Biological Assessment Report

Assessor Parcel Number (APN):
222 – 231 – 012

Prepared by:

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Consulting

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Prepared for:

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P.O. Box 2018
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Section 1 Summary of Findings and Conclusions

The project applicant seeks a Zoning Clearance Certificate (ZCC) to cultivate approximately 22,000 ft^2 of mixed light cannabis over three sites. The applicant is proposing to permit existing cannabis cultivation activities in accordance with the County of Humboldt Commercial Cannabis Land Use Ordinance (CCLUO). The existing operation includes approximately 14,000 ft^2 of mixed light cannabis cultivation.

The project site is located approximately 1.25 air miles southwest of Garberville in Humboldt County, California. Cannabis has historically been cultivated at one of the proposed project sites at this location. Although the seasonal timing of the field visit was not appropriate for the detection of all blooming rare and special status plant species, the ecological habitat and preexisting use of the sites makes it unlikely that special status plant and animal species are present within the proposed site location, or would be negatively impacted by the project. With the proposed recommendations observed, this project is not anticipated to cause any direct or indirect impacts to the surrounding wildlife, environment and/or habitats.

Section 2 Introduction, Background, and Project Understanding

2.1 Purpose and Need

This Biological Assessment Report has been prepared for Chronic Creek, LLC by request from the applicant. This report has been prepared as a preliminary measure to investigate the potential impact of the cultivation of approximately 22,000 ft^2 of mixed light cannabis. The environmental and biological impacts related to this proposed project were assessed in terms of disturbance to sensitive species and site-specific habitat.

2.2 Biologist's Qualifications

The biological assessment for this report was conducted by Mason London. Mason holds an MSc in Biology with a concentration in aquatic ecology from Humboldt State University. Mason also has 9 years of experience working professionally as a botanist, wildlife biologist, aquatic ecological research scientist, and has instructed ecological courses at the university level.

2.3 Parcel and Project Site Description

This Biological Assessment Report considers the potentially occurring species and communities that could be affected by the proposed 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 (Appendix B: Map 1). Other project related aspects, such as water storage, site location and cultivation methods were assessed in terms of ecological and biological impact.

On December 15th, 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 approximately 22,000 ft^2 of cannabis. This proposed project is to occur over three sites; *Site 1* and *Site 2* in the location where previous cultivation activities have occurred, and *Site 3* occurring in a previously graded flat which has no history of cannabis cultivation (Appendix B: Map 2). The proposed activities are to cultivate approximately 3,600 ft^2 at *Site 1*, 11,200 ft^2 at *Site 2* and 7,200 ft^2 at *Site 3*.

The parcel (APN: 222-231-012) where the proposed project sites are to occur is 31.61 acres (Appendix B: Map 1 & Map 2). The parcel is located approximately 1.25 air miles southwest of Garberville in Humboldt County, California within the Garberville 7.5 minute quadrangle (Quad code: 4012317) in the in the Connick Creek Watershed (Connick Creek is a tributary to the South Fork Eel River) (CDFW Region: 1). The center location of this parcel is 40°05'27.3"N 123°48'59.9"W. The elevation of the center of the proposed project site is approximately 525 feet (~160 meters) above sea level (Google Earth Pro, 2019). This parcel is zoned as Agriculture Exclusive (AE) and Agriculture General (AG). The AE zone is designated to parcels where "...agriculture is and should be the desirable predominate use and in which the protection of this use from encroachment from incompatible uses is essential to the general welfare" (Humboldt County Code Zoning Regulations, Title III Land Use and Development). The AG zone designation is "applied in areas in which agriculture is the desirable predominate use and rural residential uses are second" (Humboldt County Code Zoning Regulations, Title III Land Use and Development). The current general plan for this parcel is Residential Agriculture (RA) and according to the Humboldt County General Plan, allowable uses under this plan include both "general agriculture," and "intensive agriculture" (Humboldt County General Plan, 2017).

The project is proposed to occur over three previously graded sites, one of them having a history of cannabis cultivation. A few brushy nonnative species of vegetation, as well as a few immature brushy trees, will be removed due to encroachment onto the graded flat.

2.4 Cultivation

The parcel historically had a total of approximately 14,000 ft^2 of cultivated mixed light cannabis. The applicant is proposing to cultivate approximately 22,000 ft^2 of cannabis over three location (*Site 1, Site 2* & *Site 3*) (Appendix B: Map 2). The cannabis for this project will be cultivated using mixed light methods which will occur in greenhouses and will utilize wattage for string lights and fans. The applicant currently utilizes solar power but intends to connect the parcel to PG&E grid power in the near future. Until the parcel is connect to grid power, the project will utilize a Honda EU2000i generator. A review of the "Top 10 Quietest Portable Generators" renders the Honda EU2000i as the second quietest generator on the market, when "at a quarter load, the 53 decibels (dB) produced by this generator is about the equivalent noise level of quiet

conversation at home" (generatorgrid, 2019). Regardless of its inherent quietness, a housing will be built for the generator to keep the volume down to 60 dB when 100 ft away, which is approximately the distance to the nearest tree line from where the generator will be placed.

2.5 Water Collection and Storage

There are 3 permitted wells on the parcel. Each project site has a well which will be used for the irrigation of the cannabis. The applicant currently has water storage tanks equating to 15,000 gallons (Figure 1). The applicant will increase her storage capacity so there is 15,000 gallons at each site and will have two other 1,100 gallon tanks at the middle flat for a total of 47,200 gallons of storage on the parcel.

Section 3 Methods

3.1 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 (CNDDB, CDFW, 2019) BIOS, the United State Fish and Wildlife Service Information for Planning and Conservation (IPaC, USFWS 2019), Calflora Project (Calflora, 2019) for the Garberville 9-quad area. Animals on the CNDDB 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 Garberville quadrangle, and the 8 adjacent quadrangles, resulted in 33 special status animal species (4 amphibians, 9 birds, 1 crustacean, 5 fishes, 2 insects, 8 mammals, 3 mollusks, 1 reptile) (Appendix A: Table 1) and 44 special status plant (1 lichen, 43 Vascular) (Appendix A: Table 2).

3.2 Biological Resource and Habitat Investigation

A biological resource and habitat investigation was conducted at the project site between 15:00 and 16:30 on December 15th, 2019 (Appendix B: Map 1). The weather was overcast with sporadic short periods of sunshine. The timing of the investigation, towards the beginning of winter, was outside the blooming period for the majority of the plant species on the species list. However, the goal of the investigation was to determine suitable habitat for potential species within the project area. Habitat and habitat characteristic for the project site, preexisting cultivation sites, and the adjacent area, was investigated (Appendix B: Map 1). Dominate species in surrounding habitats, project related features such as cultivation methods, irrigation sources, and project site setbacks from watercourses were also observed and recorded. A TruPulse 200X laser rangefinder was used to make all of the distance and slope measurements and for determining adequate setbacks.

