March 25, 2019

Ms. Carol Littlefield 18331 Ponderosa Trail Lower Lake, CA 95457

Subject: Biological Resources Report 18331 Ponderosa Trail, Lower Lake, Lake County,

California

Dear Ms. Littlefield:

Huffman-Broadway Group, Inc. (HBG) has completed a Biological Resources Report related to licensing of an existing cannabis cultivation operation under the CalCannabis Cultivation Program within an approximately 37.5-acre site at 18331 Ponderosa Trail in Lower Lake, Lake County, California.

The objective of this study was to provide a determination of the potential for the Study Area and, in particular, the proposed cultivation sites and operations areas to support sensitive habitats as defined by state or federal regulation and/or pursuant to the California Environmental Quality Act (CEQA) including habitat suitable to support special status species of flora and fauna, and to evaluate whether the cultivation of cannabis as proposed would result in significant impacts to these resources. Our analysis included: (1) a review of the habitat characteristics of the site and species of plants and animals expected to utilize the site; (2) review of the California Natural Diversity Data Base (CNDDB) to determine if any populations of endangered, threatened, or rare species have occurred historically or are currently known to exist in the project vicinity; (3) a field survey of the site by an HBG biologist, and (4) an evaluation of whether the proposed project has the potential to result in impacts to sensitive habitats or special status species. The study included a general reconnaissance of the site by HBG wildlife biologist Gary Deghi on March 4, 2019.

PROPOSED PROJECT

The subject property is an approximately 37.5-acre site located at 18331 Ponderosa Trail in Lower Lake, Lake County, California. The subject property is assessor parcel No. 012-048-010-00 owned by Carol Littlefield. The Project Area is accessed by a private, gated, gravel and dirt road off of Noble Ranch Road. Existing land uses on the property include a primary residence, two rural residences, a barn and two vegetable/flower gardens. The remainder of the site is forested woodland.

The applicant's defined project for cannabis cultivation is shown in Figure 1. The Management Plan, prepared by Carol Littlefield, the applicant, describes the operations (Littlefield 2017). According to the applicant's plan the project includes two outdoor cultivation areas totaling approximately 0.5 acres and pre-existing facilities including a material storage area; an existing irrigation system; cannabis drying and processing areas; and access roads. Cultivation Area #1 has a fenced enclosure with dimensions 96.5 feet by 96.5 feet (9,316.5 sq. ft.), with 5,400 sq. ft. of Cannabis canopy grown inside. Cultivation Area #2 has a fenced enclosure with dimensions of 100 feet by 46.5 feet (5,022 sq. ft.), with 1787 sq. ft. of Cannabis canopy grown inside. Cultivation method varies and includes planting stations in native, tilled soil and also use of smart pots and raised beds. No artificial lighting is used. A two-story barn (approximately 730 square feet) is used for equipment and material storage on the ground level and cannabis drying on the upper level. A room within the primary residence is also used for surveillance equipment and Cannabis processing (approximately 144 square feet). The cultivation operation will draw water from the existing residential water supply, which uses an existing, permitted groundwater well and electric pump. Aboveground PVC piping transports water from the well to an automated drip irrigation system in the Cultivation Area #1, and Cultivation Area #2 is supplied with buried PVC pipe to another automated drip system. (Littlefield 2017).

EXISTING BIOLOGICAL SETTING

The description of the biological setting for the property is based on a field visit to the site by HBG Senior Environmental Scientist Gary Deghi on December 20, 2018. The survey on this date included observations of the composition and distribution of plant species, wildlife observations, identification of sensitive habitats and a comparison of site characteristics for similarity to sites known to support special status species within the area.

The project site is in a rural location of Lake County east of the unincorporated community of Middletown in Lake County, California. The property slopes to the north and west away from an existing residence located at the end of a driveway that extends from a gate entrance off of Ponderosa Trial along the eastern border of the property. Elevations on the property range from about 2,080 msl in the northwest corner of the parcel to about 2,200 feet msl near in the southwest corner of the parcel. The parcel is a mostly wooded site with an existing house, barn and garden in the northern portion of the property. A review of the Natural Resource Conservation Service (NRCS) Soil Survey map for Lake County (NRCS 1985) indicates that 99% of the soils on the property are Collayomi-Aiken-Whispering complex, 5 to 30 percent slopes. One small area of steeper slopes in the northwest corner of the property consists of Colayomi-Aiken-Whispering complex, 30 to 50 percent slopes.

Like other portions of northern California, Lower Lake experiences a Mediterranean climate characterized by warm, dry summers and cool, wet winters. Average annual precipitation in the Lower Lake area is slightly less than 40 inches, with most rain occurring in the winter "rainy season" (November through March).

Plant Communities

Vegetation communities are assemblages of plant species growing in an area of similar biological and environmental factors. Vegetation communities and habitats at the project site were identified based on the currently accepted List of Vegetation Alliances and Associations (or Natural Communities List) (CDFW 2010). The list is based on A Manual of California Vegetation, Second Edition (Sawyer and Keeler-Wolf 2009), which is the National Vegetation Classification applied to California. The project area contains one habitat type according to the Natural Communities List: Interior Live Oak Woodland, but the site of the existing house and associated built facilities would be considered an urban habitat with primarily planted landscaping vegetation.

Canopy vegetation in the forested portions of the site is mostly Interior live oak (*Quercus wislizeni*), California foothill pine (*Pinus sabiniana*), and California black oak (*Quercus kelloggii*), with Ponderosa pine (*Pinus ponderosa*) also present. Forest understory is sparse and includes saplings and young trees of the major canopy species. The cultivation sites total approximately 0.5 acre in size. One of the sites consist of a fenced-in garden comprised vegetables and planted flowers, and the other is a fenced-in area within the oak woodland forest that has been cleared of vegetation in the past and with little vegetation. Some unused smart pots were observed in this area during the site reconnaissance.

