ATTACHMENT C

BIOLOGICAL RESOURCE ASSESSMENT WITH BOTANICAL SURVEY

For

Ogulin Cannabis Facilities II

2160 Ogulin Canyon Road

Lake County, California

June 25, 2021

Prepared for: Ogulin Estates Holdings,LLC

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FIGURES AND TABLES

1.0 PROJECT DESCRIPTION

1.1 The parcel is located 2160 Ogulin Canyon Road, north-east of Clearlake, CA and approximately ½ mile east of CA State Highway 53. See **Figure 1** attached.

Figure 1;
Location

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 new development. The initial phase of this assessment evaluates the potential of the property to contain sensitive plant and wildlife habitat. The second phase consists of field surveys, including a botanical survey listing all plant taxa[1]. 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".

A delineation of waters of the U.S. was not conducted due to the lack of water and hydric soil not present on the parcel. A wetland is defined as 1. The presence of water 2. Hydric soils and 3. Wetland plants. The presence of woody riparian species and the evidence of water flow does qualify as potential wetland. Riparian areas are considered sensitive areas and are to be protected. Setback requirements would be needed for the existing riparian area (depicted I **Section 3.3, Vegetation Types and graphically on Figure 3, Vegetation Types**). **Figure 2** of this report illustrates that the riparian area will not be altered or encroached upon in any significant way from the actions proposed in the project. All wetlands and drainages within the project area are depicted in Table 5.

1.2 **Proposed Project:** This survey covers 1 parcel totaling approximately 9.56 acres in the east central part of Lake County APN: 010-044-21. Ogulin Estates Holdings, LLC is the landholder of the parcel located in the Burns Valley creek watershed. The area proposed for development comprise approximately 2 to 3 acres in size. The area is comprised of an existing set of buildings with associated roads and service ways. Proposed project drawing is attached, see **Figure 2.**

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 species 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 (CNDDB)
- Soils of the project area
- Elevation
- Presence or absence of special features such as vernal pools and serpentine soils
- Plant communities existing within the project area

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 (CNDDB)*; RareFind 5, 2021
- California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California* (v9-01 0.0)
- California Department of Fish and Wildlife, *California Wildlife Habitat Relationships System (CWHR Version 9.0)*

The CNDDB 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 thesuitability 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.).

[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.

2.1 Botanical Survey Methods: An in-season botanical survey was conducted for the project site. The CNDDB report and maps for the Lower Lake, CA quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, andEvens, 2009), and mapped on a 1"=600' aerial photo (due to the large size of the survey area). Vegetation type names are based on an assessment of dominant cover species.

Plants occurring on the site were identified using *The Jepson Manual, Higher Plants of California,* 2012. Where necessary, species names were updated based on the 6th edition, *CNPS Inventory of Rare and Endangered Plants of California*. A map of the vegetation types at the site is provided in **Figure 2.**

2.2 Survey Dates: Site visits for the plant surveys, vegetation mapping, and the delineation were conducted on May 10, 18, and June 10,11, 2021.

2.3 Biological Assessment Staff: The field surveys, plant taxonomy, and vegetation mapping, were conducted by Lawrence Ray principal biologist. Mr. Ray has a Master of Science Degree in Ecology from the Antioch University/UC Berkeley and a Bachelor of Science Degree in Environmental Studies from the Antioch University. He hasover 35 years of experience as a biologist in the government and private sectors. Supportstaff was provided by Austin Ray who holds an AA Degree in Horticulture from Cabrillo College.

3.0 SITE CHARACTERISTICS

3.1Site Topography and Drainage: The parcel occupies a relatively flat topography from 1,418 (mean sea level) at the entrance on Ogulin Canyon Road to 1,513 feet msl at the southeast corner. Drainage from the surrounding slopes is to Burns Valley Creek which is drains southwest to Clear Lake. Topography is shown in **Figure 1.**

3.2 Soils: Based on the *Soil Surveys of Lake County and Mendocino County (Eastern Part), California* prepared by the U.S. Resource Conservation Service, the survey area contains the following soil types:

161-Manzanita loam, 15 to 25 percent slopes. Thisvery deep, well drained soil is on terraces. It formed in alluvium derived from mixed rock sources. The vegetation is oak, manzanita, and annual grasses.

Elevation is 1,400 to 1,600 feet. The average annual precipitation is 25 to 35 inches, the average annual airtemperature is 55 to 59 degrees F, and the average frost-free period is 160 to 200 days.
Typically, the upper 5 inches of the surface layer is light yellowish brown loam and the lower 14 inches is strong brown loam. The upper 9 inches of the subsoil isstrong brown loam, and the lower 56 inches is variegated strong brown and yellowish red clay loam.

197-Phipps complex, 30 to 50 percent slopes.
This map unit is on uplifted, dissected hills. These soils are susceptible to slumping and gullying. The vegetationis mainly oak and annual grasses. Elevation is 1,100 to 2,000 feet. The average annual precipitation is about 25 to 35 inches, the average annual air temperature is about 55 to 59 degrees F, and the average frost-free period is about 160 to 200 days.
This unit is about 50 percent Phipps clay loam, loamysubstratum, and 15 percent Phipps loam. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.
Included in this unit are small areas of Bally and Forbesville soils. Also included are small areas of olive gray clayey soils that form deep, wide cracks when dry and are 20 to 40 inches deep over unconsolidated sediment; highly eroded or gullied soils in steep ravines; soils on north-facing slopes that are similar to these Phipps soils but are cooler or have slopes of 50 to 75 percent; and soils that are similar to these Phipps soils but have a thick, dark-colored surface layer, have more clay throughout the profile, or have less clay in the subsoil. Included areas make up about 35 percent of thetotal acreage. The percentage varies from one area to another.
The Phipps clay loam is very deep and well drained. Itformed in alluvium derived from mixed rock sources.
Typically, the surface layer is pale brown clay loam about7 inches thick. The upper 11 inches of the subsoil is palebrown and light yellowish brown clay loam, and the lower24 inches is yellowish brown clay. The substratum to a depth of 60 inches or more is light yellowish brown clay loam.

246- Wolfcreek gravelly loam. This very deep, welldrained soil is on flood plains. It formed in alluvium derived from mixed rock sources. Slope is O to 2 percent. The vegetation is mainly annual grasses and forbs. Elevation is 1,300 to 2,600 feet. The average annual precipitation is 25 to 40 inches, the average annual air

temperature is 55 to 59 degrees F, and the average frost-free period is 150 to 205 days.

Typically, the surface layer is pale brown gravelly loam1O inches thick. The underlying material to a depth of 72inches is stratified, brown clay loam, sandy clay loam, and very gravelly sandy clay loam.
Included in this unit are small areas of Talmage soils. Also included are small areas of soils that are similar to this Wolfcreek soil but are nongravelly, have a darker colored surface layer and more clay, or are in low areasthat are subject to occasional flooding. Included areas make up about 15 percent of the total acreage. The percentage varies from one area to another.
Permeability of this Wolfcreek soil is moderately slow. Available water capacity is 7.5 to 10.0 inches. Effective rooting depth is 60 inches or more. Surface runoff is very slow, and the hazard of erosion is slight. This soil is subject to rare periods of flooding during prolonged,
high-intensity storms.