3.2.1 Project Site Location and Description

The project is to occur over three previously disturbed flats. All flats have been previously graded and have had a history of cattle grazing. *Site 1* and *Site 2* historically had been cultivated with cannabis, but haven't been cultivated in two years (Figure 2 & 3; Appendix B: Map 2). *Site 3* has never had cannabis cultivated at this location (Figure 4; Appendix B: Map 2). At *Site 1*, existing infrastructure will be utilized so there are no alterations to this site for the proposed project. *Site 1* had been previously terraced when it was graded, and *Site 2 &* 3 occur in locations of slopes less than 15%. All sites were determined to be in environmentally adequate areas for cultivation based on the surrounding habitat, observed species, and their setback to watercourses.

3.2.2 Sensitive Species

Of the 33 special status animal species, 9 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 44 special status plant species, 5 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 4 Results and Discussion

4.1 Habitat Area and Existing Site Conditions

The habitat investigated within the parcel is dominated by second growth mixed hardwood and coniferous forest. There is also cleared openings where the projects are proposed to occur. The southern border of the parcel is a Class I perennial stream (Connick Creek) which is over 550 ft away from the nearest location to a project site (*Site 2*) so was not further investigated in terms of potential impacts associated with the proposed cultivation activities (Appendix B: Map 2). There is also a Class II intermittent stream that was observed approximately 230 ft west of *Site 2*, which is the closest proximity to a project site (Figure 5; Appendix B: Map 2). This distance from the Class II watercourse to *Site 2* is larger than the required 100 ft setback so no further investigation in terms of potential impacts associated with the proposed cultivation activities was assessed. The project sites exist within the boundaries of preexisting disturbed clearings which have been previously graded, grazed and for *Site 1* and *Site 2*, previously cultivated. There are no actives associated with the proposed project that will negatively impact these habitats in anyway.

4.1.1 Terrestrial

The second growth mixed hardwood and coniferous forest habitat is typical of southern Humboldt. The dominate species observed were Douglas fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), Pacific madrone (*Arbutus menziesii*), black oak (*Quercus velutina*) and a few California bay (*Umbellularia californica*) and canyon live oaks (*Quercus chrysolepis*) dispersed amongst the other dominate species (see surrounding habitat of project sites in Figure 2, 3 & 4). The observed species in the understory and margins of this habitat were Western bracken fern (*Pteridium aquilinum*), poison oak (*Toxicodendron diversilobum*), patches of coyote brush (*Baccharis pilularis*), Scotch broom (*Cytisus scoparius*), Himalayan blackberry (*Rubus armeniacus*), and manzanita (*Arctostaphylos spp.*) (Figure 6) and Western sword fern (*Polystichum munitum*) and evergreen huckleberry (*Vaccinium ovatum*) deeper in the understory (see surrounding habitat in Figure 5). This habitat dominates the parcel and is not anticipated to be negatively impacted by the proposed project in anyway.

The project sites are dominated by many non-native, as well as a few native, species as a result of the preexisting disturbance associated with the previous grading, grazing and cultivation actives. Some of the species observed in all three project sites include narrow leaved plantain (*Plantago lanceolate*), common mallow (*Malva neglecta*), pennyroyal (*Mentha pulegium*) chickweed (*Stellaria media*), Scotch broom, Himalayan blackberry, bull thistle (*Cirsium vulgare*) and grasses, such as tall fescue (*Festuca arundinacea*), big quaking grass (*Briza maxima*) and meadow foxtail (*Alopecurus pratensis*). The main tree species growing around the margins of the project site are black oak, and immature Douglas fir, tanoak and Pacific madrone. The margins of both project sites are surrounded by mostly Scotch broom and Himalayan blackberry (Figure 7). As a result of the benign activities associated with this project, and given the history of grading, grazing and cultivation at these locations, there is no anticipated negative impacts to the project site's habitat, nor the species that would utilize this habitat in anyway.

4.1.2 Hydrologic and Aquatic

As previously mentioned, the observed watercourses on the parcel were well outside of the required setbacks from the project sites so no further investigation was done to these habitats. At *Site 3* there were observed species that are potential indicators of a wetland or a "wet area" habitat. The species observed were a few individual clusters of common rush (*Juncus effuses*) and a few patches of bunchy sedge (*Cyperus spp.*) (Figure 8). The presence of these species is not always representative of a wetland. The U.S. Army Corps of Engineers (USACE) defines wetlands as "...areas that are inundated or saturated by surface or groundwater 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" (33 CFR 328.3(b), U.S. Army Corps of Engineers). This parcel is located within the USACE 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). This is what was observed during the site visiting investigation at *Site 3*. The site visit investigation was conducted after multiple

days of heavy rainfall with rain occurring every day for the previous week (December 8th-14th), and 1.10 total inches of rain recorded at the Eel River Conservation Camp in Redway, CA (~3.25 miles north of *Site 3*) in the 24 hours prior to the site visit (www.mesowest.utah.edu, 2019). Even with all of this rainfall, no standing water was observed within the project site or in the surrounding habitat (i.e. the location of the *Juncus effusus* cluster). Further investigation was completed by digging soil pits in order to determine if this location meet the hydric requirements for wetland soils. The soil observed at this location was not hydric, but rather gravelly/sandy and incapable of retaining surface water and/or groundwater (Figure 9). Based on the lack of hydrology and hydric soils observed at *Site 3* there is no evidence that this habitat is ever saturated by surface or groundwater and the sandy gravel soil type appears to be unable to support any freestanding water. Therefore, it was determined that the presence of these observed species is not representative of a wetland, but rather an outcome of occurring in the northwest forests and coast sub region, which, according to the National Weather Service receives, on average, between 75 and 100 inches of rain per year (this value is based on the annual average precipitation averaged between 1961 and 1990). Furthermore, giving the history of grading and grazing at this site, it is determined that the proposed cultivation activities will not negatively impact this habitat.

4.1.3 Sensitive Species or Habitats

Each species derived from the previously mentioned databases were evaluated for their potential of occurrence 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.

There were no observed, or mapped occurrences of any of these species surrounding a large buffer (multiple miles) of the project site as shown by the CNDDB Bios map (Appendix B: Map 3)

4.2 Special Status Plant Species

Potential habitat for 5 special-status species exist within the project area. These species include: Tracy's tarplant (*Hemizonia congesta ssp. Tracyi*), Humboldt County milkvetch (*Astragalus agnicidus*), maple-leaved checkerbloom (*Sidalcea malachroides*) and Pacific gilia (*Gilia capitata ssp. pacifica*) and Vine Hill ceanothus (*Ceanothus foliosus var. vineatus*).

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 of disturbance it is unlikely that this species has colonized the project site. 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" (CNDDB Metadata, 2019). If it was to exist in the surrounding area, due to the moderate potential habitat in the areas surrounding the project sites, no activates from the proposed project will disturb or impact the species.

