ATTACHMENT 4B

Neighborhood Setback Conformance Analysis

15260

APN: 107-054-036
Kouchalakos,E

A Biological Assessment:

Commercial Cannabis Cultivation

Highpoint Honeydew Farm/Evan Kouchalakos
APN#: 107-054-036

CONFIDENTIAL

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1.0 Introduction

1.1 Purpose and Need

This biological assessment has been prepared for Evan Kouchalakos, for APN# 107-054-036, 47730 Mattole Rd. Petrolia CA 95536 as a supplement to a commercial cannabis cultivation permit in Humboldt County, California.
Humboldt County regulates commercial cannabis through the Commercial Medical Marijuana Land Use Ordinance (CMMLUO), which requires permit applicants to assess all potentially significant impacts to biological resources from existing or proposed cannabis cultivation operations.
The purpose of this assessment is to gather information necessary to complete a review of biological resources. This report describes the results of the site visit, which assessed the Study Area and immediately adjacent areas for: (1) the potential to support special-status plant and wildlife species; (2) the potential presence of sensitive biological communities such as wetlands or riparian habitats; and (3) the potential presence of other sensitive biological resources protected by local, state, and federal laws and regulations.

1.2 Project Sites and Biological Assessment Area

The project site is defined as the cultivation area within the 47-acre property under ownership of Evan Kouchalakos (APN 107-054-036 figure 1). The biological assessment area (BAA) is defined as the entire 47-acre parcel.

1.3 Regulatory Background

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that informed field investigations and analysis of potential project impacts.

2.1 Cannabis Cultivation

Proposition 64 (Medical Cannabis Regulation and Safety Act) cannabis has been determined to be a commercial agricultural crop and is legalized for recreational use. Cannabis cultivation is regulated by the California Department of Food and Agriculture (CDFA) which cannabis licensing from the state. This permitting process is subject to environmental review under The California Environmental Quality Act (CEQA).
Under CEQA, Humboldt County, as the lead agency, requires that CMMLUO permit applicants have a qualified biologist professional assess the project area for sensitive biological communities and the potential presence of protected plants and animals.

2.2 Sensitive Biological Communities

Habitats that fulfill distinctive functions or values such as wetlands, streams or riparian habitat are termed sensitive biological communities. These communities are protected federally with the Clean Water Act (CWA) regulations. In addition, these habitats are regulated by the state of California via the Porter-Cologne Act, The California Department of Fish and Wildlife (CDFW), and the California Environmental Quality Act (CEQA). They are further governed by local ordinances such as city or county tree ordinances, Special Habitat Management Areas or General Plan Elements.

Figure 1-Study Area

2.2.1 Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a Notification of Lake or Streambed Alteration. The term "stream", which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term "stream" can include ephemeral streams, dry
washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream dependent terrestrial wildlife (CDFG 1994). "Riparian" is defined as "on, or pertaining to, the banks of a stream." Riparian vegetation is defined as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG 1994). Removal of riparian vegetation also requires a Notification of Lake or Streambed Alteration.

2.2.2 Aquatic Habitats

Federal, State and local regulatory agencies have recognized aquatic habitats such as water bodies, waterways and wetlands as ecologically significant biological communities. The Clean Water Act (CWA) authorizes the U.S. Army Corp of Engineers (ACOE) to regulate the "Waters of the United States" under section 404. These are defined as "waters susceptible to use in commerce, including interstate waters and wetlands, all other waters, and their tributaries (33 CFR 328.3). Non-wetland waters of a sufficient depth and inundated for a sufficient duration, which also exclude hydrophytic vegetation, are considered "other waters" and are usually defined by the high-water mark. These non-wetland waters include lakes, streams and rivers.
Waters of the United States, the Corps regulates "Waters of the United States" under Section 404 of the CWA. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high-water mark (OHWM), and herein referred to as non-wetland waters. Non-wetland waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the Corps under Section 404 of the CWA.

