

**Biological Assessment
for
Humboldt County APN**

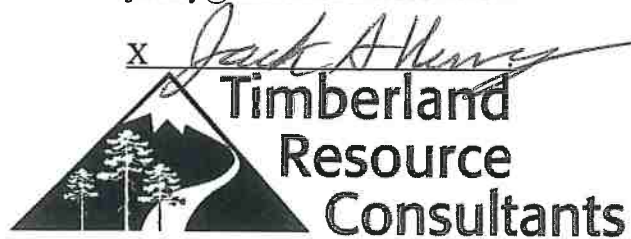
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1.0 Introduction

1.1 Purpose and Need

This Biological Assessment has been prepared for New Leaf Holdings, LLC CO and Josh Ptashne. 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

This project contains six individual locations where operations that may cause direct impacts to biological resources are proposed. These locations consist of the different cultivation sites, restoration sites, and structures associated with cannabis activities. These sites make up the Project Areas. The project area is defined as the area where direct impacts have the potential to occur.

The Biological Assessment Area (BAA) is defined as the area where potential impacts may occur to sensitive/protected species and/or sensitive biological communities. 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, 0.5 miles for nesting golden eagles. The BAA encompasses the project parcel and peripheral private properties. The assessment area overlaps with Sections 24, 25, and 36, T2S, R3E, and Sections 19, 30, and 31, T2S, R4E, Humboldt County in the Myers Flat 7.5' USGS quad. Current land uses within the BAA include residential developments, commercial cannabis cultivation, and non-industrial timber harvest.

1.3 Parcel Description

The project proposes to permit and develop commercial cannabis cultivation on APN 211-372-007-000. This parcel has combined zoning that consists of Agriculture Exempt (AE) and Timber Production Zone (TPZ). The parcel is approximately Past uses on the property have consisted of non-industrial commercial timber harvest. Existing developments on the property include a seasonal road network, two existing structures, and cultivation sites. The two structures on the property consists of a domestic residence and a metal building for processing.

1.4 Commercial Cannabis Cultivation

The project proposes to cultivate 43,100 square feet of existing commercial cannabis cultivation. The project plans to utilize 3 of the 5 pre-existing cultivation sites the other two will be restored. At the time of the assessment no cultivation site was active. The project proposes converting approximately 0.4 acres of Douglas-fir forest adjacent to Cultivation Site 5. This conversion will be the receiving site for the two relocated areas if approved. The donor sites (Cultivation Site 2 and 6) will be restored to native conditions.

Irrigation water for this project is sourced from an existing groundwater well on the property. Water is pumped from the well to storage tanks before travelling to the cultivation sites. Cannabis plants are cultivated in either above ground beds or individual potting containers. Harvested cannabis is dried onsite and processed offsite.

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, Humboldt County General Code, and Commercial Cannabis Land Use Ordinance affords considerations to a host of biological communities and resources. As mentioned above these local ordinances contain setback protections for species specific old growth timber stands, coastal oak woodlands, and environmental sensitive habitat areas (ESHAs). The CCLUO also includes considerations for invasive species management.

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 wildlife biologist, Jack Henry, using direct observations, measurements, and ocular estimations during site reviews conducted on April 10, 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 and publicly accessible sites from peripheral roads within the BAA.

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. Plant communities are classified using both the California Wildlife Habitat Relationship System published by CDFW and 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 (CNDDB) was queried (December 2018) 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 2018) and Special Animals List (August 2018). The plant list uses information from the Special Vascular Plants Bryophytes and Lichens List (August 2018) and Endangered Threatened and Rare Plants (August 2018). The above lists were obtained from

<https://www.wildlife.ca.gov/Data/CNDDB/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.

The plant list is generated much the same way but analyzed differently. It recognizes all 7.5' USGS quads the species has been found in either Humboldt or Trinity County and whether potential habitat for the species is present within the BAA. It does not use the above criteria to assess potential presence in further detail because plant species habitat selection. Plant species are included in the list if they meet the following conditions:

1. Documented in one of the 9 quads searched as part of the CNDDDB query
2. Have potential habitat within the BAA

The Interactive Distribution Map v2.02 available through Calflora was utilized as a litmus test to check for potential occurrences within the BAA. This data was matched with the Jepson eflora interactive GIS which utilizes specimen records from the Consortium of California Herbaria (CCH). These two GIS databases coupled with personal experience and knowledge was used to generate the Sensitive Plant Species list. Web urls for these resources are included below:

<http://www.calflora.org/entry/dgrid.html?crn=931> (the final three digits represent the species search)

&

<http://ucjeps.berkeley.edu/eflora/> (CCH specimen record GIS data can be found in the bottom right hand corner of each web page for individual species)

4.0 Results and Discussion

4.1 Terrestrial Habitat

The climate can be characterized by high-intensity rainfall over winter and cool summers. Annual mean rainfall is approximately 60 inches (streamstats.usgs.gov). Elevations within the BAA range from 1,100' to 2,600' above mean sea level. Slopes in the BAA vary from gradual to steep and drain towards Elk Creek. The BAA contains seven different soil types:

- 402 – Tannin-Wohly-Rockyglen complex, 50-70% slopes
- 407 – Tannin-Wohly complex, 9-30% slopes
- 571 – Sproulish-Canoecreek-Redwohly complex, 30-50% slopes
- 573 – Sproulish-Canoecreek-Redwohly complex, 15-30% slopes, warm

- 574 – Sproulish-Canoe creek-Redwohly complex, 30-50% slopes
- 575 – Sproulish-Canoe creek-Redwohly complex, 50-75% slopes warm
- 663 – Yorknorth-Windynip complex, 15-50 percent slopes

See attached Soil Survey Map.

Terrestrial habitats present within the BAA consist of a mosaic of montane hardwood-conifer, Douglas-fir forest, annual grasslands, and developed sites barren of vegetation. The most prominent habitat within the BAA is montane hardwood-conifer (MHC) covering approximately 64% of the BAA. MHC habitat within the BAA contains three dominant tree species: Douglas-fir (*pseudotsuga menziesii*), Tanoak (*notholithocarpus densiflorus*), and California Bay Laurel (*umbellularia californica*). Individual species dominance varies greatly with several different intergrades observed within the BAA. This habitat contains minor components of canyon live oak (*quercus chrysolepis*), big-leaf maple (*acer macrophyllum*), Pacific madrone (*arbutus menziesii*), California black oak (*quercus kelloggii*), and California buckeye (*aesculus californica*). Canopy cover varies and as a result so does the understory. The majority of the understory consists of dense evergreen huckleberry (*vaccinium ovatum*) thicket with other areas dominated by pink honeysuckle (*lonicera hispidula* var. *vacillans*), and poison oak (*toxicodendron diversilobum*). Open areas in the canopy also contained spreading gooseberry (*ribes divaricatum*), coyote brush (*baccharis pilularis*), pacific black berry (*rubus ursinus*), and deer brush (*ceanothus integerrimus*). The second most prominent habitat is Douglas-fir forest (DFR). DFR is dominated by Douglas-fir species with Tanoak present as a codominant or even dominant in some locations. The understory is identical to MHC habitat. The third habitat type present within the BAA is annual grassland (AGS). Species dominance is highly variable in this habitat, often dependent on rainfall and browse pressure. Species observed within the AGS habitat includes Yorkshire fog (*holcus lanatus*), slender wild oat (*avena barbata*), soft brome (*bromus hordeaceus*), rough's dogtail (*cynosurus echinatus*), tall fescue (*festuca arundinacea*), and spreading rush (*juncus patens*). AGS habitat also contains widely dispersed individual trees consisting of canyon live oak, California black oak, and Douglas-fir. The fourth habitat present within the BAA is non or sparsely vegetated developed areas that fall under the designation of barren (BAR). This habitat may have native and/or nonnative vegetation present seasonally during winter and early spring. But human activities and disturbances prevent vegetation from persisting year-round.

Due to the lack of permanent perennial watercourses (Class I) the BAA lacks any distinguishable riparian overstory. Intermittent watercourses (Class II) within the BAA do contain herbaceous riparian vegetation that dominates the understory along the stream banks and channels. These areas are often identifiable by the dominant sword fern (*polystichum munitum*) and chain fern (*woodwardia fimbriata*) understory. There are some microsites where these watercourses meet flat topography and form either small (> 0.5 acre) on-stream ponds or emergent wetlands. These areas support greater concentrations of riparian herbaceous vegetation including slough sedge (*carex obnupta*), northern giant horsetail (*equisetum telmateia*), miner's lettuce (*claytonia perfoliate*), Artic sweet colt's foot (*petasites frigidus*), and California fetid adderstongue (*scoliopus bigelovii*).

