

# **BIOTIC ASSESSMENT**

**PURVINE ROAD [APN 022-230-018]  
SONOMA COUNTY, CALIFORNIA**

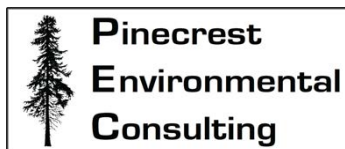
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Project No. MGA001



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## 1.0 INTRODUCTION

### 1.1 PURPOSE

The purpose of this Biotic Assessment is to evaluate the existence of sensitive habitats and the potential for special-status species to occur on or near the site of proposed *Cannabis* cultivation activities, pursuant to Sonoma County Ordinance No. 6189, Section 26-88-254(f)(8). The proposed project involves permitting outdoor and mixed light *Cannabis* cultivation and processing facilities on a 37-acre parcel located at 334 Purvine Road, in unincorporated Sonoma County. The parcel is currently leased grazing land, and has several abandoned barns that are proposed for repurposing.

### 1.2 LOCATION

The proposed project is located in unincorporated Sonoma County, four miles west of the City of Petaluma, between Bodega Avenue and Spring Hill Road (Figure 1). The parcel is zoned Land Extensive Agriculture, is located in the jurisdiction of the North Coast Regional Water Quality Board, is located in Groundwater Availability Zone 2, and is not located in a Priority Groundwater Management Basin. The topography of the parcel is gently sloping from a high elevation of 330 feet in the west corner of the parcel to a low elevation of 240 feet in the east corner of the parcel (Figure 2). The entire parcel is also outside of all County-designated Biotic Habitat, Valley Oak Habitat, and Riparian buffers (Figure 3). The surrounding land uses are predominantly dairy farms, rural residential developments, and the City of Petaluma to the east. The Pacific Ocean is approximately ten miles to the west.

No obvious channels or swales exist onsite, although approximately 1000 feet offsite west of the property line, a stream channel is visible with downcut topography and riparian vegetation. This channel flows west through pastureland and then turns north just east of the Coast Guard Training Facility, before its confluence with Stemple Creek. Stemple Creek flows for another five miles before its confluence with Estero de San Antonio, which flows for another five miles through open pastureland before emptying into Bodega Bay just north of Dillon Beach.

The property features two residences, four outbuildings and garages, and three large barns that were used historically for cattle and poultry rearing. The parcel is currently leased as grazing land, and the barns on the property are no longer used for any purpose. The proposed project entails converting two of the barns to mixed-light cultivation, converting an unused pasture to outdoor cultivation, and maintaining the current grazing leases for the rest of the grassland portion of the parcel.

## **1.3 METHODS**

### **1.3.1 Records Search and Literature Review**

Based on a review of the literature and all relevant databases, we compiled a list of special-status plant and animal species that are known to occur within several miles of the project site (Appendix A). Sources of information referenced include the California Natural Diversity Database (CNDDDB 2017), U.S. Fish and Wildlife Service Environmental Conservation Online System (USFWS 2017), the California Native Plants Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS 2017), and the knowledge of PEC staff familiar with the species and habitats of Sonoma County. Additional information on sensitive habitats including wetlands was obtained from the USFWS National Wetlands Inventory (NWI 2017), the Sonoma County Vegetation Mapping and Lidar Program (SCWA 2017), and the County of Sonoma Permit and Resource Management Geographical Information Systems (GIS) databases (PRMD 2017).

Plant species included here are State or Federally Endangered or Threatened, and/or considered Rare by CDFW, and/or are recognized as special-status species by the CNPS or CDFW. Animal species included here are designated as State or Federally Endangered or Threatened, and/or California Species of Special Concern, and/or Fully Protected species by the CDFW. In addition, nests of most native bird species, regardless of their regulatory status, are protected from take or harassment under the Migratory Bird Treaty Act (MBTA) and California Fish and Wildlife Code.

### **1.3.2 Field Surveys**

A wildlife and botanical survey was conducted at the site on May 22, 2017. The survey was timed to coincide with the flowering of the majority of plant species in the region. Beginning with the areas surrounding the proposed cultivation areas, the entire property was surveyed on foot by PEC botanist Dr. Christopher DiVittorio and PEC wildlife biologist Melissa Ferriter, recording the location and identity of all plant and animal species encountered. Plant voucher specimens were taken of any species that were not identifiable in the field, and that were not likely to be special-status.

The field survey was conducted by breaking up the outdoor portions of the parcel into zones and cataloging all of the species found in each zone by walking in parallel lines approximately five feet apart until the whole zone was covered, with the exception of any fields presently under cultivation. Botanical specimens were taken back to the laboratory for identification if field identification was not possible. If species were not flowering in the field and species may be special-status, notes were made for a follow-up visit. Birds and nests were identified by call and with binoculars. Vocalizations, scat, tracks, feathers, burrows, nests, and molts were also used for identification of animals present onsite.

## 2.0 RESULTS

### 2.1 NATURAL COMMUNITIES IN THE EVALUATION AREA

Using field surveys, knowledge of PEC staff, and a search of the Sonoma County Vegetation Map (SCWA 2017) within five miles of the project area ("Biological Resources Evaluation Area"), a variety of natural communities were recorded (Figure 4). Regionally, the dominant community types are intensively grazed pastureland, coast live oak (*Quercus agrifolia*) and exotic grass savannah, rural residential developments, and disturbed riparian corridors. The surrounding region, known historically as the Laguna de San Antonio, is almost exclusively dedicated to dairies, however there are also significant numbers of poultry facilities. Farther to the north and south the landscape increases in the cover of woodland versus grassland, however the vast majority of this portion of the County was historically clear-cut.

