Floristic Survey Addendum

CANNABIS CULTIVATION OPERATION AT 11450 & 11474 SPRUCE GROVE ROAD

Lower Lake, CA

Lake County, California

May 15, 2024

Prepared for;

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1.0 Report Context

This report is an addendum to **BIOLOGICAL RESOURCES ASSESSMENT FOR THE CANNABIS CULTIVATION OPERATION AT 11450 & 11474 SPRUCE GROVE ROAD, LOWER LAKE, CALIFORNIA** dated December 7, 2021, Prepared by G.O. Graening, PhD and Tim Nosal, MS Natural Investigations Company, Inc. 3104 O Street, #221, Sacramento, CA 95816. This report is referenced throughout this addendum as "**The Report**." Specific details and sections included in **The Report** do not require duplication and which accurately described and include pertinent information already investigated.

The local permitting agency is requesting completion of a botanical survey 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 plant habitat. The second phase consists of field surveys, including a botanical survey listing all plant taxa. The biological resource assessment will determine whether the property contains sensitive plants requiring mitigation under the California Environmental Quality Act (CEQA) as well as other activities. As used here, the terms sensitive plant includes all state or federal rare, threatened, or endangered species as well as CA Native Plant Society plant status designations.

A property location map is included in **The Repot** in the **"Exhibits"** section at the end of the report.

1.1 Proposed Project: A detailed description can be found on **page 2 of The Report** in Section 1.1. PROJECT LOCATION AND DESCRIPTION

An additional botanical survey was recommended because the field survey was not performed during the blooming period of most regionally occurring rare plants. The survey is focused on rare plants that have been reported in the vicinity by the CNDDB and performed during the blooming period of most target species. The survey is also focused on habitat types that are more likely to harbor rare species. Because special-status species that occur in the vicinity could have migrated onto the Study Area between the time the field survey was completed and the start of construction, 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 are detected, construction should be delayed, and the appropriate wildlife agency (CDFW and/or USFWS) should be consulted, and project impacts and mitigation reassessed.

The area proposed for the cannabis operation is illustrated in The Report in the Exhibits Section, Project Features Map.

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 like 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 regarding the geographic range of sensitive plant species
- Location(s) of known populations of sensitive plant species as mapped in the California Natural Diversity Database (CNDDB)
- Soils of the project area
- Elevation
- Presence or absence of unique 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 Diversity Database (CNDDB); Rare Find 5, 2021

California Native Plant Society's (CNPS) Electronic Endangered Vascular Plants of California (v9-01 0.0) inventory of Rare and The CNDDB and Rare Findnd 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 particularly good indication of the suitability of a site as habitat for sensitive plant species.

In addition, the California Department of Fish and Wildlife (CDFW) “Protocols for the Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive

Species Natural Communities" (March 20, 2018) was incorporated into field methodology. Some special status plants and suitable habitat were encountered during field surveys.

2.1 Botanical Survey Methods: An in-season botanical survey was conducted for the project site. The CNDDB report and maps for the Lower Lake, CA quadrangle was referenced prior to the survey. Vegetation communities were identified based on the nomenclature of A Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens, 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 **The Report in the Exhibits Section entitled Habitat Types.**

2.2 Survey Dates: Site visits for the plant surveys, vegetation mapping, and the delineation were conducted on April 24,25 and May 8,9, 2024.

2.3 Biological Assessment Staff: The field surveys and plant taxonomy were conducted by Lawrence Ray principal biologist. Mr. Ray has a Master of Science Degree in Ecology from Antioch University/UC Berkeley and a Bachelor of Science Degree in Environmental Studies from Antioch University. He has over 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.

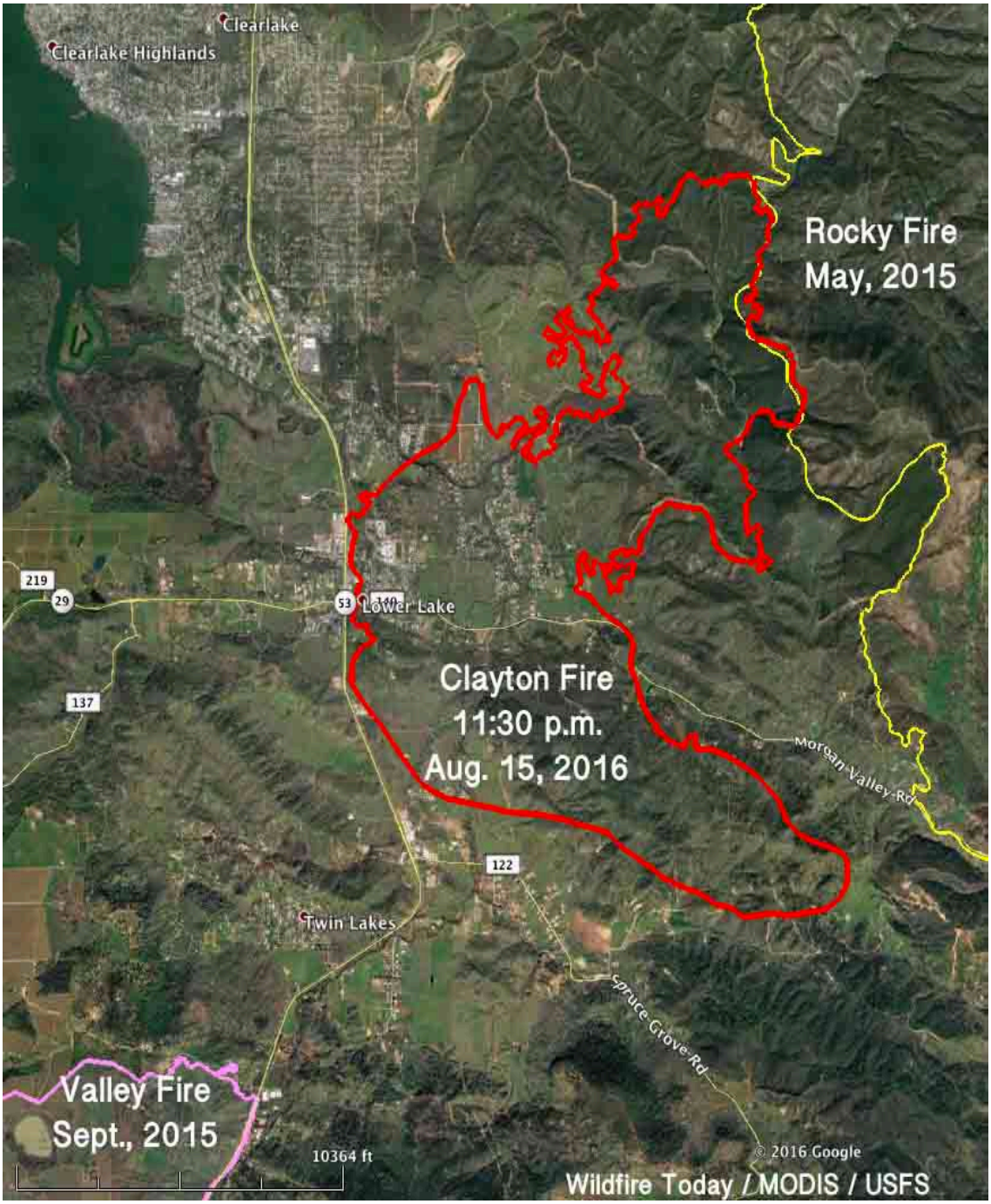
PLANT COMMUNITIES AND OTHER COVER TYPES PRESENT

3.0 Vegetation Types: The entire property maps for vegetation were reviewed to provide project context. Descriptions of vegetation communities and found in section **4.2.1. Terrestrial Vegetation Communities on pages 8 and 9** of **The Report.** It is important to note that these are highly dynamic communities, changing seasonally and annually based on the overall rain year. The vegetation map provided in Figure 4 should be considered as a "snapshot" of the vegetative cover on this property as it occurred during the growing season of 2021. Community boundaries – and occasionally presence – can be expected to change on a more level ground due to even slight changes in hydrology. **There were no significant changes found during recent surveys in 2024.**

The entire property was mapped for vegetation and is in the **Exhibits Section** of **The Report** labeled "**Habitat Types**."

Habitat types are a "snapshot" of the vegetative cover on this property as it occurred during the growing season of 2021.

Fire. Wildfires can have a significant impact on the appearance of “fire follower” and “fire dependent” species. The area impacted by the most recent fire in 2016 were surveyed for the occurrence of plants that would otherwise be hidden by the presence of dense vegetation present on much of the property. Special attention was given to these areas for the potential for certain species to occur. The Clayton Fire boundary is illustrated in the map below.



Special Status Plants

There are four (4) Special Status plants in Table 1 below. All are located outside of the project area. The following photos were taken during recent surveys.

Please review APPENDIX 1: USFWS SPECIES LIST in the Exhibit Section of The Report for reference.

TABLE 1. **FLORA**; Flora observed at **11450 & 11474 SPRUCE GROVE ROAD**

Form	Species	Common Name	Status	Origin
forb	*Achillea millefolium*	yarrow	None	N
forb	*Achyrachaena mollis*	Blow-wives	None	N
forb	*Acmispon brachycarpus*	Hill lotus	None	N
forb	*Acmispon glaber*	deerweed	None	N
forb	*Adelinia grandis*	Hound's tongue	None	N
bush	*Adenostoma fasciculatum*	Chamise	None	N
tree	*Aesculus californica*	California buckeye	None	N
forb	*Agoseris apargioides*	Coast dandelion	none	N
tree	*Ailanthus altissima*	Tree of heaven	none	E, I
grass	*Aira caryophyllea*	Silver hairgrass	none	E
forb	*Amsinckia lunaris*	Bent flowered fiddleneck	CA 1B.2	N
forb	*Amsinckia menziesii*	Menzies' Fiddleneck	none	N
bush	*Arctostaphylos manzanita ssp. manzanita*	Common manzanita	None	N
forb	*Artemisia douglasiana*	California mugwort	none	N
forb	*Asclepias fascicularis*	Narrow leaf milkweed	none	N
forb	*Astragalus breweri*	Brewer's milk vetch	CA 4.2	N
grass	*Avena barbata*	Wild oats	none	E, I
bush	*Baccharis pilularis*	Coyote brush	none	N
grass	*Briza minor*	Quaking grass	none	E, I
forb	*Brodiaea californica*	California brodiaea	none	N
forb	*Brodiaea elegans*	Cluster lily	none	N
grass	*Bromus diandrus*	Ripgut brome	none	E, I
grass	*Bromus hordeaceus*	Soft chess	none	E, I

	Table 1 continued			
grass	*Bromus madritensis*	Madrid brome	none	E, I
grass	*Bromus sitchensis var. carinatus*	California brome	none	N
forb	*Calochortus amabilis*	Golden fairy lantern	none	N
forb	*Capsella bursa-pastoris*	Shepherd's purse	none	E
forb	*Carduus pycnocephalus*	Italian thistle	none	E, I
forb	*Castilleja campestris*	Yellow owl's clover	none	N
bush	*Ceanothus cuneatus*	Wedge leaf ceanothus	none	N
bush	*Ceanothus integerrimus var. macrothyrsus*	deerbrush	none	N
forb	*Centaurea solstitialis*	Yellow star thistle	none	E, I
forb	*Centromadia fitchii*	Fitche's spikeweed	none	N
bush	*Cercocarpus betuloides*	Mountain mahogany	none	N
forb	*Chlorogalum pomeridianum*	Soap plant	none	N
forb	*Cichorium intybus*	chicory	none	E
forb	*Cirsium vulgare*	Bull thistle	none	E, I
forb	*Clarkia purpurea*	Purple clarkia	none	N
forb	*Claytonia perfoliata*	Miners' lettuce	none	N
forb	*Collinsia heterophylla*	Purple chinese houses	none	N
forb	*Convolvulus arvensis*	Field bindweed	none	E, I
forb	*Croton setiger*	Turkey-mullein	none	N
grass	*Cynosurus echinatus*	Dogtail grass	none	E, I
forb	*Cyperus eragrostis*	Tall flatsedge	none	N
grass	*Dactylis glomerata*	Orchard grass	none	E
forb	*Daucus pusillus*	Wild carrot	none	N
forb	*Delphinium decorum*	Larkspur	none	N
forb	*Dipterostemon capitatus*	Blue dicks	none	N
forb	*Eleocharis macrostachya*	Pale spikerush	none	N
grass	*Elymus caput-medusae*	Medusa-head grass	none	E, I
grass	*Elymus elymoides*	Squirrletail grass	none	N
grass	*Elymus glaucus*	Blue wildrye	none	N
forb	*Epilobium brachycarpum*	Tall willowherb	none	N
bush	*Eriodictyon californicum*	Yerba santa	none	N
forb	*Erodium botrys*	Broad leaved filaree	none	E, I
forb	*Erodium cicutarium*	Red-stemmed filaree	none	E, I
forb	*Eschscholzia californica*	California poppy	none	N
grass	*Festuca bromoides*	Brome fescue	none	E, I
grass	*Festuca myuros*	Rattail fescue	none	E, I
grass	*Festuca perennis*	Italian ryegrass	none	E, I

