

**Biological Assessment  
for  
Old Goat Farms  
Humboldt County Application # 11033**



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# Table of Contents

List of Appendixes.....	2
1.0 Introduction.....	3
1.1 Purpose and Need .....	3
1.2 Biological Assessment Area and Project Area .....	3
1.3 Commercial Cannabis Cultivation .....	3
2.0 Regulatory Background.....	3
2.1 Cannabis Cultivation.....	3
2.2 Sensitive Biological Communities .....	3
2.2.1 Aquatic Habitats .....	3
2.2.2 Wetlands .....	4
2.2.3 Sensitive Natural Communities.....	4
2.2.4 Local Policies, Ordinances, and Regulations.....	5
2.2.5 Sensitive and Protected Species.....	5
3.0 Methods.....	6
3.1 Field Observations .....	6
3.2 Review of Scientific Literature .....	6
3.3 Agency Consultation.....	6
3.4 Sensitive Biological Communities .....	6
3.4.1 Sensitive and Protected Species.....	6
4.0 Results and Discussion .....	7
4.1 Terrestrial Habitat.....	7
4.2 Sensitive Biological Communities .....	7
4.2.1 Aquatic Habitats .....	7
4.2.2 Wetlands .....	7
4.2.3 Sensitive Natural Communities.....	8
4.3 Sensitive and Protected Species .....	8
4.3.1 Bird Species of Special Concern.....	8
4.3.2 Mammal Species of Special Concern.....	10
4.3.3. Reptiles and Amphibians of Special Concern .....	13
4.3.4 Fish Species of Special Concern .....	15
4.4 Potential Impacts .....	16
4.4.1 Water Quality and Aquatic Habitats.....	16
4.4.2 Sensitive Natural Communities and Special Status Plants.....	16
4.4.3 Northern Spotted Owl Assessment .....	17
5.0 Recommendations .....	18
6.0 References.....	19

## List of Attachments

1) General Location Map.....	23
2) Property Diagram.....	24
3) Premise Diagram.....	25
4) NSO Habitat Map .....	26
5) NRCS Web Soil Survey Report .....	27
6) CNDDDB Species List .....	30

## **1.0 Introduction**

### **1.1 Purpose and Need**

This Biological Assessment has been prepared for Old Goat Farms and APN 531-011-005-000. The Humboldt County Planning Department requests the applicant have a qualified professional assess the project for the potential presence of sensitive biological communities as well as sensitive and protected species.

### **1.2 Biological Assessment Area and Project Area**

The Biological Assessment Area (BAA) is defined as the area where potential impacts may occur to sensitive/protected species and/or sensitive biological communities. The project area is defined as the area where direct impacts have the potential to occur. The Project Area contains the existing cultivation sites and associated structures. Disturbance impacts associated with this project have the potential to indirectly impact sensitive species outside of the project area. Thus, the BAA reflects the largest disturbance buffer for potential protected species in this area, 0.25 miles for the northern spotted owl. The assessment area is located within Section 22 and 23, T9N, R3E, Humboldt County in the French Camp Ridge 7.5' USGS quad. Current land uses within the BAA consists industrial and provide timberland, commercial cannabis cultivation and rural residential uses.

### **1.3 Commercial Cannabis Cultivation**

The project proposes to permit existing commercial cannabis cultivation on APN 531-011-005. This parcel is zoned Timber Production Zone (TPZ) and Agricultural Exempt (AE). Existing developments on the property include an access road, two agricultural structures, a residence, and the cultivation site.

The project proposes utilizing the existing cultivation area. Cultivation consists of 22,000 ft<sup>2</sup> of "outdoor" cultivation and 8,000 ft<sup>2</sup> of "mixed-light" green house cultivation. Plants are cultivated in above ground pots or beds filled with imported soils. Water is sourced from an existing groundwater well. Power for this project is provided by several gas powered generators.

## **2.0 Regulatory Background**

### **2.1 Cannabis Cultivation**

Commercial cannabis was recognized as an agricultural crop under the Medical Cannabis Regulation and Safety Act and further legalized for recreational uses under Proposition 64. The California Department of Food and Agriculture (CDFA) implements the CalCannabis program which regulates commercial cannabis licensing from a state level. Humboldt County also regulates commercial cultivation licensing from a local level through the Commercial Cannabis Land Use Ordinance. A cultivator must have both a state and county license to operator commercial cannabis cultivation in the state.

### **2.2 Sensitive Biological Communities**

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act (CWA); state regulations such as the Porter-Cologne Act, the CDFW Fish and Game Code and the California Environmental Quality Act (CEQA); or local ordinances or policies such as city or county tree ordinances, Special Habitat Management Areas, and General Plan Elements.

#### **2.2.1 Aquatic Habitats**

Watercourses, waterbodies, and critical hydrologic features have been recognized by federal, state, and local regulatory agencies/bodies as ecologically important biological communities. Under Section 404 of the CWA the U.S. Army Corps of Engineers regulate "Waters of the United States" as defined in the Code of Federal Regulations as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often



characterized by an ordinary high water mark, and herein referred to as non-wetland waters. Non-wetland waters, for example, generally include lakes, rivers, and streams.

Although very similar, the term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The State Water Resources Control Board (SWRCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. SWRCB jurisdiction includes wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the state are further protected from cannabis cultivation impacts through the Order WQ 2017-0023-DWQ General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities. Streams, lakes, and riparian habitat are also subject to jurisdiction by CDFW under Sections 1600-1616 of CDFGC and Humboldt County per §BR-P5 of the Humboldt County General Plan.

### **2.2.2 Wetlands**

Section 404 of the CWA protects wetlands federally. In 1989 George H.W. Bush implemented the national “No-net Loss of Wetlands” policy which either avoids the filling of wetlands or mitigates the destruction and/or degradation of wetlands. U.S. Army Corps of Engineers 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 circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” There is no single accepted definition of wetlands at the state level although CDFW exerts jurisdiction over them through their importance as wildlife habitat. Wetlands are locally protected through setbacks built within the most recent version of the Humboldt County General Plan (2017) and Order WQ 2017-0023-DWQ.

### **2.2.3 Sensitive Natural Communities**

Sensitive Natural Communities have been defined by CDFW and the California Native Plant Society (CNPS) as vegetation types with a state rank of S1-S3 per standards set forth in the NatureServe Heritage Methodology. This system uses the best and most recent scientific information to assess rarity per a community’s range, distribution, and the proportion of occurrences that are of good ecological integrity. Threats and trends are also considered in the overall ranking of a community’s rarity. The use of marsh and/or wetlands in the names of vegetation alliances does not imply or assert regulatory jurisdiction. Although there are no specific protocols for avoiding and/or mitigating impacts to these communities they are afforded consideration during environmental review per CEQA Guidelines checklist IVb.

Sensitive species and communities are ranked per standards set forth in the NatureServe Heritage Methodology. All species are given two ranks that consist of a letter and a number. The letter represents whether the rank is a global rank (G) or a state rank (S). The number corresponds to the subject’s rarity.

**1 Critically Imperiled.** At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors

**2 Imperiled.** At risk because of rarity due to the very restricted range, very few populations, (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province

**3 Vulnerable.** At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent widespread declines, or other factors

**4 Apparently Secure.** Uncommon but not rare; some cause for long-term concern due to declines or other factors

**5 Secure – Common;** widespread and abundant

Subspecies receive a T-rank attached to the G-rank and an additional S-rank for state ranking. With subspecies, the initial rank reflects the entire species' risk while the second rank represents just the subspecies' status.

#### **2.2.4 Local Policies, Ordinances, and Regulations**

The Humboldt County General Plan and Humboldt County General Code affords considerations to a host of biological communities and resources in relation to existing and proposed developments. These local ordinances contain setback protections for species specific old growth timber stands, coastal oak woodlands, and environmental sensitive habitat areas (ESHAs).

This application will follow specifications detailed in Humboldt County Ordinance No. 2559, Ordinance Making Clarifying and Corrective Amendments to Title III of the Humboldt County Code Relating to the Commercial Cultivation, Processing, Manufacturing and Distribution of Cannabis for Medical Use (Ordinance 1.0). This ordinance contains little in the form of biological protections, relying on additional cannabis programs from other agencies to qualify for a Mitigated Negative Declaration.

#### **2.2.5 Sensitive and Protected Species**

Sensitive and protected species include those plants and wildlife species that have been formally listed or are candidates for either listings under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford legal protection to both listed species and species that are candidates for listing. Additionally, CEQA affords special consideration to species ranked as sensitive (S1-2 are considered sensitive), as a CDFW Species of Special Concern, or CDFW Fully Protected. In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under this legislation, destroying active nests, eggs, and young is illegal.

Wildlife species are ranked using the same system NatureServe Heritage methodology.

Plant species have an additional ranking system designed by the CNPS. The following alphanumeric codes are the CNPS List, California Rare Plant Ranks (CRPR):

- 1A – Presumed extirpated in California and either rare or extinct elsewhere
- 1B – Rare or Endangered in California and elsewhere
- 2A – Presumed extirpated in California, but more common elsewhere
- 2B – Rare or endangered in California, but more common elsewhere
- 3 – Plants for which more information is needed – Review List
- 4 – Plants of limited distribution – Watch List

The CRPR use a decimal-style threat rank. The threat rank is an extension added onto the CRPR and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. Most CRPRs read as 1B.1, 1B.2, 1B.3, etc. Note that some Rank 3 plants do not have a threat code extension due to difficulty in ascertaining threats. Rank 1A and 2A plants also do not have threat code extensions since there are no known extant populations in California. Threat Code extensions and their meanings are as follows:

- 1) Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 2) Moderately threatened in California (20-80% of occurrences threatened / moderate degree and of threat)
- 3) Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)



## 3.0 Methods

### 3.1 Field Observations

All field data was collected by TRC staff using direct observations, measurements, and ocular estimations during field visit conducted in 2017 and 2019. A 200' Lufkin FE200 HI-VIZ measuring tape and Forestry Pro (Nikon Laser Range Finder) was used for recording distances to the nearest tenth of a foot. Slope percent was measured using a Suunto PM-5/360 PC Clinometer to the nearest degree. The reach of the field observations covered terrestrial and aquatic habitat present within the project parcel.

### 3.2 Review of Scientific Literature

Scientific literature and data have been sourced from multiple locations. The majority of reference material has been sourced from online journal archives and databases. If hardcopies or pdfs could not be acquired the web url and date of reference is present within the bibliography. Some species data is sourced from agency factsheets such as the U.S. Department of Agriculture (USDA), U.S. Geological Survey (USGS), and U.S. Fish and Wildlife Service (USFWS).

### 3.3 Agency Consultation

No agency personal were consulted for this report.

### 3.4 Sensitive Biological Communities

Prior to performing the site visit, the Natural Resources Conservation Service Web Soil Survey (WSS) was reviewed to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present within the BAA. Satellite imagery from the National Agriculture Imagery Project (NAIP), USGS topographic maps, Humboldt County Biological Resources Map, and the National Wetlands Inventory were used to scope for the potential presence of sensitive communities.

Field data collected during the site visit was compared to existing literature and published data in order to classify and identify sensitive biological communities per federal, state, and local jurisdictions. Terrestrial habitats are classified using the California Wildlife Habitat Relationship System published by CDFW. Further detail is given through the identification of natural plant communities using the Natural Communities list published by both CDFW and CNPS. These communities are described below in Section 4.0.

#### 3.4.1 Sensitive and Protected Species

The scoping procedure to generate the plants and animals list noted in this report is as follows: First, the California Natural Diversity Database (CNDDDB) was queried (September 2019) for any species detections within the nine 7.5' USGS quadrangles around the project area. Next, a general habitat assessment was made for the BAA from observations made on property and the surrounding areas. Lastly, given the habitat types present within the BAA, a species list was developed for animals using the Endangered and Threatened Animals List (August 2019) and Special Animals List (August 2019). The plant list uses information from the Special Vascular Plants Bryophytes and Lichens List (August 2019) and Endangered Threatened and Rare Plants (August 2019). The above lists were obtained from:

<https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

Each species status within the BAA is evaluated and summarized. A conclusion is made for each species per the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Unlikely.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site recently.

For plants, a list was generated from the 9-quad search and has been included in the attachments. Because this project is existing and potential impacts are associated with disturbance, no impacts to rare plants are expected and thus no conclusion was made for individual species in the list. If ground disturbing activities are proposed in the future, botanical surveys should be considered.

## 4.0 Results and Discussion

### 4.1 Terrestrial Habitat

The climate can be characterized by high-intensity rainfall over winter and warm arid summers. Annual mean rainfall is approximately 58 inches (<https://wrcc.dri.edu>). Elevations within the BAA range from 2,200' to 3,300' above mean sea level. Slopes in the BAA vary from gentle to steep and drain towards Pine Creek, a tributary of the Trinity River. The BAA contains three different soil types: 445 – Burroin-Redtop complex, 9 to 30 percent slopes (310.9 acres), 446 – Bagaul-Burroin-Redtop complex, 15 to 50 percent slopes (77.2 acres), and 693 – Kinseyridge-Titlow complex, 9 to 50 percent slopes (1.0 acres). See attached NRCS Soil Survey Map in the Attachments.