Animal Populations

The habitats on site and in the immediately surrounding area support a number of wildlife species, mostly those typically found in forested habitats this part of Lake County. Trees and other vegetation on the property provide nesting and roosting sites for birds, and cover and foraging habitat for species of birds, mammals, reptiles and amphibians. A number of wildlife species were documented at the site during a biological reconnaissance conducted on March 4, 2019. All species documented are common to abundant in the region and would be expected in the habitats present at the site.

Birds documented at the site during the March 4, 2019 field review included acorn woodpecker (*Melanerpes formicivorus*), hairy woodpecker (*Picoides villosus*), Nuttall's woodpecker (*Picoides nuttallii*), northern flicker (*Colaptes auratus*), pileated woodpecker (*Dryocopus pileatus*), black phoebe (*Sayornis nigricans*), California scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), Hutton's vireo (*Vireo huttoni*), American robin (*Turdus migratorius*), hermit thrush (*Catharus guttatus*), western bluebird (*Sialia mexicana*), oak titmouse (*Baeolophus inornatus*), white-breasted nuthatch (*Sitta carolinensis*), brown creeper (*Certhia americana*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), dark-eyed Junco (*Junco hyemalis*) and purple finch (*Haemorhous purpureus*). These species are all common to abundant species that are expected in the forested habitats found at the site. Many of these resident species will remain through the breeding season.

Observed amphibians included California slender salamander (*Batrachoseps attenuatus*), which were abundant, but would also likely include species such as Pacific treefrog (*Pseudacris*

regilla), western toad (Bufo boreas), arboreal salamander (Aneides lugubris) and ensatina salamander (Ensatina eschscholtzii), among others. Reptiles were not observed but likely include western fence lizard (Sceloperus occidentalis), southern alligator lizard (Elgaria multicarinatus), ringneck snake (Diadophus punctatus), gopher snake (Pituophis melanoleucus) and common garter snake (Thamnophis sirtalis). Mammals included mule deer (Odocoileus hemionus), which were observed during the site visit; other expected species would also likely include species such as Virginia opossum (Didelphis virginiana), western gray squirrel (Sciurus griseus), deer mouse (Peromyscus crinitus), striped skunk (Mephitis mephitis), raccoon (Procyon lotor), and probably bobcat (Felis rufus), among others.

Sensitive Habitats

Regulatory Requirements

Sensitive habitats are those habitats which have been identified by local, state, or federal agencies as areas which provided special functions or values. These habitats are subject to regulation under various local, state, and federal regulations such as the following:

Waters of the United States. The Department of the Army, acting through the U.S. Army Corps of Engineers (USACE), has the authority to permit the discharge of dredge or fill material in waters of the U.S. under Section 404 of the Clean Water Act (CWA). Waters of the U.S. include both wetlands and "other waters of the U.S." Wetlands and other waters of the U.S. are described by U.S. Environmental Protection Agency (US EPA) and USACE regulations (40 CFR § 230.3(s) and 33 CFR § 328.3(a), respectively). US EPA and the USACE define wetlands as "...those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (US EPA regulations at 40 CFR § 230.3(t); USACE regulations at 33 CFR § 328.3(b)). Both natural and manmade wetlands and other waters (not vegetated by a dominance of rooted emergent vegetation) are subject to regulation. The geographic extent of wetlands is defined by the collective presence of a dominance of wetland vegetation, wetland hydrology conditions, and wetland soil conditions as determined following the USACE' 1987 Wetlands Delineation Manual (1987 Manual); the USACE' 2008 Regional Supplement to Corps of Engineers Wetland Delineation Manual: Arid West, Version 2.0 (Arid West Regional Supplement); and supporting guidance documents. The geographic extent of other waters of the U.S. is defined by an ordinary high water mark (OHWM) in non-tidal waters (33 CFR. §328.3(e)) and by the High Tide Line within tidal waters (33 CFR. §328.3(d)).

Waters of the State. Waters of the State are defined more broadly than "waters of the US" to mean "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code section 13050(e)). Examples include, but are not limited to, rivers, streams, lakes, bays, marshes, mudflats, unvegetated seasonally ponded areas, drainage swales, sloughs, wet meadows, natural ponds, vernal pools, diked baylands, seasonal wetlands, and riparian woodlands. Waters of the State include all waters within the state's boundaries, whether

private or public, including waters in both natural and artificial channels. They include all "waters of the United States"; all surface waters that are not "waters of the United States, e.g. non-jurisdictional wetlands; groundwater; and the territorial seas. The State Water Quality Control Board (SWQCB) and its Regional Boards, including the Central Valley Regional Water Quality Control Board (CVRWQCB), routinely rely on the USACE/US EPA jurisdictional determinations as they have no adopted methodology for the identification and delineation of wetlands or other waters of the State. However, as a matter of policy the SWQCB/CVRWQCB consider wetlands and waters determined non-jurisdictional by the USACE/USEPA under SWANCC or Rapanos guidance to remain jurisdictional as waters of the State subject to SWQCB/SFBRWQCB jurisdiction.