2.2.2 Aquatic Habitats (Cont.)

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

2.2.3 Sensitive Biological Communities

Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2016). Sensitive plant communities are also identified by CDFW (CDFG 2003, CDFG 2007, CDFG 2009). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2014) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or United States Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3). Specific habitats may also be identified as sensitive in city or county general plans or ordinances
CDFW and the California Native Plant Society (CNPS) defines Sensitive Natural Communities as vegetation types with a state ranking of S1 to S3 by protocols established by the Nature Serve Heritage methodologies There are no specific protocols for mitigating impacts to sensitive communities, but they are considered for environmental review under CEQA checklist IVb. The state ranking (S) is as follows:

1. Critically imperiled –At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
2. Imperiled-At risk because of rarity due to very restricted range, very few populations, (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

2.2.3 Sensitive Biological Communities (Cont.)

3. Vulnerable-At moderate risk of extinction due to a restricted range, relatively few populations, (often 80 or fewer), recent widespread declines, or other factors.
4. Apparently Secure –Uncommon but not rare; some cause for long-term concern due to declines or other factors.
5. Secure-Common; widespread and abundant.

2.2.4 Sensitive and Protected Species

The Federal Endangered Species Act (FESA) of 1973 is intended to protect and recover imperiled animal and plant species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (Service) and the Commerce Department's National Marine Fisheries Service (NMFS). Under the ESA, species may be listed as either endangered, threatened, or as a candidate for listing. "Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. Candidate species are currently under review for a proposed listing. The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. CESA prohibits the take of any species of wildlife designated by the California Fish and Game Commission as endangered, threatened, or as a proposed candidate species.

Plant and Wildlife Species Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and species proposed for listing. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, USFWS Birds of Conservation Concern, and CDFW special-status invertebrates are all considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the CEQA. In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under this legislation, destroying active nests, eggs, and young is illegal. Plant species included within the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Rank (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Very few Rank 3 or Rank 4 plant species meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act or Sections 2062 and 2067 of the CDFW Code that outlines CESA. However, CNPS and CDFW strongly recommend that these species be fully considered during the preparation of environmental documentation relating to CEQA.

2.2.4 Sensitive and Protected Species (Cont.)
This may be particularly appropriate for the type locality of a Rank 4 plant, for populations at the periphery of a species range or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology or occurring on unusual substrates. A description of the CNPS Ranks is provided below in section 3.3.

1.0 Methods

3.1 Field Observations

All field data was recorded by Qualified Biologist Austin Theriault on December 2nd, 2021, using a 100' measuring tape for all distance measurements, Garmin GPS Location Device, and binoculars (10 x 42) were used to identify any wildlife sightings. Portions of all aquatic and terrestrial habitats within the project area were assessed. The Study Area was traversed on foot to determine (1) plant communities present within the Study Area, (2) if existing conditions provided suitable habitat for any special-status plant or wildlife species, and (3) if sensitive habitats are present.
No protocol-level presence/absence surveys were conducted as part of this assessment. Our determinations regarding the potential of the Study Area to support special-status plant and wildlife species were based primarily on the suitability of habitats within the Study Area, the proximity of known occurrences, and an on-site inspection and survey. This assessment is based on information available at the time of the study and on-site conditions that were observed on initial visit on December 2nd, 2021, and subsequent visit on June 28th, 2020.

3.2 Review of Scientific Literature

Data was sourced from USFWS, USDA, and CDFW fact sheets, CEQA reference material and naturalist field guides.

