



## **Biological and Aquatic Resources Assessment**

**Larabee Valley APN: 210-250-008**

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May 2020 (revised July 2020)



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## **1. INTRODUCTION**

This report includes the results of an assessment for sensitive biological and aquatic resources at on APN: 210-250-008 in Larabee Valley. This report includes and botanical survey, a wildlife habitat assessment, and a wetland delineation. The botanical survey and wetland delineation were limited to areas within and directly adjacent to existing cultivation sites and potential relocation areas and do not cover the entire property.

## **2. DEFINITIONS**

### **2.1. Botanical Resources**

#### **2.1.1. Special Status Plants**

Special status species include taxa that are listed under the Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA), in addition to species that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA). This includes plants with California Rare Plant Ranks (CRPR) of 1A, 1B, 2A, or 2B and other species that warrant protection based on local or biological significance.

#### **2.1.2. Special Status Natural Communities**

Special status plant communities are communities with limited distribution that may be vulnerable to environmental impacts. Natural Communities recognized as sensitive are provided on the *Sensitive Natural Communities List* (California Department of Fish and Wildlife (CDFW) 2018). The list is based on the vegetation classification in *A Manual of California Vegetation, 2<sup>nd</sup> Edition* (Sawyer et al. 2009). Natural communities with G or S ranks of 3 or lower are considered sensitive. However, they may not warrant protection under CEQA unless they are considered high quality. Human disturbance, invasive species, logging, and grazing are common factors considered when judging whether the stand is high quality and warrants protection.

### **2.2. Special Status Wildlife**

Special status species include taxa that are listed under the ESA and/or the CESA in addition to CDFW Species of Special Concern (SSC), Fully Protected (FP), Watch List (WL), and other species that warrant protection based on local or biological significance.

### **2.3. Aquatic Resources**

#### **2.3.1. Waters of the United States**

Waters of the United States are regulated by the U.S Army Corps of Engineers (Army Corps) under the Clean Water Act. Waters of the United States include, but are not limited to, territorial seas, waters used for interstate or foreign commerce and their tributaries, and adjacent waters, including wetlands.

Army Corps jurisdiction in waters such as creeks and rivers includes the area below the ordinary high water mark, which is the line on the bank established by fluctuations of water that leave physical characteristics such as a distinct line on the bank, shelving, destruction of terrestrial vegetation, and presence of debris.

The Army Corps defines wetlands as:

“...areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

### **2.3.2. Waters of the State**

Waters of the state are regulated by the State Water Resources Control Board (State Water Board) under the Porter-Cologne Water Quality Control Act. Waters of the state are defined as:

“...any surface water or groundwater, including saline waters, within the boundaries of the state.”

Waters of the State includes water in both natural and artificial channels.

The Water Board defines an area as wetland as:

*“An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.”*

### **2.3.3. Streamside Management Areas**

The *Humboldt County General Plan* (Humboldt County 2017) recognizes Streamside Management Areas (SMAs) along all streams, which are defined as:

“100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of perennial streams.”

“50 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of intermittent streams.”

The *Humboldt County General Plan* also defines SMAs for wetlands that are:

Seasonal wetlands = 50 feet  
Perennial wetlands = 100 feet

The State Water Resources Control Board (Water Board) *Cannabis Cultivation Policy* (Water Board 2019) also requires minimum setbacks for cannabis cultivation (Table 1).

Table 1. Cannabis Cultivation Policy Minimum Setbacks.

Common Name	Watercourse Class	Distance
Perennial watercourses, waterbodies, or springs	I	150 ft.
Intermittent watercourses or wetlands	II	100 ft.
Ephemeral watercourses	III	50 ft.
Man-made irrigation canals, water supply reservoirs, of hydroelectric canals that support native aquatic species	IV	Established riparian vegetation zone
All other man-made irrigation canals, water supply reservoirs, of hydroelectric canals	IV	N/A

For cannabis cultivation in Humboldt County, the most conservative of the two setbacks should be used, which could be different depending on the watercourse or wetland classification and the presence of associated riparian vegetation.

### 3. ENVIRONMENTAL SETTING

#### 3.1. Project Location

The parcel is located off Larabee Valley Road approximately 4.5 miles southwest of Dinsmore on the Larabee Valley USGS quadrangle (Section 13, T1N, R4E) in Humboldt County (Figure 1).

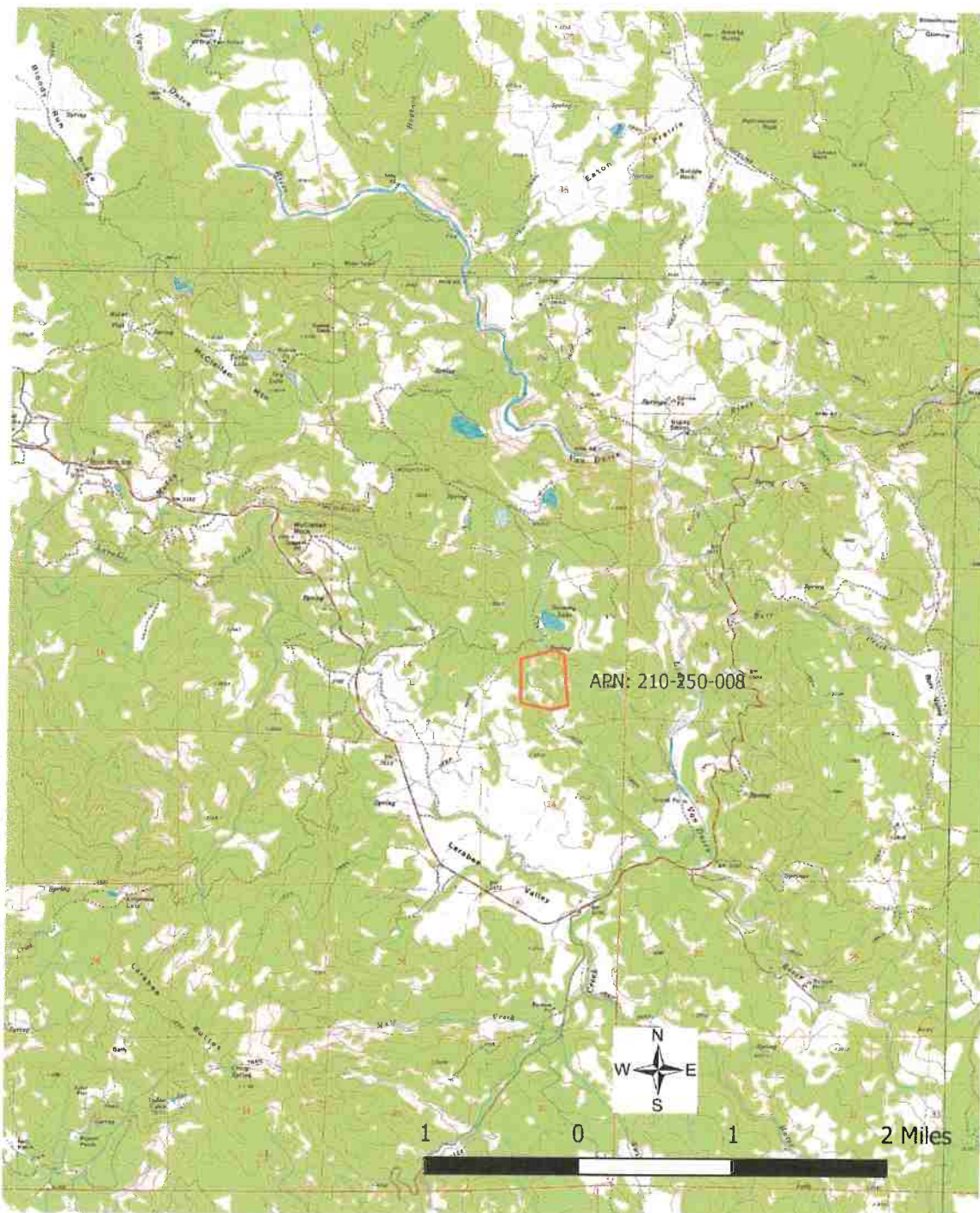
#### 3.2. Soil, Topography, and Hydrology