Vegetation alliances observed within the BAA include but are not limited to:

- Douglas-fir forest (*pseudotsuga menziesii*)
- Douglas-fir forest – pacific madrone (*pseudotsuga menziesii* – *arbutus menziesii*)
- Douglas fir forest – canyon live oak – tanoak (*pseudotsuga menziesii* – *quercus chrysolepis* – *notholithocarpus densiflorus*)
- Douglas-fir forest – California bay laurel (*pseudotsuga menziesii* – *umbellularia californica*)
- Douglas-fir forest – California bay laurel / sword fern (*pseudotsuga menziesii* – *umbellularia californica* / *polystichum munitum*)
- Douglas-fir forest – California bay laurel / poison oak (*pseudotsuga menziesii* – *umbellularia californica* / *toxicodendron diversilobum*)
- Douglas-fir forest / coyote brush (*pseudotsuga menziesii* / *baccharis pilularis*)

- Douglas-fir forest / salal (*pseudotsuga menziesii* / *gaultheria shallon*)
- Douglas-fir – tanoak forest (*pseudotsuga menziesii* - *notholithocarpus*)
- Douglas-fir forest – tanoak – (canyon live oak) / poison oak (*pseudotsuga menziesii* – *notholithocarpus densiflorus* – (*quercus chrysolepis*) / *toxicodendron diversilobum*)
- Douglas fir – tanoak forest - (canyon live oak) / evergreen huckleberry (*pseudotsuga menziesii* – *notholithocarpus densiflorus* – (*quercus chrysolepis*) / *vaccinium ovatum*)
- Douglas-fir – tanoak forest – (California bay laurel) / poison oak (*pseudotsuga menziesii* – *notholithocarpus densiflorus* – (*umbellularia californica*) / *toxicodendron diversilobum*)
- Douglas-fir – tanoak forest / iris (*pseudotsuga menziesii* – *notholithocarpus densiflorus* / *iris*)
- Douglas-fir – tanoak forest / salal (*pseudotsuga menziesii* – *notholithocarpus densiflorus* / *gaultheria shallon*)
- Douglas-fir – tanoak forest / poison oak – (pink honeysuckle) (*pseudotsuga menziesii* – *notholithocarpus* / *toxicodendron* – (*lonicera hispidula* var. *vacillans*))
- Douglas-fir – tanoak forest / evergreen huckleberry – (salal) (*pseudotsuga menziesii* – *notholithocarpus densiflorus* / *vaccinium ovatum* – (*gaultheria shallon*))
- Tanoak forest (*notholithocarpus densiflorus*)
- Tanoak forest – California bay laurel (*notholithocarpus densiflorus* – *umbellularia californica*)
- Tanoak forest – pacific madrone (*notholithocarpus densiflorus* – *arbutus menziesii*)
- Tanoak forest – pacific madrone / deer brush (*notholithocarpus densiflorus* – *arbutus menziesii* / *ceanothus interrigimus*)
- Tanoak forest – salal (*notholithocarpus densiflorus* – *gaultheria shallon*)
- Tanoak forest / poison oak – pink honeysuckle (*notholithocarpus densiflorus* / *toxicodendron diversilobum* – *lonicera hispidula* var. *vacillans*)
- Tanoak forest / evergreen huckleberry (*notholithocarpus densiflorus* / *vaccinium ovatum*)
- California bay forest (*umbellularia californica*)
- California bay forest – pacific madrone (*umbellularia californica* – *arbutus menziesii*)
- California bay forest – tanoak (*umbellularia californica* – *notholithocarpus densiflorus*)
- California bay forest – canyon live oak (*umbellularia californica* – *quercus chrysolepis*)
- California bay forest / sword fern (*umbellularia californica* / *polystichum munitum*)
- California bay forest / poison oak (*umbellularia californica* / *toxicodendron diversilobum*)

4.2 Sensitive Biological Communities

4.2.1 Aquatic Habitats

The majority (77%) of the BAA is located within the Canoe Creek – South Fork Eel River HUC12 watershed (HUC12#:180101051001). Small distal portions of the BAA overlap with the Butte Creek-South Fork Eel River (180101060405) and Basin Creek – Eel River (180101050502) HUC 12 watersheds. Aquatic habitat in the BAA is dominated by riverine habitat with small (>0.5 acre) lacustrine habitats present in specific site conditions.

Riverine habitats located within the BAA include intermittent (Class II), and ephemeral (Class III) watercourses. Intermittent tributaries present in the BAA can be characterized by well-defined stream morphology, moderate to steep gradients, and variable substrates. Intermittent watercourses within the BAA occur in all three habitat types (MHC, DFR, and AGS). Intermittent watercourses located in timbered habitats (MHC and DFR) provide coarse sediment substrates with strong canopy cover that result in cold-water habitat. Cold-water habitats within the BAA provide potential habitat for coastal-tailed frog (*ascapheus truei*), pacific giant salamander (*dicamptodon tenebrosus*), foothill yellow-legged frog (*rana boylei*), and southern torrent salamander (*rhyacotriton variegatus*). Intermittent watercourses located in AGS habitats contain warm-water habitats due to the lack of canopy cover, slow water velocities, and organic matter content. Warm-water habitats provide potential habitat for northern red-legged frog (*rana aurora*), rough-skinned newt (*taricha rivularis*), Sierra tree frog (*pseudacris sierra*),

and boreal toad (*anaxyrus boreas boreas*). Ephemeral watercourses often lack well defined channels or riparian vegetation given their episodic hydrology and they provide no aquatic habitat value.

Lacustrine habitat within the BAA consists of pond features often on-stream that are less than 0.5 acres in size. Similar to riverine habitats these can be divided into two groups, cold-water and warm-water habitats. Cold-water lacustrine features are often present on intermittent watercourses and have strong overhead canopy cover. Cold-water pond features provide potential habitat for rough-skinned newt, northern red-legged frog, and pacific giant salamander. Warm-water lacustrine features have low water velocities, open canopy cover (< 40%), and can be found as either isolated features or on-stream. These features provide potential breeding habitat for northern red-legged frogs, Sierra tree frogs, rough-skinned newts, and boreal toad.

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).

A wetland delineation was performed by professional botanist Kyle Wear on October 22, 2018. A wetland boundary was delineated and mapped by Kyle. The emergent wetland is approximately 1.27 acres in size, however that only accounts for the portion of wetland on property. The actual size of the wetland could not be delineated due to property boundaries. The nearest cultivation to this wetland is approximately 120' away.

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.

- Douglas-fir forest – pacific madrone (*pseudotsuga menziesii* – *arbutus menziesii*)
- Douglas-fir forest – California bay laurel (*pseudotsuga menziesii* – *umbellularia californica*)
- Douglas-fir forest – California bay laurel / poison oak (*pseudotsuga menziesii* – *umbellularia californica* / *toxicodendron diversilobum*)
- Douglas-fir forest / salal (*pseudotsuga menziesii* / *gaultheria shallon*)
- California bay forest (*umbellularia californica*)
- California bay forest – pacific madrone (*umbellularia californica* – *arbutus menziesii*)
- California bay forest – tanoak (*umbellularia californica* – *notholithocarpus densiflorus*)
- California bay forest – canyon live oak (*umbellularia californica* – *quercus chrysolepis*)
- California bay forest / sword fern (*umbellularia californica* / *polystichum munitum*)
- California bay forest / poison oak (*umbellularia californica* / *toxicodendron diversilobum*)

The proposed conversion site is dominated by Douglas-fir – tanoak forest association. The proposed permitting of the existing sites will not impact these listed communities. Proposed restoration associated with this project has the potential to benefit natural communities.

4.3 Sensitive and Protected Species

4.3.1 Bird Species of Special Concern

- **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 large diameter redwood snags in northern California (Buchanan et al. 2014). Peregrine falcon territories in California vary from 3-7 miles apart and densities are often a result of potential nesting sites (cliff structures) (Polite and Pratt 1990).

Status within BAA: The CNDDDB does not document any peregrine falcon observations within the BAA. There is an undisclosed peregrine falcon location within the Miranda 7.5' USGS quad per the CNDDDB. The BAA does contain one rock outcropping that potentially provides suitable nesting habitat for peregrine falcons. It is outside of property boundaries at the northern boundary of the BAA along Dyerville Loop Rd. The BAA lacks suitable foraging habitat for this species. Given the lack of nesting structure and foraging habitat within the BAA, the potential for peregrine falcon presence 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. Bald Eagles nest most frequently in stands with less than 40% canopy cover. 86% of documented nest sites in California are located within 1 mi of foraging habitat (Polite and Pratt 1990).

Status within BAA: The CNDDDB does not document any bald eagle observations within the BAA. Although canopy cover can be variable within the BAA, timbered habitats have canopy cover greater than 50%. The nearest foraging water bodies are over 1.5 miles away from the boundaries of the BAA. Bald eagles have an unlikely potential for being present within the BAA.

