



Biological Assessment Report

APN: 208-251-006



Steve Luu, Owner

Prepared by:

Mason London, Biologist

X 

Prepared for:

Mamba Humboldt Logistics

Brittany Massaro
50 Thistle Ridge Road
Eureka, CA 95503
APN: 208-251-006

Date Prepared:

June 2, 2019

Table of Contents

Section II Introduction, Background, and Project Understanding	3
A. Purpose and Need	3
B. Biologist's Qualifications	3
C. Parcel and Project Site Description	4
D. Cultivation	5
E. Water Collection and Storage	5
Section III Methods	5
A. Pre-Site Visit Data Compilation and Preparation	5
B. Biological Resource and Habitat Investigation	6
1. Project Site Location	6
2. Sensitive Species	6
Section IV Results and Discussion	7
A. Habitat Area and Existing Site Conditions	7
1. Terrestrial	7
B. Previous Cultivation Sites	7
1. Sensitive Species or Habitats	8
C. Special Status Plant Species	9
1. Other Specie Status Plant Species	9
D. Special Status Animals Species	10
1. Other Special Status Animals Species	11
Section V Conclusion	11
A. Potential Impacts and Recommended Mitigation	11
1. Potential Direct Impacts	11
2. Potential Indirect Impacts	12
Section VI References	13
Appendix A: Photos	14
Appendix B: Maps	16
Appendix C	20
Table 1 – Special Status Animal Species	20
Table 2 – Special Status Plant Species	24
Appendix D: Observations	29

Section I Summary of Findings and Conclusions

The project applicant seeks a Zoning Clearance Certificate (ZCC) under Humboldt County Commercial Cannabis Land Use Ordinance (CCLUO) Application #12949 to cultivate a 14,500 ft² (4,500 ft² mixed-light cultivation and 10,000 ft² of existing outdoor cultivation), utilizing a combination of greenhouse and outdoor beds in the place of an existing graded flat with historic disturbance. The project site is located approximately 1.40 air miles north to northwest of Dinsmore CA, and approximately 1.35 air miles off of Highway 36. This project occurs entirely within the boundaries of the preexisting graded flat and no vegetation, including trees, will be removed within the project site or in the adjacent area for this project. No special status plant or animal species were observed during the site visit and the ecological habitat and preexisting use of the site makes it unlikely that special status plant and animal species are present within the site location or would be negatively impacted by the project.

Section II Introduction, Background, and Project Understanding

A. Purpose and Need

This Biological Assessment Report has been prepared for Mamba Humboldt Logistics Application #12949 by request from the County of Humboldt Planning and Building Department Cannabis Services Division. A letter sent to the applicant on January 25, 2019 stating that “...there is habitat for a rare or endangered species within the project site and relocation of cultivation is proposed; therefore, a biological survey report prepared by a qualified biologist for all existing and proposed development is required...” The request also specified to include “...a review of relevant databases, literature, etc. regarding possible present species, for both animals and plants...” and “...a review of the site-specific conditions as to the likelihood of hosting habitat for species.” A previous cultivation site was also assessed in order to determine the environmental superiority of the current project site.

B. Biologist’s Qualifications

The biological assessment for this report was conducted by Mason London. Mason holds a MSc in Biology with a concentration in aquatic ecology from Humboldt State University. Mason also

has 9 collective years of experience working professionally as a botanist, wildlife biologist, and aquatic ecological research scientist.

C. Parcel and Project Site Description

This Biological Assessment Report considers the potentially occurring species and communities that could be affected by the project based on available spatial data, habitat requirements, and observations made during a site visit. The project site was evaluated for potential habitat value to protect endangered, threatened, rare, and sensitive species by walking around the project area to observe species, habitat types and quality (see Biological Survey Path in Appendix B: Map 1). Other project related aspects, such as water source and storage, site location and cultivation methods were assessed in terms of ecological and biological impact. Previous cultivation sites were also investigated to determine if the current location is environmentally superior for cultivation.

On June 1st, 2019 a biological resource and habitat survey, with regards to special status species, was conducted for the area of potential effects for the cultivation of 4,500 ft² of mixed-light and 10,000 ft² of outdoor cannabis within approximately 0.65 acres of an existing graded flat. The 40 acre parcel has an Assessors' Parcel Number (APN) of 208-251-0066. This parcel is located approximately 1.40 air miles east to north to northwest of Dinsmore, California within the Blake Mountain 7.5 minute quadrangle (Quad code: 4012355) in the Van Duzen River Watershed (CDFW Region: 1). The project site is located approximately 1.35 air miles north of Highway 36. The center location of this parcel is 40.5110, -123.6150 degrees. The elevation of the center of the proposed project site is approximately 2,880 feet (~878 meters) above sea level (Google Earth Pro, 2019). This parcel is zoned as Forest Recreation (FR) which as a principle permitted use of "general agriculture, nurseries and greenhouses..." (Humboldt County Code Zoning Regulations, Title III Land Use and Development).

The project occurs entirely within a graded flat. There are no trees located within the project site. Douglas firs (*Pseudotsuga menziesii*) and Oregon white oak (*Quercus garryana*) outline the perimeter of the flat which will not be removed for the project.

D. Cultivation

The 14,500 ft² mixed-light cannabis will be cultivated within greenhouses and outdoor beds. For the mixed-light cannabis within the greenhouses, which will have seasonal supplemental light, they will be fully covered at night when they are lit with artificial light, eliminating any potential for light pollution. The lights used for this cultivation will be powered by a 40 kw MultiQuip generator. The MultiQuip website describes the sound level of this generator and explains how “...the unit features an e-coat and powder-coat, weatherproof steel housing that allows a substantially low operating noise level of 65 db(A0)” (www.multiquip.com, 2019). Since the nearest tree line is approximately 115 ft away from the generator, the sound level will be below 60 db at the tree line.

For full season outdoor plants, no artificial light and/or generators will be used for cultivation, which means that no noise or light pollution will impact the surrounding area.

E. Water Collection and Storage

Water for cultivation is currently derived from an onsite well. There is also currently 25,000 gallons of water storage tanks and the applicant plans to purchase more in the near future.

Section III Methods

A. Pre-Site Visit Data Compilation and Preparation

A list of special-status plant and animal species to consider to be potentially present within the parcel was downloaded from the California Department of Fish and Wildlife’s California Natural Diversity Database (CNDDDB, CDFW, 2019) BIOS, the United State Fish and Wildlife Service Information for Planning and Conservation (IPaC, USFWS 2019), Calflora Project (Calflora, 2019) for the Blake Mountain 9-quad area. Animals on the CNDDDB list were primarily included based on state or federal listing status or CDFW designation. Native pollinators found in the area were also included based on the state rarity and their potential to be affected by cannabis cultivation.

The special status species in the 7.5 minute USGS Blake Mountain quadrangle, and the 8 adjacent quadrangles, resulted in 40 special status animal species (4 amphibians, 1 arachnid, 10

birds, 6 fishes, 3 insects, 12 mammals, 3 mollusks, 1 reptile) (Appendix A -Table 1) and 55 special status plant (2 moss, 1 liverwort, 52 Vascular) (Appendix A - Table 2).

B. Biological Resource and Habitat Investigation

A biological resource and habitat investigation was conducted at the project site between 12:30 and 14:45 on June 1st, 2019 (Appendix B: Map 1). The weather was sunny with clear skies. The goal of the investigation was to determine suitable habitat for potential species within the project area. Habitat characteristic on the majority of the 40 acre parcel were investigated. Dominate species in surrounded habitats, project related features, such as water storage locations and methods, and project site setbacks from watercourses were also observed and recorded. A TruPulse 200X laser rangefinder was used to make all of the distance measurements and for determining adequate setbacks. An area of approximately 3 acres, which included the project site as well as the surrounding habitat features and the adjacent wooded and vegetated areas was more thoroughly surveyed for sensitive species and potential project related impacts. The previous cultivation location was also investigated to determine if the current cultivation site is environmentally superior.