The soil types mapped on the parcel include Highyork-Elkcamp-Airstrip complex, Pasterrock-Coyotecreek-Manese complex, and Rockyglen-Tannin complex (United States Department of Agriculture, Natural Resource Conservation (NRCS) Service 2020). The soil types are derived from sandstone, mudstone, and schist parent material. The soil types, including their minor components, have non-hydric soil ratings. The parcel is on a generally south-facing slope. The topography ranges from relative flat to approximately 40% slopes. The elevation ranges from approximately 2,600-3,000 feet above sea level. The parcel includes two ponds, emergent wetlands, and tributaries of the Little Van Duzen River.

### 4. METHODS

The parcel was evaluated for sensitive biological and aquatic resources by Kyle Wear, M.A., on May 4 and May 14, 2020. Mr. Wear has over 25 years of experience conducting botanical surveys and other biological work in northern California. Mr. Wear is trained in wetland

Figure 1. Location Map.



delineation by the Wetland Training Institute and has been conducting wetland delineations for over 15 years.

#### **4.1. Botanical Survey**

A list of special status plants that could potentially occur on the parcel was generated by consulting the *California Natural Diversity Database* (CDFW 2020a) and the *CNPS Inventory of Rare and Endangered Plants* (CNPS 2020). The scoping list includes special status plants with documented occurrences on the Larabee Valley USGS quadrangle or adjacent quadrangles; the list may include other taxa known to occur in habitat similar to the project area in Humboldt County (Appendix A).

A botanical survey was conducted according to methods outlined in *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). The parcel was surveyed on May 4 and May 14, 2020. A survey coverage map is provided in Appendix B. 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, 2<sup>nd</sup> Edition* (Sawyer et al. 2009).

The May timing of the surveys was considered seasonally appropriate, as all plants on the scoping list with potential to occur on the parcel would have been recognizable to at least the genus level at the time of the survey.

The potential for invasive species on the parcel was also addressed during the field work. The California Invasive Plant Council (Cal-IPC) maintains an inventory of invasive plants in California (Cal-IPC 2020). For the purposes of this report, plants with Cal-IPC ratings of “High” were considered. These plants have high rates of dispersal and severe ecological impacts on physical process, plant and animal communities, and vegetation.

#### **4.2. Special Status Wildlife**

A list of special status wildlife that could potentially occur in the parcel was generated by consulting the *California Natural Diversity Database* (CDFW 2020a) and the *CDFW Spotted Owl Observations* (CDFW 2020b) (Appendix C). The list includes special status species with documented occurrences on the Larabee Valley USGS quadrangle or adjacent quadrangles

No protocol-level wildlife surveys were conducted.

#### **4.3. Aquatic Resources**

##### **4.3.1. Wetlands**

Federal, State, and County wetland delineation methods follow the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement*



to the Corps of Engineers Wetland Delineation Manual Western Mountains, Valleys, and Coast Region (Version 2.0) (Army Corps 2010). A positive wetland determination is made when all three wetland parameters (hydrophytic vegetation, hydric, soil, and wetland hydrology) are present.

Three representative sample plots were evaluated for hydrophytic vegetation, hydric soil, and wetland hydrology. The plots represent the variation in topography and vegetation in the wetlands and adjacent upland habitat near two of the cultivation areas.

#### Hydrophytic Vegetation

The presence of hydrophytic vegetation is determined by the wetland indicator status of each plant species present using the *Western Mountains Valleys and Coast 2016 Regional Wetland Plant List* (Army Corps 2016). The indicator status of plants is based on the estimated probability of the species occurring in wetlands. The indicator status categories are:

Obligate Wetland Plants (OBL)	Almost always occur in wetlands	>99% frequency
Facultative Wetland Plants (FACW)	Usually occur in wetlands	67%-99%
Facultative Plants (FAC)	Equally occur wetlands and non-wetlands	33%-67%
Facultative Upland Plants (FACU)	Sometimes occur in wetlands	1%-33%
Obligate Upland Plants (UPL)	Rarely occur in wetlands	<1%

If more than 50% of the dominant plants across all vegetation strata (i.e. trees, shrubs, herbs) are OBL, FACW, or FAC, the vegetation is considered to be hydrophytic. Dominance of plants within the plots is determined using the "50/20" rule. This method involves estimating absolute cover of each plant in each vegetation stratum. Dominant plants include the plants with the highest cover that collectively or individually account for 50% of the total vegetation cover. Additional plants are considered dominant if their cover is at least 20%.

#### Hydric Soil

Indicators of hydric soil include, but are not limited to, a strong hydrogen sulfide (rotten egg) odor, redox concentrations, depleted matrix, and high organic matter content. Soil colors are determined by using a standard Munsell soil color chart (Gretag Macbeth 2000).

#### Wetland Hydrology

Indicators of wetland hydrology include, but are not limited to, surface water, high water table, soil saturation, sediment deposits, soil cracks, and oxidized root channels along living roots.

#### **4.3.2. Other Aquatic Resources**

Other aquatic resources include rivers, streams, ponds, lakes, and other waterbodies and any associated riparian habitat.

## 5. RESULTS AND DISCUSSION

### 5.1. Botanical Survey

#### 5.1.1. Special Status Plants

A population of Tracy's tarweed (*Hemizonia congesta* ssp. *tracyi*) was encountered in grassland habitat near one of the cultivation areas (Appendix D). Tracy's tarweed has a CRPR of 4.3. Plants with a CRPR of 4 have a limited distribution and are on a watch list. List 4 plants may be protected under CEQA if they are considered locally significant. Tracy's tarweed is relatively common in Humboldt County and the population is not considered locally significant; thus, no protection measures are recommended.

A small population of rein orchid (*Piperia* sp.) was encountered along one of the roads through Douglas-fir forest. The plants were not blooming and could not be definitively identified to species. Based on leaf morphology and phenology, the plants appear to be royal rein orchid (*Piperia transversa*), but the plants cannot be ruled out as white-flowered rein orchid (*Piperia candida*), which has a CRPR of 1B.2. The plants are far enough off the road and not near any cultivation area or planned disturbance and should not be impacted by normal use and maintenance of the road.

A list of all plants encountered during the survey is provided in Appendix E.

#### 5.1.2. Special Status Natural Communities

The parcel includes approximately 10.5 acres of Oregon white oak woodland (*Quercus garryana* Woodland Alliance) (Appendix D). Oregon white oak woodland has a rarity ranking of G4 S3 and is listed on the CDFW *Sensitive Natural Communities List* (CDFW 2018). The project will not impact oak woodlands on the parcel. No protection measures are recommended.