### 2.2 PLANTS OBSERVED ONSITE

The community descriptions below are organized based on the zones that were surveyed, and the floristic results presented in Appendix B. Overall, the parcel contains a very low diversity of habitats and is comprised almost entirely of heavily grazed annual grassland. Approximately 90% of the property is annual grassland, 5% is planted trees, and 5% is developed buildings (Figure 5).

The most abundant species in the open grassland portions of the property were non-native. Exotic grasses included Italian ryegrass (*Lolium perenne*), silver hairgrass (*Aira caryophyllea*), wild oats (*Avena barbata*), riggut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), rattlesnake grass (*Briza minor*), foxtail barley (*Hordeum murinum*), Harding grass (*Phalaris aquatica*), and foxtail fescue (*Vulpia myuros*). Exotic dicots included cranesbill (*Geranium dissectum*), Italian thistle (*Carduus pycnocephalus*), hairy cat's ear (*Hypochaeris radicata*), filaree (*Erodium cicutarium*), wild radish (*Raphanus sativus*), curly dock (*Rumex acetosella*), turkey mullein (*Croton setigerus*), bristly ox-tongue (*Picris echioides*), black mustard (*Brassica nigra*), rose clover (*Trifolium hirtum*), prostrate knotweed (*Polygonum aviculare*), spring vetch (*Vicia sativa*), and field bindweed (*Convolvulus arvensis*). Native species were not abundant, but some individuals of California poppy (*Eschscholzia californica*), California buttercup (*Ranunculus californicus*), toad rush (*Juncus bufonius*), and California cudweed (*Gnaphalium californicum*) were present near the edges of the property lines.

The northwest property line is planted with a row of *Eucalyptus* trees as a wind break, and two Monterey cypress (*Cupressus macrocarpa*) exist at the far east corner of the property. Associated with the residences and outbuildings near the driveway are several other horticultural plants including Coast redwood (*Sequoia sempervirens*), Himalayan blackberry (*Rubus armeniacus*), coast live oak (*Quercus agrifolia*), California fan palm (*Washingtonia filifera*), and Monterey pine (*Pinus radiata*). Southwest of the residences is a small abandoned orchard featuring cherry (*Prunus avium*), apple (*Malus pumila*), and grapefruit (*Citrus paradisi*).

## 2.3 WILDLIFE OBSERVED ONSITE

Several species of terrestrial vertebrates were observed during the field survey including slender salamander (*Batrachoseps attenuatus*), western fence lizard (*Sceloperous occidentalis*), and black-tailed jackrabbit (*Lepus californicus*). Sign of fossorial mammals were present in the form of excavation mounds in the open grassland, and these were likely from California ground squirrel (*Otospermophilus beecheyi*) and California vole (*Microtus californicus*). Sign of coyote (*Canis latrans*) was also observed. Birds sighted during the survey included turkey vulture (*Cathartes aura*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), and California scrub jay (*Aphelocoma californica*).

## 2.4 POTENTIAL WETLANDS

No jurisdictional wetlands are suspected to exist onsite. There are no topographical features that would indicate flow, and few of the plant species observed would be considered wetland plants. The topography of the site also allows for well drained soils, and there were no saturated locations found even though the winter of 2016-2017 was unusually wet.

### 3.0 SUMMARY & CONCLUSIONS

No special-status plants were found in the study area and there is low potential for special-status plants to exist in the project area. No follow-up visits are recommended since all species were identifiable at the time of the survey.

No special-status animals were found in the study area, and there is low potential for special-status animals to exist in the project area. While suitable grassland habitat exists for some species that use upland habitat for estivation such as California tiger salamander (*Ambystoma californiense*), no suitable wetlands for breeding are found near the project site. No burrows appropriate for burrowing owl were found, and there is limited nesting habitat for migratory birds or raptors onsite except for the *Eucalyptus* trees planted on the northwest fenceline. Some bats may use the barns as roosts and so appropriately timed surveys for bats and estivating amphibians should be conducted prior to construction activities.

No wetlands were found onsite and little potential exists for the project to impact wetlands or water quality downstream.



## **4.0 REGULATORY FRAMEWORK**

### **4.1 FEDERAL ENDANGERED SPECIES ACT**

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally-listed threatened and endangered species under the federal Endangered Species Act (FESA). The USFWS also maintains a list of 'proposed' species and candidate species that are not legally protected under the FESA, but are often included in their review of a project as they may become listed in the near future. The FESA protects listed animal species from harm or "take" which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that results in death or injury to a listed species. An activity can be defined as a "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA if they occur on federal lands.

Pursuant to the requirements of the FESA, a federal agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed threatened or endangered species (plants and animals) may be present in the project area and determine whether the proposed project may affect such species. Any activities that could result in the take of a federally-listed species will require formal consultation with the USFWS before project activities commence.