1. Project Site Location

The project site exists approximately 110 ft setback to the northwest of the nearest bankfull edge of an unnamed Class III ephemeral watercourse (Figure 1; Appendix B: Map 2). The project site is located within a graded flat that has little to no vegetated cover. Surrounding the project site in all directions is a mixed second growth hardwood and coniferous forest.

2. Sensitive Species

Of the 40 special status animal species, 1 had a moderate potential of occurring at or within the project site with additional species having potential to occur adjacent to the project site. Of the 55 special status plant species, 1 had a moderate potential of occurring at or within the project site with additional species having potential to occur adjacent to the project site.

Section IV Results and Discussion

A. Habitat Area and Existing Site Conditions

The habitat within the 40 acre parcel is dominated by second growth mixed hardwood and coniferous forest. There are also preexisting cleared flats scattered throughout the parcel. The project site is to exist entirely within one of the open graded flats.

1. Terrestrial

The mixed second growth hardwood and coniferous forest, which surrounds the project site, is dominated by Douglas fir (*Pseudotsuga menziesii*), Oregon white oak (*Quercus garryana*), with a few Pacific madrone (*Arbutus menziesii*). This habitat type borders the parcel and surrounds the graded flat. Some native forb species observed in the understory of the forested area surrounding the graded flat consist of two eyed violet (*Viola ocellate*), Tolmie's star-tulip (*Calochortus tolmiei*), mountain sweet-cicely (*Osmorhiza chilensis*) and Pacific sanicle (*Sanicula crassicaulis*). This project is not anticipated to impact this mixed hardwood and coniferous forest habitat in anyway.

The open graded flat is primarily free of vegetation and consists primarily of exposed soil (Figure 2 & 3). Observed species surrounding the perimeter of the graded flat include nonnative grasses, such as rattlesnake grass (*Briza maxima*) and cheatgrass (*bromus tectorum*) as well as broadleaf plantain (*Plantago major*) and spear thistle (*Cirsium vulgare*).

B. Previous Cultivation Sites

A previous cultivation site was investigated in order to assess whether or not the current cultivation site is in fact environmentally superior. The previous site was also in a graded flat, but was within 85 ft of an unnamed Class II intermittent stream (Figure 4). The required buffer for an intermittent stream is 100 ft, therefore the current site is superior for cultivation. There is 1,300 ft² of outdoor cultivation that has been relocated from this previous site to the current project site, and is factored in to the 14,500 ft² canopy cover.

1. Sensitive Species or Habitats

Each species derived from the previously mentioned databases were evaluated for their potential of occurrence (Appendix C: Table 1 & Table 2) within the project site by the following criteria:

1. **“None.”** Species listed as having “none” potential of occurrence are those species for which there is no suitable habitat within the project area (elevation, hydrology, plant community, disturbance regime, etc.)
2. **“Low.”** Species listed as having a “low” potential of occurrence are those species for which there is no known occurrence of the species within the project area and there is limited or marginal suitable habitat present at the project area.
3. **“Moderate.”** Species listed as having “moderate” potential of occurrence within the project area are those species for which there is a known record of occurrence within or in the vicinity of the project area and/or there is suitable habitat present within the project area.
4. **“High.”** Species listed as having “high” potential of occurrence within the project area are those species for which there is a known record of occurrence within or in the vicinity of the project area and/or there is highly suitable habitat present within the project area.
5. **“Present.”** Species listed as having “present” potential of occurrence within the project area are those species for which the species was observed during the field survey.

Species with a ‘low’ potential of occurrence were not further investigated for likelihood to exist within or utilize the project site habitat. A rank of low was given to species that most likely will not occur, or are highly unlikely for them to occur, based on their habitat requirements. However, there are always exceptions to natural rules and so these species were not given the rank of ‘none’ because it is not entirely impossible for them to occur, just extremely unlikely.

C. Special Status Plant Species

Due to the level of degradation within the project site, potential habitat for only 1 special-status species exists within the project area boundary. This species is Tracy's tarplant (*Hemizonia congesta ssp. tracyi*).

Tracy's tarplant (*Hemizonia congesta ssp. tracyi*) is an annual herb found between 120 and 1200 meters in coastal prairies, lower montane coniferous forests, and North Coast coniferous forests. This species is found in openings and sometimes in serpentinite areas. The habitat of the project sites makes it moderately likely that *Hemizonia congesta ssp. tracyi* could exist. However, given the history, and current state, of disturbance it is unlikely that this species has colonized the graded flat. There are no recorded observations of *Hemizonia congesta ssp. Tracyi* within the surrounding area, and even though it is endemic to Northwestern California, it has a CA Rare Plant Rank of 4.3, which means that the species has a "...limited distribution, [but is] not very threatened in California" (CNDDDB Metadata, 2019). If it was exist in the surrounding area, due to the moderate potential habitat in the areas surrounding the project site, no activates from the proposed project will disturb or impact the species. No *Hemizonia congesta ssp. Tracyi* were recorded during the site visit investigation.

1. Other Specie Status Plant Species

The CNDDDB Bios map shows a buffered occurrence of two species statues plant species occurring within the project site (Appendix B: Map 3): **Tracy's sanicle (*Sanicula tracyi*)** and **Oregon golden thread (*Coptis lacinata*)**.

The Oregon goldthread (*Coptis lacinata*) occurrence report on the CDFW RareFind query indicates that the "only source of information for this site is [a] 1976 collection..." and in the description of the location details it is indicated that "...better location information [is] needed." Given that the habitat for *Coptis lacinata* is seeps, meadows, mesic sites, moist streambanks and wetlands and the habitat of the project site is open, exposed, dry and heavily degraded, it was determined that the project site is not suitable habitat for this species and it is

highly unlikely for this species occur. Also, no *Coptis lacinata* were observed during the site visit investigation.

The Tracy's sanicle (*Sanicula tracyi*) occurrence report on the CDFW RareFind query is from 1980 and indicates that this species was found on a "...dry northeast slope in an oak/Douglas-fir woodland." The habitat for *Sanicula tracyi* is dry gravelly slopes or flats, usually in or at margins of oak woodlands with scattered trees. There is a lot of potential habitat for this species to occur near the project site but given the grading and previous degradation experienced at the location of the project site it is highly unlikely that *Sanicula tracyi* would be currently present. Also, no *Sanicula tracyi* were observed during the site visit investigation. The surrounding potential habitat for *Sanicula tracyi* are not anticipated to be impacted by this project in anyway.

D. Special Status Animals Species

Due to the level of degradation within the project site, and the lack of vegetation for animal shelter/nesting, moderate potential habitat for only 1 special status animal species exists within the project location. There are birds and bats listed on the CNDDDB Bios generated list for the area that would only utilize the project site for hunting (either on the ground or in the airspace) and would otherwise only fly over the site. None of these species would utilize the project site for nesting or shelter due to the lack of canopy cover. No practices for this project will impact these species ability to hunt and therefore those species were left off of this list of potential occurrences. It is not expected that these species will be impacted in anyway by the proposed project. The remaining special-status species with a potential to occur within the project site is the North American porcupine (*Erethizon dorsatum*).

The **North American Porcupine (*Erethizon dorsatum*)** can be found in forested habitats in broadleaf upland forest, cismontane woodland, and lower and upper montane conifer forest. Even though this species may reside nearby and could pass through the project site while foraging, the lack of cover within the cultivated area make it unlikely that this species would be found in the project area. Also, the frequent human activity that occurs within the project area

likely results in *Erethizon dorsatum* not utilizing the site. It is not anticipated that the project will negatively impact this species.