	Table 1 continued			
grass	*Festuca rubra*	Red fescue	none	N
bush	*Frangula californica*	Coffeeberry	none	N
tree	*Fraxinus latifolia*	Oregon Ash	none	N
forb	*Galium aparine*	Common bedstraw	none	N
forb	*Geranium dissectum*	Split-leaf geranium	none	E, I
forb	*Gnaphalium palustre*	Lowland cudweed	none	N
forb	*Hesperevax acaulis*	Stemless dwarf cudweed	none	N
bush	*Heteromeles arbutifolia*	Toyon	none	N
forb	*Hirschfeldia incana*	Shortpod mustard	none	E, I
forb	*Holocarpha virgata*	Wand tarplant	none	N
grass	*Hordeum marinum ssp. gussoneanum*	Mediterranean barley	none	E, I
grass	*Hordeum murinum*	Wall barley	none	E, I
frob	*Hypericum perforatum*	Klamath weed	none	E, I
forb	*Iris douglasiana*	Douglas iris	none	N
tree	*Juglans hindsii*	Northern CA black walnut	none	N
forb	*Juncus balticus*	Baltic rush	none	N
forb	*Juncus bufonius*	Toad rush	none	N
forb	*Juncus confusus*	Colorado rush	none	N
forb	*Kickxia elatine*	Sharp-leaved fluellin	none	E
forb	*Lactuca serriola*	Prickly lettuce	none	E
forb	*Lasthenia burkei*	Burke's goldfields	CA 1B.1	N
forb	*Lasthenia californica*	California goldfields	none	N
forb	*Lathyrus angulatus*	Angled pea vine	none	N
forb	*Layia chrysanthemoides*	Smooth tidy tips	none	N
forb	*Leontodon saxatilis*	Hawkbit	none	E
bush	*Lepechinia calycina*	White pitcher sage	none	N
forb	*Leptosiphon aureus*	Golden linanthus	CA 4.2	N
forb	*Lomatium dasycarpum*	Woolly fruited lomatium	none	N
forb	*Lomatium macrocarpum*	Large fruited lomatium	none	N
vine	*Lonicera hispidula*	Pink honeysuckle	none	N
forb	*Lupinus bicolor*	Miniature lupine	none	N
forb	*Lupinus nanus*	Sky lupine	none	N
forb	*Lythrum hyssopifolia*	Hyssop loosestrife	none	E, I
forb	*Madia exigua*	tarweed	none	N
forb	*Malva neglecta*	Dwarf mallow	none	E
forb	*Marrubium vulgare*	horehound	none	E, I
grass	*Melica californica*	California melicgrass	none	N
forb	*Melilotus officinalis*	Yellow sweetclover	none	E

	Table 1 continued			
forb	*Micropus californicus*	Slender cottonweed	none	N
forb	*Mimulus guttatus*	Seep monkeyflower	none	N
forb	*Navarretia vividior*	Mountain navarretia	none	N
forb	*Penstemon heterophyllus*	Foothill penstemon	none	N
forb	*Perideridia kelloggii*	yampa	none	N
grass	*Phalaris aquatica*	Harding grass	none	E
tree	*Pinus ponderosa*	Yellow pine	none	N
tree	*Pinus sabiniana*	Grey pine	none	N
forb	*Plagiobothrys greenei*	Greene's allocarya	none	N
forb	*Plantago lanceolata*	English plantain	none	E, I
grass	*Poa bulbosa*	Bulbous bluegrass	none	E
tree	*Populus fremontii*	Freemont cottonwood	none	N
tree	*Prunus cerasifera*	Cherry plum	none	E
tree	*Pseudoacacia robinia*	Black locust	none	E
tree	*Quercus chrysolepis*	Canyon live oak	none	N
tree	*Quercus douglasii*	Blue oak	none	N
tree	*Quercus garryana*	Oregon white oak	none	N
tree	*Quercus kelloggii*	Black oak	none	N
tree	*Quercus lobata*	Valley oak	none	N
forb	*Raphanus sativus*	Wild radish	none	E, I
bush	*Rhamnus ilicifolia*	Hollyleaf redberry	none	N
bush	*Rhus aromatica*	Fragrant sumac	none	N
bush	*Rosa californica*	California rose	none	N
forb	*Rosa gymnocarpa*	Wood rose	none	N
vine	*Rubus ursinus*	California blackberry	none	N
forb	*Rumex crispus*	Curly dock	none	E, I
tree	*Salix exigua*	Narrow leaf willow	none	N
tree	*Salix laevigata*	Red willow	none	N
tree	*Salix lasiolepis*	Arroyo willow	none	N
bush	*Sambucus nigra ssp. caerulea*	Blue elderberry	none	N
forb	*Scrophularia californica*	California bee plant	none	N
forb	*Senecio vulgaris*	Old man of spring	none	E, I
tree	*Sequoia sempervirens*	Coast redwood	none	N *
forb	*Silybum marinum*	Milk thistle	none	E
forb	*Sisymbrium officinale*	Hedge mustard	none	N
forb	*Sisyrinchium bellum*	Blue eyed grass	none	N
forb	*Stachys ajugoides*	Ajuga hedge nettle	none	N
forb	*Stellaria media*	Chickweed	none	
grass	*Stipa miliacea*	Smilo grass	none	E, I

	Table 1 continued			
grass	*Stipa pulchra*	Purple needlegrass	none	N
grass	*Stipa lemmonii*	Lemmon's needlegrass	none	N
bush	*Symphoricarpos albus*	Common snowberry	none	N
forb	*Symphoricarpos mollis*	Creeping snowberry	none	N
forb	*Torilis arvensis*	Tall sock-destroyer	none	E, I
forb	*Torilis nodosa*	Wild parsley	none	
bush	*Toxicodendron diversilobum*	Poison oak	none	N
forb	*Tragopogon dubius*	Yellow salsify	none	E, I
forb	*Trifolium dichotomum*	Indian clover	none	N
forb	*Trifolium dubium*	Shamrock clover	none	E
forb	*Trifolium fragiferum*	Strawberry clover	none	E
forb	*Trifolium hirtum*	Rose clover	none	E, I
forb	*Trifolium incarnatum*	Crimson clover	none	E
forb	*Trifolium subterraneum*	Subterranean clover	none	E
forb	*Triphysaria versicolor*	Yellow owl's clover	none	N
forb	*Triteleia laxa*	Ithuriel's spear	none	N
forb	*Triteleia hyacinthina*	White brodiaea	none	N
grass	*Triticum aestivum*	wheat	none	E, I
forb	*Verbascum thapsus*	Common mullein	none	E, I
forb	*Vicia villosa*	Winter vetch	none	E
vine	*Vitis californicus*	California grape	none	N
forb	*Wyethia angustifolia*	Narrow leaf mule ears	none	N
forb	*Wyethia glabra*	Smooth mule ears	none	N
forb	*Xanthium orientale*	Common cockle bur	none	N
forb	*Zeltnera davyi*	Davy's centaury	none	N

KEY FOR TABLE 1

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 California 1B.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 Act FESA = 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

N= Native

E=Exotic

I=Invasive

Special Status Plants

There are four (4) Special Status plants in Table 1 above. All are located outside of the project area. The following photos were taken during recent surveys.

Please review APPENDIX 1: USFWS SPECIES LIST in the Exhibit Section of The Report for reference.

Amsinckia lunaris	Bent flowered fiddleneck	CA 1B.2	Location; 38.89713/122.59323

https://www.calflora.org/app/taxon?crn=324

Astragalus breweri	Brewer's milk vetch	CA 4.2	Location; 38.89026/122.59152

https://www.calflora.org/app/taxon?crn=810

Lasthenia burkei	Burke's goldfields	CA 1B.1	Location;38.88975/122.59289

https://www.calflora.org/app/taxon?crn=4576

Leptosiphon aureus	Golden linanthus	CA 4.2	Location; 38.89746/122.59190

https://www.calflora.org/app/taxon?crn=10055

BIOLOGICAL RESOURCES ASSESSMENT FOR THE CANNABIS CULTIVATION OPERATION AT 11450 & 11474 SPRUCE GROVE ROAD, LOWER LAKE, CALIFORNIA

December 7, 2021

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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 a 506-acre property at 11450 and 11474 Spruce Grove Road, Lower Lake, in Lake County, California. The property consists of 10 parcels: APNs 012-045-39, -40, -41, -42 and -43, and APNs 012-059-10, -11, -12, -13, and -14. The proposed cultivation operation would occur on APNs 012-045-41 and -42 and APNs 012-059-10 and -11, and consists of: a 45-acre cultivation area; irrigation systems; a 4,500-square foot barn for cannabis processing and storage; and access roads. Cultivation will occur primarily outdoors with plants growing in full sun in amended, native soil. Temporary greenhouses (hoophouses) may be used for propagation or for light deprivation or frost protection. Conex storage containers may be used for material, chemical, and equipment storage within the fenced compound. An existing 4,500-square foot barn may be used for cannabis product processing and product and material storage. Office space and a small nursery may also occur within the barn. The cultivation operation will use water from an existing permitted agricultural water supply, which uses existing groundwater well (located on APN 012-045-40) and electric pumps. An array of water tanks will store water and provide gravitational head. Drip irrigation systems will deliver water to each planting station. The Project Area is accessed by a private gravel road off of Spruce Grove Road.

For this assessment, the Project Area was defined as the cultivation area (45 acres) plus the barn, and this combined area was the subject of the impact analysis. The entire 506-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 proposed cultivation site 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 are in Sunset Climate Zone 7, California's Gray Pine Belt, with hot summers and mild but pronounced winters without sever winter cold or high humidity (Brenzel, 2012).

The topography of the Study Area is a portion of the Excelsior Valley and a line of hills, with elevations ranging from 1,340 feet to 1,740 feet. The topography of the Project Area is relatively flat with a gentle slope to the west, with elevations ranging from 1,368 feet to 1,410 feet. Surface flow infiltrates into the soil in the Project Area, or flows into agricultural ditches or upland swales. There are no channels or wetlands in the Project Area. There are several unnamed ephemeral (Class III watercourses) and intermittent (Class II watercourses) channels in the Study Area. Drainage leaves the Project Area to the west towards Copsey Creek, a Class I Watercourse and tributary to Cache Creek, which flows to the Sacramento River. The watershed of the surrounding area supports several vegetation types, with south-facing slopes supporting chaparral, grasslands, and mixed oak/conifer woodland, while the north-facing slopes are primarily chaparral. The valley floor is altered, and consists of irrigated agricultural lands in a rural setting.

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 Kristen Ahrens, M.S. (Natural Investigations Co., Inc.) conducted a reconnaissance-level biological survey on June 7, 2019. Weather conditions were warm and sunny. An additional biological survey was conducted by consulting biologist Tim Nosal, MS. on November 29, 2021. Weather conditions were cool and sunny. 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 (2021); CDFW (2021b,c); NatureServe 2021; and University of California at Berkeley (2021a,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, 2021c). Species' habitat requirements and life histories were identified using the following sources: Baldwin et al. (2012); CNPS (2021), Calflora (2021); CDFW (2021a,b,c); and University of California at Berkeley (2021a,b).