Terrestrial habitats present within the BAA are dominated by Douglas-fir timberlands. Stands vary in age, resulting from various logging events of the past 80 years. Species composition of the overstory consist of Douglas-fir (*Pseudotsuga menziesii*) with varying amounts tanoak (*Notholithocarpus densiflorus*) as the dominate species. Other species include pacific madrone (*Arbutus menziesii*), golden chinquapin (*Chrysolepis chrysophylla*), red alder (*Alnus rubra*), rhododendron (*Rhododendron occidentale*), and incense cedar (*Calocedrus decurrens*). Understory species typically consist of sword fern (*Polystichum munitum*), salal (*Gaulthoria shallon*), Oregon grape (*Mahonia aquifolium*), thimble berry (*Rubus parviflorus*), salmon berry (*Rubus spectabilis*) various *ceanothus* species and various annual and perennial grasses.

### 4.2 Sensitive Biological Communities

#### 4.2.1 Aquatic Habitats

The BAA is located within the Pine Creek HUC12 watershed (HUC12#:180102091002). Aquatic habitat in the BAA is dominated by riverine habitat but includes dispersed lacustrine habitats. Riverine habitats located within the BAA consists of unnamed intermittent watercourses (Class II), and unnamed ephemeral watercourses (Class III). The Project area is located over 7,500' from potentially fish bearing streams (Pine Creek). Pine Creek is tributary to the Trinity River.

#### 4.2.2 Wetlands

This project is located within the U.S. Army Corps of Engineers Land Resource Region A (LRR:A) within the Western Mountains, Valleys, and Coast Region. LRR:A or the Northwest Forests and Coast sub region often experiences frequent and heavy rainfall events that create ample opportunities for wetland vegetation to propagate. Although these sites may show a diverse range of wetland vegetation, they often lack proper hydrology and/or hydric soils to meet the definition of a wetland (U.S. Army Corps of Engineers 2010).

The National Wetland Inventory database was checked for any known potential wetland sites, none were documented. During the site assessment the gradually sloped grassland habitat around the project area and



vineyards was carefully assessed for any wetland indicators that may merit further delineation methods. No wetland indicators were observed.

#### 4.2.3 Sensitive Natural Communities

California Department of Fish and Wildlife and the California Native Plant Society identify these natural communities within the BAA as sensitive. Sensitive natural communities are those that are vulnerable to development or are generally rare within the state. No sensitive natural communities were identified in the BAA.

### 4.3 Sensitive and Protected Species

#### 4.3.1 Bird Species of Special Concern

- **American Golden Eagle** (*aquila chrysaetos canadensis*)

**Status:** Federally protected under the Bald and Golden Eagle Act, G5, S3, CDFW Fully Protected, BLM Sensitive Species, CDF Sensitive Species, International Union for Conservation of Nature (IUCN) Least Concern, USFWS Birds of Conservation Concern

**Key Habitat:** Golden Eagles are a rare to uncommon resident and a locally rare breeder in interior Humboldt County (Harris 2005). When present, they are often located near open grasslands for hunting and within dense forest for nesting (Hunter et al. 2005). Rolling terrain with good thermal lift, and nest sites that are secluded from disturbances are favored by golden eagle. Basic habitat analysis done by Humboldt Redwood Company found their golden eagle nests occur in Douglas-fir trees with 59-98 inch DBH within 1.8 miles of foraging habitat (Chinnicci et al 2012).

**Status within BAA:** The CNDDDB does not identify any known golden eagle sites within the BAA. This species is unlikely due to the lack of foraging habitat. The closest foraging habitat is to the south west of the project near Bald Hills, approximately 3.5 miles from the project area.

- **American Peregrine Falcon** (*falco peregrinus anatum*)

**Status:** CESA de-listed (November 4, 2009), ESA de-listed (August 25, 1999), G4T4, S3S4, CDFW Fully Protected and CDF Sensitive Species

**Key Habitat:** Peregrine falcons breed near wetlands, lakes, riparian areas, or other water, mostly on high cliffs, ledges and rock outcroppings in woodland, forest, and coastal habitats (Polite and Pratt 1990). There has been recent documentation of peregrine falcon nests in old growth redwood snags (Buchanan et al. 2014). Buchanan et al (2014) found through their review of literature that all documented tree nests are located within 7.6 km of coastal bays, sloughs, and/or marshes.

**Status within BAA:** The CNDDDB does not document any peregrine falcon observations within the BAA. The BAA lacks any rock outcroppings capable of providing suitable nesting conditions for this species. Due to the ridge location of this project, distance to potential forage habitat and lack of suitable nesting habitat, the potential for nesting peregrine falcons to be found within the BAA is unlikely.

- **Bald Eagle** (*haliaeetus leucocephalus leucocephalus*)

**Status:** Federally protected under Bald and Golden Eagle Act, De-listed from ESA in 2007, CESA Endangered, G5, S3, BLM Sensitive Species, CDF Sensitive Species, USFS Sensitive Species, CDFW Fully Protected, USFWS Birds of Conservation Concern

**Key Habitat:** Bald eagles are rare to uncommon residents and locally rare breeders in Humboldt County (Harris 2005). Bald Eagles require large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches. Nesting/roosting habitat consists of tall trees with either broken tops or stout branches denude of vegetation. Lehman (1979 in Anthony et al 1982) found Bald Eagles in California choose ponderosa pine (*pinus ponderosa*) 81% out of 87 nests. Even in mixed conifer coastal forests of Oregon, ponderosa pine is preferred in Douglas-fir dominated stands (Anthony et al 1982). Bald Eagles in California nest most frequently in stands

with less than 40% canopy cover and 87% of known nests are located within 1 mile of foraging habitat (Polite C and Pratt J. 1990).

**Status within BAA:** The CNDDDB does not document any bald eagle observations within the BAA. Due to the ridge location of this project, distance to potential forage habitat and lack of suitable nesting habitat, the potential for nesting peregrine falcons to be found within the BAA is unlikely.

- **Little Willow Flycatcher** (*empidonax trailii brewsteri*)

**Status:** CESA Endangered, G5, S1S2, USFWS Birds of Conservation Concern, USFS Sensitive Species

**Key Habitat:** Willow flycatcher can be fairly common spring and fall migrants on the northwestern coast. Willow flycatcher prefers dense willow or similar riparian shrub along persistent water (Gaines 1990). Recent bird surveys have found increased evidence that flycatchers have been utilizing young (5-15 years) clearcuts with dense regeneration and a strong hardwood component (Hunter et al 2005). Potentially prefer sights with less brown-headed cowbird (*molothrus ater*) presence.

**Status within BAA:** The CNDDDB does not identify any willow flycatcher observations within the BAA. Willow flycatchers are only known from three recorded breeding attempts in Humboldt County, all of which are outside the BAA (Hunter et al. 2005). No habitat for this species is known within the BAA and such the no potential within the BAA.

- **Marbled Murrelet** (*brachyramphus marmoratus*)

**Status:** ESA Threatened, CESA Endangered, G3G4, S1, CDF Sensitive Species, IUCN Endangered, North American Bird Conservation Initiative Red Watch List

**Key Habitat:** Marbled Murrelet occurs year-round in marine subtidal and pelagic habitats from the Oregon border to Point Sal, Santa Barbara Co. (Sowls et al. 1980 cited in Sanders 1990). Roosts/Nests up to 50 miles inland within stands of mature redwood or dense mature conifer forests (USFWS 1997). Murrelets choose timber stand of varying sizes but almost always select stands dominated by coastal redwood suggesting coastal fog influences are important. There is only one record of a marbled murrelet nesting in a non-redwood site (Hunter et al 2005). Marbled murrelets are dependent on existing nesting platforms because they do not construct their own out of materials. Thus, minimum habitat characteristics for marbled murrelets consists of 1) mature or old-growth timber stands and 2) Minimum 4" diameter limbs with dense epiphytic vegetation and less than 10% slope (Evans et al 2003).

**Status within BAA:** The CNDDDB does not identify any marbled murrelet observations within the BAA. Timber stands within the BAA lacks large diameter (> 28" DBH) conifer trees. An adjacent THP [1-04-063HUM] to the project property, and within the BAA, found through consultation with CDFW that no suitable marbled murrelet habitat existed within 1/4 mile of the THP. Due to the forest composition and structure, it is unlikely for this species to be found within the BAA.

- **Northern Spotted Owl** (*strix occidentalis caurina*)

**Status:** ESA and CESA Threatened, G3G4, S1, CDF Sensitive Species, IUCN Endangered, North American Birds of Conservation Initiative Red Watch List

**Key Habitat:** Humboldt County supports a substantial number of breeding pairs of Northern Spotted Owl (Hunter et al. 2005). Northern spotted owls reside in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2300m (0 – 7,600'). They usually nest in tree or snag cavities, or in broken tops of large trees (Polite C. 1990). In northwestern California, northern spotted owls also occur in second growth redwood-tanoak



stands that retain suitable trees for nests and support high densities of their preferred prey, dusky-footed woodrats (Hunter et al. 2005).

**Status within BAA:** There are no known northern spotted owl detections or activity centers present within the BAA. The nearest known AC is approximately 8,000 ft from project area. NSO habitat, both foraging and nesting habitat exists throughout the BAA and adjacent to the project area. Northern spotted owls have a high potential of being present within the BAA. See 4.7.4 Northern Spotted Owl Assessment for additional information.

#### 4.3.2 Mammal Species of Special Concern

##### - **American Badger** (*taxidea taxus*)

**Status:** G5, S3, CDFW Species of Special Concern, IUCN: Least Concern

**Key Habitat:** Badgers are generalist species often found in drier open stages of most shrub, forest, and herbaceous habitats with sandy soils (Ahlborn 1990). They have historically been found throughout the state except for the northern north coast (Grinnell et al 1937 in Ahlborn 1990). Apps et al (2002) found positive habitat correlations with specific soil parent materials, sandy-loam soil textures, canopy openness, agricultural habitats, and linear disturbances (roads). Badger habitat selection negatively correlated with canopy cover, wet vegetation, and terrain ruggedness (Apps et al. 2002).

**Status within BAA:** The CNDDDB does not document any observations of American badger within the BAA. The BAA generally contains closed canopy timberlands. The potential for American badger to be present within the BAA is unlikely.

##### - **Fringed Myotis** (*myotis thysanodes*)

**Status:** G4, S3, BLM: Sensitive Species, IUCN: Least Concern, USFS: Sensitive, Western bat Working Group (WBWG): High Priority

**Key Habitat:** Fringed myotis are a gleaner bat that usually roost in caves, rock crevices, or anthropogenic structures. Unlike other parts of their range, these bats are known to be an active tree-roosting species in Humboldt County. Weller and Zabel (2001) found that in Pilot Creek (Humboldt County) fringed myotis used snag structures at least 11" DBH as day roosts (not maternal) and displayed low site fidelity which is common in tree-roosting species. They found the greatest predictor of fringed myotis day-use roost was snag density. This is likely due to fringed myotis's low site fidelity and greater snag densities equal great solar exposure (Weller and Zabel 2001). As with other tree-roosting species, solar exposure has been shown to be important in maintaining internal roosts microclimates (Ormsbee and McComb 1998, Weller and Zabel 2001, Lacki and Baker 2007). Lacki and Baker (2007) found maternal roosts were always located in rock crevices in the state of Washington with Hayes (2011) concluding similar results in Colorado. There is no literature available on maternal colonies in coastal California conifer forests.

**Status within BAA:** There are no documented occurrences of fringed myotis within the BAA. The BAA lacks rock outcroppings capable of providing crevice structure for maternal colonies. The BAA contain potential foraging habitat in the form of perennial surface waters. Forest habitats within the BAA provide potential day roost habitat in the form of snag features, predominantly consisting. Generally, snags are shaded and do not provide suitable roosting structure unless within open canopy. There is a moderate potential for day roosting fringed myotis to be found within the BAA.

##### - **Humboldt Marten** (*martes caurina humboldtensis*)

**Status:** State Candidate for Threatened, G5T1, S1, CSSC, USFS: Sensitive Species



**Key Habitat:** Humboldt marten were once thought to be extinct but are now known from three remnant populations in the Pacific Northwest. One population is known from California in the northeastern portion of Humboldt County. Additional survey efforts occurred in 2009 in Mendocino but failed to detect any martens, further strengthening evidence that the Klamath population is the last (Slauson et al. 2009). Slauson et al. (2002) found that Humboldt Martens selected forest stands located in the most mesic aspects with dense shrub cover in close proximity to large diameter mature conifer species.

**Status within BAA:** There have been no documented observations of Humboldt marten within the BAA however this species has been documented near the Bald Hills. Potential habitat may exist in the form of timberland throughout the BAA. The potential for Humboldt marten to be found within the BAA is moderate.

- **Long-eared Myotis (*myotis evotis*)**

**Status:** G5, S3, BLM Sensitive Species, IUCN Least Concern

**Key Habitat:** Long-eared myotis are relatively widespread across California. They are known to roost individually or in small groups of less than 10 individuals (Harris 1990, Kunz and Lumsden 2003). Kunz and Lumsden (2003) described them as tree-roosting bats as well as previous written descriptions in literature (Rancourt et al 2005). Rancourt et al (2005) found in their study that rock crevices were chosen as maternity roosts more often than stump or snag structures. This species also has a low roost fidelity meaning they often move roost locations within an acute area, <400m (Kunz and Lumsden 2003). It is hypothesized this species would select rock crevices over snag/stump structures because of their potential benefits to reproductive fitness (Rancourt et al 2005). Kalcounis-Rüppel et al (2005) found that tree dwelling bats relative to random trees select trees that are larger diameter, taller, closer to open surface water, and are located in more open canopies. Solar exposure was found to be an important factor in maintaining temperatures within snag roosts (Lacki and Baker 2007).