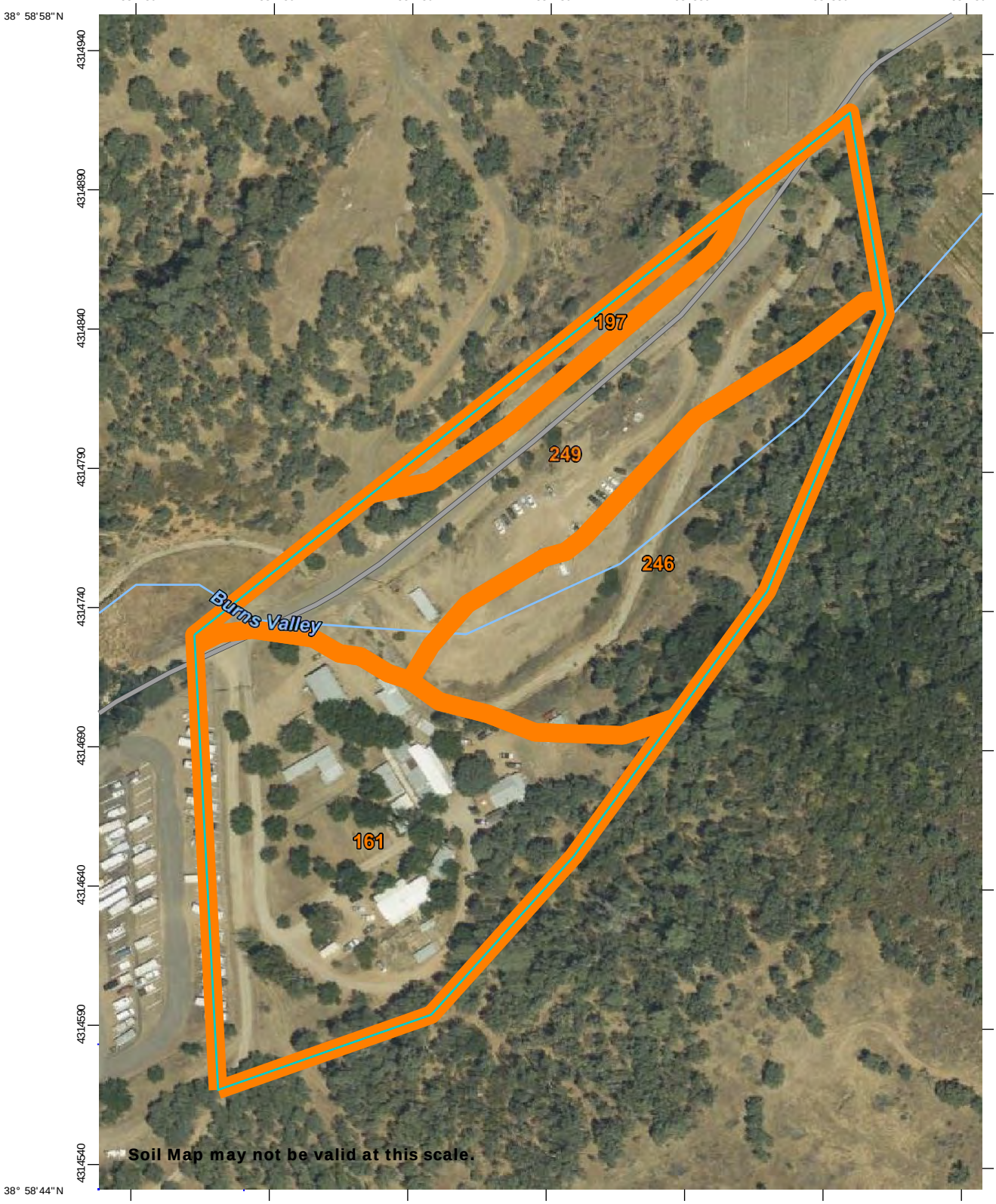
249-Xerofluvents-Riverwash complex. This map unit is on narrow flood plains adjacent to stream channels and in active stream channels. Slope is 0 to 2 percent. The vegetation is mainly sparse annual grassesand forbs. Elevation is 750 to 2,800 feet. The average annual precipitation is 25 to 40 inches, the average annual air temperature is 54 to 59 degrees F, and the average frost-free period is 135 to 200 days.

This unit is about 55 percent Xerofluvents and 30 percent Riverwash. The components of this unit are sointricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are small areas of Kelsey, Maywood Variant, and Talmage soils. Included areasmake up about 15 percent of the total acreage. The percentage varies from one area to another.
Xerofluvents consist of very deep, excessively drainedsoils that formed in alluvium derived from mixed rock sources. No single profile of Xerofluvents is typical, but one commonly observed in the survey area has a surface layer of grayish brown very gravelly sandy loam 5 inches thick. The underlying material to a depth of 84 inches is stratified, light brownish gray very gravelly loamy coarse sand and very gravelly coarse sand.

Figure 4; Soils Map

Soil Map—Lake County, California
(2160 OCnyn)



122° 36'21"W 534130 534180 534230 534280 534330 534380 534430 122° 36'8"W
38° 58'58"N
4314940
4314890
4314840
4314790
4314740
4314690
4314640
4314590
4314540
38° 58'44"N

Map Scale: 1:2,060 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

3.3 **Vegetation Types:** This project contains five distinct 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.**

Figure 2; Vegetation Map

1Blue Oak Alliance/Developed Areas with Blue Oak

2.Ruderal/Waste area dominated by Eriogonum sp

3. Chamise chaparral Shrub Alliance

4. Brome Grasslands

5. Riparian Area-Salix lasiolepis Shrub Alliance

TABLE 1. PLANT COMMUNITIES AND OTHER COVER TYPES PRESENT

COVER TYPE	Total Acres of Cover Type on Property	Percent of Property Supporting Cover Type
Blue Oak Woodland-Quercus douglasii Woodland Alliance	6.25	66
Ruderal non-specific waste area (Eriogonum)	0.94	9.8
Chamise chaparral- Adenostoma fasciculatum Shrubland Alliance	0.39	3.5
Annual brome grasslands - Bromus(diandrus,hordeaceus)	1.52	16
Riparian- Salix lasiolepis Shrubland Alliance	0.46	4.7
Total	**9.56**	**100.00**

1.Blue Oak Woodland/*Quercus douglasii* Woodland Alliance. Quercus douglasii is dominant or co-dominant in the tree canopy Aesculus californica, Juniperus californica,Pinus sabiniana, Quercus agrifolia, Q. lobata, and *Q. wislizeni*. Trees < 20 m; with conifers35m; canopy is intermittent to continuous, or savanna-like; it may be one or two tiered. Shrub layer is sparse to intermittent. Herbaceous layer is sparse or grassy, and forbs are present seasonally. **Habitats:** Valley bottoms, foothills, rocky outcroppings. Soils are shallow, low in fertility, moderately to excessively drained with extensive rock fragments. **Elevation:** 30-1900 m.

2.Ruderal/non-specific waste area. This area is dominated by extremely sparse vegetation due to high compaction of soils and extreme disturbance from industrial use. Two dominant natives cover the greatest percentage of the area; Eriogonum nudum and Eriogonum wrightii. Some scattered grasses and forbs are also present included in the Annual Brome Grassland section and are present around the margins and sparsely throughout the area.

3. Chamise chaparral/*Andenostoma fasciculatum* Shrub Alliance. *Adenostoma fasciculatum* is dominant in the shrub canopy with *A. sparsifolium, Arctostahylos glandulosa, A. manzanita, A. viscida, Ceanothus spp., Diplacus aurantiacus, Eroidictyon californicum, Eriogonum fasciculatum, Hesperoyucca whipplei, Heteromeles arbutifolia, Quercus berberidifolia, Q. wislizeni, Salvia apiana, S. leucophylla, S. mellifera,* and *Toxicodendron diversilobum*. Emergent trees may be present at low cover. Shrubs < 4 m;canopy is intermittent to continuous. Herbaceous layer is sparse to intermittent. **Habitats:**Varied topography. Soils are commonly shallow over colluvium and many kinds of bedrock. **Elevation**: 10-1800 m.

4. Annual brome grasslands/*Bromus (diandrus, hordeaceus) – Brachypodium distachyon*Bromus diandrus, B. hordeaceus, or Brachypodium distachyon is dominant or co- dominant with non-natives in the herbaceous layer. Emergent trees and shrubs may be present at low cover. Herbs < 75 cm; cover is intermittent to continuous. **Habitats:** All topographic settings in foothills, waste places, rangelands, openings in woodlands.**Elevation**: 0-2200 m.

5.Salix lasiolepis Shrubland Alliance. Arroyo willow thickets are small and scattered in the riparian area of the parcel. Also scattered are a few Fremont cottonwood (*Populus fremontii)* as well as a few *Sambucus nigra*. Found along streambanks and benches, slope seeps and stringers along drainages. **The USFWS Wetland Inventory** (1996 national list) recognizes Salix lasiolepis as a **FACW plant.** Elevation**: 0-2170**

4.0 PRE-SURVEY RESEARCH RESULTS

4.1 <u>CNPS On-Line Electronic Inventory Analysis</u>: 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 the 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. The CNPS database search does not allow fine tuning for specific soil types and many specific habitats.

