

September 10, 2019

Biological Assessment for NCR VII LLC Cannabis Cultivation Project

1. INTRODUCTION

The NCR VII LLC Cannabis Cultivation Project, or NCR VII Project involves existing outdoor cultivation about seven miles north of Weitchpec, in northern Humboldt County. Entailing existing outdoor cannabis cultivation on a parcel assessed as 158 acres (APN 530-151-005), zoned for Timberland Production (TPZ), in Section 4, Township 10, Range 4, HBM, Nick Vigil, the landowner, is currently operating in compliance with an interim permit issued by Humboldt County Planning and Building Department's (HCPBD) Cannabis Service Division.

Nevertheless, in order to complete the permit process, Mr. Vigil has requested that I address potential detrimental environmental impacts of proposed cultivation activities. Having consulted on northern California forest-wildlife matters since 1990, I specialize in biological investigations for protected and sensitive species in compliance with State and Federal law. A qualifying "Spotted Owl Expert" (SOE), my [resume](#) also demonstrates extensive knowledge of environmental regulations.

As such, this biological resource assessment focuses on potential detrimental impacts of existing commercial agricultural activities, pursuant to California Environmental Quality Act (CEQA) statute (Public Resources Code Section 21000 and following), the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 and following), published court decisions interpreting CEQA, and locally adopted CEQA procedures. Streamlining investigation of potential significant environmental impacts, this assessment also references Timberland Conversion Evaluation Report (TCER) conducted by Chris Carroll, Registered Professional Forester (RPF#2628) with Timberland Resource Consultants (TRC).

PROJECT DESCRIPTION

It appears medical marihuana has been grown on this property since 2012. As such, potential adverse environmental impacts of were analyzed for two areas of cultivation, on opposite sides of this ownership, totaling a footprint of approximately 29,500 square foot (sq. ft.). Originally cleared and graded by previous landowner's logging activities in 1993, additional clearing and 0.95 acres an unpermitted timberland conversion have been addressed in the TCER.

As such, this document identifies four existing cultivation areas. Site 1A and 1B are outdoor gardens, 5,500 and 4,000 sq. ft. respectively, located in the southern end of the property. Closer to the northern boundary, Site 2 is composed of a 20,000 outdoor garden, and is associated with a manmade pound. Site 3 is a 2,600 sq. ft. greenhouse, situated adjacent to a shop used for propagation and drying. Off -the-grid, power for cultivation operations is provided by solar panels, or backup generators, also employed for household proposes.

Outdoor cultivation Sites 1A, 1B and greenhouse at Site 3 are located in association with a residential cabin situated on Bee Lake. Recently petitioned as a designated “Ceremonial Area” by the Yurok Tribe, although entirely within the Vigil ownership, HCPBD is requiring that he discontinue cannabis cultivation activities within 600 feet of this small body of water. Thus, scheduled to be relocated to Site 2, going forward, the effective cultivation footprint for this outdoor cannabis project may be as small as 20,000 sq. ft.

There are no stream crossings or water diversions on this ownership, but as per forbearance outlined in previously established 1600 Permit with California Department of Fish and Wildlife (CDFW), water for cannabis cultivation and domestic uses is collected from a fully contained and hydrologically disconnected spring on a neighboring property. Gravity feed, although water is stored in onsite plastic tanks at Sites 1A, 1B and 3, cultivation at Site 2 will use water stored in a fenced in pond that was engineered for this purpose.

2. ENVIRONMENTAL SETTING

In the headwaters of Bee Creek, approximately two miles upstream from its confluence with Bluff Creek, a stream that eventually enters the Klamath River, this project is situated next to the Six Rivers National Forest, but more than 19 miles from the Pacific Ocean. In cleared second growth Douglas-fir habitat (Mayer and Laudenslayer 1988), at an elevation of 3,600 feet, this project is too far inland and at an elevation above what would be considered suitable for marbled murrelets.

