COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
860 NORTH BUSH STREET · UKIAH · CALIFORNIA · 95482
120 WEST FIR STREET · FT. BRAGG · CALIFORNIA · 95437

JULIA KROG, DIRECTOR
TELEPHONE: 707-234-6650
FAX: 707-463-5709
FB PHONE: 707-964-5379
FB FAX: 707-961-2427
pbs@mendocinocounty.org
www.mendocinocounty.org/pbs

October 10, 2023

Planning – Fort Bragg
Department of Transportation
Environmental Health - Fort Bragg
Building Inspection - Fort Bragg
Assessor
Air Quality Management
Department of Forestry/ CalFire
-Land Use
-Resource Management
Department of Fish and Wildlife
California Coastal Commission
County Addresser
Cloverdale Rancheria
Redwood Valley Rancheria
Sherwood Valley Band of Pomo Indians
Mendocino Fire District
Mendocino Unified School District

CASE#: CDP_2022-0029
DATE FILED: 9/12/2022
OWNER/APPLICANT: BARBARA FISHELSON
AGENT: BRIAN MANNING/OAK SPRINGS STUDIO
REQUEST: Revised Standard Coastal Development Permit for the construction of a 1,218 sq. ft. Single-Family Residence; grading for house and a 200± foot driveway from Sea Pines Lane; parking for 4 vehicles; clearing of approximately 1 acre of vegetation; construction of new septic. Previous referral dated 1/11/2023.
LOCATION: In the coastal zone, 1.8± miles north of Mendocino Town Center, lying on the south side of Sea Pines Lane (Private), 0.2± miles east of its intersection with State Route 1 (SR 1), located at 12825 Sea Pines Lane, Mendocino; APN: 118-210-29.
SUPERVISORIAL DISTRICT: 4
STAFF PLANNER: MARK CLISER
RESPONSE DUE DATE: October 24, 2023

PROJECT INFORMATION CAN BE FOUND AT:
www.mendocinocounty.org
Select "Government" from the drop-down; then locate Planning and Building Services/Public Agency Referrals.

Mendocino County Planning & Building Services is soliciting your input, which will be used in staff analysis and forwarded to the appropriate public hearing. You are invited to comment on any aspect of the proposed project(s). Please convey any requirements or conditions your agency requires for project compliance to the project coordinator at the above address, or submit your comments by email to pbs@mendocinocounty.org. Please note the case number and name of the project coordinator with all correspondence to this department.

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

☐ No comment at this time.

☐ Recommend conditional approval (attached).

☐ Applicant to submit additional information (attach items needed, or contact the applicant directly, copying Planning and Building Services in any correspondence you may have with the applicant)

☐ Recommend denial (Attach reasons for recommending denial).

☐ Recommend preparation of an Environmental Impact Report (attach reasons why an EIR should be required).

☐ Other comments (attach as necessary).

REVIEWED BY:

Signature _____ Department _____ Date _____

REPORT FOR COASTAL DEVELOPMENT PERMIT

CASE: CDP_2022-0029

OWNER: BARBARA FISHELSON

APPLICANT: BARBARA FISHELSON

REQUEST: Revised Standard Coastal Development Permit for the construction of a 1,218 sq. ft. Single-Family Residence; grading for house and a 200± foot driveway from Sea Pines Lane; parking for 4 vehicles; clearing of approximately 1 acre of vegetation; construction of new septic. Previous referral dated 1/11/2023.

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APN/S: 118-210-29-00

PARCEL SIZE: 10± Acres

GENERAL PLAN: RURAL RESIDENTIAL (RR10PD:R)

ZONING: RURAL RESIDENTIAL (RR:10)

EXISTING USES: Undeveloped

DISTRICT: 4 (Gjerde)

RELATED CASES: None

	ADJACENT GENERAL PLAN	ADJACENT ZONING	ADJACENT LOT SIZES	ADJACENT USES
NORTH:	Rural Residential (RR10PD)	Rural Residential (RR)	23.4± Acres	Residential
EAST:	Remote Residential / ~~Rural Residential~~ Planned Development (RMR20 / ~~RR10PD)~~	Remote Rural / Rural Residential (RMR / RR)	10± Acres	Residential
SOUTH:	Open Space / Rural Residential Planned Development (OSDPR / RR10PD)	Open Space / Rural Residential (OS / RR)	59.4±; 19.5± Acres	Open Space / Residential
WEST:	Rural Residential Planned Development (RR10PD)	Rural Residential (RR)	10± Acres	Residential

REFERRAL AGENCIES

LOCAL
- ☒ Air Quality Management District
- ☒ Assessor's Office
- ☒ Building Division Fort Bragg
- ☒ County Addresser
- ☒ Department of Transportation (DOT)
- ☒ Environmental Health (EH)
- ☒ Mendocino Fire District
- ☒ Mendocino Unified School District
- ☒ Planning Division Fort Bragg

STATE
- ☒ CALFIRE (Land Use)
- ☒ CALFIRE (Resource Management)
- ☒ California Coastal Commission
- ☒ California Dept. of Fish & Wildlife
- ☒ ~~Regional Water Quality Control Board~~

TRIBAL
- ☒ Cloverdale Rancheria
- ☒ Redwood Valley Rancheria
- ☒ Sherwood Valley Band of Pomo Indians

ADDITIONAL INFORMATION:

STAFF PLANNER: MARK CLISER **DATE:** 10/10/2023

ENVIRONMENTAL DATA

1. MAC:
GIS
NA

2. FIRE HAZARD SEVERITY ZONE:
CALFIRE FRAP maps/GIS
High

3. FIRE RESPONSIBILITY AREA:
CALFIRE FRAP maps/GIS
Mendocino Fire Protection District Calfire

4. FARMLAND CLASSIFICATION:
GIS
Grazing

5. FLOOD ZONE CLASSIFICATION:
FEMA Flood Insurance Rate Maps (FIRM)
NO

6. COASTAL GROUNDWATER RESOURCE AREA:
Coastal Groundwater Study/GIS
Critical

7. SOIL CLASSIFICATION:
Mendocino County Soils Study Eastern/Western Part
Western I usually list the soil types i.e. 199—Shinglemill-Gibney complex, 2 to 9
percent slopes

8. PYGMY VEGETATION OR PYGMY CAPABLE SOIL:
LCP maps, Pygmy Soils Maps; GIS
Yes

9. WILLIAMSON ACT CONTRACT:
GIS/Mendocino County Assessor's Office
NO

10. TIMBER PRODUCTION ZONE:
GIS
NO

11. WETLANDS CLASSIFICATION:
GIS
Freshwater Forested / Shrub Wetland

12. EARTHQUAKE FAULT ZONE:
Earthquake Fault Zone Maps; GIS
NO

13. AIRPORT LAND USE PLANNING AREA:
Airport Land Use Plan; GIS
NO

14. SUPERFUND/BROWNFIELD/HAZMAT SITE:
GIS; General Plan 3-11
NO

15. NATURAL DIVERSITY DATABASE:
CA Dept. of Fish & Wildlife Rarefind Database/GIS
YES

16. STATE FOREST/PARK/RECREATION AREA ADJACENT:
GIS; General Plan 3-10
No

17. LANDSLIDE HAZARD:
Hazards and Landslides Map; GIS; Policy RM-61; General Plan 4-44
No

18. WATER EFFICIENT LANDSCAPE REQUIRED:
Policy RM-7; General Plan 4-34
Yes

19. WILD AND SCENIC RIVER:
www.rivers.gov (Eel Only); GIS
No

20. SPECIFIC PLAN/SPECIAL PLAN AREA:
Various Adopted Specific Plan Areas; GIS
Yes

21. STATE CLEARINGHOUSE REQUIRED:
Policy
No

22. OAK WOODLAND AREA:
USDA
No

23. HARBOR DISTRICT:
Sec. 20.512
No

FOR PROJECTS WITHIN THE COASTAL ZONE ONLY

24. LCP LAND USE CLASSIFICATION:
LCP Land Use maps/GIS
Map 15:

25. LCP LAND CAPABILITIES & NATURAL HAZARDS:
LCP Land Capabilities maps/GIS; 20.500
Stream Aluvium and Terraces; Intermediate Shaking; Moderate Productivity (Timberland)

26. LCP HABITATS & RESOURCES:
LCP Habitat maps/GIS; 20.496
Hardwood Forest / Grassland

27. COASTAL COMMISSION APPEALABLE AREA:
Post LCP Certification Permit and Appeal Jurisdiction maps/GIS; 20.544
Yes

28. CDP EXCLUSION ZONE:
CDP Exclusion Zone maps/GIS
NO

29. HIGHLY SCENIC AREA:
Highly Scenic & Tree Removal Area Maps/GIS; Secs. 20.504.015, 20.504.020
NO

30. BIOLOGICAL RESOURCES & NATURAL AREAS:
Biological Resources & Natural Area Map; GIS; General Plan 4-9
NA

31. BLUFFTOP GEOLOGY:
GIS; 20.500.020
No

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120 WEST FIR STREET
FORT BRAGG, CA 95437
Telephone: 707-964-5379
FAX: 707-961-2427
pbs@co.mendocino.ca.us
www.co.mendocino.ca.us/planning

Office Use Only	
Case No(s)	CDP2023-0029
CDF No(s)	46-22
Date Filed	
Fee	
Receipt No.	
Received by	

COASTAL ZONE APPLICATION FORM

Revised

RECEIVED
SEP 25 2023
PLANNING & BUILDING SERV
FORT BRAGG CA

APPLICANT

Name: Barbara Fishelson
Mailing Address: po box 1623
City: Mendocino State: ca Zip Code: 95460 Phone: 7073573725

PROPERTY OWNER

Name: Barbara Fishelson
Mailing Address: p.o. box 1623
City: Mendocino State: Ca Zip Code: 95460 Phone: 707-357-3725

AGENT

Name:
Mailing Address:
City: State: Zip Code: Phone:

PARCEL SIZE

10 +- ☐ Square feet ■ Acres

STREET ADDRESS OF PROJECT

12825 Sea Pines Lane

ASSESSOR'S PARCEL NUMBER(S)

118-210-29-00

I certify that the information submitted with this application is true and accurate.

Signature of Applicant/Agent — Date: 9/25/23
Signature of Owner — Date: 9/22/23

REPORT FOR COASTAL DEVELOPMENT PERMIT CASE: CDP_2022-0029

OWNER: BARBARA FISHELSON

APPLICANT: BARBARA FISHELSON

AGENT:

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COASTAL ZONE - SITE AND PROJECT DESCRIPTION QUESTIONNAIRE

The purpose of this questionnaire is to relate information concerning your application to the Planning and Building Services Department and other agencies who will be reviewing your project proposal. Please remember that the clearer picture that your give us of your project and the site, the easier it will be to promptly process your application. Please answer all questions. Those questions which do not pertain to your project, please indicate "Not Applicable" or "N/A".

THE PROJECT

1. Build a new 1218 sq. ft. house for Barbara Fishelson. Secondary Improvements: Build a new driveway from Sea Pines Lane to new house 200 +- feet with parking area at end of driveway to accommodate 4 cars. Clear vegetation and duff, under brush and small trees around house site (approximately 1 acre) and driveway. The site is nearly flat and little grading will be required. Excavation of 18" footing for house foundation footings added back around house to facilitate drainage. Removal of top soil and gravel added for driveway. Build a new septic system. There is an existing well on the property.

2. If the project is residential, please complete the following:

TYPE OF UNIT	NUMBER OF STRUCTURES	SQUARE FEET PER DWELLING UNIT
☒ Single Family	one	1218
☐ Mobile Home		
☐ Duplex		
☐ Multifamily		

If Multifamily, number of dwelling units per building: _____

3. If the project is commercial, industrial, or institutional, complete the following:

Total square footage of structures: N/A
Estimated employees per shift: _____
Estimated shifts per day: _____
Type of loading facilities proposed: _____

4. Will the proposed project be phased? ☐ Yes ☒ No
If Yes, explain your plans for phasing.

5. Are there existing structures on the property? ☐ Yes ☒ No
If yes, describe below and identify the use of each structure on the plot plan.

6. Will any existing structures be demolished? ☐ Yes ☒ No
Will any existing structures be removed? ☐ Yes ☒ No

If yes to either question, describe the type of development to be demolished or removed, including the relocation site, if applicable.

7. Project Height. Maximum height of structure 24' +- feet.

8. Lot area (within property lines): 10 +- ☐ square feet ☒ acres

9. Lot Coverage:

	EXISTING	NEW PROPOSED	TOTAL
Building coverage	0 square feet	1218 square feet	1218 square feet
Paved area	0 square feet	5,400 square feet	5400 +-square feet
Landscaped area	0 square feet	35,600 square feet	35,600 +- square feet
Unimproved area	435,600 square feet	_____ square feet	394,800 +-square feet

GRAND TOTAL: 435,600 +- square fe
(Should equal gross area of parce

10. Gross floor area: _____ square feet (including covered parking and accessory buildings).

11. Parking will be provided as follows:

Number of Spaces Existing 0 Proposed 4 Total 4

Number of covered spaces	0	Size _____
Number of uncovered spaces	4	Size 10'X 20'
Number of standard spaces	_____	Size _____
Number of handicapped spaces	_____	Size _____

12. Utilities will be supplied to the site as follows:

A. Electricity
- ☐ Utility Company (service exists to the parcel).
- ☒ Utility Company (requires extension of services to site: 100 ± feet _____ miles
- ☒ On Site generation, Specify: PV SOLAR POWER
- ☐ None

B. Gas
- ☒ Utility Company/Tank
- ☐ On Site generation, Specify: _____
- ~~None~~

C. Telephone: ☒ Yes ☐ No

13. Will there by any exterior lighting? ☒ Yes ☐ No
If yes, describe below and identify the location of all exterior lighting on the plot plan and building plans.
2 EXTERIOR LIGHTS LOW WATTAGE FIXTURES DIRECTED DOWNWARD & SHIELDED NOT TO SHINE ON NEARBY PROPERTIES. BAILEY STREET HOME COASTAL STYLE ONE LIGHT BARN OUTDOOR WALL LANTERN - DARK SKY RATED OUT DOOR WALL LIGHT.

14. What will be the method of sewage disposal?

- ☐ Community sewage system, specify supplier _____
- ☒ Septic Tank
- ☐ Other, specify _____

15. What will be the domestic water source?

- ☐ Community water system, specify supplier _____
- ☒ Well EXISTING
- ☐ Spring
- ☐ Other, specify _____

16. Is any grading or road construction planned? ☒ Yes ☐ No
If yes, grading and drainage plans may be required. Also, describe the terrain to be traversed (e.g., steep, moderate slope, flat, etc.). Nearly flat terrain. Little to no grading required.

For grading and road construction, complete the following:

A. Amount of cut: 20 cubic yards FOOTING 18" DEEP
B. Amount of fill: 0 cubic yards
C. Maximum height of fill slope: 0 feet
D. Maximum height of cut slope: 0 feet
E. Amount of import or export: 0 cubic yards
F. Location of borrow or disposal site: ON SITE

17. Will vegetation be removed on areas other than the building sites and roads? ☐ Yes ☒ No
If yes, explain:

18. Does the project involve sand removal, mining or gravel extraction? ☐ Yes ☒ No
If yes, detailed extraction, reclamation and monitoring may be required.

19. Will the proposed development convert land currently or previously used for agriculture to another use? ☐ Yes ☒ No
If yes, how many acres will be converted? _____ acres (An agricultural economic feasibility study may be required.)

20. Will the development provide public or private recreational opportunities? ☐ Yes ☒ No
If yes, explain:

21. Is the proposed development visible from:

A. State Highway 1 or other scenic route? ☐ Yes ☒ No
B. Park, beach or recreation area? ☐ Yes ☒ No

22. Will the project involve the use or disposal of potentially hazardous materials such as toxic substances, flammables, or explosives? ☐ Yes ☒ No
If yes, explain:

23. Does the development involve diking, filling, dredging or placing structures in open coastal waters, wetlands, estuaries or lakes?

A. Diking ☐ Yes ☒ No
B. Filling ☐ Yes ☒ No
C. Dredging ☐ Yes ☒ No
D. Placement of structures in open coastal waters, wetlands, estuaries or lakes ☐ Yes ☒ No

Amount of material to be dredged or filled? N/A cubic yards.

Location of dredged material disposal site: N/A

Has a U.S. Army Corps of Engineers permit been applied for? ☐ Yes ☒ No

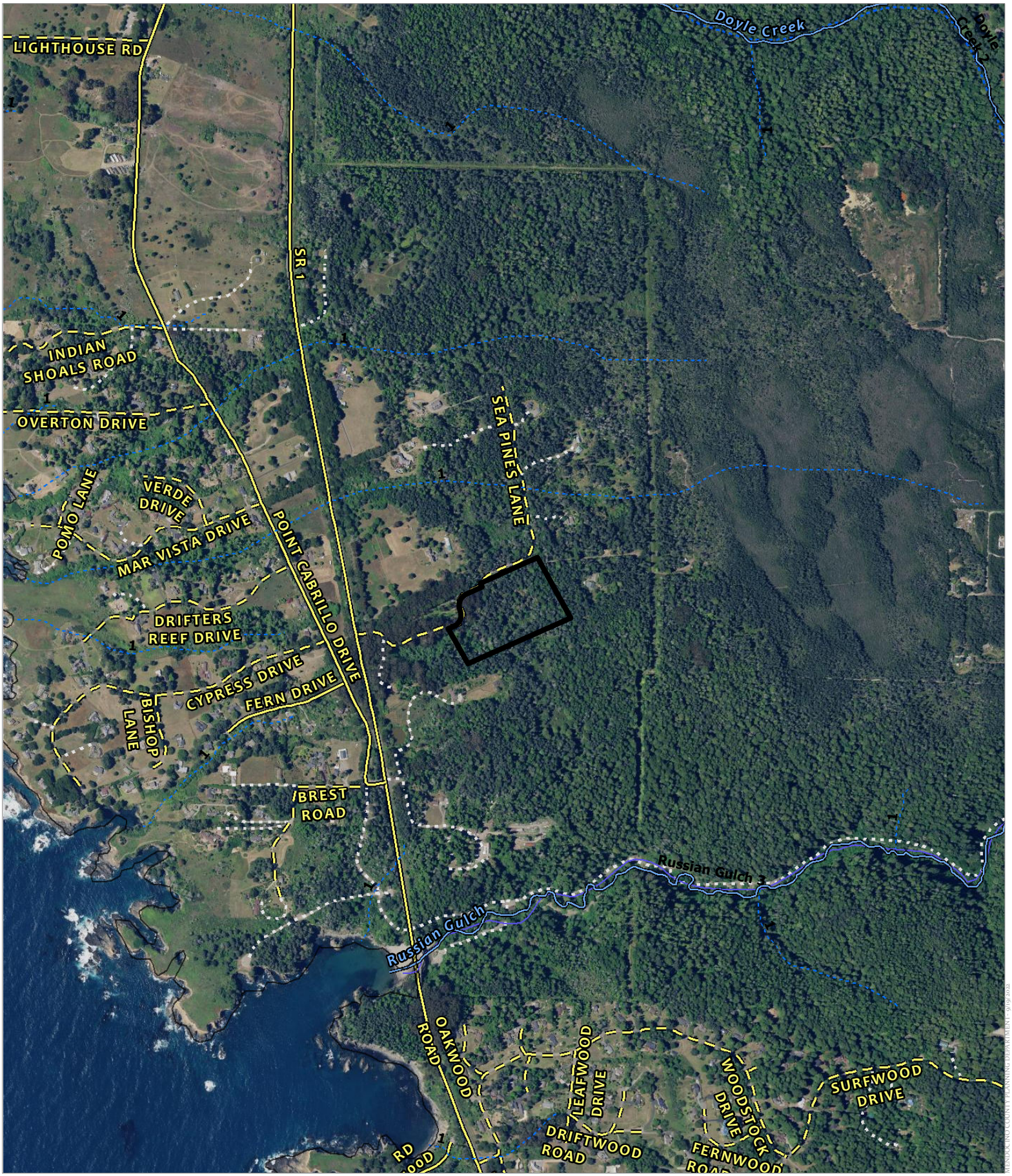
If you need additional room to answer any question, attach additional sheets.

CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
APN: 118-210-29
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

Major Towns & Places
City Limits
Coastal Zone Boundary
Highways
Major Roads

0 2,550 5,100 Feet
0 0.5 1 Miles
1:63,360

LOCATION MAP



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APLCT: Brian Manning
AGENT: Brian Manning
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Public Roads

Private Roads

0 500 1,000 Feet

0 0.075 0.15 Miles

1:12,000

AERIAL IMAGERY

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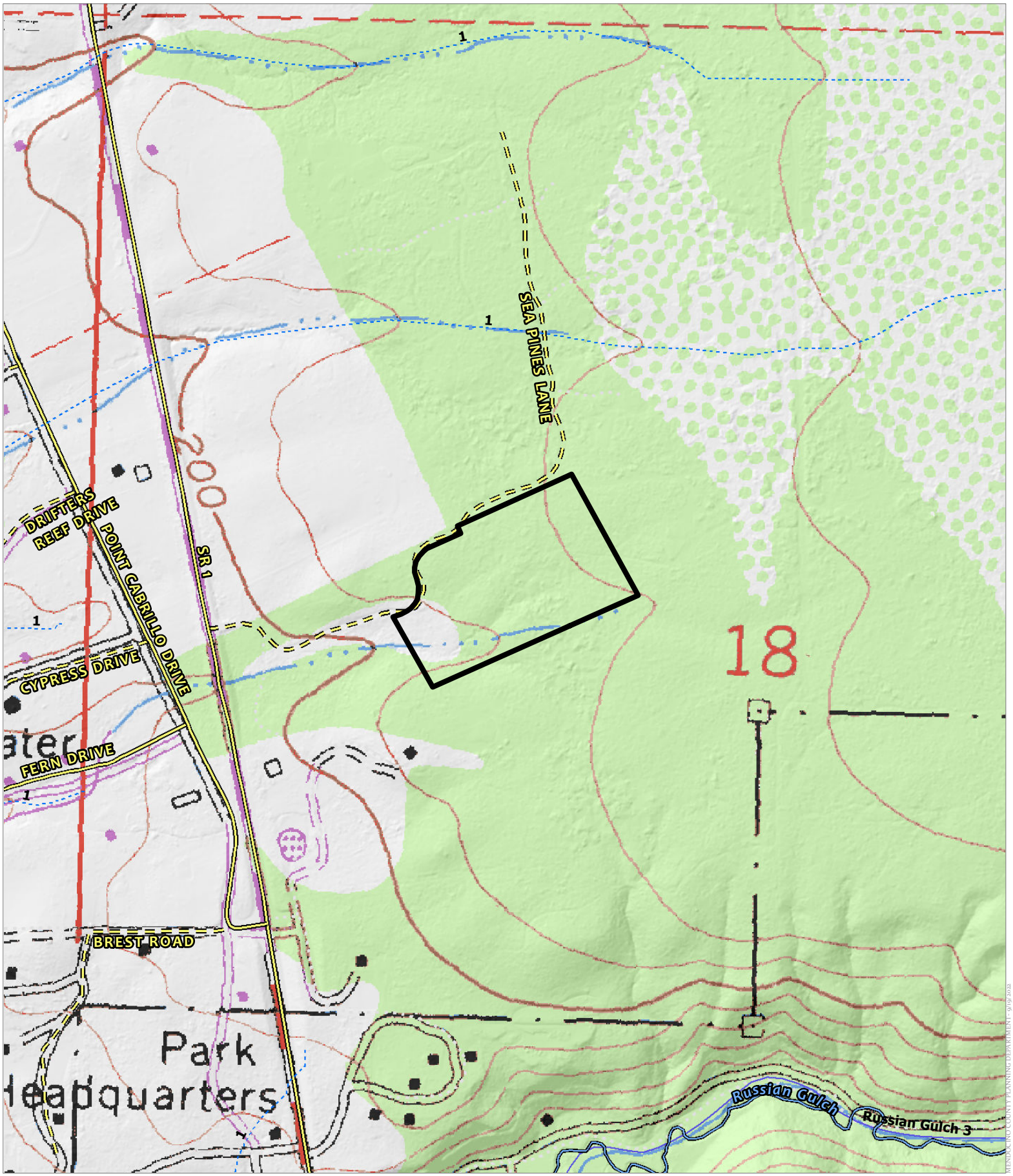
APN: 118-210-29
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

= = = Private Roads

0 100 200 Feet
0 0.0175 0.035 Miles
1:2,400

AERIAL IMAGERY

MENDOCINO COUNTY PLANNING DEPARTMENT - 09/09/2022



CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
APN: 118-210-29
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

Public Roads

Private Roads

0 250 500 Feet

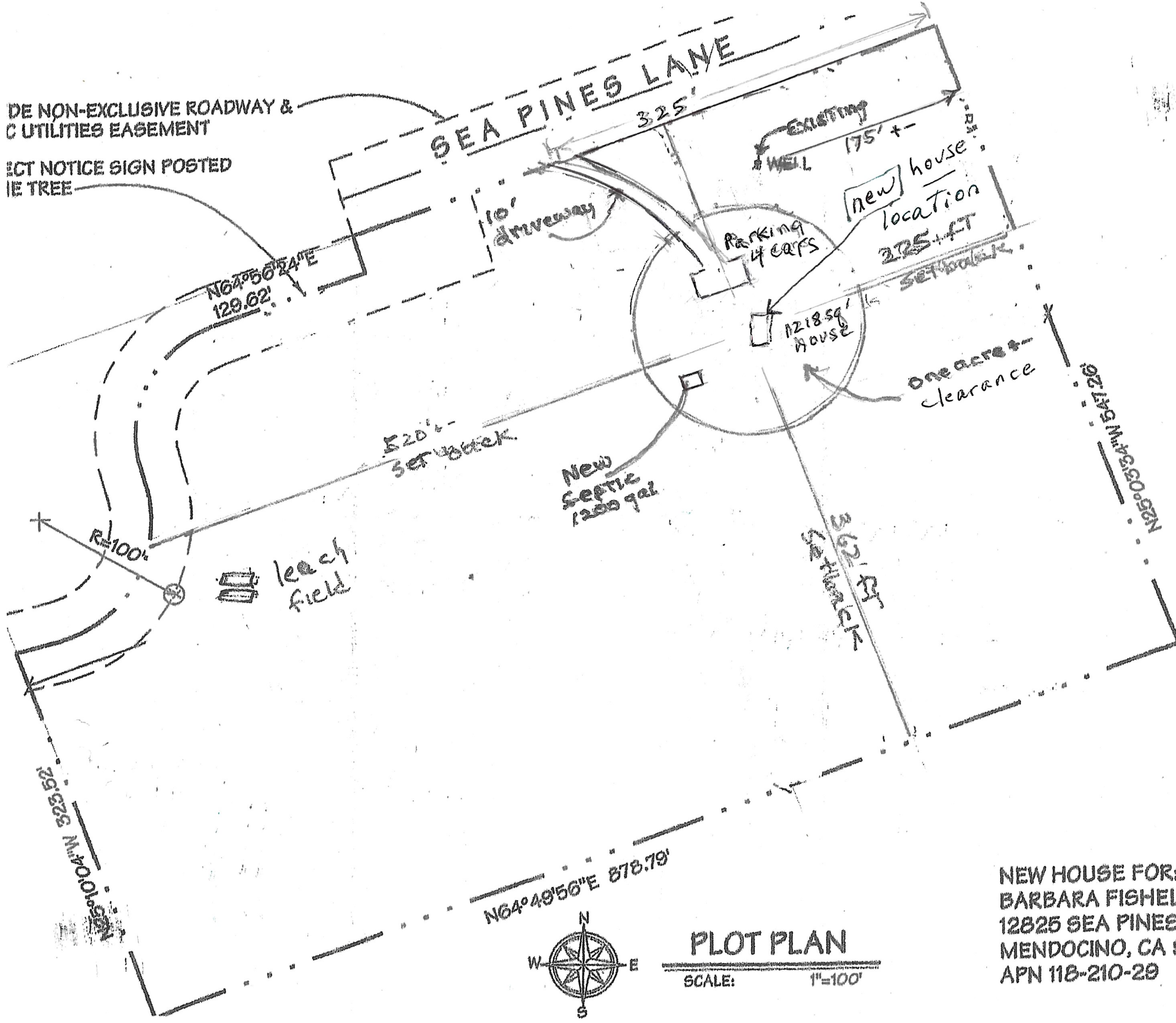
0 0.0425 0.085 Miles

1:6,000

N W E S

TOPOGRAPHIC MAP

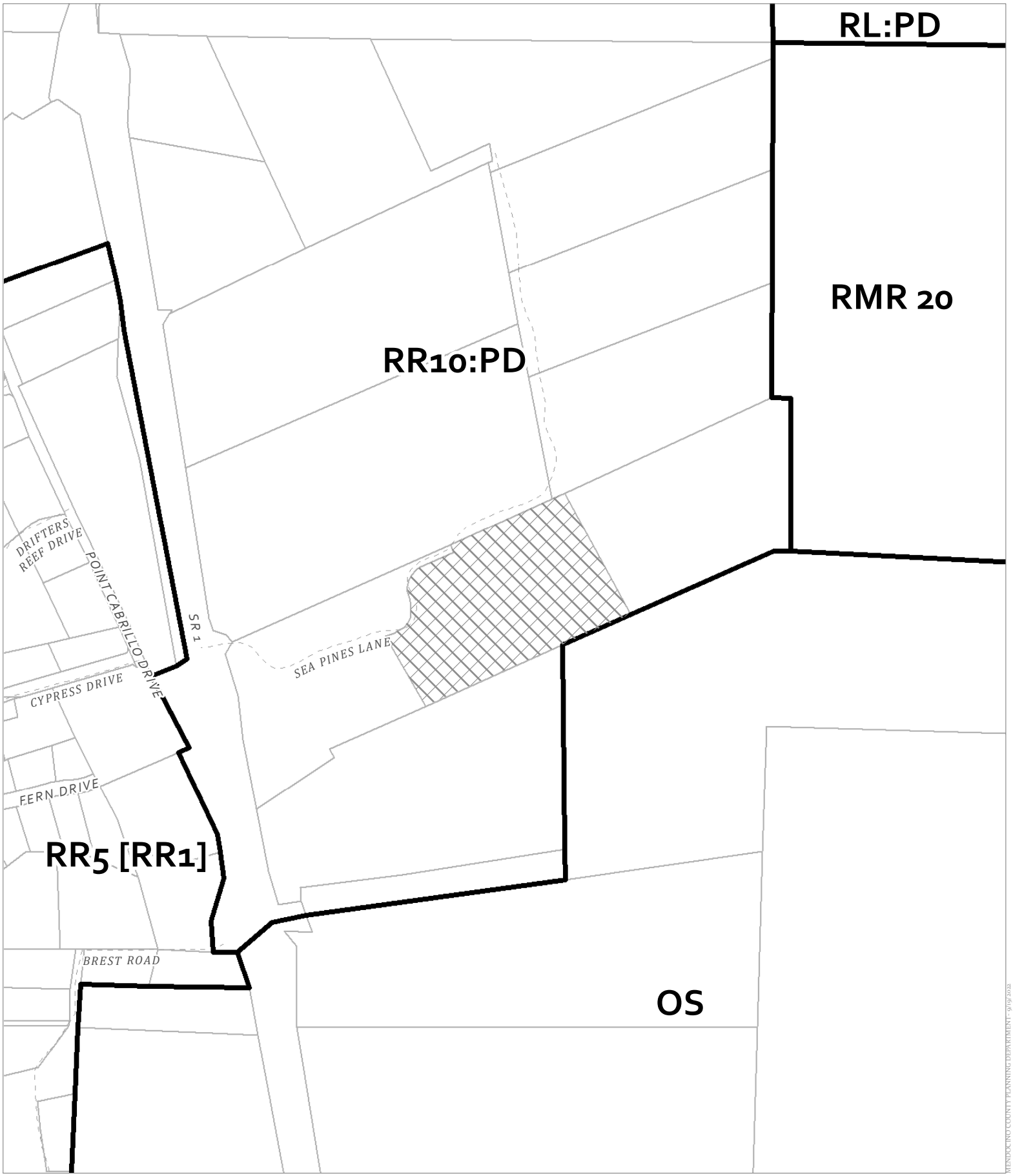
CONTOUR INTERVAL IS 40 FEET



PLOT PLAN

SCALE: 1"=100'

