COASTAL PERMIT ADMINISTRATOR STAFF REPORT- STANDARD CDP

DECEMBER 12, 2024
CDP_2019-0035

SUMMARY

OWNER:	4471 Comptche Ukiah Road, LLC 15101 Caspar Road, P O Box 103 Caspar CA 95420
APPLICANT:	Michael Malmberg 44771 Comptche 8Ukiah Road Mendocino CA 95460
AGENT:	Jacobszoon and Associates Inc. 117 Clara Avenue Ukiah CA 95482
REQUEST:	Standard Coastal Development Permit to approve restoration measures for after the fact removal of dead and dying Grand Fir and Bishop Pine trees for fuel reduction and creation of recreational space and installation of one thousand (1,000) feet of seven (7) foot tall wildlife friendly perimeter fencing.
LOCATION:	In the Coastal Zone, 1.6± miles south of the town of Mendocino, on the south side of Comptche Ukiah Road (CR 223), 0.14± miles east of its intersection with State Route 1 (SR 1), located at 44771 Comptche Ukiah Road, Mendocino; APNs: 119-310-08, 119-310-06 and 119-310-07.
TOTAL ACREAGE:	12.74± Acres
GENERAL PLAN:	Rural Residential, five-acre minimum (RR: 5)
ZONING:	Mendocino County Division II: Rural Residential, five (5) acre minimum (RR-5)
SUPERVISORIAL DISTRICT:	5 (Williams)
ENVIRONMENTAL DETERMINATION:	Mitigated Negative Declaration
APPEALABLE:	Yes
RECOMMENDATION:	Approve with Conditions
STAFF PLANNER:	Keith Gronendyke

BACKGROUND

PROJECT DESCRIPTION: Standard Coastal Development Permit to remove dead and dying Grand Fir and Bishop Pine trees for fuel reduction and creation of recreational space and installation of one thousand (1,000) feet of seven-foot tall wildlife friendly perimeter fencing. The fence to be constructed is proposed to be seven (7) feet tall and constructed to be wildlife friendly to allow for normal wildlife movement and corridor use. This is to be accomplished by raising the bottom of the wire fencing to allow for the free movement of small animals with the height of the fence limited to seven feet, which can be scaled by deer

It should be noted that the tree removal has already been completed and this application for a Coastal Development Permit is to evaluate the impacts of the vegetation clearing and the possible impacts of the proposed fencing.

This vegetation removal initially was reported to the Mendocino County Code Enforcement Department and a code violation case was opened.

SITE CHARACTERISTICS: The subject parcels are located just south of the Town of Mendocino and immediately south of the Big River watershed where it meets the Pacific Ocean. The site elevation ranges from a low of one-hundred and two (102)± feet at Comptche Ukiah Road to a high of two-hundred and seventy-two (272) feet at the back of the largest parcel and features a gradual upward slope to the east toward the inland side to the east. The estimated slope of the properties ranges from 0 degrees to72 degrees at the southeastern portion of the property. There are a number of visitor accommodation lodging facilities immediately to the north that boarder the Big River and Pacific Ocean areas. To the west along the property line with the adjacent parcel is an existing camping facility. Existing structures included a single family residence with an assortment of accessory buildings. The designated land classification and zoning district is Rural Residential, five (5)acre minimum. (See attachments *Zoning Display Map* and *General Plan Classifications*). The surrounding lands are mapped high productivity timber lands with LCP land capabilities, Zone 3 is Beach Deposits and Stream Alluvium and Terraces (See attachment *LCP Land Capabilities & Natural Hazards*). The provided mapping describes the surrounding lands as "Coastal Forest" (See *LCP Habitats and Resources*). This site is located in a "Very High Fire Hazard" area and is under the responsibility of Mendocino Fire Protection and CAL FIRE (See attached *Fire Hazard Zones & Responsibility Areas*). The subject properties are located within an appealable jurisdiction. The project site is located within a Highly Scenic Area (conditional) (See *Highly Scenic and Tree Removal Areas)*

The subject parcels are located within a mapped "Marginal Water Resource Area" (See attached *Ground Water Resources*) and not located in a local water district.

APPLICANT'S STATEMENT: *"The project consists of the removal of dead and dying trees for the purpose of fuels reduction and to create usable recreational space. The tree species that were removed include dead and dying Grand Fir and Bishop Pine. Additionally, a 7' tall wildlife friendly fence made of wire deer fencing with T-posts will be put in bordering portions of the northern, western and southern property lines. The fence will be placed according to the Mendocino County normal setbacks and preservation setbacks and will allow for normal wildlife movement and corridor use. Approximately 1,000 'of fencing will be put in bordering the western property lines of APNs 119-31-07-00 and 119-310-08-00, approximately 80' of fencing will be put in bordering the northern property line of APN 119-310-07-00 with a gate at the driveway and approximately 50' of fencing will be put in bordering the southern property line of APN 119-310-08-00 in the southwestern corner.*

SUMMARY OF REFERRAL AGENCIES COMMENTS:

REFERRAL AGENCY	COMMENTS
Archaeological Commission	Comments
Northwest Information Center	Comments
Department of Fish and Wildlife	Comments
Assessor's Office	No response
Building Division (Fort Bragg)	No comment
County Addressor	No comment
Department of Transportation (DOT)	Comments
Planning Division (Fort Bragg)	No comment
Mendocino Fire Protection District	No response
Cal Fire (Land Use)	Comments
Cal Fire (Resource Management)	No response
California Coastal Commission	No response

Cloverdale Rancheria	No response
Redwood Valley Rancheria	No response
Sherwood Valley Band of Pomo Indians	No response

RELEVANT COMMENT DISCUSSIONS:

California Fish and Wildlife: Previously, the Fish and Wildlife Department commented on the project with concerns surrounding the proposed fencing, the potential development of recreational space, determination of the health of trees, the potential impacts to amphibians from the vegetation removal and other issues. In a letter from Senior Wildlife Biologist, Alicia Ives Ringstad, Ms. Ringstad responded to the concerns of the California Department of Fish and Wildlife's concerns. Staff feels that the included conditions of approval and mitigation measures will ensure that the project site will be protected and restored to pre-removal status.

SURROUNDING LAND USE AND ZONING: As listed on Table 1 below, the surrounding lands are classified and zoned Rural Residential (RR) and developed with similar residential uses. The proposed remediation and fence construction is consistent with these surrounding land uses:

Table 1: Surrounding Land Use and Zoning

	GENERAL PLAN	ZONING	LOT SIZES	USES
NORTH	Rural Residential (RR:5)	Rural Residential (RR:5)	3.61± Acres	Transient occupancy
EAST	Open Space (OS)	Open Space	20.01 ± Acre	Vacant
SOUTH	Rural Residential (RR:5)	Rural Residential (RR:5)	14.7± Acre	Residential
WEST	Rural Residential (RR:5)	Rural Residential (RR:5)	12.75 ± Acre	Transient occupancy

LOCAL COASTAL PROGRAM CONSISTENCY:

The proposed development is consistent with the goals and policies of the Local Coastal Program, General Plan, and Zoning Code, as detailed below:

Land Use: The project site is located within the boundaries of the Local Coastal Program (LCP) area, as shown on *LCP Land Use Map 17: Mendocino*. The subject parcels are classified as Rural Residential (RR 5) by the Mendocino County General Plan, as shown on the *General Plan Classifications* map.

The Coastal Element Chapter 2.2 Rural Residential classification reads:

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

The existing development on the property of a single family residence and associated accessory structures is consistent with residential development per Mendocino County Coastal Element Chapter 2.2.

Zoning: The zoning codes enforce the intent of the land use classification. This project site is located within a Rural Residential district as shown on the *Zoning Display* map (attachment **F**).

The Rural Residential district, per Mendocino County Code (MCC) Section 20.376.005,

> *"… is intended to encourage and preserve local small scale farming in the Coastal Zone on lands which are not well-suited for large scale commercial agriculture. Residential uses should be located as to create minimal impact on the agricultural viability."*

The already completed project of clearing does not have an impact on the agricultural viability of the properties or conflict with the uses within the Rural Residential District or the MCC Chapter 20.376 *RR -- Rural Residential District*. There is not an agricultural use currently established, nor is one being proposed.

Extensive clearing of thick stands of Grand Fir and Bishop Pine trees would have to be done to facilitate an agricultural use of the property. The proposed installation of one-thousand (1,000)(± feet of wildlife friendly fencing also would not be deemed to have an impact on any future agricultural use of the property or its current residential use. The site is already developed with a single-family residence and supporting infrastructure. This application seeks approval of work already performed, as noted above. The project is found to be consistent with the zoning and General Plan classification of Rural Residential as it will allow for the continuance of the existing use on the parcels. In addition, due to the nature of the project and the characteristics of the site, the project presents no additional risk of damage to property or persons. The project would not impact or encroach on any property line setback requirement for the RR District per MCC Sec. 20.376.035.

Visual Resources**:** The parcel is located within a designated highly scenic area (Conditional), but not within a special community, or special treatment area; additionally, the already removed vegetation from the understory will not change the visual impacts to the surrounding area. The only development/construction is the proposed fencing, which will be constructed of a see-through wire material and will not obstruct visibility. As such, it will not have visual impacts and the proposed project will not conflict with Coastal Element Chapter 3.5, and complies with MCC Chapter 20.504 *Visual Resources and Special Treatment Areas*.

Hazard Management**:** The removal of dead and dying vegetation in the understory of the existing Grand Fir and Bishop Pine trees will have minimal to no impact on geologic, fire, and flood hazards. The site is rated as "Very High Fire Hazard", and fire protection services are provided by the Mendocino Fire Protection Department along with Cal Fire, as shown on the F*ire Hazard Zones & Responsibility Areas* map. The vegetation removal and fence construction will not contribute additional risk of damage to property, or persons, and do not conflict with 20.500.010. The parcels are not located in a flood plain area. As such, the project presents no additional risk of damage to property or persons and does not conflict with MCC 22.17.020. Therefore, given the location and minimal potential for impact or being impacted by any of the hazards in MCC 20.500, the proposed project will not conflict with Coastal Element Chapter 3.4, and complies with MCC Chapter 20.500 *Hazard Areas*, including geologic (faults, bluffs, tsunami, landslides, and erosion), fire, and flood hazards.

Habitats and Natural Resources: The project location is designated as Coastal Forest on the LCP Habitats and Resources map. A Rare Plant Assessment and Botanical Survey was provided with the application, which evaluated the site for Environmentally Sensitive Habitat Areas (ESHAs) after the removal of Bishop Pine trees, along with other species, without a Coastal Development Permit. Additional studies included rare plant surveys, vegetation mapping and a total tree removal count performed on May 7, July 10 and August 6, of 2019. The California Coastal Act (CCA) defines an ESHA as: "*Environmentally sensitive habitat area means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."*

According to the report: "*The dominant vegetation within the study area is Northern Bishop Pine Forest… with the overstory trees consisting of Bishop Pine, Grand fir and Douglas fir with scattered tan oak and coast redwood. There are no late successional or old growth stands within the study area. The understory consists of coast rhododendron, sword fern, salal and huckleberry. The canopy is closed with little sunlight and no conifer regeneration (saplings) within the forest area. There is regeneration along the edges of the forest where more openings exist.*

There is a seasonal Class III watercourse with no streamside vegetation within the Bishop Pine forest until the stream reaches the house clearing…"

The report further states that: *"Northern Bishop Pine Forest **is an ESHA** as defined in Section 30107.5 of the Coastal Act, Section 3.1 of the Certified Mendocino County LUP and CZC Section 20.308.040(F) is ""…any area in which plan or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities.""*

The CA Department of Fish and Wildlife (CDFW) recognizes special status natural communities as communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status species or their habitat.

Additionally, *"…seventy-three special-status plant species have been documented within the vicinity of the Study Area. Of the seventy-three special status species documented within the vicinity of the study area, sixty-four special-status species are unlikely or have no potential to occur…The nine special-status plant species with potential to occur within the Study Area are:* ***Bolander's reed grass, swamp harebell, Monterey Coast paintbrush, Point Reyes ceanothus, harlequin lotus, Baker's goldfields, coast lily, redwood lily and Monterey clover."***

"Forty-four special-status wildlife species have been documented within the vicinity of the Study Area. No special-status wildlife species were observed within the Study Area during the site assessment. Twenty-one special-status wildlife species have the moderate potential to occur within the Study Area. The remaining thirteen special-status wildlife species do not have the potential to occur. The thirteen special-status wildlife species with potential to occur within the Study Area include: ***red-bellied newt, osprey, northern spotted owl, obscure bumble bee, lotis blue butterfly, Sonoma tree vole, Townsend's big-eared bat, silver-haired bat, hoary bat, little brown bat, fringed myotis, long-legged myotis*** *and* ***Yuma myotis."***

The report indicated that while listed special-status plant species have the potential to occur within the study area, only one was observed during the biological site assessment and the botanical surveys and is not within the area of the tree removal. As such, no further recommendations or conditions of approval were listed.

The report also indicated that while special-status wildlife species have the potential to occur within the study area, none were observed during the biological site assessment and that no further recommendations or conditions of approval were listed.

As the Bishop pine forest has been designated an ESHA, special after the fact mitigation measures have been proposed that would mitigate possible significant impacts to a less than significant level within the tree removal area. These measures include:

- *Replacement trees may be a combination of those naturally regenerating and planted individuals. It is recommended to not replant replacement trees, but to use the existing regenerating trees as replacement trees due to the high number of regeneration of Bishop pine trees occurring at the site. Bishop pinecones are serotinous and open only after fire or on very hot days; therefor, the majority of the regeneration has been located within the burn piles associated with the removal of the Bishop pine trees.*

- *Annual monitoring will be conducted in the fall for five (5) years, starting in 2025, and the trees shall maintain a success rate of eighty (80) percent at the end of the five (5) years. Reporting of the annual monitoring shall be submitted to the County of Mendocino and the Department of Fish and Wildlife. The annual monitoring shall be completed, and the report sent to the above noted parties no later than October 31 of each year. Monitoring visits shall be conducted by a qualified forester or biologist to document success rates, assess watering regimes and monitor encroachment by non-native species.*

- *Supplemental watering will be conducted, if necessary, as well as thinning, if necessary, to release crowded individuals for more rapid tree growth. Areas around the regeneration trees should be weeded as necessary.*

- *Results of restoration activities shall be submitted to CDFW, the County and the California Coastal*

Commission on an annual basis at minimum.

- *The replanted trees shall have an eighty (80) percent minimum survivability ratio after five (5) years.*
- *Disturbed areas shall have a continuous cover of native vegetation. Exotic species shall comprise no more than twenty (20) percent of the total cover.*
- *If at the end of three (3) years, the tree survival rate is less than eighty (80) percent, additional trees shall be planted at a rate of 2:1 for those that did not survive. Monitoring of new trees shall take place for two (2) more years or as needed to achieve the eighty (80) percent survivability ratio.*
- *If at the end of five (5) years, the tree survival rate is less than eighty (80) percent, the mitigation plan shall be analyzed and adapted to achieve target success rates. An updated mitigation plan shall be drafted by a qualified forester or biologist.*

The above noted mitigation measures contained in the Bishop Pine Forest Mitigation Plan prepared by Jacobszoon and Associates Inc. on December 21, 2023, have been incorporated into the conditions of approval for this project.

California Department of Fish and Wildlife did respond to the agency referral request on August 13, 2024, but did not comment on the Bishop pine forest Mitigation Plan. The proposed project will not conflict with Coastal Element 3.1, and complies with MCC Chapter 20.496, *Environmentally Sensitive Habitat and Other Resource Areas*.

Grading, Erosion and Run Off: Best management practices are to be used if any significant rainfall is to occur during the time of exterior remediation and installation of the fencing (Condition 25). The proposed project complies with MCC Chapter 20.492 *Grading, Erosion, and Runoff* and MCC Section 18.70.027 *Grading as "Development" in the Coastal Zone.*

Groundwater Resources: The site is designated as having marginal water resources by the Mendocino County Coastal *Groundwater Study*, as shown on the *Ground Water Resources Map*. The project was not referred to the Mendocino County Division of Environmental Health (DEH) to review impacts that may occur in regards to water and septic developments, as no additional development that would impact groundwater resources is proposed with this application. The proposed project complies with MCC Section 20.516.015 (B)(1) *Water Supply.*

Archaeological/Cultural Resources: The project proposal was referred to the Northwest Information Center Sonoma State University, which responded that, while a previous study covered approximately twenty percent of the project area an updated archaeological survey would be required to be conducted for the project site. As such, an archaeological survey was prepared on August 27, 2020, by Geist Engineering and Environmental Group Inc. and submitted to the Planning and Building Department. The project was presented to the Mendocino County Archaeological Commission at the August 26, 2020, meeting. The survey was accepted by the Commission. Staff notes that Condition 23, advises the property owners and contractors of a "Discovery Clause," which prescribes the procedures subsequent to the discovery of any cultural resources during any remediation activities associated with the project. Comments were requested from the following tribes: Redwood Valley Rancheria, Sherwood Valley Band of Pomo Indians, and Cloverdale Rancheria, no responses were received. With the adherence of condition 16, the proposed project complies with MCC Sections 22.12.090 *Discoveries* and 22.12.100 *Discoveries of Human Remains.*

Transportation/Circulation: The project would not contribute new sources of traffic on local and regional roadways. The project would not impact transportation or circulation and will be provided with adequate access for existing residential use of the parcel. The project was referred to Mendocino County Department of Transportation (DOT) for input. DOT did respond to the agency referral request and conditions of approval 5-7 have been added to address the concerns of DOT. The proposed project complies with MCC Section 20.516.015 (C) (2) *Transportation Systems.*

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PROJECT FINDINGS AND CONDITIONS

Staff recommends, pursuant to the provisions of Chapter 20.532 and Chapter 20.536 of the Mendocino County Code, that the Coastal Permit Administrator approve the proposed project, adopts a Mitigated Negative Declaration, and adopt the following findings and conditions.

FINDINGS:

1. Pursuant to MCC Section 20.532.095(A)(1), the installation of one-thousand (1,000)± feet of seven (7)foot tall wildlife friendly fencing is in conformity with the certified Local Coastal Program. The removal of dead and dying trees was done without the benefit of permits and was not reviewed for consistency. However the proposed Conditions of Approval include restoration of the Bishop Pine habitat, and those proposed measures are consistent with the Local Coastal Program and the along with the installation of fencing is not in conflict with the Rural Residential land use classification, and the removal and replacement of dead and dying trees along with the installation of fencing will allow for the continued residential use of the site, which is consistent with the intent of the Rural Residential Classification; and

2. Pursuant to MCC Section 20.532.095(A)(2), the installation of 1,000 feet of seven foot tall wildlife friendly fencing and proposed mitigation measures to restore Bishop Pine habitat would not change or impact the existing utilities, access roads, drainage, and other necessary facilities; and

3. Pursuant to MCC Section 20.532.095(A)(3), the installation of one-thousand (1,000)± feet of seven (7) foot tall wildlife friendly fencing and proposed mitigation measures to restore Bishop Pine habitat is consistent with, and does not conflict with, the purpose and intent of the Rural Residential District, as well as all other provisions of Division II of Title 20 of the Mendocino County Code.

4. Pursuant to MCC Section 20.532.095(A)(4), the installation of one-thousand (1,000)± feet of seven foot tall wildlife friendly fencing and proposed mitigation measures to restore Bishop Pine habitat, if completed in compliance with the conditions of approval and mitigation measures, will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act and the project will have a less than significant impact on the environment with mitigation measures incorporated into the conditions of approval; and

5. Pursuant to MCC Section 20.532.095(A)(5), the installation of one-thousand (1,000)± feet of seven foot tall wildlife friendly fencing and proposed mitigation measures to restore Bishop Pine habitat will not have any adverse impact on any known archaeological or paleontological resources, and Condition 23 is in place when archaeological sites or artifacts are discovered; and

6. Pursuant to MCC Section 20.532.095(A)(6), other public services, including but not limited to, solid waste and public roadway capacity have been considered and are adequate to serve the site. The site is currently developed with a single-family residence and the removal of dead and dying Grand fir and Bishop pine trees for fuel reduction and the creation of recreational space, along with the installation of one-thousand (1,000)± feet of seven foot tall wildlife friendly fencing will not affect demands on public services.

CONDITIONS OF APPROVAL AND MITIGATION MEASURES (as indicated by "":**

1. This action shall become final on the 11th day following the decision unless an appeal is filed pursuant to Section 20.544.015 of the Mendocino County Code. The permit shall expire and become null and void at the expiration of two years after the effective date except where construction and use of the property in reliance on such permit has been initiated prior to its expiration.

2. In the event of further mitigation processes needed regarding this project, the Applicants have sole responsibility for renewing this application before the expiration date. The County will not provide a notice prior to the expiration date.

3. All fencing shall be constructed of wire deer fencing attached to T-posts. Prior to the issuance of a

building permit for the fencing, a site plan detailing all proposed locations of fencing shall be submitted to the Mendocino County Planning Department for review. Also, an elevation drawing of the proposed fencing shall be submitted that details the specific design of the fencing that makes it “wildlife friendly.”

All “wildlife friendly" fencing shall be constructed of smooth wire and be no taller than seven (7) feet from the ground and have a three (3) inch clearance from the ground to the bottom of the fence to facilitate the passage of large and small animals over and under the fencing.

4. Prior to fence installation, a property boundary survey shall be completed to establish the proper location of all property lines where the fencing will be installed. Proof of a completed survey shall be submitted to the Mendocino County Planning Department.

5. A private road approach shall be constructed onto Comptche Ukiah Road (CR 223) in accordance with Mendocino County Road and Development Standards No. A51B, or as modified by the applicant and approved by Department of Transportation staff during field review, to be paved with asphalt concrete or comparable surfacing to the adjacent road. Concrete driveways shall not be permitted.

6. The proposed fencing shall be located entirely outside of the County right-of-way and shall not hinder sight distance on the County Road.

7. The applicant shall obtain an encroachment permit from the Mendocino County Department of Transportation for work within the County right-of-way.

8. ** The replacement ratio of removed Bishop Pine trees is 3:1

9. ** Replacement trees may be a combination of those naturally regenerating and planted individuals. It is recommended to not replant replacement trees, but to use the existing regenerating trees as replacement trees due to the high number of regeneration of Bishop pine trees occurring at the site. Bishop pinecones are serotinous and open only after fire or on very hot days; therefore, the majority of the regeneration has been located within the burn piles associated with the removal of the Bishop pine trees.

10. ** Annual monitoring will be conducted in the fall for five (5) years, starting in 2025, and the trees shall maintain a success rate of eighty (80) percent at the end of the five (5) years in 2030. Reporting of the annual monitoring shall be submitted to the County of Mendocino and the Department of Fish and Wildlife. The annual monitoring shall be completed, and the report sent to the above noted parties no later than October 31 of each year. Monitoring visits shall be conducted by a qualified forester or biologist to document success rates, assess watering regimes and monitor encroachment by non-native species.

11. ** Supplemental watering will be conducted, if necessary, as well as thinning, if necessary, to release crowded individuals for more rapid tree growth. Areas around the regeneration trees should be weeded as necessary.

12. ** Results of restoration activities shall be submitted to CDFW, the County and the California Coastal Commission on an annual basis at minimum.

13. ** The replanted trees shall have an eighty (80) percent minimum survivability ratio after five (5) years.

14. ** Disturbed areas shall have a continuous cover of native vegetation. Exotic species shall comprise no more than twenty (20) percent of the total cover.

15. ** If at the end of three (3) years, the tree survival rate is less than eighty (80) percent, additional trees shall be planted at a rate of 2:1 for those that did not survive. Monitoring of new trees shall take place for two (2) more years or as needed to achieve the eighty (80) percent survivability ratio.

16. ** If at the end of five (5) years, the tree survival rate is less than eighty (80) percent, the mitigation plan shall be analyzed and adapted to achieve target success rates. An updated mitigation plan shall

be drafted by a qualified forester or biologist.

17. **In order to allow for more habitat for bats and voles, no other removal of dead, dying or living trees may be done, unless they present a danger to life, limb or property.

18. No new hiking trails shall be constructed on the subject property.

19. The application, along with supplemental exhibits and related maps, shall be considered elements of this permit, and that compliance therewith is mandatory, unless an amendment has been approved by the Coastal Permit Administrator.

20. This permit shall be subject to the securing of all necessary permits for the proposed removal and replacement of soil from County, State, and Federal agencies having jurisdiction.

21. The Applicants shall secure all required building permits for the proposed fence construction as required by the Building Division of the Department of Planning and Building Services.

22. This permit shall be subject to revocation or modification upon a finding of any one or more of the following:

    a. The permit was obtained or extended by fraud.

    b. One or more of the conditions upon which the permit was granted have been violated.

    c. The use for which the permit was granted is conducted so as to be detrimental to the public health, welfare or safety, or to be a nuisance.

    d. A final judgment of a court of competent jurisdiction has declared one or more conditions to be void or ineffective, or has enjoined or otherwise prohibited the enforcement or operation of one or more such conditions.

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

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

25. Within one (1) year from the effective date of this permit, applicant shall secure a “finaled” grading permit from Mendocino County Planning and Building services.

26. Best management practices are to be used if any significant rainfall is to occur during the time of exterior remediation and repairs.