<u>Note</u>: *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. Consequently, the CNPS list generated for a site may include several taxa for which the required habitat is not present.*

4.2 <u>California Natural Diversity Database</u>: The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Purdy's Gardens 7½' and adjacent quadrangles 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.

4.3 **California Natural Diversity Database:** The California Natural Diversity Database (CNDDB) and CDFW RareFind 5 data and maps for the Lower Lake 7½' and adjacent quadrangles 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 ofthe 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

Ogulin Cannabis Facilities II

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	1B.2	None	None	Mar-Jun	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	1B.3	None	None	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest; volcanic
Astragalus breweri	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); often serpentinite, volcanic
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	Convolvulaceae	perennial rhizomatous herb	4.2	None	None	Apr-Jun	Chaparral, Lower montane coniferous forest, Valley and foothill grassland; serpentinite
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	1B.1	None	None	Feb-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland; volcanic or serpentinite

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Onagraceae	annual herb	4.2	None	None	Apr-Jul	Chaparral (openings, usually serpentinite)
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	4.3	None	None	May-Jun	Chaparral, Cismontane woodland serpentinite, rocky or gravelly
Cryptantha dissita	serpentine cryptantha	Boraginaceae	annual herb	1B.2	None	None	Apr-Jun	Chaparral (serpentinite)
Eryngium constancei	Loch Lomond button celery		Annual herb	1B.1	endangered	endangered		Vernal pool, wetland
Fritillaria purdyi	Purdy's fritillary	Liliaceae	perennial bulbiferous herb	4.3	None	None	Mar-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest; usually serpentinite
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	1B.2	**CE**	None	Apr-Aug	Marshes and swamps (lake margins), Vernal pools; clay
Hesperolinon adenophyllum	glandular western flax	Linaceae	annual herb	1B.2	None	None	May-Aug	Chaparral, Cismontane woodland, Valley and foothill grassland; usually serpentinite
Horkelia bolanderi	Bolander's horkelia	Rosaceae	perennial herb	1B.2	None	None	(May)Jun-Aug	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland; edges, vernally mesic areas
Lasthenia burkei	Burke's goldfields		Annual herb	1B.1	endangered	endangered		Meadow, seeps, vernal pool, wetland
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	1B.2	None	None	Apr-May	Chaparral, Cismontane woodland, Valley and foothill grassland; sandy, serpentinite
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	4.2	None	None	Apr-Aug(Sep)	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest. Sometimes serpentinite, sometimes roadsides
Monardella viridis	green monardella	Lamiaceae	perennial rhizomatous herb	4.3	None	None	Jun-Sep	Broadleafed upland forest, Chaparral, Cismontane woodland

Streptanthus glandulosus ssp. hoffmanii	Hoffman's bristly jewelflower	Brassicaceae	annual herb	1B.3	None	None	Mar-Jul	Chaparral, Cismontane woodland, Valley and foothill grassland (often serpentinite); rocky
Streptanthus hesperidis	green jewelflower	Brassicaceae	annual herb	1B.2	None	None	May-Jul	Chaparral (openings), Cismontane woodland; serpentinite, rocky
Tracyina rostrata	beaked tracyina	Asteraceae	annual herb	1B.2	None	None	May-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	2B.3	None	None	May-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest

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

State and Federal Status:

CESA = 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. CNDDB SENSITIVE PLANT AND WILDLIFE SPECIES WITHIN THE LOWER LAKE AND ADJACENT CALIFORNIA 7½' QUADRANGLES

Habitat Type	Habitat Present
Northern Interior Cypress Forest	No
Serpentine Bunchgrass	No

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Amsinckia lunaris	bent-flowered fiddleneck	Coastal bluff scrub, cismontane woodland, valley & foothill grassland; --/--/1B.2	March-June ann. herb	Habitat present but not found during surveys
Antirrhinum virga	twig-like snapdragon	Chaparral, lower montane coniferous forest,/rocky, openings, often serpentinite; --/--/4.3	June-July per. herb	Poor habitat present
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Chaparral, cismontane woodland, lower montane conif. forest/volcanic; --/--/1B.3	March-May everg. shrub	Poor habitat present
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Chaparral, lower montane coniferous forest/rocky, often serpentine; --/--/1B.1	Feb.-April ann. herb	Poor habitat present
Astragalus breweri	Brewer's milk-vetch	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (open, often gravelly)/often serpentinite, volcanic; --/--/4.2	April-June ann. herb	Poor habitat present
Brasenia schreiberi	watershield	Marshes & swamps/freshwater; --/--/2B.3	March-Sept rhizom. herb	Habitat not present
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	Chaparral, lower montane conif. forest, valley & foothill grassland/serpentinite; --/--/4.2	April-June rhizom. herb	Habitat not present
Carex comosa	bristly sedge	Coastal prairie, marshes and swamps (lake margins), valley and foothill grassland; --/--/2B.1	May-Sept. per. rhizom. herb	Habitat not present
Ceanothus confusus	Rincon ridge ceanothus	Closed cone conif. forest, chaparral, cismontane woodland/volcanic; --/--/1B.1	Feb.-April everg. shrub	Poor habitat present
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Chaparral (openings, usually serpentinite); --/--/4.2	April-June ann. herb	Habitat not present
Collomia diversifolia	serpentine collomia	Chaparral, cismontane woodland/serpentinite, rocky or gravelly; --/--/4.3	May-June ann. herb	Habitat not present
Cryptantha dissita	serpentine cryptantha	Chaparral/serpentine outcrops; --/--/1B.2	April-June ann. herb	Habitat not present

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Entosthodon kochii	Koch's cord moss	Cismontane woodland (soil); --/--/1B.3	moss	Habitat present but not found during surveys
Erythranthe nudata	bare monkeyflower	Chaparral, cismontane woodland, serpentinite seeps; --/--/4.3	May-June ann. herb	Habitat not present
Fritillaria purdyi	Purdy's fritillary	Chaparral, cismontane woodland, lower montane coniferous forest; usually serpentinite; --/--/4.3	March-June bulb. herb	Habitat not present
Gratiola heterosepala	Boggs Lake hedge-hyssop	Freshwater marsh, marshes & swamps (freshwater), vernal pools, sometimes lake margins/clay; --/SE/1B.2	April-Aug. ann. herb	Habitat not present
Hesperolinon adenophyllum	glandular western flax	Chaparral, cismontane woodland, valley & foothill grassland/usually serpentine chaparral; --/--/1B.2	May-Aug. ann. herb	Habitat not present
Horkelia bolanderi	Bolander's horkelia	Lower montane conif. forest, chaparral, meadows & seeps, valley & foothill grassland/grassy margins of vernal pools and meadows; --/ --/1B.2	June-Aug. per. herb	Habitat present but not found during surveys
Kopsiopsis hookeri	small groundcone	North Coast coniferous forest/redwood forest; --/--/2B.3 (parasitic)	April-August per. rhizom. herb	Habitat not present
Layia septentrionalis	Colusa layia	Chaparral, cismontane woodland, valley & foothill grassland/sandy or serpentine; --/--/1B.2	April-May ann. herb	Habitat present, not found during surveys
Leptosiphon acicularis	bristly leptisiphon	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland; --/--/4.2	April-July ann. herb	Habitat present but not found during surveys
Monardella viridis	green monardella	Broadleaved upland forest, chaparral, cismontane woodland; --/--/4.3	June-Sept. rhizom. herb	Habitat present but not found during surveys
Plagiobothrys lithocaryus	Mayacamas popcorn-flower	Chaparral, cismontane woodland, valley & foothill grassland/mesic; --/--/1A (presumed extinct)	April-May ann. herb	No habitat present
Ranunculus lobbii	Lobb's aquatic buttercup	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools/mesic--/--/4.2	Feb.-May ann. herb (aquatic)	Habitat not present
Sidalcea keckii	Keck's checkerbloom	Chaparral, cismontane woodland, coastal prairie,valley and foothill grassland;Endangered/1B1/	April-May annual herb	Poor habitat present, not found

