BIOLOGICAL SITE ASSESSMENT FOR THE CANNABIS CULTIVATION OPERATION AT 2593 NEW LONG VALLEY ROAD, CLEARLAKE OAKS, CALIFORNIA

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Applicant:

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Prepared for:

Regional Water Quality Control Board

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1. INTRODUCTION

1.1. PROJECT LOCATION AND DESCRIPTION

Natural Investigations Company conducted a biological site assessment for a cannabis cultivation operation at 2593 New Long Valley Road, Clearlake Oaks, in Lake County, California. The entire 20.8-acre parcel (APN 620-071-004) was the Study Area. The Project Area is accessed by a private graveled road on New Long Valley Road (see exhibits).

The project area is flat and will not require grading or terracing. Vegetation clearing will be limited to mowing of non-native grasses that were established for hay (see exhibits). Installation of a proposed processing building will occur on the foundation of the home that was destroyed in the 2018 fire. Shipping storage containers will be installed in an existing parking area.

Mature plants will be grown outside in a fenced garden compound. Cultivation will occur in full sun in native soil. The irrigation system for the cultivation operation uses water supplied by a well and a pump located in the northern portion of the parcel. The water will be pumped via underground PVC piping to a 2,500-gallon storage tank adjacent to the garden. Irrigation will be provided via black poly tubing and emitters (drip irrigation). A mixing tank may be used to add liquid fertilizers and other amendments to the irrigation water. A soil stockpile and compost pile will be established in the garden enclosure.

A garage and the well house for the pump are the only structures found on the site. The 600 square foot garage will be used for harvested Cannabis drying. A processing building is proposed for construction on site. The building will be used for cannabis processing, and will have an employee break room and flush toilets. A septic system will be installed to service the building. Electricity for the building will be provided by the local electric utility. Diesel generators will provide back-up electricity. A propane tank (approximately 200 gallons) may be installed to provide fuel for heating the building. Shipping storage containers will be installed adjacent to the garage. Employees will use the existing driveway for parking and staging. Prior to construction of the processing building, employees will have use of a portable chemical toilet in the garden enclosure.

1.2. PURPOSE AND SCOPE OF ASSESSMENT

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

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

Cannabis Cultivation Site, and knowledge of state and federal laws regarding the protection of sensitive and endangered species." (Glossary of the General Order)

In support of this permit enrollment application and general compliance California Environmental Quality Act, Natural Investigations Co. has prepared this assessment to provide information about the biological resources within the Study Area, the regulatory environment affecting such resources, any potential Project-related impacts upon these resources, and finally, to identify mitigation measures and other recommendations to reduce the significance of these impacts. The specific scope of services performed for this Biological Site Assessment consisted of the following tasks:

- Compile all readily-available historical biological resource information about the Study Area;
- Spatially query state and federal databases for any historic 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).

Regional Board Order R5-2015-0113 protects receiving water bodies from water-quality impacts associated with cannabis cultivation using a combination of Best Management Practices, buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight.

1.3.3. Tree Protection

For Lake County, no relevant county or municipal tree ordinances were identified that would protect non-commercial tree species such as native oaks (*Quercus* spp.).

In areas outside timberland, pursuant to Public Resource Code section 4526, no tree removal for the purposes of facilitating cannabis production, including solar exposure increases, is allowed within 150 feet of fish bearing water bodies or 100 feet of aquatic habitat for non-fish aquatic species (i.e. aquatic insects). In areas inside timberland, any tree removal is subject to the conditions and requirements set forth in the Z'berg-Nejedly Forest Practice Act and the California Forest Practice Rules. If development

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

2. ENVIRONMENTAL SETTING

The Study Area is located within the Inner North Coast Ranges geographic subregion, which is contained within the Northwestern California geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately cold winters. The Study Area and vicinity is in between climate Zones 7, California's Gray Pine Belt, with hot summers and mild but pronounced winters without severe winter cold or high humidity (Brenzel, 2012). The topography of the Study Area is relatively flat with a channel incision. The elevation ranges from approximately 1,230 feet to 1,280 feet above mean sea level. Long Valley Creek bisects the Study Area. The northern portion of the Study Area drains south into the creek and the southern portion of the Study Area flows north into the creek. Drainage from the entire Study Area flows into Long Valley Creek, thence North Fork Cache Creek and Cache Creek eventually draining into the Sacramento River.

Prior to the establishment of this cultivation operation, land uses were open space, hay production and cannabis cultivation. Existing facilities on the property include a garage and a pump house. Surrounding land use is largely open space, rural residential, hay production and cannabis cultivation.

The Natural Resources Conservation Service (NRCS) has identified several soil types within the Study Area. The geology that underlays the site includes soils derived from alluvium, sandstone and shale. No soils derived from volcanic materials or serpentine are mapped within or adjacent to this parcel. (NRCS 2019).

3. METHODOLOGY

3.1. PRELIMINARY DATA GATHERING AND RESEARCH

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

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

3.2. FIELD SURVEY

Consulting biologist Tim Nosal, MS. conducted a reconnaissance-level field survey on May 7, 2019. Weather conditions were warm and sunny with a light breeze and temperatures between 65-70 degrees F. A variable-intensity pedestrian survey was performed, and modified to account for differences in terrain, vegetation density, and visibility. All visible fauna and flora observed were recorded in a field notebook, and identified to the lowest possible taxon. Survey efforts emphasized the search for any special-status species that had documented occurrences in the CNDDB within the vicinity of the Study Area and those species on the USFWS species list (Appendix 1).

When a specimen could not be identified in the field, a photograph or voucher specimen (depending upon permit requirements) was taken and identified in the laboratory using a dissecting scope where

necessary. Tim Nosal holds CDFW Plant Voucher Specimen Permit 2081(a)-16-102-V. Taxonomic determinations were facilitated by referencing museum specimens or by various texts, including the following: Powell and Hogue (1979); Pavlik (1991); (1993); Brenzel (2012); Stuart and Sawyer (2001); Lanner (2002); Sibley (2003); Baldwin et al. (2012); Calflora (2019); CDFW (2019b,c); NatureServe 2019; and University of California at Berkeley (2019a,b).

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

3.3. MAPPING AND OTHER ANALYSES

Locations of species' occurrences and habitat boundaries within the Study Area were recorded on color aerial photographs, and then digitized to produce the final habitat maps. The boundaries of potentially jurisdictional water resources within the Study Area were identified and measured in the field, and similarly digitized to calculate acreage and to produce informal delineation maps. Geographic analyses were performed using geographical information system software (ArcGIS 10, ESRI, Inc.). Vegetation communities (assemblages of plant species growing in an area of similar biological and environmental factors), were classified by Vegetation Series (distinctive associations of plants, described by dominant species and particular environmental setting) using the CNPS Vegetation Classification system (Sawyer and Keeler-Wolf, 1995). Wetlands and other aquatic habitats were classified using USFWS National Wetlands Inventory Classification System for Wetland and Deepwater Habitats, or "Cowardin class" (Cowardin et al., 1979; USFWS 2007). Informal wetland delineation methods consisted of an abbreviated, visual assessment of the three requisite wetland parameters (hydrophytic vegetation, hydric soils, hydrologic regime) defined in the US Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987). Wildlife habitats were classified according to the CDFW's California Wildlife Habitat Relationships System (CDFW, 2019c). Species' habitat requirements and life histories were identified using the following sources: Baldwin et al. (2012); CNPS (2019), Calflora (2019); CDFW (2019a,b,c); and University of California at Berkeley (2019a,b).