### **4.2 CALIFORNIA ENDANGERED SPECIES ACT**

The California Endangered Species Act (CESA) protects any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, the California Department of Fish and Wildlife (CDFW) has jurisdiction over state-listed species (California Fish and Wildlife Code 2070). Take of state-listed species requires a permit from CDFW, which is granted only under strictly limited circumstances. Additionally, the CDFW maintains lists of "species of special concern" that are defined as animal species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed or proposed endangered or threatened species may be present in the project area and determine whether the proposed project may result in a significant impact on such species.

### **4.3 CALIFORNIA ENVIRONMENTAL QUALITY ACT**

Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Wildlife Code dealing

with rare or endangered plants or animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts, if it finds that the species meets the criteria of a threatened or endangered species.

#### **4.4 CLEAN WATER ACT**

Under Section 404 of the federal Clean Water Act, the U.S. Army Corps of Engineers (Corps) is responsible for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed "isolated wetlands" and, depending on the circumstances, may also be subject to Corps jurisdiction.

In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit depends on the acreage involved and the purpose of the proposed fill. Minor amounts of fill are sometimes covered by Nationwide Permits, which were established to streamline the permit process for projects with "minimal" impacts on wetlands or other waters of the U.S. An Individual Permit is required for projects that result in more than a minimal impact on jurisdictional areas. The Individual Permit process requires evidence that fill of jurisdictional areas has been minimized to the extent "practicable" and provides an opportunity for public review of the project.

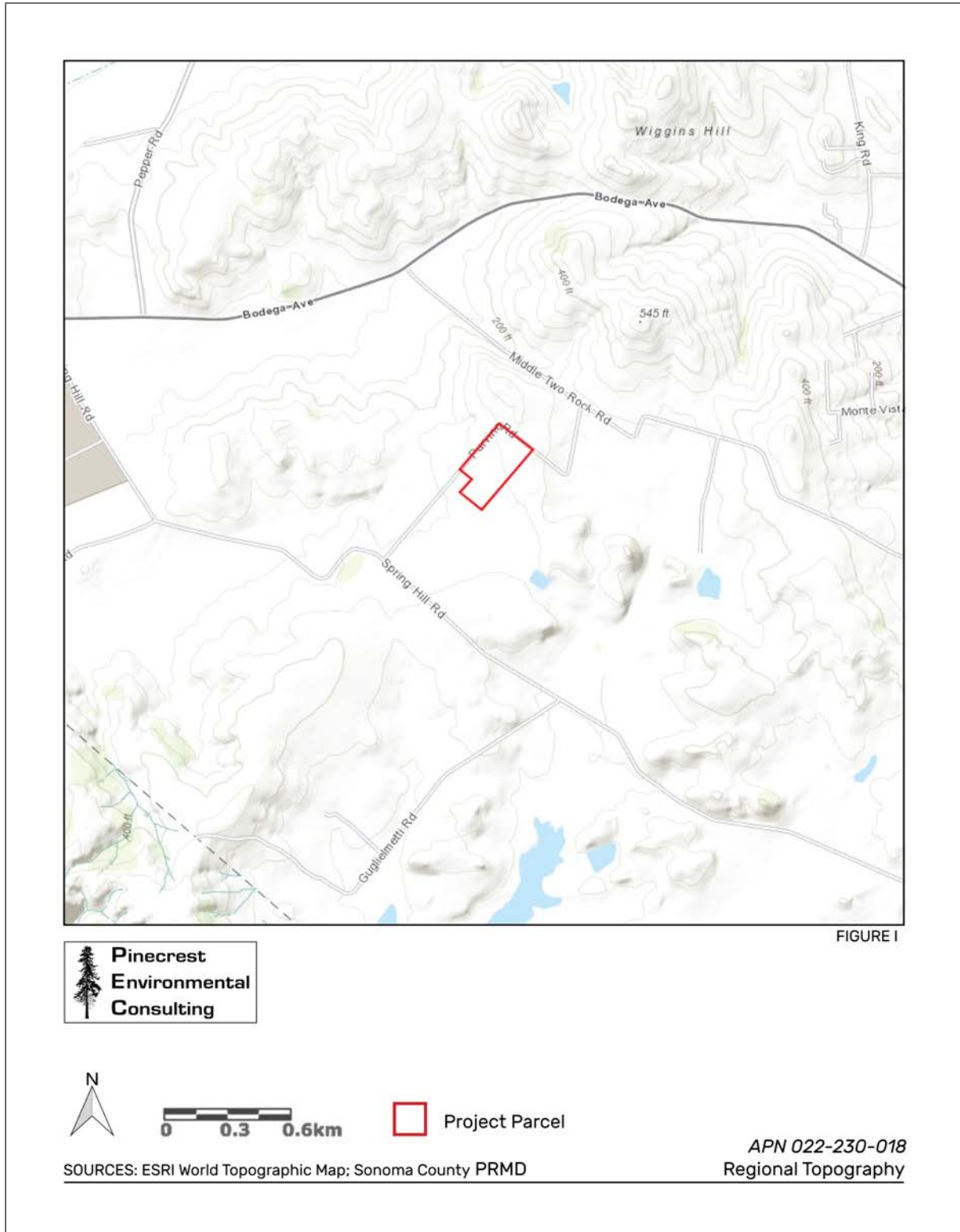
#### **4.5 CALIFORNIA WATER QUALITY REGULATORY PROGRAMS**

Pursuant to Section 401 of the federal Clean Water Act and the state's Porter-Cologne Act, projects that are regulated by the Corps must obtain water quality certification from the Regional Water Quality Control Board (RWQCB). This certification ensures that the project will uphold state water quality standards. The RWQCB sometimes asserts jurisdiction over wetlands that the Corps does not (e.g. certain isolated wetlands) and may impose mitigation requirements even if the Corps does not. The CDFW also exerts jurisdiction over the bed and banks of watercourses and water bodies according to provisions of Section 1601 to 1603 of the Fish and Wildlife Code. The Fish and Wildlife Code requires a Stream Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or water body.

