
**BIOLOGICAL RESOURCE ASSESSMENT
WITH BOTANICAL SURVEY
and DELINEATION OF WATERS OF THE U.S.
for the
HUTTOPIA PROJECT at SIX SIGMA WINERY
APN 012-012-69
Lake County, CA**

July 23, 2018

**Prepared by
Northwest Biosurvey**



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1.0 PROJECT DESCRIPTION

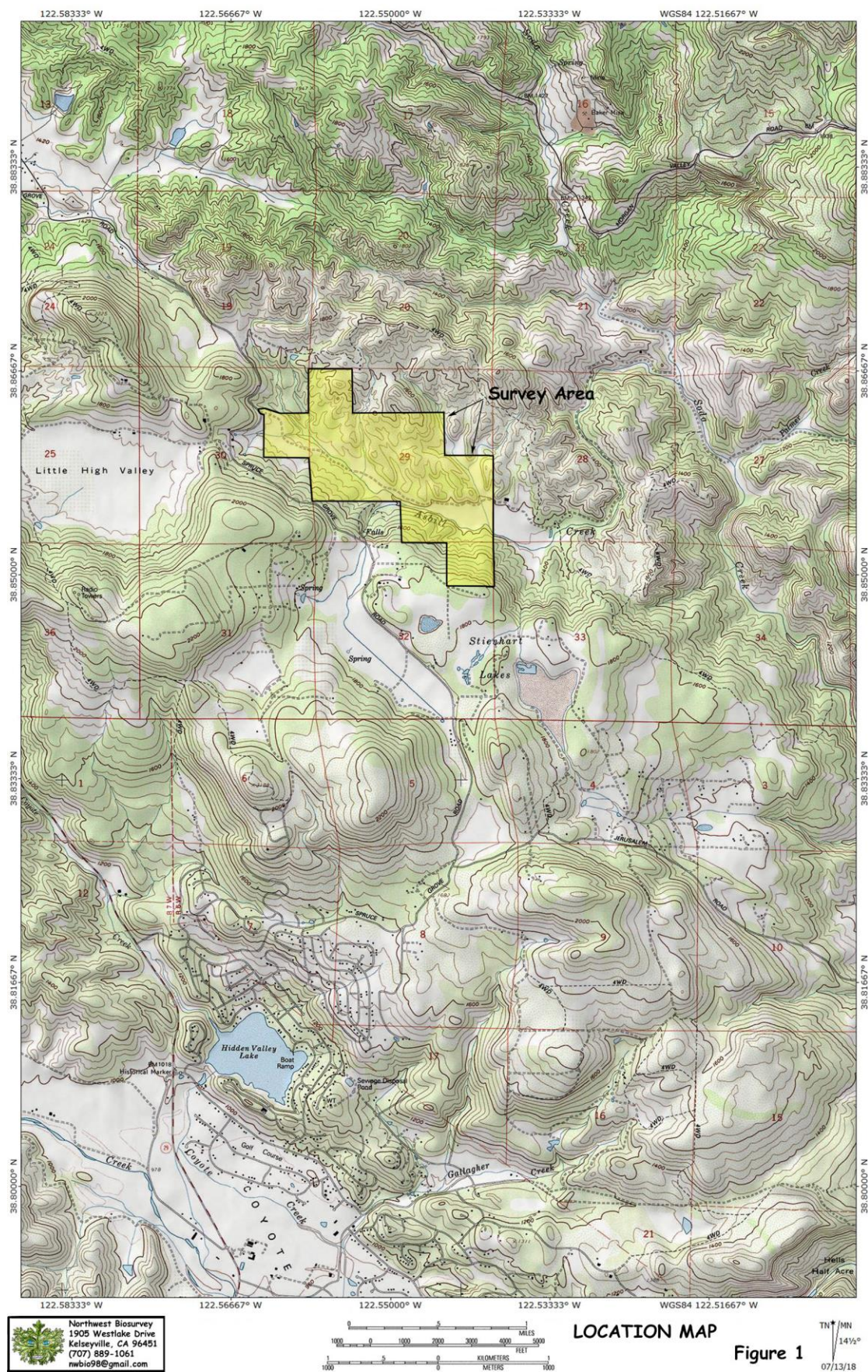
1.1 Proposed Project: This biological resource assessment covers a ±140-acre portion (designated the "Focus Area") of a large parcel (shown in Figure 1); this area is proposed for development as part of the Huttopia glamping resort project. The property is located north of Hidden Valley Lake subdivision in Lake County on the Six Sigma Winery property. The local permitting agency is requesting completion of a botanical survey and assessment of biological resources on the property as part of the California Environmental Quality Act (CEQA) review required for development of the property.

The initial phase of this assessment evaluates the potential of the survey area to contain sensitive plant and wildlife habitat. The second phase consists of field surveys, including a botanical survey listing all plant taxa¹. The biological resource assessment will determine whether the property contains sensitive plants or potentially contains sensitive wildlife requiring mitigation under the California Environmental Quality Act (CEQA) or National Environmental Policy Act (NEPA). As used here, the terms sensitive plant or wildlife includes all state or federal rare, threatened, or endangered species and all species listed in the California Natural Diversity Database (CNDDB) list of "Special Status Plants, Animals, and Natural Communities".

Due to the fact that wetland delineations are prepared with a standard format for U.S. Army Corps of Engineers review, the delineation is provided in its own section. The delineation and findings are provided in Section 6.0.

1.2 Location: The project site is located at 13444 Spruce Grove Road, Lower Lake (APN 012-012-69, Sec. 29, T12N R06W, Middletown, Calif. 7½' Topographic Map). A location map of the parcel is provided in **Figure 1**.

¹ Many sensitive plants and wildlife are subspecies or varieties which are taxonomic subcategories of species. The term "taxa" refers to species and their sub-specific categories.



2.0 ASSESSMENT METHODOLOGY

The basis of the biological resource assessment is a comparison of existing habitat conditions within the project boundaries to the geographic range and habitat requirements of sensitive plants and wildlife. It includes all sensitive species that occupy habitats similar to those found in the project area and whose known geographic ranges encompass it. The approach is conservative in that it tends to over-estimate the actual number of sensitive species potentially present.

The analysis includes the following site characteristics:

- Location of the project area with regard to the geographic range of sensitive plant and wildlife species
- Location(s) of known populations of sensitive plant and wildlife species as mapped in the California Natural Diversity Database (CNDDDB)
- Soils of the project area
- Elevation
- Presence or absence of special habitat features such as vernal pools and serpentine soils

In addition to knowledge of the local plants and wildlife, the following computer databases were used to analyze the suitability of the site for sensitive species:

- California Department of Fish and Wildlife (CDFW), *California Natural Diversity Database (CNDDDB)*; RareFind 5, 2018
- California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California* (2018 edition)
- California Department of Fish and Wildlife, *California Wildlife Habitat Relationships System (CWHR)*, Version 9.0

The CNDDDB and RareFind 5 databases consist of maps and records of all known populations of sensitive plants and wildlife in California. This data is continually updated by the CDFW with new sensitive species population data.

The CNPS database produces a list of sensitive plants potentially occurring at a site based on the various site characteristics listed above. While use of the CNPS inventory does not in itself eliminate the need for an in-season botanical survey, it can, when used in conjunction with other information, provide a very good indication of the suitability of a site as habitat for sensitive plant species.

The CWHR database operates on the same basis as the CNPS inventory. Input includes geographic area, plant community (including development stage), soil structure, and special features such as presence of water, snags, cover, and food (fruit, seeds, insects, etc.).

2.1 Botanical Survey Methods: A full, in-season floristic-level survey was conducted for the project site. The CNDDDB report and overlay map for the Middletown quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of *A Manual of California Vegetation* (Sawyer et al. 2009) as modified by the California Native Plant Society (CNPS), and mapped on a 1"=300' aerial photo. Vegetation community names are based on an assessment of dominant cover species.

Plants occurring on the site were identified using *The Jepson Manual of Higher Plants of California*. Where necessary, species names were updated based on the 6th edition, *CNPS Inventory of Rare and Endangered Plants of California*. A map of the plant communities is provided in **Figure 2**.

2.2 Delineation Methods: The delineation was conducted as prescribed in the *Corps of Engineers Wetlands Delineation Manual*, January 1987 and the *Arid West 2008 Supplement*. Plant taxonomy and nomenclature is from the *Jepson Manual, Higher Plants of California*, 2012. Other texts, such as Munz's *A California Flora and Supplement*, 1973, and Mason's *Flora of the Marshes of California*, 1957, were used as supplemental texts.

2.3 Survey Dates: Site visits for in-season floristic surveys were made on April 20 and 26, and June 5, 2018. Due to the short growing season in Lake County in 2018, all potentially present sensitive plant species in this area would have been identifiable on these dates.

2.4 Biological Assessment Staff: The field surveys, plant taxonomy, vegetation mapping, and the delineation were conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. He has over 35 years of experience as a biologist in the government and private sectors. He completed his wetland delineation training under Terry Huffman of Huffman & Associates, Inc.

Mr. Zalusky was assisted in the field and with mapping by Leigh Zalusky. Leigh Zalusky has a Bachelor of Science Degree in Computer Engineering from the University of California, Davis. He has also developed extensive skills in plant taxonomy and ecology

while managing and assisting in the development of the Seigler Valley Wetland Mitigation Bank and while assisting Northwest Biosurvey staff in field surveys and vegetation mapping over the past three years.

Database review and report preparation were conducted by Danielle Zalusky, Northwest Biosurvey principal planner. Ms. Zalusky has 15 years of experience as a planner in local government and the private sector and 16 years in field biology. She has a Bachelor of Arts Degree and has completed all course work toward an M.A. Degree in Rural and Town Planning from Chico State University. Prior to joining Northwest Biosurvey in 2002, Ms. Zalusky was a senior planner for the Lake County Community Development Department.

3.0 SITE CHARACTERISTICS

3.1 Topography and Drainage: The Six Sigma Ranch is located in a narrow valley and its adjacent steep slopes along the course of Asbill Creek in the Interior Coast Range southeast of the Clear Lake Basin. Asbill Creek drains the valley through a steep and narrow canyon to its confluence with Soda Creek 1.9 river miles to the north east. Soda Creek continues 5.8 river miles south through continuous steep canyons to Lake Berryessa, passing through Jerusalem valley on the way. Elevations range from 1,800 feet msl (mean sea level) along the southern ridge to 1,400 feet msl on the valley floor. Slopes north of the valley rise to 1,520 feet msl.

3.2 Soils: The focus area contains the following soil types:

- **Skyhigh-Millsholm loams, 15-50% slopes (soil unit 209):**

This map unit is on hills. Natural vegetation is mainly oaks and grasses. The unit is composed of approximately 45% Skyhigh loam and 25% Millsholm loam. The Skyhigh soil is moderately deep and well drained. It formed in material weathered from sandstone and shale. Permeability is slow. Surface runoff is rapid and the hazard of erosion is severe. The shrink-swell potential is high in the subsoil. The Millsholm soil is shallow and well drained. It formed in material weathered from sandstone and shale. Permeability of this soil is moderate; surface runoff is rapid, and erosion hazard is severe. Most of the project area contains this soil type.

- **Still loam, stratified substratum (soil unit 233):**

This soil type occurs within a small area at the southeast of the property in the valley. This is a very deep, well-drained soil on alluvial plains. It formed in alluvium derived from mixed rock sources, mostly sandstone and shale. The slope is from 0 to 2%. Permeability is moderately slow. Surface runoff is slow and the hazard from erosion is slight. Vegetation is mainly annual grasses and forbs with scattered oaks. Some areas near streams are subject to rare periods of flooding.

3.3 Vegetation Types: This project contains fifteen plant communities or vegetation types based on or derived from the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) *A Manual of California Vegetation*. These vegetation types and other cover types are listed in **Table 1**. They are described below and shown in the vegetation map provided in **Figure 2**.

TABLE 1. PLANT COMMUNITIES AND OTHER COVER TYPES PRESENT

COVER TYPE	Total Acres of Cover Type on Property	Percent of Property Supporting Cover Type
Ponderosa Pine Forest	3.23	0.62
California Black Oak Forest	30.09	5.82
Interior Live Oak Woodland	108.77	21.03
Blue Oak Woodland	97.84	18.92
Mixed Oak Woodland	20.68	4.00
California Valley Oak Woodland	12.92	2.50
Ghost Pine Forest	3.61	0.70
Red Willow Thicket	1.21	0.23
Narrow-Leaf Willow Thicket	0.25	0.05
California Coffee Berry Scrub	6.67	1.29
Chamise Chaparral	117.77	22.75
Wild Oat Grassland	74.67	14.44
Yellow Star Thistle Field	20.27	3.92
Exposed Rock Substrate	0.56	0.11
Ruderal (disturbed areas, i.e. roadways etc.)	7.84	1.52
Vineyard	10.84	2.10
Total Acres of Cover Type	517.22	100.00

- **Ponderosa Pine Forest:**

Ponderosa pine (*Pinus ponderosa*) forest is limited to a small copse of trees on a shaded north-facing slope along the southern property boundary. These trees provide an upper conifer canopy over a continuation of the surrounding California black oak woodland. The shrub layer and ground cover are the same as in the surrounding woodland with the primary difference being that these oaks form a subcanopy rather than the dominant tree cover.

- **California Black Oak Forest:**

This dense woodland occupies the shaded, north-facing slope along the southern edge of the property. It is heavily dominated by California black oak (*Quercus kelloggii*) with scattered ponderosa pine and big leaf maple (*Acer macrophyllum*).

Along its downslope edge it transitions into mixed oak woodland and interior live oak woodland, depending on the aspect of the terrain. The shrub layer is diffuse due to the dense tree canopy but includes common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*) and poison oak (*Toxicodendron diversilobum*). The ground cover consists of shade-tolerant woodland species including Henderson's shooting stars (*Dodecatheon hendersonii*), and grand hound's tongue (*Cynoglossum grande*).

- **Interior Live Oak Woodland:**

This community occupies shaded slopes, generally along watercourses. It is dominated by mature interior live oak (*Quercus wislizeni*) with subdominant California bay (*Umbellularia californica*). It also includes occasional California black oak and ghost pine (*Pinus sabiniana*). Along shaded north-facing slopes the community includes buckeye (*Aesculus californica*) as an understory tree within a diverse mix of shrubs including common manzanita, birch-leaf mountain mahogany (*Cercocarpus betuloides* var. *betuloides*), poison oak, bush monkeyflower (*Mimulus aurantiacus* ssp. *aurantiacus*), toyon (*Heteromeles arbutifolia*), and California manroot (*Marah fabaceus*). In these shaded areas the ground cover is limited to community boundaries and includes white-stem hedge nettle (*Stachys albens*), small-flowered star lily (*Zigadenus fremontii*), goldback fern (*Pentagramma triangularis* ssp. *triangularis*), and leaf litter.

Along the exposed south-facing slopes, the community occurs as an ecotone with the surrounding chamise chaparral community. That community invades this woodland as a shrub and ground cover layer in all but the more shaded locations.

