

# BOTANICAL STUDY

Prepared for:  
SPROWL CREEK LLC  
APN's 222-071-030  
Garberville, Ca 95542

Prepared by:  
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Phillipsville, Ca 95589

# Botanical Study

## 1.0 Introduction

Protocol-level site surveys were conducted by a qualified biologist and environmental scientist, Austin Theriault, contracted by ETA Humboldt in 2021 and 2022. Multi-Season site visits have been conducted on the subject property, (APN's 222-071-030) in effort to comprehensively survey for botanical, biological, water quality, erosion control, and proposed disturbance areas. Floristic and botanical data has been collected throughout multiple site visits conducted on 06/08/2021, 07/15/2021, and 05/13/2022. All proposed disturbed areas have been surveyed throughout seasons for presence of rare or endangered plants present in proposed disturbed areas and throughout the property. Data has been collected in preparation for a comprehensive floristic study due to new ground disturbance being proposed. If a comprehensive floristic study is determined to be required, the project areas have been surveyed to protocol and sufficient data can be presented. This botanical survey was conducted at the subject property to identify special status plants and plant communities that could be impacted by development on the parcel for cannabis cultivation. A Comprehensive Floristic Analysis of the property is not recommended due to the absence of rare and or endangered plant species identified in the proposed disturbed areas/ property entirety during multiple / multi-season site inspections. No occurrences of rare or endangered species have been identified in the proposed disturbed areas and or property during multiple biological/ botanical focused surveys. Per California regulations regarding disturbed areas and CEQA review, a comprehensive floristic study would only be required if occurrences of listed species were identified during in field reconnaissance. Ten transects through each of the project sites were survey with ten representative 3m by 3m quadrangles sampled for plant community determinations. Referenced below are State regulations regarding Special Status plants and proposed Cannabis projects.

“Prior to commencement of new development related to cannabis activities and during the blooming period for the special-status plant species with potential to occur in the site, a qualified botanist will conduct protocol-level surveys for special status plants in all proposed disturbance areas following survey methods from CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities If special-status plants are not found, the botanist will document the findings in a letter report to USFWS, CDFW, and the applicant and no further mitigation will be required.” (CDFW 2009). The most recent survey was conducted on 5/13/2022. Post-site visit, an additional botanical assessment was conducted in-effort to identify property widebotanical and floristic status, presence, and or absence of plant species deemed to be Rare or Endangered by the State of California. The data presented as an addendum to this report is from the most recent floristic survey.

Multiple Botanical and Floristic reconnaissance site visits have been conducted to create a baseline vegetation profile of the subject properties and to assess the presence/absence of rare and endangered plant and animal species as defined by the California Department of Fish and Wildlife. Protocol level botanical surveys have been conducted on three separate in-season surveys spanning two years.

During the property wide comprehensive survey, no rare or endangered plant or animal species were identified by ETA's qualified biologist. There are thirteen plants of significance listed as rare or endangered and occurring in the Garberville Quadrangle as of May 2022. Those plants are Methuselah's Beard Lichen (*Usnea Longissima*), Streamside Daisy (*Erigeron Biolettii*), Tracy's Tarplant (*Hemizonia Congesta* ssp. *Tracyi*), Northern Clustered Sedge (*Carex Arcta*), Northern Bugleweed (*Lycopus Uniflorus*), Coast Fawn Lily (*Erytgronium Revolutum*), Siskiyou Cherkerbloom (*Sidalcea Malviflora* ssp. *Patula*), Humboldt County Fuchsia (*Epolobium Septentriolale*), Heart Leaved Twayblade (*Listera Cordata*), White-flowered Rein Orchid (*Piperia Candida*), North Coast Semaphore Grass (*Pleuropogon Hooverianus*), Bristly Leptosiphon (*Leptosiphon Acicularis*) and Broad-lobed Leptosiphon (*Leptosiphon Letisectus*). None of which were identified during multiple field reconnaissance visits. Botanical surveys of the proposed cultivation areas have been conducted in 2021 and 2022 in tandem with the Biological Assessment to confirm that no rare or endangered plant or animal species would be disturbed if these sites were to be developed. To address the concerns of Humboldt County about floristic significance of disturbed areas, an additional survey was conducted on 05/13/2022 in effort to collect further data of surrounding vegetation in the project areas, proposed cultivation areas. Species that were identified on the property were determined to be commonly occurring vascular plants with no protection listing Federal or State.

