September 29, 2020

CASE #: CDP_2020-0022
DATE FILED: 8/19/2020
OWNER/APPLICANT: WILLIAM & AUDREY IRWIN
REQUEST: Standard Coastal Development Permit to develop a vacant parcel with a single family residence, a detached garage, establishment of an on-site well with a pump house and water storage tank, an on-site septic system and driveway.
LOCATION: In the Coastal Zone, 3± miles south of Albion town center, 0.5± miles east of the intersection of Cameron Road (CR 516) and State Route 1 (SR 1), on the south side of Cameron Rd., at the end of a private road, located at 1656 Cameron Rd., Elk (APN: 126-110-12).
ENVIRONMENTAL DETERMINATION: Categorically Exempt.
SUPERVISORIAL DISTRICT: 5
STAFF PLANNER: JESSIE WALDMAN
RESPONSE DUE DATE: October 13, 2020

PROJECT INFORMATION CAN BE FOUND AT:
https://www.mendocinocounty.org/government/planning-building-services/public-agency-referrals

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

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

☐ No comment at this time.
☐ Recommend conditional approval (attached).
☐ Applicant to submit additional information (attach items needed, or contact the applicant directly, copying Planning and Building Services in any correspondence you may have with the applicant)
☐ Recommend denial (Attach reasons for recommending denial).
☐ Recommend preparation of an Environmental Impact Report (attach reasons why an EIR should be required).
☐ Other comments (attach as necessary).

REVIEWED BY:

Signature ___________________ Department ___________________ Date ______________

COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
860 NORTH BUSH STREET • UKIAH • CALIFORNIA • 95482
120 WEST FIR STREET • FT. BRAGG • CALIFORNIA • 95437
CASE: CDP_2020-0022

OWNER/ APPLICANT/ AGENT: WILLIAM C & AUDREY J IRWIN

REQUEST: Standard Coastal Development Permit to develop a vacant parcel with a single family residence, a detached garage, establishment of an on-site well with a pump house and water storage tank, an on-site septic system and driveway.

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APN/S: 126-110-12

PARCEL SIZE: 5.09± Acres

GENERAL PLAN: Rural Residential (RR5DL:R*)
ZONING: Rural Residential (RR:5)

EXISTING USES: VACANT

DISTRICT: 5th Supervisorial District (Williams) N/A

RELATED CASES:

ADJACENT GENERAL PLAN
NORTH: Rural Residential RR5DL
EAST: Rural Residential RR5
SOUTH: Range Land RL160
WEST: State Route 1

ADJACENT ZONING
NORTH: Rural Residential RR5DL
EAST: Range Land RL160
SOUTH: Rural Residential RR5
WEST: State Route 1

ADJACENT LOT SIZES
NORTH: 5± Acres
EAST: 5± Acres
SOUTH: 153± Acres
WEST: State Route 1

ADJACENT USES
NORTH: Residential
EAST: Residential
SOUTH: Agricultural
WEST: State Route 1

REFERRAL AGENCIES

LOCAL
- Archaeological Commission
- Assessor’s Office
- Building Division (FB)
- Department of Transportation (DOT)
- Environmental Health (EH) (FB)
- ELK Community Services District
- Planning Division (UKIAH)
- Sonoma State University

STATE
- CALFIRE (Land Use)
- California Coastal Commission
- California Dept. of Fish & Wildlife
- California Native Plant Society

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

ADDITIONAL INFORMATION:
CalFire #336-20 Completed

Rare Plan Assessment & Botanical Survey, prepared by Alicia Ives Ringstad of Jacobszoon & Associates, Inc (Rare Plan, 2020):
- Special Natural Communities and Other ESHA (Bishop Pine and Four (4) Special Status Wildlife Species)
- 50’ Reduced buffer for Bishop Pine (Rare Plan, Section 6.1, 6.5 & 6.6, pg. 18 and Appendix D, pg. 65)
- No wetland Conditions or hydrophytic vegetation dominated areas were observed within or adjacent (Rare Plan, Section 6.1, pg. 19)

STAFF PLANNER: JESSIE WALDMAN
DATE: 9/18/2020
1. MAC: GIS
   NO

2. FIRE HAZARD SEVERITY ZONE: GIS; CalFIRE FRAP Maps/GIS
   Very High Fire Hazard

3. FIRE RESPONSIBILITY AREA: CalFIRE (State Responsible Agency) #339-20
   Elk Community Services District (Local Responsible Agency)

4. FARMLAND CLASSIFICATION: GIS
   Grazing Land (G)

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

6. COASTAL GROUNDWATER RESOURCE AREA: GIS
   Critical Water Area

7. SOIL CLASSIFICATION: Mendocino County Soils Study Eastern/Western Part
   144—Flumeville clay loam; 139—Dystropepts

8. PYGMY VEGETATION OR PYGMY CAPABLE SOIL: GIS
   NO

9. WILLIAMSON ACT CONTRACT: GIS/Mendocino County Assessor's Office
   NO; Adjacent to Non-Prime

10. TIMBER PRODUCTION ZONE: GIS
    NO

11. WETLANDS CLASSIFICATION: GIS
    Freshwater Emergent Wetland

12. EARTHQUAKE FAULT ZONE: GIS
    NO

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

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

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

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

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

18. WATER EFFICIENT LANDSCAPE REQUIRED: Policy RM-7; General Plan 4-34
    NO

19. WILDMOUNTAIN RIVER: www.rivers.gov
   NO

20. SPECIFIC PLAN/SPECIAL PLAN AREA: Various Adopted Specific Plan Areas; GIS
    NO

21. STATE CLEARINGHOUSE REQUIRED: Policy
    NO

22. OAK WOODLAND AREA: USDA
    NO

23. HARBOR DISTRICT: Sec. 20.512
    NO

24. LCP LAND USE CLASSIFICATION: LCP Land Use maps/GIS
    Land Use Map 19: NAVARRO

25. LCP LAND CAPABILITIES & NATURAL HAZARDS: LCP Land Capabilities maps/GIS; 20.500
    Non-Prime Agricultural Lands; High Productivity Timberland; Beach deposits and stream alluvium and terraces (Zone 3)

26. LCP HABITATS & RESOURCES: LCP Habitat maps/GIS; 20.496
    Barren

27. COASTAL COMMISSION APPEALABLE AREA: Coastal Commission Appealable Area Map and Natural Resources & Coastal Areas maps/GIS; 20.544
    NO; Adjacent

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

29. HIGHLY SCENIC AREA: Policy RM-7; General Plan 4-34
    Conditionally Highly Scenic

30. BIOLOGICAL RESOURCES & NATURAL AREAS: Biological Resources & Natural Area Map; GIS; General Plan 4-9
    NO

31. BLUFFTOP GEOLOGY: Sec. 20.500.020
    NO

FOR PROJECTS WITHIN THE COASTAL ZONE ONLY

24. LCP LAND USE CLASSIFICATION: Land Use Map 19: NAVARRO

25. LCP LAND CAPABILITIES & NATURAL HAZARDS: Non-Prime Agricultural Lands; High Productivity Timberland; Beach deposits and stream alluvium and terraces (Zone 3)

26. LCP HABITATS & RESOURCES: Barren

27. COASTAL COMMISSION APPEALABLE AREA: Coastal Commission Appealable Area Map and Natural Resources & Coastal Areas maps/GIS; 20.544
    NO; Adjacent
COASTAL ZONE APPLICATION FORM

APPLICANT
Name: William C. and Audrey J. Irwin
Mailing Address: 2071 Galloping Way
City: Acton
State: CA
Zip Code: 93510
Phone: 661-269-2071

PROPERTY OWNER
Name: William C. and Audrey J. Irwin
Mailing Address: 2071 Galloping Way
City: Acton
State: CA
Zip Code: 93510
Phone: 661-269-2071

AGENT
Name
Mailing Address
City
State
Zip Code
Phone

PARCEL SIZE
Square feet
5.09
Acres

STREET ADDRESS OF PROJECT
1656 Cameron Road, Elk, CA 95432

ASSESSOR'S PARCEL NUMBER(S)
126 110 12

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

Signature of Applicant/Agent
Date
Signature of Owner
Date
8/6/2020
COASTAL ZONE - SITE AND PROJECT DESCRIPTION QUESTIONNAIRE

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

THE PROJECT

1. Describe your project and include secondary improvements such as wells, septic systems, grading, vegetation removal, roads, etc.
   New Residence/Garage/Driveway/Small Filter House/Water Storage/Septic System. Wood Frame, Aluminum Roof, Fire Resistant Siding. Property has existing well, Water test clean, results sent to County. Botanical Surveys (3) and Forestry Survey through Jacobzoon and Associates. Complete Septic System Designed by Andy Rittiman and Associates, Pits and Perc test, Complete GeoTec Survey by Chandler Koehn. Complete Power and Telephone are underground and exist in a Power Box at the NE corner of the property. Currently the property is undeveloped, with Pine/Fir trees. There is an old shed (8'x12'), sitting on stones near the NE corner of the property left by the previous owner, this will be dismantled and removed. At proposed site is, bedrock is 5' below surface. Driveway, hard pack black gravel, will follow current contour of elevation. Much of the current ground vegetation is poison oak, so that growth will be curtailed, will maintain natural growth outside of fire zone.

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

   TYPE OF UNIT | NUMBER OF STRUCTURES | SQUARE FEET PER DWELLING UNIT
   --------------|---------------------|--------------------------
   ✔ Single Family | 1                   | 2924 Square Ft
   □ Mobile Home   |                     |                          |
   □ Duplex        |                     |                          |
   □ Multifamily   |                     |                          |

   If Multifamily, number of dwelling units per building: ________________

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

   Total square footage of structures: __________________________
   Estimated employees per shift: ______________________________
   Estimated shifts per day: ________________________________
   Type of loading facilities proposed: ________________________

4. Will the proposed project be phased?  □ Yes  □ No
   If Yes, explain your plans for phasing.
5. Are there existing structures on the property? [ ] Yes [ ] No
   If yes, describe below and identify the use of each structure on the plot plan.
   8'x12' Plywood Shed, Stacked rocks used for corner foundations, left by previous owners. No use, will be dismantled and removed.

6. Will any existing structures be demolished? [ ] Yes [ ] No
   Will any existing structures be removed? [ ] Yes [ ] No
   If yes to either question, describe the type of development to be demolished or removed, including the relocation site, if applicable.
   8'x12' Plywood Shed

7. Project Height. Maximum height of structure ___________ feet.

8. Lot area (within property lines): ___________ square feet [ ] acres

9. Lot Coverage:

<table>
<thead>
<tr>
<th></th>
<th>EXISTING</th>
<th>NEW PROPOSED</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building coverage</td>
<td>________</td>
<td>2924+500</td>
<td>3424</td>
</tr>
<tr>
<td>Paved area</td>
<td>________</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>Landscaped area</td>
<td>________</td>
<td>40,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Unimproved area</td>
<td>________</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td></td>
<td>________</td>
<td>178,296</td>
<td>________</td>
</tr>
<tr>
<td>GRAND TOTAL:</td>
<td>221,720</td>
<td>square feet</td>
<td>square feet</td>
</tr>
</tbody>
</table>
   (Should equal gross area of parcel)

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

11. Parking will be provided as follows:

<table>
<thead>
<tr>
<th>Number of Spaces</th>
<th>Existing</th>
<th>Proposed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of covered spaces</td>
<td>2</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>Number of uncovered spaces</td>
<td>________</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>Number of standard spaces</td>
<td>________</td>
<td>________</td>
<td>________</td>
</tr>
<tr>
<td>Number of handicapped spaces</td>
<td>________</td>
<td>________</td>
<td>________</td>
</tr>
</tbody>
</table>
12. Utilities will be supplied to the site as follows:

A. Electricity
   - Utility Company (service exists to the parcel).
   - Utility Company (requires extension of services to site: _______ feet _______ miles
   - On Site generation, Specify: ________________________________
   - None

B. Gas
   - Utility Company/Tank
   - On Site generation, Specify: ________________________________
   - None

C. Telephone: □ Yes □ No

13. Will there be any exterior lighting? □ Yes □ No
   If yes, describe below and identify the location of all exterior lighting on the plot plan and building plans.
   WAC Lighting Icon 2 Light 14” and 16” Tall LED Outdoor Wall Sconce  Model: WS-W54614-BZ
   Main Entrance East (2 total) on door sides, Garage door facing SW (1), Above Garage Double Doors (1). Would like to have these also on the West side also, if possible, (3) center and outside Bedroom Patio Doors before tall windows.

14. What will be the method of sewage disposal?
   - Community sewage system, specify supplier ________________________________
   ■ Septic Tank
   - Other, specify ________________________________

15. What will be the domestic water source?
   - Community water system, specify supplier ________________________________
   ■ Well
   - Spring
   - Other, specify ________________________________

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

For grading and road construction, complete the following:

A. Amount of cut: ____________________ cubic yards
B. Amount of fill: ____________________ cubic yards
C. Maximum height of fill slope: _________ feet
D. Maximum height of cut slope: _________ feet
E. Amount of import or export: ____________________ cubic yards
F. Location of borrow or disposal site: ________________________________
17. Will vegetation be removed on areas other than the building sites and roads? □ Yes    □ No
   If yes, explain:
   Yes, if necessary for fire clearance

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

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

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

21. Is the proposed development visible from:
   A. State Highway 1 or other scenic route? □ Yes    □ No
   B. Park, beach or recreation area? □ Yes    □ No

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

23. Does the development involve diking, filling, dredging or placing structures in open coastal waters,
    wetlands, estuaries or lakes?
   A. Diking □ Yes    □ No
   B. Filling □ Yes    □ No
   C. Dredging □ Yes    □ No
   D. Placement of structures in open coastal waters, wetlands, estuaries or lakes □ Yes    □ No

   Amount of material to be dredged or filled? ___________ cubic yards.

   Location of dredged material disposal site: ________________________

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

If you need additional room to answer any question, attach additional sheets.
CASE: CDP 2020-0022
OWNER: IRWIN, William & Audrey
APN: 126-110-12
APLCT: William C. & Audrey J. Irwin
AGENT:
ADDRESS: 1656 Cameron Road, Elk

MENDOCINO COUNTY PLANNING DEPARTMENT - 8/25/2020

Public Roads
Driveways/Unnamed Roads

AERIAL IMAGERY
CASE: CDP 2020-0022
OWNER: IRWIN, William & Audrey
APN: 126-110-12
APLCT: William C. & Audrey J. Irwin
AGENT:  
ADDRESS: 1656 Cameron Road, Elk

BETWEEN CAMERON ROAD AND HIGHWAY 1 INTERSECTION AND MALLO PASS CREEK EVERYTHING WITHIN VIEW EASTERY OF HIGHWAY 1 IS DESIGNATED HIGHLY SCENIC.

LCP LAND USE MAP 19: NAVARRO
CASE: CDP 2020-0022
OWNER: IRWIN, William & Audrey
APN: 126-110-12
APLCT: William C. & Audrey J. Irwin
AGENT:
ADDRESS: 1656 Cameron Road, Elk

Legend: Land Capabilities/
Natural Hazards
Coastal Zone Boundary
Incorporated City Limits
LAND CAPABILITIES
Agricultural Land
Prime
Non-Prime
Timberland
High Productivity
Moderate
NATURAL HAZARDS
Fault Repro (for further
information see Appendix
Special Studies
May 1974)
Seismicity
Bedrock
(Marine terrace
Deposits (Zone 1)
Strong Shaling)
Beach Deprecates
and Spillway
(Marine terraces
Zone 3)
Interim Shaling
Public Roads
Assessors Parcels
LCP LAND CAPABILITIES & NATURAL HAZARDS
CASE: CDP 2020-0022
OWNER: IRWIN, William & Audrey
APN: 126-110-12
APLCT: William C. & Audrey J. Irwin
AGENT:
ADDRESS: 1656 Cameron Road, Elk

Public Roads
Assessors Parcels
POST LCP CERTIFICATION AND APPEAL JURISDICTION
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Riverine

CASE: CDP 2020-0022
OWNER: IRWIN, William & Audrey
APN: 126-110-12
APLCT: William C. & Audrey J. Irwin
AGENT:
ADDRESS: 1656 Cameron Road, Elk

NATIONAL WETLANDS INVENTORY
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Riverine
CASE: CDP 2020-0022
OWNER: IRWIN, William & Audrey
APN: 126-110-12
APLCT: William C. & Audrey J. Irwin
AGENT: 
ADDRESS: 1656 Cameron Road, Elk

MENDOCINO COUNTY PLANNING DEPARTMENT - 8/25/2020

GROUND WATER RESOURCES

Critical Water Areas
Assessors Parcels
CASE: CDP 2020-0022
OWNER: IRWIN, William & Audrey
APN: 126-110-12
APLCT: William C. & Audrey J. Irwin
AGENT: 
ADDRESS: 1656 Cameron Road, Elk

HIGHLY SCENIC & TREE REMOVAL AREAS
CASE: CDP 2020-0022
OWNER: IRWIN, William & Audrey
APN: 126-110-12
APLCT: William C. & Audrey J. Irwin
AGENT:
ADDRESS: 1656 Cameron Road, Elk

ESTIMATED SLOPE

- 0° - 14°
- 15° - 32°
- 33° - 72°
CASE: CDP 2020-0022
OWNER: IRWIN, William & Audrey
APN: 126-110-12
APLCT: William C. & Audrey J. Irwin
AGENT:
ADDRESS: 1656 Cameron Road, Elk

Urban & Built-Up Land (D)
Grazing Land (G)
Non-Ag & Natural Vegetation (nv)
Rural Residential & Rural Commercial (R)
RARE PLANT ASSESSMENT & BOTANICAL SURVEY

Prepared For:
Bill Irwin
1656 Cameron Rd. Elk, CA 95432
APN: 126-110-12

Alicia Ives Ringstad
Senior Wildlife Biologist

Date: July 22, 2020
# Table of Contents

**Section 1.0: Introduction** ................................................................. 3

**Section 2.0: Regulatory Background** ............................................... 3

2.1 ESHA ........................................................................................................ 3

2.2 Natural Communities and Sensitive Natural Communities (Other ESHA) ......................................................... 3

2.3 Special-Status Species ............................................................................. 5

**Section 3.0: Field Survey Methodology** .............................................. 5

3.1 Assessment Methods ............................................................................... 5

3.2 Database Resource Descriptions ........................................................... 6

3.3 Special-status Plant Species .................................................................. 8

3.4 Special-status Animal Species ............................................................... 9

3.5 Natural Communities and Other ESHA .................................................. 9

3.5.1 Non-sensitive Natural Communities .................................................. 10

3.5.2 Sensitive Natural Communities and ESHA ......................................... 10

3.5.3 Critical Habitat .................................................................................. 10

**Section 4.0: Study Area Setting** ......................................................... 11

4.1 Topography and Soils ........................................................................... 11

4.2 Climate and Hydrology ......................................................................... 12

4.3 Biota and Land Use ................................................................................ 12

4.4 Vegetation .............................................................................................. 12

**Section 5.0: Field Survey Results** ....................................................... 13

5.1 Natural Communities and Other ESHA ............................................... 13

5.1.2 Sensitive Natural Communities and Other ESHA ............................... 13

5.2 Special-status Species .......................................................................... 15

5.2.1 Special-status Plant Species ............................................................... 15

5.2.2 Special-status Animal species ........................................................... 16

**Section 6.0: Assessment Summary and Recommendations/Mitigations** .................................................................................. 18

6.1 Sensitive Natural Communities and Other ESHA ............................... 18

6.2 Special-status Species ........................................................................... 19

6.2.1 Special-status Plant Species ............................................................... 19

6.2.2 Special-status Wildlife Species ........................................................... 19

6.3 Wildlife Corridors .................................................................................. 21

6.4 Critical Habitat ....................................................................................... 21
Section 1.0: Introduction
Jacobszoon & Associates, Inc. has performed an Environmentally Sensitive Habitat Area (ESHA) survey and assessment, biological assessment and botanical survey on 5.09 acres at 1656 Cameron Rd. Elk, Mendocino County, California, APN: 126-110-12 (Appendix F: Figures 1-3). The proposed project includes clearing approximately 1.5 acres for a homesite development, which includes a 2,924 sq. ft. house, 500 sq. ft. garage, septic tank and leach field, driveway, well and pumphouse (Appendix F: Figures 4). Surveys were conducted on August 20, 2019, March 25, 2020 and May 22, 2020.