- **Bank Swallow** (*riparia riparia*)

Status: CESA Threatened, G5, S2, BLM Sensitive Species, IUCN Least Concern

Key Habitat: Bank swallows nest colonially along cliffs made of friable soils, sand, or loose rock (Hunter et al 2005). Breeding habitat always consists of vertical bluffs at least 1 m in height (Garrison 1998). Only five breeding records are known in Humboldt County from a study by Talmadge (1947). These records represent a stark contrast from this birds known distribution in California (Hunter et al 2005). Bank swallows are known to concentrate foraging above wetlands, riparian areas, and open meadows but have been observed above closed forest canopies on occasion (Garrison 1998). This species is known to colonize new sites when habitat is available (Hunter et al 2005).

Status within BAA: Of the five known breeding records in Humboldt County, none of them occur within the BAA (CNDDDB, Hunter et al 2005). No friable bluff features are known to be present within the BAA. There is no potential for bank swallow presence within the BAA.

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

Status: Federally protected under the Bald and Golden Eagle Act, G5, S3, CDFW Fully Protected, BLM Sensitive Species, CDF Sensitive Species, 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.

Status within BAA: There are no documented golden eagle observations within the BAA. The nearest known golden eagle site is approximately 1 mile south of the BAA in close proximity to Marshal Opening. TRC has performed golden eagle surveys in 2018 and 2019 surveys are in progress for the neighboring parcel's NTMP, 1-17NTMP-001. Golden eagle survey coverage on 1-17NTMP-001 covers the upper ½ of this project's BAA. There have been no golden eagle detections to date. Annual grassland habitat within the BAA provides potential foraging habitat for golden eagles. No large diameter (> 32" DBH) conifer trees were observed within the BAA although they are potentially present. Golden eagles have a moderate potential of being found within the BAA.

- **Grasshopper Sparrow** (*ammodramus savannarum*)

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

Key Habitat: Grasshopper sparrows have shown variability in specific habitat characteristic but always select grasslands with light shrub density (Unitt 2008, Hunter et al 2005). Hunter et al (2005) often encountered grasshopper sparrows on southern slopes that are fully exposed to sunlight. They are thought to prefer sites undisturbed by human activities (Hunter et al 2005).

Status within BAA: There have been no documented observations of grasshopper sparrow within the BAA per the CNDDDB query. Annual grassland habitats within the BAA provide potential habitat for this species. There is no potential sparrow habitat present within the project areas. There is a high potential for this species to be found within the BAA.

- **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. There have been no recorded breeding attempts by willow flycatcher in Trinity County (Hunter et al. 2005 and CNDDDB). 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). There is potentially suitable habitat present within the BAA for this species in the form of early successional scrub habitat within Douglas-fir forest and montane hardwood conifer habitats. Little willow flycatchers have a moderate potential of being present 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. There is only one record of a marbled murrelet nesting in a non-redwood site (Hunter et al 2005).

Status within BAA: There are no documented observations of marbled murrelets within the BAA (CNDDDB). There is no suitable old-growth habitat present within the BAA. Murrelet populations

are known from isolated patches of old-growth forest within Humboldt County. There is no potential marbled murrelet habitat within the BAA. There is no potential 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 nests 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: The BAA does contain one documented northern spotted owl activity center. HUM0785 was established in 1997 when observers Rodgers and McCray found a northern spotted owl pair with a nest structure. The activity center is off property near the peak of Elk Mountain (See attached map). The database contains no other documented positive observations associated with this activity center. Timberland Resource Consultants have performed northern spotted owl protocol surveys on the neighboring property (1-17NTMP-001) in 2017 and 2018. Protocol owl surveys are currently in progress for 2019. 1-17NTMP-001 survey stations cover the activity center and owl habitat present within property boundaries of this project. There have been no detections within 0.7 miles of HUM0785 and annual activity center searches have resulted in negative detections. Northern spotted owls are present within the BAA.

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 CNDDB does not document any observations of American badger within the BAA. Terrestrial habitat characteristics present in the BAA generally do not meet badger preferences detailed in the Apps et al (2002) study. Annual grassland habitat does provide potential habitat for this species within the BAA but it is limited (10% of BAA). No badger burrows were observed during the site visit. The potential for American badger presence within the BAA is unlikely. Badgers have been historically rare from the north coast (Grinnell et al 1937 in Ahlborn 1990).

- **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. The BAA does contain a very dense evergreen huckleberry shrub layer in a mesic aspect on the ridge however it lacks large diameter trees. There potential for Humboldt marten to be found within the BAA is unlikely.

- **Long-legged Myotis (*myotis volans*)**

Status: G5, S3, Western Bat Working Group: High Priority, IUCN Least Concern

Key Habitat: Long-legged myotis are known to use a multitude of roost structures depending on the specific roosting behavior whether it be a day roost, maternal roost, night roost, or hibernacula (hibernation roost) (Christy and West 1993). This species has been observed utilizing buildings, bridge structures, bark crevices, and rock crevices for solitary roosts (night or day roost). For maternal roosting they select buildings, bark crevices, rock crevices, or snag structures (Christy and West 1993). Orsmbec and McComb (1998) found this species primarily selected snag structures that were exposed to sunlight either through canopy openings or elevation above the average canopy height in a Douglas-fir/western hemlock forest in Oregon.

Status within BAA: The CNDDDB does not contain any documented observations of long-legged myotis within the BAA. The BAA does contain potential maternal roosting habitat in the form of snag structures and potential bark crevices in the Douglas-fir forest and montane hardwood-conifer habitats. There is a high potential for long-legged myotis presence 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 (CNDDDB). The BAA contains potential porcupine habitat in the form of Douglas-fir forest and montane hardwood-conifer habitats. There is a high potential for porcupine presence within the BAA.

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

Status: CESA Threatened, 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. Abundant physical structure is the driving characteristic for habitat selection by Fishers (USFWS 2016). Studies on the Hoopa Reservation found although fishers selected certain habitat types for certain behaviors, they utilized all habitat types present within their home range (Mathews et al 2008 in Lofroth et al 2011). 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. Although the conifer portion of the BAA generally displays mid-seral characteristics, residual hardwood structure present throughout the BAA provide late-seral characteristics and structure for this species. There is a fisher observation approximately 0.5 miles north of the BAA near Elk Prairie (CNDDDB). There is a high potential for fisher presence within the BAA.

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

Status: G5, S3, CDFW Species of Special Concern, Working Bat 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 BAA provides potential foraging habitat in the form of annual grassland habitat. The BAA also provides potential roosting habitat in the form of broad-leaf evergreen hardwoods that include California black oak and canyon live oak. However, the BAA is located along the inland extent of the coastal fog/redwood ecoregion. This ecoregion is inherently mesic or wet which is ill-suited for this species that prefers arid environment. This species is unlikely to be found within the BAA.

- **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 any natural structures that are capable of providing maternal roost sites for Townsend's big-eared bats. The BAA potentially contains unoccupied or abandoned structures capable of providing roost sites for this species, examples include agricultural or storage structures that are rarely disturbed. The potential for Townsend's big-eared

bat to be found within the BAA is moderate.

- **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). In California, they have been found in redwood, Douglas-fir, and montane hardwood-conifer forest habitats (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 contains no documented observations of Sonoma tree vole in the BAA. The BAA does contain potential Sonoma tree vole habitat in the form of mid-seral Douglas-fir forest and montane hardwood-conifer habitats. The BAA does lack any mature Douglas-fir forest. There is a moderate potential for Sonoma tree vole to be found within the BAA.

- **Western Red Bat (*Lasiurus blossevillei*)**

Status: G5, S3, CSSC, IUCN Least Concern, Western Bat Working Group: High Priority

Key Habitat: Western red bats are solitary foliage roosting bats adapted for exposed roosting behavior. Red bats prefer broad-leaf tree species usually located in edge habitats, but can be found in shrubs and even leaf litter during the winter. Studies have found significant correlation with red bat habitat selection and riparian species such as willow, cottonwood, and sycamores (Bolster 2005).

Status within BAA: There are no documented observations of western red bats within the BAA (CNDDDB). Although the BAA lacks dominant riparian tree species such as willow, alder, and cottonwood, it does offer other evergreen broad leaf tree species. These include California black oak, big leaf maple, canyon live oak, tanoak, and pacific madrone. The BAA also provides edge habitat where annual grassland and timbered habitats meet. There is a high potential for this species to be found within the BAA.

4.3.3. Reptiles and Amphibians of Special Concern

- **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. Intermittent (Class II) watercourses with steep gradients provide potential habitat for this species within the BAA. There is a high potential for this species to be found in the BAA.

- **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 study evaluated an inland population in Tehama County and coastal populations in more mesic timberlands may disperse farther distances more regularly.

