

JACOBSZOOM & ASSOCIATES, INC.

natural resource planning & management

April 21, 2021

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Re: Addendum to the Biological Resource Assessment for Amy Soderlind (UP 19-35), APN: 014-004-10

Hello Victor,

According to the Biological Assessment conducted on September 3, 2019, the project area consisted of former cannabis cultivation areas, including a rectangular field and irregularly shaped plots between blue oak trees. At the time of the biological survey, vegetative cover consisted of non-native annual grassland species or was absent (bare ground). Since it had been highly disturbed, it was concluded that this community provided limited habitat value for terrestrial wildlife. The disturbed and altered condition of these lands greatly reduced their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

Approximately 0.75 acre (32,670 sq. ft.) of blue oaks, coyote brush, poison oak, manzanita brush and non-native grasses were removed in January of 2020. Many of the trees and shrubs were either dead, dying or beetle infested from multiple fires surrounding the property from 2017-2019. No commercial species were removed. As the vegetation removal occurred at the end of January 2020, outside of the nesting bird season, nesting bird surveys were not necessary. Grading consisted of less than 50 cubic yards of soil. No tilling or tractors were utilized.

Botanical protocol surveys are not necessary for this project as a cursory survey of the project area conducted on April 20, 2021 has determined that it is highly unlikely that special-status plant or animal species have been negatively impacted by the removal of vegetation and trees/shrubs. The present vegetation consists of rattlesnake grass.



Existing site conditions within the project area. Picture taken 4/20/2021.





Rattlesnake grass present within the project area. Picture taken 4/20/21.





Edge of project area, showing remaining trees. Picture taken 4/20/21.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Alicia Ives Ringstad
Senior Wildlife Biologist
Jacobszoon & Associates, Inc.



**BIOLOGICAL SITE ASSESSMENT FOR THE
CANNABIS CULTIVATION OPERATION
AT 19303 BUTTS CANYON ROAD, MIDDLETOWN, CALIFORNIA**

September 11, 2019

Applicant:

Lauren Goodman

Prepared for:

Regional Water Quality Control Board

Prepared by:

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1. INTRODUCTION

1.1. PROJECT LOCATION AND DESCRIPTION

Natural Investigations Company conducted a biological site assessment for a proposed cannabis cultivation operation at 19303 Butts Canyon Road in Middletown, Lake County, California. The entire 25-acre parcel (APN 014-004-10) was the Study Area. The Study Area contains a single-family residence, detached garage, and a barn. The Project Area is located in the center of the Study Area; there will be a 100 foot setback from the east and west property boundaries. The cultivation compound is 130 feet by 500 feet, which is 65,000 square feet, and is accessed by an existing dirt road. 43,560 square feet of Cannabis canopy is currently allowed to be cultivated. There are no Cannabis manufacturing or extraction activities proposed at this time.

The Project consists of establishing an outdoor cannabis cultivation operation. The project will consist of vegetation clearing for the establishment of cultivation areas (see exhibits). The existing soil will be amended, and plants will be grown in the ground. There will be two structures within the cultivation area, one on the north end and one on the south end. The north end structure will be for parking and processing. The south end structure will be for storage processing. A 6-foot tall fence will be constructed out of wood or chain-link with slats around the Project Area to provide a visual barrier to adjacent properties. An existing well is located 620 feet to the southwest of Project Area. Drip irrigation methods will be used to water plants.

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)

"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 existing biological resource information about the Study Area;

- Spatially query state and federal databases for any occurrences of special-status species or habitats within the Study Area and vicinity;
- Perform a reconnaissance-level field survey of the Study Area, including photographic documentation;
- Inventory all flora and fauna observed during the field survey;
- Characterize and map the habitat types present within the Study Area, including any potential 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

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

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

Under CWA Section 401, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will

comply with State water quality standards. The California State Water Resources Control Board is responsible for administering CWA Section 401 regulations.

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

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

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

The State Water Resources Control Board’s Order WQ 2017-0023-DWQ General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities protects receiving water bodies from water-quality impacts associated with cannabis cultivation using a combination of Best Management Practices, buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight.

1.3.3. Tree Protection

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 are in climate Zone 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 sloped on the south and

relatively flat at the north. The elevation ranges from approximately 1080 feet to 1200 feet above mean sea level. A Class III watercourse runs west through the Study Area, approximately 250 feet north of the Project Area. The watercourse passes through an existing culvert under an unpaved access road. Drainage runs east to stock ponds, and eventually to Bucksnot Creek, Putah Creek, and the Sacramento River. The Study Area is predominantly natural, but portions have been previously used for agriculture. There is a single-family dwelling on the property. The surrounding land uses are private estates with open space and grazing land.

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

3.2. FIELD SURVEY

Consulting biologist Ted Hermansen, MS conducted a reconnaissance-level field survey on September 3, 2019. Weather conditions were warm and sunny. 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 by Geo Graening or Tim Nosal 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 (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. Few animals were active during this warm period, but the following animals were detected within the Study Area during the field survey: acorn woodpecker (*Melanerpes formicivorus*), fence lizard (*Sceloporus occidentalis*), California quail (*Callipepla californica*), turkey vulture (*Cathartes aura*); wild turkey (*Cathartes aura*; sign), coyote (*Canis latrans*; sign), gopher (*Thomomys bottae*; sign), and northern flicker (*Colaptes auratus*).

4.2. VEGETATION COMMUNITIES AND WILDLIFE HABITAT TYPES

4.2.1. Terrestrial Vegetation Communities

The Study Area contains the following terrestrial vegetation communities: blue oak-foothill pine woodland, agriculture, and developed. These vegetation communities are discussed here and are delineated in the Exhibits. Aquatic vegetation communities are discussed in the section on jurisdictional waters.