The purpose of this study was to identify and map areas within the parcels that are potential environmentally sensitive habitat areas (ESHA), as defined by the California Coastal Commission (CCC), to locate special-status plants, and special-status animal habitats to determine if they would be directly or potentially impacted by the proposed development.

Section 2.0: Regulatory Background

2.1 ESHA
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.

2.2 Natural Communities and Sensitive Natural Communities (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 2019), Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986), and A Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009 and online 2019).
Sensitive Natural Communities

Natural Communities are evaluated using NatureServe’s Heritage Methodology, the same system used to assign global and state rarity ranks for plant and animal species in the CNDDB. VegCAMP has been ranking California Natural Communities by their rarity and threat since the inception of the program. However, since 2012 the ranking methodology has become more transparent and defensible through the advent of a rank calculator. VegCAMP and the California Native Plant Society’s Vegetation Program now use this calculator to rank Natural Communities; rankings are reviewed by both programs.

The basic ranking concepts of rarity and threats used in the “Heritage Methodology” since the 1970’s remain the same, using the best and most recent scientific information available. However, as a result of better definitions based on classification and mapping of California’s Natural Communities, we can apply standardized quantitative rarity and threat parameters and compute weighted scores for rarity and threats. For rarity, the ranking involves the knowledge of range and distribution of a given type of vegetation, and the proportion of occurrences that are of good ecological integrity. Threats and trends are likewise considered in categories such as residential and commercial development, agriculture, energy production and mining, and invasive and other problematic species and genes (among others). Threat scope (typically assessed within a 20-year timeframe for vegetation) and severity are used to calculate an overall threat score, which is added to the overall rarity score for a single rank of 1 through 5. Evaluation is done at both the Global (full natural range within and outside of California) and State (within California) levels resulting in a single G (global) and S (state) rank ranging from 1 (very rare and threatened) to 5 (demonstrably secure). For more details on the components of ranking see the “factor reference sheet” on the conservation rank calculator mentioned above.

Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities to be addressed in the environmental review processes of CEQA and its equivalents. A question mark (?) denotes an inexact numeric rank because we know we have insufficient samples over the full expected range of the type, but existing information points to this rank; it is the equivalent of the NatureServe rank calculator's "range of rankings" option. We have not provided the G and S rank for all associations in the October 2018 version of this classification. However, associations currently designated as being of S3 or rarer are indicated with a Y in the Sensitive column. For alliances with State ranks of S1-S3, all associations within them are also considered Sensitive. Ranking is an ongoing process and we expect to provide association level ranks for all of the S3 or rarer entities in the future. Please note that semi-natural stands are not ranked, as these are defined and strongly dominated by non-native species.

As of 2018, about half of California has been mapped and classified according to the state and national standard. Accordingly, not all Sensitive Natural Communities have been described, and the ranks of some current communities may change as we refine their known distributions. However, rankings are based on the best available information.
2.3 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 botanical surveys that were conducted for this project are based on *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

Section 3.0: Field Survey Methodology

3.1 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. 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, and (3) if sensitive biological communities (ESHAs) are present.

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 Elk 7.5' quadrangle topographic map (USGS 1978), and available aerial photographs. Field surveys were conducted by Jacobszoon and Associates, Inc. on August 20, 2019, March 25, 2020 and May 22, 2020 to identify and delineate potential ESHAs within the Study Area. 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.
3.2 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 Natural Diversity Database (CNDDB) Spotted Owl Data, CWHR, RareFind and Quick Viewer (online edition, v5.80.28i).

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.

**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.

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.

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)

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. The NSO activity Centers located within 0.7 miles of the Study Area.

3.3 Special-status Plant 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 (Appendix F, Figure 5 & 6). Potential occurrence of special-status plants in the Study Area was evaluated by first determining which special-status species occur in the vicinity of the Study Area or in similar biological communities through a literature and database search (Appendix A). A list of target plant species with potential to occur in the Study Area was generated, which guided subsequent field surveys. 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.

Special-status plant surveys were conducted by Alicia Ives Ringstad of Jacobszoon and Associates, Inc. during visits on August 20, 2019, March 25, 2020 and May 22, 2020. A total of six (6) survey hours were spent conducting special-status plant surveys. Surveys were conducted by wandering transects in areas most likely to support special-status plant species. 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 2017).
3.4 Special-status Animal Species

Potential occurrence of special-status wildlife in the Study Area was evaluated by Jacobszoon and Associates, Inc. by determining which special-status species occur in the vicinity of the Study Area or in similar biological communities through a literature and database search. Records from the CNDDB (CDFW 2019) and the USFWS Species list for Mendocino County (USFWS 2019) were reviewed to determine which special-status wildlife species have been documented to occur in the vicinity of the Study Area (Appendix A). Site visits were conducted by Alicia Ives Ringstad of Jacobszoon and Associates, Inc. during visits on August 20, 2019, March 25, 2020 and May 22, 2020, to evaluate potentially suitable habitat characteristics for special-status species in the Study Area.

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.

3.5 Natural Communities and Other ESHA

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 2nd Edition (CNPS 2019). 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.
3.5.1 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.

3.5.2 Sensitive Natural Communities and ESHA
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.

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 2019). 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.

3.5.3 Critical Habitat
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 4.0: Study Area Setting

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

4.1 Topography and Soils

The Study Area is located at 1656 Cameron Road Elk, CA, located in Section 4, T15N, R17W, in Mount Diablo Base and Meridian, in the Elk USGS 7.5 minute quadrangle, and encompasses approximately 1.5 acres and is located at 400-460 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: Dystropepts, 30 to 75 percent slopes, and Flumeville clay loam, 0 to 5 percent slopes (Appendix F: Figure 7). Descriptions of the soil series are as follows:

Dystropepts (Map Unit Symbol: 139): Included in this map unit are small areas of Abalobadiah and Vizcaino soils, area of Rock outcrop, and areas of mass wasting along ocean bluffs. Included areas make up about 25 percent of the total acreage. Native vegetation is mainly brush or grass and grand fir, Douglas-fir, and redwood. Elevation ranges from 10 to 400 feet.

- Dystropepts series consists of well drained soils that are shallow or moderately deep to bedrock. These soils are on side slopes of marine terraces or coastal hills. These soils formed in sandstone or shale. Slopes range from 30 to 75 percent.

Flumeville clay loam (Map Unit Symbol: 144): Included with this soil in mapping are small areas of Windyhollow and Cabrillo soils and Tropaquepts. Included areas make up about 15 percent of the total acreage of the unit. Native vegetation is mainly perennial grasses and forbs. Elevation ranges from 10 to 1,200 feet.

- Flumeville series consists of very deep, poorly drained soils that formed in alluvium derived from mixed rock sources. These soils are on marine terraces.

Typical pedons for the soils found on site are as follows:

**Dystropepts:**

A1—0 to 11 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist

A2—11 to 19 inches; dark grayish brown (10YR 4/2) very gravelly clay loam, black (10YR 2/1) moist

R—19 inches; hard, slightly hard, and soft, fractured shale.

**Flumeville:**

0 to 11 inches; dark gray (10YR 4/1) clay loam, very dark grayish brown (10YR 3/2) moist
Bt1—11 to 19 inches; grayish brown (10YR 5/2) clay loam, very dark brown (10YR 2/2) moist; common fine and medium prominent reddish brown (5YR 4/4) mottles, dark reddish brown (5YR 2.5/2) moist

Bt2—19 to 26 inches; grayish brown (10YR 5/2) clay, very dark grayish brown (10YR 3/2) moist; common fine and medium prominent strong brown (7.5YR 5/6) mottles, strong brown (7.5YR 5/6) moist

Bt3—26 to 33 inches; light gray (10YR 7/2) clay, grayish brown (10YR 5/2) moist; common fine and medium prominent strong brown (7.5YR 5/8) mottles, strong brown (7.5YR 5/8) moist

Bt4—33 to 55 inches; white (5Y 8/2) clay, pale yellow (5Y 7/3) moist; common fine and medium prominent strong brown (7.5YR 5/8) mottles, strong brown (7.5YR 5/8) moist

Bt5—55 to 62 inches; white (5Y 8/2) clay, light gray (5Y 7/2) moist; few fine and medium prominent strong brown (7.5YR 5/8) mottles, strong brown (7.5YR 5/8) moist

4.2 Climate and Hydrology
The Study Area is located in the coastal fog belt of Mendocino County. Average annual precipitation for Elk, CA is 56.61 inches, with the majority falling as rain and fog drip in the winter months (December through March). The mean daily low and high temperatures in degrees Fahrenheit range from 45.2 in December to 67.3 in August/September (US Climate Data 2019). Monthly precipitation for Fort Bragg, is 10.2 inches to 0.1 inch) respectively. Although the Study Area experiences substantial rainfall events, evidence of surface ponding, repeated directional flow, perched water table, and/or saturated substrates for extended periods (14 days or greater) are not present.

4.3 Biota and Land Use
This 5.09-acre parcel is currently undeveloped. The adjacent parcels are single family residences. The parcel is located within the Coastal Zone and is zoned RR5 (Rural Residential, one dwelling unit per 5 acres).

4.4 Vegetation
The dominant vegetation within the Study Area is Bishop pine (*Pinus muricata*), Grand fir (*Abies grandis*), tan oak (*Notholithocarpus deniflorus*), Grand fir (*Abies grandis*). There are no late successional or old growth stands within the Study Area. A scattered one-two layered mixed conifer hardwood stand is present on the project. The understory consists of sword fern (*Polystichum munitum*), huckleberry (*Vaccinium ovatum*), Douglas iris (*Iris douglasiana*), and conifer reproduction (saplings). Please see the overall vascular species list of plants encountered within the Study Area in Appendix B.
Section 5.0: Field Survey Results

The Study Area is not located with Open Space and Environmentally Sensitive Habitat Areas according to the County of Mendocino Local Coastal Plan Map (Map 14).

5.1 Natural Communities and Other ESHA

The CDFW-CNPS Protocol for the “Combined Vegetation Rapid Assessment and Relevé Field Form” and “Protocol for Combined Vegetation Rapid Assessment and Relevé Sampling Field Form” were used to determine the habitat types present within the parcels. The Vegetation Rapid Assessment method was chosen for the forested Study Area (See Appendix C for data sheets).

5.1.2 Sensitive Natural Communities and Other ESHA

According to USDA Forest Service CalVeg mapping delineation, the Study Area is located within Bishop pine forest (reference Appendix F: Figure 8). CalVeg mapping delineations within the parcels include: Bishop pine forest and woodland. This habitat type is considered to be *Pinus muricata-Pinus radiata* forest and woodland, an MCV2 Alliance). The related Association is *Pinus muricata/Notholithocarpus densiflorus*.

*Pinus muricata-Pinus radiata* Forest and Woodland-MCV2 Alliance, Bishop pine (CalVeg), Northern Bishop pine forest (Holland), Closed-cone pine forest (Munz)

*Pinus muricata* or *Pinus radiata* is dominant or co-dominant in the tree canopy with *Abies grandis*, *Acer macrophyllum*, *Alnus rhombifolia*, *Arbutus menziesii*, *Hesperocyparis goveniana*, *Hesperocyparis pigmaea*, *Notholithocarpus densiflorus*, *Pinus attenuata*, *Pinus contorta ssp. boulder*, *Pinus contorta ssp. contorta*, *Pinus muricata*, *Pinus radiata*, *Pseudotsuga menziesii*, *Quercus agrifolia*, *Quercus tomentella*, *Quercus wislizenii*, *Salix lasiolepis*, *Salix scouleriana*, *Sequoi a sempervirens*, *Tsuga heterophylla* or *Umbellularia californica*. Trees < 30 m; canopy is open to continuous and one or two tiered. Shrub layer is sparse to continuous. Herbaceous layer is sparse or abundant. Membership rules:

- *Pinus muricata* > 15% relative cover with trees evenly spaced in the tree canopy (Keeler-Wolf et al. 2003a).
- *Pinus radiata* > 25% cover in the tree layer (Sawyer and Keeler-Wolf 1995).
- *Pinus muricata* > 30% relative cover in the tree canopy (Klein et al. 2015, Rodriguez et al. 2017).
- *Pinus muricata* > 50% relative cover in an open to dense canopy; or *Pinus muricata* > at least 10% relative cover with *Quercus agrifolia* (TNC 2007).
- *Pinus muricata* has 30-60% relative cover in the tree layer with *Notholithocarpus densiflorus* in the overstory or regenerating tree layers; *Hesperocyparis pigmaea* not significant in cover (CDFW 2018).
Northern Bishop Pine Forest Community

The Study Area is a Bishop pine-Monterey pine forest alliance with a Pinus muricata-Pseudotsuga menziesii association (87.070.04) present (G3 S3). The overstory trees consist of Bishop pine (Pinus muricata), Grand fir (Abies grandis) and tan oak (Notholithocarpus deniflorus) trees. This Alliance is considered an ESHA within the Coastal Zone.

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 2017 [v 1.0]). 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 (MCV2; 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 (September 2003, October 2007, December 2009, September 2010) based on a standardized vegetation classification system that is currently being developed for California (and which is consistent with the MCV classification system).

Although the rare vegetation types under the state’s new vegetation classification system have not yet been added to the CNDDB to replace the old Holland types (but eventually are planned to be), global and state rarity rankings have been assigned for various types on the recent VegCAMP lists.
On the most recent VegCAMP list (August 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).

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, fifty-nine (59) 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 59 special-status species documented within the vicinity of the Study Area, fifty-five (55) special-status species are unlikely or have no potential to occur due to:

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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](http://dfg.ca.gov/biogeodata/vegcamp/natural_comm_background.asp)
- 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 four (4) 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.
- **Baker’s goldfields** (*Lasthenia burkei*- California Endangered, Federally Endangered, 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 roadides. Elevation ranges from 15-1560 feet. Blooming period: May-to August.

The above listed fourteen special-status plant species were determined to have a potential to occur within the Study Area; however, protocol-level surveys conducted by Jacobszoon & Associates, Inc. resulted in negative findings for these species.

### 5.2.2 Special-status Animal species

Upon review of the resource databases listed in Section 4.2, thirty-two (32) 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.
Four (4) special-status wildlife species have the moderate or high potential to occur within the Study Area. The remaining twenty-seven (28) 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 four (4) special-status wildlife species with potential to occur within the Study Area are described in below.

- **California red-legged frog** (*Rana draytonii*): 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.
- **Mendocino leptonetid spider** (*Calileptoneta wapiti*): *C. wapiti* are known only from the locality (Elk) and nearby sites in Mendocino County. This genus is known to have a preference for cool, humid areas, and are typically known from the foothills and forests between San Francisco Bay and southern Oregon (Adams 2014).
- **purple martin** (*Progne subis*): *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.
• **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. 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.

No special-status wildlife species were observed within the Study Area during the site assessments; however, since habitat is present for these species, Jacobszoon and Associates, Inc. recommends conditions to avoid impacts to potentially present special status wildlife species in Section 6.

**Section 6.0: Assessment Summary and Recommendations/Mitigations**

Eight (8) special-status plant and wildlife species have the potential to occur within the Study Area and one (1) sensitive biological community is present (Bishop pine), 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 Sensitive Natural Communities and Other ESHA

**Northern Bishop Pine Forest Community**

Northern Bishop Pine Forest is present within the Study Area (Appendix F: Figure 8) with the overstory trees consisting of Bishop pine (*Pinus muricata*), Grand fir (*Abies grandis*), and tan oak (*Notholithocarpus deniflorus*) trees. There are no late successional or old growth stands within the Study Area. The understory consists of sword fern (*Polystichum munitum*), huckleberry (*Vaccinium ovatum*), Douglas iris (*Iris douglasiana*), and conifer reproduction (saplings). The canopy is closed with little sunlight and little conifer regeneration (saplings) within the forested area. There is regeneration along the edge of the adjacent landowner parcel boundary. The development of the homesite is proposed to be located entirely within an ESHA (Bishop pine forest). There are no other ESHAs located within 100 feet from the proposed construction activities. Please see Appendix D for a discussion regarding the reduced buffer analysis.

**Wetlands and Other Water Summary**

A wetland delineation was not specifically conducted by Jacobszoon and Associates, Inc. in conjunction with this biological assessment; however, wetland indicators were looked for during the site visits.
The Army Corp of Engineers requires that three wetland parameters are present for an area to be considered a jurisdictional wetland. Wetland parameters include hydrophytic vegetation dominance, hydric soils, and hydrology as detailed within the Army Corp of Engineers wetland delineation manual (Environmental Laboratory 1987 and ERDC 2014). The California Coastal Commission requires that only one of these wetland parameters be present for an area to be considered a wetland. No wetland conditions or hydrophytic vegetation dominated areas were observed within or adjacent to the Study Area.