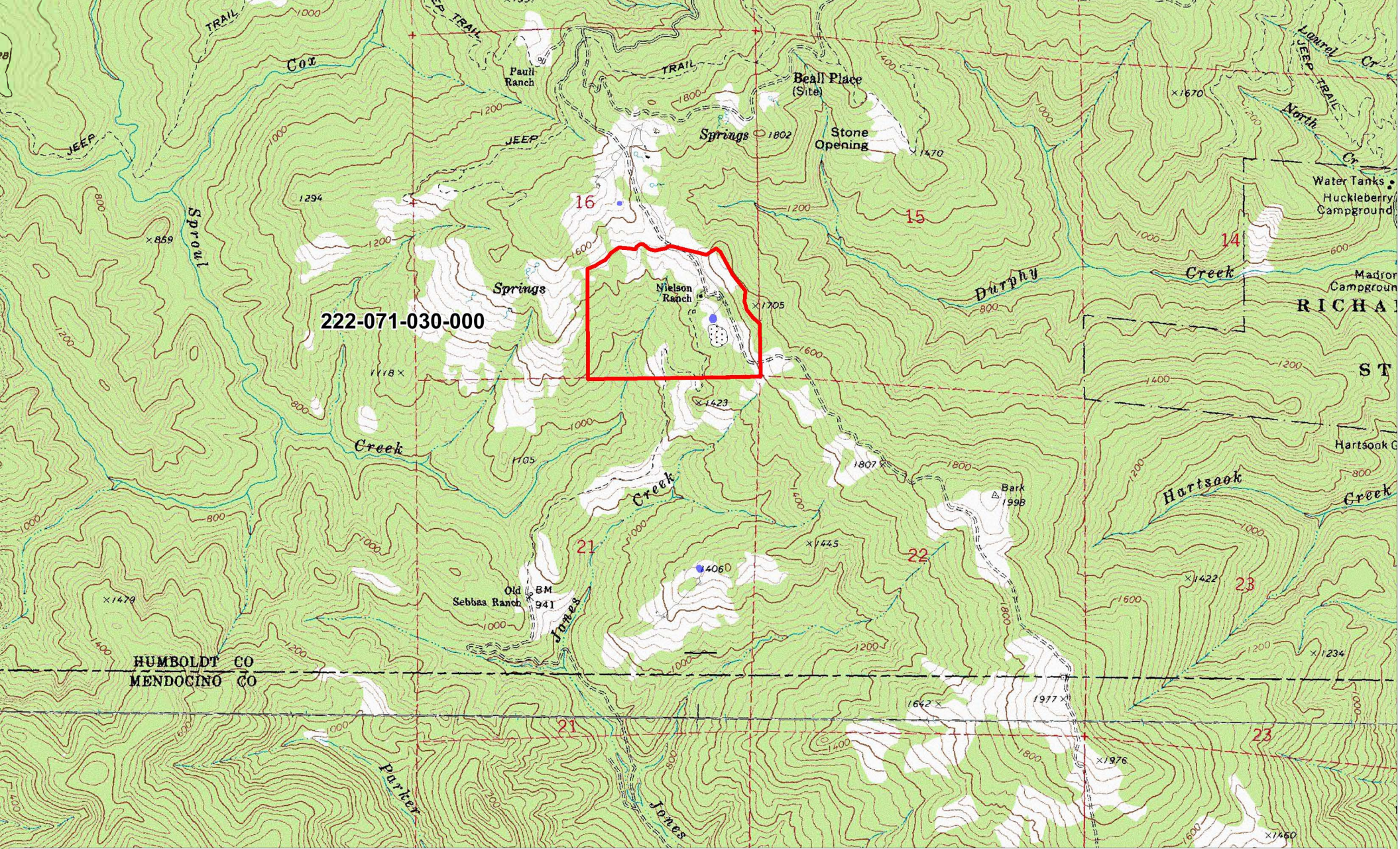
## **1.2 Location**

The project site is located approximately 7 miles South Southwest of the town of Garberville, CA. The parcel is in section 16, Township 5 south, Range 3 east, MDB&M, as made known on the 7.5' USGS Quadrangle Map, Garberville, CA. A location map is provided in Figure 1. The subject property is located in the Sproul Creek watershed. This parcel was once part of the historic Nielson Ranch and was historically grazed and logged.

## **1.3 Assessment Methodology**

**Botanical Survey Methods:** An in-season floristic-level survey was conducted for the project site. The CNDDDB report and overlay map for the Garberville quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of *A Manual of California Vegetation* (Sawyer et al. 2009) as modified by the California Native Plant Society (CNPS), and mapped on an aerial photo. Vegetation community names are based on an assessment of dominant cover species. Transects of each project area were traversed by foot with one transect lines every 20 ft for each area. Ten quadrangle plots were collected with data collection consisting of plant identification and approximate coverage of the area. The methodology followed in the course of this study conforms to published guidelines for the conduct of floristic surveys. (CNPS 2001). Plants occurring on the site were identified using *The Jepson Manual of Higher Plants of California*. Where necessary, species names were updated based on the 6th edition, CNPS *Inventory of Rare and Endangered Plants of California*. All field surveys were conducted on foot on the proposed disturbed areas and various locations throughout the property. All plant and animal species observed were recorded with geospatial data collection and photographs. Two botanical reconnaissance site visits have been conducted to create a baseline vegetation profile of the subject properties and to assess the presence/absence of rare and endangered plant and animal species as defined by the California Department of Fish and Wildlife.





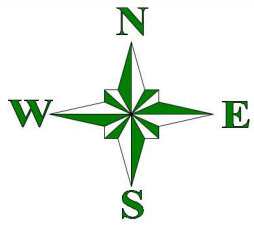
