BIOLOGICAL RESOURCES ASSESSMENT FOR THE CANNABIS CULTIVATION OPERATION AT 11615 & 11625 SEIGLER SPRINGS NORTH ROAD, MIDDLETOWN, CALIFORNIA

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Applicant / Cultivator:

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1. INTRODUCTION

1.1. PROJECT LOCATION AND DESCRIPTION

Natural Investigations Company conducted a biological resources assessment for a cannabis cultivation operation on an 80-acre property (APNs 115-007-030-000 & 115-007-060-000) at 11615 & 11625 Seigler Springs North Road, Middletown, California. A 10-acre outdoor cultivation compound was designed in the northwest portion of the Property; four acres of mature Cannabis canopy will be cultivated. A new groundwater well will need to be drilled and installed. Drip irrigation will be employed. Temporary greenhouses (hoophouses) may be used for vegetative propagation or photoperiod control. Existing ranch roads will be used to access the cultivation compound. No permanent structures are proposed at this time.

For this assessment, the Project Area was defined as the cultivation area plus and access road, and this 10-acre area was the subject of the impact analysis. The entire 80-acre property was defined as the Study Area. The Study Area is defined to identify biological resources adjacent to the Project Area, and is the area subject to potential indirect effects from Project implementation.

1.2. SCOPE OF ASSESSMENT

This assessment provides information about the biological resources within the Study Area, the regulatory environment affecting such resources, any potential Project-related impacts upon these resources, and finally, to identify mitigation measures and other recommendations to reduce the significance of these impacts. The specific scope of services performed for this assessment consisted of the following tasks:

- Compile all readily-available historical biological resource information about the Study Area;
- Spatially query state and federal databases for any occurrences of special-status species or habitats within the Study Area and vicinity;
- Perform a reconnaissance-level field survey of the Study Area, including photographic documentation;
- Inventory all flora and fauna observed during the field survey;
- Characterize and map the habitat types present within the Study Area, including any potentially-jurisdictional water resources;
- Evaluate the likelihood for the occurrence of any special-status species;
- Assess the potential for the Project to adversely impact any sensitive biological resources;
- Recommend mitigation measures designed to avoid or minimize Project-related impacts; and
- Prepare and submit a report summarizing all of the above tasks.

The scope of services does not include other services that are not described in this Section, such as formal aquatic resource delineations or protocol-level surveys for special-status species.

1.3. REGULATORY SETTING

The following section summarizes some applicable regulations of biological resources on real property in California.

1.3.1. Special-status Species Regulations

The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service implement the Federal Endangered Species Act of 1973 (FESA) (16 USC §1531 et seq.). Threatened and endangered species on the federal list (50 CFR §17.11, 17.12) are protected from “take” (direct or indirect harm), unless a FESA Section 10 Permit is granted or a FESA Section 7 Biological Opinion with incidental take provisions is rendered. Pursuant to the requirements of FESA, an agency reviewing a

proposed project within its jurisdiction must determine whether any federally listed species may be present in the project area and determine whether the proposed project will have a potentially significant impact upon such species. Under FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC §1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require mitigation. Species that are candidates for listing are not protected under FESA; however, USFWS advises that a candidate species could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration.

The California Endangered Species Act of 1970 (CESA) (California Fish and Game Code §2050 *et seq*., and CCR Title 14, §670.2, 670.51) prohibits "take" (defined as hunt, pursue, catch, capture, or kill) of species listed under CESA. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Section 2081 establishes an incidental take permit program for state-listed species. Under CESA, California Department of Fish and Wildlife (CDFW) has the responsibility for maintaining a list of threatened and endangered species designated under state law (CFG Code 2070). CDFW also maintains lists of species of special concern, which serve as "watch lists." Pursuant to requirements of CESA, an agency reviewing proposed projects within its jurisdiction must determine whether any state-listed species may be present in the Study Area and determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation.

California Fish and Game Code Sections 4700, 5050, and 5515 designates certain mammal, amphibian, and reptile species "fully protected", making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The California Native Plant Protection Act of 1977 (CFG Code §1900 *et seq*.) requires CDFW to establish criteria for determining if a species or variety of native plant is endangered or rare. Section 19131 of the code requires that landowners notify CDFW at least 10 days prior to initiating activities that will destroy a listed plant to allow the salvage of plant material.

Many bird species, especially those that are breeding, migratory, or of limited distribution, are protected under federal and state regulations. Under the Migratory Bird Treaty Act of 1918 (16 USC §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbances must be reduced or eliminated during the nesting cycle. California Fish and Game Code (§3503, 3503.5, and 3800) prohibits the possession, incidental take, or needless destruction of any bird nests or eggs. Fish and Game Code §3511 designates certain bird species "fully protected", making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The Bald and Golden Eagle Protection Act (16 USC §668) specifically protects bald and golden eagles from harm or trade in parts of these species.

California Environmental Quality Act (CEQA) (Public Resources Code §15380) defines "rare" in a broader sense than the definitions of threatened, endangered, or fully protected. Under the CEQA definition, CDFW can request additional consideration of species not otherwise protected. CEQA requires that the impacts of a project upon environmental resources must be analyzed and assessed using criteria determined by the lead agency. Sensitive species that would qualify for listing but are not currently listed may be afforded protection under CEQA. The CEQA Guidelines (§15065) require that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines (§15380) provide for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Plant species on the California Native Plant Society (CNPS) Lists 1A, 1B, or 2 are typically considered rare under CEQA. California "Species of Special Concern" is a category conferred by CDFW on those species that are indicators of regional habitat changes or are considered potential future protected species. While they do not have statutory

protection, Species of Special Concern are typically considered rare under CEQA and thereby warrant specific protection measures.

1.3.2. Water Resource Protection

Real property that contains water resources are subject to various federal and state regulations and activities occurring in these water resources may require permits, licenses, variances, or similar authorization from federal, state and local agencies, as described next.

The Federal Water Pollution Control Act Amendments of 1972 (as amended), commonly known as the Clean Water Act (CWA), established the basic structure for regulating discharges of pollutants into "waters of the United States". Waters of the US includes essentially all surface waters, all interstate waters and their tributaries, all impoundments of these waters, and all wetlands adjacent to these waters. CWA Section 404 requires approval prior to dredging or discharging fill material into any waters of the US, especially wetlands. The permitting program is designed to minimize impacts to waters of the US, and when impacts cannot be avoided, requires compensatory mitigation. The US Army Corps of Engineers (USACE) is responsible for administering Section 404 regulations. Substantial impacts to jurisdictional wetlands may require an Individual Permit. Small-scale projects may require only a Nationwide Permit, which typically has an expedited process compared to the Individual Permit process. Mitigation of wetland impacts is required as a condition of the CWA Section 404 Permit and may include on-site preservation, restoration, or enhancement and/or off-site restoration or enhancement. The characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands to achieve no net loss of wetlands.

Under CWA Section 401, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. The California State Water Resources Control Board is responsible for administering CWA Section 401 regulations.

Section 10 of the Rivers and Harbors Act of 1899 requires approval from USACE prior to the commencement of any work in or over navigable Waters of the US, or which affects the course, location, condition or capacity of such waters. Navigable waters of the United States are defined as waters that have been used in the past, are now used, or are susceptible to use, as a means to transport interstate or foreign commerce up to the head of navigation. Rivers and Harbors Act Section 10 permits are required for construction activities in these waters.

California Fish and Game Code (§1601 - 1607) protects fishery resources by regulating "*any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake*." CDFW requires notification prior to commencement, and issuance of a Lake or Streambed Alteration Agreement, if a proposed project will result in the alteration or degradation of ''waters of the State". The limit of CDFW jurisdiction is subject to the judgment of the Department; currently, this jurisdiction is interpreted to be the "stream zone", defined as "*that portion of the stream channel that restricts lateral movement of water*" and delineated at "*the top of the bank or the outer edge of any riparian vegetation, whichever is more landward*". CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and the applicant is the Streambed Alteration Agreement. Projects that require a Streambed Alteration Agreement may also require a CWA 404 Section Permit and/or CWA Section 401 Water Quality Certification.

For construction projects that disturb one or more acres of soil, the landowner or developer must obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ).

The State Water Resources Control Board's Order WQ 2019-0001-DWQ General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities protects receiving water bodies from water-quality impacts associated with cannabis cultivation using a combination of Best Management Practices, buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight.

1.3.3. Tree Protection

At the State level, in areas inside timberland, any tree removal is subject to the conditions and requirements set forth in the Z'berg-Nejedly Forest Practice Act and the California Forest Practice Rules. If development of a project will result in the removal of commercial tree species, one of the following permits is needed: Less than 3 Acre Conversion Exemption; Christmas Tree; Dead, Dying or Diseased, Fuelwood, or Split Products Exemption; a Public Agency, Public and Private Utility Right of Way Exemption; a Notice of Exemption from Timberland Conversion Permit for Subdivision; or an Application for Timberland Conversion Permit.

Lake County does not have a specific ordinance protecting native trees. However, under the Cannabis Ordinance 3084, Section 4, Subsection iii) Prohibited Activities (a) Tree Removal, Lake County restricts tree removal as follows:

> *"The removal of any commercial tree species as defined by the California Code of Regulations section 895.1, Commercial Species for the Coast Forest District and Northern Forest District, and the removal of any true oak species (Quercus species) or Tan Oak (Notholithocarpus species) for the purpose of developing a cannabis cultivation site should be avoided and minimized. This shall not include the pruning of any such tree species for the health of the tree or the removal of such trees if necessary for safety or disease concerns."*

During the permitting process, Lake County requires mitigation for the removal of protected trees; typical mitigation is tree replacement at a ratio of 2:1 or 3:1.

2. ENVIRONMENTAL SETTING

The Study Area is located within the Inner North Coast Range geographic subregion, which is contained within the Northwestern California geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately-cold winters. The Study Area and vicinity is in Climate Zone 14 "Northern California's Inland Areas with Some Ocean Influence", with maritime air moderating temperatures that would otherwise be hotter in summer and colder in the winter (Sunset, 2020). The topography of the Study Area is a mountain ridgetop, slope, and draw. The elevation ranges from approximately 2,400 feet to 2,800 feet above mean sea level . Drainage runs east, flows into a poorly-drained valley.

3. METHODOLOGY

3.1. PRELIMINARY DATA GATHERING AND RESEARCH

Prior to conducting the field survey, the following information sources were reviewed:

- Any readily-available previous biological resource studies pertaining to the Study Area or vicinity
- Aerial photography of the Study Area (current and historical)
- United States Geologic Service 7.5 degree-minute topographic quadrangles of the Study Area and vicinity
- USFWS National Wetland Inventory
- USDA Natural Resources Conservation Service soil survey maps
- California Natural Diversity Database (CNDDB), electronically updated monthly by subscription
- USFWS species list (IPaC Trust Resources Report).

3.2. FIELD SURVEY

Consulting biologist Tim Nosal, MS. conducted a reconnaissance-level field survey on September 21, 2020. An additional field survey was conducted by Mr. Nosal on October 27, 2020. Variable-intensity pedestrian surveys were performed, and modified to account for differences in terrain, vegetation density, and visibility. All visible fauna and flora observed were recorded in a field notebook, and identified to the lowest possible taxon. Survey efforts emphasized the search for any special-status species that had documented occurrences in the CNDDB within the vicinity of the Study Area and those species on the USFWS species list (Appendix 1).

When a specimen could not be identified in the field, a photograph or voucher specimen (depending upon permit requirements) was taken and identified in the laboratory using a dissecting scope where necessary. Dr. Graening holds the following scientific collection permits: CDFW Scientific Collecting Permit No. SC-006802; and CDFW Plant Voucher Specimen Permit 09004. Tim Nosal holds CDFW Plant Voucher Specimen Permit 2081(a)-16-102-V. Taxonomic determinations were facilitated by referencing museum specimens or by various texts, including the following: Powell and Hogue (1979); Pavlik (1991); (1993); Brenzel (2012); Stuart and Sawyer (2001); Lanner (2002); Sibley (2003); Baldwin et al. (2012); Calflora (2020); CDFW (2020b,c); NatureServe 2020; and University of California at Berkeley (2020a,b).

The locations of any special-status species sighted were marked on aerial photographs and/or georeferenced with a geographic positioning system (GPS) receiver. Habitat types occurring in the Study Area were mapped on aerial photographs, and information on habitat conditions and the suitability of the habitats to support special-status species was also recorded. The Study Area was also informally assessed for the presence of potentially-jurisdictional water features, including riparian zones, isolated wetlands and vernal pools, and other biologically-sensitive aquatic habitats

3.3. MAPPING AND OTHER ANALYSES

Locations of species' occurrences and habitat boundaries within the Study Area were digitized to produce the final habitat maps. The boundaries of potentially jurisdictional water resources within the Study Area were identified and measured in the field, and similarly digitized to calculate acreage and to produce informal delineation maps. Geographic analyses were performed using geographical information system software (ArcGIS 10, ESRI, Inc.). Vegetation communities (assemblages of plant species growing in an area of similar biological and environmental factors), were classified by Vegetation Series (distinctive associations of plants, described by dominant species and particular environmental setting) using the CNPS Vegetation Classification system (Sawyer and Keeler-Wolf, 1995). Informal wetland delineation methods consisted of an abbreviated, visual assessment of the three requisite wetland parameters (hydrophytic vegetation, hydric soils, hydrologic regime) defined in the US Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987). Wildlife habitats were classified according to the CDFW's California Wildlife Habitat Relationships System (CDFW, 2020c). Species' habitat requirements and life histories were identified using the following sources: Baldwin et al. (2012); CNPS (2020), Calflora (2020); CDFW (2020a,b,c); and University of California at Berkeley (2020a,b).

4. RESULTS

4.1. INVENTORY OF FLORA AND FAUNA FROM FIELD SURVEY

All plants detected during the field survey of the Study Area are listed in Appendix 2. The following animals were detected within the Study Area during the field survey:

> northwestern fence lizard (*Sceloporus occidentalis occidentalis*); Botta's pocket gopher (*Thomomys bottae*); Columbian black-tailed deer (*Odocoileus hemionus columbianus*); coyote (*Canis latrans*); gray fox (*Urocyon cinereoargenteus*); Sonoma chipmunk (*Neotamias sonomae*); acorn woodpecker (*Melanerpes formicivorus*); Anna's hummingbird (*Calypte anna*); California quail (*Callipepla californica*); California scrub jay (*Aphelocoma californica*); common raven (*Corvus corax*); dark-eyed junco (*Junco hyemalis*); northern flicker (*Colaptes auratus*); oak titmouse (*Baeolophus inornatus*); spotted towhee (*Pipilo maculatus*); turkey vulture (*Cathartes aura*); and common songbirds.

4.2. VEGETATION COMMUNITIES AND WILDLIFE HABITAT TYPES

4.2.1. Terrestrial Vegetation Communities

The Study Area burned in the 2015 Valley Fire. Merchantable conifers that were killed by the fire were logged. Non-merchantable timber was felled and left as slash. Oaks were variously impacted by the fire. Many trees survived with minor to moderate scorching. Some of the oaks were top-killed and are now resprouting, although some were killed outright.

The Study Area consists of one vegetation type: oak woodland. The dominant tree across the parcel is the California black oak (*Quercus kelloggii*). Ponderosa pine (*Pinus ponderosa*) are common, but were likely to have been more important in the canopy prior to the fire. Other trees observed within the woodland include sugar pine (*Pinus lambertiana*), blue oak (*Quercus douglasii*) and interior live oak (*Quercus wislizeni*). The understory across much of the Study Area is dominated by an impenetrable canopy of deer brush (*Ceanothus integerrimus* var. *macrothyrsus*). In areas not dominated by deer brush, typical species observed within the shrub layer include common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), poison-oak (*Toxicodendron diversilobum*), Lemmon's keckiella (*Keckiella lemmonii*), coyote brush (*Baccharis pilularis*) and birch leaf mountain mahogany (*Cercocarpus betuloides*). The herbaceous layer within the woodland consists of a variety of native and non-native grasses and herbs: dogtail grass (*Cynosurus echinoides*), sixweeks rattail fescue (*Festuca myuros*), California brome (*Bromus carinatus*), blue wildrye (*Elymus glaucus*), Pacific fescue (*Festuca microstachys*), wooly sunflower (*Eriophyllum lanatum*), hayfield tarplant (*Hemizonia congesta* spp. *luzulifolia*) and silvery everlasting (*Antennaria argentea*). This vegetation can be classified as the Holland Type "Black Oak Woodland," and "71.010.26 *Quercus kelloggii - Pinus ponderosa*" (CDFW 2020).

4.2.2. Wildlife Habitat Types

Wildlife habitat types were classified using CDFW's Wildlife Habitat Relationship System. The Study Area contains the following wildlife habitat types: Montane Hardwood-Conifer; Blue Oak Woodland; Valley Oak Woodland;; and Barren.

4.2.3. Critical Habitat and Special-status Habitat

No critical habitat for any federally-listed species occurs within the Project Area or the surrounding Study Area. The CNDDB did not report any special-status habitats with the Study Area. The CNDDB reported the following special-status habitats in a 10-mile radius outside of the Study Area: Central Valley Drainage Rainbow Trout/Cyprinid Stream; Clear Lake Drainage Resident Trout Stream; Clear Lake Drainage

Cyprinid/Catostomid Stream; Clear Lake Drainage Seasonal Lakefish Spawning Stream; Northern Basalt Flow Vernal Pool; Northern Volcanic Ash Vernal Pool; Coastal and Valley Freshwater Marsh and Great Valley Mixed Riparian Forest. No special-status habitats were detected within the Project Area. However, the surrounding Study Area contains 1 special-status habitat: a watercourse.