6.2 Special-status Species

6.2.1 Special-status Plant Species

Four (4) special-status plant species were determined to have the potential to occur within the Study Area: Bolander’s reed grass (*Calamagrostis bolanderi*), swamp harebell (*Campanula californica*), Baker’s goldfields (*Lasthenia burkei*), Coast lily (*Lilium maritimum*). However, protocol-level surveys conducted by Jacobszoon and Associates, Inc. on August 20, 2019, March 25, 2020 and May 22, 2020 resulted in negative findings for these species. There are no further surveys required.

Mendocino Coast paintbrush (*Castilleja mendoensis*) and Pacific gilia (*Gilia capitate sp. pacifica*) have mapped CNDDB occurrences within the parcel, along Highway 1. These occurrences are approximately 300 feet west of the Study Area and proposed 1.5-acre development and were not observed during protocol-level surveys.

6.2.2 Special-status Wildlife Species

Four (4) special-status wildlife species were determined to have the potential to occur within the Study Area: California red-legged frog (*Rana draytonii*), Mendocino leptonetid spider (*Calileptoneta wapiti*), purple martin (*Progne subis*), and Sonoma tree vole (*Arborimus pomo*). Biological assessments conducted by Jacobszoon and Associates, Inc. on August 20, 2019, March 25, 2020 and May 22, 2020 resulted in negative findings for these species.

**California red-legged frog** (*Rana draytonii*): is federally listed as a Threatened Species under the Endangered Species Act as of May 23, 1996. Critical habitat has been designated and the project area is not located in a critical habitat area for California Red Legged Frog. Upland dispersal habitat can include forest debris and small mammal burrows. There is a potential for presence within the Study Area during migration. These frogs could be impacted by use of equipment and placing and moving stockpiles.

Within one week prior to the onset of construction, a qualified biologist shall conduct a survey of the construction area for migrating California red-legged frogs, and shall conduct a training for the construction crew on identification of California red-legged frogs, as well as the protocols they must follow per this condition:
Prior to the onset of construction, and every morning before moving heavy equipment and/or stockpiles, the construction crew shall perform a visual search around all stacked or stored material, and under parked equipment to detect the presence of frogs. If a California red-legged frog is detected, construction crews will stop all ground disturbing work in the vicinity and contact the United States Fish and Wildlife Service or a qualified biologist, to address the issue and provide clearance to re-initiate work.

If a rain event occurs during the construction period, all ground disturbing construction-related activities will cease until at least 48 hours after the rain stops. Prior to resuming ground disturbing construction activities, trained construction crew member will examine the site for the presence of frogs. If no special status frogs are found, construction activities may resume.

**Purple martin (Progne subis) and other Avifauna**

The existing vegetation within the Study Area provides potential nesting and foraging habitat for birds. There are no known occurrences of special-status avian species that overlap within the Study Area. Vegetation removal within the Study Area during breeding periods could significantly impact nesting bird species. Additionally, activities within the Study Area may result in the indirect visual and acoustic disturbance to avian species and has the potential to result in nest abandonment.

The bird breeding season typically extends from February to August. Ideally, the clearing of vegetation and the initiation of construction can be done in the non-breeding season between September and January. If these activities cannot be performed in the non-breeding season, a qualified biologist shall perform preconstruction breeding bird within 14 days of the onset of construction or clearing of vegetation. If active breeding bird nests are observed, no ground disturbance activities shall occur within a minimum 100-foot exclusion zone. These exclusion zones may vary depending on species, habitat and level of disturbance. The exclusion zone shall remain in place around the active nest until all young are no longer dependent upon the nest. A biologist should monitor the nest site weekly during the breeding season to ensure the buffer is sufficient to protect the nest site from potential disturbances.

**Sonoma tree vole (Arborimus pomo)**

According to the July 2020 Department of Fish and Wildlife Special Animals List, Sonoma tree vole (Arborimus pomo) is listed as a G3 S3 Species of Special Concern. The state listing indicates the species is considered vulnerable in its range due to a restricted range, relatively few populations, recent and widespread declines or other factors. The Sonoma tree vole range is located along the coast from Sonoma County through Mendocino, Humboldt, and Trinity County. The total population is unknown but is estimated at over 10,000. Preferred habitat is considered mesic old growth Douglas Fir Forest; however, Sonoma tree voles are known to live in other coniferous forests, such as Grand fir trees.
They are known to eat primarily Douglas fir (*Pseudotsuga menziesii*) needles but eat other conifer needles as well. They may also eat the inner bark of twigs. Sonoma tree voles live in the tree canopy and are thought to have limited dispersal capabilities, and so are threatened by canopy removal and fragmentation.

The property does not contain Douglas fir trees; however, does contain Grand fir trees, which Sonoma tree vole would utilize if present. Sonoma tree voles, nests or resin ducts were not observed during site assessments; however, it is recommended to survey the 1.5-acre Study Area again prior to the onset of construction.

**6.3 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.

**6.4 Critical Habitat**
The Study Area does not contain any critical habitat for federal or state-listed species.

**6.5 Proposed Remediation Plan for Bishop pine tree removal**
Within the 1.5 acre Study Area, a total of forty-seven (47) Grand fir trees and sixty-eight (68) Bishop pine trees that are 7-inch DBH (diameter at breast height) and greater are proposed to be removed for the development of the homesite. Approximately twenty (20) of the sixty-eight (68) Bishop pine trees are either dead or dying. The trees are approximately 80-100 years old, at the age which Bishop pine trees start dying.

The development is proposed to be located with one hundred (100) feet of an environmentally sensitive habitat (Bishop pine forest) and/or has potential to negatively impact the long-term maintenance of the habitat, as determined through the project review.

As per Mendocino County’s Title 20-Coastal Zoning Code, Sec. 20.496.020 ESHA -- Development Criteria. (a) (4) Permitted Development. Development permitted within the buffer area shall comply at a minimum with the following standards: (e) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel. Mitigation measures, such as planting riparian vegetation, shall be required to replace the protective values of the buffer area on the parcel, at a minimum ratio of 1:1, which are lost as a result of development under this solution.
Therefore, it is recommended to replace Bishop pine and Grand fir trees at a ratio of 1:1. 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 proposed for removal (see table below). A tree that is 7” DBH and over is an established tree and has a higher survival rate than a tree that is 1-6” DBH.

Trees by species, number and diameter class

<table>
<thead>
<tr>
<th>DBH</th>
<th>Bishop Pine</th>
<th>Grand fir</th>
<th>Tanoak</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
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</tr>
<tr>
<td>12</td>
<td>4</td>
<td>7</td>
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<tr>
<td>14</td>
<td>3</td>
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</tr>
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<td>4</td>
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<tr>
<td>28</td>
<td>2</td>
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<td>32</td>
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<td>0</td>
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</tr>
<tr>
<td>48</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>47</td>
<td>9</td>
</tr>
</tbody>
</table>
2. An inventory by species, number and diameter class of native trees currently regenerating on the site (see table below).

<table>
<thead>
<tr>
<th>DBH</th>
<th>Bishop Pine</th>
<th>Grand fir</th>
<th>Tanoak</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>10</td>
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<tr>
<td>4</td>
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<td>3</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>93</td>
<td>10</td>
</tr>
</tbody>
</table>

3. The regeneration of the Bishop pine trees is low within the Study Area (3 trees under 6” DBH), most likely due to the lack of sunlight and that Bishop pinecones are serotinous (need fire to open and germinate) Typically, the lack of fire resulting in excessively thick understory vegetation and duff layers inhibits seed germination and recruitment. The regeneration of the Grand fir trees is high with 93 trees under 6” DBH.

It is recommended that there is sufficient regeneration to replace the Grand fir trees that are proposed for removal and to not replant due to the available space and sunlight on the rest of the 5.09-acre parcel. It is recommended that the remediation of the removed 68 Bishop pine trees over 7” DBH be a 1:1 replacement based on available space and sunlight on the remainder of the parcel. Bishop pine individuals shall be replaced with saplings obtained from local stock in the area. Planted Bishop pine saplings should be planted by hand, with workers using hand tools and/or digging through the soil with a portable augur without the usage of heavy construction machinery that could trample and/or compact ground layer plants and underlying soil. Newly planted Bishop pine and Grand fir individuals should be protected by “protective tubes”

4. An 80% survival rate for the newly planted replacement Bishop pine trees shall occur and be monitored for five consecutive years annually in October by a qualified biologist. After each annual monitoring survey, an annual brief letter report summary of the biologist’s findings should be submitted by the qualified biologist to California Department of Fish and Wildlife (CDFW) by no later than December 31 for each of the five monitoring years (2021 through 2025, for example, if construction begins and this Plan’s mitigation measure actions are initiated by spring 2021). CDFW may provide comments on each annual summary letter and require planting of new Bishop pine trees based on results noted in each of the annual summary letter.
For example, in the event that an 80% survival rate of the Bishop pine trees is not achieved in the first five years, the monitoring period will be extended until compliance is demonstrated.

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.

6.6 Other Recommendations

- Young bishop pine and grand fir trees should be allowed to become re-established wherever they are present outside the construction site.

- Erosion control fencing should be installed 50 feet outside of the proposed 1.5 acres of construction area prior to construction.

- Invasive Scotch broom (*Cytisus scoparius*) will be removed from all portions of the property to the greatest extent practical.

- During construction, any stockpiled materials should be checked around and moved carefully in order to avoid potential nesting bird habitat, if stockpiling takes place between February and August.

- Landscaping on the parcel should not include any invasive plants and should ideally consist of native plants compatible with the adjacent plant communities.
Section 7.0: References


California Department of Fish and Wildlife. 2009. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. 


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 14 years professional wildlife biology, forestry, botany and environmental planning experience. Ms. Ives Ringstad provides Botanical surveys and Biological Assessments for large and small projects 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: List of Potential Special-Status Species

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>STATUS*</th>
<th>HABITAT REQUIREMENTS</th>
<th>POTENTIAL TO OCCUR IN THE STUDY AREA</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amphibians</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific tailed frog</td>
<td>CDFW: SSC, IUCN: LC</td>
<td>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.</td>
<td><strong>No Potential.</strong> According to the CWHR Predicted Habitat Suitability Map, the Study Area is located west of the known distribution for this species. The Study Area does not have any watercourses located within the Study Area and does not provide suitable habitat for this species. The closest watercourse is approximately 275 feet north of the Study Area.</td>
<td><strong>Not Present.</strong> There are no further recommendations for this species.</td>
</tr>
<tr>
<td><em>Ascaphus truei</em></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>northern red-legged frog</td>
<td>CDFW: SSC, IUCN: LC, USFS: S</td>
<td>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.</td>
<td><strong>No Potential.</strong> According to the CWHR Predicted Habitat Suitability Map, the Study Area is located south of the known distribution and range for this species. The Study Area does not have any watercourses located within the Study Area and does not provide suitable habitat for this species. The closest watercourse is approximately 275 feet north of the Study Area.</td>
<td><strong>Not Present.</strong> There are no further recommendations for this species.</td>
</tr>
<tr>
<td><em>Rana aurora</em></td>
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</tbody>
</table>

3 CWHR Predicted Habitat Suitability is a dataset that represents areas of suitable habitat within the species ranges based on California Wildlife Habitat Relationships (CWRH 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.
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>STATUS*</th>
<th>HABITAT REQUIREMENTS</th>
<th>POTENTIAL TO OCCUR IN THE STUDY AREA</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>foothill yellow-legged frog  <em>Rana boylii</em></td>
<td>SCT</td>
<td><em>R. boylii</em> 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. Adults breed and tadpoles develop in slow water velocity habitats. 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.</td>
<td>No Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area has a Low (0.22) suitability for this species and does not provide suitable habitat. The closest watercourse is approximately 275 feet north of the Study Area.</td>
<td>Not Present. There are no further recommendations for this species.</td>
</tr>
<tr>
<td>California red-legged frog  <em>Rana draytonii</em></td>
<td>FT</td>
<td>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.</td>
<td>Moderate Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area has a Low (0.33) to Medium (0.66) suitability for this species. The closest watercourse is approximately 275 feet north of the Study Area; however, there is potential for presence within the Study Area during migration.</td>
<td>Not Observed. Preconstruction surveys for this species shall occur prior to the onset of construction. See Section 6.2.2 for mitigation measures.</td>
</tr>
<tr>
<td>SPECIES</td>
<td>STATUS*</td>
<td>HABITAT REQUIREMENTS</td>
<td>POTENTIAL TO OCCUR IN THE STUDY AREA</td>
<td>RECOMMENDATIONS</td>
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<td>-----------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Southern torrent salamander</td>
<td>CDFW: SSC</td>
<td><em>R. variegatus</em> 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 in redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Critical habitat requirements for <em>R. variegatus</em> is cold water temperatures (6.5° - 15° C) and loose, rocky substrates composed of gravel and cobble (Thomson et al. 2016).</td>
<td>No Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area is located west and south of the known distribution for this species. The Study Area does not have any watercourses located within the Study Area and does not provide suitable habitat for this species. The closest watercourse is approximately 275 feet north of the Study Area.</td>
<td>Not Present. There are no further recommendations for this species.</td>
</tr>
<tr>
<td><em>Rhyacotriton variegatus</em></td>
<td>IUCN: LC</td>
<td></td>
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<td></td>
<td>USFS: S</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>red-bellied newt</td>
<td>CDFW: SSC</td>
<td>Red-bellied newts typically inhabit redwood (<em>Sequoia sempervirens</em>) forest habitat along the coast; however, have also been found in other forest types (hardwood, etc.). Breeding habitats are moderate to fast-flowing streams with rocky substrates. Breeding coincides with the receding of streams after heavy winter rains. 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).</td>
<td>Unlikely. According to the CWHR Predicted Habitat Suitability Map, the Study Area is located west of the known distribution for the species. The Study Area does not have any watercourses located within the Study Area and does not provide suitable habitat for this species. The closest watercourse is approximately 275 feet north of the Study Area.</td>
<td>Not Present. There are no further recommendations for this species.</td>
</tr>
<tr>
<td>Taricha rivularis</td>
<td>IUCN: LC</td>
<td></td>
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<tr>
<td>SPECIES</td>
<td>STATUS*</td>
<td>HABITAT REQUIREMENTS</td>
<td>POTENTIAL TO OCCUR IN THE STUDY AREA</td>
<td>RECOMMENDATIONS</td>
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</tr>
<tr>
<td><strong>Arachnids</strong></td>
<td></td>
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</tbody>
</table>
| Mendocino leptonetid spider  
*Calileptoneta wapiti* | CDFW: SSC  
*IUCN: LC* | *C. wapiti* are known only from the locality (Elk) and nearby sites in Mendocino County. This genus is known to have a preference for cool, humid areas, and are typically known from the foothills and forests between San Francisco Bay and southern Oregon (Adams 2014). | **Moderate Potential.** The Study Area is located near Elk and may provide suitable habitat for this species. | **Not Observed.** This species was not observed during site visits, however, may be present. The removal of 1.5 acres of Bishop pine forest shall not have an adverse impact to this species. No further recommendations for this species. |

| **Avifauna** | | | | |
| Great blue heron  
*Ardea herodias* | CDF: S  
*IUCN: LC* | *A. herodias* are commonly found in shallow estuaries and fresh and saline emergent wetlands. 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 with a rookery tree. | **No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area has a Low (0.22) suitability for this species and does not provide suitable habitat. | **Not Present.** As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species. |
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>STATUS*</th>
<th>HABITAT REQUIREMENTS</th>
<th>POTENTIAL TO OCCUR IN THE STUDY AREA</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>marbled murrelet</td>
<td>FT, SE</td>
<td><em>B. marmoratus</em> forage in the ocean, often close to shore during the summer months. In the nonbreeding season murrelets forage further off-shore and will fly inland (up to 35 miles) to nest in old-growth redwood-dominated forests (Zeiner et al. 1990a). Murrelet nests are a depression partly encircled by guano, commonly located on large, limbs in Douglas-fir (<em>Pseudotsuga menziesii</em>). Additionally, nests have been located on witch’s broom (mistletoe), old squirrel nests and on large burls that have collected organic debris. USFWS has determined that for the long-term survival of the species, <em>B marmoratus</em> require greater than 500 acres of old-growth forest with potential nest trees greater than 32” dbh. Over 40% overstory canopy is necessary to protect the nest site from predation and other environmental conditions.</td>
<td>Unlikely. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat for this species. The Study Area does not contain old-growth coniferous forest that is necessary for nesting. This species may occasionally fly over the Study Area.</td>
<td>Not Present. As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.</td>
</tr>
<tr>
<td>white-tailed kite</td>
<td>BLM: S</td>
<td>White-tailed kites are often found in coastal, valley lowlands and agricultural areas, <em>E. leucurus</em> 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.</td>
<td>No Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat for this species; however; the surrounding area may provide open habitat of moderate quality foraging habitat for this species.</td>
<td>Not Present. As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.</td>
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<td>tufted puffin <em>Fratercula cirrhata</em></td>
<td>CDFW: SSC</td>
<td>The Tufted puffin occurs sparsely along the California coast from Prince Island in Del Norte county to Point Conception (Sowls et al. 1980). <em>F. cirrhata</em> 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. <em>F. cirrhata</em> feed on medium-sized fish such as smelt, herring, and sea perch, some crustaceans and squid (Cogswell 1977).</td>
<td>No Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat for this species.</td>
<td>Not Present. As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.</td>
</tr>
<tr>
<td>ashy storm-petrel <em>Oceanodroma homochroa</em></td>
<td>CDFW: SSC</td>
<td>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. <em>O. homochroa</em> 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.</td>
<td>No Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat for this species.</td>
<td>Not Present. As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.</td>
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<tr>
<td>osprey <em>Pandion haliaetus</em></td>
<td>CDF: S CDFW: WL IUCN: LC</td>
<td><em>P. haliaetus</em> 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 tree tops are used for cover and nesting. Nests are located on or near the tops of trees, snags, cliffs, or human-made structures.</td>
<td>Unlikely. According to the CWHR Predicted Habitat Suitability Map, the Study Area has a Low (0.22) suitability for this species and does not provide suitable habitat.</td>
<td>Not Present. As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.</td>
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<tr>
<td>California brown pelican</td>
<td>CDFW: SSC</td>
<td>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. <em>P. occidentalis californicus</em> 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).</td>
<td>No Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat for this species.</td>
<td>Not Present. As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.</td>
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<tr>
<td>double-crested cormorant</td>
<td>CDFW: WL, IUCN: LC</td>
<td><em>P. auriitus</em> are colonial waterbirds, feeding almost exclusively on a diet of fish, crustaceans or amphibians. In addition to feeding areas, <em>P. auriitus</em> 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.</td>
<td>No Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat for this species.</td>
<td>Not Present. As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.</td>
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<tr>
<td>purple martin</td>
<td>CDFW: SSC, IUCN: LC</td>
<td><em>P. subis</em> 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, <em>P. subis</em> forage in open areas near water.</td>
<td>Moderate Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat for this species; however, the large Bishop pine and Grand fir trees within the Study Area may provide suitable habitat for this species.</td>
<td>Not Present. As no active nests or nest structures were observed within or adjacent to the Study Area, there are no further recommendations for this species.</td>
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<td>northern spotted owl, <em>Strix occidentalis caurina</em></td>
<td>FT</td>
<td>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 (Renssen 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 (<em>Neotoma fuscipes</em>). 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.</td>
<td>Unlikely. The Study Area marginally contains the required habitat for this species; however, the closest NSO Activity Center (MEN0306) is 0.65 miles south/southeast from the Study Area. It is not likely this species will utilize this area for nesting and/or foraging.</td>
<td>Not Present. No further recommendations for this species.</td>
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<td>Fish</td>
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<td>Pacific lamprey, <em>Entosphenus tridentatus</em></td>
<td>AFS: VU</td>
<td><em>E. tridentatus</em> 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, <em>E. tridentatus</em> migrate into fresh water and dig nests. Adults die post-breeding. Larvae/juveniles live 5-6 years in freshwater before returning to the ocean.</td>
<td>No Potential. The Study Area does not contain Class I stream habitat to provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td>SPECIES</td>
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| 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. They are most abundant in mid-elevation streams in the Sierra foothills and in the lower reaches of some coastal streams. 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 (Taylor et al. 1982), 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. | No Potential. The Study Area does not provide suitable habitat for this species. | Not Present. There are no further recommendations for this species. |
| 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. | Not Present. No further recommendations for this species |
| steelhead – northern California DPS  
*Oncorhynchus mykiss irideus* pop. 16 | FT AFS: TH  
Candidate species for listing state endangered | 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 stream habitat. | Not Present. No further recommendations for this species. |
### SPECIES