27. Prior to the removal of any additional trees, the CAL FIRE Resource Management Division shall be notified.

ATTACHMENTS:

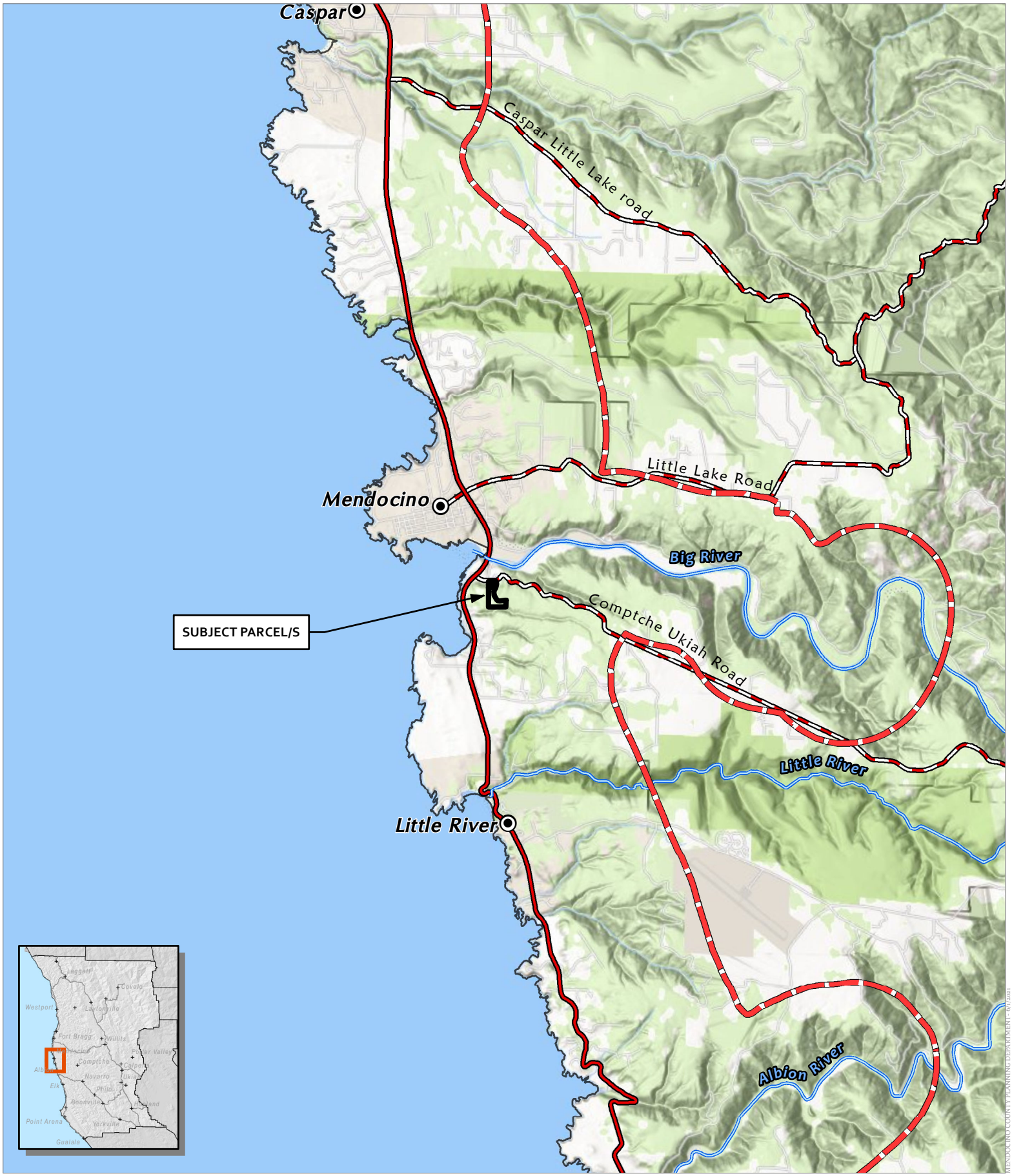
A. Location Map
B. Aerial Imagery (specific)
C. Aerial Imagery
D. Topographic Map
E. Site Plan
F. Zoning Display Map
G. General Plan Classifications
H. LCP Land Use Map 17: Mendocino
I. LCP Land Capabilities & Natural Hazards
J. LCP Habitats & Resources
K. Appealable Areas
L. Adjacent Parcels
M. Fire Hazard Zones
N. WUI Zone
O. Groundwater Resources
P. Highly Scenic and Tree Removal Areas
Q. Estimated Slope
R. Western Soils Classification
S. Farmland Class
T. Rare Plant Assessment & Botanical Survey
U. Appendix A
V. Appendix B
W. Appendix C

MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY AVAILABLE ONLINE AT: https://www.mendocinocounty.gov/departments/planning-building-services/public-hearing-bodies

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

10-23-2024
DATE

KEITH GRONENDYKE
PLANNER III



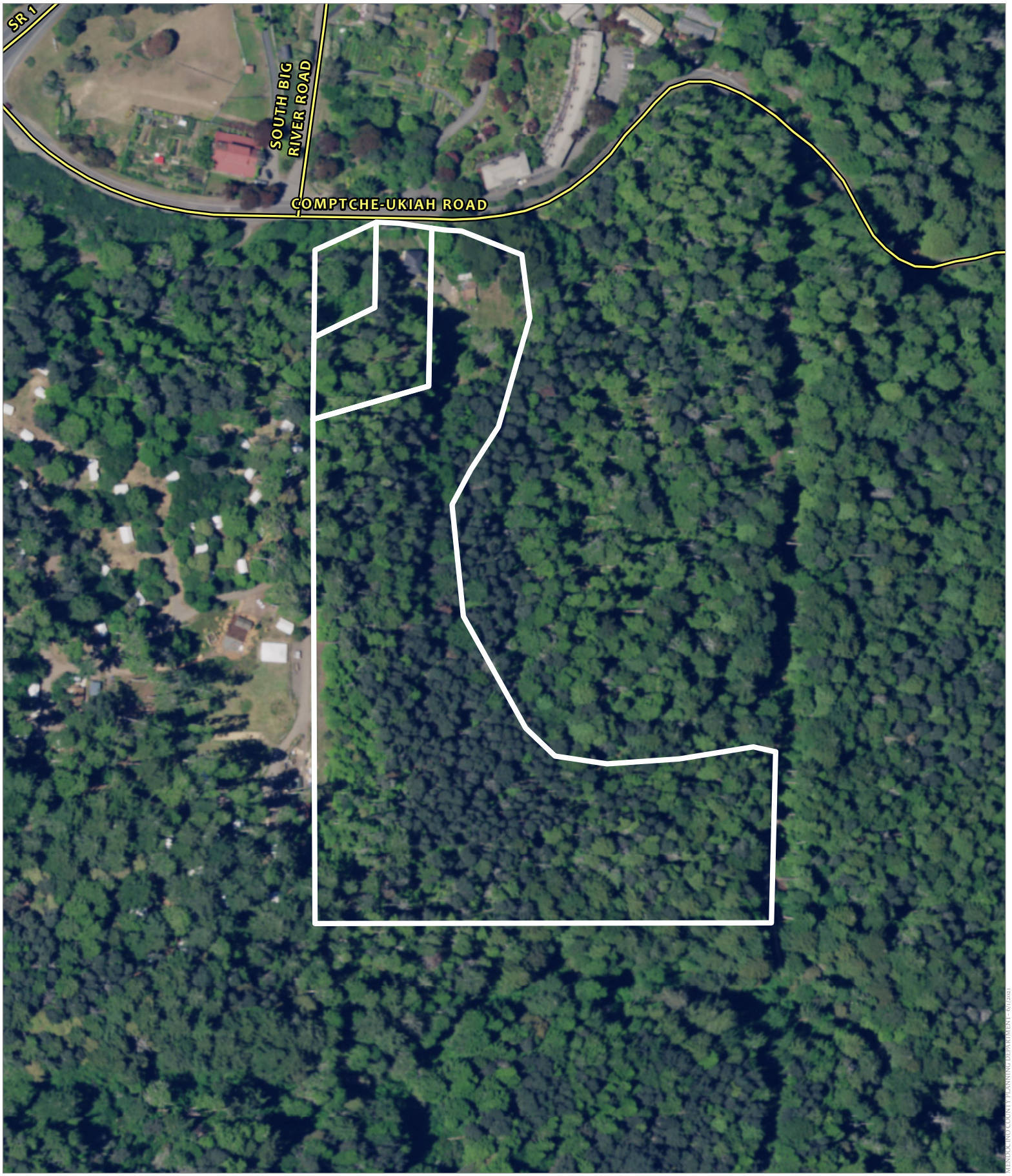
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OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

Major Towns & Places
Coastal Zone Boundary
Highways
Major Roads

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

LOCATION MAP

MENDOCINO COUNTY PLANNING DEPARTMENT - 04/2021



CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
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ADDRESS: 44771 Comptche Ukiah Road, Mendocino

Public Roads

0 100 200 Feet
0 0.015 0.03 Miles
1:2,400

AERIAL IMAGERY

MENDOCINO COUNTY PLANNING DEPARTMENT - 09/2021



CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

Named Rivers

Public Roads

0 250 500 Feet

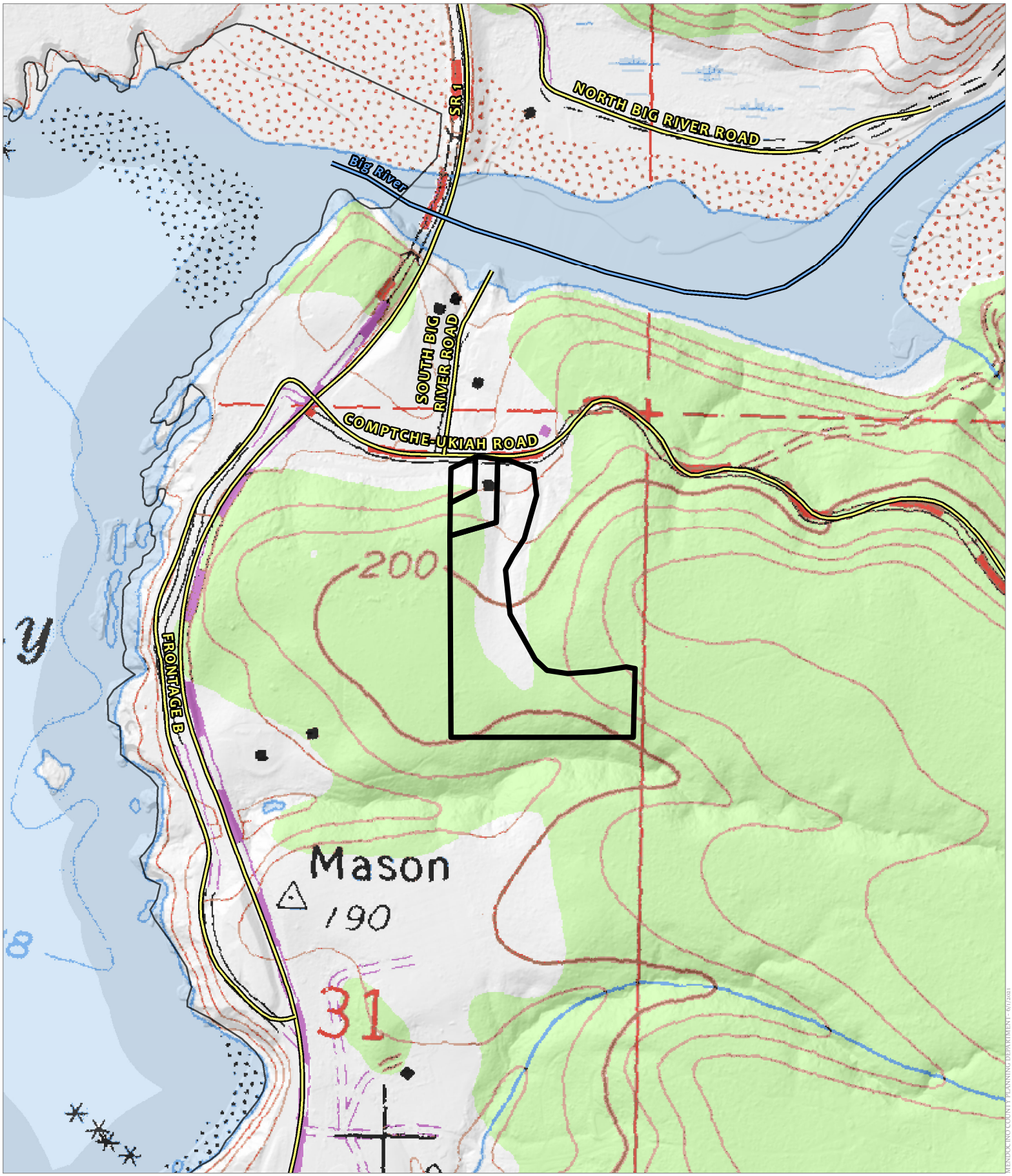
0 0.0425 0.085 Miles

N W E S

1:6,000

AERIAL IMAGERY

MENDOCINO COUNTY PLANNING DEPARTMENT - 09/2021



CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

Named Rivers
Public Roads

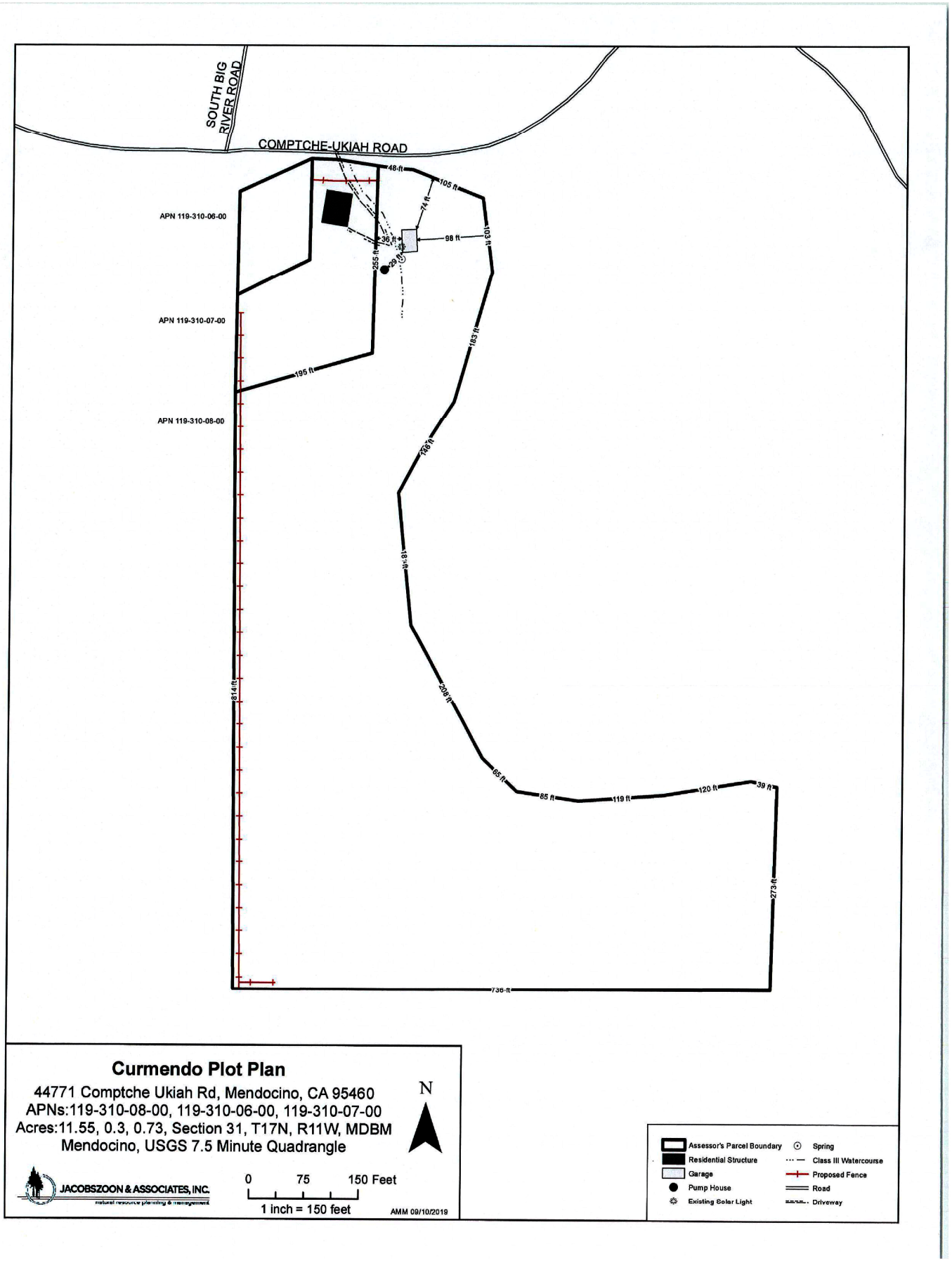
0 250 500 Feet
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N W E S

TOPOGRAPHIC MAP

CONTOUR INTERVAL IS 40 FEET

MENDOCINO COUNTY PLANNING DEPARTMENT - 06/2021

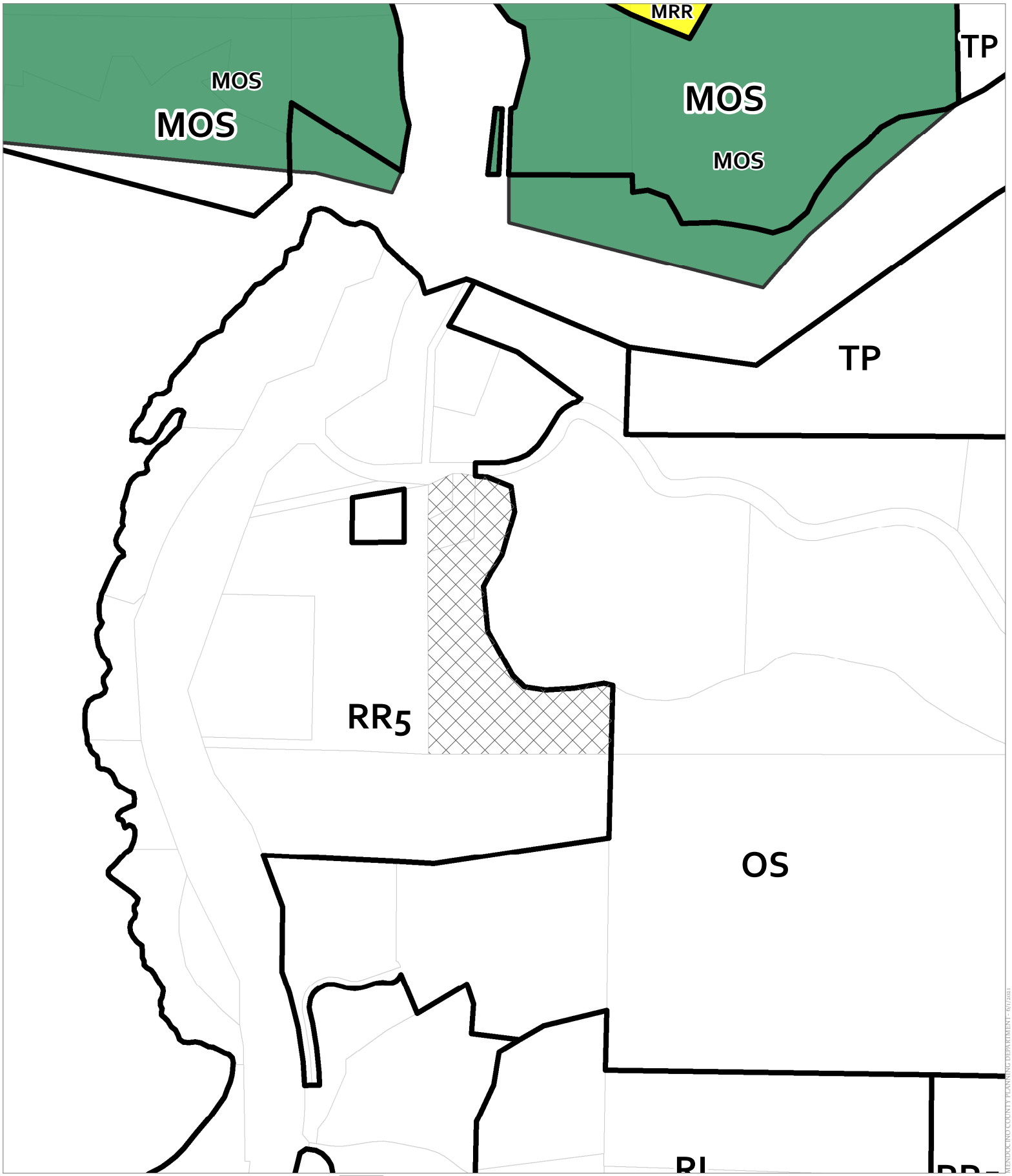


CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Assc.
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

NO SCALE

PLOT PLAN

MENDOCINO COUNTY PLANNING DEPARTMENT - 9/19/2019



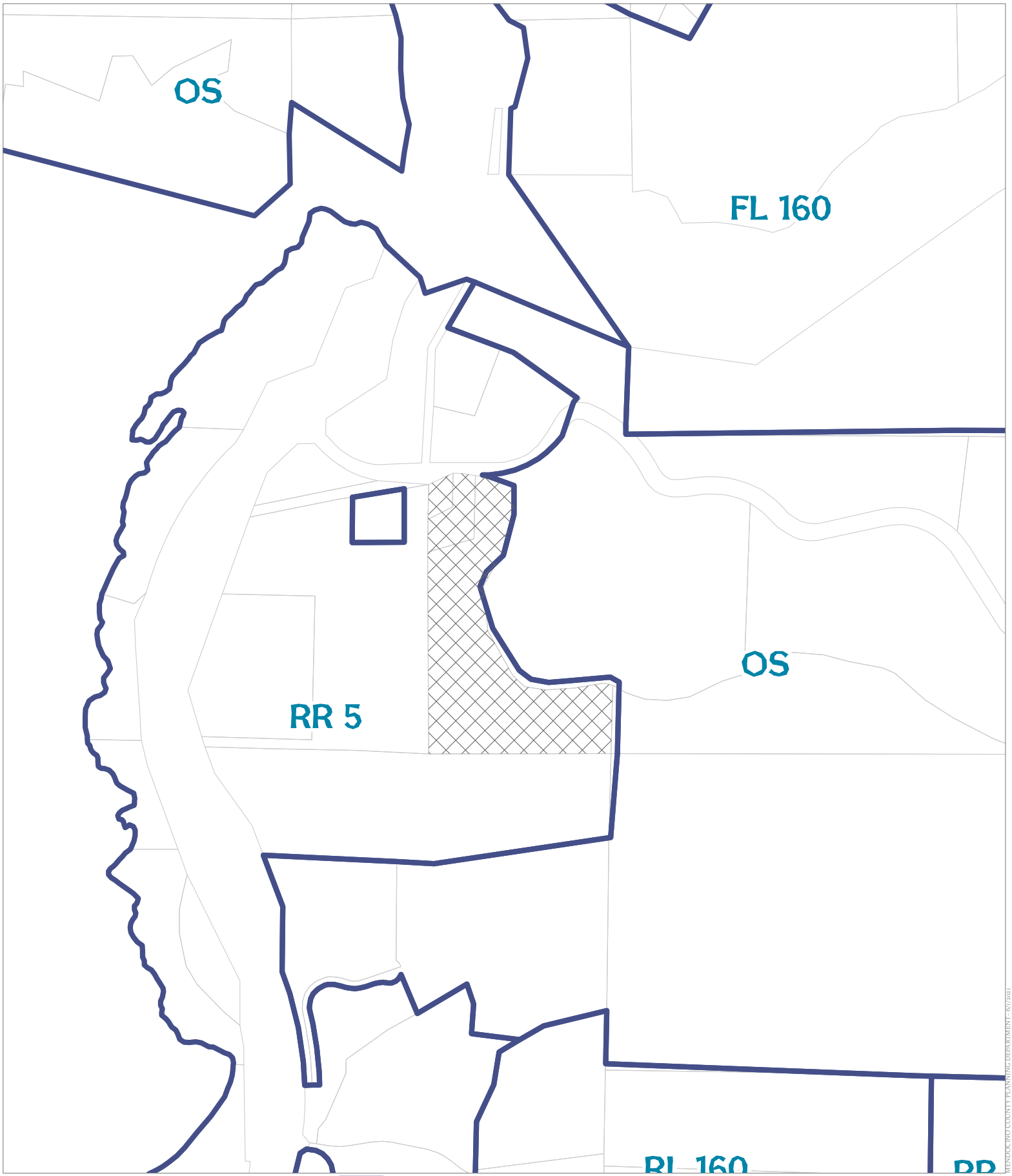
CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

Zoning Districts

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

ZONING DISPLAY MAP

MENDOCINO COUNTY PLANNING DEPARTMENT - 6/7/2021



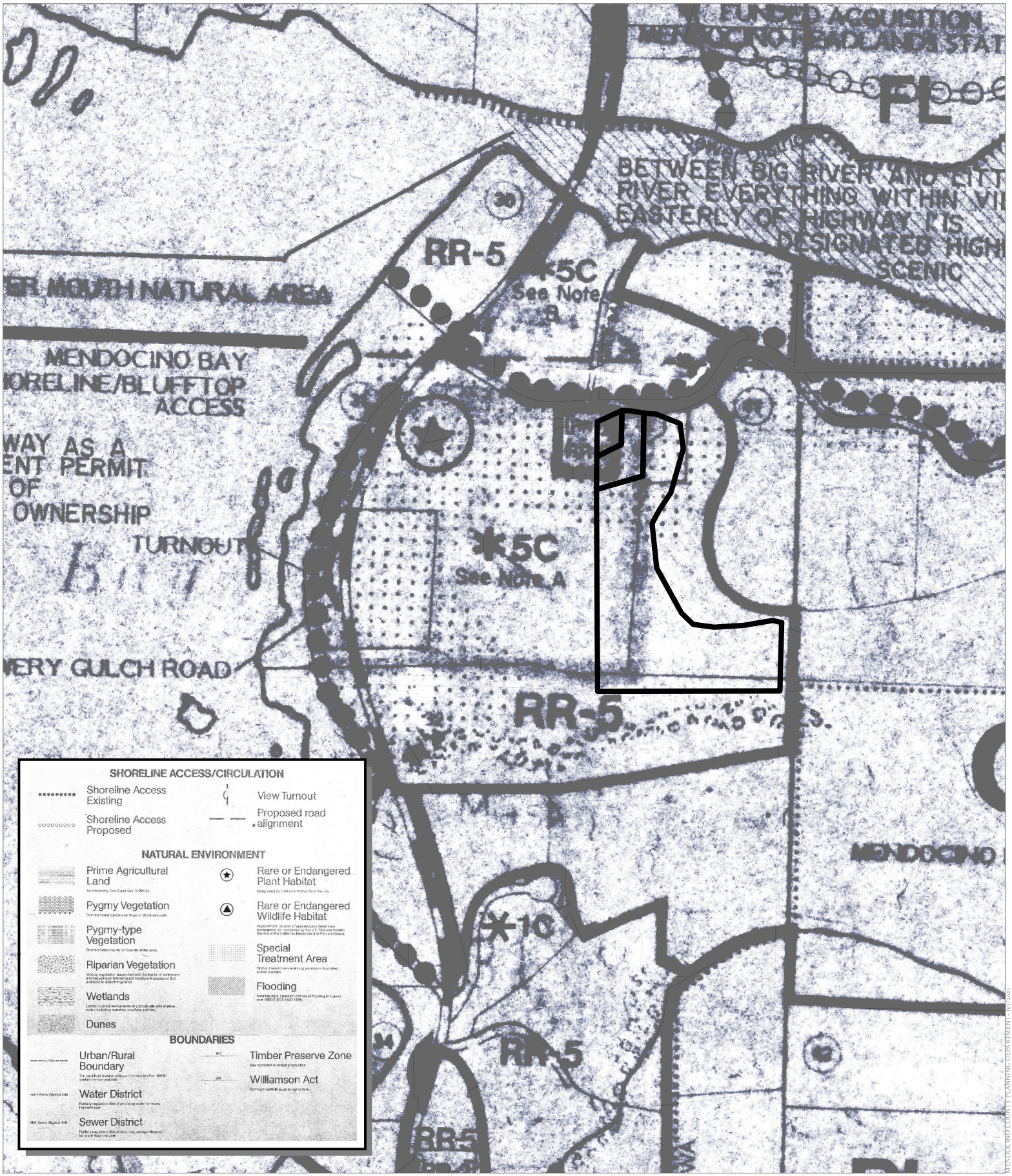
CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