California Department of Fish and Wildlife Regulations. The California Department of Fish and Wildlife (CDFW) regulates lakes and streams under Section of 1602 of the California Fish and Game Code (FGC). CDFW's regulations implementing the FGC define the relevant rivers, streams and lakes over which the agency has jurisdiction to constitute "all rivers, streams, lakes, and streambeds in the State of California, including all rivers, streams and streambeds which have intermittent flows of water." (Title 14 California Code of Regulations [CCR] § 720). The CDFW takes jurisdiction under its Lake and Streambed Alteration Agreement Program for any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. The CDFW does not have a methodology for the identification and delineation of the jurisdictional limits of streams except for the general guidance provided in A Field Guide to Lake and Streambed Alteration Agreements, Section 1600-1607 California Fish and Game Code (CDFG 1994). In making jurisdictional determinations, CDFW staff typically rely on field observation of physical features that provide evidence of water flow through a bed and channel such as observed flowing water, sediment deposits and drift deposits and that the stream supports fish or other aquatic life. Riparian habitat is not specifically defined by the FGC but CDFW takes jurisdiction over areas within the flood plain of a body of water where the vegetation (grass, sedges, rushes, forbs, shrubs, and trees) is supported by the surface or subsurface flow.

Sensitive plant communities are those natural plant communities identified in local or regional plans, policies, ordinances, regulations, or by the CDFW which provide special functions or values. The CDFW natural plant communities considered sensitive are those CDFW ranks as 'threatened' or 'very threatened' and keeps records of occurrences of these sensitive communities in the CNDDB. All known occurrences of sensitive habitats are mapped onto 7.5 minute USGS topographic quadrangle maps maintained by the CNDDB. Sensitive plant communities are also identified by CDFW on their List of California Natural Communities Recognized by the CNDDB. Impacts to sensitive natural communities must be considered and evaluated under CEQA.

California Department of Food and Agriculture. The California Department of Food and Agriculture (CDFA), through its CalCannabis Cultivation Licensing Program, ensures public safety and environmental protection by licensing and regulating commercial cannabis cultivators in

California. CalCannabis also manages the state's track-and-trace system, which tracks all commercial cannabis and cannabis products from cultivation to sale. CDFA adopted final regulations for state cannabis cultivation licensing on January 16, 2019. With relevance to biological concerns, the regulations currently limit outdoor cannabis cultivation to a maximum of 1.0 acre. Regulations also address sensitive habitats, special status species, water sources, outdoor lighting, noise and human presence, and other items.

Lake County Requirements. The Open Space, Conservation and Recreation Chapter (Chapter 9) of the Lake County General Plan contains goals, policies, and programs designed to address biological resources, along with other resources in the County. The purpose of the Biological Resources section (Section 9.1) is to preserve and protect environmentally sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County. Policies commit the County to protect resources such as rare and endangered species, environmentally sensitive habitats, riparian corridors and wetlands.

Lake County's regulations regarding the commercial cultivation of cannabis are found in Chapter 21, Article 27 of the Lake County Code (the Zoning Ordinance). The Ordinance provides guidance related to cultivation in the vicinity of environmentally sensitive habitats: "Outdoor cultivation, including any topsoil, Pesticide Managements, or fertilizers use for the cultivation of medical marijuana shall not be located within 100 feet of any spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool. For purposes of determining the edge of Clear Lake, the setback shall be measured from the full lake level of 7.79 feet on the Rumsey Gauge."

Sensitive Habitat Findings

On March 4, 2019, Gary Deghi of HBG conducted an initial reconnaissance investigation of the study area for the presence of wetlands and other "waters of the U.S." potentially subject to federal jurisdiction under the Clean Water Act or state or local jurisdiction under the Porter-Cologne Act or California Coastal Act. The review was conducted in accordance with the following: Code of Federal Regulations (CFR) definitions of jurisdictional waters; the Corps' 1987 Wetlands Delineation Manual (1987 Manual); the Corps' 2008 Regional Supplement to Corps of Engineers Wetland Delineation Manual: Arid West, Version 2.0 (Arid West Regional Supplement); and supporting guidance documents. The review included an investigation of existing land forms, vegetation, hydrology, and soil conditions, but consisted of a preliminary review of the area for wetland habitats.

No areas were found that would be regulated by the Corps of Engineers as a water of the U.S. under Section 404 of the Clean Water Act or by the CVRWQCB as a water of the state of California under the Porter-Cologne Act. Likewise, no areas at the site would be considered a stream course subject to the jurisdiction of the CDFW pursuant to Section 1602 of the California Fish and Game Code. The nearest blue line stream is approximately 1,238 feet (nearly ¼ mile) down the slope to the southwest.

Special Status Species

Sensitive species include those species listed by the federal and state governments as endangered, threatened, or rare or candidate species for these lists. Endangered or threatened species are protected by the federal Endangered Species Act of 1973 as amended, the California Native Plant Protection Act of 1977, and the California Endangered Species Act of 1970. The California Environmental Quality Act (CEQA) provides additional protection for unlisted species that meet the "rare" or "endangered" criteria defined in Title 14, California Code of Regulations Section 15380.

CDFW maintains records for the distribution and known occurrences of sensitive species and habitats in the California Natural Diversity Database (CNDDB). The CNDDB is organized into map areas based on 7.5-minute topographic maps produced by the US Geological Survey. All known occurrences of sensitive species and important natural communities are mapped on the quadrangle maps. The database gives further detailed information on each occurrence, including specific location of the individual, population, or habitat (if possible) and the presumed current state of the population or habitat. The project site is located in the northern portion of the Middletown 7.5-minute quadrangle. A search of the CNDDB for records of occurrence of special status animals and plants and natural communities within this quadrangle indicated that a number of special status species have been known known to occur in the general area of the project site, but none have been documented on the site itself.

Tables 1 and 2, respectively, present a lists of special status plants and animals that have been reported within 10 miles of the project site. The table includes an evaluation of the potential for sensitive species to occur at the site.

Special Status Plant Species

A list of special status plants with potential to occur on the property was developed from the CDFW's California Natural Diversity Data Base. A complete list of special status plant species occurring in the vicinity of the property is included in Table 1. The table includes all plant species mentioned in the CNDDB within approximately 10 miles of the site. Special status plant species include: (i) species that are listed or proposed for listing as threatened or endangered under the federal Endangered Species Act; (ii) species that are listed, or proposed for listing by the state of California as threatened or endangered under the California Endangered Species Act; (iii) plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California and elsewhere; and (iv) plant species that meet the definition of rare or endangered under CEQA.