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</tr>
</thead>
</table>
| **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 stream habitat. | **Not Present.** No further recommendations for this species. |

**Insects**

| Insects | USFS: S | 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. | **No Potential.** The Study Area consists of a moderately dense forest and does not provide suitable habitat for this species | **Not Present.** No further recommendations for this species. |

| Insects | USFS: S  
Xerces: IM  
Candidate species for listing state endangered | 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. | **No Potential.** The Study Area consists of a moderately dense forest or streams and does not provide suitable habitat for this species | **Not Present.** No further recommendations for this species. |
<table>
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</table>
| 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 one site near the town of Mendocino. 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*). Evidence suggests the larval host food is the seaside bird’s-foot trefoil (*Lotus formosissimus*). | Unlikely. Little is known of the Lotis blue butterfly’s habitat requirements and ecology, however other northern California *Lycaeides idas* typically occur in wet meadows, bogs, seeps, springs, and along the shorelines of streams. Coastal lotus (*Hosackia gracilis*) is a presumed larval food plant. | Not Present. The seaside bird’s-foot trefoil (*Hosackia gracilis*), the insect’s host plant, was not observed during the botanical surveys conducted within or adjacent to the Study Area. The potential for presence of this species is very low. There are no further surveys or recommendations for this species. |
| Behren’s silverspot butterfly  
*Speyeria zerene behrensii* | FE  
Xerces:  
CI | The known historic range is along the coast from near the Town of Mendocino in Mendocino County to Salt Point State Park in Sonoma County. The larval food plant is currently thought to be early blue violet (*Viola adunca*). It inhabits coastal terrace prairie habitat in areas with a strong ocean influence. | No Potential. The Study Area does not contain coastal prairie habitat and does not provide suitable habitat for this species. | Not Present. There are no further recommendations for this species. |
| Point Arena mountain beaver  
*Aplodontia rufa nigra* | FE  
CDFW:  
SSC  
IUCN:  
LC | *A. rufa nigra* occur in deciduous riparian zones with a relatively open canopy and a dense understory. Deep soils are required for burrowing, along with a cool, moist microclimate. Mountain beavers feed on the vegetative parts of plants: thimbleberry, salmonberry, blackberry, dogwood, salal, ferns, lupines, willows, and grasses. Mountain beavers do not concentrate urine and require a large daily intake of water. Mountain beavers breed from December through March with the peak being in February. | No Potential. According to the CWHR Predicted Habitat Suitability Map, the Study Area is not within the distribution range of this species and does not provide suitable habitat for this species. | Not Present. There are no further recommendations for this species. |
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<tbody>
<tr>
<td>Sonoma red tree vole</td>
<td></td>
<td><em>A. pomo</em> lives only in humid coastal forests consisting of Douglas-fir, grand fir,</td>
<td><strong>Moderate Potential.</strong> According to the CWHR Predicted Habitat</td>
<td><strong>Not Observed.</strong> Sonoma red tree voles, nests or the telltale resin ducts were not</td>
</tr>
<tr>
<td>Arborimus pomo</td>
<td>CDFW: SSC</td>
<td>western hemlock, and/or Sitka spruce. This species requires Douglas-fir and grand fir</td>
<td>Suitability Map, the Study Area is located south and west of</td>
<td>observed during the biological assessment conducted on August 20, 2019. Douglas-fir</td>
</tr>
<tr>
<td></td>
<td>IUCN: NT</td>
<td>needles as a food source and nesting materials. Nests are frequently found in trees</td>
<td>the known distribution of this species; however, the Study Area</td>
<td>trees are not present within the Study Area; however, Grand fir trees are. It</td>
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<td>along the bole, in branch crotches, or in the top of snags. Nests are most often</td>
<td>does provide required nesting or foraging habitat (Grand fir</td>
<td>is recommended that preconstruction surveys of the proposed trees for removal</td>
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<td>found along roads, skid trails, or forest edges; however, they could exist further</td>
<td>trees).</td>
<td>be conducted prior to the onset of construction.</td>
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<td>in the forest with dense canopies making nest identification difficult. This</td>
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<td>species is distributed along the North Coast from Sonoma County north to the Oregon</td>
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<td>border, being practically restricted to the fog belt.</td>
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<td>Townsend’s big-eared</td>
<td>BLM: S</td>
<td><em>C. townsendii</em> is associated with a wide variety of habitats from deserts to mid-</td>
<td><strong>Unlikely.</strong> According to the CWHR Predicted Habitat</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td>bat</td>
<td>CDFW: SSC</td>
<td>elevation mixed coniferous-deciduous forest. Females form maternity colonies in</td>
<td>Suitability Map, the Study Area has a Low (0.22) suitability</td>
<td></td>
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<tr>
<td>Corynorhinus</td>
<td>IUCN: LC</td>
<td>buildings, caves and mines and males roost singly or in small groups. Foraging</td>
<td>for this species and does not provide suitable habitat for this</td>
<td></td>
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<tr>
<td>townsendii</td>
<td>USFS: S</td>
<td>occurs in open forest habitats where they glean moths from vegetation.</td>
<td>species.</td>
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<td>WBWG: H</td>
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<tr>
<td>North American porcupine</td>
<td>IUCN: LC</td>
<td><em>E. dorsatum</em> are commonly found in coniferous and mixed forested areas, and can</td>
<td><strong>No Potential.</strong> According to the CWHR Predicted Habitat</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
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<tr>
<td>Erethizon dorsatum</td>
<td></td>
<td>also inhabit shrublands, tundra and deserts, albeit less frequently as this species</td>
<td>Suitability Map, the Study Area is located outside of the</td>
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<td>tends to spend much of its time in trees. This herbivore eats leaves, twigs, and</td>
<td>known distribution for this species and does not provide</td>
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<td>green plants like Skunk cabbage (<em>Symlocarpus foetidus</em>) and clovers (*Trifolium</td>
<td>suitable habitat.</td>
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<td><em>spp.</em>). This species makes its dens in hollow trees, decaying logs and caves in</td>
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<td>rocky areas. Recognized as primarily solitary and nocturnal, <em>E. dorsatum</em> may be</td>
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<td></td>
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<td>be seen foraging during daytime.</td>
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Not Observed. Sonoma red tree voles, nests or the telltale resin ducts were not observed during the biological assessment conducted on August 20, 2019. Douglas-fir trees are not present within the Study Area; however, Grand fir trees are. It is recommended that preconstruction surveys of the proposed trees for removal be conducted prior to the onset of construction.
<table>
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<tbody>
<tr>
<td><strong>Mollusks</strong></td>
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<tr>
<td>Pomo bronze shoulderband</td>
<td>CDFW: SSC</td>
<td><em>H. arrosa pomoensis</em> are a terrestrial mollusk endemic to Mendocino County, known from type specimens from Big River, Navarro River, and Russian Gulch watersheds. This gastropod is known to occupy heavily redwood-timbered canyons of Mendocino County, generally well inland. Its microhabitat is under the redwoods. Snails in the genus <em>Helminthoglypta</em> are known to use a “love dart” in their mating rituals. Otherwise, our lack of basic knowledge of this species’ life history, habitat selection, and larval food preference, make implementation of effective protection measures difficult. Current conservation measures entail protecting potential Pomo bronze shoulderband habitat.</td>
<td><strong>No Potential.</strong> The Study Areas do not provide suitable habitat for this species, as there are no watercourses present within the Study Area.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Helminthoglypta arrosa pomoensis</em></td>
<td>IUCN: DD</td>
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<td><strong>Reptiles</strong></td>
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<tr>
<td>western pond turtle</td>
<td>BLM: S</td>
<td><em>E. marmorata</em> 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.</td>
<td><strong>No Potential.</strong> The Study Areas do not provide suitable habitat for this species, as there are no watercourses or ponds within the Study Area.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Emys marmorata</em></td>
<td>CDFW: SSC</td>
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<td>IUCN: VU</td>
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<td></td>
<td>USFS: S</td>
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## Special-status Plant Species