4. RESULTS

4.1. INVENTORY OF FLORA AND FAUNA FROM FIELD SURVEY

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

American black bear (*Ursus americana*); black-tailed jackrabbit (*Lepus californicus*); Botta's pocket gopher (*Thomomys bottae*); California ground squirrel (*Otospermophilus beecheyi*); Columbian black-tailed deer (*Odocoileus hemionus columbianus*); coyote (*Canis latrans*); dog (*Canis lupis familiaris*); horse (*Equus caballus*); pig (*Sus scrofa*); raccoon (*Procyon lotor*); acorn woodpecker (*Melanerpes formicivorus*); American crow (*Corvus brachyrhynchos*); American goldfinch (*Spinus tristis*); bandtailed pigeon (*Patagioenas fasciata*); barn swallow (*Hirundo rustica*); California scrub jay (*Aphelocoma californica*); common raven (*Corvus corax*); dark-eyed junco (*Junco hyemalis*); marsh hawk (*Circus cyaneus*); mourning dove (*Zenaida macroura*); northern flicker (*Colaptes auratus*); oak titmouse (*Baeolophus inornatus*); red-shouldered hawk (*Buteo lineatus*); red-tailed hawk (*Buteo jamaicensis*); rough-legged hawk (*Buteo lagopus*); sparrow (Emberizidae); spotted towhee (*Pipilo maculatus*); turkey vulture (*Cathartes aura*); western bluebird (*Sialia mexicanus*); white-breasted nuthatch (*Sitta carolinensis*); and wild turkey (*Meleagris gallopavo*).

4.2. VEGETATION COMMUNITIES AND WILDLIFE HABITAT TYPES

4.2.1. Terrestrial Vegetation Communities

The Study Area contains the following terrestrial vegetation communities: Disturbed/Developed, Annual Grassland, Chaparral, Oak-Pine Woodland and Riparian. These vegetation communities are discussed here and are delineated in the Exhibits.

Disturbed/Developed: These areas consist of disturbed or converted natural habitat that are now either in a ruderal (constantly disturbed) state, or urbanized with gravel roads, or structure and utility placement. These areas include roads and parking areas, residences, outbuildings, gardens, and lawn. Vegetation within this habitat type consists primarily of nonnative ornamental plants or invasive species lacking a consistent community structure. This habitat type provides limited resources for wildlife and is utilized primarily by species tolerant of human activities. The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

Annual Grassland: Much of the western portion of the Study Area is characterized by seasonal, herbaceous vegetation. Although a significant portion of this area was in cultivation as recently as 2019, the natural vegetation has recovered quickly. The annual grassland habitat is comprised largely of non-native annual grasses and native herbs with some native perennial grasses also important. Plants common in this habitat type include wand tarplant (*Holocarpha virgata*), wild oat (*Avena barbata*), filaree (*Erodium* spp.), star thistle (*Centaurea solstitialis*), bromes (*Bromus* spp.), winter vetch (*Vicia villosa*), lupine (*Lupinus* spp.), blue wild rye (*Elymus glaucus*), bull thistle (*Cirsium vulgare*), Italian thistle (*Carduus pycnocephalus*), tall sock destroyer (*Torilis arvensis*) and various other species. This vegetation can be classified as the Holland Type "Non-native Grassland" or as "42.240.00 Tarweed Fields" (CDFW 2021e).

Chaparral (Chamise): Shrub dominated vegetation can be found on the ridges and south-facing slopes of the Study Area. The dominant species within the chaparral are chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos* spp.), deerbrush (*Ceanothus integerrimus var. macrothyrsus*), buckbrush (*Ceanothus* cuneatus), coyote brush (*Baccharis pilularis*), poison oak

(*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*) and yerba santa (*Eriodictyon californicum*). Grasses and herbs are relatively common in the understory as the chaparral recovers from the 2016 Clayton Fire. This vegetation type can be classified as the "Chamise" or as "37.101.19 *Adenostoma fasciculatum – Arctostaphylos manzanita* – Chamise Chapparal" (CDFW 2021e).

Oak-Pine Woodland: Found along the hills and slopes throughout the western portion of the Study Area is habitat dominated by oak and pine. The mixed oak/pine woodland consists of an open canopy of blue oak (*Quercus douglasii*) and gray pine (*Pinus sabiniana*) with an understory of shrubs including common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), ceanothus, toyon, poison oak, grasses (*Elymus*, *Bromus*, *Avena*, et al.) and herbs. The dominant tree of the valley floor and creek margins is valley oak (*Quercus lobata*). Much of the woodland habitat is recovering from the 2016 fire. This vegetation can be classified as the Holland Type "Blue Oak - Foothill Pine" or as "71.020.01 *Quercus douglasii – Pinus sabiniana* Blue Oak Woodland (CDFW 2021e).

Riparian: A narrow band of riparian habitat can be found along the channel of Copsey Creek, following the western edge of the Study Area. The riparian vegetation consists of a canopy of red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), Fremont cottonwood (*Populus fremonti*i), Oregon ash (*Fraxinus latifolia*), blue elderberry (*Sambucus nigra ssp. caerulea*) and valley oak (*Quercus lobata*) with a shrub layer of snowberry (*Symphoricarpos mollis*), California blackberry (*Rubus ursinus*), poison oak and rose (*Rosa gymnocarpa*) with an understory of grasses and other herbs. The riparian forest can be classified as the Holland Type "Great Valley Mixed Riparian Forest" or as "61.205.02 *Salix laevigata – Salix lasiolepis* Red Willow Riparian Forest and Woodland (CDFW 2021e).

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: Urban; Barren; Annual Grassland; Mixed Chaparral; Blue Oak – Foothill Pine; Valley Foothill Riparian; Riverine and Lacustrine.

4.2.3. Critical Habitat and Special-status Habitat

No critical habitat for any federally-listed species occurs within the Study Area. The nearest critical habitat is for the federally threatened slender Orcutt grass (*Orcuttia tenuis*), approximately 1.3 miles south of the Study Area. The CNDDB reported no special-status habitats within the Study Area. The CNDDB reported several 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; Serpentine Bunchgrass; Wildflower Field; Northern Basalt Flow Vernal Pool; Northern Volcanic Ash Vernal Pool; Coastal and Valley Freshwater Marsh; Great Valley Mixed Riparian Forest and Northern Interior Cypress Forest.

During the field survey, no special-status habitats were detected within the Project Area. The following special-status habitats were detected within the surrounding Study Area: watercourses, ponds, and riparian habitat along Copsey Creek.

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, but the open space allows for unrestricted wildlife movement and Copsey Creek may function as a wildlife corridor. No specific fishery resources exist in or near the Study Area; the nearest is in Clear Lake. The Study Area is not located within any known 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
- A query of the California Native Plant Society's database *Inventory of Rare and Endangered Plants of California* (online edition).

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 no special-status habitats or special-status species within the boundaries of the Project Area. The CNDDB has mapped occurrences of Hall's harmonia (*Harmonia hallii*) and few-flowered navarretia (*Navarretia leucocephala sp. pauciflora*) within the Study Area. These were mapped by CNDDB within the northwestern corner of APN 012-045-40. However, the CNDDB lists each plant with the following vague location description: "Exact location unknown, mapped in general vicinity of Lower Lake." Within a 10-mile buffer of the Study Area boundary, the CNDDB reported several special-status species occurrences, summarized in the following table along with any additional CNPS species.

A USFWS species list was generated online using the USFWS' IPaC Trust Resource Report System (see Appendix 1). The following species list is generated using a regional and/or watershed approach and does not necessarily indicate that the Study Area provides suitable habitat:

- Northern Spotted Owl (*Strix occidentalis caurina*) Threatened
- California Red-legged Frog (*Rana draytonii*) Threatened
- Delta Smelt (*Hypomesus transpacificus*) Threatened
- Monarch Butterfly (*Danaus plexippus*) Candidate
- Burke's Goldfields (*Lasthenia burkei*) Endangered
- Few-flowered Navarretia (*Navarretia leucocephala ssp. pauciflora)* Endangered
- Slender Orcutt Grass (*Orcuttia tenuis*) Threatened

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

Common Name	Scientific Name	Status*	General Habitat**	Microhabitat**	Potential to Occur in Project Area***
Red-bellied newt	*Taricha rivularis*	CSSC	Broadleaved upland forest; North coast coniferous forest; Redwood; Riparian forest; Riparian woodland	Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	**Potential to occur**: Suitable habitat present.
California giant salamander	*Dicamptodon ensatus*	FT/CSSC	Aquatic; Meadow & seep; North coast coniferous forest; Riparian forest	Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	**Absent**: No habitat onsite.
California red-legged frog	*Rana draytonii*	CE/CSSC	Aquatic; Artificial flowing waters; Artificial standing waters; Freshwater marsh; Marsh & swamp; Riparian forest; Riparian scrub; Riparian woodland; South coast flowing waters; South coast standing waters; Sacramento/San Joaquin flowing waters; Sacrament	Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Low potential to occur**: Marginal habitat is present.
Foothill yellow-legged frog	*Rana boylii*	CWL	Aquatic; Chaparral; Cismontane woodland; Coastal scrub; Klamath/North coast flowing waters; Lower montane coniferous forest; Meadow & seep; Riparian forest; Riparian woodland; Sacramento/San Joaquin flowing waters	Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	**Potential to occur**: Suitable habitat present.
Osprey	*Pandion haliaetus*	FD/CE/CFP	Riparian forest	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	**Potential to occur**: Suitable habitat present.
Bald eagle	*Haliaeetus leucocephalus*	CWL	Lower montane coniferous forest; Old-growth	Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	**Absent**: No habitat onsite.
Cooper's hawk	*Accipiter cooperii*	CFP/CWL	Cismontane woodland; Riparian forest; Riparian woodland; Upper montane coniferous forest	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	**Potential to occur**: Suitable habitat present.
Golden eagle	*Aquila chrysaetos*	CWL	Broadleaved upland forest; Cismontane woodland; Coastal prairie; Great Basin grassland; Great Basin scrub; Lower montane coniferous forest; Pinon & juniper woodlands; Upper montane coniferous forest; Valley & foothill grassland	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Absent**: No habitat onsite.
Prairie falcon	*Falco mexicanus*	FT/CE	Great Basin grassland; Great Basin scrub; Mojavean desert scrub; Sonoran desert scrub; Valley & foothill grassland	Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	**Absent**: No habitat onsite.

Common Name	Scientific Name	Status*	General Habitat**	Microhabitat**	Potential to Occur in Project Area***
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	CSSC	Riparian forest	Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	**Absent**: No habitat onsite.
Purple martin	*Progne subis*	CT	Broadleaved upland forest; Lower montane coniferous forest	Nests in old woodpecker cavities mostly; also in human-made structures. Nest often located in tall, isolated tree/snag.	**Potential to occur**: Suitable habitat present.
Clear Lake hitch	*Lavinia exilicauda chi*	CSSC	Aquatic; Sacramento/San Joaquin flowing waters; Sacramento/San Joaquin standing waters	Adults found in the limnetic zone. Juveniles found in the nearshore shallow-water habitat hiding in the vegetation.	**Absent**: No habitat onsite.
Sacramento perch	*Archoplites interruptus*	CSSC	Aquatic; Sacramento/San Joaquin flowing waters; Sacramento/San Joaquin standing waters	Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	**Absent**: No habitat onsite.
Clear Lake tule perch	*Hysterocarpus traskii lagunae*	CSSC	Aquatic		**Absent**: No habitat onsite.
Long-eared myotis	*Myotis evotis*	CSSC	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests.	Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.	**Potential to occur**: Suitable habitat present.
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.	**Absent**: No habitat onsite.
Silver-haired bat	*Lasionycteris noctivagans*	CSSC	Lower montane coniferous forest; Old-growth; Riparian forest	Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	**Potential to occur**: Suitable habitat present.
Hoary bat	*Lasiurus cinereus*	CSSC	Broadleaved upland forest; Cismontane woodland; Lower montane coniferous forest; North coast coniferous forest	Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	**Potential to occur**: Suitable habitat present.
Western red bat	*Lasiurus blossevillii*	CSSC	Cismontane woodland; Lower montane coniferous forest; Riparian forest; Riparian woodland	Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Potential to occur**: Suitable habitat present.
Townsend's big-eared bat	*Corynorhinus townsendii*	CSSC	Broadleaved upland forest; Chaparral; Chenopod scrub; Great Basin grassland; Great Basin scrub; Joshua tree woodland; Lower montane coniferous forest; Mojavean desert scrub; Meadow & seep; Riparian forest; Riparian woodland; Sonoran desert scrub; Sonoran	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**Absent**: No habitat onsite.
Pallid bat	*Antrozous pallidus*	CSSC	Chaparral; Coastal scrub; Desert wash; Great Basin grassland; Great Basin scrub; Mojavean desert scrub; Riparian woodland; Sonoran desert scrub; Upper montane coniferous forest; Valley & foothill	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Potential to occur**: Suitable habitat present.