Nevertheless, this cannabis cultivation is located within the range of the northern spotted owl (NSO) (*Strix occidentalis caurina*). According the California Natural Diversity Data Base (CNDDB), there could be as many as three historical Territories within 1.3 miles of proposed operations. Intensively managed for timber production before being converted to cannabis cultivation, I inspected this project on June 18, 2019, and in comparing existing site conditions against historical aerial photography, it appears cannabis cultivation was been located on log landings.

Likely first clear-cut in the mid-1900s, and logged at least twice since then, whereas the stand structure on this ownership is generally not suitable for NSOs, there is suitable habitat on adjacent public land. Previously field inspected by environmental specialists and consultants, existing cannabis cultivation located next to residential compound associated with Bee Lake will likely be discontinued on the direction of Humboldt County. However, this small two-acre natural forest lake is not be used for cannabis cultivation. Confirming the absence of wetlands and/or other sensitive habitats within 150 feet, I also measured noise disturbance levels associated with generators and fans with an EXTECH Digital Sound Level Meter Model 407730. Noise levels of onsite generators and greenhouse fans was found to be below the 50 decibel (dB) at 100 feet, or edge of habitat, the threshold for disturbance recently established by the CDFW for cannabis cultivation in Humboldt County.

3. REGULATORY SETTING

Proposition 64 (the California Marijuana Legalization Initiative) gives each municipality the right to make their own rules. As such, the Humboldt County Planning and Building

Department (HCPBD) began accepting applications for projects in the Inland Zone after the CMMLUO was adopted by the Board of Supervisors on February 26, 2016. Accordingly:

"It is intended to address the County of Humboldt's prerogative to license, permit, and control commercial cultivation, processing, manufacturing and distribution of cannabis for medical marijuana as set forth in the MMRSA, including, but not limited to the provisions of Business and Professions Code Sections 19315, 19316, 19320, 19322, 19332, and 19360 and Health and Safety Code Section 11362.777, in conjunction with state licensing requirements, in order to protect the public health, safety, and welfare of the residents of the County of Humboldt, and to reduce or eliminate any adverse environmental effects of existing commercial cannabis cultivation operations in the County of Humboldt, and to prevent adverse environmental effects of any new commercial cannabis activities which may be permitted in the future in accordance with this Section and state law."

The Commercial Cannabis Land Use Ordinance (CCLUO), as revised on January 11, 2018, limits the maximum allowable cultivation area for outdoor and/or mixed light cultivation to the size of the existing cultivation area prior to January 1, 2016. As per Section 314-55.4.9, Table of Humboldt County Commercial Cannabis Cultivation Permit Types – Inland Zone, the maximum area for an existing cultivation project, on a single parcel ten acres or larger, is 22,000 sq. ft. for mixed-light, and 43,560 sq. ft. for outdoor cultivation.

Although 55.4.6.5 provides accommodations for pre-existing cultivation sites that exempts them from performance standards required of new developments, general provisions applicable to all commercial cannabis land use activities intended to alleviate adverse environmental impacts include a 600 feet standard setback for publicly owned lands managed for open space and/or wildlife habitat purposes. However, a setback of less than 600 feet may in accordance to 55.4.6.4.4(f) be allowed with a Special Permit. Addressing potential disturbance of federally listed species in accordance to the Endangered Species Act (ESA), the CCLUO specify:

"The noise produced by a generator used for cannabis cultivation shall not be audible by humans from neighboring residences. The combined decibel level for all noise sources, including generators, measured at the property line shall be no more than 60 decibels. Where applicable, sound levels must also show that they will not result in the harassment of Marbled Murrelet or Spotted Owl species. Conformance will be evaluated using current auditory disturbance guidance prepared by the United State Fish and Wildlife Service, and further consultation where necessary."

Cannabis cultivators applying for an Annual License from the California Department of Food and Agriculture must also address potentially significant adverse environmental effect in accordance to CEQA. Although CEQA does not directly regulate land use, it does require state and local agencies to follow a protocol of analysis and public disclosure. It also provides a blueprint for determining detrimental significant environmental impacts.