Blue oak-foothill pine woodland. This vegetation community occurs between 500 and 3,000 feet (Neal 1980, Mayer and Laudenslayer 1988, and CDFW 2019c); within the Study Area, it contained and understory of annual grassland or chaparral vegetation. This community contains blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), foothill pine (*Pinus sabiniana*), black oak (*Quercus kelloggii*), madrone (*Arbutus menziesii*), and ponderosa pine (*Pinus ponderosa*). The southwestern half of the project is on a north facing slope and contains a higher diversity of trees with an understory of chaparral species, such as manzanita, whereas the northeastern half, which includes the Project Area, is relatively flat and predominantly consists of blue oak with a dense understory of non-native annual grassland species, such as nit grass (*Gastridium phleoides*) and rattlesnake grass (*Briza maxima*). This habitat type supports a diverse array of terrestrial wildlife.

Agriculture. This vegetation community consists of former cannabis cultivation areas, including a rectangular field and irregularly shaped plots between blue oak trees. At the time of the biological survey, vegetative cover consisted of non-native annual grassland species or was absent (bare ground). Since it has been highly disturbed, this community provides limited habitat value for terrestrial wildlife.

Developed. This community consists of disturbed or converted natural habitat that is now graded and contains structures, dirt roads, or gravel roads. Vegetation within this habitat type consists primarily of nonnative weedy or invasive species or ornamental plants lacking a consistent community structure. This habitat is classified as Holland vegetation type – “Urban – 11100,” and “Urban” and “Barren” wildlife habitat types by CDFW’s Wildlife Habitat Relationship System (WHR). This habitat type provides limited resources for wildlife and is utilized primarily by species tolerant of human activities. The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

4.2.2. Critical Habitat and Special-status Habitat

No critical habitat for any species listed under the federal endangered species act occurs within the Study Area. One special-status habitat, a Class III water course, was detected within the Study Area; however, it will be avoided as it is outside of the Project Area. The CNDDDB reported no special-status habitats within the Study Area. The CNDDDB reported the following special-status habitats within in a 10-mile radius outside of the Study Area: northern basalt flow vernal pool, northern vernal pool, serpentine bunchgrass, wildflower field, central valley drainage rainbow trout/cyprinid stream, and coastal and valley freshwater marsh. None of these habitats were detected within the Study Area during the survey.

4.2.3. 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. The Study Area is near a natural landscape block for California essential habitat connectivity (ds621) that is located on the north side of Butts Canyon Road, but the Project would not change the migration patterns beyond existing conditions because the Project would not block terrestrial wildlife movement. No fishery resources exist in or near the Study Area. The Study Area is not located within any adopted Habitat Conservation Plan or Natural Community Conservation Plan area (CDFW 2019).

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. Occurrences of Listed Species and Other Special-status Species

A list of special-status plant and animal species occurrences 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.

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

Scientific Name	Common Name	Status*	General Habitat**	Microhabitat**
PLANTS				
<i>Amorpha californica</i> var. <i>napensis</i>	Napa false indigo	1B.2	BROADLEAFED UPLAND FOREST, CHAPARRAL, CISMONTANE WOODLAND.	OPENINGS IN FOREST OR WOODLAND OR IN CHAPARRAL. 120-2000 M
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	1B.2	CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.	50-500M.
<i>Antirrhinum subcordatum</i>	dimorphic snapdragon	S3	CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.	GENERALLY ON SERPENTINE OR SHALE IN FOOTHILL WOODLAND OR CHAPARRAL ON S- AND W-FACING SLOPES. 185-800 M.
<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	Konocti manzanita	1B.3	CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.	VOLCANIC SOILS. 395-1615 M.
<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	Jepson's milk-vetch	1B.2	CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND, CHAPARRAL.	COMMONLY ON SERPENTINE IN GRASSLAND OR OPENINGS IN CHAPARRAL. 180-1000 M.
<i>Brodiaea leptandra</i>	narrow-anthered brodiaea	1B.2	BROADLEAFED UPLAND FOREST, CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST, VALLEY AND FOOTHILL GRASSLAND	VOLCANIC SUBSTRATES. 110-915 M.
<i>Calystegia collina</i> ssp. <i>oxyphylla</i>	Mt. Saint Helena morning-glory	S3	CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST, VALLEY AND FOOTHILL GRASSLAND.	ON SERPENTINE BARRENS, SLOPES, AND HILLSIDES. 280-1010 M.
<i>Carex praticola</i>	northern meadow sedge	S2/2B.2	MEADOWS AND SEEPS.	MOIST TO WET MEADOWS. 0-3200 M.
<i>Castilleja rubicundula</i> var. <i>rubicundula</i>	pink creamsacs	1B.2	CHAPARRAL, MEADOWS AND SEEPS, VALLEY AND FOOTHILL GRASSLAND.	OPENINGS IN CHAPARRAL OR GRASSLANDS. ON SERPENTINE. 20-900 M.
<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	1B.1	CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL, CISMONTANE WOODLAND.	KNOWN FROM VOLCANIC OR SERPENTINE SOILS, DRY SHRUBBY SLOPES. 75-1065 M.
<i>Ceanothus divergens</i>	Calistoga ceanothus	1B.1	CHAPARRAL.	ROCKY, SERPENTINE OR VOLCANIC SITES. 170-950 M.
<i>Ceanothus purpureus</i>	holly-leaved ceanothus	1B.1	CHAPARRAL.	ROCKY, VOLCANIC SLOPES. 120-640M.
<i>Ceanothus sonomensis</i>	Sonoma ceanothus	1B.1	CHAPARRAL.	SANDY, SERPENTINE OR VOLCANIC SOILS. 210-800 M.
<i>Centromadia parryi</i> ssp. <i>parryi</i>	pappose tarplant	1B.2	COASTAL PRAIRIE, MEADOWS AND SEEPS, COASTAL SALT MARSH, VALLEY AND FOOTHILL GRASSLAND.	VERNALLY MESIC, OFTEN ALKALINE SITES. 2-420M.
<i>Chlorogalum pomeridianum</i> var. <i>minus</i>	dwarf soaproot	1B.2	CHAPARRAL, VALLEY AND FOOTHILL GRASSLAND.	SERPENTINE. 240-970 M.
<i>Cryptantha dissita</i>	serpentine cryptantha	1B.2	CHAPARRAL.	SERPENTINE OUTCROPS. 330-730M.
<i>Erigeron greenei</i>	Greene's narrow-leaved daisy	1B.2	CHAPARRAL.	SERPENTINE AND VOLCANIC SUBSTRATES, GENERALLY IN SHRUBBY VEGETATION. 80-1005 M.