1. Other Special Status Animals Species

There is a known **Northern Spotted Owl (*Strix occidentalis caurina*)** Activity Center approximately 1.85 miles from the project site (Appendix B: Map 4, & Appendix D: Observation Report). Northern spotted owls reside in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2300 meters. They usually nest in trees or snag cavities, or in broken tops of large trees (Polite C. 1990). Since the surrounding habitat to the project site on the parcel is dominated by second growth forest, it was determined to not be suitable for *Strix occidentalis caurina*, especially within the immediate vicinity of the project site (i.e. with a .25 mile buffer). The Northern Spotted Owl Database contains no known Activity Centers within 0.7 miles. There will be no expected negative impacts to the nearest known Activity Center since it occurs more than 0.7 miles away from the project site. No trees will be removed for this project and therefore no habitat alterations will occur. Furthermore, it is noted that in general, noise levels of 70 dB or less, would not generate a significant disturbance unless within very close proximity (>25 m) to an active nest (USFWS 2006). Since the application's generator is already at 65 dB, and will be much less than that at the nearest tree line (approximately 115 ft away), there are no anticipated noise disturbances that could impact owls. For light pollution, the applicant will completely cover their greenhouses to eliminate escaping light when they are being artificially lit.

Section V Conclusion

A. Potential Impacts and Recommended Mitigation

1. Potential Direct Impacts

Direct impacts are considered to be effects that may occur to the environment from direct interface with the proposed action. The project site is considered to have no direct impacts to the environment or the surrounding habitat. Given complete lack of vegetated habitat of the project site, the history of disturbance (grading), and no vegetation being removed (within and surrounding the project site), the cultivation plan renders no negative habitat alterations resulting in the only potential direct impacts as disturbance-based.

Other common disturbance based impacts include noise and light pollution. For the project, recommendations to mitigate noise pollution are already accounted for by the manufactured housing of the generator so that when used for supplementing light to the mixed-light cannabis, it will not exceed 60 dB when 100 ft away. Light pollution will be mitigated by completely covering the greenhouses when they are being artificially lit. If the greenhouses are covered completely, and the generator (when in use) is in its permanent housing, there will be no expected disturbance-based impacts to the surrounding wildlife.

2. Potential Indirect Impacts

Given the existing disturbance of the project site the minimal development that occurred and will occur (the relation of the 1,300 ft² of outdoor cannabis) should have no significant adverse indirect impacts to the surrounding environment and habitats.

Section VI References

- 2017 Humboldt County General Plan. Chapter 4 Land Use Element. Adopted October 23, 2017.
- 33 CFR Part 328: Definition of Waters of the United States. U.S. Army Corps of Engineers. Accessed March 2019.
- Calflora database. Berkeley CA: Calflora . Accessed March 2019 <http://calflora.org/>
- California Department of Fish and Wildlife. 2019 “California Natural Diversity Database” (CNDDB) Accessed March 2019 <https://www.wildlife.ca.gov/Data/CNDDB>
- California Department of Fish and Wildlife. 2018 “Biogeographic Information and Observation System” (BIOS) Accessed December 2018 <https://map.dfg.ca.gov/bios/>
- California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 11 March 2019].
- Google Earth Pro 2019 Accessed March 2019
- Historic Aerials by Netronline. 2019. Accessed March 2019 <https://www.historicaerials.com/>
- National Weather Service Corporate Image Web Team. (2005, October 24). NWS Eureka. Retrieved from https://w2.weather.gov/climate/local_data.php?wfo=eka
- Polite C. Kiff L, editor. 1990. Spotted Owl. California’s Wildlife Vol I-III. California Depart. Fish and Wildlife, Sacramento, California.
- Thompson R.C., Wright A.N., and Shaffer H.B. 2016. California amphibian species of special concern. University of California Press, Oakland, CA.
- Top 10 Quietest Portable Generators (Under 65db) – Reviews. Accessed April 2019 <https://generatorgrid.com/quiet/>
- US Climate Data. 2019. Accessed April 2019 <https://www.usclimatedata.com/climate/eureka/california/united-states/usca0360>
- U.S. Fish and Wildlife Service (2019) “Information Planning and Conservation System” (IPAC) Accessed March 2019 <https://ecos.fws.gov/ipac/>
- U.S. Fish and Wildlife Service Wetland Mapper. Accessed March 2019 <https://www.fws.gov/wetlands/data/mapper.html>
- U.S. Fish and Wildlife Services. 2006. Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California.

Appendix A

Photos:



Figure 1. Unnamed Class III ephemeral watercourse located approximately 110 ft southeast of the project site.



Figure 2. Southern end of the project site. Note the exposed dirt and lack of vegetated habitat.



Figure 3. Image taken and the southeastern corner of the project site facing north over the 14,500 ft² outdoor and mixed light cannabis cultivation. Note the lack of vegetated habitat within the project site boundaries.



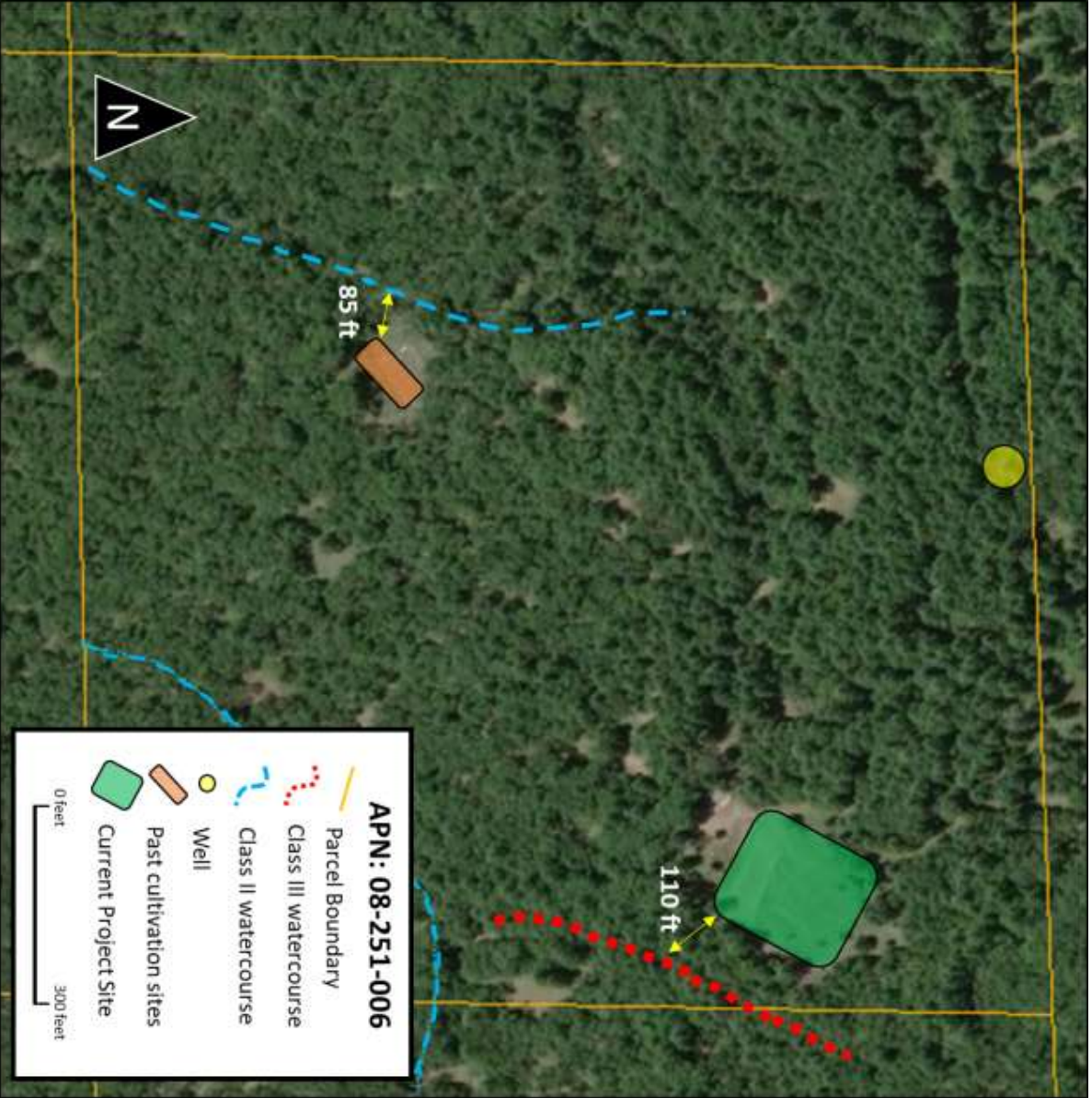
Figure 4. Past cultivation location located southwest of current project site. Note the vicinity to the unnamed Class II Intermittent stream in the background (85 ft away). The 1,300 ft² of outdoor cannabis has been relocated and is getting incorporated into the 14,500 ft² project site due to its environmental superiority.