4.2.4. Habitat Plans and Wildlife Corridors

Wildlife movement corridors link remaining areas of functional wildlife habitat that are separated primarily by human disturbance, but natural barriers such as rugged terrain and abrupt changes in vegetation cover are also possible. Wilderness and open lands have been fragmented by urbanization, which can disrupt migratory species and separate interbreeding populations. Corridors allow migratory movements and act as links between these separated populations.

No designated wildlife corridors exist within or near the Study Area. No fishery resources exist in or near the Study Area. Although there are no designated wildlife corridors, the open space within the Study Area allows for unrestricted animal movement. The Study Area is not located within any adopted Habitat Conservation Plan or Natural Community Conservation Plan.

4.3. LISTED SPECIES AND OTHER SPECIAL-STATUS SPECIES

For the purposes of this assessment, “special status” is defined to be species that are of management concern to state or federal natural resource agencies, and include those species that are:

- Listed as endangered, threatened, proposed, or candidate for listing under the Federal Endangered Species Act;
- Listed as endangered, threatened, rare, or proposed for listing, under the California Endangered Species Act of 1970;
- Designated as endangered or rare, pursuant to California Fish and Game Code (§1901);
- Designated as fully protected, pursuant to California Fish and Game Code (§3511, §4700, or §5050);
- Designated as a species of special concern by CDFW;
- Plants considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS); this consists of species on Lists 1A, 1B, and 2 of the CNPS Ranking System; or
- Plants listed as rare under the California Native Plant Protection Act.

4.3.1. Reported Occurrences of Listed Species and Other Special-status Species

A list of special-status plant and animal species that have occurred within the Study Area and vicinity was compiled based upon the following:

- Any previous and readily-available biological resource studies pertaining to the Study Area;
- Informal consultation with USFWS by generating an electronic Species List (Information for Planning and Conservation website at https://ecos.fws.gov/ipac/); and
- A spatial query of the CNDDB.

The CNDDB was queried and any reported occurrences of special-status species were plotted in relation to the Study Area boundary using GIS software (see exhibits). The CNDDB reported 1 special-status animal occurrence with the Study Area: Clear Lake pyrg (*Pyrgulopsis ventricosa*). This snail requires perennial aquatic habitat. The property does not contain this habitat, although a spring may have been present with the Study Area in the past. The CNDDB reported 1 special-status plant occurrence on the property: California satintail (*Imperata brevifolia*). This grass requires perennial aquatic habitat. The property does not contain this habitat. Within a 10-mile buffer of the Study Area boundary, the CNDDB reported several special-status species occurrences, summarized in the following table.

A USFWS species list was generated online using the USFWS’ IPaC Trust Resource Report System (see Appendix 1). This list is generated using a regional and/or watershed approach and does not

necessarily indicate that the Study Area provides suitable habitat. The following listed species should be considered in the impact assessment:

- Northern Spotted Owl (*Strix occidentalis caurina*) Threatened
- Yellow-billed Cuckoo (*Coccyzus americanus*) Threatened
- California Red-legged Frog (*Rana draytonii*) Threatened
- Delta Smelt (*Hypomesus transpacificus*) Threatened
- Burke's Goldfields (*Lasthenia burkei*) Endangered
- Few-flowered Navarretia (*Navarretia leucocephala ssp. pauciflora)* Endangered
- Lake County Stonecrop (*Parvisedum leiocarpum)* Endangered
- Loch Lomond Coyote Thistle (*Eryngium constancei)* Endangered
- Many-flowered Navarretia (*Navarretia leucocephala ssp. plieantha)* Endangered
- Slender Orcutt Grass (*Orcuttia tenuis*) Threatened

Migratory birds should also be considered in the impact assessment.

Special-status Species Reported by CNDDB in the Vicinity of the Study Area

Common Name Scientific Name	Status*	General Habitat**	Microhabitat**
Red-bellied newt *Taricha rivularis*	CSSC	Found in coastal woodlands and redwood forests along the coast of Northern California	A stream or river dweller. Larvae retreat into vegetation and under stones during the day.
California giant salamander *Dicamptodon ensatus*	CSSC	Mendocino and Lake Counties south to Santa Cruz and Santa Clara Counties.	Wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages.
Foothill yellow-legged frog *Rana boylii*	CCT/CSSC	Partly-shaded, shallow streams & riffles with a rocky substrate in a variety of habitats.	Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.
Osprey *Pandion haliaetus*	CWL	Ocean shore, bays, fresh-water lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.
Golden eagle *Aquila chrysaetos*	CFP/CWL	Rolling foothills, mountain areas, sage-juniper flats, & desert.	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
American peregrine falcon *Falco peregrinus anatum*	FD/CD/CFP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Nest consists of a scrape or a depression or ledge in an open site.
Prairie falcon *Falco mexicanus*	CWL	Inhabits dry, open terrain, either level or hilly.	Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT/CE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.
Purple martin *Progne subis*	CSSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, & Monterey pine.	Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.
Steelhead - central California coast DPS *Oncorhynchus mykiss irideus pop. 8*	FT	From Russian River, south to Soquel Cr & to, but not including, Pajaro River. Also San Francisco & San Pablo Bay basins.	
Clear Lake hitch *Lavinia exilicauda chi*	CT	Found only in clear lake, lake co, and associated ponds. Spawns in streams flowing into clear lake.	Adults found in the limnetic zone. Juveniles found in the nearshore shallow-water habitat hiding in the vegetation.
Sacramento perch *Archoplites interruptus*	CSSC	Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley.	Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.
Long-eared myotis *Myotis evotis*	CSSC	Found in all brush, woodland & forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands & forests.	Nursery colonies in buildings, crevices, spaces under bark, & snags. Caves used primarily as night roosts.
Fringed myotis *Myotis thysanodes*	CSSC	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood & hardwood-conifer.	Uses caves, mines, buildings or crevices for maternity colonies and roosts.
Silver-haired bat *Lasionycteris noctivagans*	CSSC	Primarily a coastal & montane forest dweller feeding over streams, ponds & open brushy areas.	Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes & rarely under rocks. Needs drinking water.
Hoary bat *Lasiurus cinereus*	CSSC	Prefers open habitats or habitat mosaics, with access to trees for cover & open areas or habitat edges for feeding.	Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
Western red bat *Lasiurus blossevillii*	CSSC	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests.	Prefers habitat edges & mosaics with trees that are protected from above & open below with open areas for foraging.
Townsend's big-eared bat *Corynorhinus townsendii*	CSSC	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls & ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Pallid bat *Antrozous pallidus*	CSSC	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.

North American porcupine *Erethizon dorsatum*	CSSC	Coast ranges, Klamath Mountains, southern Cascades, Modoc Plateau, Sierra Nevada and Transverse Ranges.	Montane conifer and wet meadow habitats.
Western pond turtle *Emys marmorata*	CSSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, be	Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying
An isopod *Calasellus californicus*	CSSC	Known from Lake, Napa, Marin, Santa Cruz and Santa Clara counties.	
Brownish dubiraphian riffle beetle *Dubiraphia brunnescens*	CSSC	Aquatic; known only from the NE shore of Clear Lake, Lake County.	Inhabits exposed, wave-washed willow roots.
Ricksecker's water scavenger beetle *Hydrochara ricksecker*i	CSSC	Aquatic.	
Wilbur Springs shorebug *Saldula usingeri*	CSSC	Requires springs/creeks with high concentrations of Na, Cl, & Li.	Found only on wet substrate of spring outflows.
Western bumble bee *Bombus occidentalis*	CSSC	Once common & widespread, species has declined precipitously from Central Ca to southern B.C., perhaps from disease.	
Obscure bumble bee *Bombus caliginosus*	CSSC	Open grassy coastal prairies and Coast Range meadows. Nesting occurs underground as well as above ground in abandoned bird nests.	Food plants include *Ceanothus, Cirsium, Clarkia, Keckiella, Lathyrus, Lotus, Lupinus, Rhododendron, Trifolium, Rubus* and *Vaccinium.*
Borax Lake cuckoo wasp *Hedychridium milleri*	CSSC	Endemic to central California. Only collection is from the type locality.	External parasite of wasp and bee larva.
Clear Lake pyrg *Pyrgulopsis ventricosa*	CSSC	Restricted to Seigler Creek drainage in the south end of the Clear Lake Basin.	Freshwater.
Toren's grimmia *Grimmia torenii*	1B.3	Cismontane woodland, lower montane coniferous forest, chaparral.	Openings, rocky, boulder and rock walls, carbonate, volcanic. 325-1160 m.
Elongate copper moss *Mielichhoferia elongata*	4.3	Cismontane woodland. Commonly called "copper mosses".	Moss growing on very acidic, metamorphic rock or substrate; usually in higher portions in fens. Often on substrates natu
Loch Lomond button-celery *Eryngium constancei*	FE/CE/1B.1	Vernal pools.	Volcanic ash flow vernal pools. 460-855 m.
Greene's narrow-leaved daisy *Erigeron greenei*	1B.2	Chaparral.	Serpentine and volcanic substrates, generally in shrubby vegetation. 80-1005 m.
Congested-headed hayfield tarplant *Hemizonia congesta ssp. congesta*	1B.2	Valley and foothill grassland.	Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 20-560 m.
Burke's goldfields *Lasthenia burkei*	FE/CE/1B.1	Vernal pools, meadows and seeps.	Most often in vernal pools and swales. 15-600 m.
Colusa layia *Layia septentrionalis*	1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 145-1095m.
Hall's harmonia *Harmonia hallii*	1B.2	Chaparral.	Serpentine hills and ridges. Open, rocky areas within chaparral. 500-900 m.
Bent-flowered fiddleneck *Amsinckia lunaris*	1B.2	Cismontane woodland, valley and foothill grassland.	50-500m.
Serpentine cryptantha *Cryptantha dissita*	1B.2	Chaparral.	Serpentine outcrops. 330-730m.
Freed's jewelflower *Streptanthus brachiatus ssp. hoffmanii*	1B.2	Chaparral, cismontane woodland.	Serpentine rock outcrops, primarily in geothermal development areas. 490-1220 m.
Socrates Mine jewelflower *Streptanthus brachiatus ssp. brachiatus*	1B.2	Chaparral, closed-cone coniferous forest.	Serpentine areas and serpentine chaparral. 545-1000 m.
Hoffman's bristly jewelflower *Streptanthus glandulosus ssp. hoffmanii*	1B.3	Chaparral, cismontane woodland, valley and foothill grassland.	Moist, steep rocky banks, in serpentine and non-serpentine soil. 120-475m.

Green jewelflower *Streptanthus hesperidis*	1B.2	Chaparral, cismontane woodland.	Openings in chaparral or woodland; serpentine, rocky sites. 130-760m.
Watershield *Brasenia schreberi*	2B.3	Freshwater marshes and swamps.	Aquatic from water bodies both natural and artificial in California.
Cascade downingia *Downingia willamettensis*	2B.2	Cismontane woodland, valley and foothill grasslands.	Lake margins and vernal pools.
Legenere *Legenere limosa*	1B.1	Vernal pools.	In beds of vernal pools. 1-880 m.
Three-fingered morning-glory *Calystegia collina ssp. tridactylosa*	1B.2	Chaparral, cismontane woodland.	Rocky, gravelly openings in serpentine. 0-600 m.
Oval-leaved viburnum *Viburnum ellipticum*	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	215-1400 m.
Lake County stonecrop *Sedella leiocarpa*	FE/CE/1B.1	Valley and foothill grassland, vernal pools, cismontane woodland.	Level areas that are seasonally wet and dry out in late spring; substrate usually of volcanic origin. 365-790 m.
Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	1B.1	Chaparral, lower montane coniferous forest.	Rocky, serpentine sites. Slopes and ridges. 450-1000 m.
Konocti manzanita *Arctostaphylos manzanita ssp. elegans*	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	Volcanic soils. 395-1615 m.
Jepson's milk-vetch *Astragalus rattanii var. jepsonianus*	1B.2	Cismontane woodland, valley and foothill grassland, chaparral.	Commonly on serpentine in grassland or openings in chaparral. 180-1000 m.
Cobb Mountain lupine *Lupinus sericatus*	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, broadleafed upland forest.	In stands of knobcone pine-oak woodland, on open wooded slopes in gravelly soils; sometimes on serpentine. 275-1525 m.
Saline clover *Trifolium hydrophilum*	1B.2	Marshes and swamps, valley and foothill grassland, vernal pools.	Mesic, alkaline sites. 0-300 m.
Napa bluecurls *Trichostema ruygtii*	1B.2	Cismontane woodland, chaparral, valley and foothill grassland, vernal pools, lower montane coniferous forest.	Often in open, sunny areas. Also has been found in vernal pools. 30-590m.
Woolly meadowfoam *Limnanthes floccosa ssp. floccosa*	4.2	Chapparal, cismontane woodland, valley and foothill grassland, vernal pools.	Vernally wet areas, ditches, and ponds. 60-1335 m.
Glandular western flax *Hesperolinon adenophyllum*	1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Serpentine soils; generally found in serpentine chaparral. 150-1315 m.
Two-carpellate western flax *Hesperolinon bicarpellatum*	1B.2	Serpentine chaparral.	Serpentine barrens at edge of chaparral. 60-1005 m.
Lake County western flax *Hesperolinon didymocarpum*	CE/1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Serpentine soil in open grassland and near chaparral. 330-365m.
Sharsmith's western flax *Hesperolinon sharsmithiae*	1B.2	Chaparral.	Serpentine substrates. 270-300 m.
Marsh checkerbloom *Sidalcea oregana ssp. hydrophila*	1B.2	Meadows and seeps, riparian forest.	Wet soil of streambanks, meadows. 1100-2300 m.
Snow Mountain buckwheat *Eriogonum nervulosum*	1B.2	Chaparral.	Dry serpentine outcrops, balds, and barrens. 300-2100 m.
Brandegee's eriastrum *Eriastrum brandegeeae*	1B.1	Chaparral, cismontane woodland.	On barren volcanic soils; often in open areas. 425-840 m.
Jepson's leptosiphon *Leptosiphon jepsonii*	1B.2	Chaparral, cismontane woodland.	Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. 100-500m.
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. 5-1740 m.
Few-flowered navarretia *Navarretia leucocephala ssp. pauciflora*	FE/CT/1B.1	Vernal pools.	Volcanic ash flow, and volcanic substrate vernal pools. 400-855 m.
Many-flowered navarretia	FE/CE/1B.2	Vernal pools.	Volcanic ash flow vernal pools. 30-950 m.

Navarretia leucocephala ssp. plieantha			
Rincon Ridge ceanothus *Ceanothus confusus*	1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland.	Known from volcanic or serpentine soils, dry shrubby slopes. 75-1065 m.
Calistoga ceanothus *Ceanothus divergens*	1B.2	Chaparral.	Rocky, serpentine or volcanic sites. 170-950 m.
Bolander's horkelia *Horkelia bolanderi*	1B.2	Lower montane coniferous forest, chaparral, meadows, valley and foothill grassland.	Grassy margins of vernal pools and meadows. 450-1100 m.
Pink creamsacs *Castilleja rubicundula var. rubicundula*	1B.2	Chaparral, meadows and seeps, valley and foothill grassland.	Openings in chaparral or grasslands. On serpentine. 20-900 m.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	CE/1B.2	Marshes and swamps (freshwater), vernal pools.	Clay soils; usually in vernal pools, sometimes on lake margins. 10-2375 m.
Sonoma beardtongue *Penstemon newberryi var. sonomensis*	1B.3	Chaparral.	Crevices in rock outcrops and talus slopes. 700-1370 m.
Dimorphic snapdragon *Antirrhinum subcordatum*	4.3	Chaparral, lower montane coniferous forest.	Generally, on serpentine or shale in foothill woodland or chaparral on s- and w-facing slopes. 185-800 m.
Northern meadow sedge *Carex praticola*	2B.2	Meadows and seeps.	Moist to wet meadows. 0-3200 m.
Dwarf soaproot *Chlorogalum pomeridianum var. minus*	1B.2	Chaparral, valley and foothill grassland.	Serpentine. 240-970 m.
Geysers panicum *Panicum acuminatum var. thermale*	CE/1B.2	Closed-cone coniferous forest, riparian forest, valley and foothill grassland.	Usually around moist, warm soil in the vicinity of hot springs. 305-2470 m.
California satintail *Imperata brevifolia*	2B.1	Coastal scrub, chaparral, riparian scrub, mojavean scrub, meadows and seeps (alkali), riparian scrub.	Mesic sites, alkali seeps, riparian areas. 0-1215 m.
Slender Orcutt grass *Orcuttia tenuis*	FT/CE/1B.1	Vernal pools.	Often in gravelly pools. 35-1760 m.
Eel-grass pondweed *Potamogeton zosteriformis*	2B.2	Marshes and swamps.	Ponds, lakes, streams. 0-1860 m.

*Definitions of Status Codes: FE = Federally listed as endangered; FT = Federally listed as threatened; FPE = Federally proposed for listing as endangered; FPT = Federally proposed for listing as threatened; FC = Candidate for Federal listing; MB = Migratory Bird Act; CE = California State listed as endangered; CT = California State listed as threatened; CSSC = California species of special concern; CR = California rare species; CFP = California fully protected species; CNPS (California Native Plant Society) List 1A = Plants presumed extinct in California by CNPS; CNPS List 1B = CNPS designated rare or endangered plants in California and elsewhere; and CNPS List 2 = CNPS designated rare or endangered plants in California, but more common elsewhere. Global Ranking: G1 = Critically Imperiled; G2 = Imperiled; G3 = Vulnerable. State Ranking: S1 = Critically Imperiled; S2 = Imperiled; S3 = Vulnerable.
**Copied verbatim from CNDDB, unless otherwise noted.

4.3.2. Listed Species or Special-status Species Observed During Field Survey

During the field survey, no special-status species were detected within the Project Area or the surrounding Study Area.