4. RESULTS

4.1. INVENTORY OF FLORA AND FAUNA FROM FIELD SURVEY

All plants detected during the field survey of the Study Area are listed in Appendix 2. The following animals were detected within the Study Area during the field survey: moths and butterflies (Lepidoptera); ants (Formicidae); grasshoppers (Orthoptera); fence lizard (*Sceloporus occidentalis*); northern Pacific rattlesnake (*Crotalis oreganus oreganus*); unidentified fish (Actinopterygii); dog (*Canis familiaris*) California Quail (*Callipepla californica*); Turkey Vulture (*Cathartes aura*); Acorn Woodpecker (*Melanerpes formicivorus*); Nuttall's woodpecker (*Picoides nuttallii*); Eurasian collard dove (*Streptopelia decaocto*); western meadowlark (*Sturnella neglecta*); western kingbird (*Tyrannus verticalis*); Brewer's blackbird (*Euphagus cyanocephalus*); violet-green swallow (*Tachycineta thalassina*); Anna's hummingbird (*Calypte anna*); sparrows (Emberizidae) and common songbirds.

4.2. VEGETATION COMMUNITIES AND WILDLIFE HABITAT TYPES

The Study Area contains 3 terrestrial habitat types (see Exhibits and photos in Appendix 3): ruderal/urbanized; riparian; and annual grassland.

Ruderal/Urbanized: 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. The area mapped as urbanized includes the garage, former house site and the adjacent parking areas. Vegetation within this habitat type consists primarily of nonnative annual grasses, weedy or invasive species or ornamental plants lacking a consistent community structure. This habitat is classified as the "Urban" wildlife habitat type by CDFW's Wildlife Habitat Relationship System (WHR).

Riparian: Riparian habitat can be found along the channel of Long Valley Creek within the Study Area. The riparian zone burned during the 2018 Mendocino Complex Fire. Before the fire, the riparian habitat consisted of riparian woodland with a canopy of valley oak (*Quercus lobata*), willows (*Salix* spp.), and Fremont cottonwood (*Populus fremontii*). The fire killed most of the riparian woodland trees. The recovering community is a riparian scrub dominated by shrubby species such as giant reed (*Arundo donax*), sandbar willow (*Salix exigua*) and Himalayan blackberry (*Rubus armeniacus*) with a variety of herbs and grasses in the understory. This vegetation can be classified as "61.209.00 *Salix exigua* Shrubland Alliance (Allen et al. 1991)" or as the Holland Type "Great Valley willow scrub".

Annual Grassland: Most of the Study Area is flat, and is vegetated with a dense cover of annual grasses and herbs. Grasslands on both sides of Long Valley Creek have been managed as a hay crop in the past. The plants in the grassland reflect, in part, the past management practices including annual mowing and introduction of plants suitable for hay production. Annual species are dominant in the grassland, including Ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceous*), Italian rye (*Festuca perennis*), Medusa-head (*Elymus caput-medusae*), vetch (*Vicia* spp.) and Menzies' fiddleneck (*Amsinckia menziesii*) This type of grassland can be classified as "42.026.00 *Bromus (diandrus, hordeaceous) – Brachypodium distachyon* Herbaceous Semi-Natural Alliance" or as the Holland Type "Non-native grassland".

Aquatic special-status habitats (wetlands) are discussed later in this report. The CNDDB reported no special-status habitats within the Study Area. The CNDDB reported the following special-status habitats in the vicinity of the Study Area: Clear Lake Drainage Cyprinid/Catostomid Stream; Clear Lake Drainage Seasonal Lakefish Spawning Stream; Coastal and Valley Freshwater Marsh and Great Valley Mixed Riparian Forest.

The following special-status terrestrial habitat was detected within the Study Area: riparian scrub (along Long Valley Creek).

4.3. 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. Historical Special-status Species’ Occurrences

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

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

The CNDDB was queried and any reported occurrences of special-status species were plotted in relation to the Study Area boundary using GIS software (see exhibits). The CNDDB reported no special-status species occurrences within the Study Area.

Within a 10-mile buffer of the Study Area boundary, the CNDDB reported several special-status species occurrences, summarized in the following table. A federal species list was also generated from the USFWS website (Appendix 1).

Table 1. Special-status Species Reported by CNDDB in the Vicinity of the Study Area

Common name Scientific name	Status	General Habitat	Microhabitat
Red-bellied newt *Taricha rivularis*	CSSC	Found in coastal woodlands and redwood forests along the coast of Northern California	A stream or river dweller. Larvae retreat into vegetation and under stones during the day.
Foothill yellow-legged frog *Rana boylii*	CCT/ CSSC	Partly-shaded, shallow streams & riffles with a rocky substrate in a variety of habitats.	Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.
Osprey *Pandion haliaetus*	CWL	Ocean shore, bays, fresh-water lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.
Bald eagle *Haliaeetus leucocephalus*	FD/ CE/ CFP	Ocean shore, lake margins, & rivers for both nesting & wintering. Most nests within 1 mi of water.	Nests in large, old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter
Prairie falcon *Falco mexicanus*	CWL	Inhabits dry, open terrain, either level or hilly.	Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT/CE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.
Clear Lake hitch *Lavinia exilicauda chi*	CT	Found only in Clear Lake, Lake Co, and associated ponds. Spawns in streams flowing into Clear Lake.	Adults found in the limnetic zone. Juveniles found in the nearshore shallow-water habitat hiding in the vegetation.
Sacramento perch *Archoplites interruptus*	CSSC	Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley.	Prefers warm water. Aquatic vegetation is essental for young. Tolerates wide range of physio-chemical water conditions.
Silver-haired bat *Lasionycteris noctivagans*	CSSC	Primarily a coastal & montane forest dweller feeding over streams, ponds & open brushy areas.	Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes & rarely under rocks. Needs drinking water.
Townsend's big-eared bat *Corynorhinus townsendii*	CSSC	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls & ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Pallid bat *Antrozous pallidus*	CSSC	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
San joaquin pocket mouse *Perognathus inornatus*	CSSC	Grassland, oak savanna and arid scrubland in the Southern Sacramento Valley, Salinas Valley, San Joaquin Valley	Associated with fine-textured, sandy, friable soils.
Humboldt marten *Martes caurina humboldtensis*	CCE/ CSSC	Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County.	Associated with late-successional coniferous forests, prefer forests with low, overhead cover.
Fisher - West Coast DPS *Pekania pennanti*	CT/ CSSC	Intermediate to large-tree stages of coniferous forests & deciduous-riparian areas with high percent canopy closure.	Uses cavities, snags, logs & rocky areas for cover & denning. Needs large areas of mature, dense forest.
Western pond turtle *Emys marmorata*	CSSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation.	Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying
Brownish dubiraphian riffle beetle *Dubiraphia brunnescens*	CSSC	Aquatic; known only from the NE shore of Clear Lake, Lake County.	Inhabits exposed, wave-washed willow roots.
Wilbur Springs shorebug *Saldula usingeri*	CSSC	Requires springs/creeks with high concentrations of Na, Cl, & Li.	Found only on wet substrate of spring outflows.
Obscure bumble bee *Bombus caliginosus*	CSSC	West Coast from Washington south to Southern California	Associated with Fabaceae, Ericaceae, Asteraceae, *Ceanothus*, thistles, et al.
Borax Lake cuckoo wasp *Hedychridium milleri*	CSSC	Endemic to Central California. Only collection is from the type locality.	External parasite of wasp and bee larva.
Big-scale balsamroot *Balsamorhiza macrolepis*	1B.2	Chaparral, valley and foothill grassland, cismontane woodland.	Sometimes on serpentine. 90-1555 m.
Small-flowered calycadenia *Calycadenia micrantha*	1B.2	Chaparral, valley and foothill grassland, meadows and seeps.	Rocky talus or scree; sparsely vegetated areas. Occasionally on roadsides; sometimes on serpentine. 5-1500 m.
Greene's narrow-leaved	1B.2	Chaparral.	Serpentine and volcanic substrates, generally in

