BIOLOGICAL SITE ASSESSMENT FOR THE CANNABIS CULTIVATION OPERATION AT 9900 AND 10030 BOTTLE ROCK ROAD, KELSEYVILLE, CALIFORNIA

September 23, 2019

Applicant:

Bottle Rock Farms

Prepared for:

Regional Water Quality Control Board

Prepared by:

G.O. Graening, PhD and Tim Nosal, MS
Natural Investigations Company, Inc.
3104 O Street, #221, Sacramento, CA 95816

NATURAL INVESTIGATIONS CO.
WWW.NATURALINVESTIGATIONS.COM

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1. INTRODUCTION

1.1. PROJECT LOCATION AND DESCRIPTION

Natural Investigations Company conducted a biological site assessment for a cannabis cultivation operation at 9900 and 10030 Bottle Rock Road, Kelseyville, in Lake County, California. The cultivation operations will occur on an 87.59-acre property comprised of two parcels: APN 011-057-230 (45.20 acres) and APN 011-057-220 (42.39 acres) (see exhibits). The property of combined parcels is the Study Area. There are two Project Areas, each 3 acres; they are accessed by private graveled roads off of Nancy Drive (see exhibits).

Prior to undertaking this project, two 3-acre clearings were established, one on each parcel. The tree removals were permitted under authority of Cal Fire as a "Less Than 3 Acre Conversion Exemption" permit. A Registered Professional Forester prepared the permit, and operations were carried out by a Licensed Timber Operator. The cannabis cultivation operations will not require the removal or disturbance of any additional vegetation (see exhibits).

Cannabis cultivation will take place within a 3-acre growing compound on each parcel. Each compound with have two 1-acre cannabis gardens, for a total of 4 acres of cannabis canopy and 6 acres of disturbance over the two parcels (see exhibits). The cultivation compounds were previously cleared of vegetation under authority of Cal Fire. The cultivation areas have been designed with sufficient setbacks from other parcels, residences, watercourses, and other sensitive natural resources. Ancillary facilities consist of a home that will house two employees, a small shed that will be removed, and a well. A 4,750 square foot processing and storage building will be constructed adjacent to the home. A new agricultural well may be developed.

1.2. PURPOSE AND SCOPE OF ASSESSMENT

This Biological Resources Assessment was prepared to assist in compliance with the California Environmental Quality Act and the state and federal Endangered Species Act. This assessment also functions to fulfill requirements for obtaining enrollment (a Notice of Applicability) in the State Water Resources Control Board's Order WQ 2017-0023-DWQ General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (General Order). The Applicant's Notice of Receipt may have required technical reports, including a Biological Resources Assessment. The Water Board has not issued specific guidelines for the preparation of these assessments, so the guidelines for preparing assessments for California Environmental Quality Act compliance were used. The General Order does give these general guidelines:

> "*Prior to commencing any cannabis land development or site expansion activities the cannabis cultivator shall secure a qualified biologist. The cannabis cultivator and the Qualified Biologist shall consult with CDFW and CAL FIRE and designate and mark a no-disturbance buffer to protect identified sensitive plant and wildlife species and communities*." (Section 1, Number 8 of the General Order)
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> "*Qualified Biologist – an individual who possesses, at a minimum, a bachelor's or advanced degree, from an accredited university, with a major in biology, zoology, wildlife biology, natural resources science, or a closely related scientific discipline, at least two years of field experience in the biology and natural history of local plant, fish, and wildlife resources present at the Cannabis Cultivation Site, and knowledge of state and federal laws regarding the protection of sensitive and endangered species*." (Glossary of the General Order)

In support of this permit enrollment application and general compliance California Environmental Quality Act, Natural Investigations Co. has prepared this assessment to provide 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 Biological Site 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 2017-0023-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

For Lake County, no relevant county or municipal tree ordinances were identified that would protect non-commercial tree species such as native oaks (*Quercus* spp.). Lake County may require protection of tree resources during the CEQA compliance process, for such applications such as Cannabis licensing or grading permits.

In areas outside of timberland, pursuant to Public Resource Code section 4526, no tree removal for the purposes of facilitating cannabis production, including solar exposure increases, is allowed within 150 feet of fish bearing water bodies or 100 feet of aquatic habitat for non-fish aquatic species (i.e. aquatic insects). 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.

2. ENVIRONMENTAL SETTING

The Study Area is located within the Inner North Coast Ranges 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 between climate Zones 7, California's Gray Pine Belt, with hot summers and mild but pronounced winters without severe winter cold or high humidity (Brenzel, 2012). The Study Area is located along the hills and valleys of Camel Back Ridge. The topography is mountainous, with ridges deeply incised by a tributary to Cole Creek. The elevation ranges from approximately 2,210 feet to 2,655 feet above mean sea level. The Study Area drains towards the middle of the property into an unnamed tributary of Cole Creek, eventually flowing into Clear Lake.

Prior to the establishment of this cultivation operation, land uses were residential estate, open space, and cannabis cultivation. The surrounding land uses are private estates with gardens and open space. The Natural Resources Conservation Service (NRCS) has identified several soil types within the Study Area. The geology that underlays the site consists of soils derived from obsidian. No soils derived from serpentine are mapped within or adjacent to this parcel. (NRCS 2019).

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
- United States Geologic Service (USGS) 7.5 degree-minute topographic quadrangles of the Study Area and vicinity
- Aerial photography of the Study Area
- 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 12-13, 2019. Weather conditions were warm and sunny. A variable-intensity pedestrian survey was 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. 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 (2019); CDFW (2019b,c); NatureServe 2019; and University of California at Berkeley (2019a,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 recorded on color aerial photographs, and then 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). Wetlands and other aquatic habitats were classified using USFWS National Wetlands Inventory Classification System for Wetland and Deepwater Habitats, or "Cowardin class" (Cowardin et al., 1979; USFWS 2007). 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, 2019c). Species' habitat requirements and life histories were identified using the following sources: Baldwin et al. (2012); CNPS (2019), Calflora (2019); CDFW (2019a,b,c); and University of California at Berkeley (2019a,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: butterfly (Lepidoptera); dragonfly (Odonata); grasshopper (Orthoptera); wasp (Hymenoptera); northwestern fence lizard (*Sceloporus occidentalis occidentalis*); black-tailed jackrabbit (*Lepus californicus*); Columbian black-tailed deer (*Odocoileus hemionus columbianus*); coyote (*Canis latrans*); Douglas squirrel (*Tamiasciurus douglasii*); dusky-footed wood rat (*Neotoma fuscipes*); Anna's hummingbird (*Calypte anna*); California scrub jay (*Aphelocoma californica*); dark-eyed junco (*Junco hyemalis*); northern flicker (*Colaptes auratus*); oak titmouse (*Baeolophus inornatus*); red breasted nuthatch (*Sitta canadensis*); red-shouldered hawk (*Buteo lineatus*); spotted towhee (*Pipilo maculatus*); Stellar's jay (*Cyanocitta stelleri*); turkey vulture (*Cathartes aura*); and other common songbirds.