4.3.3. Potential for Listed Species or Special-status Species to Occur in the Study Area

No special-status animal species were detected within the Study Area during the field survey. The CNDDB reported 1 special-status animal occurrence on the property: Clear Lake pyrg (*Pyrgulopsis ventricosa*). This snail requires perennial aquatic habitat. The property does not contain this habitat, although the spring may have been habitat in the past. Special-status animals are not considered to be highly likely to occur in the project area.

No special-status plant species were detected within the Study Area during the field survey. The CNDDB reported 1 special-status plant occurrence on the property: California satintail (*Imperata brevifolia*). This grass requires perennial aquatic habitat. The property does not contain this habitat, although the spring may have been habitat in the past. Special-status plants are considered to be moderately likely to occur within the Study Area because native woodland vegetation will be disturbed/removed in order to install this project and the property contains volcanic soils. Several special status plants are known to occur on volcanic soils and rare plants have been reported in the vicinity in woodland habitats. No soils derived from serpentine parent material are mapped in or adjacent to the project.

4.4. POTENTIALLY-JURISDICTIONAL WATER RESOURCES

The USFWS National Wetland Inventory reported no water features within the Project Area, but the Inventory did report 1 water feature within the Study Area (see Exhibits): a channel and associated riverine habitat.

An informal assessment for the presence of potentially-jurisdictional water resources within the Study Area was also conducted during the field survey. For purposes of this biological site assessment, non-wetland waters (i.e., channels) were classified using the California Forest Practice Rules. The California Forest Practice Rules define a Class I watercourse as 1) a watercourse providing habitat for fish always or seasonally, and/or 2) providing a domestic water source; a Class II watercourse is 1) a watercourse capable of supporting non-fish aquatic species, or 2) a watercourse within 1,000 feet of a watercourse that seasonally or always has fish present; a Class III watercourse is a watercourse with no aquatic life present and that shows evidence of being capable of transporting sediment to Class I and Class II waters during high water flow conditions.

The field survey determined that the Project Area does not contain any channels or wetlands. The following water features were detected within the larger Study Area during the field survey (see Exhibits):

- 1 unnamed ephemeral channel (Class III watercourse).

There are no vernal pools or other isolated wetlands in the Study Area. A spring is indicated on the USGS topo map, but no spring could be found at the top of the watercourse.

5. IMPACT ANALYSES AND MITIGATION MEASURES

This section establishes the impact criteria, then analyzes potential Project-related impacts upon the known biological resources within the Study Area, and then suggests mitigation measures to reduce these impacts to a less-than-significant level.

5.1. IMPACT SIGNIFICANCE CRITERIA

The significance of impacts to biological resources depends upon the proximity and quality of vegetation communities and wildlife habitats, the presence or absence of special-status species, and the effectiveness of measures implemented to protect these resources from Project-related impacts. As defined by CEQA, the Project would be considered to have a significant adverse impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a special-status species in local or regional plans, policies, or regulations, or by USFWS or CDFW
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by USFWS or CDFW
- 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
- 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
- Conflict with any county or municipal policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved governmental habitat conservation plan.

5.2. IMPACT ANALYSIS

The following discussion evaluates the potential for Project-related activities to adversely affect biological resources. The Project boundaries were digitized and then overlaid on the habitat map using GIS to quantify potential impacts. Historical aerial photos were also analyzed for changes in land use.

5.2.1. Potential Direct / Indirect Adverse Effects Upon Special-status Species

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

No special-status animal species were detected within the Study Area during the field survey. The CNDDB reported 1 special-status animal occurrence on the property: Clear Lake pyrg (*Pyrgulopsis ventricosa*). This snail requires perennial aquatic habitat. The property does not contain this habitat, although the spring may have been habitat in the past. Special-status animals are not considered to be highly likely to occur in the project area. No direct impacts to special-status animals are expected from implementation of the proposed project.

The CNDDB reported 1 special-status plant occurrence on the property: California satintail (*Imperata brevifolia*). This grass requires perennial aquatic habitat. The property does not contain this habitat, although the spring may have been habitat in the past. Special-status plants are considered to be

moderately likely to occur within the Study Area because native woodland vegetation will be disturbed/removed in order to install this project and the property contains volcanic soils. Several special status plants are known to occur on volcanic soils and rare plants have been reported in the vicinity in woodland habitats. No soils derived from serpentine parent material are mapped in or adjacent to the project. No special-status plants were observed within the Project Area or the surrounding Study Area, but this survey was performed outside of the blooming period of most rare plants occurring in the region. Without an additional botanical survey performed during the blooming period, we cannot be certain that special-status plants will not be impacted by project implementation. This is a potentially significant impact before mitigation.

The Study Area contains suitable nesting habitat for various bird species because of the presence of trees and poles. However, no nests or nesting activity was observed in the project area during the field survey. Trees must be inspected for the presence of active bird nests before tree felling or ground clearing. If active nests are present in the project area during construction of the project, CDFW should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site.

Recommended Mitigation Measures

An additional botanical survey is recommended because our field survey was not performed during the blooming period of most regionally-occurring rare plants. The survey should be focused on rare plants that have been reported in the vicinity by the CNDDB and performed during the blooming period of the majority of target species. The survey should also focus on habitat types that are more likely to harbor rare species. With the implementation of this mitigation measure, adverse impacts upon special-status plant species would be reduced to a less-than-significant level.

5.2.2. Potential Direct / Indirect Adverse Effects Upon Special-status Habitats or Natural Communities or Corridors

- *Will the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

The Project Area and surrounding Study Area are not within any designated listed species' critical habitat. The Project Area does not contain special-status habitats. The Study Area contains one special-status habitat: an ephemeral watercourse. The project area is several hundred feet away from this feature. There is no evidence that project implementation will impact any special-status habitats. Therefore, no mitigation is required.

Recommended Mitigation Measures

No mitigation is necessary.

5.2.3. Potential Direct / Indirect Adverse Effects on Jurisdictional Water Resources

- *Will the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

There are no water resources within the Project Area; the project was designed to be appropriately setback from water resources. There is water resource within the surrounding Study Area: one unnamed ephemeral channel (Class III Watercourse). The project area is about 400 feet from this channel. Potential direct impacts to water resources could occur during construction by modification or destruction of stream banks or riparian vegetation or the filling of wetlands or channels. However, the cultivation areas have been designed with 150-foot setbacks from watercourses and situated on flat ridgetops. Because of these avoidance measures, no direct impacts to water resources are expected.

Potential indirect impacts to water resources could occur during construction by increased erosion and sedimentation in receiving water bodies due to soil disturbance. If the total area of ground disturbance from installation of the cultivation operation is 1 acre or more, the Cultivator must enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ). Implementation of a stormwater pollution prevention plan, and erosion control plan, along with regular inspections, will ensure that construction activities do not pollute receiving waterbodies.

Potential adverse impacts to water resources could occur during operation of cultivation activities resources by discharge of sediment or other pollutants (fertilizers, pesticides, human waste, etc.) into receiving waterbodies. However, the project proponent must file a Notice of Intent and enroll in Cannabis Cultivation Order WQ 2019-0001-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, site management plans, inspections and reporting, and regulatory oversight.

Cultivators who enroll in the State Water Board's Waste Discharge Requirements for Cannabis Cultivation Order WQ 2019-0001-DWQ must comply with the Minimum Riparian Setbacks, as summarized in the following table. The Project would be considered to have a significant adverse impact on jurisdictional water resources if it would be non-compliant with these requirements. The minimum riparian setbacks apply to all land disturbance, cannabis cultivation activities, and facilities (e.g., material or vehicle storage, diesel powered pump locations, water storage areas, and chemical toilet placement). The proposed project is compliant with the setback requirements of Cannabis Cultivation Order WQ 2019-0001-DWQ.

Minimum Riparian Setbacks

Common Name	Watercourse Class	Distance
Perennial watercourses, waterbodies (e.g. lakes, ponds), or springs	I	150 ft.
Intermittent watercourses or wetlands	II	100 ft.
Ephemeral watercourses	III	50 ft.
Man-made irrigation canals, water supply reservoirs, or hydroelectric canals that support native aquatic species	IV	Established riparian zone vegetation

Recommended Mitigation Measures

No impacts were identified, and therefore no mitigation measures are proposed.

It is recommended that a formal delineation of jurisdictional waters be performed before construction work, or ground disturbance, is performed within 50 feet of any wetland or channel.

5.2.4. Potential Impacts to Wildlife Movement, Corridors, etc.

- *Will 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?*

Although no mapped wildlife corridors (such as the California Essential Habitat Connectivity Area layer in CNDDB) exist within or near the Study Area, the open space and the stream corridor in the Study Area facilitate animal movement and migrations. While the Study Area may be used by wildlife for movement or migration, the Project would not have a significant impact on this movement because it would not block movement and the majority of the open space in the Study Area would still be available.

Implementation of the proposed project would necessitate erection of security fences around the cultivation compounds. These fences do not allow animal movement and may act as a local barrier to wildlife movement. However, the fenced cultivation areas are surrounded by open space, allowing wildlife to move around these fenced areas. Thus, implementation of the proposed project is a less than significant impact upon wildlife movement. Implementation of the project will not 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.

Recommended Mitigation Measures

No mitigation is necessary.

5.2.5. Potential Conflicts with Ordinances, Habitat Conservation Plans, etc.

- *Will the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*
- *Will 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?*

Construction of the project may require the removal of trees protected by Lake County and CALFIRE. This is a potentially significant impact before mitigation. The project does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or another approved governmental habitat conservation plan. The Study Area is not within the coverage area of any adopted Habitat Conservation Plan or Natural Community Conservation Plan.

Recommended Mitigation Measures

Lake County requires mitigation for the removal of commercial tree species and native oak species.

If development of the project will result in the removal of commercial tree species, one of the following permits is needed: Less than 3 Acre Conversion Exemption; Christmas Tree; Dead, Dying or Diseased, Fuelwood, or Split Products Exemption; a Public Agency, Public and Private Utility Right of Way Exemption; a Notice of Exemption from Timberland Conversion Permit for Subdivision; or an Application for Timberland Conversion Permit.

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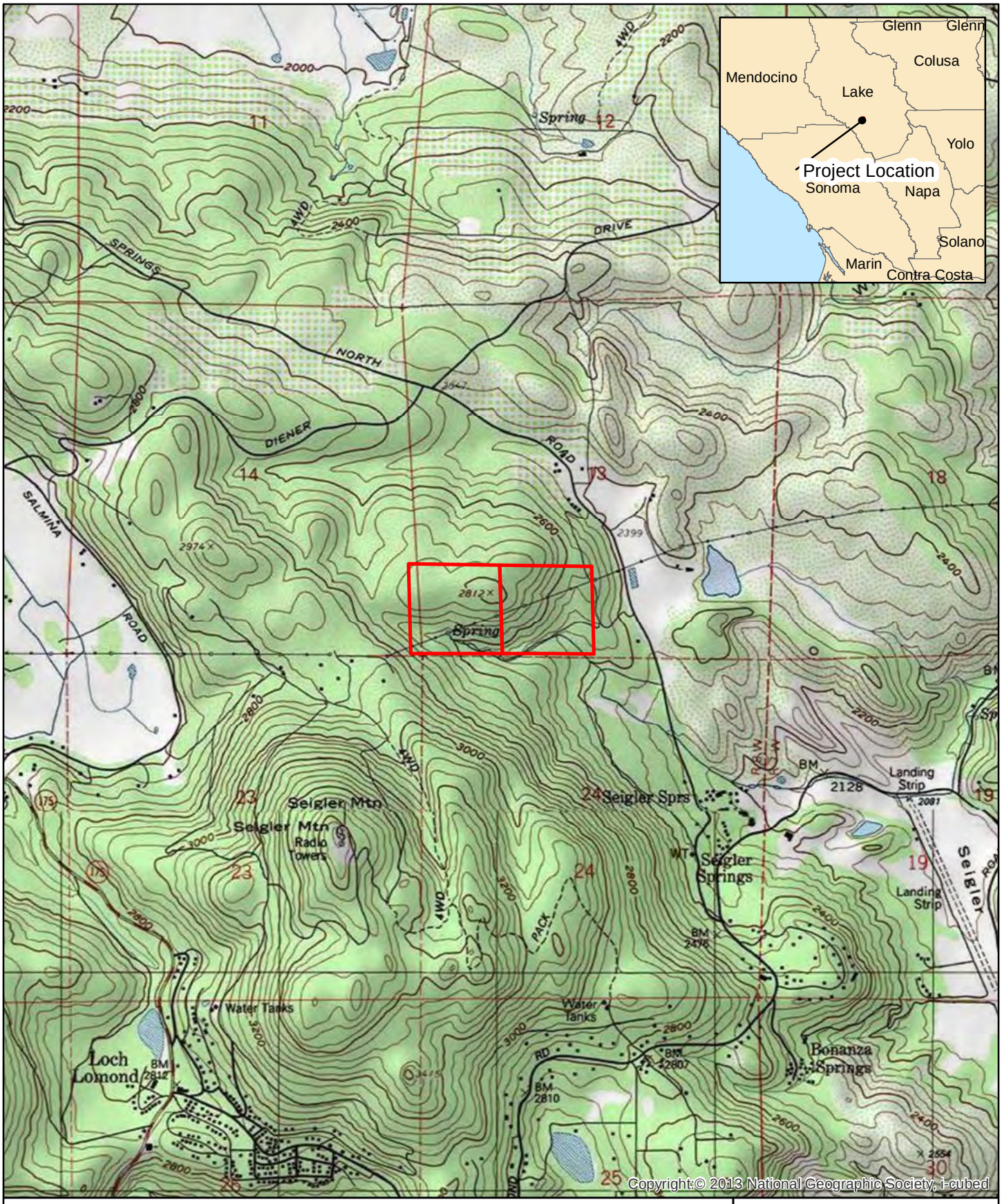
EXHIBITS