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<tr>
<th>SPECIES</th>
<th>STATUS*</th>
<th>HABITAT REQUIREMENTS</th>
<th>POTENTIAL TO OCCUR IN THE PROJECT AREA</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>pink sand-verbena</td>
<td>Rank 1B.1</td>
<td>Coastal dunes. Elevation ranges from 0-35 feet. Bloom Jun-Oct.</td>
<td><strong>No Potential.</strong> 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.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Abronia umbellata</em></td>
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<tr>
<td>Blasdale’s bent grass</td>
<td>Rank 1B.2</td>
<td>Coastal bluff scrub, coastal dunes, coastal prairie. Elevation ranges from 0 to 490 feet. Bloom May-Jul.</td>
<td><strong>No Potential.</strong> 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.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Agrostis blasdalei</em></td>
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<tr>
<td>sea-watch</td>
<td>Rank 4.2</td>
<td>Coastal bluff scrub, Coastal dunes, Coastal scrub, coastal salt marshes and swamps. Elevation ranges from 0-490. Bloom May-Jul.</td>
<td><strong>No Potential.</strong> 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.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Angelica lucida</em></td>
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<tr>
<td>pygmy manzanita</td>
<td>Rank 1B.2</td>
<td>Closed-coniferous forest (acidic sandy soil). Elevations range from 295-655 feet. Bloom May-Sep.</td>
<td><strong>Unlikely.</strong> This species is known to occur on acidic sandy soil in Closed-coniferous forest. The Study Area is comprised of Bishop pine forest habitat (closed-cone coniferous forest); however, does not have podzol-like soil and does not provide suitable habitat for this species.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Arctostaphylos nummularia ssp. mendocinoensis</em></td>
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<tr>
<td>Humboldt County milk-vetch</td>
<td>CE Rank 1B.2</td>
<td>Broadleafed upland forest, North Coast coniferous forest/openings, disturbed areas, sometimes roadsides. Elevation ranges from 390 to 2705 feet. Bloom Apr-Sep.</td>
<td>No Potential. 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.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Astragalus agnicidus</em></td>
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<tr>
<td>Bolander’s reed grass</td>
<td>Rank 4.2</td>
<td>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. Bloom May-Aug.</td>
<td>Moderate Potential. This species is known to occur in openings and disturbed areas in wet areas and non-wet areas of closed-cone coniferous forest habitat. The Study Area is comprised of Bishop pine forest, without wet areas; however, may provide suitable habitat for this species</td>
<td>Not Observed. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Calamagrostis bolanderi</em></td>
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<tr>
<td>Thurber’s reed grass</td>
<td>Rank 2B.1</td>
<td>Coastal scrub (mesic), Marshes and swamps (freshwater). Elevations range from 30-345 feet. Bloom May-Aug..</td>
<td>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.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Calamagrostis crassiglumis</em></td>
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<tr>
<td>coastal bluff morning-glory</td>
<td>Rank 1B.2</td>
<td>Coastal bluff scrub, Coastal dunes Coastal scrub, North Coast coniferous forest. Elevations range from 0-345 feet. Bloom (Mar) Apr-Sep.</td>
<td>No Potential. 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.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td>Calystegia purpurata ssp. saxicola</td>
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<tr>
<td>swamp harebell</td>
<td>Rank 1B.2</td>
<td>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.</td>
<td>High Potential. This species is known to occur in openings and disturbed areas of North Coast coniferous forest and forest habitat. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Observed. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.</td>
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<tr>
<td>Campanula californica</td>
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<tr>
<td>California sedge</td>
<td>Rank 2B.3</td>
<td>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.</td>
<td>No Potential. This species is known to occur in marshy/swampy areas in Closed-cone coniferous forest and Coastal habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td>Carex californica</td>
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<tr>
<td>livid sedge</td>
<td>Rank 2A</td>
<td>Bogs and fens. Elevations range from 0-0 feet. Bloom Jun.</td>
<td>No Potential. This species is known to occur in bogs and fens. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td>Carex livida</td>
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<tr>
<td>Lyngbye’s sedge</td>
<td>Rank 2B.2</td>
<td>Marshes and swamps (brackish or freshwater). Elevation ranges from 0-35 feet. Bloom Apr-Aug.</td>
<td>No Potential. This species is known to occur in freshwater or brackish wetlands. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Carex lyngbyei</em></td>
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<tr>
<td>deceiving sedge</td>
<td>Rank 1B.2</td>
<td>Coastal prairie, Coastal scrub, Meadows and seeps, Marshes and swamps (coastal salt)/ mesic. Elevation ranges from 5-755 feet. Bloom Jun (Jul).</td>
<td>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 habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Carex saliniformis</em></td>
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<tr>
<td>Humboldt Bay owl’s-clover</td>
<td>Rank 1B.2</td>
<td>Marshes and swamps (coastal salt). Elevation ranges from 0-10 feet. Bloom Apr-Aug.</td>
<td>No Potential. This species is known to occur in coastal salt marshes and swamps. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Castilleja ambigua var. humboldtiensis</em></td>
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<tr>
<td>Oregon coast paintbrush</td>
<td>Rank 2B.2</td>
<td>Coastal bluff scrub, Coastal dunes, Coastal scrub/ sandy. Elevations range from 45-330 feet. Bloom Jun-Jul.</td>
<td>No Potential. This species is highly restricted to sandy areas in coastal habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Castilleja litoralis</em></td>
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<tr>
<td>Mendocino Coast paintbrush</td>
<td>Rank 1B.2</td>
<td>Coastal bluff scrub, Closed-cone coniferous forest, Coastal dunes, Coastal prairie, Coastal scrub. Elevations range from 0-525 feet. Bloom Apr-Aug.</td>
<td>No Potential. This species is highly restricted to coastal habitats and closed-cone coniferous forest in the coast range. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td>Castilleja mendocinensis</td>
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<tr>
<td>glory brush</td>
<td>Rank 4.3</td>
<td>Chaparral. Elevations range from 95-2000 feet. Bloom Mar-Jun (Aug).</td>
<td>No Potential. This species is found in chaparral habitat. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td>Ceanothus gloriosus var. exaltatus</td>
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<tr>
<td>Point Reyes ceanothus</td>
<td>Rank 4.3</td>
<td>Coastal bluff scrub, Closed-cone coniferous forest, Coastal dunes, Coastal scrub/ sandy. Elevation ranges from 15-1705 feet. Bloom Mar-May.</td>
<td>No Potential. This species is known to occur in sandy coastal and closed-cone coniferous forest habitat types. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td>Ceanothus gloriosus var. gloriosus</td>
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<tr>
<td>Howell’s spineflower</td>
<td>CT</td>
<td>Coastal dunes, coastal prairie, coastal scrub/ sandy, often disturbed areas. Elevation ranges from 0-150 feet. Bloom May-Jul.</td>
<td>No Potential. This species is highly restricted to sandy areas in coastal habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td>Chorizanthe howellii</td>
<td>FE Rank 1B.2</td>
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Page 47 of 76
<table>
<thead>
<tr>
<th>SPECIES</th>
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</thead>
</table>
| 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). | **No Potential.** This species is known to occur in wet areas and streambanks of North Coast coniferous and riparian forest 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. |
| 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). | **No Potential.** This species is known to occur in wet areas and streambanks of North Coast coniferous forest 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. |
| bunchberry  
*Cornus canadensis* | Rank 2B.2 | Bogs and fens, Meadows and seeps, North Coast coniferous forest/ mesic, open sites. Elevation ranges 195-6300 feet. Bloom from May-Jul. | **No Potential.** This species is known to occur in grassland, bogs, wetlands and open, wet areas within North Coast coniferous 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. |
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</thead>
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<tr>
<td>Mendocino dodder</td>
<td>Rank 1B.2</td>
<td>Coastal dunes (interdune depressions). Elevation ranges from 0-165 feet. Bloom (Jun) Jul-Oct.</td>
<td>No Potential. This species is known to occur in coastal dunes habitat. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
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<tr>
<td><em>Cuscuta pacifica var. papillate</em></td>
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<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td>supple daisy</td>
<td>Rank 1B.2</td>
<td>Coastal bluff scrub, coastal prairie. Elevation ranges from 30-165 feet. Bloom May-Jul.</td>
<td>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.</td>
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<tr>
<td><em>Erigeron supplex</em></td>
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<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td>bluff wallflower</td>
<td>Rank 1B.2</td>
<td>Coastal bluff scrub, Coastal dunes, Coastal prairie. Elevation ranges from 0-605 feet. Bloom Feb-Jul.</td>
<td>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.</td>
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<tr>
<td><em>Erysimum concinnum</em></td>
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<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td>Menzies’ wallflower</td>
<td>CE, FE, Rank 1B.1</td>
<td>Coastal dunes. Elevation ranges from 0-115 feet. Bloom Mar-Sep.</td>
<td>No Potential. This species is known to occur in coastal dunes habitat. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
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<tr>
<td><em>Erysimum menziesii</em></td>
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<td></td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td>Pacific gilia</td>
<td>Rank 1B.2</td>
<td>Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland. Elevation ranges from 15-5465 feet. Bloom Apr-Aug.</td>
<td>No Potential. This species occurs in openings in chaparral, coastal and grassland habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
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<tr>
<td><em>Gilia capitata ssp. pacifica</em></td>
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<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td>dark-eyed gilia</td>
<td>Rank 1B.2</td>
<td>Coastal dunes. Elevation ranges from 5-100 feet. Bloom Apr-Jul.</td>
<td>No Potential. This species occurs in coastal dune habitat. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Gilia millefoliata</em></td>
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<tr>
<td>short-leaved evax</td>
<td>Rank 1B.2</td>
<td>Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie. Elevation ranges from 0-705 feet. Bloom Mar-Jun.</td>
<td>No Potential. This species occurs in coastal habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<td><em>Hesperevax sparsiflora var. brevifolia</em></td>
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<tr>
<td>pygmy cypress</td>
<td>Rank 1B.2</td>
<td>Closed-cone coniferous forest (usually podzol-like soil). Elevation ranges from 95-1970 feet.</td>
<td>Unlikely. This species occurs on podzol-like soil in Closed-cone coniferous forest habitat. The Study Area is comprised of Bishop pine forest habitat (closed-cone coniferous forest); however, does not have podzol-like soil and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Hesperocyparis pygmaea</em></td>
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<tr>
<td>harlequin lotus</td>
<td>Rank 4.2</td>
<td>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, and moist meadows. Elevations range from 0-2295 feet. Bloom Mar-Jul.</td>
<td>No Potential. This species is known to occur usually in wet meadows in a variety of habitats. The Study Area is comprised of Bishop pine forest habitat without wet areas and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
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<td><em>Hosackia gracilis</em></td>
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<tr>
<td>hair-leaved rush</td>
<td>Rank 2B.2</td>
<td>Bogs and fens, Marshes and swamps (freshwater). Elevation ranges from 65-330 feet. Bloom Apr-May (Jun-Jul).</td>
<td><strong>No Potential.</strong> This species occurs in freshwater wetland habitats. The Study Area is comprised of Bishop pine forest habitat without wet areas and does not provide suitable habitat for this species.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Juncus supiniformis</em></td>
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<tr>
<td>small groundcone</td>
<td>Rank 2B.3</td>
<td>North coast coniferous forest, open woods, shrubby places, generally on <em>Gaultheria shallon</em>. Elevation ranges from 394 to 4708 feet. Bloom Apr-Aug.</td>
<td><strong>No Potential.</strong> This species is known to occur in wet areas and streambanks of North Coast coniferous forest. The Study area consists of Bishop pine forest without salal present and does not provide suitable habitat for this species.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Kopsiopsis hookeri</em></td>
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<tr>
<td>Baker’s goldfields</td>
<td>CE</td>
<td>Closed-cone coniferous forest (openings), Coastal scrub, Meadows and seeps, Marshes and swamps. Elevation ranges from 195-1705 feet. Bloom Apr-Oct.</td>
<td><strong>High Potential.</strong> This species is known to occur in wetland, coastal and closed-cone coniferous forest habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td><strong>Not Present.</strong> No further recommendations for this species</td>
</tr>
<tr>
<td><em>Lasthenia burkei</em></td>
<td>FE</td>
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<td></td>
<td>Rank 1B.1</td>
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<tr>
<td>perennial goldfields</td>
<td>Rank 1B.2</td>
<td>Coastal bluff scrub, Coastal dunes, Coastal scrub. Elevation ranges from 15-1705 feet. Bloom Jan-Nov.</td>
<td><strong>No Potential.</strong> This species occurs in coastal habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Lasthenia californica ssp. macrantha</em></td>
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<td>RECOMMENDATIONS</td>
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<tr>
<td>marsh pea</td>
<td>Rank 2B.2</td>
<td>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.</td>
<td>Unlikely. This species is known to occur in freshwater wetlands and bogs and fens in coastal and forest habitats. The Study Area is comprised of Bishop pine forest habitat and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Lathyrus palustris</em></td>
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<tr>
<td>Coast lily</td>
<td>Rank 1B.1</td>
<td>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.</td>
<td>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 habitat and may provide suitable habitat for this species.</td>
<td>Not Observed. This species was not observed during the botanical surveys conducted for this Project. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Lilium maritimum</em></td>
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<tr>
<td>Running-pine</td>
<td>Rank 4.1</td>
<td>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).</td>
<td>No Potential. 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 habitat without wet area and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Lycopodium clavatum</em></td>
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<tr>
<td>Northern microseris</td>
<td>Rank 2B.1</td>
<td>Bogs and fens, Lower montane coniferous forest, Meadows and seeps. Elevation ranges from 3280-6560 feet. Bloom Jun-Sep.</td>
<td><strong>No Potential.</strong> 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.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Microseris borealis</em></td>
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<tr>
<td>leafy-stemmed miterwort</td>
<td>Rank 2B.2</td>
<td>Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest/ mesic, sometimes roadsides. Elevation ranges from 15-5575 feet. Bloom May-Jul.</td>
<td><strong>No Potential.</strong> This species is known to occur in wet areas of coastal scrub and 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.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Mitellastra caulescens</em></td>
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<tr>
<td>seacoast ragwort</td>
<td>Rank 2B.2</td>
<td>Coastal scrub, North Coast coniferous forest, sometimes along roadsides. Elevation ranges from 99 to 3002 feet. Bloom (Jan-Apr) May-Jul (Aug).</td>
<td><strong>No Potential.</strong> This species is known to occur in coastal scrub and North Coast coniferous forest. The Study Area consists of Bishop pine forest and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Packera bolanderi var. bolanderi</em></td>
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<tr>
<td>North Coast phacelia</td>
<td>Rank 1B.2</td>
<td>Coastal bluff scrub, Coastal dunes/ sandy, sometimes rocky. Elevation ranges from 30-560 feet. Bloom Mar-May.</td>
<td><strong>No Potential.</strong> This species occurs on sandy or rocky soil in coastal habitats. The Study Area is comprised Bishop pine forest and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Phacelia insularis var. continentis</em></td>
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<tr>
<td>Bolander’s beach pine</td>
<td>Rank 1B.2</td>
<td>Closed-cone coniferous forest (usually podzol-like soil). Elevation ranges from 245-820 feet.</td>
<td><strong>Unlikely.</strong> This species occurs on podzol-like soil in Closed-cone coniferous forest habitat. The Study Area is comprised of Bishop pine forest; however, does not contain podzol-like soil and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Pinus contorta ssp. bolanderi</em></td>
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<tr>
<td>white-flowered rein orchid</td>
<td>Rank 1B.2</td>
<td>Broadleafed upland forest, Lower montane coniferous forest/ sometimes serpentinite. Elevation ranges from 95-4300 feet. Bloom (Mar) May-Sep.</td>
<td><strong>No Potential.</strong> This species is known to occur in broadleaved forest, lower montane and North Coast coniferous 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.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Piperia candida</em></td>
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<tr>
<td>California pinefoot</td>
<td>Rank 4.2</td>
<td>Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest/sometimes mesic. Elevation ranges from 45-7300 feet. Bloom (Mar-Apr) May-Aug.</td>
<td><strong>No Potential.</strong> This species is known to occur in wet areas and non-wet areas in broadleaved forest, lower montane and North Coast coniferous forest habitats. The Study Area is comprised of Bishop pine forest without wet areas; however, may provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Pityopus californicus</em></td>
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<tr>
<td>Nodding semaphore grass</td>
<td>Rank 4.2</td>
<td>Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest/ mesic. Elevation ranges from 0-5250 feet. Bloom (Mar) Apr-Aug.</td>
<td><strong>Unlikely.</strong> This species is known to occur in wet areas of lower montane, North Coast coniferous and riparian forest habitats. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this species.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Pleuro pogon refractus</em></td>
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<tr>
<td>Angel’s hair lichen</td>
<td>Rank 2B.1</td>
<td>North Coast coniferous forest/ On dead twigs and other lichens. Elevation ranges from 245-1410 feet.</td>
<td><strong>No Potential.</strong> 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.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Ramalina thrausta</em></td>
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<tr>
<td>white beaked-rush</td>
<td>Rank 2B.2</td>
<td>Bogs and fens, Meadows and seeps, Marshes and swamps (freshwater). Elevation ranges from 195-6695 feet. Bloom Jun-Aug.</td>
<td><strong>No Potential.</strong> This species occurs in wetland habitats. The Study Area is comprised of North Coast coniferous forest and Bishop pine forest and does not provide suitable habitat for this species.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
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<tr>
<td><em>Rhynchospora alba</em></td>
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<tr>
<td>great burnet</td>
<td>Rank 2B.2</td>
<td>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.</td>
<td><strong>Unlikely.</strong> This species is known to occur in North Coast coniferous forest, and this species has a strong affinity for serpentinite soils. The Study Area does not have serpentinite soils and does not provide suitable habitat for this species.</td>
<td><strong>Not Present.</strong> No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Sanguisorba officinalis</em></td>
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<tr>
<td>SPECIES</td>
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</tbody>
</table>
| Point Reyes checkerbloom  
*Sidalcea calycosa ssp. rhizomata* | Rank 1B.2 | Marshes (freshwater) and swamps near the coast. Elevation ranges from 17 to 312 feet. Bloom Apr-Sep. | No Potential. This species occurs in freshwater marsh 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. |
| 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. | No Potential. 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 without wet areas and does not provide suitable habitat for this species. | Not Present. No further recommendations for this species. |
| Siskiyou checkerbloom  
*Sidalcea malviflora ssp. patula* | Rank 1B.2 | Coastal bluff scrub, coastal prairie, north coast coniferous forest, often open coastal forest, roadcuts. Elevation ranges from 17 to 4118 feet. Bloom May-Aug. | No Potential. This species is known to occur in coastal 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. |
| purple-stemmed checkerbloom  
*Sidalcea malviflora ssp. purpurea* | Rank 1B.2 | Broadleaved upland forest, coastal prairie. Elevation ranges from 49 to 279 feet. Bloom May-Jun. | No Potential. This species occurs in coastal prairie and broadleaved upland 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. |
<table>
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<tr>
<th>SPECIES</th>
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<th>HABITAT REQUIREMENTS</th>
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<tbody>
<tr>
<td>Hoffman's bristly jewelflower</td>
<td>Rank 1B.3</td>
<td>Chaparral, cismontane woodland, valley and foothill grassland, moist, steep rocky banks in serpentine and non-serpentine soils. Elevation ranges from 197 to 2510 feet. Bloom Mar-Jul.</td>
<td>No Potential. This species is known to occur in moist steep rocky streambanks in chaparral, grassland and cismontane woodland habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Streptanthus glandulosus ssp. hoffmanii</em></td>
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<tr>
<td>Santa Cruz clover</td>
<td>Rank 1B.1</td>
<td>Coastal prairie, broadleaved upland forest, cismontane woodland, often found in moist grasslands along gravelly margins. Elevation ranges from 99 to 2641 feet. Bloom Apr-Oct.</td>
<td>No Potential. This species is known to occur in moist grasslands in coastal prairie, broadleaved upland forest and cismontane woodland habitats. The Study Area is comprised of Bishop pine forest and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td><em>Trifolium buckwestiorum</em></td>
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<tr>
<td>Monterey clover</td>
<td>CE FE Rank 1B.1</td>
<td>Closed-cone coniferous forest (sandy, openings, burned areas). Elevation ranges from 95-1000 feet. Bloom Apr-Jun.</td>
<td>No Potential. This species is known to occur in sandy openings and burned areas of Closed-cone coniferous forest habitat. The Study Area is comprised Bishop pine forest and does not provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td><em>Trifolium trichocalyx</em></td>
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<tr>
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<td>STATUS*</td>
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<tr>
<td>Methuselah’s beard lichen</td>
<td>Rank 4.2</td>
<td>Broadleafed upland forest, North Coast coniferous forest/ On tree branches; usually on old growth hardwoods and conifers. Elevations range from 160-4790 feet.</td>
<td>Unlikely. 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 may provide suitable habitat for this species.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td>Usnea longissima</td>
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<tr>
<td>fringed false-hellebore</td>
<td>Rank 4.3</td>
<td>Bogs and fens, Coastal scrub, Meadows and seeps, North Coast coniferous forest/ mesic. Elevation ranges from 5-985 feet. Bloom Jul-Sep.</td>
<td>No Potential. This species is known to occur usually in 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.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
<td>Veratrum fimbriatum</td>
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<tr>
<th>COMMUNITY</th>
<th>STATUS*</th>
<th>HABITAT REQUIREMENTS</th>
<th>POTENTIAL TO OCCUR IN THE PROJECT AREA</th>
<th>RECOMMENDATIONS</th>
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<tbody>
<tr>
<td>Coastal Brackish Marsh</td>
<td></td>
<td>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.</td>
<td>No Potential. This community is not located within or near the Study Area. The Study Area is comprised of Bishop pine forest without wet areas does not provide suitable habitat for this community.</td>
<td>Not Present. No further recommendations for this species.</td>
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<tr>
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<tr>
<td>Grand Fir Forest</td>
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<td>The Grand fir (<em>Abies grandis</em>) is the dominant or co-dominant in the tree canopy with <em>Alnus rubra</em>, <em>Picea stichensis</em>, <em>Pinus agrifolia</em>, <em>Sequoia sempervirens</em> and <em>Tsuga heterophylla</em>. 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.</td>
<td>Unlikely. This community is also known as North Coast coniferous forest. The Study Area is comprised of Bishop pine forest with some scattered Grand fir trees; however, the co-dominant species within a grand fir forest are not present. The Study Area does not provide suitable habitat for this community.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
<tr>
<td>Coastal and Valley Freshwater Marsh</td>
<td></td>
<td>Coastal and valley freshwater marsh is classified as several different alliances including the Typha (<em>T. angustifolia</em>, <em>T. domingensis</em>, <em>T. latifolia</em>) alliance (cattail marshes), <em>Schoenoplectus acutus</em> alliance (hardstem bulrush marsh), and <em>Schoenoplectus californicus</em> alliance. It is classified as freshwater emergent wetland as described in A Guide to the Wildlife Habitats of California. 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.</td>
<td>No Potential. This community is not located within or near the Study Area. The Study Area is comprised of Bishop pine forest without wet areas and does not provide suitable habitat for this community.</td>
<td>Not Present. No further recommendations for this species.</td>
</tr>
</tbody>
</table>
### Abbreviation | Organization
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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.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Organization</th>
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<tbody>
<tr>
<td>AFS_EN</td>
<td>American Fisheries Society – Endangered</td>
</tr>
<tr>
<td>AFS_TH</td>
<td>American Fisheries Society – Threatened</td>
</tr>
<tr>
<td>AFS_VU</td>
<td>American Fisheries Society – Vulnerable</td>
</tr>
<tr>
<td>BLM_S</td>
<td>Bureau of Land Management – Sensitive</td>
</tr>
<tr>
<td>BCC</td>
<td>USFWS Birds of Conservation Concern</td>
</tr>
<tr>
<td>CDF_S</td>
<td>Calif. Dept. of Forestry &amp; Fire Protection – Sensitive</td>
</tr>
<tr>
<td>CDFW_SSC</td>
<td>Calif. Dept. of Fish &amp; Wildlife – Species of Special Concern</td>
</tr>
<tr>
<td>CDFW_FP</td>
<td>Calif. Dept. of Fish &amp; Wildlife – Fully Protected</td>
</tr>
<tr>
<td>CDFW_WL</td>
<td>Calif. Dept. of Fish &amp; Wildlife – Watch List</td>
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<td>IUCN_CR</td>
<td>IUCN – Critically Endangered</td>
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<tr>
<td>IUCN_EN</td>
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</tr>
<tr>
<td>IUCN_NT</td>
<td>IUCN – Near Threatened</td>
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<td>IUCN_VU</td>
<td>IUCN – Vulnerable</td>
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<td>IUCN_LC</td>
<td>IUCN – Least Concern</td>
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<tr>
<td>IUCN_DD</td>
<td>IUCN – Data Deficient</td>
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<tr>
<td>IUCN_CD</td>
<td>IUCN – Conservation Dependent</td>
</tr>
<tr>
<td>NABCI_YWL</td>
<td>North American Bird Conservation Initiative – Yellow Watch List</td>
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<tr>
<td>NMFS_SC</td>
<td>National Marine Fisheries Service – Species of Concern</td>
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<tr>
<td>USFS_S</td>
<td>U. S. Forest Service – Sensitive</td>
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<tr>
<td>USFWS_BCC</td>
<td>U. S. Fish &amp; Wildlife Service Birds of Conservation Concern</td>
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<tr>
<td>WBWG_H</td>
<td>Western Bat Working Group – High Priority</td>
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<tr>
<td>WBWG_MH</td>
<td>Western Bat Working Group – Medium-High Priority</td>
</tr>
<tr>
<td>WBWG_M</td>
<td>Western Bat Working Group – Medium Priority</td>
</tr>
<tr>
<td>WBWG_LM</td>
<td>Western Bat Working Group – Low-Medium Priority</td>
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<tr>
<td>Xerces: CI</td>
<td>Xerces Society – Critically Imperiled</td>
</tr>
<tr>
<td>Xerces: IM</td>
<td>Xerces Society – Imperiled</td>
</tr>
<tr>
<td>Xerces: VU</td>
<td>Xerces Society – Vulnerable</td>
</tr>
<tr>
<td>Xerces: DD</td>
<td>Xerces Society – Data Deficient</td>
</tr>
</tbody>
</table>
## Appendix B: List of Species Observed