Streptanthus glandulosus ssp. hoffmanii	Hoffman's bristly jewelflower	Chaparral, cismontane woodland, valley and foothill grassland/rocky, often serpentinite; --/--/1B.3	March-July ann. herb	Habitat not present
Tracyina rostrata	beaked tracyina	Cismontane woodland, valley & foothill grassland; --/--/1B.2	May-June ann. herb	Habitat present but not found during surveys

Plant Species	Common Name	Habitat Requirements/ Fed-State-CNPS* Status	Blooming Season/Form	Habitat Present
Viburnum ellipticum	oval-leaved viburnum	Chaparral, cismontane woodland, lower montane coniferous forest; --/--/2B.3	May-June decid. shrub	Habitat present but not found during surveys

*See CNPS list for key

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Bombus occidentalis	western bumblebee	Once common in the western U.S., these bees are important pollinators of both wild plants and crops. Threats to be bee include insecticides, loss of habitat, climate change and diseases from commercial bee rearing. G4/S1	year-round	Habitat may be present
Bombus caliginosus	obscure bumble bee	A black and yellow bee found in California, Oregon, Washington. Food plant genera: Baccharis, Cirsium, Lupinus, Lotus, Grindelia, Phacelia; G3G4/CA-SNR	year-round	Poor habitat present
Taricha rivularis	red-bellied newt	Occurs near high to moderate gradient streams and rivers, riffles, pools. Burrows in soil or debris near water, emerges during fall rains to water to breed; G4/SNR	year-round	No Habitat present
Rana boylii	foothill yellow-legged frog	Riparian/aquatic: partly-shaded, shallow streams & riffles with a rocky substrate in variety of habitats; SSC/SCT/G3/S2S3	year-round	No Habitat present
Emys marmorata	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	No Habitat present
Elanus leucurus	white-tailed kite	Open areas near woodlands and water; SFP/G5/S3	year-round	Habitat is present
Circus cyaneus	northern harrier	Coastal salt and freshwater marshes, meadows, grasslands near wetlands; nests in brush on ground; SSC/G5/S3	migratory	Habitat is present
Pandion haliaetus	osprey	Large, fish-bearing waters usually in mixed conifer habitats/typically nests are within 15 miles of good fish-producing body of water; WL/G5/S4	sometimes migratory	Habitat not present

Wildlife Species	Common Name	Habitat Requirements, Status	Season Present	Habitat Present
Agelaius tricolor	tricolored blackbird	Fresh emergent wetland (marshes) with cattails, tules, sedges. Largely endemic to California; SCE//G2G3/S1S2	year-round	No Habitat is present
Ammodramus savannarum	grasshopper sparrow	Prefers open grassland habitats with patches of bare ground and shrubby vegetation. Breeds in various types of grassland vegetation. Eats insects, grain, and seeds on the ground; SSC/G5/S3	sometimes migratory	Habitat is present
Corynorhinus townsendii	Townsend's big-eared bat	Roosts in open near relatively mesic sites, mainly montane forest habitats; SSC/G3/S2	local migrant	Habitat is present
Antrozous pallidus	pallid bat	Open, dry habitats, forest habitats, in caves, tunnels, buildings, bridges; sensitive to human disturbance; SSC/G5/S3	local migrant	Habitat is present
Pekania pennanti	fisher, West Coast DPS	No. Coast conifer forest: old-growth conifer or riparian forests; cavities, snags, logs, rocky areas; SCT/SSC/G5/S3	year-round	Poor habitat present
Taxidea taxus	American badger	Dryer open stages of shrub, forest, & herbaceous habitats. Needs friable soils for burrows and open uncultivated ground; SSC/G5/S3	year-round	Habitat is present
Erethizon dorsatum	North American porcupine	Occurs in a wide variety of coniferous and mixed woodland habitats in Sierra Nevada, Cascade, and Coast Ranges/ uses fallen and standing dead trees as cover; G5/S3	year-round	No Habitat present

KEY FOR TABLE 3:

State and Federal:

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

SC/SCD=State Candidate for Listing/Delisting

SSC=CDFW Species of Special Concern

SFP=CDFW 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

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 rated

4.4 Wildlife Habitat Analysis Results: The California Wildlife Habitat Relationships analysis lists a number of native 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**.

4.5 Wildlife Assessment: Based on the pre-survey research conducted for this study, a total of 15 sensitive wildlife species need to be accounted for within the project area. These consist of the species identified as present within and adjacent to the Lower Lake quadrangle by the CNDDB. Accepted protocol requires that all CNDDB species in the surrounding U.S.G.S. quadrangle be discussed even through suitable habitat may not occur on the site.

- **Western bumble bee (*Bombus occidentalis*):**
  Once common in the western and northwestern U.S., these bees are important pollinators of both wild plants and crops and has been commercially reared to pollinate crops such as greenhouse tomatoes and cranberries; they also have been an important pollinator of alfalfa, avocado, apples, cherries, blackberries, and blueberry. Since 1998 populations have declined due to insecticides, loss of habitat, climate change and diseases from commercial bee rearing. This bumblebee is a generic forager and its habitat requirements are non-specific. Identification of bees is based on their sex and markings.

- **Obscure bumble bee (*Bombus oliginosus*):**
  This bumblebee is native to the west coast; in the Coast Range it inhabits meadows. It is similar in appearance and co-exists with the common *Bombus vosnesenskii* and may be mistaken for this bee. *B. oliginosus* is threatened by climate change and loss of habitat, and does not thrive in developed urban or agricultural areas. Its food sources include plant genera *Baccharis, Cirsium, Lupinus, Lotus, Grindelia*, and *Phacelia*. There is a low potential for it to occur on the property.

- **Red-bellied newt (*Taricha rivularis*):**
  This species is often found under rocks, logs, soil or duff, or in rodent burrows in coastal woodlands and redwood forests. Newts occur near high to moderate gradient streams and rivers, in riffles, and pools. Newts burrow in soil or debris near water, and emerge during fall rains to breed; and may migrate up to a mile or more between terrestrial habitat and stream breeding sites. They usually breed in flowing water, from late February through May. Appropriate habitat for newts does not occur within the streams on the project site. Streams on the surrounding slopes are short-term seasonal drainages, these drainages generally are unsuitable for this species.

- **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. Burns Valley Creek may provide suitable habitat for this species. These frogs may spend dry summer months in shallows and backwaters after stream channels become dry, which do not occur in this watershed.

- **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. While turtles may use the stream corridor , there is no suitable habitat on this parcel for them to remain.

- **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 woodlands adjacent to expanses of open grasslands with nearby water (Clearlake); this would provide marginal habitat for kites for both nesting and hunting. 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.

- **Northern harrier (*Circus cyaneus hudsonius*):**
  This raptor occurs in annual grassland and is also found at high elevations. It inhabits meadows, open grasslands and rangelands, and emergent wetlands; it prefers habitat such as the broad, open grasslands and wetlands of the Sacramento Valley where this species is commonly seen. It is seldom found in wooded or agricultural areas. Formerly called the “marsh hawk”, it nests on the ground in dense shrubby vegetation in and near wetlands. The harrier feeds on insects and small mammals, birds, etc., and competes with the red-tailed hawk for food. These raptors nest from April to August and have California Species of Concern status during that period. This parcel does not provide habitat for harriers.

- **Osprey (*Pandion haliaetus*):**
  This species occurs near large, fish-bearing waters in ponderosa pine or mixed conifer habitats where it feeds on open waters for fish, although it also takes small birds and mammals. It hunts over wide expanses of open water and usually nests in the tops of large isolated trees near shorelines. Nests are made on platforms of stickson top of large snags, dead-topped trees, or man-made structures. Nests areusually within close proximity of large fish-producing water bodies. The stick nests constructed by this species are readily apparent when present. Ospreys prefer to nest near large bodies of water and are unlikely to nest on the property.

- **Tricolored blackbird (*Agelaius tricolor*):**
  These blackbirds are colony nesters in fresh emergent wetland habitat (tule or cattail marsh), but may also occur in dense blackberry or willow shrub communities adjacent to water. Cover is required for nesting. Proximity to insects is preferred, although food includes seeds and grain. Breeding occurs April through June. The species is usually readily observed when present and has a distinctive call. This site does not contain suitable habitat for this species.