4.2. VEGETATION COMMUNITIES AND WILDLIFE HABITAT TYPES

4.2.1. Terrestrial Vegetation Communities

The Study Area contains the following terrestrial vegetation communities: ruderal/developed and closed cone coniferous forest. These vegetation communities are discussed here and are delineated in the Exhibits. Aquatic vegetation communities are discussed in the section on jurisdictional waters.

Ruderal/Disturbed: The area around the home has been disturbed for the construction of the home and other activities. Very little vegetation grows in this area due to vehicular traffic. Other areas of disturbance include where vegetation has been cleared for establishment of cultivation operations. These areas consist of disturbed or converted natural habitat that is now either in ruderal state, graded, or urbanized with gravel roads, structures and gardens. Vegetation within this habitat type consists primarily of nonnative annual grasses, weedy or invasive species lacking a consistent community structure.

Closed-cone Pine Forest: The majority of the Study Area is vegetated with a single habitat type: closed-cone pine forest. Knobcone pine (*Pinus attenuata*) is the dominant tree in the somewhat open canopy. Knobcone pine is a fire-obligate species, dependent upon stand-replacing crown fires for reproduction. Other trees found in the canopy include the occasional Douglas-fir (*Pseudotsuga menziesii*) and canyon live oak (*Quercus chrysolepis*). Various shrubs and small trees form a dense understory including manzanita (*Arctostaphylos* spp.), oaks (*Quercus* spp.), poison oak (*Toxicodendron diversilobum*), ceanothus (*Ceanothus* spp.) and others. The herbaceous layer is sparse. The closed-cone pine forest can be classified as the Holland Type "83210 Knobcone Pine Forest" or as "*Pinus attenuata* Forest Alliance" (Sawyer 2009).

4.2.2. Wildlife Habitat Types

These habitats are classified as "Urban" or "Barren" and "Closed-cone Pine-Cypress" wildlife habitat types by DFW's Wildlife Habitat Relationship System (WHR).

4.2.3. Critical Habitat and Special-status Habitat

No critical habitat for any federally-listed species occurs within the Study Area. No special-status habitats were detected within the Study Area. The CNDDB reported no special-status habitats within the Study Area. The CNDDB reported 5 special-status habitat occurrences within 10 miles of the Study Area: Clear Lake drainage seasonal lake-fish spawning stream; Northern basalt flow vernal pool; Northern volcanic ash vernal pool; Coastal and Valley freshwater marsh; and Great Valley mixed riparian forest

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 wildlife corridors exist within the Project Area, but the Class II watercourse functions as a wildlife corridor. No fishery resources exist in or near the Study Area. 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 a special-status species occurrence within the Study Area: western pond turtle (*Emys marmorata*). However, this is an artifact of the mapping process; the actual occurrence is described as "*Habitat consists of an upland vernal lake formed in volcanic ash rock; surrounding forest is dominated by ponderosa pine, California black oak, Douglas-fir, and madrone. The lake is partially-filled with tules and goes mostly dry in summer*." No habitat similar to this is found within the Study Area. Within a 10-mile buffer of the Study Area boundary, the CNDDB reported several special-status species occurrences, summarized in Table 1.

A USFWS species list was generated online using the USFWS' IPaC Trust Resource Report System (see Appendix 1). The following listed species should be considered in the impact assessment:

- Birds
    - Northern Spotted Owl (*Strix occidentalis caurina*) Threatened

- Amphibians
    - California Red-legged Frog (*Rana draytonii*) Threatened

- Fishes
    - Delta Smelt (*Hypomesus transpacificus*) Threatened

- Crustaceans
    - Conservancy Fairy Shrimp (*Branchinecta conservatio*) Endangered

- Flowering Plants
    - Burke's Goldfields (*Lasthenia burkei*) Endangered
    - Few-flowered Navarretia (*Navarretia leucocephala ssp. pauciflora)* Endangered
    - Many-flowered Navarretia (*Navarretia leucocephala ssp. plieantha)* Endangered
    - Slender Orcutt Grass (*Orcuttia tenuis*) Threatened
- Migratory Birds

Table 1. 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.
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.
Bell's sage sparrow Artemisiospiza belli belli	CWL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range.	Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.
Tricolored blackbird Agelaius tricolor	CT/CSSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, & foraging area with insect prey within a few km of the colony.
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.
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.

Common Name *Scientific Name*	**Status**	**General Habitat**	**Microhabitat**
Ricksecker's water scavenger beetle Hydrochara ricksecker	CSSC	Aquatic.	
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, Rubus, Trifolium,* and *Vaccinium.*
Blennosperma vernal pool andrenid bee Andrena blennospermatis	CSSC	This bee is oligolectic on vernal pool Blennosperma.	Bees nest in the uplands around vernal pools.
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.
Small-flowered calycadenia Calycadenia micrantha	1B.2	Chaparral, valley and foothill grassland, meadows and seeps.	Rocky talus or scree; sparsely vegetated areas. Occasionally on roadsides; sometimes on serpentine. 5-1500 m.
Greene's narrow-leaved daisy Erigeron greenei	1B.2	Chaparral.	Serpentine and volcanic substrates, generally in shrubby vegetation. 80-1005 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.
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 grassland.	Lake margins and vernal pools. 15-1110 m.
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	1B.1	Chaparral, lower montane coniferous forest.	Rocky, serpentine sites. Slopes and ridges. 450-1000 m.