- **Blue Oak Woodland:**

This community ranges from woodland with up to 80-percent canopy cover to open savanna with individual trees scattered within a matrix of wild oat grassland. It is dominated by mature blue oak (*Quercus douglasii*) with occasional ghost pine. The shrub layer is sparse within the woodland and generally absent within the savanna. It consists of common manzanita, poison oak, birch-leaf mountain mahogany, and toyon. The ground cover is a continuation of the surrounding wild oat grassland.

- **Mixed Oak Woodland:**

This is an ecotone "community" on a north-facing slope above the central valley portion of the property. It consists of a mix of trees, shrubs, and ground cover from the surrounding woodlands and forests. These include ponderosa pine forest, California black oak woodland, interior live oak woodland, and blue oak woodland. While it is generally dominated by California black oak, the mix of subdominant to codominant trees changes depending on which community it is adjacent to.

- **California Valley Oak Woodland:**

California valley oak (*Quercus lobata*) is limited to the valley bottom and occurs principally along waterways. This woodland has an open structure of large mature trees within a matrix of wild oat grassland. It contains only scattered shrubs which are primarily common manzanita and poison oak located beneath the driplines of trees.

- **Ghost Pine Forest:**

Ghost pine occurs throughout the more xeric (dry soil) woodlands and shrub communities on the property. It attains a canopy density sufficient to qualify as a separate plant community in only two locations in the eastern half of the property. Both are on south-facing slopes. Due to the comparatively open canopy, it supports a shrub and ground cover layer consisting of a continuation of the shrubs, forbs and grasses from the adjacent communities. These are typically the more xeric forms characteristic of the chamise chaparral community.

- **Red Willow Thicket:**

This dense, shrubby community occurs along a shaded drainage on the north-facing slope on the south side of the valley. It consists of stretches of low shrubby red willow (*Salix laevigata*) interspersed with large mature red willow in the more shaded areas. Openings in the canopy support Himalayan blackberry (*Rubus armeniacus*). The ground cover ranges from the surrounding zonal vegetation (vegetation of the surrounding plant community) to riparian species within the stream channels. These include Colorado rush (*Juncus confusus*), spiny-fruit buttercup (*Ranunculus muricatus*), pale spikerush (*Eleocharis palustris*), and clustered field sedge (*Carex praegracilis*).

- **Narrow-leaved Willow Thicket:**

This dense, shrubby riparian community occurs along a principal drainage along the southern edge of the valley. While it occurs in less shaded habitat than the red willow thicket community, it is essentially identical in all but the dominant tree cover of narrow-leaved willow (*Salix exigua*).

- **California Coffeeberry Scrub:**

This isolated community exists as a small pocket on the shaded north-facing slope south of the valley. It is dominated by California coffeeberry (*Frangula californica* ssp. *californica*), but several other shrubs are present at a less than subdominant density. These include common manzanita, blue elderberry (*Sambucus nigra* ssp.

caerulea), birch-leaf mountain mahogany, and interior live oak shrub (*Quercus wislizeni* var. *frutescens*). The ground cover consists primarily of leaf litter.

- **Chamise Chaparral:**

This xeric shrub community occupies south-facing slopes north of the valley. It is heavily dominated by chamise (*Adenostoma fasciculatum* var. *fasciculatum*) punctuated by widely-spread common manzanita and occasional ghost pines. Community edges and small openings support a ground cover of mixed forbs and grasses, including soft chess (*Bromus hordeaceus*), red brome (*Bromus madritensis* ssp. *rubens*), small-flowered star lily, and pitcher sage (*Lepechinia calycina*).

- **Wild Oat Grassland:**

This grassland consists of a varying mix of grasses and forbs with changing dominance and species mix depending on location (aspect-shading, soil type, etc.) In more xeric locations it is typically dominated by soft chess, medusahead (*Elymus caput-medusae*), slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), smallflower lotus (*Acemispom micranthus*), and red-stem storksbill (*Erodium cicutarium*). In more mesic (shaded, moist soil) locations it includes hedgehog dogtail (*Cynosurus echinatus*), Pacific blacksnakeroot (*Sanicula crassicaulis*), western buttercup (*Ranunculus occidentalis*), and grand hound's tongue.

- **Yellow Star Thistle Field:**

Several locations within the valley floor contain dense patches of yellow star thistle (*Centaurea solstitialis*). These are typically homogenous but edges support a continuation of grasses and forbs from the surrounding wild oat grassland.

- **Exposed Rock Substrate:**

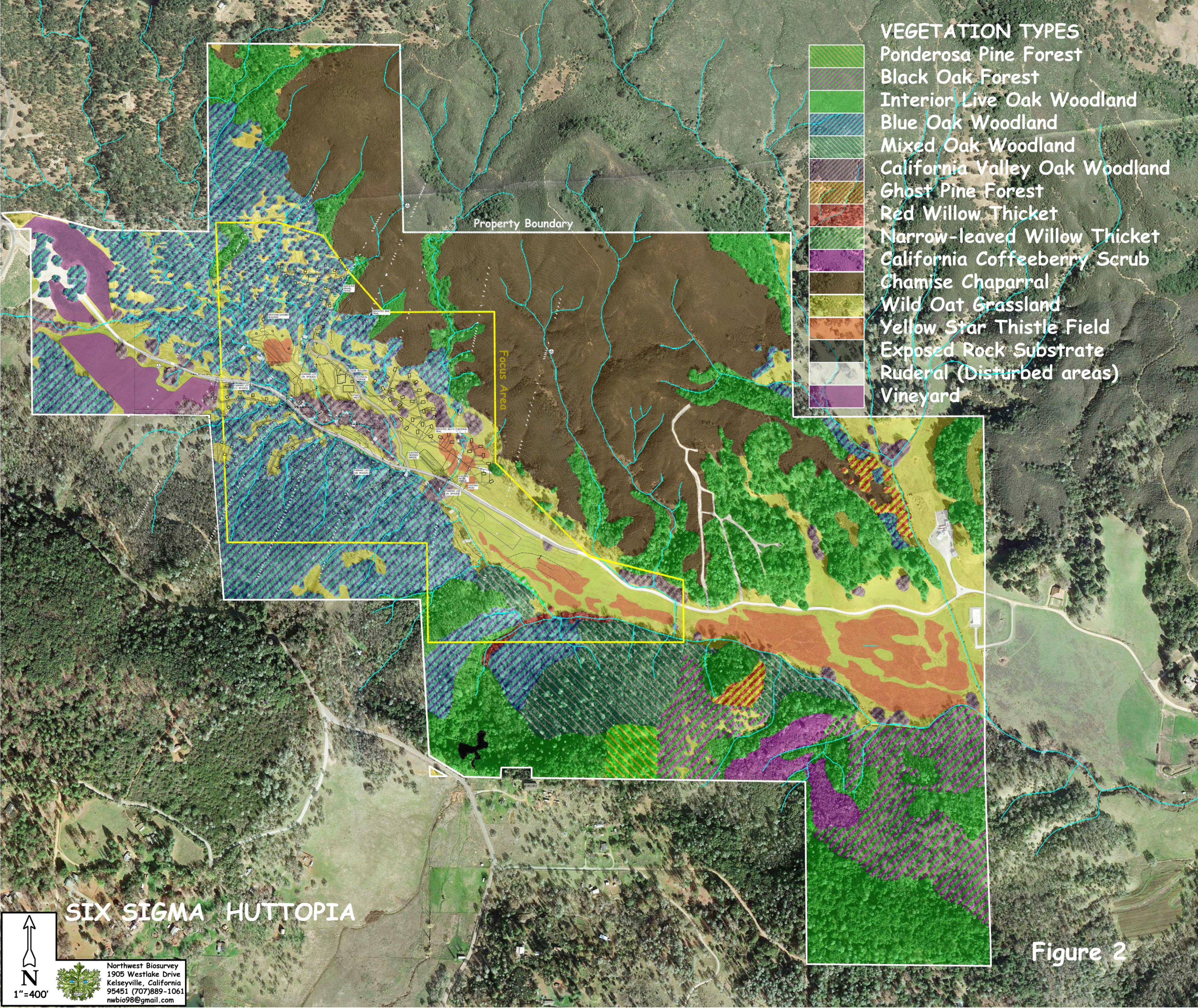
Much of the steep crest of the ridge along the southern edge of the valley consists of exposed volcanic rock outcrop. Much of this is obscured by the tree canopy; however, an area of exposed bedrock along the southern property boundary precludes the establishment of vegetation.

- **Ruderal (Disturbed Areas):**

Disturbed areas (roads, parking areas, structures, etc.) within the survey area are limited to a ranch road extending along the valley floor, a minor structure, and a parking area.

- **Vineyard:**

The western corner of the property supports established vineyard development.



4.0 PRE-SURVEY RESEARCH RESULTS

4.1 CNPS Electronic Inventory Analysis: A California Native Plant Society (CNPS) analysis was conducted for all plants with federal and state regulatory status, and all non-status plants on the CNPS Lists 1B through 4. The query included all plants within this area of Lake County occurring within the plant communities identified on the project site. The inventory lists species potentially occurring at the site; these are listed in **Table 2**. These species were included in the list of potentially sensitive species specifically searched for during field surveys. It is important to note that this list includes species for which appropriate habitat is not present on the parcel (including serpentine and vernal pool species). The CNPS database search does not allow fine tuning for specific soil types and many specific habitats.

Note: *The CNPS list is used to broaden the list of sensitive species considered during the subsequent field surveys; however, it must be used with discretion because the database search does not allow fine-tuning for specific soil types or for many specific habitats required by sensitive plant taxa (e.g. vernal pools or serpentine soils). Consequently, the CNPS list generated for a site may include several taxa for which the required habitat is not present.*

4.2 California Natural Diversity Database: The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Middletown 7½' quadrangle were reviewed for this project. **Table 3** presents a list of sensitive plant and wildlife species known to occur within this quadrangle. In addition to listing the species present within the quadrangle, the table provides a brief descriptor of the habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species. **Appendix A** at the end of this report lists the species within the nine quadrangles in the vicinity of this property.

TABLE 2. CALIFORNIA NATIVE PLANT SOCIETY'S INVENTORY OF RARE AND ENDANGERED PLANTS

Selected CNPS Plants by Scientific Name
Huttopia Project

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	Boraginaceae	annual herb	1B.2	None	None	Mar-Jun	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland
<i>Arctostaphylos manzanita ssp. elegans</i>	Konocti manzanita	Ericaceae	perennial evergreen shrub	1B.3	None	None	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest
<i>Astragalus breweri</i>	Brewer's milk-vetch	Fabaceae	annual herb	4.2	None	None	Apr-Jun	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland (open, often gravelly)
<i>Astragalus rattanii var. jepsonianus</i>	Jepson's milk-vetch	Fabaceae	annual herb	1B.2	None	None	Mar-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
<i>Calamagrostis ophitidis</i>	serpentine reed grass	Poaceae	perennial herb	4.3	None	None	Apr-Jul	Chaparral (open, often north-facing slopes), Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland
<i>Calystegia collina ssp. oxyphylla</i>	Mt. Saint Helena morning-glory	Convolvulaceae	perennial rhizomatous herb	4.2	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest, Valley and foothill grassland
<i>Collomia diversifolia</i>	serpentine collomia	Polemoniaceae	annual herb	4.3	None	None	May-Jun	Chaparral, Cismontane woodland
<i>Delphinium uliginosum</i>	swamp larkspur	Ranunculaceae	perennial herb	4.2	None	None	May-Jun	Chaparral, Valley and foothill grassland
<i>Harmonia hallii</i>	Hall's harmonia	Asteraceae	annual herb	1B.2	None	None	Apr-Jun	Chaparral (serpentine)
<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	Linaceae	annual herb	1B.2	None	None	May-Jul	Chaparral (serpentine)

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
<i>Hesperolinon didymocarpum</i>	Lake County western flax	Linaceae	annual herb	1B.2	SE	None	May-Jul	Chaparral, Cismontane woodland, Valley and foothill grassland
<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	Linaceae	annual herb	1B.2	None	None	May-Jul	Chaparral
<i>Leptosiphon acicularis</i>	bristly leptosiphon	Polemoniaceae	annual herb	4.2	None	None	Apr-Jul	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland
<i>Lomatium repostum</i>	Napa lomatium	Apiaceae	perennial herb	4.3	None	None	Mar-Jun	Chaparral, Cismontane woodland
<i>Navarretia cotulifolia</i>	cotula navarretia	Polemoniaceae	annual herb	4.2	None	None	May-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
<i>Navarretia jepsonii</i>	Jepson's navarretia	Polemoniaceae	annual herb	4.3	None	None	Apr-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	Polemoniaceae	annual herb	1B.1	None	None	Apr-Jul	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools
<i>Orcuttia tenuis</i>	slender Orcutt grass	Poaceae	annual herb	1B.1	SE	FT	May-Sep(Oct)	Vernal pools
<i>Sedella leiocarpa</i>	Lake County stonecrop	Crassulaceae	annual herb	1B.1	SE	FE	Apr-May	Cismontane woodland, Valley and foothill grassland, Vernal pools
<i>Streptanthus hesperidis</i>	green jewelflower	Brassicaceae	annual herb	1B.2	None	None	May-Jul	Chaparral (openings), Cismontane woodland
<i>Streptanthus morrisonii</i> ssp. <i>elatus</i>	Three Peaks jewelflower	Brassicaceae	perennial herb	1B.2	None	None	Jun-Sep	Chaparral (serpentine)
<i>Trifolium hydrophilum</i>	saline clover	Fabaceae	annual herb	1B.2	None	None	Apr-Jun	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools

KEY FOR TABLE 2:

CNPS Rare Plant-Threat Rank Definitions:

- 1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California
- 1B.2 = Rare, threatened, or endangered in California and elsewhere; moderately threatened in California
- 1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California
- 2A = Presumed extinct in California, but extant elsewhere
- 2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.
- 2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; moderately threatened in Calif.
- 2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.
- 3 = Plants about which we need more information (Review List)
- 3.1 = Plants about which we need more information (Review List); seriously threatened in California
- 3.2 = Plants about which we need more information (Review List); moderately threatened in California
- 3.3 = Plants about which we need more information (Review List); not very threatened in California
- 4.1 = Plants of limited distribution (watch list); seriously threatened in California
- 4.2 = Plants of limited distribution (watch list); moderately threatened in California
- 4.3 = Plants of limited distribution (watch list); not very threatened in California

KEY FOR TABLE 2 (cont.):

State and Federal Status:

- | | |
|---|---------------------------|
| CEA = California Endangered Species Act | |
| FESA = Federal Endangered Species Act | |
| SR = State. Rare | SE = State Endangered. |
| ST = State. Threatened | SD = State Delisted |
| SSC = CDFW Species of Special Concern | FP = CDFW Fully Protected |
| WL = CDFW Watch List | FE = Federal Endangered |
| FT = Federal Threatened | FD = Federal Delisted |

TABLE 3. CNDDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE MIDDLETOWN, CALIF. 7½' QUAD.