Although some of the rare plants noted in Table 1 are possible in the surrounding oak woodland, most of the plant species included in Table 1 require habitat conditions that are not found anywhere on the property (e.g., serpentine soils and rock outcrops, wet meadows and seeps, vernal pools, riparian forest, chaparral, grasslands). The designated critical habitat for the federally and state-listed endangered slender orcutt grass (*Orcuttia tenuis*) occurs in the immediate project vicinity, but slender Orcutt grass occurs only in vernal pools, which do not

occur on the project site or in the project vicinity. None of the plant species would be expected to occur within the previously-disturbed sites within the property selected for cannabis cultivation or any related activities.

Special Status Animal Species

Animal species noted in the CNDDB as occurring within a 10 mile radius of the site, or that are known to occur in the general vicinity based on the knowledge of HBG biologists, are discussed in Table 2. None of the animal species discussed in the table have the potential to occur on the site. This finding is made based on the habitat requirements of species listed in the table and is based on field review of habitats present at the site and the immediate vicinity and an evaluation of the suitability of on-site habitats to support these species.

BIOLOGICAL IMPACTS

Standards of Significance

According to CEQA Guidelines (Appendix G), the project would be considered to have a significant impact on biological resources if it would:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Wildlife and Game or U.S. Fish and Wildlife Service.
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

<u>Impacts</u>

1) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The proposed project would not result in any significant adverse impacts on special status plant or animal species. The project would not substantially reduce the number or restrict the range of a rare, endangered or threatened species of fauna. None of the plant species discussed in Table 1 or the animal species discussed in Table 2 have the potential to occur within the cultivation sites, one which is the site of a current vegetable and flower garden and the other that is a cleared area in the oak woodland forest with little vegetation. Therefore, no impacts to special status species of plant or animal would occur due to implementation of the project.

2) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

The project would not adversely affect significant riparian lands, wetlands, marshes, or other significant wildlife habitats or sensitive communities. No wetland or riparian habitats or sensitive natural communities were found on the property, so no impacts to sensitive habitats are anticipated. The nearest blue line stream to the project site is an unnamed intermittent stream nearly ½ mile to the southwest of the site. As no streams, riparian habitats, or sensitive communities are located within ¼ mile of the site, no indirect impacts on these ecosystems would occur as a result of the cultivation operations. In addition, irrigation water for the cultivation is from the existing residential water supply, which uses an existing, permitted groundwater well, so no water will be extracted from surface streams.

- 3) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? As no wetlands or waters of the U.S. are found on the property, cannabis cultivation within the approximately 0.5-acre cultivation area would not result in filling or direct impacts to any area that would be subject to jurisdiction of the U.S. Army Corps of Engineers. No impacts would occur to any stream or wetland subject to the state regulatory jurisdiction of the CVRWQCB or CDFW. No permits would be required from the U.S. Army Corps of Engineers under the Clean Water Act, the CVRWQCB under the Porter-Cologne Act, or CDFW under Fish and Game Code Section 1602.
- 4) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Mature native forest canopy trees and young trees and saplings forming an understory occur throughout the oak woodland found on the property. The two sites totaling approximately 0.5

acre that are proposed for cannabis cultivation consist of a fenced-in vegetable and flower garden and a fenced-in previously-cleared area of little vegetation to the southwest of the garden. No trees would need to be removed to accommodate the proposed cultivation areas. As the proposed cultivation would occur within previously-disturbed portions of the property with either little vegetation or mostly non-native or planted plants of limited habitat value for wildlife, impacts to wildlife species would not be considered significant.

Although a number of wildlife species, including a variety of bird species, were observed on the property during the field survey, the establishment of the proposed cultivation within a previously-disturbed portions of the site, would not significantly impact forested wildlife habitats. Extensive areas of onsite habitat will be available for use by wildlife species that may currently occupy the approximately 0.5 acre cultivation area. The project would not result in substantial change in animal populations at the site. The nearest significant wildlife corridors would be along the stream that is located at the bottom of a canyon nearly ¼ mile to the southwest of the proposed cultivation and would be unaffected by the proposed project. The project will not cause a fish or wildlife population to drop below self-sustaining levels.

Additionally, the project applicant is enrolling in the State Water Board's Waste Discharge Requirements for Cannabis Cultivation Order WQ 2017-0023-DWQ. Compliance with this Order will ensure that cultivation operations will not significantly impact water resources by using a combination of Best Management Practices (BMPs), buffer zones, sediment and erosion controls, inspections and reporting, and regulatory oversight. Small quantities of organic pesticides are the only chemicals utilized by this cultivation operation.

The project will not create new light sources, so no night lighting impacts on nocturnal wildlife will occur, and the project will be in compliance with all lighting requirements of the CalCannabis Licensing Program. Primary use of gas or diesel-powered generators, which are not allow under the CalCannabis Licensing Program, are not proposed for use. Noise levels would be consistent with the rural environment of the project area and the cultivation will not result in adverse impacts for wildlife populations. Rodenticides, which can have secondary effects with respect to non-target species that prey on rodents, will not be used in the cultivation, in compliance with Cal Cannabis licensing requirements.

5) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No wetlands, riparian corridors, or other sensitive habitats protected by the General Plan or County Zoning Ordinance would be affected by the proposed project. No tree removal is necessary to establish the cultivation areas so tree preservation policies or ordinances would not apply to the project. No element of the project will occur within 100 feet of any spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool, in keeping with County requirements of Lake County Zoning Ordinance.

6) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan applicable to the project site.

