BIOLOGICAL RESOURCE ASSESSMENT REPORT

Assessor Parcel Numbers (APN):

208 – 271 – 002

Prepared For:

Trichome Acres, LLC

002 Anderson Ford Rd
Dinsmore, CA 95526

Prepared By:

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Date Prepared:

November 18th, 2020

Certification: I hereby certify that the statements furnished in this report present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

X _____.

Mason London, MS Biology

Naiad Biological Consulting Principal Biologist

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Section 1 Summary of Findings and Conclusions

A Biological Resource Assessment was completed for Trichome Acres, LLC as a measure to investigate the impacts of cannabis cultivation within the established Study Area.

The Study Area defined in this Report is located outside of Dinsmore, California in Humboldt County. Although the seasonal timing of the field visit did not fall within the blooming period of all rare and special-status plant species, the preexisting habitat quality observed within the areas of current project activities and the habitat observed suggests it unlikely that special-status plant species, not in bloom during the field survey, are present within the project site locations, or would be negatively impacted by the project. No sensitive or special-status vegetation was observed during the site visit nor will be removed within the project area.

The current cultivation site (post-2017), described further in this Report, was found to be environmentally superior to the previously cultivated decommissioned site (pre-2017), due to this proximity to a sensitive habitat (a Class III watercourse).

With the proposed recommendations observed, the current project operations are not anticipated to cause any major 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 Resource Assessment (BRA) Report has been prepared by request from the client. This BRA describes the findings from a biological assessment, which in the case of this document is an initial reconnaissance survey to assess potential biological resource and present habitat. This BRA has been prepared as a preliminary measure to investigate the impacts of the current cannabis cultivation operation over one (1) parcel, referred to throughout this Report as the Study Area.

This BRA also addresses the notices presented from the County of Humboldt Planning and Building Department to Trichome Acres, LLC, which states that "[t]here is habitat for rare or endangered species within the project site and on-site relocation has occurred; therefore, a biological survey report prepared by a qualified biologist for all existing and proposed development is required. The minimum requirements of the report are:

- A review of relevant databases, literature, etc. regarding possible present species, for both animals and plants,
- A review of the site-specific conditions as to the likelihood of hosting habitat for species, and
- If habitat is present, completion of protocol level surveys."

A biological assessment, as defined by the United States Fish and Wildlife Service's (USFWS), is "information prepared by a qualified biologist to determine whether a proposed action is likely to: (1) adversely affect listed species or designated critical habitat; (2) jeopardize the continued existence of a species that are proposed for listing; or (3) adversely modify proposed critical habitat. A biological assessment is a specific document required under Section 7 of the Federal Endangered Species Act (FESA) when project actions have the potential to result in "may affect" determination," (USFWS: Endangered Species Glossary, 2020).

This BRA includes a professional analysis of the environmental superiority of the relocated cultivation site in comparison to the decommissioned cultivated site.

This BRA reports on the investigation and findings of the biological resource and habitat quality on the parcel and the environmental superiority of the relocation cultivation site in relation to the findings from the biological resource assessment survey. This BRA therefore addresses the status and possible utilization of the project site by special-status plant and animal species found within the region, and assesses the environmental impacts to these resources in association to the cultivation of cannabis within the defined project site locations. Special-status species, both plant and animal, include all state or federal rare, threatened, and/or endangered species and all species listed in the California Natural Diversity Database (CNDDB) list of *Special-Status Plants, Animals and Natural Communities*.

The locations and presence of potential wetland features and other sensitive habitats, within the Study Area assessed in this BRA, were identified and mapped in order to determine adequate setbacks for preexisting

cannabis cultivation to occur. This was done as a measure to address the environmental superiority of the relocated cultivation site compared to the decommissioned cannabis cultivation site within the Study Area.

This document has been prepared in accordance with legal requirements set forth under Section 7 of the Federal Endangered Species Act (FESA) (16 U.S. Code § 1536) subsection (c). Under this subsection (c), it is stated that "…based on the best scientific and commercial data available, that such species [which are listed or proposed to be listed] may be present, such agency shall conduct a biological assessment for the purpose of identifying any endangered species or threatened species which is likely to be affected by such action. Such assessments shall be completed … before any contract for construction is entered into and before construction is begun with respect to such action."[1]

2.2 Biologist's Qualifications

The BRA for this Report was conducted by Mason London. Mason is the primary biological consultant of Naiad Biological Consulting. Mason holds a Master of Science Degree in Biology with a concentration in aquatic ecology from Humboldt State University. Mason has 11 years of experience working professionally as a botanist, wildlife biologist, aquatic ecological research scientist, and has instructed ecological field and classroom courses at the university level.

2.3 Study Area Description and Geographic Setting

This Report summarizes the results of a reconnaissance level survey, which assessed the Study Area for: (1) the potential to support special-status species; and (2) the potential presence of sensitive biological communities such as wetlands, riparian habitats and other sensitive biological resources protected by local, state, and federal laws and regulations. Site observations relating to the presence of such special-status species or sensitive habitats may require that further protocol-level surveys be conducted.

The BRA considers the potentially occurring species and communities that could be affected by cannabis cultivation within one (1) parcel, based on available spatial data, habitat requirements, and observations made during a single site visit. The parcel was evaluated for potential habitat value to protect endangered, threatened, rare, and sensitive species by traversing the Study Area on foot to observe special-status species as well as overall habitat quality and habitat modification. In this regard, habitat quality directly relates to the distribution of individuals in space and influences the potential for resource acquisition. Habitat modification, both positive and/or negative, refers to the changes in habitat quality, which can induce changes in species acquisition of resources. Other proposed project related aspects, such as irrigation source, site location and cultivation methods were assessed in terms of ecological and biological impact.

The parcel assessed for the feasibility of cannabis cultivation, referred to as the Study Area, in this Report is Assessor's Parcel Number (APN): 208-271-002 (Map 1 & Map 2).

[1] **Section 7 of the Federal Endangered Species Act (FESA) (16 U.S. Code § 1536) subsection (c):** https://www.fws.gov/endangered/laws-policies/section-7.html

APN: 218-031-008 is 40.00 acres (per Humboldt WebGIS) with a high elevation of approximately 3300 ft (approx. 1005 meters) and a low elevation of approximately 2970 ft (approx. 905 meters) (Google Earth Pro, 2020). This parcel is located in Section 32, Township 2 North, Range 5 East (S32, T2N, R5E) of the Humboldt Base and Meridian (HBM).

The approximate center location of the Study Area is located approximately 2.30 air miles northwest of Dinsmore, California in Humboldt County (Map 1). The Study Area occurs in the Showers Mtn. 7.5-minute United States Geological Survey (USGS) quadrangle (Quad code: 4012356) within the Mad River watershed. The Mad River is a coastal river draining into the Pacific Ocean approximately 40.00 air miles northwest of the center location of the parcel (CDFW Region: 1). The county road, Anderson Ford Rd, bisections the western portion of the parcel (Map 2). The center location of the Study Area is 40°30'52.5"N 123°38'04.6"W. The parcel is zoned as Forestry Recreation (FR) which allows the parcel to be utilized for "[g]neral agricultural, nurseries and greenhouses…"[2](Humboldt County Code Zoning Regulations: Title III Land Use and Development - *Section 314-7.3*). The Current General Plan of Residential Agriculture (RA) which allowable uses include "general agriculture" and "intensive agriculture"[3] (2017 Humboldt County General Plan, 2017).

[2] **Humboldt County Code – Zoning Regulations:** https: //humboldtgov.org/DocumentCenter/View/4029/Humboldt-County-Zoning-Regulations-PDF?bidId=
[3] **Humboldt County General Plan:** https: //humboldtgov.org/DocumentCenter/View/62021/Section-48-Land-Use-Designations-PDF?bidId=

Section 3 Methods

3.1 Pre-Site Visit Data Compilation and Preparation

A list of special-status plant and animal species considered to have potential presents within the Study Area was downloaded from the California Department of Fish and Wildlife's California Natural Diversity Database Biogeographic Information and Observation System (CNDDB BIOS)(CDFW, 2020), the United State Fish and Wildlife Service Information for Planning and Conservation (IPaC, USFWS 2020) and Calflora Project (Calflora, 2020) for the USGS Showers Mtn. 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 Showers Mtn. quadrangle, and the eight (8) adjacent quadrangles, resulted in thirty nine (39) special-status animal species (4 amphibians, 10 birds, 7 fishes, 2 insect, 13 mammals, 2 mollusks, 1 reptile) (Table 1), sixty (60) special-status plant (3 bryophytes, 1 lichen, 56 vascular) (Table 2) and two (2) special-status habitat communities (North Central Coast Summer Steelhead Stream and Upland Douglas Fir Forest).

3.2 Biological Resource and Habitat Investigation

A biological resource and habitat investigation was conducted within the Study Area between 1200 and 1400 on October 15, 2020 by Mason London (Map 3). The weather was sunny and clear.

The goal of the investigation and field survey was to determine suitable habitat for special-status species, and therefore potential impact to these species, within the Study Area. Impact to potentially occurring special-status species was assessed based on the likelihood for the project, and project related activities, to result in *take*, or *incidental take*, of the previously mentioned species (Table 1). The Federal Endangered Species Act (FESA) definitions *take* as any action that will "…[h]arass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 U.S.C., §1532 (19)). Whereas *harass* is defined as "[a]n intentional or negligent act or omission which *creates the likelihood of injury* to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns (e.g., breeding, feeding, or sheltering)" (16 U.S.C., §1532 (20); 50 C.F.R. § 17.3) and *harm* is defined as "[a]n act which actually kills or injures wildlife. May include significant habitat modification or degradation that kills or injures wildlife by significantly impairing essential behavior patterns," (U.S.C., §1532 (20); 50 C.F.R. § 17.3.). Based on these impact assessment parameters, the Study Area habitat and habitat characteristics, as well as the surrounding area, was investigated.