Appendix B

Maps:

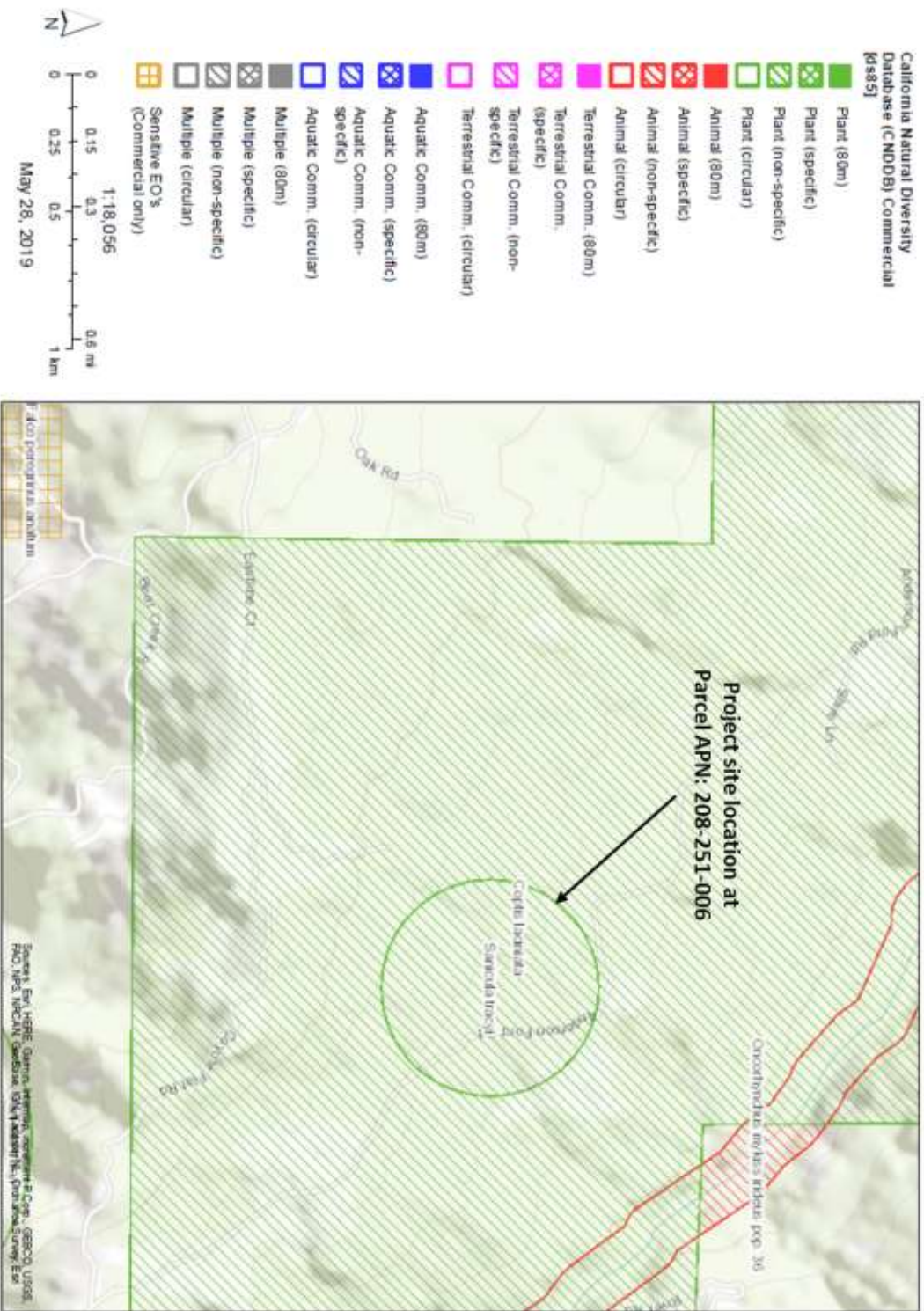


Map 1. The general path taken during the biological survey and site visit investigation on June 1st, 2019.



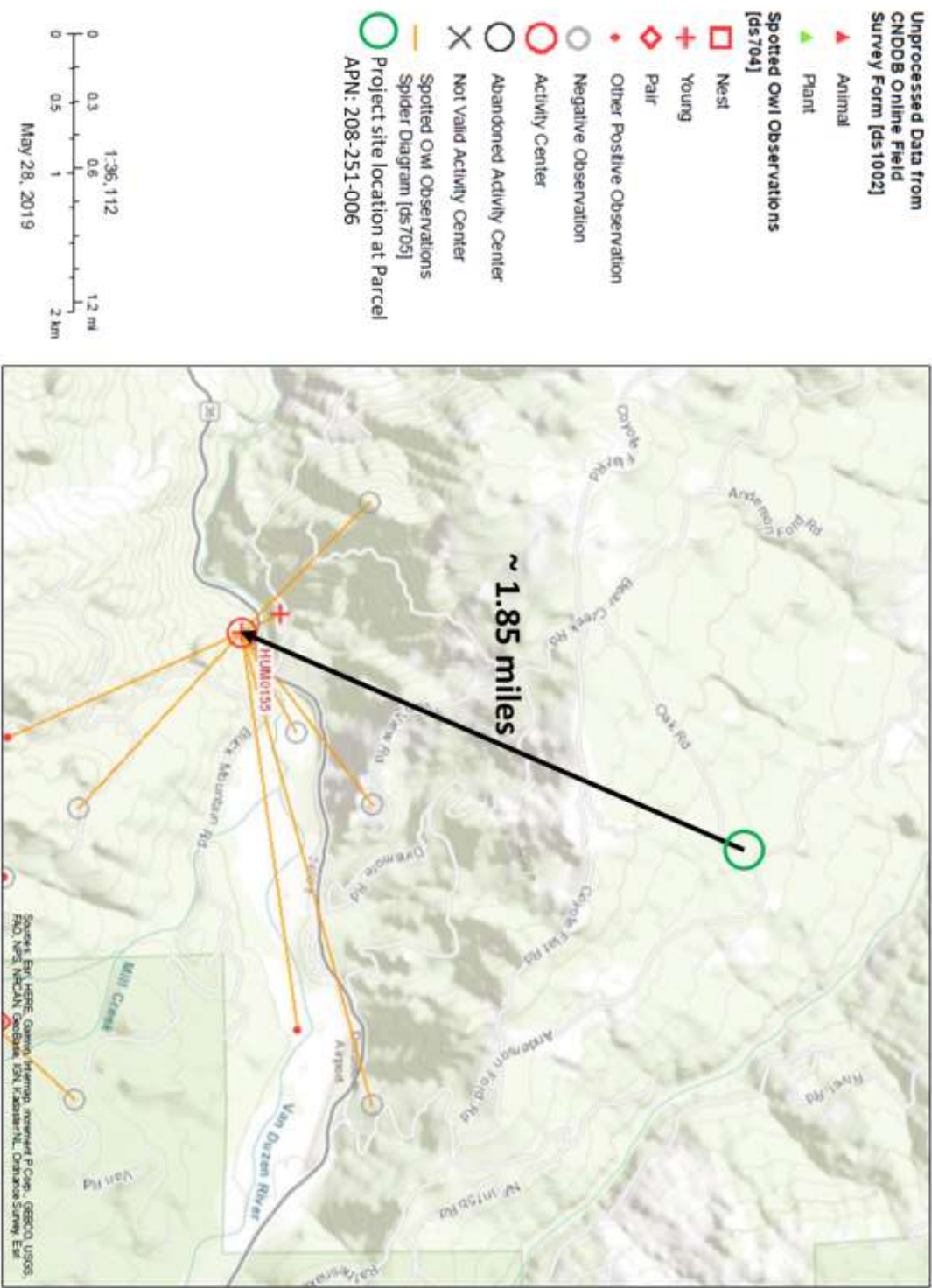
Map 2. Parcel APN: 208-251-006's past cultivation site, current cultivation site, and the vicinity of these sites to nearest watercourses.