NEW HOUSE FOR:
BARBARA FISHELSON
12825 SEA PINES LANE
MENDOCINO, CA 954
APN 118-210-29



CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
APN: 118-210-29
APLCT: Brian Manning
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ADDRESS: 12825 Sea Pines Lane, Mendocino

Zoning Districts

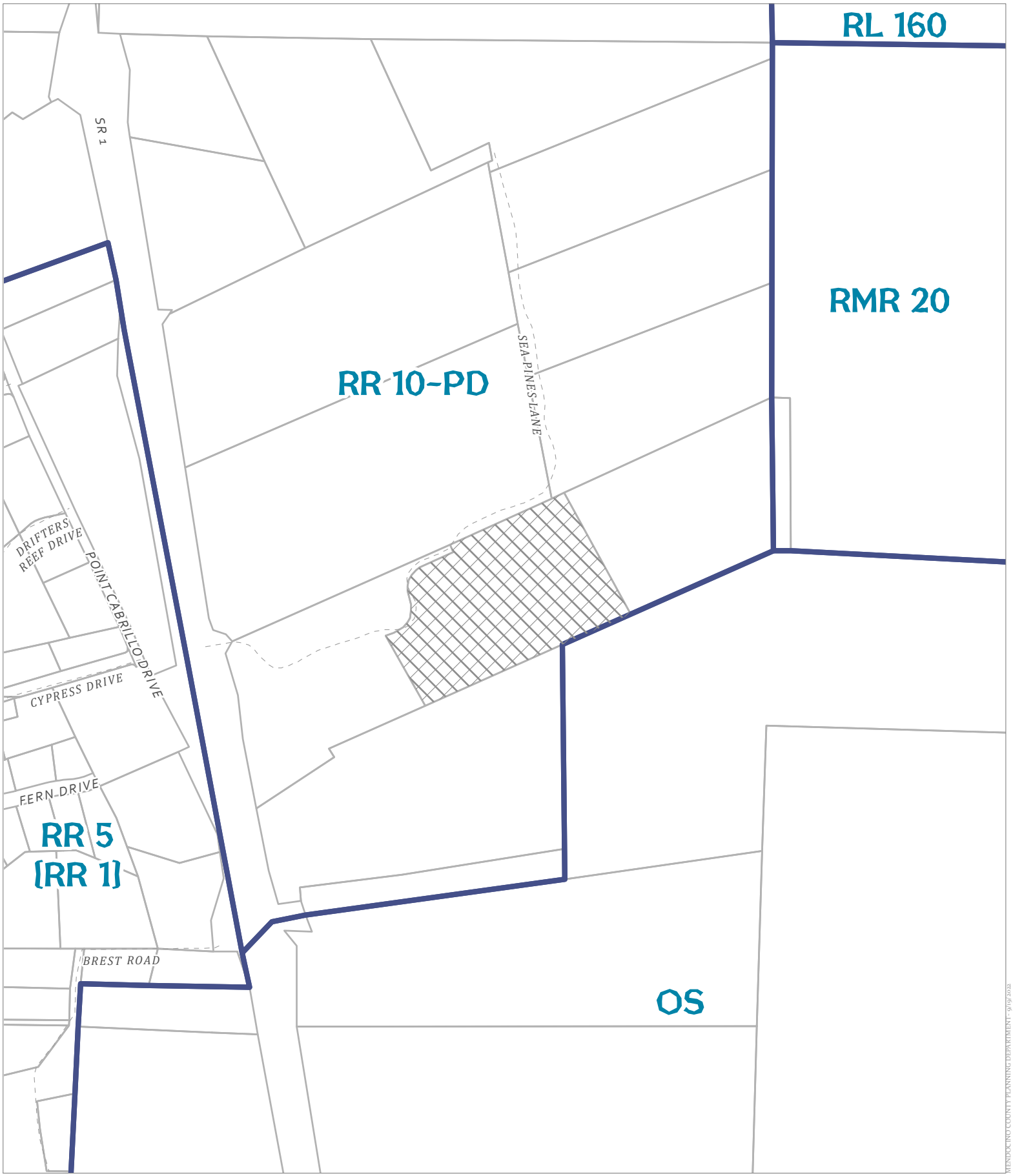
Public Roads

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

N W E S

ZONING DISPLAY MAP

MENDOCINO COUNTY PLANNING DEPARTMENT - 9/19/2022



CASE: CDP 2022-0029
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General Plan Classes

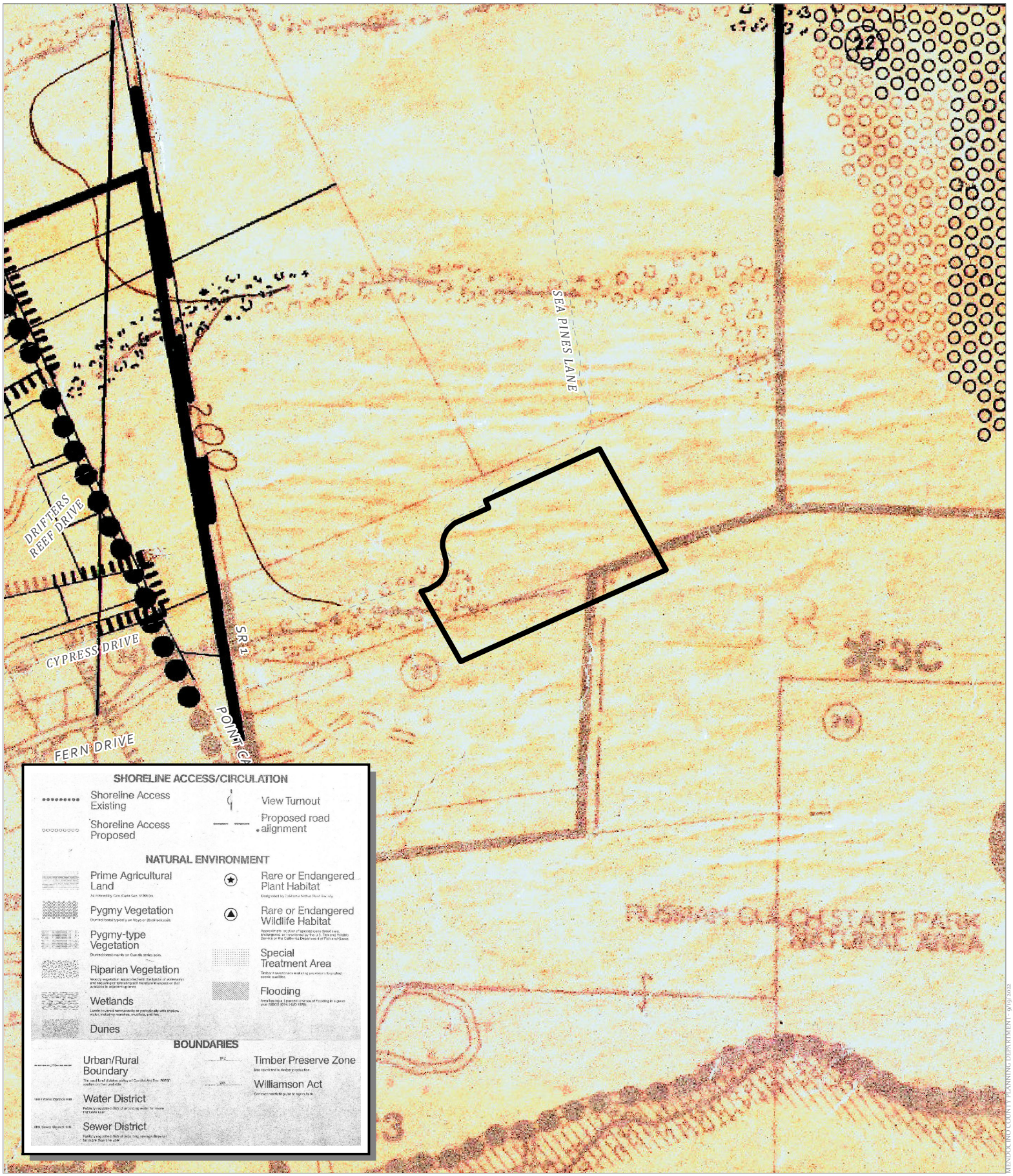
Public Roads

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

N W E S

MENDOCINO COUNTY PLANNING DEPARTMENT - 09/09/2022

GENERAL PLAN CLASSIFICATIONS



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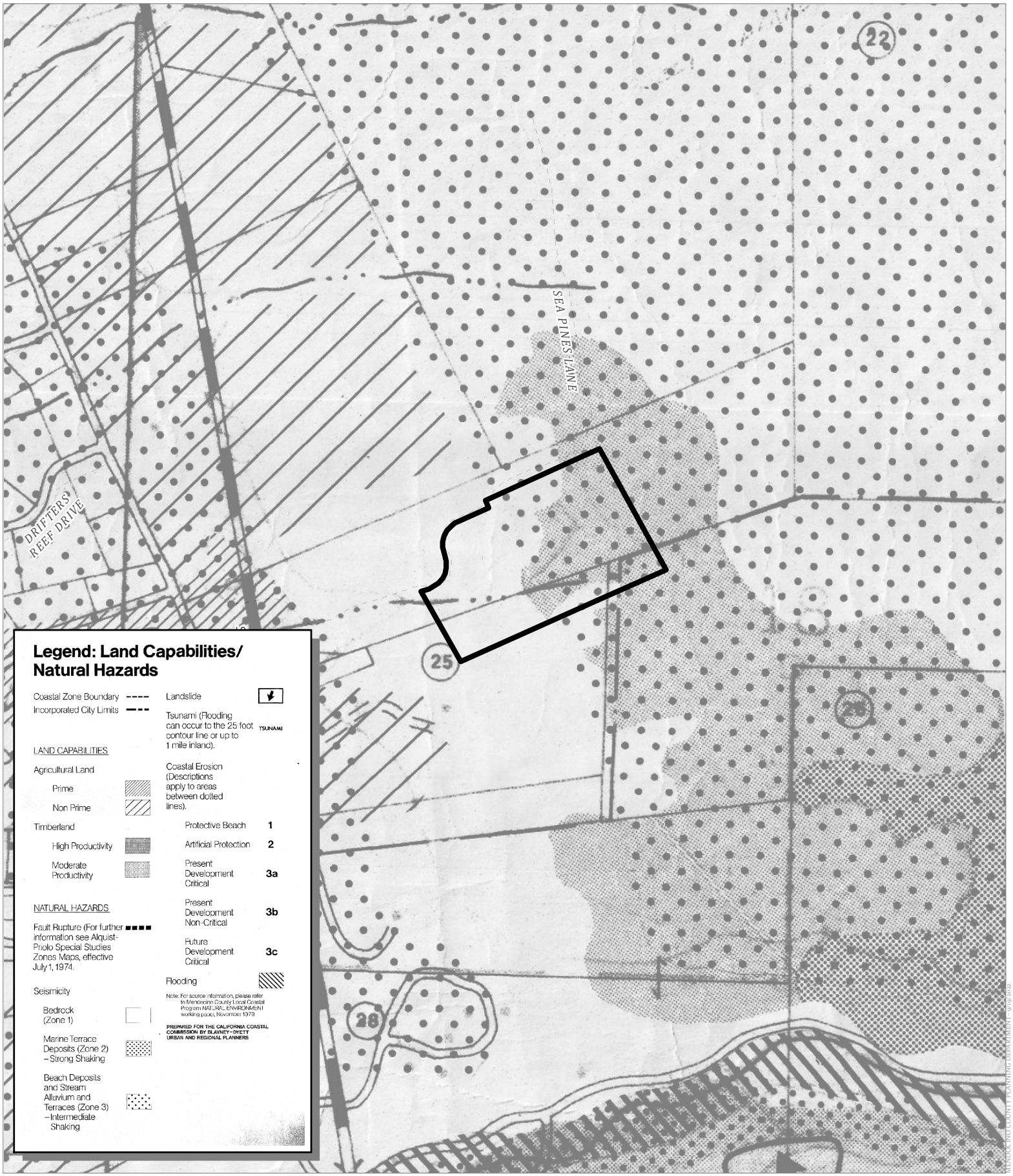
Public Roads

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

LCP LAND USE MAP 15: CASPAR



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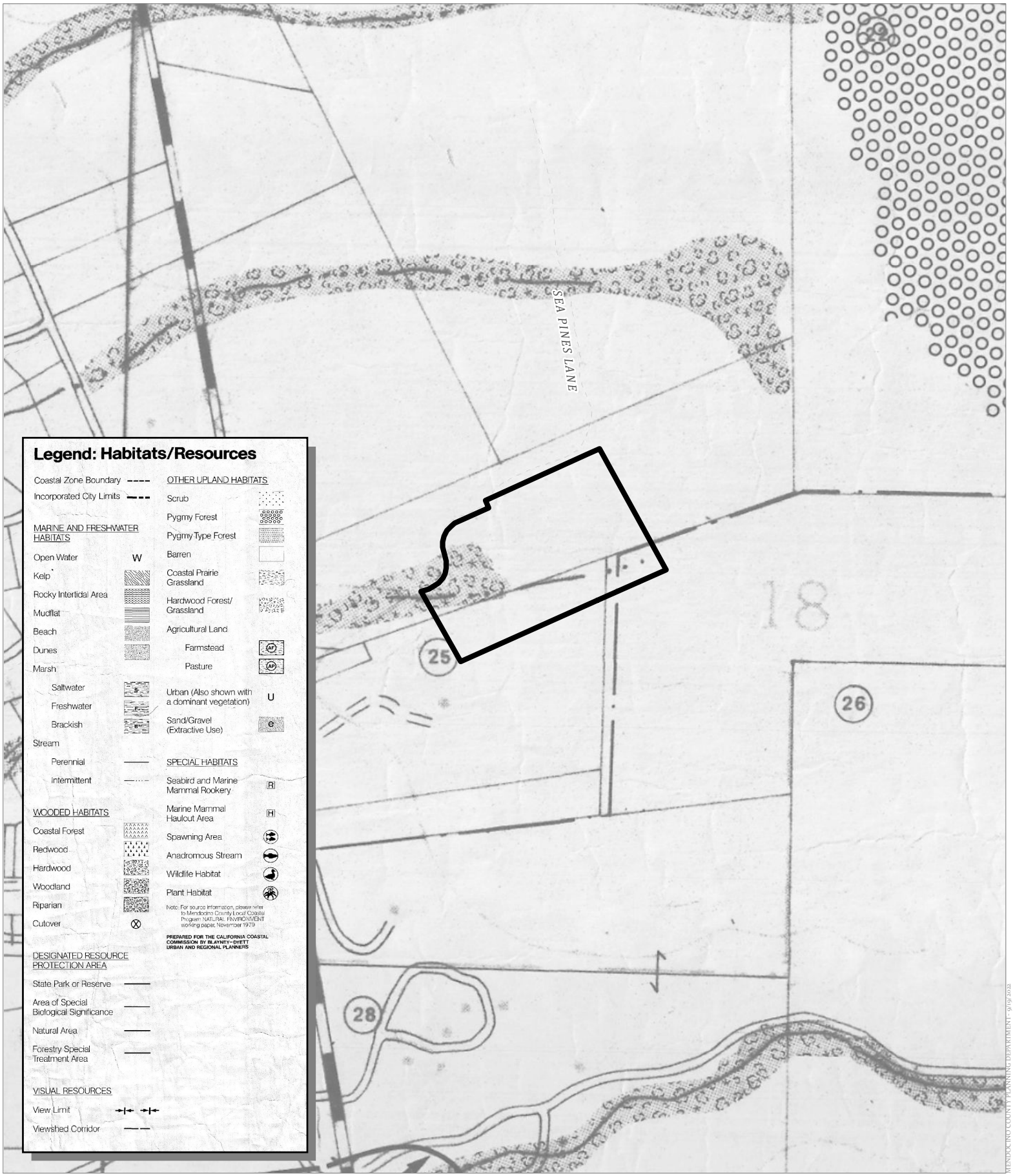
Public Roads

0 250 500 Feet
0 0.0425 0.085 Miles
N W E S
1:6,000

LCP LAND CAPABILITIES & NATURAL HAZARDS



Legend: Habitats/Resources

Coastal Zone Boundary
Incorporated City Limits

MARINE AND FRESHWATER HABITATS
Open Water (W)
Kelp
Rocky Intertidal Area
Mudflat
Beach
Dunes
Marsh
Saltwater (S)
Freshwater (F)
Brackish (B)
Stream
Perennial
Intermittent

WOODED HABITATS
Coastal Forest
Redwood
Hardwood
Woodland
Riparian
Cutover (⊗)

DESIGNATED RESOURCE PROTECTION AREA
State Park or Reserve
Area of Special Biological Significance
Natural Area
Forestry Special Treatment Area

VISUAL RESOURCES
View Limit
Viewshed Corridor

OTHER UPLAND HABITATS
Scrub
Pygmy Forest
Pygmy Type Forest
Barren
Coastal Prairie Grassland
Hardwood Forest/ Grassland
Agricultural Land
Farmstead (AF)
Pasture (AP)
Urban (Also shown with a dominant vegetation) (U)
Sand/Gravel (Extractive Use) (e)

SPECIAL HABITATS
Seabird and Marine Mammal Rookery (R)
Marine Mammal Haulout Area (H)
Spawning Area
Anadromous Stream
Wildlife Habitat
Plant Habitat

Note: For source information, please refer to Mendocino County Local Coastal Program: NATURAL ENVIRONMENT working paper, November 1979

PREPARED FOR THE CALIFORNIA COASTAL COMMISSION BY BLAYNEY-DYETT URBAN AND REGIONAL PLANNERS

Public Roads

0 250 500 Feet
0 0.0425 0.085 Miles
N W E S
1:6,000

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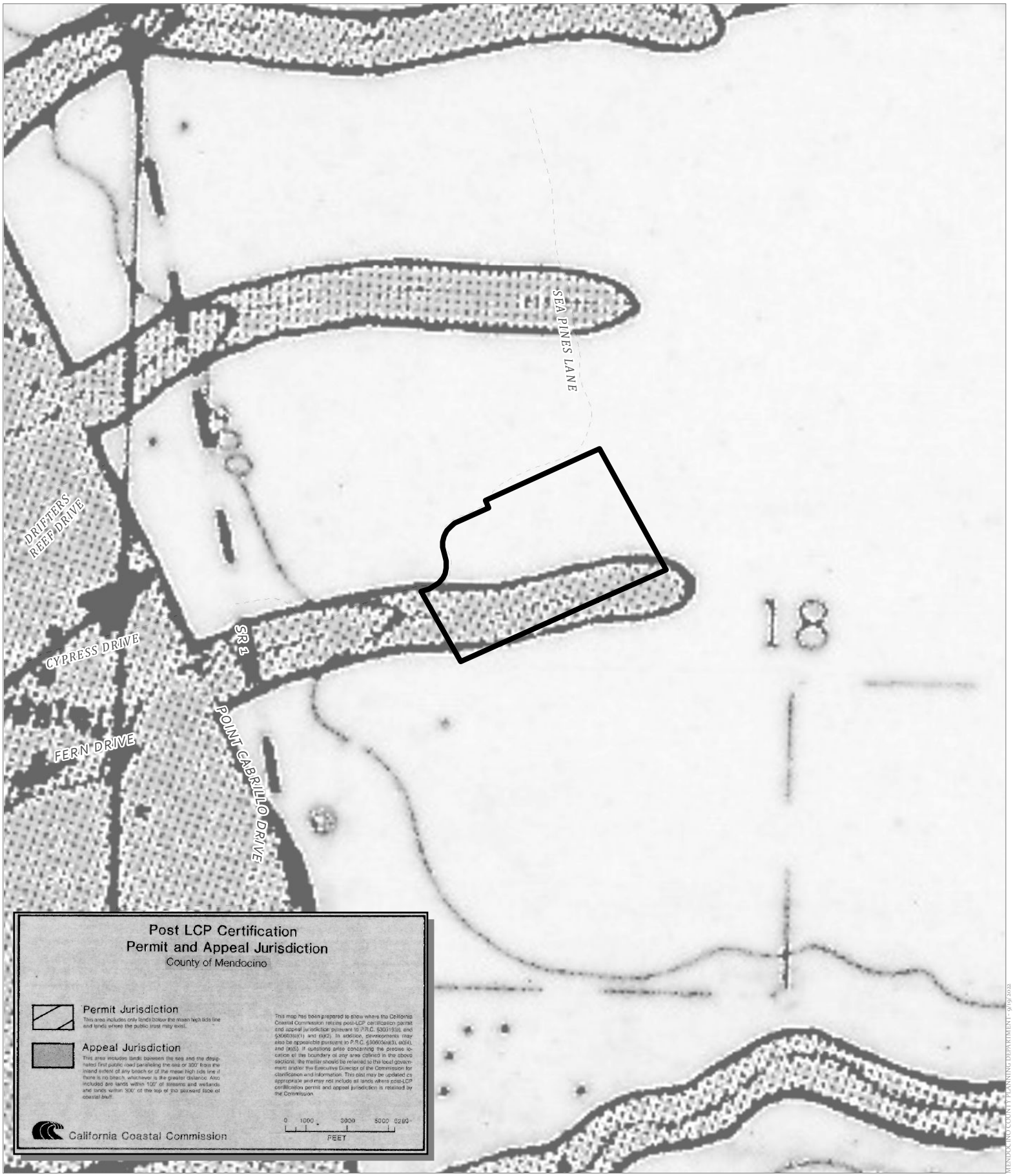
LCP HABITATS & RESOURCES



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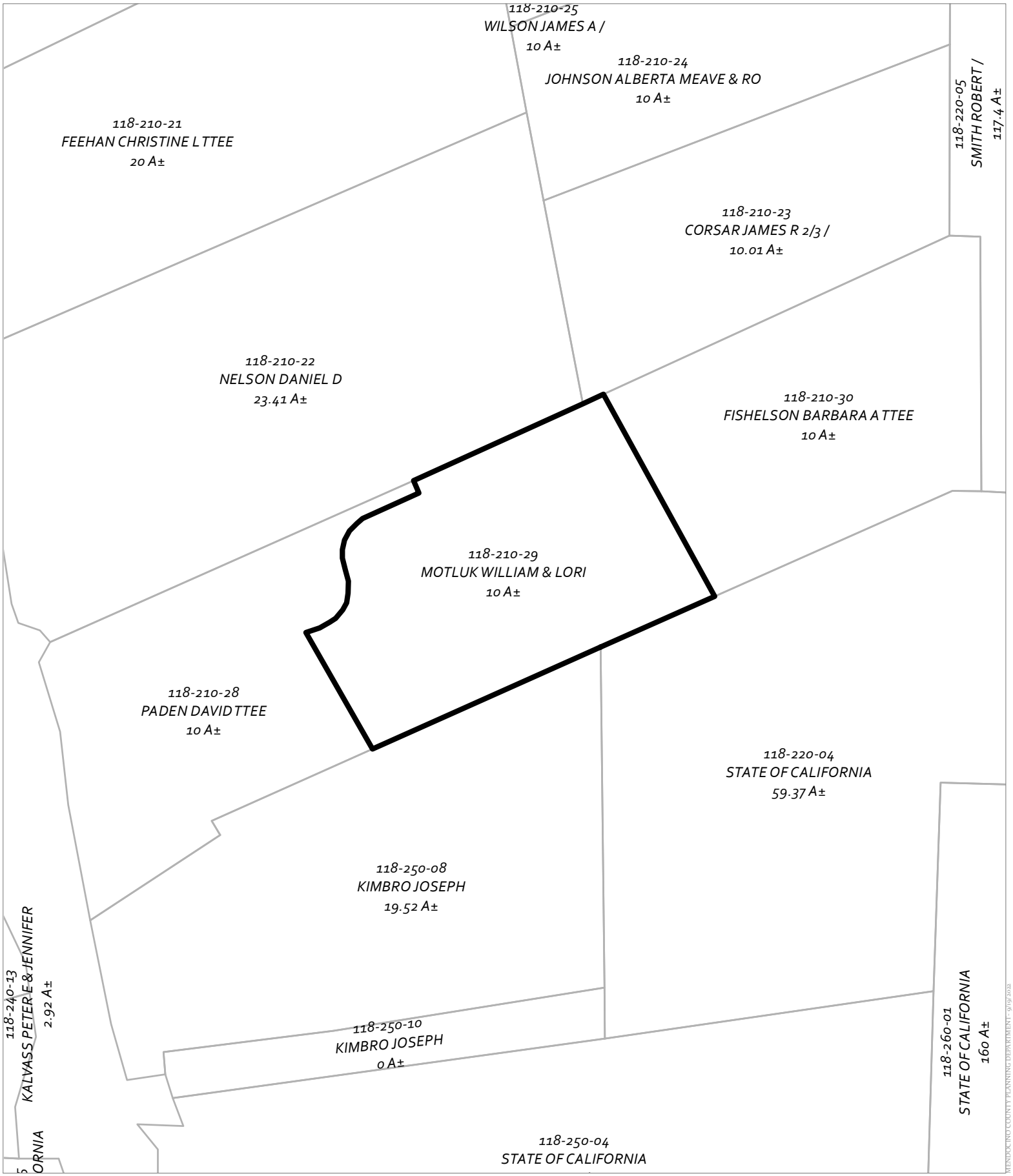
Public Roads

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

MENDOCINO COUNTY PLANNING DEPARTMENT - 09/9/2022

POST LCP CERTIFICATION & APPEAL JURISDICTION



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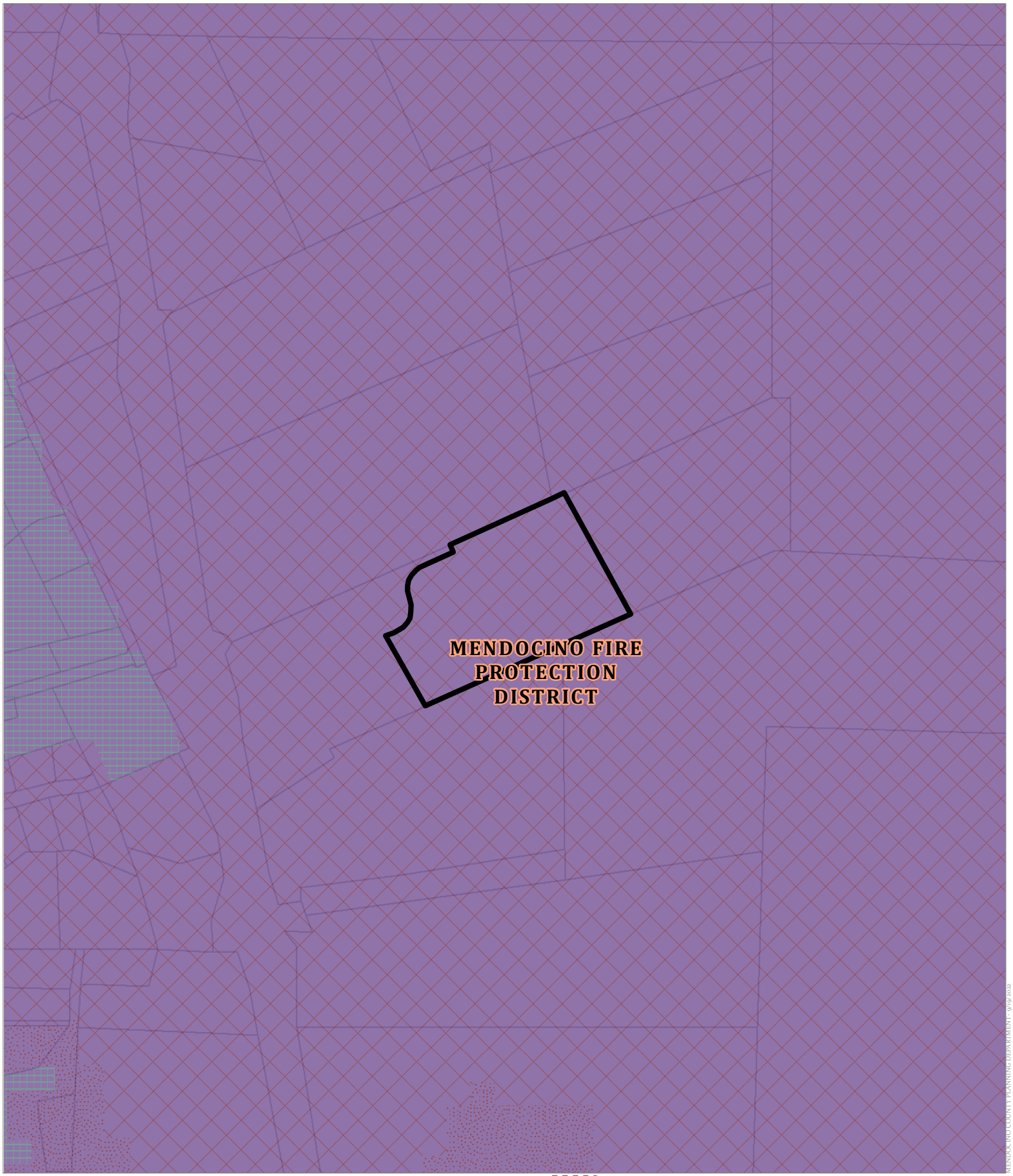
0 150 300 Feet
0 0.025 0.05 Miles
1:3,600

ADJACENT PARCELS



CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
APN: 118-210-29
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

