

**BIOLOGICAL RESOURCES ASSESSMENT  
AND  
BOTANICAL SURVEY REPORT  
FOR THE  
CANNABIS CULTIVATION OPERATION AT  
7255 BOGGS LANE, KELSEYVILLE, CALIFORNIA**

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# 1. INTRODUCTION

## 1.1. PROJECT LOCATION AND DESCRIPTION

Natural Investigations Company conducted a biological resources assessment and a botanical field survey for a cannabis cultivation operation on a 30.6-acre parcel (APN 007-021-21) at 7255 Boggs Lane, Kelseyville, in Lake County, California. The proposed cannabis cultivation operation consists of converting a vineyard to a cultivation compound. The fenced compound will be approximately 2.25 acres in size and will be capable of producing up to 2 acres of mature Cannabis canopy. The cultivation method is outdoor and mixed light, and will use fabric pots and temporary greenhouses (hoophouses). Existing wells will supply the irrigation water, and mixing tanks and drip irrigation will be employed. No new buildings are proposed, but two existing outbuildings may be used for material and chemical storage and product processing.

For this assessment, the Project Area was defined as the cultivation area plus the ancillary facilities, and this 2.3-acre area was the subject of the impact analysis. The entire 31-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. REGULATORY SETTING

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

### 1.2.1. 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.

### **1.2.2. 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.

### **1.2.3. 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.”*

The Oak Woodlands Protection Act and the County of Lake identify mitigation standards and requirements for projects that remove oak woodlands. Under the Oak Woodlands Protection Act, Lake County shall require one or more oak woodland alternatives “to mitigate the significant effect of the conversion of oak woodlands.” Alternatives to mitigate the significant effect of the conversion of oak woodlands: replace removed trees at a rate of 3:1 and maintain trees pursuant to Section 4526 of Senate Bill No. 1334 terminating seven years after the trees are planted.

## 2. ENVIRONMENTAL SETTING

The Study Area is located within Inner North Coast Range geographic subregion, which is contained within the Northwestern California geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately-cold winters. The Study Area and vicinity is in climate Zone 14 “Northern California’s Inland Areas with Some Ocean Influence“, with maritime air moderating temperatures that would otherwise be hotter in summer and colder in the winter (Sunset, 2022). The topography of the Study Area is relatively flat, and consist of an agricultural field in the upper end of Big Valley. The elevation ranges from approximately 1,276 feet to 1,476 feet above mean sea level. Drainage runs to the west toward Adobe Creek. Prior to the establishment of this cultivation operation, land uses were rural residential and vineyard, and before that, a walnut orchard.

## 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 (CNDDDB), electronically updated monthly by subscription
- USFWS species list (IPaC Trust Resources Report).

### 3.2. FIELD SURVEY

Consulting biologist Tim Nosal, MS. conducted a wildlife survey and botanical field survey on March 29, 2022. A complete coverage, variable-intensity pedestrian survey was performed, and modified to account for differences in terrain, vegetation density, and visibility. All visible fauna and flora observed were recorded in a field notebook, and identified to the lowest possible taxon. Survey efforts emphasized the search for any special-status species that had documented occurrences in the CNDDDB 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 (2022); CDFW (2022b,c); NatureServe 2022; and University of California at Berkeley (2022a,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, 2022c). Species' habitat requirements and life histories were identified using the following sources: Baldwin et al. (2012); CNPS (2022), Calflora (2022); CDFW (2022a,b,c); and University of California at Berkeley (2022a,b).

## 4. RESULTS

### 4.1. INVENTORY OF FLORA AND FAUNA FROM FIELD SURVEY

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

black-tailed jackrabbit (*Lepus californicus*); Botta's pocket gopher (*Thomomys bottae*); California ground squirrel (*Otospermophilus beecheyi*); dusky-footed woodrat (*Neotoma fuscipes*); western gray squirrel (*Sciurus griseus*); acorn woodpecker (*Melanerpes formicivorus*); Anna's hummingbird (*Calypte anna*); Barn owl (*Tyto alba*); California scrub jay (*Aphelocoma californica*); California towhee (*Melospiza crissalis*); cliff swallow (*Petrochelidon pyrrhonota*); common raven (*Corvus corax*); dark-eyed junco (*Junco hyemalis*); Eurasian collared-dove (*Streptopelia decaocto*); European starling (*Sturnus vulgaris*); house finch (*Haemorhous mexicanus*); mourning dove (*Zenaidura macroura*); northern flicker (*Colaptes auratus*); Nuttall's woodpecker (*Picoides nuttallii*); oak titmouse (*Baeolophus inornatus*); red-shouldered hawk (*Buteo lineatus*); red-tailed hawk (*Buteo jamaicensis*); red-winged blackbird (*Agelaius phoeniceus*); sparrow (Emberizidae); western bluebird (*Sialia mexicana*); white crowned sparrow (*Zonotrichia leucophrys*); 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: ruderal/disturbed; vineyard; and mixed oak woodland. These vegetation communities are discussed here and are delineated in the Exhibits.

**Ruderal/Disturbed.** These areas consist of disturbed or converted natural habitat that is now either in ruderal state, graded, or urbanized with gravel roads, or structure and utility placement. Vegetation within this habitat type consists primarily of nonnative weedy or invasive species or ornamental plants lacking a consistent community structure. The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

**Vineyard.** These areas of converted natural habitat are in agricultural production as vineyard. The understory in vineyards usually consist of bare soil (controlled by tillage and/or herbicides) or a cover crop of herbaceous plants. Some species of birds and mammals have adapted to the vineyard habitats. However, many have become "agricultural pests". Similar to the ruderal/developed habitat type, the disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

**Mixed Oak Woodland.** Portions of the Study Area have oak woodland. Dominant tree species are blue oak (*Quercus douglasii*) and interior live oak (*Quercus wislizeni*) and gray (*Pinus sabiniana*). The understory within the oak woodland is vegetated with annual grasses and native and non-native herb as well as chaparral species such poison-oak (*Toxicodendron diversilobum*), *Baccharis pilularis*, and *Ceanothus cuneatus*. dominant in the understory. Holland Type "Oak Forest" or as "*Quercus (agrifolia, douglasii, garryana, kelloggii, lobata, wislizeni)* Mixed Oak Forest" (CDFW 2021e). This vegetation can be classified as the Holland Type "Interior Live Oak Woodland" or as "71.080.08 *Quercus wislizeni* (Interior Live Oak 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: Blue Oak Woodland; Orchard – Vineyard; Urban; and Barren.