Common Name *Scientific Name*	Status	General Habitat	Microhabitat
Arctostaphylos stanfordiana ssp. raichei			
Konocti manzanita Arctostaphylos manzanita ssp. elegans	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	Volcanic soils. 395-1615 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.
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 sepentine chaparral. 150-1315 m.
Two-carpellate western flax Hesperolinon bicarpellatum	1B.2	Serpentine chaparral.	Serpentine barrens at edge of chaparral. 60-1005 m.
Marsh checkerbloom Sidalcea oregana ssp. hydrophila	1B.2	Meadows and seeps, riparian forest.	Wet soil of streambanks, meadows. 1100-2300 m.
Brandegee's eriastrum Eriastrum brandegeeae	1B.1	Chaparral, cismontane woodland.	On barren volcanic soils; often in open areas. 425-840 m.
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 Navarretia leucocephala ssp. plieantha	FE/CE/1B.2	Vernal pools.	Volcanic ash flow vernal pools. 30-950 m.
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.
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.
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; CCT= California candidate for listing as Threatened; CSSC = California species of special concern; CWL= California Watch List; 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; CNPS List 2 = CNPS designated rare or endangered plants in California, but more common elsewhere. and CNPS List 4 = CNPS Watch List: Plants of limited distribution.

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 Study Area.

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

The obsidian (volcanic) soils of the closed-cone coniferous forest within the Study Area have a moderate potential for providing suitable habitat for special-status plant species, particularly Greene's narrow-leaved daisy. The mature trees in the Study Area have a moderate potential to harbor special-status bats, primarily hoary bat and western red bat. There is no persistent aquatic habitat in the Study Area that can sustain aquatic special-status species. Downstream of the Study Area, Cole Creek may have suitable aquatic habitat.

4.4. POTENTIALLY-JURISDICTIONAL WATER RESOURCES

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 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 1000 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 USFWS National Wetland Inventory (see Appendix 1) reported 1 water feature within the Study Area: an intermittent watercourse. This same water feature was detected within the Study Area during the field survey (see Exhibits): an intermittent channel (Class II). The unnamed Class II watercourse enters the Study Area near the southwest corner and flows north, exiting the parcel near the northwest corner, eventually flowing into Cole Creek. No distinct riparian habitat is found within the Study Area. There are no wetlands and no vernal pools or other isolated wetlands in the Study Area.

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.

Additionally, cultivators who enroll in the State Water Board's Waste Discharge Requirements for Cannabis Cultivation Order WQ 2017-0023-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 biological resources if it would be non-compliant with these requirements. Cannabis cultivators shall comply with the minimum riparian setbacks described below for 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 riparian setbacks shall be measured from the waterbody's bankfull stage (high flow water levels that occur every 1.5 to 2 years[13]) or from the top edge of the waterbody bank in incised channels, whichever is more conservative. Riparian setbacks for springheads shall be measured from the springhead in all directions (circular buffer). Riparian setbacks for wetlands shall be measured from the edge of the bankfull water level. The cannabis cultivator shall increase riparian setbacks as needed or implement additional Requirements to meet the performance Requirement of protecting surface water from discharges that threaten water quality. If the cannabis cultivation Site cannot be managed to protect water quality, the Executive Officer of the applicable Regional Water Board may revoke authorization for cannabis cultivation activities at the cannabis cultivation site.

Minimum Riparian Setbacks

Common Name	Watercourse Class	Distance (Low Risk)	Distance (Mod Risk)	Variance
Perennial watercourses, springs, or seeps	I	150 ft.	200 ft.	Compliance Schedule
Intermittent watercourses	II	100 ft.	150 ft.	Compliance Schedule
Ephemeral watercourses	III	50 ft.	100 ft.	Compliance Schedule
Other waterbodies (lakes, etc.) and wetlands	150 ft.	200 ft.	Compliance Schedule	Other waterbodies (lakes, etc.) and wetlands

Notes:

- Riparian setbacks do not apply to man-made irrigation canals, water supply reservoirs, and hydroelectric canals (Watercourse Class IV) that do not support native aquatic species, however cannabis cultivators shall ensure land disturbance, cannabis cultivation activities, and facilities are not located in or disturb the existing riparian and wetland riparian vegetation associated with these Watercourse Class IV waterbodies.
- Risk is defined in Table 1 of this Policy and is based on the natural (prior to land disturbance activities) surface topography.
- Variance to riparian setbacks is only allowed if consistent with this Policy and a work plan and compliance schedule are approved by the applicable Regional Water Board Executive Officer.

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.

Cultivation operations on the parcels will be installed on land previously cleared of vegetation as "Less Than 3 Acre Conversion Exemption" under the authority of Cal Fire. No additional vegetation will be removed or disturbed for this project. No significant accumulations of sediment in receiving waterbodies were noted as a result of the conversion operation.

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 species were detected within the Study Area. Regionally-occurring special status plants could be present on the obsidian soils of the closed-cone pine forest habitat, primarily Greene's narrow-leaved daisy. The mature trees in the Study Area have a moderate potential to harbor special-status bats, primarily hoary bat and western red bat.

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

If the establishment of cultivation operations requires the destruction of closed-cone pine forest habitat, the following mitigation measure should be implemented:

> A pre-construction survey for special-status species should be performed by a qualified biologist to ensure that special-status species are not present. If any listed species or special-status species are detected, construction should be delayed, and the appropriate wildlife agency (CDFW and/or USFWS) should be consulted and project impacts and mitigation reassessed.

With the implementation of this mitigation measure, adverse impacts upon special-status species would be reduced to a less-than-significant level.

If construction activities require the removal of trees or shrubs, or disturbance to riparian habitat, and if these activities occur during the nesting season (usually March to September), a pre-construction survey for the presence of special-status bird species or any nesting bird species should be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, CDFW and/or USFWS 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.

With the implementation of this mitigation measure, adverse impacts upon special-status bird species and nesting birds 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 Study Area is not inside any federally-designated critical habitat. The Project Area contains no special-status habitats, but special-status habitats are directly adjacent to some project areas. If the establishment of cultivation operations requires the destruction of sensitive habitats, such as undisturbed closed-cone pine forest habitat, this is a potentially-significant impact.