Common Name	Scientific Name	Status*	General Habitat**	Microhabitat**	Potential to Occur in Project Area***
			grassland		
Western pond turtle	*Emys marmorata*	CSSC	Aquatic; Artificial flowing waters; Klamath/North coast flowing waters; Klamath/North coast standing waters; Marsh & swamp; South coast flowing waters; South coast standing waters; Sacramento/San Joaquin flowing waters; Sacramento/San Joaquin standing waters	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**Potential to occur**: Suitable habitat present.
Brownish dubiraphian riffle beetle	*Dubiraphia brunnescens*	CSSC	Aquatic	Inhabits exposed, wave-washed willow roots.	**Absent**: No habitat onsite.
Wilbur Springs minute moss beetle	*Ochthebius recticulus*	CCE	Aquatic; Sacramento/San Joaquin flowing waters	Inhabits the shoreline of the creek at Wilbur Hot Springs.	**Absent**: No habitat onsite.
Western bumble bee	*Bombus occidentalis*	CSSC		Once common and widespread, species has declined precipitously from central Ca to southern B.C., perhaps from disease.	**Potential to occur**: Suitable habitat present.
Borax Lake cuckoo wasp	*Hedychridium milleri*	CSSC		External parasite of wasp and bee larva.	**Potential to occur**: Suitable habitat present.
Western ridged mussel	*Gonidea angulata*	CSSC	Aquatic	Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from central and southern California.	**Low potential to occur**: Marginal habitat is present.
Clear Lake pyrg	*Pyrgulopsis ventricosa*	CSSC	Aquatic	Known only from spring fed creek in Seigler Canyon	**Absent**: No habitat onsite.
Toren's grimmia	*Grimmia torenii*	1B.3	Chaparral; Cismontane woodland; Lower montane coniferous forest; Limestone	Openings, rocky, boulder and rock walls, serpentine, volcanic. 325-1160 m.	**Absent**: No habitat onsite.
Elongate copper moss	*Mielichhoferia elongata*	4.3	Cismontane woodland	Moss growing on very acidic, metamorphic rock or substrate; usually in higher portions in fens. Often on substrates naturally enriched with heavy metals (e.g. copper) such as mine tailings. 5-1085 m.	**Absent**: No habitat onsite.
Loch Lomond button-celery	*Eryngium constancei*	FE/CE/1B.1	Vernal pool; Wetland	Volcanic ash flow vernal pools. 460-855 m.	**Absent**: No habitat onsite.
Big-scale balsamroot	*Balsamorhiza macrolepis*	1B.2	Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Sometimes on serpentine. 35-1465 m.	**Potential to occur**: Suitable habitat present.
Greene's narrow-leaved daisy	*Erigeron greenei*	1B.2	Chaparral; Ultramafic	Serpentine and volcanic substrates, generally in shrubby vegetation. 90-835 m.	**Absent**: No habitat onsite.

Common Name	Scientific Name	Status*	General Habitat**	Microhabitat**	Potential to Occur in Project Area***
Congested-headed hayfield tarplant	*Hemizonia congesta ssp. congesta*	1B.2	Valley & foothill grassland	Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 5-520 m.	**Potential to occur**: Suitable habitat present.
Pappose tarplant	*Centromadia parryi ssp. parryi*	1B.2	Chaparral; Coastal prairie; Meadow & seep; Marsh & swamp; Valley & foothill grassland	Vernally mesic, often alkaline sites. 1-500 m.	**Low potential to occur**: Marginal habitat is present.
Burke's goldfields	*Lasthenia burkei*	FE/CE/1B.1	Meadow & seep; Vernal pool; Wetland	Most often in vernal pools and swales. 15-580 m.	**Absent**: No habitat onsite.
Colusa layia	*Layia septentrionalis*	1B.2	Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 15-1100 m.	**Absent**: No habitat onsite.
Hall's harmonia	*Harmonia hallii*	1B.2	Chaparral; Ultramafic	Serpentine hills and ridges. Open, rocky areas within chaparral. 335-945 m.	**Present**: Species has been previously documented to occur within the Study Area. Suitable serpentine habitat is not present.
Bent-flowered fiddleneck	*Amsinckia lunaris*	1B.2	Coastal bluff scrub; Cismontane woodland; Valley & foothill grassland	3-795 m.	**Potential to occur**: Suitable habitat present.
Serpentine cryptantha	*Cryptantha dissita*	1B.2	Chaparral; Ultramafic	Serpentine outcrops. 135-735 m.	**Absent**: No habitat onsite.
Deep-scarred cryptantha	*Cryptantha excavata*	1B.1	Cismontane woodland	Sandy, gravelly, dry streambanks. 180-375 m.	**Potential to occur**: Suitable habitat present.
Freed's jewelflower	*Streptanthus brachiatus ssp. hoffmanii*	1B.2	Chaparral; Cismontane woodland; Ultramafic	Serpentine rock outcrops, primarily in geothermal development areas. 485-1040 m.	**Absent**: No habitat onsite.
Socrates Mine jewelflower	*Streptanthus brachiatus ssp. brachiatus*	1B.2	Closed-cone coniferous forest; Chaparral; Ultramafic	Serpentine areas and serpentine chaparral. 605-1950 m.	**Absent**: No habitat onsite.
Kruckeberg's jewelflower	*Streptanthus morrisonii ssp. kruckebergii*	1B.2	Cismontane woodland; Ultramafic	Scattered serpentine outcrops near the lake/napa county line. 240-665 m.	**Absent**: No habitat onsite.
Green jewelflower	*Streptanthus hesperidis*	1B.2	Chaparral; Cismontane woodland; Ultramafic	Openings in chaparral or woodland; serpentine, rocky sites. 240-765 m.	**Absent**: No habitat onsite.
Watershield	*Brasenia schreberi*	2B.3	Marsh & swamp; Wetland	Aquatic known from water bodies both natural and artificial in California. 1-2180 m.	**Low potential to occur**: Marginal habitat is present.

Common Name	Scientific Name	Status*	General Habitat**	Microhabitat**	Potential to Occur in Project Area***
Cascade downingia	*Downingia willamettensis*	2B.2	Cismontane woodland; Valley & foothill grassland; Vernal pool	Lake margins. 15-1110 m.	**Absent**: No habitat onsite.
Legenere	*Legenere limosa*	1B.1	Vernal pool; Wetland	In beds of vernal pools. 1-1005 m.	**Absent**: No habitat onsite.
San Joaquin spearscale	*Extriplex joaquinana*	1B.2	Alkali playa; Chenopod scrub; Meadow & seep; Valley & foothill grassland	In seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata, Frankenia*, etc. 0-800 m.	**Absent**: No habitat onsite.
Mt. Saint Helena morning-glory	*Calystegia collina ssp. oxyphylla*	4.2	Chaparral; Lower montane coniferous forest; Ultramafic; Valley & foothill grassland	On serpentine barrens, slopes, and hillsides. 280-1010 m.	**Absent**: No habitat onsite.
Three-fingered morning-glory	*Calystegia collina ssp. tridactylosa*	1B.2	Chaparral; Cismontane woodland; Ultramafic	Rocky, gravelly openings in serpentine. 605-705 m.	**Absent**: No habitat onsite.
Oval-leaved viburnum	*Viburnum ellipticum*	2B.3	Chaparral; Cismontane woodland; Lower montane coniferous forest	215-1400 m.	**Potential to occur**: Suitable habitat present.
Lake County stonecrop	*Sedella leiocarpa*	FE/CE/1B.1	Cismontane woodland; Valley & foothill grassland; Vernal pool; Wetland	Level areas that are seasonally wet and dry out in late spring; substrate usually of volcanic origin. 515-640 m.	**Absent**: No habitat onsite.
Raiche's manzanita	*Arctostaphylos stanfordiana ssp. raichei*	1B.1	Chaparral; Lower montane coniferous forest; Ultramafic	Rocky, serpentine sites. Slopes and ridges. 485-1070 m.	**Absent**: No habitat onsite.
Konocti manzanita	*Arctostaphylos manzanita ssp. elegans*	1B.3	Chaparral; Cismontane woodland; Lower montane coniferous forest	Volcanic soils. 225-1830 m.	**Absent**: No habitat onsite.
Jepson's milk-vetch	*Astragalus rattanii var. jepsonianus*	1B.2	Cismontane woodland; Ultramafic; Valley & foothill grassland	Commonly on serpentine in grassland or openings in chaparral. 175-1005 m.	**Absent**: No habitat onsite.
Cobb Mountain lupine	*Lupinus sericatus*	1B.2	Broadleaved upland forest; Chaparral; Cismontane woodland; Lower montane coniferous forest; Ultramafic	In stands of knobcone pine-oak woodland, on open wooded slopes in gravelly soils; sometimes on serpentine. 120-1390 m.	**Absent**: No habitat onsite.
Milo Baker's lupine	*Lupinus milo-bakeri*	CT/1B.1	Cismontane woodland; Valley & foothill grassland	In roadside ditches, dry gravelly areas along roads, and along small streams. 380-430 m.	**Potential to occur**: Suitable habitat present.
Saline clover	*Trifolium hydrophilum*	1B.2	Marsh & swamp; Valley & foothill grassland; Vernal pool; Wetland	Mesic, alkaline sites. 1-335 m.	**Absent**: No habitat onsite.

Common Name	Scientific Name	Status*	General Habitat**	Microhabitat**	Potential to Occur in Project Area***
Glandular western flax	*Hesperolinon adenophyllum*	1B.2	Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Serpentine soils; generally found in serpentine chaparral. 425-1345 m.	**Absent**: No habitat onsite.
Two-carpellate western flax	*Hesperolinon bicarpellatum*	1B.2	Chaparral; Ultramafic	Serpentine barrens at edge of chaparral. 175-825 m.	**Absent**: No habitat onsite.
Lake County western flax	*Hesperolinon didymocarpum*	CE/1B.2	Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Serpentine soil in open grassland and near chaparral. 325-400 m.	**Absent**: No habitat onsite.
Drymaria-like western flax	*Hesperolinon drymarioides*	1B.2	Closed-cone coniferous forest; Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Serpentine soils, mostly within chaparral. 400-1100 m.	**Absent**: No habitat onsite.
Sharsmith's western flax	*Hesperolinon sharsmithiae*	1B.2	Chaparral; Ultramafic	Serpentine substrates. 180-670 m.	**Absent**: No habitat onsite.
Keck's checkerbloom	*Sidalcea keckii*	FE/1B.1	Cismontane woodland; Ultramafic; Valley & foothill grassland	Grassy slopes in blue oak woodland. On serpentine-derived, clay soils, at least sometimes. 85-505 m.	**Absent**: No habitat onsite.
Marsh checkerbloom	*Sidalcea oregana ssp. hydrophila*	1B.2	Meadow & seep; Riparian forest; Wetland	Wet soil of streambanks, meadows. 455-2030 m.	**Potential to occur**: Suitable habitat present.
Snow Mountain buckwheat	*Eriogonum nervulosum*	1B.2	Chaparral; Ultramafic	Dry serpentine outcrops, balds, and barrens. 445-2105 m.	**Absent**: No habitat onsite.
Tracy's eriastrum	*Eriastrum tracyi*	CR/3.2	Chaparral; Cismontane woodland; Valley & foothill grassland	Gravelly shale or clay; often in open areas. 315-2400 m.	**Potential to occur**: Suitable habitat present.
Brandegee's eriastrum	*Eriastrum brandegeeae*	1B.1	Chaparral; Cismontane woodland	On barren volcanic soils; often in open areas. 410-845 m.	**Absent**: No habitat onsite.
Jepson's leptosiphon	*Leptosiphon jepsonii*	1B.2	Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. 55-855 m.	**Absent**: No habitat onsite.
Baker's navarretia	*Navarretia leucocephala ssp. bakeri*	1B.1	Cismontane woodland; Lower montane coniferous forest; Meadow & seep; Valley & foothill grassland; Vernal pool; Wetland	Vernal pools and swales; adobe or alkaline soils. 3-1680 m.	**Absent**: No habitat onsite.
Few-flowered navarretia	*Navarretia leucocephala ssp. pauciflora*	FE/CT/1B.1	Vernal pool; Wetland	Volcanic ash flow, and volcanic substrate vernal pools. 425-855 m.	**Present**: Species has been previously documented to occur within the Study Area. Suitable vernal pool is not present