**Status within BAA:** There are no documented observations of this species within the BAA. The BAA lacks large rock outcropping and large diameter mature conifer trees that may provide potential roost structure for this species. The BAA contains potential foraging habitat in the form of perennial surface waters. Forest habitats within the BAA provide potential day roost habitat in the form of snag features, predominantly consisting. Generally, snags are shaded and do not provide suitable roosting structure unless within open canopy. There is a moderate potential for long-eared myotis to be found within the BAA.

- **North American Porcupine (*erethizon dorsatum*)**

**Status:** G5, S3, IUCN Least Concern

**Key Habitat:** Most common in montane conifer, Douglas-fir, alpine dwarf-shrub, and wet meadow habitats. Porcupines are less common in hardwood, hardwood-conifer, montane and valley-foothill riparian, aspen, pinyon-juniper, low sage, sagebrush, and bitterbrush. Dens in caves, crevices in rocks, cliffs, hollow logs, snags, burrows of other animals; will use dense foliage in trees if other sites are unavailable. In spring and summer, feeds on aquatic and terrestrial herbs, shrubs, fruits, leaves, and buds. Winter diet consists of twigs, bark, and cambium of trees, particularly conifers, and evergreen leaves (Johnson and Harris 1990).

**Status within BAA:** There are no documented observations of porcupines within the BAA. Douglas-fir timberland provide habitat for this species. The potential for porcupine presence within the BAA is moderate.

- **Pacific Fisher – West Coast DPS/Northern California ESU (*pekania pennanti*)**

**Status:** G5T2T3Q, S2S3, CDFW Species of Special Concern Priority 2, BLM Sensitive Species, USFS Sensitive Species

**Key Habitat:** Fisher occurrence is regularly associated with low- to mid-elevation coniferous and mixed conifer/hardwood forests with mature or late-successional characteristics. Regardless of age class, abundant physical structure is the driving characteristic for habitat selection by Fishers (USFWS 2016). Other studies have found Fishers prefer a strong hardwood component possibly related to prey densities (Lofroth et al 2011). Fishers have also been observed using second growth and regenerative conifer stands in areas where significant residual structure was left from historic timber management (Mathew et al 2008). Fishers are highly territorial defending 10 square mile territories from one another; as a result, they are inherently rare (Ingles 1965).

**Status within BAA:** The CNDDDB does not document any observations of fisher in the BAA, however it has been detected on the French Camp Ridge and adjacent quad maps, and is generally common in the vicinity. The BAA contains potential fisher habitat in the form of timberland. There is a high potential for Pacific fisher to be found within the BAA.

- **Pallid Bat** (*antrozous pallidus*)

**Status:** G5, S3, CDFW Species of Special Concern, Western Bat Working Group High Priority, BLM and USFS Sensitive Species, IUCN Least Concern

**Key Habitat:** Pallid bats are found in semi-arid and arid climates across western North America. They have been found in deserts, shrub-steppe, grasslands, canyon lands, ponderosa woodlands, mixed conifer forest, oak woodland, and riparian forest (Hayes and Wiles 2013). Pierson and Rainey (2007) conclude that in northern California this species has a strong association with oak woodlands/savannah where it forages and roosts. It is also often found under bridge structures in northern California (Pierson and Rainey 2007). This species roosts in moderate size groups ranging from 20 – 200 individuals and often with other bat species (Vaughan and O'Shea 1976).

**Status within BAA:** The CNDDDB does not contain any documented observations of this species in the BAA. The 9 quad search revealed one documented observation of this species in near Bald Hills. The BAA contains potential pallid bat habitat in the form of timberland Pallid bats have a moderate potential of being found within the BAA.

- **Sonoma Tree Vole** (*arborimus pomo*)

**Status:** G3, S3, CDFW Species of Special Concern, IUCN Near Threatened

**Key Habitat:** These small arboreal mammals are mainly associated with mature conifer forests. They construct nests of conifer needles often located in trees but seldom found at the base (Brylski and Harris 1990). Chinnici et al. (2011) found that nests were more prominent in mature stands with higher densities of Douglas-fir.

**Status within BAA:** The CNDDDB indicates a observation of this species within the BAA. There are additionally several documented observations of Sonoma tree vole from the 9-quad search. Douglas-fir is the dominate tree species in the terrestrial habitats present within the BAA. The potential of finding Sonoma tree vole within the BAA is moderate to high.

- **Townsend's Big-Eared Bat** (*corynorhinus townsendii*)

**Status:** G3G4, S2, CDFW Species of Special Concern Priority 2, BLM Sensitive Species, USFS: Sensitive Species, IUCN Least Concern, Western Bat Working Group: High Priority

**Key Habitat:** Townsend's big-eared bat is unequivocally associated with areas containing caves and cave-analogs for roosting habitat. Beyond the constraint for cavernous roosts, habitat associations become less well defined. Generally, Townsend's big-eared bats are found in the dry uplands throughout the West, but they also occur in mesic coniferous and deciduous forest habitats



along the Pacific coast (Kunz and Martin 1982). Townsend's big-eared bat requires spacious cavern-like structures for roosting (Pierson 1998) during all stages of its life cycle. Typically, they use caves and mines, but Townsend's big-eared bat have been noted roosting in large hollows of redwood trees, in attics and abandoned buildings (Dalquest 1947), and under bridges (Fellers and Pierson 2002). In coastal California, five of six known maternity colonies were in old buildings; the sixth was in a cave-like feature of a bridge (Fellers and Pierson 2002).

Throughout its western range, Townsend's big-eared bat roosts in a variety of vegetative communities, and at a range of elevations and there appears to be little or no association between local surface vegetative characteristics and selection of particular roosts in either eastern or western populations (Wethington et al. 1997, Sherwin et al. 2000). This suggests that the bats select roosts based on internal characteristics of the structure rather than the surrounding vegetative community. The Critical period for maternity roosts is May 15 - August 15 (Gruver and Keinath 2006).

**Status within BAA:** The CNDDDB shows no documented observations of Townsend's big-eared bat in the BAA. The BAA does not contain prominent rock outcroppings. The BAA also lacks artificial structures that may provide potential roosting structures for this species. There are no large diameter conifer snags capable of providing roost structure. There is potential for hardwood snag features to be large enough diameter to provide roosting cavities, however these snags would need to receive large amounts of solar exposure to maintain preferred roosting microclimate. The potential for Townsend's big-eared bat to be found within the BAA is unlikely.

#### 4.3.3. Reptiles and Amphibians of Special Concern

##### - Foothill Yellow-legged Frog (*rana boylei*)

**Status:** Candidate for CESA Threatened, G3, S3, CDFW Species of Special Concern Priority 1, USFS Sensitive Species, BLM Sensitive Species, IUCN Near Threatened

**Key Habitat:** Foothill yellow-legged frog's habitat selection as many frogs, depends on their life stage. This species is primarily found in and around streams with shallow, flowing water with some cobble-sized substrate (Hayes and Jennings 1988). Egg masses require low flowing stream locations with some form of anchor and protection such as behind or under a rock (Thomson et al. 2016). Not much is known about foothill yellow-legged frog terrestrial habitat selection. Bourque (2008) found adult foothill yellow-legged frog an average distance from water of 3 m but also found select individuals up to 40 m from any surface water. This studied evaluated an inland population in Tehama County and coastal populations in more mesic timberlands may disperse farther distances more regularly. The best indicator for adult foothill yellow-legged frog presence is canopy openness (Welsh and Hodgson 2011).

**Status within BAA:** Foothill yellow-legged frogs have not been documented within the BAA. Watercourses within the BAA provide low quality habitat for foothill yellow-legged frog being ephemeral watercourses with subsurface or low flows in the summer months. There is low potential that foothill yellow-legged frogs are present within the BAA.

##### - Northern Red-Legged Frog (*rana aurora aurora*)

**Status:** CDFW Species of Special Concern Priority 2, USFS Sensitive Species, IUCN Least Concern

**Key Habitat:** Northern red-legged frog (northern red-legged frog) is relatively terrestrial for a ranid frog (Thomson et al. 2016). Adult individuals are common in terrestrial habitats especially over winter or wet periods but they commonly prefer shorelines or stream banks with vegetative cover. Individuals have been observed up to 80 m away from surface water in rainy conditions (Haggard 2000). Reproductive sites require persistent water at least 6" deep with emergent vegetation required to anchor egg masses (Morey and Basey 1990). Jennings et al. (1993) found



that intermittent streams chosen by northern red-legged frog for breeding retained surface water year-round.

**Status within BAA:** The CNDDDB does not identify any northern red-legged frog observations within the BAA. Potential habitat is present in the form of intermittent slow flowing watercourses with pool features. One pond feature was observed in the BAA, though its habitat potential is unknown (it appears to be a man-made, lined pond). Watercourses within the project area do not have persistent water to provide hoverer. Red-legged frogs have a low to moderate potential of being found within the BAA.

- **Northwestern Pond Turtle** (*emys marmorata*)

**Status:** G3G4, S3, CDFW Species of Special Concern Priority 1, BLM Sensitive Species, USFS Sensitive Species, IUCN Vulnerable

**Key Habitat:** Northwestern pond turtles are aquatic habitat generalist and can be found in a variety of waterbodies including rivers, streams, lakes, ponds, and marshes. Northwestern pond turtles have even been observed using ephemeral water features such as vernal pools or settling ponds. These turtles require upland habitat with adequate soil conditions for excavating nests that also lack disturbance. Studies have shown females prefer nesting sites within 100 m of a waterbody. Northwestern pond turtles prefer quiet and undisturbed water features with adequate basking substrate such as emergent woody debris or relatively unshaded shorelines (Thomson et al. 2016). They can persist in unfavorable conditions for some period of time (Spinks et al. 2003).

**Status within BAA:** Northwestern pond turtles have not been documented within the BAA. The pond observed within the BAA may provide potential habitat. No habitat is present within the project area. Northwestern pond turtles have a low to moderate potential of being present within the BAA.

- **Coastal Tailed Frog** (*ascaphus truei*)

**Status:** G4, S3S4, CDFW Species of Special Concern Priority 2 and IUCN Least Concern

**Key Habitat:** Coastal tailed frog is regarded to be an uncommon inhabitant of Humboldt County but has been shown to be quite common in the correct habitat characteristics. Coastal tailed frogs occur in permanent streams and are highly dependent on water temperature (Morey 1990). Welsh and Hodgson (2011) found that canopy cover is the best predictor of this species' presence. Pacific tailed frogs were never observed within streams with less than 83% canopy cover (Welsh and Hodgson 2011). Aside from cold water temperature tailed frogs select habitat with coarse substrate (cobbles and boulders) and steep gradients (Thomson et al. 2016).

**Status within BAA:** The CNDDDB shows no documented occurrences of coastal tailed frog within the BAA. Watercourses within the BAA are generally not suited for this species. Canopy cover is dense throughout the watercourses within the BAA and would meet the cover threshold of this species. However watercourses gradients are likely too gradual for this species and flows too low to sustain populations of this species. The potential for coastal tailed frog to be found within the BAA is unlikely.

- **Southern Torrent Salamander** (*rhyacotriton variegatus*)

**Status:** G3G4, S2S3, CDFW Species of Special Concern Priority 1, USFS Sensitive Species, IUCN Least Concern

**Key Habitat:** Southern torrent salamander prefers habitat characteristics that correlate with late-seral forests. Coastal coniferous forests that may not be mature enough may be productive enough to create these conditions which include clear, cold waters with loose, coarse substrates that lack overall sediments loads (Welsh and Lind 1996). Interstitial spacing between gravels and cobbles is very important for low flow periods within intermittent low-order streams occupied by southern

torrent salamander. This may be why southern torrent salamanders also prefer high gradient streams capable of flushing out sediment loads and maintaining coarse substrates. Torrent salamander presence is also highly associated with canopy cover due to its strong correlation with temperature control and hydrologic period (Thomson et al 2016).

**Status within BAA:** The CNDDB documents southern torrent salamander within the BAA. While watercourses within the project are generally not suited for this species (lack of persistent flows), the dense canopy cover and springy nature of portions of the Class II could provide habitat. Other watercourses within the BAA may also provide habitat for this species. The potential for southern torrent salamander to be found within the BAA is high.

#### 4.3.4 Fish Species of Special Concern

##### - Coho Salmon – Southern Oregon/Northern California ESU (*Oncorhynchus kisutch* pop. 2)

**Status:** ESA and CESA Threatened, AFS Threatened

**Key Habitat:** Coho Salmon utilize a variety of habitat types throughout their life history. Their most important habitat characteristic is water temperature. Juvenile Coho present within stream habitats prefer deep pools with overhead shading during the summer months. As temperatures cool and stream flows increase, they can be found throughout the stream in riffles, runs, and pools. During winter juvenile Coho seek refugia from high velocity peak flows, wintering refuge is one of the most important and least appreciated factors influencing survival. Spawning sites are usually located in fine to coarse gravels and usually in between riffles and pools where oxygen is well circulated through the water column (Moyle 2002).

**Status within BAA:** The CNDDB shows no documented occurrences of coho salmon within the BAA. No habitat exists for this species in the BAA. Downstream habitat exists potentially in Pine Creek, and the Trinity River.