<i>Eriogonum nervulosum</i>	Snow Mountain buckwheat	1B.2	CHAPARRAL.	DRY SERPENTINE OUTCROPS, BALDS, AND BARRENS. 300-2100 M.
<i>Eryngium jepsonii</i>	Jepson's coyote-thistle	1B.2	–	–
<i>Fritillaria pluriflora</i>	adobe-lily	1B.2	CHAPARRAL, CISMONTANE WOODLAND, FOOTHILL GRASSLAND.	USUALLY ON CLAY SOILS; SOMETIMES SERPENTINE. 60-705 M.
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	1B.2	MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.	CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 10-2375 M.
<i>Harmonia hallii</i>	Hall's harmonia	1B.2	CHAPARRAL.	SERPENTINE HILLS AND RIDGES. OPEN, ROCKY AREAS WITHIN CHAPARRAL. 500-900 M.
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	congested-headed hayfield tarplant	1B.2	VALLEY AND FOOTHILL GRASSLAND.	GRASSY VALLEYS AND HILLS, OFTEN IN FALLOW FIELDS; SOMETIMES ALONG ROADSIDES. 20-560 M.
<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	1B.2	SERPENTINE CHAPARRAL.	SERPENTINE BARRENS AT EDGE OF CHAPARRAL. 60-1005 M.
<i>Hesperolinon didymocarpum</i>	Lake County western flax	1B.2	CHAPARRAL, CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.	SERPENTINE SOIL IN OPEN GRASSLAND AND NEAR CHAPARRAL. 330-365M.
<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	1B.2	CHAPARRAL.	SERPENTINE SUBSTRATES. 270-300 M.
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	1B.2	VERNAL POOLS, MEADOWS, LOWER MONTANE CONIFEROUS FOREST, CHAPARRAL, GREAT BASIN SCRUB.	VERNAL POOLS, EPHEMERAL DRAINAGES, WET MEADOW HABITATS AND STREAMSIDES. 300-2040M.
<i>Lasthenia burkei</i>	Burke's goldfields	1B.1	VERNAL POOLS, MEADOWS AND SEEPS.	MOST OFTEN IN VERNAL POOLS AND SWALES. 15-600 M.
<i>Layia septentrionalis</i>	Colusa layia	1B.2	CHAPARRAL, CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.	SCATTERED COLONIES IN FIELDS AND GRASSY SLOPES IN SANDY OR SERPENTINE SOIL. 145-1095M.
<i>Legenere limosa</i>	legenere	1B.1	VERNAL POOLS.	IN BEDS OF VERNAL POOLS. 1-880 M.
<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	1B.2	CHAPARRAL, CISMONTANE WOODLAND.	OPEN TO PARTIALLY SHADED GRASSY SLOPES. ON VOLCANICS OR THE PERIPHERY OF SERPENTINE SUBSTRATES. 100-500M.
<i>Limnanthes floccosa</i> ssp. <i>floccosa</i>	woolly meadowfoam	S3	CHAPARRAL, CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.	VERNALLY WET AREAS, DITCHES, AND PONDS. 60-1335 M.
<i>Limnanthes vinculans</i>	Sebastopol meadowfoam	FE/CE/1B.1	MESIC MEADOWS, VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND.	SWALES, WET MEADOWS AND MARSHY AREAS IN VALLEY OAK SAVANNA; ON POORLY DRAINED SOILS OF CLAYS AND SANDY LOAM. 15-305 M.
<i>Lupinus sericatus</i>	Cobb Mountain lupine	1B.2	CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST, BROADLEAFED UPLAND FOREST.	IN STANDS OF KNOBCONE PINE-OAK WOODLAND, ON OPEN WOODED SLOPES IN GRAVELLY SOILS; SOMETIMES ON SERPENTINE. 275-1525 M.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	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.