Other vegetation on the parcel includes forest dominated by Douglas-fir (*Pseudotsuga menziesii*). Tanoak (*Notholithocarpus densiflorus* var. *densiflorus*) is often co-dominant. The vegetation is consistent with Douglas fir forest (*Pseudotsuga menziesii* Forest Alliance) and Douglas fir – tanoak forest (*Pseudotsuga menziesii* - *Notholithocarpus densiflorus* var. *densiflorus* Forest Alliance), which are common plant communities. The understory is relatively open and sparsely vegetated with herbaceous plants such as sword fern (*Polystichum munitum*), woodland madia (*Anisocarpus madioides*), Pacific snakeroot (*Sanicula crassicaulis*), and white hawkweed (*Hieracium albiflorum*).

The grasslands on the parcel are dominated by a mix of native and non-native grasses and other herbaceous plants including wild oats (*Avena barbata*), sweet vernal grass (*Anthoxanthum odoratum*), soft chess (*Bromus hordeaceus*), and rough cat's-ear (*Hypochaeris radicata*). There is often a native grass component of California oatgrass (*Danthonia californica*). The parcel also includes emergent wetland described in Section 5.2.

### 5.1.3. Invasive Species

No highly invasive plants such as Scotch broom, French broom, pampas grass, or gorse were observed on the parcel.

## 5.2. Special Status Wildlife

### 5.2.1. Birds

Raptors including Cooper's hawk (*Accipiter cooperii*) and golden eagle (*Aquila chrysaetos*) could potentially nest in the conifers or other trees and use the open grasslands for foraging. The grasslands are also potential foraging habitat for American peregrine falcon (*Falco peregrinus anatum*). Cultivation on the existing footprints should not impact habitat for these species. Expansion of cultivation into grasslands could impact a small amount of potential foraging habitat.

The Douglas-fir forest is also potential habitat for northern spotted owl (*Strix occidentalis caurina*). The nearest activity centers are approximately 1.4 miles northwest of the parcel (HUM0925) and 1.5 miles east of the parcel (HUM0983); the nearest designated critical habitat is approximately 1.3 miles southwest of the property (CDFW 2020b). The project will not disturb forest habitat and should not impact spotted owl habitat.

The parcel lacks riparian habitat that could support birds such as willow flycatcher (*Empidonax traillii*), yellow-breasted chat (*Icteria virens*), and yellow warbler (*Setophaga petechia*), and there are no large waterbodies that could be potential osprey (*Pandion haliaetus*) habitat.

### 5.2.2. Amphibians and Reptiles

The ponds and streams are potential habitat for amphibians and reptiles such as northern red-legged frog (*Rana aurora*), foothill yellow-legged frog (*Rana boylei*), and western pond turtle (*Emys marmorata*). The ponds will not be used for cultivation and the streams will be protected with required setbacks, thus there should be no impact on these species.

### 5.2.3. Mammals

The Douglas-fir stands are potential habitat for Sonoma tree vole (*Arborimus pomo*). The project will have no impact to Douglas-fir forest.

The parcel includes potential habitat for American badger (*Taxidea taxus*). Cultivation on existing footprints will not impact habitat. Expansion could impact a small amount of potential habitat.

The project will not impact coniferous forest on the parcel that are potential fisher (*Pekania pennant*) and Humboldt Marten (*Martes caurina humboldtensis*) habitat.

#### 5.2.4. Invertebrates

The grasslands on the parcel are potential nesting and foraging habitat for western bumble bee (*Bombus occidentalis*). Expansion of cultivation areas into grassland could impact a small amount of potential habitat.

#### 5.2.5. Fish

There are no fish bearing streams of the parcel that could support salmonids. Required stream and wetland setbacks should protect water quality in habitat lower in the watershed.

### 5.3. Aquatic Resources

#### 5.3.1. Wetlands

Approximately 0.20 acres of emergent wetland were delineated in the project area (Figure 2). Wetland determination data forms are provided in Appendix F. The wetlands are associated with lower topography in swales and along streams. The hydrophytic vegetation is generally dominated by rushes (*Juncus patens* and *J. effusus*). The soil generally meets hydric soil indicator F6 (Redox Dark Surface). The soil color was 10yr 4/2 with distinct and prominent 7.5yr 5/6 redox concentrations. The water table in portions of the wetlands was approximately 6 inches below the surface with saturation near the surface meeting wetland hydrology indicators A2 (High Water Table) and A3 (Saturation).

The wetlands require a 100-foot setback under the *Cannabis Cultivation Policy* (Water Board 2019), which is greater than the County SMA for seasonal wetlands of 50 feet. Approximately 1,017 square feet of the existing cultivation area near the southwest corner of the parcel is within the wetland setback and should be relocated or abandoned and restored.

The adjacent upland is generally grassland dominated by upland herbaceous vegetation. Dominant plants include soft chess (*Bromus hordeaceus*), sweet vernal grass (*Anthoxanthum odoratum*), English plantain (*Plantago lanceolata*), and rough cat's-ear (*Hyprochaeris radicata*).

There are often relatively small patches of spreading rush (*Juncus patens*) in otherwise upland grassland vegetation. Although *Juncus patens* has a FACW indicator status these areas lack indicators of hydric soil or wetland hydrology and are not in topographic positions typical for wetlands (See data form for Sample Point 1). Thus, these areas do not meet the three-parameter wetland definition used by the Army Corps, Water Board, and Humboldt County.

#### 5.3.2. Other Aquatic Resources

The parcel includes one intermittent (Class II), six ephemeral (Class III) streams, and two ponds. Two drainage ditches were also mapped. One ditch extends from the cultivation area near the residence in the northern portion of the parcel into the adjacent upland forest and does not connect to another waterbody. Another inboard ditch flows along the main access to road and into a Class III stream.

Figure 2. Aquatic Resources Map.



2018 NAIP Image

- |                     |                           |
|---------------------|---------------------------|
| Emergent Wetland    | Drainage Ditch            |
| Intermittent Stream | Culvert                   |
| Ephemeral Stream    | Sample Point              |
| 100-Foot Setback    | Existing Cultivation      |
| 50-Foot Setback     | Approx. Property Boundary |
| Pond                |                           |



100 0 100 200 Feet

The setback for the Class II stream is 100 feet. The Class III streams require a 50-foot setback. In areas where there is wetland along the stream, there is a 100-foot setback from the edge of the wetland, regardless of the stream classification. Approximately 2,282 square feet of the existing cultivation area near the southwest corner of the parcel is within a Class III stream setback and should be relocated or abandoned and restored.

## 6. REFERENCES

California Department of Fish and Wildlife (CDFW). 2020a. *California Natural Diversity Database (CNDDDB) – Commercial Version* [ds85]. Retrieved May 10, 2020  
<https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx>

CDFW. 2020b. *Spotted Owl Observations* [ds704]. Retrieved May 10, 2020.  
<https://apps.wildlife.ca.gov/bios>

CDFW. 2018. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*.  
<https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281280-plants>

CDFW. 2018. *Sensitive Natural Communities List*.  
<https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities>

California Invasive Plant Council. 2020. *The Cal-IPC Inventory*.  
<https://www.cal-ipc.org/plants/inventory/>

California Native Plant Society. 2020. *Inventory of Rare and Endangered Plants*.  
<http://www.rareplants.cnps.org>

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experimental Station.