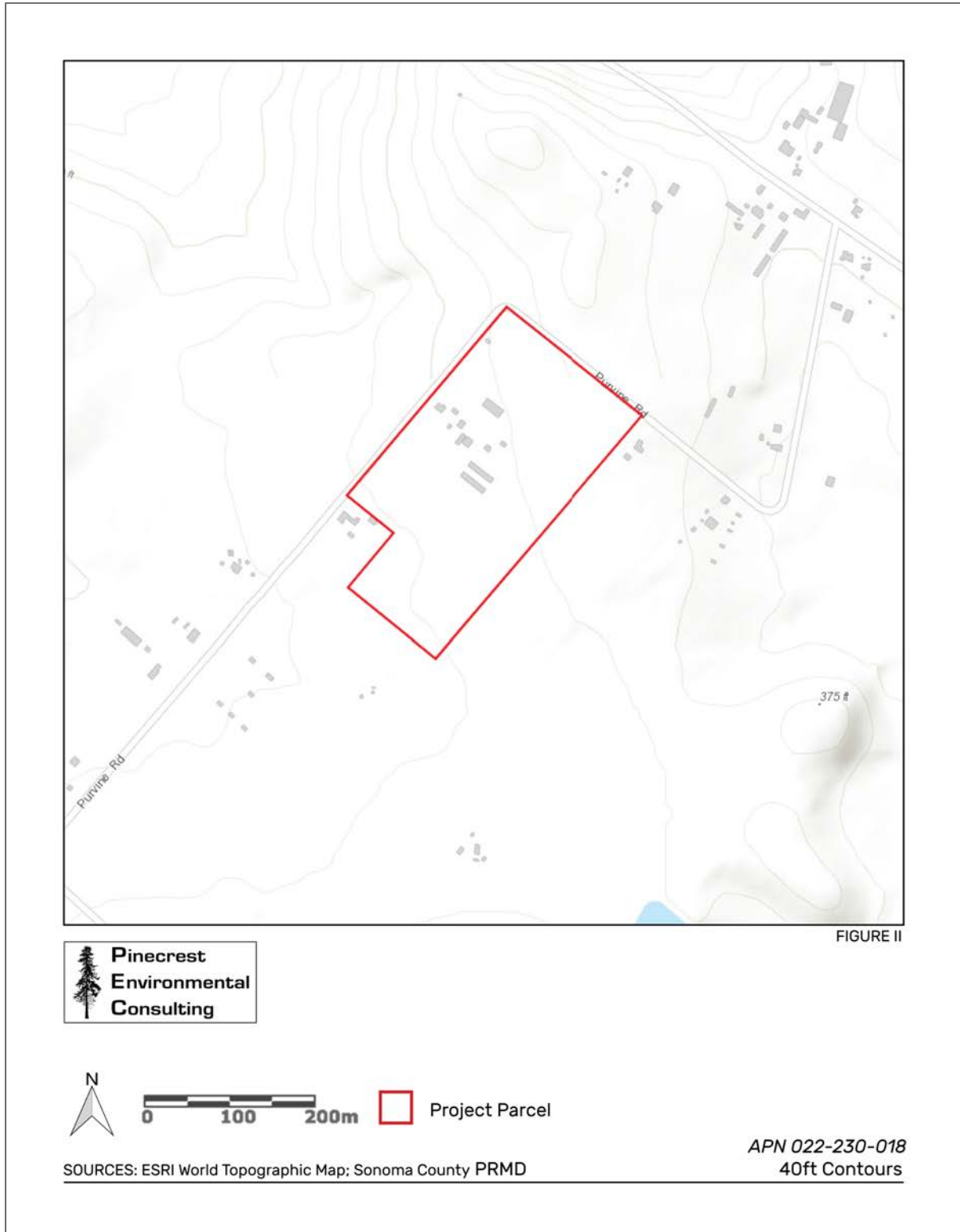
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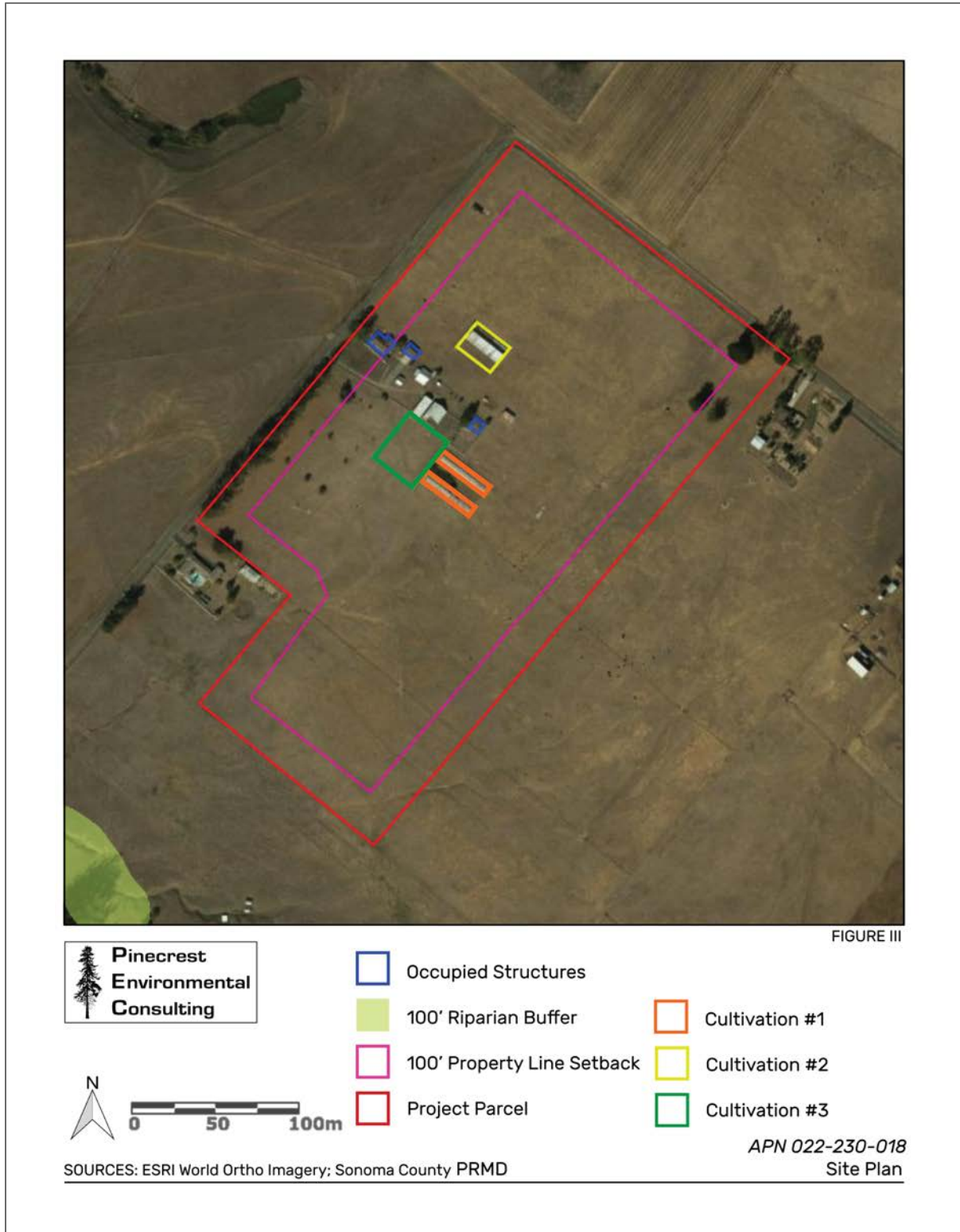
**FIGURE 1: REGIONAL TOPOGRAPHY**