<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	many-flowered navarretia	FE/CE/1B.2	VERNAL POOLS.	VOLCANIC ASH FLOW VERNAL POOLS. 30-950 M.
<i>Navarretia myersii</i> ssp. <i>deminuta</i>	small pincushion navarretia	1B.1	VERNAL POOLS.	KNOWN FROM ONLY ONE SITE IN LAKE COUNTY IN VERNAL POOL HABITAT ON CLAY-LOAM SOIL; ALSO IN ROADSIDE DEPRESSIONS. 355 M.
<i>Navarretia paradoxinota</i>	Porter's navarretia	1B.3	–	–
<i>Navarretia rosulata</i>	Marin County navarretia	1B.2	CLOSED-CONE CONIFEROUS FOREST, CHAPARRAL.	DRY, OPEN ROCKY PLACES; CAN OCCUR ON SERPENTINE. 200-635M.
<i>Orcuttia tenuis</i>	slender Orcutt grass	FT/CE/1B.1	VERNAL POOLS.	OFTEN IN GRAVELLY POOLS. 35-1760 M.
<i>Penstemon newberryi</i> var. <i>sonomensis</i>	Sonoma beardtongue	1B.3	CHAPARRAL.	CREVICES IN ROCK OUTCROPS AND TALUS SLOPES. 700-1370 M.
<i>Plagiobothrys strictus</i>	Calistoga popcornflower	FE/CT/1B.2	MEADOWS AND SEEPS, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.	ALKALINE SITES NEAR THERMAL SPRINGS AND ON MARGINS OF VERNAL POOLS IN HEAVY, DARK, ADOBE-LIKE CLAY. 90-160 M.
<i>Plagiobothrys strictus</i>	Calistoga popcornflower	FE/CT/1B.1	MEADOWS AND SEEPS, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.	ALKALINE SITES NEAR THERMAL SPRINGS AND ON MARGINS OF VERNAL POOLS IN HEAVY, DARK, ADOBE-LIKE CLAY. 90-160 M.
<i>Poa napensis</i>	Napa blue grass	FE/CT/1B.1	MEADOWS AND SEEPS, VALLEY AND FOOTHILL GRASSLAND.	MOIST ALKALINE MEADOWS FED BY RUNOFF FROM NEARBY HOT SPRINGS. 100-200 M.
<i>Puccinellia simplex</i>	California alkali grass	1B.2	–	–
<i>Sedella leiocarpa</i>	Lake County stonecrop	FE/CE/1B.S	VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS, CISMONTANE WOODLAND.	LEVEL AREAS THAT ARE SEASONALLY WET AND DRY OUT IN LATE SPRING; SUBSTRATE USUALLY OF VOLCANIC ORIGIN. 365-790 M.
<i>Sidalcea keckii</i>	Keck's checkerbloom	FE/1B.1	CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND	GRASSY SLOPES IN BLUE OAK WOODLAND. 75-650 M.
<i>Sidalcea oregana</i> ssp. <i>valida</i>	Kenwood Marsh checkerbloom	FE/CE/1B.1	MARSHES AND SWAMPS.	EDGES OF FRESHWATER MARSHES. 115-150 M.
<i>Spergularia macrotheca</i> var. <i>longistyla</i>	long-styled sand-spurrey	1B.2	–	–
<i>Streptanthus brachiatus</i> ssp. <i>brachiatus</i>	Socrates Mine jewelflower	1B.2	CHAPARRAL, CLOSED-CONE CONIFEROUS FOREST.	SERPENTINE AREAS AND SERPENTINE CHAPARRAL. 545-1000 M.
<i>Streptanthus brachiatus</i> ssp. <i>hoffmanii</i>	Freed's jewelflower	1B.2	CHAPARRAL, CISMONTANE WOODLAND.	SERPENTINE ROCK OUTCROPS, PRIMARILY IN GEOTHERMAL DEVELOPMENT AREAS. 490-1220 M.
<i>Streptanthus hesperidis</i>	green jewelflower	1B.2	CHAPARRAL, CISMONTANE WOODLAND.	OPENINGS IN CHAPARRAL OR WOODLAND; SERPENTINE, ROCKY SITES. 130-760M.
<i>Streptanthus morrisonii</i> ssp. <i>elatus</i>	Three Peaks jewelflower	1B.2	CHAPARRAL.	SERPENTINE BARRENS, OUTCROPS, AND TALUS; 80-815 M.

<i>Streptanthus morrisonii</i> ssp. <i>kruckebergii</i>	Kruckeberg's jewelflower	1B.2	CISMONTANE WOODLAND.	SCATTERED SERPENTINE OUTCROPS NEAR THE LAKE/NAPA COUNTY LINE. 215-1035 M.
<i>Streptanthus vernalis</i>	early jewelflower	1B.2	CHAPARRAL, CLOSED-CONE CONIFEROUS FOREST.	ON SERPENTINE. 610M.
<i>Stuckenia filiformis</i> ssp. <i>alpina</i>	slender-leaved pondweed	2B.2	MARSHES AND SWAMPS.	SHALLOW, CLEAR WATER OF LAKES AND DRAINAGE CHANNELS. 300-2150 M.
<i>Trichostema ruygtii</i>	Napa bluecurls	1B.2	CISMONTANE WOODLAND, CHAPARRAL, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS, LOWER MONTANE CONIFEROUS FOREST.	OFTEN IN OPEN, SUNNY AREAS. ALSO HAS BEEN FOUND IN VERNAL POOLS. 30-590M.
<i>Trifolium hydrophilum</i>	saline clover	1B.2	MARSHES AND SWAMPS, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.	MESIC, ALKALINE SITES. 0-300 M.
ANIMALS				
<i>Agelaius tricolor</i>	tricolored blackbird	CT	HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.	REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.
<i>Antrozous pallidus</i>	pallid bat	S3	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.
<i>Aquila chrysaetos</i>	golden eagle	S3	ROLLING FOOTHILLS, MOUNTAIN AREAS, SAGE-JUNIPER FLATS, & DESERT.	CLIFF-WALLED CANYONS PROVIDE NESTING HABITAT IN MOST PARTS OF RANGE; ALSO, LARGE TREES IN OPEN AREAS.
<i>Bombus caliginosus</i>	obscure bumble bee	S1S2	–	–
<i>Bombus occidentalis</i>	western bumble bee	S1	ONCE COMMON & WIDESPREAD, SPECIES HAS DECLINED PRECIPITOUSLY FROM CENTRAL CA TO SOUTHERN B.C., PERHAPS FROM DISEASE.	–
<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 & CEILINGS. ROOSTING SITES LIMITING. EXTREMELY SENSITIVE TO HUMAN DISTURBANCE.
<i>Dicamptodon ensatus</i>	California giant salamander	SSC	Occurs in wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages. One population has been found inhabiting flowing water in a network of caves. (CALHERPS 2019)	–
<i>Emys marmorata</i>	western pond turtle	SSC	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
<i>Falco peregrinus anatum</i>	American peregrine falcon	CFP	NEAR WETLANDS, LAKES, RIVERS, OR OTHER WATER; ON CLIFFS, BANKS, DUNES, MOUNDS; ALSO, HUMAN-MADE STRUCTURES.	NEST CONSISTS OF A SCRAPE OR A DEPRESSION OR LEDGE IN AN OPEN SITE.