222-071-030-000

### Botanical Study General Location Map

APN : 222-071-030

 Property Boundary

The parcel is in section 16, Township 5 south, Range 3 east, MDB&M, as made known on the 7.5' USGS Quadrangle Map, Garberville, CA















Scale : 1" = 2,000'



# Botanical Study

APN : 222-071-030

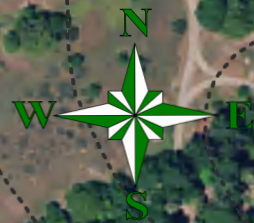
-  Property Boundary
  -  Botanical Survey Track
  -  Botanical Study Area
  -  Structure
  -  Cultivation Area
  -  Pond
- Watercourse**
-  Class I
  -  Class II
  -  Class III
- Road**
-  Permanent
  -  Seasonal
  -  Trail

222-071-030-000

Botanical Study Area A

Botanical Study Area B

Botanical Study Area C



Scale : 1" = 300'



#### **1.4 Biological Assessment Staff and Qualifications**

The biological assessment, botanical field surveys and plant taxonomy were conducted by Austin Theriault, ETA Humboldt's principal biologist. Mr. Theriault graduated Humboldt State University with a B.S. degree in Environmental Planning and Management and a minor in Geospatial Analysis. Education spanned many interdisciplinary fields including but not limited to Botanical and Biological fields of study. Mr. Theriault has worked with multiple professional Botanist and Biologist that have decades of experience in Humboldt County. Mr. Theriault has over 5 years of in-field experience working with multiple consulting firms, non-profits, and private landowners; providing comprehensive property surveys addressing environmental issues, wildlife biological assessments, botanical assessments, ecological restoration projects, erosion control, and water quality in effort to help manage our human interaction with the natural environment