<table>
<thead>
<tr>
<th>SCIENTIFIC NAME</th>
<th>COMMON NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plants</strong></td>
<td></td>
</tr>
<tr>
<td>Abies grandis</td>
<td>grand fir</td>
</tr>
<tr>
<td>Avena fatua</td>
<td>wild oat</td>
</tr>
<tr>
<td>Claytonia perfoliata</td>
<td>miner’s lettuce</td>
</tr>
<tr>
<td>Deschampsia cespitosa</td>
<td>tufted hairgrass</td>
</tr>
<tr>
<td>Festuca perennis</td>
<td>Italian rye grass</td>
</tr>
<tr>
<td>Fragaria vesca</td>
<td>wood strawberry</td>
</tr>
<tr>
<td>Gallium aparine</td>
<td>common bedstraw</td>
</tr>
<tr>
<td>Heteromeles arbutifolia</td>
<td>toyon</td>
</tr>
<tr>
<td>Holcus lanatus</td>
<td>common velvet grass</td>
</tr>
<tr>
<td>Iris douglasiana</td>
<td>Douglas iris</td>
</tr>
<tr>
<td>Lonicera hispidula</td>
<td>hairy honeysuckle</td>
</tr>
<tr>
<td>Madia sativa</td>
<td>coast tarweed</td>
</tr>
<tr>
<td>Mentha pulegium</td>
<td>pennyroyal</td>
</tr>
<tr>
<td>Notholithocarpus densiflorus</td>
<td>tanoak</td>
</tr>
<tr>
<td>Oxalis oregana</td>
<td>redwood sorrel</td>
</tr>
<tr>
<td>Petasites frigidus var. palmatus</td>
<td>western coltsfoot</td>
</tr>
<tr>
<td>Pinus muricata</td>
<td>Bishop pine</td>
</tr>
<tr>
<td>Plantago lanceolata</td>
<td>English plantain</td>
</tr>
<tr>
<td>Polysticum munitum</td>
<td>sword fern</td>
</tr>
<tr>
<td>Pteridium aquilinum var. pubescens</td>
<td>western bracken fern</td>
</tr>
<tr>
<td>Rhododendron macrophyllum</td>
<td>western rhododendron</td>
</tr>
<tr>
<td>Rubus armeniacus</td>
<td>Himalayan blackberry</td>
</tr>
<tr>
<td>Rubus parviflorus</td>
<td>thimbleberry</td>
</tr>
<tr>
<td>Taraxacum oficinale</td>
<td>common dandelion</td>
</tr>
<tr>
<td>Toxicodendron diversilobum</td>
<td>poison-oak</td>
</tr>
<tr>
<td>Vaccinium ovatum</td>
<td>evergreen huckleberry</td>
</tr>
<tr>
<td>Viola sempervirens</td>
<td>evergreen violet</td>
</tr>
<tr>
<td><strong>Wildlife</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td></td>
</tr>
<tr>
<td>None observed</td>
<td></td>
</tr>
<tr>
<td><strong>Avifauna</strong></td>
<td></td>
</tr>
<tr>
<td>Colaptes auratus</td>
<td>northern flicker</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td></td>
</tr>
<tr>
<td>None observed</td>
<td></td>
</tr>
<tr>
<td>SCIENTIFIC NAME</td>
<td>COMMON NAME</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Insects</td>
<td>None observed</td>
</tr>
<tr>
<td>Mammals</td>
<td>None observed</td>
</tr>
<tr>
<td>Mollusks</td>
<td>None observed</td>
</tr>
<tr>
<td>Reptiles</td>
<td>None observed</td>
</tr>
</tbody>
</table>
Appendix C: Combined Vegetation Rapid Assessment and Relevé Field Form
Combined Vegetation Rapid Assessment and Relevé Field Form
(Revised March 27, 2018)

For Office Use:                                      Final database #:     Final vegetation type:  Pinus muriicata-Pinus radiata-Pinus elliottii-Abies amabilis
                   Alliance: Ceanothus, etc.

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Database #:  IRWN0001                                      Date:  August 20, 2019
Name of recorder: Alicia Dart Riggsad
Other surveyors:
UID:  Cameron Rd. Elk (165.5)
Location Name:  Cameron Rd. Elk (165.5)

GPS name: minijPAD                                     For Relevé only: Bearing°, left axis at ID point of Long / Short side
UTME _______ _______ UTMN _______ _______ Zone: 11  NAD83  GPS error: ft / m / PDOP 5°-
Decimal degrees: LAT  39° 18' 53.2"  LONG 123° 17' 28.8"
GPS within stand?  Yes / No  If No, cite from GPS to stand: distance (m) _______ bearing° _______ inclination° _______ 
and record: Base point ID  B-1RWN0001  Projected UTMx: UTME ___________ UTMN ___________
Camera Name:   & Camera photos at ID point: 1RWN0001-P1, 1RWN0001-P2, 1RWN0001-P3, 1RWN0001-P4
Other photos:

Stand Size (acres): <1, 1-5, >5 | Plot Area (m²): 100 | Plot Dimensions _______ x _______ | RA Radius 20 m
Exposure, Actual:  NE NW SE SW Flat (Variable) Steepness, Actual:  0°-1° 1-5° 5-25° >25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
Geology code: othE  Soil Texture code: FIXESE | Upland or Wetland/Riparian (circle one)
% Surface cover:  (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl. sand, mud)
H2O: 0 BA Stems: 50 Litter: 25 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 0 Gravel: 0 Fines: 25% =100%

% Current year bioturbation 0  Past bioturbation present? Yes / No  % Hoof punch 0
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:
Site is underdeveloped with mostly Bishop pine and Grand fir trees. Grand fir regeneration. Some of the larger Bishop pines are dead and dying. Age of trees is approximately 80-100 yrs. No evidence of fire.

Disturbance code / Intensity (L,M,H): 00 / L 20 / L _______ _______ _______ “Other” _______ _______ _______

II. HABITAT DESCRIPTION

Tree DBH:  T1 (<1” dbh), T2 (1-6” dbh), T3 (6-11” dbh), T4 (11-24” dbh), T5 (>24” dbh) T6 multi-layered (T3 or T4 layer under T5, >60% cover)
Shrub:  S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
Herbaceous:  H1 (<12” plant ht.), H2 (>12” ht.)
Desert Riparian Tree/Shrub:  1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)
Desert Palm/Joshua Tree:  1 (<1.5” base diameter), 2 (1.5-6” diam.), 3 (>6” diam.)

III. INTERPRETATION OF STAND

Field-assessed vegetation Alliance name: Pinus muriicata
Field-assessed Association name (optional): Notholithocarpus densiflorus
Adjacent Alliances/direction:
Confidence in Alliance identification:  L M H Explain: mostly Bishop pine, first
Phenology (E,P,L): Herb L Shrub L Tree L Other identification or mapping information:
**IV. VEGETATION DESCRIPTION**

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Species</th>
<th>% cover</th>
<th>C</th>
<th>Final species determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>T/A</td>
<td>Pinus ponderosa</td>
<td>70/10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T/A</td>
<td>Abies grandis</td>
<td>50/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>Picea engelmannii</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>Vaccinium ovalifolium</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>Pteridium aquilinum</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Juniperus virginiana</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>Rubus armeniacus</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>Heteromeles arbutifolia</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Mentha punctata</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Lonicera hispida</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Polygala chrysantha</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Oxalis oregana</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

% NonVasc cover: 1  Total % Vasc Veg cover: 80

Stratum categories: T=Tree, A=SApling, E=SEedling, S=Shrub, H=Herb, N=Non-vascular

% Cover Intervals for reference: r=trace, +=<1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Unusual species:
Photo Points for Combined Vegetation Rapid Assessment and Relevé Field Forms

IRWN0001-P1- looking west.
IRWN0001-P2- looking north
IRWN0001-P3- looking east.
IRWN0001-P4- looking south
### Appendix D: Reduced Buffer Analysis

<table>
<thead>
<tr>
<th>Mendocino County Coastal Zoning Code, Table 4. Section 20.496.020 ESHA – Development Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(A) Buffer Areas.</strong></td>
</tr>
<tr>
<td>A buffer area shall be established adjacent to all environmentally sensitive habitat areas. The purpose of this buffer area shall be to provide for a sufficient area to protect the environmentally sensitive habitat from degradation resulting from future developments and shall be compatible with the continuance of such habitat areas.</td>
</tr>
<tr>
<td>One potential Environmentally Sensitive Habitat Area (ESHA) was identified within the Study Area:</td>
</tr>
<tr>
<td>• <strong>Bishop pine forest ESHA</strong> (G3 S3) – Parcel located within CalVeg mapped Bishop pine forest.</td>
</tr>
<tr>
<td>A proposed Remediation Plan (Section 6.5) and Recommendations (Section 6.6) address the potential impacts from proposed the development and how it can be minimized to have the least impact possible.</td>
</tr>
<tr>
<td><strong>(1) Width.</strong></td>
</tr>
<tr>
<td>The width of the buffer area shall be a minimum of one hundred (100) feet, unless an applicant can demonstrate, after consultation and agreement with the California Department of Fish and Game, and County Planning staff, that one hundred (100) feet is not necessary to protect the resources of that particular habitat area from possible significant disruption caused by the proposed development. The buffer area shall be measured from the outside edge of the Environmentally Sensitive Habitat Areas and shall not be less than fifty (50) feet in width. New land division shall not be allowed which will create new parcels entirely within a buffer area. Developments permitted within a buffer area shall generally be the same as those uses permitted in the adjacent Environmentally Sensitive Habitat Area.</td>
</tr>
<tr>
<td>Based on the analysis below, the recommended buffer is:</td>
</tr>
<tr>
<td>• <strong>Bishop pine forest ESHA</strong> – 50-foot Buffer around the Study Area.</td>
</tr>
<tr>
<td>Erosion control fencing should be installed 50 feet outside of the proposed 1.5 acres of construction area prior to construction.</td>
</tr>
</tbody>
</table>
Mendocino County Coastal Zoning Code, Table 4. Section 20.496.020 ESHA – Development Criteria

<table>
<thead>
<tr>
<th>1(a)</th>
<th><strong>Biological Significance of Adjacent Lands.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Lands adjacent to a wetland, stream, or riparian habitat area vary in the degree to which they are functionally related to these habitat areas. Functional relationships may exist if species associated with such areas spend a significant portion of their life cycle on adjacent lands. The degree of significance depends upon the habitat requirements of the species in the habitat area (e.g., nesting, feeding, breeding, or resting).</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Where a significant functional relationship exists, the land supporting this relationship shall also be considered to be part of the ESHA, and the buffer zone shall be measured from the edge of these lands and be sufficiently wide to protect these functional relationships. Where no significant functional relationships exist, the buffer shall be measured from the edge of the wetland, stream, or riparian habitat that is adjacent to the proposed development.</strong></td>
</tr>
</tbody>
</table>

The closest stream or riparian habitat area is a Class II watercourse, approximately 225 feet north of the Study Area.

There are two mapped CNDDB occurrences (Pacific gilia and Mendocino Coast paintbrush) that includes a portion of this parcel located along Highway 1, approximately 300 feet of the Study Area.

Potentially present nesting birds may be migratory or year-round residents, and nesting requirements are highly variable. The bird nesting season typically extends from February to August. Although no special-status birds or nests were observed during any of the field surveys, the Bishop pine trees provide potential nesting habitat for special-status bird species and would be protected by the Migratory Bird Treaty Act. If construction is to occur during the breeding season (February to August), a pre-construction survey is recommended to ensure that no nesting birds will be disturbed during development. No surveys are recommended if development occurs in the non-breeding season. (See Appendix A for potential special-status bird species in the Study Area).

California red-legged frogs may be found in upland areas during migration; however, the adjacent upland areas do not provide any known specific habitat value for California red-legged frog. Within one week prior to the onset of construction, a qualified biologist shall conduct a survey of the construction area for migrating California red-legged frogs, and shall conduct a training for the construction crew on identification of California red-legged frogs, as well as the protocols listed in Section 6:

Sonoma tree voles may potentially be present within the Study Area. The property does not contain Douglas fir trees; however, does contain Grand fir trees, which Sonoma tree vole would utilize if present. Sonoma tree voles, nests or resin ducts were not observed during site assessments; however, it is recommended to survey the 1.5-acre Study Area again prior to the onset of construction.
**Mendocino County Coastal Zoning Code, Table 4. Section 20.496.020 ESHA – Development Criteria**

| 1(b) | **Sensitivity of Species to Disturbance.**  
The width of the buffer zone shall be based, in part, on the distance necessary to ensure that the most sensitive species of plants and animals will not be disturbed significantly by the permitted development. Such a determination shall be based on the following after consultation with the Department of Fish and Game or others with similar expertise:  
(1b-i) Nesting, feeding, breeding, resting, or other habitat requirements of both resident and migratory fish and wildlife species;  
(1b-ii) An assessment of the short-term and long-term adaptability of various species to human disturbance;  
(1b-iii) An assessment of the impact and activity levels of the proposed development on the resource. |

1b-i: No special status plant or animal species were observed in the project area during any of the field surveys. However, there is potential for presence of special status birds, mammals and amphibians in the project area. A survey for Sonoma tree voles and California red-legged frogs shall be conducted prior to construction.

There is a potential that special status birds (which are sensitive to disturbance during their breeding seasons) may use the Bishop pine trees within the Study Area.

The Class II watercourse that is approximately 225 feet north of the Study Area is not expected to support fish and is farther than 100 feet from the Study Area. There are two mapped CNDDB occurrences (Pacific gilia and Mendocino Coast paintbrush) that are farther than 100 feet from the Study Area.

The proposed development is in a subdivision where human traffic and activity currently exist on nearby adjacent parcels. Common species in the Study Area are likely adapted to human disturbance.

To minimize construction impacts, the recommended Mitigation Measures (Section 6) include:

- Young bishop pine and grand fir trees should be allowed to become re-established wherever they are present outside the construction site.
- Erosion control fencing should be installed 50 feet outside of the proposed 1.5 acres of construction area prior to construction.
- Invasive Scotch broom (Cytisus scoparius will be removed from all portions of the property to the greatest extent practicable.
- During construction, any stockpiled materials should be checked around and moved carefully in order to avoid potential nesting bird habitat, if stockpiling takes place between February and August.
- Landscaping on the parcel should not include any invasive plants and should ideally consist of native plants compatible with the adjacent plant communities.

1b-ii: Adaptability to human disturbance: The Study Area is located in a rural residential subdivision where the parcels are approximately 5 acres in size. Properties adjacent to the northwest and east are developed with residences. Wildlife found in this area should be reasonably adapted to human disturbance.

1b-iii: Impacts of proposed activity on the project area: The proposed development consists of a modest single-family residence and associated development. The development is expected to result in minimal removal of vegetation, and the use of the property is expected to be similar to existing neighboring uses.

A minimal buffer of 50 feet should be sufficient to address habitat requirements.
## Mendocino County Coastal Zoning Code, Table 4. Section 20.496.020 ESHA – Development Criteria

<table>
<thead>
<tr>
<th>1(c)</th>
<th>Susceptibility of Parcel to Erosion.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The width of the buffer zone shall be based, in part, on an assessment of the slope, soils, impervious surface coverage, runoff characteristics, and vegetative cover of the parcel and to what degree the development will change the potential for erosion. A sufficient buffer to allow for the interception of any additional material eroded as a result of the proposed development should be provided.</td>
</tr>
<tr>
<td></td>
<td>The soil types mapped for the Study Area by NRCS are Dystropepts, 30 to 75 percent slopes, and Flumeville clay loam, 0 to 5 percent slopes. The downhill soil type (Dystropepts) is a well-drained soil that is shallow or moderately deep to bedrock. The proposed construction area is 5-20% slope and the recommended 50 foot buffer around the 1.5 acres shall protect erosion from entering the downhill portion of the parcel.</td>
</tr>
<tr>
<td></td>
<td>The property slopes gently to moderately in a westerly direction, towards the ocean. Proposed impervious surface coverage is expected to be minimal.</td>
</tr>
<tr>
<td></td>
<td>The permeable area in the Study Area will be reduced due to the construction of the storage units and driveway, which will occupy approximately 125,510 sq. ft. of ground, or 79% of the total parcel area. Proposed development is positioned in the flattest portion of the parcel, adjacent to Hwy 1.</td>
</tr>
<tr>
<td></td>
<td>It is recommended that straw wattles are placed along the 50 ft ESHA buffer boundary around the proposed 1.5 acre conversion for the homesite and associated development. Straw wattles will prevent sediment caused from ground disturbance activities from entering the Bishop pine forest ESHA. Upland habitat in the 50 ft buffer, within the Bishop pine forest habitat has &gt;90% vegetation cover, mostly composed of trees and shrubs, which will provide additional protection for the Bishop pine forest. Ground disturbance and exposed soil will be limited to the 1.5 acres.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1(d)</th>
<th>Use of Natural Topographic Features to Locate Development.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hills and bluffs adjacent to ESHAs shall be used, where feasible, to buffer habitat areas. Where otherwise permitted, development shall be located on the sides of hills away from ESHAs. Similarly, bluff faces should not be developed, but shall be included in the buffer zone.</td>
</tr>
<tr>
<td></td>
<td>There are no natural topographic features present to use for buffering purposes. Slopes are consistently gentle to moderate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1(e)</th>
<th>Use of Existing Cultural Features to Locate Buffer Zones.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cultural features (e.g., roads and dikes) shall be used, where feasible, to buffer habitat areas. Where feasible, development shall be located on the side of roads, dikes, irrigation canals, flood control channels, etc., away from the ESHA.</td>
</tr>
<tr>
<td></td>
<td>There are no cultural features on the property to use as a buffer.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1(f)</th>
<th>Lot Configuration and Location of Existing Development.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Where an existing subdivision or other development is largely built-out and the buildings are a uniform distance from a habitat area, at least that same distance shall be required as a buffer zone for any new development permitted. However, if that distance is less than one hundred (100) feet, additional mitigation measures (e.g., planting of native vegetation) shall be provided to ensure additional protection. Where development is proposed in an area that is largely undeveloped, the widest and most protective buffer zone feasible shall be required.</td>
</tr>
<tr>
<td></td>
<td>Existing structures to the north and east of the property appears to observe a setback to the subject northern Class II stream of over 100 feet and both structures are located in Bishop pine forest. These measurements are based on Google Earth aerial photo interpretation.</td>
</tr>
</tbody>
</table>
**Mendocino County Coastal Zoning Code, Table 4. Section 20.496.020 ESHA – Development Criteria**

<table>
<thead>
<tr>
<th><strong>1(g) Type and Scale of Development Proposed.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The type and scale of the proposed development will, to a large degree, determine the size of the buffer zone necessary to protect the ESHA. Such evaluations shall be made on a case-by-case basis depending upon the resources involved, the degree to which adjacent lands are already developed, and the type of development already existing in the area.</td>
</tr>
</tbody>
</table>

The proposed development consists of construction of a single-family residence and the associated infrastructure including driveway, connection to utilities and septic, and a primary and secondary leach field. The proposed development is consistent with the type and scale of nearby residences.