General Plan Classes

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

MENDOCINO COUNTY PLANNING DEPARTMENT - 6/7/2021

GENERAL PLAN CLASSIFICATIONS

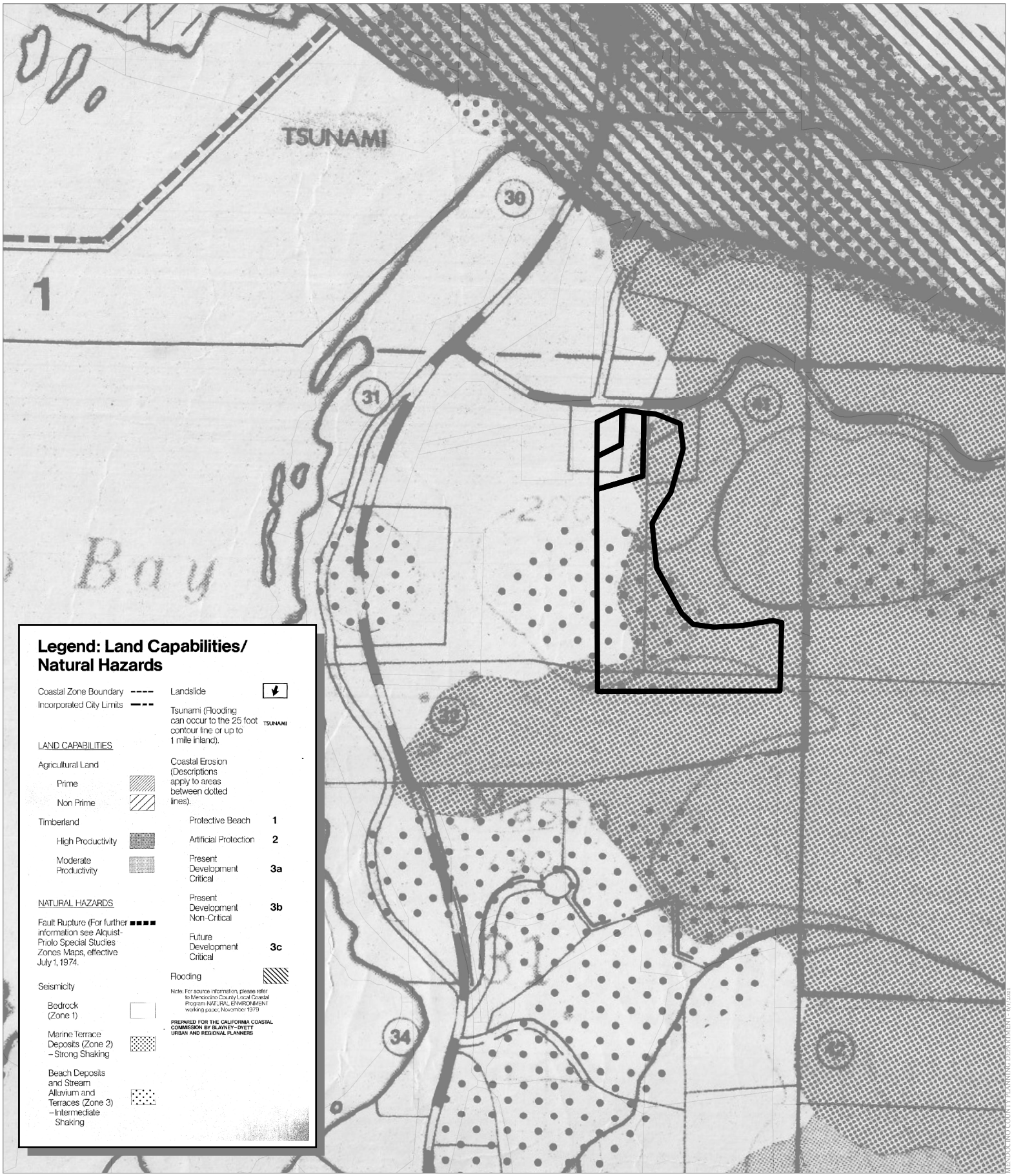


CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

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

LCP LAND USE MAP 17: MENDOCINO

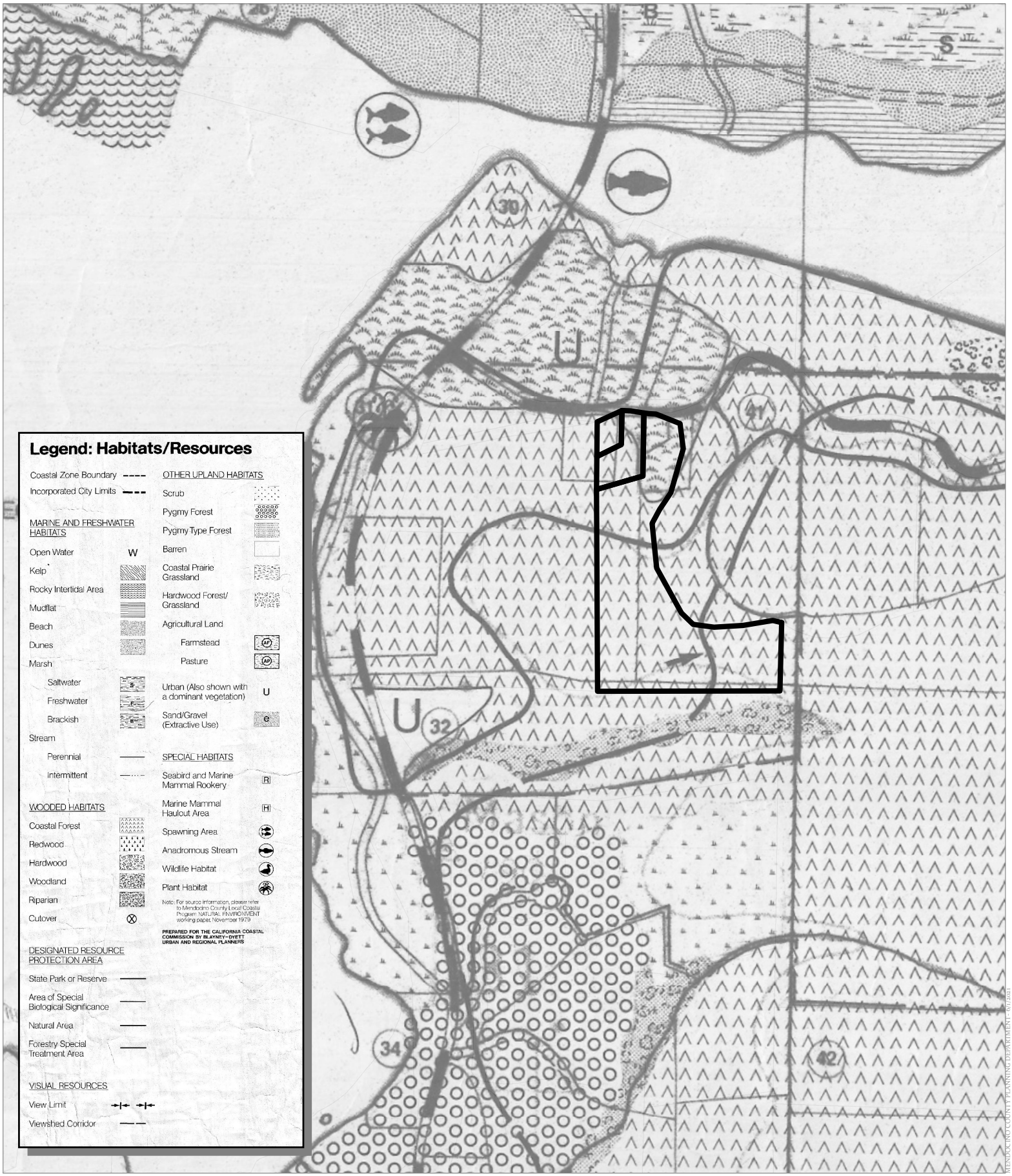
MENDOCINO COUNTY PLANNING DEPARTMENT 09/2021



CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

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

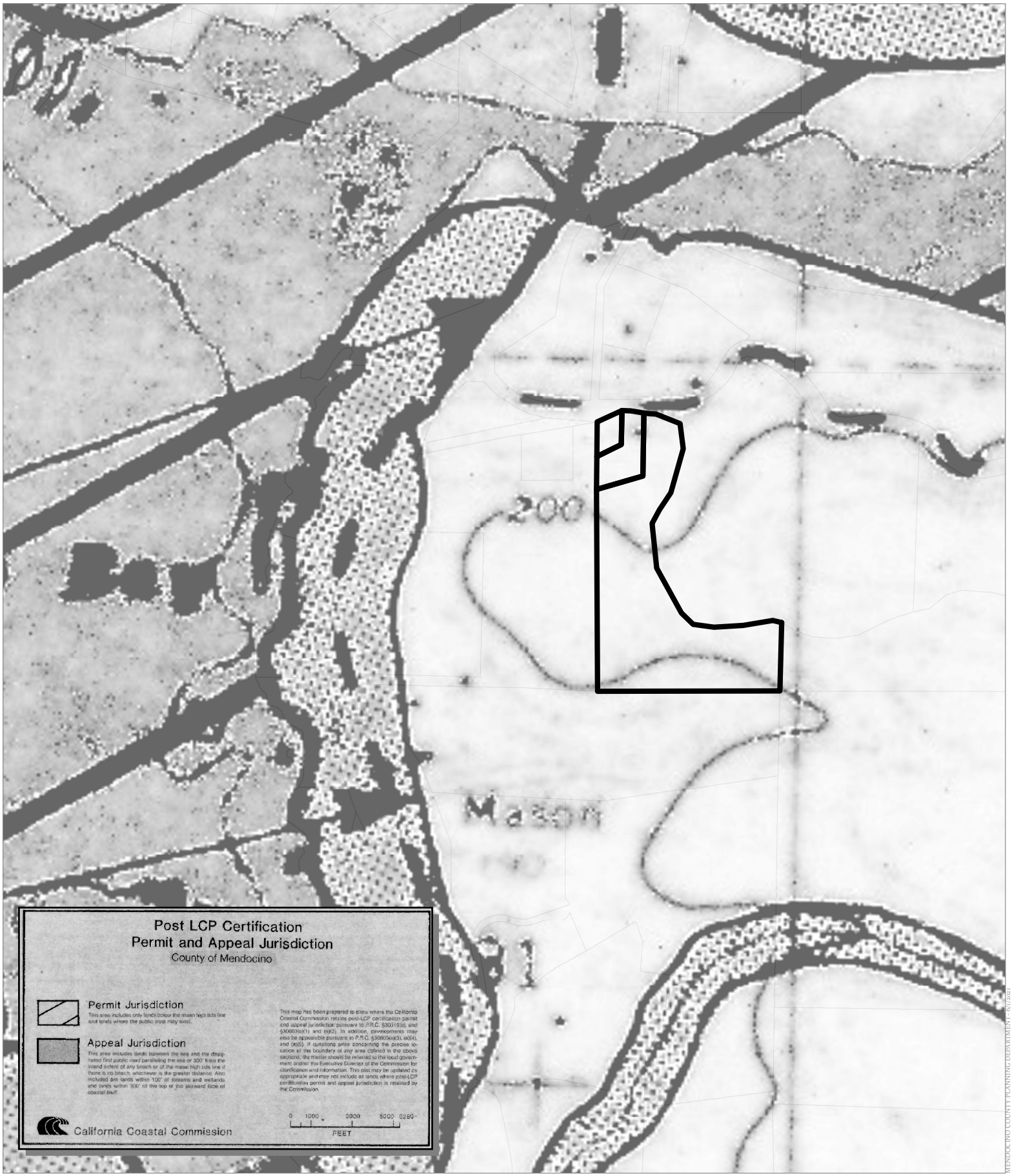
LCP LAND CAPABILITIES & NATURAL HAZARDS



CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

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

LCP HABITATS & RESOURCES

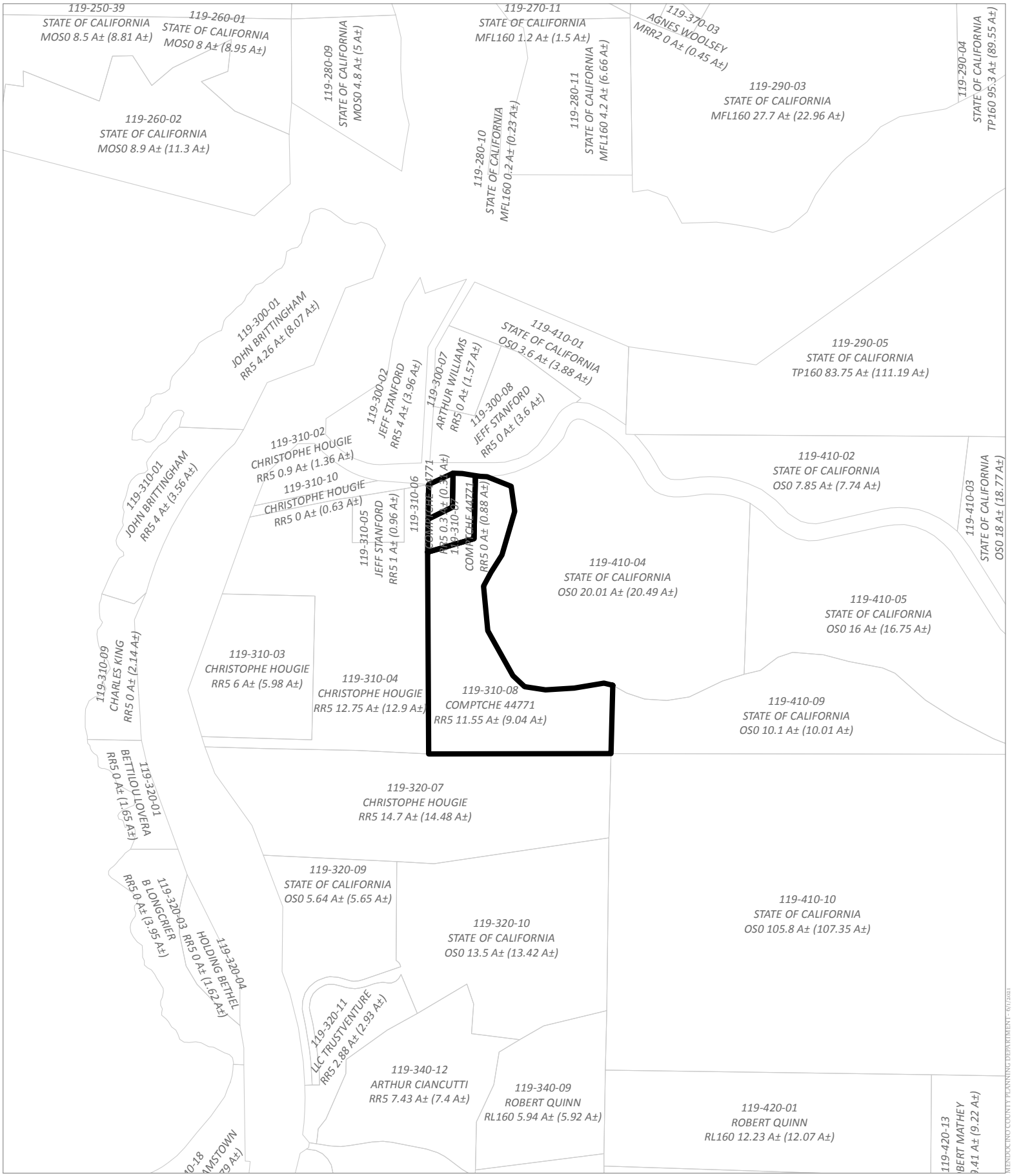


CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

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

POST LCP CERTIFICATION & APPEAL JURISDICTION

MENDOCINO COUNTY PLANNING DEPARTMENT - 2019

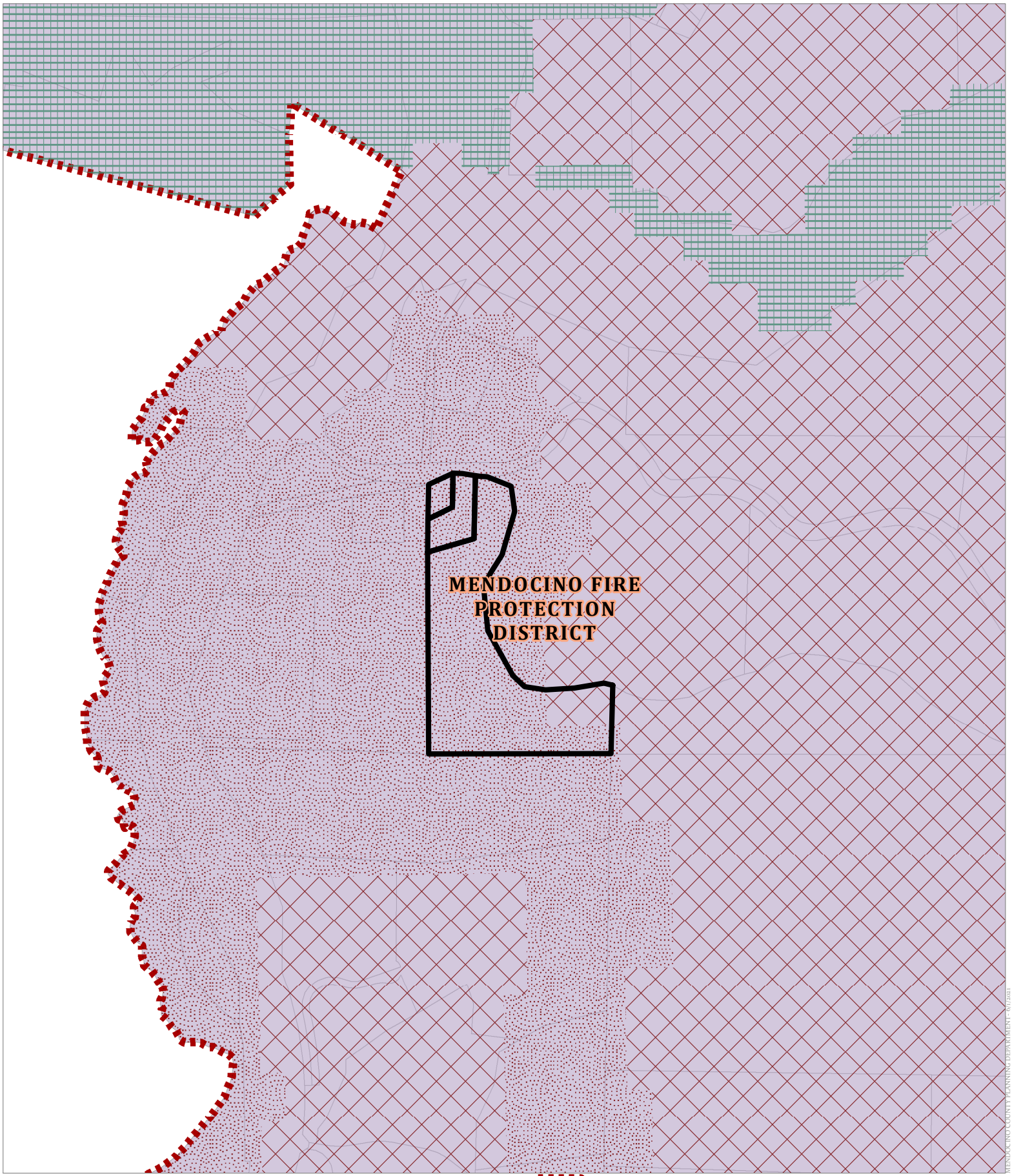


CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

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

ADJACENT PARCELS

MENDOCINO COUNTY PLANNING DEPARTMENT - 6/7/2021



CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

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

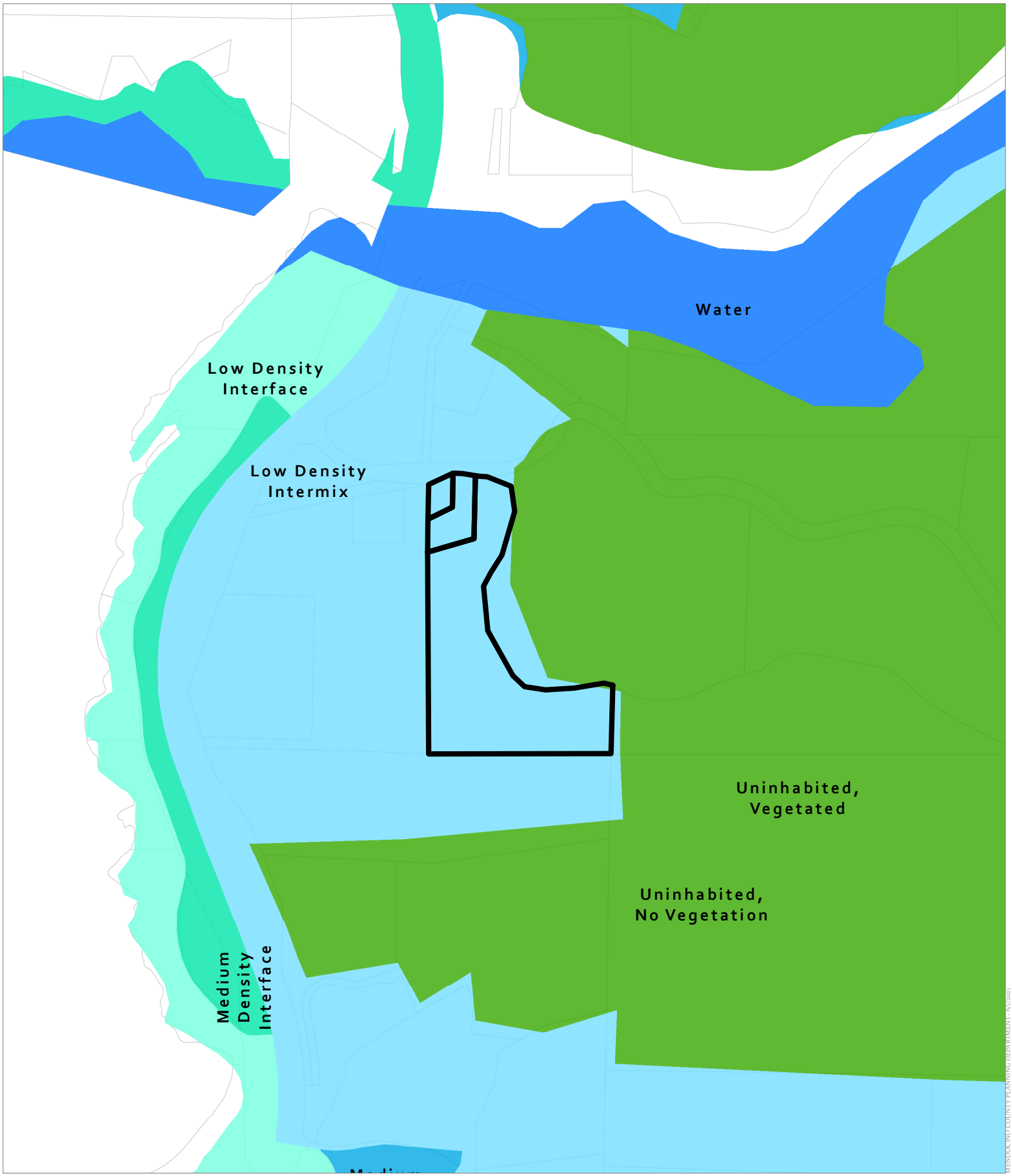
0 250 500 Feet
0 0.0425 0.085 Miles
1:6,000

N W E S

FIRE HAZARD ZONES & RESPONSIBILITY AREAS

STATE RESPONSIBILITY AREA

MENDOCINO COUNTY PLANNING DEPARTMENT - 04/2021



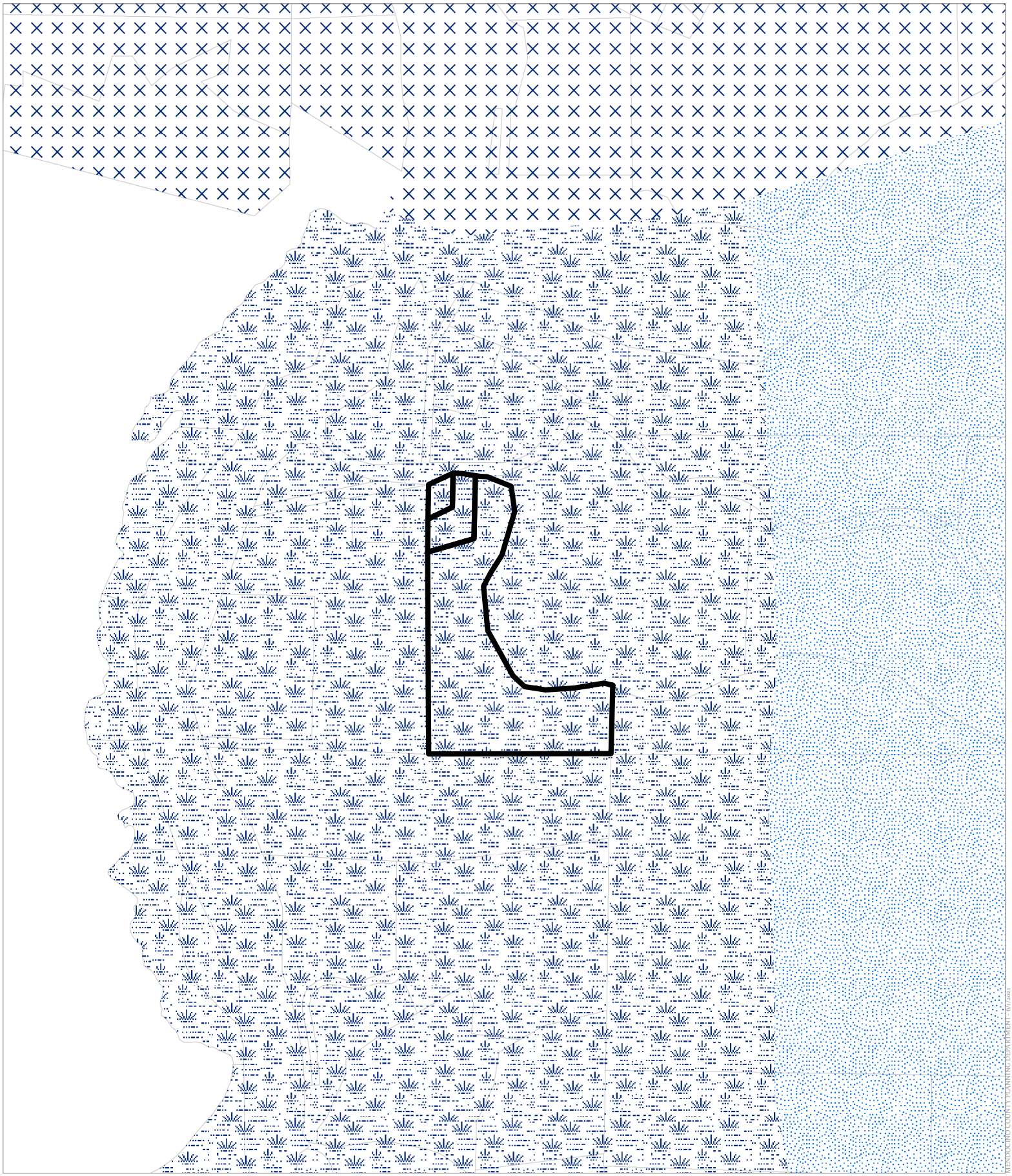
CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