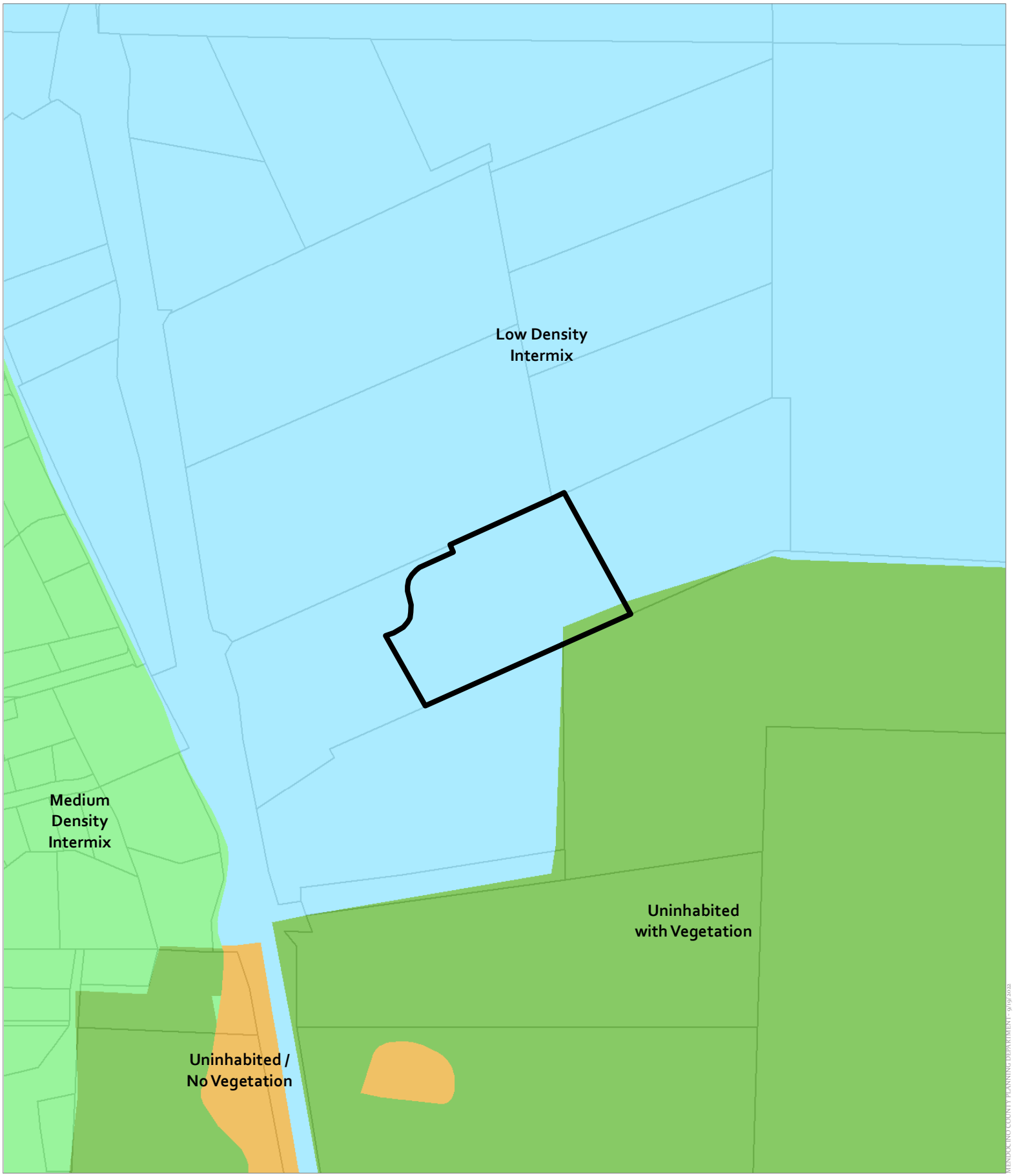
Very High Fire Hazard
High Fire Hazard
Moderate Fire Hazard
County Fire Districts

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

N W E S

FIRE HAZARD ZONES & RESPONSIBILITY AREAS
STATE RESPONSIBILITY AREA

MENDOCINO COUNTY PLANNING DEPARTMENT - 09/09/2022



CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
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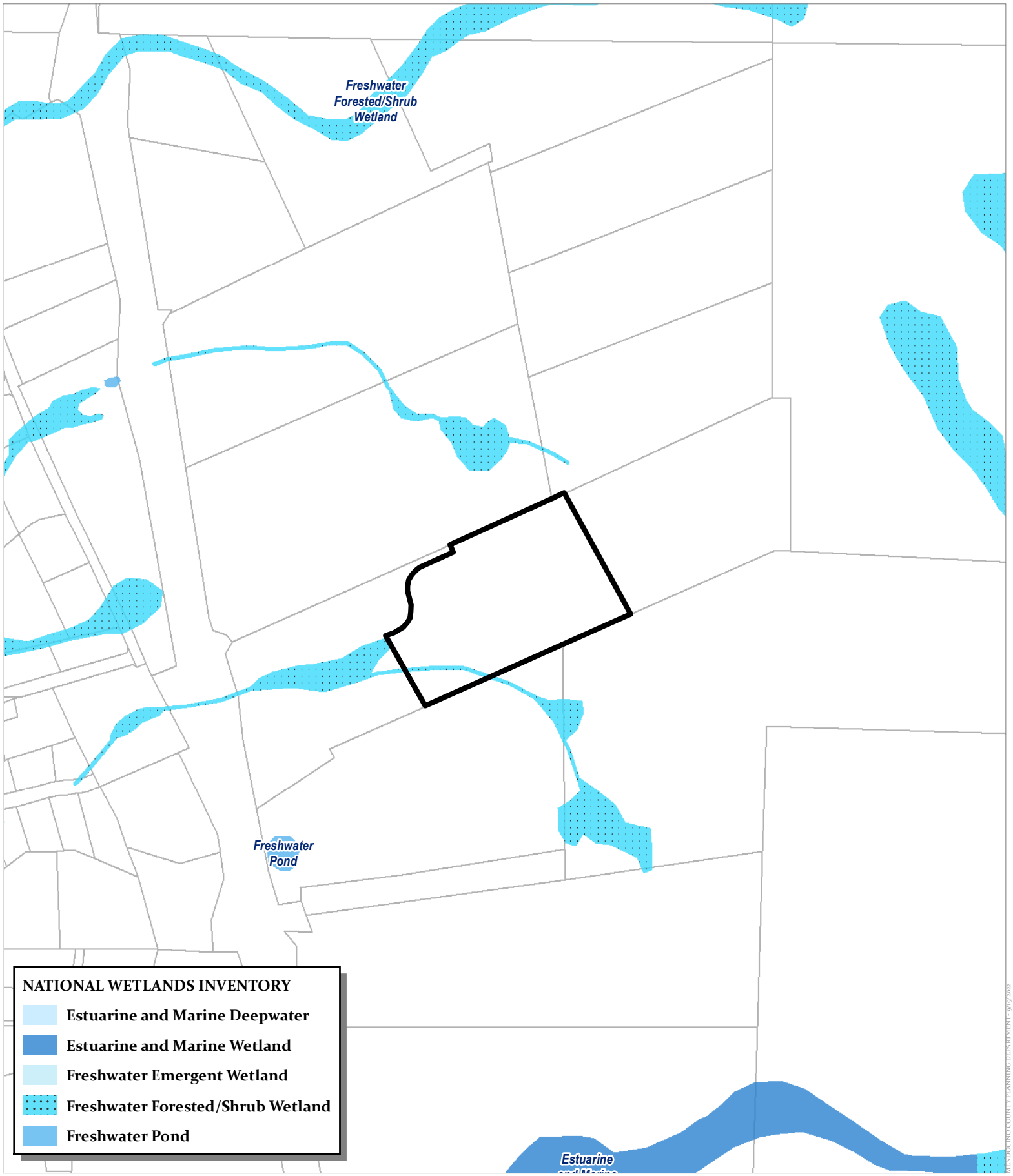
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

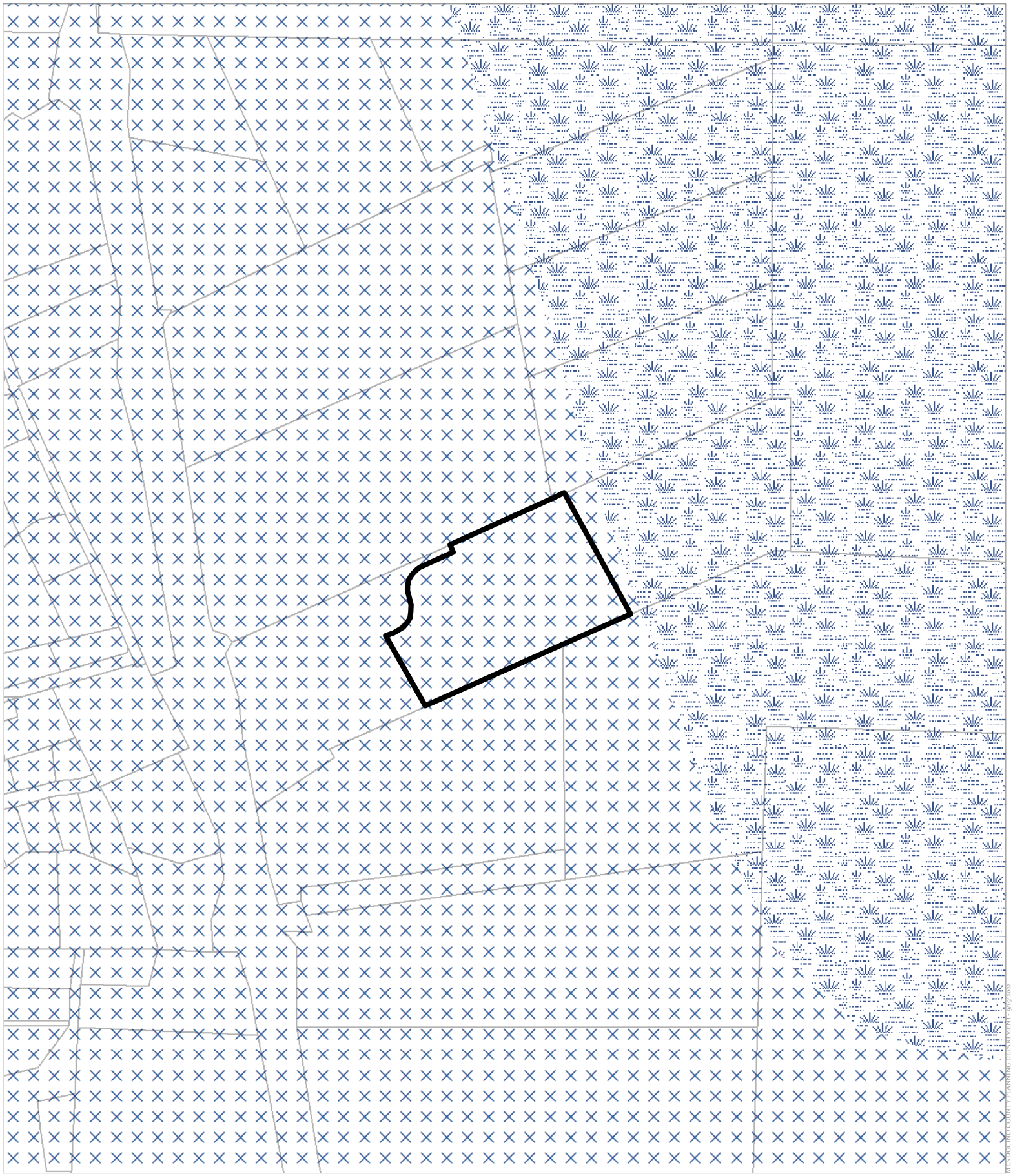
WILDLAND-URBAN INTERFACE ZONES



CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
APN: 118-210-29
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

WETLANDS



CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
APN: 118-210-29
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

Critical Water Areas

Marginal Water Resources

0 250 500 Feet

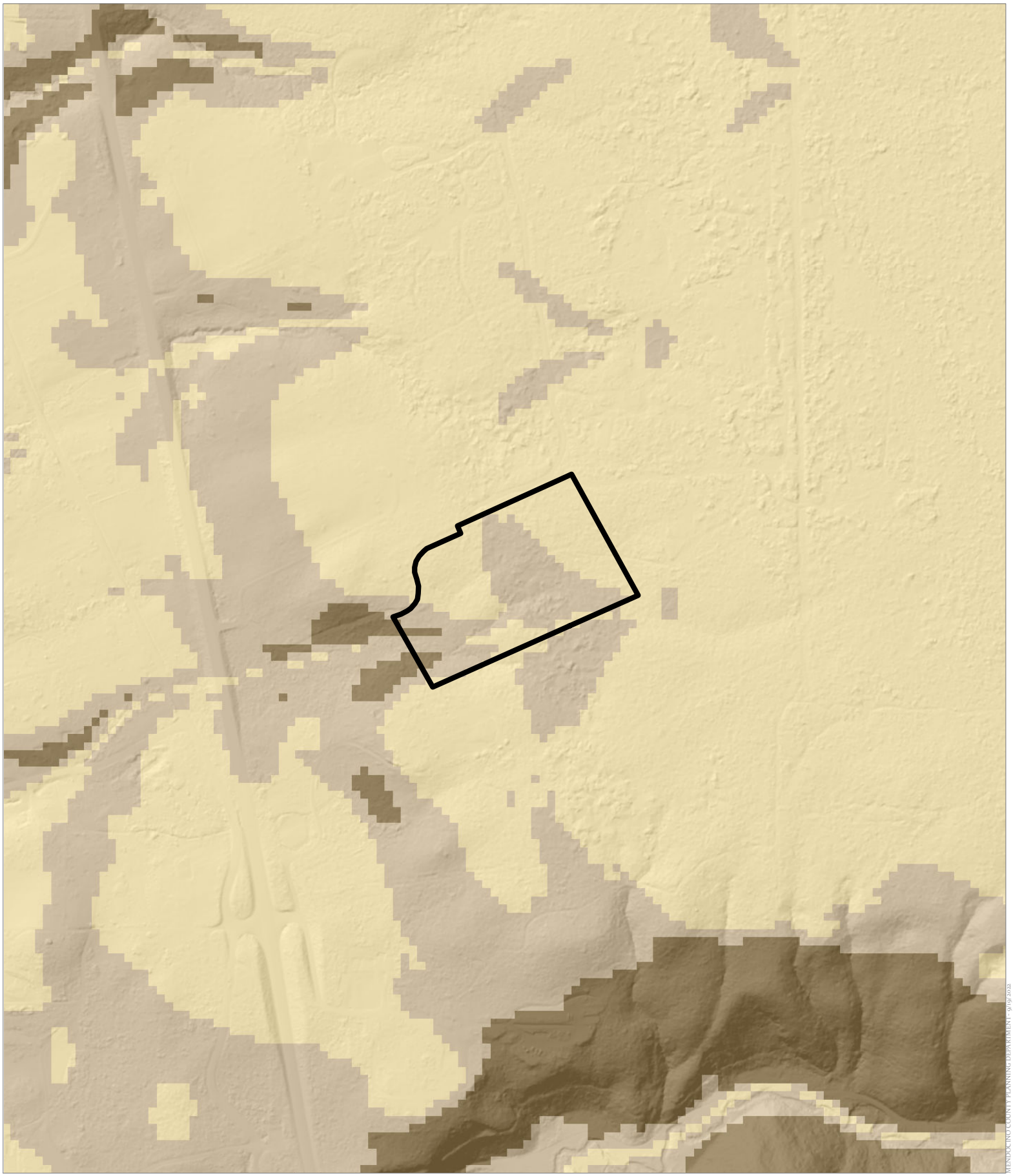
0 0.0425 0.085 Miles

N W E S

1:6,000

MENDOCINO COUNTY PLANNING DEPARTMENT 9/9/2022

ADJACENT PARCELS



CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
APN: 118-210-29
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

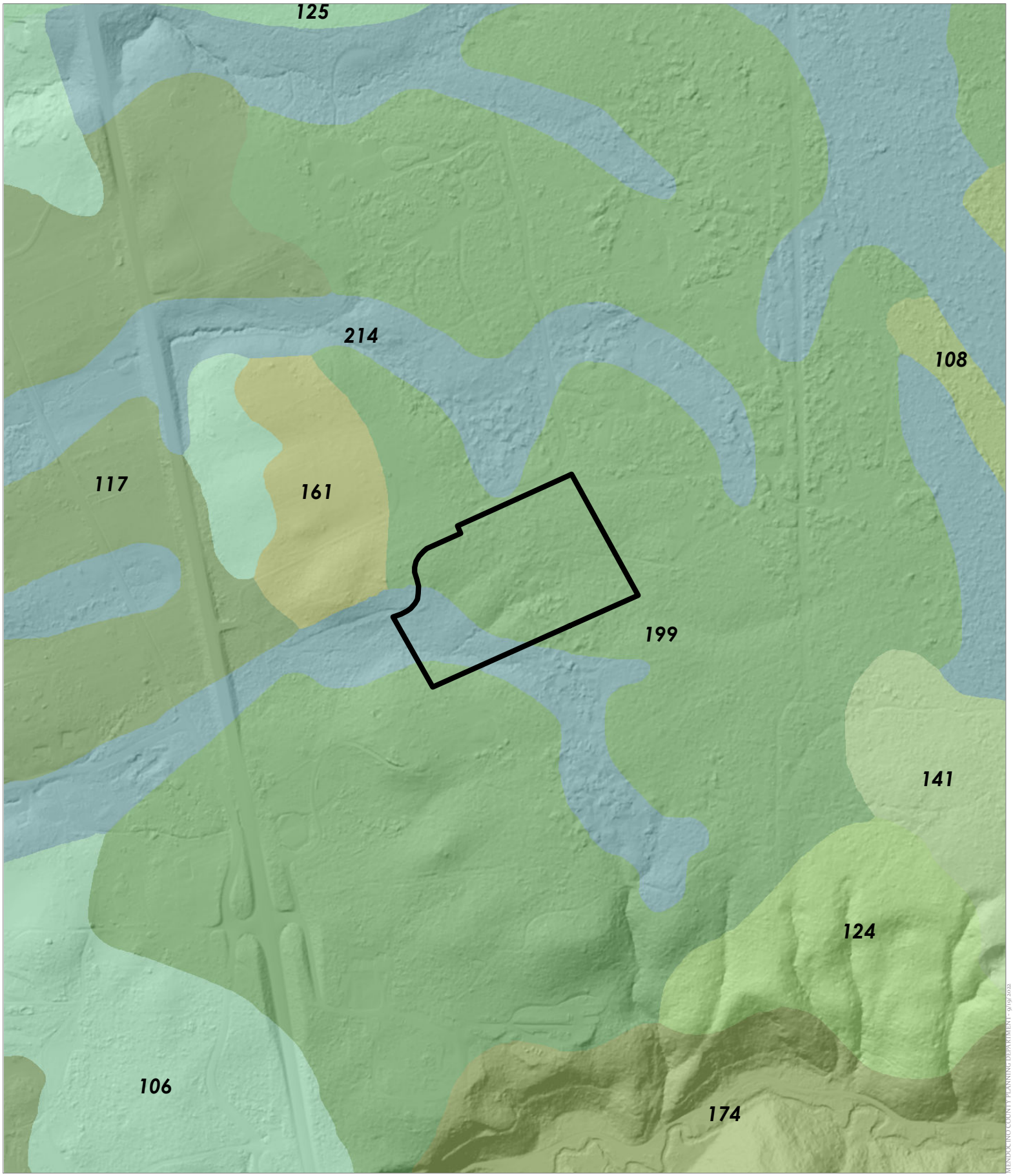
0° - 14°
15° - 32°
33° - 72°

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

N W E S

ESTIMATED SLOPE

MENDOCINO COUNTY PLANNING DEPARTMENT - 9/19/2022



CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
APN: 118-210-29
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

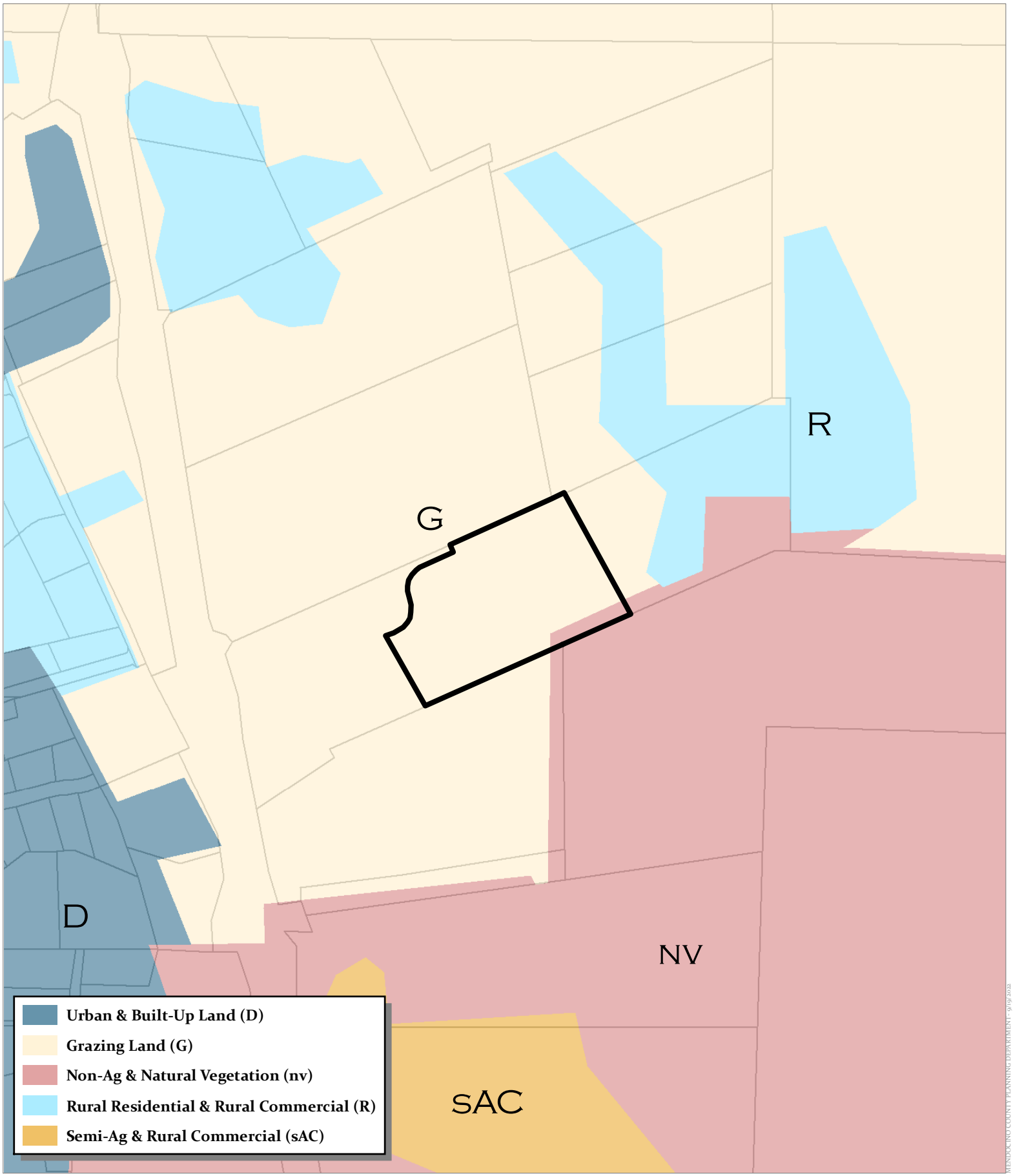
Blacklock & Aborigine

Shinglemill-Gibney Complex

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

WESTERN SOIL CLASSES

MENDOCINO COUNTY PLANNING DEPARTMENT - 9/19/2022



CASE: CDP 2022-0029
OWNER: FISHELSON, Barbara
APN: 118-210-29
APLCT: Brian Manning
AGENT: Brian Manning
ADDRESS: 12825 Sea Pines Lane, Mendocino

0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

FARMLAND CLASSIFICATIONS

BIOLOGICAL SCOPING SURVEY REPORT

For
12825 Sea Pines Ln.
Mendocino County
APN 118-210-29

Property Owner:
Barbara Fishelson

Report Prepared By:
Kim Obermeyer, Biologist and
Alison Gardner, Botanist

May 2023

TABLE OF CONTENTS

1 PROJECT SUMMARY

A biological resources survey was conducted to determine the type, condition, and location of biological elements. During December 2022 to April 2023 botanist, Alison Gardner and biologist, Kim Obermeyer conducted biological scoping surveys on Barbara Fishelson's 10-acre residential parcel (APN 118-210-29) located at 12825 Sea Pines Lane in the City of Mendocino, Mendocino County, California (**Figure 1**). Any sensitive coastal resources, such as wetlands or rare plants or animals and their habitats that can be considered ESHA were identified and mapped. When ESHA are identified the potential effects of the impact of the development on the ESHA are evaluated, and avoidance and mitigation measures are developed. The proposed development consists of a single-family residence and supporting infrastructure with a driveway.

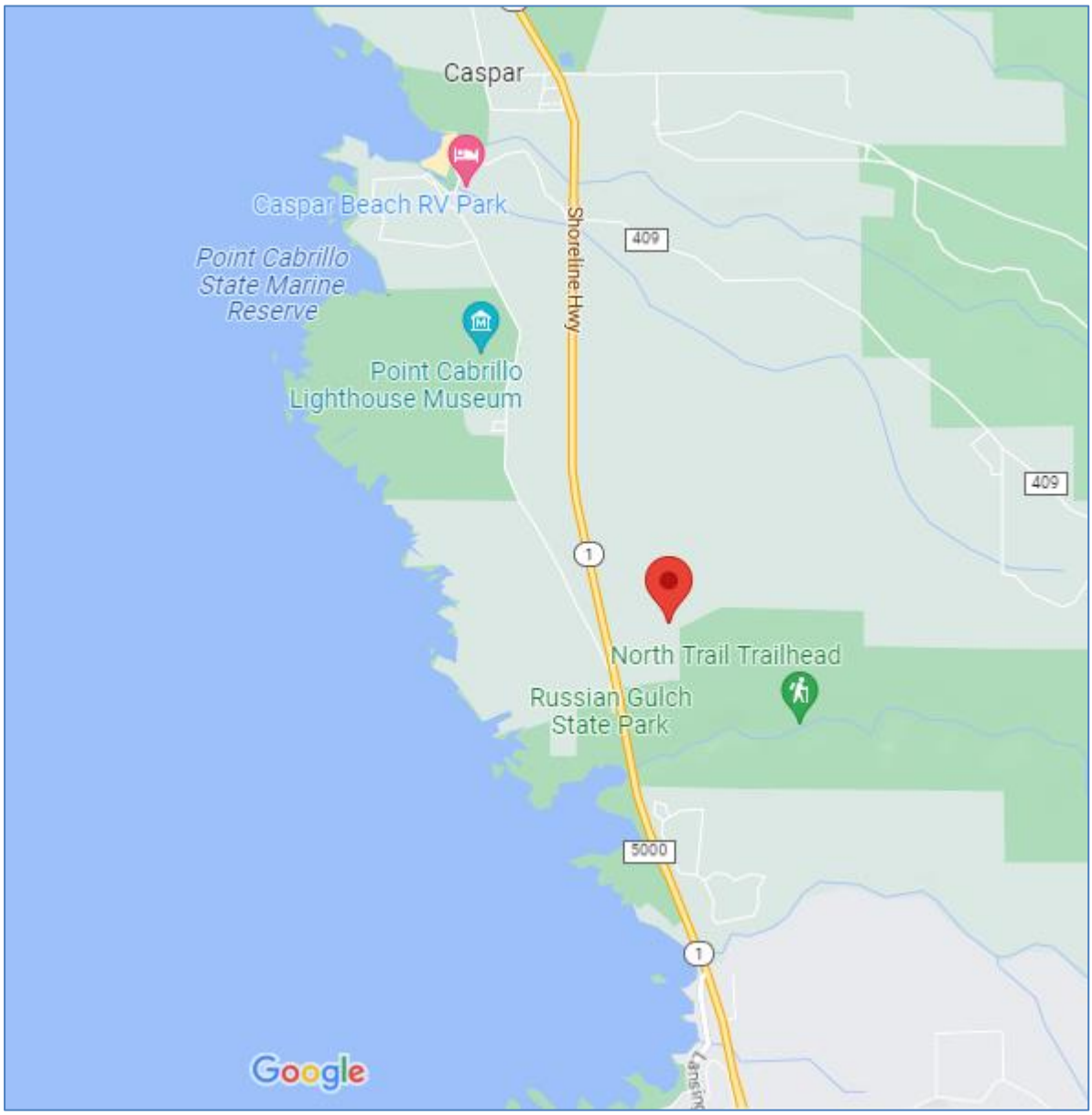
The purpose of the study was to determine the presence and boundaries of sensitive coastal resources (wetlands, natural communities, special-status plants and animals) that could be considered Environmentally Sensitive Habitat Area's under the County's Coastal Zoning Code.

Surveys were conducted December 2022 to April 2023 to determine if any ESHA occurred or could potentially occur on the project site. Those special-status species that were identifiable in the field during the time of the survey were evaluated and those that were not evaluated for potentially occurring based on the presence of suitable habitat.

Several ESHA's and special status biological resources were identified including Bishop pine forest, a riparian area (Rhododendron columbianum--Western Labrador-tea thickets), and the sensitive plants Fringed False Hellebore (*Veratrum fimbriatum*) and Swamp Harebell (*Eastwoodiella californica*). The bishop pine forest is senescent with no young trees. There is also potential habitat for sensitive animal species including the Pomo bronze shoulderband (*Helminthoglypta arrosa pomoensis*), foothills yellow- legged frog (*Rana boylii)*, Northern red-legged frog (*Rana aurora aurora*), purple martin (*Progne subis*), Sonoma tree vole (*Arborimus pomo*), and bats.

If construction activities happen during bird nesting or bat roosting periods, pre-construction surveys should be considered to mitigate impacts.

Figure 1. Location map- 12825 Sea Pines Ln., Mendocino. APN 118-210-29



2 STUDY AREA DESCIPTION

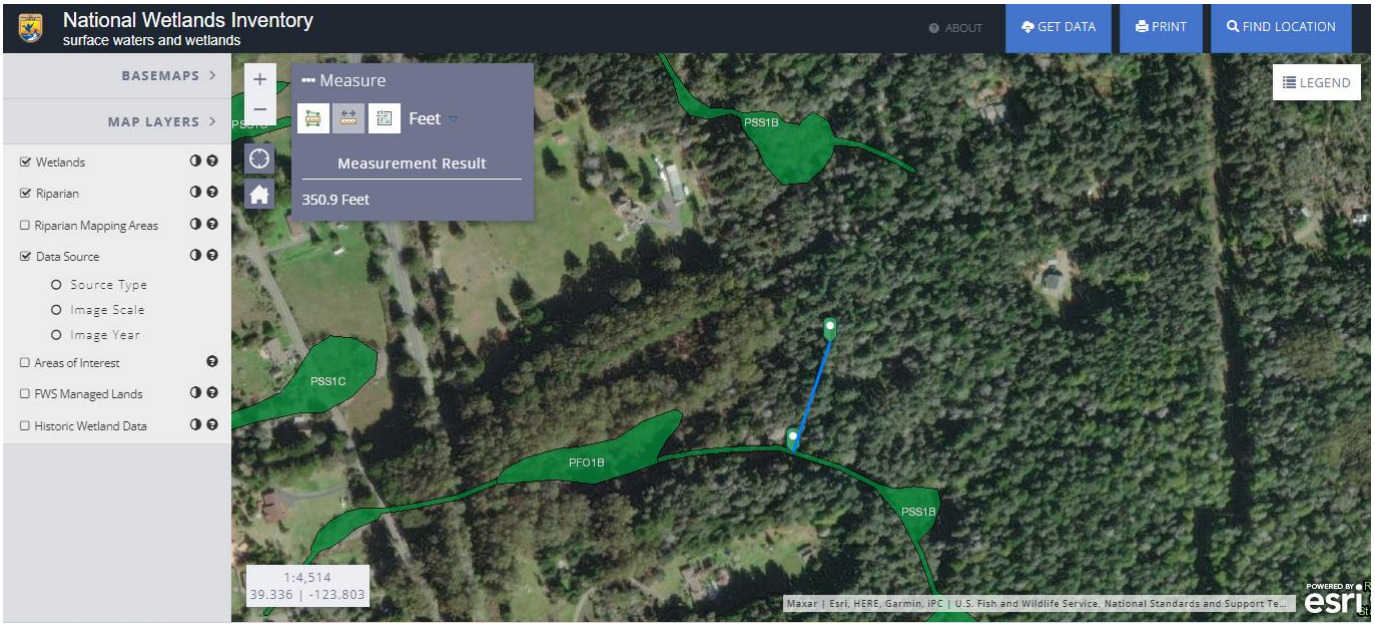
General site description

The project site is a 10 acre residential lot in Mendocino County, California, located at 12825 Sea Pines Lane, Mendocino (APN 118-210-29). This parcel is bounded on the north by the curving Sea Pines Lane, with straight boundaries on the west, east, and south bordering private parcels. There is a creek that flows across the southwest part of the parcel. The parcel slopes moderately to the south and the west. The border of Russian Gulch State Park is approximately 700' to the southeast. The entire parcel is undeveloped with some old overgrown roads.