The goal of the investigation was not to conduct a complete botanical field survey for special-status plants species, but rather a focused survey to determine suitable habitat for potential species within the habitats present within the Study Area, and document any of these species' occurrences. A focused survey is an on-site survey that is limited in scope, content, length and designed to gather information on a specific issue(s). Because of the CNDDB generated list of focal special-status species targeted for this survey (Table 2), the habitats of potential

likelihood of occurrence were surveyed based on predetermined features. Only habitats that were determined to be potentially impacted by the project were investigated for the presence of the focal special-status species. Therefore, a meandering, or wandering transect, approach to the survey was implemented in order to cover all habitats that could potentially harbor the listed species currently in bloom (Map 3). The scope of this survey was limited as a result of the cultivation locations being preestablished sites and therefore any disturbance associated with the project is preexisting and will likely cause no further harm to any plant communities. All habitats encountered on the meandering transect were surveyed for likely special-status species occurrence (Map 3). Since the focused survey targeted special-status species, not all species encountered were documented. The focused survey conducted within the Study Area is not an official protocol-level botanical survey.

A similar approach to assessing potential occurrences of special-status animal species was taken during the meandering survey throughout the Study Area (Map 3). All major habitats within the parcels were investigated in order to determine current quality in context of species acquisition. The assessment of animal habitat within the Study Area is not an official protocol-level survey. Specific wildlife surveys may be recommended if future project development or infrastructure enhancement occurs.

Dominant species in surrounding habitats, presence of sensitive habitats such as riparian areas and potential wetland features, and project site setbacks from watercourses were observed and recorded. A TruPulse 200X laser rangefinder was used to make all of the distance and slope measurements and for determining adequate setbacks in the field. True buffers and setbacks, used in all of the maps associated with this Report were generated with GIS software out of the field.

3.2.1 Wetland Determination

Prior to the site investigation, the Study Area was assessed for the presence of wetlands utilizing several digital databases and resources including but not limited to the USFWS National Wetland Inventory (NWI), NRCS Web Soil Survey, USGS topographic maps, and inundation or saturation visible on aerial imagery.

No soil test pits were dug for evaluating the presence of hydric soil since other wetland indicators such as hydrophytic vegetation and wetland hydrology were visible during the time of the site visit investigation. However, only potential wetland features surrounding the proposed cultivation sites were targeted. The “err on the side of caution” approach to determining potential wetland habitats was implemented when visually assessing the site and determining setbacks. Field observations of identifiable plant communities were used to assist interpretation of aerial imagery in defining potential wetland areas and their boundaries. A thorough investigation during the spring would be more appropriate for evaluating the presence of wetland hydrology. Test pits for determining hydric soil presence would be recommended for confirming the determinations of potential wetland features within the Study Area. The assessment of potential wetland habitats within the Study Area described in this Report do not represent an official protocol-level delineation.

3.2.2 Occurrence of Special-Status Species

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.

Section 4 Results and Discussion

4.1 Study Area Habitat, Existing Site Conditions and Project Location Feasibility

The main habitats investigated within the Study Area consist of upland mixed hardwood and coniferous forest, a Class II and a Class III watercourses, decommissioned cannabis cultivation site location (pre-2017), which is now an open grassy clearing, and the current cannabis cultivation site (post-2017) (Map 2). These habitats were assessed based on habitat quality parameters in relationship to previous habitat modification. These habitats were also assessed based on the potential to harbor special-status species.

4.1.1 Study Area Habitats and Features

The upland mixed hardwood and coniferous forest habitat that covers the majority of the parcel consist of Douglas fir (*Pseudotsuga menziesii*), bigleaf maple (*Acer macrophyllum*), Western red cedar (*Thuja plicata*), California black oak (*Quercus kelloggii*), Oregon white oak (*Quercus garryana*), canyon live oak (*Quercus chrysolepis*) and elderberry (*Sambucus spp.*) (Photo 1 & 2). The understory of this habitat is dominated by Oregon grape (*Mahonia aquifolium*), Pacific blackberry (*Rubus ursinus*), white bark raspberry (*Rubus leucodermis*), poison oak (*Toxicodendron diversilobum*), ocean spray (*Holodiscus discolor*), wild strawberry (*Fragaria vesca*) and sword fern (*Polystichum munitum*) (Photo 3).

The decommissioned cannabis cultivation site, which was decommissioned in 2017 and relocated to the current cannabis cultivation site, is an open grassy clearing dominated by milky oats (*Avena sativa*), rough dog's-tail (*Cynosurus echinatus*), and patches of bull thistle (*Cirsium vulgare*) (Map 2; Photo 4). This area was cleared and disturbed prior to the clients purchasing the parcel. This site was likely used as a log deck during historic logging operations. Many log decks were created in the flattest area of a forest and many times that meant that watercourses were filled and their banks were excavated do to the more sublet topography of these features. It appears that this was the case at this location because a Class III watercourse begins just above (to the south) of the grassy opening and flows through the western portion of this site, and then down into the mixed hardwood and coniferous forest habitat to the north of this location (Map 2; Photo 5). This location is thus not suitable to cultivating cannabis because the usable space within the site encroaches on the required 50-foot buffer from the banks of this Class III feature (Map 2; Photo 6).

This buffer was established at the top of the bank of the Class III watercourse, which is in accordance with the Humboldt County Streamside Management Ordinance (1995), as amended by the Humboldt County General Plan, which states that the buffer distances are to be "[m]easured as the horizontal distance from the top of the bank or the edge of riparian drip-line, whichever is greater on either side of the stream," and according to the most conservative buffer as required by the California State Water Resource Control Board (Section 1, Requirement 37 of Cannabis Cultivation Policy Attachment A: Definitions and Requirements for Cannabis Cultivation[4]). Since no true riparian corridor habitat exists for this watercourse, the "top of bank" was used to establish these setbacks.

[4] **State Water Resources Control Board: Cannabis Cultivation Policy Principles and Guidelines for Cannabis Cultivation:** https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/policy/final_cannabis_policy_with_attach_a.pdf

According to the *Forest Practice Rules Water Course and Lake Protection Zone*[5] definitions, a Class III watercourse has "[n]o aquatic life present. Capable of sediment transport to a Class I or Class II under normal water flow conditions. Usually flows only in response to storms."

The dominate species identified within the Class III watercourse at this site include the same species observed in the open clearing, but also common rush (*Juncus effusus*) (Photo 6). The client has already relocated the cultivation operation from this site to the current cultivation site which was determined to be environmentally superior to this previous location due to its proximity to watercourses (Map 2).

Since cannabis cultivation has been going on at the current cultivation site since 2017, all disturbed habitat features are considered to be preexisting as the time of the site visit investigation (Map 2; Photo 7). No new activities that have not already occurred over the past four (4) years are anticipated to occur, therefore the habitat quality of this site is reflective of the preexisting habitat modification that as already occurred. It does not appear that any severe alterations (i.e. grading or substantial clearing) to the habitat occurred as part of the development and construction of this cultivation site in 2017 and based on the location and setback to sensitive habitats, such as watercourses, this site appears to have no current negative direct impacts to the surrounding environment, wildlife, or other biological resources. The only potential impact to the surrounding environment would be from noise and/or light pollution created in association with the cultivation methods. A *Light and Noise Assessment* was conducted on September 19, 2020 at the cultivation site by PR Professional Services and determined that the current operation measures are mitigating the potential disturbance to the surrounding environment and that the "…cultivation activities on APN 208-271-002 are anticipated to be in compliance with the Performance Standards set in Humboldt County's CMMLUO Ordinance (No. 2559)," (Appendix E).

An unnamed Class II watercourse identified flows southwest to northeast through the Study Area and runs the entire length of the parcel (Map 2; Photo 8). All water for irrigation for this project is seasonally taken from this stream during the appropriate forbearance period and stored on site (Photo 9). The dominate species identified within the riparian corridor of this unnamed Class II watercourse are canyon live oak (*Quercus chrysolepis*), beaked hazelnut (*Corylus cornuta*), ocean spray (*Holodiscus discolor*), Oregon grape (*Mahonia aquifolium*), snowberry (*Symphoricarpos spp.*) and sword fern (*Polystichum munitum*) (Photo 8). The current cultivation site location is outside of the required 100-foot buffered setback of the Class II watercourse and therefore exists in an appropriate location (Map 2). This buffer was established in accordance with the Humboldt County Streamside Management Ordinance (1995), as amended by the Humboldt County General Plan, and according to the most conservative buffer as required by the California State Water Resource Control Board (Section 1, Requirement 37 of Cannabis Cultivation Policy Attachment A: Definitions and Requirements for Cannabis Cultivation[6]). According to the *Forest Practice Rules Water Course and Lake Protection Zone*[7] definitions, a Class II

[5] **California Code of Regulations, title 14, Chapter 4. Forest Practice Rules, Subchapters 4,5 and 6 Forest District Rules Article 6 Water Course and Lake Protection:** http://carules.elaws.us/code/t.14_d.1.5_ch.4

[6] **State Water Resources Control Board: Cannabis Cultivation Policy Principles and Guidelines for Cannabis Cultivation:** https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/policy/final_cannabis_policy_with_attach_a.pdf

[7] **California Code of Regulations, title 14, Chapter 4. Forest Practice Rules, Subchapters 4,5 and 6 Forest District Rules Article 6 Water Course and Lake Protection:** http://carules.elaws.us/code/t.14_d.1.5_ch.4

watercourse has "[f]ish always or seasonally present within 1,000 feet upstream from a Class I stream, or aquatic habitat for non-fish species (amphibians) [and] may be a seasonal stream."

No special-status species in bloom at the time of the field survey were observed. The previous species mentioned are to describe the general habitat type and habitat quality and the listing of these species does not represent an official protocol-level survey.