<i>Haliaeetus leucocephalus</i>	bald eagle	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.
<i>Lasionycteris noctivagans</i>	silver-haired bat	S3S4	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.
<i>Oncorhynchus mykiss irideus</i> pop. 8	steelhead - central California coast DPS	FT	FROM RUSSIAN RIVER, SOUTH TO SOQUEL CR & TO, BUT NOT INCLUDING, PAJARO RIVER. ALSO SAN FRANCISCO & SAN PABLO BAY BASINS.	—
<i>Pekania pennanti</i>	fisher - West Coast DPS	CT/SSC	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.
<i>Progne subis</i>	purple martin	SSC	INHABITS WOODLANDS, LOW ELEVATION CONIFEROUS FOREST OF DOUGLAS-FIR, PONDEROSA PINE, & MONTEREY PINE.	NESTS IN OLD WOODPECKER CAVITIES MOSTLY, ALSO IN HUMAN-MADE STRUCTURES. NEST OFTEN LOCATED IN TALL, ISOLATED TREE/SNAG.
<i>Rana boylei</i>	foothill yellow-legged frog	FPT/SSC	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.
<i>Syncaris pacifica</i>	California freshwater shrimp	FE/CE	ENDEMIC TO MARIN, NAPA, & SONOMA COUNTIES. FOUND IN LOW ELEVATION, LOW GRADIENT STREAMS WHERE RIPARIAN COVER IS MODERATE.	SHALLOW POOLS AWAY FROM MAIN STREAMFLOW. WINTER: UNDERCUT BANKS W/EXPOSED ROOTS. SUMMER: LEAFY BRANCHES TOUCHING WATER.
<i>Taricha rivularis</i>	red-bellied newt	SSC	Adults are terrestrial and breed in aquatic habitat. A stream or river dweller. Found in coastal woodlands and redwood forest along the coast of northern California. Larvae retreat into vegetation and under stones during the day. (Calherps 2019b)	—
<i>Trachykele hartmani</i>	serpentine cypress wood-boring beetle	G1/S1	LARVAE DEVELOP IN SARGENT CYPRESS. RESTRICTED TO NAPA, COLUSA, AND LAKE COUNTIES.	—
<i>Vandykea tuberculata</i>	serpentine cypress long-horned beetle	G1/S1	BREEDS IN SHADED-OUT LOWER BRANCHES OF SARGENT CYPRESS AND PERHAPS MCNAB CYPRESS IN SERPENTINE SOIL/CYPRESS HABITATS.	—

*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—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors; G2 = Imperiled—At high risk of extinction; G3 = Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

State Ranking: S1 = Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state; S2 = Imperiled—Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state; S3 = Vulnerable—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.

**According to CNDDDB, unless otherwise noted.

A USFWS species list was generated online using the USFWS' IPaC Trust Resource Report System (see Appendix 1) and includes: northern spotted owl (*Strix occidentalis caurina*), California red-legged frog (*Rana draytonii*), delta smelt (*Hypomesus transpacificus*), California freshwater shrimp (*Syncaris pacifica*), Burke's goldfields (*Lasthenia burkei*). There are no occurrences of these species within 10 miles of the Study Area in CNDDb, except for northern spotted owl, which occurs at Bogg Mountain and Mount Saint Helena (approximately 5 miles away), however the Study Area lacks suitable habitat for this species.

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 Study Area has a low potential for harboring special-status plant species due to the dominance of aggressive non-native grasses and forbs in the understory. The watercourse within the Study Area appeared highly ephemeral and therefore is unlikely to provide aquatic habitat for aquatic special-status species that require persistent aquatic habitat. No vernal pools were detected during the survey.

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 no water features within the Study Area.

One potential jurisdictional water feature was detected within the Study Area during the field survey: an unnamed Class III watercourse (see Exhibits). The water course was dry at the time of the survey and appeared to only flow during or immediately after precipitation events. Vegetation within the water course was either absent (volcanic cobble stone) or consisted of non-native grassland species. The water course enters the Study Area through a culvert under a dirt road from the east and heads west. Where decipherable from adjacent upland habitats, the water course was shallow (approximately 5 inches deep) and had average width of 7 feet.

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) 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. Aerial photographs were also analyzed for changes in land use.

Limited impacts to natural habitats likely occurred when areas within blue oak-foothill pine woodland were altered for previous cannabis cultivation because few trees were removed and these areas are dominated by non-native annual grassland species. Oak trees will need to be removed to clear land for the described Project.

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

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

No special-status species was detected within the Study Area. The watercourse within the Study Area probably does not sustain aquatic special-status species. No vernal pools were identified within the Study Area. No impacts to special-status species were identified from project implementation. Therefore, no mitigation is required.

The Study Area contains suitable nesting habitat for various bird species because of the presence of trees. However, no active nest or nesting activity was observed in the project area during the field survey. Trees must be inspected for the presence of active bird nests before tree felling or ground clearing. If active nests are present in the project area during construction of the project, CDFW should be consulted

to develop measures to avoid “take” of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site.

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

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

The Study Area is not within any designated listed species’ critical habitat.

The Study Area contains one terrestrial special-status habitat: a Class III watercourse. There is no evidence that project implementation impacted or will impact any special-status habitats. Therefore, no mitigation is required.

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.

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

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

There is one protected water resource within the Study Area, a Class III watercourse.

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. If the total area of ground disturbance from project implementation is greater than 1 acre, 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).

The Project Area is 250 feet from the Class III watercourse, which is more than the designated setback for Class III watercourses (50 feet) as required by the Cannabis Cultivation Order WQ 2017-0023-DWQ (Order). Therefore, the proposed project is compliant with the setback requirements of the Order. Ongoing 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, inspections and reporting, and regulatory oversight. Therefore, no mitigation is required.

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

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

- Will the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No wildlife corridors exist within or adjacent to the Study Area. Implementation of the project will not interfere substantially with the movement of any native resident or migratory fish, wildlife species, 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.

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

- Will the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Will the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or another approved governmental habitat conservation plan. The Study Area is not within the coverage area of any adopted Habitat Conservation Plan or Natural Community Conservation Plan. No mitigation is necessary.