Status within BAA: The CNDDDB shows no documented observations of foothill yellow-legged frogs in the BAA. Watercourses present within the BAA have generally have steep gradients with high canopy cover. The few watercourses that flow over flat gradients display open canopy cover with fine sediment substrates. These habitats may provide foraging or winter dispersal corridors for this species but do not provide breeding habitat. The potential for foothill yellow-legged frog to be found within the BAA is moderate.

- **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. The BAA does contain high quality potential breeding habitat in the form of warm water pond features with emergent vegetation. Northern red-legged frogs have a high 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 turtle 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 turtle 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: The CNDDDB does not document any known northwestern pond turtle observations within the BAA. Although there are lacustrine habitats within the BAA, the majority of them are warm water ponds that likely dry up during the summer months. However, agricultural ponds present within the BAA, off property, do provide potential western pond turtle habitat. There is a moderate potential for this species to be found in the BAA.

- **Red-bellied Newt (*Taricha rivularis*)**

Status: G4, S2, CDFW Species of Special Concern, IUCN Least Concern

Key Habitat: Red-bellied newts have the smallest range of their genus. The Mattole River marks the approximate northern boundary of their range. Very little is known about their terrestrial habitat use either as adults or juveniles. Juveniles are believed to use subterranean burrows for the first five years of their life or until sexual maturity, although this is only based off low juvenile capture rates in the few studies that exist (Marks and Doyle 2005). Mature adults have been found in a multitude of vegetation compositions including redwood (*sequoia sempervirens*), California bay laurel (*umbellularia californica*), tanoak (*notholithocarpus densiflorus*), madrone (*arbutus menziesii*), and Douglas-fir (*pseudotsuga menziesii*). Twitty et al. (1966) as well as Licht and Brown (1967) found adult red-bellied newts on heavily wooded slopes that rise from the south bank (north facing slope) of their breeding stream. These slopes often have high densities of large woody debris and leaf litter (Packer 1960). Red-bellied newts only select water features with swift flowing water and coarse substrates. They do not utilize ponds or other standing water habitats. Red-bellied newts display a unique homing instinct that returns individuals to the same reach of stream channel every breeding migration (Twitty et al. 1966, Packer 1960). Breeding occurs from March through May with March and April being the peak months. Eggs are deposited on the bottom side of flat rocks often located in the center of the stream (Twitty et al. 1966).

Status within BAA: The BAA is outside of the known range of this species. There is potential habitat present in the form of swift flowing rocky watercourses. However, given that no red-bellied newts have been found east of the Mattole River, it is unlikely to find this species within the BAA.

- **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 CNDDDB shows no documented occurrences of southern torrent salamander within the BAA. Intermittent (Class II) watercourses with steep gradients provide potential habitat for this species within the BAA. There is a high potential for this species to be found in the BAA.

4.3.5 Plant Species of Special Concern

<i>Astragalus agnicidus</i>		Humboldt County Milk-vetch	
Fed List: None	State List: Endangered	CNPS Rank: 1B.1	State Rank: S2
USGS 7.5' Quad (CNDDDB): Bridgeville, Miranda, Myers Flat			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: Broadleaved upland forests, North coast coniferous forest (CNDDDB). Open soil in woodland (Jepson eflora). Openings and disturbances in mixed evergreen forests (Calflora)			
<i>Carex arcta</i>		Northern clustered sedge	
Fed List: None	State List: None	CNPS Rank: 2B.2	State Rank: S1

USGS 7.5' Quad (CNDDDB): Board Camp Mountain, Hayfork Bally			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: Bog & fen, North coast coniferous forest, Wetland (CNDDDB). Wet places, especially sphagnum bogs (Jepson eflora). North Coastal Coniferous Forest, Douglas-Fir Forest, wetland-riparian (Calflora).			
Erythronium oregonum		Giant Fawn Lily	
Fed List: None	State List: None	CNPS List: 2B.2	State Rank: S2
USGS 7.5' Quad (CNDDDB): Blue Creek Mtn, Ettersburg, Fish Lake, Grouse Mtn, Hennessey Peak, Hoopa, Hupa Mountain, Panther Creek, Iaqua Buttes, Johnsons, Lord-Ellis Summit, Myers Flat, Scotia, Somes Bar, Taylor Peak, Tish Tang Point			
Documented in BAA: Yes		Potential Habitat in BAA: Yes	
Habitat: Cismontane woodland, Meadow & seep, Ultramafic (CNDDDB). Openings in woodlands (Jepson eflora). Mixed Evergreen Forest (Calflora).			
Erythronium revolutum		Coast fawn lily	
Fed List: None	State List: None	CNPS Rank: 2B.2	State Rank: S3
USGS 7.5' Quad (CNDDDB): Bald Hills, Blue Lake, Board Camp Mountain, Bridgeville, Buckeye Mountain, Bull Creek, Dinsmore, Ettersburg, Eureka, French Camp Ridge, Garberville, Grouse Mountain, Holter Ridge, Hupa Mountain, Iaqua Buttes, Johnsons, Korbel, Lord-Ellis Summit, Mad River Buttes, Maple Creek, Miranda, Myers Flat, Owl Creek, Piercy, Scotia, Taylor Peak, Weitchpec, Yager Junction			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: Bogs and fens, broadleafed upland forest, north coast coniferous forest; mesic sites, streambanks (CNDDDB). Streambanks, wet places in woodlands (Jepson eflora).			
Gilia capitata ssp pacifica		Pacific gilia	
Fed List: None	State List: None	CNPS List: 1B.2	State Rank: S2
USGS 7.5' Quads (CNDDDB): Bridgeville, Larabee Valley, Board Camp Mountain, and Mad River Buttes			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: Chaparral, Coastal bluff scrub, Coastal prairie, Valley and foothill grasslands (CNDDDB). Steep slopes, ravines, open flats, or coastal bluffs, grassland, dunes (Jepson eflora).			
Gilia millefoliata		Dark-eyed gilia	
Fed List: None	State List: None	CNPS List: 1B.2	State Rank: S2
USGS 7.5" Quads (CNDDDB): Cannibal Island, Crannell, Eureka, Fields Landing, Petrolia, Trinidad, Tyee City			
pauperculusDocumented in BAA: No		Potential Habitat in BAA: No	
Habitat: Coastal dunes (CNDDDB). Stabilized coastal dunes (Jepsons eflora). Coastal strand (Calflora).			
Howellia aquatilis		Water howellia	
Fed List: None	State List: None	CNPS List: 2B.2	State Rank: S2
USGS 7.5" Quad (CNDDDB): Alderpoint, Fort Seward			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: Aquatic, freshwater marsh, marsh & swamp, wetland (CNDDDB). Seasonal ponds (Jepson eflora). Freshwater wetlands (Calflora).			

<i>Kopsiopsis hookeri</i>		Small groundcone	
Fed List: None	State List: None	CNPS List: 2B.3	State Rank: S1S2
USGS 7.5" Quad (CNDDDB): Bald Hills, Fish Lake, French Camp Ridge, Holter Ridge, Johnsons, Miranda, Salyer, Weitchpec			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: North coast coniferous forest (CNDDDB). Open woodland, mixed conifer forest, generally on <i>Gaultheria shallon</i> , occasionally on <i>Arbutus menziesii</i> , <i>Arctostaphylos</i> (Jepson eflora).			
<i>Lycopodium clavatum</i>		Running-pine	
Fed List: None	State List: None	CNPS List: 4.1	State Rank: S3
USGS 7.5' Quad (CNDDDB): Arcata North, Arcata South, Bald Hills, Blue Lake, Crannell, Hydesville, Iaquia Buttes, Korbel, Maple Creek, McWhinney Creek, Orick, Owl Creek, Panther Creek, Redcrest, Rodger's Peak, Scotia, Sims Mountain, Trinidad, Weott			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: Lower montane coniferous forest, north coast coniferous forest, marshes and swamps; Forest understory, edges, openings, roadsides; mesic sites with partial shade and light (CNDDDB). Moist ground, swamps, on trees (Jepson eflora). Freshwater-marsh (Calflora).			
<i>Montia howellii</i>		Howell's montia	
Fed List: None	State List: None	CNPS List: 2B.2	State Rank: S2
USGS 7.5' Quad (CNDDDB): Arcata North, Bald Hills, Blocksburg, Briceland, Bridgeville, Buckeye Mountain, Bull Creek, Capetown, Eureka, Ferndale, Fields Landing, Fort Seward, Fortuna, Hennessey Peak Hupa Mountain, Hydesville, Iaquia Buttes, Ironside Mountain, Korbel, Larabee Valley, Lord-Ellis Summit, Mad River Buttes, Maple Creek, McWhinney Creek, Miranda, Myers Flat, Orick, Owl Creek, Panther Creek, Redcrest, Salyer, Scotia, Taylor Peak, Weitchpec, Willow Creek, Yager Junction			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: Meadow & seep, North coast coniferous forest, vernal pool, wetland (CNDDDB). Vernally wet sites, often compacted soils (Jepson eflora). Redwood forest, Freshwater wetlands, Wetland-riparian (Caflora).			
<i>Packera bolanderi</i> var. <i>bolanderi</i>		Seacoast ragwort	
Fed List: None	State List: None	CNPS List: 2B.2	State Rank: S2S3
USGS 7.5' Quad (CNDDDB): Crannell, Hydesville, Iaquia Buttes, Mad River Buttes, Myers Flat, Owl Creek, Panther Creek, Redcrest, Scotia, Taylor Peak			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: Coastal scrub, north coast coniferous forest (CNDDDB). Coastal forests, wet cliffs (Jepson eflora). Coastal strand, north coastal scrub (Calflora).			
<i>Piperia candida</i>		White-flowered rein orchid	
Fed List: None	State List: None	CNPS List: 1B.2	State Rank: S3
USGS 7.5' Quad (CNDDDB): Bald Hills, Blake Mountain, Board Camp Mtn., Briceland, Bridgeville, Buckeye Mtn., Bull Creek, Crannell, Fish Lake, French Camp Ridge, Holter Ridge, Honeydew, Hoopa, Hupa Mountain, Iaquia Buttes, Johnsons, Larabee Valley, Lord-Ellis Summit, Mad River Buttes, Maple Creek, Miranda, Myers Flat, Scotia, Showers Mtn., Weitchpec, Weott, Willow Creek			
Documented in BAA: No		Potential Habitat in BAA: Yes	
Habitat: North coast coniferous forest, lower montane coniferous forest, broadleafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops and muskeg (CNDDDB). Open to shady sites, conifer and mixed-evergreen forest (Jepson eflora). Yellow pine forest, north coastal coniferous forest (Calflora).			