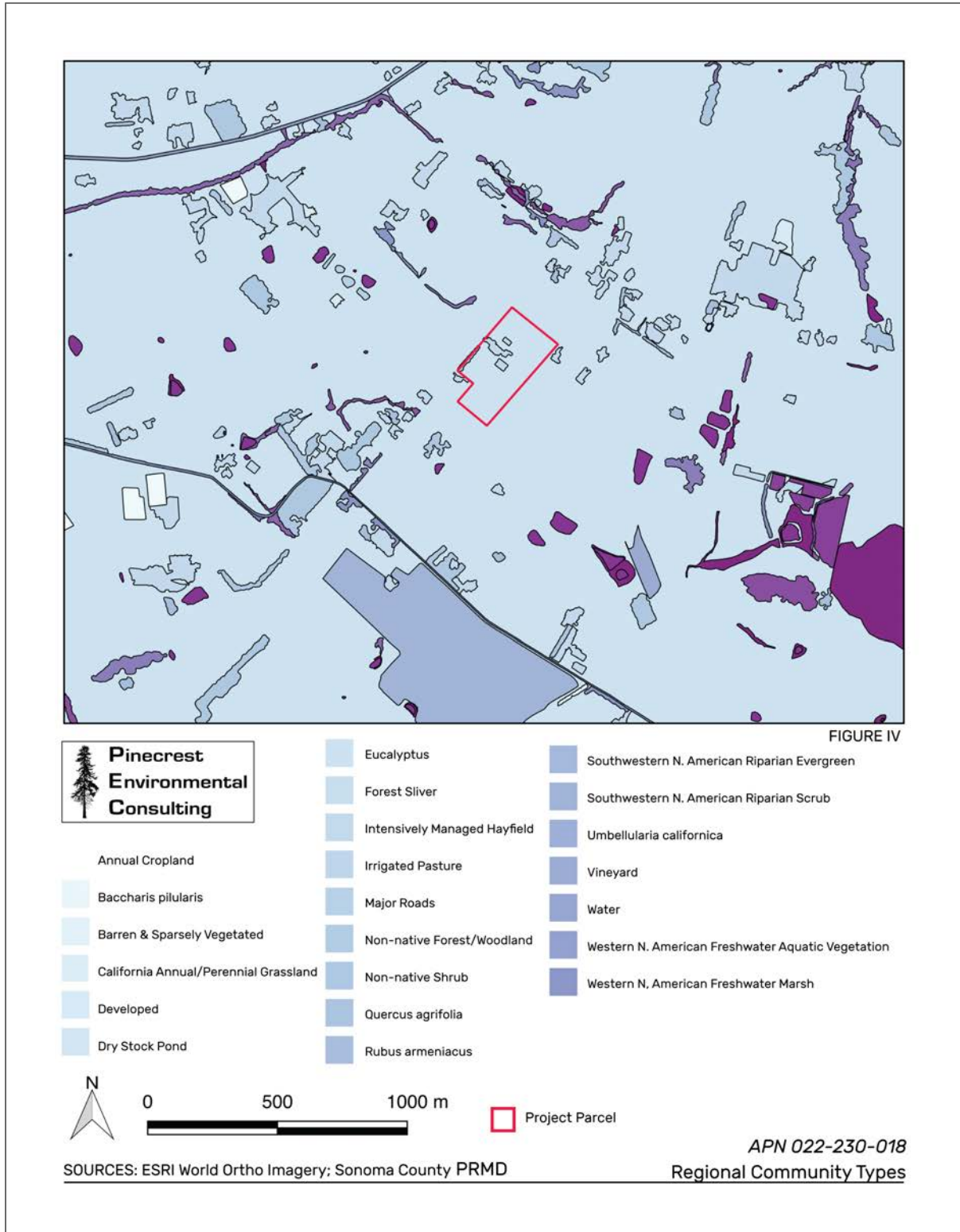
**FIGURE 2: 40FT TOPOGRAPHIC CONTOURS**



**FIGURE 3: SITE PLAN**



**FIGURE 4: REGIONAL COMMUNITY COMPOSITION**



**FIGURE 5: ONSITE PLANT COMMUNITIES**

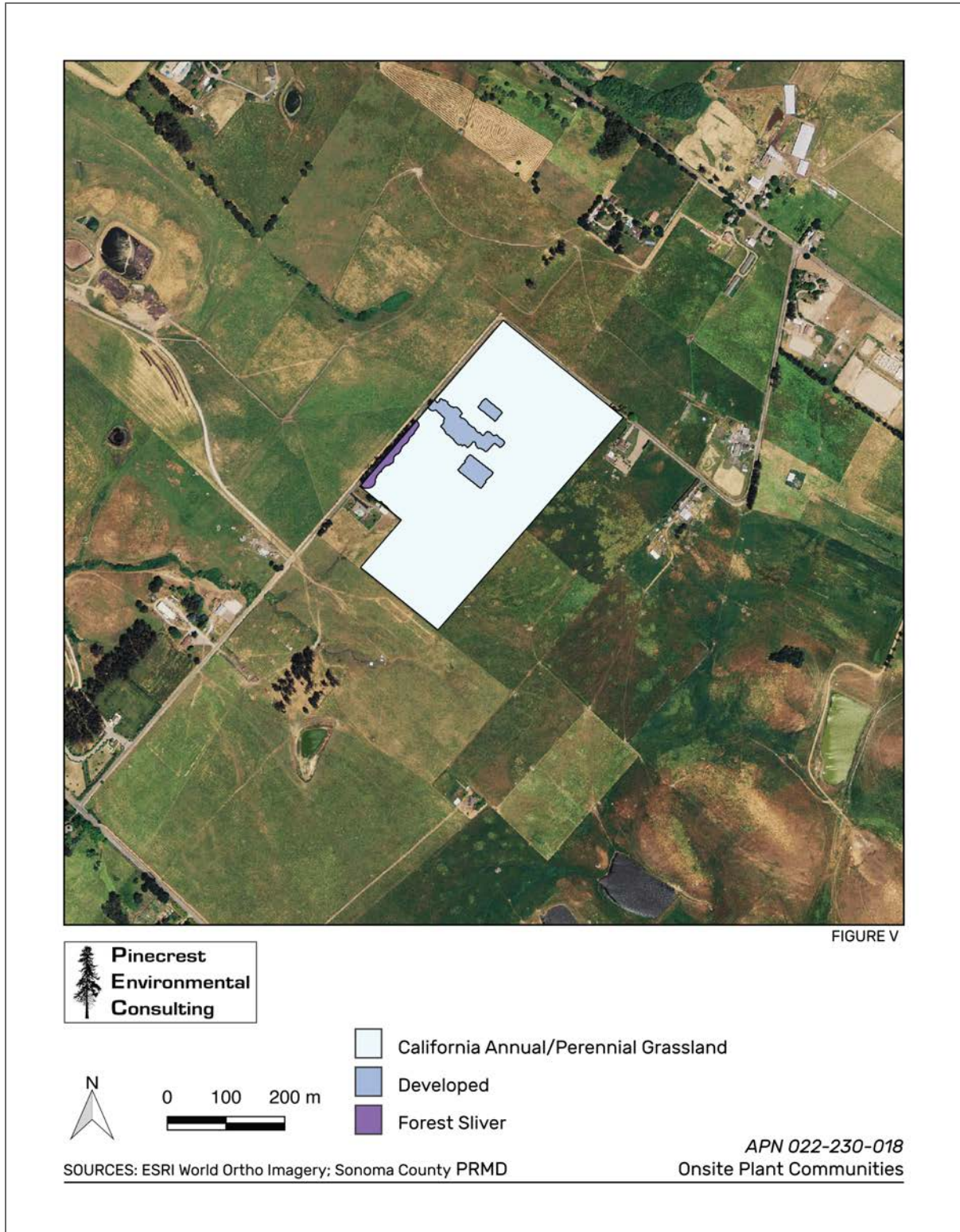


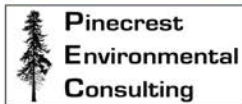
FIGURE V



**FIGURE 6: PHOTOGRAPH OF CULTIVATION AREA #2**



FIGURE VI



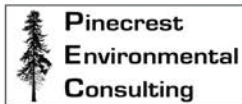
SOURCES: Christopher DiVittorio

APN 022-230-018  
Cultivation Area #2

## FIGURE 7: PHOTOGRAPH OF CULTIVATION AREA #1



FIGURE VII



SOURCES: Christopher DiVittorio

APN 022-230-018  
Cultivation Area #1

## FIGURE 8: PHOTOGRAPH OF EXISTING STRUCTURES



FIGURE VIII



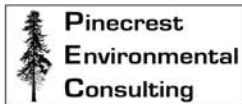
SOURCES: Christopher DiVittorio

APN 022-230-018  
Existing Structures

## FIGURE 9: PHOTOGRAPH OF GRASSLAND COMMUNITY



FIGURE IX



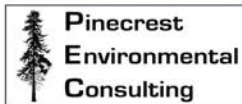
SOURCES: Christopher DiVittorio

*APN 022-230-018*  
Grassland Community

**FIGURE 10: PHOTOGRAPH OF CULTIVATION AREA #3**



FIGURE X



SOURCES: Christopher DiVittorio

APN 022-230-018  
Cultivation Area #3

## APPENDIX A: SPECIAL-STATUS SPECIES CONSIDERED

Taxon	Status <sup>1</sup> Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
<b>Plants</b>			
Colusa layia ( <i>Layia septentrionalis</i> )	—/—/1B.2	Chaparral, valley grassland	<u>Very Low</u> : No chaparral exists in the project area.
Brownish beaked-rush ( <i>Rhynchospora capitellata</i> )	—/—/2B.2	Freshwater marsh, riparian	<u>Very Low</u> : Some wetland habitat exists offsite near the project area.