3.3 Sensitive and Protected Species

The procedure used to determine the listed plants and animals in this report included a July query of the California Natural Diversity Database (CNDDB) for any sensitive species detection's.
Description of CNPS Ranks and Threat Codes California Rare Plant Ranks (formerly known as CNPS Lists)
Rank 1A Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B Rare, threatened, or endangered in California and elsewhere Rank 2A Presumed extirpated in California, but more common elsewhere
Rank 2B Rare, threatened, or endangered in California, but more common elsewhere
Rank 3 Plants about which more information is needed - A review list
Rank 4 Plants of limited distribution - A watch list
Threat Ranks
0.1 Seriously threatened in California
0.2 Moderately threatened in California
0.3 Not very threatened in California
Critical Habitat Critical habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species, but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

2.0 Results and Discussion

4.1 BAA Description

The BAA consists of the approximately 47 acres under Evan Kouchalakos's ownership. Terrestrial habitat on the property is dominated by Upland Douglas Fir Forest, with Black Oak (Quercus veluntina), White Oak (Quercus alba) and Tanoak (Notholithocarpus densiflorus). Annual mean rainfall in this region is about 56". Elevation on this parcel is approximately 1,300-1,600 feet above sea level and is a mixture of hills and meadows.
Land use on the property is primarily restricted to cannabis cultivation and residential use. The assessment site visit included an inventory of wildlife species observed. No special species mammals, amphibians, or fish or birds were observed during visit.

4.2 Site Description

The property is an assessed 47-acre square parcel located approximately 17 miles East Southeast of the town of Petrolia, CA. The parcel is within Section 31, Township 2 South, Range 1 East, HB&M, as made known on the 7.5' USGS Quadrangle Map, Bull Creek, CA. Existing development on the parcels includes an approx. 2,800ft². residence, (not used for cannabis) a 384ft² shed used for pesticide and fertilizer storage, and a 1,500ft² harvesting/ processing/secured Harvest building.

4.3 Commercial Cannabis Cultivation

The cannabis cultivation will take place in a proposed Outdoor light deprivation cannabis cultivation area within two areas of the parcel.
Water for irrigation is currently supplied from a groundwater well. All water and fertilizers are applied by drip irrigation at agronomic rates to minimize runoff.
The primary road system is in good shape and provides adequate access to the cultivation. Future cannabis cultivation will require that the roads and crossings be maintained to present standards, which in part, are enforced by the Forest Practice Act (CalFire), Clean Water Act (WQ), and the Endangered Species Act (DFW & USFWS

4.4 Sensitive Biological Communities

4.4.1 Aquatic Habitats

The BAA includes one unnamed Class III watercourse which is tributary to the Mattole River. The subject property is primarily ridge top with one small ephemeral headwaters of Class III watercourse. No occurrences of sensitive species were observed in the channel. No Aquatic Habitat areas were observed during in-field reconnaissance.

4.4.2 Wetlands

A review of the USFWS National Wetlands Inventory indicates no potential seasonal wetlands
on the property. No wetland areas were observed within the project area during in-field reconnaissance. The property is located on primarily native grasslands and Oak/ Douglas fir timberland.

4.4.3 Sensitive Natural Communities

No known Sensitive Natural Communities of state ranking S1 or S2 were reported by CNDDB within the BAA. The dominant vegetation series is Douglas-Fir and Mixed Oak and Madrone forest, which is state-ranked S3 series. No associations in this vegetation series are ranked lower than S3.

4.5 Sensitive and Protected Species

4.5.1 Bird Species of Special Concern

Coopers Hawk (*Accipiter Cooperii)*
Status: CDFW- Watch List (WL), Federal and State Status- None; State Rank S4
Habitat: Tall trees with extensive canopy cover. Forested mountainous regions, especially foothills. Conifer is a preferred tree, but large dense canopy is best.
Status within the BAA: No observed occurrences within the BAA. Five listed occurrences in the CNDDB 9 quad report, Scotia, Taylor Peak, Redcrest, Buckeye Mtn., and Bull Creek. Potential suitable habitat may exist within the BAA.