Water

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

WILDLAND-URBAN INTERFACE ZONES

MENDOCINO COUNTY PLANNING DEPARTMENT - 6/7/2021



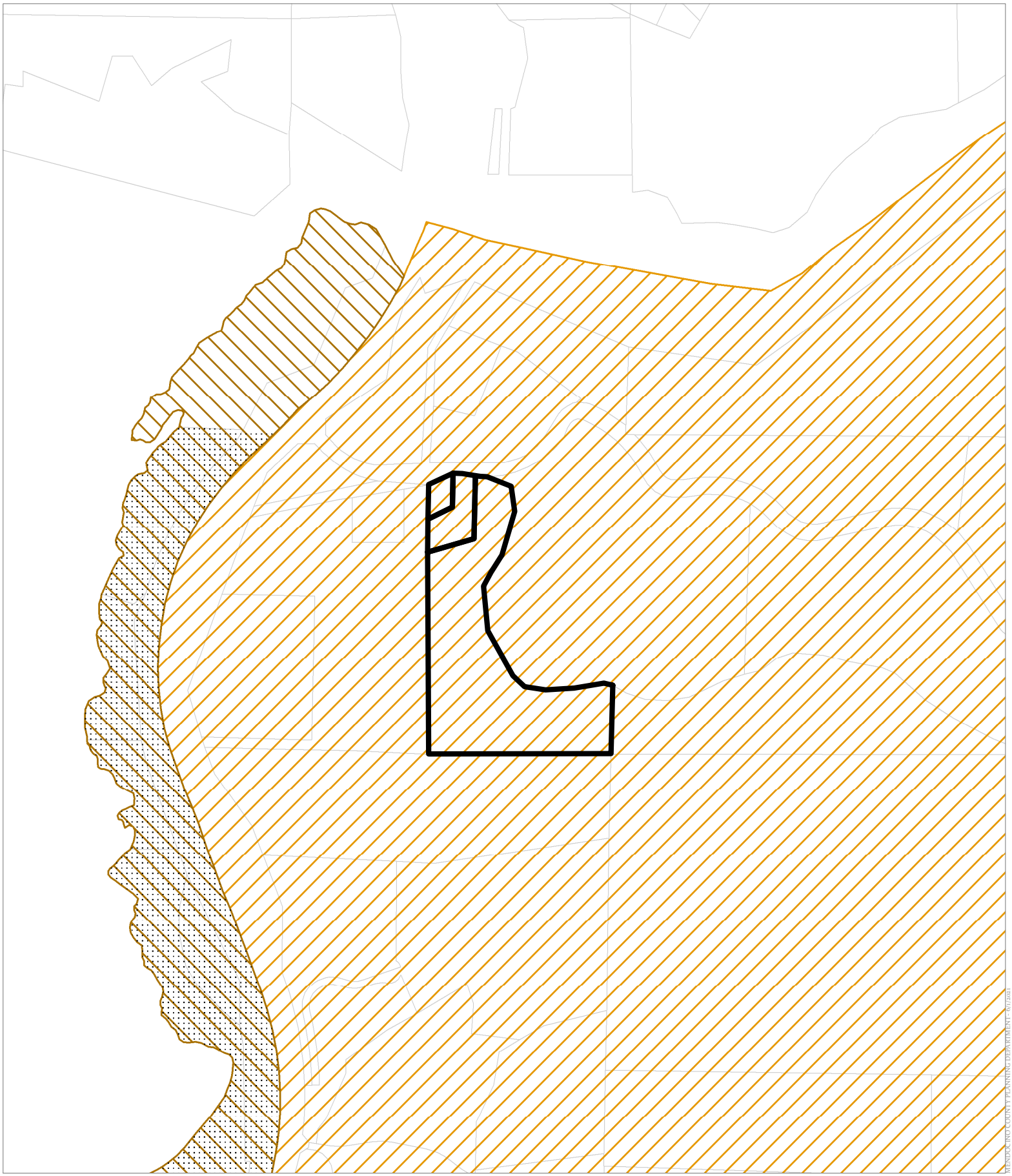
CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

Critical Water Areas
Sufficient Water Resources
Marginal Water Resources

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

N W E S

GROUND WATER RESOURCES



CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

Tree Removal Area
Highly Scenic Area
Highly Scenic Area (Conditional)

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

MENDOCINO COUNTY PLANNING DEPARTMENT 7/6/2021

HIGHLY SCENIC & TREE REMOVAL AREAS



CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

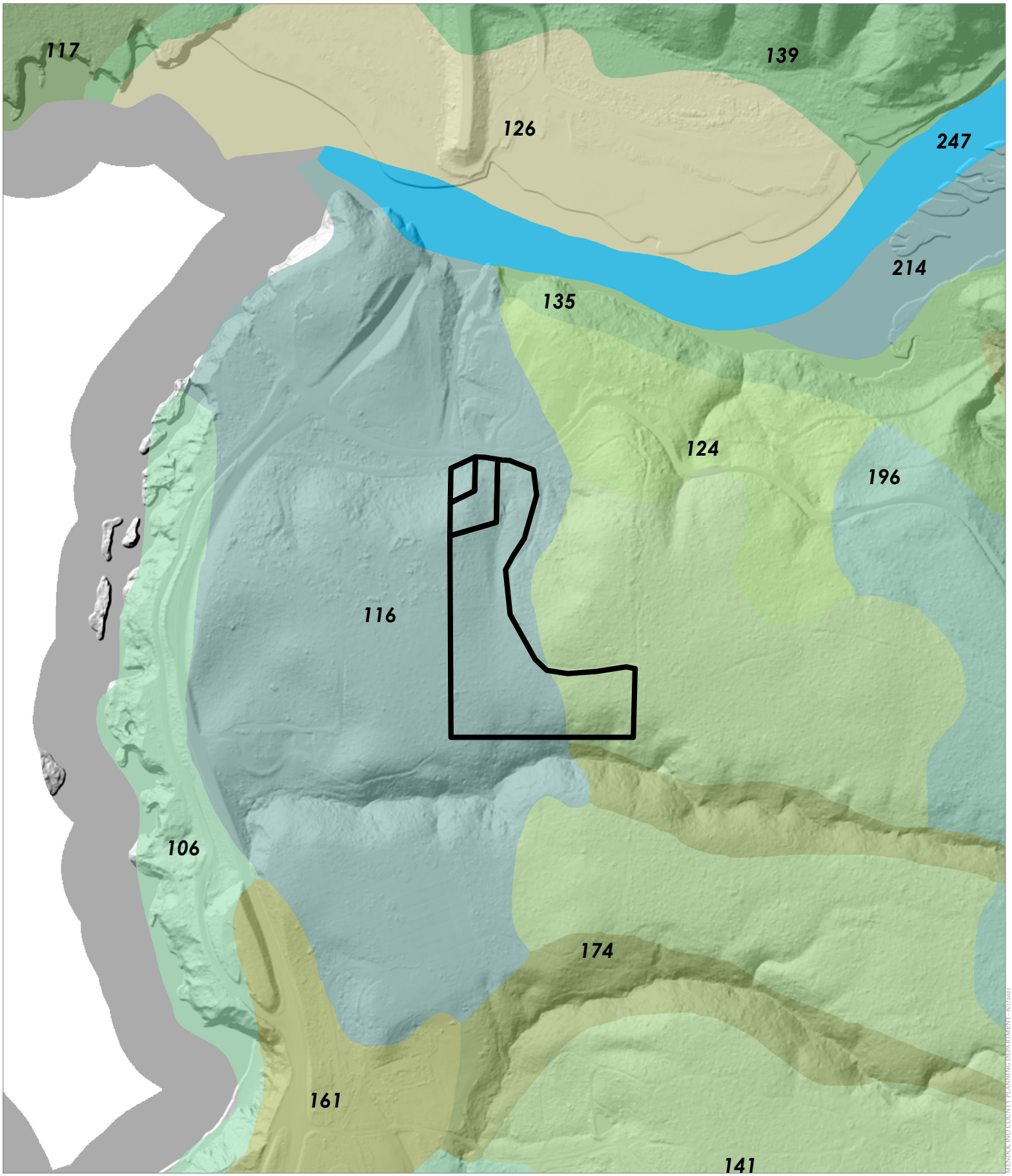
0° - 14°
15° - 32°
33° - 72°

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

N W E S

ESTIMATED SLOPE

MENDOCINO COUNTY PLANNING DEPARTMENT - 06/2021

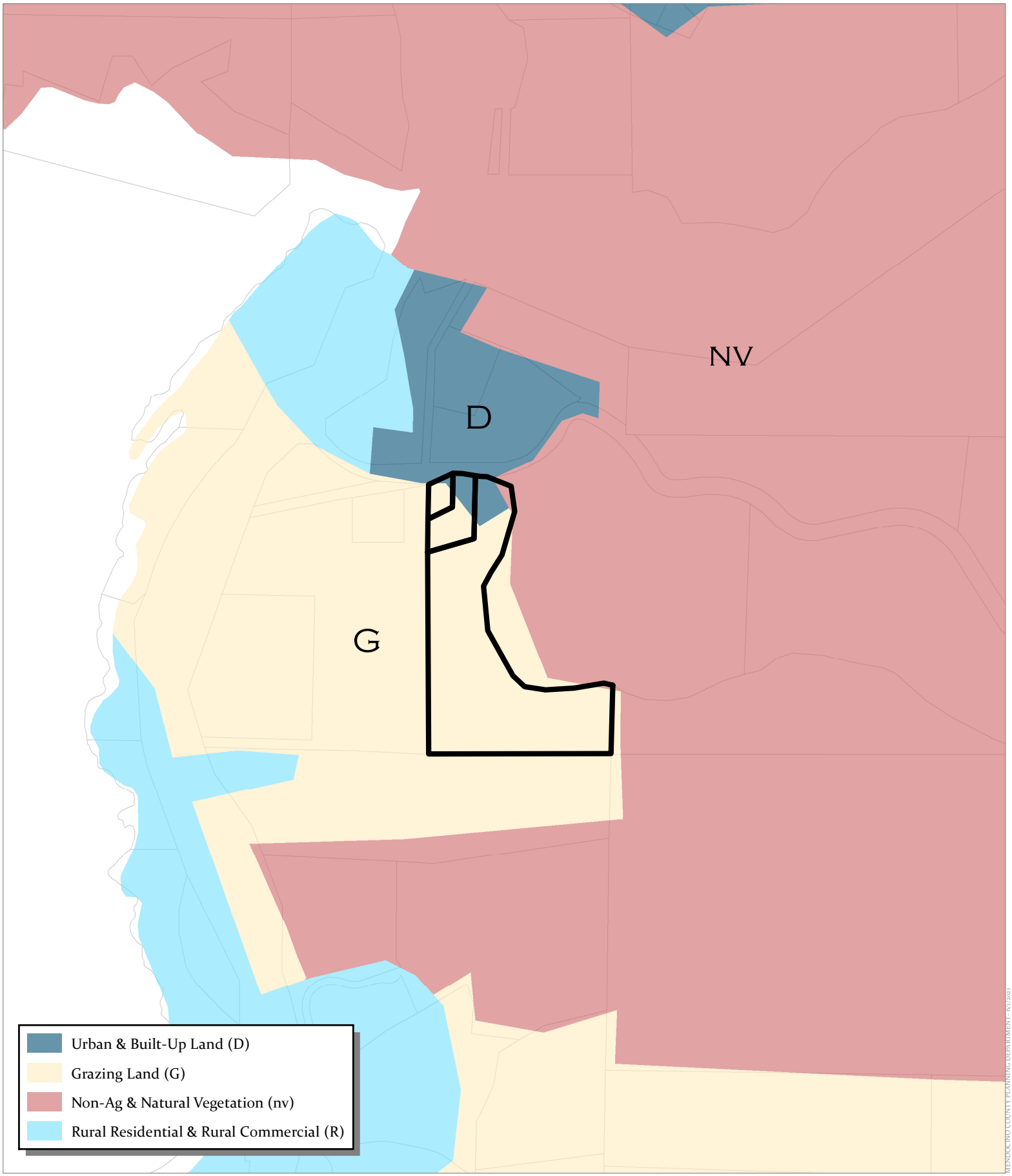


CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

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

WESTERN SOIL CLASSES

MENDOCINO COUNTY PLANNING DEPARTMENT - 06/2021



CASE: CDP 2019-0035
OWNER: 44771 Comptche Ukiah Road, LLC
APN: 119-310-08
APLCT: Michael Malmberg
AGENT: Jacobszoon & Associates
ADDRESS: 44771 Comptche Ukiah Road, Mendocino

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

FARMLAND CLASSIFICATIONS

MENDOCINO COUNTY PLANNING DEPARTMENT - 6/7/2021

JACOBSZOON & ASSOCIATES, INC.

natural resource planning & management



RARE PLANT ASSESSMENT & BOTANICAL SURVEY

Prepared For:

44771 Comptche Ukiah Road LLC
APN 119-310-08
44771 Comptche Ukiah Rd.
Mendocino, CA 95460

Prepared by Jacobszoon & Associates, Inc.

Alicia Ives Ringstad
Senior Wildlife Biologist
alicia@jaforestry.com

Date: August 27, 2019

117 Clara Ave. Ukiah, California 95482
707-485-5544 www.jaforestry.com fax: 707-485-5577

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Section 1.0: Introduction

On May 7, 2019, Jacobszoon & Associates, Inc. performed an Environmentally Sensitive Habitat Area (ESHA) assessment on approximately 11.5 acres at 44771 Comptche Ukiah Road, Mendocino, Mendocino County, California, APN: APN 119-310-08 (Appendix D: Figures 1 and 2) after the removal of Bishop pine trees without a Coastal Development Permit. Additional studies conducted by Jacobszoon & Associates, Inc. in the Study Area include rare plant surveys, vegetation mapping and total tree removal count performed on May 7, July 10 and August 6, 2019. A fence is proposed to be installed along the western and northern property boundaries (Appendix D: Figure 1). The purpose of this study was to identify and map areas within the property that are potential environmentally sensitive habitat areas (ESHA), as defined by the California Coastal Commission (CCC).

Section 2.0: Regulatory Background

The California Coastal Act (CCA) defines an ESHA as follows:

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

The Mendocino County LCP and California Coastal Commission (CCC) Guidelines contain definitions for specific types of ESHAs, including; wetlands, estuaries, streams and rivers, lakes, open coastal waters and coastal waters, riparian habitats, other resource areas, and special status species and their habitats. For the purposes of this report, Jacobszoon & Associates, Inc. has taken into consideration any areas that may meet the definition of ESHA as defined by the CCA, CCC guidelines, or the Mendocino County LCP.

2.1 Natural Communities and Other ESHA

The CCA and Mendocino County LCP define other resource areas as follows:

> *"Other designated resource areas include: State parks and reserves, underwater parks and reserves, areas of special biological significance, natural areas, special treatment areas, fishing access points, areas of special biological importance, significant California ecosystems, and coastal marine ecosystems."*

Other resource areas considered ESHA include California Department of Fish and Wildlife (CDFW1) rare natural communities ranked as imperiled globally or in California (G2 S2 or rarer), as noted in the California Natural Diversity Database (CNDDB). These communities have been classified and described by various references, including the *List of Vegetation Alliances and Associations* (CDFW 2018), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), and *A Manual of California Vegetation, 2nd Edition* (CNPS 2019).

2.2 Special-Status Species

Special-status species and their habitats are defined as ESHA by the CCA and Mendocino County LCP. Special-status species include those species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing by the U.S. Fish and Wildlife Service (USFWS) or CDFW. In addition, CDFW Species of Special Concern are given special consideration under the California Environmental Quality Act (CEQA). However, these Species of Special Concern may only be protected as ESHAs if they are ranked by CDFW as imperiled globally or in California (G2 S2 or rarer). Plant species on California Native Plant Society (CNPS) Rare Plant Ranks 1, 2, 3 or 4 are also considered special-status species and are protected as ESHA.

Rare plant assessments and surveys are conducted to determine the presence of rare, threatened, or endangered plants and plant communities or the potential for the presence of sensitive species or critical habitat that may occur within the proposed project area or be potentially impacted by the proposed project. Survey findings are useful in assessing the potential for significant adverse impacts on botanical resources and critical in mitigating those impacts to a level less than significant. In order to conduct an effective survey, potentially occurring rare plant species were investigated, along with their blooming times, and habitat requirements. The following report is based on *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

Section 3.0: Study Area Setting

The following subsections summarize the physical and biological settings of the Study Area.

3.1 Topography and Soils

The Study Area is located at 44771 Comptche-Ukiah Road in Mendocino, CA, located in Section 31, T17N, R17W, in Mount Diablo Base and Meridian, in the Mendocino USGS 7.5 minute quadrangle, and encompasses approximately 11.5 acres. The Study Area is located within the Little River Watershed and is located at 80-200 feet elevation.

According to the United States Department of Agriculture, Natural Resources Conservation Service's *Web Soil Survey,* the Study Area is underlain by two soil mapping units: Bruhel-Shinglemill complex, 2 to 15 percent slopes, and Ferncreek sandy loam, 2 to 9 percent slopes (Appendix D: Figure 3). Descriptions of the soil series are as follows:

Bruhel-Shinglemill complex (Map Unit Symbol: 116): This series is on marine terraces. The vegetation is mainly Bishop pine and annual and perennial grasses. The elevation ranges from 50 to 300 feet. This series is comprised of approximately 50% Brhel loam and 25% Shinglemill loam. Included in this unit are small areas of Abalobadiah, Flumeville and Gibney soils. Included areas make up about 25% of the total acreage.

Ferncreek sandy loam (Map Unit Symbol: 141): This very deep, somewhat poorly drained soil is on marine terraces. The vegetation is mainly redwood, bishop pine and Douglas-fir. Elevation is 100 to 800 feet. Included in this unit are small areas of Caspar and Quinliven soils. Included areas make up about 20% of the total acreage.

3.2 Biota and Land Use

The dominant vegetation within the Study Area is Northern Bishop Pine Forest (CNPS Manual of California Vegetation 2019) with the overstory trees consisting of Bishop pine (*Pinus muricata*), Grand fir (*Abies grandis*), Douglas-fir (*Pseudotsuga menziesii*) with scattered tan oak (*Notholithocarpus deniflorus*) and coast redwood (*Sequoia sempervirens*) trees. There are no late successional or old growth stands within the Study Area. The understory consists of coast rhododendron (*Rhododendron macrophyllum*), sword fern (*Polystichum munitum*), salal (*Gaultheria shallon*), huckleberry (*Vaccinium ovatum*). The canopy is closed with little sunlight and no conifer regeneration (saplings) within the forested area. There is regeneration along the edges of the forest where more openings exist (along an old logging road, a PG&E power line and along an adjacent California State Parks ownership). Please see the overall vascular species list of plants encountered within the Study Area in Appendix B.

There is a seasonal Class III watercourse with no streamside vegetation within the bishop pine forest until the stream reaches the house clearing. There is a small spring with a pumphouse located approximately 50 feet north of the Bishop pine forest on the Class III; however, it is located approximately 102 feet from where the removal of trees took place. Removal of trees did not occur within the Class III watercourse. The removal of trees did not affect the spring and since it is located outside of the Study Area, it is not considered to be a part of the Study Area.

Section 4.0: Field Survey Methodology

4.1 Assessment Methods

The biological resource assessment is designed to assess the potential for the presence of sensitive wildlife species and to determine whether habitat for sensitive plant species and plant communities may or may not be present within the Study Area. The purpose of this analysis is to assess the potential for cumulative impacts to biological resources that may occur as a result of the proposed development. The basis of the biological assessment analysis is a comparison of existing habitat conditions within the Study Area to the geographic range and habitat requirements of sensitive plant and wildlife species.

Prior to conducting field surveys, available reference materials were reviewed, including the United States Department of Agriculture, Natural Resources Conservation Service's *Web Soil Survey,* the Fort Bragg 7.5minute quadrangle topographic map (USGS 1978), and available aerial photographs.

Field surveys were conducted by Jacobszoon and Associates on May 7, July 10 and August 6, 2019, to identify and delineate potential ESHAs and determine if habitat within the Study Area is suitable for special-status plant or wildlife species. The methodology of the surveys is described below. ESHA boundaries were mapped using sub-meter accuracy Global Positioning System (GPS). The following sections detail the methods utilized to delineate the potential ESHA within the Study Area.

4.2 Database Resource Descriptions

The potential for occurrences of rare, threatened, endangered or plant and animal species of concern within or near the Study Area were evaluated by reviewing topographic maps, aerial photography, the California Native Plant Society's Rare Plant Rank (CRPR) electronic inventory (online edition, v8-03 0.45), the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) Rarefind, Spotted Owl Data Viewer and Quick Viewer (online edition, v5.77.14: Appendix D: Figures 4 and 5).

The County of Mendocino also maintains a mapped database of biological resources including special features such as wetland, vernal pool, aquatic, and riparian communities. This database was also reviewed, and no special or unique biological resources are noted within the Study Area.

The CRPR database produces a list of sensitive plants potentially occurring at a site based on various site characteristics (location of Study Area with regard to the geographic range of sensitive plant species, location(s) of known populations of sensitive plant species as mapped in the CNDDB, soils of the Study Area, elevation, presence/absence of special habitat features, and plant communities existing within the Study Area). While use of the CRPR inventory does not eliminate the need for an in-season botanical survey, it can, when used in conjunction with other information, provide a very good indication of the suitability of a site as habitat for sensitive plant species. The CNDDB database consists of mapped overlays of all known populations of sensitive plants and wildlife. The database is continually updated with new sensitive species population data.

Rare, threatened, and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, can be shown to be rare, threatened, and/or endangered under the following definitions:

A species, subspecies, or variety of plant is **"endangered"** when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease. A plant is **"threatened"** when it is likely to become endangered in the foreseeable future in the absence of protection measures. A plant is **"rare"** when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its habitat continues to deteriorate.

Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. The most current version of the California Natural Diversity Database's List of California Terrestrial Natural Communities was used as a guide to the names and status of communities.

The rare plants (native, vascular and non-vascular) and animals assessed are of limited abundance in California, with known occurrence or distribution in Mendocino County, and were derived from the following lists:

- Federal listed or threatened or endangered plants or species of concern (FT, FE, FSC)
- California State listed or rare, threatened or endangered plants or species of concern (SR, ST, SE, SP, SSC)
- Board of Forestry Sensitive (BFS)
- California Department of Fish and Wildlife (CDFW) Status animals: Fully Protected, Species of Special Concern and Watch List (FP, SSC, WL)
- California Native Plant Society Rare Plant Rank (CRPR) list 1A species (plants presumed extirpated in California, and either rare or extinct elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 1B species (plants rare, threatened or endangered in California and elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 2A species (plants presumed extirpated in California but more common elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 2B species (plants rare, threatened, or endangered in California but more common elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 3 (plants which more information is needed- a review list)
- California Native Plant Society Rare Plant Rank (CRPR) list 4 (plants of limited distribution- a watch list)

4.3 Database Assessment Results

For the identification of species and habitats, a scoping was performed that extended five miles surrounding the proposed Study Area. The distance is chosen to account for the possible distribution of animal and plant species and habitats. In addition, a 0.7-mile radius scoping area was completed for the identification of northern spotted owl (NSO) activity centers. No spotted owl territories were within the 0.7-mile buffer.

To characterize existing biological conditions and identify potential impacts to sensitive habitats resulting from implementation of the project, Jacobszoon & Associate's senior wildlife biologist Alicia Ives Ringstad conducted a biological assessment and botanical survey of the Study Area on May 7, 2019, a botanical survey along with a total count of all species and DBH (diameter at breast height) size on July 10, 2019 and a botanical survey and Bishop pine regeneration count on August 6, 2019, consisting of approximately 16 hours.

The Study Area was assessed to document: (1) the on-site plant communities, (2) existing conditions and to determine if such conditions provide suitable habitat for any special-status plant or wildlife species, (3) if sensitive biological communities (ESHAs) are present (4) the total number count of all species and DBH of trees cut without a permit and (5) Bishop pine regeneration. Plant species observed during the site assessment were recorded and are listed in Appendix B. Plants listed in Appendix B were identified using *The Jepson Manual: Vascular Plants of California 2nd Edition* (Baldwin et al. 2012) to the taxonomic level necessary to determine rarity. Names given follow *The Jepson Flora Project* (JFP 2019).

Biological communities present in the Study Area were classified based on existing plant community descriptions described by *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) or *Manual of California Vegetation*, Online Edition (CNPS 2019b). However, in some cases it may be necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

4.4 Natural Communities and Other ESHA

4.4.1 Non-sensitive Natural Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations, and ordinances. These communities may, however, provide suitable habitat for some special-status plant or wildlife species, and are described in section 5.1 below.

4.4.2 Sensitive Natural Communities and ESHA

Sensitive biological communities are defined as those communities that may be afforded special consideration under CEQA and other applicable federal, state, and local laws, regulations and ordinances. Applicable laws and ordinances are discussed above in section 2.0. Special methods used to identify sensitive biological communities are discussed below.

The Study Area was evaluated for the presence of other ESHA as defined in the CCA and the Mendocino County LCP, as well as natural communities designated in the CNDDB as G2 S2 or rarer (CDFW 2019). The presence of rare natural communities was determined by Jacobszoon & Associates, based on vegetation community classifications given in *Terrestrial Natural Communities of California* (Holland 1986) and *A Manual of California Vegetation* (CNPS 2019b). Vegetation or biological community boundaries were mapped using a GPS and/or were hand-drawn on high resolution aerial photographs where distinct signatures corresponded with shifts in these vegetation types.

4.5 Special-status Species

Prior to the site visit, databases (listed above) were accessed to determine whether special-status species were documented within the CNDDB five-mile survey radius around the Study Area. During the site visit, existing habitat conditions were evaluated and used to assess the potential for presence of special-status species. The potential for each special-status species to occur in the Study Area was then evaluated according to the following criteria:

- No Potential. Habitat on and 100 feet adjacent to the Study Area is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and 100 feet adjacent to the site is unsuitable or very poor quality. The species is not likely to be found on-site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or 100 feet adjacent to the Study Area is unsuitable. The species has a moderate probability of being found on-site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or 100 feet adjacent to the Study Area is highly suitable. The species has a high probability of being found on-site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDB) on-site recently.

The biological assessment is intended to identify the presence or absence of suitable habitat for special-status species known to occur within the Study Area. The assessment does include a full season protocol-level survey to determine the actual presence or absence of a listed species. If a special-status species is observed during the assessment, its presence will be recorded and potential mitigations discussed. All plant and wildlife species observed and identified were recorded and are included in Appendix B.

Critical habitat is a term defined by the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. Federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species, but which are needed for the species' recovery, are protected by the prohibition against adverse modification of critical habitat.

Section 5.0: Field Survey Results

5.1 Natural Communities and Other ESHA

5.1.1 Non-sensitive Natural Communities

There are no non-sensitive Natural Communities present within the Study Area.

5.1.2 Sensitive Natural Communities and Other ESHA

Northern Bishop Pine Forest Community

The Study Area is a Bishop pine-Monterey pine forest alliance with a *Pinus muricata-Psuedotusga menziesii* association (87.070.04) present (G3 S3) (Appendix D: Figure 6).

Northern Bishop Pine Forest is present within the Study Area with the overstory trees consisting of Bishop pine (*Pinus muricata*), Grand fir (*Abies grandis*), Douglas-fir (*Pseudotsuga menziesii*) with scattered tan oak (*Notholithocarpus deniflorus*) and coast redwood (*Sequoia sempervirens*) trees. There are no late successional or old growth stands within the Study Area. The understory consists of coast rhododendron (*Rhododendron macrophyllum*), sword fern (*Polystichum munitum*), salal (*Gaultheria shallon*), huckleberry (*Vaccinium ovatum*). The canopy is closed with little sunlight and no conifer regeneration (saplings) within the forested area.
There is Bishop pine regeneration along the edges of the forest where more openings exist (along an old logging road, a PG&E power line and along the California State Parks ownership boundary).

While Bishop pine (*Pinus muricata*) is itself not considered a rare species, the total assemblage of plant species in an area where Bishop pine occurs (i.e., the vegetation community type) is treated as rare, as explained below. Its range is restricted to coastal California and northern Baja (Mexico) at elevations less than 300 meters (Hickman 1993; Jepson Flora Project 2019).

In some areas the species grows in pure stands, while in other areas individuals or small populations of the species are intermixed with other dominant tree species such as tanoak (*Lithocarpus densiflorus*), beach pine (*Pinus contorta ssp. contorta*), Bolander pine (*Pinus contorta ssp. bolanderi*), Douglas-fir (*Pseudotsuga menziesii*), coast redwood (*Sequoia sempervirens*), pygmy cypress (*Hesperocyparis pygmaea*), and others.

Background on Northern Bishop Pine Forest Community Classification

"Northern Bishop Pine Forest" is a natural community originally defined by Holland (1986) and described, in part, as follows:

> "…Typically dominated by pure stands of *Pinus muricata*, with cones that remain closed on the trees for many years. The seeds are released in large quantities and germinate freely following fires…" (Holland 1986).