Furthermore, cannabis cultivation is often conducted on land cleared under the 1973 Z'berg-Nejedly Forest Practice Act (Public Resources Code Section 4551 et seq.). Hereto referred to as the California Forest Practice Rules (FPRs), not only are these rules

functionally equivalent to CEQA, they also provide firmly established thresholds of significance for sensitive biological resources. Specifically, 14 CCR §919.9 and §919.10 contain USFWS recommendations for avoiding take of NSOs. Other relevant environmental laws include the California's Endangered Species Act (CESA), the Bald and Golden Eagle Protection Act, as well as the California Fish and Game Code.

Water quality in California is governed by the Porter-Cologne Water Quality Control Act and certification authority under Section 401 of the Clean Water Act (CWA), as administered by the Regional Water Quality Control Board (RWQCB). The Section 401 water quality certification program allows the State to ensure that activities requiring a Federal permit or license comply with State water quality standards. Water quality certification must be based on a finding that the proposed discharge will comply with water quality standards which are in the regional board's basin plans.

While the USFWS and the National Marine Fisheries Service (NMFS) have authority over federally listed species, CDFW is responsible for implementing the CESA. Also authorized to comment and make recommendations on CEQA projects; however, as Lead Agency, permitting legal cannabis cultivation in a manner that prevents or minimizes significant environmental impacts is ultimately a Humboldt County responsibility.

4. BIOLOGICAL COMMUNITIES

Preliminary environmental scoping included a literature review of floral and faunal communities likely impacted by the proposed cannabis cultivation using CDFW's List of Special Animals (2018). A query of the CNDDDB was also conducted within 1.3 miles of the project. In addition to NSO Territories HUM0024, HUM0030 and HUM0243, this database also records four other special status animals; Del Norte salamander (*Plethodon elongatus*), southern torrent salamander (*Rhyacotriton variegatus*), tailed frog (*Ascaphus truei*), and fishers (*Pekania pennanti*). Additionally, this assessment area contains six protected plants species; Small groundcone (*Kopsiopsis hookeri*), bald mountain milk-vetch (*Astragalus umbraticus*), coast fawn lily (*Erythronium revolutum*), Oregon goldthread (*Coptis laciniata*), white-flowered rein orchid (*Piperia candida*), and robust false lupine (*Thermopsis robusta*).

This project's near ridge top location, more than one and a half miles feet from a Class I streams precludes impacts to anadromous species. Negative effects to listed species, such as foothills yellow-legged frog and Willow Flycatcher (*Empidonax traillii*) can also be ruled out. However, a more comprehensive assessment of floral and faunal communities potentially impacted by proposed cannabis cultivation has been conducted in terms of ecological management guilds.

5. DISCUSSION OF ENVIRONMENTAL IMPACTS

Article 5 of the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Sections 15000-15387) provide rules for "Preliminary Review of Project and Conduct of Initial Study". Concerned with present plant or animal communities threatened by local elimination, in jeopardy of experiencing substantial habitat reduction, or dropping below

self-sustaining levels as a result of proposed project [§15065(a)(1)], CEQA requires that a decision-making body provide substantial evidence of significant environmental effects before empowering lead agency to authorize additional mitigations or alternatives [§15126.4 (a)(3)].

To the best extent possible, such arguments should contain an element of Forecasting (§15144), as well as a degree of Specificity (§15146), and Technical Detail (§15147). Limited to activities which are within the agency's area of expertise [§15096 (d)], comments need to be written in a manner that is meaningful and useful to the decision-making body and the public [§21003(b)].

“Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence” [14 CCR §21080(e)(2)].

As such, special-status species potentially impacted by proposed cannabis cultivation have been discussed with emphasis on CEQA significance, starting with those listed under the ESA, followed by species considered under the CESA, and lastly, non-listed sensitive species. Although potential significant effects to animals with large territories were considered inside 1.3 miles, impacts to species with smaller ranges and/or specific habitat requirements were evaluated within the disturbance footprint of proposed operations.

Accordingly, environmental impacts have been discussed for Northern Spotted Owl and Late Mature Forest Species, Bald Eagle, Osprey and Forest Raptors, Aquatic/Wet Site Species, Forest Mustelids and Other Small Mammals and Special Status Plants. Parameters used to appraise potential CEQA significance included (1) occurrence and distribution of the species in relation to the project area, (2) species sensitivity to disturbance, (3) existing baseline conditions, and (4) the species legal status and population size. A species was dropped from further consideration, if the project area was found to occur outside its distribution, or vital habitat requirements for that species were absent.