Humboldt County. 2017. *Humboldt County General Plan (Adopted October 23, 2017)*. Chapter 10 Conservation and Open Space Elements.  
<https://humboldt.gov/205/General-Plan>

State Water Resources Control Board. 2019. *Cannabis Cultivation Policy. Principles and Guidelines for Cannabis Cultivation*.  
[https://www.waterboards.ca.gov/water\\_issues/programs/cannabis/docs/policy/final\\_cannabis\\_policy\\_with\\_attach\\_a.pdf](https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/policy/final_cannabis_policy_with_attach_a.pdf)

U.S. Army Corps of Engineers (Army Corps) 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual. Western Mountains, Valleys, and Coast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS. Army Corps of Engineer Research and Development Center.

<https://usace.contentdm.oclc.org/utis/getfile/collection/p266001coll1/id/7646>

Army Corps. 2016. *Western Mountains, Valleys, and Coast 2016 Regional Wetland Plant List*. Lichvar, R.W., D.L. Banks, and N.C. Melvin. The National Wetland Plant List: 2016 Update of Wetland Ratings. *Phytoneuron* 2016-30: 1-17.

[https://www.codot.gov/programs/environmental/wetlands/nwpl\\_wmvc\\_2016v1.pdf](https://www.codot.gov/programs/environmental/wetlands/nwpl_wmvc_2016v1.pdf)

United States Department of Agriculture, Natural Resource Conservation Service. 2020. *Web Soil Survey*. <https://websoilsurvey.sc.egov.usda.gov>

Appendix A. Special Status Plant Scoping List.

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Elevation (Feet)	Potential to occur Parcel.
<i>Anisocarpus scabridus</i> scabrid alpine tarplant	1B.3	(Jun)Jul- Aug(Sep)	Upper montane coniferous forest (metamorphic, rocky)	5410-7545	Low. Occurs in higher elevation habitat.
<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i> Konocti manzanita	1B.3	(Jan)Mar- May(Jul)	<b>General:</b> Chaparral, Cismontane woodland, Lower montane coniferous forest. <b>Micro:</b> volcanic	1295-5300	Unlikely. Occurs in higher elevation habitat.
<i>Astragalus agnicidus</i> Humboldt County milk-vetch	1B.1, CE	Apr-Sep	<b>General:</b> Broadleafed upland forest, North Coast coniferous forest. <b>Micro:</b> openings, disturbed areas, sometimes roadsides	390-2625	High. Potential along roads and disturbed areas.
<i>Astragalus umbraticus</i> Bald Mountain milk-vetch	2B.3	May-Aug	<b>General:</b> Cismontane woodland, Lower montane coniferous forest <b>Micro:</b> sometimes roadside	490-4100	High. Potential along roads and disturbed areas.
<i>Calycadenia micrantha</i> small-flowered calycadenia	1B.2	Jun-Sep	<b>General:</b> Chaparral, Meadows and seeps (volcanic), Valley and foothill grassland. <b>Micro:</b> Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas	15-4920	Moderate. Potential in rocky areas in grasslands.
<i>Carex praticola</i> northern meadow sedge	2B.2	May-Jul	Meadows and seeps (mesic)	0-10500	Moderate. Potential in wetlands.
<i>Epilobium oreganum</i> Oregon fireweed	1B.2	Jun-Sep	<b>General:</b> Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest. <b>Micro:</b> mesic	1640-7350	Unlikely. Occurs in higher elevation habitat.
<i>Erigeron maniopotamicus</i> Mad River fleabane daisy	1B.2	May-Aug	<b>General:</b> Lower montane coniferous forest, Meadows and	4180-4920	Unlikely. Occurs in higher elevation habitat.



Appendix A (Cont.). Special Status Plant Scoping List.

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Elevation (Feet)	Potential to occur Parcel.
<i>Erythronium oregonum</i> giant fawn lily	2B.2	Mar-Jun(Jul)	seeps (open, dry). <b>Micro:</b> open, disturbed areas (road cuts); rocky <b>General:</b> Cismontane woodland, Meadows and seeps. <b>Micro:</b> sometimes serpentinite, rocky, openings	325-3775	Moderate. Potential along streams and rocky areas.
<i>Erythronium revolutum</i> coast fawn lily	2B.2	Mar-Jul(Aug)	<b>General:</b> Bogs and fens, Broadleafed upland forest, North Coast coniferous forest. <b>Micro:</b> Mesic, streambanks	0-5250	Moderate. Potential along streams and rocky areas.
<i>Gilia capitata</i> ssp. <i>pacifica</i> Pacific gilia	1B.2	Apr-Aug	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland	15-5465	Moderate. Potential in grasslands and rocky areas.
<i>Hosackia yollabollensis</i> Yolla Bolly Mtns. bird's-foot trefoil	1B.2	Jun-Aug	<b>General:</b> Meadows and seeps, Upper montane coniferous forest (openings). <b>Micro:</b> dry barren exposed slopes, often gravelly	5395-7005	Unlikely. Occurs in higher elevation habitat.
<i>Howellia aquatilis</i> water howellia	2B.2, FT	Jun	Marshes and swamps (freshwater)	3555-4230	Unlikely. Occurs in higher elevation habitat.
<i>Kopsiopsis hookeri</i> small groundcone	2B.3	Apr-Aug	North Coast coniferous forest	295-2905	Moderate. Potential in forest understory.
<i>Lathyrus biflorus</i> two-flowered pea	1B.1	Jun-Aug	Lower montane coniferous forest (serpentinite)	4490-4545	None. Occurs on serpentinite.
<i>Lupinus constancei</i> The Lassics lupine	1B.1	Jul	Lower montane coniferous forest (serpentinite)	4920-6560	None. Occurs on serpentinite.
<i>Lupinus elmeri</i> South Fork Mountain lupine	1B.2	Jun-Jul(Aug)	Lower montane coniferous forest	3995-6560	Unlikely. Occurs in higher elevation habitat.

Appendix A (Cont.). Special Status Plant Scoping List.

Scientific Name Common Name	Listing Status	Blooming Period	Habitat	Elevation (Feet)	Potential to occur Parcel.
<i>Montia howellii</i> Howell's montia	2B.2	(Jan- Feb)Mar- May	<b>General:</b> Meadows and seeps, North Coast coniferous forest, Vernal pools. <b>Micro:</b> vernal mesic, sometimes roadsides	0-2740	Moderate. Potential on roads may be cultivation areas.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	1B.1	Apr-Jul	<b>General:</b> Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools. <b>Micro:</b> Mesic	15-5709	Moderate- Unlikely. Parcel lacks vernal pools. Some potential in open seasonally wet areas.
<i>Packera bolanderi</i> var. <i>bolanderi</i> seacoast ragwort	2B.2	(Jan- Apr)May- Jul(Aug)	<b>General:</b> Coastal scrub, North Coast coniferous forest. <b>Micro:</b> Sometimes roadsides	95-2135	Moderate. Potential along roads and open habitat.
<i>Piperia candida</i> white-flowered rein orchid	1B.2	(Mar)May- Sep	Broadleaved upland forest, <b>General:</b> Lower montane coniferous forest, North Coast coniferous forest. <b>Micro:</b> sometimes serpentinite	95-4300	High. Potential along roads/roadcuts and forest understory.
<i>Sabulina decumbens</i> The Lassics sandwort	1B.2	Jul	<b>General:</b> Lower montane coniferous forest, Upper montane coniferous forest. <b>Micro:</b> serpentinite	4920-5495	None. Occurs on serpentine.
<i>Sidalcea malviflora</i> ssp. <i>patula</i> Siskiyou checkerbloom	1B.2	(Apr)May- Aug	<b>General:</b> Coastal bluff scrub, Coastal prairie, North Coast coniferous forest. <b>Micro:</b> often roadcuts	45-2885	High. Potential in grasslands.
<i>Thermopsis robusta</i> robust false lupine	1B.2	May-Jul	Broadleaved upland forest, North Coast coniferous forest	490-4920	Moderate. Potential along roads and disturbed areas.