Common name Scientific name	Status	General Habitat	Microhabitat
daisy *Erigeron greenei*			shrubby vegetation. 80-1005 m.
Pappose tarplant *Centromadia parryi ssp. parryi*	1B.2	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland.	Vernally mesic, often alkaline sites. 2-420m.
Colusa layia *Layia septentrionalis*	1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 145-1095m.
Hall's harmonia *Harmonia hallii*	1B.2	Chaparral.	Serpentine hills and ridges. Open, rocky areas within chaparral. 500-900 m.
Bent-flowered fiddleneck *Amsinckia lunaris*	1B.2	Cismontane woodland, valley and foothill grassland.	50-500m.
San Joaquin spearscale *Extriplex joaquinana*	1B.2	Chenopod scrub, alkali meadow, playas, valley and foothill grassland.	In seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata, Frankenia*, etc. 1-835 m.
Konocti manzanita *Arctostaphylos manzanita ssp. elegans*	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	Volcanic soils. 395-1615 m.
Jepson's milk-vetch *Astragalus rattanii var. jepsonianus*	1B.2	Cismontane woodland, valley and foothill grassland, chaparral.	Commonly on serpentine in grassland or openings in chaparral. 180-1000 m.
Anthony Peak lupine *Lupinus antoninus*	1B.2	Upper montane coniferous forest, lower montane coniferous forest.	Open areas with surrounding forest; rocky sites. 1220-2285 m.
Glandular western flax *Hesperolinon adenophyllum*	1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Serpentine soils; generally found in sepentine chaparral. 150-1315 m.
Drymaria-like western flax *Hesperolinon drymarioides*	1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland, valley and foothill grassland.	Serpentine soils, mostly within chaparral. 390-1000m.
Snow Mountain buckwheat *Eriogonum nervulosum*	1B.2	Chaparral.	Dry serpentine outcrops, balds, and barrens. 300-2100 m.
Brandegee's eriastrum *Eriastrum brandegeeae*	1B.1	Chaparral, cismontane woodland.	On barren volcanic soils; often in open areas. 425-840 m.
Tracy's eriastrum *Eriastrum tracyi*	CR/3.2	Chaparral, cismontane woodland.	Gravelly shale or clay; often in open areas. 315-760 m.
Baker's navarretia *Navarretia leucocephala ssp. bakeri*	1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest.	Vernal pools and swales; adobe or alkaline soils. 5-1740 m.
Few-flowered navarretia *Navarretia leucocephala ssp. pauciflora*	FE / CT /1B.1	Vernal pools.	Volcanic ash flow, and volcanic substrate vernal pools. 400-855 m.
Porter's navarretia *Navarretia paradoxinota*	1B.3	Meadows and seeps.	Vernally mesic openings on serpentine soils, often drainages. 165-840 m.
Rincon Ridge ceanothus *Ceanothus confusus*	1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland.	Known from volcanic or serpentine soils, dry shrubby slopes. 75-1065 m.
Bolander's horkelia *Horkelia bolanderi*	1B.2	Lower montane coniferous forest, chaparral, meadows, valley and foothill grassland.	Grassy margins of vernal pools and meadows. 450-1100 m.
Pink creamsacs *Castilleja rubicundula var. rubicundula*	1B.2	Chaparral, meadows and seeps, valley and foothill grassland.	Openings in chaparral or grasslands. On serpentine. 20-900 m.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	CE/1B.2	Marshes and swamps (freshwater), vernal pools.	Clay soils; usually in vernal pools, sometimes on lake margins. 10-2375 m.
Adobe-lily *Fritillaria pluriflora*	1B.2	Chaparral, cismontane woodland, foothill grassland.	Usually on clay soils; sometimes serpentine. 60-705 m.
Eel-grass pondweed *Potamogeton zosteriformis*	2B.2	Marshes and swamps.	Ponds, lakes, streams. 0-1860 m.

Definitions of Status Codes: FE = Federally listed as endangered; FT = Federally listed as threatened; FPE = Federally proposed for listing as endangered; FPT = Federally proposed for listing as threatened; FC = Candidate for Federal listing; MB = Migratory Bird Act; CE = California State listed as endangered; CT = California State listed as threatened; CSSC = California species of special concern; CWL = California Watch List; CR = California rare species; CFP = California fully protected species; CNPS (California Native Plant Society) List 1A = Plants presumed extinct in California by CNPS; CNPS List 1B = CNPS designated rare or endangered plants in California and elsewhere; CNPS List 2 = CNPS designated rare or endangered plants in California, but more common elsewhere; CNPS List 3 = CNPS designated Review List for plants about which more information is needed; CNPS List 4 = CNPS designated Watch List for plants of limited distribution.

4.3.2. Special-status Species Observed During Field Survey

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

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

The annual grasslands 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 and owing to a history of disturbance including hay production and fire. The channel of Long Valley Creek and associated riparian corridor and riverine wetlands within the Study Area have a moderate potential to sustain aquatic special-status species and diverse wildlife species including foothill yellow-legged frog (*Rana boylii*).

4.4. POTENTIALLY-JURISDICTIONAL WATER RESOURCES

An informal assessment for the presence of potentially-jurisdictional water resources within the Study Area was also conducted during the field survey.