## 4.2.3. Critical Habitat and Special-status Habitat

No critical habitat for any federally-listed species occurs within the Project Area or the surrounding Study Area. The CNDDDB reported no special-status habitats within the Project Area or in a 10-mile radius outside of the Study Area. No special-status habitats were detected within the Project Area or surrounding Study Area during the field survey.

## 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 fishery resources exist in or near the Study Area. The nearest fishery resource is downstream of Adobe Creek. The nearest wildlife is Adobe Creek and its tributary channels. The Study Area is not located within any adopted Habitat Conservation Plan or Natural Community Conservation Plan.

## 4.3. LISTED SPECIES AND OTHER SPECIAL-STATUS SPECIES

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

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

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

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

- Any previous and readily-available biological resource studies pertaining to the Study Area;
- Informal consultation with USFWS by generating an electronic Species List (Information for Planning and Conservation website at <https://ecos.fws.gov/ipac/>); and
- A spatial query of the CNDDDB
- A query of the California Native Plant Society's database *Inventory of Rare and Endangered Plants of California* (online edition).

The CNDDDB 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 CNDDDB reported a special-status species occurrence within the Study Area—western red bat (*Lasiurus blossevillii*)—but this is an artifact of the vague mapping process; the actual occurrence record is not in the Study Area. The record states:

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*"LAMB VALLEY, NEAR THE INTERSECTION OF COUNTY ROAD 83A & COUNTY ROAD 23, ESPARTO...MAPPED TO DESCRIBED LOCATION OF "THE MATSUMOTO ORCHARD, ABOUT 1 MILE SOUTH & 4 MILES WEST OF ESPARTO....RED BATS APPEAR IN FEB OR MAR FIRST IN SMALL ORANGE GROVE WEST OF HOUSE AND THEN POPULATE THE APRICOT TREES WHEN THEY LEAF OUT."*

Note, however, that trees and buildings within the Study Area provide habitat for this species. Within a 10-mile buffer of the Study Area boundary, the CNDDDB reported several special-status species occurrences, summarized in the table in the Appendix 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*)
- Green sea turtle (*Chelonia mydas*)
- California red-legged frog (*Rana draytonii*)
- Delta smelt (*Hypomesus transpacificus*)
- Monarch butterfly (*Danaus plexippus*) Candidate
- California Freshwater Shrimp (*Syncaris pacifica*)
- Burke's Goldfields (*Lasthenia burkei*)

Migratory birds should also be considered in the impact assessment.

### **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**

See the Appendix for a complete table of Special-status Species and their potential to occur in the Study Area.

The vineyard and ruderal/developed habitats within the Study Area have a very low potential for harboring special-status plant species due to the dominance of monocultures or aggressive non-native grasses and forbs and disturbance associated with agriculture and other human uses. However, rare plants reported by CNDDDB to occur in the region use oak woodland habitat, especially on volcanic soils. Similar oak woodland habitat occurs in the surrounding Study Area, but not in the Project Area. The botanical field survey performed for this project did not detect any special-status plant species.

Special-status animals have a very low potential to occur in vineyard and ruderal/developed habitats. However, some special-status animals have a moderate potential to occur in the oak woodland habitat, but this habitat will not be disturbed by project implementation.

## **4.4. POTENTIALLY-JURISDICTIONAL WATER RESOURCES**

The USFWS National Wetland Inventory reported no water features within the Project Area or the surrounding Study Area (see Exhibits).

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 and the surrounding Study Area do not contain any channels or wetlands.

## **5. IMPACT ANALYSES AND MITIGATION MEASURES**

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

### **5.1. IMPACT SIGNIFICANCE CRITERIA**

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

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

## 5.2. IMPACT ANALYSIS

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

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

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

No special-status plant species were reported by CNDDDB in the Project Area. The botanical field survey performed for this project did not detect any special-status plant species. The Project Area contains only vineyard and ruderal/developed habitats, which have a very low potential for harboring special-status plant species due to the dominance of monocultures or aggressive non-native grasses and forbs and disturbance associated with agriculture and other human uses.

No special-status animal species were reported by CNDDDB in the Project Area. The wildlife survey performed for this project did not detect any special-status animal species. The Project Area contains only vineyard and ruderal/developed habitats, which have a very low potential for harboring special-status animals, especially because there are no water resources within the Study Area.

No impacts to special-status plant or animal species are expected from implementation of the proposed project.

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

## Recommended Mitigation Measures

No mitigation is necessary.

### 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 nearest aquatic habitats are over 800 feet away.

## 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 or surrounding Study Area. The nearest aquatic habitats are over 800 feet away. Project implementation will not directly impact any water resource.

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, areas of ground disturbance are small, and vegetated buffers are present. If the total area of ground disturbance from installation of the cultivation operation is 1 acre or more, the Cultivator must enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ). Implementation of a stormwater pollution prevention plan, and erosion control plan, along with regular inspections, will ensure that construction activities do not pollute receiving waterbodies.

Potential adverse impacts to water resources could occur during operation of cultivation activities resources by discharge of sediment or other pollutants (fertilizers, pesticides, human waste, etc.) into receiving waterbodies. However, the project proponent must file a Notice of Intent and enroll in Cannabis Cultivation Order WQ 2019-0001-DWQ. Compliance with this Order will ensure that cultivation operations will not significantly impact water resources by using a combination of Best Management Practices (BMPs), buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight.

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

or vehicle storage, diesel powered pump locations, water storage areas, and chemical toilet placement). The proposed project is compliant with the setback requirements of Cannabis Cultivation Order WQ 2019-0001-DWQ.