#### **2.0 Special Status Plants**

Special status plants include those listed as rare, threatened, or endangered under the federal Endangered Species Act and/or the California Endangered Species Act. Additionally, impacts to taxa with California Rare Plant Ranks (CRPR) of 1A, 1B, 2A, and 2B must be analyzed in environmental documents related to the California Environmental Quality Act (CEQA), or those considered functionally equivalent to CEQA. Impacts to plants with CRPRs of 3 and 4 should also be addressed. Protection measures for populations of these taxa may be warranted if they are determined to have local or biological significance.

#### **2.1 Special Status Plant Communities**

Special status plant communities are communities with limited distribution that may be vulnerable to environmental impacts. Updated information on California natural communities, including rarity rankings, is provided in A Manual of California Vegetation Online Edition (CNPS 2021). Natural communities with G or S ranks of 3 or lower are considered sensitive.

#### **2.2 Project Area Vegetation Types:**

The parcel includes douglas fir and associated forest and grasslands. Most of the proposed cultivation is on existing cultivation footprints or in previously graded areas. The ridge top proposed cultivation area consists of native and non-native grasses. The forest on the parcel includes a canopy of Douglas-fir (*Pseudotsuga menziesii*) and tanoak (*Notholithocarpus densiflorus* var. *densiflorus*). There are scattered Oregon white oak (*Quercus garryana*) trees around the forest/grassland edge. Other common trees include canyon live oak (*Quercus chrysolepis*) and California bay (*Umbellularia californica*). The grasslands are generally dominated by non-native grasses including Smooth Cordgrass (*Sporobolus alterniflorus*), Brome Fescue (*Vulpia bromoides*), harding grass (*Phalaris aquatica*), Rat's-tail fescue (*Vulpia myuros*), wild oat (*Avena barbata*), soft chess (*Bromus hordeaceus*), Lop Grass (*Bromus hordeaceus*), six weeks grass (*Festuca myuros*), and dogtail grass (*Cynosurus echinatus*). There is a native grass component that includes California oatgrass (*Danthonia californica*) and blue wildrye (*Elymus glaucus* ssp. *glaucus*). Other native plants noted in the grasslands include miniature lupine (*Lupinus bicolor*). See Botanical Picture log for additional species identified on May 13<sup>th</sup> 2022.



Special status natural communities that have potential to occur on the parcel include, but are not limited to, oak woodlands and special status native grassland communities. The survey was floristic and followed methods outlined in Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018). All plants were identified to the taxonomic level necessary to determine whether they are special status. Plant taxonomy generally follows The Jepson Manual Vascular Plants of California, Second Edition (Baldwin et. al. 2012), however the plant list may include more recent name changes. Plant communities were classified according to A Manual of California Vegetation Online Edition (CNPS 2021b). Ten 3' X 3' quadrangles were collected on each transect in each proposed area to define vegetation coverage and potential natural communities. The surveys were conducted at the time of year when plants on the scoping list with potential to occur on the parcel would be recognizable and identifiable (generally, but not necessarily during the blooming period) and when other common plants would be identifiable so that a comprehensive plant list of the project area could be compiled.

### **2.3 Pre-Survey Research Results**

**CNPS Electronic Inventory Analysis:** A California Native Plant Society (CNPS) analysis was conducted for all plants with federal and state regulatory status, and all non-status plants on the CNPS Lists 1B through 4. The query included all plants within this area of Humboldt County occurring within the plant communities identified on the project site. The inventory lists species potentially occurring at the site; these are listed in Table 2. These species were included in the list of potentially sensitive species specifically searched for during field surveys. It is important to note that this list includes species for which appropriate habitat is not present on the parcel (including serpentine and vernal pool species). The CNPS database search does not allow fine tuning for specific soil types and many specific habitats.