The currently accepted vegetation classification system for the state that is standardly used by CDFW, CNPS, and other state and federal agencies, organizations, and consultants for survey and planning purposes is A Manual of California Vegetation (MCV; Sawyer, Keeler-Wolf, and Evens 2009). Unlike Holland, this vegetation classification system is based on the standard National Vegetation Classification System (NVCS) and includes alliances (a floristically defined vegetation unit identified by its dominant and/or characteristic species) and associations (the finer level of classification beneath alliance).

Although the CNDDB still maintains records of some of the old Holland vegetation types, these types are no longer the accepted standard, and the CDFW Vegetation Classification and Mapping Program (VegCAMP) has published more recent vegetation lists for the state (October 2018) based on a standardized vegetation classification system that is currently being developed for California (and which is consistent with the MCV classification system). Global and state rarity rankings have been assigned for various types on the recent VegCAMP lists.

On the most recent VegCAMP list (April 2019), there is no longer a "Northern Bishop Pine Forest" type, but instead there is a Bishop pine forest alliance and various Bishop pine associations. Unlike the G2/S2.2 rankings of the no-longer-recognized "Northern Bishop Pine Forest" natural community, on this list the currently accepted Bishop pine alliance vegetation type is ranked G3/S3[1]. This ranking is considered "vulnerable and at moderate risk of extinction" at the global and state levels. Additionally, CDFW Biogeographic Data Branch indicates that for alliances with State ranks of S1-S3, all associations within them are also considered to be highly imperiled[2] and of high priority for inventory in the CNDDB (VegCAMP 2019).

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[1] In this case, the California Heritage (CNDDB) ranking of G3/S3 describes the global rank (G rank) and the state rank (S rank) for Northern Bishop pine forest in California as vulnerable and at moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

[2] http://dfg.ca.gov/biogeodata/vegcamp/natural_comm_background.asp

Northern Bishop Pine Forest is an ESHA, as defined in Section 30107.5 of the Coastal Act, Section 3.1 of the certified Mendocino County LUP, and CZC Section 20.308.040(F) is

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

The CA Department of Fish and Wildlife (CDFW) recognizes special status natural communities as communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status species or their habitat.

As described above, the CDFW List of California Terrestrial Natural Communities ranks Bishop Pine forest community type as "G3S3," highly imperiled, and of high priority for inventory in the CNDDB. Because of its relative rarity at the state and global levels, Northern Bishop pine forest meets the rarity test for designation as ESHA under the above cited Coastal Act and LCP policies.

5.2 Special-status Species

5.2.1 Special-status Plant Species

Upon review of the resource databases listed in Section 4.2, seventy-three (73) special-status plant species have been documented within the vicinity of the Study Area. Please refer to Appendix A for a table of all special-status plant species with a potential to occur, as well as a discussion of the likelihood for each species to occur within the Study Area based on habitat present. Of the 73 special-status species documented within the vicinity of the Study Area, sixty-four (64) special-status species are unlikely or have no potential to occur due to:

- Hydrologic conditions (e.g., vernal pools, riverine) necessary to support the special-status plant species are not present within the Study Area;
- Edaphic conditions (soils, e.g., rocky outcrops, serpentinite) necessary to support the special-status plant species are not present within the Study Area;
- Topographic conditions (e.g., montane) necessary to support the special-status plant species are not present within the Study Area;
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present within the Study Area;
- Associated vegetation communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present within the Study Area;
- The Study Area is geographically isolated (e.g., outside of required elevations, coastal environment) from the documented range of the special-status plant species;

The nine (9) special-status plant species with potential to occur within the Study Area are described below:

- **Bolander's reed grass** (*Calamagrostis bolanderi*- Rare Plant Rank 4.2): Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Meadows and seeps (mesic), Marshes and swamps (freshwater), North Coast coniferous forest/mesic. Elevation ranges from 0-1495 feet. Blooming period- May to August.
- **swamp harebell** (*Campanula californica*- Rare Plant Rank 1B.2): North Coast coniferous forest, Marshes and swamps (freshwater), Bogs and fens, Closed-cone coniferous forest, Coastal prairie, Meadows and seeps/mesic. Elevation ranges from 0-1330 feet. Blooming period- June to October.
- **Monterey Coast paintbrush** (*Castilleja latifolia*- Rare Plant Rank 4.3): Closed-cone coniferous forest, Cismontane woodland (openings), Coastal dunes, Coastal scrub/ sand. Elevation ranges from 0-555 feet. Blooming period February to September.
- **Point Reyes ceanothus** (*Ceanothus gloriosus var. gloriosus* - Rare Plant Rank 4.3): Coastal bluff scrub, Closed-cone coniferous forest, Coastal dunes, Coastal scrub/ sandy. Elevation ranges from 15-1705 feet. Blooming period March to May.
- **harlequin lotus** (*Hosackia gracilis* - Rare Plant Species Rank 4.2): Wetlands, roadsides, occasionally non-wetlands; broadleaf upland forest, coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and swamps, North Coast coniferous forest, mixed evergreen forest, valley and foothill grassland. Blooming period- March to July.
- **Baker's goldfields** (*Lasthenia burkei*- State Endangered, Federally Endangered and Rare Plant Rank 1B.1): Closed-cone coniferous forest (openings), Coastal scrub, Meadows and seeps, Marshes and swamps. Elevation ranges from 195-1705 feet. Blooming period April to October.
- **coast lily** (*Lilium maritimum*-Rare Plant Rank 1B.1): Broadleafed upland forest, Closed-cone coniferous forest, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest/ sometimes roadsides. Elevation ranges from 15-1560 feet. Blooming period- May- to August.
- **redwood lily** (*Lilium rubescens* – Rare Plant Species Rank 4.2): Broadleafed upland forest, chaparral, lower montane coniferous forest, North Coast coniferous forest, upper montane coniferous forest, red fir forest, yellow pine forest; sometimes serpentinite, sometimes roadsides; Blooming period – April to August.
- **Monterey clover** (*Trifolium trichocalyx*- State Endangered, Federally Endangered and Rare Plant Rank 1B.1): Closed-cone coniferous forest (sandy, openings, burned areas). Elevation ranges from 95-1000 feet. Blooming period April to June.

5.2.2 Special-status Animal species

Upon review of the resource databases listed in Section 4.2, forty-four (44) special-status wildlife species have been documented within the vicinity of the Study Area. Please refer to Appendix A for a table of all special-status wildlife species with a potential to occur, as well as a discussion of the likelihood for each species to occur within the Study Area based on habitat assessment.

No special-status wildlife species were observed within the Study Area during the site assessment. Twenty-one (21) special-status wildlife species have the moderate potential to occur within the Study Area. The remaining thirteen (13) special-status wildlife species do not have the potential to occur due to one or more of the following reasons:

- Aquatic Habitats (e.g., streams, rivers, vernal pools) necessary to support special-status wildlife species are not present within the Study Area;
- Vegetation Habitats (e.g., forested area, riparian, grassland) that provide nesting and/or foraging resources necessary to support special-status wildlife species are not present within the Study Area;
- Physical Structures and Vegetation (e.g., caves, old-growth trees) that provide nesting, cover, and/or foraging habitat necessary to support special-status wildlife species are not present within the Study Area;
- Host Plants (e.g., *Cirsium sp.*) that provide larval and nectar resources necessary to support special-status wildlife species are not present within the Study Area;
- Historic and Contemporary Disturbance (e.g., cattle grazing, agriculture) deter the presence of the special-status wildlife species from occupying the Study Area;
- The Study Area is outside the documented nesting range of special-status wildlife species.

The thirteen (13) special-status wildlife species with potential to occur within the Study Area are described in below.

- **red-bellied newt** (*Taricha rivularis*): Inhabits coastal forests, typically in redwood (*Sequoia sempervirens*) forest habitat although also found in other forest types (hardwood etc.). Adults are terrestrial and fossorial. Transformed juveniles leave aquatic environments and go into hiding in underground shelters, often until ready to reproduce. Breeding occurs in streams often with relatively strong flows.
- **Osprey** (*Pandion haliaetus*): *P. haliaetus* are strictly associated with large, fish-bearing waters, primarily in ponderosa pine and mixed conifer stands. Foraging habitat consists of open, clear waters, rivers, lakes, reservoirs, estuaries, lagoons, swamps, marshes, and bays. Diet consists almost exclusively live fish. Large trees, snags, and blown-out treetops are used for cover and nesting. Nests are located on or near the tops of trees, snags, cliffs, or human-made structures.

- **northern spotted owl** (*Strix occidentalis caurina*): Northern spotted owls (NSO) are permanent residents in Mendocino County. They require mature forest patches with permanent water and suitable nesting trees and snags (Zeiner et al. 1990a). Northern spotted owls use dense, old-growth forests, or mid- to late- seral stage forest, with a multi-layered canopy for breeding (Remsen 1978). Mixed conifer, redwood, and Douglas-fir habitats are required for nesting and roosting. Northern spotted owl nests are most often found on existing structures (old raptor nest, squirrel nest, red-tree vole nest), or debris piled on a broken topped tree; although, they have been found inside tree cavities. Successful nest sites have canopy cover immediately above nests exceeding 85% with nesting/roosting activity centers surrounding the nest with canopy closure often exceeding 80%. The primary prey for NSOs in this area is the dusky-footed woodrat (*Neotoma fuscipes*). NSOs feed in forest habitats where they usually search from a perch and pounce on the prey in vegetation or on the ground. Foraging habitat is the most flexible of NSO habitat.
- **obscure bumble bee** (*Bombus caliginosus*): The obscure bumble bee is a species of bumblebee native to the west coast of the United States, where its distribution extends from Washington through to Southern California. The workers are most often seen on Fabaceae, the legume family, while queens are most often seen on Ericaceae, the heath family, and males have been observed most often on Asteraceae, the aster family. Common plants visited by the workers include ceanothus, thistles, sweet peas, lupines, rhododendrons, Rubus, willows, and clovers.
- **lotis blue butterfly** (*Plebujus idas lotis*): Little is known about this butterfly and it is possibly already extinct. The Lotis Blue has not been seen alive since 1983. It is only known from a few sites near Mendocino on California's north coast. The butterfly was known to associate with wet meadows and coastal bog habitat and the last known location was at a sphagnum bog surrounded by a closed-cone pine forest, dominated primarily by bishop pine (Pinus muricata). Nothing is known for certain about food habits of the lotis blue butterfly, as the larval host plant is not confirmed, but evidence suggests that it was the seaside bird's-foot trefoil (Lotus formosissimus).
- **Sonoma tree vole** *(Arborimus pomo): A. pomo* lives only in humid coastal forests consisting of Douglas-fir, grand fir, western hemlock, and/or Sitka spruce. This species requires Douglas-fir and grand fir needles as a food source and nesting materials. Nests are frequently found in trees along the bole, in branch crotches, or in the top of snags. Nests are most often found along roads, skid trails, or forest edges; however, they could exist further in the forest with dense canopies making nest identification difficult. This species is distributed along the North Coast from Sonoma County north to the Oregon border, being practically restricted to the fog belt.

- **Townsend's big-eared bat** (*Corynorhinus townsendii*): *C. townsendii* is associated with a wide variety of habitats from deserts to mid-elevation mixed coniferous-deciduous forest. Females form maternity colonies in buildings, caves and mines and males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.
- **silver-haired bat** (*Lasionycteris noctivagans*): Silver-haired bat (*Lasionycteris noctivagans*): The silver-haired bat is primarily a coastal and montane forest dweller, roosting and foraging within lower montane coniferous forest, oldgrowth, and riparian forests. Roosting habitat consists of within hollow trees, beneath exfoliating bark, abandoned woodpecker holes, snags, buildings, caves and rarely under rocks. *L. noctivagans* feeds over streams, ponds and open brushy areas.
- **hoary bat** *(Lasiusus cinereus):* Hoary bats can be yearlong residents of Mendocino County. This bat is one of the few bats knows to both migrate south for winter and to hibernate locally. *L. cinereus* prefers a diet of moths, yet will also consume beetles, wasps, flies, grasshoppers, dragonflies, and termites. Hoary bat daytime roosts are typically dense foliage of medium to large sized trees. This bat occupies a variety of habitats including dense forest, forest edges, coniferous forests, deserts, and broadleaf forests.
- **little brown bat** (*Myotis lucifugus*): *M. lucifugus* typically lives and feeds in forested areas near or over water. The little brown bat lives in three different roosting sites throughout the year: day roosts, night roosts, and hibernation roosts. Stable, ambient temperatures greatly influence site selection. Manmade structures are often selected, however both day and night roosts may be found in trees, under rocks, and in piles of wood. Day roost provide excellent shelter, limited to no light, and typically have southwestern exposure. Night roosts are larger areas these bats can use when outside temperatures necessitate communal congregation for warmth. Hibernaculum habitats tend to include mines and caves and are typically warmer and more humid.
- **fringed myotis** (*Myotis thysanodes*): *M. thysanodes* occupy a variety of habitats including pinyon-juniper, valley and foothill grasslands and hardwood-conifer habitats. Roosting and maternity colony sites include caves, mines, buildings and crevices. Foraging occurs around streams, lakes, and ponds, and their diet consists of various arthropods (moths, beetles and spiders) captured in flight or gleaned from plants. Foraging often occurs close to vegetative canopy.
- **Long-legged myotis** (*Myotis volans*): The long-legged myotis forages in chaparral, coastal scrub, Great Basin shrub habitats, and early successional stages of woodlands and forests. They roost in caves, mines, buildings, rock crevices, in snags, and under tree bark.

- **Yuma myotis** (*Myotis yumanensis*): *M. yumanensis* will use a variety of lowland western habitats, from scrub to coniferous forest which are near slow moving or standing water habitats. Roosting sites include caves, mines, buildings, under bridges, and in cliff and tree crevices. Foraging occurs near or over water sources and their diet consists primarily of aquatic-emergent insects.

Section 6.0: Assessment Summary and Recommendations

Twenty-two (22) special-status plant and wildlife species have the potential to occur within the Study Area and one sensitive biological community is present (Bishop pine forest), based on present habitat within the Study Area. Details of the sensitive resources are discussed in Section 5.1.2, while details of constraints are discussed below.

6.1 Natural Communities and Other ESHA

Northern Bishop Pine Forest Community

Northern Bishop Pine Forest is present within the Study Area (Appendix D: Figure 6) with the overstory trees consisting of Bishop pine (*Pinus muricata*), Grand fir (*Abies grandis),* Douglas-fir (*Pseudotsuga menziesii*) trees with scattered tan oak (*Notholithocarpus deniflorus*) and coast redwood (*Sequoia sempervirens*) trees. There are no late successional or old growth stands within the Study Area. The understory consists of coast rhododendron (*Rhododendron macrophyllum*), sword fern (*Polystichum munitum*), salal (*Gaultheria shallon*), huckleberry (*Vaccinium ovatum*). The canopy is closed with little sunlight and no conifer regeneration (saplings) within the forested area. There is regeneration along the edges of the forest where more openings exist (along an old logging road, a PG&E power line and along an adjacent landowner boundary).

There is a seasonal Class III watercourse with no streamside vegetation within the bishop pine forest until the stream reaches the house clearing. There is a small spring with a pumphouse located approximately 50 feet north of the Bishop pine forest on the Class III; however, it is located approximately 102 feet from where the removal of trees took place. Removal of trees did not occur within the Class III watercourse. The removal of trees did not affect the spring and since it is located outside of the Study Area, it is not considered to be a part of the Study Area.

6.2 Proposed Remediation Plan

A total of 651 Bishop pine, Grand fir, Douglas-fir and coast redwood trees (ranging from 1"-38" DBH) and underbrush were removed in the understory of this Bishop pine forest. According to CAL-FIRE and Jacobszoon and Associates, Inc.'s Registered Professional Forester (RPF), Randy Jacobszoon, all but 3 removed trees over 12" DBH (diameter at breast height) were either dead, dying or diseased and posed a fire and hazard risk and approximately 12 trees that had fallen due to windthrow.

Observation of the stumps of the trees that have been cut, rot or bug infestation was observed, which indicate dead, dying or diseased trees. The majority of overstory canopy is still intact. It is not proposed to remove any more trees within the Study Area. Of those 100 trees that are 12" DBH, there are 64 Bishop pine trees (see table below).

A pre-consultation meeting occurred with California Department of Fish and Wildlife on July 23, 2019 to review the site conditions for restoration. It was noted that the County's recommended 3:1 replanting of the Bishop pines would not be feasible in the available growing space and sunlight. The property to the west replicates what this property looked like before any cutting of trees; multiple small DBH (1"-6") trees that allow no growing space or sunlight, consisting of mostly Grand-fir trees. The Study Area now replicates the property to the east (California State Parks) with the removal of many of the 1-6" trees (mostly Grand fir trees). The removal of trees was completed without the use of heavy equipment; therefore, the soil was not disturbed and the majority of the understory is regenerating. The tops of the trees felled were burned in burn piles and all rounds cut and stacked throughout the Study Area.

It is recommended that a five-year restoration and monitoring plan be prepared with review and concurrence by CDFW and Mendocino County. The plan is as follows:

1. An inventory by species, number and diameter class of the native trees that were removed (see table below).

Trees by species, number and diameter class

DBH	Bishop Pine	Douglas Fir	Grand Fir	Redwood
1	0	13	103	0
2	0	13	111	0
3	0	5	92	0
4	0	9	54	0
5	2	10	51	0
6	2	9	20	1
7	0	2	12	0
8	7	3	11	0
9	0	4	4	0
10	0	2	4	0
11	2	2	3	0
12	4	5	3	1
13	4	2	1	0
14	11	3	1	0
15	3	0	0	0
16	4	2	2	0

17	4	0	2	0
18	11	0	0	0
19	5	2	0	0
20	5	1	1	0
21	2	2	0	0
22	0	1	0	0
23	1	2	0	0
24	2	1	0	0
25	1	0	0	0
26	0	2	0	0
27	3	0	0	0
28	1	1	0	0
29	0	1	0	0
30	0	0	0	0
31	0	0	0	0
32	1	0	0	0
33	0	0	0	0
34	1	0	0	0
35	0	0	0	0
36	0	0	0	0
37	0	0	0	0
38	1	0	0	0
Total	77	97	475	2
DBH	**Bishop Pine**	**Douglas Fir**	**Grand Fir**	**Redwood**
Total over 12" DBH	**64**	**25**	**10**	**1**

2. An inventory by species, number and diameter class of native trees currently regenerating on the site (see table below).

Regeneration

DBH	Bishop Pine	Douglas Fir	Grand Fir	Redwood
1	84	5	310	10

3. It is recommended that the mediation of the removed 64 Bishop pine trees over 12" be a 2:1 replacement for a total of 128 trees. Replacement trees may be a combination of those naturally regenerating and planted individuals. As of August 6, 2019, the count of Bishop pine tree regeneration within the Study Area is 84 trees, leaving 44 more trees to be replaced. It is recommended that in the spring of 2020, another count of regenerating Bishop pine trees be conducted, primarily within the burn pile areas. Bishop pinecones are serotinous (need fire to open and germinate) and the 12-inch layer of duff (pine needles) were burned and removed, allowing the Bishop pinecones to potentially establish in the ground. It is expected that more Bishop pine regeneration will be present in the spring. If less than 44 trees are present, it is recommended to plant trees that are obtained from a local seed source and planted after the first seasonal rains have saturated soils beyond the first several inches (or before April).

4. Annual monitoring will be conducted in the fall for 5 years and the trees shall maintain a success rate of 80% at the end of the 5 years (2020, 2021, 2022, 2023 and 2024). Reporting of the annual monitoring shall be submitted to the County of Mendocino and the California Department of Fish and Wildlife.

5. Supplemental watering will be conducted if necessary, as well as thinning if necessary, to release crowded individuals for more rapid tree growth. Results of restoration activities shall be submitted to CDFW, the County and the California Coastal Commission on an annual basis at minimum.

6.3 Special-status Species

6.3.1 Special-status Plant Species

While the listed special-status species (Appendix A) have the potential to occur within the Study Area, only one was observed within the Study Area during the biological site assessment and the botanical surveys (Monterey cypress- *Hesperocyparis macrocarpa)* located next to Comptche Ukiah Road by the house and is not within the area of the trees that were cut. No other special-status species were observed and there are no further recommendations. There is no habitat present within the Study Area, were trees were removed, that would support the listed special status species listed in Appendix A.

6.3.2 Special-status Wildlife Species

While these special-status species have the potential to occur within the Study Area, none were observed within the Study Area during the biological site assessment and there are no further recommendations. The removal of mostly understory trees did not affect the potential of special status species. No bird nests, bat roosts or Sonoma tree vole nests were observed during any of the site visits.

CWHR

CWHR Predicted Habitat Suitability is a dataset accessed through CNDDB BIOS Commercial/Spotted Owl Viewer that represents areas of suitable habitat within the species ranges based on California Wildlife Habitat Relationships (CWHR). Habitat suitability ranks of Low (less than 0.34), Medium (0.34-0.66) and High (greater than 0.66) suitability are based on the mean expert opinion suitability value for each habitat type for breeding, foraging, and cover (CDFW 2019).

Examination of the CWHR dataset was applied when: 1) the data is available for the species of concern, and 2) when there is a moderate to high potential for an animal to occur on or within 100 feet of the Study Area. As with all models, these maps are not perfect, and do not predict the occurrence of an organism, it just examines whether the areas being examined in the biological assessment is habitat which *may* support a species of special concern. This information not only informs the landowner of what may occur on their property, but also assists the biologist when conducting a survey.

6.4 Wildlife Corridors

No change to foraging or wintering habitat for migratory birds is expected as a result of the parcel boundary adjustment. Additionally, no significant impacts to migratory corridors for amphibian, aquatic, avian, mammalian, or reptilian species is expected as a result of the proposed project.

The proposed fence to be installed along the western and northern property boundaries shall be built with wildlife friendly deer fencing with t-posts and shall not hinder any wildlife corridors as the property won't be completely fenced and still allow for wildlife movement through the property.

6.5 Critical Habitat

The Study Area do not contain any critical habitat for federal or state-listed species. There is USFWS designated critical habitat for Marbled murrelet approximately 1.35 miles northeast from the Study Area.

Section 7.0: References

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Report Author:

Alicia Ives Ringstad

Alicia Ives Ringstad received a B.S. in Wildlife Management and Conservation from Humboldt State University in 2007, with studies including plant taxonomy. She is a Consulting Senior Wildlife Biologist with over 13 years professional wildlife biology, forestry, botany and environmental planning experience. Ms. Ives Ringstad provides Botanical Assessments for large and small project requiring compliance with the California Environmental Quality Act (CEQA), these projects include timber harvesting, land conversion, minor and major subdivisions, and development plans/permits. Ms. Ives Ringstad's experience includes conducting wetland delineations that met the requirements of the US Army Corps of Engineers Technical Report (Y-87-1).

Appendix A: Table of Special-Status Species with Potential to Occur Within the Study Area.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Amphibians				
Pacific tailed frog *Ascaphus truei*	CDFW: SSC IUCN: LC	Pacific tailed frogs are primarily associated with perennial, cold, swift flowing streams in mature or old-growth forest stands. Other stream habitat characteristics which may predict presence include high canopy cover, coarse substrates such as cobble, boulder, and/or bedrock, low fine sediment loads, and steep gradients.	**No Potential.** The Study Area does not have any watercourses and does not provide suitable for this species.	No further recommendations for this species.
California giant salamander *Dicamptodon ensatus*	CDFW: SSC IUCN: NT	California giant salamanders are year-round residents of California. They occur up to 6,500 feet primarily in humid coastal forests, especially in Douglas fir, redwood, red fir, and montane and valley-foothill riparian habitats, in or near streams. Aquatic adults and larvae are found in cool, rocky streams and occasionally in lakes and ponds.	**No Potential.** The Study Area does not have any watercourses and does not provide suitable for this species.	No further recommendations for this species.
northern red-legged frog *Rana aurora*	CDFW: SSC IUCN: LC USFS: S	The northern red-legged frog (NRLF) occupies mesic forests and riparian areas with quiet, permanent or near permanent pools in streams, marshes and occasionally ponds with extensive shoreline vegetation. This frog is also known to occupy and breed in artificial habitats, such as stock ponds and drainage ditches, while coastal streams may be crucial for juvenile dispersal. The NRLF is unusually terrestrial for a ranid frog; individuals have been discovered from 5 to 80 meters away from water. Breeding season is from December to April.	**No Potential.** The Study Area does not have any watercourses and does not provide suitable for this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
foothill yellow-legged frog *Rana boylii*	SCT BLM: S CDFW: SSC IUCN: NT USFS: S	*R. boylii* occupy a diverse range of ephemeral and permanent streams, rivers, and adjacent moist terrestrial habitats. Occupied streams are often partly shaded, low gradient, and dominated by coarse, unconsolidated rocky substrates.. Dispersing juvenile and adult frogs will seek refugia in Class II streams pre-and-post breeding, opposite of salmonids. In particular, juvenile habitat is the most remote and removed from the Class I streams and can include seeps, unmapped streams, ditches, storm water drainage areas, and can overlap with Southern Torrent Salamander habitat.	**No Potential.** The Study Area does not have any watercourses that would provide suitable for this species.	No further recommendations for this species.
California red-legged frog *Rana draytonii*	FT CDFW: SSC IUCN: VU	California red-legged frogs (CRLF) primarily inhabit permanent or nearly permanent water sources (quiet streams, marshes, and ponds) containing shorelines with extensive vegetation. Breeding tends to occur primarily in ponds, less likely in streams, and happens from November to April. This ranid frog will also use upland habitats outside of the breeding season and may be discovered under logs, rocks, and other debris during wet conditions.	**No Potential.** The Study Area is located far north of the known distribution for this species and does not have any watercourses that would provide suitable for this species.	No further recommendations for this species.
Southern torrent salamander *Rhyacotriton variegatus*	CDFW: SSC IUCN: LC USFS: S	*R. variegatus* occur in coastal forests of northwestern California south to Point Arena in Mendocino County. This species is found primarily in cold, well shaded permanent streams and spring seepages (Behler and King 1979) in redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Critical habitat requirements for *R. variegates* is cold water temperatures (6.5 °- 15 °C) and loose, rocky substrates composed of gravel and cobble (Thomson et al. 2016).	**No Potential.** The Study Area does not have any watercourses that would provide suitable for this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
red-bellied newt *Taricha rivularis*	CDFW: SSC IUCN: LC	Red-bellied newts predominantly inhabit redwood (*Sequoia sempervirens*) forest habitat along the coast; however, have also been found in other forest types (hardwood-conifer, montane woodland, valley-foothill woodland, mixed conifer, etc.). The preferred aquatic breeding habitats are moderate to fast-flowing streams with rocky substrates. Breeding coincides with the receding of streams after heavy winter rains. Adults are terrestrial and the aquatic breeding phase lasts from February to May. After breeding, adults leave streams but usually stay in the same drainage; however, they are also known to travel several kilometers between breeding years. Underground retreats are used from May to October, and adults forage on the surface before and as they migrate to streams. (Thomas et al. 2016).	**Moderate Potential.** The Study Area does have a Class III watercourse and this species could utilize the Study Area for migration. The Study Area may provide potential suitable habitat for this species.	**Not Observed.** This species was not observed during the biological assessment conducted on May 7 and July 10, 2019. No further recommendations for this species.
Avifauna				
northern goshawk *Accipiter gentilis*	BLM: S CDF: S CDFW: SSC IUCN: LC USFS: S	*E. gentilis* are often found in dense, mature and old-growth stands of conifer and deciduous habitats. Younger seral stands that include larger residual or defective trees are also used. Nest often on cooler (northerly or easterly) moderate slopes in dense vegetation or within riparian zones, but close to openings (Squires, Reynolds 1997). Nest sites are often located next to water, which may provide a break in canopy for easy access to the nest stand or may influence microclimate or prey distribution.	**Unlikely.** The Study Area is comprised of conifer trees; however, is not located near a large body of water and according to the CWHR Predicted Habitat Suitability Map[3], the Study Area as not having northern goshawk habitat. The Study Area does not provide suitable habitat for this species.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.