##### - Chinook Salmon – California Coast (*Oncorhynchus tshawytscha* pop.17)

**Status:** G5, S1S2, CDFW Species of Special Concern

**Key Habitat:** Chinook salmon spawning adults migrate into rivers in the late fall during increased stream flows. High quality spawning habitat is characterized by coarse substrates of frequently large diameters (cobbles) with adequate stream flow to regularly supply fresh oxygen to the developing embryos. Chinook often choose middle and high order streams for spawning habitat but have been recorded in low order streams that display adequate substrate conditions and hydrology. Ideal water depth for egg laying is 25-100 cm. Once eggs hatch Chinook emerge as alevin and spend 4-6 weeks within gravels close to the nest site (Moyle et al. 2015). After this period Chinook develop into juvenile frye and spend the summer months in cool (<20°C), shallow, slow flowing streams (Gale et al. 1998). Rearing habitat often contains overhanging riparian vegetation to provide cover, food, and habitat variation (Moyle et al. 2015).

**Status within BAA:** The CNDDB shows no documented occurrences of chinook salmon within the BAA. No habitat exists for this species in the BAA. Downstream habitat exists potentially in Pine Creek, and the Trinity River.

##### - Pacific Lamprey (*Entosphenus tridentatus*)

**Status:** G4, S4, CDFW Species of Special Concern, BLM Sensitive Species, USFS Sensitive Species, American Fisheries Society: Vulnerable

**Key Habitat:** Pacific lampreys are distributed in fresh water streams throughout coastal California during their breeding season. They spawn in substrates similar to that of salmonid species (Streif 2008). They prefer gravel substrates consisting of both fines and cobbles usually at the head of riffles. Young ammocoetes require sand substrate where they spend 3-7 years maturing into the



next life stages. Once matured to the next stage, macrophthalmia, they drift downstream and into the ocean where they feed and grow into adults (Stillwater Sciences et al. 2016).

**Status within BAA:** The CNDDDB shows no documented occurrences of Pacific lamprey within the BAA. No habitat exists for this species in the BAA. Downstream habitat exists potentially in Pine Creek, and the Trinity River.

- **Steelhead Trout – Northern California DPS (*Oncorhynchus mykiss irideus* pop. 16)**

**Status:** ESA Threatened, G5T2Q, S2S3, American Fisheries Society: Threatened

**Key Habitat:** As many salmonid species, steelhead trout utilize a variety of habitats depending on their life stage. Population 16 consists of northern California steelhead that mature in the ocean and return to freshwater rivers during the winter run. Adult steelhead require swift moving water with depths of at least 18 cm (Bjornn and Reiser 1991). Spawning sites are often located at the tail-out of pools with fine gravel substrates (Moyle et al 2015). NCST fry require clear, cool, quick moving water usually located at seeps and stream confluences (Moyle 2002).

**Status within the BAA:** The CNDDDB shows no documented occurrences of steelhead within the BAA. No habitat exists for this species in the BAA. Downstream habitat exists potentially in Pine Creek, and the Trinity River.

- **Summer-run Steelhead Trout (*Oncorhynchus mykiss irideus* pop. 36)**

**Status:** ESA Threatened, G5T2Q, S2S3, American Fisheries Society: Threatened

**Key Habitat:** As many salmonid species, steelhead trout utilize a variety of habitats depending on their life stage. Population 36 consists of steelhead that mature inland and are often landlocked behind fish passage barriers. Summer-run steelhead can jump higher than any other steelhead subspecies and are currently at greater risk than their winter-run cousins (Moyle et al. 2017). Adult steelhead require swift moving water with depths of at least 18 cm (Bjornn and Reiser 1991). Spawning sites are often located at the tail-out of pools with fine gravel substrates (Moyle et al 2015). NCST fry require clear, cool, quick moving water usually located at seeps and stream confluences (Moyle 2002).

**Status within the BAA:** The CNDDDB shows no documented occurrences of steelhead within the BAA. No habitat exists for this species in the BAA. Downstream habitat exists potentially in Pine Creek, and the Trinity River.

## **4.4 Potential Impacts**

### **4.4.1 Water Quality and Aquatic Habitats**

The use and maintenance of the native surfaced road network, the upkeep of other unvegetated surfaces (landings, terraces, cut banks, etc.), and general operations in steep rugged terrain increases the risk of erosion and sediment transportation. Additionally, the storage and use of agricultural nutrients, pesticides, herbicides, and fuels in steep rugged terrain also presents risks of pollutant discharge to surface waters. With pre-existing sites these impacts generally are indirect. Potential water quality impacts associated with this project were managed through enrollment in the regional cannabis waste discharge program (RWQ Order No. 2015-0023). The project has transferred into the state waste discharge program (Order WQ 2017-0023 DWQ) and will continue to actively manage potential water quality impacts through implementation of a Site Management Plan.

### **4.4.2 Sensitive Natural Communities and Special Status Plants**

Sensitive natural communities and special status plants experience greater risks from potential impacts given either their distribution or their life history. Conversion and development of native habitats pose the greatest risk to sensitive natural communities and individual special status plants. At this time, the project does not propose to remove or alter any natural plant communities. The proposed project is to continue use of the existing developed sites within the Project Area. Potential indirect impacts are mitigated



through the implementation of best management practices, the Water Resource Protection Plan, the Site Management Plan, and the Lake and Streambed Alteration Agreement. If additional ground disturbance or habitat conversion is proposed, floristic surveys should be conducted to assure no potentially present special status plant species or sensitive natural communities are impacted.

#### **4.4.3 Northern Spotted Owl Assessment**

The Biological Assessment Area (BAA) contains both foraging and nesting/roosting northern spotted owl habitat in the form of Douglas-fir forest types. The CNDDDB does not indicate any documented northern spotted owl (NSO) activity centers within the BAA. The nearest known activity center is located approximately 8,000 feet north of the project area. According to the Forest Practice Watershed Mapper v2, several timber harvests have been recorded and implemented within in the vicinity of the project area. Full protocol NSO surveys are required prior to timber harvest activities and can be reviewed from CALFIRE's online database [CALTREES]. In 2004, 1-04-063HUM was approved immediately adjacent to the subject property. No NSOs were detected during surveys for this THP. Additionally, 1-16-042HUM was approved in 2016 portions of which overlap the BAA. This THP was completed in 2018. No NSOs were detected during surveys. No other surveys for NSOs are known. This project does not propose any modifications to NSO habitat. Potential impacts associated with this project and NSO are disturbance based.

NSO are sensitive to noise and light disturbance (USFWS 2006). This project does proposes utilizing supplemental lighting for cultivating purposes within the 8,000 ft<sup>2</sup> mixed light areas. At the time of assessment in August of 2018, this practice was not being utilized and cultivation within the mixed light areas was simply 'outdoor' cultivation. Regardless, should supplemental lighting be used, 'black-out' tarps are recommended to eliminate any potential light disturbance.

Daily project generated noise consists of occasional light-vehicle traffic, use of power tools, and several generators. Generally, these noise levels are very low [51-60 dB(A)]. Several generators are used to generate power at the facility for various uses. A generator was observed at the primary farm structure, at the well for water pumping, and at the mixed light area. At the primary farm building and well location, both sites utilize a HondaEU7000 generator. Noise levels were measured at 35' from the source (the closest distance to potential habitat) and found to be very low [50-55 dB(A)]. Noise levels measured at 50' from the source where 40-45 dB. This was in part due to the enclosures that house the generators. At the mixed light location, a Whisperwatt MW Power 36 generator is located adjacent to the greenhouse structures. This facility was not in use at the time of assessment, however TRC requested it powered on and put under load in order to measure noise levels. Noise levels at the source were found to be low [61-70 dB(A)] and attenuated to 56 dB at 50 feet. These expected daily activities will not produce noise levels great enough to impact potential northern spotted owls within the BAA (USFWS 2006).

Given the natural setting and road conditions of this project there are additional risks of noise impacts to northern spotted owls due to the potential for heavy equipment use. Heavy equipment may be required for additional proposed actions on-site (e.g. road maintenance, stream crossing work, earthwork, general construction). Heavy equipment produces noise levels that vary from high [81-90 dB(A)] to very high [91-100 dB(A)] (USFWS 2006). These noise levels present a high risk of impacting northern spotted owls potentially present within nesting/roosting habitat along the road network. In order to mitigate this risk, the project should either:

- 1) Restrict the use of heavy equipment outside of the critical period (February 1<sup>st</sup> through July 31<sup>st</sup>). Heavy equipment is defined as road graders, dozers, dump trucks, excavators, back-hoes, or any mechanical equipment that generates greater than 70 dB(A) at 23' or 7 meters.

**or:**

- 2) Survey for northern spotted owls per the Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls, USFWS 2012. Surveys should be conducted per Section 9.0 Surveys for Disturbance Only Projects.

## 5.0 Recommendations

- Adhere to all conditions in the Site Management Plan as required by Order WQ 2017-0023.
- Comply with all winter monitoring requirements under Order WQ 2017-0023
- Supplemental lighting associated with mixed-light cultivation shall be fully contained under "black-out tarps".
- Have all outside lighting on timers or motion sensors to reduce light exposure to wildlife and their potential habitat.
- Perform floristic survey if any additional [new] ground disturbance is proposed.
- If operations with the potential to significantly disturb (e.g. heavy equipment operations) northern spotted owl are proposed during the critical period, February 1<sup>st</sup> – July 31<sup>st</sup>. Northern Spotted owl surveys should be performed per specifications stated in Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls (2012) before operations occur. Surveys should be performed per Section 9.0 Surveys for Disturbance-Only Projects.

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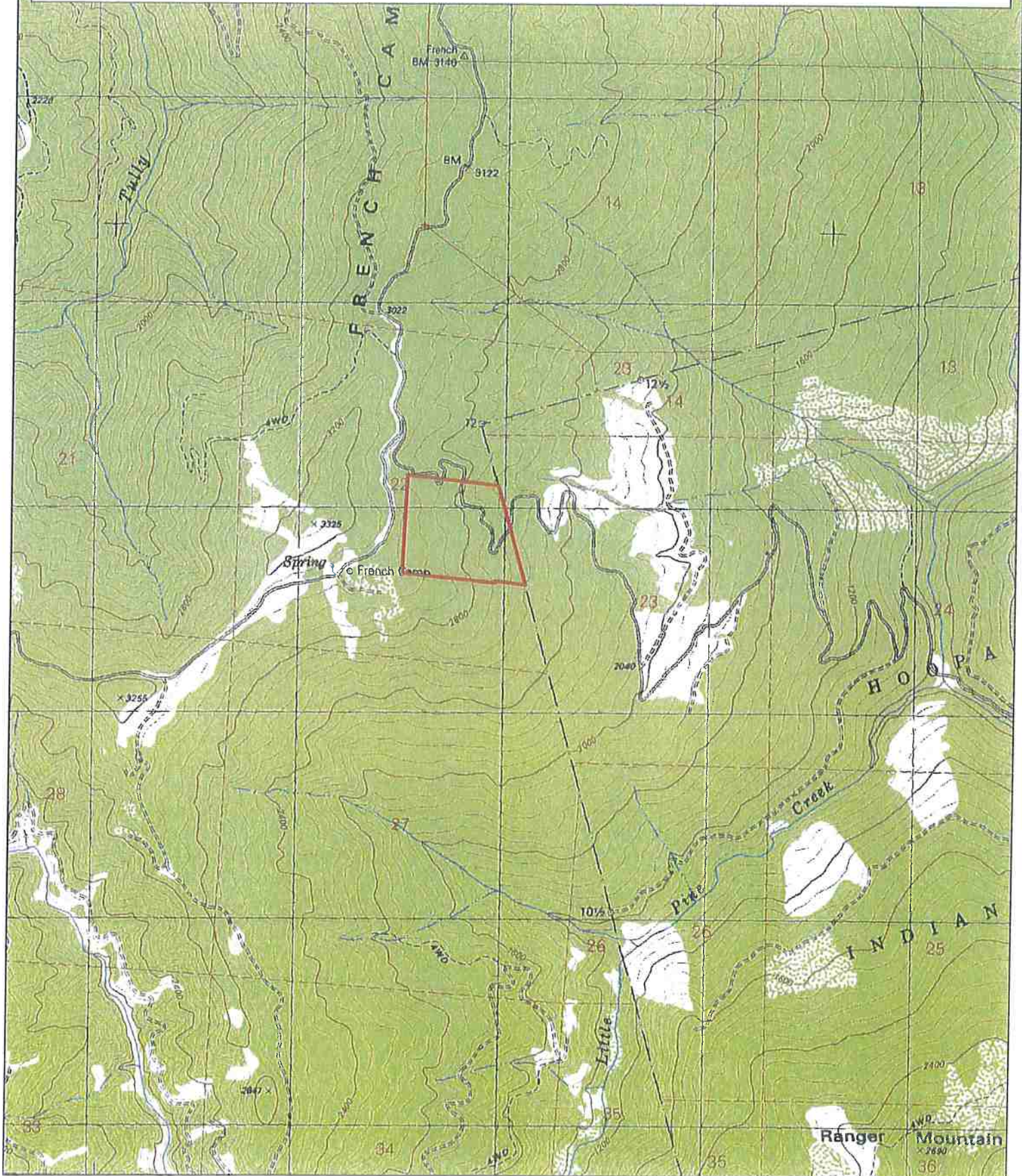
# Attachments



**11033 Old Goat Farms  
General Location Map**

 Property Boundary

*Located in Section 22; T9N, R3E, HB&M,  
Humboldt County from the Frech Camp Ridge  
7.5' USGS Quad. Map Scale 1" = 2,000'*





# CDEA PROPERTY DIAGRAM

Applicant: Old Goat Farms  
 Owner: Brian Dell, Josef Sayes, & Brian Woolford  
 County: Humboldt Permit: 11033  
 Outdoor: 22,000'sq  
 Mixed Light: 8,000'sq Tier 1 DEP No Lights  
 APN: 531-011-005  
 Address: French Camp Road  
 City: Blue Lake, 95625  
 Phone: (310)849-7980  
 Email: brian4034@msn.com