<table>
<thead>
<tr>
<th><strong>(2) Configuration.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The buffer area shall be measured from the nearest outside edge of the ESHA (e.g., for a wetland from the landward edge of the wetland; for a stream from the landward edge of riparian vegetation or the top of the bluff).</td>
</tr>
</tbody>
</table>

- The Bishop pine forest was first identified in the field by examining vegetation patterns, topography, and landforms.
- The buffer area is measured from the landward edge of riparian vegetation associated with drainage for the Class II stream.

<table>
<thead>
<tr>
<th><strong>(3) Land Division.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>New subdivisions or boundary line adjustments shall not be allowed which will create or provide for new parcels entirely within a buffer area.</td>
</tr>
</tbody>
</table>

A boundary line adjustment or new subdivision is not proposed for this development.

<table>
<thead>
<tr>
<th><strong>(4) Permitted Development.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Development permitted within the buffer area shall comply at a minimum with the following standards:</td>
</tr>
</tbody>
</table>

4(a) Development shall be compatible with the continuance of the adjacent habitat area by maintaining the functional capacity, their ability to be self-sustaining and maintain natural species diversity.

Development within the recommended 50-foot buffer area consist of septic leach field and lines installed underground from the leach field area to the proposed residence. The proposed underground utility lines are not expected to have a detrimental short or long term impact to the ESHA or buffers. The homesite and driveway will have an impact within the 1.5 acre conversion area; however, is still consistent with existing development in the surrounding area.

4(b) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel.

The proposed location for the homesite, driveway, leach field and septic system is the most feasible location within the parcel. It is adjacent from the road easement leading to the property and utilizes the least amount of space available. It is located further than 300 feet from Highway 1 and would not be visible to highway traffic. It is located on the least sloped area within the parcel.
**Mendocino County Coastal Zoning Code, Table 4. Section 20.496.020 ESHA – Development Criteria**

<table>
<thead>
<tr>
<th></th>
<th>Development shall be sited and designed to prevent impacts, which would degrade adjacent habitat areas. The determination of the best site shall include consideration of drainage, access, soil type, vegetation, hydrological characteristics, elevation, topography, and distance from natural stream channels. The term &quot;best site&quot; shall be defined as the site having the least impact on the maintenance of the biological and physical integrity of the buffer strip or critical habitat protection area and on the maintenance of the hydrologic capacity of these areas to pass a one hundred (100) year flood without increased damage to the coastal zone natural environment or human systems.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4(c)</td>
<td>The “best site” is as proposed. This is the only location that will be sufficient for the proposed homesite and development. The area was chosen to minimize removal of the majority of healthy native trees.</td>
</tr>
<tr>
<td>4(d)</td>
<td>Development shall be compatible with the continuance of such habitat areas by maintaining their functional capacity and their ability to be self-sustaining and to maintain natural species diversity.</td>
</tr>
<tr>
<td></td>
<td>Young bishop pine and grand fir trees should be allowed to become re-established wherever they are present outside the construction site.</td>
</tr>
<tr>
<td></td>
<td>Invasive Scotch broom (Cytisus scoparius) will be removed from all portions of the property to the greatest extent practicable.</td>
</tr>
<tr>
<td></td>
<td>Landscaping on the parcel should not include any invasive plants and should ideally consist of native plants compatible with the adjacent plant communities.</td>
</tr>
<tr>
<td>4(e)</td>
<td>Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel. Mitigation measures, such as planting riparian vegetation, shall be required to replace the protective values of the buffer area on the parcel, at a minimum ratio of 1:1, which are lost as a result of development under this solution.</td>
</tr>
<tr>
<td></td>
<td>There is no other feasible location on the parcel for the proposed homesite and development. Mitigation measures are proposed including the facilitation of natural regeneration of Bishop pine and Grand fir trees within the proposed 50-foot buffer.</td>
</tr>
<tr>
<td></td>
<td>It is recommended that there is sufficient regeneration to replace the Grand fir trees that are proposed for removal and to not replant due to the available space and sunlight on the rest of the 5.09-acre parcel. It is recommended that the remediation of the removed 68 Bishop pine trees over 7” DBH be a 1:1 replacement based on available space and sunlight on the remainder of the parcel. Bishop pine individuals shall be replaced with saplings obtained from local stock in the area. Planted Bishop pine saplings should be planted by hand, with workers using hand tools and/or digging through the soil with a portable auger without the usage of heavy construction machinery that could trample and/or compact ground layer plants and underlying soil. Newly planted Bishop pine and Grand fir individuals should be protected by “protective tubes”</td>
</tr>
<tr>
<td></td>
<td>An 80% survival rate for the newly planted replacement Bishop pine trees shall occur and be monitored for five consecutive years annually in October by a qualified biologist. After each annual monitoring survey, an annual brief letter report summary of the biologist’s findings should be submitted by the qualified biologist to California Department of Fish and Wildlife (CDFW) by no later than December 31 for each of the five monitoring years (2021 through 2025, for example, if construction begins and this Plan’s mitigation measure actions are initiated by spring 2021). CDFW may provide comments on each annual summary letter and require planting of new Bishop pine trees based on results noted in each of the annual summary letter.</td>
</tr>
<tr>
<td>Mendocino County Coastal Zoning Code, Table 4. Section 20.496.020 ESHA – Development Criteria</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>4(f)</strong> Development shall minimize the following: impervious surfaces, removal of vegetation, amount of bare soil, noise, dust, artificial light, nutrient runoff, air pollution, and human intrusion into the wetland and minimize alteration of natural landforms.</td>
<td></td>
</tr>
<tr>
<td>Vegetation removal is proposed for the development of the homesite (approximately 1.5 acres). The proposed impervious surfaces shall be limited to the proposed 1.5 acres. The project is not expected to result in significant areas of bare soil, noise, dust, artificial light, nutrient runoff, air pollution or human intrusion into sensitive areas. The Coastal Zoning Code requires exterior lights to be downcast and shielded and building and air quality requirements are expected to address dust, air pollution and nutrient runoff issues.</td>
<td></td>
</tr>
<tr>
<td><strong>4(g)</strong> Where riparian vegetation is lost due to development, such vegetation shall be replaced at a minimum ratio of one to one (1:1) to restore the protective values of the buffer area.</td>
<td></td>
</tr>
<tr>
<td>No riparian vegetation will be removed as part of the project.</td>
<td></td>
</tr>
<tr>
<td><strong>4(h)</strong> Aboveground structures shall allow peak surface water flows from a one hundred (100) year flood to pass with no significant impediment.</td>
<td></td>
</tr>
<tr>
<td>The development is not proposed in a 100 year flood zone.</td>
<td></td>
</tr>
<tr>
<td><strong>4(i)</strong> Hydraulic capacity, subsurface flow patterns, biological diversity, and/or biological or hydrological processes, either terrestrial or aquatic, shall be protected.</td>
<td></td>
</tr>
<tr>
<td>The development is not expected to impact any terrestrial or aquatic hydrologic flow patterns or biological or hydrological processes.</td>
<td></td>
</tr>
<tr>
<td><strong>4(j)</strong> Priority for drainage conveyance from a development site shall be through the natural stream environment zones, if any exist, in the development area. In the drainage system design report or development plan, the capacity of natural stream environment zones to convey runoff from the completed development shall be evaluated and integrated with the drainage system wherever possible. No structure shall interrupt the flow of groundwater within a buffer strip. Foundations shall be situated with the long axis of interrupted impermeable vertical surfaces oriented parallel to the groundwater flow direction. Piers may be allowed on a case-by-case basis.</td>
<td></td>
</tr>
<tr>
<td>The project will not change topography or drainage patterns. The project will respect and avoid the natural stream environment.</td>
<td></td>
</tr>
<tr>
<td><strong>4(k)</strong> If findings are made that the effects of developing an ESHA buffer area may result in significant adverse impacts to the ESHA, mitigation measures will be required as a condition of project approval. Noise barriers, buffer areas in permanent open space, land dedication for erosion control, and wetland restoration, including off-site drainage improvements, may be required as mitigation measures for developments adjacent to environmentally sensitive habitats. (Ord. No. 3785 (part), adopted 1991)</td>
<td></td>
</tr>
<tr>
<td>This project is not expected to result in significant adverse impacts to ESHA.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix E: Representative Photos of the Study Area

Picture 1: Looking southwest, towards the ocean. Bishop pine and grand fir trees within the Study Area.

Date Taken: August 20, 2019.
Picture 2: Looking north, showing mostly grand fir sapling regeneration within the Study Area.

Date Taken: August 20, 2019.
Picture 3: Looking north, along the parcel boundary line showing mostly grand fir sapling regeneration within the Study Area.

Date Taken: August 20, 2019.
Picture 4: Looking northwest, along the parcel boundary line showing some dying Bishop pine trees.

Date Taken: August 20, 2019.
Appendix F: Supporting Figures (Maps)
Irwin Biological Assessment

APN: 126-110-12-00, Parcel Size: 5 acres
Section 4, T15N, R17W, MD B&M
Albion USGS 7.5 Minute Quadrangle
Irwin Biological Assessment

APN: 126-110-12-00, Parcel Size: 5 acres
Section 4, T15N, R17W, MD B&M
Albion USGS 7.5 Minute Quadrangle

Aerial Map
- Assessor's Parcel Boundary
- Watercourses
- Class 1
- Class 2
- Class 3
- Conversion Area (Study Area)
Figure 3: Bill Irwin

APN: 126-110-12-00, Parcel Size: 5 acres
Section 4, T15N, R17W, MD B&M
Albion USGS 7.5 Minute Quadrangle

1 inch = 300 feet

Copyright: © 2013 National Geographic Society, i-cubed

Copyright: © 2019 JACOBSZOO & ASSOCIATES, INC.

CNDDB Map-Zoomed In
- Assessor's Parcel Boundary
- Conversion Area
- 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)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
Soil Map—Mendocino County, Western Part, California
(Bill Irwin)

Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

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

Map Scale: 1:1,260 if printed on A landscape (11" x 8.5") sheet.

Soil Map may not be valid at this scale.
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: 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 14, Sep 16, 2019
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

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>139</td>
<td>Dystropepts, 30 to 75 percent slopes</td>
<td>3.2</td>
<td>65.1%</td>
</tr>
<tr>
<td>144</td>
<td>Flumeville clay loam, 0 to 5 percent slopes</td>
<td>1.7</td>
<td>34.9%</td>
</tr>
<tr>
<td>Totals for Area of Interest</td>
<td></td>
<td>5.0</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
The Director of the Department of Forestry and Fire Protection (CAL FIRE) is hereby notified of timber operations under the requirements of 14 CCR § 1104.1(a): Harvesting of trees that is a single conversion to a non-timber growing use of timberland of less than three acres. (See 14 CCR § 1104.1(a) for a description of the conditions on the conduct of this type of timber operation and additional information that is required to be submitted.) Complete Items 1 through 8 on both pages of this notice.

1. Registered Professional Forester preparing Notice: Name __Erik Snow__________________ Number __#3101___________
   Address ______117 Clara Ave._____________________________________________________________________________
   City __Ukiah_____________________________________ State _CA______ Zip __95482___________ Phone _707-485-5544______

   I have, or my supervised designee has, (1) prepared this Notice of Conversion Exemption Timber Operations; (2) visited the site and flagged the boundaries of the conversion exemption, applicable WLPZs and equipment limitation zones; (3) prepared a Neighborhood Notice of Conversion Exemption according to 14 CCR § 1104.1(a)(3) to be mailed by the landowner to adjacent landowners; and (4) posted and dated a copy of the Neighborhood Notice of Conversion Exemption on the ownership, visible to the public, at least 5 days prior to the postmark date of submission of the Notice of Conversion Exemption. I certify that if the County Board of Supervisors has not designated a representative authorized to sign in Item 6 that I, or my supervised designee, contacted the county and the Notice is in conformance with county regulations.

   SIGNATURE of RPF (required)  _____________________________________________________________ Date _____________________

2. LICENSED TIMBER OPERATOR(S):  Name __Unknown______________________________________________ Lic. No. _________________
   Address __________________________________________________________________________________________________________
   City ___________________________________________________ State ___________ Zip _____________ Phone ______________________

   SIGNATURE __________________________________________________________________________________

3. TIMBERLAND OWNER(S) OF RECORD:  Name __Bill Irwin__________________________________________________________________
   Address ______1656 Cameron Rd. Elk, CA 95432________________________________________________________________________
   City ___Elk_____________________________________________ State __CA_______ Zip __95432_______ Phone _(661) 269-2071______

   I certify, under penalty of perjury, that This is a one-time conversion to a non-timberland use and that there is a “BONA FIDE INTENT” [14 CCR § 1100(b)] to convert to: (required) __Homesite_________________________________________________________

   (State what the conversion will be to)

   SIGNATURE: ____________________________________________ Date ______________
4. TIMBER OWNER(S) OF RECORD: Name __Bill Irwin______________________________
   Address ______1656 Cameron Rd. Elk, CA 95432_________________________________
   City ___Elk_____________________________________________ State __CA_______ Zip __95432_______ Phone _(661) 269-2071______

5. NOTICE SUBMITTER(S): Name __Bill Irwin______________________________
   Address ______1656 Cameron Rd. Elk, CA 95432_________________________________
   City ___Elk_____________________________________________ State __CA_______ Zip __95432_______ Phone _(661) 269-2071____
Submitter must be 2,3 or 4 above, and must sign.
   SIGNATURE __________________________________________________________________________ Date _________________

6. COUNTY BOARD OF SUPERVISORS DECLARATION: (required)
   I, ___________________________________________, declare as the authorized designee of the County Board of Supervisors that this conversion
   exemption is in conformance with all county regulatory requirements, including public notice. (If the county has authorized a designee this item
   MUST be completed. If it has not, see Item 1.)
   SIGNATURE __________________________________________________________________________ Date _________________

TIMBER TAX NOTICE: The TIMBER OWNER is responsible for payment of a yield tax.

For timber yield tax information or for assistance with these questions call 1-800-400-7115, or write: Timber Tax Section, MIC: 60,
California Department of Tax and Fee Administration, P.O. Box 942879, Sacramento, CA 94279-0060; or see the CDTFA Web Page on
the Internet http://www.cdtfa.ca.gov.

TIMBER TAX INFORMATION: Some small or low value harvests may be exempt from the timber yield tax (Revenue and Taxation Code
sec. 38116)

Timber Owners may be considered exempt if the value of the harvesting operations does not exceed $3,000 dollars within a quarter,
according to CDTFA Harvest Value Schedules, Rule 1024.

IF THE TIMBER OWNER BELIEVES HARVESTING MAY BE EXEMPT (see timber tax exemption language above for low value harvests)
PLEASE CHECK BELOW:

FINAL DETERMINATION of tax exempt status will be made by the Timber Tax Section of the California Department of Tax and
Fees Administration. If you think you are exempt based on the directions above please complete the below information so the
Timber Tax Section can make the final determination.

IF YOU WOULD LIKE CDTFA TIMBER TAX SECTION TO CONSIDER A TAX EXEMPTION BASED ON PROJECTED HARVEST
PLEASE COMPLETE THE INFORMATION BELOW.

A. Circle the option that most closely estimates the total volume for this harvest, in thousands of board feet (mbf - Net Scribner short log):
   Under 8 mbf  8-15 mbf  16-25 mbf  Over 25 mbf

B. Estimate what percentage of timber will be removed during this harvest: (percentages provided should equal 100%)
   Redwood __________%; Ponderosa/Sugar pine __________%; Douglas-fir __________%; Fir __________%;
   Port-Orford Cedar __________%; Cedar (IC, WRC) __________%; Bishop Pine __________%; Other hardwood __________%.

C. Fuelwood over 150 cords? Yes ☐ No ☑
   D. Christmas trees over 3,000 lineal feet? Yes ☐ No ☑
7. 14 CCR § 1038 (i) - Is it anticipated that a tree existing before 1800 A.D. greater than 60 inches’ diameter at stump height for Sierra or Coastal Redwoods or 48 inches in diameter at stump height for all other tree species will be harvested? ☐ YES ☒ NO (required)

NOTE: If yes please refer to 14 CCR § 1038(h) and have an RPF prepare an explanation and justification described in 14 CCR § 1104.1(i) to be included at Submission

8. Has the Timberland Owner, whether acting as an individual, partnership or as an employee of a corporation or other legal entity obtained a conversion on a contiguous land ownership within the last 5 years? ☐ YES ☒ NO (required)

NOTE: If YES then the landowner may not apply for the conversion. The Timberland Owner may request a waiver of the five-year limitation with the Department per 14 CCR § 1104.1(a)(9)(A)(1-3)(B-D)

9. Has all or a portion of the contiguous land ownership been subject to a PRIOR, unpermitted Timberland conversion? (required) ☐ YES ☒ NO

If YES please provide a description or information to assist the Director in determining that this conversion would be consistent with the purpose of the Act. (optional)

NOTE: Per 14 CCR § 1104.1(a) This conversion exemption is applicable to a conversion of Timberland to a non-timber use only, of less than three acres in one contiguous ownership, whether or not it is a portion of a larger land parcel and shall not be part of a THP. This conversion exemption may only be used once per contiguous land ownership. If all or a portion of the contiguous land ownership has been subject to prior, unpermitted Timberland conversion, a conversion exemption hereunder shall not be accepted unless the Director determines that it would be consistent with the purposes of the Act

10. Will Timber operations occur within the winter period? ☒ YES ☐ NO (optional)

NOTE: If YES refer to 14 CCR § 1104.1(a)(2)(E)(1-3) for specific requirements

11. Has the County / City approved by, local permit, operations within a WLPZ? ☐ YES ☒ NO (optional)

NOTE: timber operations are NOT allowed within a WLPZ without approval by county or city approval.

12. Have significant archaeological sites been identified within the project area? (required) ☒ YES ☐ NO
   - If yes will the site be preserved in place? ☐ YES ☒ NO
   - If yes please provide written concurrence from the Departments Archaeologist at the time of submission.