Summary. As a result of this Biological Resources Report, we find that the proposed cannabis cultivation project will not result in any potentially significant adverse biological impacts to the environment.

If you have any questions regarding this Biological Resources Report for 18331 Ponderosa Trail near Lower Lake in Lake County, please call either me or Dr. Terry Huffman at 415-925-2000.

Sincerely

Ġary Deghi

Vice President/Senior Environmental Scientist

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Tables

Table 1. Special Status Plants Known to Occur in the Vicinity of the Project Area, Lake County, California

Table 2. Special Status Animal Species That Have Been Reported in the Vicinity of the Project Area, Lake County, California

Table 1. Special Status Plants Known to Occur in the Vicinity of the Project Area, Lake County, California

SCIENTIFIC NAME	STATUS ² FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Bent-flowered fiddleneck (Amsinckia lunaris)	//1B.2	Cismontane woodland and valley and foothill grassland. 50-500m.	Not present. Suitable habitat is not present at the site.
Dimorphic snapdragon (Antirrhimun subcordatum)	//4.3	Found in chaparral, lower montane coniferous forest, generally on serpentine or shale in foothill woodland or chaparral on south and west -facing slopes. 185-800 m.	Not present. Suitable habitat is not present at the site.
Konocti manzanita (Arctostaphylos manzanita ssp. elegans	//1B.3	Found on volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest. 225-1830 m.	Not present. Suitable habitat is not present at the site.
Raiche's manzanita (Arctostaphylos stanfordiana ssp. raichei)	//1B/2	Found on serpentine sites on slope and ridges in chaparral and lower montane coniferous foest. 485-1070 m.	Not present. Suitable habitat is not present at the site.
Jepson's milk-vetch (Astragalus rattanii var. jepsonianus)	//1B.2	Commonly found on serpentine in grassland or openings in chaparral and also cismontane woodland, valley and foothill grassland. 175-1005 m.	Not present. Suitable habitat is not present at the site.
Mt. St. Helena morning glory (Calystegia collina ssp.oxyphylla)	//4.2	Found on serpentine barrens, slopes and hillsides in chaparral, lower montane coniferous forest and valley and foothill grassland. 280-1010m.	Not present. Suitable habitat is not present at the site.
Northern meadow sedge (Carex praticola)	//1B.2	Meadows and seeps. Moist to wet meadows. 15-3200 m.	Not present. Suitable habitat is not present at the site.

SCIENTIFIC NAME	STATUS ² FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Pink creamsacs (Castilleja rubicundula var. rubicundula)	//1B.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland. Found in openings in chaparral or grasslands on serpentine soils. 20-915 m.	Not present. Suitable habitat is not present at the site.
Rincon Ridge ceanothus (Ceanothus confuses)	//1B.1	Known from volcanic or serpentine soils on dry shrubby slopes in closed-cone coniferous forest, chaparral, and cismontane woodland. 75-1065m.	Not present. Suitable habitat is not present at the site.
Calistoga ceanothus (Ceanothus divergens)	//1B.2	Rocky, serpentine or volcanic sites in chaparral. 170-950m.	Not present. Suitable habitat is not present at the site.
Dwarf soaproot (Chlorogalum pomeridianum var. minus)	//1B.2	Serpentine in chaparral. 120-1220 m.	Not present. Suitable habitat is not present at the site.
Serpentine cryptantha (Cryptantha dissita)	//1B.2	Serpentine outcrops in chaparral. 135- 175m.	Not present. Suitable habitat is not present at the site.
Cascade downingia (Downingia willamettensis)	//2B.2	Vernal pools and lake margins in cismontane woodland, valley and foothill grasslands. 15-1110 m.	Not present. Suitable habitat is not present at the site.
Brandegee's eriastrum (Eriastrum brandegeeae)	//1B.1	Found on barren volcanic soils in chaparral and cismontane woodland. Often in open areas. 410-845 m.	Not present. Suitable habitat is not present at the site.
Greene's narrow-leaved daisy	//1B.2	Serpentine and volcanic substrates in	Not present. Suitable habitat is not present
(Erigeron greenei)		chaparral. 75-1060m.	at the site.
Snow Mountain buckwheat (Eriogonum nervulosum)	//1B.2	Dry serpentine outcrops, balds, and barrens in chaparral. 445-2105 m.	Not present. Suitable habitat is not present at the site.
Loch Lomond button-celery (<i>Eryngium constancei</i>)	FE/CE/1B.1	Volcanic ash flow vernal pools. 460-855 m.	Not present. Suitable habitat is not present at the site.

SCIENTIFIC NAME	STATUS ² FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Adobe-lily (<i>Fritillaria pluriflora</i>)	//1B.2	Found in clay soils, sometimes serpentine in chaparral, cismontane woodland, valley and foothill grassland. 45-945 m.	Not present. Suitable habitat is not present at the site.
Bogg's Lake hedge hyssop (Gratiola heterosepala)	/CE/1B.2	Inhabits vernal pools and margins of vernal lakes. 10-2375m.	Not present. Suitable habitat is not present at the site.
Toren's grimmia (Grimmia torenii)	//1B.3	Cismontane woodland, lower montane coniferous forest, chaparral. Found in forest openings, rocky, boulders and rock walls, carbonate, volcanic. 325-1160 m.	Not present. Suitable habitat is not present at the site.
Hall's harmonia (Harmonia hallii)	//1B.2	Serpentine hills and ridges, open rocky areas within chaparral. 335-930 m.	Not present. Suitable habitat is not present at the site.
Congested-headed hayfield tarplant (Hemizonia congesta ssp. congesta)	//1B.2	Grassy valleys and hills in Coastal scrub, valley and foothill grassland. Often in fallow fields. 25-200m.	Not present. Suitable habitat is not present at the site.
Grandular western flax (Hesperolinon adenophyllum)	//1B.2	Occurs in chaparral, cismontane woodland and valley and foothill grassland on serpentine soils. Most often in serpentine chaparral. 150-1315 m.	Not present. Suitable habitat is not present at the site.
Lake County western flax (Hesperolinon didymocarpum)	/CE/1B.2	Serpentine soil in open grassland and near chaparral. 325-400 m.	Not present. Suitable habitat is not present at the site.
Drymaria-like western flax (Hesperolinon drymarioides)	//1B.2	Serpentine soils in closed-cone coniferous forest, chaparral, cismontane woodland, valley and foothill grassland. Mostly within chaparral. 395-2000 m.	Not present. Suitable habitat is not present at the site.
Sharsmith's western flax (Hesperolinon sharsmithiae)	//1B.2	Serpentine substrates in chaparral. 180-670 m.	Not present. Suitable habitat is not present at the site.