#### Minimum Riparian Setbacks

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

#### Recommended Mitigation Measures

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

#### 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 CNDDDB) exist within the Study Area, the open space in the Study Area facilitate animal movement and migrations. The vineyards represent an existing barrier to large animal movement. While the Project Area may be used by smaller wildlife for movement, the Project would not have a significant impact on this movement because 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, only grapevines. 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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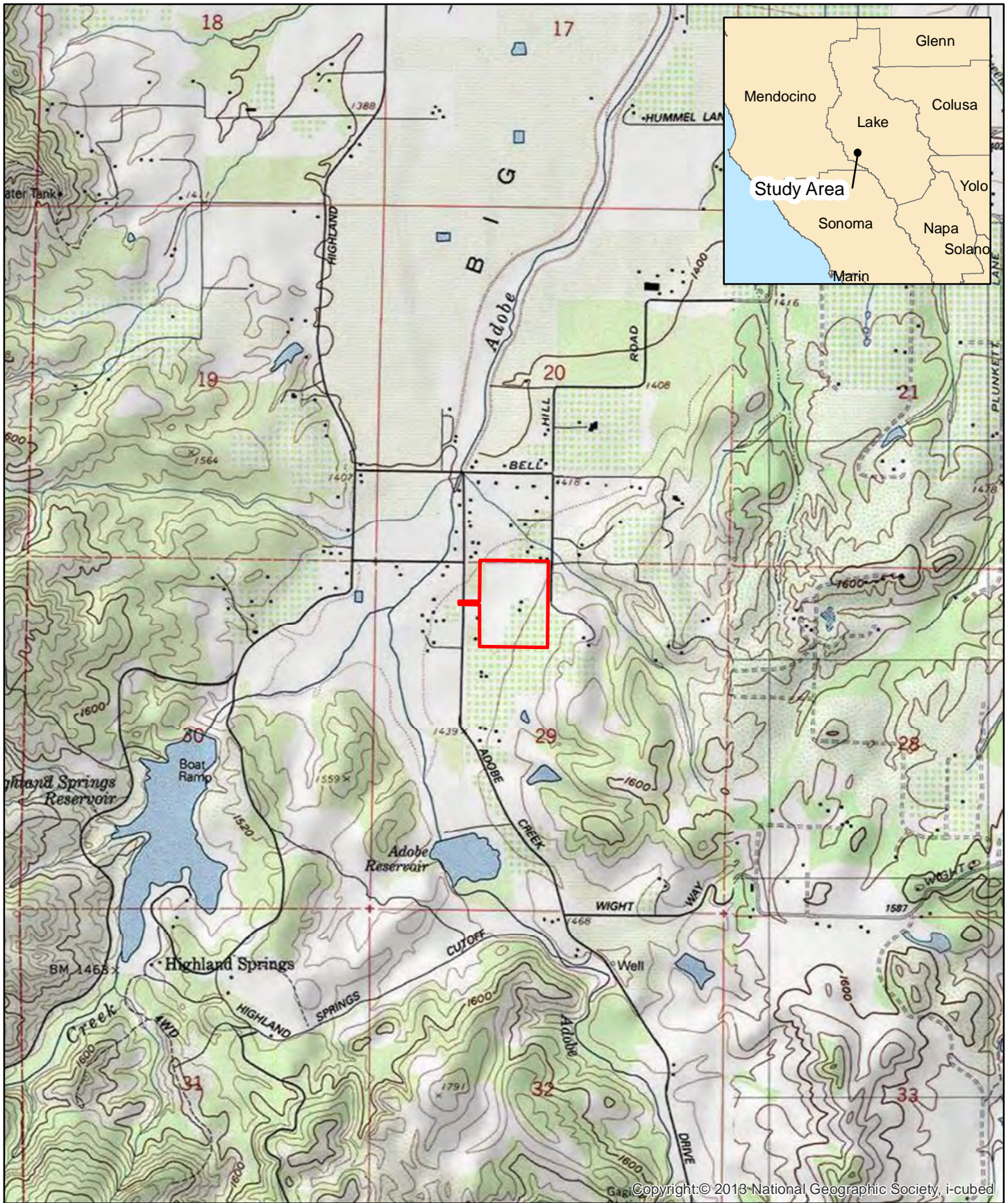
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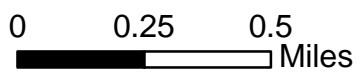
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# EXHIBITS