4.2 Special-Status Plant Species

Not all previously mentioned habitats within the Study Area were surveyed for special-status plant species with equal effort. The habitats investigated for presence of special-status plant species primarily consist of the habitats that were determined to have the potential to be impacted or disturbed by cannabis cultivation and/or cultivation associated activities. No new development is proposed for this project and therefore there are no foreseeable activities that would cause any further disturbance than has already occurred, eliminating any potential to impact special-status plant species in the future. However, all species derived from the CNDDB list were assessed for potential occurrence within the Study Area, both within the potential project locations, and within the surrounding habitats (Table 2).

A "non-specific" special-status species occurrence for Oregon goldenthread (*Coptis laciniata*) does exist to the north of the parcel (Map 4). This occurrence was reported in May of 1976, with the only location information as "[n]orth of Dinsmore… [b]etter location information needed," (Occurrence Report 1). This occurrence was mapped to encompass 2,602 acres of land which has the similar habitat to the Study Area. Due to the similarity in habitat type of the Study Area, it is moderately to highly likely that *Coptis laciniata* could occur within the parcel boundaries. However, *Coptis laciniata* are found within meadows and seeps of north coast coniferous forests and are particularly found in mesic sites such as moist streambanks. This type of habitat does exist on the parcel, however, the area the project site occurs, and thus the area to have had potential disturbance from this project development, doesn't not have a habitat that fits this species' specific habitat requirements. The habitats that *Coptis laciniata* could be found within the parcel are all protected from the project site due to the adequate buffers from mesic habitats being observed (Map 2). Furthermore, the elevation range of *Coptis laciniata* is 0 to 1000 meters, and the Study Area exists at the highest elevation range that this species could be found in (the project site occurs at approximately 985 meters), making it even more unlikely that this species would occur within any proximity to be impacted by this project. *Coptis laciniata* was not observed during the site visit and it has been determined that the current location of the cannabis cultivation, and the activities associated with this operation, will not cause any harm or take of this species.

Potential habitat for three (3) special-status plant species exists within the current project site based on specific habitat requirements. These species were not observed within the project area during the field survey and even though this focal survey occurred outside of the bloom period for a majority of these species, the preexisting disturbance to this site, and that fact that no new development is proposed, it has been determined that no special-status plant species will be impacted by this project.

The three (3) species, which habitat features of the project could be suitable for, are **Tracy's sanicle (*Sanicula tracyi*)**, **trailing black currant (*Ribes laxiflorum*)**, and **running-pine (*Lycopodium clavatum*)**.

- *Sanicula tracyi* has a moderate potential of occurring within the project site based on this species favoring openings of lower montane coniferous forests and having an elevation range between 100 and 1585 meters. However, the level of disturbance and clearing that has occurred at this project site makes it highly unlikely that this species would be found at this location. Also, given the ongoing activity at this location, it is unlikely that this species would establish within the project site area.
- *Ribes laxiflorum* has a moderate potential of occurring within the project site based on this species being found along roadsides of north coast coniferous forests and having an elevation range between 5 and 1395 meters. However, the level of disturbance and clearing that has occurred at the project site makes it highly unlikely that this species would be found at this location. Also, given the ongoing activity at this location, it is unlikely that this species would establish within the project site area.
- *Lycopodium clavatum* has a moderate potential of occurring within the project site based on it being found on the edges of openings and roadies of both lower montane coniferous forests and north coast coniferous forests and if found between 45 and 1225 meters. However, this species does favor more mesic sites which does not meet the habitat criteria of the project and given the level of disturbance and clearing that has occurred at the project site, it is highly unlikely that this species would be found at this location. Also, given the ongoing activity at this location, it is unlikely that this species would establish within the project site area.

No listed special-status plant species were observed during the field survey. Furthermore, no special-status plant species occurrences have been documented within the Study Area on the CNNDB (Map 4). Based on the findings from this survey, it is unlikely that any special-status species would utilize the current cannabis cultivation site within the Study Area, based on these species' elevation, habitat and micro-habitat requirements, as well as due to the level of preexisting, and current, disturbance within this site.

4.3 Special-Status Animals Species

Not all previously mentioned habitats within the Study Area were surveyed for special-status animal species potential utilization with equal effort. The habitats investigated for presence and habitat requirements of special-status animal species primarily consist of the cultivation site, and therefore these species would have the potential to be impacted by proposed project activities. The surrounding area was also survived for potential habitat and potential acquisition of special-status animals' species, since disturbances such as noise and light pollution would also have the potential to impact these areas and in turn may cause take of a species. However, all species derived from the CNDDB list were assessed for potential occurrence within the Study Area, cultivation site, and within the surrounding habitats (Table 1). It should be noted that no special-status animal species occurrences have been documented within the Study Area based on the CNNDB (Map 4).

The habitat assessed within the cannabis cultivation site is potentially suitable for three (3) special-status animal species. Other special-status species may also exist within this area but would only utilize the cultivation site for hunting/foraging and would otherwise only pass over in flight (Table 1). These species include certain listed

predatory birds, such as Cooper's hawk (*Accipiter cooperii*) and bat/myotis species, such as hoary bat (*Lasiurus cinereus*). These species would not utilize the cultivation site for nesting or shelter due to the void of canopy cover and other structures. Moreover, the noise and light pollution produced from the project site meet the required mitigation standards and therefore there is no foreseeable impact to these species. The remaining three (3) special-status animal species that have the potential to be found within the project site include the Western Bumblebee (*Bombus occidentalis*), the North American porcupine (*Erethizon dorsatum*) and the American badger (*Taxidea taxus*).

- *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 suitable project areas. Due to the project areas habitat quality, and due to the abundant suitable habitat within the Study Area, it is unlikely that there would be a significant loss of nesting habitat as a result of project development. Furthermore, it is unlikely that the project development resulted in a significant decrease in forage material. Since no new development, and therefore disturbance, for this project is proposed, it is not anticipated that the project will negatively impact this species.
- *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 project areas makes it unlikely that this species would utilize open field habitat. Also, the frequent human activity that occurs within the Study Area likely results in *Erethizon dorsatum* not utilizing the site. It is not anticipated that the project will negatively impact this species.
- *Taxidea taxus* is most abundant in drier open stages of most shrub, forest, and herbaceous habitats. *Taxidea taxus* requires sufficient food, friable soils (soils with a crumbly texture) and open, uncultivated ground. This species preys on burrowing rodents and digs burrows. No evidence of *Taxidea taxus*, such as ground disturbance or burrows, was observed during the site visit. The surrounding suitable habitat will not be disturbed in anyway related to proposed project activities and therefore this species is still capable of existing within the Study Area without a negative impact. Furthermore, all noise and light pollution will be mitigated and will therefore not disrupt the nocturnal life history of this species.

4.3.1 Other Special-Status Animal Species

The nearest known **northern spotted owl (*Strix occidentalis caurina*)** Activity Center (HUM0019), according to the most up to date CNDDB Spotted Owl Viewer, is approximately 2.30 air miles northeast of the nearest edge of the Study Area (Map 5; Occurrence Report 2). *Strix occidentalis caurina* 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 habitat of the Study Area is not dominated by this forest type, and is therefore not preferred for nesting or roosting 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),"[8] (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 all activities associated with the cultivation site will mitigate all noise and light pollution, there is no expected disruptions towards essential breeding activities or any activates that may injure or harm this species, or any other species, related to this project.

4.4 Special Status Habitat Communities

The two (2) special-status habitat communities identified in the CNDDB BIOS search in the 7.5-minute USGS Shower Mtn. quadrangle, and the 8 adjacent quadrangles, are the North Central Coast Summer Steelhead Stream and Upland Douglas Fir Forest habitat.

The recorded North Central Coast Summer Steelhead Stream habitat within the quad search exists within the Van Duzen River watershed and the nearest edge of this recorded habitat feature is approximately 2.00 airmiles southwest of the Study Area. The Study Area's watercourses do not flow into this watershed and the watercourses on the parcel do not meet the habitat requirements to support summer steelhead. Furthermore, the project site location is in accordance with the required buffered distance from these watercourses. The State Water Resource Control Board: Cannabis Cultivation Policy Attachment A: Definitions and Requirements for Cannabis Cultivation, 2019, Definition 82 for "Riparian Setback" states that these setbacks are "established to protect water quality and/or aquatic life." Since the project site is outside of the required setback from these habitats, it is not expected that this project would impact special-status aquatic species, or their habitat, in anyway.

The other special-status habitat community identified on the CNDDB BIOS is **Upland Douglas Fir Forest** which has a nearest documented occurrence of approximately 8.00 air miles south to southwest of the Study Area. All of the occurrence reports that identify this habitat throughout California describe, in the *Ecological Comments* section, Douglas fir individuals in this community are either "mature" or "old-growth." No Douglas fir individuals on the property fit this description. Furthermore, according to the California Native Plant Society (CNPS), a Douglas fir forest is comprised of "*Pseudotsuga menziesii* > 50% relative cover in the tree canopy and reproducing successfully, though hardwoods may dominate or co-dominate in the subcanopy and regeneration layer; *Abies concolor*, *Chamaecyparis lawsoniana*, *Pinus contorta*, *P. ponderosa*, and *Sequoia sempervirens* <20% relative cover; and *Notholithocarpus densiflorus* <10% relative cover in the tree canopy" (Jimerson et al. 1996). This habitat description was not observed on the parcel, and given the proposed cultivation methods associated with this project, there are no anticipate impacts to any forested habitat.

[8] **USFWS Northern Spotted Owl Survey protocol: Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls:** https://www.fws.gov/yreka/ES/2012RevisedNSOprotocol-2-15-12.pdf

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 or current action. The biological resource assessment of the Study Area resulted in the determination of the current cannabis cultivation area being suitable based on the preexisting habitat type and quality, observed species and the locations setbacks from sensitive habitats. This location was established as a means to minimize or negate the potential for direct impact to occur to the environment from direct interface with the current project. Based on these findings, it was determined that the relocation of the cultivation site prior to 2017 was developed in an environmentally superior location.