Golden Eagle *(Aquila Chrysaetos)*
Status: CDFW-Fully Protected, Watch List (FP, WL), Federal and State Status- None; State Rank S3
Habitat: Golden Eagles favor partially or completely open country, especially around mountains, hills, and cliffs. They use a variety of habitats ranging from arctic to desert, including tundra, shrublands, grasslands, coniferous forests, farmland, and areas along rivers and streams.
Status within the BAA: No observed occurrences within the BAA. Three listed occurrences in the CNDDB 9 quad report, Bull Creek, Buckeye Mtn., and Taylor Peak. Potential suitable habitat may exist within the BAA.

4.5.2 Amphibian Species of Special Concern

Foothill Yellow-Legged Frog (*Rana boylii*)
Status: CDFW – SSC; Federal status – none; State status -Endangered, State rank - S3
Habitat: Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis (Thomson et al 2016).
Status within BAA: No observed occurrence within the BAA. There were nine occurrences within the 9-quad CNDDB report, Taylor Peak, Scotia, Redcrest, Bull Creek, Buckeye Mtn., Weott, Honeydew, Shubrick Peak and Ettersburg. Potential suitable habitat may exist within the BAA.

Pacific Tailed Frog *(Ascaphus Truei)*
Status: CDFW- SSC; Federal and State Status- None State Rank S3S4
Habitat: Cold, clear, and well shaded streams.
Status within the BAA: No observed occurrence within the BAA. There were six occurrences listed in the 9-quad CNDDB report, Scotia, Redcrest, Bull Creek, Weott, Shubrick Peak, and Honeydew. Potential suitable habitat may exist within the BAA.

Southern Torrent Salamander *(Rhyacotriton Variegatus)*
Status: CDFW- SSC Federal and State Status- None, State Rank- S2S3
Habitat: forested areas, with high humidity and dense canopy cover Individuals are found near seepages and small streams, preferring to occupy the splash zone of cool, turbulent strams with small boulders and very little fine sediment.
Status within the BAA: No observed occurrences within the BAA. There were 8 listed occurrences in the 9-quad CNDDB report, Ettersburg, Shubrick Peak, Honeydew, Weott, Bull Creek, Redcrest, Taylor Peak and Scotia. Potential suitable habitat may exist within the BAA.

4.5.3 Fish Species of Special Concern

Steelhead- Northern California DPS (*Oncorhynchus Mykiss Irideus Pop. 16*)
Status: CDFW- none; Federal Status- Threatened; State Status- None; State Rank- S3
Habitat: Gravel bottomed, fast flowing, well oxygenated rivers, and streams. Juveniles prefer water that is 10" to 20" deep. Requires highly permeable gravels to keep incubating eggs and sac fry well oxygenated.
Status within BAA: No observed occurrence within the BAA. There were eight occurrences within the 9-quad CNDDB report, Ettersburg, Honeydew, Weott, Scotia, Taylor Peak, Bull Creek, Buckeye Mtn., and Redcrest. Suitable habitat does not exist within the BAA.

Coho Salmon- Southern Oregon/Northern California ESU *(Oncorhynchus Kisutch pop. 2)*
Status: CDFW- none; Federal and State Status- Threatened; State Rank S2
Habitat: Very cold clear water, juveniles usually feed and grow in slow moving off channel habitats, small clear tributaries and estuaries before migration to the ocean.
Status within the BAA: No observed occurrences within the BAA. There were nine listed occurrences in the 9-quad CNDDB report, Redcrest, Buckeye Mtn., Bull Creek, Taylor Peak, Scotia, Weott, Honeydew, Ettersburg, and Shubrick Peak. Potential suitable habitat does not exist within the BAA.

Chinook Salmon- California Coastal ESU *(Oncorhynchus tshawytscha pop. 17)*
Status: CDFW- None; Federal Status- Threatened; State Status- None; State Rank S2
Habitat: Freshwater streams, estuaries, and open ocean. Freshwater streams must be relatively deep with course gravel, temps under 14c, and a fast flow.
Status Within the BAA: No observed occurrences within the BAA. There were six listed occurrences in the 9-quad CNDDB report, Honeydew, Weott, Bull Creek, Redcrest, Taylor Peak, and Scotia. Suitable habitat does not exist withing the BAA.