- **Grasshopper sparrow (*Ammodramus savannarum*):**
  This sparrow is a summer resident in foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity counties to southern California. It occurs in dry, dense grasslands with scattered shrubs for singing perches. Grasshopper sparrows are secretive in winter. They need thick grasslands and forbs for cover, and nest in small depressions on the ground. They breed from April to mid-July. Sparrows feed primarily on insects but also eat other invertebrates, grains, and forb seeds. They search for food on the ground. They may be present in the grasslands.

- **Townsend's western big-eared bat (*Corynorhinus townsendii ssp. townsendii*):**
  This bat is a California Species of Special Concern. Physical traits include bilateral nose lumps and very large ears. The most restrictive resource required by this species is daytime roosting habitat. This bat 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 contains a riparian corridor, however it is low quality habitat for this species.

- **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. 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 with limited water, which may provide some habitat for this species.

- **Pacific fisher, West Coast DPS (*Martes pennanti*):**
  Fishers are found mostly in dense coniferous or deciduous riparian habitats that include older trees and snags. Fishers are mainly carnivorous, eating smaller mammals, rodents, birds, carrion, and fruits. They hunt for prey on the ground and in trees. Cover is provided by cavities in large trees, snags and logs and their nests are built in protected cavities, brush-piles or logs. Young are born between February and May. Fishers are listed for a distant quad in the CNDDB near Scotts Creek, but the species has not been reported in this area since 1941. While there is no chance that they occur on this parcel due to no dense forest on this parcel.

- **American badger (*Taxidea taxus*):**
  Badgers are found mostly in drier open stages of shrub, forest, and herbaceous habitats with friable soils such as open grasslands, fields, and pastures. They are found from high alpine meadows to sea level and occur throughout the stateexcept for the northern North Coast. This species is carnivorous, eating mostly fossorial rodents; they also will eat reptiles, insects, birds, eggs, and carrion. They dig burrows in friable or sandy soil for cover and nesting, and often reuse old burrows. Breeding occurs in late summer or fall. Nests are in areas with little overstory cover, often a grass-lined den, and young are born mostly in March and April. Young become independent in 5 or 6 months. The single occurrence mapped by CNDDB within the Lakeport quadrangle is near the west boundary of the City of Lakeport onan unknown date. They would be unlikely to occur on this property.

- **North American porcupine (*Erethizon dorsatum*):**
  This large, primarily nocturnal rodent prefers conifer and hardwood forests and woodlands, but is also found in forested wetlands and chaparral. They can withstand extreme cold temperatures. Porcupines use downed logs and debris, as well as snags and tree hollows, as cover and dens. Food is vegetation including twigs, berries, roots, seeds, needles, and bark; porcupines commonly climb trees for food. The porcupine breeds from September to November or December, giving birth in the spring. Lifespan is relatively long.

  Porcupines may occur in the area and on the property. This species is listed in the CNDDB as "G5" (Global Secure) and "SNR" (Species Not Rated-California). It is therefore not a species with sensitive regulatory status although its local accounts are included in the database.

Raptors and passerines lacking sensitive regulatory status but otherwise protected under the Migratory Bird Treaty Act may also be present on the property in their sensitive status.

5.0 FIELD SURVEY RESULTS

5.1 Botanical Field Survey Results: Table 4 presents the results of the botanicalsurvey for the project. Each of the sensitive plant species potentially occurring at the site and listed in Tables 2 and 3 was specifically searched for during the surveys. The surveys identified a total of 61 plant taxa on the property.

TABLE 4. Flora of 2160 Ogulin Canyon Road

Habit	Species	Common Name	Family	Origin
forb	*Chlorogalum pomeridiaum*	Wavyleaf soap plant	Agavaceae	N
forb	*Andostoma fasciculatum*	chamise	Alismataceae	N
forb	*Allium serra*	jeweled onion	Alliaceae	N
forb	*Conium maculatum*	poison hemlock	Apiaceae	A
forb	*Lomatium dasycarpum ssp. dasycarpum*	woolly-fruited lomatium	Apiaceae	N
forb	*Lomatium macrocarpum*	Large fruited lomatium	Apiaceae	N
forb	*Sanicula bipinnata*	Poisin sanicle	Apiaceae	N
forb	*Agoseris apargioides var apargioides*	coast dandelion	Asteraceae	N
forb	*Chamomilla suaveolens*	pineapple weed	Asteraceae	A
forb	*Centaurea solstitialis*	Yellow star thistle	Asteraceae	A
forb	*Eriogonum nedum*	Naked buckwheat	Polygonaceae	N
forb	*Eriophyllum lanatum var. lanatum*	common woolly sunflower	Asteraceae	N
forb	*Madia gracilis*	gumweed, slender tarweed	Asteraceae	N
forb	*Micropus californicus*	cottontop	Asteraceae	N
forb	*Wyethia angustifolia*	narrow-leaved mule ears	Asteraceae	N
forb	*Cynoglossum grande*	grand hound's tongue	Boraginaceae	N
forb	*Lepidium nitidum var. nitidum*	shining peppergrass	Brassicaceae	N
forb	*Dichelostemma capitatum*	Blue dicks	Brodiaea	N
forb	*Lonicera interrupta*	Chaparral honeysuckle	Caprifoliaceae	N
forb	*Cerastium glomeratum*	mouse-ear chickweed, sticky mouse-ear	Caryophyllaceae	A

Habit	Species	Common Name	Family	Origin
forb	*Acmispon glaber*	deerweed	Fabaceae	N
forb	*Lupinus bicolor*	miniature lupine	Fabaceae	N
forb	*Trifolium hirtum*	rose clover	Fabaceae	A
forb	*Vicia americana var. americana*	American vetch	Fabaceae	N
forb	*Erodium cicutarium*	red-stem storksbill	Geraniaceae	A
forb	*Geranium dissectum*	cut-leaved geranium	Geraniaceae	A

Habit	Species	Common Name	Family	Origin
forb	*Toxicoscordion fremontii*	Fremont's death camus	Liliaceae	
forb	*Clarkia purpurea*	purple clarkia, winecup clarkia, four-spot	Onagraceae	N
forb	*Eschscholzia californica*	California poppy	Papaveraceae	N
forb	*Delphinium hesperium*	foothill larkspur	Ranunculaceae	N
forb	*Galium divaricatum*	Lamarck's bedstraw	Rubiaceae	N
forb	*Penstemon heterophyllus*	foothill penstemon	Scrophulariaceae	N

Habit	Species	Common Name	Family	Origin
grass	*Avena barbata*	slender wild oat	Poaceae	A
grass	*Briza minor*	small quaking grass	Poaceae	A
grass	*Bromus diandrus*	ripgut grass, ripgut brome	Poaceae	A
grass	*Bromus hordeaceus*	soft chess	Poaceae	A
grass	*Bromus jinermis*	smooth brome	Poaceae	A
grass	*Bromus laevipes*	woodland brome	Poaceae	N
grass	*Bromus madritensis ssp. rubens*	red brome	Poaceae	A
grass	*Elymus caput-medusae*	medusahead	Poaceae	A
grass	*Elymus glaucus ssp. glaucus*	blue wildrye	Poaceae	N
grass	*Festuca myuros*	rattail sixweeks grass	Poaceae	A
shrub	*Sambucus nigra ssp. caerulea*	blue elderberry	Adoxacaceae	N
shrub	*Toxicodendron diversilobum*	poison oak	Anacardiaceae	N
shrub	*Baccharis pilularis*	coyote brush, chaparral broom	Asteraceae	N
shrub	*Symphoricarpos albus var. laevigatus*	common snowberry	Caryophyllaceae	N

