140-12-00 Mendocino County

Property Owners:
Dan and Penny Elia
30632 Marilyn Drive
Laguna Beach, CA 92651



Report Prepared By: Asa Spade, Senior Biologist

March 8, 2023

Wynn Coastal Planning & Biology 703 North Main Street, Fort Bragg CA 95437 ph: 707-964-2537 fx: 707-964-2622 www.WCPlan.com

CDP\_2022-0027

#### **Biological Scoping Survey**

Investigators: Nicole Herrera (B.A. Environmental Studies, Gonzaga University) & Asa B. Spade (B.S.

Environmental Science: Landscape Ecosystems, Humboldt State) **Property Address**: 33850 Carson Hill Rd, Little River, CA 95456

**APN**: 121-140-12-00

Survey Date: September 20, 2022 Study Area Size: ~4.0 acres Parcel Size: ~5.35 acres

#### Site Description:

The subject parcel is located at 33850 Carson Hill Rd, Little River, CA (**Figure 1**). The parcel is east of the highway within the California Coastal Zone. The designated building envelope for residential structures is in a Coastal Development Permit Exclusion Zone. The parcel (**Figure 2**) can be accessed from CA-1 by turning east onto Carson Hill Rd and proceeding ~400ft; the parcel is to the north. The subject parcel is surrounded primarily by parcels of similar size, developed with single-family residences, and with forested land with some clearings. Highway CA-1 borders the subject parcel along its west side. The study area is sloped toward the southwest with an elevation of approximately 320 feet above sea level at the eastern end of the clearing and 250 feet at its western end. A number of native trees have been planted along the outside edge of the clearing and a few fruit trees are present along the south side of the clearing. Existing development includes some irrigation piping, and a retaining wall near the top of the clearing. A building envelope (**Figure 3**) for a single-family residence was designated during the subdivision creating the subject parcel in 1989.

#### **Proposed Development:**

The proposed development (**Figure 4**) is a single-family residence located at the upper (eastern) end of the existing clearing, within the area designated for residential structures by the 1989 subdivision. The existing driveway will be improved. A primary septic leach field and the designation of a replacement field are proposed near the middle of the clearing. Three standing dead trees at the northwestern edge of the building envelope and a few small trees at the northeastern edge of the building envelope are proposed for removal. A 10ftx10ft pump shed and propane tank are also proposed.

#### Methodology:

Prior to visiting the site, Wynn Coastal Planning & Biology (WCPB) biologists compiled a list of sensitive and natural species of plants, animals, and communities occurring within the 9 quads centered on the project site (**Table 2**). This list was used to identify species and communities with the greatest potential for occurring at the project site, but the survey was not strictly limited to this list of potential rare and sensitive species. Maps were also created using the California Natural Diversity Database (CNDDB) for records within one miles of the study area (**Figure 5** and **Figure 6**). A USFWS National Wetlands Inventory (NWI) map (**Appendix A**) and a U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soil map (**Appendix B**) were generated and used to inform the study.

On September 20, 2022, WCPB biologists visited the site for 1.3 hours to examine the plant communities and vegetation on, and within 100 feet of, the proposed building envelope. The focus of the study area was to determine if, and to what extent, special status plant communities, plants, wetlands, and/or special status wildlife habitat that could be considered Environmentally Sensitive Habitat Area (ESHA) occur within 100 feet of the proposed development. On February 24, 2023, after receiving feedback from Mendocino County Planning, WCPB biologists returned to the site to document planted native trees on the site, to conduct a protocol level Sonoma tree vole survey, and to perform protocol level Coastal Act wetland delineation in the vicinity of the proposed residence. The survey was limited to areas that were safely and legally accessible.

CDP\_2022-0027

No areas of potential wetland were observed during our initial study of the area but WCPB performed additional site work and have provided more background information in this report to allay concerns Mendocino County Planning expressed due to the soils on the site being included on the National Hydric Soil list. Figure 7 is a map showing the extent of soil map units that are listed on the National Hydric Soil list, as well as wetlands documented on the National Wetland Inventory in the vicinity of the subject parcel. The ACOE recognizes wetlands where hydrophytic vegetation, hydric soils, and hydrology are all present. In the California Coastal Zone, wetlands are recognized if any one of the three ACOE parameters (hydrophytic vegetation, hydric soils, or hydrology) is present. Inclusion of a soil map unit on the National Hydric Soil list is not the same as meeting the hydric soil parameter in the process of conducting a wetland delineation study. Soil map units often contain a number of soil types, some of which may be hydric while others are not. Hydric soils occur where soil near the surface is inundated for a significant portion of the year sufficient to create anaerobic conditions that change the chemical composition and physical attributes of the soil. In WCPB's experience, it would be very unusual for an area to have hydric soils but not display any indication of inundation (wetland hydrology) or the resulting change in vegetation (hydrophytic vegetation) that would normally occur in periodically inundated areas, except perhaps along the edge of a more extensive wetland area.

Wetland delineation field work began with examination of the topography and searching for observable indicators of surface hydrology and hydrophytic plants. Further analyses were performed at two sample points where wetland soils, hydrophytic vegetation, and hydrology were inspected according to the US Army Corp of Engineers (ACOE) methodology for: Western Mountains, Valleys, and Coast Region (Version 2.0). Wetland data sheets for these sample points are presented in **Appendix C**. Sampling points are marked in the field with colored pin flags and labeled in Sharpie marker. Locations of sampling points are depicted on the planted native tree & wetland sample point map in **Figure 8**.

#### **Survey Results:**

One type of soil has been mapped by the Natural Resource Conservation Service in the study area: Bruhel-Shinglemill complex, 2 to 15 percent slopes. According to the Soil Survey of Mendocino County "This map unit occurs on marine terraces. The vegetation is mainly bishop pine and annual and perennial grasses." Bruhel-Shinglemill complex, 2 to 15 percent slopes is included on the NRCS list of hydric soils (USDA Natural Resource Conservation Service, 2001) due to the inclusion of Shinglemill soils, which make up ~5% of the complex, Flumeville soils, which make up ~5% of the complex. It should be noted that when a given soil is listed on the National Hydric Soils List as a hydric soil, that does not necessarily mean a wetland is present. Soil complexes are mapped at a coarse resolution and contain a number of components, any one of which may or may not be hydric, and may or may not be present in the particular mapped location.

The NWI map was consulted and showed no mapped wetlands within the study area. Ground surveys confirmed that no wetland features are present in the study area. Streams were present north and south of the study area but at a distance greater than they would be potentially affected by the proposed development.

Protocol level wetland delineation was conducted at two locations on the slope where the residence is proposed. The wetland hydrology, hydric soils, and hydrophytic vegetation indicators used to make wetland determinations are summarized below.

#### Sampling Point SP01 – Upland

No observable indicators of wetland occurred in this area, but a sample point was conducted in the vicinity of the proposed residence at the recommendation of a Mendocino County Planner because the soil map unit, Bruhel-Shinglemill complex, 2-15% slopes is on the National Hydric Soil list. The area was mowed after the end of the growing season the year before, so grass identification was difficult. Dominant plant species at this sample point were Bishop pine (*Pinus muricata* UPL), redwood manzanita (*Arctostaphylos columbiana* UPL), purple-awned wallaby grass (*Rytidosperma penicillatum* UPL), slender wild oat (*Avena barbata* UPL), and rattlesnake grass (*Briza maxima* UPL). The hydrophytic vegetation parameter was not met. No wetland hydrology indicators and no hydric soil indicators were observed within the pit dug to 18-

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inches deep. As no wetland parameters were met, Sample Point SP01 was determined to be in an upland area.

#### Sampling Point SP02 - Upland

As per SP01, no observable indicators of wetland occurred in this area, but a sample point was conducted in the vicinity of the proposed residence at the recommendation of a Mendocino County Planner because the soil map unit, Bruhel-Shinglemill complex, 2-15% slopes is on the National Hydric Soil list. The area was mowed after the end of the growing season the year before, so grass identification was difficult. Dominant plant species at this sample point were Bishop pine (*Pinus muricata* UPL), coast redwood (*Sequoia sempervirens* UPL), coyote brush (*Baccharis pilularis* UPL), common velvet grass (*Holcus lanatus* FAC), and purple-awned wallaby grass (*Rytidosperma penicillatum* UPL). The hydrophytic vegetation parameter was not met. No wetland hydrology indicators and no hydric soil indicators were observed within the pit dug to 18-inches deep. As no wetland parameters were met, Sample Point SP01 was determined to be in an upland area.

Plant communities and vegetation (**Figure 9**) observed within the study area consisted primarily of non-native grassland within the clearing, and grand fir – Bishop pine forest surrounding the clearing. A number of native trees have been planted on the subject parcel along the edges of the grassland and along the road.

The non-native grassland (**Figure 10**) present was dominated by purple-awned wallaby grass (*Rytidosperma penicillatum*). Also present were common velvet grass (*Holcus lanatus*), bird's foot trefoil (*Lotus corniculatus*), hairy cat's ear (*Hypochaeris radicata*), English plantain (*Plantago lanceolata*), California blackberry (*Rubus ursinus*), bull thistle (*Cirsium vulgare*), sweet vernal grass (*Anthoxanthum odoratum*), wonder woman sedge (*Carex gynodynama*), sow thistle (*Sonchus oleracea*), creeping bentgrass (*Agrostis stolonifera*), rattlesnake grass (*Briza maxima*), and cottonbatting plant (*Pseudognaphalium stramineum*). Along the edges of the clearing were a number of planted trees including coast redwood (*Sequoia sempervirens*), western red cedar (*Thuja plicata*), Sitka spruce (*Picea sitchensis*), and some species that require more sunlight than is found within the forest understory including pampas grass (*Cortaderia jubata*), coyote brush (*Baccharis pilularis*), and hairy manzanita (*Arctostaphylos columbiana*). A number of seedling and sapling Bishop pine (*Pinus muricata*) and Douglas fir (*Pseudotsuga menziesii*) trees were also present within the area mapped as non-native grassland.

The non-native grassland present would best be classified as a purple-awned wallaby grass grassland (*Rytidosperma penicillatum* Semi-Natural grassland association) with areas of common velvetgrass – sweet vernal grass grassland (*Holcus lanatus* – *Anthoxanthum odoratum* Semi-Natural Grassland Association). Grassland habitat changes considerably throughout the growing season with different species becoming more prominent and identifiable then fading as another species appears to dominate. When grasslands are mowed, some of the earlier blooming species can be missed or appear less dominant than might be apparent without mowing. Purple-awned wallaby grass is one of the latest grasses to bloom in our area and its dominance may therefore have been exaggerated during the single site visit conducted.