SCIENTIFIC NAME	STATUS ² FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Two-carpellate western flax (Hesperolinon bicarpellatum)	//1B.2	Serpentine barrens at the edge of chaparral. 175-825 m.	Not present. Suitable habitat is not present at the site.
Bolander's horkelia (Horkelia bolanderi)	//1B.2	Found in the grassy margins of vernal pools and meadows in lower montane coniferous forest, chaparral, meadows and seeps and valley and foothill grassland. 455-855 m.	Not present. Suitable habitat is not present at the site.
California satintail (Imperata brevifolia)	//2B.1	Coastal scrub, chaparral, riparian scrub, Mojavean desert scrub, meadows and seeps. Found in mesic sites, alkali seeps and riparian areas. 3-1495 m.	Not present. Suitable habitat is not present at the site.
Northern California black walnut (Juglans hindsii)	//1B.1	Riparian forest and riparian woodland. Few extant native stands remain. Widlely naturalized. Found in deep alluvial soil associated with a creek or stream. 0-640 m.	Not present. Suitable habitat is not present at the site.
Burke's goldfields (Lasthenia burkei)	FE/CE/1B.1	Found in vernal pools, meadows and seeps, most often in vernal pools and swales. 15-600m.	Not present. Suitable habitat is not present at the site.
Colusa layia (Layia septentrionalis)	//1B.2	Found in scattered colonies in fields and grassy slopes in sandy or serpentine soils in chaparral, cismontane woodland and valley and foothill grassland. 15-1100 m.	Not present. Suitable habitat is not present at the site.
Legenere (Legenere limosa)	//1B.1	Inhabits the beds of vernal pools. 1-880m.	Not present. Suitable habitat is not present at the site.
Jepson's leptosiphon (Leptosiphon jepsonii)	//1B.2	Found on volcanics or the periphery of serpentine substrates in chaparral, cismontane woodland, and open to partially shaded grassy slopes. 55-855 m.	Not present. Suitable habitat is not present at the site.

SCIENTIFIC NAME	STATUS ² FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Cobb mountain lupine (Lupinus sericatus)	//1B.2	Chaparral, cismontane woodland, lower montane coniferous forest; in stands of knob cone pine-oak woodland; on open woodland slopes in gravelly soils; sometimes on serpentine. 180-1500m.	Not present. Suitable habitat is not present at the site.
Elongate copper moss (Mielichhoferia elongate)	//4.3	Found in cismontane woodland. This moss grows on very acidic, metamorphic rock or substrate, usually in higher portions in fens. Often found on substrates naturally enriched with heavy metals such as copper. 500-1300 m.	Not present. Suitable habitat is not present at the site.
Baker's navarretia (Navarretia leucocephala ssp. bakeri)	//1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils at 5-1740m.	Not present. Suitable habitat is not present at the site.
Few-flowered navarretia (Navarretia leucocephala ssp. pauciflora)	FE/CT/1B.1	Inhabits volcanic ash flows and volcanic substrates in vernal pools. 400-855m.	Not present. Suitable habitat is not present at the site.
Many-flowered navarretia (Navarretia leucocephala ssp. Plieantha)	FE/CE/1B.2	Volcanic ash flow vernal pools. 30-915m.	Not present. Suitable habitat is not present at the site.
Small pincushion navarretia (Navarretia myersii ssp. deminuta)	//1B.1	Found in vernal pools, also roadside depressions. Known from only one vernal pool site on clay-loam soils in Lake County. 355 m.	Not present. Suitable habitat is not present at the site.
Porter's navarretia (Navarretia paradoxinota)	//1B.3	Meadows and seeps, opening, vernally mesic sites, often in drainages on serpentinite. 175-875 m.	Not present. Suitable habitat is not present at the site.