Habitat Type	Habitat Present
Northern Basalt Flow Vernal Pool	no

Plant Species	Common Name	Habitat Requirements, Fed/State/CNPS* Status	Blooming Season	Habitat Present
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	Coastal bluff scrub, cismontane woodland, valley & foothill grassland; --/--/1B.2	March-June ann. herb	poor
<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	Jepson's milk-vetch	Chaparral, cismontane woodland, valley & foothill grassland; often serpentinite; --/--/1B.2	April-June ann. herb	poor
<i>Calystegia collina</i> ssp. <i>oxyphylla</i>	Mt. Saint Helena morning-glory	Chaparral, lower montane conif. forest, valley & foothill grassland/serpentinite; --/--/4.2	April-June rhizom. herb	no
<i>Erigeron greenei</i>	Greene's narrow-leaved daisy	Chaparral/serpentine and volcanic, generally in shrubby vegetation; --/--/1B.2	May-Sept. per. herb	yes
<i>Fritillaria pluriflora</i>	adobe-lily	Chaparral, cismontane woodland, valley & foothill grassland/usually clay soils, sometimes serpentinite; --/--/1B.2	Feb.-April per. herb	no
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	Marshes & swamps (freshwater), vernal pools/clay, sometimes lake margins; --/SE/1B.2	April-Aug. ann. herb	no
<i>Harmonia hallii</i>	Hall's harmonia	Open rocky areas in chaparral/serpentine barrens, hills & ridges; --/--/1B.2	April-June ann. herb	no
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	congestion-headed hayfield tarplant	Valley and foothill grassland/often in fallow fields, sometimes roadsides;--/--/1B.2	April-Nov. ann. herb	moderate
<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	Serpentine barrens at edge of chaparral; --/--/1B.2	May-July ann. herb	no
<i>Hesperolinon didymocarpum</i>	Lake County western flax	Chaparral, cismontane woodland, valley & foothill grassland/serpentinite soil in open grassland and near chaparral; --/SE/1B.2	May-July ann. herb	no
<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	Chaparral/serpentinite; --/--/1B.2	May-July ann. herb	no
<i>Lasthenia burkei</i>	Burke's goldfields	Meadows and seeps, vernal pools and swales; FE/SE/1B.1	April-June ann. herb	no

Plant Species	Common Name	Habitat Requirements, Fed/State/CNPS* Status	Blooming Season	Habitat Present
<i>Legenere limosa</i>	legenere	In beds of vernal pools; --/--/1B.1	April-June ann. herb	no
<i>Leptosiphon jepsonii</i>	Jepson's leptisiphon	Chaparral, cismontane woodland, grassy slopes/volcanic or serpentine edge; --/--/1B.2	May-July ann. herb	no
<i>Navarretia leucocephala ssp. bakeri</i>	Baker's navarretia	Cismontane woodland, lower montane conif. forest, meadows & seeps, valley & foothill grassland, vernal pools, swales/adobe or alkaline soils; --/--/1B.1	May-July ann. herb	no
<i>Navarretia leucocephala ssp. pliantha</i>	many-flowered navarretia	Volcanic ash flow vernal pools; FE/SE/1B.2	May-June ann. herb	no
<i>Navarretia paradoxinota</i>	Porter's navarretia	Meadows and seeps; serpentinite, openings, vernal mesic, often drainages; --/--/1B.3	May-June ann. herb	no
<i>Orcuttia tenuis</i>	slender Orcutt grass	Vernal pools/often in gravelly substrates; FT/SE/1B.1	May-Oct. ann. herb	no
<i>Sedella leiocarpa</i>	Lake County stonecrop	Cismontane woodland, valley & foothill grassland, vernal pools/vernal mesic depressions in volcanic outcrops; FE/SE/1B.1	April-May ann. herb	no
<i>Streptanthus hesperidis</i>	green jewel flower	Chaparral or cismontane woodland (openings)/serpentine, rocky; --/--/1B.2	May-July ann. herb	no
<i>Trifolium hydrophilum</i>	saline clover	Marshes & swamps, valley & foothill grassland, vernal pools/mesic, alkaline sites; --/--/1B.2	April-June ann. herb	no

*See CNPS list for key

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
<i>Rana boylei</i>	foothill yellow-legged frog	Riparian/aquatic: partly-shaded, shallow streams & riffles with a rocky substrate in variety of habitats; SSC/G3/S2S3	year-round	yes
<i>Emys marmorata</i>	western pond turtle	Aquatic turtle found in ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms; In woodland, forest, & grasslands; SSC/G3G4/S3	year-round	yes
<i>Haliaeetus leucocephalus</i>	bald eagle	Large bodies of water with adjacent snags. Nests in large old-growth or dominant live tree (often ponderosa pine) with open branches; FD/SE/SFP/G5/S2	wintering and nesting	no

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	Roosts in open near relatively mesic sites, mainly montane forest habitats; SSC/G3/S2	year-round	no
<i>Lasionycteris noctivagans</i>	silver-haired bat	Coastal & montane forest, feeds over streams, ponds and brushy areas. Roosts in hollow trees; G5/S3S4	year-round	poor
<i>Lasiurus cinereus</i>	hoary bat	Open habitats with access to trees and water; G5/S4	migratory spring & fall	poor

Key for Table 3:

SE/ST/SD = State Endangered/Threatened/Delisted

SSC = CDFW Species of Special Concern

WL = CDFW Watch List

FE/FT/FD = Federal Endangered/Threatened/Delisted

Threat = Threatened

Cand = Candidate

SC/SCD = State Candidate for Listing/Delisting

SFP = State Fully Protected

FC = Federal Candidate

FPE/FPT/FPD/FP = Federal Proposed Endangered/Threatened/Delisting

End = Endangered

Prop = Proposed

NatureServe Conservation Status:

G1/S1 = Global/State Critically Imperiled

G2/S2 = Global/State Imperiled

G3/S3 = Global/State Vulnerable

G4/S4 = Global/State Apparently Secure

G5/S5 = Global/State Secure

SNR = Not yet assessed

4.3 Wildlife Habitat Analysis Results: The California Wildlife Habitat Relationships analysis lists a large number of species with sensitive and non-sensitive status as potentially occurring on the site based on the geographic location and wildlife habitats present. This list is included as **Appendix B**.

4.4 Wildlife Assessment: Based on the pre-survey research conducted for this study, a total of 10 sensitive wildlife species need to be accounted for within the project area. These consist of the six species identified as present within the Middletown quadrangle by the CNDDDB. Four additional species were added based on results of the CWHR and the presence of habitat: white-tailed kite, yellow-breasted chat, yellow warbler, and pallid bat.

Accepted protocol requires that all CNDDDB species in the surrounding U.S.G.S. quadrangle be discussed even through suitable habitat may not occur on the site.

▪ **Foothill yellow-legged frog (*Rana boylii*):**

These frogs are relatively common along the shaded banks of perennial headwater streams. They are heavily dependent on the presence of perennial water and are seldom far from pools where they can seek shelter from predation. The larvae require three to four months to mature, making most ephemeral (seasonal) streams unsuitable as breeding sites. Asbill Creek, a perennial stream, runs through the south part of the property. This creek provides suitable habitat for foothill yellow-legged frogs. The species is known to occur in Asbill Creek near its confluence with Soda Creek and should be assumed present.

▪ **Western pond turtle (*Emys marmorata*):**

These turtles prefer slow or ponded water with sheltering vegetation but will range widely through less suitable habitat in search of these sites. Eggs are laid on land in sheltered nests. Stream channels are often used as movement corridors between waterways or ponds. The CNDDDB occurrences for this species in the area are from Asbill Creek, a portion of which occurs within this property. *Emys marmorata* should be assumed to be present, at least seasonally, in this area. The species is known to occur in Asbill Creek near its confluence with Soda Creek and should be assumed present.

▪ **Bald eagle (*Haliaeetus leucocephalus*):**

This is a California Endangered and Fully Protected species. It requires large bodies of water with abundant fish, and adjacent snags or perches. Nests are near water and consist of a stick platform on a large live tree, often the largest tree in a stand, usually with fairly open canopy. Bald eagles hunt over lakes and rivers and nest in

adjacent riparian habitat. The species is listed in the CNDDDB overlays for this region near McCreary Lake. While bald eagles have not been identified in this area, the rock outcroppings in the eastern portion of the parcel may provide moderately-suitable habitat for raptor nests, although large water bodies needed for feeding do not occur in the area.

- **White-tailed kite (*Elanus leucurus*):**

Usually found near agricultural areas, the kite prefers open terrain near woodlands and water. These raptors hunt over open country and prefer large, deciduous trees surrounded by expanses of grassland, meadows, farmland, and/or wetlands for nesting and roosting sites. The property contains both a variety of woodlands and forests, black oak and blue oak woodlands adjacent to open grasslands; this would provide potential habitats for kites for both nesting and hunting. Perennial water may be found on Asbill Creek. This is a California Fully Protected species. All raptors are protected under the Migratory Bird Treaty Act and California Department of Fish and Wildlife code.

- **Yellow-breasted chat (*Icteria virens*):**

- **Yellow warbler (*Dendroica petechia brewsteri*):**

Both of these passerine species require riparian woodland such as willow thickets near streams, with a dense shrubby understory for nesting and cover. Both species arrive in these areas in April and are typically gone by September or October. The nesting season for the chat extends from May to August. Fledging for warblers is usually completed by August. Nests are constructed in shrubs and small trees in the lower canopy of the woodland, and they forage for insects in the upper canopy. They are omnivorous, eating insects and spiders as well as fruit. The willow thicket habitats along Asbill Creek provide excellent potential habitat for both of these species.

- **Townsend's western big-eared bat (*Corynorhinus townsendii ssp. townsendii*):**

This is a California Species of Special Concern. Physical characteristics of this bat include bilateral nose lumps and very large ears. The most restrictive resource required by this species is daytime roosting habitat. This prefers caves and mines and is easily observed when present, hanging from open surfaces in mines and caves. Less frequently it will roost in tunnels, bridges or other human-made structures, or hollow trees. Roost sites may vary from year to year. These bats typically prefer relatively mesic (moist) habitat such as streams near woodland habitats and may travel long distances for foraging. The majority of their diet consists of moths. This species is extremely sensitive to disturbance of roosting sites: These sites are frequently abandoned after being visited by humans. This property lacks the cool,

moist, protected habitats preferred by this species and lacks appropriate roosting structures.

- **Silver-haired bat (*Lasionycteris noctivagans*):**

This is a medium-sized bat with short and rounded ears. This species occurs throughout most of North America and is associated mainly with coastal and montane forest habitats. It needs proximity to drinking water. Foraging typically occurs over streams, ponds, and open brushy areas and is believed to occur when other bat species are not present. The preferred prey appears to be moths, although the silver-haired bat takes a wide variety of prey, including moths, flies, beetles, ants, and termites, and is adept at exploiting large swarms of insects. The species is primarily a tree-roosting bat, roosting during the day behind loose tree bark, in hollow trees, and in abandoned woodpecker holes. Occasionally individuals may roost in man-made structures. There is poor habitat on the property for this species.

- **Hoary Bat (*Lasiurus cinereus*):**

The hoary bat is a large bat with a frosted appearance and furry tail. It roosts in open habitats in woodlands or forest in the branches of large deciduous and coniferous trees. Males are solitary and females roost in dense foliage in medium to large trees with their young; they do not form maternity colonies. The hoary bat hunts above canopy level, over open areas, and water. The primary prey of the hoary bat is moths but include beetles and dragonflies. This species will sometimes set up foraging territories at bright lights where insects congregate. They are not attracted to human structures such as houses but are sometimes found in large trees in suburban areas. This species migrates to warmer climates during the winter, sometimes moving with flocks of birds. There is a moderate potential for this species to be present on the site due the presence of woodlands and due to the proximity to water in the form of streams. This species lacks special status but is reported on CNDDDB maps.

- **Yuma myotis (*Myotis yumanensis*):**

This is a small-sized bat with relatively large feet. Its preferred habitat is open conifer forests and riparian woodlands with nearby water, although it occurs in arid areas where permanent water is present. Day and night roosts are commonly found in caves, mines, under bridges, buildings, and sometimes trees. Its diet includes aquatic emergent insects such as mayflies, midges, caddis flies, along with small beetles, flies, and small moths; these are often gleaned from the surfaces of ponds and other bodies of water. Yuma myotis mate in the fall and births last from late May to mid-June with a peak in early June. Females bear a single young in a year. The

property lacks appropriate habitat for Yuma myotis. Threats to this species are from closures of mines and disturbance of maternity roosts in buildings, as well as pest control activities. This species does not have special status in California. Potential habitat for Yuma myotis on this property is poor.

- **Pallid bat (*Antrozous pallidus*):**

Optimal habitat for these bats consists of open, dry habitats with rocky areas, but the bats are also found in oak savanna grasslands, and in open forest and woodlands with access to riparian and open water for feeding and drinking in northern California. Foraging occurs over open country. These bats prefer the cool summer temperatures of caves, crevices, and mines as roosting sites where they are known to wedge themselves into small spaces; they will also roost in buildings, bridges, and hollow trees. Preferred roosts are high above the ground and inaccessible to terrestrial predators, although they are occasionally found roosting on the ground underneath sacks, tarps, and other objects left by humans.

The bats have a home range of 1 to 3 miles and are known to roost with other bat species. This species of bat does not migrate long distances between seasons. It is extremely sensitive to human disturbance of roosting sites. Populations in California have declined due to habitat destruction and use of pesticides. The project site contains oak woodlands and pine forests, and although open water does not occur on the property, water does occur in the form of streams.

5.0 FIELD SURVEY RESULTS

5.1 Botanical Field Survey Results: **Table 4** presents the results of the floristic-level botanical survey within the survey area. Each of the sensitive plant taxa potentially occurring at the sites and listed in Tables 2 and 3 was specifically searched for during the survey. The survey identified a total 119 plant taxa on the property, including native and introduced plants. No species with sensitive status were identified during the surveys.