Recommended Mitigation Measures

If the establishment of cultivation operations requires the destruction of undisturbed closed-cone pine forest habitat, the following mitigation measure should be implemented:

- Performance of a botanical survey to identify if any special-status plant species are present and to delineate sensitive and non-sensitive plant habitat at a finer scale, which may reduce the overall area needed for protection.

With the implementation of this mitigation measure, impacts to special-status habitats would be reduced to a less than significant level.

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 is one water resource within the Study Area: one unnamed Class II Watercourse. No riparian habitat is found within the Study Area. There are no wetlands and no vernal pools or other isolated wetlands in the Study Area.

Potential adverse impacts to water resources could occur during construction by modification or destruction of stream banks or riparian vegetation, the filling of wetlands, or by increased erosion and sedimentation in receiving water bodies due to soil disturbance. Project implementation will not directly impact any channels or wetlands. Soil disturbance from project implementation could increase erosion and sedimentation. Regulations at both the County and State levels require creation and implementation of an erosion control plan / stormwater management plan. Furthermore, if the total area of ground disturbance from project implementation is greater than 1 acre, the project proponent will need to enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ).

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 2017-0023-DWQ. Compliance with this Order will ensure that cultivation operations will not significantly impact water resources by using a combination of Best Management Practices (BMPs), buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight.

Implementation of these plans, BMPs, and compliance with Water Board and County regulations will ensure that water quality impacts are less than significant. Therefore, no mitigation is required.

It is recommended that a formal delineation of jurisdictional waters be performed before construction work, or ground disturbance, is performed near any wetland or drainage.

Recommended Mitigation Measures

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

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?

No specific wildlife corridors exist within or near the Study Area, but the large open spaces on the property allow for ample animal movement. 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. Implementation of the project does not conflict with any county or municipal policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

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?

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.

If development of the project will result in the removal of commercial tree species, and this is likely, 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.

Recommended Mitigation Measures

No mitigation is necessary.

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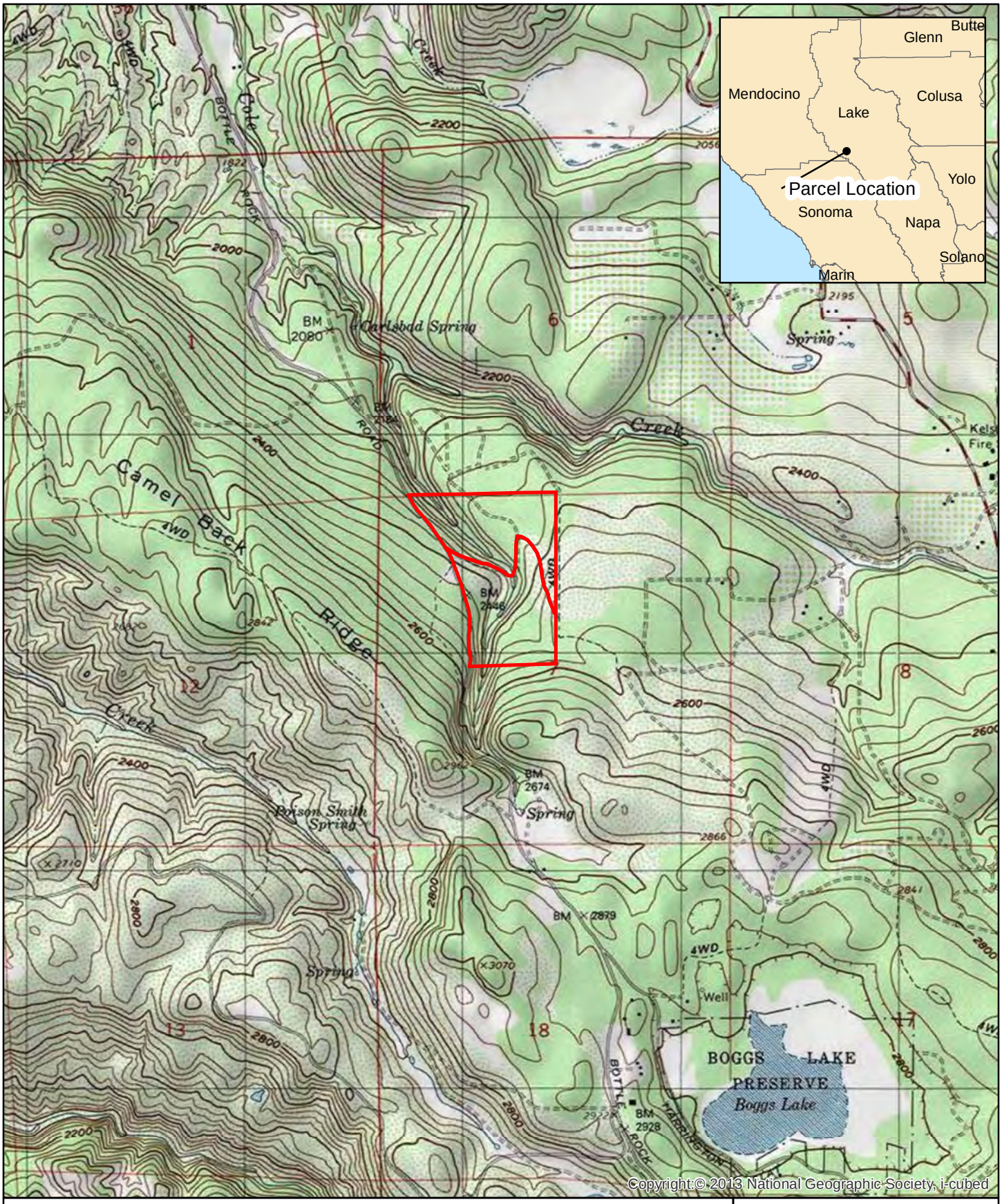
EXHIBITS