SCIENTIFIC NAME	STATUS ² FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Slender Orcutt grass	FT/CE/1B.1	Vernal pools. Often found in gravelly pools.	Not present. Suitable habitat is not present
(Orcuttia tenuis)		35-1760 m.	at the site.
Sonoma beardtongue	//1B.3	Found in crevices in rock outcrops and talus	Not present. Suitable habitat is not present
(Penstemon newberryi var. sonomensis)		slopes within chaparral. 700-1370m.	at the site.
Eel-grass pondweed	//2B.2	Marshes and swamps, ponds, lakes,	Not present. Suitable habitat is not present
(Potamogeton zosteriformis)		streams. 90-2135 m.	at the site.
Lake County stonecrop	FE/CE/1B.1	Valley and foothill grassland, vernal pools,	Not present. Suitable habitat is not present
(Sedella leiocarpa)		cismontane woodland. Found in level areas	at the site.
		that are seasonally wet and dry out in late	
		spring. Substrate usually of volcanic origin.	
		515-640 m.	
Marsh checkerbloom	//1B.2	Meadows and seeps and riparian forest.	Not present. Suitable habitat is not present
(Sidalcea oregana ssp.		Found in wet soil of streambanks and	at the site.
hydrophila)		meadows. 455-2030 M.	
Socrates Mine jewelflower	//1B.2	Serpentine in chaparral and closed-cone	Not present. Suitable habitat is not present
(Streptanthus brachiatus spp.		coniferous forest. 605-1950 m.	at the site.
brachiatus)	/ // 0		
Freed's jewelflower	//1B.2	Primarily in geothermal development areas	Not present. Suitable habitat is not present
(Streptanthus brachiatus spp.		with chaparral, cismontane woodland and	at the site.
hoffmanii)	/ /10.2	serpentine rock outcrops. 485-1040 m.	Not proceed Cuitable behitst is not proceed
Green jewelflower (Streptanthus hesperidis)	//1B.2	Serpentine rocky sites in openings within chaparral, and cismontane woodland. 240-	Not present. Suitable habitat is not present at the site.
(Strepturitius riesperiuis)		765 m.	at the site.
Kruckeberg's jewelflower	//1B.2	Cismontane woodland. Found in scattered	Not present. Suitable habitat is not present
(Streptanthus morrisonii ssp.		serpentine outcrops near the Lake/Napa	at the site.
kruckebergii)		County line. 240-665 m.	

SCIENTIFIC NAME	STATUS ² FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Napa bluecurls (Trichostema ruygtii)	//1B.2	Open sunny areas in cismontane woodland, chaparral, valley and foothill grassland, vernal pools and lower montane coniferous forest. 30-590 m.	Not present. Suitable habitat is not present at the site.
Saline clover (<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>)	//1B.2	Marshes and swamps, mesic alkaline sites, vernal pools in valley and foothill grassland. 0-300 m.	Not present. Suitable habitat is not present at the site.
Oval-leaved viburnum (Viburnum ellipticum)	//2B.3	Chaparral, cismontane woodland and lower montane coniferous forest. 215-1400m.	Not present. Suitable habitat is not present at the site.

^{1.} Source: California Natural Diversity Data Base, Natural Heritage Division, California Department of Fish and Wildlife for the Middletown 7.5 Minute Quadrangle Map and surrounding areas, information March 2019.

2. Status Codes:

FE	Federal-listed Endangered
FT	Federal-listed Threatened
FPE	Federal Proposed Endangered
FPT	Federal Proposed Threatened
CE	California State-listed Endangered
CT	California State-listed Threatened
CR	California Rare
FP	California Fully Protected
CSC	California Species of Special Concern

California Rare Plant Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.

California Rare Plant Rank 1B: Plants rare, threatened, or endangered in California and elsewhere.

California Rare Plant Rank 2A: Plants presumed extirpated in California, but more common elsewhere.

California Rare Plant Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere.

California Rare Plant Rank 3: Plants about which more information is needed – a review list.

California Rare Plant Rank 4: Plants of limited distribution – a watch list.

CNPS Threat Ranks

- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Table 2. Special Status Animal Species that have been Reported in the Vicinity of the Project Area, Lake County, California

SPECIES	STATUS FED/STATE	НАВІТАТ	OCCURRENCE ON THE PROJECT SITE
INVERTEBRATES			
Western bumble bee (Bombus occidentalis)	/	This species was once common and widespread, but the species has declined precipitously from Central California to Southern British Columbia, perhaps from disease.	Not present. Suitable habitat is not present at the site.
Brownish Dubiraphian riffle beetle (Dubiraphia brunnescens)	/	Aquatic species known only from the NE shore of Clear Lake in Lake County. Inhabits exposed, wave-washed willow roots.	Not present. Suitable habitat is not present at the site.
Ricksecker's water scavenger Beetle (Hydrochara rickseckeri)	/	Aquatic beetle that lives in weedy shallow, open water associated freshwater seeps, springs, farm ponds, vernal pools (playa type pools) and slow-moving stream habitats.	Not present. Suitable habitat is not present at the site.
Wilbur Springs shorebug (Saldula usingeri)	/	Found only on wet sbustrate of spring outflows. Requires springs/creeks with high concentrations of sodium, chlorine and lithium.	Not present. Suitable habitat is not present at the site.
AMPHIBIANS	T	To a second	T
California giant salamander (Dicamptodon ensatus)	/CSC	Known from wet coastal forests near streams and seeps. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults are found in wet forests under rocks and logs near streams and lakes.	Not present. Suitable habitat is not present at the site.

SPECIES	STATUS FED/STATE	НАВІТАТ	OCCURRENCE ON THE PROJECT SITE
Red-bellied newt (Taricha rivularis)	/CSC	Found in coastal drainages from Humboldt County south to Sonoma County and inland to Lake County. Lives in terrestrial habitats. Juveniles are generally found underground; adults are active at the surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean rocky substrate.	Not present. Suitable habitat is not present at the site.
Foothill yellow-legged frog (Rana boylii)	/CSC	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.	Not present. Suitable habitat is not present at the site.
REPTILES	•	, , , ,	
Western pond turtle (Emmys marmorata)	/CSC	Associated with permanent or nearly permanent water in a wide variety of habitats. Requires basking sites. Nests found up to 0.5 miles from water.	Not present. Suitable habitat is not present at the site.
BIRDS			
Northern harrier (Circus cyaneus) [nesting]	/CSC	Coastal salt marsh and freshwater marsh; nests and forages in grasslands; nests on ground in shrubby vegetation, usually at marsh edge.	Not present. Suitable habitat is not present at the site.
White-tailed kite (Elanus caeruleus) [nesting]	/FP	Open grassland and agricultural areas throughout Central California.	Not present. Suitable habitat is not present at the site.