Habit	Species	Common Name	Family	Origin
shrub	*Arctostaphylos manzanita ssp. manzanita*	common manzanita	Ericaceae	N
shrub	*Arctostaphylos viscida*	white-leaf manzanita	Ericaceae	N
shrub	*Pickeringia montana*	chaparral pea	Fabaceae	N
shrub	*Eriodictyon californicum*	California yerba santa	Hydrophyllaceae	N
shrub	*Lepechinia calycina*	pitcher sage	Lamiaceae	N
shrub	*Ceanothus cuneatus var. cuneatus*	buckbrush	Rhamnaceae	N
shrub	*Adenostoma fasciculatum*	chamise	Rosaceae	N
shrub	*Cercocarpus betuloides var. betuloides*	birch-leaf mountain mahogany	Rosaceae	N
shrub	*Heteromeles arbutifolia*	toyon	Rosaceae	N
tree	*Quercus douglasii*	Blue oak	Fagaceae	N
Tree	*Quercus wislizeni*	interior live oak	Fagaceae	N
Tree	*Pinus sabiniana*	California foothill pine	Pinaceae	N
Tree	*Populus fremontii*	Fremont cottonwood	Salicaceae	N
Tree	*Salix lasiolepis*	Arroyo willow	Salicaceae	N

vine	*Calystegia occidentalis ssp. occidentalis*	western morning-glory	Convolvulaceae	N
	N=Native A=Alien (non-native)			

6.0SUMMARY AND RECOMMENDATIONS

6.1Summary: 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 (CNDDB) 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 Relations System*.
- A California Department of Fish and Wildlife protocol, floristic-level field survey of the plants occurring within the property.
- A delineation of waters of the U.S.

Sensitive Plants: A total of 61 native and introduced plant taxa were identified within the survey areas during the in-season botanical survey. 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 15 sensitive wildlife species were assessed for potential occurrence at the site because of inclusion in the CNDDB database for the quadrangle and the CWHR database. Based on the habitat assessment, the following conclusions are made regarding species with sensitive regulatory status:

- Sensitive status species that have a potential to be present in their sensitive state:

  Obscure bumble bee, Foothill yellow legged frog; Western pond turtle; White- tailed kite; Northern harrier; Tricolored blackbird; Grasshopper sparrow; Townsend's big-eared bat; Pallid bat; American badger; Pacific fisher; North American porcupine

Possible Waters of the U.S.: A small riparian area is present on this parcel. It is of very low quality and does not exhibit all three criteria for designation as wetland.

6.2Potential Impacts and Proposed Mitigation for Biological Resources:

(For all recommended mitigation measures accepted as conditions of approval, the text should be modified to use declarative language, i.e. "should" should become "shall", etc.)

- Habitat Fragmentation

Potential Impacts: The proposed gardens and processing facility shown in Figure 2 are comparatively small and unlikely to significantly impair wildlife movement through the corridor. Use of outdoor lighting has a potential to disrupt wildlife movement, much of which occursat night.

Proposed Mitigation for Habitat Fragmentation:

Measure 1: The use of deer fencing should be restricted to the perimeters of the proposed gardens. No deer fencing or other obstacles to wildlife passage should be installed that will restrict wildlife movement.

Measure 2: Outdoor lighting, if used, should be restricted to the processing facility and should be directed downward so as not to illuminate adjacent areas.

- Woodland and Forest Resources

Potential Impact: As shown in **Table 1**, the property contains a combined total of 6.25 acres of woodland. The proposed project design limits project components to the existing infrastructure areas and would not impact woodland resources.

Existing Blue Oaks within the development zone should be preserved when possible.

Proposed Mitigation for Impacts to Woodland and Forest: No mitigation recommended if the project is constructed within the area of existing infrastructure.

- Sensitive Plants and Wildlife

Potential Impacts:

Plants: No plants with sensitive regulatory status were found on the property during the floristic-level botanical survey.

Wildlife: The following wildlife species have a potential to be present on the Benmore Ranch property:

- Obscure bumble bee
- Western pond turtle
- White-tailed kite
- Northern harrier
- Grasshopper sparrow
- Pallid bat
- American badger
- North American porcupine

Use of pesticides resulting in drift has a potential to result in the incidental take of the obscure bumble bee, if present. Pesticide contamination of waterways or direct impacts to waterways has a potential to result in incidental take of foothill yellow-legged frog and/or western pond turtle downstream from the project area.

Other sensitive species listed above depend primarily on woodland, forest, and grassland habitats. Woodland and forest habitat would not be impacted by this project. Impacts to grasslands would be minimal based on the current project design.

Proposed Mitigation for impacts to Wildlife:

Measure 3: To mitigate potential impacts to obscure bumble bee, foothill yellow-legged frog, and western pond turtle, State and Federal regulations on pesticide selection and use should be strictly followed. Pesticide use should not occur during periods when winds may transport spray to adjacent areas. As an alternative, the operator may wish to use organic growing methods. It should be noted that State of California regulations for cannabis cultivation include strict standards for purity which may pre-empt use of pesticides.

- Waters of the U.S.

Potential Impacts: As shown in **Figure 2**, the development would not significantly alter the existing riparian area.

Placement of fill within Waters of the U.S. may require a Nationwide permit by the Corps of Engineers (possibly a non-reporting permit under the Nationwide Permit Program), along with a 401 Water Quality Certification from the Regional Water Quality Control Board, and 1604 Stream Alteration Agreement from the California Department of Fish and Wildlife. The County of Lake may require stream setbacks.

Erosion Control:

Potential Impacts: Vegetation clearing and grading activities have a potential to result in sediment runoff to Burns Valley Creek.

Proposed Mitigation: All work in or near waterways and wetlands should incorporate extensive erosion control measures consistent with Lake County Grading Regulations in order to avoid erosion and the potential for transport of sediments to Burns Valley Creek. 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

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPSSYSTEM

RESULTS

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
CE = California Endangered
CT = California Threatened
CF = California Fully Protected
CP = California Protected
SC = California Species of Special Concern
PE = Federally-Proposed Endangered
PT = Federally-Proposed Threatened
FC = Federal Candidate
BL = BLM Sensitive
FS = USFS Sensitive
CD = CDF Sensitive
HA = Harvest

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
A004	CALIFORNIA GIANT SALAMANDER		NATIVE
A006	ROUGH-SKINNED NEWT		NATIVE
A007	CALIFORNIA NEWT	SC	NATIVE
A012	COMMON ENSATINA	SC BL FS	NATIVE
A014	CALIFORNIA SLENDER SALAMANDER		NATIVE
A020	SPECKLED BLACK SALAMANDER		NATIVE
A022	ARBOREAL SALAMANDER		NATIVE
A032	WESTERN TOAD		NATIVE
A039	PACIFIC TREEFROG		NATIVE
A048	COASTAL GIANT SALAMANDER		NATIVE
A071	CALIFORNIA RED-LEGGED FROG	FT SC	NATIVE
B003	COMMON LOON	SC	NATIVE
B049	AMERICAN BITTERN		NATIVE
B050	LEAST BITTERN	SC	NATIVE
B051	GREAT BLUE HERON	CD	NATIVE
B052	GREAT EGRET	CD	NATIVE
B053	SNOWY EGRET		NATIVE
B057	CATTLE EGRET		NATIVE
B058	GREEN HERON		NATIVE
B059	BLACK-CROWNED NIGHT HERON		NATIVE
B067	TUNDRA SWAN		NATIVE
B071	SNOW GOOSE	HA	NATIVE
B075	CANADA GOOSE	HA	NATIVE
B076	WOOD DUCK	HA	NATIVE
B077	GREEN-WINGED TEAL	HA	NATIVE
B079	MALLARD	HA	NATIVE

B080	NORTHERN PINTAIL							HA	NATIVE
B083	CINNAMON TEAL							HA	NATIVE
B084	NORTHERN SHOVELER							HA	NATIVE
B085	GADWALL							HA	NATIVE
B086	EURASIAN WIGEON							HA	NATIVE