Parcel Location

0 0.5 1 Kilometers

0 0.5 1 Miles

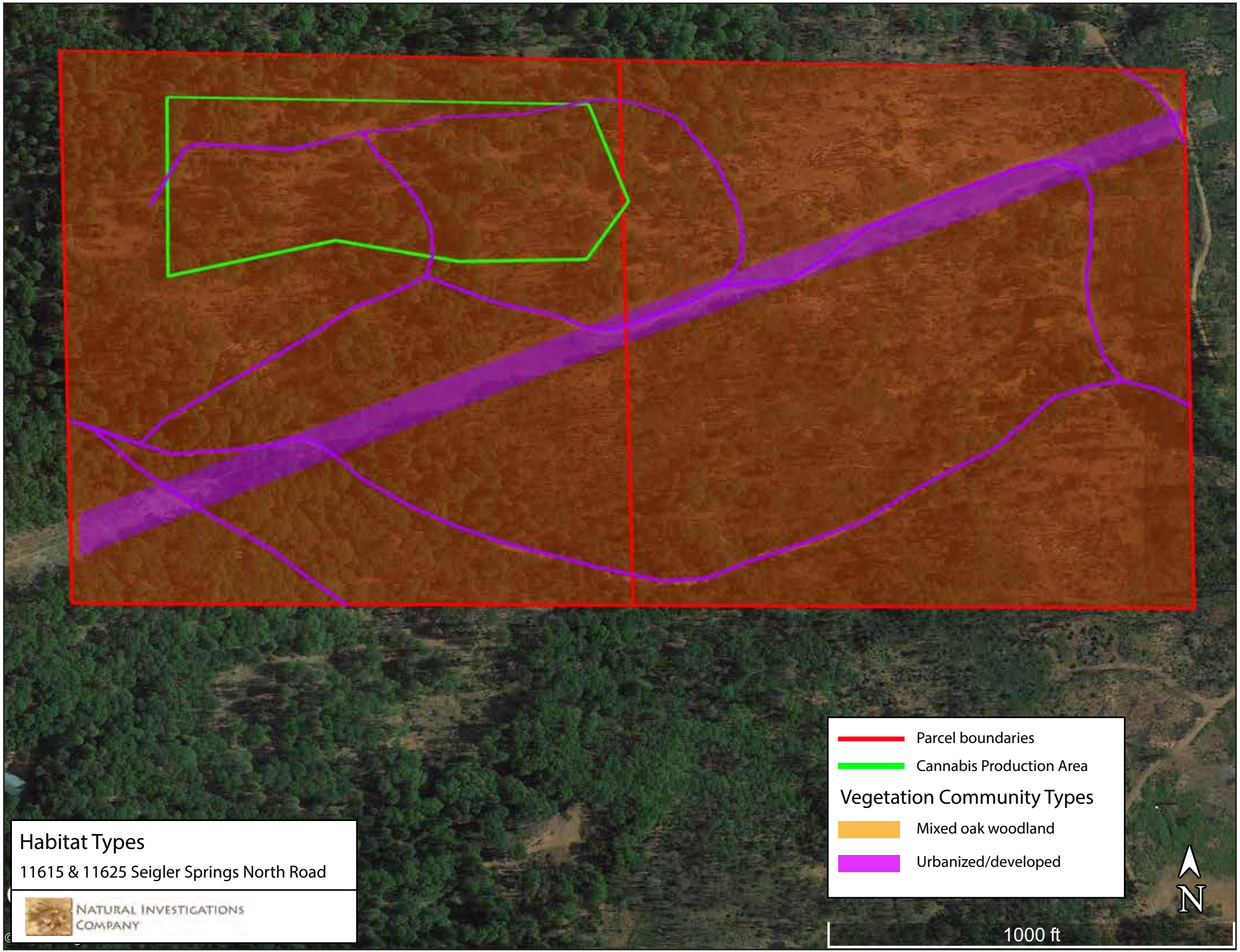
1:24,000

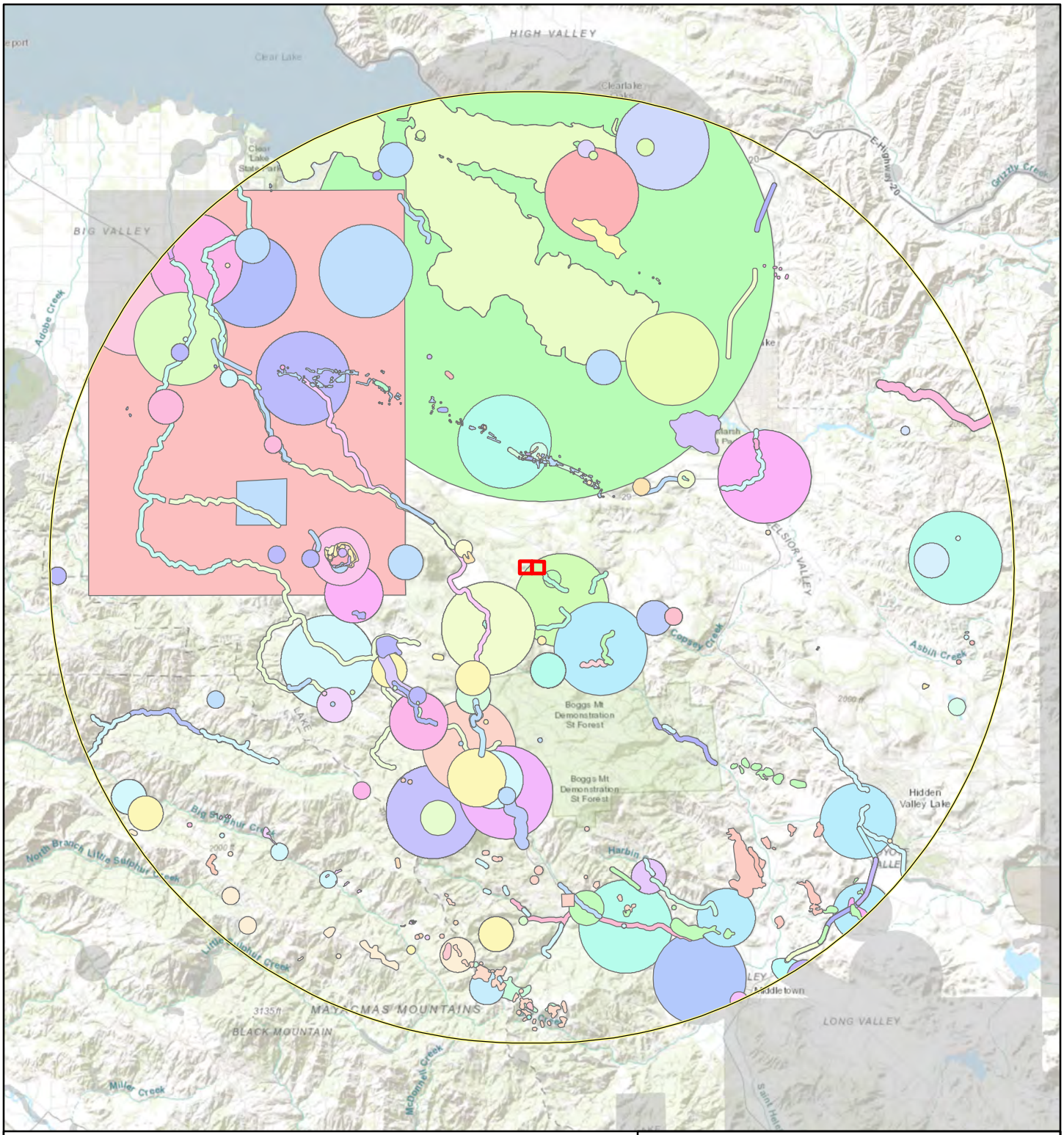
Seigler Springs North Rd
Parcel Location Map

Natural Investigations Company

Map Date 9/17/2020

Clearlake Highlands 1993 Quadrangle:Township 12N, Range 8W, Section 13,14


Parcel boundaries
Cannabis Production Area
Vegetation Community Types
Mixed oak woodland
Urbanized/developed
N
1000 ft
Habitat Types
11615 & 11625 Seigler Springs North Road
Natural Investigations Company



Parcel Location 10 Mile Buffer

1:190,000 1 inch = 3 miles

0 3 6 Miles

N

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist inshowing features discussed in an attached document. Natural Investigations Company can not guarantee the accuracy and content of electronic files.The master file is stored by Natural Investigations Company and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.Data Sources: California Department of Fish and Wildlife. 2020. RareFind 5.x, California Natural Diversity Data Base. Biogeographic Data Branch, Sacramento, California.
(updated monthly by subscription service)

Special-Status Species Occurrences Map

Seigler Springs North Rd

Clearlake Highlands 1993 Quadrangle:
Township 12N, Range 8W, Section 13,14

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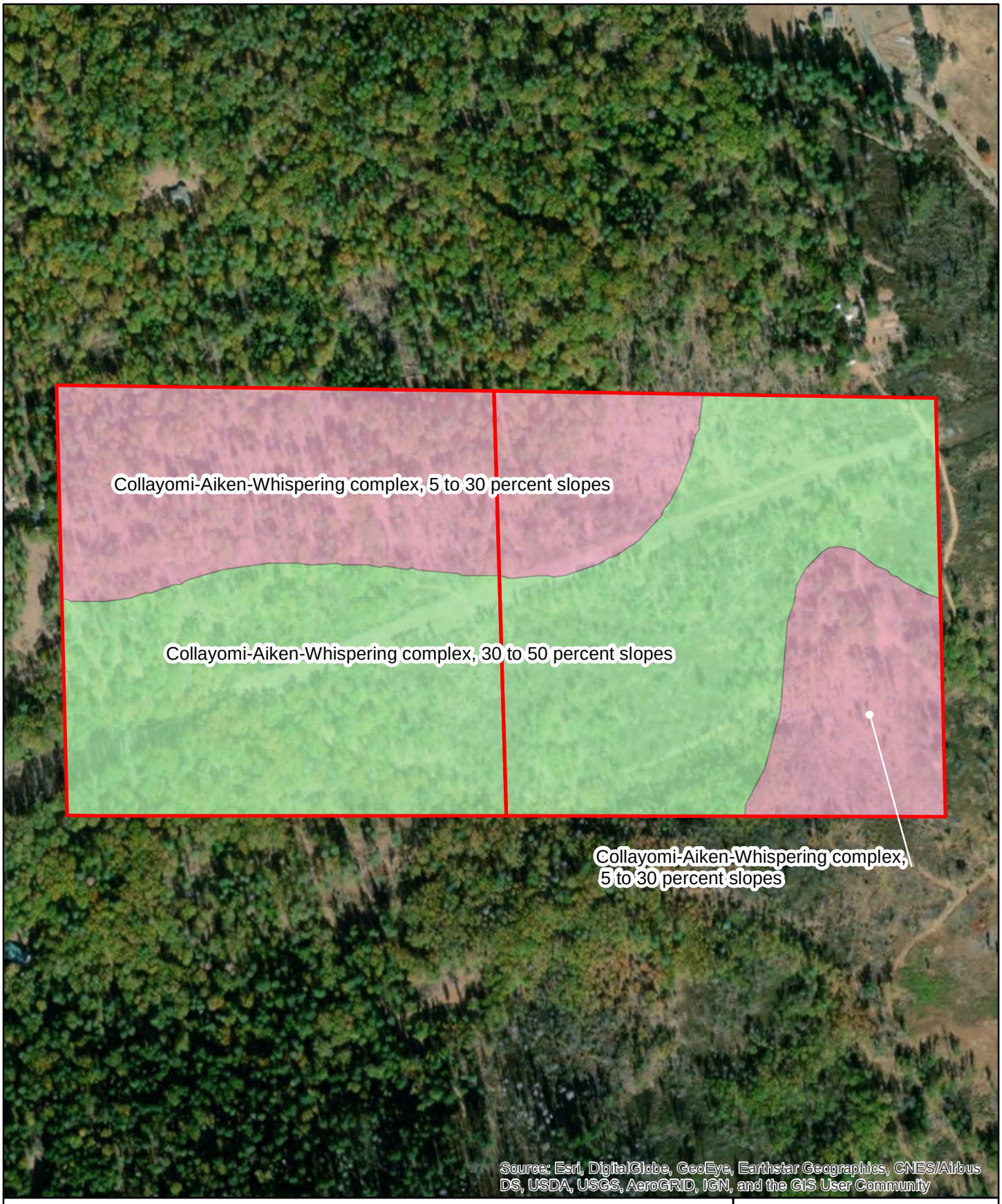
www.NaturalInvestigations.com



Parcel Location

0 125 250 Meters

0 500 1,000 Feet

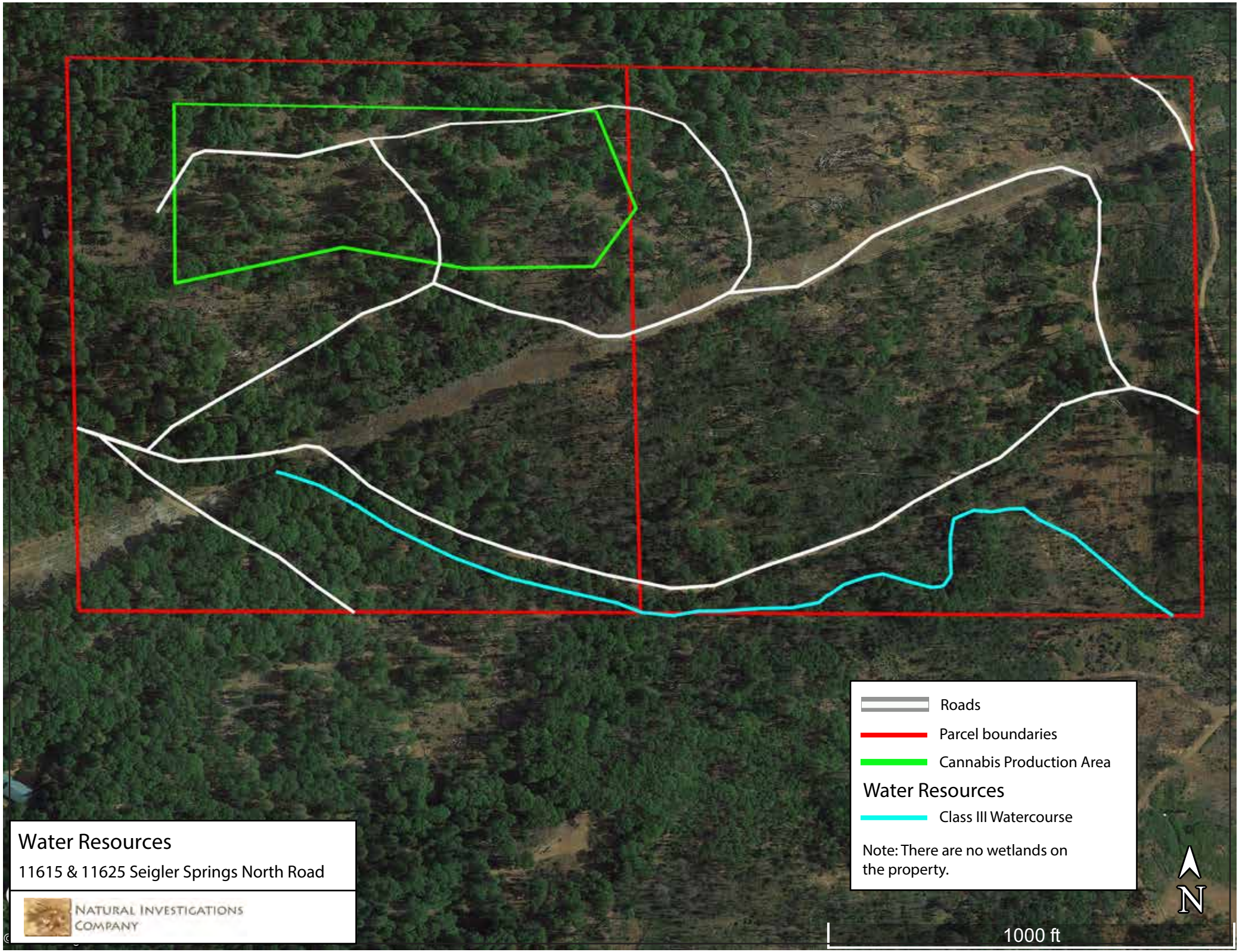
1:5,000

Siegler Springs North Rd
USDA Soils Map

Natural Investigations Company

Map Date 9/17/2020

Clearlake Highlands 1993 Quadrangle:Township 12N, Range 8W, Section 13,14


Roads
Parcel boundaries
Cannabis Production Area
Water Resources
Class III Watercourse
Note: There are no wetlands on the property.
N
1000 ft
Water Resources
11615 & 11625 Seigler Springs North Road
Natural Investigations Company

Parcel Location

Wetlands and Channels

0 125 250 Meters

0 500 1,000 Feet

1:5,000

Siegler Springs North Rd
National Wetlands Inventory
Features Map

Natural Investigations Company

Map Date 9/17/2020

Clearlake Highlands 1993 Quadrangle:Township 12N, Range 8W, Section 13,14

APPENDIX 1: USFWS SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2020-SLI-2916
Event Code: 08ESMF00-2020-E-09018
Project Name: Siegler Springs North Rd

September 17, 2020

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2020-SLI-2916

Event Code: 08ESMF00-2020-E-09018

Project Name: Siegler Springs North Rd

Project Type: ** OTHER **

Project Description: Bio Assessment

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.88329556105745N122.70110783558064W

Counties: Lake, CA

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Flowering Plants

NAME	STATUS
Burke's Goldfields *Lasthenia burkei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Few-flowered Navarretia *Navarretia leucocephala ssp. pauciflora (=N. pauciflora)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8242	Endangered
Lake County Stonecrop *Parvisedum leiocarpum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2263	Endangered
Loch Lomond Coyote Thistle *Eryngium constancei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5106	Endangered
Many-flowered Navarretia *Navarretia leucocephala ssp. plieantha* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2491	Endangered
Slender Orcutt Grass *Orcuttia tenuis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX 2: CHECKLIST OF PLANTS DETECTED IN THE STUDY AREA

Appendix 2:
Plants Observed at 11615 & 11625 Seigler Springs Road North, Middletown on September 21 & October 27, 2020

Common Name	**Scientific Name**
Yarrow	*Achillea millefolium*
Mountain dandelion	*Agoseris sp.*
Bentgrass	*Agrostis sp.*
Silver hairgrass	*Aira caryophyllea*
Silvery everlasting	*Antennaria argentea*
Hoary manzanita	*Arctostaphylos canescens ssp. canescens*
Common manzanita	*Arctostaphylos manzanita ssp. manzanita*
White leaf manzanita	*Arctostaphylos viscida ssp. viscida*
Slender wild oat	*Avena barbata*
Coyote brush	*Baccharis pilularis*
California brome	*Bromus carinatus*
Ripgut brome	*Bromus diandrus*
Soft chess	*Bromus hordeaceus*
Madrid brome	*Bromus madritensis*
Cheat grass	*Bromus tectorum*
Pinegrass	*Calamagrostis rubescens*
Incense cedar	*Calocedrus decurrens*
Wedgeleaf ceanothus	*Ceanothus cuneatus*
Deer brush	*Ceanothus integerrimus var. macrothyrsus*
Yellow star thistle	*Centaurea solstitialis*
Birch leaf mountain mahogany	*Cercocarpus betuloides*
Few leaved thistle	*Cirsium remotifolium*
Bull thistle	*Cirsium vulgare*
Clarkia	*Clarkia sp.*
Dogtail grass	*Cynosurus echinoides*
Rattlesnake weed	*Daucus pusillus*
Medusahead grass	*Elymus caput-medusae*
Squirretail grass	*Elymus elymoides*
Blue wildrye	*Elymus glaucus*
Tall willowherb	*Epilobium brachycarpum*
Willowherb	*Epilobium sp.*
Yerba santa	*Eriodictyon californicum*
Wooly sunflower	*Eriophyllum lanatum*
Eggleaf spurge	*Euphorbia oblongata*
Brome fescue	*Festuca bromoides*
California fescue	*Festuca californica*
Pacific fescue	*Festuca microstachys*
Sixweeks rattail fescue	*Festuca myuros*
Bolander's bedstraw	*Galium bolanderi*
California bedstraw	*Galium californicum ssp. californicum*
Bedstraw	*Galium sp.*
Nit grass	*Gastridium phleoides*
Hayfield tar plant	*Hemizonia congesta ssp. luzulifolia*
Big deer vetch	*Hosackia crassifolia var. crassifolia*
Gold wire	*Hypericum concinnum*
Klamath weed	*Hypericum perforatum*
Iris	*Iris sp.*
Lamp rush	*Juncus laccatus*

Western rush	*Juncus occidentalis*
Rush	*Juncus sp.*
Slender rush	*Juncus tenuis*
Lemmon's keckiella	*Keckiella lemmonii*
Hawkbit	*Leontodon saxatilis*
Common madia	*Madia elegans*
Goldback fern	*Pentagramma triangularis*
American mistletoe	*Phoradendron leucarpum*
Sugar pine	*Pinus lambertiana*
Ponderosa pine	*Pinus ponderosa*
Douglas-fir	*Pseudotsuga menziesii*
Bracken	*Pteridium aquilinum*
Blue oak	*Quercus douglasii*
California black oak	*Quercus kelloggii*
Interior live oak	*Quercus wislizeni*
White mignonette	*Reseda alba*
California rose	*Rosa californica*
Himalayan blackberry	*Rubus armeniacus*
Whitebark raspberry	*Rubus leucodermis*
Blue elderberry	*Sambucus nigra ssp. caerulea*
Pacific sanicle	*Sanicula crassicaulis*
California goldenrod	*Solidago velutina ssp. californica*
Tall stephanomeria	*Stephanomeria virgata*
Tall sock destroyer	*Torilis arvensis*
Poison-oak	*Toxicodendron diversilobum*
Common mullein	*Verbascum thapsus*
California grape	*Vitis californicus*