**11033 Old Goat Farms  
NSO Habitat Map**

 Property Boundary

 Biological Assessment Area  
[0.25 Miles]

**Northern Spotted Owl Habitat**

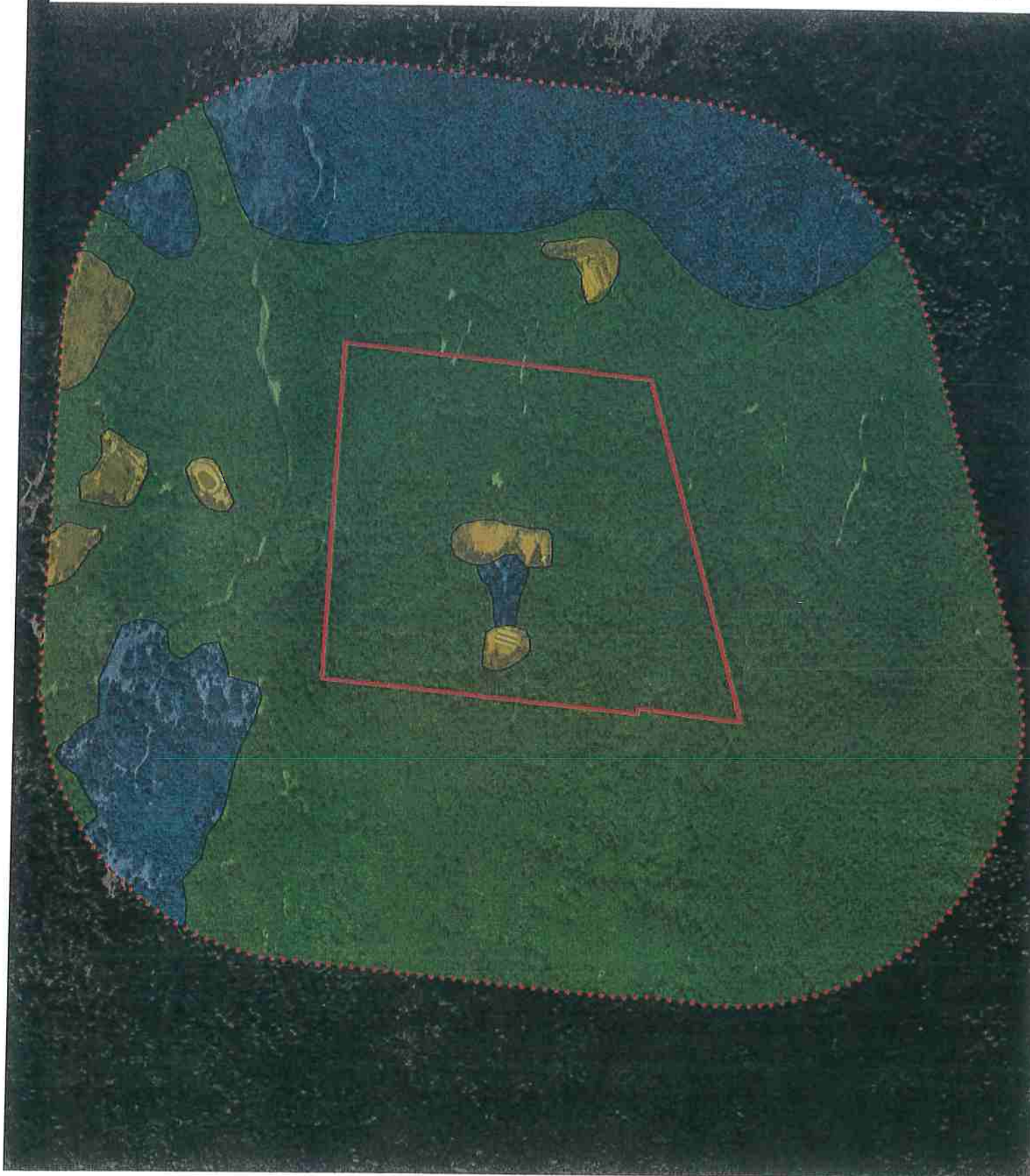
 Nest/Roost

 Forage

 Non-Habitat

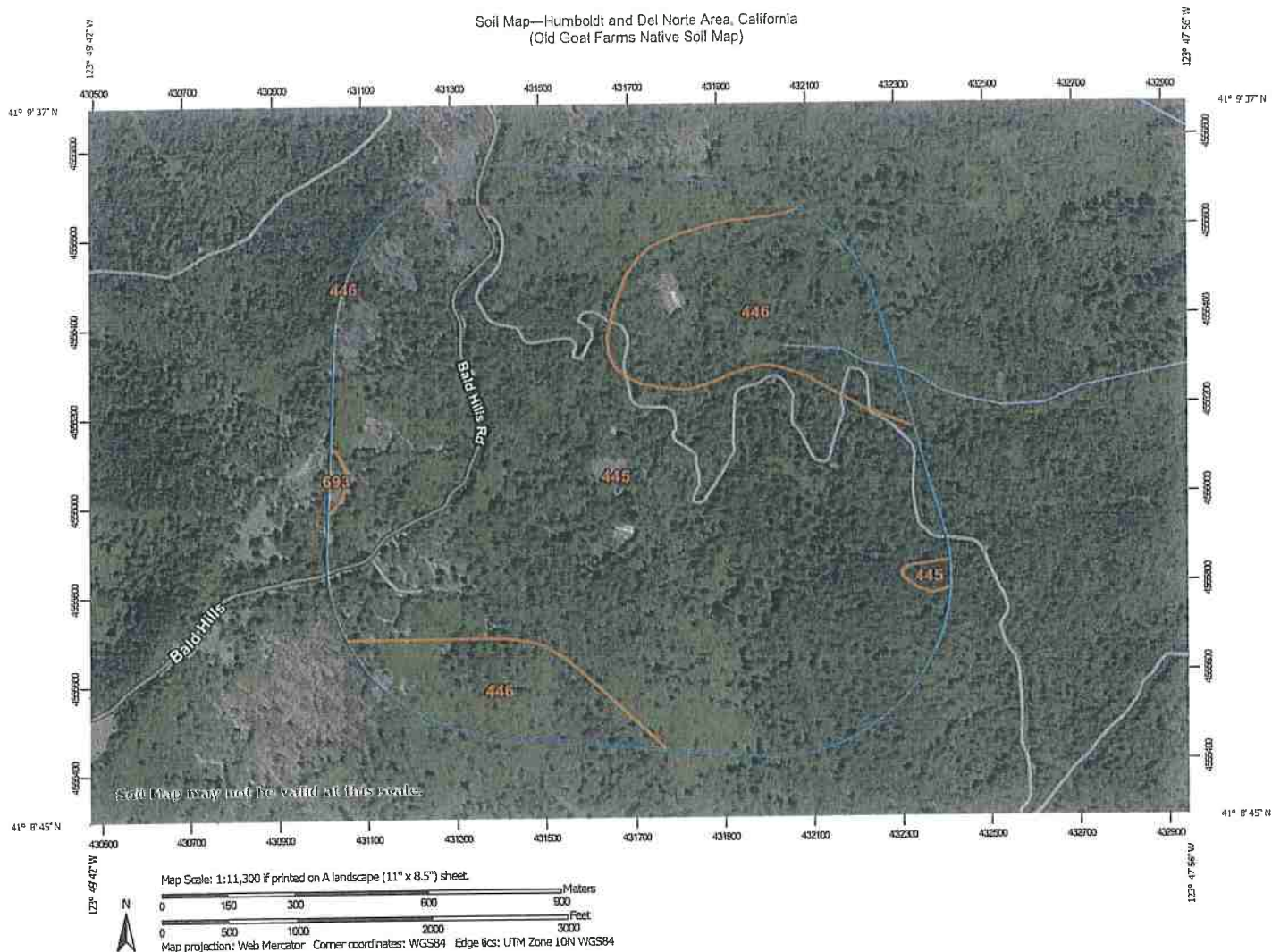


Scale: 1" = 600'





Soil Map—Humboldt and Del Norte Area, California  
(Old Goat Farms Native Soil Map)



Natural Resources  
Conservation Service

Web Soil Survey  
National Cooperative Soil Survey

9/13/2019  
Page 1 of 3

## MAP LEGEND

<b>Area of Interest (AOI)</b>	Area of Interest (AOI)	Spoil Area
<b>Soils</b>	Soil Map Unit Polygons	Stony Spot
	Soil Map Unit Lines	Very Stony Spot
	Soil Map Unit Points	Wet Spot
<b>Special Point Features</b>		Other
	Blowout	Special Line Features
	Borrow Pit	<b>Water Features</b>
	Clay Spot	Streams and Canals
	Closed Depression	<b>Transportation</b>
	Gravel Pit	Rails
	Gravelly Spot	Interstate Highways
	Landfill	US Routes
	Lava Flow	Major Roads
	Marsh or swamp	Local Roads
	Mine or Quarry	<b>Background</b>
	Miscellaneous Water	Aerial Photography
	Perennial Water	
	Rock Outcrop	
	Saline Spot	
	Sandy Spot	
	Severely Eroded Spot	
	Sinkhole	
	Slide or Slip	
	Sodic Spot	

## MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Humboldt and Del Norte Area, California  
Survey Area Data: Version 12, Sep 14, 2018

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

Date(s) aerial images were photographed: Dec 31, 2009—Oct 11, 2017

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

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
445	Burroin-Redtop complex, 9 to 30 percent slopes	310.9	79.9%
446	Bagaul-Burroin-Redtop complex, 15 to 50 percent slopes	77.2	19.8%
693	Kinseyridge-Tillow complex, 9 to 50 percent slopes	1.0	0.2%
Totals for Area of Interest		389.1	100.0%



**CNDDB 9-Quad Species List** 270 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112317	Hupa Mountain	Mapped	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112318	Panther Creek	Mapped and Unprocessed	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112326	Weitchpec	Mapped	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112327	French Camp Ridge	Mapped	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112328	Bald Hills	Mapped and Unprocessed	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112336	Fish Lake	Mapped	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112337	Johnsons	Mapped	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112338	Holter Ridge	Mapped and Unprocessed	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112338	Holter Ridge	Mapped and Unprocessed	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112337	Johnsons	Mapped	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112336	Fish Lake	Mapped and Unprocessed	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112328	Bald Hills	Mapped and Unprocessed	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112327	French Camp Ridge	Mapped and Unprocessed	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112326	Weitchpec	Unprocessed	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112318	Panther Creek	Mapped and Unprocessed	Animals - Amphibians - Plethodontidae - Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112316	Hoopla	Unprocessed	Animals - Amphibians - Plethodontidae - Plethodon elongatus

Animals - Amphibians	Rana aurora	northern red-legged frog	AAABH01021	None	None	SSC	-	4112317	Hupa Mountain	Mapped	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red-legged frog	AAABH01021	None	None	SSC	-	4112318	Panther Creek	Mapped	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red-legged frog	AAABH01021	None	None	SSC	-	4112328	Bald Hills	Mapped	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red-legged frog	AAABH01021	None	None	SSC	-	4112337	Johnsons	Mapped	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red-legged frog	AAABH01021	None	None	SSC	-	4112338	Holter Ridge	Mapped	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana boylei	foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	SSC	-	4112338	Holter Ridge	Mapped	Animals - Amphibians - Ranidae - Rana boylei
Animals - Amphibians	Rana boylei	foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	SSC	-	4112328	Bald Hills	Mapped	Animals - Amphibians - Ranidae - Rana boylei
Animals - Amphibians	Rana boylei	foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	SSC	-	4112327	French Camp Ridge	Mapped	Animals - Amphibians - Ranidae - Rana boylei
Animals - Amphibians	Rana boylei	foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	SSC	-	4112318	Panther Creek	Mapped	Animals - Amphibians - Ranidae - Rana boylei
Animals - Amphibians	Rana boylei	foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	SSC	-	4112326	Weitchpec	Mapped	Animals - Amphibians - Ranidae - Rana boylei
Animals - Amphibians	Rana boylei	foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	SSC	-	4112317	Hupa Mountain	Mapped	Animals - Amphibians - Ranidae - Rana boylei
Animals - Amphibians	Rana boylei	foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	SSC	-	4112316	Hoopa	Mapped	Animals - Amphibians - Ranidae - Rana boylei
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112316	Hoopa	Mapped	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112318	Panther Creek	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112317	Hupa Mountain	Mapped	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112327	French Camp Ridge	Mapped	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112326	Weitchpec	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus

Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112338	Holter Ridge	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112337	Johnsons	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112328	Bald Hills	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112336	Fish Lake	Mapped	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Birds	Accipiter gentilis	northern goshawk	ABNKC12060	None	None	SSC	-	4112336	Fish Lake	Mapped	Animals - Birds - Accipitridae - Accipiter gentilis
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	4112337	Johnsons	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	4112338	Holter Ridge	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
Animals - Birds	Brachyramphus marmoratus	marbled murrelet	ABNNN06010	Threatened	Endangered	-	-	4112338	Holter Ridge	Mapped	Animals - Birds - Alcidae - Brachyramphus marmoratus
Animals - Birds	Brachyramphus marmoratus	marbled murrelet	ABNNN06010	Threatened	Endangered	-	-	4112328	Bald Hills	Mapped	Animals - Birds - Alcidae - Brachyramphus marmoratus
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	4112326	Weitchpec	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	4112316	Hoopa	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	4112337	Johnsons	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	4112337	Johnsons	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4112337	Johnsons	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4112336	Fish Lake	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4112338	Holter Ridge	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4112316	Hoopa	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4112326	Weitchpec	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4112327	French Camp Ridge	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Bonasa umbellus	ruffed grouse	ABNLC11010	None	None	WL	-	4112326	Weitchpec	Mapped	Animals - Birds - Phasianidae - Bonasa umbellus