The forested portion of the study area had an overstory dominated by grand fir (Abies grandis) and Bishop pine (Figure 10 - Figure 12). Also present in the overstory to a lesser degree was Douglas fir and small amount of tanoak (Notholithocarpus densiflorus). The understory of the forest contained poison oak (Toxicodendron diversilobum), western bracken fern (Pteridium aquilinum), California blackberry, hairy manzanita, spreading rush (Juncus patens), western sword fern (Polystichum munitum), California wax myrtle (Morella californica), evergreen huckleberry (Vaccinium ovatum), Douglas iris (Iris douglasiana), hairy honeysuckle (Lonicera hispidula), sapling tanoak, salal (Gaultheria shallon), coastal burnweed (Senecio minima), Chinook brome (Bromus laevipes), bluegrass (Poa pratensis), dwarf mistletoe (Arceuthobium campylopodum), oxe-eye daisy (Leucanthemum vulgare), thimbleberry (Rubus parviflora), vanilla grass (Anthoxanthum occidentale), woodland strawberry (Fragaria vesca), coyote brush, cotoneaster (Cotoneaster spp.), English holly (Ilex aquifolium), Latin American fleabane (Erigeron karvinskianus), pearly everlasting (Anaphalis margaritacea), blueblossum (Ceanothus thyrsiflorus), redwood violet (Viola sempervirens), woodland madia (Madia madioides), rattlesnake plantain (Goodyera oblongifolia), and everlasting pea (Lathyrus latifolius).

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Classification of natural communities with the Manual of California Vegetation is hierarchical; a community is defined by the dominant species of plants within the tallest stratum of vegetation. Plant community "Alliances" are the highest level of classification, containing within them one or more "Associations". Because Associations are nested within Alliances, they are always less abundant than the Alliance as a whole and therefore have rarity rankings as rare as, or rarer than, their parent Alliance. A "dominant species" is defined as "An abundant species with high cover in relation to other species in the layer with highest canopy cover. We typically define dominant species as those with at least 50% relative cover in relation to other species with high cover in relation to other species in the layer with the highest canopy cover. We typically define co-dominant species as those with at least 30% relative cover."

In the forest within the study area the tallest and most abundant tree species are grand fir and Bishop pine. with Douglas fir present in some areas, but with significantly less relative cover than the other two species. The California Natural Community List includes the Abies grandis Forest Alliance which has a state rank of S2, meaning the community is "imperiled statewide", and the Bishop pine Forest Alliance with a rank of S3, meaning that community is "vulnerable statewide". A ranking of S1-S3 indicated that a plant community is <u>"rare and threatened" in California.</u> The Manual of California Vegetation describes a grand fir forest as one where "Abies grandis is dominant or co-dominant in the tree canopy with Alnus rubra, Picea sitchensis, Pinus muricata, Sequoia sempervirens or Tsuga heterophylla." The Manual describes Bishop pine forest as one where "Pinus muricata or Pinus radiata is dominant or co-dominant in the tree canopy with Abies grandis, Acer macrophyllum, Alnus rhombifolia, Arbutus menziesii, Hesperocyparis goveniana, Hesperocyparis pygmaea, Notholithocarpus densiflorus, Pinus attenuata, Pinus contorta ssp. bolanderi, Pinus contorta ssp. contorta, Pinus muricata, Pinus radiata, Pseudotsuga menziesii, Quercus agrifolia, Quercus tomentella, Quercus wislizeni, Salix Iasiolepis, Salix scouleriana, Sequoia sempervirens, Tsuga heterophylla or Umbellularia californica." In WCPB's professional opinion, the forested areas within the study area should be classified as a grand fir - Bishop pine forest (Abies grandis - Pinus muricata Forest Association), indicating that grand fir and Bishop pine co-dominate in the overstory. While Mendocino County planners make the decision on which areas are or are not ESHAs, based on the state ranking of the community and knowledge of past projects with grand fir and Bishop pine forest present, this report presumes that the grand fir – Bishop pine forest would be considered an ESHA.

More than 200 native conifers, including coast redwood, grand fir, Douglas fir, and western red cedar, have been planted on the parcel (**Figure 13**). Some of these trees were protected with caging, supported with stakes, and/or had remnants of seedling protector tubes around their trunks. Locations of the planted trees are depicted in **Figure 8**. Because these trees are native species and are contiguous with the forest, they are mapped as part of the grand fir – Bishop pine forest.

Special status plants and plant communities with recorded CNDDB occurrences within 1 mile of the study area were further analyzed to rule out the possibility of their presence in the study area.

Point Reyes checkerbloom (*Sidalcea calycosa* ssp. *rhizomata*) and great burnet (*Sanguisorba officinalis*) generally occur within wetlands. No wetlands were present within the study area. The non-native grassland and grand fir – Bishop pine forest habitats present, sans wetland, are not the appropriate habitat type for these species.

Mendocino coast paintbrush (*Castilleja mendocinensis*), bluff wallflower (*Erysimum concinnum*) and short-leaved evax (*Hesperevax sparsiflora* var. *brevifolia*), generally occur within coastal bluff scrub habitat or coastal prairie habitat adjacent to coastal bluffs. The non-native grassland and grand fir – Bishop pine forest habitats present are not the appropriate habitat type for these species.

Bolander's beach pine (*Pinus contorta* ssp. *bolanderi*) and Mendocino pygmy cypress (*Hesperocyparis pygmaea*) are generally found within Mendocino cypress forest. The non-native grassland and grand fir – Bishop pine forest habitats present are not the appropriate habitat type for these species.

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Oregon goldthread (*Coptis laciniata*) and maple-leaved checkerbloom (*Sidalcea malviflora*) are generally found along streams. No streams were present within the study area. Both of these species are perennial plants that would have been evident and identifiable at the time of year the study was conducted. Neither were observed within the study area.

The survey took place during a time of year when not all of the special status plants with potential to occur would have been evident and identifiable; however, the habitat present has a low potential to support special status plants.

Special status animals with recorded CNDDB occurrences within 1 mile of the study area were further analyzed to rule out the possibility of their presence in the study area.

Behren's silverspot butterflies are known historically from the town of Mendocino, Mendocino County, south to the area of Salt Point State Park, Sonoma County. Now presumed to be from Manchester south to the Salt Point area. This species inhabits coastal terrace prairie with caterpillar host plant western dog violet, and adult nectar sources such as thistles, asters, etc. No western dog violet (*Viola adunca*) was found in the study area and therefore no further surveys are recommended at this time.

Western bumblebee (*Bombus occidentalis*) is not a Federal or State protected species but is listed as a California Natural Diversity Database S1 species, an indication that there are limited known occurrences in California. The project area is in the former historical range of this species. Bumblebees observed during botanical surveys did not demonstrate the field markings of the western bumble bee, which include a conspicuous white tip of the abdomen. No bumblebee colonies were observed during the field surveys. No further surveys are recommended at this time.

Northern red-legged frog (*Rana aurora*) is listed as a California Department of Fish and Wildlife Species of Special Concern. The range extends from the southwest British Colombia coast to central Mendocino County. Often found in woods adjacent to streams and streamsides with plant cover, northern red-legged frog breeds in permanent water sources, including lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. No areas of wetland were present within the study area that would be potential breeding habitat for northern red-legged frog. While northern red-legged frogs are known to move up to two miles to travel between water sources, there are no ponds or streams near the subject parcels so it is very unlikely that northern red legged frogs would be impacted by a project at this location. No further surveys for this species are recommended.

Pacific tailed frogs (*Ascaphus truei*), southern torrent salamanders (*Rhyacotriton variegatus*), and redbellied newts (*Taricha rivularis*) are all relatively dependent on perennial streams. While they may sometimes migrate over land, there are no streams nearby the study area so it is unlikely they would be impacted by a development project at this site. No further studies for these species are recommended.

Sonoma tree voles are arboreal rodents that feed on fresh Douglas fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), Sitka spruce (*Picea sitchensis*), Monterey pine (*Pinus radiata*), or Bishop pine (*P. muricata*) needles. No evidence of this species, such as clumps of tree-needle resin ducts was observed on site during the scoping survey. Because food trees for this species occur within the study area and there are CNDDB records for it nearby, this species has the potential to be affected by a project within the study area if native coniferous trees are proposed for removal. On February 24, 2023, a protocol level Sonoma tree vole survey was conducted. All trees within and surrounding the proposed development were examined with either Zeiss 8x42 and/or Nikon 8x42 binoculars. The ground beneath the trees was searched for clumps of needle resin ducts. No evidence of Sonoma tree vole presence was observed. No further surveys for this species is recommended.

The Townsend's big-eared bat is generally found in dry uplands throughout the west but can also occur in mesic forest habitats along the coast. They require spacious cavern-like structures for roosting during all stages of their life. There are no existing structures located on the property, caves, or large tree hollows so it is unlikely to find this species onsite. No further surveys for this species are recommended.

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Resident and migratory birds that are present during the nesting season may nest in the habitat present within the study area. Nesting requirements are highly variable. Some birds nest in burrows, others on the ground, in vegetation, brush, trees, rocky outcrops, or on man-made structures. The bird nesting season typically extends from February to August. The Migratory Bird Treaty Act protects special status and common birds and their nests while they are in the process of nesting. If construction is to occur during the breeding season (February to August), a pre-construction survey is recommended to ensure that no nesting birds will be disturbed during development. No nesting surveys are recommended if activity occurs in the non-breeding season.

#### **Recommendations:**

Types of development allowable within an ESHA is limited to those listed in the Mendocino County Local Coastal Plan (LCP). Unfortunately, the LCP does not directly address types of development allowable within a special status natural community ESHA. Mendocino County defines ESHA as:

"Environmentally Sensitive Habitat Area means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could easily be disturbed or degraded by human activities or developments."

"Environmentally Sensitive Habitat Areas (ESHA's) include: anadromous fish streams, sand dunes, rookeries and marine mammal haul-out areas, wetlands, riparian areas, areas of pygmy vegetation which contain species of rare or endangered plants and habitats of rare and endangered plants and animals."

Development allowable within some other types of ESHA the LCP does address include:

- "Sec. 20.496.035 Riparian Corridors and Other Riparian Resource Areas."
- "(2) Pipelines, utility lines and road and trail crossings when no less environmentally damaging alternative route is feasible;"
- "(4) Removal of trees for disease control, public safety purposes or personal use for firewood by property owner."
- "Sec. 20.496.040 Dunes."
- "(2) One single-family dwelling where adequate access, water and sewage disposal capacity exist consistent with applicable Coastal Element policies and development standards of this division."
- "Sec. 20.496.050 Other Resource Areas."
- "Any development within designated resource areas shall be reviewed and established in accord with conditions which could allow some development under mitigating conditions, but which assures the continued protection of the resource area."