APPENDIX 3: SITE PHOTOS



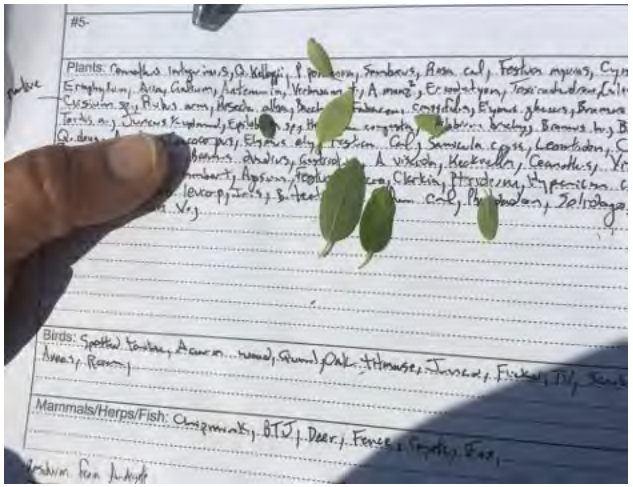








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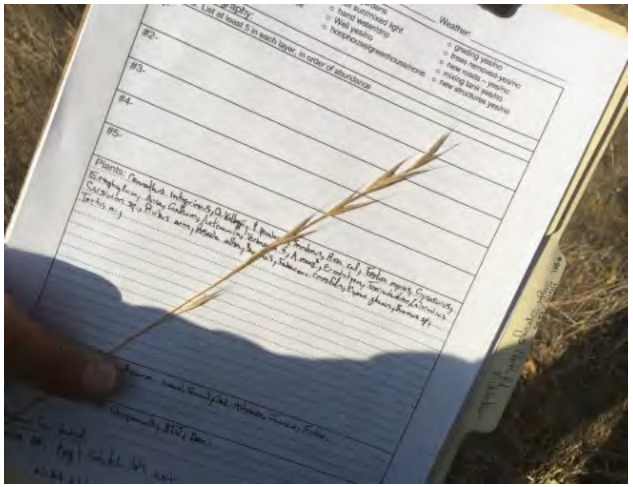
Plants:
Birds:
Mammals/Herps/Fish:





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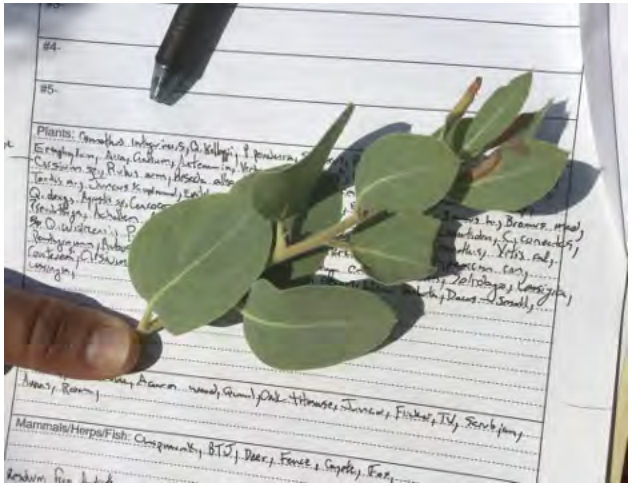









































Biological Assessment

For

Seigler Springs Cultivation

11615 Seigler Springs N. Road, Middletown, CA

Prepared for: Brian Pensack

Seigler Springs Holdings, LLC

637 Lindaro Street, Suite 201

San Rafael, CA 94901

Prepared by: Lawrence Ray

Ecological Consultant

201 Navigator Drive

Scotts Valley, CA 95066

nativeplantguy@msn.com

Table of Contents

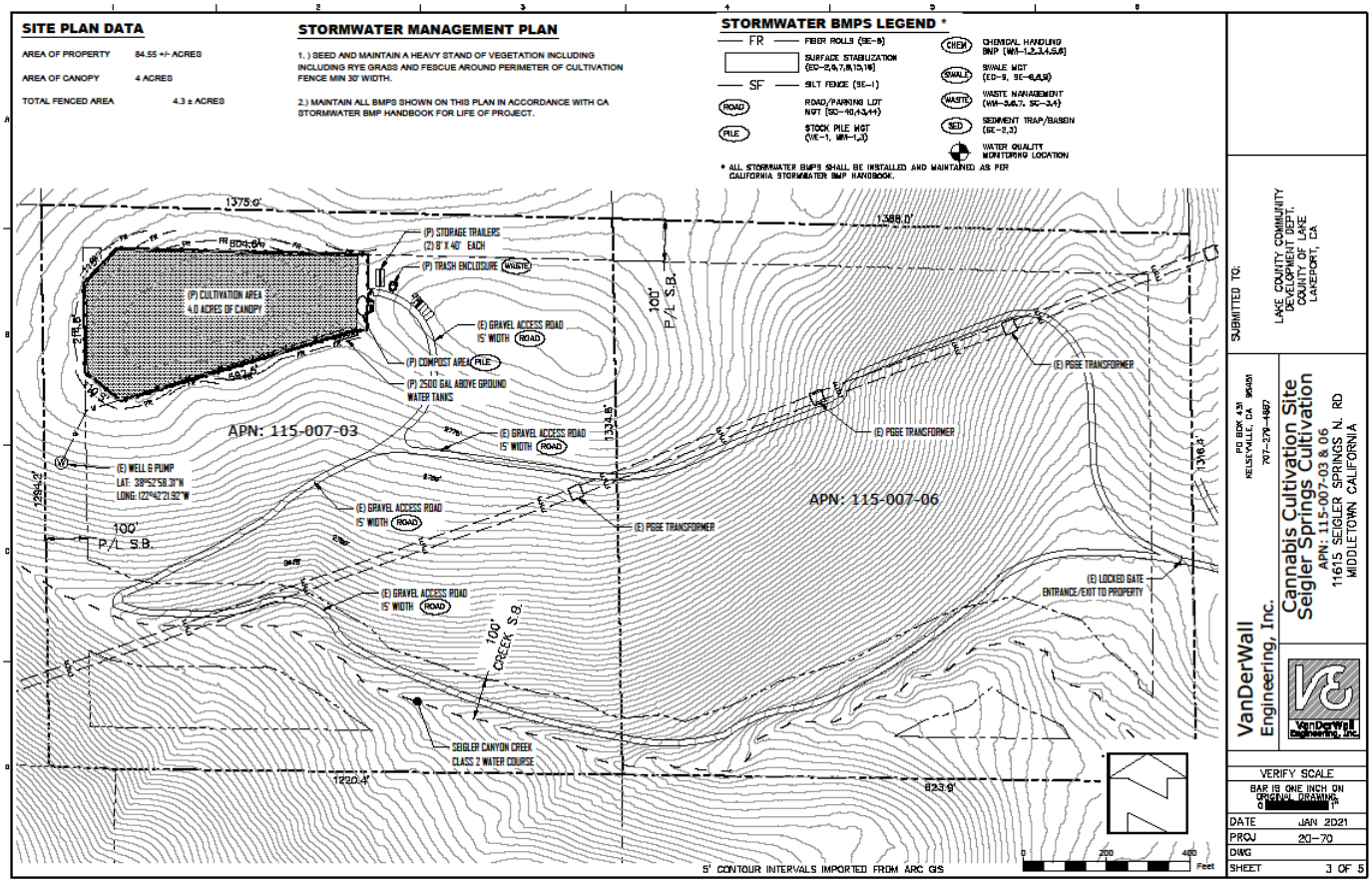
List of Figures/ Tables

1.0 PROJECT DESCRIPTION

1.1 <u>Proposed Project</u>: This survey covers two legal parcels of approximately 84.55 acres located in south central Lake County proposed for development. **Lake County Tax Assessor Parcel (APN) 115-007-03 and 115-007-06. GPS 38.88335/122.70109** at approximately the center of the area. Please see below **Figure 1; Site Plan**

The proposed project consists of a four (4) acre fenced garden area with associated infrastructure. This includes a well and water system, equipment storage facilities and a fully executed Stormwater Management Plan with associated BMP's (Best Management Practices) designed to reduce/eliminate erosion and releases of soil or other constituents utilized in the operation to the nearby waterway, Seigler Canyon Creek.

Figure 1; Site Plan



1.2 Effects of Fire

The majority of the property burned in the Valley Fire in September 2015. Evidence of the fire due to the presence of dead trees throughout the property and the dense undergrowth which has developed following the fire.

A map illustrating evidence of fire severity is attached (**Figure 2; Fire Severity Map**).

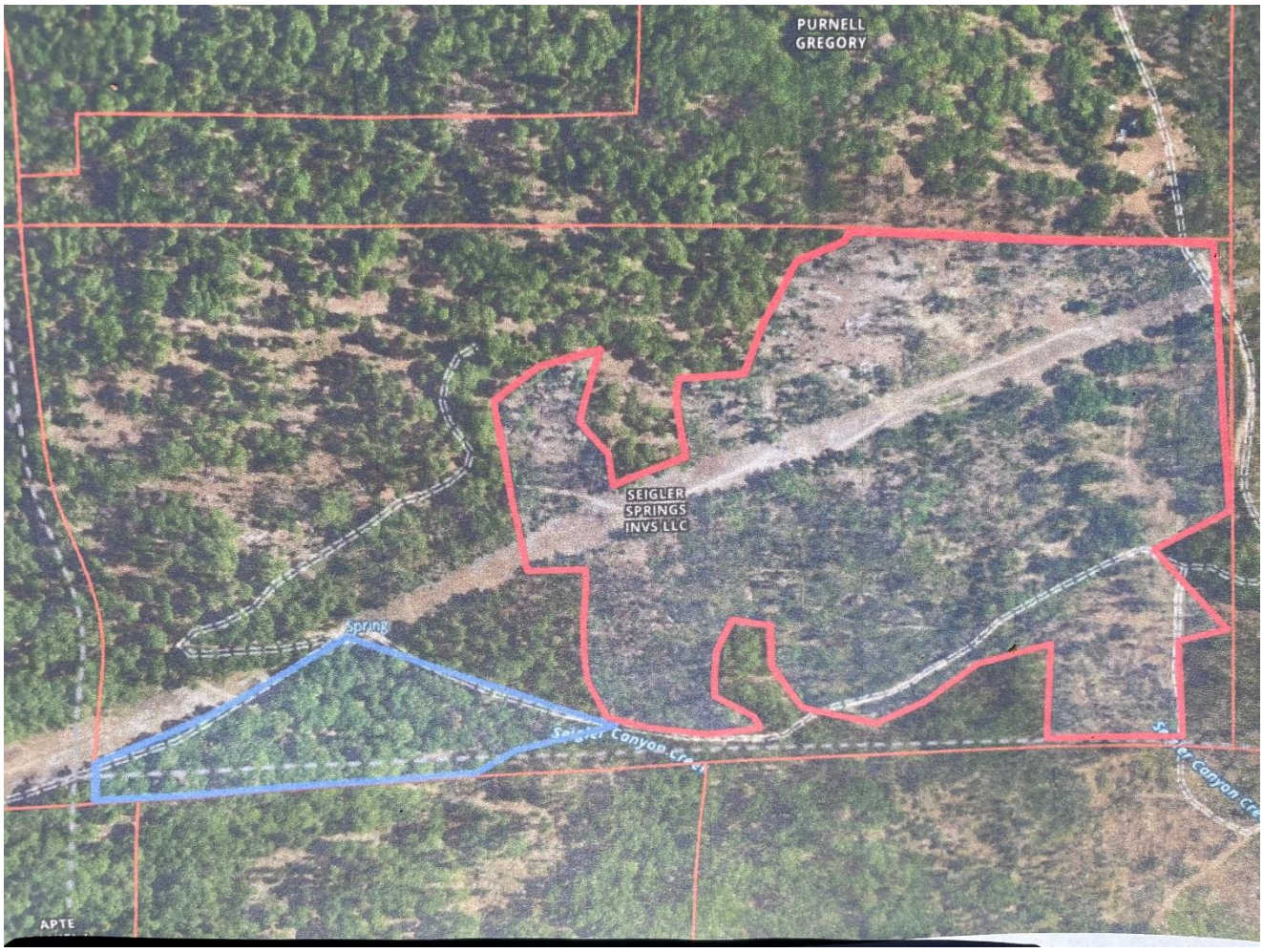


Figure 2: Fire Severity Map

Areas outlined in red illustrate high fire severity, areas where the fire consumed all available fuel with high mortality of vegetation in this area. As a result, this area is typified by a shift in species composition from black oak (Quercus kelloggii) to grasses and forbs mixed with shrubs. Some individual trees survived but are few and some are snags with basal (root) sprouting. This area totals 38.14 acres in size.

The area outlined in blue is only area on the property that did not burn in the fire. All remaining areas not outlined experienced low to moderate fire severity resulting in varying

levels of tree mortality and growth of sparse to dense understory brush growth depending on the level of overstory/tree density. This area is 5.96 acres in size out of a total for Black Oak Woodland of 60 acres.

The local permitting agency is requesting completion of a biological assessment on the property as part of the California Environmental Quality Act (CEQA) review required for new development. The initial phase of this assessment evaluates the potential of the property to contain sensitive plants or sensitive wildlife habitat through database searches of CNPS (California Native Plant Society) and CNDDB (CA Dept of Fish and Wildlife CA Natural Diversity Database). The second phase consists of field surveys, including a botanical survey listing all plant taxa and suitable habitat for sensitive wildlife species identified from a CNDDB search. The biological resource assessment will determine whether the property contains sensitive plants or wildlife requiring mitigation under the California Environmental Quality Act (CEQA). As used here, the terms sensitive plant/wildlife includes all state or federal rare, threatened, or endangered species as well as CA Native Plant Society plant status designations. This includes all species listed in the California Natural Diversity Database (CNDDB) list of "Special Vascular Plants, Bryophytes, and Lichens List", April 2021.

1.3 The site is located at 11615 North Seigler Springs Road, 7.5 miles west of Lower Lake and 16 miles NW of Middletown, CA. A location map is provided in **Figure 3**.

Figure 3: Location

2.0 ASSESSMENT METHODOLOGY

The basis of the biological resource assessment is a comparison of existing habitat conditions within the project boundaries to the geographic range and habitat requirements of sensitive plants and wildlife. It includes all sensitive species that occupy habitats similar to those found in the project area and whose known geographic ranges encompass it. The approach is conservative in that it tends to over-estimate the actual number of species present. The analysis includes the following site characteristics:

- Location of the project area with regard to the geographic range of sensitive plantand wildlife species
- Location(s) of known populations of sensitive plant and wildlife species as mappedin the California Natural Diversity Database (CNDDB)
- Soils of the project area
- Elevation
- Presence or absence of special features such as vernal pools and serpentine soils
- Plant communities existing within the project area

In addition to knowledge of the local plants and wildlife, the following computer databases were used to analyze the suitability of the site for sensitive species:

- California Department of Fish and Wildlife (CDFW), *California Natural DiversityDatabase (CNDDB)*; RareFind 5, 2021
- California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California* (v9-01 0.0)
- California Department of Fish and Wildlife, *California Wildlife Habitat RelationshipsSystem (CWHR Version 9.0)*

The CNDDB and RareFind 5 databases consist of maps and records of all known populations of sensitive plants and wildlife in California. This data is continually updated by the CDFW with new sensitive species population data.

The CNPS database produces a list of sensitive plants potentially occurring at a site based on the various site characteristics listed above. While use of the CNPS inventory does not in itself eliminate the need for an in-season botanical survey, it can, when used in conjunction with other information, provide a very good indication of thesuitability of a site as habitat for sensitive plant species.

The CWHR database operates on the same basis as the CNPS inventory. Input includes geographic area, plant community (including development stage), soil structure, and special features such as presence of water, snags, cover, and food (fruit, seeds, insects,etc.).

[1] Many sensitive plants and wildlife are subspecies or varieties which are taxonomic subcategories of species. The term "taxa" refers to species and their sub-specific categories.

2.1 Botanical Survey Methods: An in-season botanical survey was conductedfor the project site. The CNDDB report and maps for the Lower Lake, CA quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, andEvens, 2009), and mapped on a 1"=600' aerial photo (due to the large size of the survey area). Vegetation type names are based on an assessment of dominant cover species.

Plants occurring on the site were identified using *The Jepson Manual, Higher Plants of California,* 2012. Where necessary, species names were updated based on the 6th edition, *CNPS Inventory of Rare and Endangered Plants of California*. A map of the vegetation types at the site is provided in **Figure 4.**

2.2 Survey Dates: Site visits for the plant surveys and vegetation mapping were conducted on May 11, 17, and June 10,11, 2021.

2.3 Biological Assessment Staff: The field surveys, plant taxonomy, and vegetation mapping, were conducted by Lawrence Ray principal biologist. Mr. Ray has a Master of Science Degree in Ecology from the Antioch University/UC Berkeley and a Bachelor of Science Degree in Environmental Studies from the Antioch University. He hasover 35 years of experience as a biologist in the government and private sectors. Support staff was provided by Austin Ray who holds an AA Degree in Horticulture from Cabrillo College.

SITE CHARACTERISTICS

3.0 Site Topography and Drainage: The parcel occupies sloping (5-50%) topography with an average elevation of 2,683 (mean sea level). Drainage from the surrounding slopes is to Seigler Canyon Creek which is drains along the south to Cache Creek at Dam Road and Hwy 53. Topography is shown in **Figure 1.**

3.1 Soils: Based on the *Soil Surveys of Lake County and Mendocino County (Eastern Part), California* prepared by the U.S. Resource Conservation Service, the survey area contains the following soil types:

127-Collayomi-Aiken-Whispering complex, 5 to 30percent slopes. This map unit is on mountains. The vegetation is mainly conifers and oaks. Elevation is 1,400 to 4,000 feet. The average annual precipitation is 35 to 60 inches, the average annual air temperature is 50 to 55 degrees F, and the average frost-free period is 130 to 180 days.