Animals - Birds	Psiloscops flammeolus	flamulated owl	ABNSB01020	None	None	-	-	4112336	Fish Lake	Unprocessed	Animals - Birds - Strigidae - Psiloscops flammeolus
Animals - Crustaceans	Pacifastacus leniusculus klamathensis	Klamath crayfish	ICMAL31042	None	None	-	-	4112316	Hoopa	Unprocessed	Animals - Crustaceans - Astacidae - Pacifastacus leniusculus klamathensis
Animals - Crustaceans	Pacifastacus leniusculus klamathensis	Klamath crayfish	ICMAL31042	None	None	-	-	4112327	French Camp Ridge	Unprocessed	Animals - Crustaceans - Astacidae - Pacifastacus leniusculus klamathensis
Animals - Fish	Thaleichthys pacificus	eulachon	AFCHB04010	Threatened	None	-	-	4112337	Johnsons	Unprocessed	Animals - Fish - Osmeridae - Thaleichthys pacificus
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	SSC	-	4112318	Panther Creek	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4112318	Panther Creek	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4112317	Hupa Mountain	Mapped	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4112328	Bald Hills	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4112327	French Camp Ridge	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4112337	Johnsons	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4112336	Fish Lake	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4112338	Holter Ridge	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	-	-	4112338	Holter Ridge	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	-	-	4112336	Fish Lake	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	-	-	4112337	Johnsons	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	-	-	4112327	French Camp Ridge	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2

Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	-	-	4112328	Bald Hills	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	-	-	4112318	Panther Creek	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	-	-	4112326	Weitchpec	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
Animals - Fish	Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	AFCHA0209D	None	None	SSC	-	4112327	French Camp Ridge	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 1
Animals - Fish	Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	AFCHA0209D	None	None	SSC	-	4112326	Weitchpec	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 1
Animals - Fish	Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	AFCHA0209D	None	None	SSC	-	4112337	Johnsons	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 1
Animals - Fish	Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	AFCHA0209D	None	None	SSC	-	4112338	Holter Ridge	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 1
Animals - Fish	Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	AFCHA0209Q	Threatened	None	-	-	4112338	Holter Ridge	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 16
Animals - Fish	Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	AFCHA0209Q	Threatened	None	-	-	4112337	Johnsons	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 16
Animals - Fish	Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	AFCHA0209Q	Threatened	None	-	-	4112328	Bald Hills	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 16
Animals - Fish	Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	AFCHA0209Q	Threatened	None	-	-	4112318	Panther Creek	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 16
Animals - Fish	Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	AFCHA0209Q	Threatened	None	-	-	4112317	Hupa Mountain	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 16
Animals - Fish	Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	AFCHA0213B	None	Candidate Endangered	SSC	-	4112317	Hupa Mountain	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 36
Animals - Fish	Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	AFCHA0213B	None	Candidate Endangered	SSC	-	4112318	Panther Creek	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 36
Animals - Fish	Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	AFCHA0213B	None	Candidate Endangered	SSC	-	4112328	Bald Hills	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 36

Animals - Fish	Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	AFCHA0213B	None	Candidate Endangered	SSC	-	4112327	French Camp Ridge	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 36
Animals - Fish	Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	AFCHA0213B	None	Candidate Endangered	SSC	-	4112337	Johnsons	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 36
Animals - Fish	Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	AFCHA0213B	None	Candidate Endangered	SSC	-	4112336	Fish Lake	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 36
Animals - Fish	Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	AFCHA0213B	None	Candidate Endangered	SSC	-	4112338	Holter Ridge	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 36
Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	-	-	4112318	Panther Creek	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 17
Animals - Fish	Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	AFCHA02056	None	Candidate Endangered	SSC	-	4112326	Weitchpec	Mapped	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 30
Animals - Fish	Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	AFCHA02056	None	Candidate Endangered	SSC	-	4112318	Panther Creek	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 30
Animals - Fish	Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	AFCHA02056	None	Candidate Endangered	SSC	-	4112338	Holter Ridge	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 30
Animals - Fish	Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	AFCHA02056	None	Candidate Endangered	SSC	-	4112337	Johnsons	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 30
Animals - Insects	Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	-	-	4112338	Holter Ridge	Mapped	Animals - Insects - Apidae - Bombus caliginosus
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	Candidate Endangered	-	-	4112338	Holter Ridge	Mapped	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	Candidate Endangered	-	-	4112316	Hoopa	Mapped and Unprocessed	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	Candidate Endangered	-	-	4112326	Weitchpec	Mapped and Unprocessed	Animals - Insects - Apidae - Bombus occidentalis
Animals - Mammals	Aplodontia rufa humboldtiana	Humboldt mountain beaver	AMAF01017	None	None	-	-	4112326	Weitchpec	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mammals	Aplodontia rufa humboldtiana	Humboldt mountain beaver	AMAF01017	None	None	-	-	4112327	French Camp Ridge	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mammals	Aplodontia rufa humboldtiana	Humboldt mountain beaver	AMAF01017	None	None	-	-	4112337	Johnsons	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana



Animals - Mammals	Apodonta rufa humboldtiana	Humboldt mountain beaver	AMAF01017	None	None	-	-	4112336	Fish Lake	Mapped	Animals - Mammals - Apodontidae - Apodonta rufa humboldtiana
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112337	Johnsons	Unprocessed	Animals - Mammals - Muridae - Arborimus pomo
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112338	Holter Ridge	Mapped and Unprocessed	Animals - Mammals - Muridae - Arborimus pomo
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112327	French Camp Ridge	Mapped and Unprocessed	Animals - Mammals - Muridae - Arborimus pomo
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112328	Bald Hills	Mapped and Unprocessed	Animals - Mammals - Muridae - Arborimus pomo
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112326	Weitchpec	Unprocessed	Animals - Mammals - Muridae - Arborimus pomo
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112316	Hoopa	Unprocessed	Animals - Mammals - Muridae - Arborimus pomo
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112317	Hupa Mountain	Mapped	Animals - Mammals - Muridae - Arborimus pomo
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4112318	Panther Creek	Unprocessed	Animals - Mammals - Muridae - Arborimus pomo
Animals - Mammals	Martes caurina humboldtensis	Humboldt marten	AMAJF01012	None	Endangered	SSC	-	4112328	Bald Hills	Mapped	Animals - Mammals - Mustelidae - Martes caurina humboldtensis
Animals - Mammals	Pekania pennanti	fisher - West Coast DPS	AMAJF01021	None	Threatened	SSC	-	4112328	Bald Hills	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	fisher - West Coast DPS	AMAJF01021	None	Threatened	SSC	-	4112327	French Camp Ridge	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	fisher - West Coast DPS	AMAJF01021	None	Threatened	SSC	-	4112326	Weitchpec	Mapped	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	fisher - West Coast DPS	AMAJF01021	None	Threatened	SSC	-	4112318	Panther Creek	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	fisher - West Coast DPS	AMAJF01021	None	Threatened	SSC	-	4112317	Hupa Mountain	Mapped	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	fisher - West Coast DPS	AMAJF01021	None	Threatened	SSC	-	4112316	Hoopa	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	fisher - West Coast DPS	AMAJF01021	None	Threatened	SSC	-	4112338	Holter Ridge	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti
Animals - Mammals	Pekania pennanti	fisher - West Coast DPS	AMAJF01021	None	Threatened	SSC	-	4112337	Johnsons	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Pekania pennanti

Animals - Mammals	<i>Pekania pennanti</i>	fisher - West Coast DPS	AMAJF01021	None	Threatened	SSC	-	4112336	Fish Lake	Mapped	Animals - Mammals - Mustelidae - <i>Pekania pennanti</i>
Animals - Mammals	<i>Antrozous pallidus</i>	pallid bat	AMACC10010	None	None	SSC	-	4112328	Bald Hills	Mapped	Animals - Mammals - Vespertilionidae - <i>Antrozous pallidus</i>
Animals - Mammals	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	AMACC08010	None	None	SSC	-	4112316	Hoopa	Mapped	Animals - Mammals - Vespertilionidae - <i>Corynorhinus townsendii</i>
Animals - Mammals	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	AMACC08010	None	None	SSC	-	4112317	Hupa Mountain	Mapped	Animals - Mammals - Vespertilionidae - <i>Corynorhinus townsendii</i>
Animals - Mammals	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	AMACC08010	None	None	SSC	-	4112326	Weitchpec	Mapped	Animals - Mammals - Vespertilionidae - <i>Corynorhinus townsendii</i>
Animals - Mammals	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	AMACC08010	None	None	SSC	-	4112327	French Camp Ridge	Mapped	Animals - Mammals - Vespertilionidae - <i>Corynorhinus townsendii</i>
Animals - Mammals	<i>Lasionycteris noctivagans</i>	silver-haired bat	AMACC02010	None	None	-	-	4112328	Bald Hills	Mapped	Animals - Mammals - Vespertilionidae - <i>Lasionycteris noctivagans</i>
Animals - Mammals	<i>Myotis evotis</i>	long-eared myotis	AMACC01070	None	None	-	-	4112328	Bald Hills	Mapped	Animals - Mammals - Vespertilionidae - <i>Myotis evotis</i>
Animals - Mammals	<i>Myotis evotis</i>	long-eared myotis	AMACC01070	None	None	-	-	4112327	French Camp Ridge	Mapped	Animals - Mammals - Vespertilionidae - <i>Myotis evotis</i>
Animals - Mollusks	<i>Helminthoglypta talmadgei</i>	Trinity shoulderband	IMGASC2630	None	None	-	-	4112316	Hoopa	Mapped	Animals - Mollusks - Helminthoglyptidae - <i>Helminthoglypta talmadgei</i>
Animals - Mollusks	<i>Pristinicola hemphilli</i>	pristine pyrg	IMGASX0010	None	None	-	-	4112316	Hoopa	Unprocessed	Animals - Mollusks - Hydrobiidae - <i>Pristinicola hemphilli</i>
Animals - Mollusks	<i>Pristinicola hemphilli</i>	pristine pyrg	IMGASX0010	None	None	-	-	4112326	Weitchpec	Unprocessed	Animals - Mollusks - Hydrobiidae - <i>Pristinicola hemphilli</i>
Animals - Mollusks	<i>Margaritifera falcata</i>	western pearlshell	IMBIV27020	None	None	-	-	4112328	Bald Hills	Mapped and Unprocessed	Animals - Mollusks - Margaritiferidae - <i>Margaritifera falcata</i>
Animals - Mollusks	<i>Margaritifera falcata</i>	western pearlshell	IMBIV27020	None	None	-	-	4112326	Weitchpec	Mapped and Unprocessed	Animals - Mollusks - Margaritiferidae - <i>Margaritifera falcata</i>
Animals - Mollusks	<i>Margaritifera falcata</i>	western pearlshell	IMBIV27020	None	None	-	-	4112318	Panther Creek	Mapped	Animals - Mollusks - Margaritiferidae - <i>Margaritifera falcata</i>
Animals - Mollusks	<i>Vespericola karokorum</i>	Karok hesperian	IMGASA4040	None	None	-	-	4112336	Fish Lake	Mapped	Animals - Mollusks - Polygyridae - <i>Vespericola karokorum</i>
Animals - Mollusks	<i>Gonidea angulata</i>	western ridged mussel	IMBIV19010	None	None	-	-	4112326	Weitchpec	Unprocessed	Animals - Mollusks - Unionidae - <i>Gonidea angulata</i>
Animals - Reptiles	<i>Emys marmorata</i>	western pond turtle	ARAAD02030	None	None	SSC	-	4112336	Fish Lake	Mapped and Unprocessed	Animals - Reptiles - Emydidae - <i>Emys marmorata</i>