WCPB believes that Mendocino County has the ability and authority to approve some types and extent of development within an upland special status natural community ESHA through a standard CDP process as long as that development is compatible with the continuance of the habitat area by maintaining the functional capacity, their ability to be self-sustaining and maintain natural species diversity. WCPB believes that with appropriate mitigation a project proposing a single-family residence in the upper portion of the clearing on the subject parcel could be less than significantly impacting to the grand fir – Bishop pine forest present. A reasonably sized single-family residence would be consistent with development enjoyed by neighboring landowners. While the footprint of the proposed development somewhat overlaps the mapped presumed ESHA, very little removal of vegetation will need to occur to construct the residence. Only three standing dead trees at the northwestern edge of the building envelope and a few small trees at the northeastern edge of the building envelope are proposed for removal (Figure 14). At the same time, over 200 native conifers have been planted on the parcel, a strong net increase in native forest habitat.

WCPB conducted our site work during a time of the year when not all rare plants with a potential to occur would have been evident and identifiable. The survey was not floristic in nature. A potential for false

negative survey results exists. For example, a rare plant could be eaten by deer around the time when they would have been evident and identifiable and therefore not be detected during surveys. Some plants remain dormant and do not become evident and identifiable every year. Climatic conditions are different each year and may have unpredictable effects on the bloom windows of each species. Heavy rains, for example, may cause one species to bloom early and another species to bloom later than in normal years. Well timed site visits and frequent observations at known reference sites reduce the chance of error.

As discussed above in the results section, the plants recorded in the CNDDB within one mile of the subject parcel are unlikely to occur in the study area. In the surveyors' experience, special status plants typically occur in relatively uncommon and specialized niche habitats. For example, special status plants are observed on or near bluff tops, pygmy type vegetation, wetlands and perimeter of wetlands, and within certain special status plant communities. Surveyors also search for common indicator species that are often associated with special status plant and/or species of concern. Due to the types of habitat present in the project area the likelihood of occurrence of special status plants is low.

The following mitigation measures are recommended to minimize impacts from development to animals that may be seasonally or temporarily present within the study area.

#### 1.1. Potential Impact to Nesting Birds

Removal of vegetation and construction activity near trees and vegetated areas has the potential to disturb birds' nesting process if it occurs during the nesting season.

#### 1.1.1. Avoidance Measure: Seasonal avoidance

No nesting bird surveys are recommended if activity occurs in the non-breeding season (September to January). If vegetation removal or development is to occur during the breeding season (February to August) (**Table 1**), a pre-construction survey is recommended within 14 days of the onset of vegetation removal or construction to ensure that no nesting birds will be disturbed during development.

#### 1.1.2. Avoidance Measure: Nest Avoidance

If active native bird nests are observed, no vegetation removal or construction activities with the potential to disrupt nesting shall occur within a 100-foot exclusion zone. These exclusion zones may vary depending on species, habitat and level of disturbance. The exclusion zone shall remain in place around the active nest until all young are no longer dependent upon the nest. A biologist should monitor the nest site weekly during the breeding season to ensure the buffer is sufficient to protect the nest site from potential disturbance.

#### 1.1.3. Avoidance Measure: Construction activities only during daylight hours

Construction should occur during daylight hours to limit disturbing construction noise and minimize artificial lights.

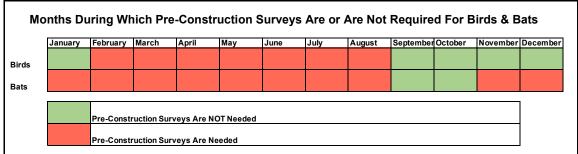


Table 1. Months surveys are or are not needed for birds and bats.

#### 1.2. Potential Impact to Bats

Tree removal and construction in the study area has the potential to impact special status bat

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species. Bats are vulnerable when roosting for reproduction when young are not yet able to fly, and during hibernation because they can die of cold or malnutrition if hibernation is disturbed. Temperatures on the Mendocino Coast usually do not drop low enough to necessitate bat hibernation. No special features such as hollow trees, abandoned buildings, or other cave analogs, which could serve as roosting or hibernation refugium, were observed; therefore, the potential for negative impacts to bats is minimal. If adult trees are proposed for removal, then a survey may be warranted.

#### 1.2.1. Avoidance Measure: Pre-construction surveys for bats

If adult trees are proposed for removal, and it is determined that a bat survey is warranted, and the tree removal is to occur between November 1 and August 31, then pre-construction surveys should be performed by a qualified biologist 14 days prior to the onset if development activities. Tree removal and construction will ideally occur between September 1st and October 31 after the young have matured and prior to the bat hibernation period.

Pre-construction bat surveys involve surveying trees, rock outcrops, and buildings subject to construction for evidence of bat use (guano accumulation, or acoustic or visual detections). If evidence of bat use is found, then biologists shall conduct acoustic surveys under appropriate conditions using an acoustic detector, to determine whether a site is occupied.

#### 1.2.2. Avoidance Measure: Roost buffer

If active bat roosts are observed, no tree removal or construction activities with potential to disturb roosting shall occur within a minimum 50-foot exclusion zone. These exclusion zones may vary depending on species, habitat and level of disturbance. The exclusion zone shall remain in place around the active roost until all young are no longer dependent upon the roost.

#### 1.2.3. Avoidance measure: Construction activities only during daylight hours

Construction should occur during daylight hours to limit disturbing construction noise and minimize artificial lights.

#### 1.3. Potential Impacts to Sonoma Tree Voles

Appropriate food tree species for Sonoma tree voles are present at the site. If trees must be removed for the project STV nests may be removed. The microclimate within the tree canopy is likely to change adjacent to trees that are removed because they will no longer block wind, shade areas, collect fog, etc. Changes in microclimates in the tree canopy may reduce the habitat suitable for Sonoma tree voles.

#### 1.3.1. Minimization Measure: Remove the least number of trees necessary

Native coniferous trees should only be removed if strictly necessary.

#### 1.3.2. Avoidance Measure: Pre-construction Sonoma tree vole surveys

A protocol level Sonoma tree vole survey was conducted on February 24, 2023, and STVs were found to be absent. According to the survey protocol surveys resulting in an absence finding are valid for 5 years. If a significant amount of time passes before vegetation removal and construction begins, then an additional STV survey should be considered.

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#### Discussion:

The subject parcel was created by a subdivision and the proposed building envelope was specified at that time. A clearing in the forest was created over 20 years ago to accommodate the proposed development and a view of the ocean. No streams or wetlands are present within 100ft of proposed development. The forest surrounding the clearing is grand fir – Bishop pine forest, a presumed sensitive natural community ESHA. The forest has been increased in size through the planting of over 200 native conifers. The single-family residence is proposed within the existing clearing, adjacent to, but predominantly outside of the presumed ESHA. A few dead trees and a couple live but relatively small trees at the edge of the building envelope will need to be removed for construction access and fire safety but will not significantly impact the overall plant community, which has already been enhanced with the native plantings to a much greater extent than the proposed impact. A 10ftx10ft pump shed and a propane tank are proposed within the forest but should not require the removal of adult trees. It is WCPB's professional opinion that if avoidance and minimization measures are followed, that the proposed development will have a less than significant impact on the grand fir – Bishop pine forest and animals that may use the property during some portions of the year.

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#### **Biologist Biographies:**

Asa B Spade graduated from Humboldt State University with a Bachelor of Science, majoring in Environmental Science, with a concentration in Landscape Ecosystems, as well as a minor in Botany. Since moving to Fort Bragg in 2006, he has been working in the natural resources field, first with Mendocino County Environmental Health, later with California State Parks and the Department of Fish and Game and as a private consulting biologist since around 2008. He has been trained in Army Corps wetland delineation by the Coastal Training Program at Elkhorn Slough and in Advanced Wetland Delineation by the Wetland Science and Coastal Training Program. He has been trained in the environmental compliance process for wetland projects in San Francisco bay and outer coastal areas. In 2011 Asa completed training to survey for California red-legged frog held by Elkhorn Slough Coastal Program. In 2015 he attended a Townsend's big eared bat basal hollow habitat assessment and survey methods workshop taught by Michael Baker, Leila Harris, and Adam Hutchins. Asa has trained with the Carex Working Group in identifying grasses and sedges of Northern California as well as a CNPS sedge workshop taught by CA Fish and Wildlife staff biologist Gordon Leppig. In 2019, he completed a training for burrowing owls taught by Dr. Lynne Trulio through the Elkhorn Slough Coastal Training Program and completed foothill vellow legged frog training taught by David Cook and Jeff Alvarez, Asa conducted field work for the Classification and Mapping of Mendocino Cypress Woodland and Related Vegetation using CNPS/CDFW Rapid Assessment/Relevé protocol. In 2021 Asa completed training by Jeff Alverez and Jeff Wilcox on the eradication of bullfrogs within the range of California red-legged and foothill yellow legged frog. In 2022 Asa participated in an Advanced Grass Identification workshop held at the Jepson Herbarium and led by Travis Columbus. He is on the Fish and Wildlife Service approved list for Point Arena mountain beaver surveys and has done surveys for Behren's silverspot butterfly. Northern spotted owl, Sonoma tree vole, foothill yellow-legged frog and the California red-legged frog. He has contributed natural resources expertise to more than 200 coastal development projects in Mendocino County.

**Nicole Bejar** graduated from Gonzaga University with a Bachelor's Degree in Environmental Studies and a minor in Biology. After graduating, she worked as an intern for The Nature Conservancy conducting vegetation monitoring for the endangered golden-cheeked warbler. She served as an AmeriCorps member for the Watershed Stewards Program which aims to conserve, restore, and enhance anadromous watersheds for future generations. She worked as a fisheries technician conducting salmonid monitoring and habitat restoration for various agencies, including the California Department of Fish and Wildlife, Pacific States Marine Fisheries Commission, and the Bureau of Land Management. She also has experience planning and implementing northern spotted owl, Sonoma tree vole, and amphibian surveys. In 2022 Nicole participated in an Advanced Grass Identification workshop held at the Jepson Herbarium and led by Travis Columbus. She is on the U.S. Fish and Wildlife Service's approved list for Point Arena mountain beaver and Behren's silverspot butterfly surveys. She completed the Bullfrog Control in California Field Workshop 2021 led by Jeff Alvarez and Jeff Wilcox held at a UC Berkeley Field Station.