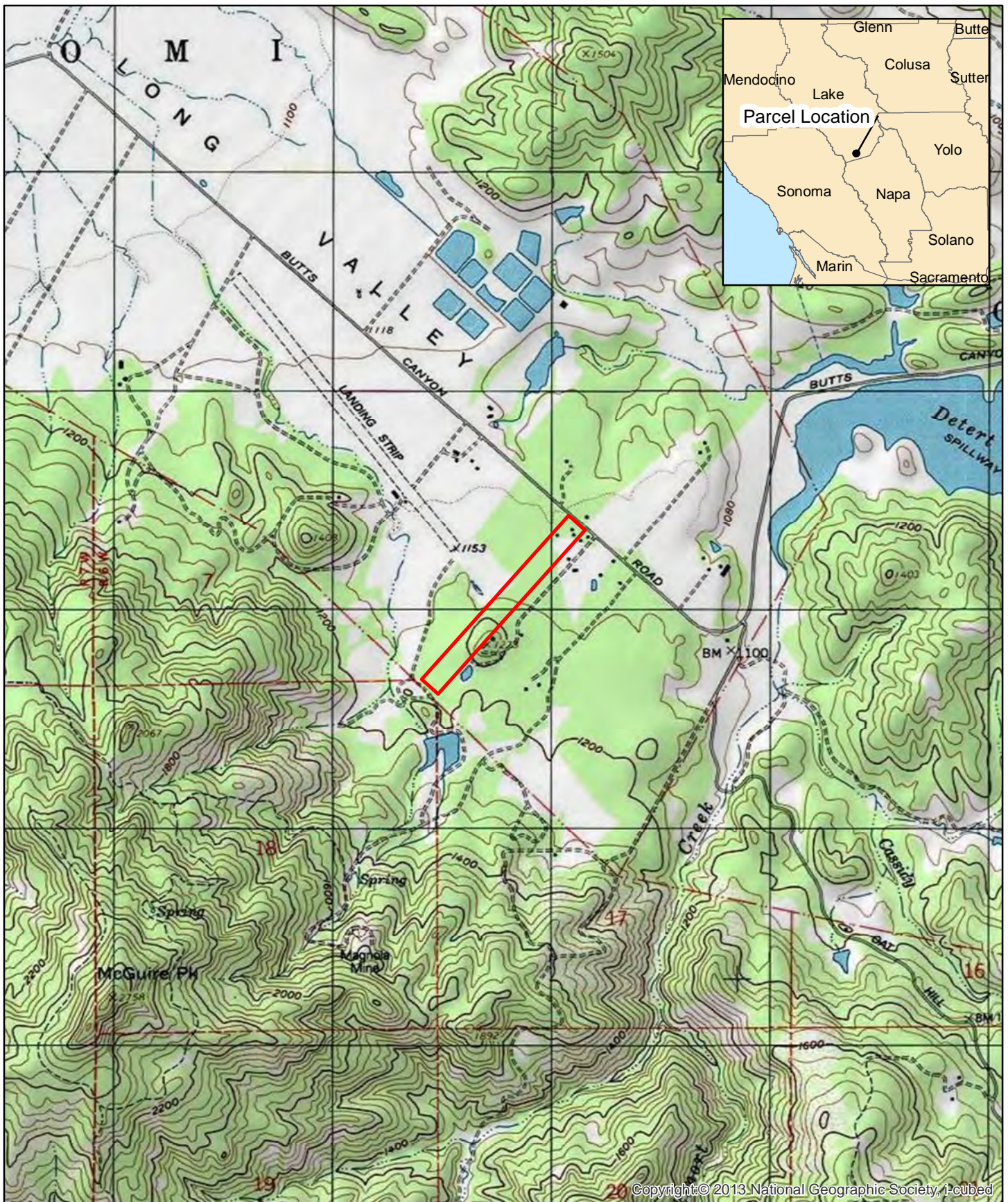
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EXHIBITS