Physical and climatic characteristics

The parcel is within the Sea Pines subdivision of similar sized parcel on the first marine terrace. The Pacific Ocean is approximately three quarters of a mile west of the parcel.
The topography of the parcel and adjacent parcels is gently sloping west with a drainage valley running roughly east-west. The region has a Mediterranean climate with approximately 40" of annual rainfall with most of the rain falling in the winter between November and March. There is a PSS1B forested/shrub wetland shown on the site according to the National Wetlands Inventory (NWI) map.

Figure 2. Fishelson property National Wetlands map



Vegetation communities

Native north coast forest with some eucalyptus in the southwest corner of the parcel on Pine Crest Lane.

3 SURVEY METHODOLOGY

Scoping tables were created for the special-status plant species and wildlife with the potential to occur in the Study Area by reviewing the most up-to-date species lists for the California Department of Fish and Wildlife (CDFW), California Natural Diversity

Database (CNDDB) and the California Native Plant Society (CNPS).

"Special-status species" is a general term for plant and animal species that warrant special consideration and/or protection due to their rarity. They can include species listed as endangered or threatened under the Federal or California Endangered Species Acts, species listed as rare under the California Native Plant Protection Act, or species not formally listed but considered rare or uncommon by government agencies or non-government organizations, such as species on the periphery of their range or those with unique or highly specific habitat requirements.

The California Natural Diversity Database CNDDB was reviewed for records within the 9-quad area centered on the Study Area. The CNDDB is a database consisting of historical observations of special- status flora and fauna in California. Because the CNDDB is limited to reported sightings, it is not a comprehensive list of species that may occur in a particular area. However, it is useful in refining the list of special-status species that have the potential to occur on a particular site.

A plant database search was performed using the CNPS *Electronic Inventory*, which allows users to query the *Inventory of Rare and Endangered Plants of California* using a set of search criteria (e.g., quad name, habitat type). A target list of special-status plant species with the potential to occur on the site was developed through interpretation of the CNDDB and CNPS query results. The biological scoping tables with special status resources and potential occurrences in the Study Area are presented in **Appendix A, Tables 1 and 2** (a key to the ranking status of all rare plants and wildlife is also presented in **Appendix A**)**.**

Additional database review of the National Wetland Inventory (NWI) was conducted to assess the potential for wetlands to occur in the area prior to field work. Aerial photography was assessed for features with "wet" characteristics and the Inventory of National Wetlands database was viewed with the subject parcel boundaries to see if any predetermined wetlands occur in the Study Area.

Biological Surveys

The survey of the Study Area was conducted primarily adhering to the protocol described by the California Department of Fish and Wildlife in *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities.*

We conducted field surveys from December 2022 to April 2023 to identify plants and sensitive fauna.

Potential wildlife habitat was surveyed including host plants for endangered butterflies, bird nests, Sonoma tree vole nests, animal burrows, and other potential wildlife indicators.

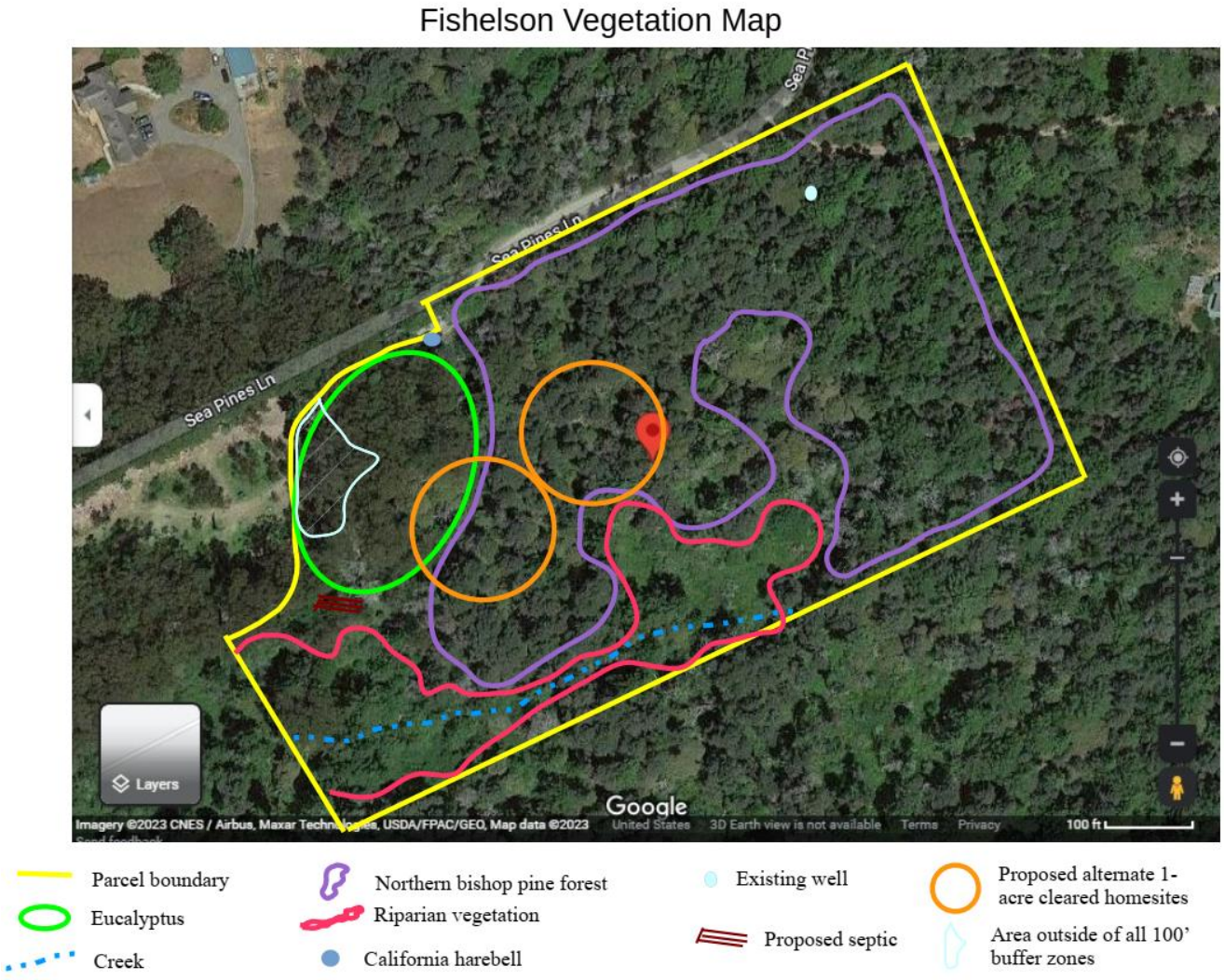
4 SURVEY RESULTS

Plants and Plant Communities

The CDFW's California Native Diversity Database (CNDDB) BIOS, was used to focus the search of special status flora previously reported in the vicinity of the Study Area (9-quad search)**.** Three special status plant species or communities were found during the survey.

Much of the parcel is mature to senescent bishop pine forest (approximately 20% dead), with little regeneration of bishop pines. There are also areas of primarily tanoak, and areas of grand fir mixed with bishop pine, tanoak and Doug fir, though none that would classify as grand fir forest (60% cover of grand fir). Grand fir and tan oak seedlings are coming in under the bishop pine. The only young bishop pines are found along the side of Sea Pines Lane. There is also a grove of Eucalyptus, with some Monterey cypress along the Sea Pines Lane. There are calypso orchids found in the Eucalyptus grove. The creek supports red alder, several stands of Labrador tea, and an extensive stand of skunk cabbage, with fringed false hellebore, slough sedge, lady fern, and deer fern. The red alder is not in dense enough stands to merit a designation of Red Alder Forest Alliance. Neither is the density of the slough sedge. However, as riparian vegetation, all these habitats near the creek should be protected as ESHA's.

Figure 3. Vegetation communities and proposed building area.



Habitats Alliances Found on Parcel

- Northern bishop pine forest:
  Pinus muricata--Bishop pine forest and woodland--Tree--S3.2--G3
  Pinus muricata > 15% relative cover with trees evenly spaced in the tree canopy (Keeler-Wolf et al. 2003a).

- Pinus muricata - (Notholithocarpus densiflorus) / Vaccinium ovatum

- Eucalyptus spp. - Ailanthus altissima – Robinia pseudoacacia--Eucalyptus - tree of heaven - black locust groves--Tree--SNA--GNA

- Riparian- Rhododendron columbianum--Western Labrador-tea thickets--Shrub--S2--G4

Environmentally Sensitive Habitat Areas (E.S.H.A.'s):
The riparian area is an ESHA, as is the bishop pine forest. However, the bishop pine forest is mature to senescent, with no regeneration.

Rare and Endangered plant species:

- Fringed False Hellebore (Veratrum fimbriatum) is a threatened plant, CNPS list 4.3.

- Swamp Harebell (Eastwoodiella californica, formerly Campanula) 1B.2

Wildlife - Potential Occurrences

The CDFW's California Native Diversity Database (CNDDB), was used generate a list of fauna previously reported in the vicinity of the project area. No special-status wildlife species were seen during the field biological survey. Descriptions for wildlife species with moderate to high potential of occurrence, and for State or Federally Endangered or Threatened Species with potential to occur are shown below. A complete list of special status wildlife with the potential to occur at the project site can be found in **Table 2** (**Appendix A**).

Invertebrates

a) **Western bumble Bee (Bombus occidentalis; G2G3, S1).** Western bumble bees are distinguished from other bumble bees in northern California by having a white patch of hairs at the end of their abdomen segments. No bumblebees were found foraging within the study area. No further studies are recommended.

b) **Lotis Blue butterfly (*Lycaeides argyrognomon lotis*) (FE; G5TH, SH)**. The Lotis Blue butterfly (LBB) has not been seen since 1983. It is primarily from Mendocino County but historically from northern Sonoma and possibly Marin Counties. The LBB inhabits wet meadows and potentially poorly-drained sphagnum-willow bogs where soils are

waterlogged and acidic. The presumed host plant for the LBB is Harlequin lotus (*Hosackia gracilis*), which was not found in the Study Area. No further surveys are warranted.

c) **Behren's silverspot butterfly (*Speyeria zerene behrensii*) (FE; G5T1, S1)**. The Behren's silverspot butterfly (BSSB) is historically from the Town of Mendocino, Mendocino County, south to the area of Salt Point State Park, Sonoma County. Now, the BSSB is presumed to be from Manchester south to Salt Point. They inhabit coastal terrace prairie with caterpillar host plant western dog violet (*Viola adunca*). Adult nectar sources include many plants in the sunflower family. Because the host plant was not found in the Study Area, no further surveys for BSSB are warranted.

d) **Pomo bronze shoulderband *(Helminthoglypta arrosa pomoensis;* G2G3T1, S1).** The Pomo bronze shoulderband is found near the coast in heavily-timbered redwood canyons of Mendocino County, from Big River and Russian Gulch watersheds. Found under redwoods. Generally, in somewhat moist duff. Found in scrub in forest opening under a power line in Russian Gulch adjacent to second growth redwood forest.

Amphibians

a) **Foothill yellow-legged frog (*Rana boylii;* G3, S2S3).** Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Although the stream habitat does not seem suitable after cursory investigation, further investigation may be warranted.

b) **Northern red-legged frog (*Rana aurora aurora*; G4 [T2]).** Found in humid forests, woodlands, grasslands, and streamsides in northwestern California. Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season. Integration zone between northern and California species is between Manchester and Elk.

Birds

Potentially present nesting birds may be migratory or year-round residents, and 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 1 to August 31. Although no special-status birds or nests were observed during any of the field surveys, the nearby trees and shrubs provide potential nesting habitats for special-status bird species and also common migratory bird species protected by the Migratory Bird Treaty Act. If construction is to occur during the breeding season for birds (February to August), a pre-construction survey is recommended to ensure that no nesting birds will be disturbed during development. No surveys are recommended if activity occurs in the non-breeding season. Mitigation and

Avoidance measures in **Section 5** further address how to minimize impacts to all potentially occurring nesting birds in the vicinity of proposed development.

a) **Marbled murrelet (Brachyramphus marmoratus; G3G4, S1).** Nests up to six miles inland in redwood and fir forest with old growth, large trees, or with presence of nest platforms**.** The project site is about 700 feet from final critical habitat in Russian Gulch State Park.

b) **Purple martin (*Progne subis*; G5 S3).** Nesting: inhabits woodlands, low elevation coniferous forest of Douglas fir, Ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures such as weep holes in bridges. Nests often located in tall, isolated trees and snags. Nesting on the Mendocino Coast. Known from Ten Mile, Noyo, and Big River, and snags from Ten Mile River to Pudding Creek. Needs open foraging habitats.

Mammals

a) **Sonoma tree vole (*Arborimus pomo*; G3 S3).** Species split into red tree vole and Sonoma tree vole; approximate boundary between two species is Klamath River. Inhabits north coast fog belt from Oregon border to Sonoma Co. in old-growth and other forests, mainly Douglas- fir, redwood, pine and montane hardwood-conifer habitats. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce. Further surveys are warranted.

Bats

Although no bats or roosts were documented during the field survey, bat roost sites can change from year to year, so pre-construction surveys are usually necessary to determine the presence or absence of bat roost sites in a given area. Pre-construction bat surveys do not need to be performed if work is conducted between September 1 and October 31, after young have matured and prior to the bat hibernation period. However, if it is necessary to disturb potential bat roost sites between November 1 and August 31, pre-construction surveys should be performed by a qualified biologist within 14 days prior to the onset if development activities. Mitigation and Avoidance measures in **Section 5** further address how to minimize impacts to all potentially occurring bats in the vicinity of proposed development.

5 MITIGATION MEASURES

Potential Impact to Invertebrates and amphibians

Protection of the riparian buffer zone during development and construction will alleviate the potential impacts to aquatic invertebrate and amphibian habitat. Any road crossing should be made with appropriately sized culverts or bridges.

Potential Impact to Birds

Construction in the Study Area has the potential to disturb special status and other protected birds during the nesting season. Construction activity near trees and vegetated areas has the potential to disturb bird species.

Measure 1a: Seasonal Avoidance

No surveys are recommended if activity occurs in the non-breeding season (September 1 to January 30). If development is to occur during the breeding season (February 1 to August 31), a pre- construction survey is recommended within 14 days of the onset of construction to ensure that no nesting birds will be disturbed during development.

Measure 1b: Nest Avoidance

If active special-status bird nests are observed, no ground disturbance activities shall occur within a minimum 100-foot exclusion zone of the nest. 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.

Potential Impact to Mammals and Bats

Construction in the Study Area has the potential to impact special status bat species. Tree removal has the potential to impact Sonoma tree voles and bats.

Measure 2a: Pre-construction and tree removal surveys for bats

Construction will ideally occur between September 1st and October 31 after the young have matured and prior to the bat hibernation period. **If it is necessary to disturb potential bat roost sites between November 1 and August 31**, **pre-construction surveys should be performed** by a qualified biologist 14 days prior to the onset of development activities. If active bat roosts are observed, no ground disturbance activities shall occur within a minimum 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 roost until all young are no longer dependent upon the roost.

Pre-construction bat surveys involve surveying trees for evidence of bat use (guano accumulation) and searching for bats visually or by sound. If evidence of bat presence is found, then biologists shall conduct acoustic surveys under appropriate conditions using an acoustic detector, to determine whether a site is occupied. If bats are found, a minimum 50-foot buffer should be implemented

around the roost tree.

Measure 2b: Construction activities during daylight hours

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

6 REFERENCES

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Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA. 1300 pp.

7 INVESTIGATOR BIOGRAPHIES

Alison Gardner received a certificate in Natural History from College of the Redwoods in Fort Bragg and has been working with native plants for almost 40 years in the Mendocino area. Her work has included plant identification for the College herbarium, private botanical tours, and botanical surveys for various private and agency groups.

Kim Obermeyer received a master's in environmental management and policy before working in Oregon and Washington for an environmental consulting firm doing biological surveys, wetland mitigation and restoration. He then received a master's in biology from University of Nevada, Reno and conducted three years of field research in Southeast Alaska on the importance of spawning Pacific salmon to predator, scavenger and nutrient systems. He worked for an addition 5 years in Juneau, Alaska for the USFS Forestry Sciences Lab, the National Parks Service and Alaska Department of Fish and Game. He has worked as a biological consultant on the North Coast since 2019.

Appendix A

Scoping Tables

Special Status Animals with Potential for Occurrence in Coastal Mendocino County

Table 1. Special Status Plants with Potential Occurrence in Coastal Mendocino County. This table is derived from federal, state, and CNPS–listed plant species, including plants of regional significance. Explanation of column headings:

FESA: federal status includes federally rare (FR), threatened (FT), or endangered (FE)
STATE: California state status includes rare (CR), threatened (CT), or endangered (CE)
CRPR: California Rare Plant Rank - ranked inventory of native California plants (Element Occurrences, EO's) thought to be at risk,
CNDDB ELEMENT RANK

Rank 1A - Plants presumed extirpated in California and either rare or extinct elsewhere
Rank 1B - Plants rare, threatened, or endangered in California and elsewhere.
(usually < 50 extant EO's in CA)
Rank 2A - Plants Presumed Extirpated in California, but more common elsewhere.
Rank 2B - Plants rare, threatened or endangered in California but more common elsewhere.
(usually < 50 extant EO's in CA)
Rank 3 - More information needed, a review list.
Rank 4 - Species of limited distribution, a watch list. (usually > 50 extant EO's in CA)

A Threat Code extension has been added following the CNPS List (e.g. 1B.1, 2.2 etc.)
Threat Code extensions and their meanings:
.1 – Seriously endangered in California (> 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 – Not very endangered in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known

GLOBAL RANK: The *global rank* (G-rank) is a reflection of the overall status of an element throughout its global range. Both Global and State ranks represent a letter+number score that reflects a combination of Rarity, Threat and Trend factors, with weighting being heavier on Rarity than the other two.
SPECIES OR NATURAL COMMUNITY LEVEL
G1 = Critically Imperiled - At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled - At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep
declines, or other factors.
G3 = Vulnerable - At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = Secure - Common; widespread and abundant.
SUBSPECIES LEVEL
Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety. For example: *Chorizanthe robusta* var. *hartwegii*. This plant is ranked G2TI. The G-rank refers to the whole species range i.e., *Chorizanthe robusta*. The T-rank refers only to the global condition of var. *hartwegii*.
Not Ranked

STATE-RANK: The state rank (S-rank) is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank.
S1 = *Critically Imperiled* - Critically Imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factors such as very steep declines making it especially vulnerable to extirpation from the state.
S2 = *Imperiled* -Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
S3 = *Vulnerable* - Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
S4 = *Apparently Secure* - Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
S5 = *Secure* - Common, widespread, and abundant in the state.

SNR = State

Notes:

1. Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take a bird's eye or aerial view when ranking sensitive elements rather than simply counting element occurrences.
2. Uncertainty about the rank of an element is expressed in two major ways: By expressing the rank as a range of values: e.g., S2S3 means the rank is somewhere between S2 and S3. By adding a ? to the rank: e.g., S2? This represents more certainty than S2S3, but less than S2.
3. Other symbols: GH - All sites are historical; the element has not been seen for at least 20 years, but suitable habitat still exists (SH = All California sites are historical).
   GX - All sites are extirpated; this element is extinct in the wild (SX = All California sites are extirpated).
   GXC - Extinct in the wild; exists in cultivation.
   G1Q - The element is very rare, but there are taxonomic questions associated with it.
   T - Rank applies to a subspecies or variety.

Scientific Name	**Common Name**	**Habitat present?**	**Family**	**Life form**	**CRPR**	**Global rank**	**State rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Elevation range (m)**
Agrostis blasdalei	Blasdale's bent grass	no	Poaceae	perennial rhizomatous herb	1B.2	G2G3	S2	SB_UCSC	None	None	May-Jul	0-150
Angelica lucida	sea-watch	yes	Apiaceae	perennial herb	4.2	G5	S3	None	None	Apr-Sep	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt)	0-150
Arctostaphylos nummularia ssp. mendocinoensis	pygmy manzanita	no	Ericaceae	perennial evergreen shrub	1B.2	G3?T1	S1	None	None	Jan	Closed-cone coniferous forest (acidic sandy clay)	90-200
Calamagrostis bolanderi	Bolander's reed grass	yes	Poaceae	perennial rhizomatous herb	4.2	G4	S4	None	None	May-Aug	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Marshes and swamps (freshwater), Meadows and seeps (mesic), North Coast coniferous forest	0-455
Calamagrostis crassiglumis	Thurber's reed grass	no	Poaceae	perennial rhizomatous herb	2B.1	G3Q	S2	None	None	May-Aug	Coastal scrub (mesic), Marshes and swamps (freshwater)	0-60
Calystegia purpurata ssp. saxicola	coastal bluff morning-glory	yes	Convolvulaceae	perennial herb	1B.2	G4T2T3	S2S3	SB_UCSC	None	None	(Mar)Apr-Sep	10-105
Carex californica	California sedge	yes	Cyperaceae	perennial rhizomatous herb	2B.2	G5	S2	None	None	May-Aug	Bogs and fens, Closed-cone coniferous forest, Coastal prairie, Marshes and swamps (margins), Meadows and seeps	90-335
Carex saliniformis	deceiving sedge	yes	Cyperaceae	perennial rhizomatous herb	1B.2	G2	S2	None	None	(May)Jun(Jul)	Coastal prairie, Coastal scrub, Marshes and swamps (coastal salt), Meadows and seeps	3-230
Castilleja litoralis	Oregon coast paintbrush	no	Orobanchaceae	perennial herb (hemiparasitic)	2B.2	G3	S3	None	None	Jun	Coastal bluff scrub, Coastal dunes, Coastal scrub	15-100
Castilleja mendocinensis	Mendocino Coast paintbrush	no	Orobanchaceae	perennial herb (hemiparasitic)	1B.2	G2	S2	SB_UCSC	None	None	Apr-Aug	0-20
Ceanothus gloriosus var. exaltatus	glory brush	no	Rhamnaceae	perennial evergreen shrub	4.3	G4T4	S4	None	None	Mar-Jun(Aug)	Chaparral	30-610
Ceanothus gloriosus var. gloriosus	Point Reyes ceanothus	yes	Rhamnaceae	perennial evergreen shrub	4.3	G4T4	S4	None	None	Mar-May	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal scrub	5-520
Chorizanthe howellii	Howell's spineflower	no	Polygonaceae	annual herb	1B.2	G1	S1	CT	FE	May-Jul	Coastal dunes, Coastal prairie, Coastal scrub	0-45
Chrysosplenium glechomifolium	Pacific golden saxifrage	yes	Saxifragaceae	perennial herb	4.3	G5?	S3	None	None	Feb-Jun	North Coast coniferous forest, Riparian forest	10-540
Coptis laciniata	Oregon goldthread	yes	Ranunculaceae	perennial rhizomatous herb	4.2	G4?	S3?	None	None	(Feb)Mar-May(Sep-Nov)	Meadows and seeps, North Coast coniferous forest (streambanks)	0-1000

Scientific Name	Common Name	Habitat present?	Family	Life form	CRPR	Global rank	State rank	CESA	FESA	Blooming Period	Habitat	Elevation range (m)
Cornus unalaschkensis	bunchberry	yes	Cornaceae	perennial rhizomatous herb	2B.2	G5	S2	None	None	May-Jul	Bogs and fens, Meadows and seeps, North Coast coniferous forest	60-1920
Cuscuta pacifica var. papillata	Mendocino dodder	no	Convolvulaceae	annual vine (parasitic)	1B.2	G5T1	S1	None	None	(Jun)Jul-Oct	Coastal dunes (interdune depressions)	0-50
Eastwoodiella californica	swamp harebell	yes	Campanulaceae	perennial rhizomatous herb	1B.2	G3	S3	SB_CalBG/RSABG	None	None	Jun-Oct	0-5
Erigeron supplex	supple daisy	no	Asteraceae	perennial herb	1B.2	G2	S2	None	None	May-Jul	Coastal bluff scrub, Coastal prairie	10-50
Erysimum concinnum	bluff wallflower	no	Brassicaceae	annual/perennial herb	1B.2	G3	S2	None	None	Feb-Jul	Coastal bluff scrub, Coastal dunes, Coastal prairie	0-185
Gilia capitata ssp. pacifica	Pacific gilia	no	Polemoniaceae	annual herb	1B.2	G5T3	S2	None	None	Apr-Aug	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	5-1665
Gilia millefoliata	dark-eyed gilia	no	Polemoniaceae	annual herb	1B.2	G2	S2	SB_CalBG/RSABG	None	None	Apr-Jul	0-5
Hesperevax sparsiflora var. brevifolia	short-leaved evax	no	Asteraceae	annual herb	1B.2	G4T3	S3	SB_CalBG/RSABG	None	None	Mar-Jun	0-5
Hesperocyparis pygmaea	pygmy cypress	yes	Cupressaceae	perennial evergreen tree	1B.2	G1	S1	SB_CalBG/RSABG	None	None		0-100
Hosackia gracilis	harlequin lotus	no	Fabaceae	perennial rhizomatous herb	4.2	G3G4	S3	SB_UCSC	None	None	Mar-Jul	0-5
Juncus supiniformis	hair-leaved rush	yes	Juncaceae	perennial rhizomatous herb	2B.2	G5	S1	None	None	Apr-May(Jun-Jul)	Bogs and fens, Marshes and swamps (freshwater)	20-100
Lasthenia californica ssp. bakeri	Baker's goldfields	yes	Asteraceae	perennial herb	1B.2	G3T1	S1	None	None	Apr-Oct	Closed-cone coniferous forest (openings), Coastal scrub, Marshes and swamps, Meadows and seeps	60-520
Lasthenia californica ssp. macrantha	perennial goldfields	no	Asteraceae	perennial herb	1B.2	G3T2	S2	SB_CalBG/RSABG	None	None	Jan-Nov	0-15
Lathyrus palustris	marsh pea	yes	Fabaceae	perennial herb	2B.2	G5	S2	None	None	Mar-Aug	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest	1-100
Lilium maritimum	coast lily	yes	Liliaceae	perennial bulbiferous herb	1B.1	G2	S2	SB_BerrySB	SB_UCBG	None	None	0-5
Mitellastra caulescens	leafy-stemmed mitrewort	yes	Saxifragaceae	perennial rhizomatous herb	4.2	G5	S4	None	None	(Mar)Apr-Oct	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	5-1700
Packera bolanderi var. bolanderi	seacoast ragwort	yes	Asteraceae	perennial rhizomatous herb	2B.2	G4T4	S2S3	None	None	(Jan-Apr)May-Jul(Aug)	Coastal scrub, North Coast coniferous forest	30-650
Phacelia insularis var. continentis	North Coast phacelia	no	Hydrophyllaceae	annual herb	1B.2	G2T2	S2	None	None	Mar-May	Coastal bluff scrub, Coastal dunes	10-170
Pinus contorta ssp. bolanderi	Bolander's beach pine	no	Pinaceae	perennial evergreen tree	1B.2	G5T2	S2	None	None		Closed-cone coniferous forest (podzol-like soil)	75-250
Pityopus californicus	California pinefoot	yes	Ericaceae	perennial herb (achlorophyllous)	4.2	G4G5	S4	None	None	(Mar-Apr)May-Aug	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	15-2225
Ramalina thrausta	angel's hair lichen	yes	Ramalinaceae	fruticose lichen (epiphytic)	2B.1	G5?	S2S3	None	None		North Coast coniferous forest	75-430

Scientific Name	**Common Name**	**Habitat present?**	**Family**	**Life form**	**CRPR**	**Global rank**	**State rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Elevation range (m)**
Sanguisorba officinalis	great burnet	yes	Rosaceae	perennial rhizomatous herb	2B.2	G5?	S2	None	None	Jul-Oct	Bogs and fens, Broadleafed upland forest, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Riparian forest	60-1400
Sidalcea malachroides	maple-leaved checkerbloom	yes	Malvaceae	perennial herb	4.2	G3	S3	None	None	(Mar)Apr-Aug	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	0-730
Usnea longissima	Methuselah's beard lichen	yes	Parmeliaceae	fruticose lichen (epiphytic)	4.2	G4	S4	None	None		Broadleafed upland forest, North Coast coniferous forest	0-165
Veratrum fimbriatum	fringed false-hellebore	Present	Melanthiaceae	perennial herb	4.3	G3	S3	None	None	Jul-Sep	Bogs and fens, Coastal scrub, Meadows and seeps, North Coast coniferous forest	3-300

Table 2. Special Status Animals with Potential for Occurrence in Coastal Mendocino County. Species gleaned from the California Department of Fish and Wildlife's list, "Special Animals," (CDFW 2016). See Table 1 for an explanation of global and state rankings. An explanation of the field "Organization: Code" is at the end of the table.