This unit is about 35 percent Collayomi very gravelly loam, 35 percent Aiken loam, and 15 percent Whisperingloam. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are small areas of Rock outcrop near ridges. Also included are small areas of Aiken, Collayomi, and Whispering soils that have slopes of more than 30 percent. Included areas make up about 15 percent of the total acreage. The percentage varies fromone area to another.

The Collayomi soil is very deep and well drained. It formed in material weathered from andesite, basalt, or dacite. Typically, about 5 percent of the surface is covered with stones and boulders. The surface layer is light brown very gravelly loam 15 inches thick. The upper35 inches of the subsoil is light brown and reddish yellowvery gravelly loam, and the lower 10 inches is light reddish brown extremely gravelly loam. Permeability of the Collayomi soil is moderate.

Available water capacity is 2.5 to 4.5 inches. Effectiverooting depth is 60 inches or more. Surface runoff is rapid, and the hazard of erosion is moderate.

128-Collayoml-Aiken-Whlsperlng complex, 30 to 50 percent slopes. This map unit is on mountains. Thevegetation is mainly conifers and oaks. Elevation is 1,400 to 4,000 feet. The average annual precipitation is 35 to 60 inches, the average annual air temperature is 50 to 55 degrees F, and the average frost-free period is130 to 180 days.

This unit is about 40 percent Collayomi very gravelly loam, 35 percent Aiken loam, and 15 percent Whispering boom The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are small areas of Aiken and Whispering soils that have slopes of less than 30 percent. Also included are small areas of soils that are similar to the Collayomi soil but have more clay in the subsoil. Included areas make up about 10 percent of thetotal acreage. The percentage varies from one area to another.

The Collayomi soil is very deep and well drained. It formed in material weathered from andesite, basalt, or dacite. Typically, 5 percent of the surface is covered withstones and boulders. The surface layer is light brown very gravelly loam 15 inches thick. The upper 35 inches of the subsoil is light brown and reddish yellow very gravelly loam, and the lower 1O inches is light reddish brown extremely gravelly loam.

Permeability of the Collayomi soil is moderate. Available water capacity is 2.5 to 4.5 inches. Effectiverooting depth is 60 inches or more. Surface runoff is rapid, and the hazard of erosion is moderate.

142-Henneke-Montara-Rock outcrop complex, 15to 50 percent slopes. This map unit is on hills and mountains. The vegetation is mainly brush, scattered conifers, and sparse annual grasses. Elevation is 640 to3,000 feet. The average annual precipitation is 25 to 40 inches, the average annual air temperature is 55 to 60 degrees F, and the average frost-free period is 160 to 205 days.

This unit is about 40 percent Henneke gravelly loam,30 percent Montara clay loam, and 15 percent Rock outcrop. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are small areas of Dubakella, Maxwell, Millsholm, and Okiota soils. Also included are small areas of clayey soils that are 20 to 40 inches deepto bedrock, clayey soils that develop deep wide cracks when dry and are 20 to 40 inches

deep to bedrock, Henneke and Montara soils that have slopes of 50 to 75percent, and soils that are similar to the Henneke and Montara soils but are 20 to 40 inches deep to bedrock or are cooler. Included areas make up about 15 percent of the total acreage. The percentage varies from one area to another.

The Henneke soil is shallow and somewhat excessively drained. It formed in material weathered from serpentinitic rock. Typically, about 50 percent of the surface is covered with a pavement of stones, cobbles, and pebbles. The surface layer is reddish brown gravelly loam 3 inches thick. The upper 8 inches of the subsoil is reddish brown gravelly clay loam, and the lower 8 inches is dark reddish brown very gravelly clay. Fractured serpentinite is at a depth of 19 inches.

Permeability of the Henneke soil is moderately slow. Available water capacity is 1 inch to 2 inches. Effective rooting depth is 1O to 20 inches. Surface runoff is rapid,and the hazard of erosion is severe. Calcium to magnesium ratio is less than 1.

The Montara soil is shallow and well drained. It formedin material weathered from serpentinitic rock. Typically, the soil is grayish brown clay loam 12 inches thick over hard, fractured serpentinite.

Permeability of the Montara soil is moderately slow. Available water capacity is 1 inch to 4 inches. Effectiverooting depth is 8 to 20 inches. Surface runoff is rapid, and the hazard of erosion is severe. Calcium to magnesium ratio is less than 1.

Rock outcrop consists of hard, fractured serpentiniticrock. It occurs as small masses of intruding bedrock oras detached stones and boulders on the land surface. Areas of Rock outcrop are 50 feet to 1 acre in size.

This unit is used mainly as wildlife habitat andwatershed.

The natural vegetation on this unit is mainly brush because of the limited soil depth and the restricted available water capacity. The vegetation in most areas is mainly chamise, manzanita, buckbrush, and Digger pine. Properly planned and applied prescribed burning or chemical or mechanical treatment can be used in small areas to improve habitat for wildlife, increase access, and reduce the risk of fire.

148-Kldd-Forward complex, 5 to 30 percent slopes. This map unit is on hills and mountains. The vegetation is mainly brush and scattered conifers on the Kidd soil and hardwoods and conifers with an understoryof shrubs on the Forward soil. Elevation is 1,500 to 3,000 feet. The average annual precipitation is 35 to 50 inches, the average annual air temperature is 51 to 55 degrees F, and the average frost-free period is 150 to 185 days.

This unit is about 60 percent Kidd gravelly loam and 20 percent Forward loam. The components of this unit are so intricately intermingled that it was not practical tomap them separately at the scale used.

Included in this unit are small areas of Aiken soils and Rock outcrop. The areas of Rock outcrop occur as escarpments. Also included are small areas of Forward and Kidd soils that have slopes of more than 30 percent;soils that are similar to the Forward soil but have a clayey subsoil; soils that are similar to the Forward and Kidd soils, near Kelseyville and Clearlake Highlands, but have warmer soil temperatures, are sandy loam or loamysand throughout the profile, and have rapid permeability; and soils that are more than 60 inches deep. Included areas make up about 20 percent of the total acreage. The percentage varies from one area to another.

The Kidd soil is shallow and somewhat excessivelydrained. It formed in material weathered from rhyolitic tuff. Typically, the surface layer is light gray gravelly loam9 inches thick. The subsoil is very pale brown gravelly loam 7 inches thick. Rhyolitic tuff is at a depth of 16 inches.

Permeability of the Kidd soil is moderately rapid. Available water capacity is 1 inch to 3 inches. Effectiverooting depth is 12 to 20 inches. Surface runoff is medium, and the hazard of erosion is moderate.

The Forward soil is moderately deep and well drained.
It formed in material weathered from rhyolitic tuff. Typically, the surface layer is light gray loam 9 inches thick. The subsoil is light gray gravelly loam 16 inchesthick. Rhyolitic tuff is at a depth of 25 inches.
Permeability of the Forward soil is moderately rapid.Available water capacity is 2 to 6 inches. Effective rooting depth is 20 to 40 inches. Surface runoff is medium, and the hazard of erosion is severe.
This unit is used mainly as wildlife habitat and watershed. It is also used for firewood production, timberproduction, and homesite development.
Estimates of the site index and yield for the Kidd soilhave not been made because the vegetation is mainly brush.
Ponderosa pine, Douglas-fir, and sugar pine are the main tree species on the Forward soil. On the basis of a 100-year site curve, the mean site index is 102 for ponderosa pine and 97 for Douglas-fir. The potential annual production of ponderosa pine is 390 board feet per acre from a fully stocked stand of trees. Estimates ofthe site index and yield for sugar pine have not been made. Among the trees of limited extent are knobcone pine in areas that have been repeatedly burned, tanoak, California black oak, Pacific madrone, and interior live oak.

247-Wolfcreek loam. This very deep, well-drained soil is on flood plains. It formed in alluvium derived from mixed rock sources. Slope is 0 to 2 percent. The vegetation is mainly annual grasses and forbs. Elevation is 1,300 to 2,600 feet. The average annual precipitation is 25 to 40 inches, the average annual air temperature is55 to 59 degrees F, and the average frost-free period is 150 to 205 days.
Typically, the surface layer is pale brown loam 7 inches thick. The upper 39 inches of the underlying material is brown clay loam and sandy clay loam, andthe lower part to a depth of 72 inches is brown very gravelly sandy clay loam.
Included in this unit are small areas of Still soils. Alsoincluded are small areas of soils that are gravelly sandyloam throughout the profile. Included areas make up about 15 percent of the total acreage. The percentage varies from one area to another.
Permeability of this Wolfcreek soil is moderately slow. Available water capacity is 7.5 to 10.0 inches. Effective rooting depth is 60 inches or more. Surface runoff is veryslow, and the hazard of erosion is slight. This soil is subject to rare periods of flooding during prolonged, high-intensity storms.
This unit is used mainly for livestock grazing and hayand pasture. It is also used for homesite development.
The production of forage is limited by the susceptibilityof the soil in this unit to compaction when moist. Grazingshould be delayed until the soil has drained sufficiently to withstand trampling by livestock. This unit responds well to fertilizer, rangeland seeding, and proper grazing use. The characteristic plant community is mainly soft chess, filaree, and burclover.
This unit is well suited to hay and pasture.
If this unit is used for homesite development, the mainlimitations are moderately slow permeability and the hazard of flooding. Increasing the size of the septic tank absorption fields can help to compensate for the moderately slow permeability. Dikes and channels that have outlets for floodwater can be used to protect buildings and onsite sewage disposal systems from flooding. Roads and streets should be located above theexpected flood level.
This map unit is in capability class I (14), irrigated, andcapability unit IIIc-1 (14), non-irrigated.

A map of site soils is included **as Figure 4.**

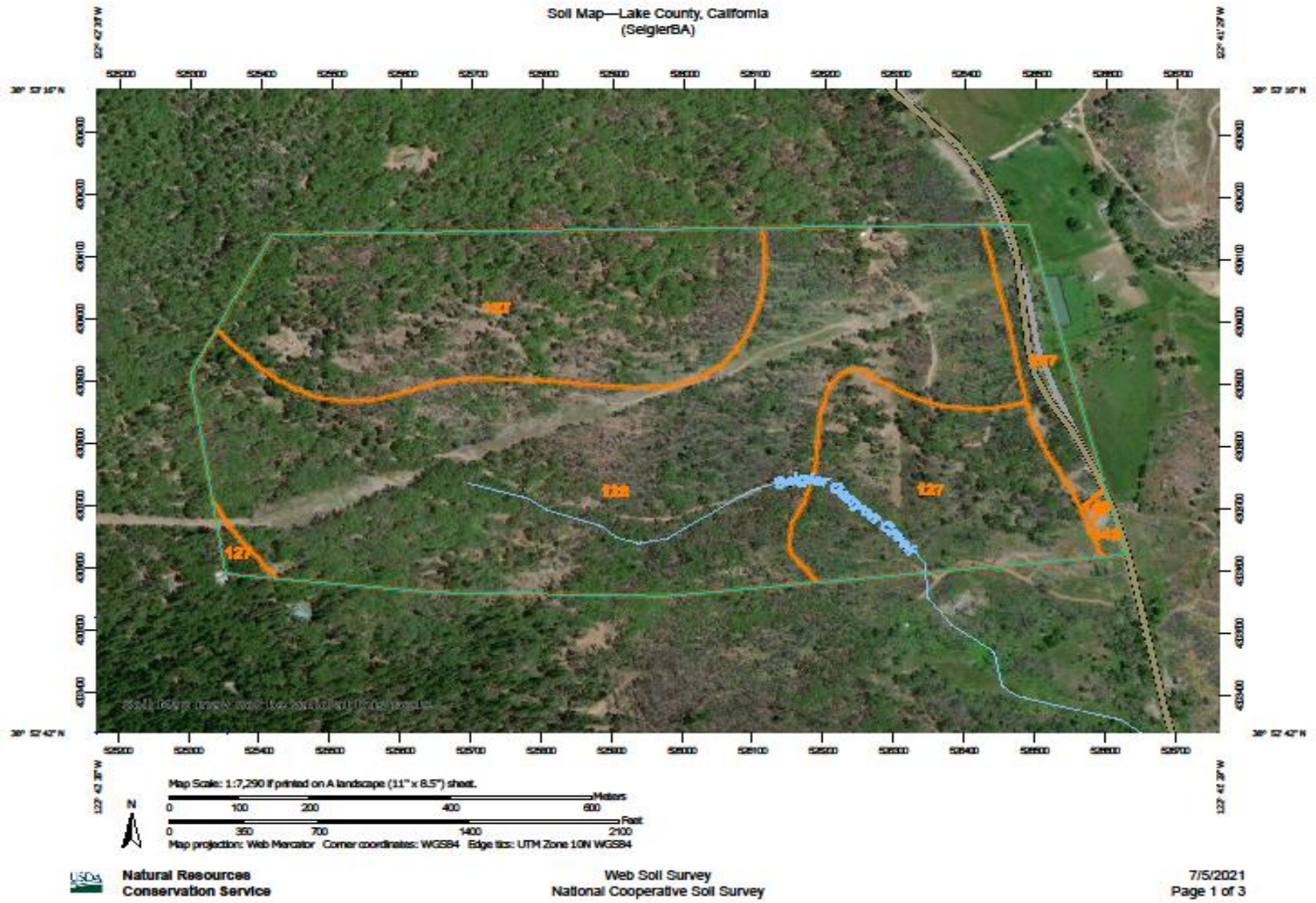


Figure 4- Site Soils Map

3.2 Vegetation Types: This project contains five distinct plant communities or vegetation types based on or derived from the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) *A Manual of California Vegetation*. These vegetation types and other cover types are listed in **Table 1.** They are described below and shown in the vegetation map provided in **Figure 5.**

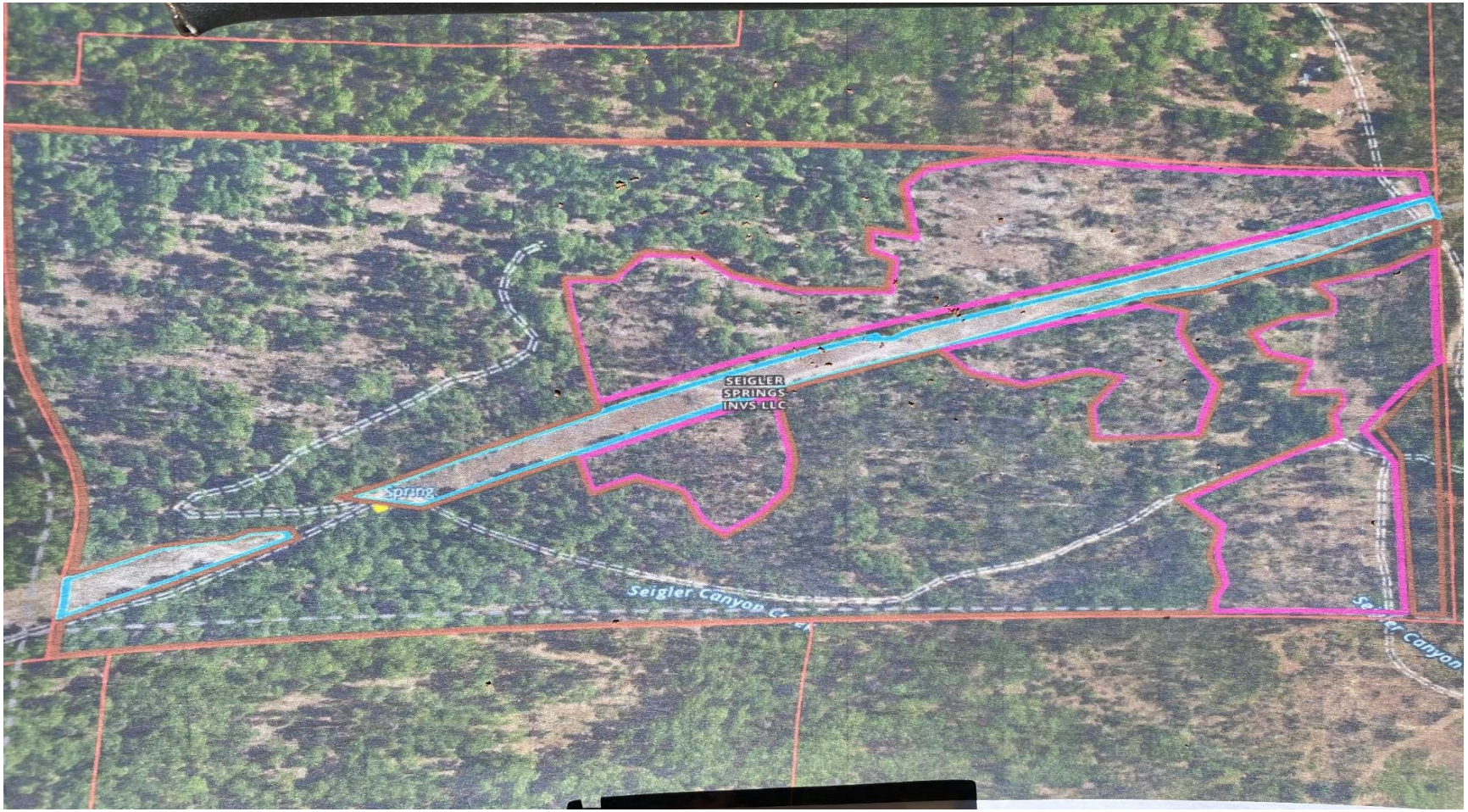


Figure 5- Vegetation Map

Red= Shrubs Blue = Grasses and forbs Brown= black oak woodlands Yellow= Spring

Table 1- Plant Communities/Alliances

COVER TYPE	Total Acres of Cover Type on Property	Percent of Property Supporting Cover Type
Ceanothus integerrimus Shrubland Alliance; Deer brush chaparral	20.29	24
Bromus rubens- Semi-natural Herbaceous stands; Red brome grasslands	4.26	5
Quercus kelloggii Forest Alliance- CA black oak forest	60.0	71
Total	**84.55**	**100.00**

1.Ceanothus integerrimus Shrubland Alliance/Deer brush chaparral

Ceanothus integerimus is dominant in the shrub canopy with Arctostaphylos manzanita, A. patula, Ceanothus cordulatus, C. cuneatus, C. velutinus, Holodiscus discolor, Lotus crassifolius, Prunus emarginata, Quercus berberidifolia and Symphoricarpos mollis.