For purposes of this biological site assessment, non-wetland waters were classified using the California Forest Practice Rules. The California Forest Practice Rules define a Class I watercourse as 1) a watercourse providing habitat for fish always or seasonally, and/or 2) providing a domestic water source; a Class II watercourse is 1) a watercourse capable of supporting non-fish aquatic species, or 2) a watercourse within 1000 feet of a watercourse that seasonally or always has fish present; a Class III watercourse is a watercourse with no aquatic life present and that shows evidence of being capable of transporting sediment to Class I and Class II waters during high water flow conditions.

The USFWS National Wetland Inventory (see Appendix 1) reported 1 water feature within the Study Area: Long Valley Creek.

Two water features were detected within the Study Area during the field survey (see Exhibits). One perennial stream (Class I) was mapped within the Study Area—Long Valley Creek—crossing the center of the Study Area. Long Valley Creek is tributary to Cache Creek. Unidentified species of fish were noted in this watercourse. Riparian scrub and riverine wetlands can be found along Long Valley Creek.

One unnamed ephemeral watercourse (Class III) was mapped within the Study Area. This channelized feature begins near the northeast corner of the parcel and flows south and west into Long Valley Creek. This channel has an ordinary high water mark, bank erosion and scouring, and litter and debris present.

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.

Additionally, cultivators who enroll in the State Water Board's Waste Discharge Requirements for Cannabis Cultivation Order WQ 2017-0023-DWQ must comply with the Minimum Riparian Setbacks, as summarized in the following table. The Project would be considered to have a significant adverse impact on biological resources if it would be non-compliant with these requirements. Cannabis cultivators shall comply with the minimum riparian setbacks described below for all land disturbance, cannabis cultivation activities, and facilities (e.g., material or vehicle storage, diesel powered pump locations, water storage areas, and chemical toilet placement). The riparian setbacks shall be measured from the waterbody's bankfull stage (high flow water levels that occur every 1.5 to 2 years[13]) or from the top edge of the waterbody bank in incised channels, whichever is more conservative. Riparian setbacks for springheads shall be measured from the springhead in all directions (circular buffer). Riparian setbacks for wetlands shall be measured from the edge of the bankfull water level. The cannabis cultivator shall increase riparian setbacks as needed or implement additional Requirements to meet the performance Requirement of protecting surface water from discharges that threaten water quality. If the cannabis cultivation Site cannot be managed to protect water quality, the Executive Officer of the applicable Regional Water Board may revoke authorization for cannabis cultivation activities at the cannabis cultivation site.

Minimum Riparian Setbacks

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

Notes:

- Riparian setbacks do not apply to man-made irrigation canals, water supply reservoirs, and hydroelectric canals (Watercourse Class IV) that do not support native aquatic species, however cannabis cultivators shall ensure land disturbance, cannabis cultivation activities, and facilities are not located in or disturb the existing riparian and wetland riparian vegetation associated with these Watercourse Class IV waterbodies.
- Risk is defined in Table 1 of this Policy and is based on the natural (prior to land disturbance activities) surface

topography.

- Variance to riparian setbacks is only allowed if consistent with this Policy and a work plan and compliance schedule are approved by the applicable Regional Water Board Executive Officer.

5.2. IMPACT ANALYSIS

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

The installation of the cultivation operation will occur on areas that burned in the 2018 Mendocino Complex Fire. These areas were previously used for hay production or graded and cleared for residential development. No impacts to natural habitats are likely to occur from installation of the cultivation areas. The project was designed to be located sufficiently far away from channels to meet the minimum setback distances required by the Water Board. No grading will occur; therefore significant accumulations of sediment in receiving waterbodies are unlikely.

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

No special-status species were detected within the Study Area. The non-native grasslands 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 the history of disturbance through hay mowing and fire. Long Valley Creek has a moderate potential to sustain aquatic special-status species. However, the cannabis processing area is 190 feet from the top of bank and the cultivation compound is 260 feet away from top of bank. With these adequate buffers and implementation of the required site management plan, no impacts to special-status species are likely to occur from project implementation. Therefore, no mitigation is required. If land clearing is performed in the future, a pre-construction special-status species survey is recommended.

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

The Study Area is not within any designated listed species' critical habitat. The Study Area contains one terrestrial special-status habitat: riparian corridors along the Long Valley Creek. The project has established a minimum buffer of 50 feet from riparian habitat. There is no evidence that project implementation will impact any special-status habitats. Therefore, no mitigation is required.

Implementation of the project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Implementation of the project does not conflict with any county or municipal policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

If tree felling is performed in the future, a pre-construction nesting bird survey is recommended.

The project does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved governmental habitat conservation plan. The Study Area is not within the coverage area of any conservation plan.

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

There are several water resources within the Study Area: one Class I Watercourse, one Class III Watercourse and riverine wetlands. Potential adverse impacts to water resources could occur during construction by modification or destruction of stream banks or riparian vegetation, the filling of wetlands, or by increased erosion and sedimentation in receiving water bodies due to soil disturbance. However, the Study Area does not have a significant erosion potential, because slopes are not steep, areas of ground disturbance are small, and vegetated buffers are present. Furthermore, the project was designed with adequate aquatic buffers. The cannabis processing area is 190 feet from the top of bank and the cultivation compound is 260 feet away from top of bank. There is no evidence that project implementation will impact any aquatic habitats. The total area of ground disturbance from installation of the cultivation operation is less than 1 acre; thus, the Cultivator does not need to enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ).

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

Potential adverse impacts to water resources could occur during operation of cultivation activities resources by discharge of sediment or other pollutants (fertilizers, pesticides, human waste, etc.) into receiving waterbodies. However, the project proponent must file a Notice of Intent and enroll in Cannabis Cultivation Order WQ 2017-0023-DWQ. Compliance with this Order will ensure that cultivation operations will not significantly impact water resources by using a combination of Best Management Practices (BMPs), buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight. Implementation of these BMPs and compliance with the Order will ensure that water quality impacts are less than significant. Therefore, no mitigation is required.