4.5.3 Mammal Species of Special Concern

North American Porcupine (*Erethizon Dorsatum*)
Status: CDFW – none; Federal and State status – none; State rank - S3
Habitat: From Canada and Alaska and down into northern Mexico. Usually found in mixed and coniferous forests, the make their dens in rocky areas or in hollow trees. Feeds on Conifer needles and Tree bark.
Status within BAA: No observed occurrences within the BAA. There were seven listed occurrences within the 9-quad CNDDB report, Weott, Honeydew, Ettersburg, Redcrest, Buckeye Mtn., Bull Creek and Scotia. Potential suitable habitat may exist within the BAA.

Sonoma Tree Vole *(Arborimus pomo)*
Status; CDFW- SSC; State and Federal Status- None; State Rank S3
Habitat: found only in humid coastal old-growth forests of northern California and Oregon, where they live and nest in the tops of Douglas fir, grand fir, and Sitka spruce trees and eat the outer parts of conifer needles (particularly Douglas fir).
Status within the BAA: No observed occurrences within the BAA. There were six listed occurrences within the 9-quad CNDDB report, Scotia, Taylor Peak, Bull Creek, Buckeye Mtn., Redcrest, and Weott. Potential suitable habitat may exist within the BAA.

Silver Haired Bat *(Lasionycteris Noctivagans)*
Status: CDFW- None; Federal and State Status- None State Rank S3S4
Habitat: Typically feed in relatively protected areas, over streams or ponds, along roadsides, and in or near coniferous or mixed coniferous and deciduous forests. Spends most of its life in forested habitats and is especially reliant on old growth forests for roost space.
Status Within the BAA: No observed occurrences within the BAA. There were four listed occurrences in the 9-quad CNDDB report, Redcrest, Bull Creek, Scotia, and Weott. Potential suitable habitat may exist within the BAA.

4.5.3 Mammal Species of Special Concern (Cont.)

Western Red Bat *(Lasiurus Blossevillii)*
Status; CDFW- SSC; Federal and State Status- None; State Rank S3
Habitat: Primarily roost in cottonwoods. They are also known to roost in shrubs in riparian habitats, as well as fruit tree orchards.
Status within the BAA: No observed occurrences within the BAA. There were two listed occurrences on the 9-quad CNDDB report, Bull Creek, and Weott. Potential suitable habitat may exist within the BAA.

Hoary Bat *(Lasiurus Cinereus)*
Status; CDFW- None; Federal and State Status- None; State Rank S4
Habitat: Diverse forest habitats with a mixture of forest and small open areas that provide edges seem ideal for this species.
Status within the BAA: No observed occurrences within the BAA. There were two listed occurrences in the 9-quad CNDDB report, Weott, and Bull Creek. Potential suitable habitat may exist within the BAA.

Long-Eared Myotis *(Myotis Evotis)*
Status: CDFW- None; Federal and State Status- None; State Rank S3
Habitat: Mixed coniferous forests. Uses large snags for day roosts, usually high into or above the forest canopy.
Status within the BAA: No observed occurrences within the BAA. There was one listed occurrence in the 9-quad CNDDB report, Bull Creek. Potential suitable habitat may exist within the BAA.

Little Brown Bat *(Myotis Lucifugus)*
Status: CDFW- None; Federal and State Status- None; State Rank S2S3
Habitat: Forested lands near water, they roost in buildings, trees, under rocks, and in piles of wood.
Status within the BAA: No observed occurrences within the BAA. There was one listed occurrence in the 9-quad CNDDB report, Bull Creek. Potential Suitable habitat likely to exist within the BAA.

Fringed Myotis *(Myotis Thysanodes)*
Status: CDFW- None; Federal and State Status- None; State Rank S3
Habitat: primarily found in desert shrublands, sagebrush-grassland, and woodland habitats consisting of Douglas-fir, Oak, and Pine trees.
Status within the BAA: No observed occurrences within the BAA. There was one listed occurrence in the 9-quad CNDDB report, Bull Creek. Potential suitable habitat likely to exist within the BAA.