Common Name	Scientific Name	Status*	General Habitat**	Microhabitat**	Potential to Occur in Project Area***
Many-flowered navarretia	*Navarretia leucocephala ssp. plieantha*	FE/CE/1B.2	Vernal pool; Wetland	Volcanic ash flow vernal pools. 30-915 m.	**Absent**: No habitat onsite.
Shining navarretia	*Navarretia nigelliformis ssp. radians*	1B.2	Cismontane woodland; Valley & foothill grassland; Vernal pool; Wetland	Apparently in grassland, and not necessarily in vernal pools. 60-975 m.	**Potential to occur**: Suitable habitat present.
Porter's navarretia	*Navarretia paradoxinota*	1B.3	Meadow & seep; Ultramafic	Serpentinite, openings, vernally mesic, often drainages. 175-875 m.	**Absent**: No habitat onsite.
Rincon Ridge ceanothus	*Ceanothus confusus*	1B.1	Closed-cone coniferous forest; Chaparral; Cismontane woodland; Ultramafic	Known from volcanic or serpentine soils, dry shrubby slopes. 150-1280 m.	**Absent**: No habitat onsite.
Calistoga ceanothus	*Ceanothus divergens*	1B.2	Chaparral; Cismontane woodland; Ultramafic	Rocky, serpentine or volcanic sites. 100-950 m.	**Absent**: No habitat onsite.
Bolander's horkelia	*Horkelia bolanderi*	1B.2	Cismontane woodland; Lower montane coniferous forest; Meadow & seep; Valley & foothill grassland	Grassy margins of vernal pools and meadows. 455-855 m.	**Absent**: No habitat onsite.
Pink creamsacs	*Castilleja rubicundula var. rubicundula*	1B.2	Chaparral; Cismontane woodland; Meadow & seep; Ultramafic; Valley & foothill grassland	Openings in chaparral or grasslands. On serpentine. 20-915 m.	**Absent**: No habitat onsite.
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	CE/1B.2	Freshwater marsh; Marsh & swamp; Vernal pool; Wetland	Clay soils; usually in vernal pools, sometimes on lake margins. 4-2410 m.	**Absent**: No habitat onsite.
Sonoma beardtongue	*Penstemon newberryi var. sonomensis*	1B.3	Chaparral	Crevices in rock outcrops and talus slopes. 425-1405 m.	**Absent**: No habitat onsite.
Dimorphic snapdragon	*Antirrhinum subcordatum*	4.3	Chaparral; Lower montane coniferous forest; Ultramafic	Generally on serpentine or shale in foothill woodland or chaparral on s- and w-facing slopes. 185-800 m.	**Absent**: No habitat onsite.
Northern meadow sedge	*Carex praticola*	2B.2	Meadow & seep; Wetland	Moist to wet meadows. 15-3200 m.	**Absent**: No habitat onsite.
Indian Valley brodiaea	*Brodiaea rosea*	CE/3.1	Closed-cone coniferous forest; Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Serpentine gravelly creek bottoms, and in meadows and swales. 340-1195 m.	**Absent**: No habitat onsite.
Dwarf soaproot	*Chlorogalum pomeridianum var. minus*	1B.2	Chaparral; Ultramafic	Serpentine. 120-1220 m.	**Absent**: No habitat onsite.
Adobe-lily	*Fritillaria pluriflora*	1B.2	Chaparral; Cismontane woodland; Ultramafic; Valley & foothill grassland	Usually on clay soils; sometimes serpentine. 45-945 m.	**Low potential to occur**: Marginal habitat is present.
Geysers panicum	*Panicum acuminatum var.*	CE/1B.2	Closed-cone coniferous forest; Riparian forest; Valley & foothill grassland; Wetland	Usually around moist, warm soil in the vicinity of hot springs. 455-2470 m.	**Absent**: No habitat onsite.

Common Name	Scientific Name	Status*	General Habitat**	Microhabitat**	Potential to Occur in Project Area***
	thermale				
California satintail	*Imperata brevifolia*	2B.1	Chaparral; Coastal scrub; Mojavean desert scrub; Meadow & seep; Riparian scrub; Wetland	Mesic sites, alkali seeps, riparian areas. 3-1495 m.	**Potential to occur**: Suitable habitat present.
Slender Orcutt grass	*Orcuttia tenuis*	FT/CE/1B.1	Vernal pool; Wetland	Often in gravelly substrate. 25-1755 m.	**Absent**: No habitat onsite.
California alkali grass	*Puccinellia simplex*	1B.2	Chenopod scrub; Meadow & seep; Valley & foothill grassland; Vernal pool	Alkaline, vernally mesic. Sinks, flats, and lake margins. 1-915 m.	**Absent**: No habitat onsite.
Eel-grass pondweed	*Potamogeton zosteriformis*	2B.2	Marsh & swamp; Wetland	Ponds, lakes, streams. 90-2135 m.	**Low potential to occur**: Marginal habitat is present.

*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.

*** Likelihood for occurrence categories:

Present: Species was observed during site visit. Or
Present: Species has been previously documented to occur within the Study Area.
Potential to occur: Suitable habitat present.
Low potential to occur: Marginal habitat is present.
Absent: No habitat onsite.

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

The listed species and special-status species identified in database searches were further assessed for their likelihood to occur within the Study Area based upon previously documented occurrences, field surveys, their habitat requirements, and the quality and extent of any suitable habitat within the Study Area. Each species was ranked for its likelihood to occur within the Study Area: a “present” rank was given for a species that was observed in the Study Area during the field visit or is known to occur within the Study Area based upon documented occurrences; a "potential to occur" rank was given for species that were not detected during current field surveys, but essential habitat elements exist within the Study Area; a "low potential to occur" rank was given for species that were not detected during current field surveys, and where habitat elements exist within the Study Area or vicinity, but the quality of that habitat is degraded or of poor quality, and/or where Study Area conditions and land uses deter its use of the Study Area; and an “absent” rank was given for species with no known observations within the Study Area or vicinity, and where no suitable habitat exists within the Study Area.

The disturbed/developed habitat within the Study Area have a low potential for harboring special-status plant species due to the dominance of aggressive non-native grasses and forbs found in the understory and the lack of suitable soils and the disturbance regimes of human activity and weed control. However, non-listed, special-status plants may occur in the annual grassland, chaparral, oak-pine woodland and riparian forest habitat and along the shore of Copsey Creek. These special-status species consist of:

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- Big-scale balsamroot (*Balsamorhiza macrolepis*)
- Congested-headed hayfield tarplant (*Hemizonia congesta ssp. congesta*)
- Bent-flowered fiddleneck (*Amsinckia lunaris*)
- Deep-scarred cryptantha (*Cryptantha excavata*)
- Oval-leaved viburnum (*Viburnum ellipticum*)
- Milo Baker's lupine (*Lupinus milo-bakeri*)
- Marsh checkerbloom (*Sidalcea oregana ssp. hydrophila*)
- Tracy's eriastrum (*Eriastrum tracyi*)
- Shining navarretia (*Navarretia nigelliformis ssp. radians*)
- California satintail *(Imperata brevifolia*)

The disturbed/developed habitat within the Study Area have a low potential for harboring special-status animal species due to the simplification of the habitats and the constant disturbance regimes of noise, ground disturbance, traffic, and other human land use activity. Special-status animals have a potential to occur in the chaparral, oak-pine woodland and riparian forest habitat habitats as well as Copsey Creek. Trees within these habitats may provide suitable nesting habitat for special status birds and bats such as osprey (*Pandion haliaetus*), Cooper's hawk (*Accipiter cooperii*), purple martin (*Progne subis*), long-eared myotis (*Myotis evotis*), silver-haired bat (*Lasionycteris noctivagans*), hoary bat (*Lasiurus cinereus*), western red bat (*Lasiurus blossevillii*) and pallid bat (*Antrozous pallidus*).

The annual grassland habitats within the Study Area provide suitable habitat for special status invertebrates including western bumble bee (*Bombus occidentalis*) and Borax Lake cuckoo wasp

(*Hedychridium milleri*). Copsey Creek at this location can sustain aquatic special-status species and diverse wildlife species, such as red-bellied newt (*Taricha rivularis*), foothill yellow-legged frog (*Rana boylii*) and western pond turtle (*Emys marmorata*).

4.4. POTENTIALLY-JURISDICTIONAL WATER RESOURCES

The USFWS National Wetland Inventory reported no water features within the Project Area, but the Inventory did report the following water features within the Study Area (see Exhibits): 5 riverine features, 1 freshwater pond, and 1 freshwater forested/shrub wetland.

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 cultivation area was designed to avoid all channels and wetlands. The following water features were detected within the larger Study Area during the field survey (see Exhibits):

- 1 perennial channel (Class I watercourse, Copsey Creek)
- 2 intermittent channels (Class II watercourses)
- at least 12 unnamed ephemeral channels (Class III watercourses)
- 3 stockponds
- riverine wetlands in Copsey Creek

There are 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.

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?*

The Project Areas are located in annual grassland habitat, which will be impacted by project implementation. Special-status plants have a moderate potential to occur in this habitat because rare plant species have been reported in similar habitats in the region by the CNDDB. A botanical survey was performed during our site survey. 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.

No special-status animals were observed within the Project Area or the surrounding Study Area during the field survey. Two special-status animals, the western bumblebee and Borax Lake cuckoo wasp, may occur within the Project Area. However, the field survey was performed outside of the season when these species are active. Therefore, without an additional botanical survey performed during the flowering period of typical food plants for the bumblebee and host species for the cuckoo wasp, we cannot be certain that special-status animals will not be impacted by project implementation. This is a potentially significant impact before mitigation.

Special-status bird species were reported in databases (CNDDB and USFWS) in the vicinity of the Project Area. The Project Area, and adjacent trees and utility poles, contain suitable nesting habitat for various bird species. However, no nests were observed during the field survey. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal and indirectly impacted by noise, vibration, and other construction-related disturbance. Therefore, Project construction is considered a potentially significant adverse impact to nesting birds.

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.

Because special-status species that occur in the vicinity could migrate onto the Study Area between the time that the field survey was completed and the start of construction, 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 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 these mitigation measures, adverse impacts upon special-status species would be reduced to a less-than-significant level.

If construction activities would occur during the nesting season (typically February through August), 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 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 terrestrial special-status habitat: riparian habitat along Copsey Creek. The cultivation area was designed to avoid

all sensitive habitats; the cultivation area is setback from the riparian habitat by a minimum of 100 feet. Project implementation will not impact any special-status habitats.

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. There are several water resources within the surrounding Study Area: one Class I Watercourse, two Class II Watercourses, ten Class III Watercourses, three freshwater ponds and riverine wetlands. 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 the nearest Class I watercourse, and 100-foot setbacks from the nearest Class I and Class II watercourses, and 150-foot setbacks from the nearest wetland. Because of these avoidance measures, no direct impacts to water resources will occur.

Potential indirect impacts to water resources could occur during construction by increased erosion and sedimentation in receiving water bodies due to soil disturbance. The Project Area does not have a significant erosion potential, because slopes are not steep and vegetated buffers are present. Therefore, no mitigation is required. However, if the total area of ground disturbance from installation of the cultivation operation is 1 acre or more, the Cultivator may need to 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.

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 corridors 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?*

Implementation of the proposed project will not require the removal of mature trees, because the area was already cleared many years ago for agriculture. 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

No mitigation is necessary.