Parcel Location

0 0.5 1 Kilometers

0 0.5 1 Miles

1:24,000

10030 Bottle Rock Road
Parcel Location Map

Natural Investigations Company

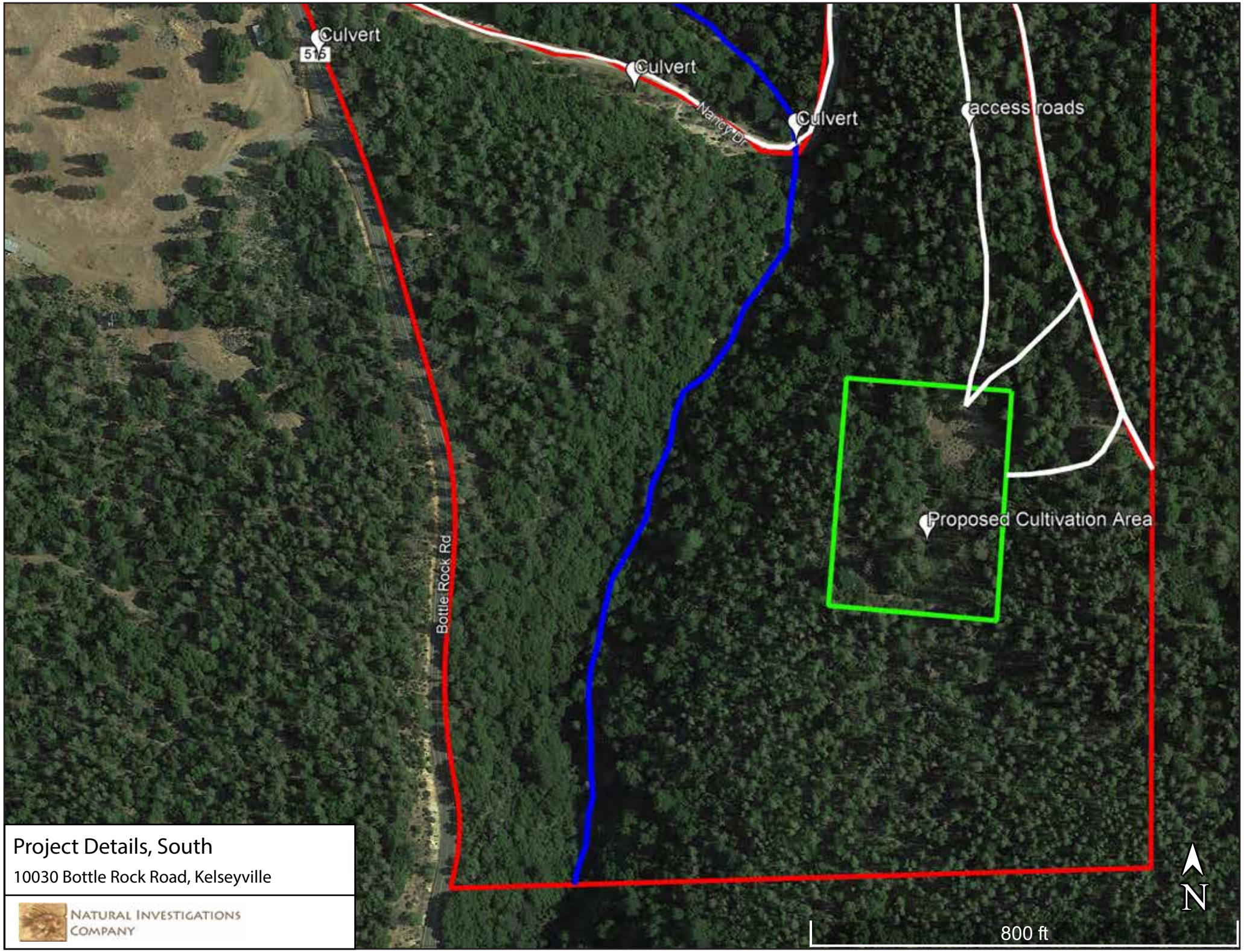
Map Date 9/11/2019

Kelseyville 1993 Quadrangle:Township 12N, Range 8W, Section 7

Project Details, North

10030 Bottle Rock Road, Kelseyville