Map of Parcel APN 208-251-006 Surrounding Sensitive Species Observations



Map 4. Parcel APN 208-251-006 and the surrounding area showing occurrence of observed sensitive species.

Map of Nearest Spotted Owl Activity Center to Parcel APN 208-251-006's Project Site



Map 5. Distance from project site to the nearest Spotted Owl Activity Center.

Appendix C

Table 1 – Special Status Animal Species – June 2019 – APN 208-251-006 – Blake Mountain and surrounding 7.5 min quadrangles

Element Type	Scientific Name	Common Name	Federal Status	State Status	CDFW Status	Data Status	Habitats	Potential of Occurrence
Animals - Amphibians	<i>Rana boylei</i>	foothill yellow-legged frog	None	Candidate Threatened	SSC	Mapped	found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley/foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types.	None in project site. Low in adjacent area.
Animals - Birds	<i>Accipiter cooperii</i>	Cooper's hawk	None	None	WL	Mapped	A breeding resident throughout most of the wooded portion of the state. Breeds in southern Sierra Nevada foothills, New York Mts., Owens Valley, and other local areas in southern California. Ranges from sea level to above 2700 m (0-9000 ft). Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently.	Moderate in project site (flyover). Moderate/high in adjacent area.
Animals - Birds	<i>Aquila chrysaetos</i>	golden eagle	None	None	FP ; WL	Mapped and Unprocessed	Ranges from sea level up to 3833 m (0-11,500 ft) (Grinnell and Miller 1944). Habitat typically rolling foothills, mountain areas, sage-juniper flats, desert.	Moderate in project site (flyover). Moderate/high in adjacent area.
Animals - Birds	<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted	Endangered	FP	Unprocessed	Permanent resident, and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity cos. About half of the wintering population is in the Klamath Basin. More common at lower elevations	Moderate in project site (flyover). Moderate/high in adjacent area.
Animals - Birds	<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	FP	Mapped	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Low in project area (flyover). Low in adjacent area.
Animals - Birds	<i>Pandion haliaetus</i>	osprey	None	None	WL	Mapped and Unprocessed	Riparian forest. Ocean shore, bays, lakes and larger freshwater streams.	Moderate in project site (flyover). Moderate in adjacent area.
Animals - Birds	<i>Psiloscops flammeolus</i>	flamulated owl	None	None	-	Unprocessed	Need montane forests with some understory brush for breeding. In California the breeding range is closely associated with the presence of ponderosa pine and Jeffrey pine.	None in project site (flyover). Low in adjacent area.

Animals - Birds	<i>Strix occidentalis caurina</i>	northern spotted owl	Threatened	Threatened	SSC	Unprocessed	Northern spotted owls typically nest or roost in multilayered, mature coniferous forest with high canopy closure, large overstory trees, and broken-topped trees or other nesting platforms (USFWS 2012). Confirmed breeding areas are widespread throughout Humboldt County (Hunter et al. 2005). Northern spotted owls may use a broad range of habitats for foraging. Their favored prey, the dusky-footed woodrat (<i>Neotoma fuscipes</i>), typically inhabits the forest edge (Harris 2005).	Low in project area (flyover). Low in adjacent area.
Animals - Birds	<i>Empidonax traillii brewsteri</i>	little willow flycatcher	None	Endangered	-	Mapped	Mountain meadows and riparian habitats in the Sierra Nevada and Cascades. Nests near the edges of vegetation clumps and near streams.	None in project site (flyover). Low in adjacent area.
Animals - Fish	<i>Entosphenus tridentatus</i>	Pacific lamprey	None	None	SSC	Unprocessed	Aquatic, Klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Animals - Fish	<i>Oncorhynchus kisutch</i> pop. 2	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	-	Unprocessed	Aquatic, Klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Animals - Fish	<i>Oncorhynchus mykiss irideus</i> pop. 1	steelhead - Klamath Mountains Province DPS	None	None	SSC	Unprocessed	Aquatic, Klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Animals - Fish	<i>Oncorhynchus mykiss irideus</i> pop. 16	steelhead - northern California DPS	Threatened	None	-	Unprocessed	Aquatic, Klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Animals - Fish	<i>Oncorhynchus mykiss irideus</i> pop. 36	summer-run steelhead trout	None	None	SSC	Unprocessed	Aquatic, Klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Animals - Fish	<i>Oncorhynchus tshawytscha</i> pop. 17	chinook salmon - California coastal ESU	Threatened	None	-	Unprocessed	Aquatic, Klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Animals - Insects	<i>Bombus caliginosus</i>	obscure bumble bee	None	None	-	Mapped	nests underground or above ground in abandoned bird nests. food plants include <i>Baccharis</i> , <i>Cirsium</i> , <i>Lupinus</i> , <i>Lotus</i> , <i>Grindella</i> , <i>Phacelia</i>	Moderate in project site. Moderate in adjacent area.

Animals - Insects	<i>Bombus occidentalis</i>	western bumble bee	None	None	-	Mapped and Unprocessed	Pollinates a wide variety of flowers, nests in cavities or abandoned burrows	Moderate in project site. Moderate in adjacent area.
Animals - Mammals	<i>Erethizon dorsatum</i>	North American porcupine	None	None	-	Mapped and Unprocessed	broadleaf upland forest, cismontane woodland, lower and upper montane conifer forest	Moderate in project site. Moderate in adjacent area.
Animals - Mammals	<i>Arborimus pomo</i>	Sonoma tree vole	None	None	SSC	Mapped	Occurs in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood- conifer habitats.	Low in project site. Low in adjacent area.
Animals - Mammals	<i>Pekania pennanti</i>	fisher - West Coast DPS	None	Threatened	SSC	Mapped	Occurs in intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with a high percent canopy closure (Schempf and White 1977).	Low in project site. Moderate in adjacent area.
Animals - Mammals	<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	Mapped	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Moderate in project site (flyover). Moderate/high in adjacent area.
Animals - Mammals	<i>Myotis evotis</i>	long-eared myotis	None	None	-	Mapped	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests. Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.	Moderate in project site (flyover). Moderate in adjacent area.
Animals - Mammals	<i>Myotis thysanodes</i>	fringed myotis	None	None	-	Mapped	pinyon-juniper, valley foothill conifer and hardwood conifer	Low in project area (flyover). Low in adjacent area.
Animals - Mammals	<i>Myotis yumanensis</i>	Yuma myotis	None	None	-	Mapped	lower and upper montane conifer and riparian forest and woodland	Low in project area (flyover). Moderate in adjacent area.
Animals - Mollusks	<i>Noyo intersessa</i>	Ten Mile shoulderband	None	None	-	Mapped	coastal dunes coastal scrub, riparian redwood forest habitats	Low in project site. Low in adjacent area.
Animals - Mollusks	<i>Margaritifera falcata</i>	western pearlshell	None	None	-	Unprocessed	Prefers lower velocity waters.	None in project site. Low in adjacent area.