13. Designate the legal land description of the location of the timber operation. Attach a USGS 7.5-minute quadrangle or equivalent map showing the location of timber operations, it would be helpful to describe the access route to the timber operation so that it can be easily located, and/or include an assessor's parcel map for small areas. (required)

<table>
<thead>
<tr>
<th>Base Meridian</th>
<th>Township</th>
<th>Range</th>
<th>Section</th>
<th>County</th>
<th>Logging Area</th>
<th>Assessor’s Parcel #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mt. Diablo</td>
<td>15N</td>
<td>17W</td>
<td>04</td>
<td>Mendocino</td>
<td>1.80</td>
<td>126-110-12-00</td>
</tr>
</tbody>
</table>

The following are limitations or requirements for timber operations conducted under a Less Than Three Acre Conversion Exemption: (Notice, Notice of Conversion Exemption, Conversion Exemption):

1. Timber operations shall comply with all other applicable provisions of the Forest Practice Act and regulations, county general plans, zoning ordinances, State regulations and any implementing ordinances; copies of the state rules and regulations may be found on CAL FIRE’s Web Page on the Internet at [http://www.fire.ca.gov](http://www.fire.ca.gov).

2. All timber operations shall be complete within one year from the date of acceptance by CAL FIRE. 14 CCR § 1104.1(a)(2)(A)

3. All conversion activities shall be complete within two years from the date of acceptance by CAL FIRE unless under permit by local jurisdiction.
Failure to complete the conversion requires compliance with stocking standards and stocking report requirements of the Forest Practice Act and Board of Forestry and Fire Protection regulations. 14 CCR § 1104.1(a)(2)(B)

4. The RPF or supervised designee shall visit the site and flag the boundary of the conversion exemption timber operations and flag any applicable WLPZs and equipment limitation zones. 14 CCR § 1104.1(a)(2)(C)

5. The Timber Operator shall be the responsible party for the treatment of logging Slash and woody debris. 14 CCR 1104.1(a)(2)(D)

6. Timber operations may be conducted during the winter period. Tractor operations in the winter period are allowed under any of the conditions described in 14 CCR § 1104.1(a)(2)(E)(1-3)

7. No timber operations are allowed within a watercourse and lake protection zone unless specifically approved by local permit (e.g., county, city). 14 CCR § 1104.1(a)(2)(F)

8. No timber operations shall be conducted until CAL FIRE’s notice of acceptance is received and a valid copy of this notice and CAL FIRE’s acceptance shall be kept on site during timber operations.

9. Before beginning Timber Operations, the Timber Operator shall notify the Department of the actual commencement date of operations. The notification, by telephone, mail, or email, shall be directed to the appropriate CAL FIRE Unit Headquarters, Forest Practice Inspector or other designated personnel. If the notification is provided by mail, Timber Operations may not commence until three (3) days after the postmark date of notification. 14 CCR § 1104.1(a)(2)(K)

10. Operations conducted under a notice of exemption are NOT permitted in known sites of rare, candidate, threatened or endangered plants and animals if the sites will be disturbed or damaged. NO timber operations may occur within a buffer zone of a listed, or sensitive species defined by 14 CCR § 895.1

11. If any activities related to timber operations, as defined by PRC 4527, are to include any of the following activities in any river, stream or lake, including episodic and perennial waterways, a notification to the California Department Fish and Wildlife is required pursuant to Fish and Game Code §1602: 1) A substantial alteration of the bed, bank, or channel; 2) A substantial diversion (i.e. water drafting) or obstruction of the natural flow; or 3) Use of material from or deposit of material into the watercourse. Information on the Lake and Streambed Alteration Program, as well as notification forms, may be found at the following link: https://www.wildlife.ca.gov/conservation/lsa.

12. No timber operations are allowed on significant historical or archeological sites. See question #12 Above. Exception can be made if site is preserved and written concurrence is received, at time of submission of the Notice, from the Department Archeologist. 14 CCR § 1104.1(a)(2)(I)(1)(a-b)

13. A violation of the conversion exemption, including a conversion applied for in the name of someone other than the person or entity implementing the conversion in bona fide good faith, are violations of the Forest Practice Act and penalties may accrue up to ten thousand dollars ($10,000) for each violation pursuant to Article 8 (commencing with Section 4601). 

14. Within one month of the completion of timber operations including slash disposal the landowner shall submit to CAL FIRE a RM-71 Completion and Stocking report. Per PRC 4585 and PRC 4587.

15. Timber operations conducted under this notice shall comply with all operational provisions of the Forest Practice Act and District Forest Practice Rules applicable to "Timber Harvesting Plan," "THP," and "plan." Timber operations must conform to applicable city or county general plans, city or county implementing ordinances, and city or county zoning ordinances within which the exemption is located.
The following suggestions may help ensure your compliance with the Forest Practice Rules:

1. Timber Owners, Timberland Owners and Timber Operators should obtain and review copies of the Forest Practice Rules pertaining to the Notice of Exemption. Copies may be obtained from BARCLAYS LAW PUBLISHERS, P.O. BOX 3066, SO. SAN FRANCISCO, CA. 94080, or from CAL FIRE, Forest Practice Section, P.O. BOX 944246, Sacramento, CA 94244-2460; or from CAL FIRE’s Web Page on the Internet at http://www.fire.ca.gov.

2. Contact the CAL FIRE office listed below for questions regarding the use of this notice.

FILE THIS NOTICE WITH THE CAL FIRE OFFICE BELOW FOR THE COUNTY IN WHICH THE OPERATION WILL OCCUR:

<table>
<thead>
<tr>
<th>Counties</th>
<th>=&gt;</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda, Colusa, Contra Costa, Del Norte Humboldt, Lake, Marin, Mendocino, Napa, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, western Trinity and Yolo Counties.</td>
<td>=&gt;</td>
<td>Forest Practice Program Manager</td>
</tr>
<tr>
<td></td>
<td>=&gt;</td>
<td>CAL FIRE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>135 Ridgway Avenue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Santa Rosa, CA 95401</td>
</tr>
<tr>
<td>Butte, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, eastern Trinity and Yuba Counties.</td>
<td>=&gt;</td>
<td>Forest Practice Program Manager</td>
</tr>
<tr>
<td></td>
<td>=&gt;</td>
<td>CAL FIRE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6105 Airport Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Redding, CA 96002</td>
</tr>
<tr>
<td>Alpine, Amador, Calaveras, El Dorado, Fresno, Imperial, Inyo, Kern, Los Angeles, Madera, Mariposa, Merced, Mono, Monterey, Orange, Riverside, San Benito, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Stanislaus, Tuolumne, Tulare, and Ventura Counties.</td>
<td>=&gt;</td>
<td>Forest Practice Program Manager</td>
</tr>
<tr>
<td></td>
<td>=&gt;</td>
<td>CAL FIRE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1234 East Shaw Avenue</td>
</tr>
</tbody>
</table>
Irwin Less Than 3 Acre Conversion
Vicinity Map

APN: 126-110-12-00, Parcel Size: 5 acres
Section 4, T15N, R17W, MD B&M
Albion USGS 7.5 Minute Quadrangle
CAL FIRE FILE # 336-20  Project Type: New Build  Battalion # 5  Date: August 26, 2020

CONDITIONS OF APPROVAL OF STATE FIRE SAFE REGULATIONS

With reference to this file number, The California Department of Forestry and Fire Protection requires the following MINIMUM standards as set forth in 14CCR, Natural Resources; DIV 1.5, be adhered to in order to gain "Final Clearance" from this department. Local agencies may have more restrictive requirements. These conditions are a summary of the 2016 SRA Fire Safe Regulations. To see the complete listing visit www.fire.ca.gov.

Building / Project Site Information

Address: 1656 Cameron Rd  APN: 126-110-12
City: Elk  Zip Code: 95432

Property Owner

Name: William C and Audrey J Irwin
Mailing Address: 2071 Galloping Way
City: Acton  State: CA
Zip Code: 93510  Phone: 661-269-2071
Email: abirwin@roadrunner.com

Agent Representing Property Owner

Name: None Listed
Mailing Address:
City:  State: 
Zip Code:  Phone: 
Email:

Mail Correspondence to:

Owner  Agent  Pick Up at CAL FIRE Howard Forest

You must comply with the following marked (X) standards below to obtain FINAL CLEARANCE

X ADDRESS STANDARD
- Address must be posted at beginning of construction and maintained thereafter.
- Minimum 4" letter height, ½" stroke, reflectorized with contrasting background, visible from both directions of travel.
- Multiple addresses on a single driveway shall be mounted on a single post.
- Address shall be placed at each driveway entrance

X DRIVEWAY STANDARD
- Minimum 10' wide with 14' unobstructed horizontal clearance and 15' unobstructed vertical clearance.
- Driveway shall have an all-weather surface, with no more than 16% grade, and minimum 50' radius inside curvature on all turns.
- Driveways exceeding 150' but less than 800' require a turnout near the midpoint, driveways exceeding 800' shall provide turnouts no more than 400' apart. Turnout shall be a minimum of 12' wide, 30' long with 25' tapers on each end.
- A turnaround shall be provided to all building sites on driveways more than 300' in length and shall be within 50' of the building, a 40' radius turnaround or 60' hammerhead "T" shall be utilized.
- Gates shall be a minimum 14' wide, all gates providing access shall be located at least 30' from the roadway. Security gates shall have an approved means of emergency operation.
**MAINTAIN DEFENSIBLE SPACE AND FUELS MODIFICATION STANDARD**

- All parcels 1 acre and larger shall provide a minimum 30’ setback for all buildings from property lines and/or the center of the road.
- All parcels less than 1 acre, the local jurisdiction shall provide for the same practical effect.
- Fuel modification and disposal of flammable vegetation and fuels caused by site development and construction, shall be completed prior to road construction or final inspection of building permit.
- Maintain defensible space 100’ from each side and front and rear of the structure(s), but not beyond the property line. The intensity of fuels management may vary within the 100’ perimeter of the structure, the most intense being within 30’ of the structure.
- Remove that portion of a tree that extends within 10 feet of a chimney or stovepipe.
- Maintain a tree, shrub or other plant adjacent to or overhanging a structure.
- Maintain the roof structure free of leaves, needles, or other vegetative materials.

**EMERGENCY WATER STANDARD**

- Water systems equaling or exceeding the National Fire Protection Association (NFPA) 1142, 2012 Edition and California Fire Code CCR 24 part 9, shall be accepted as meeting the requirements of this article.
- The hydrant or fire valve shall be 18” above grade, 8’ from flammable vegetation, no closer than 4’ and no further than 12’ from roadway, and in a location apparatus using it will not block the roadway.
- The hydrant shall be not less than 50’ nor more than ½ mile from the building it is to serve, shall be located at a turnout or turnaround along the driveway to that building or along a road that intersects with driveway.
- The hydrant head shall be 2 ½” National Hose male thread with cap for pressure and gravity flow systems, and 4 ½” for draft systems. They shall have suitable crash protection.
- A reflectorized blue marker minimum of 3” diameter shall be mounted on a fire-retardant post within 3’ of the hydrant. The marker shall be no less than 3’ or more than 5’ above grade.

**ROAD STANDARD**

- All roads shall be constructed to provide two 10’ traffic lanes, not including shoulder and striping.
- Roadway shall be designed and maintained to support 75,000 lb and provide an aggregate base. Project applicant shall provide engineering specifications to support design if requested.
- The grades for all roads, streets, private lanes, and driveways shall not exceed 16%.
- No roadway shall have an inside radius curvature of less than 50’ and additional width of 4’ shall be added to curves of 50-100’.
- Turnarounds are required on driveways and dead end roads. The minimum turning radius shall be 40 feet not including parking. If a hammerhead “T” is used the top of the “T” shall be a minimum of 60’ in length.
- Turnouts shall be a minimum of 12’ wide by 30’ long and 25’ tapers on each end.
- All one-way roads shall provide a minimum 12’ traffic lane, not including shoulders. All one-way roads shall connect to a two-lane road at both ends. In no case shall it exceed 2640’ in length and a turnout shall be placed at the approximate midpoint.
- Maximum lengths for dead end roads: Parcels zoned less than 1 acre- 800’, parcels zoned 1-4.99 acres- 1320’, parcels zoned 5-19.99 acres-2640’, parcels zoned 20 acres or larger- 5280’. Where parcels are zoned 5 acres or larger turnarounds shall be provided at maximum 1320’ intervals. Each dead-end road shall have turn around constructed at its a terminus.

**SIGN STANDARD**

- Size of letters, numbers, and symbols for street and road signs shall be a minimum 4” letter height, ¾” stroke, reflectorized, and contrasting with background color of sign. Visible from both directions of travel for at least 100’.
- Height of street and road signs shall be uniform county wide, newly constructed or approved public and private roads must be identified by a name or number through a consistent countywide system. Signs shall be placed at the intersection of those roads streets or private lanes.
- A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead end road, one way road, or single lane conditions shall be placed at the intersection preceding the access limitation and no more than 100’ before such access limitation.
□ BRIDGE STANDARD
- All roadway structures shall be constructed to carry at least the maximum load and minimum vertical clearance as required by Vehicle Code Sections 35250, 35550, and 35750.
- The bridge shall be constructed and maintained in accordance with the American Association of State and Highway Transportation Officials Standard Specifications for Highway Bridges, 17th Edition. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.
- Vehicle load limits shall be posted at both entrances to bridges.
- A bridge with only one lane shall provide for unobstructed view from one end to the other with turnouts at both ends.

X CAL FIRE ADDITIONAL CONDITIONS OR COMMENTS:
Conversion approval must be granted through CAL FIRE - Resource management, prior to final approval. Contact Resource Management at 707-459-7440.

□ EXCEPTION REQUEST GRANTED
- See attached letter

□ EXCEPTION REQUEST DENIED
- See attached letter

Project review and approval by: Anthony Massucco
Mendocino Unit - Fire Prevention Bureau

CONDITIONS OF APPROVAL INSTRUCTIONS

Review the specific standards marked (X) above that CAL FIRE has mandated for your project. Once you have completed your project and complied with all the marked standards above, contact CAL FIRE at (707) 459-7414 to request a final inspection. A CAL FIRE final inspection must be completed before Mendocino County Planning and Building Services staff will complete their final for your project. Allow two weeks for the final inspection to occur. The most common delays in obtaining a FINAL CLEARANCE from CAL FIRE is improperly addressed properties.
# STATE FIRE SAFE REGULATIONS APPLICATION

## Building / Project Site Information

<table>
<thead>
<tr>
<th>Address</th>
<th>APN</th>
<th>Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1656 Cameron Road</td>
<td>126.110.12</td>
<td>95432-9204</td>
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</tbody>
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### Property Owner

<table>
<thead>
<tr>
<th>Name</th>
<th>Mailing Address</th>
<th>City</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>William C and Audrey J Irwin</td>
<td>2071 Galloping Way</td>
<td>Aston</td>
<td>CA</td>
</tr>
</tbody>
</table>

### Agent Representing Property Owner

<table>
<thead>
<tr>
<th>Name</th>
<th>Mailing Address</th>
<th>City</th>
<th>State</th>
</tr>
</thead>
<tbody>
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</table>

### Project Information

<table>
<thead>
<tr>
<th>Project Information</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Dwelling & Building Information

- **Dwelling Sq. Ft:** 2924
- **Attached Garage Sq. Ft:**
- **Detached Garage/Shop Sq. Ft:** 500
- **Other Structure Sq. Ft:**

### TOTAL SQUARE FEET:

- Residence and Garage Rectangular Shape, Fireproof to Fire Resistant Cladding, Aluminum Roof

### Questions

1. Was the subject parcel created PRIOR to January 1, 1991?
2. Is the structure within a ½ mile driving distance of a working fire hydrant?
3. Is the structure within a 5-mile driving distance of a year-round fire station?
4. Is the subject parcel 1 acre or larger?
5. Will the proposed structure(s) be 30 ft. or more from ALL property lines?
Project Information Continued

1. Was the subject parcel created PRIOR to January 1, 1991? 
   - [ ] Yes  
   - [ ] No

2. Is the structure within a ½ mile driving distance of a working fire hydrant? 
   - [ ] Yes  
   - [ ] No

3. Is the structure within a 5-mile driving distance of a year-round fire station? 
   - [ ] Yes  
   - [ ] No

4. Is the subject parcel 1 acre or larger? 
   - [ ] Yes  
   - [ ] No

5. Will the proposed structure(s) be 30 ft. or more from ALL property lines 
   - [ ] Yes  
   - [ ] No

6. Will your project require construction of a new road? 
   - [ ] Yes  
   - [ ] No

7. Will your project require extension of an existing road? 
   - [ ] Yes  
   - [ ] No

   If you answered YES to question 6 or 7: How many feet?  [ ] Maximum grade (%)?

8. Will your project require construction of a new driveway? 
   - [ ] Yes  
   - [ ] No

9. Will your project require extension of an existing driveway? 
   - [ ] Yes  
   - [ ] No

   If you answered YES to question 8 or 9: How many feet?  [ ] Maximum grade (%)? -3°

If you answered No to (one or more) questions 6-9, describe the existing road/driveway:

A NEW DRIVEWAY ON A NEAR FLAT GRADE, OFF OF EXISTING LANE

10. Is there an existing bridge(s) on the parcel that provide access to the project site? 
    - [ ] Yes  
    - [ ] No

11. Will a bridge be installed/ constructed to provide access to project site? 
    - [ ] Yes  
    - [ ] No

12. Is a plot plan attached as per the instructions? 
    - [ ] Yes  
    - [ ] No

Subdivision Information (only required for subdivision)

Current acreage before split?  
How many parcels will be created?

Acreage of each newly created parcel?

Timber and Land Conversion Activities

13. Will trees be cut and timber products be sold, bartered, traded, or exchanged? 
    - [ ] Yes  
    - [ ] No

14. Will timberland be converted to a non-timber growing use? 
    - [ ] Yes  
    - [ ] No

If YES on questions 13 or 14, a harvest permit may be required from CAL FIRE Resource Management

FOR QUESTIONS RELATED TO TIMBER OR LAND CONVERSION CALL (707) 459-7440

Exception Request

15. Will your project require an exception to ANY of the Fire Safe Regulations? 
    - [ ] Yes  
    - [ ] No

If YES on question 15, attach a separate page identifying the applicable section pertinent to your request, facts supporting the request, and details of the exception or mitigation measures proposed, and a map showing the proposed location of the exception or mitigation measure.

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

Signature of property owner or authorized agent: [Signature]

Date: 8/6/2020  
Print Name: William C. Jarvis, Audrey J. Jarvis