ID	Species Name	Status							Native/Introduced
B087	AMERICAN WIGEON							HA	NATIVE
B089	CANVASBACK							HA	NATIVE
B091	RING-NECKED DUCK							HA	NATIVE
B093	GREATER SCAUP							HA	NATIVE
B094	LESSER SCAUP							HA	NATIVE
B101	COMMON GOLDENEYE							HA	NATIVE
B102	BARROW'S GOLDENEYE				SC			HA	NATIVE
B103	BUFFLEHEAD							HA	NATIVE
B104	HOODED MERGANSER							HA	NATIVE
B105	COMMON MERGANSER							HA	NATIVE
B106	RED-BREASTED MERGANSER							HA	NATIVE
B107	RUDDY DUCK							HA	NATIVE
B108	TURKEY VULTURE								NATIVE
B110	OSPREY							CD	NATIVE
B111	WHITE-TAILED KITE			CF			BL		NATIVE
B113	BALD EAGLE		CE	CF			BL	FS CD	NATIVE
B114	NORTHERN HARRIER				SC				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
B126	GOLDEN EAGLE			CF			BL	CD	NATIVE
B127	AMERICAN KESTREL								NATIVE
B128	MERLIN								NATIVE
B129	PEREGRINE FALCON			CF				CD	NATIVE
B131	PRAIRIE FALCON								NATIVE
B140	CALIFORNIA QUAIL				SC			HA	NATIVE
B141	MOUNTAIN QUAIL							HA	NATIVE
B145	VIRGINIA RAIL								NATIVE
B146	SORA								NATIVE
B148	COMMON GALLINULE							HA	NATIVE
B149	AMERICAN COOT							HA	NATIVE
B158	KILLDEER								NATIVE
B165	GREATER YELLOWLEGS								NATIVE
B166	LESSER YELLOWLEGS								NATIVE
B199	WILSON'S SNIPE								NATIVE

B251	BAND-TAILED PIGEON				HA	NATIVE
B255	MOURNING DOVE				HA	NATIVE
B259	YELLOW-BILLED CUCKOO	CE		PT	BL FS	NATIVE
B260	GREATER ROADRUNNER					NATIVE

ID	Species Name	Status			Native/Introduced
B262	BARN OWL				NATIVE
B263	FLAMMULATED OWL				NATIVE
B264	WESTERN SCREECH OWL				NATIVE
B265	GREAT HORNED OWL				NATIVE
B267	NORTHERN PYGMY OWL				NATIVE
B269	BURROWING OWL		SC	BL	NATIVE
B270	SPOTTED OWL	FT	SC	BL FS CD	NATIVE
B272	LONG-EARED OWL		SC		NATIVE
B273	SHORT-EARED OWL		SC		NATIVE
B274	NORTHERN SAW-WHET OWL				NATIVE
B277	COMMON POORWILL				NATIVE
B281	VAUX'S SWIFT		SC		NATIVE
B282	WHITE-THROATED SWIFT				NATIVE
B287	ANNA'S HUMMINGBIRD				NATIVE
B291	RUFOUS HUMMINGBIRD				NATIVE
B292	ALLEN'S HUMMINGBIRD				NATIVE
B293	BELTED KINGFISHER				NATIVE
B294	LEWIS' S WOODPECKER				NATIVE
B296	ACORN WOODPECKER				NATIVE
B299	RED-BREASTED SAPSUCKER				NATIVE
B302	NUTTALL'S WOODPECKER				NATIVE
B303	DOWNY WOODPECKER				NATIVE
B304	HAIRY WOODPECKER				NATIVE
B305	WHITE-HEADED WOODPECKER				NATIVE
B307	NORTHERN FLICKER				NATIVE
B309	OLIVE-SIDED FLYCATCHER		SC		NATIVE
B311	WESTERN WOOD-PEWEE				NATIVE
B317	HAMMOND'S FLYCATCHER				NATIVE
B318	DUSKY FLYCATCHER				NATIVE
B320	PACIFIC-SLOPE FLYCATCHER				NATIVE
B321	BLACK PHOEBE				NATIVE
B323	SAY'S PHOEBE				NATIVE
B326	ASH-THROATED FLYCATCHER				NATIVE
B333	WESTERN KINGBIRD				NATIVE
B337	HORNED LARK				NATIVE
B338	PURPLE MARTIN		SC		NATIVE
B339	TREE SWALLOW				NATIVE
B340	VIOLET-GREEN SWALLOW				NATIVE

B341	NORTHERN ROUGH-WINGED SWALLOW			NATIVE
B342	BANK SWALLOW	CT	BL	NATIVE
B343	CLIFF SWALLOW			NATIVE
B346	STELLER'S JAY			NATIVE

ID	Species Name	Status		Native/Introduced
B348	WESTERN SCRUB-JAY			NATIVE
B350	CLARK'S NUTCRACKER			NATIVE
B352	YELLOW-BILLED MAGPIE			NATIVE
B353	AMERICAN CROW		HA	NATIVE
B354	COMMON RAVEN			NATIVE
B356	MOUNTAIN CHICKADEE			NATIVE
B357	CHESTNUT-BACKED CHICKADEE			NATIVE
B358	OAK TITMOUSE			NATIVE
B360	BUSHTIT			NATIVE
B361	RED-BREASTED NUTHATCH			NATIVE
B362	WHITE-BREASTED NUTHATCH			NATIVE
B363	PYGMY NUTHATCH			NATIVE
B364	BROWN CREEPER			NATIVE
B367	CANYON WREN			NATIVE
B368	BEWICK'S WREN	SC		NATIVE
B369	HOUSE WREN			NATIVE
B370	WINTER WREN			NATIVE
B372	MARSH WREN	SC		NATIVE
B375	GOLDEN-CROWNED KINGLET			NATIVE
B376	RUBY-CROWNED KINGLET			NATIVE
B377	BLUE-GRAY GNATCATCHER			NATIVE
B380	WESTERN BLUEBIRD			NATIVE
B381	MOUNTAIN BLUEBIRD			NATIVE
B382	TOWNSEND'S SOLITAIRE			NATIVE
B385	SWAINSON'S THRUSH			NATIVE
B386	HERMIT THRUSH			NATIVE
B389	AMERICAN ROBIN			NATIVE
B390	VARIED THRUSH			NATIVE
B391	WRENTIT			NATIVE
B393	NORTHERN MOCKINGBIRD			NATIVE
B398	CALIFORNIA THRASHER			NATIVE
B404	AMERICAN PIPIT			NATIVE
B407	CEDAR WAXWING			NATIVE
B408	PHAINOPEPLA			NATIVE
B410	LOGGERHEAD SHRIKE	FE	SC	NATIVE
B415	CASSIN'S VIREO			NATIVE
B417	HUTTON'S VIREO	SC		NATIVE

B418	WARBLING VIREO		NATIVE
B425	ORANGE-CROWNED WARBLER		NATIVE
B426	NASHVILLE WARBLER		NATIVE
B430	YELLOW WARBLER	SC	NATIVE
B435	YELLOW-RUMPED WARBLER		NATIVE
B436	BLACK-THROATED GRAY WARBLER		NATIVE

ID	Species Name	Status	Native/Introduced
B437	TOWNSEND'S WARBLER		NATIVE
B438	HERMIT WARBLER		NATIVE
B460	MACGILLIVRAY'S WARBLER		NATIVE
B461	COMMON YELLOWTHROAT	SC	NATIVE
B463	WILSON'S WARBLER		NATIVE
B467	YELLOW-BREASTED CHAT	SC	NATIVE
B471	WESTERN TANAGER		NATIVE
B475	BLACK-HEADED GROSBEAK		NATIVE
B477	LAZULI BUNTING		NATIVE
B482	GREEN-TAILED TOWHEE		NATIVE
B483	SPOTTED TOWHEE	SC	NATIVE
B484	CALIFORNIA TOWHEE	FT CE	NATIVE
B487	RUFOUS-CROWNED SPARROW	SC	NATIVE
B489	CHIPPING SPARROW		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
B504	FOX SPARROW		NATIVE
B505	SONG SPARROW	SC	NATIVE
B506	LINCOLN'S SPARROW		NATIVE
B509	GOLDEN-CROWNED SPARROW		NATIVE
B510	WHITE-CROWNED SPARROW		NATIVE
B512	DARK-EYED JUNCO		NATIVE
B519	RED-WINGED BLACKBIRD	SC	NATIVE
B520	TRICOLORED BLACKBIRD	SC BL	NATIVE
B521	WESTERN MEADOWLARK		NATIVE
B522	YELLOW-HEADED BLACKBIRD	SC	NATIVE
B524	BREWER'S BLACKBIRD		NATIVE
B528	BROWN-HEADED COWBIRD		NATIVE
B532	BULLOCK'S ORIOLE		NATIVE
B536	PURPLE FINCH		NATIVE
B537	CASSIN'S FINCH		NATIVE
B538	HOUSE FINCH		NATIVE
B539	RED CROSSBILL		NATIVE