Emergent trees may be present, including Pinus ponderosa, Q chrysolepis and Q wislizeni, at low cover. Shrubs <4 meters; canopy is continuous or intermittent. Herbaceous layer is sparse to intermittent. **Habitats:** Ridges and upper slopes. Soils are well drained. **Elevation** 300-2100m.

2. Bromus rubens Semi-natural Herbaceous Stands

Bromus rubens Schismus barbatus or S. arabicus is dominant or co-dominant with other non-natives in in the herbaceous layer. Emergent shrubs may be present at low cover. Herbs < 75 cm; cover is intermittent to continuous. **Habitats**: All topography settings and soil textures. The USFWS wetlands inventory recognizes Bromus rubens as an UPL plant. **Elevation**: 0-2200m.

3. Quercus kelloggii Forest Alliance- CA black oak forest**.**Quercus kelloggii is dominant or co-dominant in the tree canopy with Abies concolor, Arbutus menziesii, Calocedrus decurrens, Pinus attenuate, P. ponderosa, Pseudotsuga menziesii, Quercus agrifolia, Q. chrysolepis, Q garryana, Q lobate and Umbellularia californica. Trees <40m; canopy is open to continuous, or savanna-like. Shrub layer is open to intermittent. Herbaceous layer is sparse or grassy. **Habitats**: All aspects and topographic settings. Soils are moderately to excessively drained. **Elevation**: 60-2500m.

4.0 PRE-SURVEY RESEARCH RESULTS

4.1 **CNPS On-Line Electronic Inventory Analysis:** A California Native Plant Society (CNPS) analysis was conducted for all plants with federal and state regulatory status, and all non-status plants on the CNPS Lists 1B through 4. The query included all plants within this area of the county occurring within the plant communities identifiedon the project site. The inventory lists species potentially occurring at the site; these are listed in **Table 2**. These species were included in the list of potentially sensitive species specifically searched for during field surveys. It is important to note that this list includes species for which appropriate habitat is not present on the parcel. The CNPS database search does not allow fine tuning for specific soil types and many specific habitats.

Note: *The CNPS list is used to broaden the list of sensitive species considered during thesubsequent field surveys; however, it must be used with discretion because the database search does not allow fine-tuning for specific soil types or for many specific habitats required by sensitive plant taxa. Consequently, the CNPS list generated for a site may include several taxa for which the required habitat is not present.*

4.2 California Natural Diversity Database: The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Whispering Pines, Clearlake Highlands, Lower Lake and Middletown 7½' quadrangles were reviewed for this project. **Table 3** presents a list of sensitive plant and wildlife species known to occur within this quadrangle. In addition to listing the species present within the quadrangle, the table provides a brief descriptor ofthe habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species.

TABLE 2. CALIFORNIA NATIVE PLANT SOCIETY'S INVENTORY OF RARE AND ENDANGERED PLANTS

Selected CNPS Plants by Scientific Name

Seigler Springs Cultivation

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	1B.2	None	None	Mar-Jun	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	1B.3	None	None	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest; volcanic
Astragalus breweri	Brewer's milk-vetch	Fabaceae	annual herb	4.2	None	None	Apr-Jun	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland (open, often gravelly); often serpentinite, volcanic
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	Convolvulaceae	perennial rhizomatous herb	4.2	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest, Valley and foothill grassland; serpentinite
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	1B.1	None	None	Feb-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland; volcanic or serpentinite

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Onagraceae	annual herb	4.2	None	None	Apr-Jul	Chaparral (openings, usually serpentinite)
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	4.3	None	None	May-Jun	Chaparral, Cismontane woodland serpentinite, rocky or gravelly
Cryptantha dissita	serpentine cryptantha	Boraginaceae	annual herb	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
Eryngium constancei	Loch Lomond button celery		Annual herb	1B.1	endangered	endangered		Vernal pool, wetland
Fritillaria purdyi	Purdy's fritillary	Liliaceae	perennial bulbiferous herb	4.3	None	None	Mar-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest; usually serpentinite
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	1B.2	**CE**	None	Apr-Aug	Marshes and swamps (lake margins), Vernal pools; clay
Hesperolinon adenophyllum	glandular western flax	Linaceae	annual herb	1B.2	None	None	May-Aug	Chaparral, Cismontane woodland, Valley and foothill grassland; usually serpentinite
Horkelia bolanderi	Bolander's horkelia	Rosaceae	perennial herb	1B.2	None	None	(May)Jun-Aug	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland; edges, vernally mesic areas
Lasthenia burkei	Burke's goldfields		Annual herb	1B.1	endangered	endangered		Meadow, seeps, vernal pool, wetland
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	1B.2	None	None	Apr-May	Chaparral, Cismontane woodland, Valley and foothill grassland; sandy, serpentinite
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	4.2	None	None	Apr-Aug(Sep)	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest. Sometimes serpentinite, sometimes roadsides
Monardella viridis	green monardella	Lamiaceae	perennial rhizomatous herb	4.3	None	None	Jun-Sep	Broadleafed upland forest, Chaparral, Cismontane woodland

Streptanthus glandulosus ssp. hoffmanii	Hoffman's bristly jewelflower	Brassicaceae	annual herb	1B.3	None	None	Mar-Jul	Chaparral, Cismontane woodland, Valley and foothill grassland (often serpentinite); rocky
Streptanthus hesperidis	green jewelflower	Brassicaceae	annual herb	1B.2	None	None	May-Jul	Chaparral (openings), Cismontane woodland; serpentinite, rocky
Tracyina rostrata	beaked tracyina	Asteraceae	annual herb	1B.2	None	None	May-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	2B.3	None	None	May-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest

KEY FOR TABLE 2:

CNPS Rare Plant-Threat Rank Definitions:

1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California 1B.2 = Rare, threatened, or endangered in California and elsewhere; moderately threatened in California1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California 2A = Presumed extinct in California, but extant elsewhere

2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif. 2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; moderately threatened in Calif.2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.

3 = Plants about which we need more information (Review List)

3.1 = Plants about which we need more information (Review List); seriously threatened in California

3.2 = Plants about which we need more information (Review List); moderately threatened in California

3.3 = Plants about which we need more information (Review List); not very threatened in California

4.1 = Plants of limited distribution (watch list); seriously threatened in California

4.2 = Plants of limited distribution (watch list); moderately threatened in California

4.3 = Plants of limited distribution (watch list); not very threatened in California

State and Federal Status:

CESA = California Endangered Species ActFESA = Federal Endangered Species Act

SR	*= State. Rare*	*SE*	*= State Endangered.*
ST	*= State. Threatened*	*SD*	*= State Delisted*
SSC	*= CDFW Species of Special Concern*	*FP*	*= CDFW Fully Protected*
WL	*= CDFW Watch List*	*FE*	*= Federal Endangered*
FT	*= Federal Threatened*	*FD*	*= Federal Delisted*

TABLE 3. CNDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE LOWER LAKE AND ADJACENTCALIFORNIA 7½' QUADRANGLES

Habitat Type	Habitat Present
Northern Interior Cypress Forest	No
Serpentine Bunchgrass	No

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Amsinckia lunaris	bent-flowered fiddleneck	Coastal bluff scrub, cismontane woodland, valley & foothill grassland; --/--/1B.2	March-June ann. herb	Habitat present but not found during surveys
Antirrhinum virga	twig-like snapdragon	Chaparral, lower montane coniferous forest,/rocky, openings, often serpentinite; --/--/4.3	June-July per. herb	Poor habitat present
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Chaparral, cismontane woodland, lower montane conif. forest/volcanic; --/--/1B.3	March-May everg. shrub	Poor habitat present
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Chaparral, lower montane coniferous forest/rocky, often serpentine; --/--/1B.1	Feb.-April ann. herb	Poor habitat present
Astragalus breweri	Brewer's milk-vetch	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (open, often gravelly)/often serpentinite, volcanic; --/--/4.2	April-June ann. herb	Poor habitat present
Brasenia schreiberi	watershield	Marshes & swamps/freshwater; --/--/2B.3	March-Sept rhizom. herb	Habitat not present
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	Chaparral, lower montane conif. forest, valley & foothill grassland/serpentinite; --/--/4.2	April-June rhizom. herb	Habitat not present
Carex comosa	bristly sedge	Coastal prairie, marshes and swamps (lake margins), valley and foothill grassland; --/--/2B.1	May-Sept. per. rhizom. herb	Habitat not present
Ceanothus confusus	Rincon ridge ceanothus	Closed cone conif. forest, chaparral, cismontane woodland/volcanic; --/--/1B.1	Feb.-April everg. shrub	Poor habitat present
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Chaparral (openings, usually serpentinite); --/--/4.2	April-June ann. herb	Habitat not present
Collomia diversifolia	serpentine collomia	Chaparral, cismontane woodland/serpentinite, rocky or gravelly; --/--/4.3	May-June ann. herb	Habitat not present
Cryptantha dissita	serpentine cryptantha	Chaparral/serpentine outcrops; --/--/1B.2	April-June ann. herb	Habitat not present

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Eryngium constancei	Loch Lomond button-celery	Vernal pools, wetlands	April-June	Habitat not present
Fritillaria purdyi	Purdy's fritillary	Chaparral, cismontane woodland, lower montane coniferous forest; usually serpentinite; --/--/4.3	March-June bulb. herb	Habitat not present
Gratiola heterosepala	Boggs Lake hedge-hyssop	Freshwater marsh, marshes & swamps (freshwater), vernal pools, sometimes lake margins/clay; --/SE/1B.2	April-Aug. ann. herb	Habitat not present
Hesperolinon didymocarpum	Lake County western flax	Chaparral, cismontane woodland, valley & foothill grassland/usually serpentine chaparral; --/SE/1B.2	May-Aug. ann. herb	Habitat not present
Horkelia bolanderi	Bolander's horkelia	Lower montane conif. forest, chaparral, meadows & seeps, valley & foothill grassland/grassy margins of vernal pools and meadows; --/ --/1B.2	June-Aug. per. herb	Habitat present but not found during surveys
Lasthenia burkei	Burke's goldenfields	Meadows, seeps, vernal pools, wetlands	April-August	Habitat not present
Layia septentrionalis	Colusa layia	Chaparral, cismontane woodland, valley & foothill grassland/sandy or serpentine; --/--/1B.2	April-May ann. herb	Habitat present, not found
Leptosiphon acicularis	bristly leptisiphon	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland; --/--/4.2	April-July ann. herb	Habitat present but not found during surveys
Monardella viridis	green monardella	Broadleaved upland forest, chaparral, cismontane woodland; --/--/4.3	June-Sept. rhizom. herb	Habitat present but not found during surveys
Navarretia leucocephala ssp pauciflora	Few-flowered navarretia	Vernal pools, wetlands FE/ST/1B.1	April-May ann. herb	No habitat present
Navarretia leucocephala ssp plieantha	Many-flowered navarretia	vernal pools, wetlands FE/SE/1B.2	April-May ann. herb (aquatic)	Habitat not present
Orcuttia tenuis	Slender Orcutt grass	Vernal pools, wetlands	April-May	Habitat not present
Sidalcea keckii	Keck's checkerbloom	Chaparral, cismontane woodland, coastal prairie,valley and foothill grassland;Endangered/1B1/	April-May annual herb	Poor habitat not found
Sedella leiocarpa	Lake County stonecrop	cismontane woodland, valley and foothill grassland/vernal pool/wetland FE/SE/1B.1	March-July ann. herb	Habitat not present

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Viburnum ellipticum	oval-leaved viburnum	Chaparral, cismontane woodland, lower montane coniferous forest; --/--/2B.3	May-June decid. shrub	Habitat present but not found during surveys

*See CNPS list for key

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Bombus occidentalis	western bumblebee	Once common in the western U.S., these bees are important pollinators of both wild plants and crops. Threats to be bee include insecticides, loss of habitat, climate change and diseases from commercial bee rearing. G4/S1	year-round	Habitat may be present
Bombus caliginosus	obscure bumble bee	A black and yellow bee found in California, Oregon, Washington. Food plant genera: Baccharis, Cirsium, Lupinus, Lotus, Grindelia, Phacelia; G3G4/CA-SNR	year-round	Poor habitat present
Taricha rivularis	red-bellied newt	Occurs near high to moderate gradient streams and rivers, riffles, pools. Burrows in soil or debris near water, emerges during fall rains to water to breed; G4/SNR	year-round	No Habitat present
Rana boylii	foothill yellow-legged frog	Riparian/aquatic: partly-shaded, shallow streams & riffles with a rocky substrate in variety of habitats; SSC/SCT/G3/S2S3	year-round	No Habitat present
Emys marmorata	western pond turtle	Aquatic turtle found in ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms; In woodland, forest, & grasslands; SSC/G3G4/S3	year-round	No Habitat present
Elanus leucurus	white-tailed kite	Open areas near woodlands and water; SFP/G5/S3	year-round	Habitat is present
Circus cyaneus	northern harrier	Coastal salt and freshwater marshes, meadows, grasslands near wetlands; nests in brush on ground; SSC/G5/S3	migratory	Habitat is present
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	Riparian forest FT/SE/G4/S1	sometimes migratory	Habitat not present

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Agelaius tricolor	tricolored blackbird	Fresh emergent wetland (marshes) with cattails, tules, sedges. Largely endemic to California; SCE//G2G3/S1S2	year-round	No Habitat is present
Ammodramus savannarum	grasshopper sparrow	Prefers open grassland habitats with patches of bare ground and shrubby vegetation. Breeds in various types of grassland vegetation. Eats insects, grain, and seeds on the ground; SSC/G5/S3	sometimes migratory	Habitat is present, not found
Corynorhinus townsendii	Townsend's big-eared bat	Roosts in open near relatively mesic sites, mainly montane forest habitats; SSC/G3/S2	local migrant	Habitat is present, not found
Antrozous pallidus	pallid bat	Open, dry habitats, forest habitats, in caves, tunnels, buildings, bridges; sensitive to human disturbance; SSC/G5/S3	local migrant	Habitat is present, not found
Marles caurina humboldtensis	Humboldt marten	No. Coast conifer forest: old-growth conifers; cavities, snags, logs,;FT/SE/G5/S1	year-round	Poor habitat present
Taxidea taxus	American badger	Dryer open stages of shrub, forest, & herbaceous habitats. Needs friable soils for burrows and open uncultivated ground; SSC/G5/S3	year-round	Habitat is present, not found
Erethizon dorsatum	North American porcupine	Occurs in a wide variety of coniferous and mixed woodland habitats in Sierra Nevada, Cascade, and Coast Ranges/ uses fallen and standing dead trees as cover; G5/S3	year-round	Habitat present, not found

KEY FOR TABLE 3: State and Federal:

SE/ST/SD=State Endangered/Threatened/Delisted

SC/SCD=State Candidate for Listing/Delisting

SSC=CDFW Species of Special Concern

SFP=CDFW Fully Protected

WL=CDFW Watch List

FE/FT/FD=Federal Endangered/Threatened/Delisted
FPE/FPT/FPD/FP=Federal Proposed Endangered/Threatened/Delisting

FC=Federal Candidate

NatureServe Conservation Status:

G1/S1 = Global/State Critically Imperiled

G2/S2 = Global/State Imperiled

G3/S3 = Global/State Vulnerable

G4/S4 = Global/State Apparently Secure

G5/S5 = Global/State Secure

SNR=Not rated

4.3 Wildlife Habitat Analysis Results: The California Wildlife Habitat Relationships analysis lists a number of native species with sensitive and non- sensitive status as potentially occurring on the site based on the geographic location and wildlife habitats present. This list is included as **Appendix B**.

4.4 Wildlife Assessment: Based on the pre-survey research conducted for this study, a total of 15 sensitive wildlife species need to be accounted for within the project area. These consist of the species identified as present within and adjacent to the Lower Lake quadrangle by the CNDDB. Accepted protocol requires that all CNDDB species in the surrounding U.S.G.S. quadrangle be discussed even through suitable habitat may not occur on the site.

- **Western bumble bee (*Bombus occidentalis*):**
  Once common in the western and northwestern U.S., these bees are important pollinators of both wild plants and crops and has been commercially reared to pollinate crops such as greenhouse tomatoes and cranberries; they also have been an important pollinator of alfalfa, avocado, apples, cherries, blackberries, and blueberry. Since 1998 populations have declined due to insecticides, loss of habitat, climate change and diseases from commercial bee rearing. This bumblebee is a generic forager and its habitat requirements are non-specific. Identification of bees is based on their sex and markings.

- **Obscure bumble bee (*Bombus oliginosus*):**
  This bumblebee is native to the west coast; in the Coast Range it inhabits meadows. It is similar in appearance and co-exists with the common *Bombus vosnesenskii* and may be mistaken for this bee. *B. oliginosus* is threatened by climate change and loss of habitat, and does not thrive in developed urban or agricultural areas. Its food sources include plant genera *Baccharis, Cirsium, Lupinus, Lotus, Grindelia*, and *Phacelia*. There is a low potential for it to occur on the property.