[3] CWHR Predicted Habitat Suitability is a dataset that represents areas of suitable habitat within the species ranges based on California Wildlife Habitat Relationships (CWHR 2016). Habitat suitability ranks of Low (less than 0.34), Medium (0.34-0.66) and High (greater than 0.66) suitability are based on the mean expert opinion suitability value for each habitat type for breeding, foraging, and cover.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
tricolored blackbird *Agelaius tricolor*	SCE BLM: S CDFW: SSC IUCN: EN NABCI: RWL USFWS: BCC	Breeding and foraging occur in a variety of habitats including salt marshes, moist grasslands, freshwater marshes, bay-shore habitats, riparian forests and oak savannahs. *A. tricolor* use dense riparian vegetation such as Himalayan blackberry (*Rubus armeniacus*) for nesting and forage in cultivated fields, wetlands, and feedlots associated with dairy farms.	**No Potential.** The Study Area does not contain salt or freshwater marshes, riparian forests or riparian vegetation and according to the CWHR Predicted Habitat Suitability Map, the Study Area not having tricolored blackbird habitat. The Study Area does not provide suitable habitat for this species.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.
Great blue heron *Ardea herodias*	CDF: S IUCN: LC	*E. herodias* are commonly found in shallow estuaries and fresh and saline emergent wetlands. They are common in salt ponds from July to October where fish are numerous. They are locally common near rookeries February to June or July. Foraging areas include river and creek banks, ponds, lakes, and watercourses in mountainous areas. Diet consists primarily of aquatic invertebrates, frogs, snakes and fish (Cogswell 1977). They usually nest in colonies in tops of secluded large snags or live trees, usually among the tallest available, near shallow water feeding areas.	**Unlikely.** The Study Area does not contain large streams or fresh or saline emergent wetlands to support this species. According to CWHR Predicted Habitat Suitability Map, the Study Area has a Low (0.11-0.33) suitability for this species along Comptche Ukiah Road. The Study Area does not provide suitable habitat for this species.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
marbled murrelet *Brachyramphus marmoratus*	SE USFWS: FT BFS IUCN: EN NABCI: RWL	Marbled murrelets forage in the ocean often close to shore during the summer months. In the nonbreeding season, murrelets often forage farther from shore. Marbled murrelets will fly inland (up to 35 miles) to nest in late seral stage forests or forests with late seral stage characteristics (Zeiner et al. 1990a). Nests have most commonly been located on large-horizontal limbs in Douglas-fir and redwood trees. Limbs covered by moss or lichens provide stability for the egg and chick. In addition, nests have been located on witch's broom (mistletoe), old squirrel nests, and on large burls that have collected organic debris. Murrelet nests have been found in as few as 4 acres of late seral redwood/Douglas-fir stands; however, US Fish and Wildlife Service has determined that for the long-term survival of the species, greater than 500 acres of older growth forest (late seral connected canopy) is required. Potential nest trees are greater than 32" dbh, as large diameter trees are necessary for the production of potential nesting platforms. Over 40% overstory canopy cover is necessary to protect the nest site from predation and other environmental conditions.	**Unlikely.** The Study Area does not contain old-growth coniferous forest that is necessary for nesting. This species may occasionally fly over the Study Area. According to the CWHR Predicted Habitat Suitability Map, the Study Area as not having marbled murrelet habitat.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Western snowy plover *Chadadrius nivosus nivosus*	FE CDFW: SSC NABCI: RWL USFWS: BCC	The Pacific coast population of the western snowy plover breeds primarily on coastal beaches from southern Washington to southern Baja California, Mexico. The population breeds above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. Less common nesting habitat includes bluff-backed beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars.	**No Potential.** The Study Area is not located on a coastal beach containing sand dunes. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not have western snowy plover habitat.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.
Northern harrier *Circus hudsonius*		*C. hudsonius* frequent meadows, alpine meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands and are seldom found in wooded areas. Breeding occurs on meadows and marshland, both salt and freshwater. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	**No Potential.** Habitat for this species is not present within the Study Area, as it is moderate to heavily wooded. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not have Northern harrier habitat.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.
Olive-sided flycatcher *Contopus cooperi*		*C. cooperi* breeds mostly in northern and montane coniferous forest from sea level to timberline and the edge of the tundra. They are most numerous in mid- and higher-elevation forest in mountains (3,000–7,000 feet elevation) and around burned or boggy areas with numerous openings and dead trees. Nests are open-cup structures placed at various heights above ground and well out from the trunk of a coniferous tree in a cluster of needles and twigs on a horizontal branch.	**Unlikely.** The Study Area is comprised of conifer and deciduous trees that may provide suitable foraging habitat for this species; however, according to the CWHR Predicted Habitat Suitability Map, the Study Area does not have Olive-sided flycatcher habitat. The Study Area does not provide suitable habitat for this species.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
white-tailed kite *Elanus leucurus*	BLM: S CDFW: FP IUCN: LC	White-tailed kites are often found in coastal, valley lowlands and agricultural areas, *E. leucurus* inhabit herbaceous and open stages of most habitats especially in cismontane California. This species' primary diet consists of small mammals (voles and other rodents), found in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands (Waian and Stendall 1970). Nests are made of loosely piled sticks and twigs and lined with grass or straw. Nests are placed near the top of dense broadleaved deciduous trees.	**No Potential.** The Study Area does not provide habitat for this species; however; the surrounding area may provide open habitat of moderate quality foraging habitat for this species. The CWHR map predicts the Study Area as not having white-tailed kite habitat.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.
Tufted puffin *Fratercula cirrhata*	CDFW: SSC	The Tufted puffin occurs sparsely along the California coast from Prince Island in Del Norte county to Point Conception (Sowls et al.1980). *F. cirrhata* nests on islands and, less commonly, on coastal cliffs. They are most common on nesting colonies, and nearby marine pelagic and subtidal waters, from late March to September. F. cirrhata feed on medium-sized fish such as smelt, herring, and sea perch, some crustaceans and squid (Cogswell 1977).	**No Potential.** The Study Area does not provide habitat for this species.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.
Ashy storm-petrel *Oceanodroma homochroa*	CDFW: SSC	The Ashy storm-petrel occurs year-round in offshore waters of the continental slope (200-2,000m deep) from Cape Mendocino to northern Baja California, Mexico (Small 1994). They spend most of their time at sea, coming to land only to reproduce. *O. homochroa* breed on offshore islands at 17 localities from southeast Fallallon Island to Los Coronados (Sowls et al. 1980). The Ashy storm-petrel does not migrate. They nest in natural cavities, sea caves, or rock crevices.	**No Potential.** The Study Area does not provide habitat for this species.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Osprey *Pandion haliaetus*	CDF: S CDFW: WL IUCN: LC	*P. haliaetus* are strictly associated with large, fish-bearing waters, primarily in ponderosa pine and mixed conifer stands. Foraging habitat consists of open, clear waters, rivers, lakes, reservoirs, estuaries, lagoons, swamps, marshes, and bays. Large trees, snags, and blown-out treetops are used for cover and nesting. Nests are located on or near the tops of trees, snags, cliffs, or human-made structures.	**Moderate Potential.** The Study Area does not contain lakes, lagoons or marshes; however, is just south of Big River which contains the required habitat to support this species. According to CWHR Predicted Habitat Suitability, the Study Area has a Low (0.11-0.33)	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.
California brown pelican *Pelecanus occidentalis californicus*		The California brown pelican is typically found on rocky, sandy or vegetated offshore islands, beaches in estuarine, marine subtidal, and marine pelagic waters along the California coast. They breed on the Channel Islands: Anacapa, Santa Barbara, and Santa Cruz (Garrett and Dunn 1981) from March to early August. *P. occidentalis californicus* typically build a nest on the ground or on native shrubs, and occasionally in trees on inaccessible slopes, canyons, and high bluff tops and edges (Cogswell 1977).	**No Potential.** The Study does not provide nesting or foraging habitat for this species. This species may occasionally fly over the Study Area.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.
double-crested cormorant *Phalacrocorax auritus*	CDFW: WL IUCN: LC	*P. auratus* are colonial waterbirds. In addition to feeding areas, *P. auratus* require perching areas, including rocks, wires, tops of dead trees. This species may roost and form breeding colonies up to 40 miles from a foraging area.	**No Potential.** The Study Area does not contain the required habitat that would support this species. The CWHR map predicts the Study Area as not having suitable habitat	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.
Purple martin *Progne subis*	CDFW: SSC IUCN: LC	*P. subis* often inhabit tall old-growth trees or snags in coniferous forests with multilayered canopy and are second-cavity nesters using old woodpecker cavities, crevices in rocks, trees and cactus. Typically, *P. subis* forage in open areas near water.	**Unlikely.** The Study Area does not have old-growth tree with a multi-layered canopy to support this species. The CWHR map predicts the Study Area as not having suitable habitat.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
northern spotted owl *Strix occidentalis caurina*	FT, ST CDF: S CDFW: SSC IUCN: NT NABCI: YWL	Northern spotted owls (NSO) are permanent residents in Mendocino County. They require mature forest patches with permanent water and suitable nesting trees and snags (Zeiner et al. 1990a). Northern spotted owls use dense, old-growth forests, or mid- to late- seral stage forest, with a multi-layered canopy for breeding (Remsen 1978). Mixed conifer, redwood, and Douglas-fir habitats are required for nesting and roosting. Northern spotted owl nests are most often found on existing structures (old raptor nest, squirrel nest, red-tree vole nest), or debris piled on a broken topped tree; although, they have been found inside tree cavities. Successful nest sites have canopy cover immediately above nests exceeding 85% with nesting/roosting activity centers surrounding the nest with canopy closure often exceeding 80%. The primary prey for NSOs in this area is the dusky-footed woodrat (*Neotoma fuscipes*). NSOs feed in forest habitats where they usually search from a perch and pounce on the prey in vegetation or on the ground. Foraging habitat is the most flexible of NSO habitat.	**Moderate Potential.** The Study Area does contain marginal habitat for this species; however, the closest NSO Activity Center is 0.9 miles northeast from the Study Area.	As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.
Fish				
Pacific lamprey *Entosphenus tridentatus*	AFS: VU BLM: S CDFW: SSC USFS: S	*E. tridentatus* are anadromous, but also with a number of permanent freshwater resident populations. This species is parasitic as adults, feeding on blood and body fluids of its prey. To breed, *E. tridentatus* migrate into fresh water and dig nests. Adults die post-breeding. Larvae/juveniles live 5-6 years in freshwater before returning to the ocean.	**No Potential.** The Study Area does not contain Class I stream habitat to provide suitable habitat for this species.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
tidewater goby *Eucyclogobius newberryi*	CDFW: SSC	The tidewater goby inhabits lagoons formed by streams running into the sea. These lagoons are blocked from the Pacific Ocean by sand bars, admitting salt water only during particular seasons, and so their water is cool and brackish. Juveniles have been found as far upstream as 12 km, e.g. in Ten Mile River, Mendocino County. These fish also prefer sandy bottoms with depths of 20–100 cm, near emergent vegetation beds.	**No Potential.** The Study Area does not contain Class I stream habitat.	No further recommendations for this species.
Navarro roach *Lavinia symmetricus navarroensis*	CDFW: SSC	California roach are generally found in small, warm intermittent streams, and dense populations are frequently found in isolated pools. Roach are tolerant of relatively high temperatures (30-35 C) and low oxygen levels (1-2 ppm). However, they are habitat generalists, also being found in cold, well-aerated clear "trout" streams, in human-modified habitats and in the main channels of rivers, such as the Russian and Tuolumne. This form appears to be abundant in both the Russian and Navarro rivers. The roach have been reported recently to be "extremely numerous in the warmer reaches of the Navarro River, where they may be displacing salmonids".	**No Potential.** The Study Area does not contain Class I stream habitat.	No further recommendations for this species.
Pink salmon *Oncorhynchus gorbuscha*	CDFW: SSC	Pink salmon are coldwater fish with a preferred temperature range of 5.6 to 14.6 °C, an optimal temperature of 10.1 °C, and an upper incipient lethal temperature of 25.8 °C. The native range of the species is in the Pacific and Arctic coastal waters and rivers, from the Sacramento River in northern California to the Mackenzie River in Canada.	**No Potential.** The Study Area does not contain Class I stream habitat.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Coho salmon – central California coast ESU *Oncorhynchus kisutch pop. 4*	FE, SE AFS: EN	Coho are anadromous, migrating and spawning in streams that flow directly into the ocean or tributaries of larger rivers. Migration peaks around mid-May till mid-June. The fish will spend two to three years at sea before migrating back to their natal stream to spawn. Coho lay egg masses (redds), often located between a pool and a riffle.	**No Potential.** The Study Area does not contain Class I stream habitat.	No further recommendations for this species
steelhead – northern California DPS *Oncorhynchus mykiss irideus pop. 16*	FT AFS: TH	Steelhead are anadromous coastal rainbow trout. As adults, this species requires high flows, with depths of at least 18cm for passage (Bjornn and Reiser 1991). Clean well-aerated gravel beds, typically in steep, rocky reaches of upper tributaries are needed for spawning. This DPS does not include summer-run steelhead.	**No Potential.** The Study Area does not contain Class I stream habitat.	No further recommendations for this species.
chinook salmon – California coastal ESU *Oncorhynchus tshawytscha pop. 17*	FT AFS: TH	The California coastal ESU includes all naturally-spawned populations of Chinook salmon from the Klamath River (exclusive) to the Russian River (inclusive). Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temperatures greater than 27°C are lethal.	**No Potential.** The Study Area does not contain Class I stream habitat.	No further recommendations for this species
Insects				
obscure bumble bee *Bombus caliginosus*		The obscure bumble bee is a species of bumblebee native to the west coast of the United States, where its distribution extends from Washington through to Southern California. The workers are most often seen on Fabaceae, the legume family, while queens are most often seen on Ericaceae, the heath family, and males have been observed most often on Asteraceae, the aster family. Common plants visited by the workers include ceanothus, thistles, sweet peas, lupines, rhododendrons, Rubus, willows, and clovers.	**Moderate Potential.** Rhododendrons, lupines and clovers are present within the Study Area.	The removal of the Bishop pine and minor underbrush was not a significant impact for this species. There is an abundance amount of habitat for this species present within the Study Area; therefore, no further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Western bumble bee *Bombus occidentalis*	USFS: S Xerces: IM	Formerly common throughout much of western North America, populations from southern British Columbia to central California have nearly disappeared (Xerces 2017). This species occurs in a wide variety of habitat types and are considered a generalist pollinator. This genus is most commonly encountered along stream banks, in meadows, recently-burned or logged areas, or on flowers by roadsides.	**Unlikely.** The Study Area contains a moderately dense conifer forest and not meadows, but may provide marginal suitable habitat for this species	No further recommendations for this species.
lotis blue butterfly *Plebujus idas lotis*	FE	Little is known about this butterfly and it is possibly already extinct. The Lotis Blue has not been seen alive since 1983. It is only known from a few sites near Mendocino on California's north coast. The butterfly was known to associate with wet meadows and coastal bog habitat and the last known location was at a sphagnum bog surrounded by a closed-cone pine forest, dominated primarily by bishop pine (*Pinus muricata*). Nothing is known for certain about food habits of the lotis blue butterfly, as the larval host plant is not confirmed, but evidence suggests that it was the seaside bird's-foot trefoil (*Lotus formosissimus*).	**Moderate Potential.** The Study Area does contain Bishop pine trees; however, it does not contain coastal bogs or sphagnum bogs. The required habitat for this species marginally occurs within the Study Area.	The seaside bird's-foot trefoil (*Lotus formosissimus*), the insect's host plant, was not observed during the botanical surveys conducted within the Study Area. No further recommendations for this species.
Globose dune beetle *Coelus globosus*		The Globose Dune Beetle inhabits foredunes and sand hummocks immediately bordering the coast from Bodega Bay Head to Ensenada, Baja California, and all of the Channel Islands except San Clemente Island.	**No Potential.** The Study Area does not contain coastal habitat.	No further recommendations for this species

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Mammals				
Sonoma red tree vole *Arborimus pomo*	CDFW: SSC IUCN: NT	*A. pomo* lives only in humid coastal forests consisting of Douglas-fir, grand fir, western hemlock, and/or Sitka spruce. This species requires Douglas-fir and grand fir needles as a food source and nesting materials. Nests are frequently found in trees along the bole, in branch crotches, or in the top of snags. Nests are most often found along roads, skid trails, or forest edges; however, they could exist further in the forest with dense canopies making nest identification difficult. This species is distributed along the North Coast from Sonoma County north to the Oregon border, being practically restricted to the fog belt.	**High Potential.** The Study Area does provide required nesting or foraging habitat (Douglas-fir, grand fir stands).	Sonoma red tree voles, nests or the telltale Douglas-fir resin ducts were not observed during the biological assessment conducted on May 7 and July 10, 2019. It is not likely this species was inhabiting the trees that were removed. It is not proposed to remove any more trees within the Study Area. No further recommendations for this species.
Townsend's big-eared bat *Corynorhinus townsendii*	BLM: S CDFW: SSC IUCN: LC USFS: S WBWG: H	*C. townsendii* is associated with a wide variety of habitats from deserts to mid-elevation mixed coniferous-deciduous forest. Females form maternity colonies in buildings, caves and mines and males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.	**Moderate Potential.** Outbuildings were noted within the Study Area. The outbuildings have open sides and rafters that provide potential roosting habitat for bat species including *C. townsendii*. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat.	As the CWHR Predicted Habitat Suitability is Low for the Study Area and the outbuildings are located outside of the forested area, there are no further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
North American porcupine *Erethizon dorsatum*	IUCN: LC	*E. dorsatum* are commonly found in coniferous and mixed forested areas, and can also inhabit shrublands, tundra and deserts, albeit less frequently as this species tends to spend much of its time in trees. This herbivore eats leaves, twigs, and green plants like Skunk cabbage (*Symplocarpus foetidus*) and clovers (*Trifolium spp.*). This species makes its dens in hollow trees, decaying logs and caves in rocky areas. Recognized as primarily solitary and nocturnal, *E. dorsatum* may be seen foraging during daytime.	**Unlikely.** CWHR map predicts the Study Area as having no porcupine habitat and the Study Area does not have hollow trees, decaying logs or caves. The Study Area does not provide suitable habitat for this species.	No further recommendations for this species.
Silver-haired bat *Lasionycteris noctivagans*	CDFW:SSC IUCN: LC WBWG: M	The silver-haired bat is primarily a coastal and montane forest dweller, roosting and foraging within lower montane coniferous forest, old growth, and riparian forests. Roosting habitat consists of within hollow trees, beneath exfoliating bark, abandoned woodpecker holes, snags, buildings, caves and rarely under rocks. *L. noctivagans* feeds over streams, ponds and open brushy areas.	**Moderate Potential.** The Study Area does contain conifer trees; however, there are no hollow trees present. The outbuildings have open sides and rafters that provide potential roosting habitat. According to CWHR Predicted Habitat Suitability, the Study Area has a Low to Moderate (0.11-0.66) and may provide suitable habitat for this species.	No bat roosts or signs of guano were observed during the biological assessment. No further recommendations for this species.
hoary bat *Lasiurus cinereus*	IUCN: LC WBWG: M	Hoary bats can be yearlong residents of Mendocino County. This bat is one of the few bats knows to both migrate south for winter and to hibernate locally. Hoary bat daytime roosts are typically dense foliage of medium to large sized trees. This bat occupies a variety of habitats including dense forest, forest edges, coniferous forests, deserts, and broadleaf forests.	**Moderate Potential.** The Study Area does contain trees and buildings that could be utilized for roosting; however, according to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat.	No bat roosts or signs of guano were observed during the biological assessment. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Little brown bat *Myotis lucifugus*		*M. lucifugus* typically lives and feeds in forested areas near or over water. The little brown bat lives in three different roosting sites throughout the year: day roosts, night roosts, and hibernation roosts. Stable, ambient temperatures greatly influence site selection. Manmade structures are often selected, however both day and night roosts may be found in trees, under rocks, and in piles of wood. Day roost provide excellent shelter, limited to no light, and typically have southwestern exposure. Night roosts are larger areas these bats can use when outside temperatures necessitate communal congregation for warmth. Hibernaculum habitats tend to include mines and caves and are typically warmer and more humid.	**Moderate Potential.** The Study Area does contain trees and buildings that could be utilized for roosting; however, according to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat.	No bat roosts or signs of guano were observed during the biological assessment. No further recommendations for this species.
Fringed myotis *Myotis thysanodes*	BLM: S IUCN: LC USFS: S WBWG: H	*M. thysanodes* occupy a variety of habitats including pinyon-juniper, valley and foothill grasslands and hardwood-conifer habitats. Roosting and maternity colony sites include caves, mines, buildings and crevices. Foraging occurs around streams, lakes, and ponds. Foraging often occurs close to vegetative canopy.	**Moderate Potential.** The Study Area does contain trees and buildings that could be utilized for roosting; however, according to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat.	No bat roosts or signs of guano were observed during the biological assessment. No further recommendations for this species.
Long-legged myotis *Myotis volans*		The long-legged myotis forages in chaparral, coastal scrub, Great Basin shrub habitats, and early successional stages of woodlands and forests. They roost in caves, mines, buildings, rock crevices, in snags, and under tree bark.	**Moderate Potential.** The Study Area does contain trees and buildings that could be utilized for roosting; however, according to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat.	No bat roosts or signs of guano were observed during the biological assessment. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Yuma myotis *Myotis yumanensis*	BLM:S IUCN: LC WBWG: LM	*M. yumanensis* will use a variety of lowland western habitats, from scrub to coniferous forest which are near slow moving or standing water habitats. Roosting sites include caves, mines, buildings, under bridges, and in cliff and tree crevices. Foraging occurs near or over water sources and their diet consists primarily of aquatic-emergent insects.	**Moderate Potential.** The Study Area does contain trees and buildings that could be utilized for roosting; however, according to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat.	No bat roosts or signs of guano were observed during the biological assessment. No further recommendations for this species.
Mollusks				
Ten Mile shoulderband Noyo intersessa		This snail is an aquatic invertebrate found in coastal dunes, coastal scrub, and riparian redwood forest habitats.	**No Potential.** There are no Class I or II watercourses that would provide suitable habitat for this species.	No further recommendations for this species.
Reptiles				
western pond turtle *Emys marmorata*	BLM: S CDFW: SSC IUCN: VU USFS: S	*E. marmorata* are associated with permanent ponds, lakes, streams, stock ponds, marshes, seasonal wetlands, artificial areas including reservoirs or irrigation ditches, or permanent pools along intermittent streams in a wide variety of habitats. This species requires basking sites in the aquatic environment or upland, grassy openings with loose soil for nesting and overwintering. Nest sites can be found from 100-500 meters from aquatic habitat.	**No Potential.** There are no Class I watercourses or ponds that would provide suitable habitat for this species.	No further recommendations for this species.