B542	PINE SISKIN		NATIVE
B543	LESSER GOLDFINCH		NATIVE
B544	LAWRENCE'S GOLDFINCH		NATIVE
B545	AMERICAN GOLDFINCH		NATIVE
B546	EVENING GROSBEAK		NATIVE
B548	CLARK'S GREBE		NATIVE
B554	PLUMBEOUS VIREO		NATIVE

ID	Species Name	Status	Native/Introduced
B656	RED PHALAROPE		NATIVE
B699	BARRED OWL		NATIVE
B773	AMERICAN REDSTART		NATIVE
B798	WHITE-THROATED SPARROW		NATIVE
B799	HARRIS'S SPARROW		NATIVE
B809	INDIGO BUNTING		NATIVE
M006	ORNATE SHREW	FE SC	NATIVE
M012	TROWBRIDGE'S SHREW		NATIVE
M015	SHREW-MOLE		NATIVE
M018	BROAD-FOOTED MOLE	SC	NATIVE
M023	YUMA MYOTIS	BL	NATIVE
M025	LONG-EARED MYOTIS	BL	NATIVE
M027	LONG-LEGGED MYOTIS		NATIVE
M028	CALIFORNIA MYOTIS		NATIVE
M030	SILVER-HAIRED BAT		NATIVE
M031	CANYON BAT		NATIVE
M033	WESTERN RED BAT	SC FS	NATIVE
M034	HOARY BAT		NATIVE
M037	TOWNSEND'S BIG-EARED BAT	SC BL FS	NATIVE
M038	PALLID BAT	SC BL FS	NATIVE
M039	BRAZILIAN FREE-TAILED BAT		NATIVE
M045	BRUSH RABBIT	FE CE HA	NATIVE
M047	AUDUBON'S COTTONTAIL	HA	NATIVE
M051	BLACK-TAILED JACKRABBIT	SC HA	NATIVE
M055	YELLOW-PINE CHIPMUNK		NATIVE
M057	SHADOW CHIPMUNK		NATIVE
M059	SONOMA CHIPMUNK		NATIVE
M072	CALIFORNIA GROUND SQUIRREL		NATIVE
M075	GOLDEN-MANTLED GROUND SQUIRREL		NATIVE
M077	WESTERN GRAY SQUIRREL	HA	NATIVE
M079	DOUGLAS' SQUIRREL	HA	NATIVE
M080	NORTHERN FLYING SQUIRREL	SC FS	NATIVE
M081	BOTTA'S POCKET GOPHER		NATIVE
M084	MAZAMA POCKET GOPHER		NATIVE

M105	CALIFORNIA KANGAROO RAT			SC				NATIVE
M112	AMERICAN BEAVER						HA	NATIVE
M113	WESTERN HARVEST MOUSE							NATIVE
M117	DEER MOUSE			SC				NATIVE
M119	BRUSH MOUSE							NATIVE
M127	DUSKY-FOOTED WOODRAT	FE		SC				NATIVE
M134	CALIFORNIA VOLE	FE	CE	SC		BL		NATIVE
M139	COMMON MUSKRAT						HA	NATIVE

ID	Species Name	Status						Native/Introduced
M146	COYOTE						HA	NATIVE
M147	RED FOX		CT			FS	HA	NATIVE
M149	GRAY FOX						HA	NATIVE
M151	BLACK BEAR						HA	NATIVE
M152	RINGTAIL		CF					NATIVE
M153	RACCOON						HA	NATIVE
M154	MARTEN			SC		FS		NATIVE
M155	FISHER			SC		FC BL FS		NATIVE
M156	ERMINE						HA	NATIVE
M157	LONG-TAILED WEASEL						HA	NATIVE
M158	AMERICAN MINK						HA	NATIVE
M160	AMERICAN BADGER			SC			HA	NATIVE
M162	STRIPED SKUNK						HA	NATIVE
M163	NORTHERN RIVER OTTER			SC				NATIVE
M165	MOUNTAIN LION			SC				NATIVE
M166	BOBCAT						HA	NATIVE
M177	ELK						HA	NATIVE
M181	MULE DEER						HA	NATIVE
R004	WESTERN POND TURTLE			SC		BL FS		NATIVE
R022	WESTERN FENCE LIZARD							NATIVE
R023	COMMON SAGEBRUSH LIZARD					BL		NATIVE
R036	WESTERN SKINK			SC		BL		NATIVE
R039	TIGER WHIPTAIL							NATIVE
R040	SOUTHERN ALLIGATOR LIZARD							NATIVE
R042	NORTHERN ALLIGATOR LIZARD							NATIVE
R046	NORTHERN RUBBER BOA		CT			FS		NATIVE
R048	RING-NECKED SNAKE					FS		NATIVE
R049	COMMON SHARP-TAILED SNAKE							NATIVE
R051	NORTH AMERICAN RACER							NATIVE
R053	STRIPED RACER	FT	CT					NATIVE
R057	GOPHERSNAKE			SC				NATIVE
R058	EASTERN KINGSNAKE							NATIVE
R059	CALIFORNIA MOUNTAIN KINGSNAKE			SC		BL FS		NATIVE

R060	LONG-NOSED SNAKE		NATIVE
R061	COMMON GARTERSNAKE	FE CE CF SC	NATIVE
R062	TERRESTRIAL GARTERSNAKE		NATIVE
R071	DESERT NIGHTSNAKE		NATIVE
R076	WESTERN RATTLESNAKE		NATIVE
R078	AQUATIC GARTERSNAKE		NATIVE

Total Number of Species: 283

Query Parameters

Included Locations

Lake Co

Included Location Seasons

Migrant, Summer, Winter, Yearlong

Included Habitats & (Stages)

Annual Grassland, Closed-cone Pine-cypress, Fresh Emergent Wetland, Lacustrine, Mixed Chaparral, MontaneHardwood, Ponderosa Pine, Valley Foothill Riparian, Wet Meadow

Habitat Suitability Threshold

Reproduction - Low, Cover - Low, Feeding - Low

Included Habitat Seasons

Migrant, Summer, Winter, Yearlong

Excluded Elements

Barren, Bogs, Brush Pile, Buildings, Campground, Cave, Dump, Fences, Jetty, Lakes, Lithic, Mine, Mud Flats, NestBox, Nest Island, Nest Platform, Pack Stations, Rivers, Salt Ponds, Sand Dune, Shrub/agriculture, Soil - Saline, Soil -Sandy, Springs - Hot, Springs - Mineral, Talus, Tidepools, Transmission Lines, Trees - Fir, Vernal Pools, Water - Fast,Wharf

Included Species AllSpecies Included

Included Special Statuses

Native

OWNER

OGULIN ESTATES HOLDINGS, LLC
BRIAN D. PENSACK
637 LINDARD ST., SUITE 201
SAN RAFAEL, CA 94901

SITE PLAN DATA

AREA OF PROPERTY	9.56 ACRES TOTAL
ZONING	I - INDUSTRIAL
FLOOD ZONE	X, AE, AO

NOTES

1) THIS IS NOT A BOUNDARY SURVEY. ALL LOT LINES SHOWN ARE BASED ON A.P.N. MAP.

2.) EACH GREENHOUSE TO BE EQUIPED WITH A THERMAL CAMERA.

3.) ELECTRIC, PHONE, AND CABLE LINES ARE PROPOSED TO BE UNDERGROUND ON SITE.

EARTHWORK QUANTITIES

CUT: 8,000 CY
FILL: 4,000 CY

NET: 4,000 CY EXPORT

LEGEND

PROPERTY LINE
SETBACK LINE
EASEMENT LINE
(P) ACCESS ROAD/DRIVEWAY
(E) ACCESS ROAD/DRIVEWAY
(E) TREE/BRUSH LINE
FEMA FLOOD ZONE BOUNDARY