<i>Sidalcea malachroides</i>		Maple-leaved checkerbloom	
Fed List: None	State List: None	CNPS List: 4.2	State Rank: S3
USGS 7.5' Quad (CNDDDB): Arcata North, Arcata South, Blue Lake, Bridgeville, Cape Mendocino, Eureka, Fern Cayon, Ferndale, Fields Landing, Hydesville, Iaqua Buttes, Korbel, Maple Creek, McWhinney Creek, Myers Flat, Owl Creek, Petrolia, Redcrest, Scotia, Taylor Peak, Weott			
Documented in BAA: Yes		Potential Habitat in BAA: Yes	
Habitat: Broadleafed upland forest, coastal prairie, coastal scrub, north coast coniferous forest, riparian forest; woodlands and clearings near coast, often in disturbed areas (CNDDB). Woodland clearings near coast (Jepson eflora). Disturbed (Calflora).			
<i>Sidalcea malviflora ssp. patula</i>		Siskiyou checkerbloom	
Fed List: None	State List: None	CNPS List: 1B.2	State Rank: S1
USGS 7.5' Quad (CNDDB): Arcata North, Bald Hills, Board Camp Mountain, Bridgeville, Capetown, Denny, Eureka, Ferndale, Fields Landing, Fortuna, Grouse Mountain, Hydesville, Iaqua Buttes, Korbel, Maple Creek, Myers Flat, Orick, Owl Creek, Petrolia, Salyer, Scotia, Taylor Peak, Weitchipec, Yager Junction			
Documented in BAA: Yes		Potential Habitat in BAA: Yes	
Habitat: Coastal bluff scrub, coastal prairie, north coast coniferous forest (CNDDB). Open coastal forests, bluffs (Jepson eflora). Occurs usually in wetlands (Calflora).			
<i>Tracyina rostrate</i>		Beaked tracyina	
Fed List: None	State List: None	CNPS List: 1B.2	State Rank: S2
USGS 7.5' Quad (CNDDB): Alderpoint, Fort Seward, Jewett Rock			
Documented in BAA: Yes		Potential Habitat in BAA: Yes	
Habitat: Cismontane woodland, valley and foothill grassland, chaparral. Open grassy meadows usually within oak woodland and grassland habitats (CNDDB). Grassy slopes (Jepson eflora). Valley grassland, foothill woodland (Calflora).			

4.7 Potential Impacts

4.7.1 Proposed Conversion

The proposed expansion at Cultivation Site 5 will require the conversion of commercial timberlands. This removal of vegetation and development of the site will be permitted through a proposed 3-acre timberland conversion exemption per 14CCR 1104.1. This proposed expansion will remove all vegetation within a 0.37 acre area directly adjacent to Cultivation Site 5. Once converted, the area will host canopy relocated from Cultivation Sites 2 and 6.

The proposed conversion area is dominated by Douglas-fir forest habitat. The flagged area is dominated by the Douglas-fir – tanoak forest association. 14CCR 1104.1(a)(2)(H) states “No sites of rare, threatened or endangered plants or animals shall be disturbed, threatened or damaged and no timber operations shall occur within the buffer zone of a sensitive species as defined in 14 CCR 895.1.” Sensitive Species is defined in 14CCR 895.1 as “those species designated by the Board pursuant to 14 CCR 898.2(d). These species are the Bald eagle, Golden eagle, Great blue heron, Great egret, Northern goshawk, Osprey, Peregrine falcon, California Condor, Great gray owl, Northern spotted owl, and Marbled Murrelet.”

The proposed conversion area does contain potential habitat for northern spotted owl, pacific fisher, and Sonoma tree vole. Although stand conditions indicate the area may be poor quality habitat for these species it meets minimum habitat characteristics preferred by these species. Northern spotted owl and golden eagle are the only potentially present species per the Forest Practice Act list. Protocol northern spotted owl surveys have been performed on the adjacent parcel, APN 211-362-016-000 in association with a Non-industrial Timber Management Plan (1-17NTMP-001). Surveys occurred in 2017 and 2018. This survey effort provides coverage of the proposed conversion area and has not detected any northern

spotted owl activity. Status visits have been performed on the nearby Activity Center for HUM0785 in 2017, 2018 and 2019 with no detections of northern spotted owls. Golden eagle surveys have also been performed on 1-17NTMP-001 in 2018 and they are currently in progress for 2019. No golden eagle activity has been observed above the Project Areas.

4.7.2 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. This parcel was enrolled into Order 2017-0023 DWQ and received a Notice of Applicability on November 21, 2018. A Site Management Plan (SMP) was drafted and submitted to the site operator February 4, 2019. This plan assesses roads, disturbed areas, legacy features, and all cultivation associated activities and identifies potential risks/threats to water quality. Assuming the project complies and participates in the proposed remedial work outlined in the SMP and wet season monitoring this project will not adversely impact water quality and aquatic habitats. The implementation of the SMP will improve water quality and indirectly benefit potential aquatic habitat present within the BAA.

4.7.3 Noise Disturbance

Noise levels have the potential to disturb sensitive wildlife species such as northern spotted owl directly and indirectly. In general, noise levels of 70 dB (measured at 15.2 m or 50') or less would not generate a significant disturbance unless within very close proximity (>25 m or 82') to an active nest. Usually hand tools, small electric power tools, and light vehicle traffic do not reach these decibel levels (USFWS 2006). Potential noise disturbances are greatest risk to potentially present northern spotted owls within the BAA.

Power on the property is provided by a diesel-powered AC generator (Multiquip 15kw) and two gas powered Honda generators (HondaEU2000i). Manufacturer's specifications state, at full load these generators produce 62 dB(A) (Multiquip) and 57 dB(A) (HondaEU2000i) at a distance of 23' (7 m). The Multiquip generator is located at a set location while the Honda generators are moved around the property where they are needed. Additional daily activities at this site include amplified music, light vehicle traffic, and the occasional use of power tools. There may be occasional use of heavy equipment for road maintenance, cultivation site maintenance, and general construction.

Daily operations will result in project-generated noises that range from Very Low [51-60 db(A)] to Low [61-70 db(A)]. These levels are below the noise disturbance threshold of 70 db(A) (USFWS 2006). Occasional heavy equipment work may potentially generate High [81-90 db(A)] noise levels and may occur directly within potential northern spotted owl habitat. To reduce the potential noise disturbance associated with heavy equipment work, operations should occur outside of the Northern Spotted Owl breeding season, February 1st – July 31st. Heavy equipment is defined as road graders, dozers, dump trucks, excavators, back hoes, and any other equipment with the potential to produce High [81-90 dB(A)] noise levels. Additional analysis of potential northern spotted owl impacts can be found within the NSO Assessment drafted on January 21, 2019.

4.7.4 Rodenticides

Given the potential presence of northern spotted owl, Pacific fisher, and human waste there are biological concerns related to human activities and rodenticide use. Recent studies have found evidence cannabis cultivation operations are a source of secondary poisoning in northern spotted owls, pacific fisher, and Humboldt marten (Thompson et al 2013, Franklin et al 2018, Gabriel et al 2018). Historic studies have shown a trend of anticoagulant rodenticide use associated with human activities in wild/urban interface settings (Alterio 1996, Shore 2002, Albert et al 2009, Thomas et al 2011). The site operator has stated they do not use any form of chemical or ingestible rodenticide and rely solely on trapping techniques.