California beaked-rush ( <i>Rhynchospora californica</i> )	—/—/1B.1	Freshwater wetlands	<u>Very low</u> : Some wetland habitat exists offsite near the project area.
Congested-headed tarplant ( <i>Hemizonia congesta</i> ssp. <i>congesta</i> )	—/—/1B.2	Grassland, coastal scrub	<u>Low</u> : May occur in grassland habitat. Not observed during field surveys.
Greene's narrow-leaved daisy ( <i>Erigeron greenei</i> )	—/—/1B.2	Serpentine grassland	<u>None</u> : No serpentine exists in the project area.
Holly-leaved ceanothus ( <i>Ceanothus purpureus</i> )	—/—/1B.2	Chaparral	<u>None</u> : No chaparral exists in the project area.
Pappose tarplant ( <i>Centromadia parryi</i> ssp. <i>parryi</i> )	—/—/1B.2	Grassland, chaparral	<u>Low</u> : May occur in grassland habitat. Not observed during field surveys.
Rincon Ridge ceanothus ( <i>Ceanothus confusus</i> )	—/—/1B.1	Chaparral	<u>None</u> : No chaparral exists in the project area, although some exists immediately offsite.
Rincon Ridge manzanita ( <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> )	—/—/1B.1	Chaparral	<u>Very Low</u> : No chaparral exists in the project area.
Round-headed beaked-rush ( <i>Rhynchospora globularis</i> )	—/—/2B.1	Freshwater wetlands, riparian	<u>Low</u> : Some wetland habitat exists offsite near the project area.

<b>Taxon</b>	<b>Status<sup>1</sup> Fed/State/CNPS</b>	<b>Habitat</b>	<b>Potential to Occur Within the Project Area</b>
Sonoma alopecurus ( <i>Alopecurus aequalis</i> var. <i>sonomensis</i> )	FE/—/1B.1	Freshwater wetland	<u>Very Low</u> : Some wetland habitat exists offsite near the project area.
Swamp harebell ( <i>Campanula californica</i> )	—/—/1B.2	Coastal prairie, freshwater wetlands	<u>Very Low</u> : Some wetland habitat exists offsite near the project area.