Humboldt County milkvetch (*Astragalus agnicidus*) has a moderate potential of occurring at the project site. Its elevation range is between 120 and 800 meters and is known to occur in broadleaved upland forests and North Coast coniferous forests, specifically in partially timbered openings on forest lands. While habitat for this species does exist within the project sites, *Astragalus agnicidus* is a perennial herb with very distinctive leaf structure, idyllic to those found in the Fabaceae family and easily identifiable, and even know the biological investigation was conducted outside of this species blooming dates, no *Astragalus agnicidus* were found within the project site or the immediate surrounding area. Furthermore, given the history of disturbance it is unlikely that this species has colonized the project sites. The potential habitat for *Astragalus agnicidus* in the surrounding the project site will not be disturbed by this proposed project in anyway.

Maple-leaved checkerbloom (*Sidalcea malachroides*) has a moderate potential of occurring at the project sites. Its elevation range is between 0 and 730 meters. It blooms between April and Augusts and is known to occur in broadleafed upland forests, coastal prairies, coastal scrubs, North Coast coniferous forests, and riparian woodlands and also is often found in disturbed areas. Since the project site does have a history of disturbance (through preexisting cultivation, grading and grazing), the potential of *Sidalcea malachroides* occurrance could be likely. However, even though this site visit was outside of *Sidalcea malachroides*'s blooming time, it is a perennial herb with distinct "maple like" leaves, and it is easily identified even when not in bloom. No *Sidalcea malachroides* were observed during the site investigation and it is concluded that it is highly unlikely that this species occurs at the project site. The potential habitat areas surrounding the project site will not be disturbed by this proposed project, so if it is to occur in the surrounding area, it will not be impacted or disturbed by the cultivation activities.

Pacific gilia (*Gilia capitata ssp. pacifica*) has a moderate potential of occurring at the project site. Its elevation range is between 5 and 1665 meters and is known to occur in coastal bluff scrub, chaparral openings, coastal prairies and valley/foothill grasslands. While habitat for this species does exist within the project site, the history of disturbance and ongoing cultivation of the site makes it highly unlikely that this species would occur at the project sites. The potential habitat areas surrounding the project site will not be disturbed by this proposed project. Also, this species was only recorded to occur within the Briceland, Bear Harbor 7.5 USGS Quads, and not in the Garberville 7.5 USGS Quad.

Vine Hill ceanothus (*Ceanothus foliosus var. vineatus*) has a moderate potential of occurring at the project sites. Its elevation range is between 45 and 305 meters and is known to occur in chaparral habitats. *Ceanothus foliosus var. vineatus* is a perennial evergreen herb, and even though this species blooms between March and May, it is easily distinguishable when not in flower. No *Ceanothus foliosus var. vineatus* were observed and the tome of the site visit investigation and given the history of disturbance at these project sites, it is unlikely that this species is present at these locations. Also, this species was only recorded to occur within the Bear Harbor 7.5 USGS Quads, and not in the Garberville 7.5 USGS Quad. The potential habitat areas surrounding the project site will not be disturbed by this proposed project and therefore any *Ceanothus foliosus var. vineatus* could exist outside of the project sites will not be impacted in anyway.

4.3 Special Status Animals Species

Moderate to high potential habitat for 9 special status animal species exists within the project location. Of these 9 species, 7 are either birds or bats and would only utilize the project sites air space for flying over and/or the ground area for hunting. However, none of these species would utilize the project site for nesting or shelter due to the sparseness of canopy cover and other habitat characteristic. It is not expected that these species will be impacted in anyway by the proposed project, therefore they were not further investigated in this report. The remaining 2 special-status species include the Western bumblebee (*Bombus occidentalis*) and the North American porcupine (*Erethizon dorsatum*).

The **Western Bumblebee (*Bombus occidentalis*)** is widely distributed in California and is known to pollinate a wide variety of flowering plants. This species lives in abandoned burrows and cavities and potential nesting locations may exist within the project area. However, it unlikely that there would be a significant loss of nesting habitat as a result of the project. Furthermore, it is unlikely that the project would result in a significant decrease in forage material, due to the preexisting limited foraging material as a result of the site's previous disturbance. It is not anticipated that the project will negatively impact this species.

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 in the nearby by habitat, 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.

4.3.1 Other Special Status Animal Species

The nearest known **Northern Spotted Owl (*Strix occidentalis caurina*)** Activity Center (HUM0927), according to the most up to date CNDDB Spotted Owl Viewer, is approximately 2.35 air miles from the proposed project sites (Appendix B: Map 4, & Appendix D: Observation Report 1). 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). The surrounding habitat to the parcel is not dominated by this forest type, but rather surrounding this project site is more dominated by second growth forest, which is not preferred by Strix occidentalis caurina.

Even though this project will not "...remove or modify spotted owl nesting, roosting or foraging habitat...", according to the USFWS Northern Spotted Owl Survey protocol: Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls, the "... protocol should also be applied to activities that disrupt essential breeding activities and to

activities that may injure or otherwise harm spotted owl other than through habitat modification (e.g., noise disturbance, smoke from prescribed fire)," (USFWS, 2012). 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 proposed cultivation sites that will be artificially lit will be fully covered for the few weeks and limited time when lit (eliminating all potential for light pollution), and the generator used for powering these lights will be placed into a housing to eliminate noise pollution when in use, there are no expected disruptions towards essential breeding activities or any activates that may injure or harm this species related to this project.

Section 5 Conclusion

5.1 Potential Impacts and Recommended Mitigation

5.1.1 Potential Direct Impacts

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

Common disturbance-based impacts include noise and light pollution. For the proposed project, recommendations to mitigate noise pollution are to create a housing for the generator so that when the generator will need to be used for supplementing light to the mixed light cannabis, it will not exceed 60 dB when 100 ft away (or to the nearest tree line). Given the inherent quietness of the generator utilized for this project, and the housing that it will be placed in, it is unlikely that noise pollution will impact any surrounding wildlife. If fans are used in the greenhouse, they too are not to exceed 60 dB at the tree line. 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 adequate housing, there will be no expected disturbance-based impacts to the surrounding wildlife

5.1.2 Potential Indirect Impacts

Given the existing nature of the adjacent cultivation site, as well as the existing disturbance to the proposed cultivation site, the minimal development that will occur should have no significant adverse indirect impacts to the surrounding environment and habitats.

5.1.3 Recommendations

If the applicant proceeds with the proposed cultivation plan, there is no foreseeable issues to the environment based on the location of the proposed project sites or with the activities associated with the cultivation process. The locations of these proposed sites are adequately

setback and are adhering to the required riparian buffers, as met by the most conservative California requirements. The applicant is to obey the measured setbacks from the watercourses and identified.

Section 6 References

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Appendix A: Photos

Figure 1. 10,000 of the 15,000 gallons of water storage currently on the property. Photo taken in Site2 *facing west.*

Figure 2. Proposed project Site 1.

Figure 3. Proposed project Site 2.