Appendix A (Cont.). Special Status Plant Scoping List.

<u>Scientific Name</u> Common Name	<u>Listing Status</u>	<u>Blooming Period</u>	<u>Habitat</u>	<u>Elevation (Feet)</u>	<u>Potential to occur Parcel.</u>
<i>Tracyina rostrata</i> beaked tracyina	1B.2				Moderate-High. Potential in grasslands.

**SPECIAL STATUS PLANT LISTING STATUS**

Endangered Species Act (ESA)

- FE:** Federally Endangered
- FT:** Federally Threatened
- FR:** Federally Rare

California Endangered Species Act (CESA)

- CE:** California Endangered
- CT:** California Threatened
- CR:** California Rare

California Rare Plant Ranks

- 1A:** Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
  - 1B:** Plants Rare, Threatened, or Endangered in California and Elsewhere
  - 2A:** Plants Presumed Extirpated in California, But Common Elsewhere
  - 2B:** California Rare Plant Rank 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- Threat Ranks
- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
  - 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
  - 0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Appendix B. Survey Coverage Map.



— Survey Coverage



100 0 100 200 Feet

Appendix C. Special Status Wildlife Scoping List.

Scientific Name Common Name Amphibians	Listing Status			GDFW	Habitat	Habitat on Parcel	Potential Impacts
	Federal	State					
<i>Ascaphus truei</i> Pacific tailed frog	-	-		SSC	<b>General:</b> Occurs in montane hardwood-conifer, redwood, Douglas-fir & ponderosa pine habitats. <b>Micro:</b> Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.	Parcel lacks suitable perennial streams.	No Impact. Parcel lacks habitat.
<i>Rana aurora</i> northern red-legged frog	-	-		SSC	<b>General:</b> Humid forests, woodlands, grasslands, and streamides in northwestern California, usually near dense riparian cover. <b>Micro:</b> Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season.	Potential habitat in ponds.	Low. Project will not impact ponds.
<i>Rana boylei</i> foothill yellow-legged frog	-	Candidate Threatened		SSC	<b>General:</b> Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. <b>Micro:</b> Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Potential habitat in streams.	Low. Project will not impact streams.
<i>Rhyacotriton variegatus</i> southern torrent salamander	-	-		SSC	<b>General:</b> Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old	Parcel lacks mature forest and cool permanent streams and similar habitat.	Low. Parcel lacks suitable habitat.

Appendix C (Cont.). Special Status Wildlife Scoping List.

		Listing Status				
Scientific Name Common Name	Federal	State	CDFW	Habitat	Habitat on Parcel	Potential Impacts
<b>Birds</b>						
<i>Accipiter cooperii</i> Cooper's hawk	-	-	WL	<b>General:</b> Woodland, chiefly of open, interrupted or marginal type. <b>Micro:</b> Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Parcel includes potential nesting and foraging habitat.	Low. Project will not impact forest or woodlands. Expansion into grassland could impact a very small amount of potential foraging habitat.
<i>Accipiter gentilis</i> northern goshawk	-	-	SSC	<b>General:</b> Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites. <b>Micro:</b> Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.	Parcel is marginal habitat. Some potential for nesting and foraging if conifer stands.	Low. The parcel is marginal habitat. Project will not impact forest.
<i>Aquila chrysaetos</i> golden eagle	-	-	FP ; WL	<b>General:</b> Rolling foothills, mountain areas, sage-juniper flats, and desert. <b>Micro:</b> Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Parcel includes potential nesting and foraging habitat.	Low. Cultivation on existing footprints will have no impact. Expansion into grassland would impact a very small

Appendix C (Cont.). Special Status Wildlife Scoping List.

Scientific Name Common Name	Listing Status			Habitat	Habitat on Parcel	Potential Impacts
	Federal	State	CDFW			
<i>Falco peregrinus</i> American peregrine falcon	Delisted	Delisted	FP	<b>General:</b> Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. <b>Micro:</b> Nest consists of a scrape or a depression or ledge in an open site.	Parcel does not include typical nesting habitat. Potential foraging habitat is present.	amount of potential foraging habitat. Low. Cultivation on existing footprints will have no impact. Expansion into grassland would impact a very small fraction of potential foraging habitat.
<i>Icteria virens</i> yellow-breasted chat	-	-	SSC	<b>General:</b> Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. <b>Micro:</b> Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	Parcel lacks riparian habitat.	No Impact. Parcel lacks suitable habitat.
<i>Pandion haliaetus</i> osprey	-	-	WL	<b>General:</b> Ocean shore, bays, freshwater lakes, and larger streams. <b>Micro:</b> Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Parcel lacks suitable nesting and foraging habitat.	No Impact. Parcel lacks suitable habitat.
<i>Setophaga petechia</i> yellow warbler	-	-	SSC	<b>General:</b> Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. <b>Micro:</b>	Parcel lacks suitable riparian habitat.	No Impact. Parcel lacks suitable habitat.

Appendix C (Cont.). Special Status Wildlife Scoping List.

Scientific Name Common Name	Listing Status			Habitat	Habitat on Parcel	Potential Impacts
	Federal	State	CDFW			
<i>Strix occidentalis caurina</i> Northern Spotted Owl	Threatened	Threatened	-	Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders. Often old growth, but also occurs in younger stand with suitable nest trees and high density of woodrats.	Conifer stands on parcel are potential nesting and foraging habitat.	Low. Cultivation on existing footprints or expansion into grassland will not impact habitat.
<i>Empidonax trailii</i> willow flycatcher	-	Endangered	-	<b>General:</b> Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2000-8000 ft elevation. <b>Micro:</b> Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	Parcel lack riparian habitat.	Low. Parcel lacks suitable habitat.
<b>Fish</b>						
<i>Oncorhynchus kisutch</i> pop. 2 coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	-	Rivers and streams.	There are no fish bearing streams on the parcel.	Low. Parcel lacks suitable habitat stream and wetland setbacks should protect water quality for downstream habitat.



Appendix C (Cont.). Special Status Wildlife Scoping List.

		Listing Status						
Scientific Name	Common Name	Federal	State	CDFW	Habitat	Habitat on Parcel	Potential Impacts	
<i>Oncorhynchus mykiss</i>	<i>irideus</i> pop. 16 steelhead - northern California DPS	Threatened	-	-	Rivers and streams.	There are no fish bearing streams on the parcel.	Low. Parcel lacks suitable habitat. Stream and wetland setbacks should protect water quality for downstream habitat	
<i>Oncorhynchus mykiss</i>	<i>irideus</i> pop. 36 summer-run steelhead trout	-	Candidate Endangered	SSC	Rivers and streams.	There are no fish bearing streams on the parcel.	Low. Parcel lacks suitable habitat. Stream and wetland setbacks should protect water quality for downstream habitat	
<i>Oncorhynchus tshawytscha</i>	pop. 17 chinook salmon - California coastal ESU	Threatened	-	-	Rivers and streams.	There are no fish bearing streams on the parcel.	Low. Parcel lacks suitable habitat. Stream and wetland setbacks should protect water quality for downstream habitat	
<b>Insects</b>								
<i>Bombus occidentalis</i>	western bumble bee	-	Candidate Endangered	-	Nests near ground under wood, in old rodent burrows. Forages on a variety of plants for nectar and pollen.	Parcel includes suitable nesting and foraging habitat.	Moderate. Expansion into grassland would impact a very small amount of potential	

Appendix C (Cont.). Special Status Wildlife Scoping List.