5.2.4. Potential Direct / Indirect Adverse Effects on Nesting Birds

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

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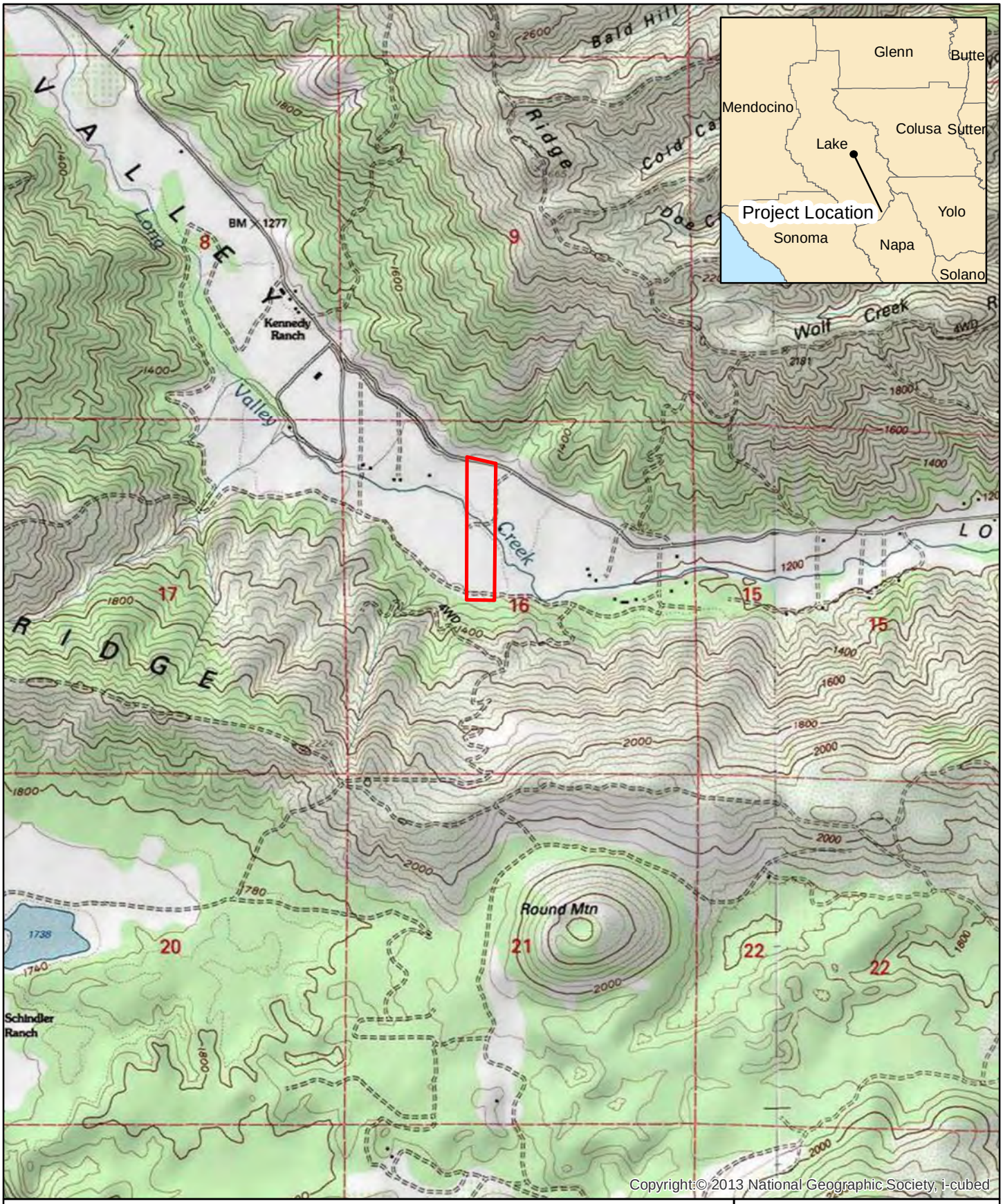
EXHIBITS



