
**BOTANICAL SURVEY REPORT
FOR THE PROPERTY AT
1000 AND 1270 HIGHWAY 53,
CLEARLAKE, CALIFORNIA**



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1. INTRODUCTION

1.1. PROJECT LOCATION AND DESCRIPTION

Natural Investigations Company conducted a botanical field survey, also known as a rare plant survey, for a 106-acre property. The property consists of 2 parcels: 1000 State Highway 53, 48.6 acres, APN 010-055-27; and 1270 State Highway 53, 56.9 acres, APN 010-055-26, Clearlake, in Lake County, California.

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The cultivator is seeking to cultivate an additional five (5) acres of outdoor Cannabis canopy within the southern parcel (APN 010-055-26), containing approximately 10 acres of cultivation area within fenced enclosures.

The cultivation operation is designed to have minimal environmental impacts. No grading will be performed, and only light vegetation clearing is needed. Immature trees (under 4 inches in diameter) will be removed, but mature trees will not be removed. Cultivation will occur in individual grow bags filled with imported soil. The existing agricultural water system will be used to irrigate each fabric pot using drip lines. There one well and an 11,000-gallon cement cistern on the southern property. Poly water tanks, ranging from 500 to 5,000 gallons in size, will be used to store water and mix nutrients.

No permanent structures are planned at this time. Stormproof sheds will be used for chemical storage and equipment storage. The cultivation compound will have a quarantine area / administrative hold area, as required by CalCannabis: this will consist of secure sheds (approx. 10 by 12 feet in dimensions). Electrical power, to be used for lighting, electrical equipment, and surveillance, will be generated from a photovoltaic array with batteries. PG&E electrical service may also be extended on to the site. The cultivation compound will be surrounded with a 6-foot tall security fence. Privacy screening may be erected on the west side of the cultivation compounds to screen views from Highway 53, if required by the County.

For this assessment, the Project Area was defined as the Phase 2 cultivation area on the south parcel, 1270 State Highway 53 (APN 010-055-27). This 10-acre area was the subject of the botanical survey. The entire 106-acre property (both parcels) was defined as the Study Area. The Study Area is defined to identify biological resources adjacent to the Project Area, and is the area subject to potential indirect effects from Project implementation.

1.2. BIOLOGICAL SETTING

The Study Area is located within the Inner North Coast Ranges geographic subregion, which is contained within the Northwestern California geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately cold winters. The Study Area and vicinity are in climate Zone 7, California's Gray Pine Belt, with hot summers and mild but pronounced winters without severe winter cold or high humidity (Brenzel, 2012).

The Study Area was previously operated as a cattle ranch, but has now reverted to natural open space. A cattle-crossing under Highway 53 on the western boundary connects to an area that has largely been converted to vineyard. Aside from the existing water supply systems (wells, pumphouse, and cisterns), a fenced garden with raised beds (not currently in use), and dirt roads, the Study Area is undeveloped. The surrounding land uses are vineyard and highway transportation corridor to the west and southwest, and grazing and timberland and open space to the north, east, and south.

The topography of the study area is characterized as gently sloping hillside. The elevation ranges from approximately 1,480 feet to 1,680 feet above mean sea level. Drainages within the Study Area eventually merge and run southwest, emptying into Clear Lake. Clear Lake is the headwaters for Cache Creek, which flows east and eventually joins the Sacramento River.

2. METHODOLOGY

2.1. SURVEY PROTOCOLS AND GUIDELINES

This rare plant survey was also conducted in accordance with the standardized guidelines for rare plant surveys issued by the United States Fish and Wildlife Service (USFWS) (1996), California Department of Fish and Wildlife (CDFW) (2009), and the California Native Plant Society (CNPS) (2001). Survey methods consist of research of the existing distribution and studies of the target species, floristic field surveys, and habitat assessment. This field survey was performed during the blooming period of most of the target species.

2.2. PRELIMINARY DATA GATHERING AND RESEARCH

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

- Any readily-available previous botanical surveys or rare plant surveys pertaining to the Study Area or vicinity
 - None were found
- Aerial photography of the Study Area (current and historical)
- United States Geologic Service 7.5 degree-minute topographic quadrangles of the Study Area and vicinity
- USFWS National Wetland Inventory
- USDA Natural Resources Conservation Service soil survey maps
- California Natural Diversity Database (CNDDDB), electronically updated monthly by subscription
- CDFW's BIOS database
- USFWS species list (IPaC Trust Resources Report) (Information for Planning and Conservation website at <https://ecos.fws.gov/ipac/>).

2.3. FIELD SURVEY

The survey area was the entire Phase 2 cultivation compound area. The Phase 1 area was not surveyed because it is currently in intensive cultivation use. Botanist Tim Nosal, MS. conducted the botanical field survey on March 4, 2021. Weather conditions were warm and sunny. A complete coverage, variable-intensity pedestrian survey was performed, and modified to account for differences in terrain, vegetation density, and visibility. All plant taxa detected were recorded in a field notebook, and identified to the taxonomic level sufficient to determine if a species was rare or otherwise sensitive. Survey efforts emphasized the search for any special-status species that had documented occurrences in the CNDDDB within the vicinity of the Study Area and those species on the CNPS or USFWS species list.