Scientific Name Common Name	Listing Status			Habitat	Habitat on Parcel	Potential Impacts
	Federal	State	CDFW			
<b>Mammals</b>						
<i>Arborimus pomosus</i> Sonoma tree vole	-	-	SSC	<b>General:</b> North coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood & montane hardwood-conifer forests. <b>Micro:</b> Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	Potential in Douglas-fir stands on parcel.	Low. Project will not impact Douglas-fir stands.
<i>Martes caurina humboldtensis</i> Humboldt marten	-	Endangered	SSC	<b>General:</b> Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County. <b>Micro:</b> Associated with late-successional coniferous forests, prefer forests with low, overhead cover.	Parcel lacks suitable late-successional forest.	Low. Parcel is marginal habitat and project will not impact conifer stands.
<i>Pekania pennanti</i> fisher - West Coast DPS	-	Threatened	SSC	<b>General:</b> Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. <b>Micro:</b> Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Potential in forest on parcel.	Low. Project will not impact conifer stands.

Appendix C (Cont.). Special Status Wildlife Scoping List.

		Listing Status				
Scientific Name Common Name	Federal	State	CDFW	Habitat	Habitat on Parcel	Potential Impacts
<i>Taxidea taxus</i> American badger	-	-	SSC	<b>General:</b> Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. <b>Micro:</b> Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Parcel includes suitable habitat and friable soils.	Low. Cultivation on existing footprints will have no impact. Expansion into grassland could impact a very small fraction of potential habitat.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-	-	SSC	<b>General:</b> Throughout California in a wide variety of habitats. Most common in mesic sites. <b>Micro:</b> Roosts cave, mines, tunnels, and buildings. Roosting sites limiting. Extremely sensitive to human disturbance.	No roosting habitat was observed on parcel.	Low. Project will not impact roosting habitat.
<b>Mollusks</b>						
<i>Monadenia infumata setosa</i> Trinity bristle snail	-	Threatened	-	<b>General:</b> Known only from along a few streams in the Trinity River drainage. <b>Micro:</b> Juveniles are found under bark of standing dead broadleaf trees, and the species may require this habitat	Parcel is not in the Trinity River drainage.	Low. The parcel is outside the known distribution.
<b>Reptiles</b>						
<i>Emys marmorata</i> western pond turtle	-	-	SSC	<b>General:</b> A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. <b>Micro:</b>	Moderate. Potential in ponds.	Low. Ponds will not be used or disturbed by cultivation activities.

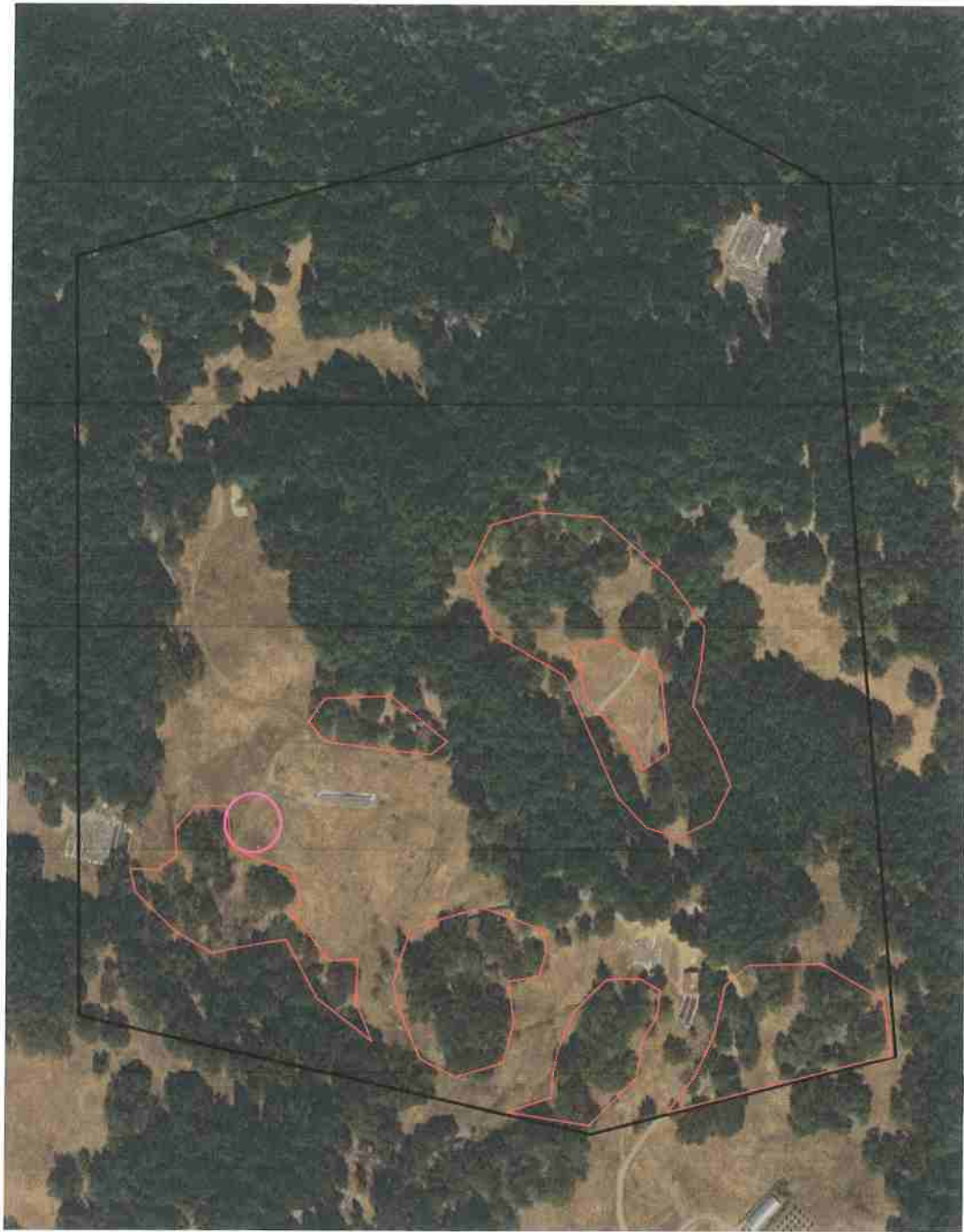
Appendix C (Cont.). Special Status Wildlife Scoping List.



Scientific Name Common Name	Listing Status			CDFW	Habitat	Habitat on Parcel	Potential Impacts
	Federal	State					
					Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.		

**CDFW LISTING STATUS**

- SSC: Species of Special Concern
- FP: Fully Protected Animal
- WL: Watch List

Appendix D. Special Status Plant and Natural Community Map.



-  Oregon white oak woodland (G4 S3)
-  General Location of Tracy's tarweed (CRPR 4.3)



100 0 100 200 Feet



Appendix E. List of Plants Encountered in the Project Area.