Long-Legged Myotis *(Myotis Volans)*
Status: CDFW- None; Federal and State Status- None; State Rank S3
Habitat: primarily coniferous forests, but the species also occurs seasonally in riparian and desert habitats
Status within the BAA: No observed occurrences within the BAA. There were three listed occurrences in the 9-quad CNDDB report, Bull Creek, Redcrest, and Weott. Potential suitable habitat may exist within the BAA.

Yuma Myotis *(Myotis Yumanesis)*
Status: CDFW- None; Federal and State Status- None; State Rank S4
Habitat: Found in a variety of western lowland habitats, from arid thorn scrub to coniferous forest, but always close to standing water such as lakes and ponds.
Status within the BAA: No observed occurrences within the BAA. There were four listed occurrences on the 9-quad CNDDB report, Weott, Redcrest, Bull Creek, and Scotia. Potential suitable habitat may exist in the BAA.

4.5.4 Plant Species of Special Concern

Databases were reviewed and cross referenced. CNPS, CALFLORA, U.S. Fish and Wildlife service, and Invasive Weeds of California guide. There was one invasive species to be identified near and on the project site, which is Canada Thistle. See Figure 2. Invasive plant species easily colonize new and disturbed sites. Although the property does not currently have any of these problem plant species in abundance, they can spread quickly. Invasive species should be dealt with immediately by manual/mechanical labor such as removing the plant, root ball and remaining vegetation either by hand, brush hog, cutting, sawing. Prevention can be encouraged with mulching. Biological controls are not recommended as this is not usually an effective method and can enter streams and waterways. Hand removal of the plants is encouraged.
To control Canada thistle, cut flowering stalks before they go to seed or hoe out the leafy rosettes. Canada thistle is especially problematic because it can reproduce from tiny root fragments. For this reason, cultivation should be minimized in dense infestations which was not found on the project site. Repeated mowing during the growing season can drain the plants' reserves and eventually kill the plant.

4.6 Potential Impacts

4.6.1 Northern Spotted Owl

The cannabis cultivation process at the Kouchalakos property will be restricted to the existing roads and the existing cultivation site. No habitat removal is proposed under the current permit application. Potential impacts to NSO within the BAA are limited to disturbance from noise from traffic accessing the site and the likely intermittent use of small equipment such as generators, ATVs, etc.

The Arcata Fish and Wildlife Office (AFWO) has provided a 2006 guidance document regarding disturbance from noise-generated activities, "Estimating the effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California." The document provides likely disturbance distances to nesting owls and Murrelets, based on ambient sound levels at the site, the use of specific equipment, and visual line-of-sight distance to nests. A review of the document suggests that scenario 4 under appendix B, the Northern Spotted Owl Sound and Visual Harassment Decision Support Tool, best reflects the likely ambient sound conditions at the site and the equipment likely to be used during cultivation. Under this scenario, "the existing environment is characterized by low to very low levels of sound associated with human activities, and is typified by small power tools, light vehicular traffic moving at slow speeds, recreational activities, and many urban and rural residential activities." The typical action-generated sounds from cultivation under this scenario could include "larger gas-powered engines, large generators, amplified music, ATV's, and small trucks at moderate speed on improved trails, and large chainsaws." This scenario 4 closely approximates the likely ambient background noise at the site, and the potential action generated noise from the cultivation activities.

No observed occurrences on the BAA. The BAA likely does not have appropriate habitat to support Spotted Owl nesting/roosting. As there is abundant foraging habitat on nearby public and private properties, cultivation activities will not likely impact foraging Spotted Owls. There were nine listed occurrences in the 9-quad CNDDB report, Ettersburg, Weott, Redcrest, Honeydew, Shubrick Peak, Bull Creek, Buckeye Mtn., Scotia and Taylor Peak.