Animals - Mollusks	<i>Anodonta californiensis</i>	California floater	None	None	-	Unprocessed	freshwater lakes and slow moving streams and rivers	None in project site. Low in adjacent area.
Animals - Reptiles	<i>Emys marmorata</i>	western pond turtle	None	None	SSC	Mapped	aquatic, flowing waters, standing waters, marsh, swamp, wetland	None in project site. Low in adjacent area.

Definitions of CDFW statuses:

FP

Fully Protected: This classification was the State of California's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts.

SS

Species of Special Concern: It is the goal and responsibility of the Department of Fish and Wildlife to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability.

WL

Watch List: The Department of Fish and Wildlife maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Appendix C

Table 2 – Special Status Plant Species – June 2019 – APN 208-251-006 – Blake Mountain and surrounding 7.5 min quadrangles

Scientific Name	Common Name	Federal Status	State Status	CA Rare Plant Rank	Quad Name	Blooming Period	Lifeform	Habitat	Micro Habitat	Elevation (meters)	Potential of Occurrence
<i>Usnea longissima</i>	Methuselah's beard lichen	None	None	4.2	Piercy Harris Noble Butte Miranda Fort Seward	NA	fruticose lichen (epiphytic)	Broadleaved upland forest; North Coast coniferous forest	On tree branches; usually on old growth hardwoods and conifers.	50 - 1460 meters	Low in project area. Moderate in adjacent area.
<i>Lomatium engelmannii</i>	Engelmann's lomatium	None	None	4.3	Noble Butte	May-Aug	perennial herb	Serpentine, Chaparral	Lower montane coniferous forest. Upper montane coniferous forest	870 - 2740 meters	Low in project area. Low in adjacent area.
<i>Erigeron biolettii</i>	streamside daisy	None	None	3	Noble Butte Piercy Garberville Miranda	Jun-Oct	perennial herb	Broadleaved upland forest; Cismontane woodland; North Coast coniferous forest	Rocky, mesic	30 - 1100 meters	Low in project area. Moderate in adjacent area.
<i>Erigeron robustior</i>	robust daisy	None	None	4.3	Fort Seward	Jun-Jul	perennial herb	Lower montane coniferous forest	Meadows and seeps; sometimes serpentine	200 - 610 meters	None due to elevation range.
<i>Hemizonia congesta</i> ssp. <i>tracyi</i>	Tracy's tarplant	None	None	4.3	Fort Seward Alderpoint Garberville Miranda Noble Butte Bell Springs	May-Oct	annual herb	Coastal prairie; Lower montane coniferous forest; North Coast coniferous forest	openings, sometimes serpentine.	120 - 1200 meters	Moderate in project site. Moderate in adjacent area.
<i>Tracyina rostrata</i>	beaked tracyina	None	None	18.2	Jewett Rock Alderpoint Fort Seward	May-Jun	annual herb	Chaparral	Cismontane woodland, Valley and foothill grassland	90 - 790 meters	None due to elevation range.
<i>Arabis mcdonaldiana</i>	McDonald's rockcress	Endangered	Endangered	18.1	Noble Butte	May-Jul	perennial herb	serpentine	Lower montane coniferous forest, Upper montane coniferous forest	135 - 1800 meters	Low in project area. Low in adjacent area.
<i>Howellia aquatilis</i>	water howellia	Threatened	None	28.2	Fort Seward Alderpoint	Jun	annual herb (aquatic)	Marshes and swamps	NA	1085 - 1290 meters	None due to elevation range.
<i>Viburnum ellipticum</i>	oval-leaved viburnum	None	None	28.3	Bell Springs Harris	May-Jun	perennial deciduous shrub	Chaparral; Cismontane woodland; Lower montane coniferous forest	NA	215 - 1400 meters	Low in project site. Moderate in adjacent area.
<i>Silene campanulata</i> ssp. <i>campanulata</i>	Red Mountain catchfly	None	Endangered	4.2	Noble Butte	Apr-Jul	perennial herb	Chaparral	Lower montane coniferous forest, usually serpentine, rocky.	425 - 2085 meters	Low in project area. Low in adjacent area.
<i>Calystegia atriplicifolia</i> ssp. <i>butensis</i>	Butte County morning-glory	None	None	4.2	Bell Springs	May-Jul	perennial rhizomatous herb	Chaparral	rocky, sometimes roadside. Lower montane coniferous forest, Valley and foothill grassland	565 - 1524 meters	Moderate in project site. Moderate in adjacent area.

<i>Sedum laxum</i> ssp. <i>eastwoodiae</i>	Red Mountain stonecrop	None	None	18.2	Noble Butte	May-Jul	perennial herb	Lower montane coniferous forest	serpentine	600 - 1200 meters	Low in project area. Low in adjacent area.
<i>Carex arcta</i>	northern clustered sedge	None	None	28.2	Garberville	Jun-Sep	perennial herb	North Coast coniferous forest (mesic)	Bogs and fens	60 - 1400 meters	Low in project site. Moderate in adjacent area.
<i>Arctostaphylos stonfordiana</i>	Raiche's manzanita	None	None	18.1	Noble Butte	Feb-Apr	perennial evergreen shrub	Chaparral	rocky, often serpentine	450 - 1035 meters	Low in project area. Low in adjacent area.
<i>Astragalus agnicidus</i>	Humboldt County milk-vetch	None	Endangered	18.1	Miranda	Apr-Sep	perennial herb	Broadleafed upland forest; North Coast coniferous forest	openings, disturbed areas, sometimes roadsides.	120 - 800 meters	None due to elevation range.
<i>Astragalus rattanii</i> var. <i>rattanii</i>	Rattan's milk-vetch	None	None	4.3	Noble Butte	Apr-Jul	perennial herb	Chaparral	gravely streambanks, Cismontane woodland	30 - 825 meters	None due to elevation range.
<i>Gentiana setigera</i>	Mendocino gentian	None	None	18.2	Noble Butte	(Apr-Jul)Aug-Sep	perennial herb	mesic	Meadows and seeps	335 - 1065 meters	none.
<i>Lycopus uniflorus</i>	northern bugleweed	None	None	4.3	Miranda Garberville	Jul-Sep	perennial herb	mesic	Bogs and fens, Marshes and swamps	5 - 2000 meters	none.
<i>Erythronium citrinum</i> var. <i>citrinum</i>	lemon-colored fawn lily	None	None	4.3	Noble Butte	Mar-May	perennial bulbiferous herb	Chaparral	Lower montane coniferous forest, usually serpentine.	150 - 1300 meters	Low in project area. Low in adjacent area.
<i>Erythronium revolutum</i>	coat fawn lily	None	None	28.2	Piercy Garberville Miranda	Mar-Jul(Aug)	perennial bulbiferous herb	Mesic	streambanks, Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	0 - 1600 meters	none.
<i>Fritillaria purdyi</i>	Purdy's fritillary	None	None	4.3	Bell Springs	Mar-Jun	perennial bulbiferous herb	Chaparral	Lower montane coniferous forest, usually serpentine.	175 - 2255 meters	Low in project area. Low in adjacent area.
<i>Lilium rubescens</i>	redwood lily	None	None	4.2	Piercy Miranda	Apr-Aug	perennial bulbiferous herb	Broadleafed upland forest; Chaparral; Lower montane coniferous forest; North Coast coniferous forest; Upper montane coniferous forest		30 - 1910 meters	Low in project site. Moderate in adjacent area.
<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	None	None	18.2	Garberville	May-Aug	perennial rhizomatous herb	Coastal bluff scrub; Coastal prairie; North Coast coniferous forest		15 - 880 meters	Low in project site. Moderate in adjacent area.
<i>Pityopus californicus</i>	California pinefoot	None	None	4.2	Piercy	May-Aug	perennial herb (achlorophyllous)	Broadleafed upland forest; Lower montane coniferous forest; North Coast coniferous forest; Upper montane coniferous forest	mesic.	15 - 2225 meters	Low in project site. Moderate in adjacent area.
<i>Montia howellii</i>	Howell's montia	None	None	28.2	Miranda Fort Seward	Mar-May	annual herb	North Coast coniferous forest	Vernally mesic, sometimes roadsides; Meadows and seeps. Vernal pools	0 - 835 meters	Low in project site. Moderate in adjacent area.
<i>Epilobium septentrionale</i>	Humboldt County fuchsia	None	None	4.3	Garberville Piercy Noble Butte	Jul-Sep	perennial herb	Broadleafed upland forest; North Coast coniferous forest	sandy or rocky.	45 - 1800 meters	Low in project site. Moderate in adjacent area.
<i>Cypripedium californicum</i>	California lady's-slipper	None	None	4.2	Noble Butte	Apr-Aug(Sep)	perennial rhizomatous herb	Bogs and fens	seeps and streambanks, usually serpentine.	30 - 2750 meters	None