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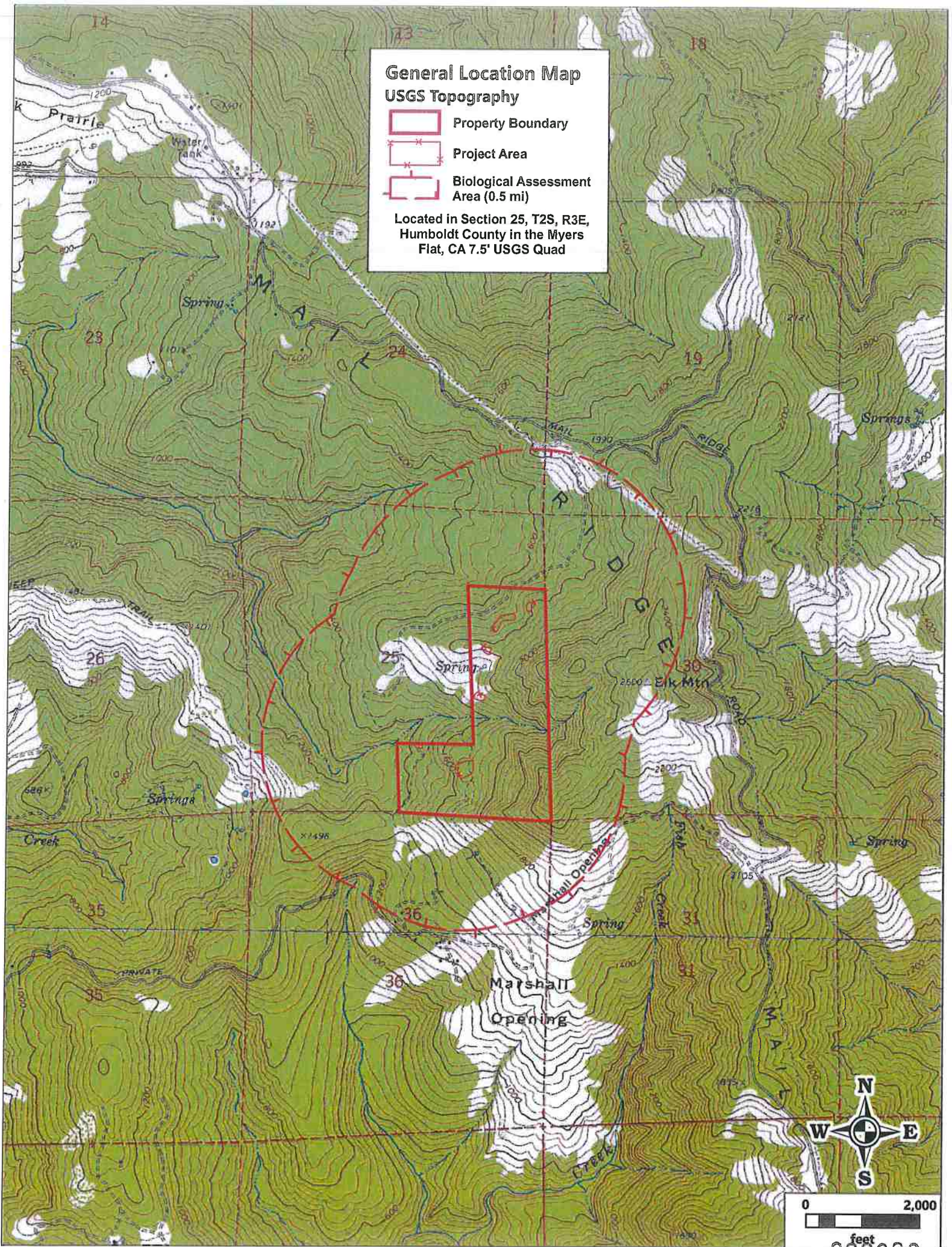
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Appendixes

General Location Map
USGS Topography

-  Property Boundary
-  Project Area
-  Biological Assessment Area (0.5 mi)







Located in Section 25, T2S, R3E,
Humboldt County in the Myers
Flat, CA 7.5' USGS Quad










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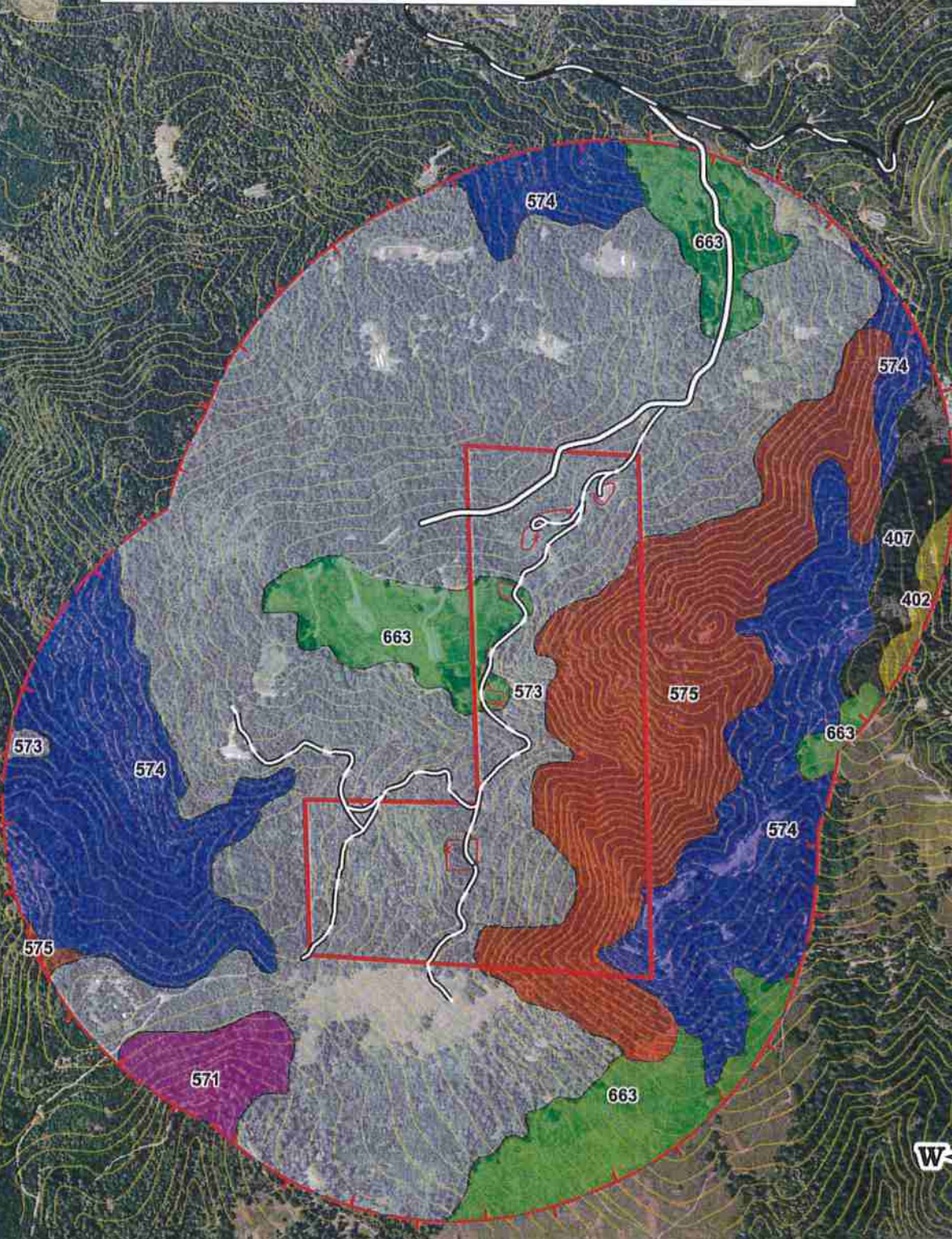
NRCS Soil Map

NAIP 2016 DOQ

-  Property Boundary
-  Biological Assessment Area (0.5 mi)
-  Project Area
-  Dyerville Loop Road
-  Easement Road
-  Seasonal Road

-  402 - Tannin-Wohly-Rockyglen complex 50-70 percent slopes
-  407 - Tannin-Wohly complex, 9-30 percent slopes
-  571 - Sproulish-Canoe Creek-Redwohly complex, 30-50 percent slopes
-  573 - Sproulish-Canoe Creek-Redwohly complex 15-30 percent slopes, warm
-  574 - Sproulish-Canoe Creek-Redwohly complex, 30-50 percent slopes
-  575 - Sproulish-Canoe Creek-Redwohly complex, 50-75 percent slopes, warm
-  663 - Yorknorth-Windynip complex, 15-50 percent slopes