Thin-lobed horkelia ( <i>Horkelia tenuiloba</i> )	—/—/1B.2	Chaparral	<u>None</u> : No chaparral in the project area.
Thurber's reed grass ( <i>Calamagrostis crassiglumis</i> )	—/—/2B.1	Coastal scrub, freshwater wetland	<u>Very Low</u> : Some wetland habitat exists offsite near the project area.
Two-fork clover ( <i>Trifolium amoenum</i> )	—/—/1B.1	Grassland, wetland	<u>Low</u> : May occur in grassland habitat. Not observed during field surveys.
White beaked-rush ( <i>Rhynchospora alba</i> )	—/—/2B.2	Wetlands, riparian	<u>Very Low</u> : Some wetland habitat exists offsite near the project area.
<b>Fish</b>			
Coho Salmon Central California Coast ESU ( <i>Oncorhynchus kisutch</i> )	FE/SE/CSC	Freshwater streams, open ocean and estuaries	<u>None</u> : No habitat available in the project area.
Steelhead Central California Coast DPS ( <i>Oncorhynchus mykiss irideus</i> )	FT/—/—	Freshwater streams, open ocean and estuaries	<u>None</u> : No habitat available in the project area.
<b>Amphibians &amp; Reptiles</b>			
California giant salamander ( <i>Dicamptodon ensatus</i> )	—/CSC/—	Wetlands and riparian areas	<u>None</u> : No suitable stream or wetland habitat exists onsite.
California red-legged frog ( <i>Rana draytonii</i> )	FT/CSC/—	Vernal pools, seasonal pools, stock ponds, and associated grasslands	<u>None</u> : No ponds exist in the project area.
California tiger salamander ( <i>Ambystoma californiense</i> )	FT/ST/—	Ponds, streams, drainages, and associated uplands	<u>Very Low</u> : No suitable breeding habitat, some potential upland estivation habitat.