TABLE 4. FLORA OF THE HUTTOPIA PROPERTY

Habit	Species	Common Name	Family	Origin
fern	<i>Pentagramma triangularis</i> subsp. <i>triangularis</i>	goldback fern	Pteridaceae	N
forb	<i>Lomatium caruifolium</i> var. <i>caruifolium</i>	caraway-leaved lomatium	Apiaceae	N
forb	<i>Lomatium dasycarpum</i> ssp. <i>dasycarpum</i>	woolly-fruited lomatium	Apiaceae	N
forb	<i>Lomatium utriculatum</i>	common lomatium	Apiaceae	N
forb	<i>Sanicula bipinnatifida</i>	purple sanicle	Apiaceae	N
forb	<i>Sanicula crassicaulis</i>	Pacific sanicle, Pacific blacksnakeroot	Apiaceae	N
forb	<i>Achillea millefolium</i>	common yarrow	Asteraceae	N
forb	<i>Achyrrachaena mollis</i>	blow wives	Asteraceae	N
forb	<i>Agoseris heterophylla</i> var. <i>cryptopleura</i>	mountain dandelion	Asteraceae	N
forb	<i>Anisocarpus madioides</i>	woodland madia	Asteraceae	N
forb	<i>Artemesia douglasiana</i>	mugwort	Asteraceae	N
forb	<i>Centaurea solstitialis</i>	yellow star thistle	Asteraceae	A
forb	<i>Chamomilla suaveolens</i>	pineapple weed	Asteraceae	A
forb	<i>Cirsium vulgare</i>	bull thistle	Asteraceae	A
forb	<i>Lasthenia californica</i>	California goldfields	Asteraceae	N
forb	<i>Micropus californicus</i>	cottontop	Asteraceae	N
forb	<i>Microseris douglasii</i> ssp. <i>douglasii</i>	Douglas' microseris	Asteraceae	N
forb	<i>Wyethia glabra</i>	green mule ears, shining mule ears	Asteraceae	N
forb	<i>Xanthium strumarium</i>	cocklebur	Asteraceae	N
forb	<i>Amsinckia menziesii</i>	small-flowered fiddleneck, rancher's fireweed	Boraginaceae	N
forb	<i>Cynoglossum grande</i>	grand hound's tongue	Boraginaceae	N
forb	<i>Phacelia imbricata</i> ssp. <i>imbricata</i>	imbricate phacelia	Boraginaceae	N
forb	<i>Plagiobothrys nothofulvus</i>	rusty popcornflower	Boraginaceae	N
forb	<i>Capsella bursa-pastoris</i>	shepherd's purse	Brassicaceae	N
forb	<i>Cardamine breweri</i>	Brewer's bittercress	Brassicaceae	N

Habit	Species	Common Name	Family	Origin
forb	<i>Lepidium nitidum</i> var. <i>nitidum</i>	shining peppergrass	Brassicaceae	N
forb	<i>Nasturtium officinale</i>	watercress	Brassicaceae	N
forb	<i>Cerastium glomeratum</i>	mouse-ear chickweed, sticky mouse-ear	Caryophyllaceae	A
forb	<i>Carex nudata</i>	naked sedge, torrent sedge	Cyperaceae	N
forb	<i>Carex praegracilis</i>	clustered field sedge	Cyperaceae	N
forb	<i>Cyperus eragrostis</i>	tall flat sedge	Cyperaceae	N
forb	<i>Eleocharis palustris</i> (<i>macrostachya</i>)	pale spikerush, common spikerush	Cyperaceae	N
forb	<i>Dipsacus fullonum</i>	fuller's teasel	Dipsacaceae	A
forb	<i>Acmispon brachycarpus</i>	shortpodded lotus, hill lotus	Fabaceae	N
forb	<i>Acmispon micranthus</i>	smallflower lotus	Fabaceae	N
forb	<i>Lupinus bicolor</i>	miniature lupine	Fabaceae	N
forb	<i>Trifolium hirtum</i>	rose clover	Fabaceae	A
forb	<i>Trifolium repens</i>	white lawn clover	Fabaceae	A
forb	<i>Vicia americana</i> var. <i>americana</i>	American vetch	Fabaceae	N
forb	<i>Vicia villosa</i> ssp. <i>villosa</i>	winter vetch, hairy vetch	Fabaceae	A
forb	<i>Erodium cicutarium</i>	red-stem storksbill	Geraniaceae	A
forb	<i>Geranium dissectum</i>	cut-leaved geranium	Geraniaceae	A
forb	<i>Nemophila heterophylla</i>	small baby blue eyes	Hydrophyllaceae	N
forb	<i>Nemophila menziesii</i>	baby blue eyes	Hydrophyllaceae	N
forb	<i>Iris macrosiphon</i>	bowl-tubed iris	Iridaceae	N
forb	<i>Sisyrinchium bellum</i>	blue-eyed grass, western blue-eyed grass	Iridaceae	N
forb	<i>Juncus confusus</i>	Colorado rush	Juncaceae	N
forb	<i>Clinopodium douglasii</i>	yerba buena	Lamiaceae	N
forb	<i>Stachys albens</i>	white-stem hedge nettle	Lamiaceae	N
forb	<i>Chlorogalum pomeridianum</i>	wavyleaf soap plant	Liliaceae	N
forb	<i>Dichelostemma capitatum</i> ssp. <i>capitatum</i>	blue dicks	Liliaceae	N
forb	<i>Triteleia laxa</i>	Ithuriel's spear	Liliaceae	N
forb	<i>Zigadenus fremontii</i>	small-flowered star lily	Liliaceae	N

Habit	Species	Common Name	Family	Origin
forb	<i>Limnanthes douglasii ssp. nivea</i>	snow white meadowfoam	Limnanthaceae	N
forb	<i>Claytonia perfoliata ssp. perfoliata</i>	miner's lettuce	Montiaceae	N
forb	<i>Castilleja exserta ssp. exserta</i>	purple owl clover	Orobanchaceae	N
forb	<i>Collinsia heterophylla var. heterophylla</i>	purple Chinese houses	Plantaginaceae	N
forb	<i>Plantago lanceolata</i>	English plantain	Plantaginaceae	A
forb	<i>Leptosiphon acicularis</i>	bristly leptosiphon	Polemoniaceae	N
forb	<i>Leptosiphon bicolor</i>	true baby stars	Polemoniaceae	N
forb	<i>Leptosiphon minimus</i>	true baby stars	Polemoniaceae	N
forb	<i>Rumex crispus</i>	curly dock	Polygonaceae	A
forb	<i>Anagalis arvensis</i>	scarlet pimpernel	Primulaceae	A
forb	<i>Dodecatheon hendersonii</i>	Henderson's shooting stars	Primulaceae	N
forb	<i>Delphinium hesperium ssp. hesperium</i>	western larkspur	Ranunculaceae	N
forb	<i>Ranunculus muricatus</i>	spiny-fruit buttercup	Ranunculaceae	A
forb	<i>Ranunculus occidentalis</i>	western buttercup	Ranunculaceae	N
forb	<i>Galium aparine</i>	goose grass, common bedstraw	Rubiaceae	N
forb	<i>Galium porrigens var. porrigens</i>	climbing bedstraw, graceful bedstraw	Rubiaceae	N
forb	<i>Lithophragma affine</i>	common woodland star	Saxifragaceae	N
forb	<i>Linaria vulgaris</i>	butter-and-eggs	Scrophulariaceae	A
forb	<i>Pedicularis densiflora</i>	warrior's plume, Indian warrior	Scrophulariaceae	N
forb	<i>Brodiaea elegans ssp. elegans</i>	harvest brodiaea	Themidaceae	N
forb	<i>Plectritis macrocera</i>	longhorn plectritis	Valerianaceae	N
grass	<i>Aira caryophyllea</i>	silver European hairgrass	Poaceae	A
grass	<i>Avena barbata</i>	slender wild oat	Poaceae	A
grass	<i>Briza minor</i>	small quaking grass	Poaceae	A
grass	<i>Bromus diandrus</i>	ripgut grass, ripgut brome	Poaceae	A
grass	<i>Bromus hordeaceus</i>	soft chess	Poaceae	A
grass	<i>Bromus madritensis ssp. rubens</i>	red brome	Poaceae	A
grass	<i>Bromus sterilis</i>	poverty brome	Poaceae	A

Habit	Species	Common Name	Family	Origin
grass	<i>Cynosurus echinatus</i>	hedgehog dogtail, annual dogtail	Poaceae	A
Grass	<i>Elymus caput-medusae</i>	medusahead	Poaceae	A
grass	<i>Festuca perennis</i>	perennial ryegrass, Italian rye grass	Poaceae	A
grass	<i>Gastridium phleoides</i>	nitgrass	Poaceae	A
grass	<i>Hordeum marinum ssp. gussoneanum</i>	Mediterranean barley	Poaceae	A
grass	<i>Poa bulbosa</i>	bulbous bluegrass	Poaceae	A
grass	<i>Poa secunda ssp. secunda</i>	one-sided bluegrass	Poaceae	N
shrub	<i>Sambucus nigra ssp. caerulea</i>	blue elderberry	Adoxaceae	N
shrub	<i>Toxicodendron diversilobum</i>	poison oak	Anacardiaceae	N
shrub	<i>Baccharis pilularis</i>	coyote brush, chaparral broom	Asteraceae	N
shrub	<i>Symphoricarpos albus var. laevigatus</i>	common snowberry	Caryophyllaceae	N
shrub	<i>Arctostaphylos manzanita ssp. manzanita</i>	common manzanita	Ericaceae	N
shrub	<i>Cercis occidentalis</i>	western redbud	Fabaceae	N
shrub	<i>Quercus wislizeni var. frutescens</i>	interior live oak	Fagaceae	N
shrub	<i>Lepechinia calycina</i>	pitcher sage	Lamiaceae	N
shrub	<i>Mimulus aurantiacus ssp. aurantiacus</i>	bush monkeyflower, sticky monkeyflower	Phrymaceae	N
shrub	<i>Ceanothus cuneatus var. cuneatus</i>	buckbrush	Rhamnaceae	N
shrub	<i>Frangula californica ssp. californica</i>	California coffeeberry	Rhamnaceae	N
Shrub	<i>Adenostoma fasciculatum var. fasciculatum</i>	chamise	Rosaceae	N
shrub	<i>Cercocarpus betuloides var. betuloides</i>	birch-leaf mountain mahogany	Rosaceae	N
shrub	<i>Heteromeles arbutifolia</i>	toyon	Rosaceae	N
shrub	<i>Rosa californica</i>	California wild rose	Rosaceae	N
shrub	<i>Rubus armeniacus</i>	Himalayan blackberry	Rosaceae	A
shrub	<i>Salix lasiolepis</i>	arroyo willow	Salicaceae	N
tree	<i>Quercus douglasii</i>	blue oak	Fagaceae	N
tree	<i>Quercus garryanna var. garryanna</i>	Oregon white oak	Fagaceae	N
tree	<i>Quercus kelloggii</i>	California black oak	Fagaceae	N
tree	<i>Quercus lobata</i>	California valley oak	Fagaceae	N

Habit	Species	Common Name	Family	Origin
tree	<i>Quercus wislizeni</i>	interior live oak	Fagaceae	N
tree	<i>Aesculus californica</i>	California buckeye	Hippocastanaceae	N
tree	<i>Umbellularia californica</i>	California bay	Lauraceae	N
Tree	<i>Pinus ponderosa</i>	ponderosa pine	Pinaceae	N
tree	<i>Pinus sabiniana</i>	ghost pine, foothill pine	Pinaceae	N
tree	<i>Salix exigua</i> var. <i>hindsiana</i>	narrow-leaved willow, sandbar willow	Salicaceae	N
tree	<i>Salix laevigata</i>	red willow	Salicaceae	N
tree	<i>Acer macrophyllum</i>	big leaf maple	Sapindaceae	N
vine	<i>Symphoricarpos mollis</i>	tripvine, creeping snowberry	Caprifoliaceae	N
vine	<i>Marah fabaceus</i>	California manroot	Cucurbitaceae	N

Origin: N = Native, A = Alien

6.0 WETLAND DELINEATION

6.1 Purpose of Delineation: This delineation has been conducted at the request of the local permitting agency in order to determine the extent of possible waters of the U.S. on the property. Measurements were taken using GIS mapping methods² verified in the field.

6.2 Delineation Procedure: This delineation has been conducted as prescribed in the *Corps of Engineers Wetlands Delineation Manual*, January 1987, and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*, 2008. The survey included use of lidar mapped overlays and an extensive foot survey. Possible waters of the U.S. on this property are defined as wetlands.

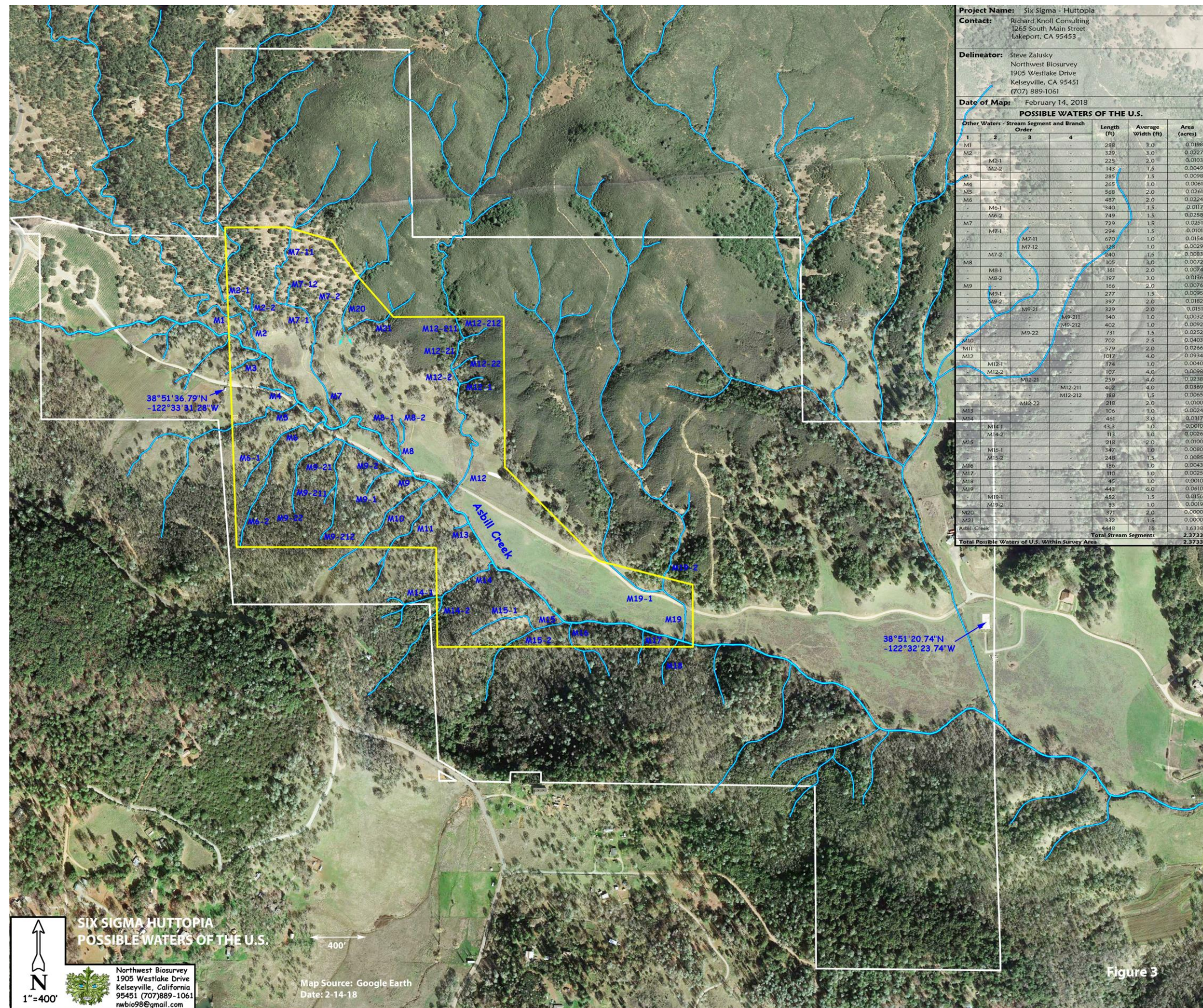
6.3 Delineation Results: The results of the delineation are shown on the aerial photo base map provided in **Figure 3**. The delineated waters consist of numerous stream channels, which are mapped in light blue. Reference numbers for the table are shown in dark blue. The total area of delineated waters is 2.37 acres, as shown in **Table 5** below.