Located in Section 25, T2S, R3E, Humboldt County in the Myers Flat 7.5' USGS Quad



0 1,200
feet

000031

Wildlife Habitats Map 2016 NAIP DOQ

-  Property Boundary
-  Project Area
-  Biological Assessment Area (0.5 mi)
-  Dyerville Loop Road
-  Easement Road
-  Seasonal Road

-  Intermittent Watercourse (Class II)
-  Ephemeral Watercourse (Class III)
-  Lacustrine Habitat
-  Emergent Wetland
-  Developed/Barren Area (BAR)
-  Annual Grassland (AGS)
-  Montane Hardwood-Conifer (MHC)
-  Douglas-fir Forest (DFR)

Located in Section 25, T2S, R3E, Humboldt County in
the Myers Flat, CA 7.5' USGS Quad



0 1,000
feet

New Leaf Holdings, LLC Hydrologic Report

Region ID: CA

Workspace ID: CA20190401204754209000

Clicked Point (Latitude, Longitude): 40.26807, -123.79910

Time: 2019-04-01 13:48:08 -0700



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.7	square miles
PRECIP	Mean Annual Precipitation	60	inches
BASINPERIM	Perimeter of the drainage basin as defined in SIR 2004-5262	6.75	miles
BSLDEM30M	Mean basin slope computed from 30 m DEM	32.4	percent
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	-2309451.7	feet

Parameter Code	Parameter Description	Value	Unit
CENTROIDY	Basin centroid vertical (y) location in state plane units	2256743.6	feet
EL6000	Percent of area above 6000 ft	0	percent
ELEV	Mean Basin Elevation	1580	feet
ELEVMAX	Maximum basin elevation	2577	feet
FOREST	Percentage of area covered by forest	70.2	percent
JANMAXTMP	Mean Maximum January Temperature	52.76	degrees F
JANMINTMP	Mean Minimum January Temperature	37.02	degrees F
LAKEAREA	Percentage of Lakes and Ponds	0	percent
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	2.2	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	0	percent
LFPLENGTH	Length of longest flow path	2	miles
MINBELEV	Minimum basin elevation	785	feet
OUTLETELEV	Elevation of the stream outlet in thousands of feet above NAVD88.	785	feet
RELIEF	Maximum - minimum elevation	1792	feet
RELRELF	Basin relief divided by basin perimeter	266	feet per mi

Peak-Flow Statistics Parameters [2012 5113 Region 1 North Coast]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.7	square miles	0.04	3200
PRECIP	Mean Annual Precipitation	60	inches	20	125

Peak-Flow Statistics Flow Report [2012 5113 Region 1 North Coast]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SEp
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Statistic	Value	Unit	PII	Plu	SEp
2 Year Peak Flood	165	ft ³ /s	67.2	403	58.6
5 Year Peak Flood	306	ft ³ /s	146	643	47.4
10 Year Peak Flood	408	ft ³ /s	202	826	44.2
25 Year Peak Flood	541	ft ³ /s	276	1060	42.7
50 Year Peak Flood	642	ft ³ /s	327	1260	42.7
100 Year Peak Flood	748	ft ³ /s	371	1510	44.3
200 Year Peak Flood	848	ft ³ /s	420	1710	44.4
500 Year Peak Flood	981	ft ³ /s	474	2030	46

Peak-Flow Statistics Citations

Gotvald, A.J., Barth, N.A., Veilleux, A.G., and Parrett, Charles, 2012, Methods for determining magnitude and frequency of floods in California, based on data through water year 2006: U.S. Geological Survey Scientific Investigations Report 2012-5113, 38 p., 1 pl. (<http://pubs.usgs.gov/sir/2012/5113/>)




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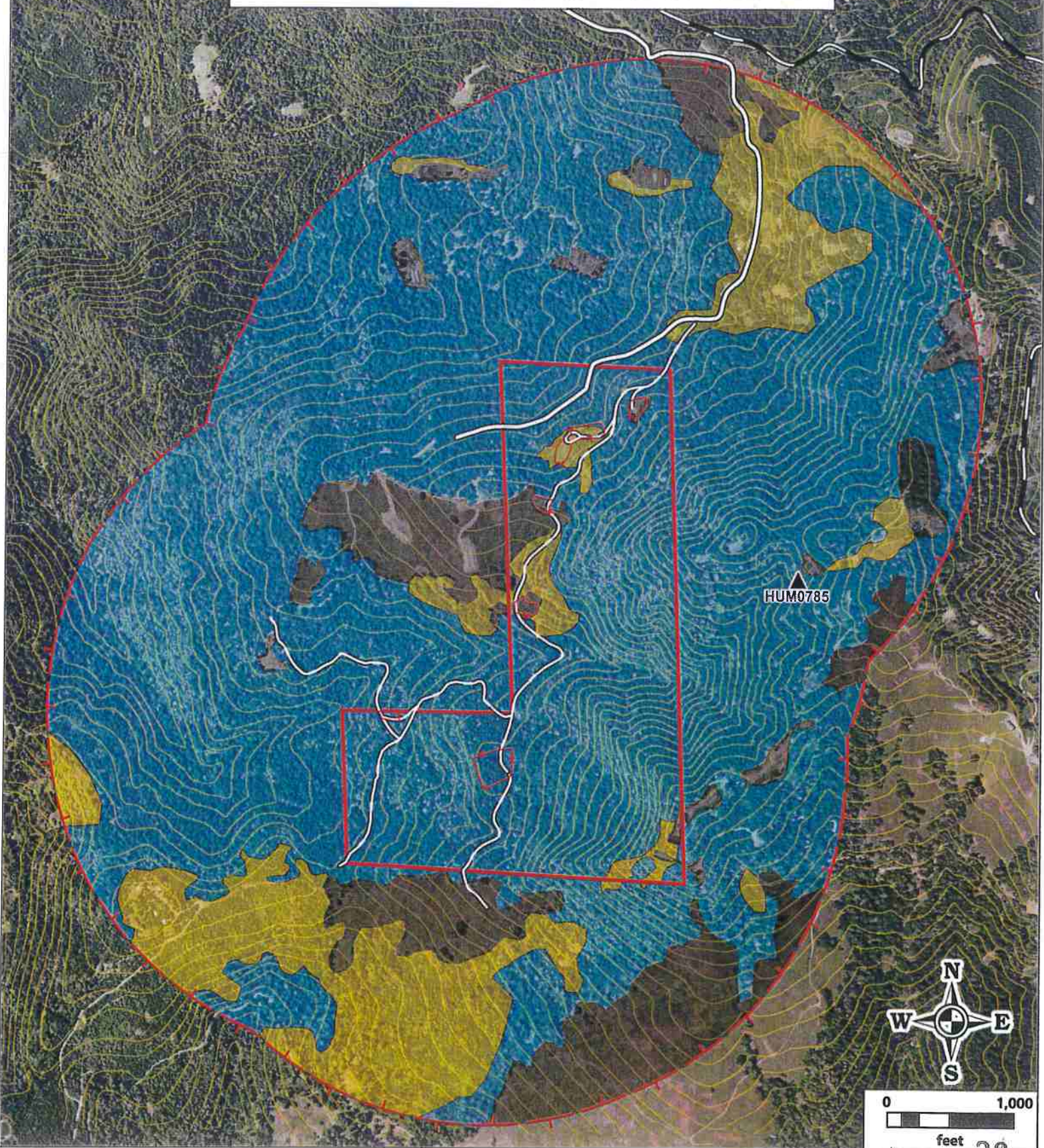
Application Version: 4.3.0