Northern Spotted Owl and Late Mature Forest Guild Species

The NSO requires mature forest patches with permanent water and suitable nesting trees and snags (Zeiner et al. 1990). Although initially believed to be old growth obligate, they commonly occur in younger forest types of northern California (USDA 1994). Nevertheless, spotted owls also share affinity for mature forest with other sensitive species dependent on the larger, more decadent trees, downed woody debris and the lower ambient temperatures characteristic of forest interior conditions.

Located about a mile east of Bee Lake, on the National Forest, Territories HUM0024 and HUM0030 appear based on the same metadata, because the CNDDB shows them detected on the same date in 1978. Although the activity center for HUM0243 is almost two miles to the east northeast, CNDDB's "spider diagram" reports a pair, approximately a mile from the northern cultivation area in 1979. Although the CNDDB gives no indication that NSOs ever having nested within a ¼ mile of proposed cannabis cultivation, because it is conceivable that disturbance from cannabis cultivation activities could potentially violate the ESA, the potential for take of NSOs has been assessed as per **“Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled**

Murrelets in Northwestern California (USFWS 2006)". Accordingly, disturbance may reach the level of "take" when at least one of the following conditions are met:

- *Project-generated sound exceeds ambient nesting conditions by 20-25 decibels (dB)*
- *Project-generated sound, when added to existing ambient conditions, exceeds 90 dB*
- *Human activities occur within a visual line-of-sight distance of 40 m or less from a nest*

Cannabis cultivation does not generate the same type of disturbance as logging, and given that no habitat will be removed, impacts to these guild species are unlikely. However, for the purposes of this assessment, potential disturbance from cannabis cultivation activities has been assessed according to the 50 decibel (dB) threshold for disturbance at 100 feet, or the edge of habitat, as specified by the CDFW for NSOs associated with cannabis cultivation in Humboldt County.

Bald Eagle, Osprey and Forest Raptor Guild

Bald eagles (*Haliaeetus leucocephalus*) and osprey (*Pandion haliaetus*) typically prefer to nest close to streams and rivers. Occupying the same niche as great blue herons; however, golden eagles (*Aquila chrysaetos*) favor large trees and rock faces on prominent ridges associated with grassy meadows. Fully protected, as are all nesting raptors, although the CNDDDB does not record rookeries or other nesting birds of prey within 1.3 miles of this project, regularly observed in the Klamath River watershed, the populations of these large birds are generally increasing.

No active raptor nests or rookeries were observed in association with this project. Given existing environmental baseline conditions, and that proposed cannabis cultivation does not involve habitat removal, it is reasonable to conclude that this project will not significantly impact these guild species.

Aquatic/Wet Site Guild

Listed as a candidate species under the CESA, habitat for foothills yellow-legged frogs does not exist in association with this project, but they are common in the Klamath River system. Nevertheless, southern torrent salamander, Del Norte salamander and tailed frog are known to occur within the assessment area. Although not observed, man-made reservoir associated with this project may also provide habitat for western pond turtle (*Emys marmorata*).

Lumped together based on their affinity for water, wet areas and riparian habitat, potential habitat for pacific giant salamander (*Dicamptodon tenebrosus*), rough-skinned newt (*Taricha granulosa*), and northern red-legged frog (*Rana aurora*) may also occur on this ownership. However, located outside the Stream Management Area (SMA), best management practices and watershed mitigation measures specified in 1600 Permit will mitigate significant impacts to Aquatic/Wet Site Guild Species. Thus, further consideration for these species has been dropped. Nevertheless, special measures for reservoirs commonly requested by CDFW include annual surveys for American bullfrog (*Rana catesbeiana*), and draining the pond once a year, if bullfrogs are observed.