Given the preexisting disturbance to the current project site (cultivation since 2017), and the fact that no sensitive vegetation will be removed within and surrounding the Study Area, the effects of the project to the environment can be mitigated and no significant adverse effects to the environment can be achieved if the actions associated with this project follow the recommendations listened in *Section 5.1.3*.

Common disturbance-based impacts associated with cannabis cultivation include noise and light pollution. For the potentially proposed projects, no continuous noise (above 70 dB to the nearest tree line) or light is to be generated in association with this project (Appendix E). Therefore, there will be no expected disturbance-based impacts to the surrounding wildlife or habitats.

5.1.2 Potential Indirect Impacts

Given the existing habitat and environment within the project site, and the fact that no new project development is proposed, there are no foreseeable indirect impacts associated with this project to the environment, surrounding habitat, or wildlife.

5.1.3 Recommendations

The following recommendations should be followed and/or taken into consideration through the development of the proposed and current projects and operations:

- The buffers and setbacks identified in this Report, and throughout the associated maps, are to be respected when carrying on with the project plan as a measure to protect sensitive habitats and special-status species that may reside within these habitats. If the client proceeds with cultivating cannabis in other locations not defined in this Report, protocol level surveys may be required in specific locations in order to more accurately establish the project sites required setbacks from watercourse and delineated wetland features.
- If future development for any reason does occur, and depending on the level of that development that will occur, best management practices (BMPs) should be used to prevent sediment, fuels or contaminates from entering the surrounding terrestrial and aquatic environments. A complete list of BMPs can be found at

Humboldt County: Title III – Land Use and Development - Division 3 - Building Regulations (Ch. 7 § 337-13)[9]. The implementation of BMPs will be dependent on the project construction methods.

- A protocol-level floristic survey is not recommended to be completed since the survey described in this Report occurred at locations that have been heavily disturbed, and therefore do not appear to have habitat that would be suitable for any special-status plant species to occur. However, if local or state agencies request a protocol-level floristic survey to be completed prior to any ground disturbance, the survey should follow procedures recommended by CDFW, and are in accordance with the guidelines established by CNPS, from the document *Protocols for Surveying and Evaluating Impacts to Specie Status Native Plant Populations and Sensitive Natural Communities*[10] (CDFW, 2018).
- Since the relocated cultivation site (current cultivation site) was determined to be environmental superior to the pre-2017 cultivation site, based on the setbacks to watercourses and therefore proximity to sensitive habitats, it is not required that this site location get decommissioned or moved to a new location.
- Restoration of the pre-2017 cultivation site should occur in accordance to guidance provided by CDFW staff.
- If additional activities are proposed that may result in take of a listed species, agency personnel from CDFW and USFWS can further analyze the potential impacts and provide technical assistance for any listed species. If required, guidelines for these reconnaissance surveys should be followed in accordance to the Humboldt County Cannabis Program EIR, CDFW Survey and Monitoring Protocols and Guidelines, which can be located here: https://www.wildlife.ca.gov/conservation/survey-protocols

5.2 Statement of Limitation

The data and findings presented in this Report are valid to the extent that they represent habitat analysis and/or actual sightings of the wildlife and special-status species described. These findings outlined in this Report are based on one (1) site visit and may not be seasonally appropriate for all conclusive results.

Deficiencies in these findings may result from the following:

- The floristic survey conducted at the time of the site visit investigation was not conducted as a protocol-level survey. A protocol-level floristic survey, conducted at the seasonally appropriate times, may be required for project approval by local, state, or federal agencies.
- The assessment of habitat utilization within the Study Area, by special-status animal species, was based upon the observations made during a single site visit and further studies and surveys may be required for project approval by local, state or federal agencies as well.
- The parcel boundaries displayed in the maps created for this Report do not represent a boundary survey. Parcel and property lines shown within these maps are approximated and were acquired from Humboldt

[9] Best Management Practices for Humboldt Co. can be located at: https://humboldt.county.codes/Code/337-13

[10] Botanical Survey Protocol: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline

County Web GIS, and any errors within these boundaries are a result of errors in Humboldt County's GIS database.

- This Report is not intended to be a complete biological survey report for all species generated from the CNDDB, but rather an initial biological resource assessment based on present biological conditions.
- The biological resource buffers and setbacks defined in this Report, and presented in Map 2, only represent buffers to biological resources and do not included cultural resources (i.e. historical landmarks and/or cemeteries). Additional buffers and setbacks may be required for cultural resources which may alter the size of the potential cultivation areas defined in this Report.

The opinions, conclusions and recommendations in this Report are based on assumptions made by Naiad Biological Consulting staff members when undertaking services and preparing the Report. As a result of this Report being an initial biological reconnaissance and project feasibility assessment, and not a protocol-level survey, Naiad Biological Consulting expressly disclaims responsibility for any error in, or omission from, this Report arising from or in connection with any of the assumptions being incorrect.

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Appendix A

Photo Documentation

APN: 208 – 271 – 002

Biological Recourse Assessment Report

October 2020

Photo 1. The mixed hardwood and coniferous forest habitat which dominates the Study Area. Photo taken within the decommissioned cultivation site facing south (see Map 2 for location reference).

Photo 2. The mixed hardwood and coniferous forest habitat which dominates the Study Area.

Photo 3. Representation of the sparse understory habitat located within the mixed hardwood and coniferous forest habitat.

Photo 4. The open grassy habitat of the decommissioned previously cultivated cannabis site.

Photo 5. The Class III watercourse (outlined in dashed yellow) within the mixed hardwood and coniferous forest to the immediate northern edge of the decommissioned cultivation site.

Photo 6. The Class III watercourse identified within the decommissioned cultivation site. Due to the required buffers of this habitat, this cultivation site was relocated to the current cultivation site in 2017.

Photo 7. The current cultivation site within the Study Area. This site has been established since 2017 and no new development is proposed.

Photo 8. The Class II watercourse identified on the parcel.

Photo 9. The location where water is seasonally (legally) collected from the Class II watercourse within the Study Area.

Appendix B

Special-Status Species Tables

APN: 208 – 271 – 002

Biological Recourse Assessment Report

October 2020

Table 1 – Special-Status Animal Species – October 2020 – APN 208-271-002 – Showers Mtn. and surrounding 7.5 min quadrangles

Scientific Name	Common Name	Federal Status	State Status	CDFW Status	Habitats	Potential of Occurrence
Amphibians						
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 in project site. Moderate in adjacent area.
Rana aurora	northern red-legged frog	None	None	SSC	inhabits quiet pools of streams, marshes, and occasionally ponds. Occurs along the Coast Ranges from Del Norte County to Mendocino County, usually below 1200 m (3936 ft).	None in project site. Moderate in adjacent area.
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, valley foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types.	None in project site. Moderate 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. Moderate in adjacent area.
Birds						
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.	Low/Moderate in project site. Moderate/High in adjacent area.
Accipiter gentilis	northern goshawk	None	None	SSC	Prefers middle and higher elevations, and mature, dense conifer forests. Casual in winter along north coast, throughout foothills, and in northern deserts, where it may be found in pinyon-juniper and low- elevation riparian habitats.	Low in project site. 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.	Low in project site. Moderate 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	None in project site. Low in surrounding area.
Charadrius montanus	mountain plover	None	None	SSC	This species is endemic to the western Great Plains. They nest across the western Great Plains and Rocky Mountain states, from the Canadian border to northern Mexico, and winter in California, southern Arizona, Texas and Mexico. They nest is open grassland habitats.	None in project site. None in surrounding 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 site. Will nest on human-made structures, and occasionally uses tree or snag cavities or old nests of other raptors.	None in project site. Low in adjacent area.
Ammodramus savannarum	grasshopper sparrow	None	None	SSC	This species breeds in open grasslands, prairies, hayfields, and pastures, typically with some bare ground. Grasshopper Sparrows usually avoid breeding in grasslands with extensive shrub cover, but are a bit more tolerant of shrubs in migration and during the winter.	None in project site. None in surrounding 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. Low/none in adjacent area.
Strix occidentalis caurina	northern spotted owl	Threatened	Threatened	SSC	Old-growth forests or mixed stands of old-growth and mature trees. Occasionally in younger forests with patches of big trees. High, multistory	None in project site. Moderate in adjacent area.

					canopy dominated by big trees, many trees with cavities or broken tops, woody debris, and space under canopy.	
Empidonax traillii	willow flycatcher	None	Endangered	-	rare to locally uncommon, summer resident in wet meadow and montane riparian habitats at 600-2500 m (2000-8000 ft) in the Sierra Nevada and Cascade Range. Dense willow thickets are required for nesting and roosting.	None in project site. Low in adjacent area.
2						
Entosphenus tridentatus	Pacific lamprey	None	None	SSC	Riffle and side channel habitats are important for spawning and for ammocoete rearing. Because lamprey ammocoetes colonize areas and are relatively immobile in the stream substrates, good water quality is essential for rearing.	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. mall, relatively low-gradient tributary streams with pea to orange-sized gravel for spawning and juvenile rearing.	None
Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	None	None	SSC	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. These salmon utilize many different habitats throughout their lives. Adults lay eggs in fast-moving freshwater streams and rivers. Juvenile salmon spend some time in the freshwater streams before moving to estuaries with a mix of freshwater and saltwater. As the salmon reach adulthood, they move out into the open ocean.	None
Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	Candidate	Candidate Endangered	SSC	Aquatic, klamath northcoast flowing waters. These salmon utilize many different habitats throughout their lives. Adults lay eggs in fast-moving freshwater streams and rivers. Juvenile salmon spend some time in the freshwater streams before moving to estuaries with a mix of freshwater and saltwater. As the salmon reach adulthood, they move out into the open ocean.	None
Insects						
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.
Atractelmis wawona	Wawona riffle beetle	None	None	-	Strong preferce for inhabiting submerged aquatic mosses. Aquatic; found in riffles of rapid, small to medium clear mountain streams; 2000-5000 ft elev.	None (aquatic species)
Mammals						
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.
Martes caurina humboldtensis	Humboldt marten	None	Candidate Endangered	SSC	old-growth coastal redwood forests of the U.S. states of California and Oregon. Less than 300 of them survive in both states combined, in three different populations of 100 each	None
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 in adjacent area.