**NSO Habitat Map
2016 NAIP DOQ**

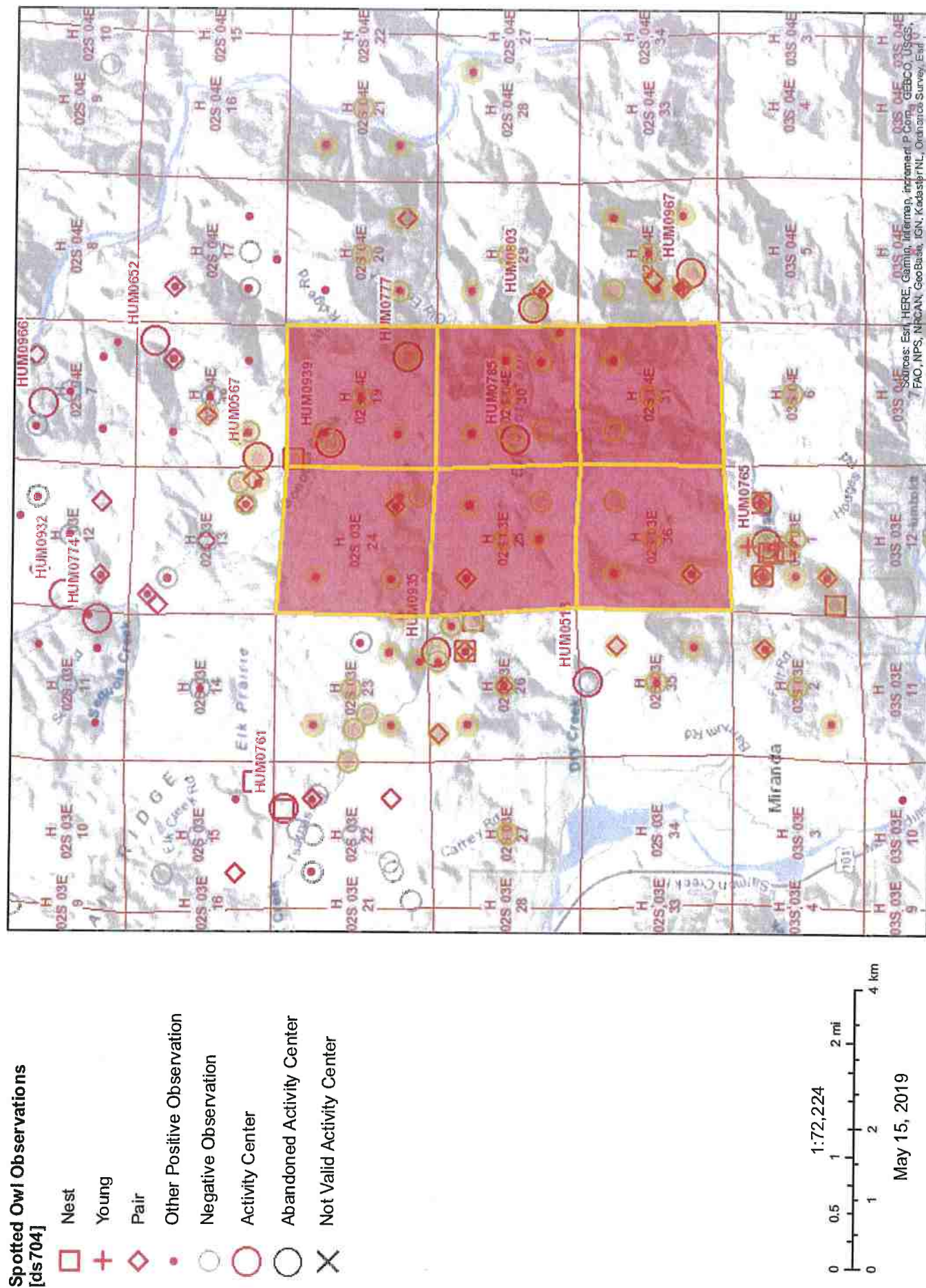
-  Property Boundary
-  Biological Assessment Area (0.5 mi)
-  Project Area

-  Dyerville Loop Road
-  Shared Easement Road
-  Seasonal Road
-  Nest/Roost Habitat
-  Foraging Habitat
-  Non-Habitat

Located in Section 25, T2S, R3E, Humboldt County in the Myers Flat 7.5' USGS Quad



Spotted Owl Database Map



Data Version Date:
05/01/2019

Report Generation Date:
5/15/2019

Report #1 - Spotted Owl Sites Found
Known Spotted Owl sites having observations
within the search area.



Meridian, Township, Range, Section (MTRS) searched:

H_02S_03E Sections(24,25,36);

H_02S_04E Sections(19,30,31);

<i>Masterowl</i>	<i>Subspecies</i>	<i>LatDD NAD83</i>	<i>LonDD NAD83</i>	<i>MTRS</i>	<i>AC Coordinate Source</i>
HUM0567	NORTHERN	40.287393	-123.778293	H 02S 04E 18	Contributor
HUM0765	NORTHERN	40.236534	-123.789112	H 03S 03E 01	Contributor
HUM0777	NORTHERN	40.272524	-123.765301	H 02S 04E 19	Contributor
HUM0785	NORTHERN	40.261732	-123.775881	H 02S 04E 30	Contributor
HUM0803	NORTHERN	40.259953	-123.758927	H 02S 04E 29	Contributor
HUM0935	NORTHERN	40.269465	-123.803314	H 02S 03E 26	Contributor
HUM0939	NORTHERN	40.280198	-123.776328	H 02S 04E 19	Contributor
HUM0967	NORTHERN	40.244217	-123.754283	H 02S 04E 32	Contributor

These reports gather all documented detections of northern spotted owls found within the PLSS section queried. All sections that are overlapped by the BAA are included in the query. This often produces superfluous data on additional owls present within the queried sections but outside of the BAA. Owls HUM0567, HUM0765, HUM0777, HUM0803, HUM0935, HUM0939, and HUM0967 are not present within the BAA although they have captured in this database query.

Data Version Date:
05/01/2019
Report Generation Date:
5/15/2019

Report #2 - Observations Reported
List of observations reported by site.



Meridian, Township, Range, Section (MTRS) searched:

H_02S_03E Sections(24,25,36);

H_02S_04E Sections(19,30,31);

As stated in the prior report due to how the database query function works this list of documented NSO observations contains superfluous data that is not germane to the assessment. As a result, pages 2-11 and 15-24 have been omitted from this document for clarity. They can be presented upon request.

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2005-03-25	1831	0					40.273472	-123.756749	H 02S 04E 20	Quarter-section centroid
NEG	2005-04-13	2132	0					40.277272	-123.733278	H 02S 04E 21	Section centroid
NEG	2005-04-18	1924	0					40.277272	-123.733278	H 02S 04E 21	Section centroid
NEG	2005-04-20	2017	0					40.277241	-123.752051	H 02S 04E 20	Section centroid
NEG	2005-04-26	2007	0					40.273472	-123.756749	H 02S 04E 20	Quarter-section centroid
NEG	2005-05-10	2342	0					40.277241	-123.752051	H 02S 04E 20	Section centroid
NEG	2005-05-15	0444	0					40.277272	-123.733278	H 02S 04E 21	Section centroid
NEG	2005-05-19	2028	0					40.273472	-123.756749	H 02S 04E 20	Quarter-section centroid
NEG	2005-05-27			UNOC				40.272524	-123.765301	H 02S 04E 19	Activity center
NEG	2005-05-31	2222	0					40.277241	-123.752051	H 02S 04E 20	Section centroid
Masterowl: HUM0785 Subspecies: NORTHERN											
POS	1994-05-11	2212	1	UM				40.259097	-123.788551	H 02S 03E 25	Half-section centroid
POS	1994-06-11	0322	1	UU				40.259097	-123.788551	H 02S 03E 25	Half-section centroid
POS	1995-04-20		1	UU				40.266243	-123.784330	H 02S 03E 25	Quarter-section centroid
POS	1995-06-01		1	UU				40.266243	-123.784330	H 02S 03E 25	Quarter-section centroid
AC	1997-05-28		2	UMUF	Y	Y	1	40.261732	-123.775881	H 02S 04E 30	Contributor
NEG	1998-04-07	2243	0					40.262559	-123.774903	H 02S 04E 30	Half-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2005-06-02	0304	0					40.258992	-123.774756	H 02S 04E 30	Quarter-section centroid
Masterowl: HUM0803 Subspecies: NORTHERN											
POS	1995-04-20		1	UU				40.262702	-123.765543	H 02S 04E 30	Contributor
POS	1995-06-01		1	UU				40.262702	-123.765543	H 02S 04E 30	Contributor
NEG	1998-04-07	2243	0					40.262652	-123.770400	H 02S 04E 30	Section centroid
POS	1998-04-30	2236	1	UM				40.257320	-123.761955	H 02S 04E 30	Contributor
NEG	1998-05-09	2349	0					40.262652	-123.770400	H 02S 04E 30	Section centroid
NEG	1998-05-10	0021	0					40.262652	-123.770400	H 02S 04E 30	Section centroid
NEG	1998-05-31	2309	0					40.262652	-123.770400	H 02S 04E 30	Section centroid
NEG	1998-05-31	2354	0					40.262652	-123.770400	H 02S 04E 30	Section centroid
NEG	1998-06-24	2100	0					40.262652	-123.770400	H 02S 04E 30	Section centroid
NEG	1998-06-25	1200	0					40.259106	-123.765726	H 02S 04E 30	Quarter-section centroid
NEG	1998-06-30	2232	0					40.262652	-123.770400	H 02S 04E 30	Section centroid
NEG	1999-04-20	2001	0					40.248558	-123.751721	H 02S 04E 32	Section centroid
NEG	1999-04-20	2001	0					40.262652	-123.770400	H 02S 04E 30	Section centroid
NEG	1999-05-28	2319	0					40.252040	-123.756487	H 02S 04E 32	Quarter-section centroid
NEG	1999-06-26	0145	0					40.252040	-123.756487	H 02S 04E 32	Quarter-section centroid