SPECIES	STATUS FED/STATE	НАВІТАТ	OCCURRENCE ON THE PROJECT SITE
Sharp-shinned hawk (Accipiter striatus) [nesting]	/WL	Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. North facing slopes, with plucking perches are critical requirements. All habitats except alpine, open prairie, and bare desert used in winter.	Not present as a nesting species. Suitable nesting habitat is not present at the site. May forage at the site.
Cooper's hawk (Accipiter cooperii) [nesting]	/WL	Nests primarily in deciduous riparian forests; forages in open woodlands.	Not present as a nesting species. Suitable nesting habitat is not present at the site. May forage at the site.
Bald eagle (Haliaeetus leucocephalus) (nesting and wintering)	Delisted,BCC/CE,FP	In winter, maybe be found throughout most of California at lakes, reservoirs, rivers and some rangelands and coastal wetlands. California's breeding habitats are mainly located in mountains and foothill forests near permanent water sources.	Not present. Suitable habitat is not present at the site.
Golden eagle (Aquila chrysaetos) [nesting and wintering]	BCC/FP,WL	Typically frequents rolling foothills, mountain areas, sage-juniper flats and desert.	Not present. Suitable habitat is not present at the site.
American peregrine falcon (Falco peregrinus anatum)	Delisted,BCC/Delisted, FP	Nests in woodland, forest and coastal habitats, on cliffs or banks, and usually near wetlands, lakes, rivers, sometimes on human-made structure. In non-breeding seasons found in riparian areas and coastal and inland wetlands.	Not present. Suitable habitat is not present at the site.

SPECIES	STATUS FED/STATE	НАВІТАТ	OCCURRENCE ON THE PROJECT SITE
Prairie falcon (Falco mexicanus)(Nesting)	BCC/WL	Associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields and desert scrub. Permanent resident and migrant along inner coast and ranges.	Not present. Suitable habitat is not present at the site.
Northern spotted owl (Strix occidentalis caurina)	FT/-	In Marin County Northern spotted owls reside in second growth Douglas-fir, coast redwood, bishop pine, mixed coniferhardwood, and evergreen hardwood forests.	Not present. Suitable habitat is not present at the site.
Western yellow-billed cuckoo (Coccyzus americanus occidentalis)	FC,BCC/CE	Nests in riparian forests along the broad, lower flood-bottoms of larger river systems. Requires willows, cottonwoods with lower story of blackberry, nettles or wild grape.	Not present. Suitable habitat is not present at the site.
Purple martin (<i>Progne subis</i>)	/CSC	Inhabits woodlands, low elevation coniferous forest of Douglas fir, ponderosa and Monterey pine. Nests mostly in old woodpecker cavities, but also man-made structures. Nest often located in tall, isolated tree snag.	Not present. Suitable habitat is not present at the site.
Loggerhead shrike (Lanius ludovicianus)	BCC/CSC	Habitat includes open areas such as desert, grasslands and savannah. Nests in thickly foliaged trees or tall shrubs. Forages in open habitats, which contain trees, fence posts, utility poles, and other perches.	Not present. Suitable habitat is not present at the site.
Yellow warbler (Setophaga petechia) [nesting]	BCC/CSC	Breeds in deciduous riparian woodlands, widespread during fall mitigation.	Not present. Suitable nesting habitat is not present at the site. May occur as a fall migrant.

SPECIES	STATUS FED/STATE	НАВІТАТ	OCCURRENCE ON THE PROJECT SITE
Tri-colored blackbird (Agelaius tricolor) [nesting colony]	BCC/CSC	Breeds near freshwater, usually in tall emergent vegetation. Requires open water with protected nesting substrate. Colonies prefer heavy growth of cattails and tules. Uses grasslands and agricultural lands for foraging.	Not present. Suitable habitat is not present at the site.
MAMMALS			
Townsend's big-eared bat (Corynorhinus townsendii)	/CCT,CSC	Found in desert scrub and coniferous forests. Roost in caves or abandoned mines and occasionally are found to roost in buildings.	Not present. Suitable habitat is not present at the site.
Pallid bat (Antrozous pallidus)	/CSC	Found in deserts, grasslands, shrub lands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in rocky areas primarily in oak woodland and ponderosa pine habitats; forages in open areas.	Not present. Suitable habitat is not present at the site.
Hoary bat (<i>Lasuirus cinereus</i>)	/	Prefers open habitats with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees.	Not present. Suitable habitat is not present at the site.
Western red bat (Lasiurus blossevillii)	/CSC	Found from Shasta Co. to the Mexican border, west of the Sierra Nevada and deserts. Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands.	Not present. Suitable habitat is not present at the site.

SPECIES	STATUS FED/STATE	HABITAT	OCCURRENCE ON THE PROJECT SITE
Silver-haired bat (Lasionycteris noctivagans)	/	Coastal and montane forests. Feeds over streams, ponds and open bushy areas, roosts in hollow trees.	Not present. Suitable habitat is not present at the site.
Long-eared myotis (Myotis evotis)	/	Found in all brush, woodland and forest habitat from sea level to about 9,000 feet. Prefers coniferous woodland and forests. Nursery colonies in buildings, crevices, spaces under bark and snags. Caves used primarily as night roosts.	Not present. Suitable habitat is not present at the site.
Fringed myotis (Myotis thysanodes)	/	Occurs in a wide variety of habitats. Optimal habitats are pinyon-juniper, valley foothill hardwood, and hardwood conifer generally at 1300-2200m. Roosts in caves, mines, buildings and crevices. Maternity colonies of up to 200 individuals are located in caves, mines, buildings or crevices.	Not present. Suitable habitat is not present at the site.

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FC Federal Candidate	CSC CDFW Species of Special Concern
BCC USFWS Bird Species of Conservation Concern	WL CDFW Watch List Species