Figure 4. proposed project Site 3.

Figure 5. The Class II intermittent stream located approximately 230 ft west of Site 1.

Figure 6. Photo showing the forested margin habitat. Photo taken in Site 2 *facing north.*

Figure 7. A photo of an example of the proposed project margin habitat. Photo showing southeast of Site 1.

Figure 8. The few clusters of common rush and bunchy sedge in Site 2.

Figure 9. The soil pit dug amongst the rush and sedge in Site 2 showing the non-hydric soils which is not representative of a wetland.

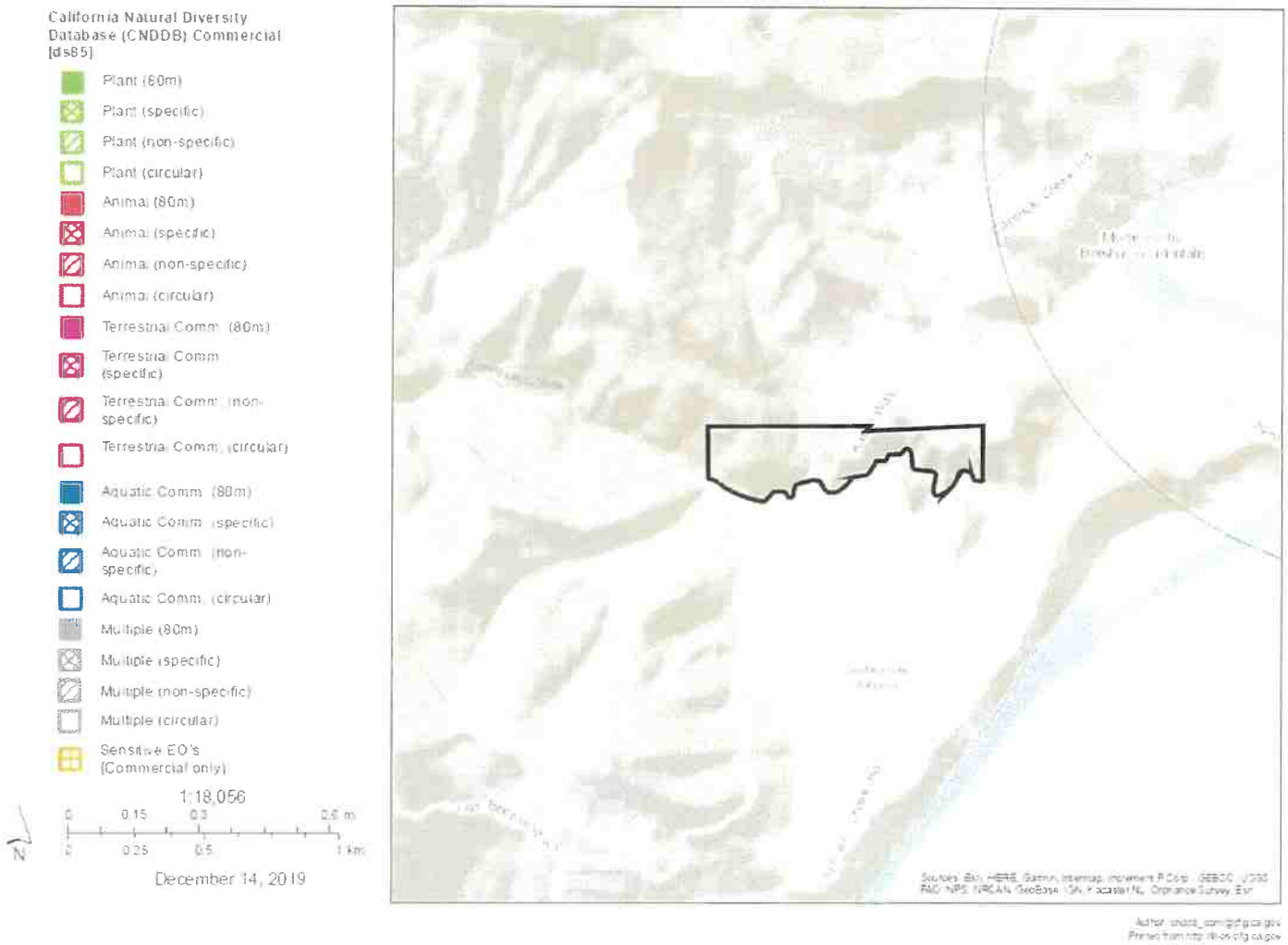
Appendix B

Maps:

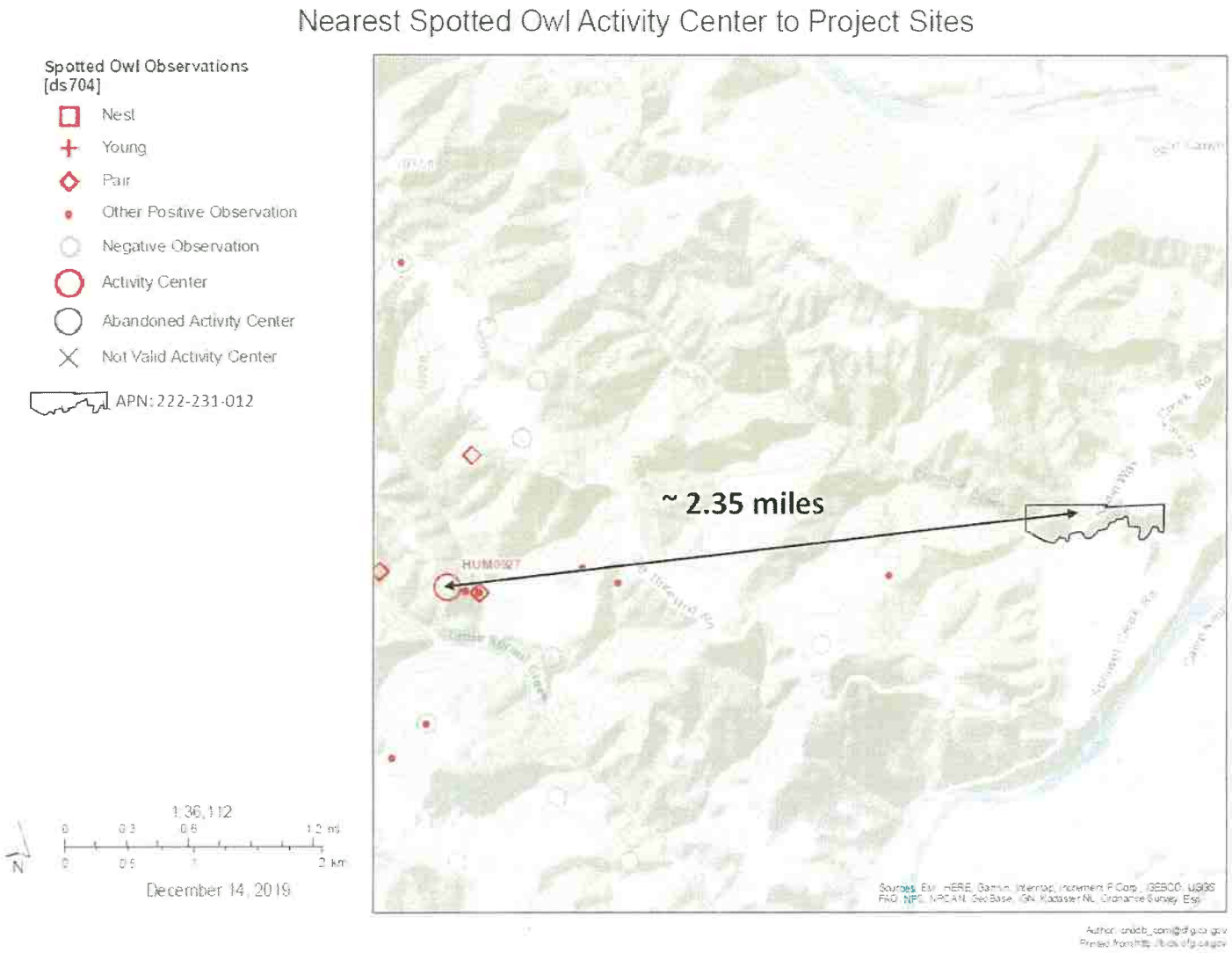
Map 1. The general path taken during the biological survey and site visit investigation on December 15th, 2019. (This is not a boundary survey, property lines shown here are approximated and taken from Humboldt County Web GIS)