Taxidea taxus	American badger	None	Threatened	SSC	Uncommon, permanent resident found throughout most of the state, except in the northern North Coast area (Grinnell et al. 1937). Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Badgers dig burrows in friable soil for cover. Frequently reuse old burrows.	Moderate in project site. Moderate in adjacent area.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	Townsend's big-eared bat is found throughout California, but the details of its distribution are not well known. This species is found in all but subalpine and alpine habitats, and may be found at any season throughout its range.	Low in project site. Moderate in adjacent area.
Lasionycteris noctivagans	silver-haired bat	None	None	-	coastal and montane forests from the Oregon border south along the coast to San Francisco Bay, and along the Sierra Nevada and Great Basin region to Inyo Co. It also occurs in southern California from Ventura and San Bernardino Cos. south to Mexico and on some of the Channel Islands.	Low in project site. Moderate in adjacent area.
Lasiurus cinereus	hoary bat	None	None	-	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding.	Low/Moderate in project site. Moderate in surrounding area.
Myotis evotis	long-eared myotis	None	None	-	The long-eared myotis is widespread in California, but generally is believed to be uncommon in most of its range. This species has been found in nearly all brush, woodland, and forest habitats, from sea level to at least 2700 m (9000 ft), but coniferous woodlands and forests seem to be preferred.	Low in project site. Moderate in adjacent area.
Myotis lucifugus	little brown bat	None	None	-	The little brown bat is found in abundance throughout the northern United States into Canada. It is present in lesser numbers in southern states and is absent from the southern Great Plains. Little brown bats also live in high-elevation forests in Mexico. (NWF)	Low in project site. Moderate in adjacent area.
Myotis thysanodes	fringed myotis	None	None	-	The fringed myotis is widespread in California, occurring in all but the Central Valley and Colorado and Mojave deserts. Its abundance appears to be irregular; it may be common locally. It occurs in a wide variety of habitats; records range in elevation from sea level to 2850 m (9350 ft) in New Mexico (Barbour and Davis 1969). Optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally at 1300-2200 m (4000-7000 ft)	Low in project site. 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.	Low in project site. 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.
Mollusks						
Monadenia infumata setosa	Trinity bristle snail	None	Threatened	-	The Trinity bristle snail lives along riparian corridors and uplands within Klamath mixed-conifer forests having a deciduous hardwood understory. The snail is primarily found in moist but well-drained, well-shaded canyons or streamside benches covered with a layer of leaf mold at least four inches deep.	Low in project site. Moderate in adjacent area.
Ancotrema voyanum	*hooded lancetooth*	None	None	-	coastal dunes coastal scrub, riparian redwood forest habitats	None
Reptiles						
Emys marmorata	western pond turtle	None	None	SSC	aquatic, flowing waters, standing waters, marsh, swamp, wetland	None

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.

Definitions of Federal Statuses (Federal Endangered Species Act):

Endangered species:

As defined in the U.S. Government Code and California Fish and Game Code (16 U.S. Government Code 1532[6] and California Fish and Game Code Section 2062), a native species, subspecies, variety of organism, or distinct population segment that is in serious danger of becoming extinct throughout all or a significant portion of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

Threatened species:

Native species, subspecies, variety, or distinct population segment of an organism that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future throughout all of a significant portion of its range.

Candidate Species:

Not defined or addressed in statute or regulations. Candidate species are those which USFWS has sufficient information on their biological status and threats to propose listing, but for which the development of a proposed listing regulation is precluded by other higher priority listing activities. Candidates receive no protection under the ESA.

Definitions of State Statuses (California Endangered Species Act):

Endangered species:

A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease. Fish & G. Code, §2062

Threatened species:

A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Fish & G. Code, §2067

Candidate Species:

A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the Department for listing. Candidates are given full CESA protection. Fish & G. Code, §2068

Table 2 – Special Status Plant Species – October 2020 – APN 208-271-002 – Showers Mtn. 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
Buxbaumia viridis	buxbaumia moss	None	None	2B.2	NA	Moss	Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest	Fallen, decorticated wood or humus.	975 - 2200 meters	None in project site. Low in adjacent area.
Meesia triquetra	three-ranked hump moss	None	None	4.2	Jul	moss	Upper montane coniferous forest; Subalpine coniferous forest	Bogs and fens; Meadows and seeps; Mesic	1300 - 2953 meters	None due to elevation range.
Ptilidium californicum	Pacific fuzzwort	None	None	4.3	May-Aug	Liverwort	Usually epiphytic on trees, fallen and decaying logs, and stumps; rarely on humus over boulders.	Lower montane coniferous forest and Upper montane coniferous forest	1140 - 1800 meters	None due to elevation range.
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	None in project site. Moderate in adjacent area.
Allium hoffmanii	Beegum onion	None	None	4.3	Jun-Jul	perennial herb	Lower montane coniferous forest	(serpentinite)	1110-1800 meters	None due to elevation range.
Allium siskiyouense	Siskiyou onion	None	None	4.3	(Apr)May-Jul	perennial bulbiferous herb	Lower montane coniferous forest. Upper montane coniferous forest	rocky, sometimes serpentinite.	855 - 2500 meters	None in project site. Low in adjacent area.
Sanicula tracyi	Tracy's sanicle	None	None	4.2	Apr-Jul	perennial herb	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	Openings	100 - 1585 meters	Moderate in project site. Moderate in adjacent area.
Calycadenia micrantha	small-flowered calycadenia	None	None	1B.2	Jun-Sep	annual herb	Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas.	Chaparral, Meadows and seeps (volcanic) Valley and foothill grassland	5 - 1500 meters	None due to soil type.
Erigeron maniopotamicus	Mad River fleabane daisy	None	None	1B.2	May-Aug	perennial herb	open, disturbed areas (road cuts); rocky.	Lower montane coniferous forest, Meadows and seeps (open, dry)	1275 - 1500 meters	None due to elevation range.
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	Low in project site. Moderate in adjacent area.
Packera bolanderi var. bolanderi	seacoast ragwort	None	None	2B.2	May-Jul	perennial rhizomatous herb	Coastal scrub; North Coast coniferous forest	Sometimes roadsides.	30 - 650 meters	None in project site. Moderate in adjacent area.
Wyethia longicaulis	Humboldt County wyethia	None	None	4.3	May-Jul	perennial herb	Broadleafed upland forest, Coastal prairie, Lower montane coniferous forest.	Sometimes roadsides.	750 - 1525 meters	Low in project site. Low in adjacent area.
Sedum laxum ssp. flavidum	pale yellow stonecrop	None	None	4.3	May-Jul	perennial herb	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	Serpentinite or volcanic	455 - 2000 meters	None due to soil type.
Carex arcta	northern clustered sedge	None	None	2B.2	Jun-Sep	perennial herb	North Coast coniferous forest (mesic)	Bogs and fens	60 - 1400 meters	None in project site. Low in adjacent area.
Arctostaphylos hispidula	Howell's manzanita	None	None	4.2	Mar-Apr	perennial evergreen shrub	Chaparral	serpentinite or sandstone	120 - 1250 meters	None due to soil type.
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	1B.3	(Jan)Mar-May(Jul)	perennial evergreen shrub	Chaparral	volcanic.	395 - 1615 meters	None due to soil type.

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	None due to elevation range.
Astragalus rattanii var. rattanii	Rattan's milk-vetch	None	None	4.3	Apr-Jul	perennial herb	Chaparral	gravelly streambanks, Cismontane woodland	30 - 825 meters	None due to elevation range.
Astragalus umbraticus	Bald Mountain milk-vetch	None	None	2B.3	Apr-Jul	perennial herb	Chaparral; Cismontane woodland; Lower montane coniferous forest	gravelly streambanks.	30 - 825 meters	None due to elevation range.
Hosackia yollabolliensis	Yolla Bolly Mtns. bird's-foot trefoil	None	None	1B.2	Jun-Aug	perennial herb	Meadows and seeps. Upper montane coniferous forest (openings)	dry barren exposed slopes, often gravelly.	1645 - 2135 meters	None due to elevation range.
Lathyrus biflorus	two-flowered pea	None	None	1B.1	Jun-Aug	perennial herb	Lower montane coniferous forest	serpentinite	1370 - 1385 meters	None due to elevation range.
Lathyrus glandulosus	sticky pea	None	None	4.3	Apr-Jun	perennial rhizomatous herb	Cismontane woodland	NA	300 - 800 meters	None due to elevation range.
Lupinus elmeri	South Fork Mountain lupine	None	None	1B.2	Jun-Jul (Aug)	perennial herb	Lower montane coniferous forest	NA	1218 - 2000 meters	None due to elevation range.
Thermopsis robusta	robust false lupine	None	None	1B.2	May-Jul	perennial rhizomatous herb	Broadleafed upland forest, North Coast coniferous forest	NA	150 - 1500 meters	Low in project site. Moderate in adjacent area.
Ribes laxiflorum	trailing black currant	None	None	4.3	Mar-Jul (Aug)	perennial deciduous shrub	North Coast coniferous forest	sometimes roadside	5 - 1395 meters	Moderate in project site. Moderate 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	None in project site. Low in adjacent area.
Erythronium revolutum	coast fawn lily	None	None	2B.2	Mar-Jul	perennial bulbiferous herb	Broadleafed upland forest; North Coast coniferous forest	Mesic, streambanks; Bogs and fens	0 - 1600 meters	None in project site. Moderate in adjacent area.
Fritillaria glauca	Siskiyou fritillaria	None	None	4.3	Mar-Jun	perennial bulbiferous herb	Chaparral	Lower montane coniferous forest, usually serpentinite.	175 - 2255 meters	Low in project area. Low in adjacent area.
Fritillaria purdyi	Purdy's fritillary	None	None	4.3	Mar-Jun	perennial bulbiferous herb	Chaparral; Cismontane woodland; Lower montane coniferous forest	usually serpentinite.	175 - 2255 meters	None in project site. Low in adjacent area.
Lilium kelloggii	Kellogg's lily	None	None	4.3	May-Aug	perennial bulbiferous herb	Lower montane coniferous forest; North Coast coniferous forest	Openings, roadsides.	3 - 1300 meters	None 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	None in project site. Moderate in adjacent area.
Lycopodium clavatum	running-pine	None	None	4.1	Jun-Aug	perennial rhizomatous herb	Lower montane coniferous forest (mesic); North Coast coniferous forest (mesic)	often edges, openings, and roadsides; Marshes and swamps	45 - 1225 meters	Moderate in project site. Moderate in adjacent area.
Iliamna latibracteata	California globe mallow	None	None	1B.2	Jun-Aug	perennial herb	Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks)	Often in burned areas.	60 - 2000 meters	None in project site. Low 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	None due to elevation range.
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	None due to elevation