**California Natural Diversity Database:** The California Natural Diversity Database (CNDDDB) and CDFW RareFind 5 data and maps for the Garberville 7½' quadrangle and all surrounding quadrangles were reviewed for this project. Table 3 presents a list of sensitive plant and wildlife species known to occur within this quadrangle. In addition to listing the species present within the quadrangle, the table provides a brief descriptor of the habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species. Appendix A at the end of this report lists the species within the nine quadrangles in the vicinity of this property.

#### 4.0 Botanical Field Survey Results:

No special status plants were encountered on the surveys. A list of all plants observed on the surveys is provided in Table 1.

##### Special Status Natural Communities

The forest on the parcel is consistent with Douglas fir – tanoak forest and woodland alliance, which has a rarity ranking of G3 S3 and is considered a special status natural community. This natural community will not be affected by the proposed cultivation areas on this property. The grasslands on the parcel are generally dominated by non-native grasses as referenced in the botanical identification photograph log. Blue wildrye (*Elymus glaucus*) was present in the grasslands at approximately 5% cover overall. The grassland in Botanical Area A is dominated by brome fescue and rat's tail fescue. Grasslands in Botanical Area C area dominated by coyote brush *Baccharis pilularis*. Historical grazing and land management practices have been utilized which has contributed to the distribution of non-native and native grasses.

Potential Natural Communities present on subject property are referenced below.

Natural Community	Associated Species	Sensitive
71.100.10	Mixed oak / <i>Baccharis pilularis</i> – <i>Toxicodendron diversilobum</i>	N
32.060.17	<i>Baccharis pilularis</i> – <i>Toxicodendron diversilobum</i>	N
42.027.00	<i>Bromus hordeaceus</i>	N

Potential factors that could result in lack of detection of special status plants include plants that have a seed on the site but currently, grazing, disease, disturbance, and adverse climatic conditions prevent from being detected in a floristic review. Seeds of some species can persist for years or decades in the soil until suitable conditions occur for germination. Plants can also be consumed by livestock, deer, or invertebrates or succumb to disease. These factors could damage identifying characters such as flowers and leaves or remove entire above ground portions of the plants resulting in negative detections. The climatic conditions were relatively dry in the spring of 2021 with lower-than-normal rainfall accumulation. Temperatures, which is the primary factor of plant phenology, was within typical ranges.



Table 1. Plant List

Scientific Name	Common Name
<i>Arbutus menziesii</i>	Pacific madrone
<i>Avena barbata</i>	slender wild oat
<i>Achillea millefolium</i>	common yarrow
<i>Arrhenatherum elatius</i>	tall oatgrass
<i>Aira caryophyllea</i>	Silver hairgrass
<i>Baccharis pilularis</i>	coyote brush
<i>Bromus diandrus</i>	ripgut grass
<i>Bromus hordeaceus</i>	Lop grass
<i>Calandrinia cilata</i>	red maids
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Cardamine californica</i>	milk maids
<i>Calystegia sp.</i>	morning glory
<i>Carex feta</i>	feta sedge
<i>Carex gynodynama</i>	Olney's hairy sedge
<i>Epilobium brachycarpum</i>	parched fireweed
<i>Eriophyllum lanatum</i>	woolly sunflower
<i>Erodium botrys</i>	Broadleaf filaree
<i>Eschscholzia californica</i>	California poppy
<i>Festuca arundinacea</i>	tall fescue
<i>Festuca californica</i>	California fescue
<i>Festuca myuros</i>	Rattail grass
<i>Festuca perennis</i>	rye grass
<i>Fragaria vesca</i>	wood strawberry
<i>Galium aparine</i>	goose grass
<i>Holcus lanatus</i>	common velvet grass
<i>Hordeum marinum</i>	Mediterranean barley
<i>Hypericum perforatum</i>	St. John's-wort
<i>Hypochaeris radicata</i>	hairy cat's-ear
<i>Iris purdyi</i>	Purdy's iris
<i>Juncus bufonius</i>	common toad rush
<i>Juncus effusus</i>	common rush
<i>Lepidium sp.</i>	peppergrass or pepperwort
<i>Leucanthemum vulgare</i>	ox-eye daisy
<i>Lupinus bicolor</i>	miniature lupine
<i>Lolium arundinaceum</i>	Tall fescue
<i>Lysimachia arvensis</i>	scarlet pimpernel