Map 2. The parcel showing the approximate locations of proposed cultivation sites, location of the Class I and Class II watercourses on the parcel and yellow arrows showing how the location of the proposed Site 1 is adequately setback from these watercourses. Only project Site 1 *has had preexisting cultivation, but both* Site 1 *and* 2 *have been previously graded and have had a history of cattle grazed at these sites. (This is not a boundary survey, property lines shown here are approximated and taken from Humboldt County Web GIS)*

APN: 222-231-012 Surrounding Sensitive Species Occurrences



Map 3. The parcel with the surrounding area showing occurrence of observed sensitive species.



Map 4. Distances from project site to the nearest Spotted Owl Activity Centers.

Appendix C

Table 1 – Special Status Animal Species – December 2019 – APN 212-016-014, 212-015-033 &220-312-029 – Miranda and surrounding 7.5 min quadrangles

Scientific Name	Common Name	Federal Status	State Status	CDFW Status	Habitats	Potential of Occurrence
Ascaphus truei	Pacific tailed frog	None	None	SSC	Inhabits cold, clear, permanent rocky streams in wet forests. They do not inhabit ponds or lakes. A rocky streambed is necessary for protective cover for adults, eggs, and larvae. After heavy rains, adults may be found in the woods away from the stream.	None
Rana boylii	foothill yellow-legged frog	None	Candidate Threatened	SSC	found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valleyfoothill 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.
Rhyacotriton variegatus	southern torrent salamander	None	None	SSC	This species occurs in cold, well-shaded permanent streams and seepages in shady coastal forests.	None in project site. Low in adjacent area.
Taricha rivularis	red-bellied newt	None	None	SSC	Broadleaved upland forest North coast coniferous forest Redwood Riparian forest Riparian woodlandLives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	None in project site. Low in adjacent area.
Accipiter cooperii	Cooper's hawk	None	None	WL	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.
Aquila chrysaetos	golden eagle	None	None	FP ; WL	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.
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	FP	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.
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	FP	Breeds near wetlands, lakes, rivers, or other water on high cliffs, banks, dunes, mounds. Nest is a scrape on a depression or ledge in an open	Moderate in project site (flyover).

					site. Will nest on human-made structures, and occasionally uses tree or snag cavities or old nests of other raptors.	Moderate/high in adjacent area.
Pandion haliaetus	osprey	None	None	WL	Riparian forest. Ocean shore, bays, lakes and larger freshwater streams.	Moderate in project site (flyover). Moderate in adjacent area.
Pelecanus occidentalis californicus	California brown pelican	Delisted	Delisted	FP	Coastal areas, with nesting occurring on islands. Species found occasionally along Arizona's lakes and rivers.	Low in project site (flyover). None in adjacent area.
Psiloscops flammeolus	flammulated owl	None	None	-	Need montane forests with some understory brush for breeding. In California the breeding range is closely associated with the presence of ponderosa pine and Jeffery pine.	None in project site (flyover). Low in adjacent area.
Strix occidentalis caurina	Northern Spotted Owl	Threatened	Threatened	-	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).	Low in project site (flyover). Low in adjacent area.
Empidonax traillii brewsteri	little willow flycatcher	None	Endangered	-	Mountain meadows and riparian habitats in the Sierra Nevada and Cascades. Nests near the edges of vegetation clumps and near streams.	low in project site (flyover). Low in adjacent area.
Pacifastacus leniusculus klamathensis	Klamath crayfish	None	None	-	Seek shelter in rocky crevices or woody debris within streambeds and littoral zones (Holdich and Lowery 1988). The signal crayfish is considered a non-burrowing crayfish (Shimizu and Goldman 1983), although they are known to construct shallow borrows.	None
Entosphenus tridentatus	Pacific lamprey	None	None	SSC	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	-	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	Threatened	None	-	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None

Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	None	None	SSC	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	Threatened	None	-	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None
Bombus caliginosus	obscure bumble bee	None	None	-	nests underground or above ground in abandoned bird nests. food plants include Baccharis, Cirsium, Lupinus, Lotus, Grindella, Phacella	Low in project site. Moderate/high in adjacent area.
Bombus occidentalis	western bumble bee	None	None	-	Pollinates a wide variety of flowers, nests in cavities or abandoned burrows	Moderate in project site. Moderate in adjacent area.
Erethizon dorsatum	North American porcupine	None	None	-	broadleaf upland forest, cismontane woodland, lower and upper montane conifer forest	Moderate in project site. Moderate in adjacent area.
Arborimus pomo	Sonoma tree vole	None	None	SSC	Occurs in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood- conifer habitats.	low in project site. Moderate in adjacent area.
Pekania pennanti	fisher - West Coast DPS	None	Threatened	SSC	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/high in adjacent area.
Antrozous pallidus	pallid bat	None	None	SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Low in project site. Moderate/high in adjacent area.
Myotis evotis	long-eared myotis	None	None	-	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.
Myotis volans	long-legged myotis	None	None	-	Common in woodland and forest habitats above 1200 m (4000 ft). Also forages in chaparral, coastal scrub, Great Basin shrub habitats, and in early successional stages of woodlands and forests.	None due to elevation.
Myotis thysanodes	fringed myotis	None	None	_	Primarily found in desert shrublands, sagebrush-grassland, and woodland habitats consisting of Douglas-fir, Oak, and Pine trees. The fringed myotis typically inhabits elevations of 1,200-2,100 m but has been observed in altitudes as high as 2,850 m in New Mexico.	Low in project site (flyover). Moderate in adjacent area.