Sidalcea oregana ssp. eximia	coast checkerbloom	None	None	1B.2	Jun-Aug	perennial herb	Lower montane coniferous forest, North Coast coniferous forest	Meadows and seeps	5 – 1340 meters	None in project site. Low in adjacent area.
Veratrum insolitum	Siskiyou false-hellebore	None	None	4.3	Jun-Aug	perennial herb	Chaparral, Lower montane coniferous forest	Clay	45 - 1635 meters	None in project site. Low 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	None in project site. Low/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	None
Epilobium oreganum	Oregon fireweed	None	None	1B.2	Jun-Sep	perennial herb	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	mesic.	500 - 2240 meters	None in project site. Low/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	None in project site. Low/moderate in adjacent area.
Cypripedium fasciculatum	clustered lady's-slipper	None	None	4.2	Mar-Aug	perennial rhizomatous herb	Lower montane coniferous forest, North Coast coniferous forest	Usually serpentinite seeps and streambanks.	100 - 2435 meters	None in project site. Low/moderate in adjacent area.
Cypripedium montanum	mountain lady's-slipper	None	None	4.2	Mar-Aug	perennial rhizomatous herb	Broadleafed upland forest, Cismontane woodland, Lower montane coniferous forest, North Coast coniferous forest	NA	185 - 2225 meters	None in project site. Moderate 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. Moderate 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. Moderate in adjacent area.
Platanthera stricta	slender bog-orchid	None	None	4.2	May-Aug	perennial herb	Lower montane coniferous forest, Meadows and seeps	Mesic	1000 - 2300 meters	None in project site. Low/none due to elevation range.
Kopsiopsis hookeri	small groundcone	None	None	2B.3	Apr-Aug	perennial rhizomatous herb (parasitic)	North Coast coniferous forest	NA	90 - 885 meters	None due to elevation.
Pleuropogon refractus	nodding semaphore grass	None	None	4.2	(Mar)Apr-Aug	perennial rhizomatous herb	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	Mesic	0 - 1600 meters	Low in project site. Moderate in adjacent area.
Collomia tracyi	Tracy's collomia	None	None	4.3	Jun-Jul	annual herb	Broadleafed upland forest, Lower montane coniferous forest	rocky, sometimes serpentinite	300 - 2100 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	Low in project site. Low 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	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.

Navarretia leucocephala ssp. bakeri	Baker's navarretia	None	None	1B.1	Apr-Jul	annual herb	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools	mesic	5 - 1740 meters	None in project site. Low in adjacent area.
Coptis laciniata	Oregon goldthread	None	None	4.2	Mar-May	perennial rhizomatous herb	Meadows and seeps; North Coast coniferous forest (streambanks)	Riparian; mesic	0 - 1000 meters	None in project site. Moderate/high in adjacent area.
Sanguisorba officinalis	great burnet	None	None	2B.2	Jul-Oct	perennial rhizomatous herb	Bogs and fens, Broadleafed upland forest, Meadows and seeps, Marshes and swamps, North Coast coniferous forest, Riparian forest	often serpentinite.	60 - 1400 meters	None in project site. None/Low in adjacent area.
Bensoniella oregona	bensoniella	None	Rare	1B.1	May-Jul	perennial herb	Bogs and fens, Lower montane coniferous forest, Meadows and seeps	Mesic openings	915 - 1400 meters	Low in project site. Low/moderate in adjacent area.
Chrysosplenium glechomifolium	Pacific golden saxifrage	None	None	4.3	Feb-Jun (Jul)	perennial herb	North Coast coniferous forest, Riparian forest	Streambanks, sometimes seeps, sometimes roadsides	10 - 640 meters	None due to elevation.
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. Low/moderate in adjacent area.
Tiarella trifoliata var. trifoliata	trifoliate laceflower	None	None	3.2	(May)Jun-Aug	perennial rhizomatous herb	Lower montane coniferous forest, North Coast coniferous forest	edges, moist shady banks, streambanks.	170 - 1500 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.\

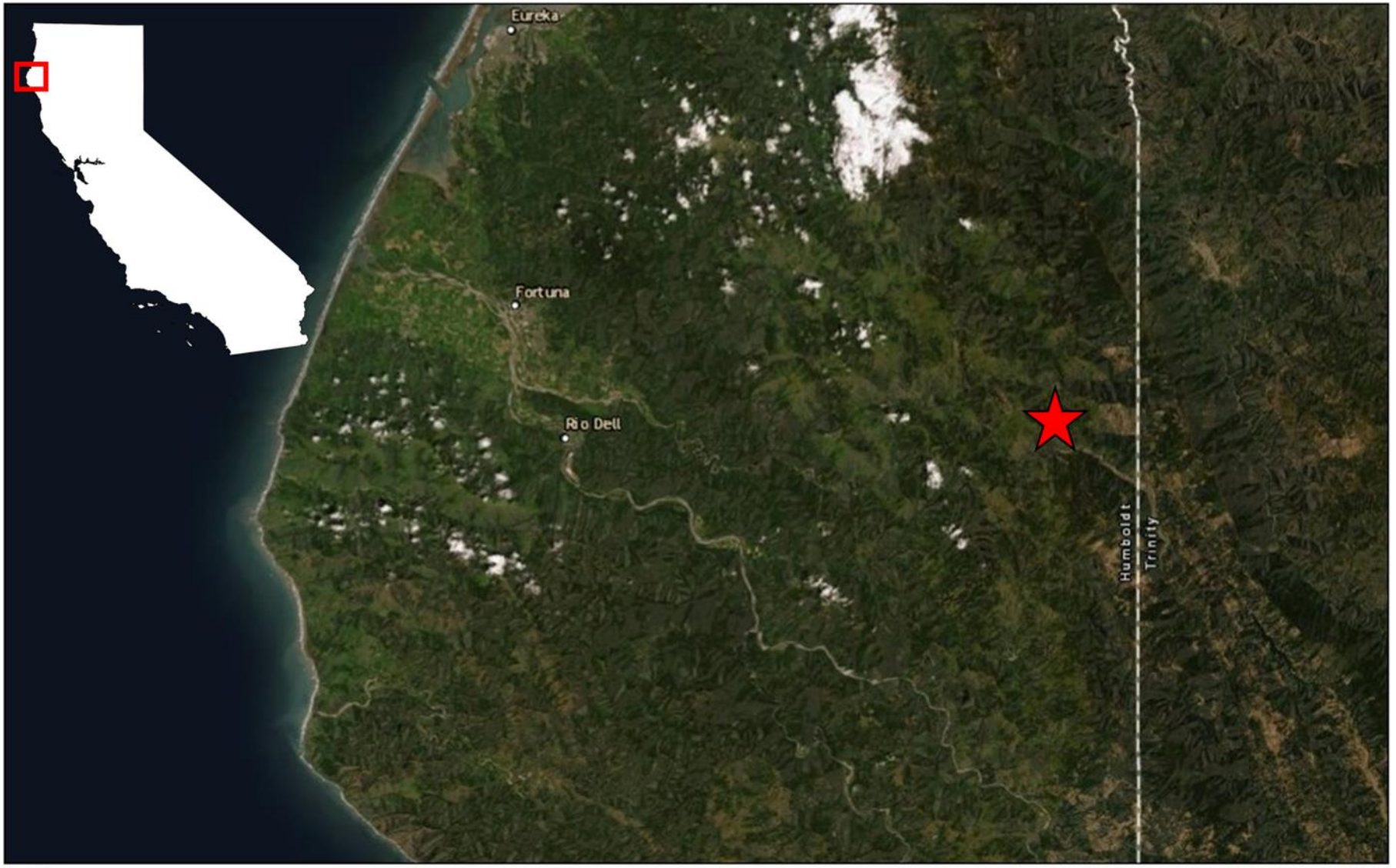
Appendix C

Maps

APN: 208 – 271 – 002

Biological Recourse Assessment Report

October 2020



Map 1. The approximate location the Study Area in Humboldt County, California.

ArcGIS Web Map

Humboldt County Planning and Building Department

Printed: November 18, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

Current Project Site

Decommissioned Project Site (Pre-2017)

Study Area (APN: 208-271-002)

Class II Watercourse

Class III Watercourse

Anderson Ford Rd.