4.6.2 Marbled Murrelet

Nesting marbled Murrelets require mature, late-successional forests with trees that support potential nesting "platforms", such as large mossy branches or canopy deformities (USFWS 1995). The forested habitat on the Kouchalakos property does not have trees of sufficient age or canopy complexity to support breeding marbled Murrelets.

There is no potential Murrelet nesting habitat located on the BAA. There were three listed occurrences in the 9-quad CNDDB report, Redcrest, Scotia, and Weott.

4.6.3 Sensitive/Nesting Birds

Cultivation activities at the existing project site are unlikely to disturb nesting or sensitive birds, as impacts would generally be limited to noise disturbance only. The project site has no bird nesting habitat is present. No potential nesting habitat will be affected by typical cultivation activities on the flat.

4.6.4 Sensitive Fish/Amphibians

The Water Resources Protection Plan outlines the necessary BMPs (Best Management Practices) needed to protect water quality from cultivation practices. These BMP's, implemented properly, should serve to protect water quality on the BAA and to downstream waters. There should be no deleterious effects to fish or other aquatic species from cultivation activities.

4.6.5 Sensitive Forest Carnivores

Forest carnivores (Fisher, Humboldt Marten) may potentially use the BAA for foraging as part of a larger home territory. Older forests with complex canopies are preferred habitat for denning for these species; the BAA does not likely provide appropriate habitat for natal dens. As no habitat removal is planned for the BAA, there is a low likelihood of impacts to potential carnivore foraging habitats.

4.6.6 Sensitive Plants

Use of the existing cultivation site will likely not affect sensitive plants, as activities will be limited to previously impacted areas. Conversion of a proposed cultivation site would likely involve some ground disturbance. Spring season floristic (botanical) surveys are effective at identifying sensitive plants for protection.

5.0 Recommendations

1. All cultivation activities should be conducted to minimize potential runoff from the project sites.
2. Any fertilizers or pesticides should be used in strict accordance with the manufacturer's directions.

3. All fertilizers, pesticides, and other cultivation-related products should be properly stored to prevent exposure to precipitation events and to prevent access to wildlife.

4. Generators should be housed inside insulated enclosures to muffle noise and adhere to noise thresholds of the CCLUO (≤50 decibels of maximum noise exposure at 100 feet from noise source or edge of habitat).

5. Conduct nesting bird surveys if tree or shrub removal or habitat alteration is planned within the nesting bird season (generally March 1 - August 31). Use appropriate distance buffers, if necessary, for any discovered active nests.

6. Conduct seasonally appropriate floristic (botanical) surveys for rare plants if any ground disturbance for further development is proposed.

6.0 References

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7.0 Appendix

Figure 1: Parcel Map

Figure 2: Web Soil Survey

APN: 107-054-036
Kouchalakos,E

MAP LEGEND

Area of Interest (AOI)
Area of Interest (AOI)

Soils
Soil Map Unit Polygons
Soil Map Unit Lines
Soil Map Unit Points

Special Point Features
Blowout
Borrow Pit
Clay Spot
Closed Depression
Gravel Pit
Gravelly Spot
Landfill
Lava Flow
Marsh or swamp
Mine or Quarry
Miscellaneous Water
Perennial Water
Rock Outcrop
Saline Spot
Sandy Spot
Severely Eroded Spot
Sinkhole
Slide or Slip
Sodic Spot

Spoil Area
Stony Spot
Very Stony Spot
Wet Spot
Other
Special Line Features

Water Features
Streams and Canals

Transportation
Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background
Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 9, Jun 1, 2020

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

Date(s) aerial images were photographed: May 6, 2019—Jun 21, 2019

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
569	[illegible]-Windynip-[illegible] complex, 15 to 50 percent slopes	14.7	49.7%
548	[illegible]-Windynip-[illegible] complex, 5 to 30 percent slopes	13.7	46.2%
549	Windynip-[illegible] complex, 30 to 50 percent slopes	1.2	4.1%
Totals for Area of Interest		29.6	100.0%