Myotis yumanensis	Yuma myotis	None	None	-	Lower and upper montane conifer and riparian forest and woodland	Low in project site. Moderate in adjacent area.
Noyo intersessa	Ten Mile shoulderband	None	None	-	coastal dunes coastal scrub, riparian redwood forest habitats	Low in project site. Moderate in adjacent area.
Margaritifera falcata	western pearlshell	None	None	-	Distribution is headwater capture, where pre-glacial watersheds were cut and reconfigured by glacial advance or retreat. With the western cutthroat being a host species for the larval stage	None in project site. Low in adjacent area.
Anodonta californiensis	California floater	None	None	-	freshwater lakes and slow-moving streams and rivers	None
Emys marmorata	western pond turtle	None	None	SSC	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.

Table 2 – Special Status Plant Species – December 2019 – APN 212-016-014, 212-015-033 &220-312-029 – Miranda and surrounding 7.5 min quadrangles

Scientific Name	Common Name	Federal Status	State Status	CA Rare Plant Rank	Blooming Period	Lifeform	Habitat	Micro Habitat	Elevation	Potential of Occurrence
Usnea longissima	Methuselah's beard lichen	None	None	4.2	NA	fruticose lichen (epiphytic)	Broadleafed 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.
Lomatium engelmannii	Engelmann's lomatium	None	None	4.3	May-Aug	Perennial herb	Serpentinite.	Chaparral. Lower montane coniferous forest. Upper montane coniferous forest	870 - 2740 meters	None due to elevation range.
Erigeron biolettii	streamside daisy	None	None	3	Jun-Oct	perennial herb	Broadleafed upland forest; Cismontane woodland; North Coast coniferous forest	Rocky, mesic	30 - 1100 meters	Low in project area. Moderate in adjacent area.
Erigeron robustior	robust daisy	None	None	4.3	Jun-Jul	perennial herb	Lower montane coniferous forest	Meadows and seeps; sometimes serpentinite	200 - 610 meters	None due to elevation range.
Hemizonia congesta ssp. tracyi	Tracy's tarplant	None	None	4.3	May-Oct	annual herb	Coastal prairie; Lower montane coniferous forest; North Coast coniferous forest	openings, sometimes serpentinite.	120 - 1200 meters	Moderate in project site. Moderate in adjacent area.
Tracyina rostrata	beaked tracyina	None	None	1B.2	May-Jun	annual herb	Chaparral, Cismontane woodland, Valley and foothill grassland	NA	90 - 790 meters	Low in project site. Low in adjacent area.
Arabis mcdonaldiana	McDonald's rockcress	Endangered	Endangered	1B.1	May-Jul	Perennial herb	serpentinite	Lower montane coniferous forest. Upper montane coniferous forest	135 - 1800 meters	Low in project site. Low in adjacent area.
Howellia aquatilis	water howellia	Threatened	None	2B.2	Jun	annual herb (aquatic)	Marshes and swamps	NA	1085 - 1290 meters	None due to elevation range.
Viburnum ellipticum	oval-leaved viburnum	None	None	2B.3	May-Jun	perennial deciduous shrub	Chaparral, Cismontane woodland, Lower montane coniferous forest	NA	215 - 1400 meters	None due to elevation range.
Silene campanulata	Red Mountain catchfly	None	Endangered	4.2	Apr-Jul	Perennial herb	usually serpentinite, rocky	Chaparral. Lower montane coniferous forest	425 - 2085 meters	None due to elevation range.

ssp. campanulata										
Sedum laxum ssp. eastwoodiae	Red Mountain stonecrop	None	None	1B.2	May-Jul	Perennial herb	Serpentinite	Lower montane coniferous forest	600 - 1200 meters	None due to elevation range.
Carex arcta	northern clustered sedge	None	None	2B.2	Jun-Sep	perennial herb	North Coast coniferous forest (mesic)	Bogs and fens	60 - 1400 meters	Low in project site. Moderate in adjacent area.
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	None	None	1B.1	Feb-Apr	perennial evergreen shrub	Rocky, often serpentinite	Chaparral, Lower montane coniferous forest	450 - 1035 meters	None due to elevation range.
Astragalus agnicidus	Humboldt County milk-vetch	None	Endangered	1B.1	Apr-Sep	perennial herb	Broadleafed upland forest; North Coast coniferous forest	openings, disturbed areas, sometimes roadsides.	120 - 800 meters	Moderate in project site. Moderate in adjacent area.
Astragalus rattanii var. rattanii	Rattan's milk-vetch	None	None	4.3	Apr-Jul	Perennial herb	gravelly streambanks	Chaparral, Cismontane woodland, Lower montane coniferous forest	30 - 825 meters	Low in project site. Moderate in adjacent area.
Hosackia gracilis	harlequin lotus	None	None	4.2	Mar-Jul	perennial rhizomatous herb	Wetlands, roadsides	Broadleafed upland forest, coastal bluff srub.	0 – 700 meters	Low in project site. Moderate in adjacent area.
Gentiana setigera	Mendocino gentian	None	None	1B.2	(Apr-Jul)Aug-Sep	perennial herb	mesic	Lower montane coniferous forest. Meadows and seeps	335 - 1065 meters	None due to elevation range.
Lycopus uniflorus	northern bugleweed	None	None	4.3	Mar-Apr	perennial deciduous shrub	Broadleafed upland forest; Cismontane woodland; Lower montane coniferous forest; Upper montane coniferous forest	NA	120 - 2300 meters	Low in project site. Moderate in adjacent area.
Erythronium citrinum var. citrinum	lemon-colored fawn lily	None	None	4.3	Mar-May	perennial bulbiferous herb	Serpentinite	Chaparral, lower montane coniferous forest	150 - 1300 meters	Low in project site. Low in adjacent area.
Erythronium oregonum	giant fawn lily	None	None	2B.2	Mar-Jun	perennial bulbiferous herb	Cismontane woodland	sometimes serpentinite, rocky, openings; Meadows and seeps	100 - 1150 meters	Low in project site. Moderate in adjacent area.
Erythronium revolutum	coast fawn lily	None	None	2B.2	Mar-Jul(Aug)	perennial bulbiferous herb	Mesic, streambanks	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	0 - 1600 meters	Low in project site. Moderate in adjacent area.