 Study Area



1:24,000

7255 Boggs Lane  
Study Area Location Map









OSPREY - Pre-Application Conference Map

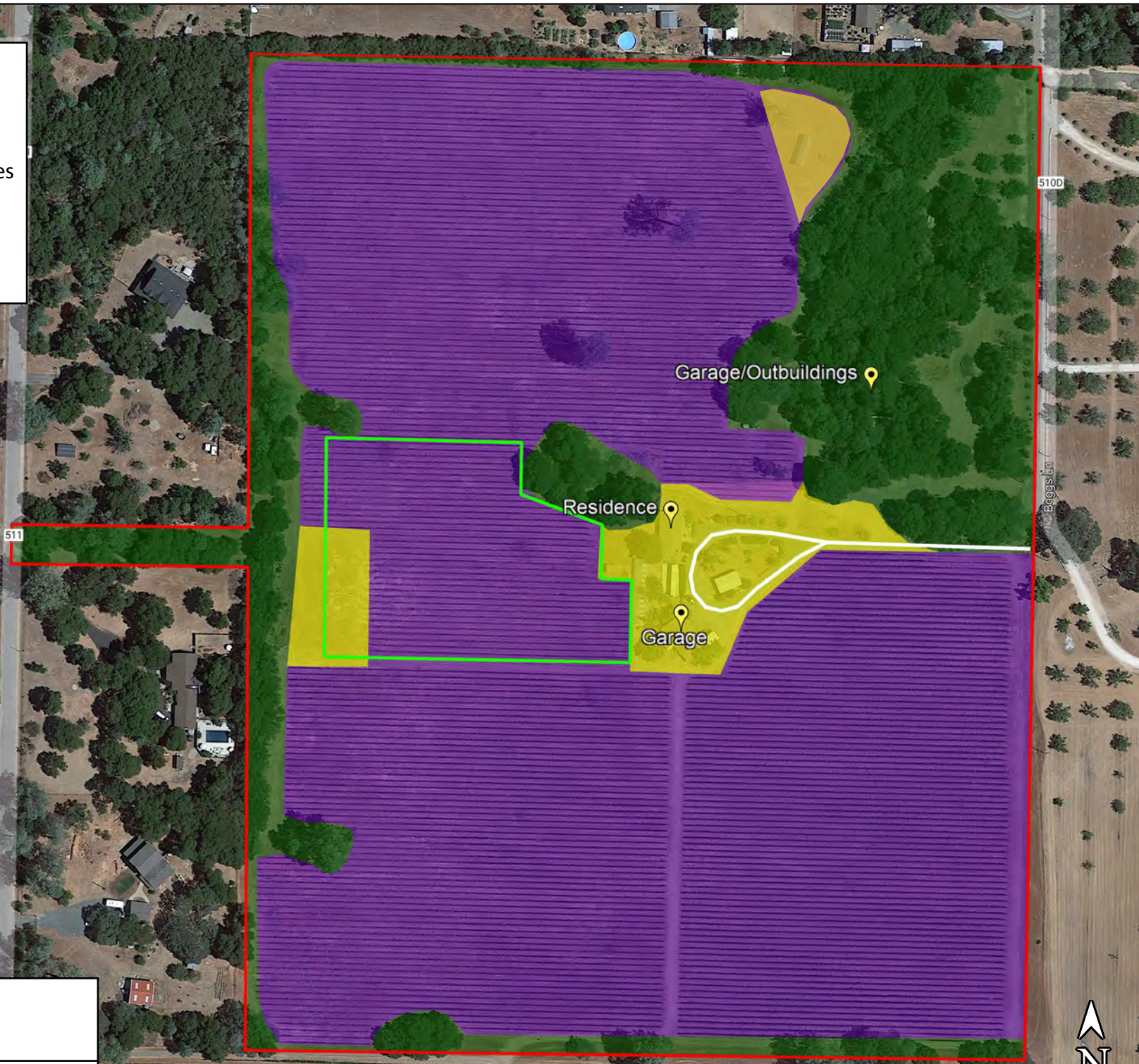


**LEGEND**

- Property Boundary
- Road Access
- Proposed Cultivation/Canopy area Area
- Watercourse
- Buildings on Lot of Record

Edited: 1/28/2021  
CS Consulting LLC

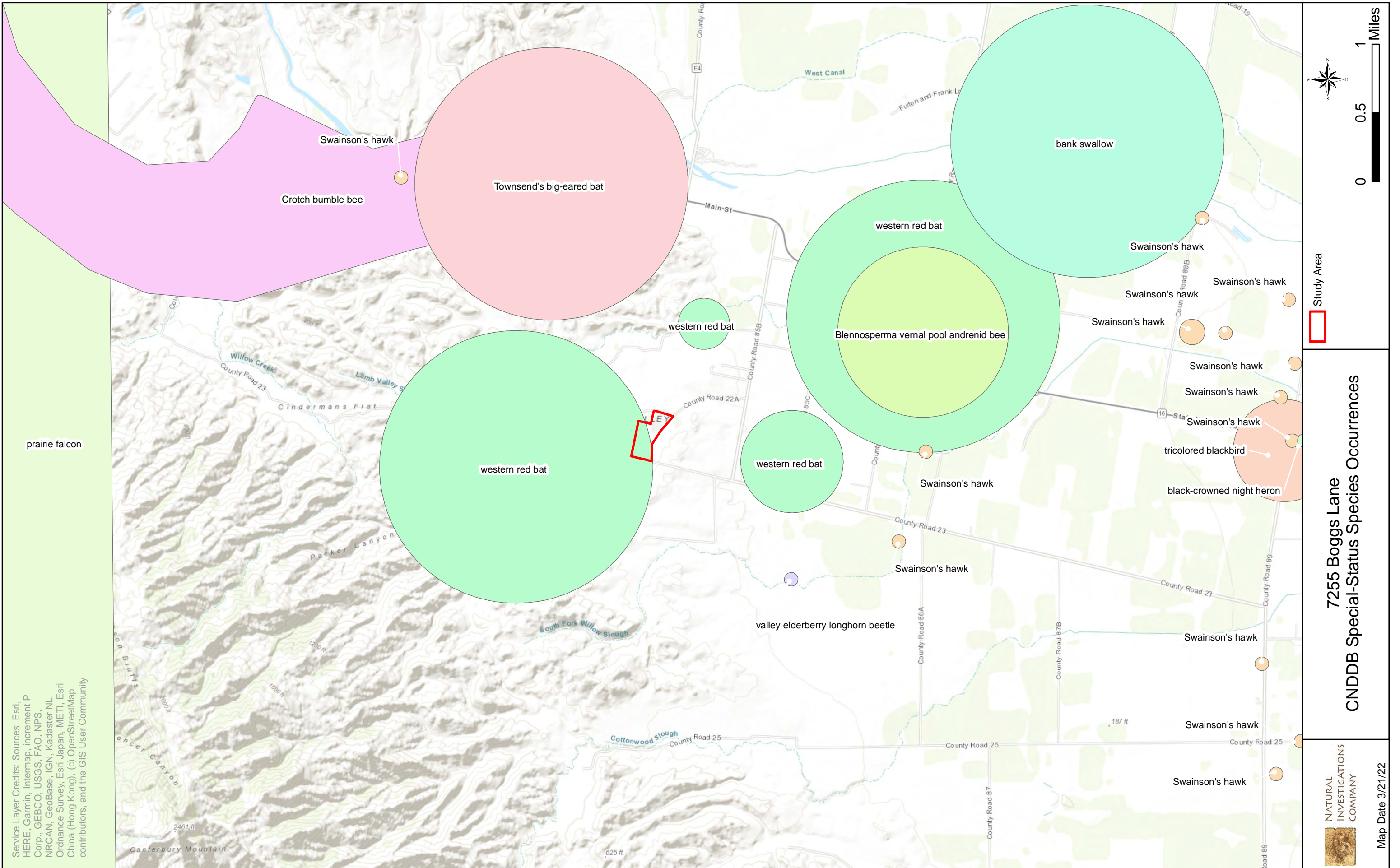
 Roads  
 Parcel boundaries  
 Cannabis Production Area  
**Vegetation Community Types**  
 Mixed oak woodland  
 Urbanized/developed  
 Vineyard