² ((Pixels/feature)/(dpi of image)) x (map scale in acres/square inch).

TABLE 5. POSSIBLE WATERS OF THE U.S.

POSSIBLE WATERS OF THE U.S. - HUTTOPIA						
Other Waters - Stream Segment and Branch Order				Length (ft)	Average Width (ft)	Area (acres)
1	2	3	4			
M1	-	-	-	288	3.0	0.0198
M2	-	-	-	329	3.0	0.0227
-	M2-1	-	-	225	2.0	0.0103
-	M2-2	-	-	143	1.5	0.0049
M3	-	-	-	285	1.5	0.0098
M4	-	-	-	265	1.0	0.0061
M5	-	-	-	568	2.0	0.0261
M6	-	-	-	487	2.0	0.0224
-	M6-1	-	-	340	1.5	0.0117
-	M6-2	-	-	749	1.5	0.0258
M7	-	-	-	729	1.5	0.0251
-	M7-1	-	-	294	1.5	0.0101
-	-	M7-11	-	670	1.0	0.0154
-	-	M7-12	-	128	1.0	0.0029
-	M7-2	-	-	240	1.5	0.0083
M8	-	-	-	105	3.0	0.0072
-	M8-1	-	-	161	2.0	0.0074
-	M8-2	-	-	197	3.0	0.0136
M9	-	-	-	166	2.0	0.0076
-	M9-1	-	-	277	1.5	0.0095
-	M9-2	-	-	397	2.0	0.0182
-	-	M9-21	-	329	2.0	0.0151
-	-	-	M9-211	140	1.0	0.0032
-	-	-	M9-212	402	1.0	0.0092
-	-	M9-22	-	731	1.5	0.0252
M10	-	-	-	702	2.5	0.0403
M11	-	-	-	579	2.0	0.0266
M12	-	-	-	1017	4.0	0.0934
-	M12-1	-	-	174	1.0	0.0040
-	M12-2	-	-	107	4.0	0.0098
-	-	M12-21	-	259	4.0	0.0238
-	-	-	M12-211	402	4.0	0.0369
-	-	-	M12-212	188	1.5	0.0065
-	-	M12-22	-	218	2.0	0.0100

POSSIBLE WATERS OF THE U.S. - HUTTOPIA						
Other Waters - Stream Segment and Branch Order				Length (ft)	Average Width (ft)	Area (acres)
1	2	3	4			
M13	-	-	-	106	1.0	0.0024
M14	-	-	-	461	3.0	0.0317
-	M14-1	-	-	43.3	1.0	0.0010
-	M14-2	-	-	113	1.0	0.0026
M15	-	-	-	218	2.0	0.0100
-	M15-1	-	-	347	1.0	0.0080
-	M15-2	-	-	248	1.5	0.0085
M16	-	-	-	186	1.0	0.0043
M17	-	-	-	110	1.0	0.0025
M18	-	-	-	45	1.0	0.0010
M19	-	-	-	443	6.0	0.0610
-	M19-1	-	-	452	1.5	0.0156
-	M19-2	-	-	83	1.0	0.0019
M20	-	-	-	371	2.0	0.0000
M21	-	-	-	332	1.5	0.0000
Asbill Creek				4448	16	1.6338
Total Stream Segments						2.3733
Total Possible Waters of U.S. Within Survey Area						2.3733



7.0 SUMMARY AND RECOMMENDATIONS

7.1 Summary: This biological resource assessment involved the following analyses and surveys for sensitive plants and wildlife potentially occurring in the vicinity of the project:

- Review of current California Natural Diversity Database (CNDDDB) mapping of known sensitive plant and wildlife populations within the region
- An analysis of the suitability of the site for sensitive plants and wildlife using the California Native Plant Society On-line Inventory of Rare and Endangered Vascular Plants of California, and the California Department of Fish and Wildlife's California Wildlife Habitat Relationships System
- Vegetation mapping
- Delineation of Waters of the U.S.

Sensitive Plants: A total of 119 native and introduced plant taxa were identified on the property during the in-season, floristic-level botanical surveys. No species with sensitive status were identified during the surveys. As used here, the term sensitive includes species having state or federal regulatory status, included on Lists 1B through 4 by the California Native Plant Society, or otherwise listed in the California Natural Diversity Database.

Sensitive Wildlife: A total of ten sensitive wildlife species were assessed for potential occurrence at the site because of inclusion in the CNDDDB database for the Middletown quadrangle and surrounding area. Four additional species were added based on results of the CWHR and the presence of habitat. Based on the habitat assessment, the following special status species may be present in the project area:

- White-tailed kite
- Yellow-breasted chat
- Yellow warbler
- Pallid bat

Possible Waters of the U.S.: A delineation was conducted on this site. The total area of delineated waters is 2.37 acres, as shown in **Figure 3**. Possible waters of the U.S. on this property are defined as stream channels.

7.2 **Potential Impacts and Proposed Mitigation for Biological Resources:**

1) **Sensitive Wildlife**

Potential Impacts: Removal of trees for development has the potential to result in an incidental take of pallid bats, white-tailed kites, and passerines.

- a. Proposed Mitigation for Pallid Bats:** If trees are to be removed (outside of the dates listed below), any tree to be removed that is suitable for use by bats shall be surveyed for signs of bats. This survey shall occur no earlier than fourteen days prior to tree removal. Suitable trees include those with hollows and/or shedding bark.

If pallid bats, or other bats with sensitive regulatory status, are discovered during the surveys, a buffer of 50 feet should be established depending on recommendations of the surveying biologist. Removal of these roost trees shall be restricted to between September 15 and October 15, when young of the year are capable of flying, or between February 15 and April 1 to avoid hibernating bats and prior to formation of maternity sites.

- b. Proposed Mitigation for White-tailed Kites:** To the extent feasible, vineyard construction, including vegetation removal, shall occur outside of the nesting season (February 15 through August 31). If construction during the nesting season cannot be avoided, any required vegetation removal should be the minimal amount necessary for construction and should be completed prior to the nesting season. In the event that vegetation removal is necessary during the nesting season, the work shall be preceded by a pre-construction nest survey conducted by a qualified biologist within two weeks of disturbance. If an active nest of a sensitive bird species is found, a construction buffer shall be established around it in consultation with CDFW staff and shall remain in place until fledging is completed or until it is determined that the nesting effort has failed as determined by the qualified biologist.

- c. Proposed Mitigation for Yellow-breasted Chat, Yellow Warbler:** If construction activities occur within 50 feet of the willow thicket habitats as mapped in **Figure 2** during the breeding season (February 15 through August 31), surveys for this species and mitigation as described in measure "b" above shall be implemented.

2) Woodlands and Forest

Potential Impacts: As shown in **Table 1** and **Figure 2**, the 517-acre property contains a mix of woodland and forest totaling 278 acres, which covers more than half of the total property. Based on an overlay of the Huttopia development plan on the vegetation map (see **Figure 2**), it appears that the project emphasizes the use of blue oak woodland and open grassland. The placement of cabins appears to focus on openings in the woodland canopy and therefore reduces potential tree loss. Infrastructure such as proposed parking areas and the leachfield, etc., also emphasize use of grassland clearings and avoid trees.

Tree loss: As a consequence of this project design focusing on reduced impacts to trees and emphasis on use of the open blue oak woodland/savanna and grassland habitat, actual tree loss should be minimized. However, this loss should be quantified during the permit process and an agency determination made regarding its significance within the context of the CEQA Guidelines. Excavation of cabin foundations, roadways, and trails beneath the driplines of oaks has a potential to result in additional tree loss beyond the incidental removal of trees within proposed construction sites.

Habitat Fragmentation: Asbill Creek and its surrounding valley habitat serves as a primary wildlife corridor through this region of steep and rugged terrain. Construction and use of this project will result in significant seasonal intrusion of people and potentially pets into this habitat. Night-time noise, lighting, and pets have a potential to adversely impact wildlife movement through the valley.

Proposed Mitigation:

- a. Use of woodland openings and grassland habitat should be emphasized as demonstrated in the proposed project design. Project engineers and/or surveyors should map any trees within the blue oak woodland that will be removed during construction. This map and tree count should be used by permitting staff to determine whether potential impacts to oak woodlands have a potential to be significant within the context of the CEQA Guidelines and California's Oak Woodlands Protection Act. In the event that impacts are determined to be significant, standard mitigation consists of establishing a

preservation ratio on an acreage basis and preserving on-site oak woodlands in a manner consistent with local planning policies.

- b. Construction of trails, foundations, roadways, etc., should avoid excavation beneath the driplines of trees for all trees that have not been approved for removal. In particular, hiking and bike trails should minimize actual excavation and implement state of the art erosion control (e.g. rolling dips vs. water bars, etc.) where excavation is necessary.
- c. To minimize disturbance of native wildlife using the valley as a movement corridor, the following measures should be implemented:
 - Pets, if allowed, should be kept indoors at night and dogs should be on a leash or under direct supervision.
 - Use of overhead lighting should be avoided. Minor, on-ground, path lighting may be allowed.
 - Night-time noise, particularly amplified music, should be subject to a curfew.
 - Restrooms should be readily available throughout the resort and their use encouraged to avoid inadvertent scent marking.

3) Waterways / Wetlands

Potential Impacts: Waterways on the property are mapped in **Figure 3**. Roadways and trails crossing these waterways have a potential to adversely impact riparian vegetation and wildlife habitat and result in erosion and sedimentation.

Proposed Mitigation: Project design should minimize waterway crossings. Where these are necessary, it is recommended that they emphasize use of open bank areas lacking dense riparian vegetation. Crossings of small waterways should consist of small bank-to-bank bridges not requiring excavation or footings. These may be removed during winter months. Use of in-channel crossings, particularly in areas containing perennial or long-duration flows and/or in-channel riparian vegetation, should be avoided. Use of mountain bikes on saturated earth trails during the winter and spring months should be avoided. Minor saturated areas may be planked.

Any work involving the placement of fill or structures within waterways may require permits from the following agencies:

- U.S. Army Corps of Engineers
- Regional Water Quality Control Board
- California Department of Fish and Wildlife

4) Erosion Control

Potential Impacts: Vegetation clearing and grading activities have a potential to result in sediment runoff into waterways.

Proposed Mitigation: All work should incorporate extensive erosion control measures consistent with Lake County Grading Regulations. Coverage under the National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with a Construction Activity (General Permit) and a Storm Water Pollution Prevention Plan (SWPPP) may be required.

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APPENDIX A

CNDDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE SURROUNDING CALIF. 7½' QUADS.

Surrounding 9-Quad List: Middletown Quadrangle

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Aetna Springs	<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC	-
Aetna Springs	<i>Rana draytonii</i>	California red-legged frog	Threat	None	SSC	-
Aetna Springs	<i>Ardea alba</i>	great egret	None	None	-	-
Aetna Springs	<i>Ardea herodias</i>	great blue heron	None	None	-	-
Aetna Springs	<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	FP	-
Aetna Springs	<i>Agelaius tricolor</i>	tricolored blackbird	None	Cand End	SSC	-
Aetna Springs	<i>Bombus caliginosus</i>	obscure bumble bee	None	None	-	-
Aetna Springs	<i>Vandykea tuberculata</i>	serpentine cypress long-horned beetle	None	None	-	-
Aetna Springs	<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	-
Aetna Springs	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-
Aetna Springs	<i>Lasionycteris noctivagans</i>	silver-haired bat	None	None	-	-
Aetna Springs	<i>Lasiurus blossevillii</i>	western red bat	None	None	SSC	-
Aetna Springs	<i>Lasiurus cinereus</i>	hoary bat	None	None	-	-
Aetna Springs	<i>Myotis ciliolabrum</i>	western small-footed myotis	None	None	-	-
Aetna Springs	<i>Myotis evotis</i>	long-eared myotis	None	None	-	-
Aetna Springs	<i>Myotis thysanodes</i>	fringed myotis	None	None	-	-
Aetna Springs	<i>Myotis volans</i>	long-legged myotis	None	None	-	-
Aetna Springs	<i>Myotis yumanensis</i>	Yuma myotis	None	None	-	-
Aetna Springs	<i>Emys marmorata</i>	western pond turtle	None	None	SSC	-
Aetna Springs	<i>Serpentine Bunchgrass</i>	Serpentine Bunchgrass	None	None	-	-
Aetna Springs	<i>Wildflower Field</i>	Wildflower Field	None	None	-	-
Aetna Springs	<i>Eryngium jepsonii</i>	Jepson's coyote-thistle	None	None	-	1B.2
Aetna Springs	<i>Centromadia parryi ssp. parryi</i>	pappose tarplant	None	None	-	1B.2
Aetna Springs	<i>Harmonia hallii</i>	Hall's harmonia	None	None	-	1B.2
Aetna Springs	<i>Harmonia nutans</i>	nodding harmonia	None	None	-	4.3
Aetna Springs	<i>Helianthus exilis</i>	serpentine sunflower	None	None	-	4.2
Aetna Springs	<i>Layia septentrionalis</i>	Colusa layia	None	None	-	1B.2
Aetna Springs	<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	None	None	-	1B.2
Aetna Springs	<i>Streptanthus hesperidis</i>	green jewelflower	None	None	-	1B.2
Aetna Springs	<i>Streptanthus morrisonii ssp. elatus</i>	Three Peaks jewelflower	None	None	-	1B.2
Aetna Springs	<i>Calystegia collina ssp. oxyphylla</i>	Mt. Saint Helena morning-glory	None	None	-	4.2
Aetna Springs	<i>Amorpha californica var. napensis</i>	Napa false indigo	None	None	-	1B.2
Aetna Springs	<i>Astragalus breweri</i>	Brewer's milk-vetch	None	None	-	4.2
Aetna Springs	<i>Astragalus clevelandii</i>	Cleveland's milk-vetch	None	None	-	4.3
Aetna Springs	<i>Lupinus sericatus</i>	Cobb Mountain lupine	None	None	-	1B.2
Aetna Springs	<i>Monardella viridis</i>	green monardella	None	None	-	4.3
Aetna Springs	<i>Erythronium helenae</i>	St. Helena fawn lily	None	None	-	4.2
Aetna Springs	<i>Fritillaria pluriflora</i>	adobe-lily	None	None	-	1B.2
Aetna Springs	<i>Fritillaria purdyi</i>	Purdy's fritillary	None	None	-	4.3