Scientific Name	Common Name
<i>Plectritis congesta</i> ssp. <i>brachystemon</i>	shortspur seablush
<i>Polygala californica</i>	California milkwort
<i>Polystichum munitum</i>	sword fern
<i>Prunella vulgaris</i>	self-heal
<i>Pseudotsuga menziesii</i>	Douglas-fir
<i>Psilocarphus tenellus</i>	woolly marbles
<i>Pteridium aquilinum</i> var. <i>pubescens</i>	bracken fern
<i>Quercus chrysolepis</i>	canyon live oak
<i>Quercus garryana</i>	Oregon white oak
<i>Ranunculus</i> sp.	buttercup
<i>Rosa</i> sp.	rose
<i>Rubus leucodermis</i>	white-stemmed raspberry
<i>Rubus ursinus</i>	California blackberry
<i>Sanicula crassicaulis</i>	Pacific snakeroot
<i>Scorzonerooides autumnalis</i>	Autumn hawkbit
<i>Senecio minimus</i>	coast fireweed
<i>Sherardia arvensis</i>	field madder
<i>Silybum marianum</i>	milk thistle
<i>Sisyrinchium bellum</i>	blue-eyed-grass
<i>Sonchus asper</i>	Spiny sowthistle
<i>Sporobolus alterniflorous</i>	Smooth Cordgrass
<i>Stachys ajugoides</i>	hedge nettle
<i>Stellaria media</i>	common chickweed
<i>Torilis arvensis</i>	rattlesnake weed
<i>Toxicodendron diversilobum</i>	poison-oak
<i>Trifolium campestre</i>	Hop trefoil
<i>Trifolium subterraneum</i>	Sub Clover
<i>Vulpia bromoides</i>	Brome fescue
<i>Vulpia myuros</i>	Rat's-tail fescue
<i>Vicie sativa</i>	Common vetch



## **5.0 Conclusion**

This biological resource assessment involved the following analyses and surveys for sensitive plants and wildlife potentially occurring in the vicinity of the project: Review of current California Natural Diversity Database (CNDDDB) mapping of known sensitive plant and wildlife populations within the region. A total of 67 native and introduced plant taxa were identified on the property during the multiple in-season, floristic-level botanical surveys. No sensitive plant species were identified on either of the botanical surveys. As used here, the term sensitive includes species having state or federal regulatory status, included on Lists 1B through 4 by the California Native Plant Society, or otherwise listed in the California Natural Diversity Database.

Table 2. Potential Special Status Plant Scoping List –Includes additional listed species known to occur in Humboldt County