Scientific Name	Common Name
<i>Achillea millefolium</i>	common yarrow
<i>Acmispon americanus</i> var. <i>americanus</i>	lotus
<i>Acmispon parviflorus</i>	lotus
<i>Adenocaulon bicolor</i>	trail plant
<i>Adiantum aleuticum</i>	five-fingered fern
<i>Agrostis</i> sp.	bent grass
<i>Aira caryophyllea</i>	European hairgrass
<i>Alopecurus</i> sp.	foxtail
<i>Amsinckia</i> sp.	fiddleneck
<i>Anisocarpus madioides</i>	woodland madia
<i>Anthoxanthum odoratum</i>	sweet vernal grass
<i>Arbutus menziesii</i>	Pacific madrone
<i>Arctostaphylos manzanita</i> ssp. <i>manzanita</i>	common manzanita
<i>Arrhenatherum elatius</i>	tall oatgrass
<i>Athyrium filix-femina</i>	lady fern
<i>Avena barbata</i>	slender wild oat
<i>Baccharis pilularis</i>	coyote brush
<i>Bellis perennis</i>	English daisy
<i>Berberis aquifolium</i>	tall Oregon-grape
<i>Briza maxima</i>	rattlesnake grass
<i>Briza minor</i>	small rattlesnake grass
<i>Bromus diandrus</i>	ripgut grass
<i>Bromus hordeaceus</i>	soft chess
<i>Bromus laevipes</i>	woodland brome
<i>Calypso bulbosa</i>	calypso orchid
<i>Capsella bursa-pastoris</i>	shepherd's purse
<i>Cardamine californica</i>	milk maids
<i>Cardamine oligosperma</i>	western bittercress
<i>Carex aquatilis</i>	water sedge
<i>Carex feta</i>	feta sedge
<i>Carex tumulicola</i>	foothill sedge
<i>Cerastium arvense</i>	field chickweed
<i>Chamomilla suaveolens</i>	pineapple weed
<i>Chloroglaum pomeridianum</i>	soaproot
<i>Cirsium vulgare</i>	bull thistle
<i>Claytonia perfoliata</i>	miner's lettuce
<i>Collomia heterophylla</i>	varied-leaf collomia
<i>Corylus cornuta</i> ssp. <i>californica</i>	California hazelnut

Appendix E (Cont). List of Plants Encountered in the Project Area.

Scientific Name	Common Name
<i>Cryptantha</i> sp.	cryptantha
<i>Cynoglossum grande</i>	hound's-tongue
<i>Cynosurus echinatus</i>	dogtail grass
<i>Dactylis glomerata</i>	orchard grass
<i>Danthonia californica</i>	California oatgrass
<i>Delphinium nudicaule</i>	canyon delphinium
<i>Deschampsia elongata</i>	slender hairgrass
<i>Dichelostemma capitatum</i>	blue dicks
<i>Dodecatheon hendersonii</i>	Henderson's shooting star
<i>Dryopteris arguta</i>	coastal wood fern
<i>Elymus glaucus</i> ssp. <i>glaucus</i>	blue wildrye
<i>Epilobium ciliatum</i>	northern willow herb
<i>Equisetum telmateia</i> ssp. <i>braunii</i>	giant horsetail
<i>Eriogonum</i> sp.	wild buckwheat
<i>Eriophyllum lanatum</i>	woolly sunflower
<i>Erodium botrys</i>	long-beaked storksbill
<i>Erythronium californicum</i>	California fawn lily
<i>Eschscholzia californica</i>	California poppy
<i>Festuca arundinacea</i>	tall fescue
<i>Festuca idahoensis</i>	blue fescue
<i>Festuca myuros</i>	rattail sixweeks grass
<i>Festuca perennis</i>	rye grass
<i>Festuca rubra</i>	red fescue
<i>Fragaria vesca</i>	wood strawberry
<i>Galium aparine</i>	goose grass
<i>Galium</i> sp.	bedstraw
<i>Geranium dissectum</i>	cut-leaved geranium
<i>Hemizonia congesta</i> ssp. <i>tracyi</i>	Tracy's tarweed (CRPR 4.3)
<i>Heuchera micrantha</i>	small-flowered alumroot
<i>Hieracium albiflorum</i>	white hawkweed
<i>Holcus lanatus</i>	common velvet grass
<i>Holodiscus discolor</i>	oceanspray
<i>Hordeum marinum</i>	Mediterranean barley
<i>Hypericum perforatum</i>	St. John's-wort
<i>Hypochaeris radicata</i>	hairy cat's-ear
<i>Iris pseudacorus</i>	crimson clover
<i>Juncus bufonius</i>	common toad rush
<i>Juncus effusus</i>	common rush

Appendix E (Cont). List of Plants Encountered in the Project Area.

Scientific Name	Common Name
<i>Juncus patens</i>	spreading rush
<i>Lathyrus vestitus</i>	wood pea
<i>Leontodon saxatilis</i>	hawkbit
<i>Lepidium sp.</i>	peppergrass or pepperwort
<i>Ligusticum ampiifolium</i>	lovage
<i>Linum bienne</i>	western blue flax
<i>Lonicera hispidula</i>	hairy honeysuckle
<i>Lotus humistratus</i>	hill lotus
<i>Lupinus bicolor</i>	miniature lupine
<i>Luzula comosa</i>	common wood rush
<i>Maianthemum stellata</i>	starry false lily of the valley
<i>Marah oreganus</i>	coast man-root
<i>Medicago sp.</i>	bur clover
<i>Melica sp.</i>	oniongrass
<i>Mentha pulegium</i>	pennyroyal
<i>Micropus californicus</i>	slender cottonweed
<i>Mimulus dentatus</i>	toothed monkey flower
<i>Mondardella sp.</i>	mondardella
<i>Myosotis discolor</i>	yellow and blue scorpion grass
<i>Nemophila parviflora</i>	small-flowered nemophila
<i>Notholithocarpus densiflorus</i> var. <i>densiflorus</i>	tanoak
<i>Osmorhiza berteroi</i>	sweet-cicely
<i>Oxalis oregana</i>	redwood sorrel
<i>Pentagramma triangularis</i> ssp. <i>triangularis</i>	goldback fern
<i>Petasites frigidis</i> var. <i>palmatus</i>	western coltsfoot
<i>Pinus ponderosa</i>	Ponderosa pine
<i>Piperia sp.</i>	rein orchid (see report section 5.1)
<i>Plantago lanceolata</i>	English plantain
<i>Plectritis congesta</i> ssp. <i>brachystemon</i>	shortspur seablush
<i>Poa pratensis</i>	Kentucky bluegrass
<i>Polystichum munitum</i>	sword fern
<i>Prunella vulgaris</i>	self-heal
<i>Pseudotsuga menziesii</i>	Douglas-fir
<i>Psilocarphus sp.</i>	woolyheads
<i>Pteridium aquilinum</i> var. <i>pubescens</i>	bracken fern
<i>Quercus garryana</i>	Oregon white oak
<i>Quercus kelloggii</i>	California black oak
<i>Ranunculus occidentalis</i>	western buttercup



Appendix E (Cont). List of Plants Encountered in the Project Area.