Parcel Location

0 0.5 1 Kilometers

0 0.5 1 Miles

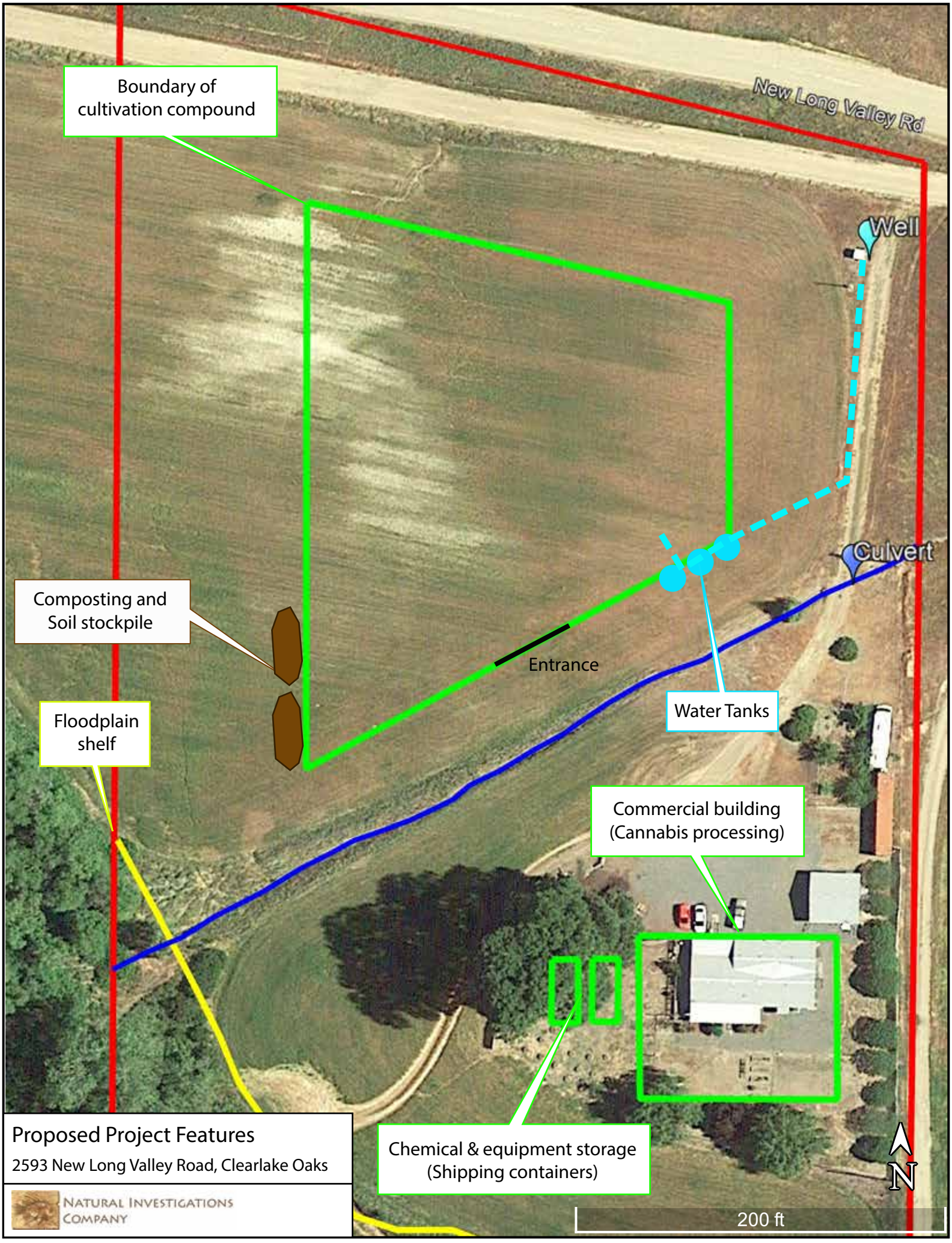
1:24,000

2593 New Long Valley Rd
Figure 1 - Project Location

Natural Investigations Company

Map Date 5/3/2019

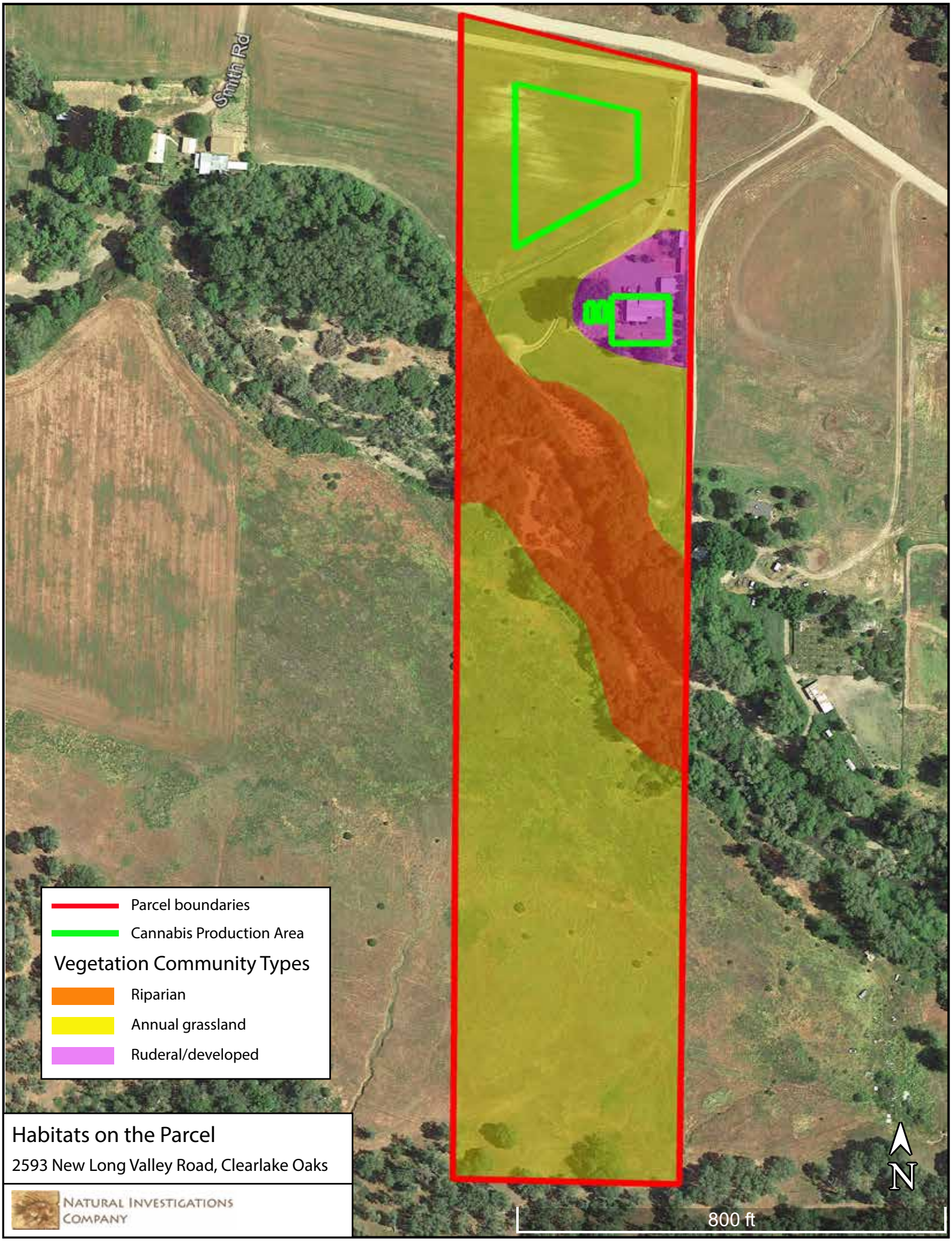
Clearlake Oaks 1996 Quadrangle:Township 14N, Range 7W, Section 16