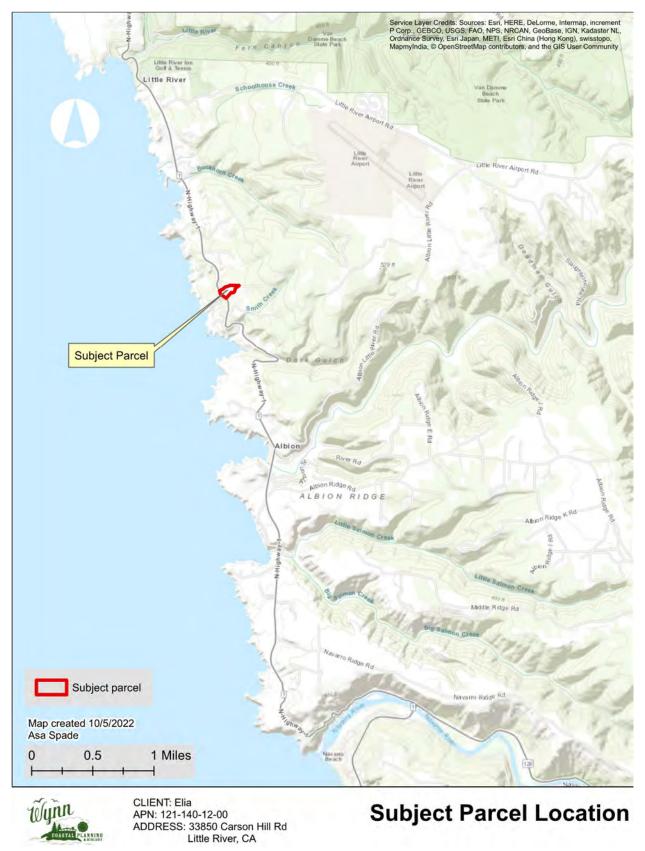


Figure 1. Location of project area in relation to Little River and the Navarro River.

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Figure 2. Aerial photograph of the study area.

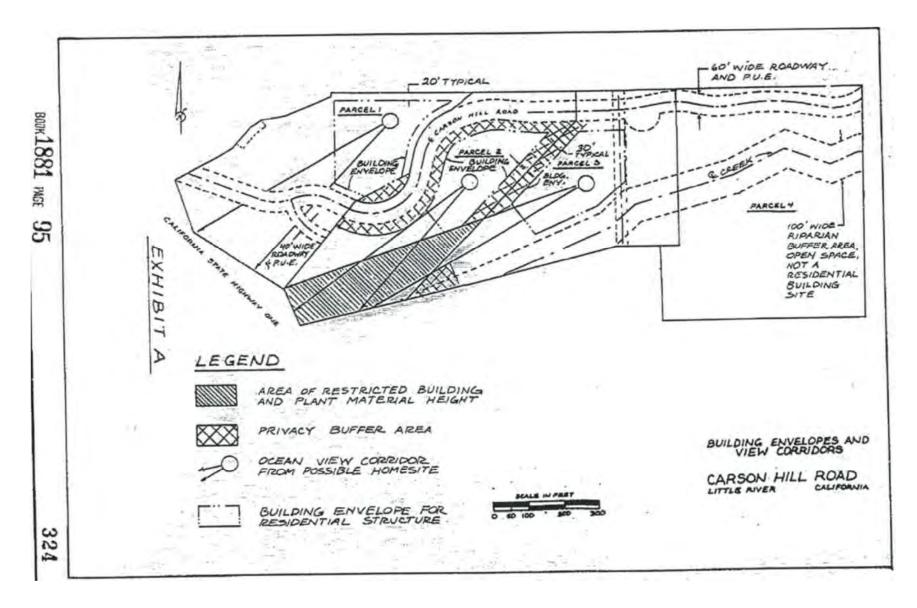


Figure 3. Designation of building envelope for residential structure for the 1989 subdivision.

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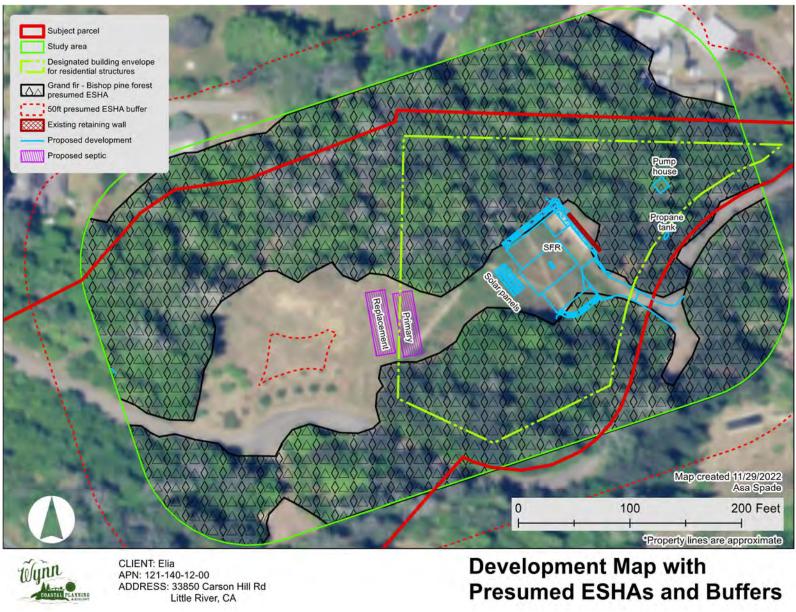


Figure 4. Proposed development relative to presumed ESHA observed at the site. The proposed development avoids ESHA to the greatest extent practicable.

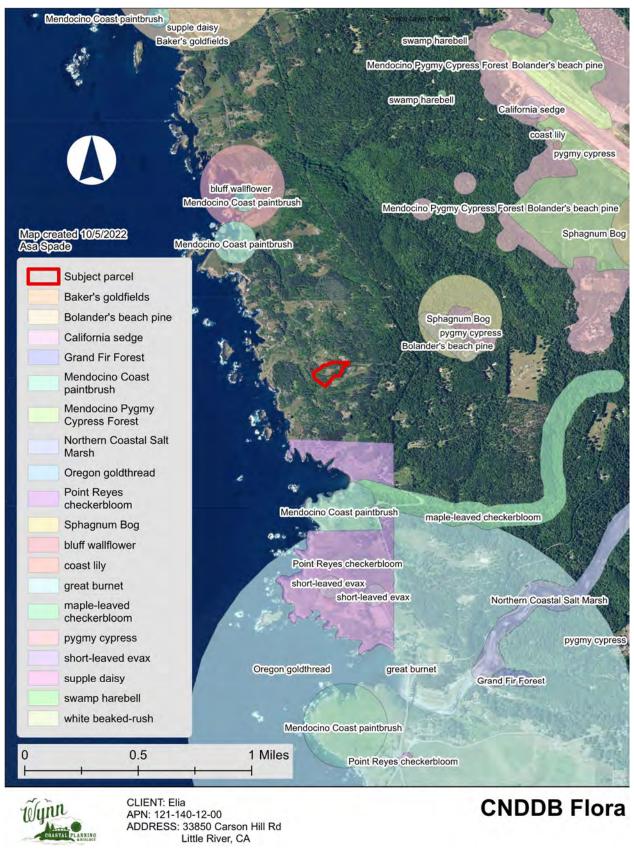


Figure 5. Special status flora reported to CDFW in the proximity of the study area and recorded in the CNDDB database.



Figure 6. Special status fauna reported to CDFW in the proximity of the study area and recorded in the CNDDB database.

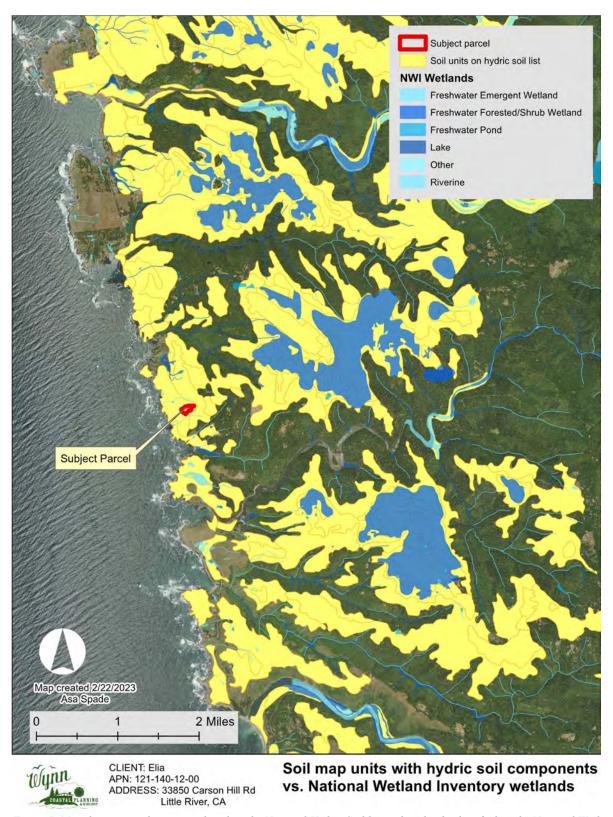


Figure 7. Map depicting soil map units listed on the National Hydric Soil list and wetlands identified on the National Wetland Inventory. It should be noted that being listed on the National Hydric Soil list is not the same thing as meeting the hydric soil parameter for the purpose of a wetland delineation survey.

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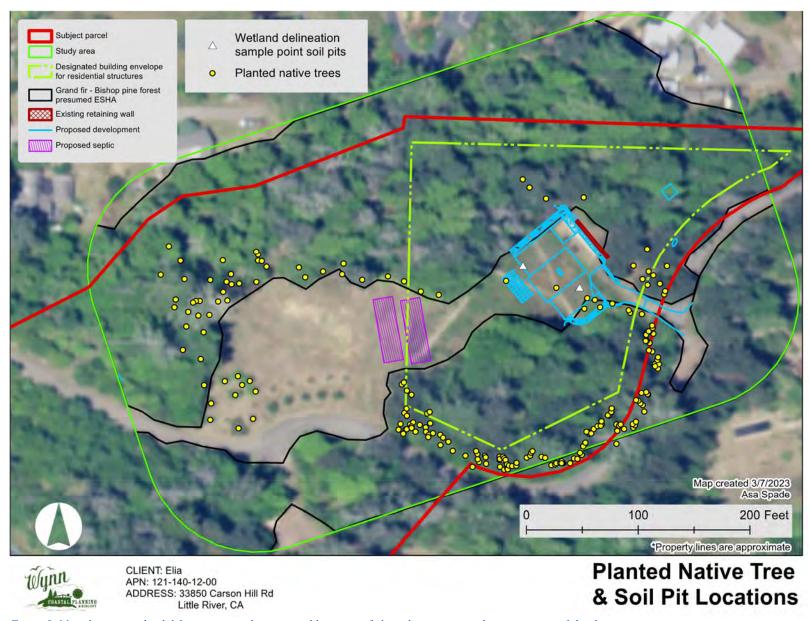


Figure 8. Map showing wetland delineation sample points and locations of planted native trees relative to proposed development.