Lilium rubescens	redwood lily	None	None	4.2	Apr-Aug	perennial bulbiferous herb	Broadleafed upland forest; Chaparral; Lower montane coniferous forest; North Coast coniferous forest; Upper montane coniferous forest	Sometimes serpentinite, sometimes roadsides.	30 - 1910 meters	Low in project site. Moderate in adjacent area.
Sidalcea malachroides	maple-leaved checkerbloom	None	None	4.2	Apr-Aug	perennial herb	Broadleafed upland forest; Coastal prairie; Coastal scrub; North Coast coniferous forest; Riparian woodland	Often in disturbed areas.	0 - 730 meters	Moderate in project site. High in adjacent area.
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	None	None	1B.2	May-Aug	perennial rhizomatous herb	Coastal bluff scrub; Coastal prairie; North Coast coniferous forest	often roadcuts.	15 - 880 meters	Low in project site. Moderate in adjacent area.
Pityopus californicus	California pinefoot	None	None	4.2	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.
Montia howellii	Howell's montia	None	None	2B.2	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.
Epilobium septentrionale	Humboldt County fuchsia	None	None	4.3	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.
Cypripedium californicum	California lady's-slipper	None	None	4.2	Apr-Aug(Sep)	perennial rhizomatous herb	seeps and streambanks, usually serpentinite.	Bogs and fens. Lower montane coniferous forest	30 - 2750 meters	Low in project site. Low in adjacent area.
Listera cordata	heart-leaved twayblade	None	None	4.2	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.
Piperia candida	white-flowered rein orchid	None	None	1B.2	May-Sep	perennial herb	Broadleafed upland forest; Lower montane coniferous forest; North Coast coniferous forest	sometimes serpentinite	30 - 1310 meters	Low in project site. Low in adjacent area.
Castilleja litoralis	Oregon coast paintbrush	None	None	2B.2	Jun-Jul	perennial herb (hemiparasitic)	sandy	Coastal bluff scrub, Coastal dunes, Coastal scrub	15 - 100 meters	Low in project site. Low in adjacent area.

Castilleja mendocinensis	Mendocino Coast paintbrush	None	None	1B.2	Apr-Aug	perennial herb (hemiparasitic)	NA	Coastal bluff scrub, Closed-cone coniferous forest, Coastal dunes, Coastal prairie, Coastal scrub	0 - 160 meters	Low in project site. Low in adjacent area.
Kopsiopsis hookeri	small groundcone	None	None	2B.3	Apr-Aug	perennial rhizomatous herb (parasitic)	North Coast coniferous forest	NA	90 - 885 meters	Low in project site. Moderate in adjacent area.
Calamagrostis bolanderi	Bolander's reed grass	None	None	4.2	May-Aug	perennial rhizomatous herb	mesic	Bogs and fens, Broadleafed upland forest	0 - 455 meters	Low in project site. Low in adjacent area.
Calamagrostis foliosa	leafy reed grass	None	None	4.2	May-Sep	perennial herb	rocky	Coastal bluff scrub. North Coast coniferous forest	0 - 1220 meters	Low in project site. Low in adjacent area.
Gilia capitata ssp. pacifica	Pacific gilia	None	None	1B.2	Apr-Aug	annual herb	Coastal bluff scrub; Chaparral (openings); Coastal prairie; Valley and foothill grassland	NA	5 - 1665 meters	Moderate in project site. Moderate in adjacent area.
Leptosiphon acicularis	bristly leptosiphon	None	None	4.2	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.
Leptosiphon latisectus	broad-lobed leptosiphon	None	None	4.3	Mar-May	perennial rhizomatous herb	Meadows and seeps; North Coast coniferous forest (streambanks)	Riparian; mesic	0 - 1000 meters	Low in project site. Moderate
Leptosiphon rattanii	Rattan's leptosiphon	None	None	4.3	May-Jul	Annual herb	rocky or gravelly	Cismontane woodland. Lower montane coniferous forest	1700 - 2000 meters	None due to elevation range.
Eriogonum kelloggii	Kellogg's buckwheat	None	Endangered	1B.2	(May)Jun-Aug	Perennial herb	rocky, serpentinite	Lower montane coniferous forest	579 - 1250 meters	None due to elevation range.
Coptis laciniata	Oregon goldthread	None	None	4.2	(Feb)Mar-May(Sep-Nov)	perennial rhizomatous herb	Mesic.	Meadows and seeps, North Coast coniferous forest (streambanks)	0 - 1000 meters	Low in project site. Moderate in adjacent area.
Ceanothus foliosus var. vineatus	Vine Hill ceanothus	None	None	1B.1	Mar-May	perennial evergreen shrub	Chaparral	NA	45 - 305 meters	Moderate in project site. Moderate in adjacent area.

Ceanothus gloriosus var. exaltatus	glory brush	None	None	4.3	Mar-Jun(Aug)	perennial evergreen shrub	Chaparral	NA	30 - 610 meters	Low in project site. Low in adjacent area.
Mitellastra caulescens	leafy-stemmed mitrewort	None	None	4.2	Apr-Oct	perennial rhizomatous herb	Broadleafed upland forest; Lower montane coniferous forest; Meadows and seeps; North Coast coniferous forest	mesic, sometimes roadsides.	5 - 1700 meters	Low in project site. Moderate 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 range (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** (trimonial) – 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 1 – For nearest Spotted Owl Activity Centers

Data Version Date
11/25/2019

Report Generation Date
12/14/2019

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

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

M_09N_20E Sections(05,06),

M_09N_01E Sections(12),

M_09N_19E Sections(01,02,03,04,05,06),

M_09N_07E Sections(11,12),

M_09N_13W Sections(22,23,24),

M_09N_12W Sections(19),

M_09N_06W Sections(13),

M_09N_02E Sections(07,08,09,10,11,12),

M_09N_04W Sections(16,17,18),

M_09N_08E Sections(07,08,09,10,11,12),

M_09N_18E Sections(01,02,03,04,05,06),

M_09N_09E Sections(07,08,09,10,11,12),

M_09N_10E Sections(07,08,09,10,11,12),

M_09N_11W Sections(19,20,21,22,23,24),

M_09N_03E Sections(07,08,09,10),

M_09N_13E Sections(07,08,09,10,11),

M_09N_10W Sections(19,20),

M_09N_11E Sections(07,08,09),

S_14N_03E Sections(30),

S_14N_01E Sections(28),

S_13N_13E Sections(34),

Page 1

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
						S_13N_08E Sections(27);					
						M_31S_33E Sections(14);					
						S_03N_13W Sections(23);					
						S_03N_08W Sections(34);					