Scientific name **Common name**	**ESA (Federal)**	**CESA (State)**	**Global Rank**	**State Rank**	**Organization: Code**	**Habitat**	**Potential for Occurrence within Project Area**
INVERTEBRATES							
Snails, Slugs, and Abalone (*GASTROPODA*)							
Helminthoglypta arrosa pomoensis Pomo bronze shoulderband	None	None	G2G3T1	S1	IUCN:DD	Found near the coast in heavily-timbered redwood canyons of Mendocino County, from Big River and Russian Gulch watersheds. Found under redwoods. Generally, in somewhat moist duff. Found in scrub in forest opening under a power line in Russian Gulch adjacent to second growth redwood forest.	Potential
Noyo intersessa Ten Mile shoulderband	None	None	G2	S2	None	Known from a few locations in Mendocino County with limited habitat information. Known from Ten Mile Dunes. Barry Roth suspects most snails found in Fort Bragg would be *N. intersessa* and *Helminthoglypta arrosa*. subsp. *a.*	No
Beetles (*INSECTA, Coleoptera*)							
Coelus globosus Globose dune beetle	None	None	G1G2	S1S2	IUCN:VU	Subterranean beetle that tunnels through sand under dune vegetation. Since coastal dune habitat in California is diminishing, the beetle is a special-status species.	None. No coastal dunes.
Butterflies & Moths (*INSECTA, Hymenoptera*)							
Lycaeides argyrognomon lotis **[***Plebejus idas lotis]*** lotis blue butterfly	Endangered	None	G5TH	SH	XERCES:CI	Not seen since 1983, it is primarily from Mendocino County but historically from northern Sonoma and possibly Marin Counties. Inhabits wet meadows, damp coastal prairie, and potentially bogs or poorly-drained sphagnum-willow bogs where soils are waterlogged and acidic. Presumed host plant is *Hosackia gracilis* [*Hosackia gracilis*].	No host plants found.
Speyeria zerene behrensii Behren's silverspot butterfly	Endangered	None	G5T1	S1	XERCES:CI	Historically from near the City of Mendocino, Mendocino County, south to the area of Salt Point State Park, Sonoma County. Now presumed to be from Manchester south to Salt Point area. Inhabits coastal terrace prairie with caterpillar host plants: violet (*Viola adunca*) and adult nectar sources: thistles, asters, etc.	No. No coastal terrace prairie habitat. No host plants found.
Ants, Bees, & Wasps (*INSECTA, Hymenoptera*)							
Bombus occidentalis Western bumble bee	None	None	G2G3	S1	USFS:S XERCES:IM	Populations in central California have declined since the 1990's. It visits flowers in a variety of habitats. Identified by a white patch on its abdomen hind tip. None recorded from coastal Mendocino County at http://www.xerces.org/bumblebees/. Nests in abandoned rodent burrows or undisturbed grass 6-18" below ground and occasionally on the surface in clumps of grass. (http://www.xerces.org/wp-content/uploads/2009/03/xerces_2008_bombus_status_review.pdf)	Potential habitat based on limited information. Unlikely.
FISH							
Lampreys (*PETROMYZONTIDAE*)							
Entosphenus tridentatus Pacific lamprey	None	None	G4	S4	AFS:VU BLM:S USFS:S	Anadromous lamprey found in freshwater rivers around the Pacific Rim, from Japan to Baja California. Adult Pacific Lamprey spawn in habitat similar to salmon: low gradient stream reaches, in gravel, often at the tailouts of pools and riffles.	No suitable watercourses.
Lampetra ayresii river lamprey	None	None	G4	S4	AFS:VU CDFW:SSC	Anadromous lamprey that uses riffle and side channel habitats for spawning and for ammocoete rearing where good water quality is essential. Adult Pacific Lamprey spawn in habitat similar to salmon: low gradient stream reaches, in gravel, often at the tailouts of pools and riffles.	No suitable watercourses.
Trout & Salmon (*SALMONIDAE*)							
Oncorhynchus gorbuscha pink salmon	None	None	G5	S1	CDFW:SSC	Most spawn in intertidal or lower reaches of streams and rivers in Sept and Oct. and move further upstream in Sacramento River. Optimal temp = 5.6 to 14.4° C. Embryos and alevins require fast-flowing well oxygenated water for development and survival.	No streams present.

Scientific name Common name	ESA (Federal)	CESA (State)	Global Rank	State Rank	Organization: Code	Habitat	Potential for Occurrence within Project Area
Oncorhynchus kisutch Coho salmon - central California coast ESU	Endangered	Endangered	G4	S2?	AFS:EN	Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	No sufficient aquatic habitat.
Oncorhynchus kisutch Coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	G4T2Q	S2?	AFS:TH CDFW:SSC	Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	No sufficient aquatic habitat.
Oncorhynchus mykiss irideus summer-run steelhead trout	None	None	G5T4Q	S2	CDFW:SSC	Cool, swift, shallow water and clean loose gravel for spawning, and suitably large pools in which to spend the summer.	No sufficient aquatic habitat.
Oncorhynchus mykiss irideus steelhead - central California coast DPS	Threatened	None	G5T2Q	S2	AFS:TH CDFW:SSC	Adult steelhead require high flows with water at least 18 cm deep for passage. They may leap up to ~3 m. For spawning, sufficient streamflow over clean gravel, cool water temperature, depth, and cover for escape (usually a deep pool with cover).	No sufficient aquatic habitat.
Oncorhynchus mykiss irideus steelhead-northern California DPS	Threatened	None	G5T2Q	S2	AFS:TH CDFW:SSC	Cool, swift, shallow water and clean loose gravel for spawning.	No sufficient aquatic habitat.
Oncorhynchus tshawytscha chinook salmon – California coastal ESU	Threatened	None	G5	S1	AFS:TH	Adults depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27° C lethal to adults.	No sufficient aquatic habitat.
Minnows & Carp (*CYPRINIDAE*)							
Lavinia symmetricus navarroensis Navarro roach	None	None	G4T1T2	S1S2	CDFW:SSC	Habitat generalists. Found in warm intermittent streams as well as cold, well-aerated streams. Found in the lower, warmer reaches of streams in the Russian and Navarro River drainages.	Poor habitat
Lavinia symmetricus parvipinnis Gualala roach	None	None	G4T1T2	S1S2	CDFW:SSC	Habitat generalists. Found in warm intermittent streams as well as cold, well-aerated streams.	Poor habitat
Gobies (*GOBIIDAE*)							
Eucyclogobius newberryi tidewater goby	Endangered	None	G3	S2S3	AFS:EN CDFW:SSC IUCN:VU	Brackish water habitats along the California coast from Agua Hedionda lagoon, San Diego Co. to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	No habitat
AMPHIBIANS & REPTILES							
Olympic salamanders (RHYACOTRITONIDAE)							
Rhyacotriton variegatus southern torrent (=seep) salamander	None	None	G3G4	S2S3	CDFW:SSC IUCN:LC USFS:S	Found in Coastal redwood, Douglas fir, mixed conifer, montane riparian, and montane hardwood-conifer forests from northern California south to Point Arena. Aquatic habitat includes permanent cold creeks, steams and seepages with low water flow; associated with moss-covered rocks within trickling water and the splash zone of waterfalls; old-growth coniferous forests with closed canopy; <50% cobble in creeks, remainder mixture of pebble, gravel and sand.	Poor habitat
Tailed frogs (ASCAPHIDAE)							
Ascaphus truei Pacific tailed frog	None	None	G4	S2S3	CDFW:SSC IUCN:LC	Occurs in montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats. Coastal from Anchor Bay, Mendocino Co. to Oregon border. Cold, clear, rocky streams in wet forests. They do not inhabit ponds or lakes. A rocky streambed is necessary for cover for adults, eggs, and larvae. After heavy rains, adults may be found in the woods away from the stream.	Poor habitat.
Frogs (RANIDAE)							
Rana aurora aurora northern red-legged frog	None	None	G4 [T2]	S2?	CDFW:SSC USFS:S	Found in humid forests, woodlands, grasslands, and streamsides in northwestern California. Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season. Integration zone between northern and California species is between Manchester and Elk.	Potential upland habitat but poor breeding habitat.
Rana aurora draytonii California red-legged frog	Threatened	None	G2G3	S2S3	CDFW:SSC IUCN:VU	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Out of known range.

Scientific name Common name	ESA (Federal)	CESA (State)	Global Rank	State Rank	Organization: Code	Habitat	Potential for Occurrence within Project Area
Rana boylii foothill yellow-legged frog	None	None	G3	S2S3	BLM:S CDFW:SSC IUCN:NT USFS:S	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying.	Potential
Box & Water Turtles (EMYDIDAE)							
Emys marmorata marmorata western pond turtle	None	None	G3G4	S3	BLM:S CDFW:SSC IUCN:VU USFS:S	Former scientific name: *Clemmys marmorata marmorata*. Associated with permanent or nearly permanent water in a wide variety of habitats. Requires basking sites. Nests sites may be found up to 0.5 km from water.	Poor habitat
BIRDS							
Pelicans (*PELECANIDAE*)							
Pelecanus occidentalis californicus California brown pelican (nesting colony & communal roosts)	Delisted	Delisted	G4T3	S1S2	BLM:S CDFW:FP USFS:S	Nest colonies are on offshore islands free of mammalian predators and human disturbance, are of sufficient elevation to prevent flooding of nests, and are associated with an adequate and consistent food supply. Brown pelicans roost communally, generally in areas that are near adequate food supplies, have some type of physical barrier to predation and disturbance, and provide some protection from environmental stresses such as wind and high surf.	No marine habitat.
Cormorants (*PHALACROCORACIDAE*)							
Phalacrocorax auritus double-crested cormorant (nesting colony)	None	None	G5	S3	CDFW:WL IUCN:LC	Rookery site: colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	No marine habitat.
Herons, Egrets, and Bitterns (*ARDEIDAE*)							
Ardea alba great egret (nesting colony)	None	None	G5	S4	CDF:S IUCN:LC	Rookery: colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes. Breeding territory is limited to the immediate vicinity of nest, and is used for courtship and copulation as well as nesting. A monogamous, colonial nester.	Poor habitat
Ardea herodias great blue heron (nesting colony)	None	None	G5	S4	CDF:S IUCN:LC	Rookery: colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	No occurrence of aquatic habitat for nesting sites.
Egretta thula snowy egret (nesting colony)	None	None	G5	S4	IUCN:LC	Rookery: colonial nester, with nest sites situated in protected beds of dense tules. Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	No occurrence of aquatic habitat for nesting sites.
Hawks, Kites, Harriers, & Eagles (*ACCIPITRIDAE*)							
Accipiter cooperii Cooper's hawk (nesting)	None	None	G5	S3	CDFW:WL IUCN:LC	Nesting: woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	No nesting habitat.
Accipiter gentilis northern goshawk (nesting)	None	None	G5	S3	BLM:S CDF:S CDFW:SSC IUCN:LC USFS:S	Nesting: within and in vicinity of coniferous forest, including Doug Fir . Uses old nests, and maintains alternate sites. Usually nests on north slopes, near water. Northern goshawks typically nest in conifer forests containing large trees and an open understory. There is historic nesting in Big River and Pudding Creek. Winter migrant on the coast.	Marginal habitat
Accipiter striatus sharp-shinned hawk (nesting)	None	None	G5	S3	CDFW:WL	Nesting: ponderosa pine, black oak, riparian deciduous, mixed conifer and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes, with plucking perches are critical requirements. Nests usually within 275 ft. of water. Nests in dense, even-aged, single-layered forest canopy, usually nests in dense, pole and small-tree stands of conifers, which are cool, moist, well shaded, with little ground-cover, near water. Foraging: Uses dense stands in close proximity to open areas.	Poor nesting habitat
Aquila chrysaetos golden eagle (nesting & wintering)	None	None	G5	S3	BLM:S CDF:S CDFW:FP CDFW:WL IUCN:LC USFWS:BCC	Nesting and wintering: rolling foothills mountain areas, sage-juniper flats, desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas. Nests on cliffs of all heights and in large trees in open areas. Alternative nest sites are maintained, and old nests are reused. Builds large platform nest, often 10 ft. across and 3 ft. high, of sticks, twigs, and greenery. Rugged, open habitats with canyons and escarpments used most frequently for nesting.	No nesting habitat.

Scientific name Common name	ESA (Federal)	CESA (State)	Global Rank	State Rank	Organization: Code	Habitat	Potential for Occurrence within Project Area
Buteo regalis ferruginous hawk (wintering)	None	None	G4	S3S4	CDFW:WL IUCN:LC USFWS:BCC	Usually east of the coastal belt, uncommon migrant in coastal Mendocino County seen in open areas such as Bald Hill and Manchester. Feeding habitat in open, treeless areas. Does not breed in California.	Poor habitat.
Circus cyaneus Northern harrier (nesting)	None	None	G5	S3	CDFW:SSC IUCN:LC	Northern harriers prefer sloughs, wet meadows, marshlands, swamps, prairies, plains, grasslands, and shrublands and perch on structures such as fence posts. Nesting habitat: nest on the ground, usually near water, or in tall grass, open fields, clearings, or on the water on a stick foundation, willow clump, or sedge tussock. Most nests built within patches of dense, often tall, vegetation (e.g., cattails) in undisturbed areas. They usually nest near hunting grounds. Foraging: They need open, low woody or herbaceous vegetation for nesting and hunting.	No habitat.
Elanus leucurus white-tailed kite (nesting)	None	None	G5	S3	CDFW:FP IUCN:LC	Nesting: rolling foothills/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland, open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching. Winter congregation of at least 20 birds seen at Manchester State Park in early 2000's. One nest known from a THP in Albion ~2006; nest was at the edge of conifer forest with no pasture immediately adjacent.	No open habitat, poor habitat.
Haliaeetus leucocephalus bald eagle (nesting & wintering)	Delisted	Endangered	G5	S2	BLM:S CDF:S CDFW:FP IUCN:LC USFS:S USFWS:BCC	Nesting and wintering: ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter. Known from winter in Lake Cleone, MacKerricher State Park and Little River.	Poor nesting habitat in small stand of trees.
Pandion haliaetus osprey (nesting)	None	None	G5	S3	CDF:S CDFW:WL IUCN:LC	Nesting: ocean shore, bays, fresh-water lakes, and larger streams. Large nests built in tree-tops within 6-7 to 15 miles of good fish-producing body of water. Flattened portions of partially broken off snags, trees, rocks, dirt pinnacles, cacti, and numerous man-made structures such as utility poles and duck blinds are used for nests. Furthest nest inland may be McGuire's Pond.	Poor nesting habitat in small stand of trees surrounding by commercial/residential area.
Falcons (*FALCONIDAE*)							
Falco columbarius merlin (wintering)	None	None	G5	S3	CDFW:WL IUCN:LC	General wintering habitat: Uncommon winter migrants on the coast. Habitat apparently similar to breeding habitat, (open forest and grasslands). Regularly hunts prey (e.g., shorebirds) concentrated on tidal flats. Often winters in cities throughout its range, where frequently perches on buildings, power poles, and tall trees. Also winters in open woodland, grasslands, open cultivated fields, marshes, estuaries, and seacoasts. Frequents open habitats at low elevation near water and tree stands.	No nesting habitat in small stand of trees.
Falco peregrinus anatum American peregrine falcon (nesting)	Delisted	Delisted	G4T4	S3S4	CDF:S CDFW:FP USFWS:BCC	Nesting: near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	No open sites for nesting.
Plovers & Relatives (CHARADRIIDAE)							
Charadrius alexandrinus nivosus western snowy plover (nesting)	Threatened	None	G3T3	S2	ABC:WLBCC CDFW:SSC USFWS:BCC	Nesting: federal listing applies only to the pacific coastal population. Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting. Sand spits, dune-backed beaches, unvegetated beach strands, open areas around estuaries, and beaches at river mouths are the preferred coastal habitats for nesting. Less common nesting habitat includes salt pans, coastal dredged spoil disposal sites, dry salt ponds, and salt pond levees and islands.	No coastal strand, open dune, or open river gravel bar habitat.
Oystercatchers (HAEMATOPODIDAE)							
Haematopus bachmani Black oystercatcher (nesting)	None	None	G5	S4	IUCN:LC USFWS:BCC	From the Aleutian Islands to Baja California, the forage on intertidal macroinvertebrates along gravel or rocky shores and in the southern part of their range nest primarily on rocky headlands and offshore rocks.	No coastal habitat.
Gulls & Terns (LARIDAE)							
Larus californicus California gull (nesting)	None	None	G5	S2	CDFW:WL IUCN:LC	Colony nesters and usually occurring on an island or vegetated offshore rock.	No coastal habitat.

Scientific name Common name	ESA (Federal)	CESA (State)	Global Rank	State Rank	Organization: Code	Habitat	Potential for Occurrence within Project Area
Auklets, Puffins, & Relatives (ALCIDAE)							
Brachyramphus marmoratus marbled murrelet (nesting)	Threatened	Endangered	G3G4	S1	ABC:WLBCC CDF:S IUCN:EN	Nesting: feeds near-shore; nests inland along coast, from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir. Presence of platforms (flat surface at least four inches in diameter) appears to be the most important stand characteristic for predicting murrelet presence. Stands can be: 1) mature (with or without an old-growth component); 2) old-growth; 3) young coniferous forests with platforms; and 4) include large residual trees in low densities sometimes less than one tree per acre.	Limited large fir trees for nesting.
Owls (*STRIGIDAE*)							
Athene cunicularia burrowing owl (burrow sites and some winter sites)	None	None	G4	S3	BLM:S CDFW:SSC IUCN:LC USFWS:BCC	Burrow sites: open, dry annual or perennial grasslands, deserts and scrublands, and dunes characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	No open habitat or ground squirrel burrows.
Strix occidentalis caurina northern spotted owl	Threatened	None	G3T3	S2S3	ABC:WLBCC CDF:S CDFW:SSC IUCN:NT	Old-growth forests or mixed stands of old-growth and mature trees. Occasionally in younger forests w/patches of big trees. High, multistory canopy dominated by big trees, many trees w/cavities or broken tops, woody debris, and space under canopy.	Poor habitat
Swifts (*APODIDAE*)							
Chaetura vauxi Vaux's swift (nesting)	None	None	G5	S2S3	CDFW:SSC IUCN:LC	Nesting: redwood, Douglas fir, and other coniferous forests. Nests in large hollow trees and snags. Often nests in flocks. Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes. The most important habitat requirement appears to be an appropriate nest-site in a large, hollow tree. Forages over most terrains and habitats, often high in the air. Shows an apparent preference for foraging over rivers and lakes.	No basal hollows or snags.
Hummingbirds (*TROCHILIDAE*)							
Selasphorus rufus rufous hummingbird (nesting)	None	None	G5	S1S2	IUCN:LC USFWS:BCC	Breeds in open or shrubby areas, forest openings, yards and parks, and sometimes in forests, thickets, and meadows. Late winter and spring migrant on the California coast. Breeding range from southeast Alaska and as far south as northwestern California.	Out of range for breeding site.
Selasphorus sasin Allen's hummingbird (nesting)	None	None	G5	SNR	ABC:WLBCC IUCN:LC USFWS:BCC	Breeds only along a narrow strip of coastal California and southern Oregon. Nests in densely vegetated areas and forests. An early migrant compared with most North American birds, arriving in summer breeding grounds as early as January. Breeds in moist coastal areas, scrub, chaparral, and forests. Winters in forest edge and scrub clearings with flowers.	Unlikely nesting site.
Woodpeckers (*PICIDAE*)							
Picoides nuttallii Nuttall's woodpecker (nesting)	None	None	G5	SNR	ABC:WLBCC IUCN:LC	Ranging from west of the Cascade mountains and in the Sierra Nevada from southern Oregon to Northern Baja California. Nests are excavated in dead branches or snags of various trees, usually in close association with oak woodlands and riparian zone, habitat vulnerable to development. At least one Mendocino Coast record from 2011 Audubon Christmas Bird Count.	No oak, other that tanoak, habitat
Sphyrapicus ruber red-breasted sapsucker (nesting)	None	None	G5	SNR	None	Breeds primarily in coniferous forests, but also uses deciduous and riparian habitat, as well as orchards and power line corridors. The nest is a hole usually dug in a live deciduous tree (e.g. alder, willow, madrone) with possible preference for larger trees showing decay-softened wood.	Very little habitat
Tyrant Flycatchers (*TYRANNIDAE*)							
Contopus cooperi olive-sided flycatcher (nesting)	None	None	G4	S4	ABC:WLBCC CDFW:SSC IUCN:NT USFWS:BCC	Breeds in montane and northern coniferous forests, at forest edges and openings, such as meadows and ponds. Tall standing dead trees are used as perch trees for catching flying insects. Accordingly, an open canopy is a key components of suitable habitat. Nest is an open cup of twigs, rootlets, and lichens, placed out near tip of horizontal branch of a tree.	Very little habitat
Swallows (*HIRUNDINIDAE*)							

Scientific name Common name	ESA (Federal)	CESA (State)	Global Rank	State Rank	Organization: Code	Habitat	Potential for Occurrence within Project Area
Progne subis purple martin	None	None	G5	S3	CDFW:SSC IUCN:LC	Nesting: inhabits woodlands, low elevation coniferous forest of Douglas fir, Ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures such as weep holes in bridges. Nest often located in tall, isolated trees and snags. Nesting on the Mendocino Coast known, in part, from Ten Mile, Noyo, and Big River, and snags from Ten Mile River to Pudding Creek. Need open foraging habitats.	Possible but limited snags and foraging habitat
Wood-warblers (*PARULIDAE*)							
Dendroica occidentalis hermit warbler (nesting)	None	None	G4G5	S4	ABC:WLBCC IUCN:LC	Breeding range is relatively limited to the Pacific Coast and the Cascade and Sierra Nevada mountain ranges of Washington, Oregon, and California. Some winter along the coastal central and southern California, but most winter primarily in the mountains of western Mexico and Central America. Nesting habitats in Pacific northwestern are coniferous forests with a high canopy volume, generally preferring mature stands of pine and Douglas fir. Avoids areas with a high deciduous volume; absent from riparian areas and clearcuts. Birds of coniferous forests; they prefer cool, wet fir forests at elevation, and moist forests of Douglas-fir, hemlock, and western red cedar closer to sea level. Major threat to this species appears to be the degradation of breeding habitat. Not know as frequently nesting on the coast, perhaps more common inland.	No nesting habitat.
Sparrows, Buntings, Warblers, & Relatives (*EMBERIZIDAE*)							
Ammodramus savannarum grasshopper sparrow (nesting)	None	None	G5	S2	CDFW:SSC IUCN:LC	Nesting: dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting. Summer (breeding) resident in Mendocino County known from north of Ten Mile River.	No nesting habitat.
Passerculus sandwichensis alaudinus Bryant's savannah sparrow (nesting)	None	None	G5T2T3	S2S3	CDFW:SSC	California endemic from near Humboldt Bay, Humboldt Co. to Morro Bay, San Luis Obispo Co. Breeds in low tidally influenced habitats in higher parts of pickleweed/saltgrass marshes, adjacent ruderal areas, moist grasslands within and just above the fog belt, bottomlands and dairy pastures in the taller grasses and rushes along roads and fences, and infrequently, drier grasslands. In moist upland grasslands, it occurs where herbaceous vegetation is relatively short, with no or little woody plant cover. Open areas, whether provided by tidal mudflats or upland interstitial areas between clumps of vegetation, appears to be an important component of occupied habitat.	No nesting habitat.
Blackbirds (*ICTERIDAE*)							
Agelaius tricolor tricolored blackbird (nesting colony)	None	None	G2G3	S1S2	ABC:WLBCC BLM:S CDFW:SSC IUCN:EN USFWS:BCC	Nesting colony: highly colonial species, most numerous in central valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, such as cattails and foraging area with insect prey within a few km of the colony. Known inland from McGuire's Pond.	No open freshwater habitat.
MAMMALS							
Evening Bats (*VESPERTILIONIDAE*)							
Antrozous pallidus pallid bat	None	None	G5	S3	BLM:S CDFW:SSC IUCN:LC USFS:S WBWG:H	A wide variety of habitats deserts, grasslands, shrublands, woodlands and forests from sea level up through mixed conifer forests. Most common in open, dry habitats with rocky areas for roosting. A yearlong resident in most of the range. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings where there is protection from high temperatures.	Limited snags
Corynorhinus townsendi Townsend's big-eared bat	None	Candidate Threatened	G3G4	S2S3	BLM:S CDFW:SSC IUCN:LC USFS:S WBWG:H	Generally found in the dry uplands throughout the West, but also occur in mesic coniferous and deciduous forest habitats along the Pacific coast. Unequivocally associated with areas containing caves and cave-analogs for roosting habitat. Requires spacious cavern-like structures for roosting during all stages of its life cycle. Typically, they use caves and mines, but have been noted roosting in large hollows of redwood trees, attics and abandoned buildings, lava tubes, and under bridges. Extremely sensitive to disturbance.	No large hollows seen.

Scientific name Common name	ESA (Federal)	CESA (State)	Global Rank	State Rank	Organization: Code	Habitat	Potential for Occurrence within Project Area
Lasionycteris noctivagans silver-haired bat	None	None	G5	S3S4	IUCN:LC WBWG:M	Ranges throughout California in coastal and montane forests. May be found anywhere in California during spring and fall migrations. Primarily a forest (tree-roosting) bat associated with north temperate zone conifer and mixed conifer/hardwood forests. Prefers forested (frequently coniferous) areas adjacent to lakes, ponds, and streams. During migration, sometimes occurs in xeric areas. Roosts in dead or dying trees with exfoliating bark, extensive vertical cracks, or cavities, rock crevices, and occasionally under wood piles, in leaf litter, under foundations, and in buildings, mines and caves. The primary threat is likely loss of roosting habitat due to logging practices that fail to accommodate the roosting needs of this species (e.g., clusters of large snags).	No basal hollows or snags.
Lasiurus blossevillii western red bat	None	None	G5	S3?	CDFW:SSC IUCN:LC	Locally common in some areas of California from Shasta County south to the Mexican border. California Central Valley is the species' primary breeding region. Species appears to be strongly associated with riparian habitats for roosting and foraging, particularly mature stands/large diameter of cottonwood/sycamore. Roosts in woodland borders, rivers, agricultural areas, and urban areas with mature trees in the foliage of large shrubs and trees, usually sheltering on the underside of overhanging leaves. It often hangs from one foot on the leaf petiole and may resemble a fruit or dead leaf. Rarely observed roosting in mines.	Not good potential habitat.
Lasiurus cinereus hoary bat	None	None	G5	S4?	IUCN:LC WBWG:M	Most widespread North American bat. Solitary species that winters along the coast and in southern California, breeding inland. Roosts in foliage of trees near ends of branches 3-5 m. above ground. Blends with the bark of trees. Highly associated with forested habitats but can be found in suburbs with old, large trees.	Possible winter roosting habitat
Myotis evotis long-eared myotis	None	None	G5	S4?	BLM:S IUCN:LC WBWG:M	Widespread in California, but generally is believed to be uncommon in most of its range. It avoids the arid Central Valley and hot deserts, occurring along the entire coast and interior mountains. Found in nearly all brush, woodland, and forest habitats, from sea level to at least 9,000 ft., but coniferous woodlands and forests seem to be preferred. Roosts in loose bark in tall, open-canopied snags; stumps in south-facing clear-cuts with minimal vegetation overgrowth in younger forests, and conifer snags in older forests, rocks, caves, bridges and abandoned mines.	Low potential for roosting. No snags.
Myotis yumanensis Yuma myotis	None	None	G5	S4?	BLM:S IUCN:LC WBWG:LM	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	Low potential for roosting.
Mountain Beavers (*PLODONTIDAE*)							
Aplodontia rufa nigra Point Arena mountain beaver	Endangered	None	G5T1	S1	CDFW:SSC IUCN:LC	Generally known from 2 miles north of Bridgeport Landing to 5 miles south of the town of Point Arena. Coastal areas often near springs or seepages; mesic coastal scrub, northern dune scrub, edges of conifer forests, and riparian plant communities. North facing slopes of ridges and gullies with friable soils and thickets of undergrowth.	Out of range; no habitat.
Mice, Rats, & Voles (*MURIDAE*)							
Arborimus pomo Sonoma tree vole	None	None	G3	S3	CDFW:SSC IUCN:NT	Species split into red tree vole and Sonoma tree vole; approximate boundary between two species is Klamath River. Inhabits north coast fog belt from Oregon border to Somona Co. in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood-conifer habitats. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	Potential habitat
Weasels & Relatives (*MUSTELIDAE*)							

Scientific name Common name	ESA (Federal)	CESA (State)	Global Rank	State Rank	Organization: Code	Habitat	Potential for Occurrence within Project Area
Martes americana humboldtensis Humboldt marten	None	None	G5T1	S1	CDFW:SSC USFS:S	Endemic to the coastal forests of northwestern California with a historical range described as "the narrow northwest humid coast strip, chiefly within the redwood belt" from the Oregon border to northern Sonoma County. However, the one known remnant Humboldt marten population occurs in the north-central portion of the described range in an area dominated by Douglas-fir and tanoak. Typically associated with closed-canopy, late-successional, mesic coniferous forests with complex physical structure near the ground. Very rare on the Mendocino coast.	Limited habitat
***Pekania pennant* (West Coast DPS)** Pacific fisher	Candidate	Candidate Threatened	G5T2T3Q	S2S3	BLM:S CDFW:SSC USFS:S	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Use cavities, snags, logs and rocky areas for cover and denning. Need large areas of mature, dense forest. Very rare on the Mendocino coast.	Not good forest habitat.
Sea Lions & Fur Seals (*OTARIIDAE*)							
Arctocephalus townsendi Guadalupe fur-seal	Threatened	Threatened	G1	S1	CDFW:FP IUCN:NT	Solitary, non-social "eared" seals breed in the tropical waters off southern California/Mexico region but have been seen on rare occasion off Mendocino.	No habitat
Callorhinus ursinus northern fur-seal	None	None	G3	S1	IUCN:VU	Mostly pelagic seal ranging throughout the Pacific Rim, from Japan to the Channel Islands. Pacific rookeries in the Channel and Farallon Islands. Infrequent visitor to the Mendocino Coast. One was stranded on Albion flat in 2013 and rescued by the Marine Mammal Center.	No habitat
Eumetopias jubatus Steller (=northern) sea-lion	Delisted	None	G3	S2	IUCN:EN MMC:SSC	Range throughout the North Pacific Rim from Japan to central California. Unlike California sea lions, Stellers tend to remain off shore or haul out in unpopulated areas. Breeding rookery on Año Nuevo Island.	No habitat

Explanation of “Organization: Code” taken from CDFW 2016.

ABC: American Bird Conservancy – The United States WatchList is a joint project between the American Bird Conservancy and the National Audubon Society. It reflects a comprehensive analysis of all the bird species in the United States. It reveals those in greatest need of immediate conservation attention to survive a convergence of environmental challenges, including habitat loss, invasive species, and global warming. The list builds on the species assessments conducted for many years by Partners in Flight (PIF) for land birds. It uses those same PIF standards but it is expanded to cover all bird species, not just land birds. The list is based on the latest available research and assessments from the bird conservation community, along with data from the Christmas Bird Count and Breeding Bird Survey. More information is available at: http://www.abcbirds.org/abcprograms/science/watchlist/index.html
WLBCC - United States WatchList of Birds of Conservation Concern

AFS: American Fisheries Society – Designations for freshwater and diadromous species were taken from the paper: Jelks, H.L., S.J. Walsh, N.M. Burkhead, S.Contreras-Balderas, E. Díaz-Pardo, D.A. Hendrickson, J. Lyons, N.E. Mandrak, F. McCormick, J.S. Nelson, S.P. Platania, B.A. Porter, C.B. Renaud, J. J. Schmitter-Soto, E.B. Taylor, and M.L. Warren, Jr. 2008. Conservation status of imperiled North American freshwater and diadromous fishes. Fisheries 33(8):372-407. Available at: http://www.fisheries.org/afs/docs/fisheries/fisheries_3308.pdf Designations for marine and estuarine species were taken from the paper: Musick, J.T. et al. 2000. “Marine, Estuarine, and Diadromous Fish Stocks at Risk of Extinction in North America (Exclusive of Pacific Salmonids). Fisheries 25(11):6-30. Available at: http://www.flmnh.ufl.edu/fish/sharks/sawfish/Reprint1390.pdf
EN - Endangered
T - Threatened
VU – Vulnerable

BLM: Bureau of Land Management – BLM Manual §6840 defines sensitive species as”...those species that are (1) under status review by the FWS/NMFS; or (2) whose numbers are declining so rapidly that Federal listing may become necessary, or (3) with typically small and widely dispersed populations; or (4) those inhabiting ecological refugia or other specialized or unique habitats.” Existing California-BLM policy concerning the designation of sensitive species identifies two conditions that must be met before a species may be considered as BLM sensitive: (1) a significant population of the species must occur on BLM-administered lands, and (2) the potential must exist for improvement of the species’ condition through BLM management. The “Sensitive Species” designation is not meant to include federally listed species, proposed species, candidate species or State-listed species. It is BLM policy to provide sensitive species with the same level of protection that is given federal candidate species. The list is available at: http://www.blm.gov/ca/pdfs/pa_pdfs/biology_pdfs/SensitiveAnimals.pdf
S - Sensitive

CDFW: California Department of Fish and Wildlife – The name California Department of Fish and Game (CDFG, or DFG) was changed to the California Department of Fish and Wildlife in 2013 and the changes are reflected here. It is the goal and responsibility of the Department of Fish and Game to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as “Species of Special Concern” because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as “Species of Special Concern” is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long term viability. Not all “Species of Special Concern” have declined equally; some species may be just starting to decline, while others may have already reached the point where they meet the criteria for listing as a “Threatened” or “Endangered” species under the State and/or Federal Endangered Species Acts. More information is available at:
http://www.nrm.dfg.ca.gov/fileHandler.ashx?DocumentID=3778 The 1995 report for fish, the 1994 report for amphibians and reptiles and the 1986 & 1998 reports for mammals are available on-line.
Fish: http://www.dfg.ca.gov/wildlife/nongame/publications/docs/fish_ssc.pdf
Amphibians & Reptiles: http://www.dfg.ca.gov/wildlife/nongame/publications/docs/herp_ssc.pdf
Mammals: http://www.dfg.ca.gov/wildlife/nongame/publications/bm_research/docs/86_27.pdf
http://www.dfg.ca.gov/wildlife/nongame/ssc/1998mssc.html
Updates of all three reports are in preparation. Information on the Amphibian and Reptile Species of Special Concern report is available at: http://arssc.ucdavis.edu
Information on the mammal report is available at: http://www.dfg.ca.gov/wildlife/nongame/ssc/mammals.html and http://www.dfg.ca.gov/wildlife/nongame/ssc/docs/mammal/MSSCProjectTimeline.pdf
A new California Bird Species of Special Concern report was completed in 2008. More information is available at: http://www.dfg.ca.gov/wildlife/species/ssc/birds.html
A new category of “Taxa to Watch” was created in the new California Bird Species of Special Concern report. The birds on this Watch List are 1) not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) were previously state or federally listed and now are on neither list; or 3) are on the list of “Fully Protected” species. More information and brief accounts for each species is available in the report.