Forest Mustelids and Other Small Mammals

The CNDDDB reports no special status mammals within 1.3 miles, other than fishers, but the Sonoma tree vole (*Arborimus pomo*) is also locally common in this region. The surrounding mid-seral forest may also contain suitable habitat for North American porcupine (*Erethizon dorsatum*), but lacking grasslands and open meadows, this ownership is less suitable for American badgers (*Taxidea taxus*). Although it appears this project is just inside the geographic range of the Humboldt marten (*Martes americana humboldtensis*), a Candidate species under the CESA, because cultivation activities will be conducted on previously cleared and graded sites, and do not involve additional ground disturbance, proposed cannabis activities are unlikely to incidentally affect martens. Consequently, it can reasonably be concluded that this project will not significantly impact any of these guild species.

Protected Plant Guild

Protected under State law, white-flowered rein orchid and white-flowered rein orchid are California Rare Plant Rank 1B plants considered threatened by the California Native Plant Society (CNPS). As per the CNPS:

“Plants with a California Rare Plant Rank of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. California Rare Plant Rank 1B plants constitute the majority of taxa in the CNPS Inventory, with more than 1,000 plants assigned to this category of rarity.”

The Small groundcone, bald mountain milk-vetch, and coast fawn lily are similarly protected, but because they are more common beyond the boundaries of California, the CNPS considers them as Rank 2B. Ranked 4, Oregon goldthread is on CNPS’s watch list because of its limited California distribution. However, according to the CNPS, all California Rare Plant Rank 1B and 2B species meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and are eligible for state listing:

“Impacts to these species or their habitat must be analyzed during preparation of environmental documents relating to CEQA, or those considered to be functionally equivalent to CEQA, as they meet the definition of Rare or Endangered under CEQA Guidelines §15125; (c) and/or §15380.”

Nevertheless, considering existing baseline conditions, potential impacts to sensitive botanical communities can reasonably be dismissed, because proposed cannabis cultivation does not involve ground disturbance of the type that could affect sensitive plant communities in ways that could be CEQA significant.

6. DISCUSSION OF SIGNIFICANT ENVIRONMENTAL IMPACTS

A determination of potential significant environmental effects calls for careful judgment on the part of the public agencies involved. However, not only does CEQA require that a project's potentially harmful impacts be discussed with an emphasis in proportion to their severity and probability of occurrence (§15143), those impacts must also be judged against existing baseline conditions. According to the CCLUO, Exhibit A – FINDINGS AND STATEMENT OF OVERIDING CONSIDERATIONS:

"The EIR adopts as its baseline for analysis of impacts the existing environmental conditions that include the legacy of a half century of unregulated cannabis cultivation in remote and environmentally sensitive areas ...that unquestionable caused harmful environmental impacts that are documented in the EIR..."

The importance of factoring in current habitat conditions when conducting an ESA "take" analysis is also indicated in the [Section 7 USFWS Consultation Handbook](#). However, whereas the ESA prohibits the incidental taking of an individual without an explicit permit, it is imperative to consider that CESA differs from the ESA in ways often not acknowledged by State agencies and stakeholders. For whereas the CESA applies to both formally listed and candidate species, it diverges from the ESA in that its definition of "take" is far more limited (Dwyer and Murphy 1995). Restricted to "Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill", CESA has no equivalent to 'harm' or 'harass'. Moreover, the California Fish and Game Code also gives CDFW explicit authority to grant incidental take. In other words, according to State law, incidental take (disturbance) of State listed species should be more permissive, providing that it involves an otherwise lawful and fully mitigated activity (Kern 1999).

Nevertheless, evaluated in accordance to the threshold for NSO noise disturbance that CDFW recently presented to HCPBD, this biological assessment found no plant or animal community potentially impacted by proposed cannabis cultivation activities in manner that would be CEQA significant. Held to higher environmental standard than other legally permitted land uses, the implementation of the CCLUO has also resulted in severely reducing the harmful effects of illegal growing. Moreover, as other States legalize cultivation, and wholesale cannabis prices continue to fall, cannabis cultivation is likely to gradually decrease in Humboldt County, further alleviating potentially harmful cumulative environmental impacts.

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7. SOURCES AND LITERATURE CITED

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