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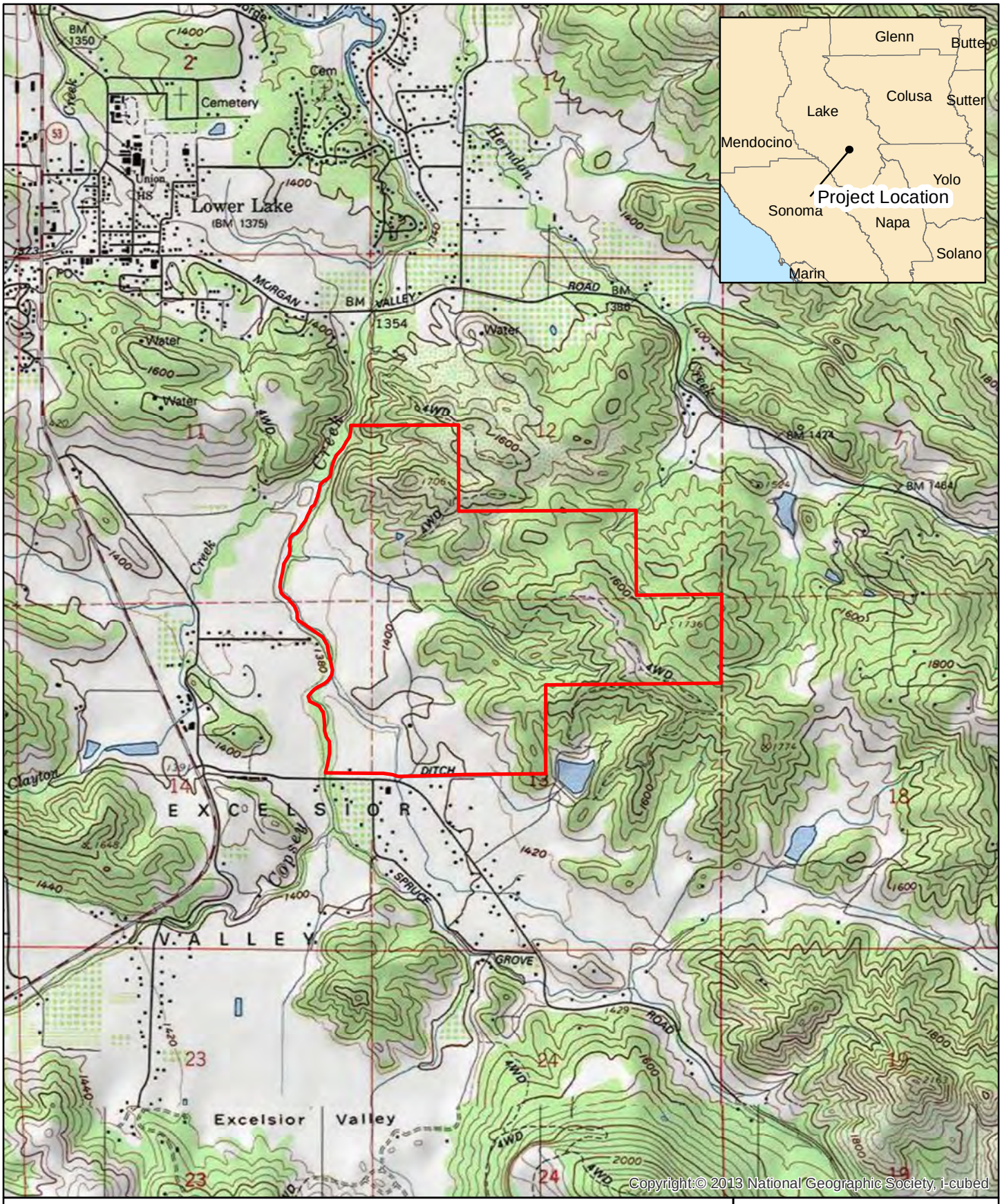
EXHIBITS