DFG (CDFW): Fully Protected: The classification of Fully Protected was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal and ring-tailed cat are the exceptions. The white-tailed kite and the golden eagle are tracked in the CNDDB; the trumpeter swan, northern elephant seal and ring-tailed cat are not.
The Fish and Game Code sections dealing with Fully Protected species state that these species ".....may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected" species, although take may be authorized for necessary scientific research. This language arguably makes the "Fully Protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003 the code sections dealing with fully protected species were amended to allow the Department to authorize take resulting from recovery activities for state-listed species. More information on Fully Protected species and the take provisions can be found in the Fish and Game Code, (birds at §3511, mammals at §4700, reptiles and amphibians at §5050, and fish at §5515). Additional information on Fully Protected fish can be found in the California Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 2, Article 4, §5.93. The category of Protected Amphibians and Reptiles in Title 14 has been repealed. The Fish and Game Code is available online at: http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=fgc&codebody=&hits=20. Title 14 of the California Code of Regulations is available at: http://ccr.oal.ca.gov/linkedslice/default.asp?SP=CCR-1000&Action=Welcome
FP - Fully Protected
SSC - Species of Special Concern
WL - Watch List

CDF: California Department of Forestry & Fire Protection – The Board of Forestry classifies as “sensitive species” those species that warrant special protection during timber operations. The list of “sensitive species” is given in §895.1 (Definitions) of the California Forest Practice Rules. The 2010 Forest Practice Rules are available at: http://www.fire.ca.gov/resource_mgt/downloads/2010_FP_Rulebook_w-Diagrams_wo-TechRule_No1.pdf
S - Sensitive

IUCN: International Union for Conservation of Nature – provides objective, scientifically-based information on the current status of globally threatened biodiversity. More information at http://www.iucnredlist.org/technical-documents/categories-and-criteria; detailed information on the IUCN and the Red List is available at: http://www.redlist.org/
CD - Conservation Dependent
CR - Critically Endangered
DD - Data Deficient
EN - Endangered
LC - Least Concern
NT - Near Threatened
VU - Vulnerable

MMC: Marine Mammal Commission – Section 202 of the Marine Mammal Protection Act directs the Marine Mammal Commission, in consultation with its Committee of Scientific Advisors, to make recommendations to the Department of Commerce, the Department of the Interior, and other federal agencies on research and management actions needed to conserve species of marine mammals. To meet this charge, the Commission devotes special attention to particular species and populations that are vulnerable to various types of human-related activities, impacts, and contaminants. Such species may include marine mammals listed as endangered or threatened under the Endangered Species Act or as depleted under the Marine Mammal Protection Act. In addition, the Commission often directs special attention to other species or populations of marine mammals not so listed whenever special conservation challenges arise that may affect them. More information on the Marine Mammal Protection Act and the Species of Special Concern list is available at: http://www.mmc.gov/species
SSC: Species of Special Concern

NMFS: National Marine Fisheries Service – National Oceanic and Atmospheric Administration (NOAA): The Office of Protected Resources (OPR) is a headquarters program office of NOAA’s National Marine Fisheries Service (NOAA Fisheries Service, or NMFS), under the U.S. Department of Commerce, with responsibility for protecting marine mammals and endangered marine life. NOAA's Office of Protected Resources works to conserve, protect, and recover species under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA) in conjunction with our Regional offices, Science Centers, and various partners. The category Species of Concern was established by the (NMFS) effective 15 April 2004. Species of Concern are those species about which NOAA’s National Marine Fisheries Service (NMFS) has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). Proactive attention and conservation action is drawn to these species. "Species of concern" status does not carry any procedural or substantive protections under the ESA. More information is available at: http://www.nmfs.noaa.gov/pr/species/concern
SC: Species of Concern

USFS: United States Forest Service - USDA Forest Service defines sensitive species as those plant and animal species identified by a regional forester that are not listed or proposed for listing under the federal Endangered Species Act for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density, or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. Regional Foresters shall identify sensitive species occurring within the region. California is the Pacific Southwest Region (Region 5).The list of sensitive animals for Region 5 is undergoing revision. The anticipated completion date was spring 2009, however it still has not been updated in spring 2010. The sensitive designation on this list is based on the previous list. More information is available at: http://www.fs.fed.us/r5/projects/sensitive-species/

USFWS: United States Fish and Wildlife Service – The goal of the Birds of Conservation Concern 2008 report is to accurately identify the migratory and nonmigratory bird species (beyond those already designated as Federally threatened or endangered) that represent our highest conservation priorities and draw attention to species in need of conservation action. We hope that by focusing attention on these highest priority species, this report will promote greater study and protection of the habitats and ecological communities upon which these species depend, thereby ensuring the future of healthy avian populations and communities. This report is available at: http://library.fws.gov/Bird_Publications/BCC2008.pdf
BCC - Birds of Conservation Concern

WBWG: Western Bat Working Group - comprised of agencies, organizations and individuals interested in bat research, management and conservation from the 13 western states and provinces. Species designated as "High Priority" are imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats. More information is available at: http://www.wbwg.org

H- high priority
LM- low-medium priority
M- medium priority
MH- medium-high priority

XERCES: The Xerces Society is an international non-profit organization dedicated to protecting biological diversity through invertebrate conservation. Their core programs focus on endangered species, native pollinators, and watershed health. More information on the Red list is available at: http://www.xerces.org/
CI - Critically Imperiled
DD - Data Deficient
IM - Imperiled
VU – Vulnerable

Appendix B

Site photographs

Fig. 1- Channeled riparian area

Figure 2. Riparian area with channel covered by Salal

Figure 3. Large bishop pines

Figure 4. Small pond off channel

Figure 5. Pond outfall

Appendix C

USFWS Threatened and Endangered species

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Mendocino County, California

Local office

Arcata Fish And Wildlife Office

(707) 822-7201

(707) 822-8411

1655 Heindon Road
Arcata, CA 95521-4573

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment Martes caurina Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9081	Threatened

Birds

NAME	STATUS
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl Strix occidentalis caurina Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover Charadrius nivosus nivosus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo Coccyzus americanus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS

Green Sea Turtle Chelonia mydas No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6199	Threatened
Leatherback Sea Turtle Dermochelys coriacea Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1493	Endangered

Fishes

NAME	STATUS
Tidewater Goby Eucyclogobius newberryi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Insects

NAME	STATUS
Behren's Silverspot Butterfly Speyeria zerene behrensii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/900	Endangered
Lotis Blue Butterfly Lycaeides argyrognomon lotis Wherever found There is **proposed** critical habitat for this species. https://ecos.fws.gov/ecp/species/5174	Endangered
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS

Burke's Goldfields Lasthenia burkei — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4338

Contra Costa Goldfields Lasthenia conjugens — Endangered
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/7058

Showy Indian Clover Trifolium amoenum — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6459

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Sep 30
Black Oystercatcher *Haematopus bachmani* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31

Black Turnstone *Arenaria melanocephala* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Cassin's Auklet *Ptychoramphus aleuticus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6967	Breeds Mar 21 to Sep 21
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds Apr 15 to Jul 15

Tufted Puffin *Fratercula cirrhata* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/430	Breeds May 5 to Oct 5
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit *Chamaea fasciata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum

probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

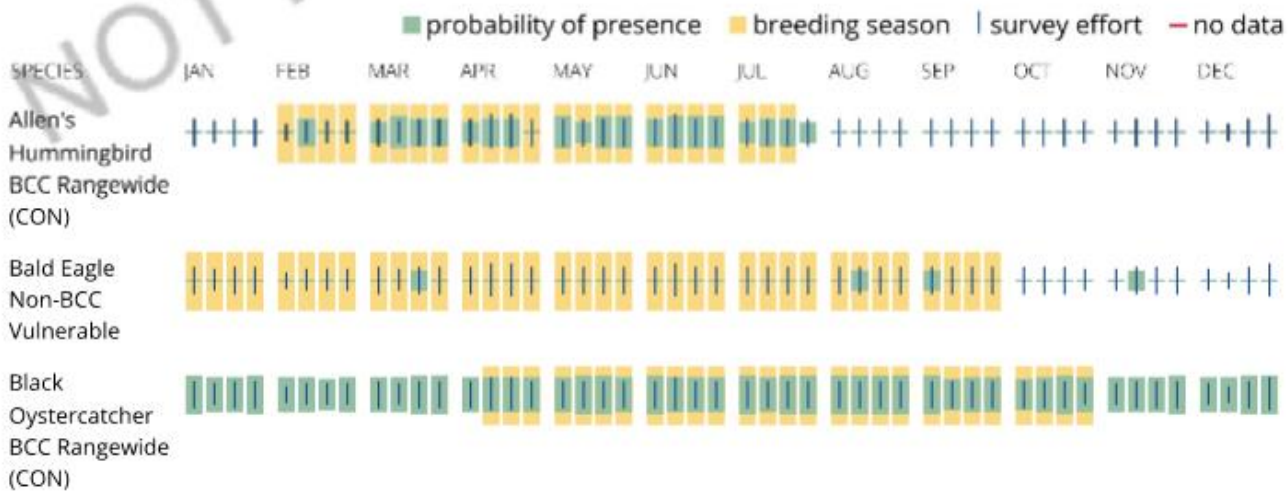
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

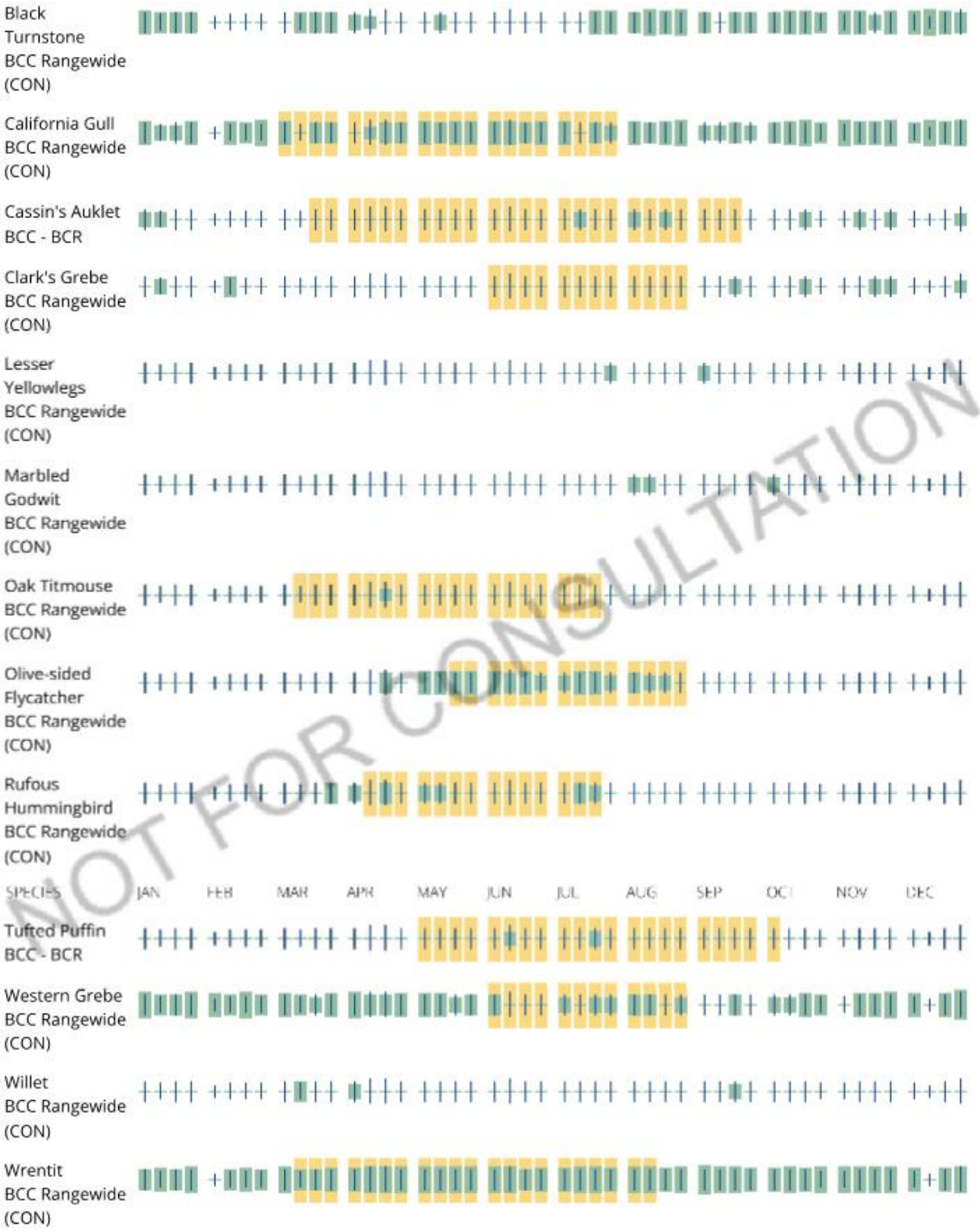
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or

minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

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

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Botanical survey for:
Barbara Fishelson & Richard Grass
PO Box 1623
Mendocino, Ca 95460
707-357-3725

For A.P.N. 118-210-29
CDP 2022-0029

Located at:
12825 Sea Pines Lane
Mendocino, CA 95460

Survey by:

Alison Gardner
Box 838
Albion, CA 95410
(707) 937-5201

Field work done on Dec. 19th, 24th, 2022, and Apr. 3rd, 5th, 14th, 18th, 19th, 29th, June 7th, July 5th, and Aug. 5th, 2023.
Nomenclature by Jepson; except for the 9-quad search and CNDDB forms, which use a name change for the California harebell.

Figure 1: Rhododendron in bloom

Description of parcel:

Figure 2: Photo of typical vegetation on parcel

This is an odd shaped parcel, bounded on the north by the curving Sea Pines Lane, with straight boundaries on the west, east, and south. There is a creek that flows across the southwest part of the parcel. The parcel slopes moderately to the south and the west. Much of the parcel is mature to senescent bishop pine forest (15% or greater relative cover of bishop pine), with little regeneration of bishop pines, but there are also areas of primarily tan oak, and areas of primarily grand fir, though there are no areas that would classify as grand fir forest, as that requires 60% cover of grand fir, and the grand fir is less than that, and mixed with bishop pine, tanoak and doug fir. As bishop pine needs to have only 15% cover to catagorize as bishop pine forest, pretty much the whole parcel outside of the riparian area qualifies as bishop pine forest. Grand fir and tan oak seedlings are coming in under the bishop pine. The only young bishop pine are found along the side of Sea Pines Lane. The shrub story is mostly salal, black and red huckleberry, and oregon grape. The herbaceous ground cover includes slender false solomon's seal, redwood violet, redwood sorrel, and native woodland grasses.

There is also a grove of blue gum Eucalyptus, with some Monterey cypress along the roadside. There are quite a few calypso orchids (not rare) found in the Eucalyptus grove. There is one large apparently old growth redwood in the southern part of the Eucalyptus grove.

Figure 3: Eucalyptus grove

The creek supports red alder, cascara, several stands of Labrador tea, and an extensive stand of skunk cabbage, with fringed false hellebore, slough sedge, lady fern, and deer fern. The red alder is not in dense enough stands to merit a designation of Red Alder Forest Alliance. Neither is the extent of the slough sedge large

enough to be a separate habitat. However, as riparian vegetation, all these species near the creek will be protected as an ESHA.

Habitats Found on Parcel:

Alliance:

Northern bishop pine forest:

Pinus muricata	Bishop pine forest and woodland	Tree	S3.2	G3

Pinus muricata > 15% relative cover with trees evenly spaced in the tree canopy (Keeler-Wolf et al. 2003a).

Association: Pinus muricata - (Notholithocarpus densiflorus) / Vaccinium ovatum

Eucalyptus spp. - Ailanthus altissima - Robinia pseudoacacia	Eucalyptus - tree of heaven - black locust groves	Tree	SNA	GNA

Alliance:

Riparian:

Rhododendron columbianum	Western Labrador-tea thickets	Shrub	S2	G4

Figure 4: Area of proposed housesite

Description of proposed project:

The owner hopes to build a single family home, and put in a septic system. There is already an existing well on the parcel. As they plan to have solar panels, they wish to clear an acre around the house site, particularly to the south, to allow the light in. They will also need to put in a driveway for access. The clearing for the housesite and driveway would involve removing the following trees: Oak—20; Bishop Pine—20, 1 dead; Grand Fir—5. I would advise that in addition to this, for both safety, and to minimize increasing populations of bark beetles and other wood consuming insects, that all or most of the dead pines on the parcel be removed, if it can be done without harming nearby living trees. This is likely to slightly prolong the lifespans of the remaining pines.

Methodology:

Figure 5: Oregon grape in shrub story

I made multiple visits to the parcel, during the blooming season of all rare plants that might be found there, based on a 9-quad search of the CNPS rare plant database. Because of the density of forest and underbrush in some places, I was not able to keep to an actual grid, but I traversed the parcel repeatedly, covering all portions of it, multiple times over the course of 9 months, to catch all plants on the parcel in their blooming season, for easy identification. While compiling a complete species list, I particularly looked for the plants found in the 9-quad search which had habitat present on the parcel.

9-Quad Survey Results:

ScientificName	CommonName	Habitat present?	CRPR	GRank	SRank
Agrostis blasdalei	Blasdale's bent grass	no	1B.2	G2G3	S2
Angelica lucida	sea-watch	yes	4.2	G5	S3
Arctostaphylos nummularia ssp. mendocinoensis	pygmy manzanita	no	1B.2	G3?T1	S1
Calamagrostis bolanderi	Bolander's reed grass	yes	4.2	G4	S4
Calamagrostis crassiglumis	Thurber's reed grass	no	2B.1	G3Q	S2
Calystegia purpurata ssp. saxicola	coastal bluff morning-glory	yes	1B.2	G4T2T3	S2S3
Carex californica	California sedge	yes	2B.2	G5	S2
Carex saliniformis	deceiving sedge	yes	1B.2	G2	S2
Castilleja litoralis	Oregon coast paintbrush	no	2B.2	G3	S3
Castilleja mendocinensis	Mendocino Coast paintbrush	no	1B.2	G2	S2
Ceanothus gloriosus var. exaltatus	glory brush	no	4.3	G4T4	S4
Ceanothus gloriosus var. gloriosus	Point Reyes ceanothus	yes	4.3	G4T4	S4
Chorizanthe howellii	Howell's spineflower	no	1B.2	G1	S1
Chrysosplenium glechomifolium	Pacific golden saxifrage	yes	4.3	G5?	S3
Coptis laciniata	Oregon goldthread	yes	4.2	G4?	S3?
Cornus unalaschkensis	bunchberry	yes	2B.2	G5	S2
Cuscuta pacifica var. papillata	Mendocino dodder	no	1B.2	G5T1	S1

Eastwoodiella californica	swamp harebell	yes	1B.2	G3	S3
Erigeron supplex	supple daisy	no	1B.2	G2	S2
Erysimum concinnum	bluff wallflower	no	1B.2	G3	S2
Gilia capitata ssp. pacifica	Pacific gilia	no	1B.2	G5T3	S2
Gilia millefoliata	dark-eyed gilia	no	1B.2	G2	S2
Hesperevax sparsiflora var. brevifolia	short-leaved evax	no	1B.2	G4T3	S3
Hesperocyparis pygmaea	pygmy cypress	yes	1B.2	G1	S1
Hosackia gracilis	harlequin lotus	no	4.2	G3G4	S3
Juncus supiniformis	hair-leaved rush	yes	2B.2	G5	S1
Lasthenia californica ssp. bakeri	Baker's goldfields	yes	1B.2	G3T1	S1
Lasthenia californica ssp. macrantha	perennial goldfields	no	1B.2	G3T2	S2
Lathyrus palustris	marsh pea	yes	2B.2	G5	S2
Lilium maritimum	coast lily	yes	1B.1	G2	S2
Mitellastra caulescens	leafy-stemmed mitrewort	yes	4.2	G5	S4
Packera bolanderi var. bolanderi	seacoast ragwort	yes	2B.2	G4T4	S2S3
Phacelia insularis var. continentis	North Coast phacelia	no	1B.2	G2T2	S2
Pinus contorta ssp. bolanderi	Bolander's beach pine	no	1B.2	G5T2	S2
Pityopus californicus	California pinefoot	yes	4.2	G4G5	S4
Ramalina thrausta	angel's hair lichen	yes	2B.1	G5?	S2S3
Sanguisorba officinalis	great burnet	yes	2B.2	G5?	S2
Sidalcea malachroides	maple-leaved checkerbloom	yes	4.2	G3	S3
Usnea longissima	Methuselah's beard lichen	yes	4.2	G4	S4
Veratrum fimbriatum	fringed false-hellebore	yes	4.3	G3	S3

There was habitat present for: *Angelica lucida, Calamagrostis bolanderi, Carex californica, Carex saliniformis, Ceanothus gloriosus var. gloriosus, Chrysosplenium glechomifolium, Coptis laciniata, Cornus unalaschkensis, Eastwoodiella (Campanula) californica, Hesperocyparis pygmaea, Juncus supiniformis, Lasthenia californica ssp. bakeri, Lathyrus palustris, Lilium maritimum, Mitellastra caulescens, Packera bolanderi var. bolanderi, Pityopus californicus, Ramalina thrausta, Sanguisorba officinalis, Sidalcea malachroides, Usnea longissima,* and *Veratrum fimbriatum.* I looked particularly for these plants, plus some other rare plants that could grow in this habitat that were not on the 9-quad search: *Angelica lucida, Ceanothus gloriosus var gloriosus, Lycopdium clavatum and Kopsiopsis hookeri.*

Of these, I found *Campanula (Eastwoodiella) californica, Lathyrus palustris* and *Veratrum fimbriatum*. It is possible that *Kopsiopsis hookeri* could be on the parcel. It is a parasitic plant on salal, that has no chlorophyll, and is only visible when it blooms, which it does not do every year, so it is quite difficult to find. It can be ascertained that it is present if found, but its absence does not mean that it isn't there.

Environmentally Sensitive Habitat Areas (E.S.H.A.'s):

Figure 6: Fringed false helebore and skunk cabbage

The riparian area is an ESHA, as is the bishop pine forest. However, the bishop pine forest is mature to senescent, with no regeneration, and a lot of standing dead trees, providing poor quality habitat. I counted 70 completely dead standing pines on the parcel, and an additional 15 with less than 10% of their crown alive.

The populations of California harebell and Pacific pea are also ESHA's. The Labrador tea thickets and the fringed false helebore are ESHA's but are completely within the riparian ESHA.

Rare and Endangered species:

Fringed False Hellebore (*Veratrum fimbriatum*) is a threatened plant, CNPS list 4.3. It is located within the riparian zone, and as such is protected.

Figure 7: California harebell

California harebell (*Campanula californica,* per Jepson) is found in two small populations in the south ditch of Sea Pines Lane, to either side of where a culvert goes under the road, just west of the small property jog along that road. Rare plant rank: 1B.2. Ongoing road maintanence will threaten this population. Although Fishelson and Grass now know about this plant, and intend to protect it, road maintanence on private roads in

this region, with multiple residences, is generally arranged by a road committee, that may not be aware of this plant or its protected status.

Pacific pea (*Lathyrus palustris*) is found just off the side of a neighbor's driveway that cuts across the northeast corner of the parcel. Rare plant rank: 2B.2. This area in the past has been used as a parking area for access to the parcel, but since the pea has been identified here, care is taken not to park on the area inhabited by the pea.

Figure 8: Pacific pea

Bolander's reedgrass (*Calamagrostis bolanderi*) is a threatened plant, Rare plant rank 4.2. It is a successionary grass, often found along roadsides, and logging roads, and in wet meadows. It occurs along the side of Sea Pines Lane, in the road ditch, both in the area of the pacific pea, and from the neighbor's driveway towards the east end of the parcel, extending to the west about 150'. I changed the location of the proposed driveway slightly, so that it is more than 50' from the reedgrass.

Plant List:

Family	***Binomial***	**Common Name**	**Native?**
Pinaceae	*Abies grandis*	grand fir	yes
Poaceae	*Agrostis capillaris*	colonial bentgrass	no
Poaceae	*Agrostis gigantea*	Red-top	no
Poaceae	*Agrostis hallii*	Hall's bentgrass	yes
Poaceae	*Aira caryophyllea*	silver European hairgrass	no
Betulaceae	*Alnus rubra*	red alder	yes
Asteraceae	*Anaphalis margaritacea*	pearly everlasting	yes
Asteraceae	*Anisocarpus madioides*	tarweed	yes
Poaceae	*Anthoxanthum occidentale*	vanilla grass	yes
Ericaceae	*Arctostaphylos columbiana*	hairy manzanita	yes
Woodsiaceae	*Athyrium felix-femina var. cyclosorum*	lady fern	yes
Asteraceae	*Baccharis pilularis ssp. consanguinea*	coyote bush	yes
Asteraceae	*Bellis perennis*	English daisy	no
Berberidaceae	*Berberis nervosa*	Oregon grape	yes
Poaceae	*Bromus laevipes*	woodland brome	yes
Poaceae	*Bromus sitchensis var. carinatus*	California brome	yes
Poaceae	*Calamagrostis bolanderi*	Bolander's reedgrass	yes

Poaceae	*Calamagrostis nutkaensis*	Nootka reed grass	yes
Orchidaceae	*Calypso bulbosa*	Calypso Orchid	yes
Brassicaceae	*Cardamine hirsuta*	winter cress	no
Cyperaceae	*Carex harfordii*	Hartford's sedge	yes
Cyperaceae	*Carex obnupta*	slough sedge	yes
Cyperaceae	*Carex rossii*	Ross' sedge	yes
Rhamnaceae	*Ceanothus thyrsiflorus var thyrsiflorus*	ceanothus	yes
Caryophyllaceae	*Cerastium glomeratum*	Sticky mouse-eared chickweed	no
Asteraceae	*Cirsium brevistylum*	western thistle	yes
Asteraceae	*Cirsium vulgare*	bull thistle	no
Montiaceae	*Claytonia siberica*	Indian Lettuce	yes
Polemoniaceae	*Colloma heterophylla*	variable-leaf collomia	yes
Poaceae	*Cortaderia jubata*	pampas grass	no
Rosaceae	*Cotoneaster pannosus*	silverleaf cotoneaster	no
Poaceae	*Dactylis glomerata*	orchard grass	no
Poaceae	*Deschampsia elongata*	slender hairgrass	yes
Plantaginaceae	*Digitalis purpurea*	foxglove	no
Campanulaceae	*Eastwoodiella californica*	California Bluebells	yes
Poaceae	*Elymus glaucus ssp glaucus*	blue wildrye	yes
Poaceae	*Elymus sp.*	wild rye	yes
Onograceae	*Epilobium ciliatum spp. ciliatum*	American fireweed	yes
Myrtaceae	*Eucalyptus globulus*	blue gum eucalyptus	no
Poaceae	*Festuca occidentalis*	western fescue	yes
Poaceae	*Festuca subulata*	nodding fescue	yes
Rosaceae	*Fragaria vesca*	wood strawberry	yes
Rhamnaceae	*Frangula purshiana ssp purshiana*	cascara sagrada	yes
Rubiaceae	*Galium aparine*	bedstraw	
Rubiaceae	*Galium triflorum*	sweet-scented bedstraw	yes
Asteraceae	*Gamochaeta ustulata*	cudweed	yes
Ericaceae	*Gaultheria shallon*	salal	yes
Fabaceae	*Genista monspessulana*	French broom	no
Geraniaceae	*Geranium dissectum*	wild geranium	no
Orchidaceae	*Goodyera oblongata*	rattlesnake orchid	yes
Araliaceae	*Hedera helix*	English ivy	no
Cupressaceae	*Hesperocyperus macrocarpa*	Monterey cypress	no
Poaceae	*Holcus lanatus*	velvet grass	no
Asteraceae	*Hypochoeris radicata*	coast dandelion	no
Aquifoliaceae	*Ilex aquifolium*	English holly	
Iridaceae	*Iris douglasiana*	Douglas iris	yes
Juncaceae	*Juncus hesperius*	coast rush	yes
Juncaceae	*Juncus patens*	blue rush	yes
Fabaceae	*Lathrys palustris*	marsh pea	yes

Fabaceae	*Lathrys vestitus var. vestitus*	wild pea	yes
Asteraceae	*Leontodon saxatilis*	hawkbit	no
Asteraceae	*Leucanthemum vulgare*	ox-eye daisy	no
Caprifoliaceae	*Lonicera hispidula*	twining honeysuckle	yes
Fabaceae	*Lotus corniculatus*	bird's foot trefoil	no
Juncaceae	*Luzula comata*	wood rush	yes
Araceae	*Lysichitum americanus*	skunk cabbage	yes
Myrsinaceae	*Lysimachia arvense*	scarlet pimpernel	no
Myrsinaceae	*Lysimachia latifolia*	star flower	yes
Ruscaceae	*Maianthemum stellatum*	slender false Solomon's seal	yes
Fabaceae	*Medicago lupulina*	Black medic	no
Lamiaceae	*Mentha pulegium*	pennyroyal	no
Myricaceae	*Morella californica*	wax myrtle	yes
Fagaceae	*Notholithocarpus densiflorus var. densiflorus*	tan oak	yes
Apiaceae	*Osmorhiza berteroi*	sweet cicily	yes
Oxalidaceae	*Oxalis oregana*	redwood sorrel	yes
Oxalidaceae	*Oxalis pilosa*	oxalis	yes
Boraginaceae	*Phacelia bolanderi*	Bolander's phacelia	yes
Pinaceae	*Picea sitchensis*	Sitka spruce	yes
Pinaceae	*Pinus muricata*	Bishop pine	yes
Plantaginaceae	*Plantago lanceolata*	English plantain	no
Poaceae	*Poa kelloggii*	Kellogg's Bluegrass	Y
Polypodiaceae	*Polypodium scouleri*	Leather-leaf fern	yes
Dryopteridaceae	*Polystichum munitum*	western sword fern	yes
Lamiaceae	*Prunella vulgaris ssp. vulgaris*	self-heal	no
Rosaceae	*Prunus sp.*	flowering cherry	no
Pinaceae	*Pseudotsuga menziesii var. menziesii*	Douglas fir	yes
Dennstaedtiaceae	*Pterideum aquilinum var. pubescens*	bracken fern	yes
Ericaceae	*Rhododendron columbianum*	Labrador tea	yes
Ericaceae	*Rhododendron macrophyllum*	western azalea	yes
Grossulariaceae	*Ribes sanguineum var. glutinosum*	Pink Flowering Currant	yes
Rosaceae	*Rosa gymnocarpa*	wood rose	yes
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	no
Rosaceae	*Rubus parviflorus*	thimbleberry	yes
Rosaceae	*Rubus spectabilis*	salmonberry	yes
Rosaceae	*Rubus ursinus*	California blackberry	yes
Poaceae	*Rytidosperma penicillatum*	Australian oatgrass	no
Adoxaceae	*Sambucus racemosa var. racemosa*	Red Elderberry	yes
Apiaceae	*Sanicula crassicaulis*	snakeroot	yes
Liliaceae	*Scoliopus bigelovii*	fetid adder's tongue	yes
Asteraceae	*Senecio jacobaea*	tansy ragweed	no

Asteraceae	*Senecio minimus*	Australian fireweed	no
Cupressaceae	*Sequoia sempervirens*	coast redwood	yes
Asteraceae	*Soliva sessilis*		no
Asteraceae	*Sonchus asper*	prickly sow thistle	no
Asteraceae	*Sonchus oleraceus*	sow thistle	no
Lamiaceae	*Stachys chamissonis*	horse mint	yes
Lamiaceae	*Stachys rigida var. quercetorium*	horse mint	yes
Caryophyllaceae	*Stellaria crispa*	crisp starwort	yes
Blechnaceae	*Struthiopteris spicant*	deer fern	yes
Asteraceae	*Taraxacum officinale*	dandelion	no
Fabaceae	*Trifolium dubium*	little hop clover	no
Fabaceae	*Trifolium repens*	white clover	no
Fabaceae	*Trifolium wormskioldii*	cow clover	yes
Poaceae	*Trisetum cernuum*		yes
Ericaceae	*Vaccinium ovatum*	black huckleberry	yes
Ericaceae	*Vaccinium parviflorum*	red huckleberry	yes
Melanthiaceae	*Veratrum fimbriatum*	fringe lily	yes
Fabaceae	*Vicia americana ssp. americana*	American vetch	yes
Fabaceae	*Vicia hirsuta*	vetch	no
Fabaceae	*Vicia sativa ssp. nigra*	Narrow-leaved vetch	no
Violaceae	*Viola sempervirens*	redwood violet	yes
Hydrangaceae	*Whipplea modesta*	modesty	yes

List of Lichens:

I also made a list of lichens seen on the parcel, as there were several lichens on the 9-quad search list. I am not a lichenologist, but have had a couple of college courses in lichens, and am familiar with one of the rare lichens listed, Usnea longissima. I did not find any of the rare lichens.