Special-status Plant Species

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
pink sand-verbena *Abronia umbellata var. breviflora*	Rank 1B.1	Coastal dunes. Elevation ranges from 0-35 feet. Blooms Jun-Oct.	**No Potential.** This species is known to occur in coastal dune habitat. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Blasdale's bent grass *Agrostis blasdalei*	Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal prairie. Elevation ranges from 0 to 490 feet. Blooms May-Jul.	**No Potential.** This species is known to occur in coastal habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
sea-watch *Angelica lucida*	Rank 4.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, coastal salt marshes and swamps. Elevation ranges from 0-490. Blooms May-Jul.	**No Potential.** This species is known to occur in coastal habitats and coastal salt wetlands. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
pygmy manzanita *Arctostaphylos nummularia ssp. mendocinoensis*	Rank 1B.2	Closed-cone coniferous forest (acidic sandy soil). Elevations range from 295-655 feet. Blooms May-Sep.	**Unlikely.** This species is known to occur on acidic sandy soil (podzol-like) in a closed-cone coniferous forest. The Study Area is comprised of Bishop pine forest, which is a closed-cone forest; however, the soil is not podzol-like and does not contain pygmy trees or shrubs. The Study Area does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
Humboldt County milk-vetch *Astragalus agnicidus*	CE Rank 1B.2	Broadleafed upland forest, North Coast coniferous forest/openings, disturbed areas, sometimes roadsides. Elevation ranges from 390 to 2705 feet. Blooms Apr-Sep.	**Unlikely.** This species is known to occur in openings and disturbed areas of North Coast coniferous forest and Broadleafed upland forest habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present.** No further recommendations for this species.
Point Reyes blennosperma *Blennosperma nanum var. robustum*	CR Rank 1B.2	Coastal prairie, Coastal scrub. Elevation ranges from 30-475 feet. Blooms Feb-Apr.	**No Potential.** This species is known to occur in coastal habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present.** No further recommendations for this species.
Bolander's reed grass *Calamagrostis bolanderi*	Rank 4.2	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Meadows and seeps (mesic), Marshes and swamps (freshwater), North Coast coniferous forest/mesic. Elevation ranges from 0-1495 feet. Blooms May-Aug.	**High Potential.** This species is known to occur in wet areas of North Coast coniferous, closed-cone coniferous and Broadleafed upland forest habitats. The Study Area is comprised of Bishop pine forest, with wet areas and may provide suitable habitat for this species	**Not Observed.** This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
Thurber's reed grass *Calamagrostis crassiglumis*	Rank 2B.1	Coastal scrub (mesic), Marshes and swamps (freshwater). Elevations range from 30-345 feet. Blooms May-Aug..	**No Potential.** This species is known to occur in mesic coastal and freshwater marsh and swamp habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
coastal bluff morning-glory *Calystegia purpurata ssp. saxicola*	Rank 1B.2	Coastal bluff scrub, Coastal dunes Coastal scrub, North Coast coniferous forest. Elevations range from 0-345 feet. Bloom (Mar) Apr-Sep.	**Unlikely.** This species is known to occur in coastal and North Coast coniferous habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species
swamp harebell *Campanula californica*	Rank 1B.2	North Coast coniferous forest, Marshes and swamps (freshwater), Bogs and fens, Closed-cone coniferous forest, Coastal prairie, Meadows and seeps/mesic. Elevation ranges from 0-1330 feet. Blooms Jun-Oct.	**Moderate Potential.** This species is known to occur in wet areas and disturbed areas of forest habitat. The Study Area is comprised of Bishop pine forest without wet areas but may provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
California sedge *Carex californica*	Rank 2B.3	Bogs and fens, Closed-cone coniferous forest, Coastal prairie, Meadows and seeps, Marshes and swamps (margins). Elevation ranges from 295-1100 feet. Bloom May-August.	**Moderate Potential.** This species is known to occur in marshy/swampy areas in Closed-cone coniferous forest and Coastal habitats. The Study Area does is comprised of Bishop pine forest without wet areas but may provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
lagoon sedge *Carex lenticularis var. limnophila*	Rank 2B.2	Bogs and fens, Marshes and swamps, North Coast coniferous forest/ shores, beaches, often gravelly. Elevation ranges from 0-20 feet. Bloom Jun-Aug.	**Unlikely.** This species is known to occur in coastal and North Coast coniferous habitats. The Study Area is comprised of Bishop pine forest habitat without wet areas and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
livid sedge *Carex livida*	Rank 2A	Bogs and fens. Elevations range from 0-0 feet. Bloom Jun.	**No Potential.** This species is known to occur in Bogs and fens. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Lyngbye's sedge *Carex lyngbyei*	Rank 2B.2	Marshes and swamps (brackish or freshwater). Elevation ranges from 0-35 feet. Bloom Apr-Aug.	**No Potential.** This species is known to occur in freshwater or brackish wetlands. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
deceiving sedge *Carex saliniformis*	Rank 1B.2	Coastal prairie, Coastal scrub, Meadows and seeps, Marshes and swamps (coastal salt)/ mesic. Elevation ranges from 5-755 feet. Bloom Jun (Jul).	**No Potential.** This species is known to occur in coastal salt wetlands and mesic coastal habitat types. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
green yellow sedge *Carex viridula ssp. viridula*	Rank 2B.3	North Coast coniferous forest (mesic), Bogs and fens, Marshes and swamps (freshwater). Elevation ranges from 0-5250 feet.	**Unlikely.** This species is known to occur in wet areas of North Coast coniferous forest habitat. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
johnny-nip *Castilleja ambigua var. ambigua*	Rank 4.2	Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Valley and foothill grassland, Vernal pools margins. Elevation ranges from 0-1425 feet. Blooms Apr-Aug.	**No Potential.** This species is known to occur in coastal, grassland, wetlands and vernal pool habitat types. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Humboldt Bay owl's-clover *Castilleja ambigua var. humboldtiensis*	Rank 1B.2	Marshes and swamps (coastal salt). Elevation ranges from 0-10 feet. Blooms Apr-Aug.	**No Potential.** This species is known to occur in coastal salt marshes and swamps. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Monterey Coast paintbrush *Castilleja latifolia*	Rank 4.3	Closed-cone coniferous forest, Cismontane woodland (openings), Coastal dunes, Coastal scrub/ sand. Elevation ranges from 0-555 feet. Blooms Feb-Sep.	**Moderate Potential.** This species is known to occur in sandy, open areas of coastal, woodland and closed-cone conifer forest habitat types. The Study Area is comprised of Bishop pine forest and may provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
Oregon coast paintbrush *Castilleja litoralis*	Rank 2B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub/ sandy. Elevations range from 45-330 feet. Blooms Jun-Jul.	**No Potential.** This species is highly restricted to sandy areas in coastal habitats. The Study Area is Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
Mendocino Coast paintbrush *Castilleja mendocinensis*	Rank 1B.2	Coastal bluff scrub, Closed-cone coniferous forest, Coastal dunes, Coastal prairie, Coastal scrub. Elevations range from 0-525 feet. Bloom Apr-Aug.	**No Potential.** This species is highly restricted to coastal habitats and closed-cone coniferous forest in the coast range. The Study Area is Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
glory brush *Ceanothus gloriosus var. exaltatus*	Rank 4.3	Chaparral. Elevations range from 95-2000 feet. Bloom Mar-Jun (Aug).	**No Potential.** This species is found in chaparral habitat. The Project Area is Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Point Reyes ceanothus *Ceanothus gloriosus var. gloriosus*	Rank 4.3	Coastal bluff scrub, Closed-cone coniferous forest, Coastal dunes, Coastal scrub/ sandy. Elevation ranges from 15-1705 feet. Bloom Mar-May.	**Moderate Potential.** This species is known to occur in sandy coastal and closed-cone coniferous forest habitat types. The Study Area is Bishop pine forest habitat and may provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
Howell's spineflower *Chorizanthe howellii*	CT FE Rank 1B.2	Coastal dunes, coastal prairie, coastal scrub/ sandy, often disturbed areas. Elevation ranges from 0-150 feet. Bloom May-Jul.	**No Potential.** This species is highly restricted to sandy areas in coastal habitats. The Study Area is Bishop pine forest habitat and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Pacific golden saxifrage *Chrysosplenium glechomifolium*	Rank 4.3	North Coast coniferous forest, Riparian forest/ streambanks, sometimes seeps, sometimes roadsides. Elevation ranges from 30-1495 feet. Bloom Feb-Jun (Jul).	**Unlikely.** This species is known to occur in wet areas of North Coast coniferous forest habitat. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
Whitney's farewell-to-spring *Clarkia amoena ssp. whitneyi*	Rank 1B.1	Coastal bluff scrub, coastal scrub. Elevation ranges from 30-330 feet. Bloom Jun-Aug.	**No Potential.** This species is known to occur in coastal habitat types. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
round-headed Chinese-houses *Collinsia corymbose*	Rank 1B.2	Coastal dunes. Elevation ranges from 0-65 feet. Bloom Apr-Jun.	**No Potential.** This species is known to occur in coastal dunes habitat. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Oregon goldthread *Coptis laciniata*	Rank 4.2	Meadows and seeps, North Coast coniferous forest (streambanks)/ mesic. Elevations range from 0-3280 feet. Bloom (Feb)Mar-May (Sep-Nov).	**Unlikely.** This species is known to occur in wet areas of North Coast coniferous forest habitat. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
bunchberry *Cornus canadensis*	Rank 2B.2	Bogs and fens, Meadows and seeps, North Coast coniferous forest. Elevation ranges 195-6300 feet. Bloom from May-Jul.	**Unlikely.** This species is known to occur in grassland, wetlands and North Coast coniferous forest habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Mendocino dodder *Cuscuta pacifica var. papillate*	Rank 1B.2	Coastal dunes (interdune depressions). Elevation ranges from 0-165 feet. Bloom (Jun) Jul-Oct.	**Unlikely.** This species is known to occur in coastal dunes habitat. This species has a mapped CNDDB occurrence with a 2/5 mile accuracy with the actual location unknown. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
supple daisy *Erigeron supplex*	Rank 1B.2	Coastal bluff scrub, coastal prairie. Elevation ranges from 30-165 feet. Bloom May-Jul.	**No Potential.** This species is known to occur in coastal habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
bluff wallflower *Erysimum concinnum*	Rank 1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie. Elevation ranges from 0-605 feet. Bloom Feb-Jul.	**Unlikely.** This species is known to occur in coastal habitats and has a mapped CNDDB occurrence within the property; however, the accuracy is 2/5 of a mile recorded in 1955. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
Menzies' wallflower *Erysimum menziesii*	CE FE Rank 1B.1	Coastal dunes. Elevation ranges from 0-115 feet. Bloom Mar-Sep.	**No Potential.** This species is known to occur in coastal dunes habitat. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Roderick's fritillary *Fritillaria roderickii*	CE, Rank 1B.1	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland. Elevation ranges from 45-1310 feet. Bloom Mar-May.	**No Potential.** This species occurs in coastal and valley grassland habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
American glehnia *Glehnia littoralis ssp. leiocarpa*	Rank 4.2	Coastal dunes. Elevation ranges from 0-60 feet. Bloom May-Aug.	**No Potential.** This species is known to occur in coastal dunes habitat. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
Pacific gilia *Gilia capitata ssp. pacifica*	Rank 1B.2	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland. Elevation ranges from 15-5465 feet. Bloom Apr-Aug.	**No Potential.** This species occurs in openings in chaparral, coastal and grassland habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
dark-eyed gilia *Gilia millefoliata*	Rank 1B.2	Coastal dunes. Elevation ranges from 5-100 feet. Bloom Apr-Jul.	**No Potential.** This species occurs in coastal dune habitat. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
congested-headed hayfield tarplant *Hemizonia congesta ssp. congesta*	Rank 1B.2	Valley and foothill grassland/ sometimes roadsides. Elevation ranges from 65-1835 feet. Bloom Apr-Nov.	**No Potential.** This species is known to occur in valley and foothill grassland habitat type. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Tracy's tarplant *Hemizonia congesta ssp. tracyi*	Rank 4.3	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest/openings, sometimes serpentinite. Elevation ranges from 390-3935 feet. Blooms May-Oct.	**Unlikely.** This species occurs in openings in coastal prairie and forest habitat types. The species can be found in serpentinite soils, but not always. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
short-leaved evax *Hesperevax sparsiflora var. brevifolia*	Rank 1B.2	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie. Elevation ranges from 0-705 feet. Bloom Mar-Jun.	**No Potential.** This species occurs in coastal habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
pygmy cypress *Hesperocyparis pygmaea*	Rank 1B.2	Closed-cone coniferous forest (usually podzol-like soil). Elevation ranges from 95-1970 feet.	**Unlikely.** This species occurs on podzol-like soil in Closed-cone coniferous forest habitat. The Study Area is comprised of Bishop pine forest which is a closed-cone coniferous forest; however, does not contain podzo-like soil and does not provide suitable habitat for this species.	**Not Present.** No further recommendations for this species.
Point Reyes horkelia *Horkelia marinensis*	Rank 1B.2	Coastal dunes, Coastal prairie, Coastal scrub/ sandy. Elevation ranges from 15-2475 feet. Bloom May-Sep.	**No Potential.** This species occurs on sandy soil in coastal habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present.** No further recommendations for this species.
Harlequin lotus *Hosackia gracilis*	Rank 4.2	Broadleafed upland forest, Coastal bluff scrub, Closed-cone coniferous forest, Cismontane woodland, Coastal prairie, Coastal scrub, Meadows and seeps, Marshes and swamps, North Coast coniferous forest, Valley and foothill grassland/wetlands, roadsides. Elevations range from 0-2295 feet. Bloom Mar-Jul.	**High Potential.** This species is known to occur usually in wet areas (occasionally in non-wetlands) of a variety of habitats. The Study Area is comprised of Bishop pine forest and may provide suitable habitat for this species.	**Not Observed.** This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
coast iris *Iris longipetala*	Rank 4.2	Coastal prairie, Lower montane coniferous forest, Meadows and seeps (mesic). Elevation ranges from 0-1800 feet. Bloom Mar-May.	**No Potential.** This species occurs on mesic areas of coastal, forest and grassland habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
hair-leaved rush *Juncus supiniformis*	Rank 2B.2	Bogs and fens, Marshes and swamps (freshwater). Elevation ranges from 65-330 feet. Bloom Apr-May (Jun-Jul).	**No Potential.** This species occurs in freshwater wetland habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Baker's goldfields *Lasthenia burkei*	CE FE Rank 1B.1	Closed-cone coniferous forest (openings), Coastal scrub, Meadows and seeps, Marshes and swamps. Elevation ranges from 195-1705 feet. Bloom Apr-Oct.	**Moderate Potential.** This species is known to occur in wetland, coastal and closed-cone coniferous forest habitats. The Study Area is comprised of Bishop pine forest; however, has few openings. The Study Area may provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
perennial goldfields *Lasthenia californica ssp. macrantha*	Rank 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub. Elevation ranges from 15-1705 feet. Bloom Jan-Nov.	**No Potential.** This species occurs in coastal habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
marsh pea *Lathyrus palustris*	Rank 2B.2	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest/ mesic. Elevation ranges from 0-330 feet. Bloom Mar-Aug.	**No Potential.** This species is known to occur in wetland, coastal and forest habitats. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
broad-lobed leptosiphon *Leptosiphon latisectus*	Rank 4.3	Broadleafed upland forest, Cismontane woodland. Elevation ranges from 555-4920 feet. Bloom Apr-Jun.	**No Potential.** This species is known to occur in woodland and broadleafed upland forest habitat types. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
coast lily *Lilium maritimum*	Rank 1B.1	Broadleafed upland forest, Closed-cone coniferous forest, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest/ sometimes roadsides. Elevation ranges from 15-1560 feet. Bloom May-Aug.	**Moderate Potential.** This species is known to occur usually in freshwater wetlands, coastal, closed-cone and North Coast coniferous forest habitats. The Study Area is comprised of Bishop pine forest and may provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
redwood lily *Lilium rubescens*	Rank 4.2	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest/Sometimes serpentinite, sometimes roadsides. Elevations range from 95-6265 feet. Bloom Apr-Aug (Sep).	**Moderate Potential.** This species is known to occur in chaparral, and a variety of forest habitats. The species can be found in serpentinite soils, but not always. The Study Area is comprised of Bishop pine forest and may provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.
heart-leaved twayblade *Listera cordata*	Rank 4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest. Elevation ranges from 15-4495 feet. Bloom Feb-Jul.	**Unlikely.** This species is known to occur in wetland and non-wetland areas of Bogs and fens, Lower montane coniferous forest and North Coast coniferous forest. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
running-pine *Lycopodium clavatum*	Rank 4.1	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)/ often edges, openings, and roadsides. Elevation ranges from 145-4020 feet. Bloom Jun-Aug (Sep).	**Unlikley.** This species is known to occur in openings in marshes and swamps, and mesic forest habitats. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
northern microseris *Microseris borealis*	Rank 2B.1	Bogs and fens, Lower montane coniferous forest, Meadows and seeps. Elevation ranges from 3280-6560 feet. Bloom Jun-Sep.	**No Potential.** This species is known to occur at high elevations in bogs and fens, lower montane coniferous forest and grassland habitat types. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
leafy-stemmed miterwort *Mitellastra caulescens*	Rank 2B.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest/ mesic, sometimes roadsides. Elevation ranges from 15-5575 feet. Bloom (Jan-Feb) Mar-May	**Unlikely.** This species is known to occur in coastal scrub and North Coast coniferous forest. The Project Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Wolf's evening-primrose *Oenothera wolfii*	Rank 1B.1	Coastal scrub, North Coast coniferous forest/ sometimes roadsides. Elevation ranges from 95-2135 feet. Bloom (Jan-Apr) May-Jul (Aug).	**Unlikely.** This species is known to occur in coastal scrub and North Coast coniferous forest. The Project Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
North Coast phacelia *Phacelia insularis var. continentis*	Rank 1B.2	Coastal bluff scrub, Coastal dunes/ sandy, sometimes rocky. Elevation ranges from 30-560 feet. Bloom Mar-May.	**No Potential.** This species occurs on sandy or rocky soil in coastal habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Bolander's beach pine *Pinus contorta ssp. bolanderi*	Rank 1B.2	Closed-cone coniferous forest (usually podzol-like soil). Elevation ranges from 245-820 feet.	**Unlikely.** This species occurs on podzol-like soil in Closed-cone coniferous forest habitat. The Study Area is comprised of Bishop pine forest which is a closed-cone coniferous forest; however, does not contain podzo-like soil and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
white-flowered rein orchid *Piperia candida*	Rank 1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest/ sometimes serpentinite. Elevation ranges from 95-4300 feet. Bloom (Mar) May-Sep.	**Unlikely.** This species is known to occur in forest habitats. The species can be found in serpentinite soils, but not always. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
California pinefoot *Pityopus californicus*	Rank 4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest/mesic. Elevations range from 45-7300 feet. Bloom (Mar-Apr) May-Aug.	**Unlikely.** This species is known to occur in wet areas and non-wet areas in coniferous and mixed forest habitats. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
nodding semaphore grass *Pleuropogon refractus*	Rank 4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest/ mesic. Elevation ranges from 0-5250 feet. Bloom (Mar) Apr-Aug.	**Unlikely.** This species is known to occur in wet areas and non-wet areas in coniferous and mixed forest habitats. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species
dwarf alkali grass *Puccinellia pumila*	Rank 2B.2	Marshes and swamps (coastal salt). Elevation ranges from 0-35 feet. Bloom Jul.	**No Potential.** This species occurs in coastal salt marsh habitat. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Angel's hair lichen *Ramalina thrausta*	Rank 2B.1	North Coast coniferous forest/ On dead twigs and other lichens. Elevation ranges from 245-1410 feet.	**Unlikely.** This species is known to occur in North Coast coniferous forest habitat. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
white beaked-rush *Rhynchospora alba*	Rank 2B.2	Bogs and fens, Meadows and seeps, Marshes and swamps (freshwater). Elevation ranges from 195-6695 feet. Bloom Jun-Aug.	**No Potential.** This species occurs in wetland habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
great burnet *Sanguisorba officinalis*	Rank 2B.2	Bogs and fens, Broadleafed upland forest, Meadows and seeps, Marshes and swamps, North Coast coniferous forest, Riparian forest/ often serpentinite. Elevation ranges from 195-4595 feet. Bloom Jul-Oct.	**Unlikely.** This species is known to occur in North Coast coniferous forest and has a strong affinity for serpentinite soils. The Study Area is Bishop pine forest and does not have serpentinite soils and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
maple-leaved checkerbloom *Sidalcea malachroides*	Rank 4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland/ often in disturbed areas. Elevations range from 0-2395 feet. Bloom (Mar) Apr-Aug.	**Unlikely.** This species is known to occur in disturbed areas of Broadleafed upland forest, coastal, riparian woodland and North Coast coniferous forest. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Purple-stemmed checkerbloom *Sidalcea malviflora ssp. purpurea*	Rank 3.2	Broadleafed upland forest, Coastal prairie. Elevation ranges from 45-280 feet. Bloom May-Jun.	**No Potential.** This species occurs in coastal and broadleafed upland forest habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Trifoliate laceflower *Tiarella trifoliata var. trifoliata*	Rank 3.2	Lower montane coniferous forest, North Coast coniferous forest/ edges, moist shady banks, streambanks. Elevation ranges from 555-4920 feet. Bloom (May) Jun-Aug.	**No Potential.** This species is known to be equally likely to occur in wetlands and non-wetlands of forest habitats. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Monterey clover *Trifolium trichocalyx*	CE FE Rank 1B.1	Closed-cone coniferous forest (sandy, openings, burned areas). Elevation ranges from 95-1000 feet. Bloom Apr-Jun.	**High Potential.** This species is known to occur in sandy openings and burned areas of Closed-cone coniferous forest habitat. The Study Area is comprised of Bishop pine forest and may provide suitable habitat for this species.	**Not Observed**. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
Coastal triquetrella *Triquetrella californica*	Rank 1B.2	Coastal bluff scrub, Coastal scrub. Elevation ranges from 30-330 feet.	**No Potential.** This species is known to occur in the soil of coastal habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.
Methuselah's beard lichen *Usnea longissima*	Rank 4.2	Broadleafed upland forest, North Coast coniferous forest/ On tree branches; usually on old growth hardwoods and conifers. Elevations range from 160-4790 feet.	**No Potential.** This species is known to occur usually in Broadleafed upland forest and North Coast coniferous forest. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species
fringed false-hellebore *Veratrum fimbriatum*	Rank 4.3	Bogs and fens, Coastal scrub, Meadows and seeps, North Coast coniferous forest/ mesic. Elevation ranges from 5-985 feet. Bloom Jul-Sep.	**No Potential.** This species is known to occur usually in wet areas of North Coast coniferous forest. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species
alpine marsh violet *Viola palustris*	Rank 2B.2	Bogs and fens (coastal), Coastal scrub (mesic). Elevation ranges from 0-490 feet. Bloom Mar-Aug.	**No Potential.** This species is known to occur in coastal bogs and fens and mesic coastal scrub. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.	**Not Present**. No further recommendations for this species.

COMMUNITY	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
Coastal Brackish Marsh		Brackish marshes develop by salt marshes where a significant freshwater influx dilutes the seawater to brackish levels of salinity. This commonly happens upstream from salt marshes by estuaries of coastal rivers or near the mouths of coastal rivers with heavy freshwater discharges in the conditions of low tidal ranges. This community is dominated by grasses, forbs, and shrubs that are tolerant of slight to moderate salinities.	**No Potential.** This community is not located within or near the Study Area. The Study Area is comprised of North Coast coniferous forest and does not provide suitable habitat for this community.	**Not Present**. No further recommendations for this species.
Fen		Fens are groundwater-fed, peat-accumulating systems with perennially saturated soils. Wetland plants are typically associated with fens.	**No Potential.** This community is comprised of wetland species. The Study Area is comprised of North Coast coniferous forest, it does not have wet area and does not provide suitable habitat for this community.	**Not Present**. No further recommendations for this species.
Grand Fir Forest		The Grand fir (*Abies grandis*) is the dominant or co-dominant in the tree canopy with *Alnus rubra, Picea stitchensis, Pinus muricata, Sequoia sempervirens and Tsuga heterophyllya.* This community is found on maritime terraces, coastline slope and bluffs. The canopy is continuous. The shrub layer is sparse to intermittent and the herbaceous layer is open to abundant.	**High Potential.** This community is also known as North Coast coniferous forest. The Study Area does have Grand fir trees present along with Bishop pine trees and may provide suitable habitat for this community.	**Observed**. This species was observed during the botanical surveys mixed with the Bishop pine forest. Some Grand fir trees were removed without the Coastal Development Permit.

COMMUNITY	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
Sphagnum Bog		A bog is a wetland that accumulates peat, a deposit of dead plant material, often mosses, and in a majority of cases, sphagnum moss. Sphagnum mosses occur mainly in peat bogs, conifer forests, and moist tundra areas. Bogs occur where the water at the ground surface is acidic.	**No Potential.** This community is not located within or near the Study Area. The Study Area is comprised of North Coast coniferous forest and does not provide suitable habitat for this community.	**Not Present**. No further recommendations for this species.
Northern Coastal Salt Marsh		Northern coastal salt marsh is a highly productive plant community dominated by herbaceous, suffrutescent (sub-shrubby), salt-tolerant hydrophytes (water plants), typically forming a dense mat of vegetation up to three feet high. Species are segregated vertically into more or less distinct zones defined by the degree to which they are inundated by the tides. The plant that is most characteristic of northern coastal salt marsh is pickleweed (*Salicornia virginica).*	**No Potential.** This community is not located within or near the Study Area. The Study Area is comprised of North Coast coniferous forest and does not provide suitable habitat for this community.	**Not Present**. No further recommendations for this species.
Mendocino Pygmy Cypress Forest		The Mendocino Pygmy Cypress Forest (MPCF) is very restricted in its distribution and is known from only 2,600 acres between Ten Mile River and Navarro River in Mendocino County. The MPCF is a stunted, lichen-encrusted forest with two defining species, pygmy cypress (*Hesperocyparis pygmaea)* and Bolander's beach pine (*Pinus contort asp. Bolanderi*), that only occur together within this vegetation type.	**No Potential.** This community is not located within or near the Study Area. The Study Area is comprised of North Coast coniferous forest and does not provide suitable habitat for this community.	**Not Present**. No further recommendations for this species.

COMMUNITY	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA	RECOMMENDATIONS
Coastal and Valley Freshwater Marsh		Coastal and valley freshwater marsh is classified as several different alliances by Sawyer et al. (2009) including the Typha (*T. angustifolia, T. domingensis, T. latifolia*) alliance (cattail marshes), *Schoenoplectus acutus* alliance (hardstem bulrush marsh), and *Schoenoplectus californicus* alliance (California bulrush marsh). It is classified as freshwater emergent wetland as described in A Guide to the Wildlife Habitats of California (Mayer and Laudenslayer 1988). Coastal and valley freshwater marsh is characterized by erect, rooted herbaceous hydrophytes (water-adapted plants). All emergent wetlands are flooded frequently so that the roots of vegetation are saturated or submerged in water. Vegetation is generally about 6 feet tall and may vary from small clumps of vegetation to large areas. Coastal and valley freshwater marsh is a nontidal, flooded, depressional wetland type and is considered a palustrine emergent semi-permanently flooded (PEMF) wetland (Cowardin et al. 1979).	**No Potential.** This community is not located within or near the Study Area. The Study Area is comprised of North Coast coniferous forest and does not provide suitable habitat for this community.	**Not Present.** No further recommendations for this species.

Abbreviation	Organization
FC	Federal Candidate
FE	Federal Endangered
FT	Federal Threatened
FPE	Federally Proposed for listing as Endangered
FPT	Federally Proposed for listing as Threatened
FPD	Federally Proposed for delisting
SC	State Candidate
SE	State Endangered
ST	State Threatened
SCE	State Candidate for listing as Endangered
SCT	State Candidate for listing as Threatened
SCD	State Candidate for delisting
Rank 1A	CRPR Rank 1A: Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	CRPR Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2B	CRPR Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3	CRPR Rank 3: Plants about which CNPS needs more information (a review list)

Potential to Occur:
No Potential. Habitat on and within 100 feet adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and within 100 feet adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or within 100 feet adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or within 100 feet adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Results and Recommendations:
Present. Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.
Not Present. Species is assumed to not be present due to a lack of key habitat components.
Not Observed. Species was not observed during surveys.