PropertyLocation

0 0.5 1 Kilometers

0 0.5 1 Miles

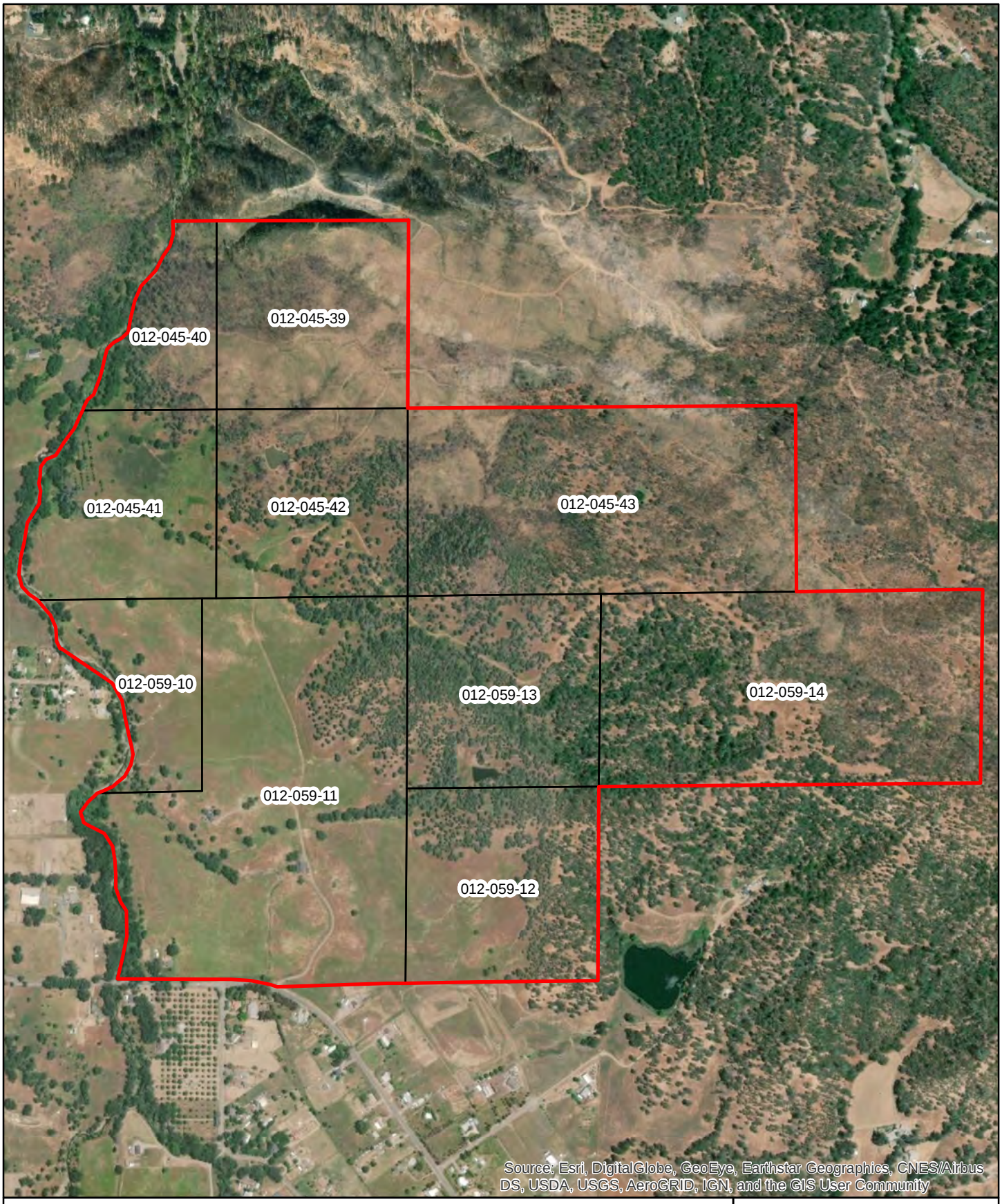
1:24,000

Property Location Map

NATURAL INVESTIGATIONS COMPANY

Map Date 6/5/2019

Lower Lake 1993 Quadrangle:Township 12N, Range 7W, Section 11,12,13,14



Project Location

Parcel Lines

0 250 500 Meters

0 1,000 2,000 Feet

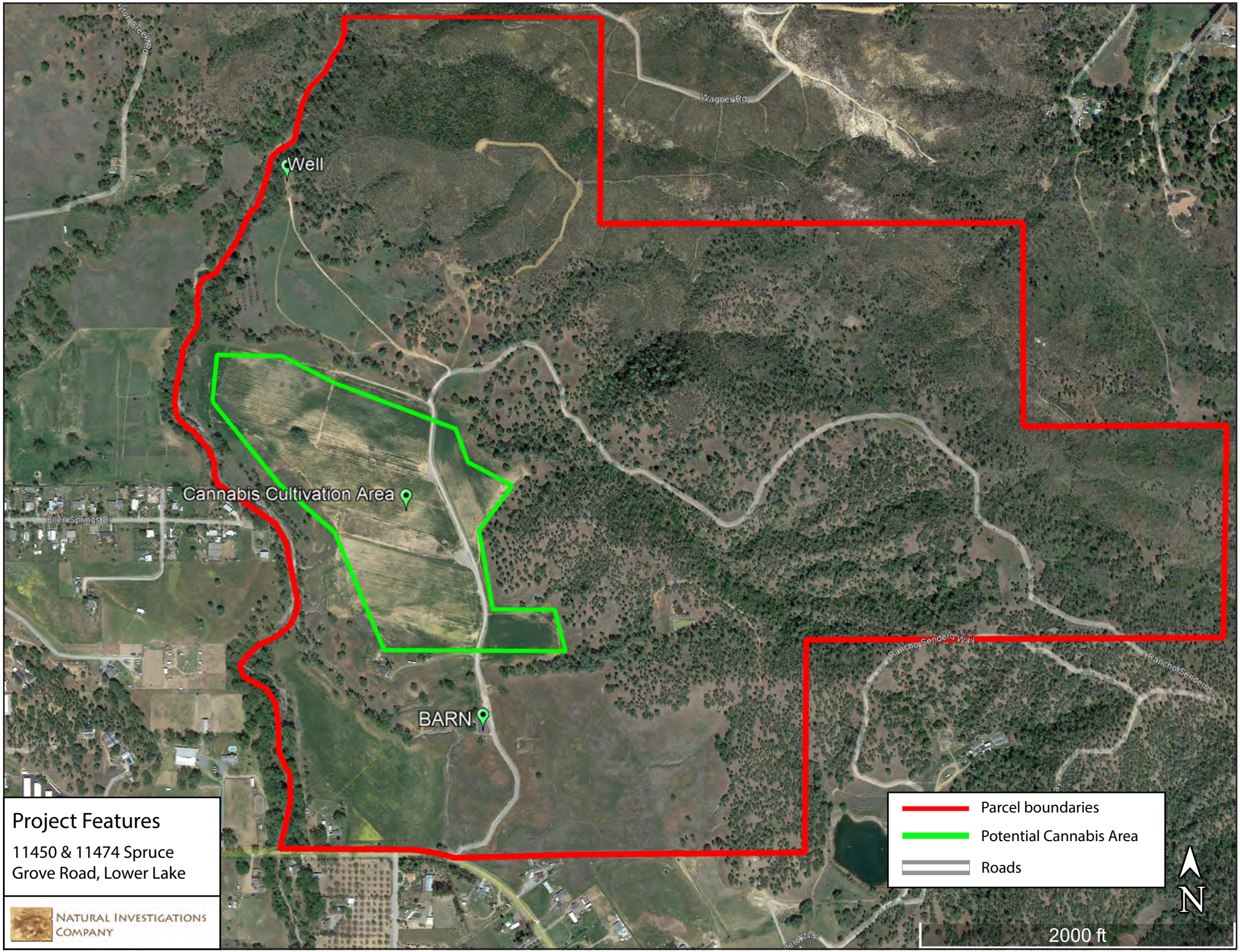
1:11,000

Parcel Layout Map

Natural Investigations Company

Map Date 6/5/2019

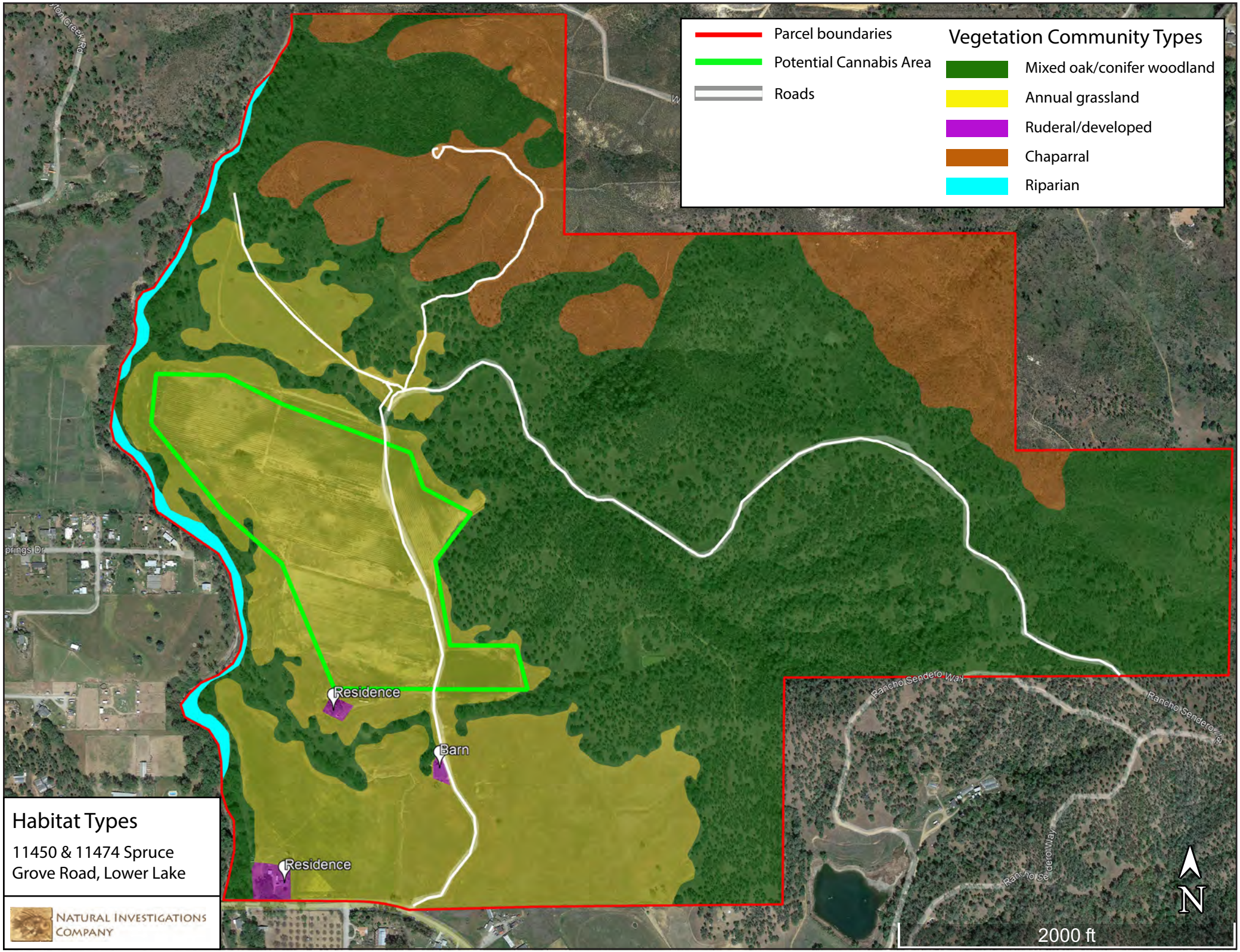
Lower Lake 1993 Quadrangle:Township 12N, Range 7W, Section 11,12,13,14



Project Features

11450 & 11474 Spruce Grove Road, Lower Lake

Natural Investigations Company


Parcel boundaries
Potential Cannabis Area
Roads
Vegetation Community Types
Mixed oak/conifer woodland
Annual grassland
Ruderal/developed
Chaparral
Riparian
Residence
Barn
Residence
Rancho Sendero Way
Rancho Sendero Way
Rancho Sendero Way
N
2000 ft
Habitat Types
11450 & 11474 Spruce Grove Road, Lower Lake
Natural Investigations Company

11450/11474 Spruce Grove Rd
CNDDB Special-Status Species Occurrences

Clear Lake hitch
western yellow-billed cuckoo
Sacramento perch
brownish dubiraphian riffle beetle
Clear Lake tule perch
western ridged mussel
Konocti manzanita
eel-grass pondweed
Coastal and Valley Freshwater Marsh
Clear Lake hitch
Loch Lomond button-celery
Konocti manzanita
Bolander's horkelia
foothill yellow-legged frog
Hall's harmonia
few-flowered navarretia
Baker's navarretia
Konocti manzanita
Konocti manzanita
Konocti manzanita
Burke's goldfields
Baker's navarretia
red-bellied newt
foothill yellow-legged frog
golden eagle
Wilbur Springs shorebug
Townsend's big-eared bat
Sharsmith's western flax
Clear Lake pyrg
California satintail
legenere
Cascade downingia
Bolander's horkelia
Lake County stonecrop
Jepson's milk-vetch
two-carpellate western flax
Toren's grimmia
Lake County stonecrop
Sharsmith's western flax
foothill yellow-legged frog
western pond turtle
western pond turtle
prairie falcon

Study Area

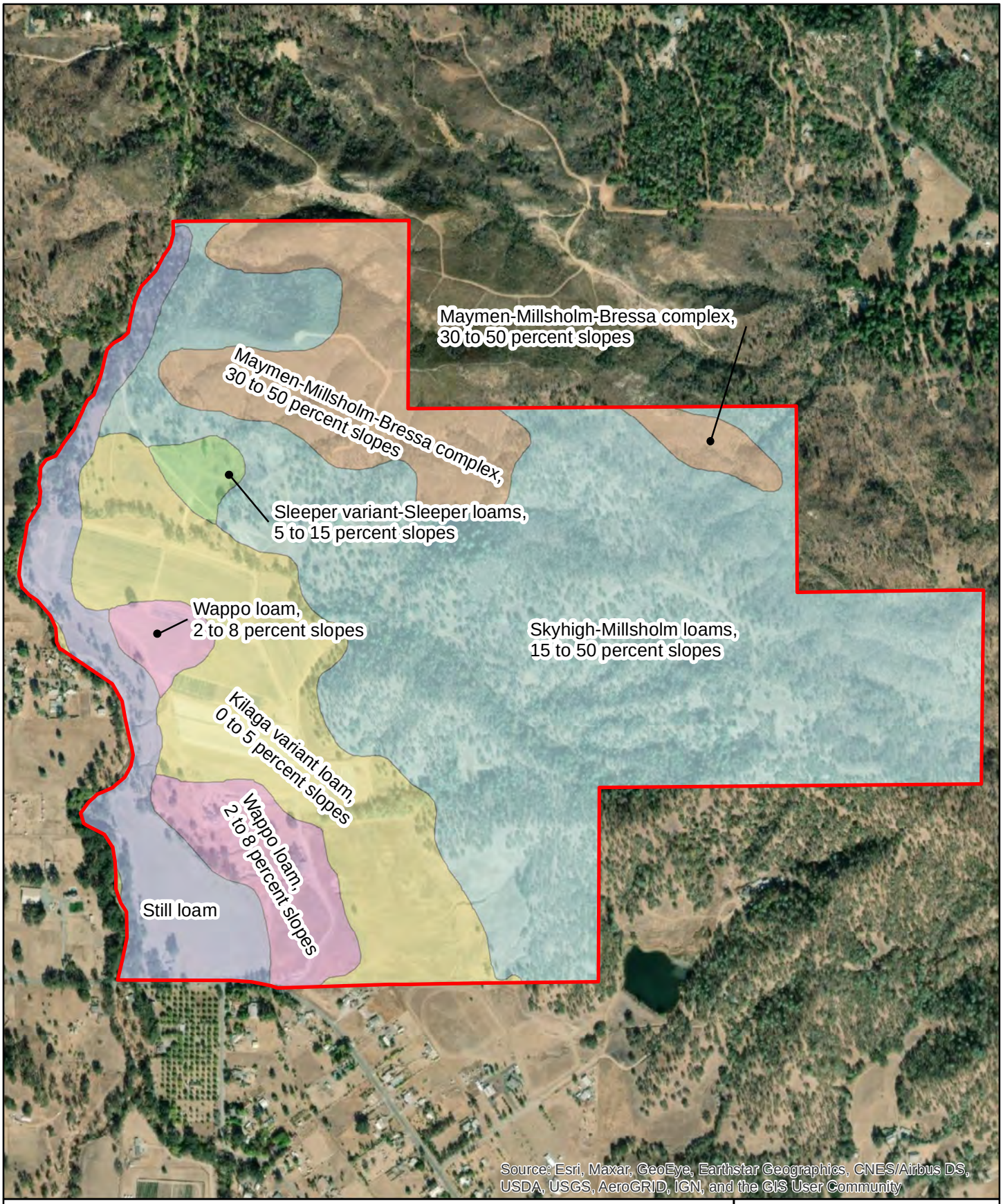
0 0.5 1 Miles

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Natural Investigations Company

Map Date 11/25/21

Data Sources: California Department of Fish and Wildlife. 2021. RareFind 5.x, California Natural Diversity Data Base. Biogeographic Data Branch, Sacramento, California. (updated monthly by subscription service)