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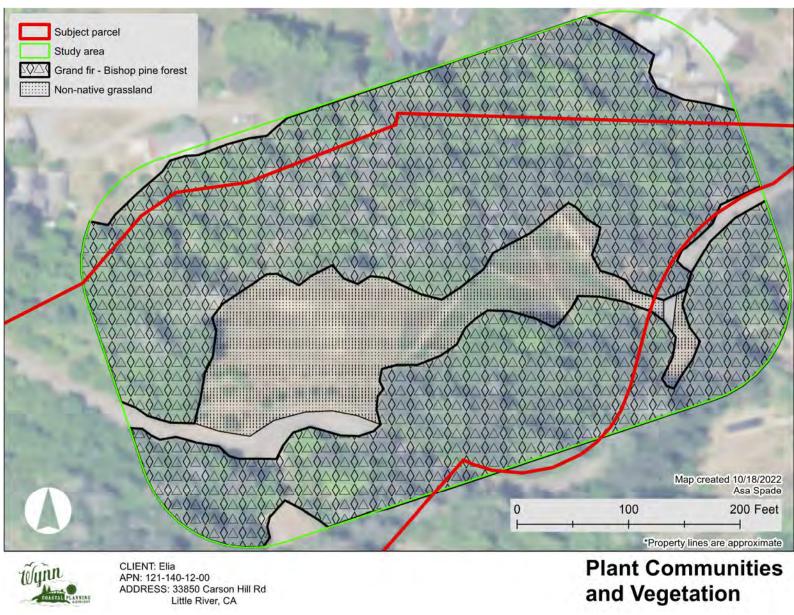


Figure 9. Plant communities and vegetation map. Grand fir – Bishop pine forest is a sensitive natural community.



Figure 10. Non-native grassland dominated by purple-awned wallaby grass in the foreground with grand fir – Bishop pine forest in the background.



Figure 11. A portion of the Grand fir – Bishop pine forest along the northern edge of the clearing.



Figure 12. A portion of the grand fir -Bishop pine forest along the southern edge of the clearing. A couple caged planted fruit trees are present at the lower right of the photo.



Figure 13. A number of young Douglas fir trees planted along the road. Remnants of seedling protector tubes can be seen at the base of some of these trees.



Figure 14. Manzanita brush, a young Bishop pine, and a standing dead Bishop pine that are proposed for removal to accommodate the northern edge of the proposed residence. The removal of this vegetation will not be a significant impact to the forest present.

Table 2. CNDDB Nine-quad search of special status flora, fauna, and communities centered on the Albion quad. Entries in bold are species that occur within the central Albion quad.

Type	Scientific name	Common name	Fedral	State	CDEIA	CRPR
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	None	None	SSC	CAPA
Animals - Amphibians	Rana aurora	northern red-legged frog	None	None	SSC	
Animals - Amphibians	Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	None	None	SSC	
Animals - Amphibians	Rana draytonii	California red-legged frog	Threatened	None	SSC	
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	None	None	SSC	
Animals - Amphibians	Taricha rivularis	red-bellied newt	None	None	SSC	-
Animals - Arachnids	Calileptoneta wapiti	Mendocino leptonetid spider	None	None		
Animals - Birds	Ardea herodias	great blue heron	None	None	2	-
Animals - Birds	Brachyramphus marmoratus	marbled murrelet	Threatened	Endangered	Ú.	-
Animals - Birds	Elanus leucurus	white-tailed kite	None	None	FP	
Animals - Birds	Fratercula cirrhata	tufted puffin	None	None	SSC	
Animals - Birds	Hydrobates homochroa	ashy storm-petrel	None	None	SSC	
Animals - Birds	Nannopterum auritum	double-crested cormorant	None	None	WL	
Animals - Birds	Pandion haliaetus	osprey	None	None	WL	2
Animals - Birds	Pelecanus occidentalis californicus	California brown pelican	Delisted	Delisted	FP	
Animals - Birds	Progne subis	purple martin	None	None	SSC	-
Animals - Birds	Strix occidentalis caurina	Northern Spotted Owl	Threatened	Threatened	-	
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	None	None	SSC	
Animals - Fish	Hesperoleucus venustus navarroensis	northern coastal roach	None	None	SSC	-
Animals - Fish	Oncorhynchus kisutch pop. 4	coho salmon - central California coast ESU	Endangered	Endangered		-
Animals - Fish	Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	Threatened	None	4	_
Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	Threatened	None	40-	-
Animals - Insects	Bombus caliginosus	obscure bumble bee	None	None		-
Animals - Insects	Bombus occidentalis	western bumble bee	None	None	4	-
Animals - Insects	Danaus plexippus plexippus pop. 1	monarch - California overwintering population		None		
Animals - Insects	Plebejus anna lotis	lotis blue butterfly	Endangered	None	-	-
Animals - Insects	Speyeria zerene behrensii	Behrens silverspot butterfly	Endangered	None	L I	2
Animals - Mammals	Aplodontia rufa nigra	Point Arena mountain beaver	Endangered	None	SSC	
Animals - Mammals	Arborimus pomo	Sonoma tree vole	None	None	SSC	
Animals - Mammals	Corynorhinus townsendii	Townsends big-eared bat	None	None	SSC	
Animals - Mammals	Erethizon dorsatum	North American porcupine	None	None		
Animals - Mollusks	Haliotis kamtschatkana	pinto abalone	None	None	0	1
Animals - Mollusks	Helminthoglypta arrosa pomoensis	Pomo bronze shoulderband	None	None		-
Animals - Mollusks	Margaritifera falcata	western pearlshell	None	None	0	
Animals - Reptiles	Emys marmorata	western pond turtle	None	None	SSC	-
Community - Terrestrial	Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	None	None		-
		Coastal Brackish Marsh	None	None		
Community - Terrestrial	ICoastal Brackish Marsh					
Community - Terrestrial	Coastal Brackish Marsh Grand Fir Forest					2
Community - Terrestrial	Grand Fir Forest	Grand Fir Forest	None None	None None	-	1
Community - Terrestrial Community - Terrestrial	Grand Fir Forest Mendocino Pygmy Cypress Forest	Grand Fir Forest Mendocino Pygmy Cypress Forest	None None	None None		2
Community - Terrestrial Community - Terrestrial Community - Terrestrial	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh	None None None	None None None	-	
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog	None None None None	None None None None	-	- - - 2B.1
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen	None None None None	None None None None None		- - - 2B.1
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen	None None None None None	None None None None None		4.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena	None None None None None None	None None None None None None		4.2 18.1
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass	None None None None None None None	None None None None None None None	*	4.2 18.1 18.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular Plants - Vascular Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular Plants - Vascular Plants - Vascular Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.2 18.1
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular Plants - Vascular Plants - Vascular Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales beht grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.2 18.1 4.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass coastal bluff morning-glory	None None None None None None None None	None None None None None None None None		4.2 18.1 1B.2 4.2 18.2 18.1 4.2 2B.1 1B.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola Campanula californica	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass coastal bluff morning-glory swamp harebell	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.2 18.1 4.2 28.1 18.2 18.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass coastal bluff morning-glory swamp harebell California sedge	None None None None None None None None	None None None None None None None None		4.2 18.1 1B.2 4.2 1B.2 1B.1 4.2 2B.1 1B.2 1B.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis cassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica Carex californica	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass Thurbers reed grass Coastal bluff morning-glory swamp harebell California sedge livid sedge	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.1 4.2 28.1 18.2 28.2 24
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass coastal bluff morning-glory swamp harebell California sedge	None None None None None None None None	None None None None None None None None		4.2 18.1 1B.2 4.2 1B.2 1B.1 4.2 2B.1 1B.2 1B.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis cassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica Carex livida Carex lyngbyei	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass coastal bluff morning-glory swamp harebell California sedge Livid sedge Lyngbyes sedge deceiving sedge	None None None None None None None None	None None None None None None None None		4.2 1B.1 1B.2 4.2 1B.2 1B.1 4.2 2B.1 1B.2 1B.2 2B.2 2A 2B.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Uscular Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica Carex livida Carex lyngbyei Carex saliniformis Castilleja ambigua var. humboldtiensis	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass Thurbers reed grass coastal bluff morning-glory swamp harebell California sedge livid sedge Lyngbyes sedge deceiving sedge Humboldt Bay owls-clover	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.1 4.2 28.1 18.2 18.2 28.2 28.2 28.2 18.2 18
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica Carex livida Carex lyngbyei Carex saliniformis	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass coastal bluff morning-glory swamp harebell California sedge livid sedge Lyngbyes sedge deceiving sedge Humboldt Bay owls-clover Oregon coast paintbrush	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.2 18.1 4.2 28.1 18.2 28.2 28.2 2A 28.2 18.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica Carex livida Carex livida Carex livida Carex ligida mendocinensis Castilleja litoralis Castilleja mendocinensis	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass coastal bluff morning-glory swamp harebell California sedge livid sedge Lyngbyes sedge deceiving sedge Humbolt Bay owls-clover Oregon coast paintbrush Mendocino Coast paintbrush	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.1 4.2 28.1 18.2 28.2 28.2 24 28.2 18.2 18.2 28.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica Carex livida Carex livida Carex saliniformis Castilleja ambigua var. humboldtiensis Castilleja ittoralis Castilleja ittoralis Castilleja imendocinensis Ceanothus gloriosus var. exaltatus	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass coastal bluff morning-glory swamp harebell California sedge livid sedge Lyngbyes sedge deceiving sedge Humboldt Bay owls-clover Oregon coast paintbrush	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.1 4.2 28.1 18.2 28.2 24 28.2 24 28.2 18.2 18.2 18.2 18.2
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis bolanderi Calamagrostis cassiglumis Catystegia purpurata ssp. saxicola Campanula californica Carex californica Carex californica Carex livida Carex lyngbyei Carex saliniformis Castilleja ambigua var. humboldtiensis Castilleja itoralis Castilleja mendocinensis Ceanothus gloriosus var. exaltatus Ceanothus gloriosus var. gloriosus	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass coastal bluff morning-glory swamp harebell California sedge livid sedge Lyngbyes sedge deceiving sedge Humboldt Bay owls-clover Oregon coast paintbrush glory brush Point Reyes ceanothus	None None None None None None None None	None None None None None None None None		4.2 18.1 1B.2 4.2 1B.1 4.2 2B.1 1B.2 1B.2 2B.2 2A 2B.2 2A 2B.2 1B.2 1B.2 1B.2 1B.2 4.3 4.3
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica Carex livida Carex livida Carex lyngbyei Carex saliniformis Castilleja ambigua var. humboldtiensis Castilleja iltoralis Castilleja mendocinensis Ceanothus gloriosus var. exaltatus Ceanothus gloriosus var. gloriosus Chorizanthe howellii	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass Thurbers reed grass Coastal bluff morning-glory swamp harebell California sedge Livid sedge Lyngbyes sedge deceiving sedge Humboldt Bay owls-clover Oregon coast paintbrush Mendocino Coast paintbrush glory brush Point Reyes ceanothus Howells spineflower	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 18.2 18.1 4.2 28.1 18.2 28.2 28.2 28.2 18.2 18.2 28.2 18.2 1
Community - Terrestrial Community - Terrestrial Community - Terrestrial Community - Terrestrial Plants - Lichens Plants - Lichens Plants - Vascular	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog Ramalina thrausta Usnea longissima Abronia umbellata var. breviflora Agrostis blasdalei Angelica lucida Arctostaphylos nummularia ssp. mendocinoensis Astragalus agnicidus Calamagrostis bolanderi Calamagrostis bolanderi Calamagrostis crassiglumis Calystegia purpurata ssp. saxicola Campanula californica Carex californica Carex livida Carex lyngbyei Carex saliniformis Castilleja ambigua var. humboldtiensis Castilleja litoralis Castilleja interalis Castonthus gloriosus var. exaltatus Ceanothus gloriosus var. gloriosus Chorizanthe howellii Chrysosplenium glechomifolium	Grand Fir Forest Mendocino Pygmy Cypress Forest Northern Coastal Salt Marsh Sphagnum Bog angels hair lichen Methuselahs beard lichen pink sand-verbena Blasdales bent grass sea-watch pygmy manzanita Humboldt County milk-vetch Bolanders reed grass Thurbers reed grass Coastal bluff morning-glory swamp harebell California sedge livid sedge Lyngbyes sedge deceiving sedge Humboldt Bay owls-clover Oregon coast paintbrush Mendocino Coast paintbrush glory brush Point Reyes ceanothus Howells spineflower Pacific golden saxifrage	None None None None None None None None	None None None None None None None None		4.2 18.1 18.2 4.2 18.1 18.1 18.2 18.1 18.2 28.2 18.2 28.2 18.2 28.2 18.2 1
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Plants - Vascular	Hesperevax sparsiflora var. brevifolia	short-leaved evax	None	None	-	18.2
Plants - Vascular	Hesperocyparis macrocarpa	Monterey cypress	None	None		1B.2
Plants - Vascular	Hesperocyparis pygmaea	pygmy cypress	None	None		18.2
Plants - Vascular	Hosackia gracilis	harlequin lotus	None	None	4	4.2
Plants - Vascular	Juncus supiniformis	hair-leaved rush	None	None	4	2B.2
Plants - Vascular	Kopsiopsis hookeri	small groundcone	None	None	÷.	2B,3
Plants - Vascular	Lasthenia californica ssp. bakeri	Bakers goldfields	None	None	-	1B.2
Plants - Vascular	Lasthenia californica ssp. macrantha	perennial goldfields	None	None		1B.2
Plants - Vascular	Lathyrus palustris	marsh pea	None	None	-	28.2
Plants - Vascular	Lilium maritimum	coast lily	None	None	-	1B.1
Plants - Vascular	Lycopodium clavatum	running-pine	None	None		4.1
Plants - Vascular	Microseris borealis	northern microseris	None	None	-	28,1
Plants - Vascular	Mitellastra caulescens	leafy-stemmed mitrewort	None	None	-	4.2
Plants - Vascular	Packera bolanderi var. bolanderi	seacoast ragwort	None	None	-	28.2
Plants - Vascular	Phacelia insularis var. continentis	North Coast phacelia	None	None	-1	18.2
Plants - Vascular	Pinus contorta ssp. bolanderi	Bolanders beach pine	None	None	2	1B.2
Plants - Vascular	Piperia candida	white-flowered rein orchid	None	None	÷	1B.2
Plants - Vascular	Pityopus californicus	California pinefoot	None	None	60	4.2
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	None	None	+	4.2
Plants - Vascular	Rhynchospora alba	white beaked-rush	None	None	-	2B.2
Plants - Vascular	Sanguisorba officinalis	great burnet	None	None	-	28.2
Plants - Vascular	Sidalcea calycosa ssp. rhizomata	Point Reyes checkerbloom	None	None	-	1B.2
Plants - Vascular	Sidalcea malachroides	maple-leaved checkerbloom	None	None	-	4.2
Plants - Vascular	Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	None	None	-	1B.2
Plants - Vascular	Sidalcea malviflora ssp. purpurea	purple-stemmed checkerbloom	None	None	4	1B.2
Plants - Vascular	Streptanthus glandulosus ssp. hoffmanii	Hoffmans bristly jewelflower	None	None	ér III	1B.3
Plants - Vascular	Trifolium buckwestiorum	Santa Cruz clover	None	None	4	1B.1
Plants - Vascular	Trifolium trichocalyx	Monterey clover	Endangered	Endangered	-	1B.1
Plants - Vascular	Veratrum fimbriatum	fringed false-hellebore	None	None	-	4.3
	*Bolded entries were recorded in the Albion	Ouad				-