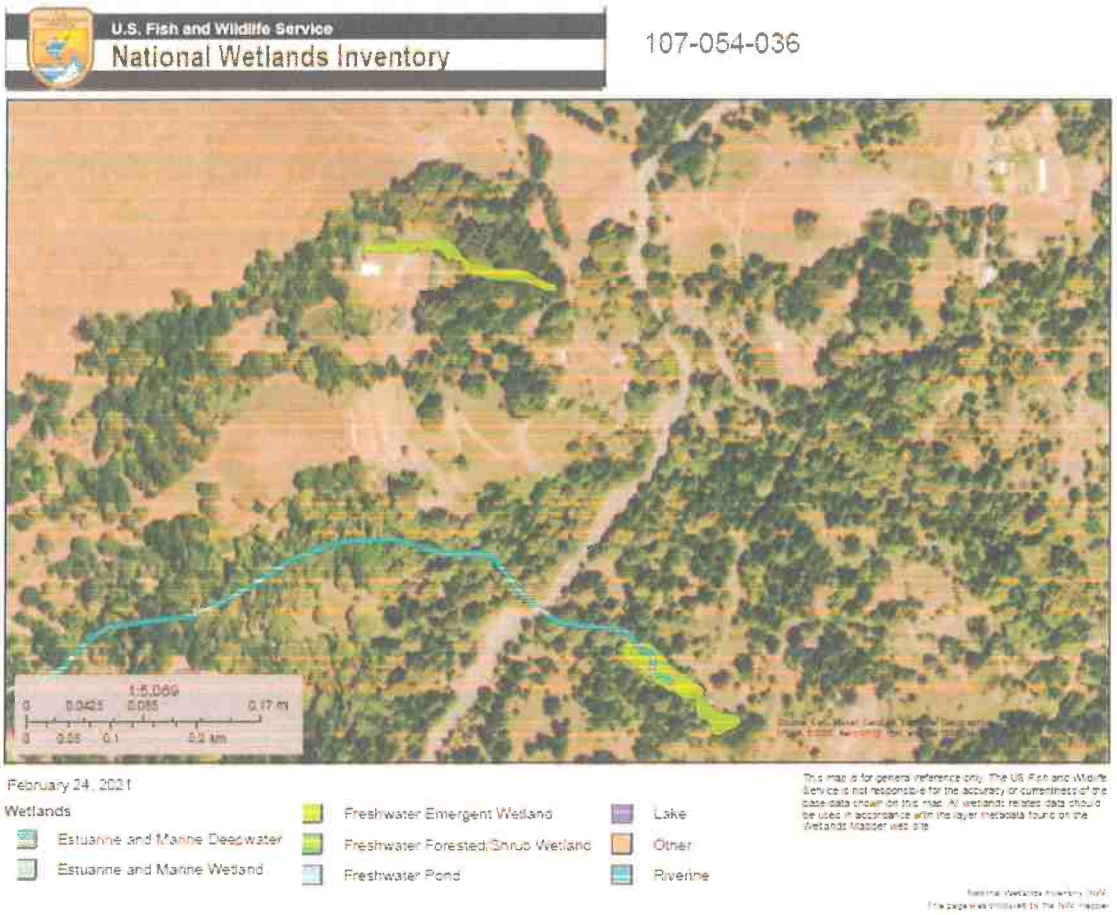

Figure 3: Aquatic Habitats


Boris Overview Map
Site 2 - Watercourse above pond re-align
Site 3 - Watercourse relaocation
Site 1 - Pond outlet relocation
Watercourse cossing
Site 4 - Spring/POD
Class II watercourse crossing
Road requires maintanence

Map of Project Area

Northern Spotted Owl - Final Critical Habitat - USFWS [ds156]

1:18,056

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

May 12, 2021