**Habitat Types**  
 7255 Boggs Lane, Kelseyville  
 NATURAL INVESTIGATIONS COMPANY



600 ft



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

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

7255 Boggs Lane  
 CNDDDB Special-Status Species Occurrences




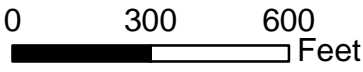
NATURAL INVESTIGATIONS COMPANY

Map Date 3/21/22



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

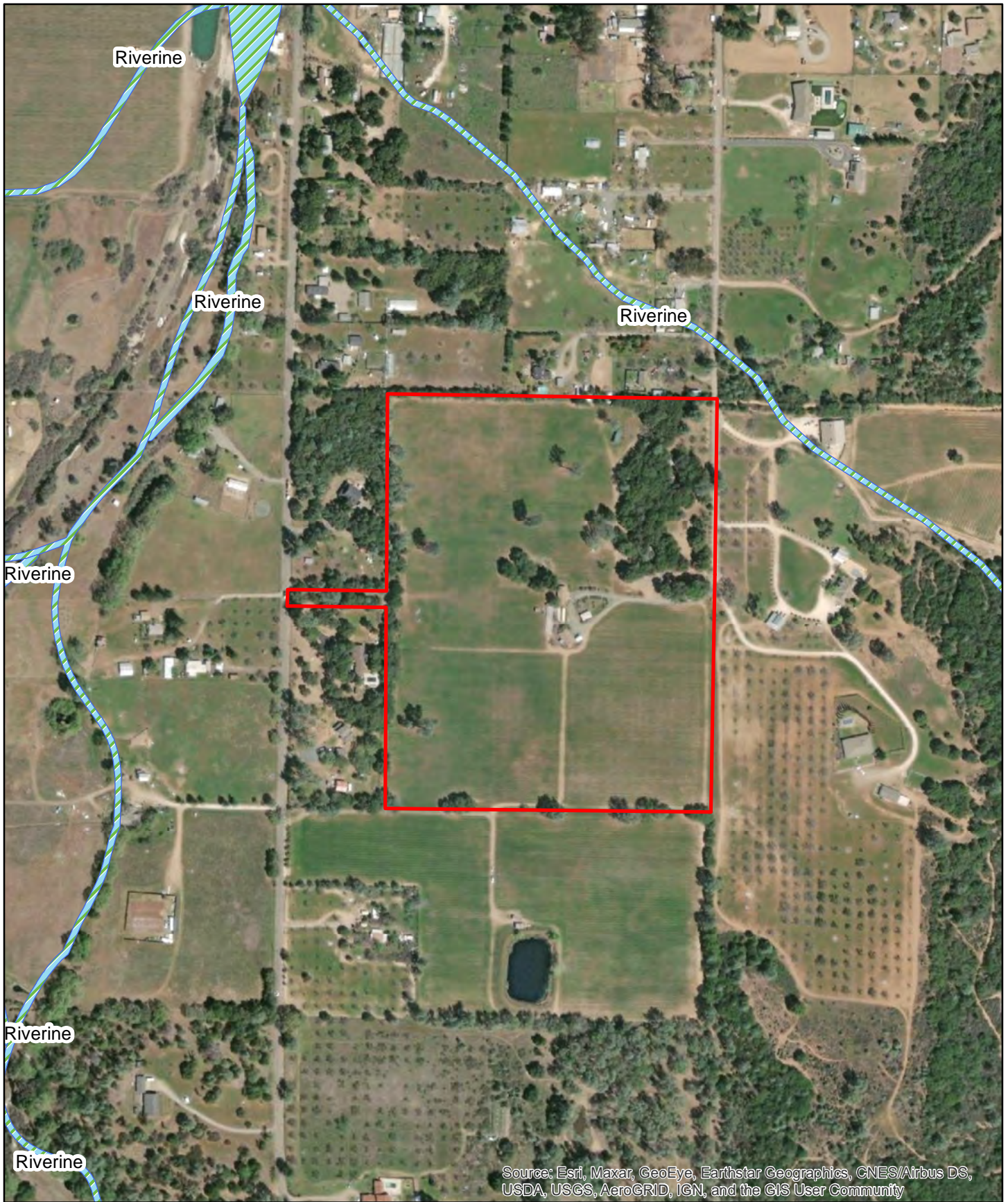
 Study Area



1:5,000

7255 Boggs Lane  
USDA Soils Map





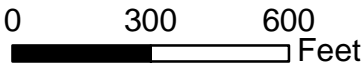
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Study Area