### U.S. Fish and Wildlife Service BNational Wetlands Inventory

## 33850 Carson Hill Rd Little River



October 6, 2022

#### Wetlands

Estuarine and Marine Deepwater

PBS Received 3-8-2023 Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake Other

Riverine

be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should

#### APN 121-140-12

Appendix A Page 1 of 1 National Wetlands Inventory (NWI) This page was produced by the NWI mapper

U2023\Bdtaritica Satesey Reportroduct of the National

Department of Agriculture

**NRCS** 

Natural Resources Conservation Service Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource 27 Report for Mendocino County, Western Part, California

33850 Carson Hill Rd Little River



PBS Received 3-8-2023

APN 121-140-12

# **Preface**

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# **How Soil Surveys Are Made**

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Elia Biological Scoping Survey Report March 8, 2023

Custom Soil Resource Report

2023 Botanical Survey Report

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



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#### MAP LEGEND

#### Area of Interest (AOI)

Area of Interest (AOI)

#### Soils

Soil Map Unit Polygons



Soil Map Unit Lines



Soil Map Unit Points

#### Special Point Features

ဖ

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

**Gravelly Spot** 

Landfill Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Sodic Spot

Slide or Slip

å

Spoil Area Stony Spot

Very Stony Spot

Ŷ

Wet Spot Other

Δ

Special Line Features

#### **Water Features**

Streams and Canals

#### Transportation

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Rails

Interstate Highways

**US Routes** 

Major Roads

00

Local Roads

#### Background

Aerial Photography

#### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Mendocino County, Western Part, California Survey Area Data: Version 18, Sep 7, 2022

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Apr 7, 2022—May 31. 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
116	Bruhel-Shinglemill complex, 2 to 15 percent slopes	3.8	100.0%
Totals for Area of Interest		3.8	100.0%

## **Map Unit Descriptions**

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

### Mendocino County, Western Part, California

#### 116—Bruhel-Shinglemill complex, 2 to 15 percent slopes

#### **Map Unit Setting**

National map unit symbol: hmkl Elevation: 50 to 1,300 feet

Mean annual precipitation: 35 to 55 inches Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 250 to 330 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Bruhel and similar soils: 50 percent Shinglemill and similar soils: 25 percent

Minor components: 23 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Bruhel**

#### Setting

Landform: Hills, mountains

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank, side slope

Down-slope shape: Concave Across-slope shape: Convex

Parent material: Residuum weathered from sandstone

#### Typical profile

H1 - 0 to 4 inches: loam H2 - 4 to 21 inches: clay loam

H3 - 21 to 41 inches: gravelly clay loam H4 - 41 to 45 inches: weathered bedrock

#### **Properties and qualities**

Slope: 2 to 15 percent

Depth to restrictive feature: 40 to 60 inches to paralithic bedrock

Drainage class: Well drained

Runoff class: Medium

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

Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: F004BL102CA - Salt-affected marine terraces with eolian sand

parent materials Hydric soil rating: No

#### **Description of Shinglemill**

#### Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Concave Across-slope shape: Concave

Parent material: Fluviomarine deposits derived from sedimentary rock

#### **Typical profile**

H1 - 0 to 8 inches: loam
H2 - 8 to 15 inches: loam
H3 - 15 to 25 inches: clay loam
H4 - 25 to 63 inches: sandy clay

#### **Properties and qualities**

Slope: 2 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to

moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 12 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: High (about 9.6 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Ecological site: F004BL102CA - Salt-affected marine terraces with eolian sand