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
Masterowl: HUM0927 Subspecies: NORTHERN											
POS	1995-04-11	2400	1	UM				40.079016	-123.863697	H 04S 03E 29	Contributor
POS	1997		2	UMUF	Y			40.095209	-123.858096	H 04S 03E 21	Quarter-section centroid
NEG	1998	2400	0					40.075749	-123.872129	H 04S 03E 32	Contributor
NEG	1998	2400	0					40.074711	-123.865067	H 04S 03E 32	Contributor
POS	1998-03-18	0035	1	UM				40.087537	-123.867219	H 04S 03E 29	Quarter-section centroid
POS	1998-03-19	0027	1	UM				40.087537	-123.867219	H 04S 03E 29	Quarter-section centroid
POS	1998-03-19	0811	2	UMUF	Y			40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
POS	1998-04-14	2315	1	UM				40.087942	-123.858553	H 04S 03E 28	Contributor
NEG	1998-04-15	2109-2119	0					40.089259	-123.871879	H 04S 03E 29	Contributor
NEG	1998-05-06		0					40.084439	-123.852471	H 04S 03E 28	Section centroid
NEG	1998-05-18		0					40.084439	-123.852471	H 04S 03E 28	Section centroid
AC	1998-05-18		2	UMUF	Y	Y		40.088160	-123.859767	H 04S 03E 28	Contributor
POS	1998-05-18	1906	2	UMUF	Y			40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
NEG	1998-08-06		0					40.088608	-123.858659	H 04S 03E 28	Section centroid
NEG	1999	2400	0					40.089259	-123.871879	H 04S 03E 29	Contributor
NEG	1999	2400	0					40.080843	-123.861270	H 04S 03E 28	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	1999	2400	0					40.084348	-123.869754	H 04S 03E 29	Contributor
NEG	1999	2400	0					40.074711	-123.865067	H 04S 03E 32	Contributor
NEG	1999	2400	0					40.075749	-123.872129	H 04S 03E 32	Contributor
NEG	1999	2400	0					40.076889	-123.852139	H 04S 03E 33	Contributor
NEG	1999-03-20	2245-2255	0					40.080843	-123.861270	H 04S 03E 28	Contributor
NEG	1999-03-20	2302-2312	0					40.084043	-123.869231	H 04S 03E 29	Contributor
NEG	1999-03-29		0					40.084439	-123.852471	H 04S 03E 28	Section centroid
NEG	1999-04-10		0					40.084439	-123.852471	H 04S 03E 28	Section centroid
NEG	1999-04-25		0					40.084439	-123.852471	H 04S 03E 28	Section centroid
NEG	1999-05-10		0					40.084439	-123.852471	H 04S 03E 28	Section centroid
POS	1999-05-27		2	UMUF	Y			40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
POS	1999-05-27	1802	2	AMAF	Y			40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
NEG	1999-06-01		0					40.084439	-123.852471	H 04S 03E 28	Section centroid
NEG	1999-06-09	2055-2105	0					40.080843	-123.861270	H 04S 03E 28	Contributor
NEG	1999-06-09	2110-2120	0					40.084043	-123.869231	H 04S 03E 29	Contributor
NEG	1999-06-10	2053	0					40.099180	-123.853559	H 04S 03E 21	Section centroid
POS	1999-06-18	1836	2	AMAF	Y			40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	1999-06-18		2	UMUF	Y			40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
NEG	1999-06-25	0330	0					40.099180	-123.853559	H 04S 03E 21	Section centroid
NEG	1999-07-08	2053	0					40.099180	-123.853559	H 04S 03E 21	Section centroid
POS	1999-07-13	2156-2208	1	UF				40.080843	-123.861270	H 04S 03E 28	Contributor
POS	1999-07-13	2216-2226	2	UMUF	Y			40.084043	-123.869231	H 04S 03E 29	Contributor
NEG	1999-07-19	2045	0					40.099180	-123.853559	H 04S 03E 21	Section centroid
NEG	2000	2400	0					40.076889	-123.852139	H 04S 03E 33	Contributor
NEG	2000	2400	0					40.089259	-123.871879	H 04S 03E 29	Contributor
NEG	2000	2400	0					40.080843	-123.861270	H 04S 03E 28	Contributor
NEG	2000	2400	0					40.074711	-123.865067	H 04S 03E 32	Contributor
NEG	2000	2400	0					40.084348	-123.869754	H 04S 03E 29	Contributor
NEG	2000	2400	0					40.075749	-123.872129	H 04S 03E 32	Contributor
NEG	2000-03-17		0					40.084439	-123.852471	H 04S 03E 28	Section centroid
POS	2000-03-20	1730	2	AMUF	Y			40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
NEG	2000-03-30		0					40.084439	-123.852471	H 04S 03E 28	Section centroid
POS	2000-05-05	2000	1	UF				40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
NEG	2000-05-06		0					40.084439	-123.852471	H 04S 03E 28	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	2000-05-15	0344	1	UM				40.088419	-123.847876	H 04S 03E 28	Quarter-section centroid
POS	2000-06-03	1930	2	AMUF	Y			40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
NEG	2001-03-02	1944	0					40.083863	-123.871712	H 04S 03E 29	Section centroid
NEG	2001-03-06	1821	0					40.083863	-123.871712	H 04S 03E 29	Section centroid
NEG	2001-03-14	1930	0					40.083863	-123.871712	H 04S 03E 29	Section centroid
NEG	2001-05-11	2122	0					40.083863	-123.871712	H 04S 03E 29	Section centroid
POS	2001-05-29	2115	1	UM				40.087446	-123.876848	H 04S 03E 29	Quarter-section centroid
NEG	2001-05-30	1910	0					40.083863	-123.871712	H 04S 03E 29	Section centroid
POS	2001-06-15	2159	1	UM				40.087537	-123.867219	H 04S 03E 29	Quarter-section centroid
POS	2001-06-16	1934	1	UM				40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
POS	2001-06-16	1934	1	UU				40.087861	-123.857546	H 04S 03E 28	Quarter-section centroid
POS	2012-04-24	2158	1	UM				40.089155	-123.850328	H 04S 03E 28	Contributor
NEG	2013	2400	0					40.084043	-123.869231	H 04S 03E 29	Contributor
POS	2013-07-18	1828	2	AMAF	Y			40.088987	-123.864535	H 04S 03E 29	Contributor
NEG	2014	2400	0					40.102031	-123.857013	H 04S 03E 21	Contributor
NEG	2014	2400	0					40.095072	-123.871207	H 04S 03E 20	Contributor
NEG	2014	2400	0					40.096127	-123.854604	H 04S 03E 21	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2014	2400	0					40.100555	-123.867307	H 04S 03E 20	Contributor
NEG	2014-03-06	1502-1702	0					40.094837	-123.867813	H 04S 03E 20	Quarter-section centroid
Positive Spotted Owl detections not associated with a known Activity Center Subspecies: NORTHERN											
POS	2013-07-17	2256	1	UM				40.105516	-123.873942	H 04S 03E 20	Contributor
POS	2013-07-29	2128	1	UM				40.105431	-123.863065	H 04S 03E 21	Contributor
Additional surveys within the search area with no Spotted Owls detected											
NEG	1998	2400	0					40.079727	-123.874800	H 04S 03E 29	Contributor
NEG	1999	2400	0					40.079727	-123.874800	H 04S 03E 29	Contributor
NEG	2000	2400	0					40.079727	-123.874800	H 04S 03E 29	Contributor
NEG	2014	2400	0					40.105431	-123.863065	H 04S 03E 21	Contributor
NEG	2014	2400	0					40.105516	-123.873942	H 04S 03E 20	Contributor