Binomial
Cavernularia lophyrea
Cetraria californica
Cetraria orbata
Chrysothrix candelaris
Cladonia spp.
Hypogymnia sp.
Parmotrema sp.
Platismatia sp.
Ramelina farinacea
Sphaerophorus globosus
Usnea cornuta group
Usnea rubicunda
Usnea spp.

Discussion:

This is a difficult parcel to build on with the current regulations. Aside from a small spot along Sea Pines Lane in the Eucalyptus grove, every spot on the entire parcel is within 100' of a sensitive habitat or rare species.

The aging bishop pine forest is an even age stand, and is not regenerating, as bishop pine needs disturbance to regenerate. The seeds will not sprout in duff, but need bare mineral soil to sprout, cause either by fire, logging, or clearing by heavy equipment. Without intervention, this parcel is likely to gradually change over time to grand fir forest, as grand fir sprouts in duff, and there are many grand fir and tanoak seedlings coming up under the bishop pines. There is a problem in this area with pine die-offs, which has been found to be from a combination of causes, including introduced root pathogens (which do not seem to be a problem on this parcel at this time), pine mistletoe (not seen on parcel), pine gall rust (present on parcel), and stress due to drought, combined with an increase in bark beetles, possibly due to fire suppression. (See study on Pine die-off, Appendix A.) I counted 70 completely dead bishop pine on the parcel, and 15 more that had no more than 10% of their crowns still alive.

As the bishop pine forest on this parcel seemed to me to clearly be in decline, I recommended that the owners contact a certified arborist to confirem the senescence of the pines. (See memo from Certified Arborist Justin Coffman, after a site visit by his senior forester, Gerald Garvey, Appendix B.)

Bishop pine is considered to be a short-lived tree, with a lifespan of 70 to 120 years. As the arborist pointed out, many of the trees have less than 30% of their crowns still alive. In another 20 years, I would surmise that most of these trees will have died. As the pines die, tan oak will become the predominant tree, and they will gradually be overtopped by grand fir and Douglas fir.

Figure 9: Skunk cabbage flower

In a later e-mail to Ms. Fishelson, addressing the probable age of the pine forest, Gerald Garvey wrote:

"I'm mostly guessing, but I would estimate the Bishop pine stand on your property at about 50-60 years. The best way to know for sure would be to research the fire history of your area. The reproduction of Bishop pine is primarily dependent on fire to open its cones to release the seed. Bishop pine is a fairly short lived species. Lacking fire, most trees succumb to disease without reproducing at about 70 – 80 years of age. We could also take some increment cores to count the rings in order to estimate the age of the dominant trees."

Jerry

Gerald M. Garvey,

Senior Forester, RPF #1743

NCRM, Inc.
2501 North State St., Ukiah CA 95482

Figure 10: Slough sedge along upper area of creek

Conclusions:

There could be a benefit to allowing the development of a single family home in the bisop pine forest. The pines do not appear to have much disease problem, they are just old. I looked for pine mistletoe, and did not see any. I did see the galls from pine gall rust, but not as many as one sees in some sites. There was evidence of bark beetles under the bark of dead pines, but they often come in as the pines age and decline. Simply protecting a species does not always really protect the species. Sometimes management is more protective than simple protection. In order to manage for bishop pine, either fire, or soil disturbance through clearing the duff down to bare soil are needed. Given the proximity to homes and state park, and the other rare plants on the parcel that could be wiped out by these actions, I would propose the following as a plan of action. Before construction of the home, the many dead trees could be cut and removed. After construction of the home, the dead tree could be replaced with young bishop pines, which can be grown from seed collected on the parcel. This could keep the parcel in bishop pine, beyond the lifespan of the current trees. The trees should be planted in the fall, after the rain starts, and monitored for 5 years, so that any that don't survive can be replaced. If we are in conditions of drought during that period, with unusually high temperatures, and without our usual summer fog, the young trees should receive supplemental watering once a month during the summer.

References:

https://ucjeps.berkeley.edu › eflora

https://rareplants.cnps.org/Search/Advanced

https://vegetation.cnps.org/search?

Appendices:

Appendix A: Bishop pine decline study

See attached PDF.

Appendix B: Bishop pine memo from arborist

See attached PDF.

Appendix C: CNDDB form for Pacific Pea

See attached PDF.

Appendix D: CNDDB form for Fringed False Hellebore

See attached PDF.

Appendix E: CNDDB form for California Harebell

See attached PDF.

Appendix F: CNDDB form for Bolander's Reedgrass

See attached PDF.

Appenix F: Upcoming name change for Campanula spp.

https://rareplants.cnps.org/Uploads/ReferenceDocs/CampanulaceaeNamChg_20230112_NamChgRev_2007_264-si75v.pdf:

Element Codes: PDCAM02060 (C. californica), PDCAM020A0 (C. exigua), PDCAM02100 (C. sharsmithiae),
PDCAM020Z0 (C. wilkinsiana), PDCAM0F0D0 (N. twisselmannii)
The name changes in this Status Review were implemented on 2023-01-12
Sent to N. Morin, CW, NW, GV, SN on 12/19/2022. 1
Non-Substantive Name Changes: Multiple taxa in Campanulaceae
Ellen A. Dean (CNPS), Aaron E. Sims (CNPS), and Jennifer Poore (CNDDB)
December 19, 2022
The following list of five taxa included in the CNPS Inventory and CNDDB are to undergo taxonomic name changes based on new treatments published in the journals Phytoneuron (Morin 2020) and Madroño (Morin and Ayers 2020). All five name changes will be included in upcoming revisions of the Jepson eFlora (JEPS 2022, Morin 2022

pers. comm.), as well as the treatment of Campanulaceae in the Flora of North America (FNA 1993+, Morin 2022 pers. comm.). The list only includes name changes that are non-substantive, meaning the concept of the plant's identity and rarity in California did not change, just its name. Their previous name in the Inventory will be treated as a taxonomic synonym if applicable, and reference to their revised nomenclatural treatment will be included in the notes section of the CNPS Inventory (CNPS 2022). The status and rank of these five taxa will not be affected.

Current Name in CNPS Inventory	Revised Name in CNPS Inventory
Campanula californica (Kellogg) A. Heller	Eastwoodiella californica (Kellogg) Morin
Campanula exigua	Rattan Ravenella exigua (Rattan) Morin
Campanula sharsmithiae Morin	Ravenella sharsmithiae (Morin) Morin
Campanula wilkinsiana Greene	Smithiastrum wilkinsianum (Greene) Morin
Nemacladus twisselmannii J. T. Howell	Nemacladus twisselmannii J. T. Howell var. twisselmannii

Revised CNPS Inventory Record

The only revisions to current records will be the name change and citation of nomenclature papers.

July 10, 2023

TO: Barbara Fishelson
PO Box 1623
Mendocino, CA 95460

FR: Justin Coffman
NCRM, Inc.
2501 N. State Street
Ukiah, CA 95482

RE: Bishop Pines located within a proposed development site at 12825 Sea Pines Lane, Mendocino, CA

On June 13, 2023, NCRM Senior Forester Jerry Garvey visited the proposed home site at 12825 Sea Pines Lane, Mendocino, CA, to observe the existing conditions of a location where a yurt and associated access road and septic system are slated to be constructed. This location is within the Coastal Zone

The area generally consists of Bishop pine and Eucalyptus with a heavy understory of rhododendron and typical related coastal brush species. The pine appears to be slowly getting shaded out by the eucalyptus as it begins to dominate the site. Pine crowns are starting to show dieback, with many exhibiting less than 30% live crown ratio. Although the pines may be in decline, a Coastal Development Permit must be secured before removal takes place since this vegetation type has the potential to be an Environmentally Sensitive Habitat Area and should be evaluated by a qualified botanist.

Furthermore, to convert the timberland at the location to a developed state a Less than 3-Acre Conversion Exemption must be sought from Cal Fire as well.

Please let us know if you have any further questions.

Sincerely,

Justin Coffman
Senior Forester & Hydrologist
PH, RPF, Certified Arborist

2501 North State Street, Ukiah, CA 95482
707-485-7211

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GAR23F0007
Quad code 3912337
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Lathyrus palustris*

Common name: marsh pea

Date of field work (mm-dd-yyyy): 08-05-2023

Comment about field work date(s): Plant was first noticed in May; bloomed and identified July 20th.

OBSERVER INFORMATION

Observer: Alison L. Gardner

Affiliation:

Address: PO Box 838 , Albion, CA 95410

Email: garaway58@gmail.com

Phone: (707) 937-5201

Other observers:

DETERMINATION

Keyed in: Jepson Manual

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Confident

Species found: Yes **If not found, why not?**

Level of survey effort: This plant was being heavily browsed by deer. Had to fence an area to allow it to bloom, so that the species could be confirmed.

Total number of individuals: +/- 20

Collection? Yes **Collection number:** Alison Gardner

Museum/Herbarium: Mendocino College Coast Campus herbarium

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
99 %	1 %	0 %

SITE INFORMATION

Habitat description: Opening along dirt driveway in bishop pine forest. With Leucanthemum vulgare, Anisocarpus madioides, Frageria vesca, Viola sempervirens, Rubus ursinus, Whipplea modesta, Anthoxantum odoratum.

Slope: flat

Land owner/manager: Barbara Fishelson

Aspect: trees open to east

Site condition + population viability: Fair

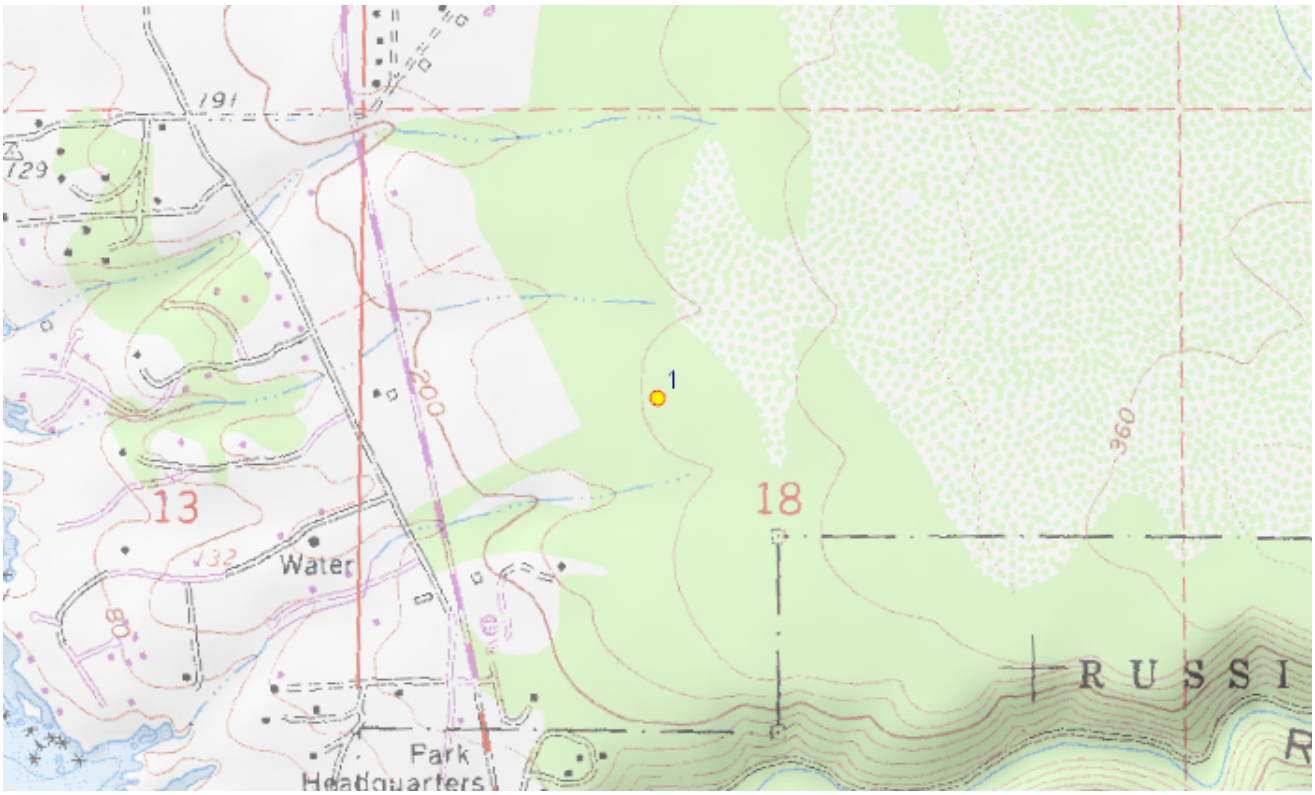
Immediate & surrounding land use: rural residential

Visible disturbances: Weedy, roadside, sometimes used as parking area, deer browsing

Threats: Owner was using this as an occasional parking area until notified of the plant. Deer seem to be fond of this plant; browsing was heavy. Was not able to bloom until fenced. Only put out one flower cluster.

General comments: This plant appears to propagate somewhat vegetatively through rhizomes, and thus has a relatively good hold on the site, despite weediness and deer browsing. There is a slight drainage ditch that aims winter runoff from this section of road onto the pea site. As there was only one flower cluster produced this year, I took a small cutting, including part of a rhizome, and have started it in a pot, from which to take an herbarium specimen next year.

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Mendocino	Mendocino	297	39.33802	-123.80138	430937	4354595	10

ID	Public Land Survey	Feature Comment
1	M T17N R17W 18	Just off edge of driveway

The mapped feature is accurate within: 5 m

Source of mapped feature: topo map

Mapping notes:

Location/directions comments: There is a driveway off to the right, where Sea Pines Lane takes a sharp left turn. About 15' down that driveway is a wide spot on the right, where this plant grows.

Attachment(s): pacific pea.jpg, Pea and associated plants.; pacific pea 2.jpg, Pea and associated plants.; pacific pea flr..jpg, Close-up of flower.

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GAR23F0006
Quad code 3912337
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Veratrum fimbriatum*

Common name: fringed false-hellebore

Date of field work (mm-dd-yyyy): 08-05-2023

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Alison L. Gardner

Affiliation:

Address: PO Box 838 , Albion, CA 95410

Email: garaway58@gmail.com

Phone: (707) 937-5201

Other observers:

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other: Sight ID. This is an easy plant to identify. It is the only Veratrum in this area.

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: about 10

Collection? No **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
100 %		

SITE INFORMATION

Habitat description: Riparian. Creek is in a narrow ditch about 2' deep in some places. Veratrum is growing along the banks with Lysitchiton americanum, Stachys chamissonis, Carex obnupta, Polystichum munitum, Struthiopteris spicant, Athyrium filix-femina var. cyclosorum, under Morella californica, Frangula purshiana, Alnus rubra, in riparain area through bishop pine forest.

Slope: 15 degrees

Land owner/manager: Barbara Fishelson

Aspect: west

Site condition + population viability: Excellent

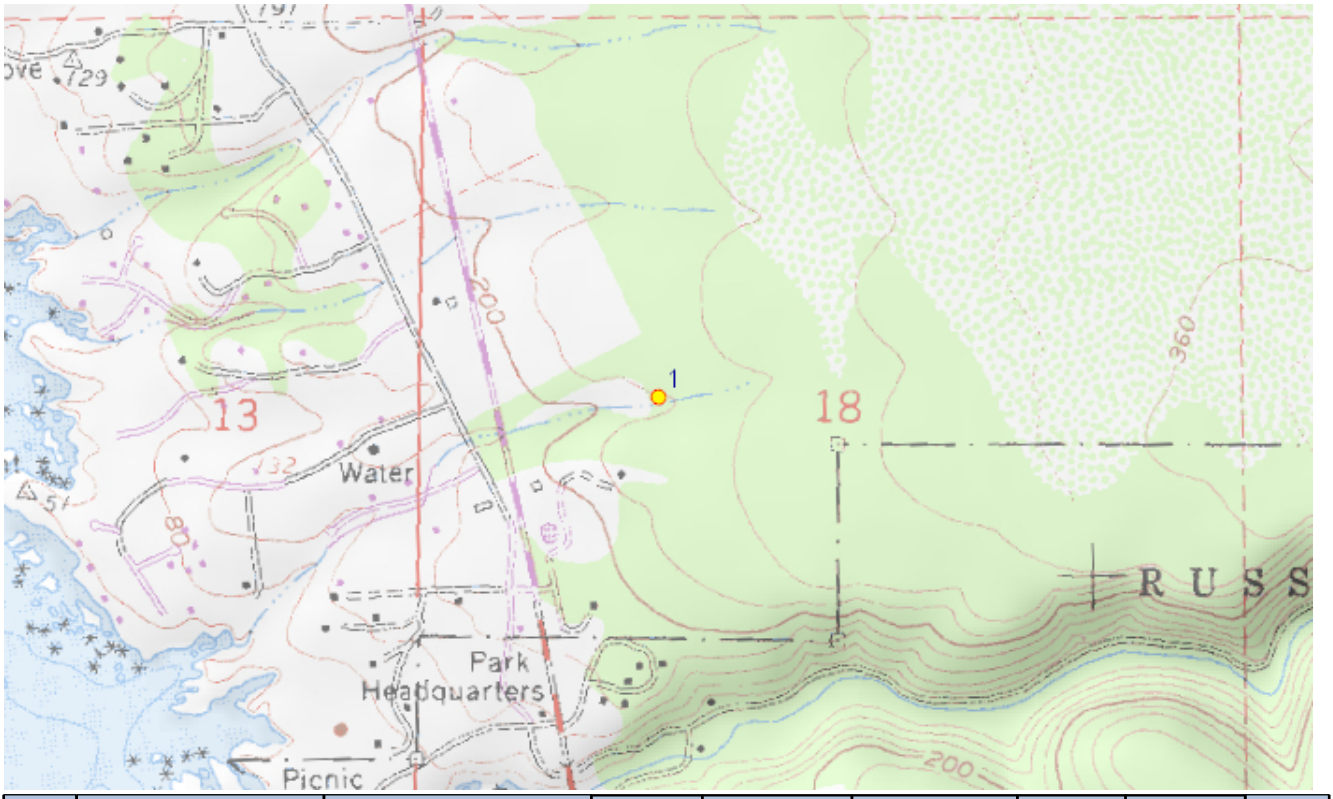
Immediate & surrounding land use: rural residences

Visible disturbances: None

Threats: None

General comments: The owner plans to build a home on this parcel, but an adequate buffer will be left to protect the riparian area.

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Mendocino	Mendocino	262	39.33641	-123.80273	430820	4354417	10

1	Public Land Survey	Feature Comment
	M T17N R17W 18	There are several patches along this creek.

The mapped feature is accurate within: 20 m

Source of mapped feature: topo map

Mapping notes:

Location/directions comments: This creek is on a private parcel along Sea Pines lane. The plant occurs in several spots along the creek on this parcel.

Attachment(s): Helebore and skunk cabbage.jpg, Veratrum fimbriatum and Lysitchiton americanum, with Stachys camissonis.; creek area.jpg, Veratrum fimbriatum and associated plants along creek

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GAR23F0005
Quad code 3912337
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Eastwoodiella californica*

Common name: swamp harebell

Date of field work (mm-dd-yyyy): 08-05-2023

Comment about field work date(s): I observed these plants on 4 occasions between Apr. 29th and Aug. 5th.

OBSERVER INFORMATION

Observer: Alison L. Gardner

Affiliation:

Address: PO Box 838 , Albion, CA 95410

Email: garaway58@gmail.com

Phone: (707) 937-5201

Other observers:

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other: I have been familiar with this plant for about 40 yrs. I first identified it before it was blooming, then waited for it to bloom to confirm my identification.

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2+

Collection? No **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
90 %	2 %	8 %

SITE INFORMATION

Habitat description: Ruderal, in a roadside ditch, near a culvert, in bishop pine forest, near Calamagrostis nutkaensis, with Galium aparine, Anthoxanthum odoratum, Agrostis sp. Rubus ursinus, Athyrium filix-femina var. cyclosorum, & Carex harfordii.

Slope: 50%

Land owner/manager: Barbara Fishelson

Aspect: NW

Site condition + population viability: Poor

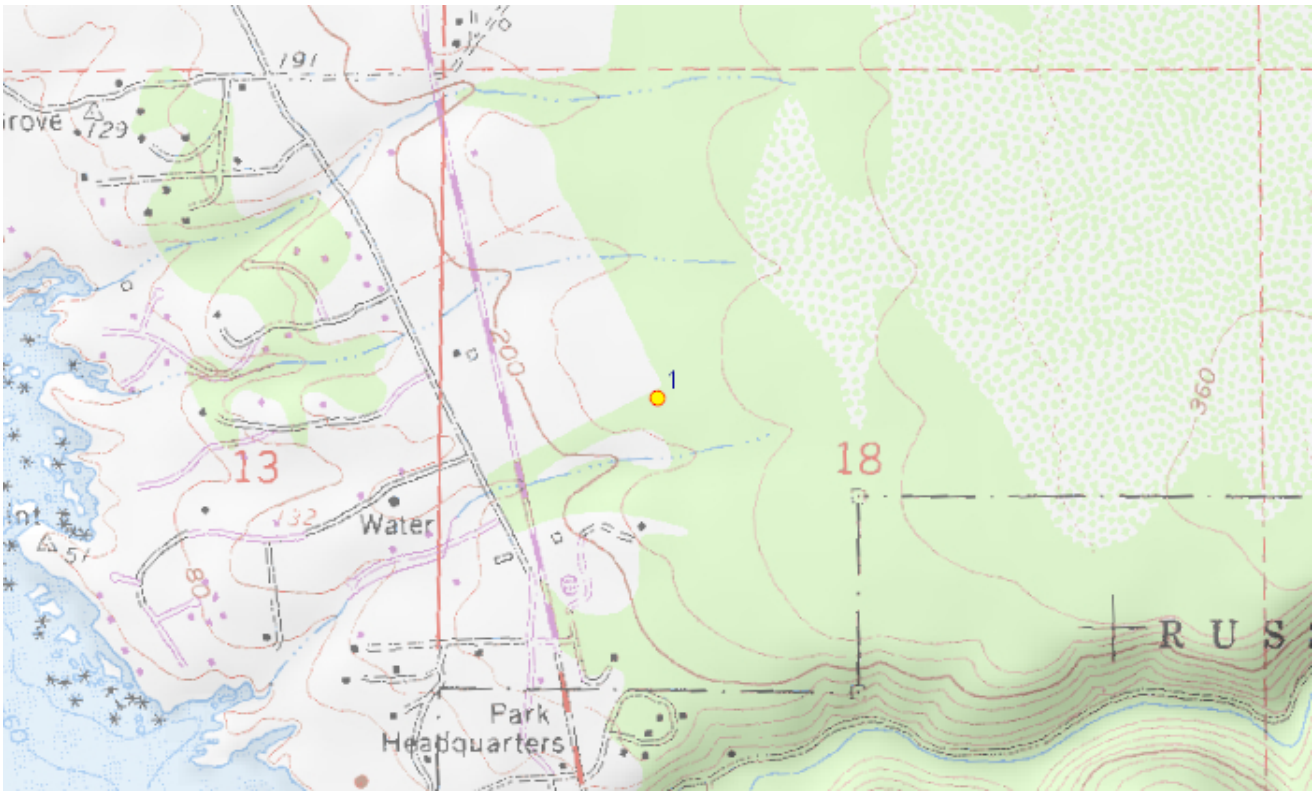
Immediate & surrounding land use: Rural dwellings, state park not far to south.

Visible disturbances: Weeds.

Threats: It's in the road ditch, and if the road is graded, it could wipe them out.

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Mendocino	Mendocino	280	39.33731	-123.80322	430778	4354518	10

1	Public Land Survey	Feature Comment
	M T17N R17W 18	Two small pops. on either side of a culvert.

The mapped feature is accurate within: 10 m

Source of mapped feature: topo map

Mapping notes:

Location/directions comments: On south side of Sea Pines lane, in road ditch. There are two small populations, on either side of a culvert that goes under the road there.

Attachment(s): campanula May.jpg, vegetative growth; california harebell flw.jpg, Flower, Aug. 5th, 2023

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GAR23F0008
Quad code 3912337
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Calamagrostis bolanderi*

Common name: Bolander's reed grass

Date of field work (mm-dd-yyyy): 08-08-2023

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Alison L. Gardner

Affiliation:

Address: PO Box 838 , Albion, CA 95410

Email: garaway58@gmail.com

Phone: (707) 937-5201

Other observers:

DETERMINATION

Keyed in: Jepson Manual

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 10 to 15

Collection? No **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
	50 %	50 %

SITE INFORMATION

Habitat description: Ruderal in bishop pine forest, with Agrostis sp., Anisocarpus maidiodes, Trifolium dubium, Rytidosperma penicillatum...

Slope: 5%

Land owner/manager: Barbara Fishelson

Aspect: west

Site condition + population viability: Fair

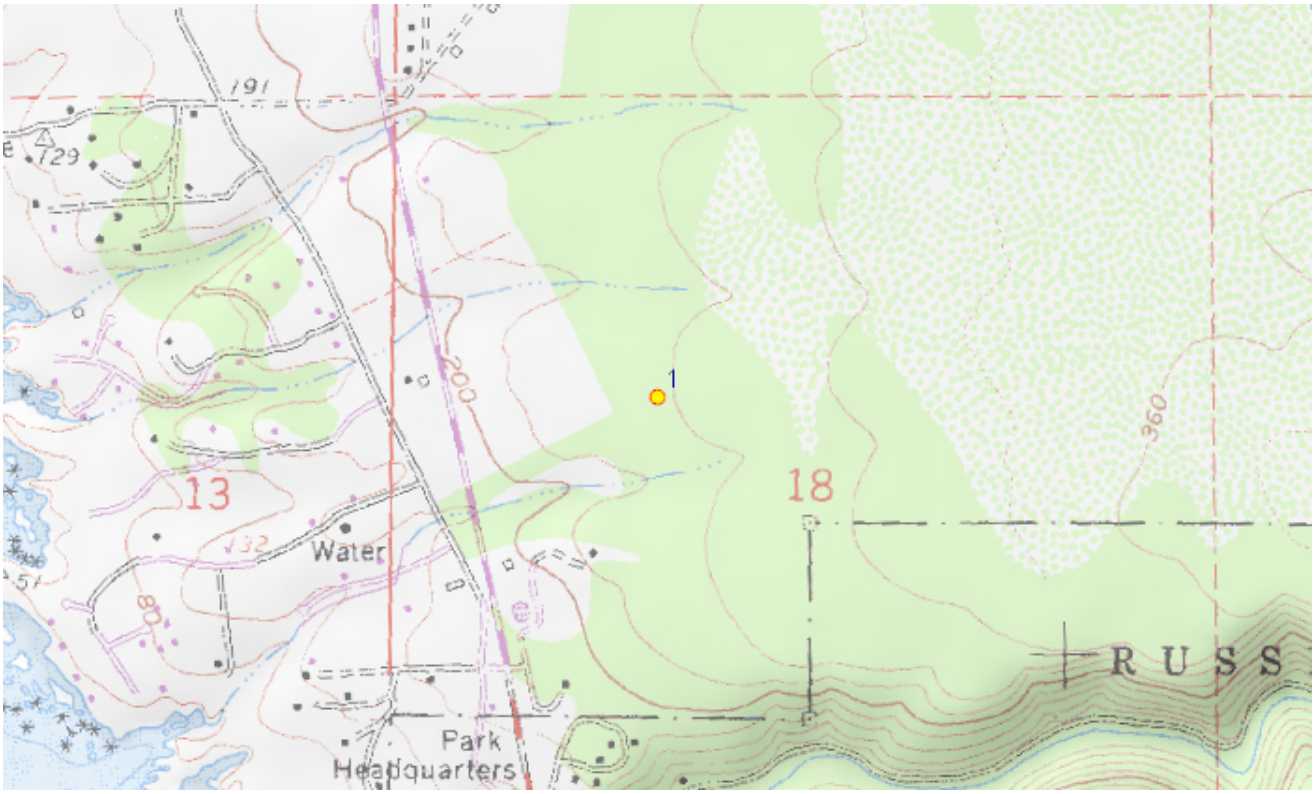
Immediate & surrounding land use: Rural residential

Visible disturbances: On edge of dirt road, shallow ditch.