parent materials

Hydric soil rating: Yes

#### **Minor Components**

#### **Flumeville**

Percent of map unit: 5 percent Landform: Marine terraces Hydric soil rating: Yes

#### **Abalobadiah**

Percent of map unit: 5 percent

Hydric soil rating: No

#### **Tropaquepts**

Percent of map unit: 5 percent Landform: Marine terraces Hydric soil rating: Yes

#### Gibney

Percent of map unit: 5 percent Hydric soil rating: No

#### Unnamed, gentler or steeper slopes

Percent of map unit: 3 percent Hydric soil rating: No

Elia Biological Scoping Survey Report March 8, 2023 CDP\_2022-0027

Custom Soil Resource Report

2023 Botanical Survey Report

Hydric soil rating: No

PBS Received 3-8-2023 APN 121-140-12

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## CDP\_2022-0027

oject/Site: 33850 carson Hill Rd		Dit /Oavatu	LIHI	e River/
oplicant/Owner: Elia				State: CA Sampling Point: SP 01
vestigator(s): ASO Spode, Nicole Ho				
ndform (hillslope, terrace, etc.): hillslope				
bregion (LRR):	Lat: 39	1.247	-05	Long: -123.77547 Datum: NAD
il Map Unit Name: Bruhe   Shinglemi	1 con	PIPX.	2-15	1. STOPENWI classification:none
e climatic / hydrologic conditions on the site typical for this			/	
e Vegetation, Soil, or Hydrology si	gnificantly	disturbed?	Are "	"Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology na				eded, explain any answers in Remarks.)
JMMARY OF FINDINGS - Attach site map	showing	samplin	g point le	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No	-		J.	
Hydric Soil Present? Yes No	-	is th	e Sampled	Area
Vetland Hydrology Present? Yes No		with	in a Wetlan	nd? Yes No
Remarks: No observable indicators of wetle A tre vicinity of a proposed residence Bruhel Shingle mill complex soil is on to		e recommend Hy	nthis ar nendation dric Soi	pea but a sample point was conducted of a Mendocino County Planner breause
EGETATION – Use scientific names of plant				
ree Stratum (Plot size: 30 m)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
Pinus muricata	0	Y	UPL	Number of Dominant Species That Are OBL, FACW, or FAC:  (A)
Abits grandis	3	2	FACU	
nothalitho curpus den riflorus	1	N	UPL	Total Number of Dominant Species Across All Strata:  5 (B)
Psuchotran menzeii	+	N	FACU	
	10	= Total Co	ver 5/2	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
apling/Shrub Stratum (Plot size: 2 6 )	-	1	7	Prevalence Index worksheet:
Arctostandus columbianum	3		UPL	Total % Cover of: Multiply by:
vaccini'm ovatum		N	UPL	OBL species x 1 =
Moreila californica		N	FACW	FACW species x 2 =
				FAC species x 3 =
	Co	T	3/ -	FACU species x 4 =
lerb Stratum (Plot size: 10 )	-0	= Total Co	ver /1.8	UPL species x 5 =
Hypochaeris radicata	3	N	FACU	Column Totals: (A) (B)
LUZULA compsa	1	N	FAC	Prevalence Index = B/A =
Rytidosperma pericillicitum	10	Y	UPL	Hydrophytic Vegetation Indicators:
Ins dovalasiana	2	N	UPL	1 - Rapid Test for Hydrophytic Vegetation
Avena barbata	15	7	UPL	2 - Dominance Test is >50%
Prendrim aquilinem		N	FACU	3 - Prevalence Index is ≤3.0¹
Briza maxima	10	Y	UPL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Lindin bienne	+	N	UPL	data in Remarks or on a separate sheet)
stachys naida	+	_N	FACW	5 - Wetland Non-Vascular Plants <sup>1</sup>
0				Problematic Hydrophytic Vegetation¹ (Explain)
1		in 1		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	+ 42 1	total Co	ver 24	/ 22 Experim amost distanced of problemation
Mondy Vino Stratum (Diataina) 10 = 1	7		FACU	
Voody Vine Stratum (Plot size: 10 m)	2			Liveranhidia
Noody Vine Stratum (Plot size: 10 m)  2 Upu S UFS INUS	2	_ N		Hydrophytic Vegetation
Noody Vine Stratum (Plot size: 10 m)  2 Upu S UPS INUS	2	= Total Co		Vegetation Present? Yes No

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	Section of the second	to the dep	th needed to docun			or comm	in the absence	of indicators.)	
Depth inches)	Color (moist)	%	Color (moist)	x Feature %	s Type <sup>↑</sup>	Loc²	Texture	Remar	ks
1-4	10483/2	100			_	_	Sondy		
13	10406/6	70	104/2	30	0	M	clay logy	Large so	d grains
- 13	1048010	70	TOAKTIZ	-		101	clay was	The second second	- and did
3-18-	+10YR6/6	95	3 163/16				boos	Partially o	on colidat
dric Soil Histosol Histic E Black H Hydroge	Indicators: (Applic	cable to all	=Reduced Matrix, CS LRRs, unless other Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed I Depleted Matrix	wise not (S5) (S6) //ineral (F //watrix (F2	ed.) 1) (except		Indicate 2 ci Rec ) Ver	cation: PL=Pore Lining ors for Problematic H m Muck (A10) d Parent Material (TF2) y Shallow Dark Surfacter (Explain in Remarks	ydric Soils <sup>3</sup> : ) e (TF12)
	ark Surface (A12)		Redox Dark Sur				3Indicate	ors of hydrophytic vege	etation and
	Mucky Mineral (S1)		Depleted Dark S	Surface (F	<del>-</del> 7)		wetla	and hydrology must be	present,
	Gleyed Matrix (S4)		Redox Depress	ions (F8)			unle	ss disturbed or probler	natic.
estrictive	Layer (if present):								
Type:							100		- /
1,00.									6 4
Depth (in		il Indi	caters were	0b5er	ved		Hydric Soi	Present? Yes	No
Depth (in emarks:	to hydric so	il Indi	caters were	Obser	ved		Hydric Soi	I Present? Yes	No
Depth (in emarks:	ogy		caters were	Obser	rved		Hydric Soi	I Present? Yes	No
Depth (in lemarks:	ogy  drology Indicators				rved				
Depth (in emarks: )  /DROLO  /etland Hy  /imary Indi	oGY redrology Indicators		d; check all that appl	y)		except	Seco	ondary Indicators (2 or	more required)
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Depth (in lemarks:	or o	inagery (Eve Surface	d: check all that appli  Water-Stai  MLRA  Salt Crust  Aquatic Int  Hydrogen  Oxidized F  Presence  Recent Iro  Stunted or  Other (Exp.  (B8)	y) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct r Stressec clain in Re ches): ches): ches):	ves (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C- ion in Tille d Plants (D emarks)	Living Ro 4) ad Soils (O 01) (LRR	Secondary	ondary Indicators (2 or Water-Stained Leaves 4A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A Geomorphic Position (I Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D	more required) (B9) (MLRA 1, 2, D) ole (C2) erial Imagery (C9 D2) 6) (LRR A) cs (D7)
YDROLO Vetland Hy Primary Indi Surface High Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Water Table Saturation F includes ca	or o	imagery (E ye Surface of Yes Yes	d; check all that appli  Water-Stai  MLRA  Salt Crust  Aquatic Int  Hydrogen  Oxidized F  Presence  Recent Iro  Stunted or  Other (Exp.  (B8)  No Depth (int)  No Depth (int)	y) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct Reduct Stresses colain in Reduct ches): ches): ches):	ves (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C- ion in Tille d Plants (D emarks)	Living Ro 4) ed Soils (0 01) (LRR	Secondary	ondary Indicators (2 or Water-Stained Leaves 4A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A Geomorphic Position (IShallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D5) Frost-Heave Hummock	more required) (B9) (MLRA 1, 2, D) ole (C2) erial Imagery (C9 D2) 6) (LRR A) cs (D7)
YDROLO Vetland Hy Primary Indi Surface High Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Water Table Saturation F Includes ca	or o	imagery (E ye Surface of Yes Yes	d; check all that apply  Water-Stal  MLRA  Salt Crust  Aquatic Int  Hydrogen  Oxidized F  Presence  Recent Iro  Stunted or  Other (Exp.  (B8)  No Depth (int)	y) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct Reduct Stresses colain in Reduct ches): ches): ches):	ves (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C- ion in Tille d Plants (D emarks)	Living Ro 4) ed Soils (0 01) (LRR	Secondary	ondary Indicators (2 or Water-Stained Leaves 4A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A Geomorphic Position (IShallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D5) Frost-Heave Hummock	more required) (B9) (MLRA 1, 2) (B9) (MLRA 1, 2) (B9) (C2) (B1) (C2) (B2) (B3) (C3) (B4) (C4) (C5) (C5) (C5) (C5) (C5) (C6) (LRR A) (C6) (C7)
YDROLC Vetland Hy Primary Indi Surface High Wi Saturati Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Wa Water Table Saturation Fincludes ca	or o	Imagery (Eve Surface (YesYes	d; check all that apply  Water-Stal  MLRA  Salt Crust  Aquatic Int  Hydrogen  Oxidized F  Presence  Recent Iro  Stunted or  Other (Exp.  (B8)  No Depth (int.  No Depth (int.  No Depth (int.)	y) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct r Stressec clain in Re ches): ches): ches): photos, p	ves (B9) (e and 4B) es (B13) edor (C1) eres along ed Iron (C- ion in Tille d Plants (Demarks)	Living Ro 4) ad Soils (O 01) (LRR /	Secondary Second	ondary Indicators (2 or Water-Stained Leaves 4A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A Geomorphic Position (IShallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D5) Frost-Heave Hummock	more required) (B9) (MLRA 1, 2, D) ole (C2) erial Imagery (C9 D2) 6) (LRR A) cs (D7)
POROLO Vetland Hy Vrimary Indi Surface High Wi Saturati Water N Sedime Drift De Algal M Iron De Surface Inundat Sparsel Surface Wa Vater Table Surface Wa Vater Table Saturation Fincludes ca	or o	Imagery (Eve Surface (YesYes	d; check all that appli  Water-Stai  MLRA  Salt Crust  Aquatic Int  Hydrogen  Oxidized F  Presence  Recent Iro  Stunted or  Other (Exp.  (B8)  No Depth (int)  No Depth (int)	y) ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct r Stressec clain in Re ches): ches): ches): photos, p	ves (B9) (e and 4B) es (B13) edor (C1) eres along ed Iron (C- ion in Tille d Plants (Demarks)	Living Ro 4) ad Soils (O 01) (LRR /	Secondary Second	ondary Indicators (2 or Water-Stained Leaves 4A, and 4B) Drainage Patterns (B10 Dry-Season Water Tab Saturation Visible on A Geomorphic Position (IShallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D5) Frost-Heave Hummock	more required) (B9) (MLRA 1, 2, D) ole (C2) erial Imagery (C9 D2) 6) (LRR A) cs (D7)