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Aetna Springs	<i>Lilium bolanderi</i>	Bolander's lily	None	None	-	4.2
Aetna Springs	<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	None	None	-	1B.2
Aetna Springs	<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	None	None	-	1B.2
Aetna Springs	<i>Toxicoscordion fontanum</i>	marsh zigadenus	None	None	-	4.2
Aetna Springs	<i>Clarkia gracilis ssp. tracyi</i>	Tracy's clarkia	None	None	-	4.2
Aetna Springs	<i>Cypripedium montanum</i>	mountain lady's-slipper	None	None	-	4.2
Aetna Springs	<i>Cordylanthus tenuis ssp. brunneus</i>	serpentine bird's-beak	None	None	-	4.3
Aetna Springs	<i>Erythranthe nudata</i>	bare monkeyflower	None	None	-	4.3
Aetna Springs	<i>Antirrhinum virga</i>	twig-like snapdragon	None	None	-	4.3
Aetna Springs	<i>Penstemon newberryi var. sonomensis</i>	Sonoma beardtongue	None	None	-	1B.3
Aetna Springs	<i>Collomia diversifolia</i>	serpentine collomia	None	None	-	4.3
Aetna Springs	<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	None	None	-	1B.2
Aetna Springs	<i>Navarretia cotulifolia</i>	cotula navarretia	None	None	-	4.2
Aetna Springs	<i>Navarretia jepsonii</i>	Jepson's navarretia	None	None	-	4.3
Aetna Springs	<i>Navarretia paradoxinota</i>	Porter's navarretia	None	None	-	1B.3
Aetna Springs	<i>Navarretia rosulata</i>	Marin County navarretia	None	None	-	1B.2
Aetna Springs	<i>Delphinium uliginosum</i>	swamp larkspur	None	None	-	4.2
Aetna Springs	<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup	None	None	-	4.2
Aetna Springs	<i>Ceanothus sonomensis</i>	Sonoma ceanothus	None	None	-	1B.2
Clearlake Highlands	<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC	-
Clearlake Highlands	<i>Rana draytonii</i>	California red-legged frog	Threat	None	SSC	-
Clearlake Highlands	<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted	End	FP	-
Clearlake Highlands	<i>Ardea alba</i>	great egret	None	None	-	-
Clearlake Highlands	<i>Ardea herodias</i>	great blue heron	None	None	-	-
Clearlake Highlands	<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	Threat	End	-	-
Clearlake Highlands	<i>Strix occidentalis caurina</i>	northern spotted owl	Threat	Threat	SSC	-
Clearlake Highlands	<i>Archoplites interruptus</i>	Sacramento perch	None	None	SSC	-
Clearlake Highlands	<i>Lavinia exilicauda chi</i>	Clear Lake hitch	None	Threat	-	-
Clearlake Highlands	<i>Hedychridium milleri</i>	Borax Lake cuckoo wasp	None	None	-	-
Clearlake Highlands	<i>Dubiraphia brunnescens</i>	brownish dubiraphian riffle beetle	None	None	-	-
Clearlake Highlands	<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	-
Clearlake Highlands	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-
Clearlake Highlands	<i>Myotis lucifugus</i>	little brown bat	None	None	-	-
Clearlake Highlands	<i>Myotis yumanensis</i>	Yuma myotis	None	None	-	-
Clearlake Highlands	<i>Pyrgulopsis ventricosa</i>	Clear Lake pyrg	None	None	-	-
Clearlake Highlands	<i>Emys marmorata</i>	western pond turtle	None	None	SSC	-
Clearlake Highlands	<i>Clear Lake Drainage Resident Trout Stream</i>	Clear Lake Drainage Resident Trout Stream	None	None	-	-
Clearlake Highlands	<i>Coastal and Valley Freshwater Marsh</i>	Coastal and Valley Freshwater Marsh	None	None	-	-
Clearlake Highlands	<i>Northern Basalt Flow Vernal Pool</i>	Northern Basalt Flow Vernal Pool	None	None	-	-
Clearlake Highlands	<i>Northern Volcanic Ash Vernal Pool</i>	Northern Volcanic Ash Vernal Pool	None	None	-	-
Clearlake Highlands	<i>Eryngium constancei</i>	Loch Lomond button-celery	End	End	-	1B.1

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Clearlake Highlands	<i>Harmonia hallii</i>	Hall's harmonia	None	None	-	1B.2
Clearlake Highlands	<i>Hemizonia congesta</i> ssp. <i>calyculata</i>	Mendocino tarplant	None	None	-	4.3
Clearlake Highlands	<i>Lasthenia burkei</i>	Burke's goldfields	End	End	-	1B.1
Clearlake Highlands	<i>Viburnum ellipticum</i>	oval-leaved viburnum	None	None	-	2B.3
Clearlake Highlands	<i>Sedella leiocarpa</i>	Lake County stonecrop	End	End	-	1B.1
Clearlake Highlands	<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	Konocti manzanita	None	None	-	1B.3
Clearlake Highlands	<i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	Raiche's manzanita	None	None	-	1B.1
Clearlake Highlands	<i>Calochortus uniflorus</i>	pink star-tulip	None	None	-	4.2
Clearlake Highlands	<i>Limnanthes floccosa</i> ssp. <i>floccosa</i>	woolly meadowfoam	None	None	-	4.2
Clearlake Highlands	<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	None	None	-	1B.2
Clearlake Highlands	<i>Sidalcea oregana</i> ssp. <i>hydrophila</i>	marsh checkerbloom	None	None	-	1B.2
Clearlake Highlands	<i>Toxicoscordion fontanum</i>	marsh zigadenus	None	None	-	4.2
Clearlake Highlands	<i>Calyptridium quadripetalum</i>	four-petaled pussypaws	None	None	-	4.3
Clearlake Highlands	<i>Piperia michaelii</i>	Michael's rein orchid	None	None	-	4.2
Clearlake Highlands	<i>Cordylanthus tenuis</i> ssp. <i>brunneus</i>	serpentine bird's-beak	None	None	-	4.3
Clearlake Highlands	<i>Antirrhinum virga</i>	twig-like snapdragon	None	None	-	4.3
Clearlake Highlands	<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	None	End	-	1B.2
Clearlake Highlands	<i>Imperata brevifolia</i>	California satintail	None	None	-	2B.1
Clearlake Highlands	<i>Eriastrum brandegeae</i>	Brandegee's eriastrum	None	None	-	1B.1
Clearlake Highlands	<i>Leptosiphon acicularis</i>	bristly leptosiphon	None	None	-	4.2
Clearlake Highlands	<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	None	None	-	1B.1
Clearlake Highlands	<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>	few-flowered navarretia	End	Threat	-	1B.1
Clearlake Highlands	<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	many-flowered navarretia	End	End	-	1B.2
Clearlake Highlands	<i>Potamogeton zosteriformis</i>	eel-grass pondweed	None	None	-	2B.2
Clearlake Highlands	<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	None	None	-	3.1
Clearlake Highlands	<i>Horkelia bolanderi</i>	Bolander's horkelia	None	None	-	1B.2
Detert Reservoir	<i>Dicamptodon ensatus</i>	California giant salamander	None	None	SSC	-
Detert Reservoir	<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC	-
Detert Reservoir	<i>Falco mexicanus</i>	prairie falcon	None	None	WL	-
Detert Reservoir	<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	FP	-
Detert Reservoir	<i>Progne subis</i>	purple martin	None	None	SSC	-
Detert Reservoir	<i>Agelaius tricolor</i>	tricolored blackbird	None	Cand End	SSC	-
Detert Reservoir	<i>Bombus caliginosus</i>	obscure bumble bee	None	None	-	-
Detert Reservoir	<i>Trachykele hartmani</i>	serpentine cypress wood-boring beetle	None	None	-	-
Detert Reservoir	<i>Hydrochara rickseckeri</i>	Ricksecker's water scavenger beetle	None	None	-	-
Detert Reservoir	<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	-
Detert Reservoir	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-
Detert Reservoir	<i>Lasionycteris noctivagans</i>	silver-haired bat	None	None	-	-
Detert Reservoir	<i>Lasiurus blossevillei</i>	western red bat	None	None	SSC	-
Detert Reservoir	<i>Lasiurus cinereus</i>	hoary bat	None	None	-	-
Detert Reservoir	<i>Myotis ciliolabrum</i>	western small-footed myotis	None	None	-	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Detert Reservoir	<i>Myotis evotis</i>	long-eared myotis	None	None	-	-
Detert Reservoir	<i>Myotis yumanensis</i>	Yuma myotis	None	None	-	-
Detert Reservoir	<i>Emys marmorata</i>	western pond turtle	None	None	SSC	-
Detert Reservoir	<i>Northern Vernal Pool</i>	Northern Vernal Pool	None	None	-	-
Detert Reservoir	<i>Asclepias solanoana</i>	serpentine milkweed	None	None	-	4.2
Detert Reservoir	<i>Erigeron biolettii</i>	streamside daisy	None	None	-	3
Detert Reservoir	<i>Erigeron greenei</i>	Greene's narrow-leaved daisy	None	None	-	1B.2
Detert Reservoir	<i>Harmonia hallii</i>	Hall's harmonia	None	None	-	1B.2
Detert Reservoir	<i>Harmonia nutans</i>	nodding harmonia	None	None	-	4.3
Detert Reservoir	<i>Helianthus exilis</i>	serpentine sunflower	None	None	-	4.2
Detert Reservoir	<i>Layia septentrionalis</i>	Colusa layia	None	None	-	1B.2
Detert Reservoir	<i>Cryptantha dissita</i>	serpentine cryptantha	None	None	-	1B.2
Detert Reservoir	<i>Streptanthus brachiatus ssp. brachiatus</i>	Socrates Mine jewelflower	None	None	-	1B.2
Detert Reservoir	<i>Streptanthus hesperidis</i>	green jewelflower	None	None	-	1B.2
Detert Reservoir	<i>Streptanthus morrisonii ssp. elatus</i>	Three Peaks jewelflower	None	None	-	1B.2
Detert Reservoir	<i>Streptanthus vernalis</i>	early jewelflower	None	None	-	1B.2
Detert Reservoir	<i>Calystegia collina ssp. oxyphylla</i>	Mt. Saint Helena morning-glory	None	None	-	4.2
Detert Reservoir	<i>Calystegia collina ssp. venusta</i>	South Coast Range morning-glory	None	None	-	4.3
Detert Reservoir	<i>Arctostaphylos manzanita ssp. elegans</i>	Konocti manzanita	None	None	-	1B.3
Detert Reservoir	<i>Amorpha californica var. napensis</i>	Napa false indigo	None	None	-	1B.2
Detert Reservoir	<i>Astragalus clevelandii</i>	Cleveland's milk-vetch	None	None	-	4.3
Detert Reservoir	<i>Astragalus rattanii var. jepsonianus</i>	Jepson's milk-vetch	None	None	-	1B.2
Detert Reservoir	<i>Lupinus sericatus</i>	Cobb Mountain lupine	None	None	-	1B.2
Detert Reservoir	<i>Ribes victoris</i>	Victor's gooseberry	None	None	-	4.3
Detert Reservoir	<i>Juncus luciensis</i>	Santa Lucia dwarf rush	None	None	-	1B.2
Detert Reservoir	<i>Trichostema ruygtii</i>	Napa bluecurls	None	None	-	1B.2
Detert Reservoir	<i>Erythronium helenae</i>	St. Helena fawn lily	None	None	-	4.2
Detert Reservoir	<i>Fritillaria purdyi</i>	Purdy's fritillary	None	None	-	4.3
Detert Reservoir	<i>Limnanthes floccosa ssp. floccosa</i>	woolly meadowfoam	None	None	-	4.2
Detert Reservoir	<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	None	None	-	1B.2
Detert Reservoir	<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	None	None	-	1B.2
Detert Reservoir	<i>Calyptidium quadripetalum</i>	four-petaled pussypaws	None	None	-	4.3
Detert Reservoir	<i>Cordylanthus tenuis ssp. brunneus</i>	serpentine bird's-beak	None	None	-	4.3
Detert Reservoir	<i>Antirrhinum virga</i>	twig-like snapdragon	None	None	-	4.3
Detert Reservoir	<i>Penstemon newberryi var. sonomensis</i>	Sonoma beardtongue	None	None	-	1B.3
Detert Reservoir	<i>Collomia diversifolia</i>	serpentine collomia	None	None	-	4.3
Detert Reservoir	<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	None	None	-	1B.2
Detert Reservoir	<i>Navarretia myersii ssp. deminuta</i>	small pincushion navarretia	None	None	-	1B.1
Detert Reservoir	<i>Eriogonum umbellatum var. bahiiforme</i>	bay buckwheat	None	None	-	4.2
Detert Reservoir	<i>Delphinium uliginosum</i>	swamp larkspur	None	None	-	4.2
Detert Reservoir	<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	None	None	-	1B.1