<b>Taxon</b>	<b>Status<sup>1</sup></b> Fed/State/CNPS	<b>Habitat</b>	<b>Potential to Occur Within the Project Area</b>
Foothill yellow-legged frog ( <i>Rana boylei</i> )	—/CSC/—	Wetlands, riparian, streams and ponds	<u>None</u> : No suitable stream or wetland habitat exists onsite.
Western pond turtle ( <i>Emys marmorata</i> )	—/CSC/—	Slow-moving creeks, streams, ponds, rivers, ditches, grasslands for nesting	<u>None</u> : No ponds or wetlands exist onsite.
<b>Invertebrates</b>			
obscure bumble bee ( <i>Bombus caliginosus</i> )	—/CSC/—	Grassland, foothill woodland, chaparral	<u>None</u> : No suitable nesting habitat exists.
<b>Birds</b>			
American peregrine falcon ( <i>Falco peregrinus anatum</i> )	FSC/CFP/—	Forages in open grasslands, nests in trees	<u>Very Low</u> : No suitable nesting or foraging habitat exists. No individuals observed during field surveys.
White-tailed kite ( <i>Elanus leucurus</i> )	—/CFP/—	Prefers to nest in marshes adjacent to deciduous forests.	<u>Very Low</u> : No suitable nesting or foraging habitat exists. No individuals observed during field surveys.
<b>Mammals</b>			
Townsend's big-eared bat ( <i>Corynorhinus townsendii</i> )	—/CSC/—	Mixed coniferous forest	<u>Low</u> : Suitable foraging habitat available. No suitable roosting habitat available. No individuals observed during 2017 survey.
Burrowing owl ( <i>Athene cucularia</i> )	—/CSC/—	Forages over open areas, nests in grasslands	<u>Low</u> : Some suitable foraging and nesting habitat available. No individuals observed during 2017 surveys.
Pallid bat ( <i>Antrozous pallidus</i> )	—/CSC/—	Common in open dry habitats with rocky areas for roosting. Roosts in caves or buildings.	<u>None</u> : Foraging habitat exists, but no suitable roosts in the project area. No individuals observed during 2017 surveys.



<sup>1</sup> Status:

Federal

FE = Federally Endangered Species

FT = Federally Threatened Species

State

SE = State Endangered Species

ST = State Threatened Species

SR = State Rare (applies to plants only)

CSC = California Species of Special Concern

CFP = California Fully Protected Species

CNPS (applies to plants only)

List 1B = plants considered rare, threatened, or endangered in California and elsewhere

List 2B = plants rare, threatened or endangered in California, but more common elsewhere

<sup>2</sup> USFWS

## APPENDIX B: SPECIES ENCOUNTERED

Plants
<i>Aira caryophylla</i>
<i>Avena barbata</i>
<i>Brassica nigra</i>
<i>Briza minor</i>
<i>Bromus diandrus</i>
<i>Bromus hordeaceus</i>
<i>Carduus pycnocephalus</i>
<i>Citrus paradisi</i>
<i>Convolvulus arvensis</i>
<i>Croton setigerus</i>
<i>Cupressus macrocarpa</i>
<i>Erodium cicutarium</i>
<i>Eschscholzia californica</i>
<i>Geranium dissectum</i>
<i>Gnaphalium californicum</i>
<i>Hordeum murinum</i>
<i>Hypochaeris radicata</i>
<i>Juncus bufonius</i>
<i>Lolium perenne</i>
<i>Malus pumila</i>
<i>Phalaris aquatica</i>
<i>Picris echioides</i>
<i>Pinus radiata</i>
<i>Polygonum aviculare</i>
<i>Prunus avium</i>
<i>Quercus agrifolia</i>
<i>Ranunculus californicus</i>
<i>Raphanus sativus</i>
<i>Rubus armeniacus</i>
<i>Rumex acetosella</i>
<i>Sequoia sempervirens</i>
<i>Trifolium hirtum</i>

<i>Vicia sativa</i>
<i>Vulpia myuros</i>
<i>Washingtonia filifera</i>
<b>Animals</b>
<i>Apis mellifera</i> (Western honeybee)
<i>Batrachoseps attenuatus</i> (slender salamander)
<i>Canis latrans</i> (coyote)
<i>Cathartes aura</i> (turkey vulture)
<i>Corvus brachyrhynchos</i> (American crow)
<i>Lepus californicus</i> (black tailed jack rabbit)
<i>Microtus californicus</i> (California vole)
<i>Otospermophilus beecheyi</i> (ground squirrel)
<i>Sceloporus occidentalis</i> (Western fence lizard)
<i>Zenaida macroura</i> (mourning dove)