Abbreviation	Organization
AFS_EN	American Fisheries Society – Endangered
AFS_TH	American Fisheries Society – Threatened
AFS_VU	American Fisheries Society – Vulnerable
BLM_S	Bureau of Land Management – Sensitive
BCC	USFWS Birds of Conservation Concern
CDF_S	Calif. Dept. of Forestry & Fire Protection – Sensitive
CDFW_SSC	Calif. Dept. of Fish & Wildlife – Species of Special Concern
CDFW_FP	Calif. Dept. of Fish & Wildlife – Fully Protected
CDFW_WL	Calif. Dept. of Fish & Wildlife – Watch List
IUCN_CR	IUCN – Critically Endangered
IUCN_EN	IUCN – Endangered
IUCN_NT	IUCN – Near Threatened
IUCN_VU	IUCN – Vulnerable
IUCN_LC	IUCN – Least Concern
IUCN_DD	IUCN – Data Deficient
IUCN_CD	IUCN – Conservation Dependent
NABCI_RWL	North American Bird Conservation Initiative – Red Watch List
NABCI_YWL	North American Bird Conservation Initiative – Yellow Watch List
NMFS_SC	National Marine Fisheries Service – Species of Concern
USFS_S	U. S. Forest Service – Sensitive
USFWS_BCC	U. S. Fish & Wildlife Service Birds of Conservation Concern
WBWG_H	Western Bat Working Group – High Priority
WBWG_MH	Western Bat Working Group – Medium-High Priority
WBWG_M	Western Bat Working Group – Medium Priority
WBWG_LM	Western Bat Working Group – Low-Medium Priority
Xerces: CI	Xerces Society – Critically Imperiled
Xerces: IM	Xerces Society – Imperiled
Xerces: VU	Xerces Society – Vulnerable
Xerces: DD	Xerces Society – Data Deficient

Appendix B: List of Species Observed

SCIENTIFIC NAME	COMMON NAME
Plants	
Abies grandis	grand fir
Anthoxanthum odoratum	sweet vernal grass
Aquilegia formosa	western columbine
Aralia californca	elk clover
Cardamine californica	California toothwort or milk maids
Claytonia perfoliata	miner's lettuce
Clintona andrewsiana	red clintonia
Cortaderia jubata	pampas grass
Elymus glaucus ssp. glaucus	blue wildrye
Equisetum telmateia ssp braunii	giant horsetail
Fragaria vespa	wood strawberry
Galium sp.	bedstraw
Galutharia shallon	salal
Geranium dissectum	cut leaved geranium
Hesperocyparis macrocarpa	**Monterey cypress CRPR 1B. 2**
Holodiscus discolor	oceanspray
Iris douglasiana	Douglas iris
Juncus effusus	common rush
Lonicera hispidula	hairy honeysuckle
Lupinus arboreous	coastal bush lupine
Madia sativa	coast tarweed
Maianthemu racemosum	false Solomon's seal
Notholithocarpus densiflorus	tanoak
Oxalis oregana	redwood sorrel
Pentagramma triangularis ssp. triangularis	goldback fern
Pinus muricata	Bishop pine
Plantago lanceolata	English plantain
Polygala californica	milkwort
Polysticum munitum	sword fern
Prunella vulgaris	self heal
Pseudotsuga menziesii var. menziesii	Douglas-fir
Pteridium aquilinum var. pubescens	western bracken fern
Ranunculus repent	creeping buttercup
Rhododendron macrophyllum	coast rhododendron
Rosa gymnocarpa	wood rose
Rubus parviflorus	thimbleberry

SCIENTIFIC NAME	COMMON NAME
Plants (continued)	
Rubus ursinus	California blackberry
Rumex acetosella	sheep sorrel
Senecio jacobaea	tansy ragwort
Taraxacum oficinale	common dandelion
Toxicodendron diversilobum	poison-oak
Trientalis latifolia	pacific star flower
Trifolium campestre	hop clover
Trifolium repens	white clover
Vaccinium ovatum	evergreen huckleberry
Verbascum thapas	common mullein
Vicia americana	American vetch
Viola glabella	stream violet
Whipplea modesta	modesty
Woodwardia fimbriata	giant chain fern
Wildlife	
Amphibians	
None observed	
Avifauna	
Buteo lineatus	red-shouldered hawk
Corvus corax	common raven
Cyanocitta stelleri	Stellar's jay
Fish	
None observed	
Insects	
None observed	
Mammals	
None observed	
Mollusks	
None observed	
Reptiles	
None observed	

Appendix B: List of Species Observed

SCIENTIFIC NAME	COMMON NAME
Plants	
Abies grandis	grand fir
Anthoxanthum odoratum	sweet vernal grass
Aquilegia formosa	western columbine
Aralia californca	elk clover
Cardamine californica	California toothwort or milk maids
Claytonia perfoliata	miner's lettuce
Clintona andrewsiana	red clintonia
Cortaderia jubata	pampas grass
Elymus glaucus ssp. glaucus	blue wildrye
Equisetum telmateia ssp braunii	giant horsetail
Fragaria vespa	wood strawberry
Galium sp.	bedstraw
Galutharia shallon	salal
Geranium dissectum	cut leaved geranium
Hesperocyparis macrocarpa	**Monterey cypress CRPR 1B. 2**
Holodiscus discolor	oceanspray
Iris douglasiana	Douglas iris
Juncus effusus	common rush
Lonicera hispidula	hairy honeysuckle
Lupinus arboreous	coastal bush lupine
Madia sativa	coast tarweed
Maianthemu racemosum	false Solomon's seal
Notholithocarpus densiflorus	tanoak
Oxalis oregana	redwood sorrel
Pentagramma triangularis ssp. triangularis	goldback fern
Pinus muricata	Bishop pine
Plantago lanceolata	English plantain
Polygala californica	milkwort
Polysticum munitum	sword fern
Prunella vulgaris	self heal
Pseudotsuga menziesii var. menziesii	Douglas-fir
Pteridium aquilinum var. pubescens	western bracken fern
Ranunculus repent	creeping buttercup
Rhododendron macrophyllum	coast rhododendron
Rosa gymnocarpa	wood rose
Rubus parviflorus	thimbleberry

SCIENTIFIC NAME	COMMON NAME
Plants (continued)	
Rubus ursinus	California blackberry
Rumex acetosella	sheep sorrel
Senecio jacobaea	tansy ragwort
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Vaccinium ovatum	evergreen huckleberry
Verbascum thapas	common mullein
Vicia americana	American vetch
Viola glabella	stream violet
Whipplea modesta	modesty
Woodwardia fimbriata	giant chain fern
Wildlife	
Amphibians	
None observed	
Avifauna	
Buteo lineatus	red-shouldered hawk
Corvus corax	common raven
Cyanocitta stelleri	Stellar's jay
Fish	
None observed	
Insects	
None observed	
Mammals	
None observed	
Mollusks	
None observed	
Reptiles	
None observed	

Appendix C: Representative Photos of the Study Area





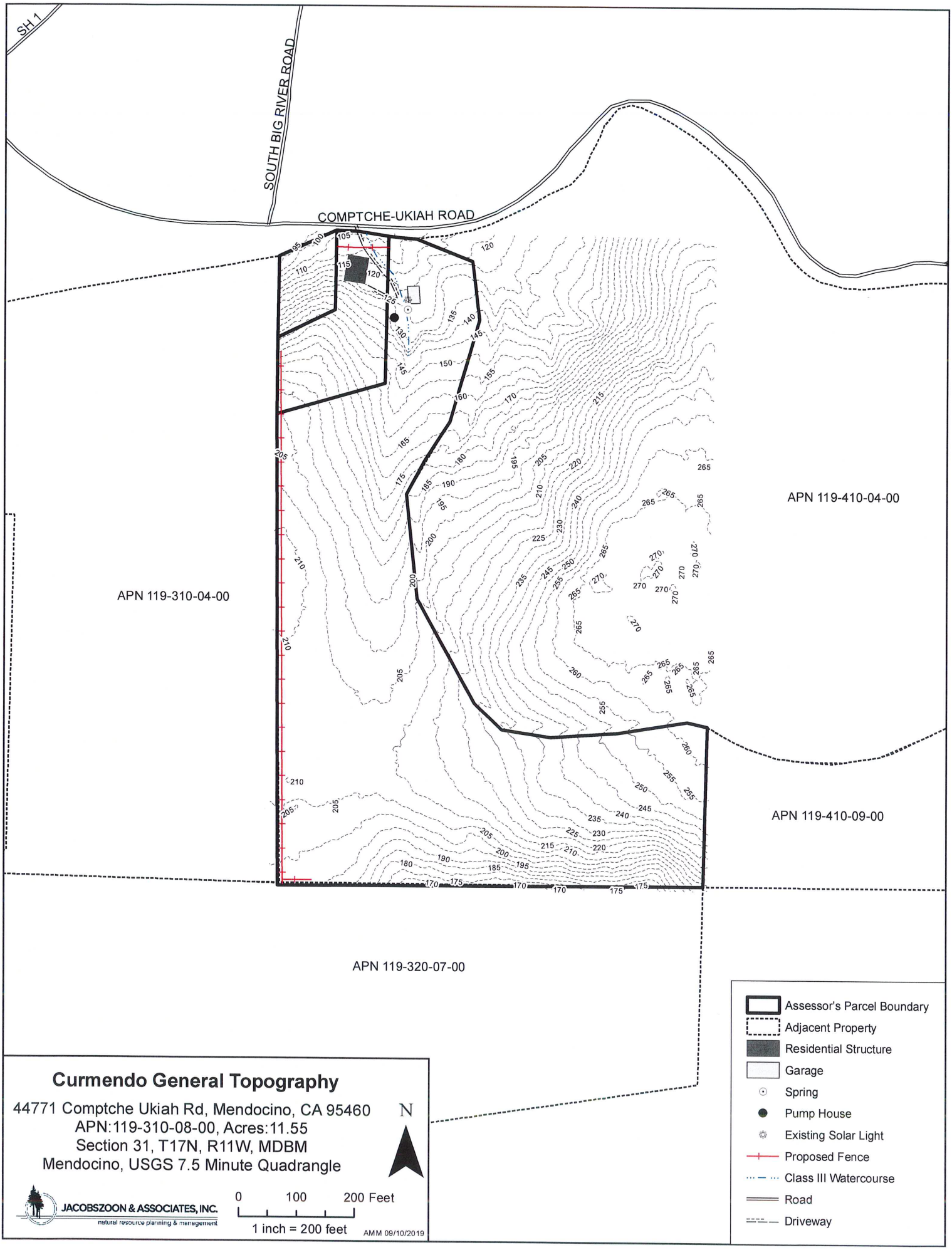








Appendix D: Supporting Figures (Maps)



Curmendo General Topography

44771 Comptche Ukiah Rd, Mendocino, CA 95460
APN:119-310-08-00, Acres:11.55
Section 31, T17N, R11W, MDBM
Mendocino, USGS 7.5 Minute Quadrangle

N

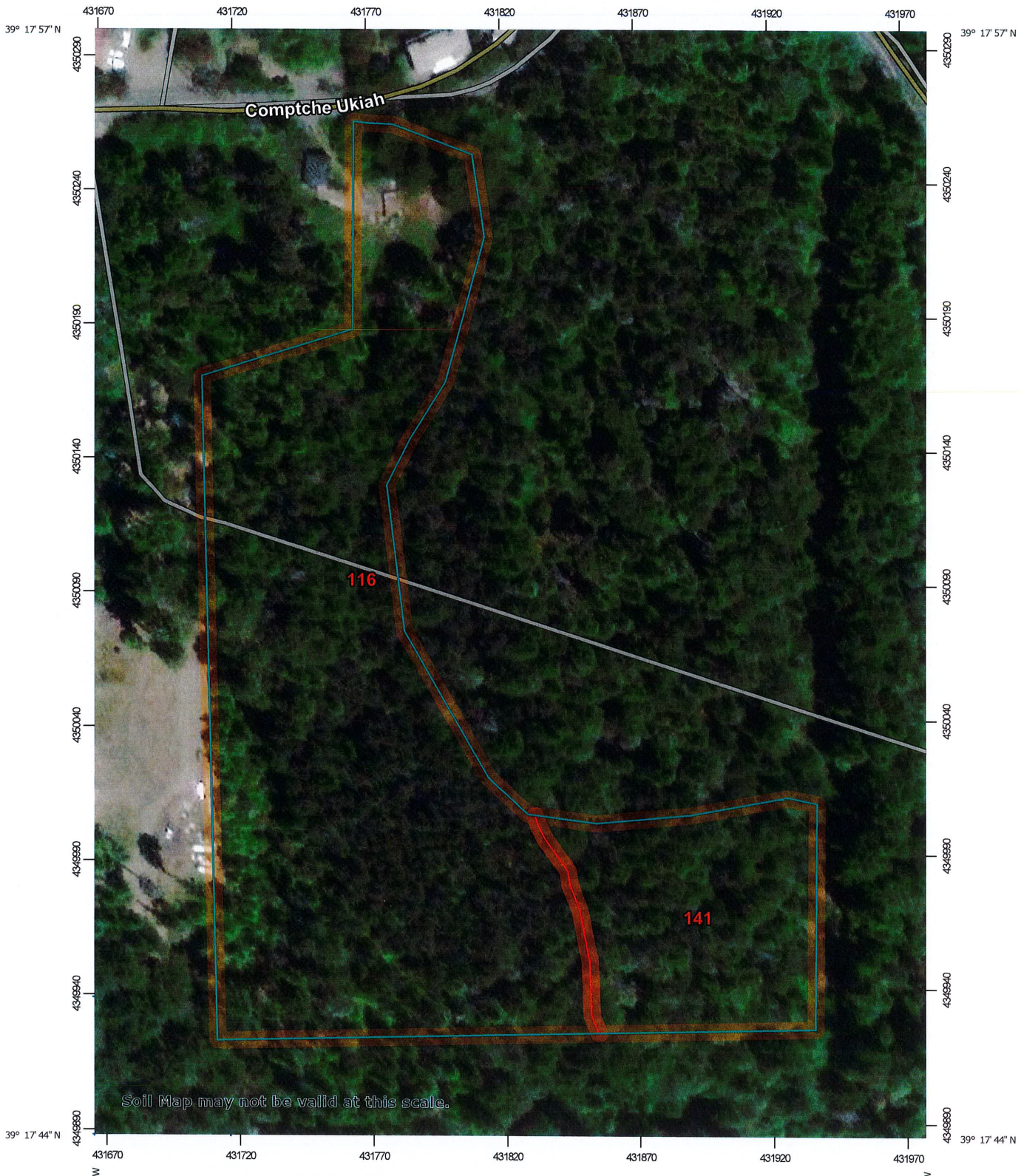
JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

0 100 200 Feet
1 inch = 200 feet

AMM 09/10/2019


erty
map.
Comptche-Ukiah Rd
Lege
44771 Comptche Ukiah Rd

Soil Map—Mendocino County, Western Part, California
(Curmendo)



Map Scale: 1:2,010 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Mendocino County, Western Part, California
Survey Area Data: Version 13, Sep 17, 2018

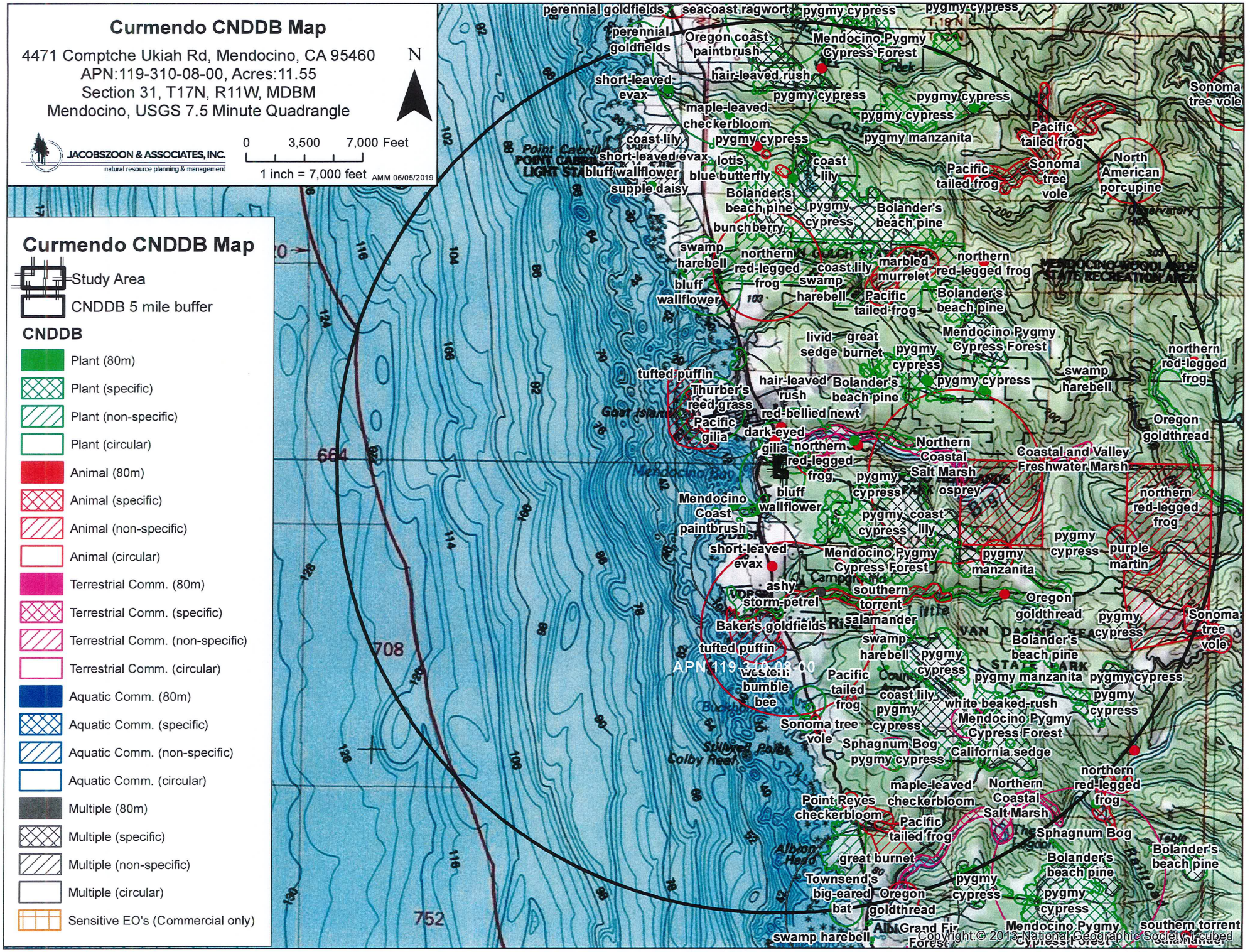
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

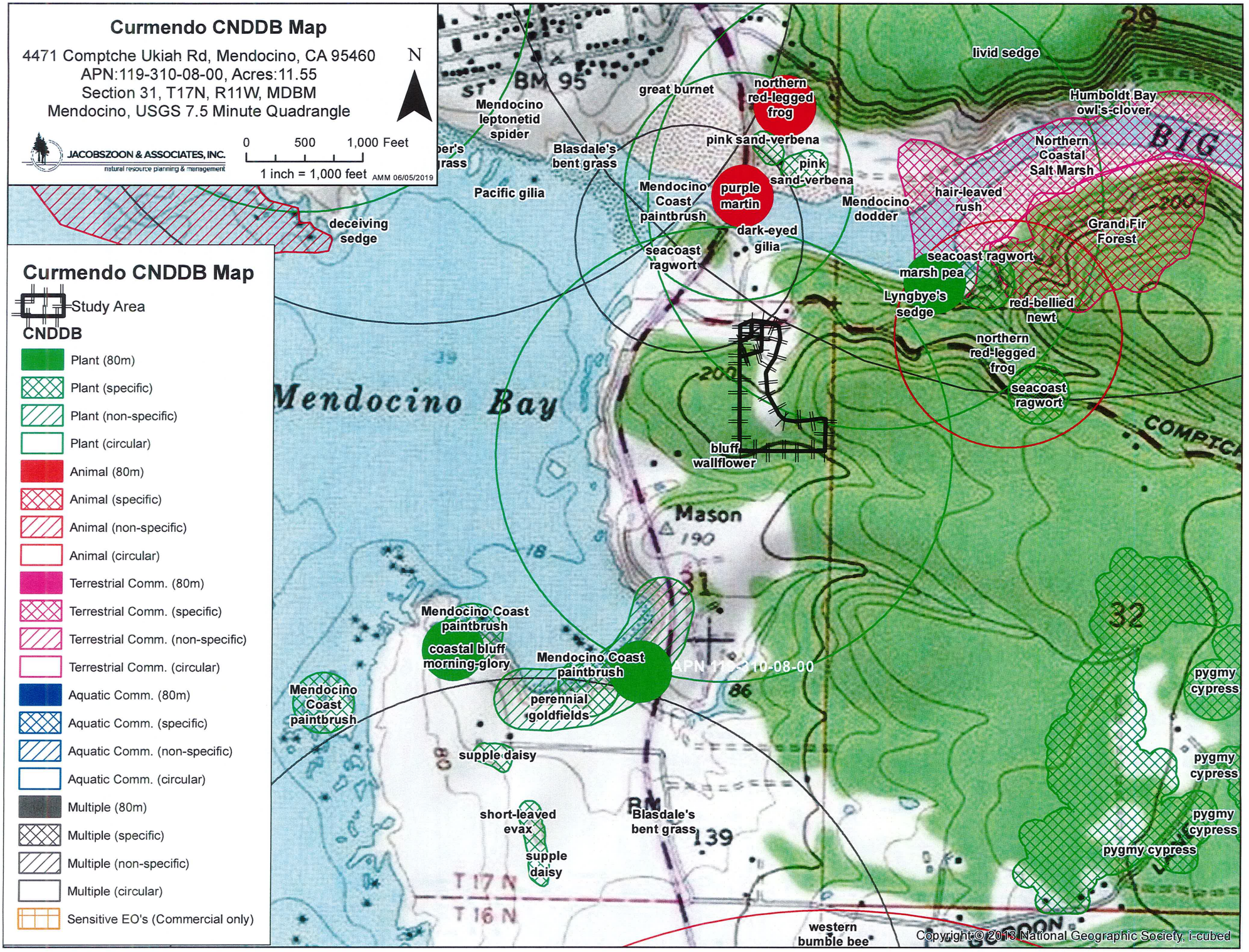
Date(s) aerial images were photographed: Dec 31, 2009—Jun 13, 2017

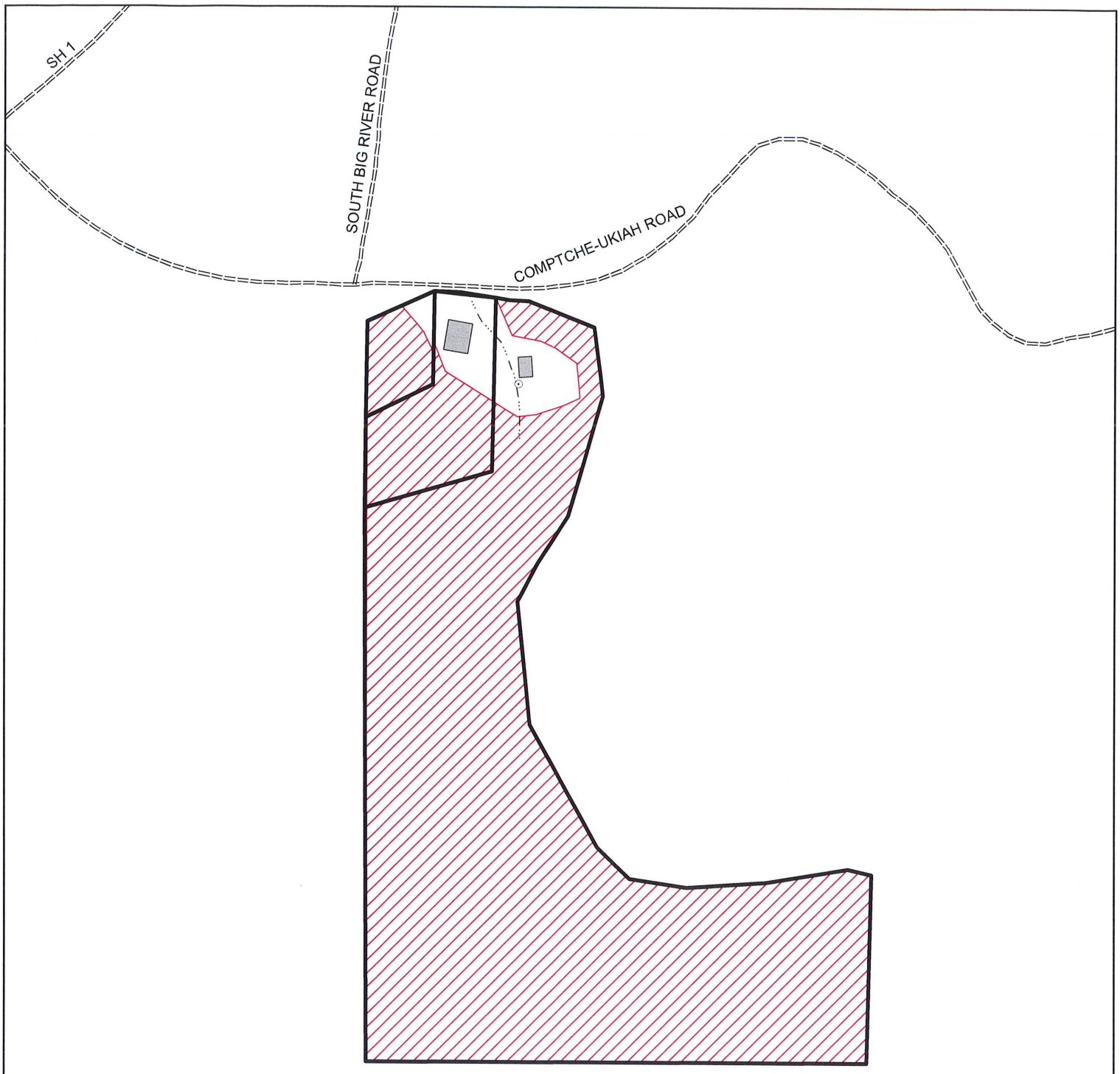
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
116	Bruhel-Shinglemill complex, 2 to 15 percent slopes	7.2	79.9%
141	Ferncreek sandy loam, 2 to 9 percent slopes	1.8	20.1%
Totals for Area of Interest		**9.0**	**100.0%**


Curmendo CNDDB Map
4471 Comptche Ukiah Rd, Mendocino, CA 95460
APN:119-310-08-00, Acres:11.55
Section 31, T17N, R11W, MDBM
Mendocino, USGS 7.5 Minute Quadrangle
JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management
N
0 3,500 7,000 Feet
1 inch = 7,000 feet AMM 06/05/2019
Curmendo CNDDB Map
Study Area
CNDDB 5 mile buffer
CNDDB
Plant (80m)
Plant (specific)
Plant (non-specific)
Plant (circular)
Animal (80m)
Animal (specific)
Animal (non-specific)
Animal (circular)
Terrestrial Comm. (80m)
Terrestrial Comm. (specific)
Terrestrial Comm. (non-specific)
Terrestrial Comm. (circular)
Aquatic Comm. (80m)
Aquatic Comm. (specific)
Aquatic Comm. (non-specific)
Aquatic Comm. (circular)
Multiple (80m)
Multiple (specific)
Multiple (non-specific)
Multiple (circular)
Sensitive EO's (Commercial only)
perennial goldfields
seacoast ragwort
pygmy cypress
Oregon coast paintbrush
Mendocino Pygmy Cypress Forest
hair-leaved rush
short-leaved evax
maple-leaved checkerbloom
coast lily
Point Cabrillo LIGHT ST.
bluff wallflower
supple daisy
lotis blue butterfly
Pacific tailed frog
Sonoma tree vole
North American porcupine
Bolander's beach pine
bunchberry
swamp harebell
northern red-legged frog
marbled murrelet
Mendocino Woodlands State Recreation Area
tufted puffin
Thurber's reed grass
Goat Island
Pacific gilia
dark-eyed gilia
red-bellied newt
Northern Coastal Salt Marsh
Coastal and Valley Freshwater Marsh
Mendocino Bay
Mendocino Coast paintbrush
osprey
Oregon goldthread
short-leaved evax
Mendocino Pygmy Cypress Forest
ashy storm-petrel
southern torrent salamander
Baker's goldfields
western bumble bee
Sonoma tree vole
Van Damme State Park
Little River
Buckhorn Cove
Stillwell Point
Colby Reef
white beaked-rush
California sedge
Sphagnum Bog
Point Reyes checkerbloom
Albion Head
great burnet
Townsend's big-eared bat
Grand Fir Forest
Mendocino Pygmy Cypress Forest
Table Bluff
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N
0 500 1,000 Feet
1 inch = 1,000 feet AMM 06/05/2019
Curmendo CNDDB Map
Study Area
CNDDB
Plant (80m)
Plant (specific)
Plant (non-specific)
Plant (circular)
Animal (80m)
Animal (specific)
Animal (non-specific)
Animal (circular)
Terrestrial Comm. (80m)
Terrestrial Comm. (specific)
Terrestrial Comm. (non-specific)
Terrestrial Comm. (circular)
Aquatic Comm. (80m)
Aquatic Comm. (specific)
Aquatic Comm. (non-specific)
Aquatic Comm. (circular)
Multiple (80m)
Multiple (specific)
Multiple (non-specific)
Multiple (circular)
Sensitive EO's (Commercial only)
livid sedge
great burnet
northern red-legged frog
Humboldt Bay owl's-clover
Mendocino leptonetid spider
pink sand-verbena
Blasdale's bent grass
pink sand-verbena
Northern Coastal Salt Marsh
Pacific gilia
Mendocino Coast paintbrush
purple martin
Mendocino dodder
hair-leaved rush
deceiving sedge
dark-eyed gilia
Grand Fir Forest
seacoast ragwort
seacoast ragwort
marsh pea
Lyngbye's sedge
red-bellied newt
northern red-legged frog
seacoast ragwort
Mendocino Bay
bluff wallflower
Mason
Mendocino Coast paintbrush
coastal bluff morning-glory
Mendocino Coast paintbrush
APN 119-310-08-00
Mendocino Coast paintbrush
perennial goldfields
pygmy cypress
supple daisy
pygmy cypress
short-leaved evax
Blasdale's bent grass
pygmy cypress
supple daisy
pygmy cypress
T 17 N
T 16 N
western bumble bee
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Curmendo Sensitive Community Area

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N

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0 100 200 Feet
1 inch = 200 feet

AMM 08/26/2019

- Parcel Boundary
- Northern Bishop Pine Forest
- Structure
- Spring
- Class III Watercourse



Curmendo Distance from Spring to Work Area

4471 Comptche Ukiah Rd, Mendocino, CA 95460
APN:119-310-08-00, Acres:11.55
Section 31, T17N, R11W, MDBM
Mendocino, USGS 7.5 Minute Quadrangle

N

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0 37.5 75 Feet
1 inch = 75 feet

AMM 08/26/2019

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community