Wetlands and Channels



1:5,000

7255 Boggs Lane  
USDA Soils Map

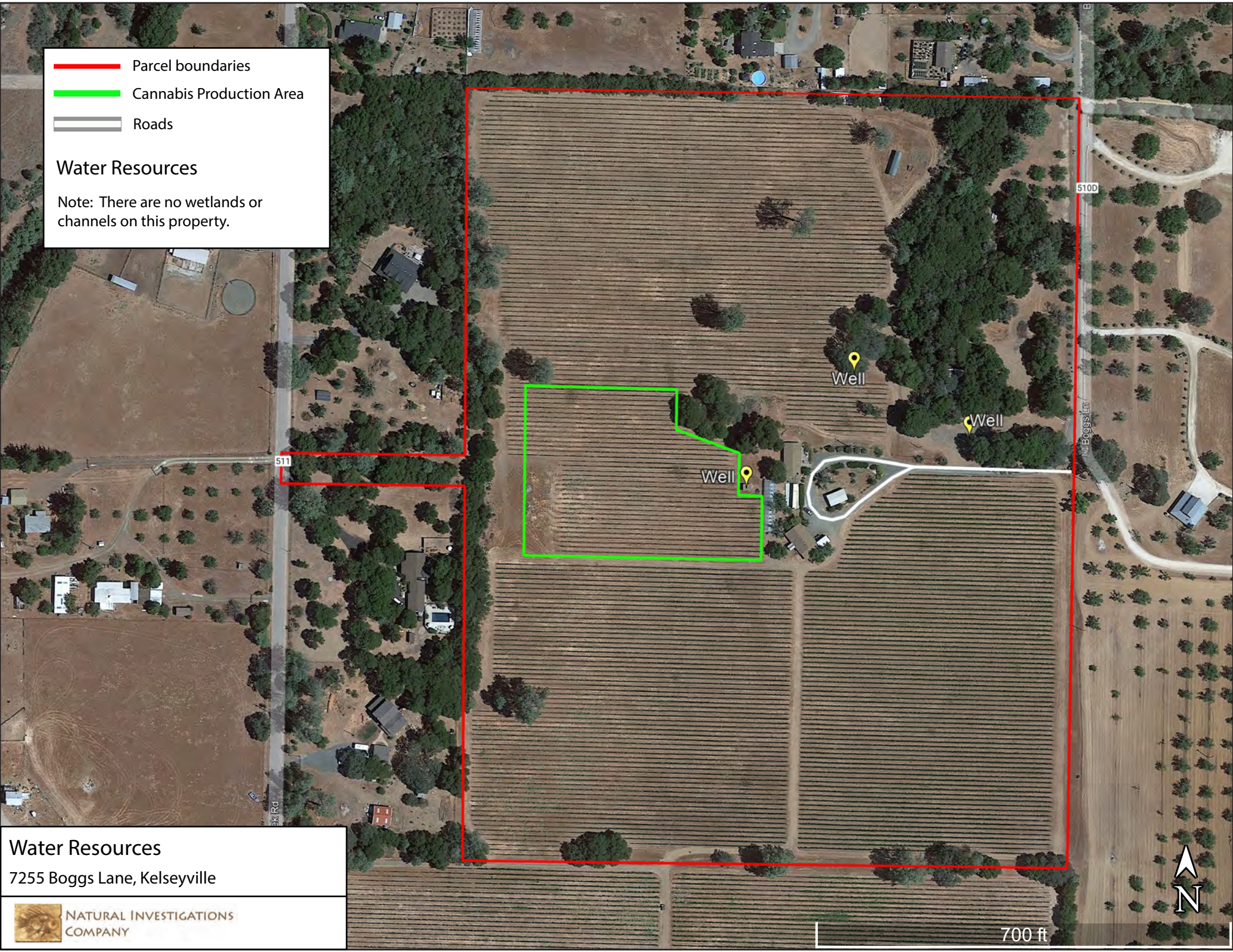


NATURAL  
INVESTIGATIONS  
COMPANY

Parcel boundaries  
Cannabis Production Area  
Roads

**Water Resources**

Note: There are no wetlands or channels on this property.



**Water Resources**  
7255 Boggs Lane, Kelseyville



NATURAL INVESTIGATIONS  
COMPANY



700 ft

## **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:  
Project Code: 2022-0029093  
Project Name: cultivation project

April 06, 2022

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, 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 U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

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 Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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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

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## Project Summary

Project Code: 2022-0029093  
Event Code: None  
Project Name: cultivation project  
Project Type: Field Crop Planting/Production  
Project Description: cultivation on 2.25 acres  
Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.9519751,-122.8882821014773,14z>



Counties: Lake County, California

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## 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<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

### Birds

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/1123">https://ecos.fws.gov/ecp/species/1123</a>	Threatened

### Reptiles

NAME	STATUS
Green Sea Turtle <i>Chelonia mydas</i> Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6199">https://ecos.fws.gov/ecp/species/6199</a>	Threatened

### Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened

## Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Crustaceans

NAME	STATUS
California Freshwater Shrimp <i>Syncaris pacifica</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7903">https://ecos.fws.gov/ecp/species/7903</a>	Endangered

## Flowering Plants

NAME	STATUS
Burke's Goldfields <i>Lasthenia burkei</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4338">https://ecos.fws.gov/ecp/species/4338</a>	Endangered

## Critical habitats

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

## **IPaC User Contact Information**

Agency: Natural Investigations Co., Inc.  
Name: G.O. Graening  
Address: 3104 O Street  
Address Line 2: No. 221  
City: Sacramento  
State: CA  
Zip: 95816  
Email: ggraening@gmail.com  
Phone: 9164525442

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## **APPENDIX 2: CHECKLIST OF PLANTS DETECTED IN THE STUDY AREA**

**Appendix 2:**

Plants Observed at 7255 Boggs Lane, Kelseyville on March 29, 2022

<b>Common Name</b>	<b>Scientific Name</b>
Short-podded lotus	<i>Acmispon brachycarpus</i>
Hill lotus	<i>Acmispon parviflorus</i>
Chamise	<i>Adenostoma fasciculatum</i>
Common fiddleneck	<i>Amsinckia intermedia</i>
Western lady's mantle	<i>Aphanes occidentalis</i>
Common sandweed	<i>Athysanus pusillus</i>
Slender wild oat	<i>Avena barbata</i>
Coyote brush	<i>Baccharis pilularis</i>
Ripgut brome	<i>Bromus diandrus</i>
Soft chess	<i>Bromus hordeaceus</i>
Madrid brome	<i>Bromus madritensis</i>
Red maids	<i>Calandrinia ciliata</i>
Western bittercress	<i>Cardamine oligosperma</i>
Italian thistle	<i>Carduus pycnocephalus</i>
Valley tassels	<i>Castilleja attenuata</i>
Wedge leaf ceanothus	<i>Ceanothus cuneatus</i>
Jim brush	<i>Ceanothus oliganthus var. soledadensis</i>
Sticky mouse-eared chickweed	<i>Cerastium glomeratum</i>
Narrow leaved miner's lettuce	<i>Claytonia parviflora</i>
Miner's lettuce	<i>Claytonia perfoliata</i>
Pygmy weed	<i>Crassula tillaea</i>
Pacific houndstooth	<i>Cynoglossum grande</i>
Rattlesnake weed	<i>Daucus pusillus</i>
Blue wildrye	<i>Elymus glaucus</i>
Tall willowherb	<i>Epilobium brachycarpum</i>
Yerba santa	<i>Eriodictyon californicum</i>
Broad leaved filaree	<i>Erodium botrys</i>
Red-stemmed filaree	<i>Erodium cicutarium</i>
White stem filaree	<i>Erodium moschatum</i>
California poppy	<i>Eschscholzia californica</i>
Brome fescue	<i>Festuca bromoides</i>
Rattail sixweeks grass	<i>Festuca myuros</i>
Bedstraw	<i>Galium aparine</i>
Climbing bedstraw	<i>Galium porrigens</i>
White flowered hawkweed	<i>Hieracium albiflorum</i>
Shortpod mustard	<i>Hirschfeldia incana</i>
Wall barley	<i>Hordeum murinum</i>
Goldwire	<i>Hypericum concinnum</i>
Klamath weed	<i>Hypericum perforatum</i>
Smooth cat's-ear	<i>Hypochaeris glabra</i>
Rough cat's-ear	<i>Hypochaeris radiata</i>