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Potential to Occur
<i>Astragalus agnicidus</i> Humboldt County milk-vetch	1B.1, CE	Apr-Sep	Broadleafed upland forest, openings, disturbed areas, sometimes roadsides	High Potential- roads and disturbed areas.
<i>Carex arcta</i> northern clustered sedge	2B.2	Jun-Sep	Bogs and fens, North Coast coniferous forest (mesic)	Low-not associated with upland grassland, more potential in wetlands
<i>Castilleja ambigua</i> var. <i>ambigua</i> johnny-nip	4.2	Mar-Aug	Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Valley and foothill grassland, Vernal pools margins	Moderate-grasslands
<i>Coptis laciniata</i> Oregon goldthread	4.2	(Feb)Mar-May(Sep-Nov)	Meadows and seeps, North Coast coniferous forest (streambanks)- Mesic	Low- occurs in riparian habitat
<i>Cypripedium fasciculatum</i> clustered lady's-slipper	4.2	Mar-Aug	Lower montane coniferous forest, North Coast coniferous forest- usually serpentinite seeps and streambanks	Low-not associated with grasslands, more potential in forest and along streams.
<i>Epilobium septentrionale</i> Humboldt County fuchsia	4.3	Jul-Sep	Broadleafed upland forest, North Coast coniferous forest-sandy or rocky	Low- typical rocky no habitat present
<i>Erigeron biolettii</i> streamside daisy	3	Jun-Oct	Broadleafed upland forest, Cismontane woodland, North Coast coniferous forest-rocky, mesic	Low-typical rocky mesic habitat, maybe more potential elsewhere on parcel
<i>Erigeron robustior</i> robust daisy	4.3	Jun-Jul	Lower montane coniferous forest, Meadows and seeps	Low - not associated with upland grassland, more potential in wetlands and riparian areas.



<b>Scientific Name Common Name</b>	<b>Listing Status</b>	<b>Blooming Period</b>	<b>Habitat</b>	<b>Potential to Occur</b>
<i>Erythronium revolutum</i> coast fawn lily	2B.2	Mar- Jul(Aug)	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest-Mesic, streambanks	Low-not associated with grasslands, more potential along streams and forest on parcel
<i>Fritillaria purdyi</i> Purdy's fritillary	4.3	Mar-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest-usually serpentinite	Low-not associated with grasslands
<i>Gilia capitata ssp.</i> <i>pacifica</i> Pacific gilia	1B.2	Apr-Aug	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland	High-in grasslands
<i>Hemizonia congesta</i> <i>ssp. tracyi</i> Tracy's tarplant	4.3	May-Oct	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest- openings, sometimes serpentinite	High-in grasslands
<i>Howellia aquatilis</i> water howellia	2B.2, FT	Jun	Marshes and swamps (freshwater)	Low-parcel lacks marshes and swamps
<i>Kopsiopsis hookeri</i> small groundcone	2B.3	Apr-Aug	North Coast coniferous forest	Low-not associated with grasslands, more potential in forest understory on parcel
<i>Lathyrus glandulosus</i> sticky pea	4.3	Apr-Jun	Cismontane woodland	Medium-High-along roads
<i>Leptosiphon acicularis</i> bristly leptosiphon	4.2	Apr-Jul	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland	High-in grasslands
<i>Leptosiphon latisectus</i> broad-lobed leptosiphon	4.3	Apr-Jun	Broadleafed upland forest, Cismontane woodland	High-in grasslands

<b>Scientific Name Common Name</b>	<b>Listing Status</b>	<b>Blooming Period</b>	<b>Habitat</b>	<b>Potential to Occur</b>
<i>Lilium rubescens</i> redwood lily	4.2	Apr- Aug(Sep)	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest-Sometimes serpentinite, sometimes roadsides	High-along roads
<i>Lilium washingtonianum</i> ssp. <i>purpurascens</i> purple-flowered Washington lily	4.3	Jun-Aug	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest-often serpentinite	Low-not associated with grasslands
<i>Listera cordata</i> heart-leaved twayblade	4.2	Feb-Jul	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	Low-not associated with grasslands, more potential in forest under-story on parcel
<i>Lycopodium clavatum</i> running-pine	4.1	Jun- Aug(Sep)	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)-often edges, openings, and roadsides	Low-not associated with grasslands, typically more mesic redwood forest
<i>Lycopus uniflorus</i> northern bugleweed	4.3	Jul-Sep	Bogs and fens, Marshes and swamps	Low-not associated with grasslands, more potential in wetlands on parcel.
<i>Meesia triquetra</i> three-ranked hump moss	4.2	Jul	Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest (mesic)-soil	Low not associated with grasslands, occurs in higher elevation habitat.