Community - Terrestrial	Upland Douglas Fir Forest	Upland Douglas Fir Forest	CTT82420CA	None	None	-	-	4112317	Hupa Mountain	Mapped	Community - Terrestrial - Upland Douglas Fir Forest
Plants - Bryophytes	Anomobryum julaceum	slender silver moss	NBMUS80010	None	None	-	4.2	4112326	Weitchpec	Mapped	Plants - Bryophytes - Bryaceae - Anomobryum julaceum
Plants - Bryophytes	Mielichhoferia elongata	elongate copper moss	NBMUS4Q022	None	None	-	4.3	4112326	Weitchpec	Mapped	Plants - Bryophytes - Mielichhoferiaceae - Mielichhoferia elongata
Plants - Bryophytes	Ptilidium californicum	Pacific fuzzwort	NBHEP2U010	None	None	-	4.3	4112317	Hupa Mountain	Mapped and Unprocessed	Plants - Bryophytes - Ptilidiaceae - Ptilidium californicum
Plants - Lichens	Usnea longissima	Methuselah's beard lichen	NLLEC5P420	None	None	-	4.2	4112328	Bald Hills	Mapped	Plants - Lichens - Parmeliaceae - Usnea longissima
Plants - Vascular	Allium siskiyouense	Siskiyou onion	PMLIL02280	None	None	-	4.3	4112336	Fish Lake	Unprocessed	Plants - Vascular - Alliaceae - Allium siskiyouense
Plants - Vascular	Sanicula tracyi	Tracy's sanicle	PDAP11Z0K0	None	None	-	4.2	4112327	French Camp Ridge	Mapped	Plants - Vascular - Apiaceae - Sanicula tracyi
Plants - Vascular	Tauschia glauca	glaucous tauschia	PDAP127020	None	None	-	4.3	4112316	Hoopla	Unprocessed	Plants - Vascular - Apiaceae - Tauschia glauca
Plants - Vascular	Arnica cernua	serpentine arnica	PDAST0Q040	None	None	-	4.3	4112316	Hoopla	Unprocessed	Plants - Vascular - Asteraceae - Arnica cernua
Plants - Vascular	Arnica cernua	serpentine arnica	PDAST0Q040	None	None	-	4.3	4112317	Hupa Mountain	Unprocessed	Plants - Vascular - Asteraceae - Arnica cernua
Plants - Vascular	Arnica cernua	serpentine arnica	PDAST0Q040	None	None	-	4.3	4112336	Fish Lake	Unprocessed	Plants - Vascular - Asteraceae - Arnica cernua
Plants - Vascular	Arnica cernua	serpentine arnica	PDAST0Q040	None	None	-	4.3	4112337	Johnsons	Unprocessed	Plants - Vascular - Asteraceae - Arnica cernua
Plants - Vascular	Arnica spathulata	Klamath arnica	PDAST0Q0M0	None	None	-	4.3	4112337	Johnsons	Unprocessed	Plants - Vascular - Asteraceae - Arnica spathulata
Plants - Vascular	Arnica spathulata	Klamath arnica	PDAST0Q0M0	None	None	-	4.3	4112336	Fish Lake	Unprocessed	Plants - Vascular - Asteraceae - Arnica spathulata
Plants - Vascular	Packera bolanderi var. bolanderi	seacoast ragwort	PDAST8H0H1	None	None	-	2B.2	4112318	Panther Creek	Mapped	Plants - Vascular - Asteraceae - Packera bolanderi var. bolanderi
Plants - Vascular	Cardamine angulata	seaside bittercress	PDBRA0K010	None	None	-	2B.1	4112338	Holter Ridge	Mapped	Plants - Vascular - Brassicaceae - Cardamine angulata
Plants - Vascular	Sedum laxum ssp. flavidum	pale yellow stonecrop	PDCRA0A0L2	None	None	-	4.3	4112336	Fish Lake	Mapped and Unprocessed	Plants - Vascular - Crassulaceae - Sedum laxum ssp. flavidum
Plants - Vascular	Sedum laxum ssp. flavidum	pale yellow stonecrop	PDCRA0A0L2	None	None	-	4.3	4112326	Weitchpec	Mapped	Plants - Vascular - Crassulaceae - Sedum laxum ssp. flavidum
Plants - Vascular	Carex praticola	northern meadow sedge	PMCYP03B20	None	None	-	2B.2	4112327	French Camp Ridge	Mapped	Plants - Vascular - Cyperaceae - Carex praticola
Plants - Vascular	Carex praticola	northern meadow sedge	PMCYP03B20	None	None	-	2B.2	4112338	Holter Ridge	Mapped and Unprocessed	Plants - Vascular - Cyperaceae - Carex praticola
Plants - Vascular	Schoenoplectus subterminalis	water bulrush	PMCYP0Q1G0	None	None	-	2B.3	4112336	Fish Lake	Mapped	Plants - Vascular - Cyperaceae - Schoenoplectus subterminalis



Plants - Vascular	Schoenoplectus subterminalis	water bulrush	PMCYP0Q1G0	None	None	-	2B.3	4112326	Weitchpec	Mapped	Plants - Vascular - Cyperaceae - Schoenoplectus subterminalis
Plants - Vascular	Astragalus umbraticus	Bald Mountain milk-vetch	PDFAB0F990	None	None	-	2B.3	4112326	Weitchpec	Mapped	Plants - Vascular - Fabaceae - Astragalus umbraticus
Plants - Vascular	Astragalus umbraticus	Bald Mountain milk-vetch	PDFAB0F990	None	None	-	2B.3	4112327	French Camp Ridge	Mapped	Plants - Vascular - Fabaceae - Astragalus umbraticus
Plants - Vascular	Astragalus umbraticus	Bald Mountain milk-vetch	PDFAB0F990	None	None	-	2B.3	4112328	Bald Hills	Mapped	Plants - Vascular - Fabaceae - Astragalus umbraticus
Plants - Vascular	Astragalus umbraticus	Bald Mountain milk-vetch	PDFAB0F990	None	None	-	2B.3	4112317	Hupa Mountain	Mapped	Plants - Vascular - Fabaceae - Astragalus umbraticus
Plants - Vascular	Astragalus umbraticus	Bald Mountain milk-vetch	PDFAB0F990	None	None	-	2B.3	4112337	Johnsons	Mapped	Plants - Vascular - Fabaceae - Astragalus umbraticus
Plants - Vascular	Astragalus umbraticus	Bald Mountain milk-vetch	PDFAB0F990	None	None	-	2B.3	4112336	Fish Lake	Mapped	Plants - Vascular - Fabaceae - Astragalus umbraticus
Plants - Vascular	Astragalus umbraticus	Bald Mountain milk-vetch	PDFAB0F990	None	None	-	2B.3	4112338	Holter Ridge	Mapped	Plants - Vascular - Fabaceae - Astragalus umbraticus
Plants - Vascular	Thermopsis gracilis	slender false lupine	PDFAB3Z0C1	None	None	-	4.3	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Fabaceae - Thermopsis gracilis
Plants - Vascular	Thermopsis gracilis	slender false lupine	PDFAB3Z0C1	None	None	-	4.3	4112337	Johnsons	Unprocessed	Plants - Vascular - Fabaceae - Thermopsis gracilis
Plants - Vascular	Thermopsis gracilis	slender false lupine	PDFAB3Z0C1	None	None	-	4.3	4112327	French Camp Ridge	Unprocessed	Plants - Vascular - Fabaceae - Thermopsis gracilis
Plants - Vascular	Thermopsis robusta	robust false lupine	PDFAB3Z0D0	None	None	-	1B.2	4112327	French Camp Ridge	Mapped	Plants - Vascular - Fabaceae - Thermopsis robusta
Plants - Vascular	Thermopsis robusta	robust false lupine	PDFAB3Z0D0	None	None	-	1B.2	4112326	Weitchpec	Mapped	Plants - Vascular - Fabaceae - Thermopsis robusta
Plants - Vascular	Thermopsis robusta	robust false lupine	PDFAB3Z0D0	None	None	-	1B.2	4112337	Johnsons	Mapped	Plants - Vascular - Fabaceae - Thermopsis robusta
Plants - Vascular	Thermopsis robusta	robust false lupine	PDFAB3Z0D0	None	None	-	1B.2	4112336	Fish Lake	Mapped	Plants - Vascular - Fabaceae - Thermopsis robusta
Plants - Vascular	Dicentra formosa ssp. oregana	Oregon bleeding heart	PDFUM04052	None	None	-	4.2	4112336	Fish Lake	Unprocessed	Plants - Vascular - Fumariaceae - Dicentra formosa ssp. oregana
Plants - Vascular	Dicentra formosa ssp. oregana	Oregon bleeding heart	PDFUM04052	None	None	-	4.2	4112337	Johnsons	Unprocessed	Plants - Vascular - Fumariaceae - Dicentra formosa ssp. oregana
Plants - Vascular	Ribes laxiflorum	trailing black currant	PDGRO020V0	None	None	-	4.3	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Grossulariaceae - Ribes laxiflorum
Plants - Vascular	Ribes laxiflorum	trailing black currant	PDGRO020V0	None	None	-	4.3	4112328	Bald Hills	Unprocessed	Plants - Vascular - Grossulariaceae - Ribes laxiflorum
Plants - Vascular	Ribes laxiflorum	trailing black currant	PDGRO020V0	None	None	-	4.3	4112318	Panther Creek	Unprocessed	Plants - Vascular - Grossulariaceae - Ribes laxiflorum

Plants - Vascular	Erythronium citrinum var. citrinum	lemon-colored fawn lily	PMLIL0U041	None	None	-	4.3	4112326	Weitchpec	Unprocessed	Plants - Vascular - Liliaceae - Erythronium citrinum var. citrinum
Plants - Vascular	Erythronium oregonum	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4112327	French Camp Ridge	Unprocessed	Plants - Vascular - Liliaceae - Erythronium oregonum
Plants - Vascular	Erythronium oregonum	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4112317	Hupa Mountain	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Erythronium oregonum
Plants - Vascular	Erythronium oregonum	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4112318	Panther Creek	Mapped	Plants - Vascular - Liliaceae - Erythronium oregonum
Plants - Vascular	Erythronium oregonum	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4112316	Hoopla	Mapped	Plants - Vascular - Liliaceae - Erythronium oregonum
Plants - Vascular	Erythronium oregonum	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4112337	Johnsons	Mapped	Plants - Vascular - Liliaceae - Erythronium oregonum
Plants - Vascular	Erythronium oregonum	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4112336	Fish Lake	Mapped	Plants - Vascular - Liliaceae - Erythronium oregonum
Plants - Vascular	Erythronium revolutum	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4112328	Bald Hills	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Erythronium revolutum
Plants - Vascular	Erythronium revolutum	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4112337	Johnsons	Mapped	Plants - Vascular - Liliaceae - Erythronium revolutum
Plants - Vascular	Erythronium revolutum	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4112338	Holter Ridge	Mapped and Unprocessed	Plants - Vascular - Liliaceae - Erythronium revolutum
Plants - Vascular	Erythronium revolutum	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4112318	Panther Creek	Unprocessed	Plants - Vascular - Liliaceae - Erythronium revolutum
Plants - Vascular	Erythronium revolutum	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4112317	Hupa Mountain	Mapped	Plants - Vascular - Liliaceae - Erythronium revolutum
Plants - Vascular	Erythronium revolutum	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4112327	French Camp Ridge	Mapped	Plants - Vascular - Liliaceae - Erythronium revolutum
Plants - Vascular	Erythronium revolutum	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4112326	Weitchpec	Mapped	Plants - Vascular - Liliaceae - Erythronium revolutum
Plants - Vascular	Lilium bolanderi	Bolander's lily	PMLIL1A010	None	None	-	4.2	4112337	Johnsons	Unprocessed	Plants - Vascular - Liliaceae - Lilium bolanderi
Plants - Vascular	Lilium bolanderi	Bolander's lily	PMLIL1A010	None	None	-	4.2	4112336	Fish Lake	Unprocessed	Plants - Vascular - Liliaceae - Lilium bolanderi
Plants - Vascular	Lilium kelloggii	Kellogg's lily	PMLIL1A0A0	None	None	-	4.3	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Liliaceae - Lilium kelloggii
Plants - Vascular	Lilium rubescens	redwood lily	PMLIL1A0N0	None	None	-	4.2	4112336	Fish Lake	Unprocessed	Plants - Vascular - Liliaceae - Lilium rubescens
Plants - Vascular	Lilium rubescens	redwood lily	PMLIL1A0N0	None	None	-	4.2	4112337	Johnsons	Unprocessed	Plants - Vascular - Liliaceae - Lilium rubescens
Plants - Vascular	Lilium rubescens	redwood lily	PMLIL1A0N0	None	None	-	4.2	4112326	Weitchpec	Unprocessed	Plants - Vascular - Liliaceae - Lilium rubescens