- **Red-bellied newt (*Taricha rivularis*):**
  This species is often found under rocks, logs, soil or duff, or in rodent burrows in coastal woodlands and redwood forests. Newts occur near high to moderate gradient streams and rivers, in riffles, and pools. Newts burrow in soil or debris near water, and emerge during fall rains to breed; and may migrate up to a mile or more between terrestrial habitat and stream breeding sites. They usually breed in flowing water, from late February through May. Appropriate habitat for newts does not occur within the streams on the project site. Streams on the surrounding slopes are short-term seasonal drainages, these drainages generally are unsuitable for this species.

- **Foothill yellow-legged frog (*Rana boylii*):**
  These frogs are relatively common along the shaded banks of perennial headwater streams. They are heavily dependent on the presence of perennial water and are seldom far from pools where they can seek shelter from predation. The larvae require three to four months to mature, making most ephemeral (seasonal) streams unsuitable as breeding sites. Burns Valley Creek may provide suitable habitat for this species. These frogs may spend dry summer months in shallows and backwaters after stream channels become dry, which do not occur in this watershed.

- **Western pond turtle (*Emys marmorata*):**
  These turtles prefer slow or ponded water with sheltering vegetation but will range widely through less suitable habitat in search of these sites. Eggs are laid on land in sheltered nests. Stream channels are often used as movement corridors between waterways or ponds. While turtles may use the stream corridor , there is no suitable habitat on this parcel for them to remain.

- **White-tailed kite (*Elanus leucurus*):**
  Usually found near agricultural areas, the kite prefers open terrain near woodlands and water. These raptors hunt over open country and prefer large, deciduous trees surrounded by expanses of grassland, meadows, farmland, and/or wetlands for nesting and roosting sites. The property contains woodlands adjacent to expanses of open grasslands with nearby water (Clearlake); this would provide marginal habitat for kites for both nesting and hunting. This is a California Fully Protected species. All raptors are protected under the Migratory Bird Treaty Act and California Department of Fish and Wildlife code.

- **Northern harrier (*Circus cyaneus hudsonius*):**
  This raptor occurs in annual grassland and is also found at high elevations. It inhabits meadows, open grasslands and rangelands, and emergent wetlands; it prefers habitat such as the broad, open grasslands and wetlands of the Sacramento Valley where this species is commonly seen. It is seldom found in wooded or agricultural areas. Formerly called the "marsh hawk", it nests on the ground in dense shrubby vegetation in and near wetlands. The harrier feeds on insects and small mammals, birds, etc., and competes with the red-tailed hawk for food. These raptors nest from April to August and have California Species of Concern status during that period. This parcel does not provide habitat for harriers.

- **Tricolored blackbird (*Agelaius tricolor*):**
  These blackbirds are colony nesters in fresh emergent wetland habitat (tule or cattail marsh), but may also occur in dense blackberry or willow shrub communities adjacent to water. Cover is required for nesting. Proximity to insects is preferred, although food includes seeds and grain. Breeding occurs April through June. The species is usually readily observed when present and has a distinctive call. This site does not contain suitable habitat for this species.

- **Grasshopper sparrow (*Ammodramus savannarum*):**
  This sparrow is a summer resident in foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity counties to southern California. It occurs in dry, dense grasslands with scattered shrubs for singing perches. Grasshopper sparrows are secretive in winter. They need thick grasslands and forbs for cover, and nest in small depressions on the ground. They breed from April to mid-July. Sparrows feed primarily on insects but also eat other invertebrates, grains, and forb seeds. They search for food on the ground. They may be present in the grasslands.

- **Townsend's western big-eared bat (*Corynorhinus townsendii ssp. townsendii*):**
  This bat is a California Species of Special Concern. Physical traits include bilateral nose lumps and very large ears. The most restrictive resource required by this species is daytime roosting habitat. This bat prefers caves and mines and is easily observed when present, hanging from open surfaces in mines and caves. Less frequently it will roost in tunnels, bridges, or other human-made structures, or hollow trees. Roost sites may vary from year to year. These bats typically prefer relatively mesic (moist)habitat such as streams near woodland habitats and may travel long distances for foraging. The majority of their diet consists of moths. This species is extremely sensitive to disturbance of roosting sites: These sites are frequently abandoned after being visited by humans. This property contains a riparian corridor, however it is low quality habitat for this species.

- **Pallid bat (*Antrozous pallidus*):**
  Optimal habitat for these bats consists of open, dry habitats with rocky areas, but the bats are also found in oak savanna grasslands, and in open forest and woodlands with access to riparian and open water for feeding and drinking. Foraging occurs over open country. These bats prefer the cool summer temperatures of caves, crevices, and mines as roosting sites where they are known to wedge themselves into small spaces; they will also roost in buildings, bridges, and hollow trees. Preferred roosts are high above the ground and inaccessible to terrestrial predators, although they are occasionally found roosting on the ground underneath sacks, tarps, and other objects left by humans.

  The bats have a home range of 1 to 3 miles and are known to roost with other bat species. This species of bat does not migrate long distances between seasons. It is extremely sensitive to human disturbance of roosting sites. Populations in California have declined due to habitat destruction and use of pesticides. The project site contains oak woodlands with limited water, which may provide some habitat for this species.

- **Humboldt marten (*Martes caurina humboldtensis*):**
  Martens are found mostly in dense coniferous or deciduous habitats that include older trees and snags. Martens are mainly carnivorous, eating smaller mammals, rodents, birds, carrion, and fruits. They hunt for prey on the ground and in trees. Cover is provided by cavities in large trees, snags and logs and their nests are built in protected cavities, brush-piles or logs. Young are born between February and May. Martens are listed for a distant quad in the CNDDB near Scotts Creek, but the species has not been reported in this area since 1941. While there is little chance that they occur on this parcel.

- **American badger (*Taxidea taxus*):**
  Badgers are found mostly in drier open stages of shrub, forest, and herbaceous habitats with friable soils such as open grasslands, fields, and pastures. They are found from high alpine meadows to sea level and occur throughout the stateexcept for the northern North Coast. This species is carnivorous, eating mostly fossorial rodents; they also will eat reptiles, insects, birds, eggs, and carrion. They dig burrows in friable or sandy soil for cover and nesting, and often reuse old burrows. Breeding occurs in late summer or fall. Nests are in areas with little overstory cover, often a grass-lined den, and young are born mostly in March and April. Young become independent in 5 or 6 months. The single occurrence mapped by CNDDB within the Lakeport quadrangle is near the west boundary of the City of Lakeport onan unknown date. They would be unlikely to occur on this property.

- **North American porcupine (*Erethizon dorsatum*):**
  This large, primarily nocturnal rodent prefers conifer and hardwood forests and woodlands, but is also found in forested wetlands and chaparral. They can withstand extreme cold temperatures. Porcupines use downed logs and debris, as well as snags and tree hollows, as cover and dens. Food is vegetation including twigs, berries, roots, seeds, needles, and bark; porcupines commonly climb trees for food. The porcupine breeds from September to November or December, giving birth in the spring. Lifespan is relatively long.

  Porcupines may occur in the area and on the property. This species is listed in the CNDDB as "G5" (Global Secure) and "SNR" (Species Not Rated-California). It is therefore not a species with sensitive regulatory status although its local accounts are included in the database.

Raptors and passerines lacking sensitive regulatory status but otherwise protected under the Migratory Bird Treaty Act may also be present on the property in their sensitive status.

5.0 FIELD SURVEY RESULTS

5.1 **Botanical Field Survey Results**: **Table 4** presents the results of the botanicalsurvey for the project. Each of the sensitive plant species potentially occurring at the site and listed in Tables 2 and 3 was specifically searched for during the surveys. The surveys identified a total of 56 plant taxa on the property.

TABLE 4. Flora of 11615 N. Seigler Canyon Road

Habit	Species	Common Name	Family	Origin
forb	*Chlorogalum pomeridiaum*	Wavyleaf soap plant	Agavaceae	N
forb	*Allium serra*	jeweled onion	Alliaceae	N
forb	*Lomatium dasycarpum ssp. dasycarpum*	woolly-fruited lomatium	Apiaceae	N
forb	*Sanicula bipinnata*	Poisin sanicle	Apiaceae	N
forb	*Agoseris apargioides var apargioides*	coast dandelion	Asteraceae	N
forb	*Chamomilla suaveolens*	pineapple weed	Asteraceae	A
forb	*Centaurea solstitialis*	Yellow star thistle	Asteraceae	A
forb	*Eriogonum nedum*	Naked buckwheat	Polygonaceae	N
forb	*Eriophyllum lanatum var. lanatum*	common woolly sunflower	Asteraceae	N
forb	*Madia gracilis*	gumweed, slender tarweed	Asteraceae	N
forb	*Micropus californicus*	cottontop	Asteraceae	N
forb	*Wyethia angustifolia*	narrow-leaved mule ears	Asteraceae	N
forb	*Cynoglossum grande*	grand hound's tongue	Boraginaceae	N
forb	*Dichelostemma capitatum*	Blue dicks	Brodiaea	N
forb	*Lonicera interrupta*	Chaparral honeysuckle	Caprifoliaceae	N
forb	*Cerastium glomeratum*	mouse-ear chickweed, sticky mouse-ear	Caryophyllaceae	A

Habit	Species	Common Name	Family	Origin
forb	*Acmispon glaber*	deerweed	Fabaceae	N
forb	*Lupinus bicolor*	miniature lupine	Fabaceae	N
forb	*Trifolium hirtum*	rose clover	Fabaceae	A
forb	*Vicia americana var. americana*	American vetch	Fabaceae	N
forb	*Erodium cicutarium*	red-stem storksbill	Geraniaceae	A
forb	*Eriophyllum confertifloum*	Yellow yarrow	Asteraceae	N
forb	*Geranium dissectum*	cut-leaved geranium	Geraniaceae	A

Habit	Species	Common Name	Family	Origin
forb	*Toxicoscordion fremontii*	Fremont's death camus	Liliaceae	
forb	*Clarkia purpurea*	purple clarkia, winecup clarkia, four-spot	Onagraceae	N
forb	*Eschscholzia californica*	California poppy	Papaveraceae	N
forb	*Delphinium hesperium*	foothill larkspur	Ranunculaceae	N
forb	*Galium divaricatum*	Lamarck's bedstraw	Rubiaceae	N
forb	*Penstemon heterophyllus*	foothill penstemon	Scrophulariaceae	N

Habit	Species	Common Name	Family	Origin
grass	*Avena barbata*	slender wild oat	Poaceae	A
grass	*Briza minor*	small quaking grass	Poaceae	A
grass	*Bromus diandrus*	ripgut grass, ripgut brome	Poaceae	A
grass	*Bromus hordeaceus*	soft chess	Poaceae	A
grass	*Bromus jinermis*	smooth brome	Poaceae	A
grass	*Bromus laevipes*	woodland brome	Poaceae	N
grass	*Bromus madritensis ssp. rubens*	red brome	Poaceae	A
grass	*Elymus caput-medusae*	medusahead	Poaceae	A
grass	*Elymus glaucus ssp. glaucus*	blue wildrye	Poaceae	N
grass	*Festuca idahoensis*	Idaho fescue	Poaceae	N
shrub	*Sambucus nigra ssp. caerulea*	blue elderberry	Adoxacaceae	N
shrub	*Toxicodendron diversilobum*	poison oak	Anacardiaceae	N
shrub	*Baccharis pilularis*	coyote brush, chaparral broom	Asteraceae	N
shrub	*Symphoricarpos albus var. laevigatus*	common snowberry	Caryophyllaceae	N

Habit	Species	Common Name	Family	Origin
shrub	*Arctostaphylos manzanita ssp. manzanita*	common manzanita	Ericaceae	N
shrub	*Arctostaphylos viscida*	white-leaf manzanita	Ericaceae	N
shrub	*Eriodictyon californicum*	California yerba santa	Hydrophyllaceae	N
shrub	*Ceanothus cuneatus var. cuneatus*	buckbrush	Rhamnaceae	N
shrub	*Ceanothus integerrimus*	Deer brush	Rhamnaceae	N
shrub	*Cercocarpus betuloides var. betuloides*	birch-leaf mountain mahogany	Rosaceae	N
shrub	*Heteromeles arbutifolia*	toyon	Rosaceae	N
forb	*Iris microsiphon*	Ground iris	Iridaceae	N
tree	*Quercus kelloggii*	Black oak	Fagaceae	N
Tree	*Quercus wislizeni*	interior live oak	Fagaceae	N
Tree	*Pinus ponderosa*	Ponderosa pine	Pinaceae	N
shrub	*Sambucus nigra ssp caerulea*	Blue elderberry	Acanthaaceae	N

vine	*Calystegia occidentalis ssp. occidentalis*	western morning-glory	Convolvulaceae	N

	N=Native A=Alien (non-native)			

6.0 SUMMARY AND RECOMMENDATIONS

6.1Summary: This biological resource assessment involved the following analyses and surveys for sensitive plants and wildlife potentially occurring in the vicinity of the project:

- Review of current California Natural Diversity Database (CNDDB) mapping of known sensitive plant and wildlife populations within the region.
- An analysis of the suitability of the site for sensitive plants and wildlife using the California Native Plant Society *On-line Inventory of Rare and Endangered Vascular Plants of California,* and the California Department of Fish and Wildlife's *California Wildlife Habitat Relations System*.
- A California Department of Fish and Wildlife protocol, floristic-level field survey of the plants occurring within the property.
- A delineation of waters of the U.S.

Sensitive Plants: A total of 56 native and introduced plant taxa were identified within the survey areas during the in-season botanical survey. As used here, the term sensitive includes species having state or federal regulatory status, included on Lists 1B through 4 by the California Native Plant Society, or otherwise listed in the California Natural Diversity Database.

Sensitive Wildlife: A total of 15 sensitive wildlife species were assessed for potential occurrence at the site because of inclusion in the CNDDB database for the quadrangle and the CWHR database. Based on the habitat assessment, the following conclusions are made regarding species with sensitive regulatory status:

- *Sensitive status species that have a potential to be present in their sensitive state:*

  Obscure bumble bee, Foothill yellow legged frog; Western pond turtle; White- tailed kite; Northern harrier; Tricolored blackbird; Grasshopper sparrow; Yellow-billed cuckoo, Townsend's big-eared bat; Pallid bat; American badger; Humboldt marten; North American porcupine

Possible Waters of the U.S.: A small riparian area is present on this parcel. It is of very low quality and does not exhibit all three criteria for designation as wetland.

6.2Potential Impacts and Proposed Mitigation for Biological Resources:

(For all recommended mitigation measures accepted as conditions of approval, the text should be modified to use declarative language, i.e. "should" should become "shall", etc.)

- *Habitat Fragmentation*

Potential Impacts: The proposed gardens and processing facility shown in Figure 2 are comparatively small and unlikely to significantly impair wildlife movement through the corridor. Use of outdoor lighting has a potential to disrupt wildlife movement, much of which occursat night.

Proposed Mitigation for Habitat Fragmentation:

Measure 1: The use of deer fencing should be restricted to the perimeters of the proposed gardens. No deer fencing or other obstacles to wildlife passage should be installed that will restrict wildlife movement.

Measure 2: Outdoor lighting, if used, should be restricted to the processing facility and should be directed downward so as not to illuminate adjacent areas.

- *Woodland and Forest Resources*

Potential Impact: As shown in **Table 1**, the property contains a combined total of 60 acres of woodland. The proposed project design limits project components to the existing infrastructure areas and would not impact woodland resources.

Existing Black Oaks within the development zone should be preserved when possible.

Proposed Mitigation for Impacts to Woodland and Forest: No mitigationrecommended if the project is constructed within the area of existing infrastructure.

- *Sensitive Plants and Wildlife*

  Potential Impacts:

  Plants: No plants with sensitive regulatory status were found on the property during the floristic-level botanical survey.

  Wildlife: The following wildlife species have a potential to be present on the property:

  - Obscure bumble bee
  - Western pond turtle
  - White-tailed kite
  - Northern harrier
  - Grasshopper sparrow
  - Pallid bat
  - North American porcupine

  Use of pesticides resulting in drift has a potential to result in the incidental take of the obscure bumble bee, if present. Pesticide contamination of waterways or direct impacts to waterways has a potential to result in incidental take of foothill yellow-legged frog and/or western pond turtle downstream from the project area.

  Other sensitive species listed above depend primarily on woodland, forest, and grassland habitats. Woodland and forest habitat would not be impacted by this project. Impacts to grasslands would be minimal based on the current project design.

Proposed Mitigation for impacts to Wildlife:

Measure 3: To mitigate potential impacts to obscure bumble bee, foothill yellow-legged frog, and western pond turtle, State and Federal regulations on pesticide selection and use should be strictly followed. Pesticide use should not occur during periods when winds may transport spray to adjacent areas. As an alternative, the operator may wish to use organic growing methods. It should be noted that State of California regulations for cannabis cultivation include strict standards for purity which may pre-empt use of pesticides.

- *Waters of the U.S.*

Potential Impacts: As shown in **Figure 1**, the development would not significantly alter the existing forest or shrub area.

Placement of fill within Waters of the U.S. may require a Nationwide permit by the Corps of Engineers (possibly a non-reporting permit under the Nationwide Permit Program), along with a 401 Water Quality Certification from the Regional Water Quality Control Board, and 1604 Stream Alteration Agreement from the California Department of Fish and Wildlife. The County of Lake may require stream setbacks.

Erosion Control:

Potential Impacts: Vegetation clearing and grading activities have a potential to result in sediment runoff to Seigler Canyon Creek.

Proposed Mitigation: All work in or near waterways and wetlands should incorporate extensive erosion control measures consistent with Lake County Grading Regulations in order to avoid erosion and the potential for transport of sediments to Seigler Canyon Creek. Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP)may be required.

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