Scientific Name	Common Name
<i>Ranunculus repens</i>	creeping buttercup
<i>Ranunculus</i> sp.	buttercup
<i>Ribes roezlii</i>	Sierra gooseberry
<i>Rosa</i> sp.	rose
<i>Rubus leucodermis</i>	white-stemmed raspberry
<i>Rubus ursinus</i>	California blackberry
<i>Rumex acetosella</i>	sheep sorrel
<i>Rumex crispus</i>	curly dock
<i>Sanicula bipinnatifida</i>	purple sanicle
<i>Sanicula crassicaulis</i>	Pacific snakeroot
<i>Scoliopus bigelovii</i>	slink-pod
<i>Senecio minimus</i>	coast fireweed
<i>Sherardia arvensis</i>	field madder
<i>Silene gallica</i>	windmill pink
<i>Silene laciniata</i>	catchfly
<i>Silybum marianum</i>	milk thistle
<i>Sisyrinchium bellum</i>	blue-eyed-grass
<i>Sonchus asper</i> ssp. <i>asper</i>	prickly sow thistle
<i>Sonchus oleraceus</i>	common sow thistle
<i>Spergularia rubra</i>	purple sand spurry
<i>Stachys ajugoides</i>	hedge nettle
<i>Stellaria media</i>	common chickweed
<i>Tellima grandiflora</i>	fringe cups
<i>Torilis arvensis</i>	rattlesnake weed
<i>Toxicodendron diversilobum</i>	poison-oak
<i>Trifolium dichotomum</i>	branched indian clover
<i>Trifolium dubium</i>	little hop clover
<i>Trifolium microcephalum</i>	maiden clover
<i>Trifolium pratense</i>	red clover
<i>Trifolium repens</i>	white clover
<i>Trifolium subterraneum</i>	subterranean clover
<i>Trillium albidum</i>	giant wakerobin
<i>Vaccinium ovatum</i>	evergreen huckleberry
<i>Vancouveria</i> sp.	inside-out flower
<i>Verbascum</i> sp.	mullein
<i>Veronica americana</i>	American brooklime
<i>Veronica</i> sp.	veronica
<i>Vicia americana</i> var. <i>americana</i>	American vetch

Appendix E (Cont). List of Plants Encountered in the Project Area.

<b>Scientific Name</b>	<b>Common Name</b>
<i>Vicia sativa</i>	vetch
<i>Viola ocellata</i>	two-eyed violet
<i>Viola sempervirens</i>	evergreen violet
<i>Whipplea modesta</i>	modesty
<i>Woodwardia fimbriata</i>	giant chain fern

# APPENDIX F

## WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: APW: 210-250-008 City/County: Humboldt Sampling Date: 5-14-20  
 Applicant/Owner: Dashtevag State: CA Sampling Point: 1  
 Investigator(s): K Wear Section, Township, Range: 13, TIN, R4E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 25%  
 Subregion (LRR): A Lat: E 442602.4 Long: 4479110.7 Datum: NAD 83  
 Soil Map Unit Name: Highway - Elkcamp - Airstrip NWI classification: -  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

### VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0' <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>10' - radius</u> )				
1. <u>Juncus patens</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Carex tumidicola</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Silybum maritimum</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	
4. <u>Vicia sativa</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	
5. <u>Erodium botrys</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6. <u>Bromus horreaceus</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
7. <u>Hypochaeris radicata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
8. <u>Lithum biene</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
9. _____				
10. _____				
11. _____				
<u>97</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				Remarks:
% Bare Ground in Herb Stratum _____				

**SOIL**

Sampling Point: 1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10yr 2/2	100						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one required; check all that apply)**

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

**Secondary Indicators (2 or more required)**

<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

# APPENDIX F (Cont.)

## WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: APN: 210-250-008 City/County: Humboldt Sampling Date: 5-14-20  
 Applicant/Owner: Dash Jevog State: CA Sampling Point: 2  
 Investigator(s): K. Wear Section, Township, Range: 13, T1W, R4E  
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 15  
 Subregion (LRR): A Lat: E 442497.4 Long: N 4479148.8 Datum: NAD83  
 Soil Map Unit Name: Highrock-Elkcamp-Airstrip NWI classification: -  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

### VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>75%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
= Total Cover				Total % Cover of:	Multiply by:
OBL species _____				x 1 = _____	
FACW species _____				x 2 = _____	
FAC species _____				x 3 = _____	
FACU species _____				x 4 = _____	
UPL species _____				x 5 = _____	
Column Totals: _____				(A)	(B)
Prevalence Index = B/A = _____					
Hydrophytic Vegetation Indicators:					
1 - Rapid Test for Hydrophytic Vegetation					
2 - Dominance Test is >50%				<input checked="" type="checkbox"/>	
3 - Prevalence Index is ≤3.0 <sup>1</sup>				<input type="checkbox"/>	
4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)				<input type="checkbox"/>	
5 - Wetland Non-Vascular Plants <sup>1</sup>				<input type="checkbox"/>	
Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				<input type="checkbox"/>	
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
Hydrophytic Vegetation Present?				Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks:					

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10yr 4/2	90	7.5 5/6	10	C	M	CL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>	<b>Secondary Indicators (2 or more required)</b>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): ± surface

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

# APPENDIX F. (Cont.)

## WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: ADN: 210-250-008 City/County: Humboldt Sampling Date: 3  
 Applicant/Owner: Dash + Veg State: CA Sampling Point: 5-14-20  
 Investigator(s): K. Wear Section, Township, Range: 13, T1N, R7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): ± none Slope (%): 20  
 Subregion (LRR): A 442501.2 Long: 4479144.0 Datum: NAD 83  
 Soil Map Unit Name: Highyork - Elkcamp - Airstrip NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks:		

### VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u>	(A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u>	(A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
_____ = Total Cover				Total % Cover of: _____	Multiply by: _____
Sapling/Shrub Stratum (Plot size: _____)				OBL species _____ x 1 = _____	
1. _____	_____	_____	_____	FACW species _____ x 2 = _____	
2. _____	_____	_____	_____	FAC species _____ x 3 = _____	
3. _____	_____	_____	_____	FACU species _____ x 4 = _____	
4. _____	_____	_____	_____	UPL species _____ x 5 = _____	
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)	
_____ = Total Cover				Prevalence Index = B/A = _____	
Herb Stratum (Plot size: <u>10' radius</u> )				Hydrophytic Vegetation Indicators:	
1. <u>Plantago lanceolata</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	___ 1 - Rapid Test for Hydrophytic Vegetation	
2. <u>Bromus hordeaceus</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	___ 2 - Dominance Test is >50%	
3. <u>Hypochaeris radicata</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	___ 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
4. <u>Anthoxanthum odoratum</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5. <u>Danthonia californica</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	___ 5 - Wetland Non-Vascular Plants <sup>1</sup>	
6. <u>Ranunculus sp</u>	<u>10</u>	<u>N</u>	<u>?</u>	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
7. <u>Vicia sativa</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. <u>Plectritis congesta</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
9. <u>Achillea millefolium</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
10. <u>Lupinus bicolor</u>	<u>5</u>	<u>N</u>	<u>UPL</u>		
11. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	
_____ = Total Cover					
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					
% Bare Ground in Herb Stratum _____					
Remarks:					

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10yr 4/2	100					cl	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



Appendix G. Selected Photos.



Photo 1. Sample Point 1. Area includes stand of *Juncus patens*, but lacks hydric soil or wetland hydrology, thus does not meet the 3-parameter wetland definition.



Photo 2. Emergent wetland in swale look towards Class II streams and cultivation area.

Appendix G (Cont.). Selected Photos.



Photo 3. Hydric soil from emergent wetland showing orangish redox concentrations.



Photo 4. Class II stream and associated wetland.