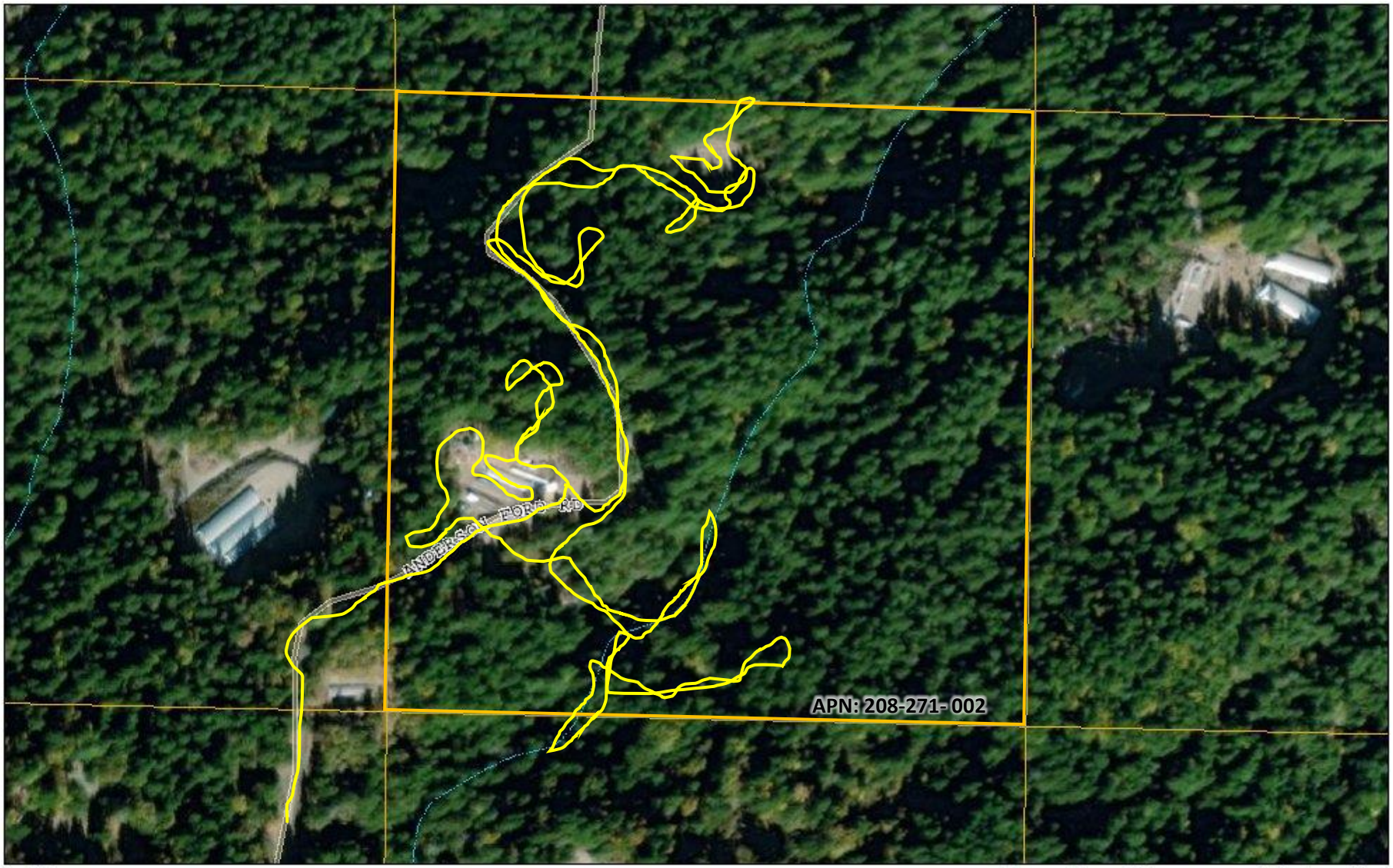
0 180 360 720 Feet
0 0.0325 0.065 0.13 Miles
RF= 1:4,514 1 in = 376 ft

N W E S

Sources: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Naiad Biological Consulting

Map 2. The approximate location of the Current Cultivation Site, the approximate location of the decommissioned Project site, and the sites proximity to both Class II and Class III watercourses identified within the Study Area. *(The parcel boundary was taken from Humboldt Co. Web GIS and does not represent a boundary survey)*



ArcGIS Web Map

Humboldt County Planning and Building Department

Printed: November 18, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

Biological Resource Assessment Survey Path (Completed on October 15th 2020)

Study Area (APN: 208-271-002)

0 180 360 720 Feet
0 0.0325 0.065 0.13 Miles
RF= 1:4,514 1 in = 376 ft

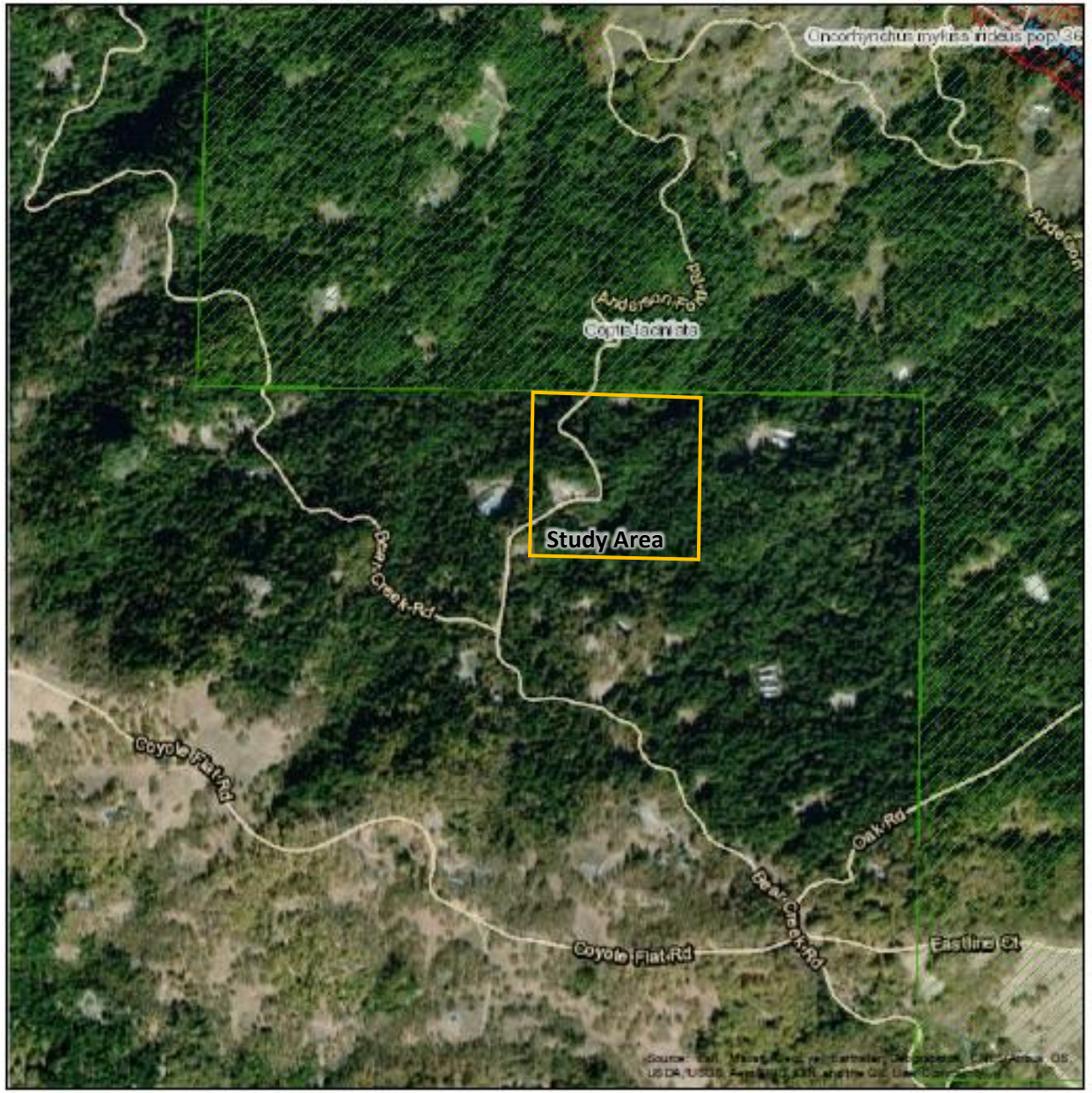
N W E S

Sources: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Naiad Biological Consulting

Map 3. The Biological Resource Assessment Survey Path conducted on October 15th 2020. (The parcel boundary was taken from Humboldt Co. Web GIS and does not represent a boundary survey)

Map 4. Surrounding Special-Status Species Occurrences



California Natural Diversity Database (CNDDB) Commercial [ds85]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

1:18,056

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

N

November 17, 2020

Naiad Biological Consulting

Author: naiadbiological@gmail.com
Printed from http://bios.dfg.ca.gov

Map 5. Nearest NSO Observations to Study Area

Spotted Owl Observations [ds704]

- Nest
- Young
- Pair
- Other Positive Observation
- Negative Observation
- Activity Center
- Abandoned Activity Center
- Not Valid Activity Center

1:36,112

0 0.3 0.6 1.2 mi

0 0.5 1 2 km

N

November 17, 2020

Naiad Biological Consulting

Author: naiadbiological@gmail.com

Appendix D

Occurrence Reports

APN: 208 – 271 – 002

Biological Recourse Assessment Report

October 2020

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Species IS (Coptis laciniata)

Map Index Number:	68125	**EO Index:**	68266
Key Quad:	Blake Mountain (4012355)	**Element Code:**	PDRAN0A020
Occurrence Number:	6	**Occurrence Last Updated:**	2007-02-14

Scientific Name: *Coptis laciniata* **Common Name:** Oregon goldthread

Listing Status: **Federal:** None **Rare Plant Rank:** 4.2

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G4?

State: S3?

General Habitat:

NORTH COAST CONIFEROUS FOREST, MEADOWS AND SEEPS.

Micro Habitat:

MESIC SITES SUCH AS MOIST STREAMBANKS. 0-1000 M.

Last Date Observed:	1976-05-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1976-05-XX	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

NORTH OF DINSMORE, T2N, R5E SEC. 28, 29, 33, 34.

Detailed Location:

MAPPED TO ENCOMPASS T2N, R5E SEC 28, 29, 33, 34. BETTER LOCATION INFORMATION NEEDED.

Ecological:

Threats:

General:

ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1976 COLLECTION BY NELSON AT HSC.