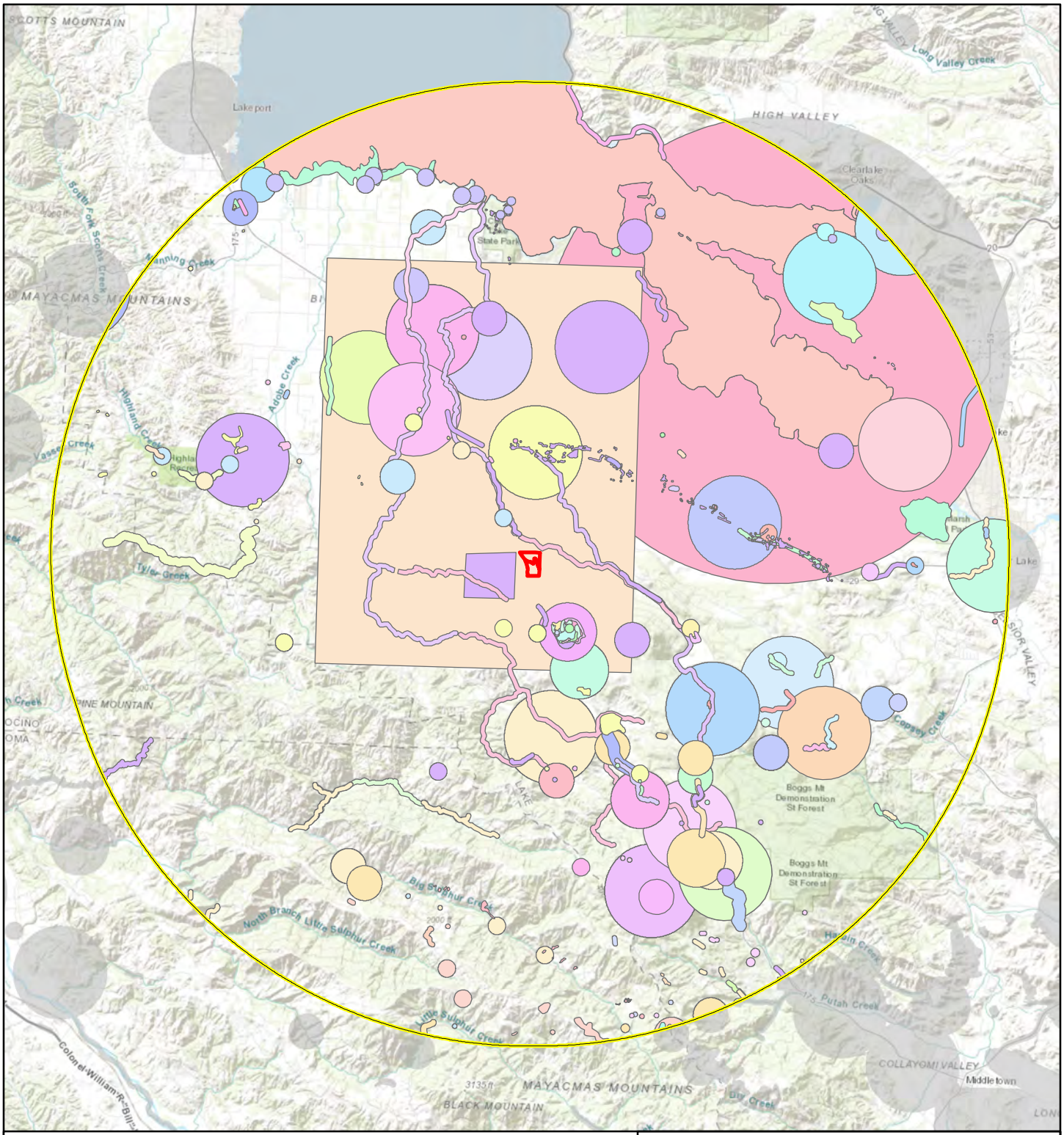
Natural Investigations Company



Project Details, South

10030 Bottle Rock Road, Kelseyville

Natural Investigations Company



Project 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. 2019. RareFind 5.x, California Natural Diversity Data Base. Biogeographic Data Branch, Sacramento, California. (updated monthly by subscription service)