<i>Listera cordata</i>	heart-leaved twayblade	None	None	4.2	Fort Seward Miranda	Feb-Jul	perennial herb	Lower montane coniferous forest; North Coast coniferous forest	Bogs and fens	5 - 1370 meters	Low in project site. Low in adjacent area.
<i>Piperia candida</i>	white- flowered rein orchid	None	None	18.2	Miranda Noble Butte Piercy	May-Sep	perennial herb	Broadleaved upland forest; Lower montane coniferous forest; North Coast coniferous forest	sometimes serpentine	30 - 1310 meters	Low in project site. Low in adjacent area.
<i>Kopsiopsis hookeri</i>	small groundcone	None	None	28.3	Miranda	Apr-Aug	perennial rhizomatous herb (parasitic)	North Coast coniferous forest	NA	90 - 885 meters	Low in project site. Moderate in adjacent area.
<i>Calamagrostis bolanderi</i>	Bolander's reed grass	None	None	4.2	Piercy	May-Aug	perennial rhizomatous herb	mesic	Bogs and fens, Broadleaved upland forest, Closed-cone coniferous forest, Coastal scrub, Meadows and seeps (mesic), Marshes and swamps (freshwater), North Coast coniferous forest	0 - 455 meters	None due to elevation range.
<i>Leptosiphon acicularis</i>	bristly leptosiphon	None	None	4.2	Miranda Garberville	Apr-Jul	annual herb	Chaparral	Cismontane woodland, Coastal prairie, Valley and foothill grassland	55 - 1500 meters	Moderate in project site. Moderate in adjacent area.
<i>Leptosiphon latisectus</i>	broad-lobed leptosiphon	None	None	4.3	Garberville Fort Seward Miranda Harris Noble Butte Bell Springs	Apr-Jul	annual herb	Chaparral; Cismontane woodland; Coastal prairie; Valley and foothill grassland	NA	55 - 1500 meters	Low in project site. Low in adjacent area.
<i>Leptosiphon rattanii</i>	Rattan's leptosiphon	None	None	4.3	Noble Butte	May-Jul	annual herb	Cismontane woodland	rocky or gravelly	1700 - 2000 meters	None due to elevation range.
<i>Eriogonum kelloggii</i>	Kellogg's buckwheat	None	Endangered	18.2	Noble Butte	(May)Jun- Aug	perennial herb	Lower montane coniferous forest	rocky, serpentine	579 - 1250 meters	Low in project site. Moderate in adjacent area.
<i>Ceanothus foliosus</i> var. <i>vineatus</i>	Vine Hill ceanothus	None	None	18.1	Noble Butte	Mar-May	perennial evergreen shrub	Chaparral	NA	45 - 305 meters	None due to elevation range.
<i>Fraugula purshiana</i> ssp. <i>ultramajica</i>	Caribou coffeeberry	None	None	18.2	Jewett Rock	May-Jul	perennial deciduous shrub	Chaparral	serpentine, Meadows and seeps	825 - 1930 meters	Low in project site. Low in adjacent area.

Global Conservation Status Definition

Listed below are definitions for interpreting NatureServe global (range-wide) conservation status ranks. These ranks are assigned by NatureServe scientists or by a designated lead office in the NatureServe network.

G1 Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

- G2** **Imperiled** – At high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factors.
- G3** **Vulnerable** – At moderate risk of extinction or elimination due to a restricted range, relatively few populations, recent and widespread declines, or other factors.
- G4** **Apparently Secure** – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- G5** **Secure** – Common; widespread and abundant.
- G#G#** **Range Rank** – A numeric range rank (e.g. G2G3, G1G3) is used to indicate the range of uncertainty about the exact status of a taxon or ecosystem type. Ranges cannot skip more than two ranks (e.g., GU should be used rather than G1G4).

Infraspecific Taxon Conservation Status Ranks

T# **Infraspecific Taxon** (trimomial) – The status of infraspecific taxa (subspecies or varieties) are indicated by a “T-rank” following the species global rank. Rules for assigning T-ranks follow the same principles outlined above. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1. A T subrank cannot imply the subspecies or variety is more abundant than the species. For example, a G1T2 subrank should not occur. A vertebrate animal population, (e.g., listed under the U.S. Endangered Species Act or assigned candidate status) may be tracked as an infraspecific taxon and given a T-rank; in such cases a Q is used after the T-rank to denote the taxon’s informal taxonomic status.

Subnational (S) Conservation Status Ranks

- S1** **Critically Imperiled** – Critically imperiled in the jurisdiction because of extreme rarity or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the jurisdiction.
- S2** **Imperiled** – Imperiled in the jurisdiction because of rarity due to very restricted range, very few populations, steep declines, or other factors making it very vulnerable to extirpation from jurisdiction.
- S3** **Vulnerable** – Vulnerable in the jurisdiction due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4** **Apparently Secure** – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5** **Secure** – Common, widespread, and abundant in the jurisdiction.
- S#S#** **Range Rank** – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem. Ranges cannot skip more than two ranks (e.g., SU is used rather than S1S4).

Rank Qualifiers

? **Inexact Numeric Rank** – Denotes inexact numeric rank; this should not be used with any of the Variant Global Conservation Status

Q **Questionable taxonomy that may reduce conservation priority** – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or inclusion of this taxon or type in another taxon or type, with the resulting taxon having a lower-priority (numerically higher) conservation status rank. The “Q” modifier is only used at a global level and not at a national or subnational level.