Proposed Project Features

2593 New Long Valley Road, Clearlake Oaks

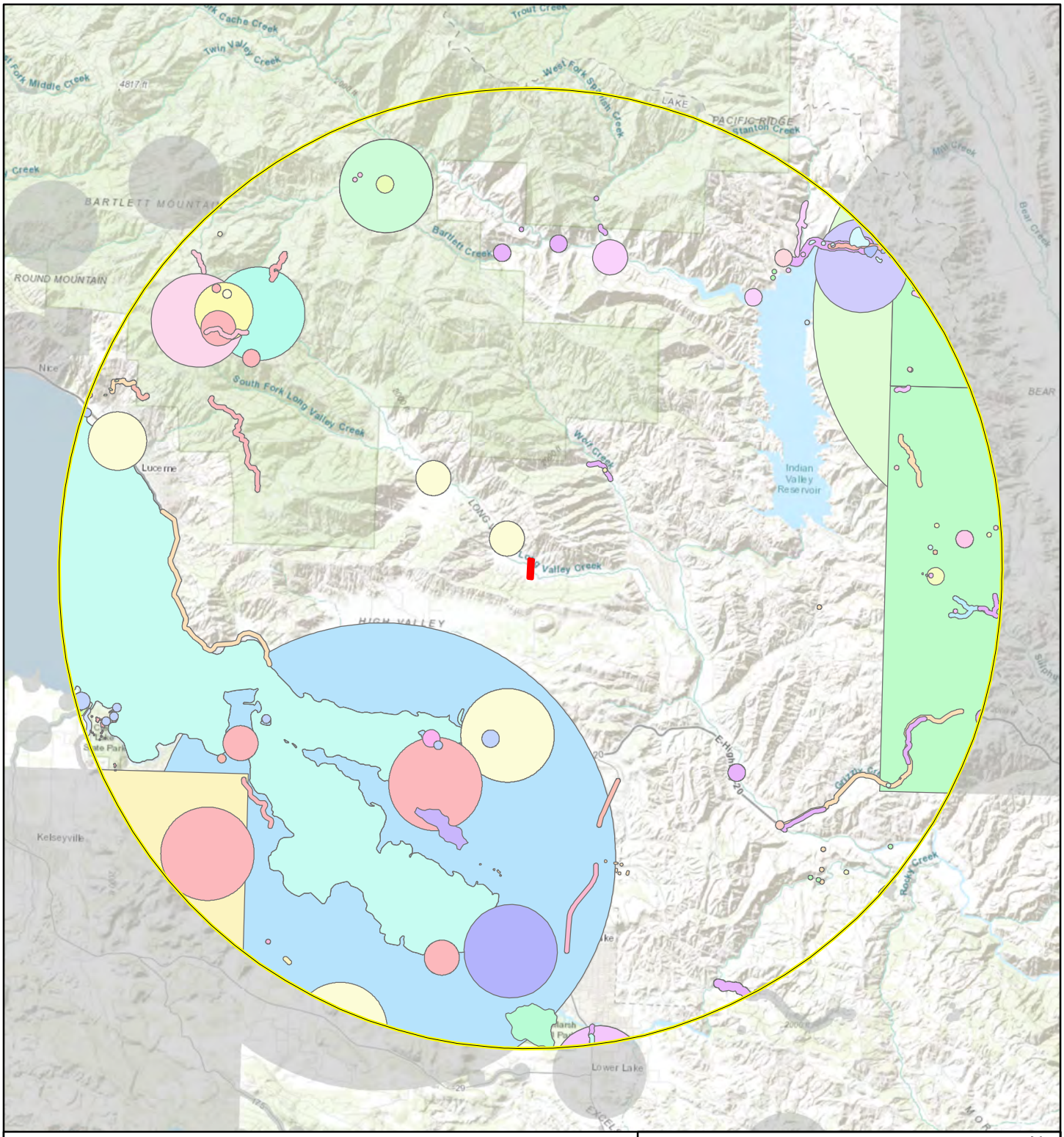
Natural Investigations Company



Habitats on the Parcel

2593 New Long Valley Road, Clearlake Oaks

Natural Investigations Company



Parcel Location 10 Mile Buffer

1:190,000 1 inch = 3 miles

0 3 6 Miles

N

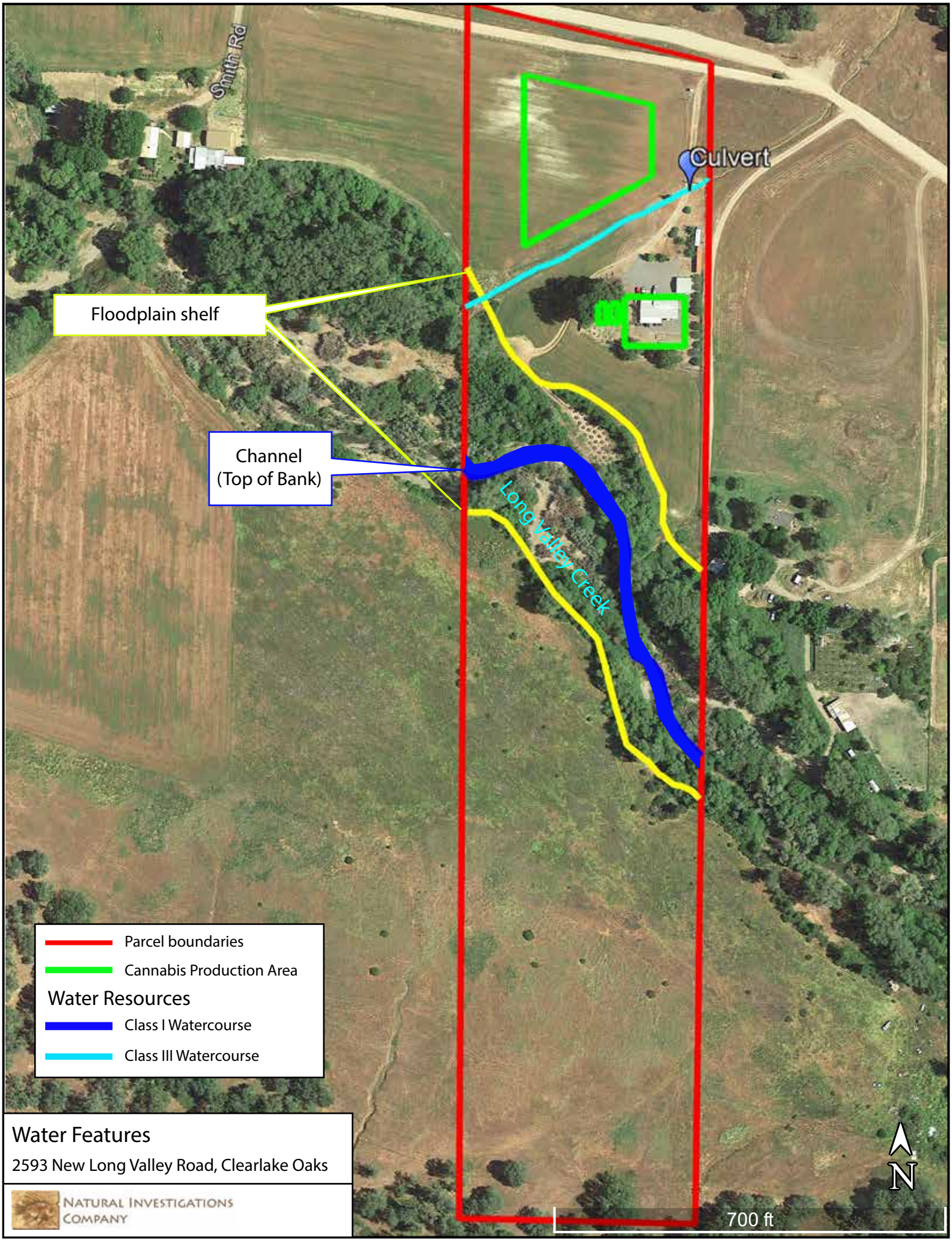
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist inshowing features discussed in an attached document. Natural Investigations Company can not guarantee the accuracy and content of electronic files.The master file is stored by Natural Investigations Company and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.Data Sources: California Department of Fish and Wildlife. 2019. RareFind 5.x, California Natural Diversity Data Base. Biogeographic Data Branch, Sacramento, California.
(updated monthly by subscription service)

Special-Status Species Occurrences Map

2593 New Long Valley Rd

Clearlake Oaks 1996 Quadrangle:
Township 14N, Range 7W, Section 16

NATURAL INVESTIGATIONS CO.
WWW.NATURALINVESTIGATIONS.COM


Smith Rd
Culvert
Floodplain shelf
Channel
(Top of Bank)
Long Valley Creek
Parcel boundaries
Cannabis Production Area
Water Resources
Class I Watercourse
Class III Watercourse
Water Features
2593 New Long Valley Road, Clearlake Oaks
Natural Investigations Company
N
700 ft

Parcel Location

Wetlands and Channels

0 125 250 Meters

0 500 1,000 Feet

1:5,000

2593 New Long Valley Rd
National Wetlands Inventory
Features Map

Natural Investigations Company

Map Date 5/3/2019

Clearlake Oaks 1996 Quadrangle:Township 14N, Range 7W, Section 16

APPENDIX 1: USFWS SPECIES LIST

United States Department of the Interior

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

In Reply Refer To:
Consultation Code: 08ESMF00-2019-SLI-1828
Event Code: 08ESMF00-2019-E-05884
Project Name: 2593 Long Valley Road

May 03, 2019

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 08ESMF00-2019-SLI-1828

Event Code: 08ESMF00-2019-E-05884

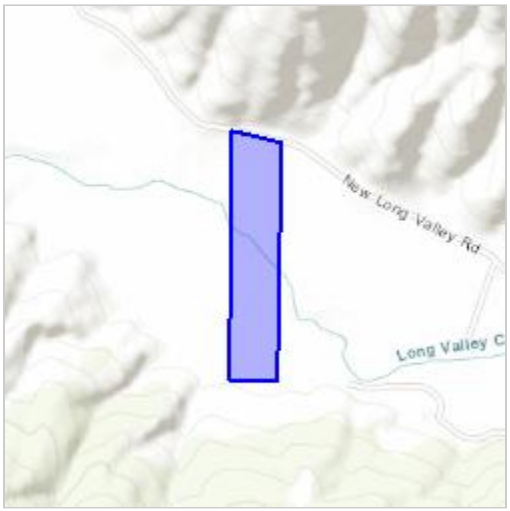
Project Name: 2593 Long Valley Road

Project Type: ** OTHER **

Project Description: Bio Assessment

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.06555601152706N122.6416924011167W