Special-Status Species Occurrences Map

10030 Bottle Rock Road

Kelseyville 1993 Quadrangle:Township 12N, Range 8W, Section 7

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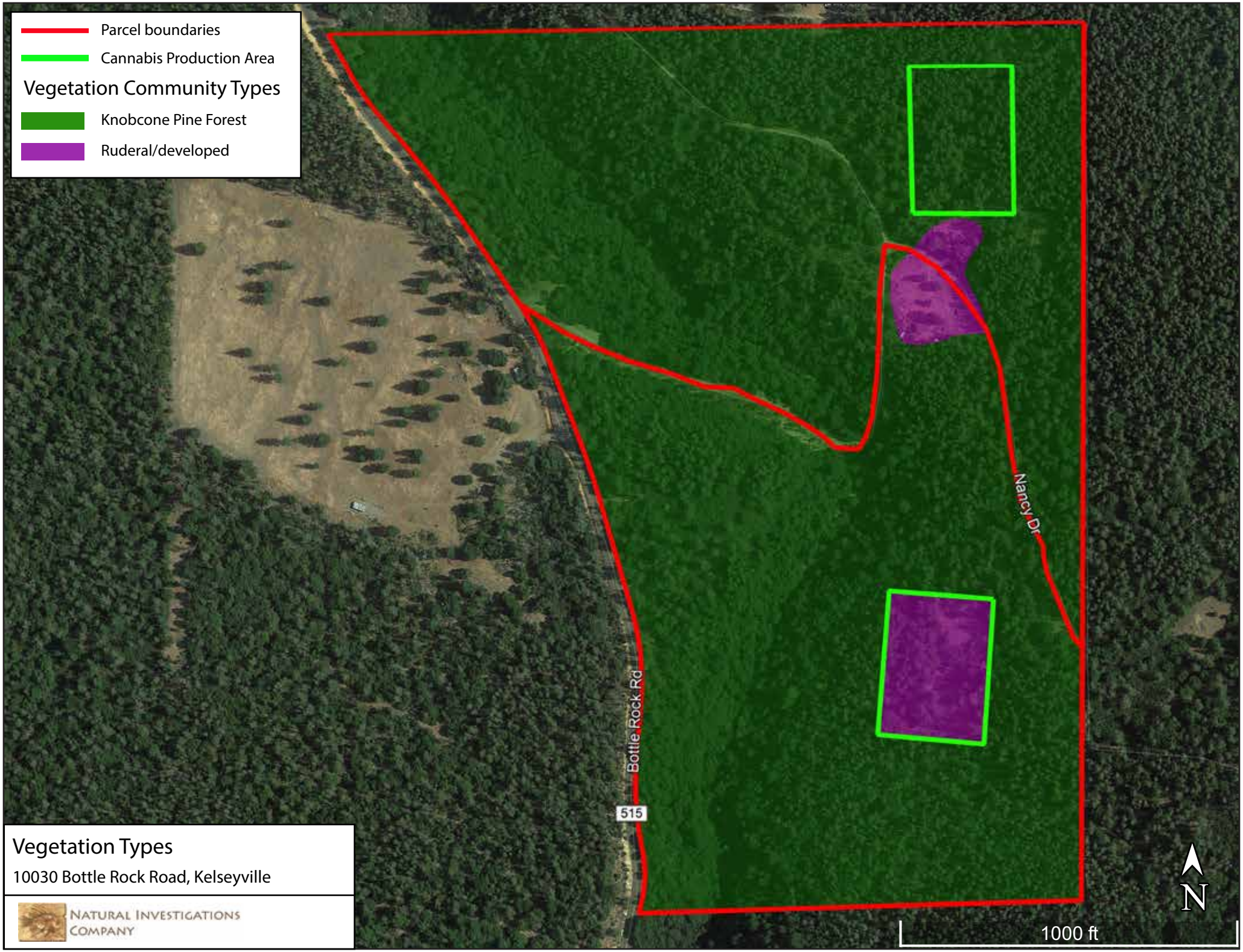
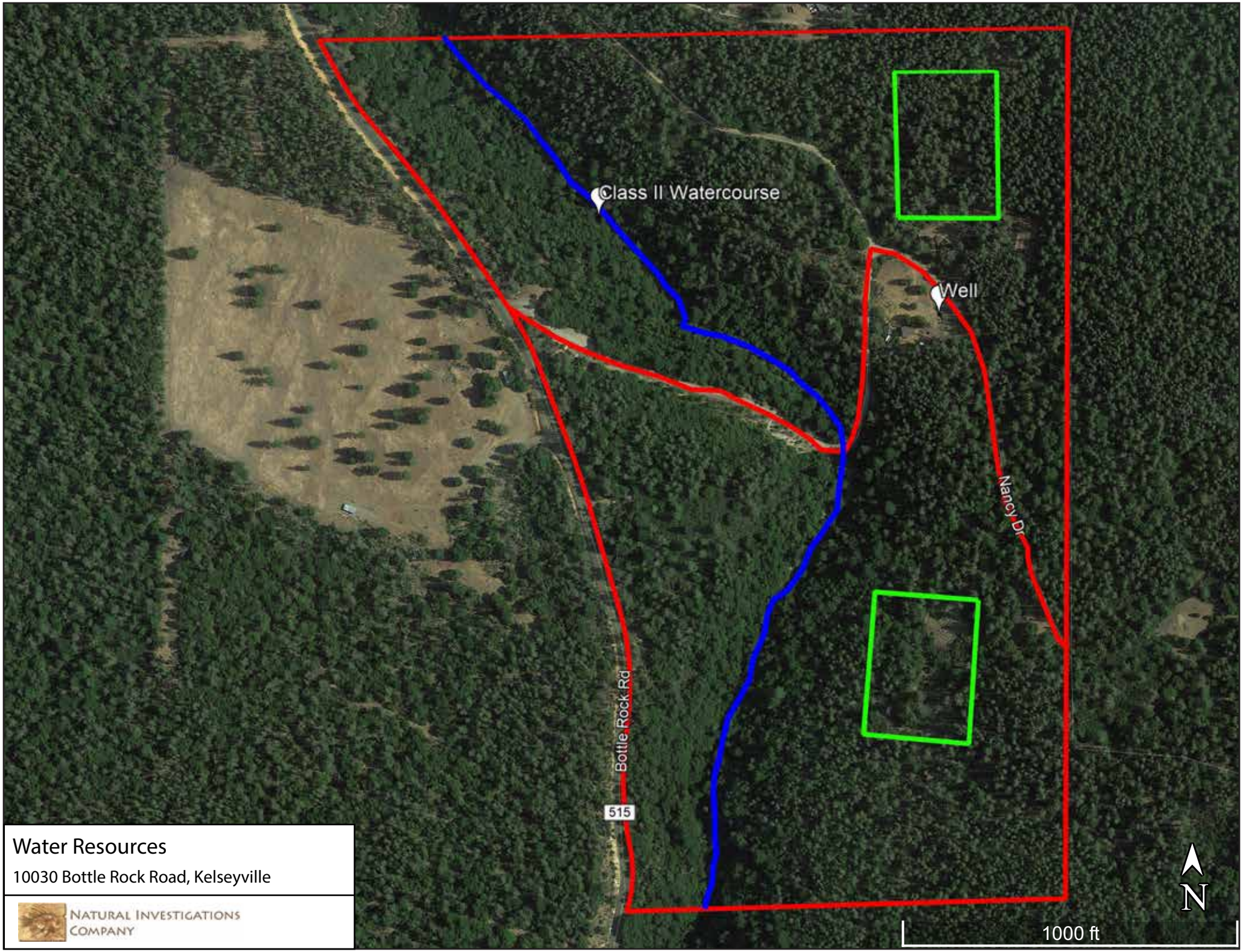
www.NaturalInvestigations.com