<b>Common Name</b>	<b>Scientific Name</b>
Northern California black walnut	<i>Juglans hindsii</i>
English walnut	<i>Juglans regia</i>
Rush	<i>Juncus sp.</i>
Sharp-leaved fluellin	<i>Kickxia elatine</i>
Shining peppergrass	<i>Lepidium nitidum</i>
Peppergrass	<i>Lepidium strictum</i>
Narrowleaf cottonrose	<i>Logfia gallica</i>
Miniature lupine	<i>Lupinus bicolor</i>
Lupine	<i>Lupinus sp.</i>
Pacific woodrush	<i>Luzula comosa</i>
Horehound	<i>Marrubium vulgare</i>
Pineapple weed	<i>Matricaria discoidea</i>
California burclover	<i>Medicago polymorpha</i>
Baby blue eyes	<i>Nemophila menziesii</i>
Gray pine	<i>Pinus sabiniana</i>
Popcornflower	<i>Plagiobothrys sp.</i>
Slender popcornflower	<i>Plagiobothrys tenellus</i>
English plantain	<i>Plantago lanceolata</i>
Annual bluegrass	<i>Poa annua</i>
Bulbous bluegrass	<i>Poa bulbosa</i>
California scrub oak	<i>Quercus berberidifolia</i>
Blue oak	<i>Quercus douglasii</i>
Leather oak	<i>Quercus durata</i>
Interior live oak	<i>Quercus wislizeni var. wislizeni</i>
Delicate buttercup	<i>Ranunculus hebecarpus</i>
Buttercup	<i>Ranunculus sp.</i>
Fragrant sumac	<i>Rhus aromatica</i>
Himalayan blackberry	<i>Rubus armeniacus</i>
Curly dock	<i>Rumex crispus</i>
Purple sanicle	<i>Sanicula bipinnatifida</i>
Pacific sanicle	<i>Sanicula crassicaulis</i>
Coastal snakeroot	<i>Sanicula laciniata</i>
South American soliva	<i>Soliva sessilis</i>
Sow thistle	<i>Sonchus oleraceus</i>
Hedge nettle	<i>Stachys sp.</i>
Sun cups	<i>Taraxia ovata</i>
Tall sock-destroyer	<i>Torilis arvensis</i>
Cowbag clover	<i>Trifolium depauperatum</i>
Clover	<i>Trifolium sp.</i>
Common mullein	<i>Verbascum thapsus</i>
Western vervain	<i>Verbena lasiostachys</i>
Winter vetch	<i>Vicia villosa</i>
European grape	<i>Vitis vinifera</i>
Smooth mule ears	<i>Wyethia glabra</i>