Parcel Location

0

0.5

1

Kilometers

0

0.5

1

Miles

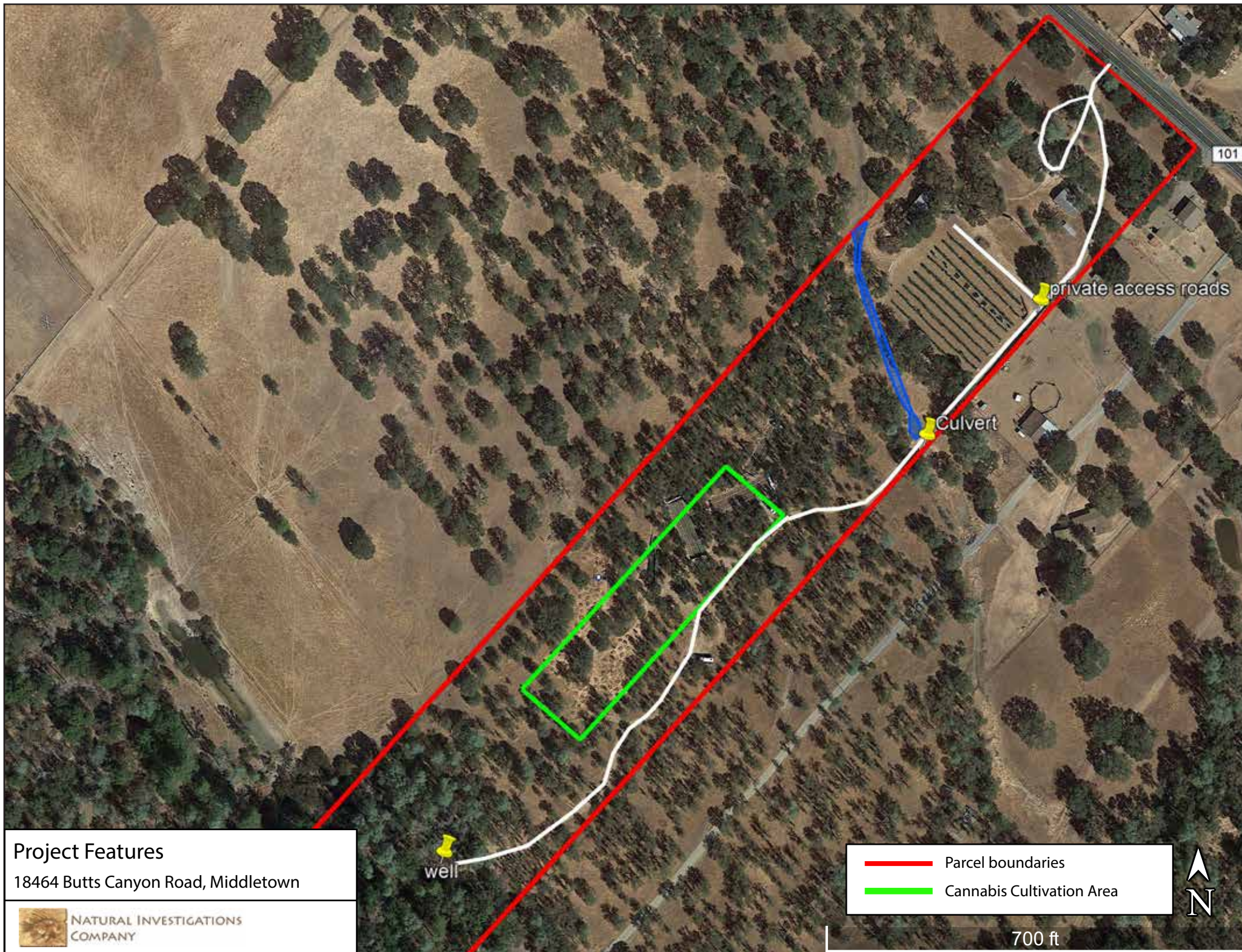


1:24,000

19303 Butts Canyon Road
Parcel Location Map



NATURAL
INVESTIGATIONS
COMPANY



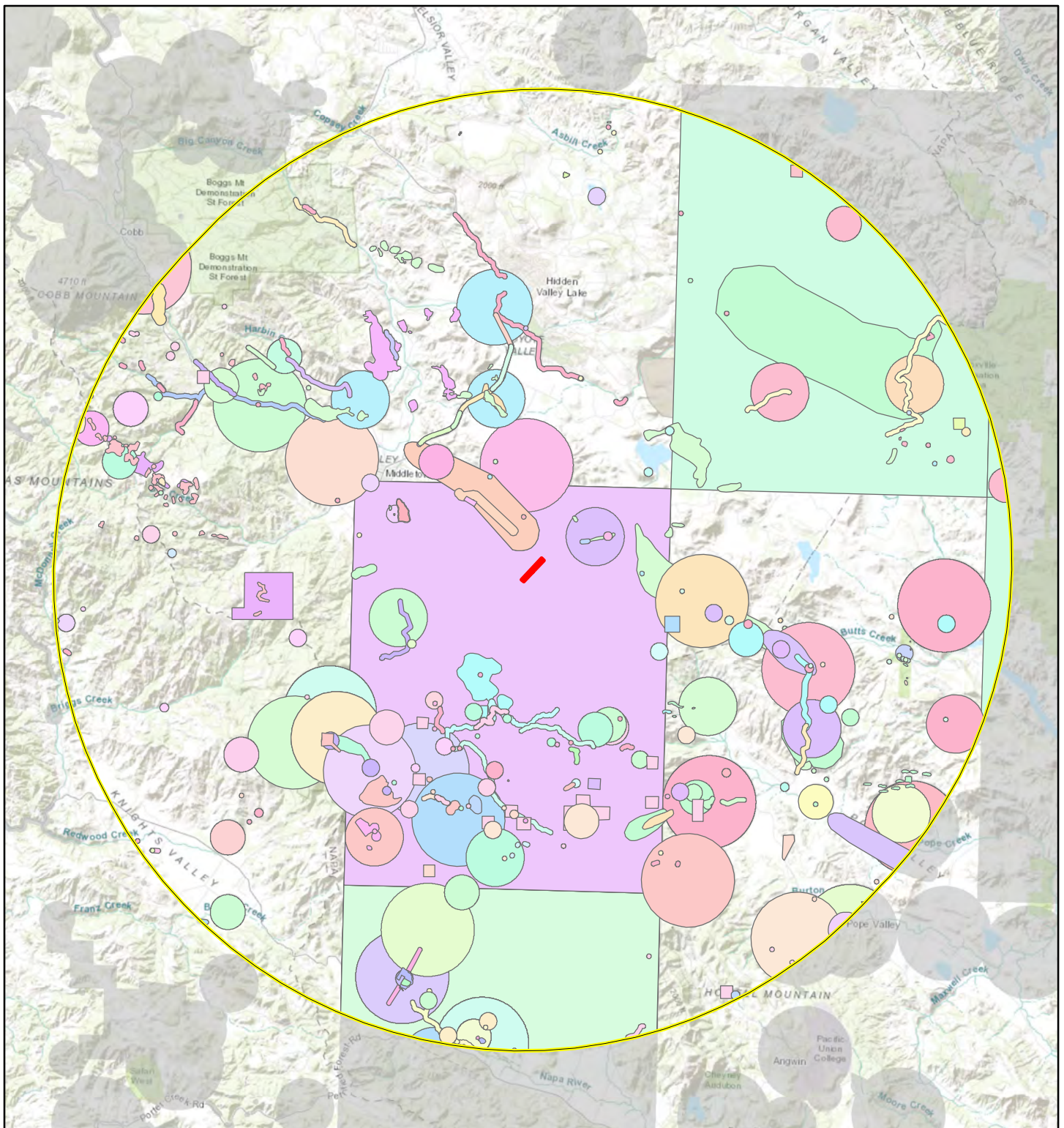
- Parcel boundaries
- Cannabis Production Area
- Vegetation Community Types**
- Mixed oak/conifer woodland
 - Blue Oak woodland
 - Ruderal/developed
 - Agricultural Areas



Vegetation Communities
19303 Butts Canyon Road, Middletown



NATURAL INVESTIGATIONS
COMPANY



Project Location 10 Mile Buffer

1:190,000 1 inch = 3 miles
 0 3 6
 Miles



Notes:

1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing 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