CDP\_2022-0027

pplicant/Owner: EII Q			State: CA Sampling Point: SPV2
vestigator(s): ASO Spade, Wicole Hea	Sac Sac	tion Township Ra	nge: SI7 TIAN RI7W
vestigator(s).	VELQ Sec	al relief (concerve	sometimes sometimes (State (M)) 7 P
indiform (nillslope, terrace, etc.):	L00	2 43-03	convex, none): <u>convex</u> Slope (%): <u>26</u> _ Long: <u>-123,77753</u> Datum: <u>NAD8</u>
		' /	NWI classification:non@_
re climatic / hydrologic conditions on the site typical for			
re Vegetation, Soil, or Hydrology	significantly dist	urbed? Are '	"Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology	_ naturally proble	matic? (If ne	eeded, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site ma	p showing sa	mpling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes			
Hydric Soil Present? Yes		is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes		The second second	
Remarks: No observable indicators of wetler in the vicinity of a proposed residence Bruhe Shinglemill complex soil is	after recon	in this area !	but a sample point was conducted a Mandocino County Planner because
EGETATION – Use scientific names of pl			
200		ominant Indicator	Dominance Test worksheet:
	% Cover S	pecies? Status	Number of Dominant Species
sequoia remperinens	G	Y UPL	That Are OBL, FACW, or FAC: (A)
a Abier grand is		N FACU	Total Number of Dominant Species Across All Strata:
4. Prupatruga men zei i		N FACU	
nothilithocarpor dentitions	AL JO =	Total Cover 10//4	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1. Backenir pilularis		Y UPL	Total % Cover of: Multiply by:
2. Vaccinum overtum		N UPL	OBL species x 1 =
3. Cotonea At franchetti		UPL	FACW species x 2 =
5. North rationica		FACW	FAC species x 3 =
o. No CHE PARTITO PUCT	15 =	Total Cover 7.5	FACU species x 4 =
Herb Stratum (Plot size: 10 )		1010100101	UPL species x 5 =
1. Holeus langtue	10	Y FAC	Column Totals: (A) (B)
2. Rytidospermen penicilian	0 10	A OBT	Prevalence Index = B/A =
3. Hypocheros radicato	3	N FACU	Hydrophytic Vegetation Indicators:
4. c. rium vulgare		HACU	1 - Rapid Test for Hydrophytic Vegetation
5. Inis devalation (		UPL	2 - Dominance Test is >50%
Smirula contagulis		UPL	3 - Prevalence Index is ≤3.0¹
8. Pely them white		FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9. Plantas Igan estata		FACU	5 - Wetland Non-Vascular Plants <sup>1</sup>
10. TUNCOS EFFOROS	1	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
11.		V	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1010	3+33-12	Total Cover 34.2	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 10/ )  1. PURUS USTAUC	1 3	N FACU	al constant
	1	N FACU	Hydrophytic Vegetation
2. Lonice 9 his pidul a	(3	Total Cover	Present? Yes No
% Bare Ground in Herb Stratum		otal Gover	
Remarks: Area was moved somewh			

Elia CDP\_2022-0027 Sampling Point: \_\_\_\_\_5 PØZ

Depth _	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
7-8	104R3/2	100			~		10am	sand grains visited
5-18+	104R312	08	10 VR6/6	7	0	TVT	sandy co	00
			LUYR5/3	12	1	KA		pockets of clay
			Totkalo					- CONTRACTOR OF CIRCY
			-		=			
			=Reduced Matrix, CS LRRs, unless other			d Sand Gr		cation: PL=Pore Lining, M=Matrix.
Histosol (A		ible to all	Sandy Redox (S		cu.,			m Muck (A10)
	pedon (A2)		Stripped Matrix					d Parent Material (TF2)
Black Hist			Loamy Mucky N		1) (except	MLRA 1)		y Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed I					er (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix					The second section of the second section of the second section of the second section s
	k Surface (A12)		Redox Dark Sur				3Indicate	ors of hydrophytic vegetation and
	cky Mineral (S1)		Depleted Dark S		7)			and hydrology must be present,
	eyed Matrix (S4)		Redox Depress	ions (F8)			unles	ss disturbed or problematic.
	yer (if present):							
Type:			_					
							Herdela Call	Present? Yes No
N	o hydric sai	I indic	a foto were ol	o Serve	d		Hydric Soil	Tresent: Tes No
POROLOG	y hydric sai				d		Hydric Soli	Tresent: Tes No
YDROLOG Vetland Hydr	y rology Indicators:		d; check all that apply	<i>(</i> )			Seco	ndary Indicators (2 or more required)
PROLOG Vetland Hydr rimary Indicat Surface W	rology Indicators: tors (minimum of or		d; check all that applo	/) ned Leav	es (B9) (e:	xcept	Seco	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2
PROLOG  Vetland Hydr  rimary Indical  Surface W  High Wate	o hydric Sai		d; check all that apply Water-Stai MLRA	/) ned Leav	es (B9) (e:	xcept	<u>Seco</u> v	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
PROLOG  Vetland Hydr  rimary Indicat  Surface W  High Wate  Saturation	o hydric Sai sy rology Indicators: tors (minimum of or /ater (A1) er Table (A2) 1 (A3)		d; check all that apply Water-Stai MLRA Salt Crust	/) ned Leav 1, <b>2, 4A</b> , a (B11)	es (B9) (e.	ксерт	<u>Seco</u> v	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) ( <b>MLRA 1, 2</b> <b>4A, and 4B</b> ) Orainage Patterns (B10)
PROLOG  Petland Hydr  rimary Indical  Surface W  High Wate  Saturation  Water Mar	ry rology Indicators: tors (minimum of or later (A1) er Table (A2) (A3) rks (B1)		d; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv	ned Leave 1, 2, 4A, a (B11) vertebrate	es (B9) (e: and 4B) s (B13)	xcept	<u>Seco</u> V C	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
PROLOG Petland Hydr rimary Indicat Surface W High Wate Saturation Water Mar Sediment	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2)		d; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv	ned Leavu 1, 2, 4A, a (B11) vertebrate Sulfide Od	es (B9) (e: and 4B) s (B13) dor (C1)		Seco V E E E E E S	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3
PROLOG Petland Hydr rimary Indicat Surface W High Wate Saturation Water Mar Sediment Drift Depo	rology Indicators: tors (minimum of or vater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3)		d; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen	ned Leavu 1, 2, 4A, a (B11) vertebrate Sulfide Od	es (B9) (e: and 4B) s (B13) dor (C1) res along	Living Roc	Seco V E E Sots (C3) C	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (Cs
PROLOG Petland Hydr rimary Indicat Surface W High Wate Saturation Water Mar Sediment Drift Depo	rology Indicators: tors (minimum of or vater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4)		d; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R	ned Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc chizosphe of Reduce	es (B9) (e: and 4B) s (B13) dor (C1) res along l	Living Roc	Seco	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (Cseomorphic Position (D2) Shallow Aquitard (D3)
PROLOG  Petland Hydr rimary Indical Surface W High Wate Saturation Water Mar Sediment Drift Depo Algal Mate Iron Depos	rology Indicators: tors (minimum of or later (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)		d; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence o	ned Leave 1, 2, 4A, a (B11) rertebrate Sulfide Oc chizosphe of Reduce n Reduction	es (B9) (exand 4B) s (B13) dor (C1) res along led fron (C4 on in Tilled	Living Roc ) d Soils (C6	Seco  V  L  Sots (C3)  Sots (C3)  Sots (C3)	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (Cs) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
PROLOG  Petland Hydr rimary Indical Surface W High Wate Saturation Water Mar Sediment Drift Depo Algal Mat ( Iron Depos Surface So	rology Indicators: tors (minimum of or later (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)	ne required	d; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or	ned Leave 1, 2, 4A, a (B11) rertebrate Sulfide Oc thizosphe of Reduce n Reduction	es (B9) (exand 4B) s (B13) dor (C1) res along to diron (C4 on in Tilled Plants (D	Living Roc ) d Soils (C6	Seco  V  C  Sots (C3)  S  S  S  S  S  S  S  S  S  S  S  S  S	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
PROLOG  Fetland Hydres  Surface Western Mare  Saturation  Water Mare  Sediment  Drift Deponication  Algal Mate  Iron Deposication  Surface Sediment  Iron Deposication  Iron Deposication  Iron Deposication  Iron Deposication  Inundation	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) n Visible on Aerial In	ne required	d; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp	ned Leave 1, 2, 4A, a (B11) rertebrate Sulfide Oc thizosphe of Reduce n Reduction	es (B9) (exand 4B) s (B13) dor (C1) res along to diron (C4 on in Tilled Plants (D	Living Roc ) d Soils (C6	Seco  V  C  Sots (C3)  S  S  S  S  S  S  S  S  S  S  S  S  S	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (Cs) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
PROLOG  Vetland Hydrogen Frimary Indicat  Surface Work High Water Mare Saturation Water Mare Sediment Drift Depondation Iron Deponder Surface Solinundation Sparsely Work Sparsely Work Standard Standard Standard Standard Sparsely Work Standard Standard Sparsely Work Standard Standar	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) n Visible on Aerial In /egetated Concave	ne required	d; check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iron Stunted or Other (Exp	ned Leave 1, 2, 4A, a (B11) rertebrate Sulfide Oc thizosphe of Reduce n Reduction	es (B9) (exand 4B) s (B13) dor (C1) res along to diron (C4 on in Tilled Plants (D	Living Roc ) d Soils (C6	Seco  V  C  Sots (C3)  S  S  S  S  S  S  S  S  S  S  S  S  S	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
PROLOG  Vetland Hydrogrimary Indicator  Surface Words High Water  Saturation  Water Mare  Sediment  Drift Deponion  Algal Mater  Iron Deposion  Surface Sedinundation  Sparsely Wileld Observal	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) er (A3) rks (B1) Deposits (B2) esits (B3) or Crust (B4) esits (B5) oil Cracks (B6) evisible on Aerial In //egetated Concave entions:	ne required nagery (B' Surface (	d; check all that apply  Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen  Oxidized R  Presence of Recent Iron  Stunted or  Other (Exp	ned Leave 1, 2, 4A, a (B11) vertebrate Sulfide Od hizosphe of Reduce n Reducti Stressed lain in Re	es (B9) (exand 4B) s (B13) dor (C1) res along to diron (C4 on in Tilled Plants (D	Living Roc ) d Soils (C6	Seco  V  C  Sots (C3)  S  S  S  S  S  S  S  S  S  S  S  S  S	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (Cs) Geomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
PROLOG Vetland Hydr rimary Indical Surface W High Wate Saturation Water Mar Sediment Drift Depoi Algal Mate Iron Depoi Surface So Inundation Sparsely V ield Observa	rology Indicators: tors (minimum of or /ater (A1) er Table (A2) er (A3) erks (B1) Deposits (B2) esits (B3) er Crust (B4) esits (B5) eoil Cracks (B6) er Visible on Aerial In /egetated Concave entions: Present?	ne required nagery (B' Surface (	d; check all that apply  Water-Stai  MLRA  Salt Crust  Aquatic Inv  Hydrogen  Oxidized R  Presence of Recent Iron  Stunted or  Other (Exp  B8)	ned Leave 1, 2, 4A, a (B11) vertebrate Sulfide Od hizosphe of Reduce n Reducti Stressed lain in Re	es (B9) (exand 4B) s (B13) dor (C1) res along I d Iron (C4 on in Tilleo Plants (Di	Living Roo ) d Soils (C6 1) (LRR A	Seco  V  C  Sots (C3)  S  S  S  S  S  S  S  S  S  S  S  S  S	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (Cs) Geomorphic Position (D2) Shallow Aquitard (D3) (AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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