## **APPENDIX 3: SITE PHOTOS**









# **APPENDIX 4: SPECIAL-STATUS SPECIES TABLE AND POTENTIAL TO OCCUR**

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

Scientific Name	Common Name	Status*	General Habitat**	Habitat Details**
<b>ANIMALS</b>				
<i>Agelaius tricolor</i>	tricolored blackbird	CT	HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY AND VICINITY. LARGELY ENDEMIC TO CALIFORNIA.	REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, AND FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.
<i>Ambystoma californiense</i> pop. 1	California tiger salamander - central California DPS	FT, CT	LIVES IN VACANT OR MAMMAL-OCCUPIED BURROWS THROUGHOUT MOST OF THE YEAR; IN GRASSLAND, SAVANNA, OR OPEN WOODLAND HABITATS.	NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.
<i>Andrena blennospermatidis</i>	Blennosperma vernal pool andrenid bee	SSC	THIS BEE IS OLIGOLECTIC ON VERNAL POOL BLENNOSPERMA.	BEES NEST IN THE UPLANDS AROUND VERNAL POOLS.
<i>Aquila chrysaetos</i>	golden eagle	SSC	ROLLING FOOTHILLS, MOUNTAIN AREAS, SAGE-JUNIPER FLATS, AND DESERT.	CLIFF-WALLED CANYONS PROVIDE NESTING HABITAT IN MOST PARTS OF RANGE; ALSO, LARGE TREES IN OPEN AREAS.
<i>Athene cunicularia</i>	burrowing owl	SSC	OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.	SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.
<i>Bombus caliginosus</i>	obscure bumble bee	SSC	COASTAL AREAS FROM SANTA BARBARA COUNTY TO NORTH TO WASHINGTON STATE.	FOOD PLANT GENERA INCLUDE BACCHARIS, CIRSIUM, LUPINUS, LOTUS, GRINDELIA AND PHACELIA.
<i>Bombus crotchii</i>	Crotch bumble bee	SSC	COASTAL CALIFORNIA EAST TO THE SIERRA-CASCADE CREST AND SOUTH INTO MEXICO.	FOOD PLANT GENERA INCLUDE ANTIRRHINUM, PHACELIA, CLARKIA, DENDROMECON, ESCHSCHOLZIA, AND ERIOGONUM.
<i>Bombus occidentalis</i>	western bumble bee	SSC	ONCE COMMON AND WIDESPREAD, SPECIES HAS DECLINED PRECIPITOUSLY FROM CENTRAL CA TO SOUTHERN B.C., PERHAPS FROM DISEASE.	
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT, CT	ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.	INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.
<i>Buteo swainsoni</i>	Swainson's hawk	CT	BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.	REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.
<i>Charadrius montanus</i>	mountain plover	SSC	SHORT GRASSLANDS, FRESHLY PLOWED FIELDS, NEWLY SPROUTING GRAIN FIELDS, AND SOMETIMES SOD FARMS.	SHORT VEGETATION, BARE GROUND, AND FLAT TOPOGRAPHY. PREFERS GRAZED AREAS AND AREAS WITH BURROWING RODENTS.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	SSC	THROUGHOUT CALIFORNIA IN A WIDE VARIETY OF HABITATS. MOST COMMON IN MESIC SITES.	ROOSTS IN THE OPEN, HANGING FROM WALLS AND CEILINGS. ROOSTING SITES LIMITING. EXTREMELY SENSITIVE TO HUMAN DISTURBANCE.
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	Threatened	OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).	PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.
<i>Emys marmorata</i>	western pond turtle	SSC	A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.	NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Scientific Name	Common Name	Status*	General Habitat**	Habitat Details**
<i>Falco mexicanus</i>	prairie falcon	SSC	INHABITS DRY, OPEN TERRAIN, EITHER LEVEL OR HILLY.	BREEDING SITES LOCATED ON CLIFFS. FORAGES FAR AFIELD, EVEN TO MARSHLANDS AND OCEAN SHORES.
<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted, FP	NEAR WETLANDS, LAKES, RIVERS, OR OTHER WATER; ON CLIFFS, BANKS, DUNES, MOUNDS; ALSO, HUMAN-MADE STRUCTURES.	NEST CONSISTS OF A SCRAPE OR A DEPRESSION OR LEDGE IN AN OPEN SITE.
<i>Gonidea angulata</i>	western ridged mussel	SSC	PRIMARILY CREEKS AND RIVERS AND LESS OFTEN LAKES. ORIGINALLY IN MOST OF STATE, NOW EXTIRPATED FROM CENTRAL AND SOUTHERN CALIFORNIA.	
<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted, FP	OCEAN SHORE, LAKE MARGINS, AND RIVERS FOR BOTH NESTING AND WINTERING. MOST NESTS WITHIN 1 MILE OF WATER.	NESTS IN LARGE, OLD-GROWTH, OR DOMINANT LIVE TREE WITH OPEN BRANCHES, ESPECIALLY PONDEROSA PINE. ROOSTS COMMUNALLY IN WINTER.
<i>Lasiurus blossevillii</i>	western red bat	SSC	ROOSTS PRIMARILY IN TREES, 2-40 FT ABOVE GROUND, FROM SEA LEVEL UP THROUGH MIXED CONIFER FORESTS.	PREFERS HABITAT EDGES AND MOSAICS WITH TREES THAT ARE PROTECTED FROM ABOVE AND OPEN BELOW WITH OPEN AREAS FOR FORAGING.
<i>Lasiurus cinereus</i>	hoary bat	SSC	PREFERS OPEN HABITATS OR HABITAT MOSAICS, WITH ACCESS TO TREES FOR COVER AND OPEN AREAS OR HABITAT EDGES FOR FEEDING.	ROOSTS IN DENSE FOLIAGE OF MEDIUM TO LARGE TREES. FEEDS PRIMARILY ON MOTHS. REQUIRES WATER.
<i>Myotis yumanensis</i>	Yuma myotis	SSC	OPTIMAL HABITATS ARE OPEN FORESTS AND WOODLANDS WITH SOURCES OF WATER OVER WHICH TO FEED.	DISTRIBUTION IS CLOSELY TIED TO BODIES OF WATER. MATERNITY COLONIES IN CAVES, MINES, BUILDINGS OR CREVICES.
<i>Nycticorax nycticorax</i>	black-crowned night heron	SSC	COLONIAL NESTER, USUALLY IN TREES, OCCASIONALLY IN TULE PATCHES.	ROOKERY SITES LOCATED ADJACENT TO FORAGING AREAS: LAKE MARGINS, MUD-BORDERED BAYS, MARSHY SPOTS.
<i>Pandion haliaetus</i>	osprey	SSC	OCEAN SHORE, BAYS, FRESHWATER LAKES, AND LARGER STREAMS.	LARGE NESTS BUILT IN TREE-TOPS WITHIN 15 MILES OF A GOOD FISH-PRODUCING BODY OF WATER.
<i>Rana boylei</i>	foothill yellow-legged frog	CE	PARTLY-SHADED, SHALLOW STREAMS AND RIFFLES WITH A ROCKY SUBSTRATE IN A VARIETY OF HABITATS.	NEEDS AT LEAST SOME COBBLE-SIZED SUBSTRATE FOR EGG-LAYING. NEEDS AT LEAST 15 WEEKS TO ATTAIN METAMORPHOSIS.
<i>Riparia riparia</i>	bank swallow	CT	COLONIAL NESTER; NESTS PRIMARILY IN RIPARIAN AND OTHER LOWLAND HABITATS WEST OF THE DESERT.	REQUIRES VERTICAL BANKS/CLIFFS WITH FINE-TEXTURED/SANDY SOILS NEAR STREAMS, RIVERS, LAKES, OCEAN TO DIG NESTING HOLE.
<i>Thamnophis gigas</i>	giant gartersnake	FT, CT	PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS AND IRRIGATION DITCHES.	THIS IS THE MOST AQUATIC OF THE GARTERSNAKES IN CALIFORNIA.
<b>PLANTS</b>				
<i>Erigeron greenei</i>	Greene's narrow-leaved daisy	CNPS 1B.2	CHAPARRAL.	SERPENTINE AND VOLCANIC SUBSTRATES, GENERALLY IN SHRUBBY VEGETATION. 90-835 M.
<i>Hesperolinon breweri</i>	Brewer's western flax	CNPS 1B.2	CHAPARRAL, CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.	OFTEN IN ROCKY SERPENTINE SOIL IN SERPENTINE CHAPARRAL AND SERPENTINE GRASSLAND. 195-910 M.
<i>Layia septentrionalis</i>	Colusa layia	CNPS 1B.2	CHAPARRAL, CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.	SCATTERED COLONIES IN FIELDS AND GRASSY SLOPES IN SANDY OR SERPENTINE SOIL. 15-1100 M.
<i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's pepper-grass	CNPS 1B.2	VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.	GRASSLAND, AND SOMETIMES VERNAL POOL EDGES. ALKALINE SOILS. 1-30 M.
<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	CNPS 1B.2	CHAPARRAL, CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.	OPEN TO PARTIALLY SHADED GRASSY SLOPES. ON VOLCANICS OR THE PERIPHERY OF SERPENTINE SUBSTRATES. 55-855 M.

Scientific Name	Common Name	Status*	General Habitat**	Habitat Details**
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	CNPS 1B.1	CISMONTANE WOODLAND, MEADOWS AND SEEPS, VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND, LOWER MONTANE CONIFEROUS FOREST.	VERNAL POOLS AND SWALES; ADOBE OR ALKALINE SOILS. 3-1680 M.
<i>Puccinellia simplex</i>	California alkali grass	CNPS 1B.2	ALKALINE, VERNALLY MESIC. SINKS, FLATS, AND LAKE MARGINS.	1-915 M.
<i>Sidalcea keckii</i>	Keck's checkerbloom	FE	CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.	GRASSY SLOPES IN BLUE OAK WOODLAND. ON SERPENTINE-DERIVED, CLAY SOILS, AT LEAST SOMETIMES. 85-505 M.

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

\*\*Copied verbatim from CNDDDB, unless otherwise noted.