Appendix D

Observation Report – For nearest Spotted Owl Activity Center

Data Version Date:
05/01/2019
Report Generation Date:
5/28/2019

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



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

- H_02N_05E Sections(31,32,33,34);
- H_01N_05E Sections(03,04,05,06,08,09,10);

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
Masterowl: HUM0047 Subspecies: NORTHERN											
POS	1977-09-16		1	UU				40.476035	-123.603509	H 01N 05E 10	Quarter-section centroid
POS	1977-09-19		1	UU				40.476035	-123.603509	H 01N 05E 10	Quarter-section centroid
POS	1978-03-29		1	UU				40.476035	-123.603509	H 01N 05E 10	Quarter-section centroid
POS	1978-03-29	1100	1	AU			0	40.475978	-123.593764	H 01N 05E 10	Quarter-section centroid
POS	1978-05-09		1	UU				40.476035	-123.603509	H 01N 05E 10	Quarter-section centroid
POS	1984-05-01		2	UMUF	Y			40.468727	-123.603845	H 01N 05E 15	Quarter-section centroid
POS	1984-06-06		2	UMUF	Y			40.474289	-123.604909	H 01N 05E 10	Contributor
POS	1985-05-13		1	UM				40.474289	-123.604909	H 01N 05E 10	Contributor
POS	1985-05-21		1	UM				40.474289	-123.604909	H 01N 05E 10	Contributor
POS	1985-05-22		1	UM				40.474289	-123.604909	H 01N 05E 10	Contributor
POS	1985-06-03		1	UM				40.474289	-123.604909	H 01N 05E 10	Contributor
POS	1985-06-04		1	UM				40.474289	-123.604909	H 01N 05E 10	Contributor
POS	1985-06-26		2	UMUF	Y			40.474289	-123.604909	H 01N 05E 10	Contributor
POS	1986-08-04		1	UM				40.474289	-123.604909	H 01N 05E 10	Contributor
POS	1987-04-15		1	UM				40.474289	-123.604909	H 01N 05E 10	Contributor
AC	1987-05-01		2	UMUF	Y	Y		40.474289	-123.604909	H 01N 05E 10	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude NAD83	Longitude NAD83	MTRS	Coordinate Source
POS	1987-07-01		0				2	40.474289	-123.604909	H 01N 05E 10	Contributor
POS	1988		2	UMUF	Y			40.468849	-123.613259	H 01N 05E 16	Quarter-section centroid
POS	1988	0000	2	AMAF	Y		0	40.476035	-123.603509	H 01N 05E 10	Quarter-section centroid
POS	1988-10-04		2	UMUF	Y			40.476035	-123.603509	H 01N 05E 10	Quarter-section centroid
POS	1994-06-21	2400	1	UF				40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
NEG	1994-06-22	1200	0					40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
POS	1995-05-16		1	AM				40.476035	-123.603509	H 01N 05E 10	Quarter-section centroid
NEG	1996-03-25	1810	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1996-04-04	2010	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1996-05-07	2010	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1996-05-09	2030	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1996-06-05	2130	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1996-06-06	2050	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1996-06-30	2050	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1997-03-05	1630	0					40.465192	-123.618180	H 01N 05E 16	Section centroid
NEG	1997-07-06	2050	0					40.465192	-123.618180	H 01N 05E 16	Section centroid
NEG	1999-04-02	2016	0					40.465503	-123.637268	H 01N 05E 17	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	1999-04-04	2343	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1999-04-13	0007	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1999-05-07	2050	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1999-05-22	0112	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1999-06-01	0013	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	1999-06-28	2240	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	2000-05-15	2039	0					40.465503	-123.637268	H 01N 05E 17	Section centroid
NEG	2001-04-16	2338	0					40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
NEG	2001-05-01	2118	0					40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
NEG	2001-05-22	0020	0					40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
NEG	2001-06-26	0023	0					40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
NEG	2001-08-01	0003	0					40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
POS	2001-08-14	2346	1	UU				40.468849	-123.613259	H 01N 05E 16	Quarter-section centroid
POS	2001-08-16	0725	1	AM				40.468849	-123.613259	H 01N 05E 16	Quarter-section centroid
NEG	2002-03-29	2251	0					40.468849	-123.613259	H 01N 05E 16	Quarter-section centroid
POS	2002-05-09	2113	1	UU				40.475978	-123.593764	H 01N 05E 10	Quarter-section centroid
NEG	2002-05-10	0640	0					40.479638	-123.598492	H 01N 05E 10	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD MAD83	Longitude DD MAD83	MTRS	Coordinate Source
NEG	2002-06-02		0					40.479638	-123.598492	H 01N 05E 10	Section centroid
POS	2003-05-08	2319	1	UM				40.465192	-123.618180	H 01N 05E 16	Section centroid
NEG	2003-05-10	0632	0					40.465192	-123.618180	H 01N 05E 16	Section centroid
POS	2003-05-29	2049	2	UMUF	Y			40.469071	-123.622274	H 01N 05E 16	Quarter-section centroid
POS	2003-05-30	1955	2	AMAF	Y	N	0	40.465192	-123.618180	H 01N 05E 16	Section centroid
POS	2004-03-31	1859	1	UM				40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
NEG	2004-04-02	1925	0					40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
POS	2004-04-26	2106	1	UM				40.476166	-123.612854	H 01N 05E 09	Quarter-section centroid
POS	2004-04-28	2001	1	AM				40.476035	-123.603509	H 01N 05E 10	Quarter-section centroid
POS	2004-05-24	2105	1	UM				40.465192	-123.618180	H 01N 05E 16	Section centroid
POS	2011-06-02	2133	1	UM				40.473907	-123.606335	H 01N 05E 10	Contributor
Masterowl: HUM0152 Subspecies: NORTHERN											
POS	1980		1	UM				40.468661	-123.594030	H 01N 05E 15	Quarter-section centroid
POS	1985-06-26		1	UM				40.475910	-123.584125	H 01N 05E 11	Quarter-section centroid
POS	1985-07-17		1	UM				40.475910	-123.584125	H 01N 05E 11	Quarter-section centroid
POS	1987-05-13		2	UMUF	Y		2	40.473640	-123.590983	H 01N 05E 10	Contributor
AC	1988		2	UMUF	Y	Y	1	40.473640	-123.590983	H 01N 05E 10	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	1988		2	UMUF	Y			40.475910	-123.584125	H 01N 05E 11	Quarter-section centroid
Masterowl: HUM0155 Subspecies: NORTHERN											
AC	1988		2	UMUF	Y	Y	1	40.487856	-123.628630	H 01N 05E 05	Contributor
POS	1988		2	UMUF	Y		1	40.489757	-123.629840	H 01N 05E 05	Contributor
POS	1988-10-04		2	UMUF	Y		1	40.487856	-123.628630	H 01N 05E 05	Contributor
NEG	2001-04-16	2212	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2001-05-01	2232	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2001-05-21	2301	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2001-06-25	2307	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2001-07-31	2043	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2001-08-14	2231	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
POS	2002-03-29	2223	2	UUUU				40.476325	-123.621822	H 01N 05E 09	Quarter-section centroid
NEG	2002-04-08	1749	0					40.479854	-123.617288	H 01N 05E 09	Section centroid
NEG	2002-05-09	2232	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2002-06-02		0					40.494277	-123.617503	H 01N 05E 04	Section centroid
NEG	2002-06-25	2222	0					40.494134	-123.637055	H 01N 05E 05	Section centroid
NEG	2002-07-05	2217	0					40.494134	-123.637055	H 01N 05E 05	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2002-07-13	2148	0					40.494134	-123.637055	H 01N 05E 05	Section centroid
POS	2003-05-09	0026	1	UU				40.490605	-123.603003	H 01N 05E 03	Quarter-section centroid
NEG	2003-05-12	0644	0					40.494243	-123.598126	H 01N 05E 03	Section centroid
NEG	2003-05-29	2222	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2003-06-16	2157	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2004-03-31	2021	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2004-04-26	2310	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2004-05-24	2222	0					40.490522	-123.622212	H 01N 05E 04	Quarter-section centroid
NEG	2005-03-09	2259	0					40.494277	-123.617503	H 01N 05E 04	Section centroid
NEG	2005-03-25	0643	0					40.494277	-123.617503	H 01N 05E 04	Section centroid
NEG	2005-04-06	0746	0					40.494277	-123.617503	H 01N 05E 04	Section centroid