<b>Scientific Name Common Name</b>	<b>Listing Status</b>	<b>Blooming Period</b>	<b>Habitat</b>	<b>Potential to Occur</b>
<i>Montia howellii</i> Howell's montia	2B.2	(Jan- Feb)Mar- May	Meadows and seeps, North Coast coniferous forest, Vernal pools- vernally mesic, sometimes roadsides	Medium-usually found on roads but subject parcel was too dry
<i>Navarretia leucocephala ssp. bakeri</i> Baker's navarretia	1B.1	Apr-Jul	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools- Mesic	Low-not associated with upland grassland, more potential in wetlands on parcel
<i>Packera bolanderi var. bolanderi</i> seacoast ragwort	2B.2	(Jan- Apr)May- Jul(Aug)	Coastal scrub, North Coast coniferous forest- Sometimes roadsides	Medium-along roads/roadcuts
<i>Piperia candida</i> white- flowered rein orchid	1B.2	(Mar)May- Sep	Broad leafed upland forest, Lower montane coniferous forest, North Coast coniferous forest- sometimes serpentine	Low-not associated with grasslands, more potential in forest understory.
<i>Pityopus californicus</i> California pinefoot	4.2	(Mar- Apr)May- Aug	Broad leafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest-mesic	Low - not associated with grasslands, more potential in forest understory.
<i>Pleuropogon refractus</i> nodding semaphore grass	4.2	(Mar)Apr- Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest- Mesic	Low -occurs in riparian habitat



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**Botanical Study Area Photographs**

**Collected May 13<sup>th</sup> 2022**

Botanical Study Area A





Botanical Study Area A





Botanical Study Area C





Botanical Study Area B











Property Plant Identification Photograph Log

(Ordered is as collected on May 13<sup>th</sup> 2022.



**Smooth Cordgrass**  
*Sporobolus alterniflorus*



**Common vetch**  
*Vicia sativa*



**Brome fescue**  
*Vulpia bromoides*



**Spiny sowthistle**  
*Sonchus asper*



**Rat's-tail fescue**  
*Vulpia myuros*



**Lop grass**  
*Bromus hordeaceus*



**Autumn hawkbit**  
*Scorzoneroides autumnalis*



**Rat's-tail fescue**  
*Vulpia myuros*



**Idaho Fescue**  
*Festuca idahoensis*



**Reed canary grass**  
*Phalaris arundinacea*



**Coyote brush**  
*Baccharis pilularis*



**Blessed milkthistle**  
*Silybum marianum*



**Silver hairgrass**  
*Aira caryophylla*



**Common velvet grass**  
*Holcus lanatus*





**Lop grass**

*Bromus hordeaceus*



**Sweet vernal grass**

*Anthoxanthum odoratum*



**Pacific poison oak**

*Toxicodendron diversilobum*



**Douglas fir**

*Pseudotsuga menziesii*



**Hop trefoil**

*Trifolium campestre*



**Coyote brush**

*Baccharis pilularis*



**Coyote brush**

*Baccharis pilularis*



**Common velvet grass**

*Holcus lanatus*



**Miniature Lupine**

*Lupinus bicolor*



**Broadleaf filaree**

*Erodium botrys*



**Purple three-awn**

*Aristida purpurea*



**Rat's-tail fescue**

*Vulpia myuros*



**Tall Fescue**

*Lolium arundinaceum*



**Sub clover**

*Trifolium subterraneum*



**Common vetch**  
*Vicia sativa*



**Pale flax**  
*Linum bienne*



**Lop grass**  
*Bromus hordeaceus*



**Purple needlegrass**  
*Nassella pulchra*



**Greater creeping  
spearwort**  
*Ranunculus flammula*



**Big quaking grass**  
*Briza maxima*



**Miniature Lupine**  
*Lupinus bicolor*



**Smooth Cat's Ear**  
*Hypochaeris glabra*



**Giant wildrye**  
*Leymus condensatus*