Threats: Grading of road.

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	Mendocino	Mendocino	292	39.33780	-123.80211	430875	4354571	10

1	Public Land Survey	Feature Comment
	M T17N R17W 18	

The mapped feature is accurate within: 5 m

Source of mapped feature: topo map

Mapping notes:

Location/directions comments: Growing in dry ditch of Sea Pines Lane. Sporadic plants over 150', plus around the corner to the right, along a driveway.

Attachment(s):

July 10, 2023

TO: Barbara Fishelson
PO Box 1623
Mendocino, CA 95460

FR: Justin Coffman
NCRM, Inc.
2501 N. State Street
Ukiah, CA 95482

RE: Bishop Pines located within a proposed development site at 12825 Sea Pines Lane, Mendocino, CA

On June 13, 2023, NCRM Senior Forester Jerry Garvey visited the proposed home site at 12825 Sea Pines Lane, Mendocino, CA, to observe the existing conditions of a location where a yurt and associated access road and septic system are slated to be constructed. This location is within the Coastal Zone

The area generally consists of Bishop pine and Eucalyptus with a heavy understory of rhododendron and typical related coastal brush species. The pine appears to be slowly getting shaded out by the eucalyptus as it begins to dominate the site. Pine crowns are starting to show dieback, with many exhibiting less than 30% live crown ratio. Although the pines may be in decline, a Coastal Development Permit must be secured before removal takes place since this vegetation type has the potential to be an Environmentally Sensitive Habitat Area and should be evaluated by a qualified botanist.

Furthermore, to convert the timberland at the location to a developed state a Less than 3-Acre Conversion Exemption must be sought from Cal Fire as well.

Please let us know if you have any further questions.

Sincerely,

Justin Coffman
Senior Forester & Hydrologist
PH, RPF, Certified Arborist

2501 North State Street, Ukiah, CA 95482
707-485-7211

Fishelson Vegetation Map

Bolander's reedgrass

Proposed driveway

Area outside of all 100' buffers

Parcel boundary

Eucalyptus

Creek

Northern bishop pine forest

Riparian vegetation

California harebell

Edge of 100' buffer zones around riparian, pine forest and rare plants

Pacific pea

Proposed septic leachfield

Proposed house site

Proposed clearing

Existing well

Fishelson Vegetation Map

Bolander's reedgrass

Proposed driveway

Area outside of all 50' buffers

Parcel boundary

Eucalyptus

Creek

Northern bishop pine forest

Riparian vegetation

California harebell

Edge of 50' buffer zones around riparian, pine forest and rare plants

Pacific pea

Proposed septic leachfield

Proposed house site

Proposed clearing

Existing well

CDP2022-0029

STATE OF CALIFORNIA, NATURAL RESOURCES AGENCY
DEPARTMENT OF FORESTRY AND FIRE PROTECTION
MENDOCINO UNIT- STATE FIRE SAFE REGULATIONS APPLICATION
MEU-4290 (REV. 1/19)

CAL FIRE - MENDOCINO UNIT
Fire Safe Regulations
17501 N. Hwy 101
Willits, CA. 95490
(707) 459-7414
Mendocino4290@fire.ca.gov

RECEIVED
MAY 16 2022
MENDOCINO UNIT

CAL FIRE File # 46-22
FOR OFFICE USE ONLY

STATE FIRE SAFE REGULATIONS APPLICATION

Building / Project Site Information

Address: 12825 SEAPINES LANE	APN: 118-21-029
City: MENDOCINO	Zip Code: 95460

Property Owner

Name: BARBARA FISHELSON	
Mailing Address: P.O. BOX 1623	
City: MENDOCINO	State: CA
Zip Code: 95460	Phone: 707-357-3725
Email: GAIAROSE@MCN.ORG	

Agent Representing Property Owner

Name:	
Mailing Address: P.O. BOX 535	
City:	State:
Zip Code:	Phone:
Email:	

Mail Correspondence to (choose one)

☒ Owner ☐ Agent ☐ Pick Up at CAL FIRE Howard Forest

Project Information

☒ Residential ☐ Commercial

☒ New Building	☐ Class K	☐ Subdivision
☐ Remodel/ Addition	☐ Replacement	☐ Other

Dwelling Sq. Ft: 1218	Attached Garage Sq. Ft: 0
Accessory Building(s) Sq. Ft: 0	Detached Garage/ Shop Sq. Ft: 0
Agricultural Building(s) Sq. Ft: 0	Other Structure Sq. Ft:
	TOTAL SQUARE FEET: 1218

Briefly describe the structure(s) to be built:
NEW S.F.R. AND NEW DRIVEWAY

RECEIVED
SEP 25 2023
PLANNING & BUILDING SERV
FORT BRAGG CA

STATE OF CALIFORNIA, NATURAL RESOURCES AGENCY
DEPARTMENT OF FORESTRY AND FIRE PROTECTION
MENDOCINO UNIT- STATE FIRE SAFE REGULATIONS APPLICATION
MEU-4290 (REV. 1/19)

CAL FIRE - MENDOCINO UNIT
Fire Safe Regulations
17501 N. Hwy 101
Willits, CA. 95490
(707) 459-7414
Mendocino4290@fire.ca.gov

Project Information Continued			Yes	No
1. Was the subject parcel created PRIOR to January 1, 1991?			X	
2. Is the structure within a ½ mile driving distance of a working fire hydrant?			X	
3. Is the structure within a 5-mile driving distance of a year-round fire station?			X	
4. Is the subject parcel 1 acre or larger?			X	
5. Will the proposed structure(s) be 30 ft. or more from ALL property lines			X	
6. Will your project require construction of a new road?			X	
7. Will your project require extension of an existing road?				X
If you answered YES to question 6 or 7:	How many feet?	Maximum grade (%)?		
8. Will your project require construction of a new driveway?			X	
9. Will your project require extension of an existing driveway?				X
If you answered YES to question 8 or 9:	How many feet? 2001.	Maximum grade (%)? 5 %		
If you answered No to (one or more) questions 6-9, describe the existing road/driveway:				
10. Is there an existing bridge(s) on the parcel that provide access to the project site?				X
11. Will a bridge be installed/ constructed to provide access to project site?				X
12. Is a plot plan attached as per the instructions?			X	

Subdivision Information (only required for subdivision)	
Current acreage before split?	How many parcels will be created?
Acreage of each newly created parcel?	

Timber and Land Conversion Activities		
13. Will trees be cut and timber products be sold, bartered, traded, or exchanged?		X
14. Will timberland be converted to a non-timber growing use?		X
If **YES** on questions 13 or 14, a harvest permit may be required from CAL FIRE Resource Management *FOR QUESTIONS RELATED TO TIMBER OR LAND CONVERSION CALL* (707) 459-7440		

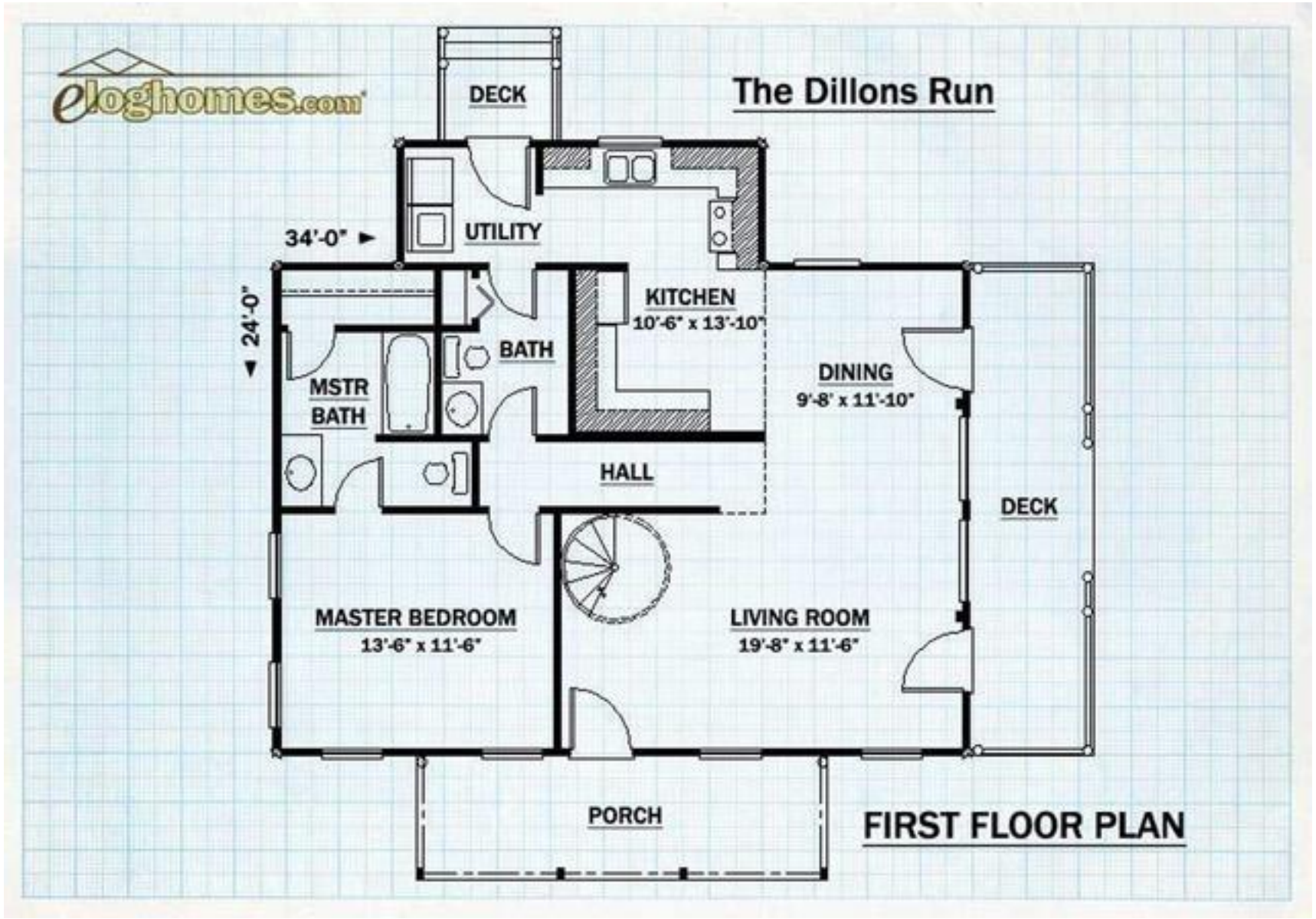
Exception Request		
15. Will your project require an exception to **ANY** of the Fire Safe Regulations?		X
If **YES** on question 15, attach a separate page identifying the applicable section pertinent to your request, facts supporting the request, and details of the exception or mitigation measures proposed, and a map showing the proposed location of the exception or mitigation measure.		

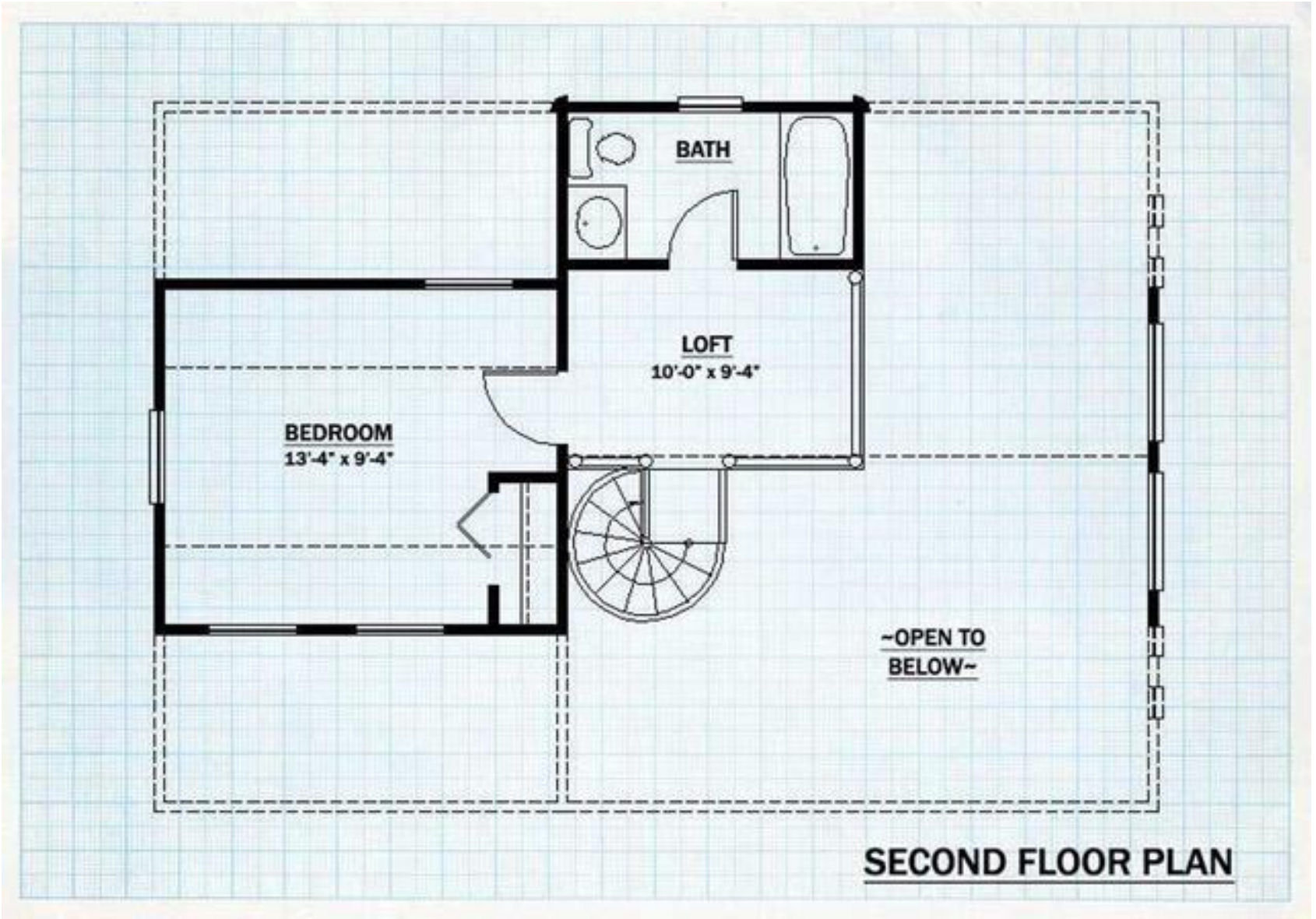
I hereby agree to maintain the property in compliance with the Fire Safe Regulations established in the Public Resources Code Section 4290.The information submitted in this application is complete and accurate to the best of my knowledge.

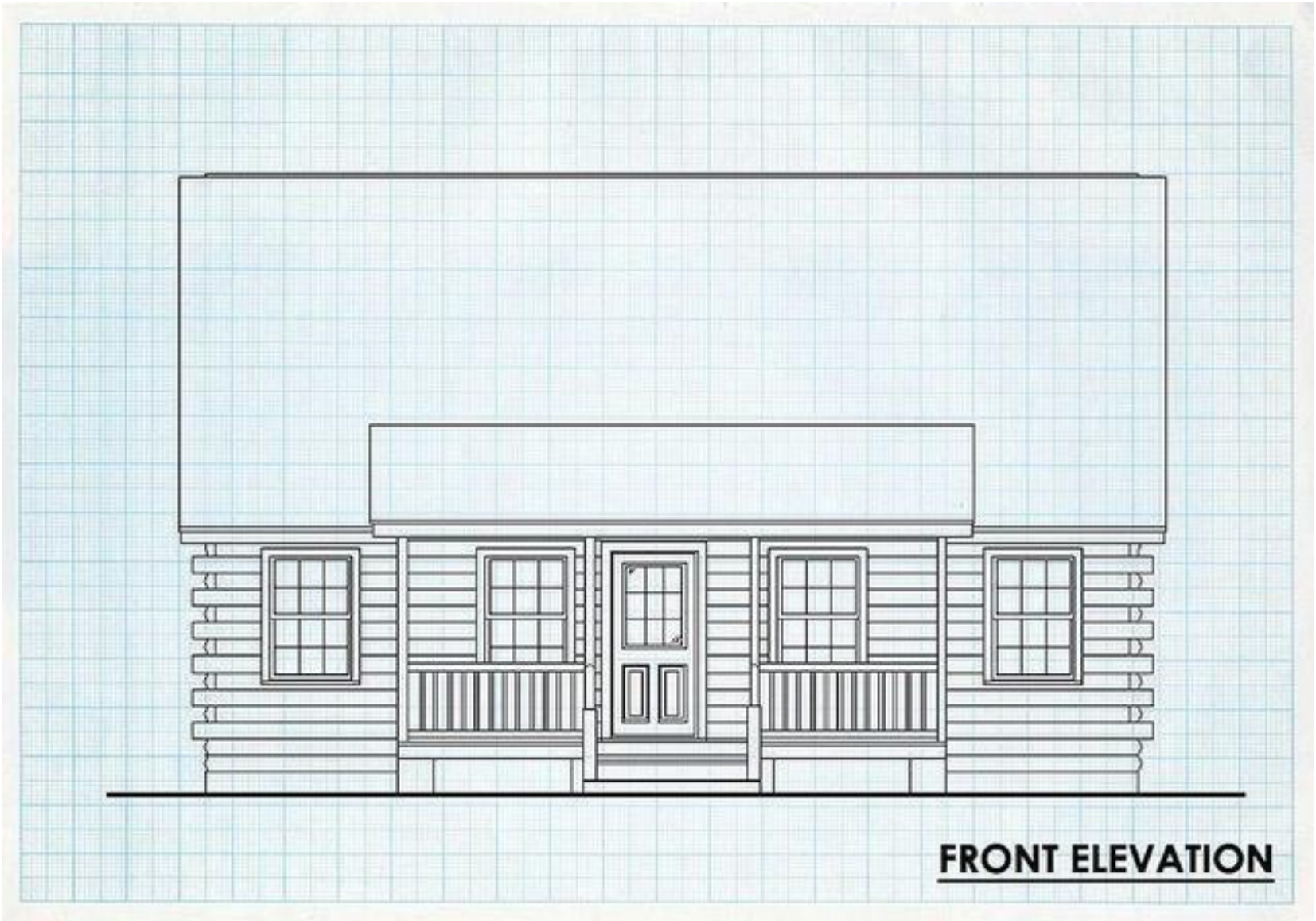
Signature of property owner or authorized agent: BFish	
Date: 9/24/23	Print Name: Barbara Fishelson

Dillons Run

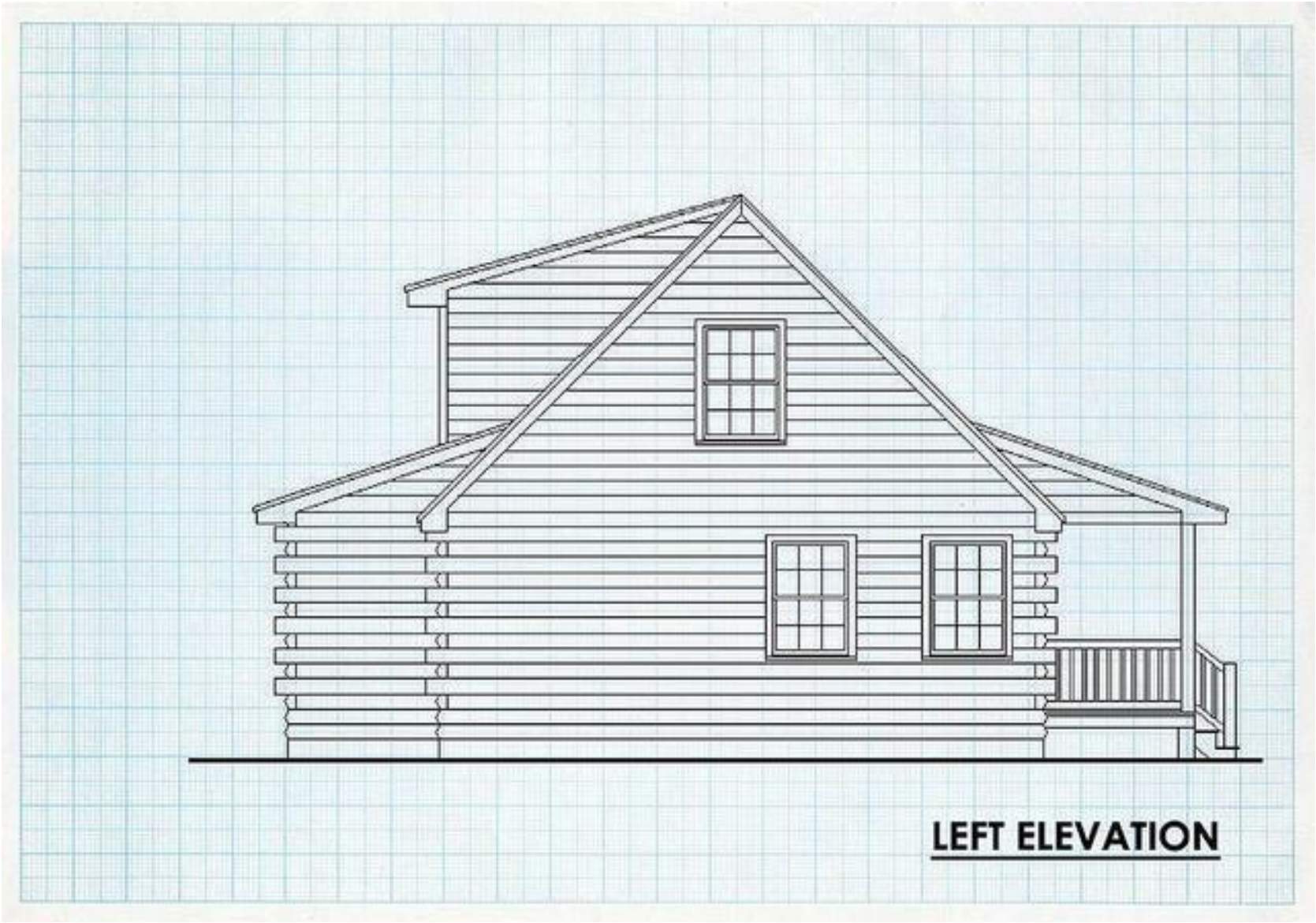
- Heated sq. ft. : **1218**
- Stories : **1.5**
- Bedrooms : **2**
- Bathrooms : **3**
- Porch : **120**
- Porte Cochere : **0**
- Interior Balcony : **yes**
- Cathedral Ceiling : **yes**
- First Floor Master : **yes**
- Deck : **168**
- First Floor : **924**
- Second Floor : **294**
- Garage : **0**
- Balcony : **0**


eloghomes.com
The Dillons Run
DECK
UTILITY
34'-0"
24'-0"
KITCHEN
10'-6" x 13'-10"
BATH
MSTR
BATH
DINING
9'-8" x 11'-10"
HALL
DECK
MASTER BEDROOM
13'-6" x 11'-6"
LIVING ROOM
19'-8" x 11'-6"
PORCH
FIRST FLOOR PLAN

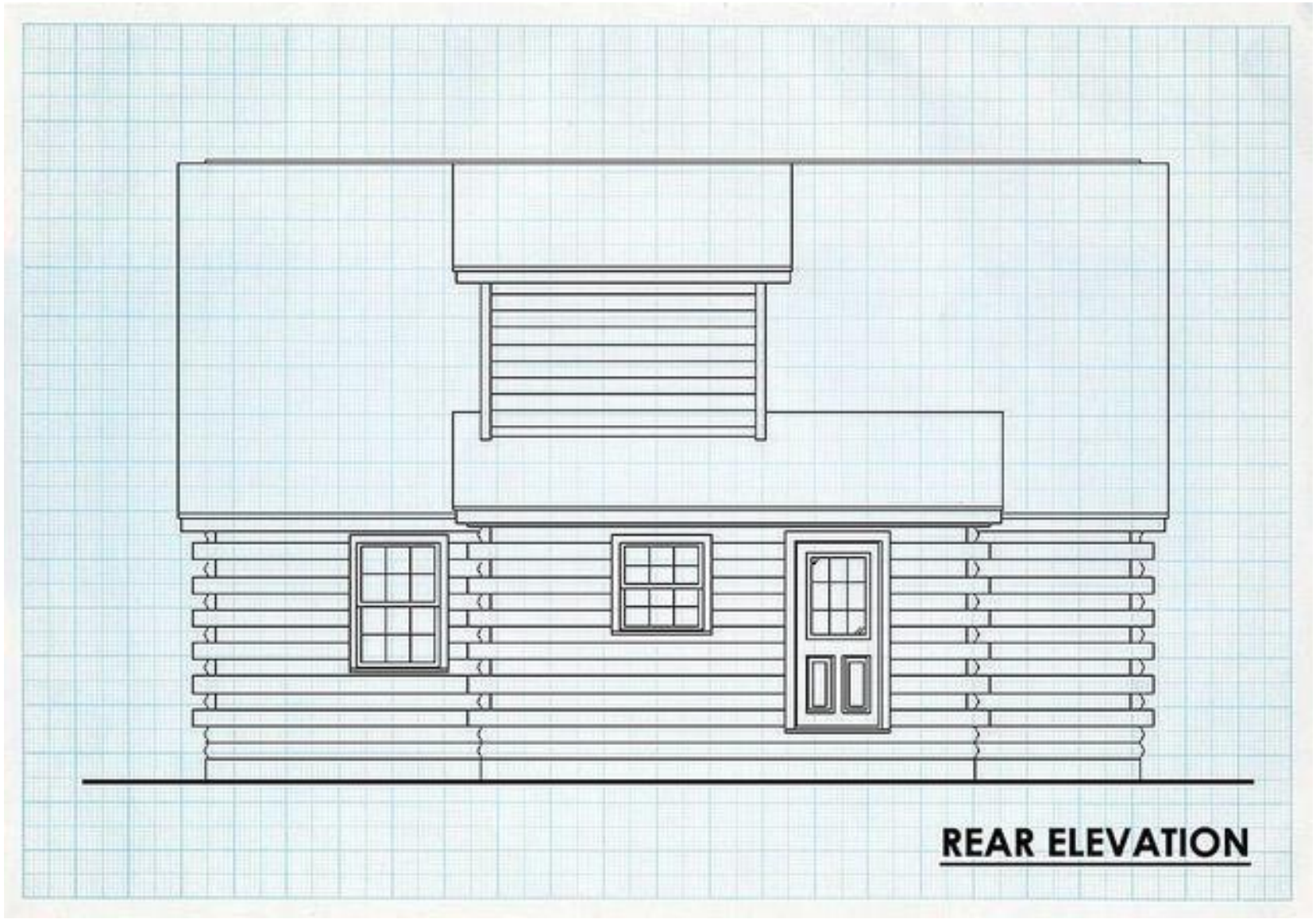

BATH
LOFT
10'-0" x 9'-4"
BEDROOM
13'-4" x 9'-4"
~OPEN TO
BELOW~
SECOND FLOOR PLAN



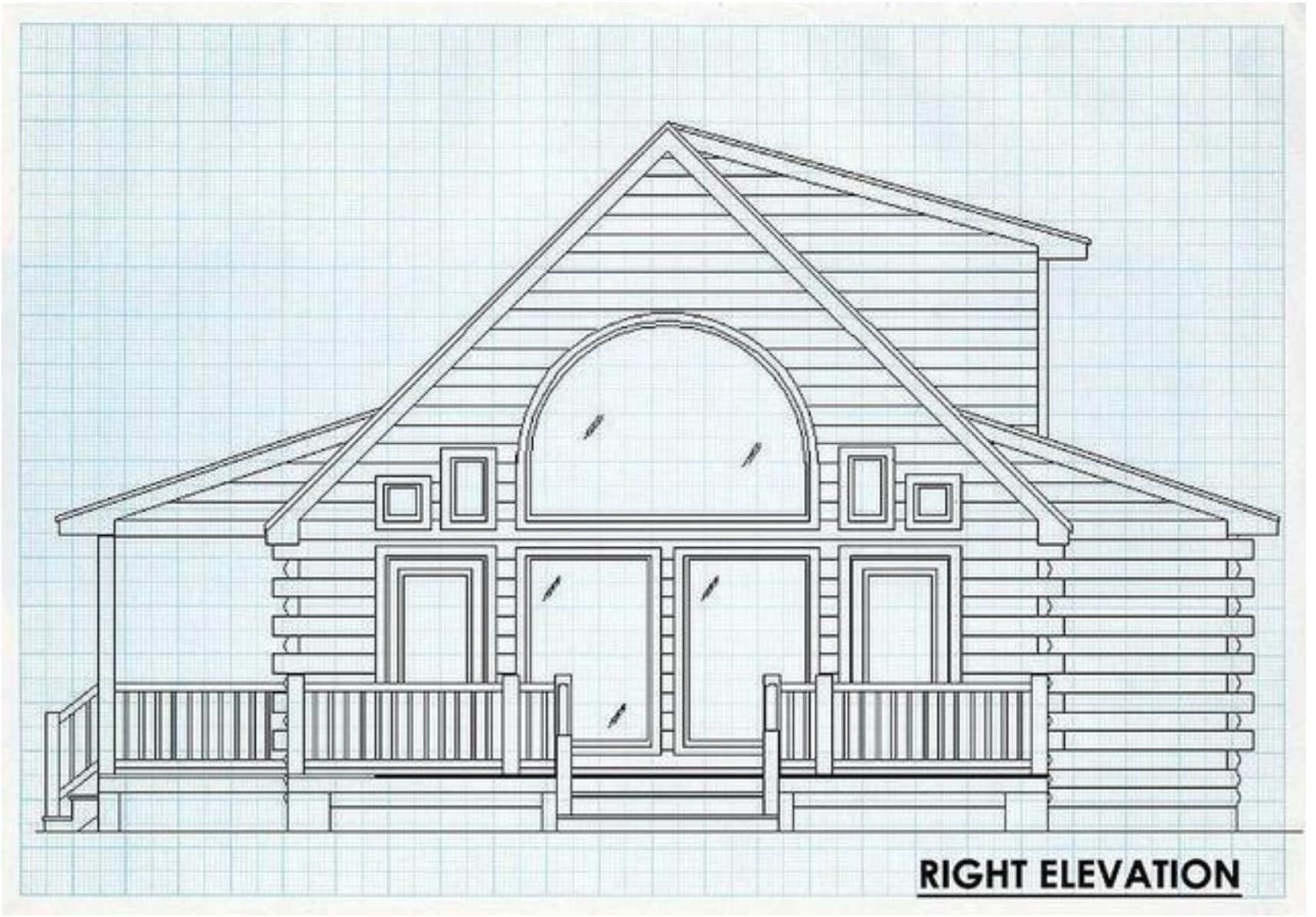
FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION


RIGHT ELEVATION