19303 Butts Canyon Road

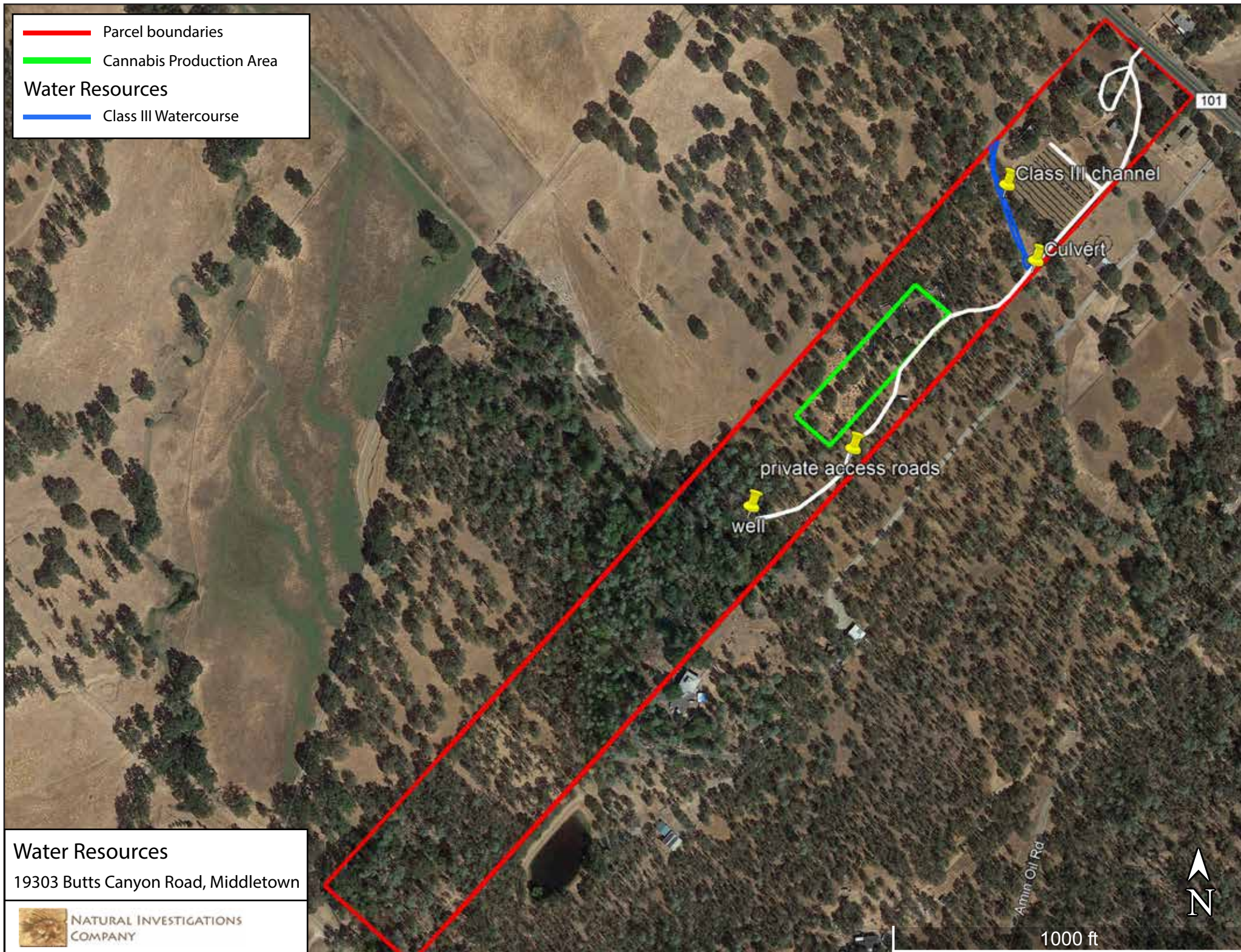
Detert Reservoir 1997 Quadrangle:
Township 10N, Range 6W, Unsectioned Collayomi



NATURAL INVESTIGATIONS CO.

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- Parcel boundaries
- Cannabis Production Area
- Water Resources
- Class III Watercourse



Water Resources

19303 Butts Canyon Road, Middletown



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Parcel Location



Wetlands and Channels

0 125 250
Meters

0 500 1,000
Feet



1:7,500

19303 Butts Canyon Road
National Wetlands Inventory
Features Map



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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:

August 28, 2019

Consultation Code: 08ESMF00-2019-SLI-2887

Event Code: 08ESMF00-2019-E-09223

Project Name: 19303 Butts Canyon Road

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-2887

Event Code: 08ESMF00-2019-E-09223

Project Name: 19303 Butts Canyon Road

Project Type: ** OTHER **

Project Description: Bio Assessment

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.72376680043395N122.55497532483449W>



Counties: Lake, CA

Endangered Species Act Species

There is a total of 6 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 Fisheries¹, 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 final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	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: https://ecos.fws.gov/ecp/species/6199	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> 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 <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Crustaceans

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

Flowering Plants

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

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

Scientific Name

Arbutus menziesii
Arctostaphylos sp.
Avena fatua
Briza maxima
Ceanothus cuneatus
Cordylanthus sp.
Eryngium vaseyi
Gastroidium phleoides
Hemizonia virgata
Pinus ponderosa
Pinus sabiniana
Quercus agrifolia
Quercus douglasii
Quercus kelloggii
Taeniatherum caput-medusae
Toxicodendron diversiloba

Common Name

Madrone
Manzanita
Wild oats
Rattlesnake grass
Wedgeleaf ceanothus
Bird's beak
Coyote thistle
Nit grass
Wand tar plant
Ponderosa pine
Foothill pine
Coast live oak
Blue oak
Black oak
Medusahead
Poison oak

APPENDIX 3: SITE PHOTOS



Position: +038.725179° / -122.554029°
Altitude: 1147ft
Datum: WGS-84
Azimuth/Bearing: 237° S57W 4213mils (True)
Elevation Angle: -33.2°
Horizon Angle: -02.1°
Zoom: 1X



Position: +038.724506° / -122.554868°
Altitude: 1150ft
Datum: WGS-84
Azimuth/Bearing: 055° N55E 0978mils (True)
Elevation Angle: -06.2°
Horizon Angle: -00.3°
Zoom: 1X



Position: +038.725298° / -122.553156°
Altitude: 1142ft
Datum: WGS-84
Azimuth/Bearing: 003° N03E 0053mils (True)
Elevation Angle: -10.5°
Horizon Angle: -00.1°
Zoom: 1X



Position: +038.725184° / -122.553779°
Altitude: 1038ft
Datum: WGS-84
Azimuth/Bearing: 188° S08W 3342mils (True)
Elevation Angle: -12.7°
Horizon Angle: -01.9°
Zoom: 1X