Counties: Lake, CA

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

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

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

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

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

Birds

NAME	STATUS
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

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

Flowering Plants

NAME	STATUS
Burke's Goldfields *Lasthenia burkei*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/4338

Critical habitats

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

APPENDIX 2: CHECKLIST OF PLANTS DETECTED IN THE STUDY AREA

Plants Observed at 2593 New Long Valley Road, Clearlake Oaks May 7, 2019

Common Name	***Scientific Name***
Yarrow	*Achillea millefolium*
Blow wives	*Achyrachaena mollis*
Foothill deervetch	*Acmispon brachycarpus*
California dandelion	*Agoseris grandiflora*
Silver hairgrass	*Aira cayophyllea*
White alder	*Alnus rhombifolia*
Menzies' fiddleneck	*Amsinckia menziesii*
Scarlet pimpernel	*Anagallis arvensis*
California mugwort	*Artemesia douglasii*
Giant reed	*Arundo donax*
Narrow-leaved milkweed	*Asclepias fascicularis*
Slender wild oat	*Avena barbata*
Common wild oat	*Avena fatua*
Coyote brush	*Baccharis pilularis*
Black mustard	*Brassica nigra*
Quaking grass	*Briza minor*
Ripgut brome	*Bromus diandrus*
Soft chess	*Bromus hordeaceous*
Red brome	*Bromus madritensis ssp. rubens*
Italian thistle	*Carduus pycnocephalus*
Santa Barbara sedge	*Carex barbarae*
Yellow star-thistle	*Centaurea solstitialis*
Sticky mouse-eared chickweed	*Cerastium glomeratum*
Bull thistle	*Cirsium vulgare*
Purple clarkia	*Clarkia purpurea ssp quadrivulnera*
Miner's lettuce	*Claytonia parviflora ssp. parviflora*
Chinese houses	*Collinsia heterophylla*
Collinsia	*Collinsia sp*
Poison hemlock	*Conium maculatum*
Field bindweed	*Convolvulus arvensis*
Dove weed	*Croton setiger*
Spreading larkspur	*Delphinium patens ssp. patens*
Fork-toothed ookow	*Dichelostemma congestum*
Medusa-head grass	*Elymus caput-medusae*
Blue Wildrye	*Elymus glaucus*
Tall willowherb	*Epilobium brachycarpum*
Common horsetail	*Equisetum arvense*
Storksbill	*Erodium cicutarium*
California poppy	*Eschscholzia californica*
Petty spurge	*Euphorbia peplus*
Brome fescue	*Festuca bromodes*
Small fescue	*Festuca microstachys*
Rattail sixweeks grass	*Festuca myuros*
Italian ryegrass	*Festuca perennis*
Bedstraw	*Galium aparine*
Cut-leaf geranium	*Geranium dissectum*
Great Valley gumweed	*Grindelia camporum*
Common sunflower	*Helianthus annuus*
Shortpod mustard	*Hirschfeldia incana*
Smooth cat's ear	*Hypochaeris glabra*
Iris	*Iris sp.*
Toad rush	*Juncus bufonius*

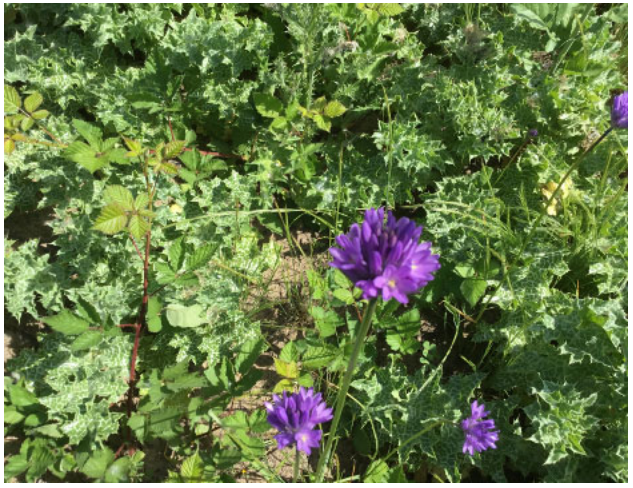
Common Name	*Scientific Name*
Common henbit	*Lamium amplexicaule*
Sweet pea	*Lathyrus sp.*
Narrowleaf cottonrose	*Logfia gallica*
Common lomatium	*Lomatium utriculatum*
Miniature lupine	*Lupinus bicolor*
Sky lupine	*Lupinus nanus*
Small tarweed	*Madia exigua*
Pineapple weed	*Matricaria discoidea*
Torrey's melicgrass	*Melica torreyana*
Slender cottonweed	*Micropus californicus*
Douglas' microseris	*Microseris douglasii*
Seep monkeyflower	*Mimulus guttatus*
Navarretia	*Navarretia sp.*
Nemophila	*Nemophila sp.*
Gray pine	*Pinus sabiniana*
Popcornflower	*Plagiobothrys sp.*
Bulbous bluegrass	*Poa bulbosa*
Pine bluegrass	*Poa secunda ssp. secunda*
Annual beardgrass	*Polypogon monspeliensis*
Fremont cottonwood	*Populus fremontii*
Blue oak	*Quercus douglasii*
Buttercup	*Ranunculus sp.*
Skunkbush	*Rhus trilobata*
Sweet briar	*Rosa rubiginosa*
Himalayan blackberry	*Rubus armeniacus*
Dock	*Rumex sp.*
Sandbar willow	*Salix exigua*
Arroyo willow	*Salix lasiolepis*
Pacific sanicle	*Sanicula crassicaulis*
Rye	*Secale cereale*
Common groundsel	*Senecio vulgare*
Field madder	*Sherardia arvensis*
Milk thistle	*Silybum marinum*
Sow thistle	*Sonchus oleraceus*
Snowberry	*Symphoriocarpos mollis*
Smallflower tamarisk	*Tamarix parviflora*
Spreading hedgeparsley	*Torilis arvensis*
Goat's beard	*Tragopogon dubius*
Little hop clover	*Trifolium dubium*
Rose clover	*Trifolium hirtum*
Clover	*Trifolium sp.*
Tomcat clover	*Trifolium willdenovii*
Owl's clover	*Triphysaria sp.*
Ithuriel's spear	*Triteleia laxa*
Great mullein	*Verbascum thapsis*
Western vervain	*Verbena lasiostachys*
Corn speedwell	*Veronica arvensis*
Persian speedwell	*Veronica persica*
Purple vetch	*Vicia benghalensis*
Spring vetch	*Vicia sativa*
Hairy vetch	*Vicia villosa*
Rough cocklebur	*Xanthium strumarium*

APPENDIX 3: SITE PHOTOS

































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