PLSS:	T02N, R05E, Sec. 28 (H)	**Accuracy:**	non-specific area	**Area (acres):**	2,602
UTM:	Zone-10 N4485280 E447790	**Latitude/Longitude:**	40.51660 / -123.61630	**Elevation (feet):**	

County Summary:	**Quad Summary:**
Humboldt	Blake Mountain (4012355), Showers Mtn. (4012356)

Sources:

NEL76S0009 NELSON, T. & J. NELSON - NELSON #2620 HSC #38101 1976-05-30

Data Version Date:
06/29/2020

Report Generation Date:
11/18/2020

Report #2 - Observations Reported

List of observations reported by site.

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

H_02N_05E Sections(22);

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
Masterowl: HUM0019 Subspecies: NORTHERN											
POS	1978-08-25		1	UU				40.542110	-123.621686	H 02N 05E 21	Quarter-section centroid
POS	1978-08-28		1	UU				40.542110	-123.621686	H 02N 05E 21	Quarter-section centroid
POS	1988-08-04		1	UU				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	1988-08-10		2	UMUF	Y			40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	1988-08-22		1	UF				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	1988-08-25		1	UF				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	1988-08-27		1	UF				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	1988-09-15		2	UMUF	Y			40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	1991-05-06		1	UM				40.533964	-123.592824	H 02N 05E 22	Quarter-section centroid
AC	1991-05-07		2	UMUF	Y	Y		40.534850	-123.600967	H 02N 05E 22	Contributor
POS	1991-07-09		1	UF				40.534850	-123.600967	H 02N 05E 22	Contributor
POS	1992		1	UU				40.541243	-123.592853	H 02N 05E 22	Quarter-section centroid
POS	1992		1	UU				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	1992		1	UF				40.534854	-123.612149	H 02N 05E 21	Quarter-section centroid
POS	1992		1	UF				40.526604	-123.592842	H 02N 05E 27	Quarter-section centroid
POS	1992		1	UF				40.526604	-123.592842	H 02N 05E 27	Quarter-section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	1992		1	UF				40.534854	-123.612149	H 02N 05E 21	Quarter-section centroid
POS	1992		1	UF				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	1992-05-12		2	UMUF	Y	Y		40.535297	-123.601562	H 02N 05E 22	Contributor
NEG	1993		0					40.537912	-123.597641	H 02N 05E 22	Section centroid
NEG	1994-05-03	0400	0					40.537912	-123.597641	H 02N 05E 22	Section centroid
POS	1994-05-16	2400	1	UM				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
NEG	1994-05-18	0500	0					40.537912	-123.597641	H 02N 05E 22	Section centroid
NEG	1994-05-23	0515	0					40.537912	-123.597641	H 02N 05E 22	Section centroid
POS	1994-05-24	1815	1	UM				40.533964	-123.592824	H 02N 05E 22	Quarter-section centroid
NEG	1994-06-08	0500	0					40.537912	-123.597641	H 02N 05E 22	Section centroid
NEG	1994-06-22	1415	0					40.533964	-123.592824	H 02N 05E 22	Quarter-section centroid
POS	2001-05-21	2058	1	UU				40.541924	-123.602365	H 02N 05E 22	Quarter-section centroid
POS	2001-06-07		2	SMAF	Y			40.535936	-123.600033	H 02N 05E 22	Contributor
POS	2001-06-07		2	UMAF	Y			40.551182	-123.592398	H 02N 05E 15	Contributor
POS	2001-06-25	2128	1	UU				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	2001-06-25	2101	1	UU				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	2001-06-30	1919	1	UM				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid

Type	*Date*	*Time*	*#Adults*	*Age/Sex*	*Pair*	*Nest*	*#Young*	*Latitude DD NAD83*	*Longitude DD NAD83*	*MTRS*	*Coordinate Source*
POS	2001-07-31	2106	1	UU				40.534608	-123.602477	H 02N 05E 22	Quarter-section centroid
POS	2001-08-14	2050	1	UU				40.542215	-123.611980	H 02N 05E 21	Quarter-section centroid
POS	2001-08-20	2107	2	UMUF	Y			40.542035	-123.605165	H 02N 05E 22	Contributor
NEG	2011-05-22	2053-2103	0					40.543346	-123.624619	H 02N 05E 21	Contributor
NEG	2011-05-22	2110-2120	0					40.547633	-123.626336	H 02N 05E 17	Contributor
NEG	2011-07-28	2247-2257	0					40.547633	-123.626336	H 02N 05E 17	Contributor
NEG	2011-07-28	2305-2315	0					40.543346	-123.624619	H 02N 05E 21	Contributor

Appendix E

Light and Noise Assessment Report

APN: 208 – 271 – 002

Biological Recourse Assessment Report

October 2020

LIGHT AND NOISE ASSESSMENT

Prepared for:

Trichome Acres, LLC.
APP# 12647
APN 208-271-002

November 13, 2020

Prepared by:

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Environmental Scientist
PR Professional Services
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OBECTIVE

Humboldt County's Commercial Medical Marijuana Land Use Ordinance (CMMLUO) No. 2559 sets forth performance standards for noise and light sources related to cannabis cultivation. The following is an evaluation of existing light and noise sources associated with cannabis cultivation at Trichome Acres, LLC (Application #12647) located on Anderson Ford Road near the community of Dinsmore. The purpose of this study is to analyze baseline ambient noise levels and determine the impacts of increased noise levels associated with cannabis cultivation.

SITE DESCRIPTION

The subject parcel (APN 208-271-002) is located northwest of Dinsmore on Anderson Ford Road, off of Bear Creek Road. Permitted cultivation activities take place west of Anderson Ford Road, which runs through the property. The 40-acre parcel is zoned for forestry recreation (FR). Land uses on neighboring parcels include timber production and commercial agriculture. The nearest off-site residences are further than 1,000 feet from the cultivation area and other potential noise sources.

The proposed project currently includes 8,325 square feet of outdoor cultivation and one nursery. Cultivation areas include full-sun outdoor patches, and PVC hoophouses with exhaust fans and hand-drawn light-deprivation tarps. Artificial lighting was present in the nursery but was not being utilized at the time of the site visit. Exhaust fans and artificial lighting are powered by diesel generators.

NOISE ASSESSMENT

A site visit was conducted on September 19, 2020 to evaluate noise impacts associated with cannabis cultivation. The existing ambient noise level, and increased noise levels were measured using a Type-2 digital sound meter with an accuracy rating of ±2 dBA. The decibel meter was mounted to a 4-foot tall tripod and set to record sound measurements for 15-minute durations at each monitoring point.

A log was created detailing activities that increased the ambient noise level. Activities that increased noise levels include but are not limited to conversation, wind gusts, traffic on Anderson Ford Road, and human activities on neighboring properties. The average ambient noise level without fans and generators running was 43.3 dBA.

Monitoring locations were established at noise sources, and at 100 feet, or the nearest property line, whichever was closer. Monitoring locations and average decibel readings are included in Table 1 below.

TABLE 1: MONITORING LOCATION DETAILS

Map ID	Location	Description	Average dBA at source	Average dBA at 100'
MP-1	(40.514078, -123.635279)	Water pump	54.1	49.6
MP-2	(40.513452, -123.635278)	Water pump	51.8	47.2
MP-3	(40.513733, -123.636394)	Generators & fans	58.3	43.7

Water pumps are used intermittently to move water between HDPE storage tanks. Pumps are run at energy saving levels, for up to one hour at a time, approximately one-two times a month during the growing season. Water pumps are not used at diversion sources or in riparian zones. When pumps are in use, noise levels at parcel boundaries do not exceed 60 dBA.

The project is powered by four diesel generators housed in a covered shed. There is one Honda 6500, two Honda 3000s, and one Honda 2000 onsite (see Table 2 for generator specs). Generators are run from dusk to dawn during the growing season. The back and sides of the shed provide noise shielding for the western parcel boundary with APN 208-271-003. The average decibel level at the parcel boundary was 43.7 dBA with fans and generators running. Noise readings were not assessed at the remaining parcel boundaries, as they are all located over 500 feet from the project area and will not be impacted by noise associated with cannabis operations.

TABLE 2: GENERATOR SPECS

Generator Make/Model	Manufacturer's Noise Rating (dBA)
Honda 6500	64-67
Honda 3000	50-57
Honda 2000	48-57

LIGHT ASSESSMENT

Artificial lighting is used in the beginning of the growing season in the nursery hoophouse to provide supplemental lighting for immature plants. String lighting and blackout tarping were present, but not in use at the time of the site visit. The cultivator was advised to shield the hoophouse with black out tarp so that no light is visible from neighboring properties between sunset and sunrise. The light source currently complies with the International Dark Sky Association standards for Lighting Zone 0 and Lighting Zone 1 and is designed to prevent light spillage onto neighboring properties resulting from backlight, uplight, or glare (BUG). Should the Humboldt County Planning Division receive complaints that the lighting is out of alignment or not complying with these standards, within ten (10) working days of receiving written notification that a complaint has been filed, the applicant shall submit written verification that the lights' shielding and alignment has been repaired, inspected and corrected as necessary.

CONCLUSION

Existing noise sources (exhaust fans, water pumps, and diesel generators) do not exceed 60 dBs at any property line. The baseline ambient noise level was measured at 43.4 dBA, and the average noise level with all noise sources running was 47.3 dBA at the parcel boundary nearest to cultivation operations. Artificial lighting in the nursery and black out mechanisms appear to comply with International Dark Sky Association Standards and will not result in uplight, backlight, or glare onto neighboring properties. Therefore, cultivation activities on APN 208-271-002 are anticipated to be in compliance with the Performance Standards set in Humboldt County's CMMLUO Ordinance (No. 2559).

PHOTOS

Photo 1: Nursery with string lighting and black out tarping.

Photo 2: Water pump and fuel setup for MP#1 and MP #2.

Photo 3: Generator shed at MP #3.