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Detert Reservoir	<i>Ceanothus divergens</i>	Calistoga ceanothus	None	None	-	1B.2
Detert Reservoir	<i>Ceanothus purpureus</i>	holly-leaved ceanothus	None	None	-	1B.2
Detert Reservoir	<i>Ceanothus sonomensis</i>	Sonoma ceanothus	None	None	-	1B.2
Detert Reservoir	<i>Brodiaea leptandra</i>	narrow-anthered brodiaea	None	None	-	1B.2
Jericho Valley	<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC	-
Jericho Valley	<i>Aquila chrysaetos</i>	golden eagle	None	None	FP ; WL	-
Jericho Valley	<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted	End	FP	-
Jericho Valley	<i>Falco mexicanus</i>	prairie falcon	None	None	WL	-
Jericho Valley	<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	-
Jericho Valley	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-
Jericho Valley	<i>Myotis yumanensis</i>	Yuma myotis	None	None	-	-
Jericho Valley	<i>Emys marmorata</i>	western pond turtle	None	None	SSC	-
Jericho Valley	Northern Interior Cypress Forest	Northern Interior Cypress Forest	None	None	-	-
Jericho Valley	Serpentine Bunchgrass	Serpentine Bunchgrass	None	None	-	-
Jericho Valley	<i>Grimmia torenii</i>	Toren's grimmia	None	None	-	1B.3
Jericho Valley	<i>Lomatium hooveri</i>	Hoover's lomatium	None	None	-	4.3
Jericho Valley	<i>Asclepias solanoana</i>	serpentine milkweed	None	None	-	4.2
Jericho Valley	<i>Balsamorhiza macrolepis</i>	big-scale balsamroot	None	None	-	1B.2
Jericho Valley	<i>Harmonia hallii</i>	Hall's harmonia	None	None	-	1B.2
Jericho Valley	<i>Helianthus exilis</i>	serpentine sunflower	None	None	-	4.2
Jericho Valley	<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	None	None	-	1B.2
Jericho Valley	<i>Arabis modesta</i>	modest rockcress	None	None	-	4.3
Jericho Valley	<i>Arabis oregana</i>	Oregon rockcress	None	None	-	4.3
Jericho Valley	<i>Streptanthus brachiatus</i> ssp. <i>hoffmanii</i>	Freed's jewelflower	None	None	-	1B.2
Jericho Valley	<i>Streptanthus hesperidis</i>	green jewelflower	None	None	-	1B.2
Jericho Valley	<i>Streptanthus morrisonii</i> ssp. <i>kruckebergii</i>	Kruckeberg's jewelflower	None	None	-	1B.2
Jericho Valley	<i>Equisetum palustre</i>	marsh horsetail	None	None	-	3
Jericho Valley	<i>Astragalus breweri</i>	Brewer's milk-vetch	None	None	-	4.2
Jericho Valley	<i>Astragalus clevelandii</i>	Cleveland's milk-vetch	None	None	-	4.3
Jericho Valley	<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	Jepson's milk-vetch	None	None	-	1B.2
Jericho Valley	<i>California macrophylla</i>	round-leaved filaree	None	None	-	1B.2
Jericho Valley	<i>Juglans hindsii</i>	Northern California black walnut	None	None	-	1B.1
Jericho Valley	<i>Erythronium helenae</i>	St. Helena fawn lily	None	None	-	4.2
Jericho Valley	<i>Fritillaria pluriflora</i>	adobe-lily	None	None	-	1B.2
Jericho Valley	<i>Fritillaria purdyi</i>	Purdy's fritillary	None	None	-	4.3
Jericho Valley	<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	None	None	-	1B.2
Jericho Valley	<i>Hesperolinon drymarioides</i>	drymaria-like western flax	None	None	-	1B.2
Jericho Valley	<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	None	None	-	1B.2
Jericho Valley	<i>Malacothamnus helleri</i>	Heller's bush-mallow	None	None	-	3.3
Jericho Valley	<i>Sidalcea keckii</i>	Keck's checkerbloom	End	None	-	1B.1
Jericho Valley	<i>Toxicoscordion fontanum</i>	marsh zigadenus	None	None	-	4.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Jericho Valley	<i>Calyptidium quadripetalum</i>	four-petaled pussypaws	None	None	-	4.3
Jericho Valley	<i>Clarkia gracilis ssp. tracyi</i>	Tracy's clarkia	None	None	-	4.2
Jericho Valley	<i>Castilleja rubicundula var. rubicundula</i>	pink creamsacs	None	None	-	1B.2
Jericho Valley	<i>Cordylanthus tenuis ssp. brunneus</i>	serpentine bird's-beak	None	None	-	4.3
Jericho Valley	<i>Orobanche valida ssp. howellii</i>	Howell's broomrape	None	None	-	4.3
Jericho Valley	<i>Erythranthe nudata</i>	bare monkeyflower	None	None	-	4.3
Jericho Valley	<i>Antirrhinum virga</i>	twig-like snapdragon	None	None	-	4.3
Jericho Valley	<i>Collomia diversifolia</i>	serpentine collomia	None	None	-	4.3
Jericho Valley	<i>Navarretia jepsonii</i>	Jepson's navarretia	None	None	-	4.3
Jericho Valley	<i>Eriogonum nervulosum</i>	Snow Mountain buckwheat	None	None	-	1B.2
Jericho Valley	<i>Eriogonum tripodum</i>	tripod buckwheat	None	None	-	4.2
Jericho Valley	<i>Delphinium uliginosum</i>	swamp larkspur	None	None	-	4.2
Lower Lake	<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC	-
Lower Lake	<i>Taricha rivularis</i>	red-bellied newt	None	None	SSC	-
Lower Lake	<i>Aquila chrysaetos</i>	golden eagle	None	None	FP ; WL	-
Lower Lake	<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted	End	FP	-
Lower Lake	<i>Ardea herodias</i>	great blue heron	None	None	-	-
Lower Lake	<i>Lavinia exilicauda chi</i>	Clear Lake hitch	None	Threat	-	-
Lower Lake	<i>Saldula usingeri</i>	Wilbur Springs shorebug	None	None	-	-
Lower Lake	<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	-
Lower Lake	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-
Lower Lake	<i>Myotis lucifugus</i>	little brown bat	None	None	-	-
Lower Lake	<i>Myotis yumanensis</i>	Yuma myotis	None	None	-	-
Lower Lake	<i>Lomatium hooveri</i>	Hoover's lomatium	None	None	-	4.3
Lower Lake	<i>Harmonia hallii</i>	Hall's harmonia	None	None	-	1B.2
Lower Lake	<i>Lasthenia burkei</i>	Burke's goldfields	End	End	-	1B.1
Lower Lake	<i>Layia septentrionalis</i>	Colusa layia	None	None	-	1B.2
Lower Lake	<i>Astragalus rattanii var. jepsonianus</i>	Jepson's milk-vetch	None	None	-	1B.2
Lower Lake	<i>Fritillaria pluriflora</i>	adobe-lily	None	None	-	1B.2
Lower Lake	<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	None	None	-	1B.2
Lower Lake	<i>Malacothamnus helleri</i>	Heller's bush-mallow	None	None	-	3.3
Lower Lake	<i>Navarretia leucocephala ssp. bakeri</i>	Baker's navarretia	None	None	-	1B.1
Lower Lake	<i>Navarretia leucocephala ssp. pauciflora</i>	few-flowered navarretia	End	Threat	-	1B.1
Lower Lake	<i>Potamogeton zosteriformis</i>	eel-grass pondweed	None	None	-	2B.2
Lower Lake	<i>Delphinium uliginosum</i>	swamp larkspur	None	None	-	4.2
Middletown	<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC	-
Middletown	<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted	End	FP	-
Middletown	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-
Middletown	<i>Lasionycteris noctivagans</i>	silver-haired bat	None	None	-	-
Middletown	<i>Lasiurus cinereus</i>	hoary bat	None	None	-	-
Middletown	<i>Myotis yumanensis</i>	Yuma myotis	None	None	-	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Middletown	<i>Emys marmorata</i>	western pond turtle	None	None	SSC	-
Middletown	<i>Northern Basalt Flow Vernal Pool</i>	Northern Basalt Flow Vernal Pool	None	None	-	-
Middletown	<i>Lomatium repostum</i>	Napa lomatium	None	None	-	4.3
Middletown	<i>Erigeron greenei</i>	Greene's narrow-leaved daisy	None	None	-	1B.2
Middletown	<i>Harmonia hallii</i>	Hall's harmonia	None	None	-	1B.2
Middletown	<i>Helianthus exilis</i>	serpentine sunflower	None	None	-	4.2
Middletown	<i>Lasthenia burkei</i>	Burke's goldfields	End	End	-	1B.1
Middletown	<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	None	None	-	1B.2
Middletown	<i>Streptanthus hesperidis</i>	green jewelflower	None	None	-	1B.2
Middletown	<i>Legenere limosa</i>	legenere	None	None	-	1B.1
Middletown	<i>Calystegia collina ssp. oxyphylla</i>	Mt. Saint Helena morning-glory	None	None	-	4.2
Middletown	<i>Calystegia purpurata ssp. saxicola</i>	coastal bluff morning-glory	None	None	-	1B.2
Middletown	<i>Sedella leiocarpa</i>	Lake County stonecrop	End	End	-	1B.1
Middletown	<i>Astragalus breweri</i>	Brewer's milk-vetch	None	None	-	4.2
Middletown	<i>Astragalus rattanii var. jepsonianus</i>	Jepson's milk-vetch	None	None	-	1B.2
Middletown	<i>Trifolium hydrophilum</i>	saline clover	None	None	-	1B.2
Middletown	<i>Calochortus uniflorus</i>	pink star-tulip	None	None	-	4.2
Middletown	<i>Erythronium helenae</i>	St. Helena fawn lily	None	None	-	4.2
Middletown	<i>Fritillaria pluriflora</i>	adobe-lily	None	None	-	1B.2
Middletown	<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	None	None	-	1B.2
Middletown	<i>Hesperolinon didymocarpum</i>	Lake County western flax	None	End	-	1B.2
Middletown	<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	None	None	-	1B.2
Middletown	<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	None	End	-	1B.2
Middletown	<i>Calamagrostis ophitidis</i>	serpentine reed grass	None	None	-	4.3
Middletown	<i>Orcuttia tenuis</i>	slender Orcutt grass	Threat	End	-	1B.1
Middletown	<i>Collomia diversifolia</i>	serpentine collomia	None	None	-	4.3
Middletown	<i>Leptosiphon acicularis</i>	bristly leptosiphon	None	None	-	4.2
Middletown	<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	None	None	-	1B.2
Middletown	<i>Navarretia cotulifolia</i>	cotula navarretia	None	None	-	4.2
Middletown	<i>Navarretia jepsonii</i>	Jepson's navarretia	None	None	-	4.3
Middletown	<i>Navarretia leucocephala ssp. bakeri</i>	Baker's navarretia	None	None	-	1B.1
Middletown	<i>Navarretia leucocephala ssp. plieantha</i>	many-flowered navarretia	End	End	-	1B.2
Middletown	<i>Navarretia paradoxinota</i>	Porter's navarretia	None	None	-	1B.3
Middletown	<i>Delphinium uliginosum</i>	swamp larkspur	None	None	-	4.2
Mount St. Helena	<i>Dicamptodon ensatus</i>	California giant salamander	None	None	SSC	-
Mount St. Helena	<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC	-
Mount St. Helena	<i>Taricha rivularis</i>	red-bellied newt	None	None	SSC	-
Mount St. Helena	<i>Aquila chrysaetos</i>	golden eagle	None	None	FP ; WL	-
Mount St. Helena	<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	FP	-
Mount St. Helena	<i>Stygobromus cherylae</i>	Barr's amphipod	None	None	-	-
Mount St. Helena	<i>Lavinia symmetricus ssp. 4</i>	Clear Lake - Russian River roach	None	None	SSC	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Mount St. Helena	<i>Hysteroecarpus traski</i> pomo	Russian River tule perch	None	None	SSC	-
Mount St. Helena	<i>Oncorhynchus kisutch</i>	coho salmon - central California coast ESU	End	End	-	-
Mount St. Helena	<i>Oncorhynchus mykiss irideus</i>	steelhead - central California coast DPS	Threat	None	-	-
Mount St. Helena	<i>Oncorhynchus tshawytscha</i>	chinook salmon - California coastal ESU	Threat	None	-	-
Mount St. Helena	<i>Trachykele hartmani</i>	serpentine cypress wood-boring beetle	None	None	-	-
Mount St. Helena	<i>Pekania pennanti</i>	fisher - West Coast DPS	Prop Threat	Cand Threat	SSC	-
Mount St. Helena	<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	-
Mount St. Helena	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-
Mount St. Helena	<i>Emys marmorata</i>	western pond turtle	None	None	SSC	-
Mount St. Helena	<i>Lomatium repostum</i>	Napa lomatium	None	None	-	4.3
Mount St. Helena	<i>Erigeron greenei</i>	Greene's narrow-leaved daisy	None	None	-	1B.2
Mount St. Helena	<i>Harmonia nutans</i>	nodding harmonia	None	None	-	4.3
Mount St. Helena	<i>Streptanthus brachiatus</i> ssp. <i>hoffmanii</i>	Freed's jewelflower	None	None	-	1B.2
Mount St. Helena	<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	Konocti manzanita	None	None	-	1B.3
Mount St. Helena	<i>Astragalus clevelandii</i>	Cleveland's milk-vetch	None	None	-	4.3
Mount St. Helena	<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	Jepson's milk-vetch	None	None	-	1B.2
Mount St. Helena	<i>Lupinus sericatus</i>	Cobb Mountain lupine	None	None	-	1B.2
Mount St. Helena	<i>Erythronium helenae</i>	St. Helena fawn lily	None	None	-	4.2
Mount St. Helena	<i>Fritillaria purdyi</i>	Purdy's fritillary	None	None	-	4.3
Mount St. Helena	<i>Limnanthes vinculans</i>	Sebastopol meadowfoam	End	End	-	1B.1
Mount St. Helena	<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	None	None	-	1B.2
Mount St. Helena	<i>Sidalcea oregana</i> ssp. <i>valida</i>	Kenwood Marsh checkerbloom	End	End	-	1B.1
Mount St. Helena	<i>Cordylanthus tenuis</i> ssp. <i>brunneus</i>	serpentine bird's-beak	None	None	-	4.3
Mount St. Helena	<i>Penstemon newberryi</i> var. <i>sonomensis</i>	Sonoma beardtongue	None	None	-	1B.3
Mount St. Helena	<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	None	None	-	1B.2
Mount St. Helena	<i>Navarretia cotulifolia</i>	cotula navarretia	None	None	-	4.2
Mount St. Helena	<i>Eriogonum nervulosum</i>	Snow Mountain buckwheat	None	None	-	1B.2
Mount St. Helena	<i>Stuckenia filiformis</i> ssp. <i>alpina</i>	slender-leaved pondweed	None	None	-	2B.2
Mount St. Helena	<i>Delphinium uliginosum</i>	swamp larkspur	None	None	-	4.2
Mount St. Helena	<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	None	None	-	1B.1
Mount St. Helena	<i>Ceanothus divergens</i>	Calistoga ceanothus	None	None	-	1B.2
Mount St. Helena	<i>Brodiaea leptandra</i>	narrow-anthered brodiaea	None	None	-	1B.2
Whispering Pines	<i>Dicamptodon ensatus</i>	California giant salamander	None	None	SSC	-
Whispering Pines	<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC	-
Whispering Pines	<i>Rana draytonii</i>	California red-legged frog	Threat	None	SSC	-
Whispering Pines	<i>Taricha rivularis</i>	red-bellied newt	None	None	SSC	-
Whispering Pines	<i>Progne subis</i>	purple martin	None	None	SSC	-
Whispering Pines	<i>Bombus occidentalis</i>	western bumble bee	None	None	-	-
Whispering Pines	<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	-
Whispering Pines	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-
Whispering Pines	<i>Lasiurus blossevillei</i>	western red bat	None	None	SSC	-