Study Area

0 250 500 Meters

0 1,000 2,000 Feet

N W E S

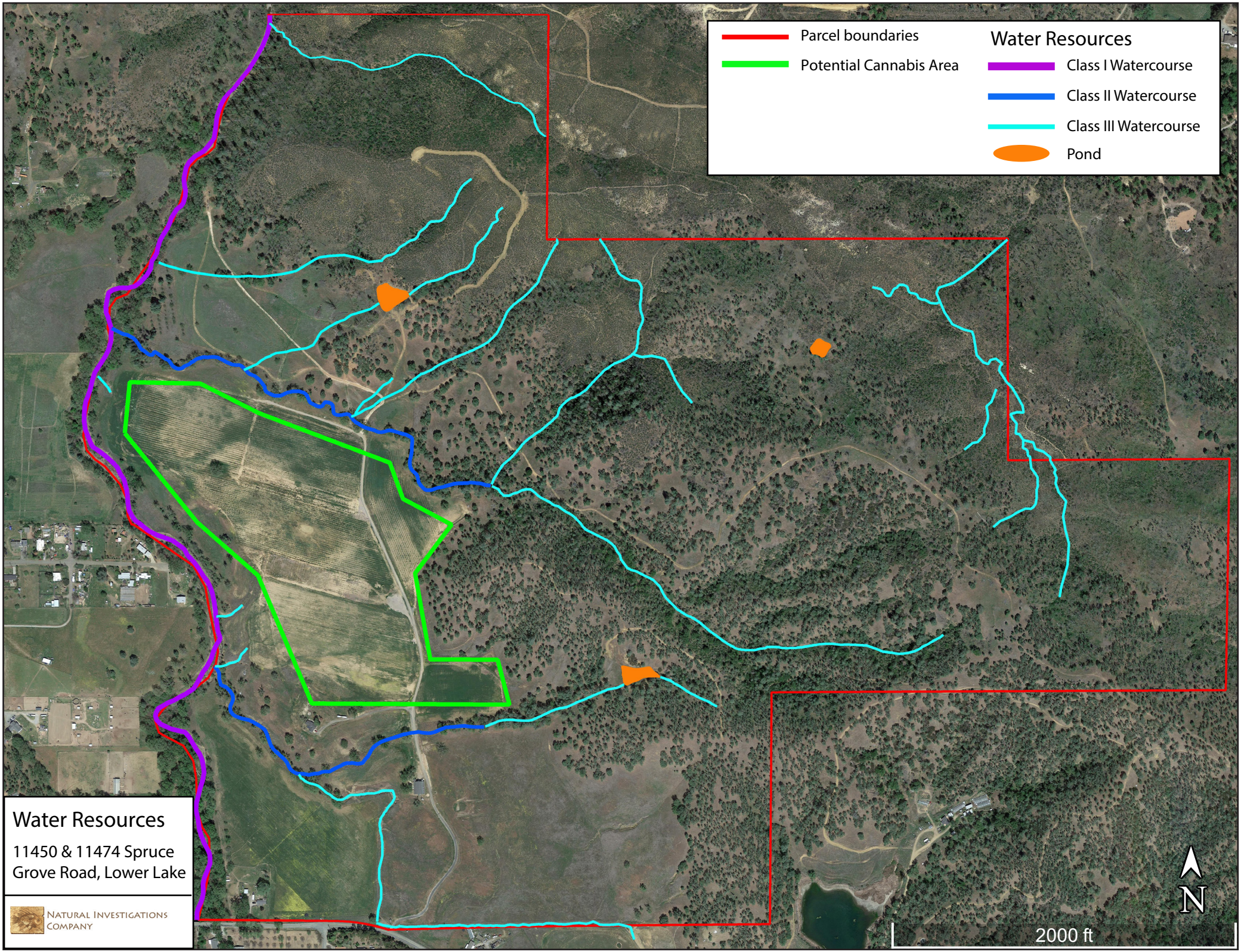
1:11,000

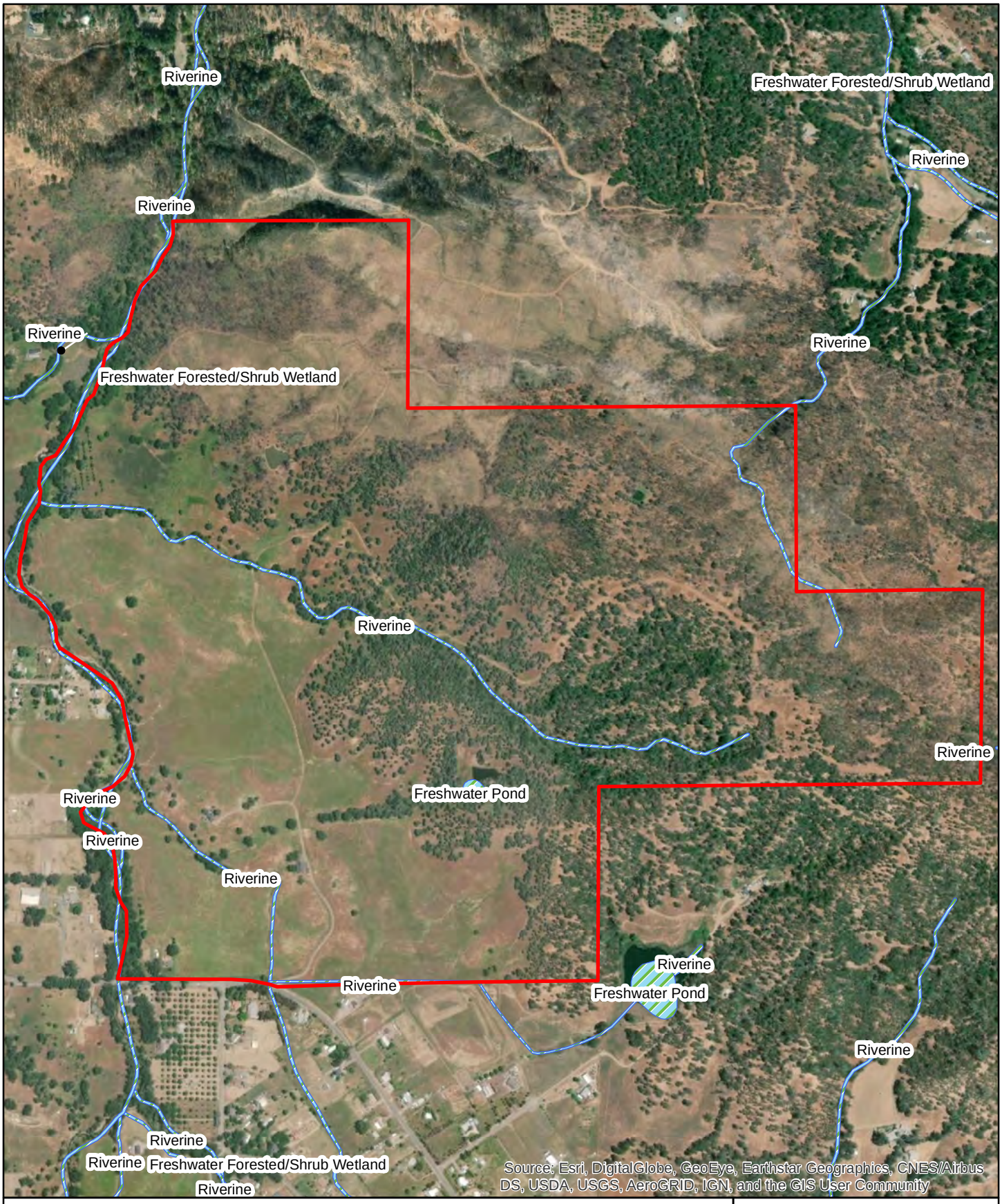
11450/11474 Spruce Grove Rd
USDA Soils Map

Natural Investigations Company

Map Date 11/24/2021

Lower Lake 1993 Quadrangle:Township 12N, Range 7W, Section 11,12,13,14


Parcel boundaries
Potential Cannabis Area
Water Resources
Class I Watercourse
Class II Watercourse
Class III Watercourse
Pond
Water Resources
11450 & 11474 Spruce Grove Road, Lower Lake
Natural Investigations Company
N
2000 ft



Project Location

Wetlands and Channels

0 250 500 Meters

0 1,000 2,000 Feet

1:11,000

National Wetlands Inventory Features Map

Natural Investigations Company

Map Date 6/5/2019

Lower Lake 1993 Quadrangle:Township 12N, Range 7W, Section 11,12,13,14

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: November 24, 2021
Consultation Code: 08ESMF00-2022-SLI-0445
Event Code: 08ESMF00-2022-E-01349
Project Name: 11450/11474 Spruce Grove Rd

Subject: List of threatened and endangered species that may occur in your proposed project location 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".

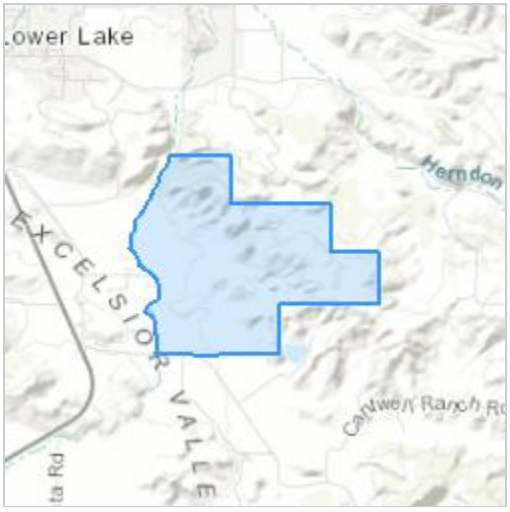
This species list is provided by:

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

Project Summary

Consultation Code: 08ESMF00-2022-SLI-0445
Event Code: Some(08ESMF00-2022-E-01349)
Project Name: 11450/11474 Spruce Grove 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/@38.895861749999995,-122.5878111512654,14z



Counties: Lake County, California

Endangered Species Act Species

There is a total of 7 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*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/1123

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/2891

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

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
Slender Orcutt Grass *Orcuttia tenuis* There is **final** critical habitat for this species. The location of the critical habitat is not available. 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 11474 Spruce Grove Rd, Lower Lake on June 7, 2019 and November 29, 2021

Common Name	**Scientific Name**
Yarrow	*Achillea millefolium*
Deerweed	*Acmispon glaber*
Chamise	*Adenostoma fasciculatum*
Tree of Heaven	*Ailanthus altissima*
Silver hairgrass	*Aira caryophyllea*
Menzies' Fiddleneck	*Amsinckia menziesii*
Fiddleneck	*Amsinckia sp.*
Common manzanita	*Arctostaphylos manzanita ssp. manzanita*
California mugwort	*Artemisia douglasiana*
Narrowleaf milkweed	*Asclepias fascicularis*
Wild oat	*Avena barbata*
Coyote brush	*Baccharis pilularis*
Quaking grass	*Briza minor*
Cluster lily	*Brodiaea elegans*
Brodiaea	*Brodiaea sp.*
Ripgut brome	*Bromus diandrus*
Soft chess	*Bromus hordeaceus*
Madrid brome	*Bromus madritensis*
Brome	*Bromus sp.*
Shepherd’s purse	*Capsella bursa-pastoris*
Italian thistle	*Carduus pycnocephalus*
Wedge leaf ceanothus	*Ceanothus cuneatus*
Deerbrush	*Ceanothus integerrimus var. macrothyrsus*
Yellow star thistle	*Centaurea solstitialis*
Fitch’s spikeweed	*Centromadia fitchii*
Mountain mahogany	*Cercocarpus betuloides*
Soap plant	*Chlorogalum pomeridianum*
Chicory	*Cichorium intybus*
Bull thistle	*Cirsium vulgare*
Clarkia	*Clarkia sp.*
Field bindweed	*Convolvulus arvensis*
Dove weed	*Croton setiger*
Dogtail grass	*Cynosurus echinatus*
Tall flatsedge	*Cyperus eragrostis*
Orchard grass	*Dactylis glomerata*
Wild carrot	*Daucus pusillus*
Pale spikerush	*Eleocharis macrostachya*
Medusa-head grass	*Elymus caput-medusae*
Squirreltail grass	*Elymus elymoides*

Blue wildrye	*Elymus glaucus*
Tall willowherb	*Epilobium brachycarpum*
Willowherb	*Epilobium sp.*
Yerba santa	*Eriodictyon californicum*
Broad leaved filaree	*Erodium botrys*
Red-stemmed filaree	*Erodium cicutarium*
Filaree	*Erodium sp.*
Brome fescue	*Festuca bromoides*
Rattail fescue	*Festuca myuros*
Italian ryegrass	*Festuca perennis*
Coffeeberry	*Frangula californica*
Oregon ash	*Fraxinus latifolia*
Split-leaf geranium	*Geranium dissectum*
Toyon	*Heteromeles arbutifolia*
Shortpod mustard	*Hirschfeldia incana*
Wand tarplant	*Holocarpha virgata*
Mediterranean barley	*Hordeum marinum ssp. gussoneanum*
Wall barley	*Hordeum murinum*
Klamath weed	*Hypericum perforatum*
Northern California black walnut	*Juglans hindsii*
Rush	*Juncus sp.*
Sharp-leaved fluellin	*Kickxia elatine*
Prickly lettuce	*Lactuca serriola*
Angled pea vine	*Lathyrus angulatus*
Peavine	*Lathyrus sp.*
Hawkbit	*Leontodon saxatilis*
Pink honeysuckle	*Lonicera hispidula*
Miniature lupine	*Lupinus bicolor*
Sky lupine	*Lupinus nanus*
Lupine	*Lupinus sp.*
Hyssop loosestrife	*Lythrum hyssopifolia*
Tarweed	*Madia exigua*
Mallow	*Malva sp.*
Horehound	*Marrubium vulgare*
Seep monkeyflower	*Mimulus guttatus*
Navarretia	*Navarretia sp.*
Yampa	*Perideridia sp.*
Harding grass	*Phalaris aquatica*
Gray pine	*Pinus sabiniana*
Popcorn flower	*Plagiobothrys sp.*
English plantain	*Plantago lanceolata*
Bulbous bluegrass	*Poa bulbosa*
Fremont cottonwood	*Populus fremontii*
Cherry plum	*Prunus cerasifera*
Black locust	*Pseudoacacia robinia*

Blue oak	*Quercus douglasii*
Oregon white oak	*Quercus garryana*
California black oak	*Quercus kelloggii*
Valley oak	*Quercus lobata*
Hollyleaf redberry	*Rhamnus ilicifolia*
Wood rose	*Rosa gymnocarpa*
California blackberry	*Rubus ursinus*
Curly dock	*Rumex crispus*
Red willow	*Salix laevigata*
Arroyo willow	*Salix lasiolepis*
Willow	*Salix sp.*
Blue elderberry	*Sambucus nigra ssp. caerulea*
California bee plant	*Scrophularia californica*
Old man of spring	*Senecio vulgare*
Coast redwood	*Sequoia sempervirens*
Milk thistle	*Silybum marinum*
Hedge mustard	*Sisymbrium officinale*
Hedge nettle	*Stachys sp.*
Chickweed	*Stellaria media*
Smilo grass	*Stipa miliacea*
Purple needlegrass	*Stipa pulchra*
Needlegrass	*Stipa sp.*
Creeping snowberry	*Symphoricarpos mollis*
Tall sock-destroyer	*Torilis arvensis*
Sock destroyer	*Torilis nodosa*
Poison-oak	*Toxicodendron diversilobum*
Yellow salsify	*Tragopogon dubius*
Indian clover	*Trifolium dichotomum*
Rose clover	*Trifolium hirtum*
Clover	*Trifolium sp.*
Subterranean clover	*Trifolium subterraneum*
Ithuriel’s spear	*Triteleia laxa*
Triplet lily	*Triteleia sp.*
Wheat	*Triticum aestivum*
Common mullein	*Verbascum thapsus*
Winter vetch	*Vicia villosa*
California grape	*Vitis californicus*
Narrow leaf mule ears	*Wyethia angustifolia*
Centaury	*Zeltnera sp.*

APPENDIX 3: SITE PHOTOS