Plants - Vascular	<i>Lycopodium clavatum</i>	running-pine	PPLYC01080	None	None	-	4.1	4112318	Panther Creek	Mapped and Unprocessed	Plants - Vascular - Lycopodiaceae - <i>Lycopodium clavatum</i>
Plants - Vascular	<i>Lycopodium clavatum</i>	running-pine	PPLYC01080	None	None	-	4.1	4112328	Bald Hills	Mapped	Plants - Vascular - Lycopodiaceae - <i>Lycopodium clavatum</i>
Plants - Vascular	<i>Lycopodium clavatum</i>	running-pine	PPLYC01080	None	None	-	4.1	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Lycopodiaceae - <i>Lycopodium clavatum</i>
Plants - Vascular	<i>Iliamna latibracteata</i>	California globe mallow	PDMAL0K040	None	None	-	1B.2	4112327	French Camp Ridge	Mapped	Plants - Vascular - Malvaceae - <i>Iliamna latibracteata</i>
Plants - Vascular	<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	PDMAL110F9	None	None	-	1B.2	4112328	Bald Hills	Mapped	Plants - Vascular - Malvaceae - <i>Sidalcea malviflora</i> ssp. <i>patula</i>
Plants - Vascular	<i>Sidalcea oregana</i> ssp. <i>eximia</i>	coast checkerbloom	PDMAL110K9	None	None	-	1B.2	4112326	Weitchpec	Mapped	Plants - Vascular - Malvaceae - <i>Sidalcea oregana</i> ssp. <i>eximia</i>
Plants - Vascular	<i>Veratrum insolitum</i>	Siskiyou false-hellebore	PMLIL25040	None	None	-	4.3	4112337	Johnsons	Unprocessed	Plants - Vascular - Melanthiaceae - <i>Veratrum insolitum</i>
Plants - Vascular	<i>Veratrum insolitum</i>	Siskiyou false-hellebore	PMLIL25040	None	None	-	4.3	4112336	Fish Lake	Unprocessed	Plants - Vascular - Melanthiaceae - <i>Veratrum insolitum</i>
Plants - Vascular	<i>Monotropa uniflora</i>	ghost-pipe	PDMON03030	None	None	-	2B.2	4112338	Holter Ridge	Mapped	Plants - Vascular - Monotropaceae - <i>Monotropa uniflora</i>
Plants - Vascular	<i>Pityopus californicus</i>	California pinefoot	PDMON05010	None	None	-	4.2	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Monotropaceae - <i>Pityopus californicus</i>
Plants - Vascular	<i>Pityopus californicus</i>	California pinefoot	PDMON05010	None	None	-	4.2	4112336	Fish Lake	Unprocessed	Plants - Vascular - Monotropaceae - <i>Pityopus californicus</i>
Plants - Vascular	<i>Pityopus californicus</i>	California pinefoot	PDMON05010	None	None	-	4.2	4112337	Johnsons	Unprocessed	Plants - Vascular - Monotropaceae - <i>Pityopus californicus</i>
Plants - Vascular	<i>Pityopus californicus</i>	California pinefoot	PDMON05010	None	None	-	4.2	4112326	Weitchpec	Unprocessed	Plants - Vascular - Monotropaceae - <i>Pityopus californicus</i>
Plants - Vascular	<i>Pityopus californicus</i>	California pinefoot	PDMON05010	None	None	-	4.2	4112328	Bald Hills	Unprocessed	Plants - Vascular - Monotropaceae - <i>Pityopus californicus</i>
Plants - Vascular	<i>Pityopus californicus</i>	California pinefoot	PDMON05010	None	None	-	4.2	4112327	French Camp Ridge	Unprocessed	Plants - Vascular - Monotropaceae - <i>Pityopus californicus</i>
Plants - Vascular	<i>Pityopus californicus</i>	California pinefoot	PDMON05010	None	None	-	4.2	4112318	Panther Creek	Unprocessed	Plants - Vascular - Monotropaceae - <i>Pityopus californicus</i>
Plants - Vascular	<i>Pityopus californicus</i>	California pinefoot	PDMON05010	None	None	-	4.2	4112317	Hupa Mountain	Unprocessed	Plants - Vascular - Monotropaceae - <i>Pityopus californicus</i>
Plants - Vascular	<i>Lewisia cotyledon</i> var. <i>heckneri</i>	Heckner's lewisia	PDPOR04052	None	None	-	1B.2	4112326	Weitchpec	Mapped	Plants - Vascular - Montiaceae - <i>Lewisia cotyledon</i> var. <i>heckneri</i>
Plants - Vascular	<i>Lewisia cotyledon</i> var. <i>howellii</i>	Howell's lewisia	PDPOR04053	None	None	-	3.2	4112326	Weitchpec	Unprocessed	Plants - Vascular - Montiaceae - <i>Lewisia cotyledon</i> var. <i>howellii</i>



Plants - Vascular	Lewisia cotyledon var. howellii	Howell's lewisia	PDPOR04053	None	None	-	3.2	4112316	Hoopa	Unprocessed	Plants - Vascular - Montiaceae - Lewisia cotyledon var. howellii
Plants - Vascular	Lewisia kelloggii ssp. hutchisonii	Hutchison's lewisia	PDPOR04071	None	None	-	3.2	4112336	Fish Lake	Unprocessed	Plants - Vascular - Montiaceae - Lewisia kelloggii ssp. hutchisonii
Plants - Vascular	Montia howellii	Howell's montia	PDPOR05070	None	None	-	2B.2	4112328	Bald Hills	Mapped and Unprocessed	Plants - Vascular - Montiaceae - Montia howellii
Plants - Vascular	Montia howellii	Howell's montia	PDPOR05070	None	None	-	2B.2	4112317	Hupa Mountain	Mapped	Plants - Vascular - Montiaceae - Montia howellii
Plants - Vascular	Montia howellii	Howell's montia	PDPOR05070	None	None	-	2B.2	4112318	Panther Creek	Mapped	Plants - Vascular - Montiaceae - Montia howellii
Plants - Vascular	Montia howellii	Howell's montia	PDPOR05070	None	None	-	2B.2	4112326	Weitchpec	Mapped	Plants - Vascular - Montiaceae - Montia howellii
Plants - Vascular	Epilobium septentrionale	Humboldt County fuchsia	PDONA06110	None	None	-	4.3	4112316	Hoopa	Unprocessed	Plants - Vascular - Onagraceae - Epilobium septentrionale
Plants - Vascular	Cypripedium californicum	California lady's-slipper	PMORC0Q040	None	None	-	4.2	4112316	Hoopa	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium californicum
Plants - Vascular	Cypripedium fasciculatum	clustered lady's-slipper	PMORC0Q060	None	None	-	4.2	4112326	Weitchpec	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium fasciculatum
Plants - Vascular	Cypripedium montanum	mountain lady's-slipper	PMORC0Q080	None	None	-	4.2	4112316	Hoopa	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium montanum
Plants - Vascular	Cypripedium montanum	mountain lady's-slipper	PMORC0Q080	None	None	-	4.2	4112336	Fish Lake	Unprocessed	Plants - Vascular - Orchidaceae - Cypripedium montanum
Plants - Vascular	Listera cordata	heart-leaved twayblade	PMORC1N060	None	None	-	4.2	4112328	Bald Hills	Unprocessed	Plants - Vascular - Orchidaceae - Listera cordata
Plants - Vascular	Listera cordata	heart-leaved twayblade	PMORC1N060	None	None	-	4.2	4112337	Johnsons	Unprocessed	Plants - Vascular - Orchidaceae - Listera cordata
Plants - Vascular	Listera cordata	heart-leaved twayblade	PMORC1N060	None	None	-	4.2	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Orchidaceae - Listera cordata
Plants - Vascular	Listera cordata	heart-leaved twayblade	PMORC1N060	None	None	-	4.2	4112317	Hupa Mountain	Unprocessed	Plants - Vascular - Orchidaceae - Listera cordata
Plants - Vascular	Listera cordata	heart-leaved twayblade	PMORC1N060	None	None	-	4.2	4112318	Panther Creek	Unprocessed	Plants - Vascular - Orchidaceae - Listera cordata
Plants - Vascular	Listera cordata	heart-leaved twayblade	PMORC1N060	None	None	-	4.2	4112326	Weitchpec	Unprocessed	Plants - Vascular - Orchidaceae - Listera cordata
Plants - Vascular	Listera cordata	heart-leaved twayblade	PMORC1N060	None	None	-	4.2	4112327	French Camp Ridge	Unprocessed	Plants - Vascular - Orchidaceae - Listera cordata
Plants - Vascular	Piperia candida	white-flowered rein orchid	PMORC1X050	None	None	-	1B.2	4112327	French Camp Ridge	Mapped	Plants - Vascular - Orchidaceae - Piperia candida
Plants - Vascular	Piperia candida	white-flowered rein orchid	PMORC1X050	None	None	-	1B.2	4112326	Weitchpec	Mapped	Plants - Vascular - Orchidaceae - Piperia candida
Plants - Vascular	Piperia candida	white-flowered rein orchid	PMORC1X050	None	None	-	1B.2	4112317	Hupa Mountain	Mapped	Plants - Vascular - Orchidaceae - Piperia candida
Plants - Vascular	Piperia candida	white-flowered rein orchid	PMORC1X050	None	None	-	1B.2	4112316	Hoopa	Mapped	Plants - Vascular - Orchidaceae - Piperia candida

Plants - Vascular	Piperia candida	white-flowered rein orchid	PMORC1X050	None	None	-	1B.2	4112338	Holter Ridge	Mapped	Plants - Vascular - Orchidaceae - Piperia candida
Plants - Vascular	Piperia candida	white-flowered rein orchid	PMORC1X050	None	None	-	1B.2	4112337	Johnsons	Mapped	Plants - Vascular - Orchidaceae - Piperia candida
Plants - Vascular	Piperia candida	white-flowered rein orchid	PMORC1X050	None	None	-	1B.2	4112328	Bald Hills	Mapped	Plants - Vascular - Orchidaceae - Piperia candida
Plants - Vascular	Piperia candida	white-flowered rein orchid	PMORC1X050	None	None	-	1B.2	4112336	Fish Lake	Mapped	Plants - Vascular - Orchidaceae - Piperia candida
Plants - Vascular	Kopsiopsis hookeri	small groundcone	PDORO01010	None	None	-	2B.3	4112336	Fish Lake	Mapped	Plants - Vascular - Orobanchaceae - Kopsiopsis hookeri
Plants - Vascular	Kopsiopsis hookeri	small groundcone	PDORO01010	None	None	-	2B.3	4112337	Johnsons	Mapped	Plants - Vascular - Orobanchaceae - Kopsiopsis hookeri
Plants - Vascular	Kopsiopsis hookeri	small groundcone	PDORO01010	None	None	-	2B.3	4112338	Holter Ridge	Mapped and Unprocessed	Plants - Vascular - Orobanchaceae - Kopsiopsis hookeri
Plants - Vascular	Kopsiopsis hookeri	small groundcone	PDORO01010	None	None	-	2B.3	4112326	Weitchpec	Mapped	Plants - Vascular - Orobanchaceae - Kopsiopsis hookeri
Plants - Vascular	Kopsiopsis hookeri	small groundcone	PDORO01010	None	None	-	2B.3	4112327	French Camp Ridge	Mapped and Unprocessed	Plants - Vascular - Orobanchaceae - Kopsiopsis hookeri
Plants - Vascular	Kopsiopsis hookeri	small groundcone	PDORO01010	None	None	-	2B.3	4112328	Bald Hills	Mapped	Plants - Vascular - Orobanchaceae - Kopsiopsis hookeri
Plants - Vascular	Calamagrostis crassiglumis	Thurber's reed grass	PMPOA17070	None	None	-	2B.1	4112338	Holter Ridge	Mapped	Plants - Vascular - Poaceae - Calamagrostis crassiglumis
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4112337	Johnsons	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4112318	Panther Creek	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Collomia tracyi	Tracy's collomia	PDPLM020B0	None	None	-	4.3	4112317	Hupa Mountain	Unprocessed	Plants - Vascular - Polemoniaceae - Collomia tracyi
Plants - Vascular	Collomia tracyi	Tracy's collomia	PDPLM020B0	None	None	-	4.3	4112316	Hoopa	Unprocessed	Plants - Vascular - Polemoniaceae - Collomia tracyi
Plants - Vascular	Gilia capitata ssp. pacifica	Pacific gilia	PDPLM040B6	None	None	-	1B.2	4112327	French Camp Ridge	Mapped	Plants - Vascular - Polemoniaceae - Gilia capitata ssp. pacifica
Plants - Vascular	Leptosiphon acicularis	bristly leptosiphon	PDPLM09010	None	None	-	4.2	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon acicularis
Plants - Vascular	Leptosiphon grandiflorus	large-flowered leptosiphon	PDPLM090K0	None	None	-	4.2	4112316	Hoopa	Unprocessed	Plants - Vascular - Polemoniaceae - Leptosiphon grandiflorus
Plants - Vascular	Coptis laciniata	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112316	Hoopa	Mapped	Plants - Vascular - Ranunculaceae - Coptis laciniata
Plants - Vascular	Coptis laciniata	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112318	Panther Creek	Unprocessed	Plants - Vascular - Ranunculaceae - Coptis laciniata
Plants - Vascular	Coptis laciniata	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112327	French Camp Ridge	Mapped and Unprocessed	Plants - Vascular - Ranunculaceae - Coptis laciniata

Plants - Vascular	<i>Coptis laciniata</i>	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112326	Weitchpec	Mapped	Plants - Vascular - Ranunculaceae - <i>Coptis laciniata</i>
Plants - Vascular	<i>Coptis laciniata</i>	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112338	Holter Ridge	Mapped and Unprocessed	Plants - Vascular - Ranunculaceae - <i>Coptis laciniata</i>
Plants - Vascular	<i>Coptis laciniata</i>	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112337	Johnsons	Mapped and Unprocessed	Plants - Vascular - Ranunculaceae - <i>Coptis laciniata</i>
Plants - Vascular	<i>Coptis laciniata</i>	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112336	Fish Lake	Mapped	Plants - Vascular - Ranunculaceae - <i>Coptis laciniata</i>
Plants - Vascular	<i>Coptis laciniata</i>	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112328	Bald Hills	Mapped and Unprocessed	Plants - Vascular - Ranunculaceae - <i>Coptis laciniata</i>
Plants - Vascular	<i>Chrysosplenium glechomifolium</i>	Pacific golden saxifrage	PDSAX07020	None	None	-	4.3	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Saxifragaceae - <i>Chrysosplenium glechomifolium</i>
Plants - Vascular	<i>Mitellastra caulescens</i>	leafy-stemmed mitrewort	PDSAX0N020	None	None	-	4.2	4112338	Holter Ridge	Unprocessed	Plants - Vascular - Saxifragaceae - <i>Mitellastra caulescens</i>
Plants - Vascular	<i>Mitellastra caulescens</i>	leafy-stemmed mitrewort	PDSAX0N020	None	None	-	4.2	4112337	Johnsons	Unprocessed	Plants - Vascular - Saxifragaceae - <i>Mitellastra caulescens</i>
Plants - Vascular	<i>Mitellastra caulescens</i>	leafy-stemmed mitrewort	PDSAX0N020	None	None	-	4.2	4112318	Panther Creek	Unprocessed	Plants - Vascular - Saxifragaceae - <i>Mitellastra caulescens</i>
Plants - Vascular	<i>Tiarella trifoliata</i> var. <i>trifoliata</i>	trifoliolate laceflower	PDSAX10031	None	None	-	3.2	4112337	Johnsons	Unprocessed	Plants - Vascular - Saxifragaceae - <i>Tiarella trifoliata</i> var. <i>trifoliata</i>