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Whispering Pines	<i>Lasiurus cinereus</i>	hoary bat	None	None	-	-
Whispering Pines	<i>Myotis evotis</i>	long-eared myotis	None	None	-	-
Whispering Pines	<i>Myotis thysanodes</i>	fringed myotis	None	None	-	-
Whispering Pines	<i>Emys marmorata</i>	western pond turtle	None	None	SSC	-
Whispering Pines	<i>Sceloporus graciosus graciosus</i>	northern sagebrush lizard	None	None	-	-
Whispering Pines	<i>Cent Valley Drainage Rainbow Trout/Cyprinid Str</i>	Central Valley Drainage Rainbow Trout/Cyprinid Strm	None	None	-	-
Whispering Pines	<i>Clear Lake Drainage Resident Trout Stream</i>	Clear Lake Drainage Resident Trout Stream	None	None	-	-
Whispering Pines	<i>Grimmia torenii</i>	Toren's grimmia	None	None	-	1B.3
Whispering Pines	<i>Mielichhoferia elongata</i>	elongate copper moss	None	None	-	4.3
Whispering Pines	<i>Chlorogalum pomeridianum var. minus</i>	dwarf soaproot	None	None	-	1B.2
Whispering Pines	<i>Eryngium constancei</i>	Loch Lomond button-celery	End	End	-	1B.1
Whispering Pines	<i>Asclepias solanoana</i>	serpentine milkweed	None	None	-	4.2
Whispering Pines	<i>Erigeron greenei</i>	Greene's narrow-leaved daisy	None	None	-	1B.2
Whispering Pines	<i>Helianthus exilis</i>	serpentine sunflower	None	None	-	4.2
Whispering Pines	<i>Layia septentrionalis</i>	Colusa layia	None	None	-	1B.2
Whispering Pines	<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	None	None	-	1B.2
Whispering Pines	<i>Cryptantha dissita</i>	serpentine cryptantha	None	None	-	1B.2
Whispering Pines	<i>Arabis blepharophylla</i>	coast rockcress	None	None	-	4.3
Whispering Pines	<i>Streptanthus brachiatus ssp. brachiatus</i>	Socrates Mine jewelflower	None	None	-	1B.2
Whispering Pines	<i>Streptanthus brachiatus ssp. hoffmanii</i>	Freed's jewelflower	None	None	-	1B.2
Whispering Pines	<i>Streptanthus hesperidis</i>	green jewelflower	None	None	-	1B.2
Whispering Pines	<i>Legenere limosa</i>	legenere	None	None	-	1B.1
Whispering Pines	<i>Calystegia collina ssp. oxyphylla</i>	Mt. Saint Helena morning-glory	None	None	-	4.2
Whispering Pines	<i>Sedella leiocarpa</i>	Lake County stonecrop	End	End	-	1B.1
Whispering Pines	<i>Carex praticola</i>	northern meadow sedge	None	None	-	2B.2
Whispering Pines	<i>Arctostaphylos manzanita ssp. elegans</i>	Konocti manzanita	None	None	-	1B.3
Whispering Pines	<i>Arctostaphylos stanfordiana ssp. raichei</i>	Raiche's manzanita	None	None	-	1B.1
Whispering Pines	<i>Astragalus breweri</i>	Brewer's milk-vetch	None	None	-	4.2
Whispering Pines	<i>Astragalus clevelandii</i>	Cleveland's milk-vetch	None	None	-	4.3
Whispering Pines	<i>Astragalus rattanii var. jepsonianus</i>	Jepson's milk-vetch	None	None	-	1B.2
Whispering Pines	<i>Lupinus sericatus</i>	Cobb Mountain lupine	None	None	-	1B.2
Whispering Pines	<i>Erythronium helenae</i>	St. Helena fawn lily	None	None	-	4.2
Whispering Pines	<i>Fritillaria purdyi</i>	Purdy's fritillary	None	None	-	4.3
Whispering Pines	<i>Hesperolinon adenophyllum</i>	glandular western flax	None	None	-	1B.2
Whispering Pines	<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	None	None	-	1B.2
Whispering Pines	<i>Sidalcea oregana ssp. hydrophila</i>	marsh checkerbloom	None	None	-	1B.2
Whispering Pines	<i>Calyptidium quadripetalum</i>	four-petaled pussypaws	None	None	-	4.3
Whispering Pines	<i>Cordylanthus tenuis ssp. brunneus</i>	serpentine bird's-beak	None	None	-	4.3
Whispering Pines	<i>Antirrhinum subcordatum</i>	dimorphic snapdragon	None	None	-	4.3
Whispering Pines	<i>Antirrhinum virga</i>	twig-like snapdragon	None	None	-	4.3
Whispering Pines	<i>Penstemon newberryi var. sonomensis</i>	Sonoma beardtongue	None	None	-	1B.3

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CAL.	CDFG	CNPS
Whispering Pines	<i>Calamagrostis ophitidis</i>	serpentine reed grass	None	None	-	4.3
Whispering Pines	<i>Imperata brevifolia</i>	California satintail	None	None	-	2B.1
Whispering Pines	<i>Panicum acuminatum</i> var. <i>thermale</i>	Geysers panicum	None	End	-	1B.2
Whispering Pines	<i>Collomia diversifolia</i>	serpentine collomia	None	None	-	4.3
Whispering Pines	<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	None	None	-	1B.2
Whispering Pines	<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	None	None	-	1B.1
Whispering Pines	<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>	few-flowered navarretia	End	Threat	-	1B.1
Whispering Pines	<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	many-flowered navarretia	End	End	-	1B.2
Whispering Pines	<i>Eriogonum nervulosum</i>	Snow Mountain buckwheat	None	None	-	1B.2
Whispering Pines	<i>Delphinium uliginosum</i>	swamp larkspur	None	None	-	4.2
Whispering Pines	<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	None	None	-	1B.1
Whispering Pines	<i>Ceanothus divergens</i>	Calistoga ceanothus	None	None	-	1B.2
Whispering Pines	<i>Horkelia bolanderi</i>	Bolander's horkelia	None	None	-	1B.2
Wilson Valley	<i>Rana boylei</i>	foothill yellow-legged frog	None	None	SSC	-
Wilson Valley	<i>Aquila chrysaetos</i>	golden eagle	None	None	FP ; WL	-
Wilson Valley	<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted	End	FP	-
Wilson Valley	<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	-
Wilson Valley	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	SSC	-
Wilson Valley	<i>Margaritifera falcata</i>	western pearlshell	None	None	-	-
Wilson Valley	<i>Emys marmorata</i>	western pond turtle	None	None	SSC	-
Wilson Valley	<i>Lomatium hooveri</i>	Hoover's lomatium	None	None	-	4.3
Wilson Valley	<i>Harmonia hallii</i>	Hall's harmonia	None	None	-	1B.2
Wilson Valley	<i>Layia septentrionalis</i>	Colusa layia	None	None	-	1B.2
Wilson Valley	<i>Senecio clevelandii</i> var. <i>clevelandii</i>	Cleveland's ragwort	None	None	-	4.3
Wilson Valley	<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	None	None	-	1B.2
Wilson Valley	<i>Streptanthus brachiatus</i> ssp. <i>hoffmanii</i>	Freed's jewelflower	None	None	-	1B.2
Wilson Valley	<i>Astragalus clevelandii</i>	Cleveland's milk-vetch	None	None	-	4.3
Wilson Valley	<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	Jepson's milk-vetch	None	None	-	1B.2
Wilson Valley	<i>California macrophylla</i>	round-leaved filaree	None	None	-	1B.2
Wilson Valley	<i>Fritillaria pluriflora</i>	adobe-lily	None	None	-	1B.2
Wilson Valley	<i>Hesperolinon drymarioides</i>	drymaria-like western flax	None	None	-	1B.2
Wilson Valley	<i>Castilleja rubicundula</i> var. <i>rubicundula</i>	pink creamsacs	None	None	-	1B.2
Wilson Valley	<i>Antirrhinum virga</i>	twig-like snapdragon	None	None	-	4.3
Wilson Valley	<i>Collomia diversifolia</i>	serpentine collomia	None	None	-	4.3
Wilson Valley	<i>Navarretia jepsonii</i>	Jepson's navarretia	None	None	-	4.3
Wilson Valley	<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>	adobe navarretia	None	None	-	4.2
Wilson Valley	<i>Eriogonum nervulosum</i>	Snow Mountain buckwheat	None	None	-	1B.2
Wilson Valley	<i>Delphinium uliginosum</i>	swamp larkspur	None	None	-	4.2

KEY:CNPS Rare Plant-Threat Rank Definitions:

- 1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously threatened in California
- 1B.2 = Rare, threatened, or endangered in California and elsewhere; fairly threatened in California
- 1B.3 = Rare, threatened, or endangered in California and elsewhere; not very threatened in California
- 2A = Presumed extinct in California, but extant elsewhere
- 2B.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.
- 2B.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; fairly threatened in Calif.
- 2B.3 = Rare, threatened, or endangered in Calif., but more common elsewhere; not very threatened in Calif.
- 3 = Plants about which we need more information (Review List)
- 3.1 = Plants about which we need more information (Review List); seriously threatened in California
- 3.2 = Plants about which we need more information (Review List); fairly threatened in California
- 3.3 = Plants about which we need more information (Review List); not very threatened in California
- 4.1 = Plants of limited distribution (watch list); seriously threatened in California
- 4.2 = Plants of limited distribution (watch list); fairly threatened in California
- 4.3 = Plants of limited distribution (watch list); not very threatened in California

CDFW / State and Federal Status:

- SE/ST/SD = State Endangered/Threatened/Delisted
- SC/SCD = State Candidate for Listing/Delisting
- SSC = CDFW Species of Special Concern
- SFP = State Fully Protected
- WL = CDFW Watch List
- FE/FT/FD = Federal Endangered/Threatened/Delisted
- FPE/FPT/FPD/FP = Federal Proposed Endangered/Threatened/Delisting
- FC = Federal Candidate

State and Federal Status:

- Threat = Threatened
- End = Endangered
- Prop = Proposed
- Cand = Candidate
- Cand End/Threat = State Candidate for Endangered/Threatened

APPENDIX B

WILDLIFE HABITAT RELATIONSHIPS SYSTEM RESULT



CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM
 supported by the
CALIFORNIA INTERAGENCY WILDLIFE TASK GROUP
 and maintained by the
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
Database Version: 9.0

SPECIES SUMMARY REPORT

FE = Federal Endangered
 FT = Federal Threatened

CF = California Fully Protected
 CP = California Protected

PT = Federally-Proposed Threatened
 FC = Federal Candidate

CD = CDF Sensitive
 HA = Harvest

CE = California Endangered
 CT = California Threatened

SC = California Species of Special Concern
 PE = Federally-Proposed Endangered

BL = BLM Sensitive
 FS = USFS Sensitive

Note: Any given status code for a species may apply to the full species or to only one or more subspecies or distinct population segments.

ID	Species Name	Status	Native/Introduced
A020	SPECKLED BLACK SALAMANDER		NATIVE
B115	SHARP-SHINNED HAWK		NATIVE
B116	COOPER'S HAWK		NATIVE
B117	NORTHERN GOSHAWK	SC BL FS CD	NATIVE
B119	RED-SHOULDERED HAWK		NATIVE
B123	RED-TAILED HAWK		NATIVE
B124	FERRUGINOUS HAWK		NATIVE
B125	ROUGH-LEGGED HAWK		NATIVE
B260	GREATER ROADRUNNER		NATIVE
B265	GREAT HORNED OWL		NATIVE
B269	BURROWING OWL	SC BL	NATIVE
B272	LONG-EARED OWL	SC	NATIVE
B277	COMMON POORWILL		NATIVE
B287	ANNA'S HUMMINGBIRD		NATIVE
B292	ALLEN'S HUMMINGBIRD		NATIVE
B294	LEWIS' S WOODPECKER		NATIVE
B317	HAMMOND'S FLYCATCHER		NATIVE
B318	DUSKY FLYCATCHER		NATIVE
B326	ASH-THROATED FLYCATCHER		NATIVE
B337	HORNED LARK		NATIVE
B348	WESTERN SCRUB-JAY		NATIVE
B360	BUSHTIT		NATIVE
B368	BEWICK'S WREN	SC	NATIVE
B377	BLUE-GRAY GNATCATCHER		NATIVE
B381	MOUNTAIN BLUEBIRD		NATIVE

B386	HERMIT THRUSH			NATIVE
B391	WRENTIT			NATIVE
B393	NORTHERN MOCKINGBIRD			NATIVE
B404	AMERICAN PIPIT			NATIVE
B408	PHAINOPEPLA			NATIVE
B410	LOGGERHEAD SHRIKE	FE	SC	NATIVE
B415	CASSIN'S VIREO			NATIVE
B417	HUTTON'S VIREO		SC	NATIVE
B425	ORANGE-CROWNED WARBLER			NATIVE
B430	YELLOW WARBLER		SC	NATIVE
B436	BLACK-THROATED GRAY WARBLER			NATIVE
B437	TOWNSEND'S WARBLER			NATIVE
B460	MACGILLIVRAY'S WARBLER			NATIVE
B475	BLACK-HEADED GROSBEAK			NATIVE
B477	LAZULI BUNTING			NATIVE
B487	RUFIOUS-CROWNED SPARROW		SC	NATIVE
B493	BLACK-CHINNED SPARROW			NATIVE
B495	LARK SPARROW			NATIVE
B497	BELL'S SPARROW	FT	SC	NATIVE
B499	SAVANNAH SPARROW	CE	SC	NATIVE
B501	GRASSHOPPER SPARROW		SC	NATIVE
B506	LINCOLN'S SPARROW			NATIVE
B509	GOLDEN-CROWNED SPARROW			NATIVE
B510	WHITE-CROWNED SPARROW			NATIVE
B532	BULLOCK'S ORIOLE			NATIVE
B543	LESSER GOLDFINCH			NATIVE
B544	LAWRENCE'S GOLDFINCH			NATIVE
B545	AMERICAN GOLDFINCH			NATIVE
B554	PLUMBEOUS VIREO			NATIVE
B699	BARRED OWL			NATIVE
M006	ORNATE SHREW	FE	SC	NATIVE
M033	WESTERN RED BAT		SC FS	NATIVE
M034	HOARY BAT			NATIVE
M037	TOWNSEND'S BIG-EARED BAT		SC BL FS	NATIVE
M045	BRUSH RABBIT	FE CE	HA	NATIVE
M055	YELLOW-PINE CHIPMUNK			NATIVE

M057	SHADOW CHIPMUNK		NATIVE
M059	SONOMA CHIPMUNK		NATIVE
M075	GOLDEN-MANTLED GROUND SQUIRREL		NATIVE
M105	CALIFORNIA KANGAROO RAT	SC	NATIVE
M117	DEER MOUSE	SC	NATIVE
M119	BRUSH MOUSE		NATIVE
M120	PINYON MOUSE		NATIVE
M134	CALIFORNIA VOLE	FE CE SC BL	NATIVE
M151	BLACK BEAR	HA	NATIVE

Total Number of Species: 69

Query Parameters

Included Locations

Lake Co

Included Location Seasons

Migrant, Summer, Winter, Yearlong

Included Habitats & (Stages)

Annual Grassland, Blue Oak-foothill Pine, Mixed Chaparral, Montane Hardwood, Ponderosa Pine, Valley Foothill Riparian, Valley Oak Woodland, Vineyard

Habitat Suitability Threshold

Reproduction - Medium, Cover - Medium, Feeding - Medium

Included Habitat Seasons

Migrant, Summer, Winter, Yearlong

Excluded Elements

Algae, Aquatics - Emergent, Aquatics - Submerged, Bogs, Brush Pile, Buildings, Campground, Carrion, Cave, Cliff, Duff, Dump, Fences, Fish, Grain, Grass/agriculture, Jetty, Kelp, Lakes, Lichens, Litter, Log - Large (hollow), Log - Large (rotten), Log - Large (sound), Log - Medium (hollow), Log - Medium (rotten), Log - Medium (sound), Mine, Moss, Mud Flats, Nest Box, Nest Island, Nest Platform, Pack Stations, Ponds, Rivers, Salt Ponds, Sand Dune, Shrub/agriculture, Shrub/water, Slash - Large (hollow), Slash - Large (rotten), Slash - Large (sound), Slash - Small, Snag - Large (rotten), Snag - Large (sound), Snag - Medium (rotten), Snag - Medium (sound), Snag - Small (rotten), Snag - Small (sound), Soil - Aerated, Soil - Friable, Soil - Gravelly, Soil - Organic, Soil - Saline, Soil - Sandy, Springs, Springs - Hot, Springs - Mineral, Streams - Intermittent, Stump (rotten), Stump (sound), Talus, Tidepools, Transmission Lines, Tree/agriculture, Tree/water, Trees - Fir, Vernal Pools, Water, Water - Created Body, Water - Fast, Water - Slow, Water/agriculture, Wharf

Included Species All

Species Included

Included Special Statuses

Native