Vegetation Types

10030 Bottle Rock Road, Kelseyville

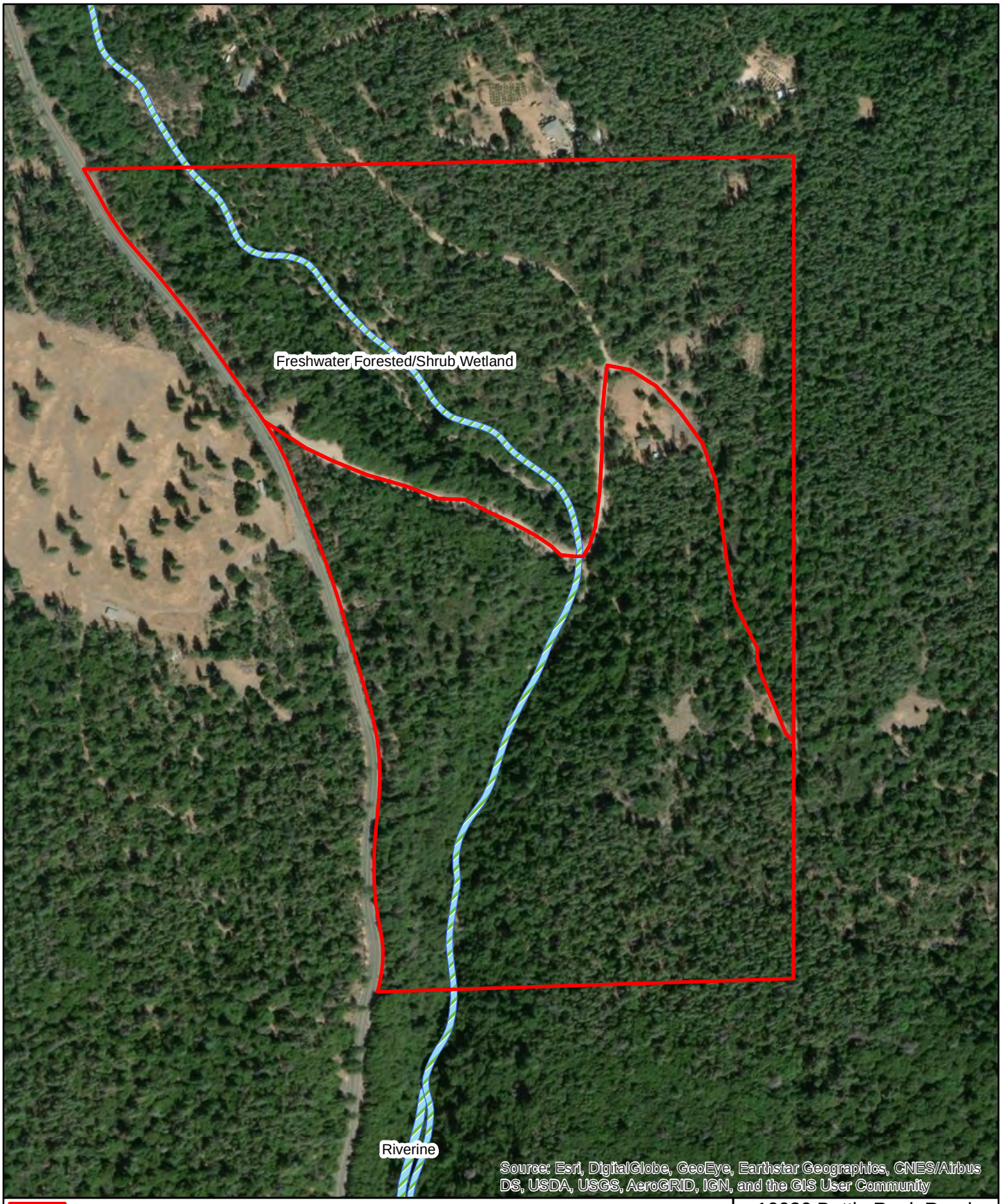
Natural Investigations Company



Water Resources

10030 Bottle Rock Road, Kelseyville

Natural Investigations Company



Parcel Location

Wetlands and Channels

0 125 250 Meters

0 500 1,000 Feet

1:5,000

10030 Bottle Rock Road
National Wetlands Inventory
Features Map

Natural Investigations Company

Map Date 8/16/2019

Kelseyville 1993 Quadrangle:Township 12N, Range 8W, Section 7

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: 08ESMF00-2019-SLI-3013
Event Code: 08ESMF00-2019-E-09619
Project Name: 10030 Bottle Rock Road

September 11, 2019

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: 08ESMF00-2019-SLI-3013

Event Code: 08ESMF00-2019-E-09619

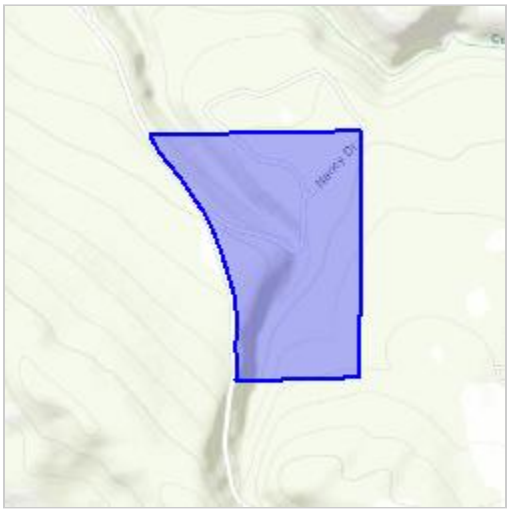
Project Name: 10030 Bottle Rock Road

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/38.90742075663215N122.79108657236571W



Counties: Lake, CA

Endangered Species Act Species

There is a total of 8 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.

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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

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

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered

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
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

Plants observed at 9900 and 10030 Bottle Rock Road, September 12, 2019

Common name	Scientific name
Silvery everlasting	*Antennaria argentea*
Madrone	*Arbutus menziesii*
Hoary manzanita	*Arctostaphylos canescens ssp. canescens*
Stanford's manzanita	*Arctostaphylos stanfordiana ssp. stanfordiana*
Whiteleaf manzanita	*Arctostaphylos viscida*
Slender wild oat	*Avena barbata*
Coyote brush	*Baccharis pilularis*
Wild turnip	*Brassica rapa*
Ripgut brome	*Bromus diandrus*
Soft chess	*Bromus hordeaceous*
Milk maids	*Cadamine californica*
Incense cedar	*Calocedrus decurrens*
Western morning glory	*Calystegia occidentalis*
Western bittercress	*Cardamine oligosperma*
Italian thistle	*Carduus pycnocephala*
Sedge	*Carex sp.*
Wedgeleaf ceanothus	*Ceanothus cuneatus*
Wavyleaf ceanothus	*Ceanothus foliosus ssp. foliosus*
Deerbrush	*Ceanothus integerrimus var. macrothyrsus*
Wavyleaf soaproot	*Chlorogalum pomeridianum*
Bull thistle	*Cirsium vulgare*
Clarkia	*Clarkia sp.*
Variableleaf collomia	*Collomia heterophyllla*
Hedgehog dogtail grass	*Cynosurus echioides*
Blue wildrye	*Elymus glaucus*
Tall willowherb	*Epilobium brachycarpum*
Willowherb	*Epilobium sp.*
Yerba santa	*Eriodictyon californicum*
Naked buckwheat	*Eriogonum nudum*
Brome fescue	*Festuca bromoides*
Rattail sixweeks fescue	*Festuca myuros*
California coffeeberry	*Frangula californica*
Climbing bedstraw	*Galium porrigens*
Goldwire	*Hypericum concinnum*
Klamath weed	*Hypericum perfoliatum*
Iris	*Iris sp.*
Rush	*Juncus sp.*
Pitcher sage	*Lepechinia calycina*
Lessingia	*Lessingia sp.*
Pink honeysuckle	*Lonicera hispidula*
Chaparral honeysuckle	*Lonicera interrupta*
Pacific starflower	*Lysimachia latifolia*
Tarplant	*Madia sp.*
Microseris	*Microseris sp.*
Coyote mint	*Monardella villosa*
Goldback fern	*Pentagramma triangularis*
Hairy pink	*Petrorhagia dubia*
Lacy phacelia	*Phacelia tanacetifolia*
Knobcone pine	*Pinus attenuata*
California milkwort	*Polygala californica*

Common name	Scientific name
Douglas-fir	*Pseudotsuga menziesii*
California scrub oak	*Quercus berberidifolia*
Canyon live oak	*Quercus chrysolepis*
Interior live oak	*Quercus wislizeni*
Wood rose	*Rosa gymnocarpa*
Scullcap	*Scutellaria tuberosa*
Knotted hedgeparsley	*Torilis nodosa*
Poison-oak	*Toxicodendron diversilobum*
Vinegar weed	*Trichostema lanceolatum*
Rose clover	*Trifolium hirtum*
California bay	*Umbellularia californica*
Stinging nettle	*Urtica dioica*
Common mullein	*Verbascum thapsis*
Western vervain	*Verbena lasiostachys*

APPENDIX 3: SITE PHOTOS