When a specimen could not be identified in the field, a photograph or voucher specimen (depending upon permit requirements) was taken and identified in the laboratory using a dissecting scope where necessary. Dr. Graening holds the following scientific collection permits: CDFW Scientific Collecting Permit No. SC-006802; and CDFW Plant Voucher Specimen Permit 09004. Tim Nosal holds CDFW Plant Voucher Specimen Permit 2081(a)-16-102-V. Where needed, taxonomic determinations were facilitated by visiting reference sites, examining museum specimens, or by referencing texts, including:

Powell and Hogue (1979); Pavlik (1991); (1993); Brenzel (2012); Stuart and Sawyer (2001); Lanner (2002); Sibley (2003); Baldwin et al. (2012); Calflora (2020); CDFW (2020b,c); NatureServe 2020; and University of California at Berkeley (2020a,b).

2.4. MAPPING AND OTHER ANALYSES

The locations of any special-status plant populations or sensitive natural communities that were detected in the field were marked on aerial photographs and/or georeferenced with a geographic positioning system (GPS) receiver. Final mapping was performed using geographical information system software (ArcGIS, ESRI, Inc.).

Vegetation communities (assemblages of plant species growing in an area of similar biological and environmental factors), were classified by Vegetation Series (distinctive associations of plants, described by dominant species and particular environmental setting) using CDFW's VEGMAP or the CNPS Vegetation Classification system (Sawyer and Keeler-Wolf, 1995).

3. RESULTS OF DATABASE QUERIES

The CNDDDB was queried and any reported occurrences of special-status species were plotted in relation to the Study Area boundary using GIS software (see exhibits). The CNDDDB reported two special-status species occurrences within the Study Area, eel-grass pondweed (*Potamogeton zosteriformis*, California Native Plant Rank 2B.2) and bent-flowered fiddleneck (*Amsinckia lunaris*; California Native Plant Rank 1B.2). The eel-grass pondweed occurrence is an historical (1945) record from "Clear Lake near Wygal's Resort at south end of lake". The bent-flowered fiddleneck occurrence is based upon a 1938 collection by Alice Eastwood from "6 miles north of Lower Lake". The exact location of this occurrence is not known. The collection was mapped as a best guess by CNDDDB adjacent to the Study Area, along Highway 53 approximately 6 road miles north of Lower Lake.

Within a 10-mile buffer of the Study Area boundary, the CNDDDB reported several special-status plant species occurrences, summarized in the following table.

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

Common name Scientific Name	Status*	General habitat**	Microhabitat**
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	S3/1B.3	Cismontane woodland, valley and foothill grassland.	50-500m.
Konocti manzanita <i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	S3/1B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	Volcanic soils. 395-1615 m.
Raiche's manzanita <i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	S2/1B.1	Chaparral, lower montane coniferous forest.	Rocky, serpentine sites. Slopes and ridges. 450-1000 m.
Jepson's milk-vetch <i>Astragalus rattanii</i> var. <i>jepsonianus</i>	S3/1B.2	Cismontane woodland, valley and foothill grassland, chaparral.	Commonly on serpentine in grassland or openings in chaparral. 180-1000 m.
Big-scale balsamroot <i>Balsamorhiza macrolepis</i>	S2/1B.2	Chaparral, valley and foothill grassland, cismontane woodland.	Sometimes on serpentine. 90-1555 m.
Watershield <i>Brasenia schreberi</i>	S3/2B.3	Freshwater marshes and swamps.	Aquatic from water bodies both natural and artificial in California.
Indian Valley brodiaea <i>Brodiaea rosea</i>	CE/G2/S2	Strictly serpentine soils. Occurs usually in wetlands, occasionally in non-wetlands (Calflora 2019)	-
Three-fingered morning-glory <i>Calystegia collina</i> ssp. <i>tridactylosa</i>	S1/1B.2	Chaparral, cismontane woodland.	Rocky, gravelly openings in serpentine. 0-600 m.
Pink creamsacs <i>Castilleja rubicundula</i> var. <i>rubicundula</i>	S2/1B.2	Chaparral, meadows and seeps, valley and foothill grassland.	Openings in chaparral or grasslands. On serpentine. 20-900 m.
Pappose tarplant <i>Centromadia parryi</i> ssp. <i>parryi</i>	S2/1B.2	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland.	Vernally mesic, often alkaline sites. 2-420m.
Cascade downingia <i>Downingia willamettensis</i>	S2/2B.2	Community association: Yellow Pine Forest, Douglas-Fir Forest, Redwood Forest, wetland-riparian. Occurs in wetlands (Calflora 2019)	-
Brandegge's eriastrum <i>Eriastrum brandegeae</i>	S1/1B.1	Chaparral, cismontane woodland.	On barren volcanic soils; often in open areas. 425-840 m.
Tracy's eriastrum <i>Eriastrum tracyi</i>	CR/S3	Chaparral, cismontane woodland.	Gravelly shale or clay; often in open areas. 315-760 m.
Greene's narrow-leaved daisy <i>Erigeron greenei</i>	S3/1B.2	Chaparral.	Serpentine and volcanic substrates, generally in shrubby vegetation. 80-1005 m.
Snow Mountain buckwheat <i>Eriogonum nervulosum</i>	G2/S2/1B.2	Chaparral.	Dry serpentine outcrops, balds, and barrens. 300-2100 m.
Loch Lomond button-celery <i>Eryngium constancei</i>	FE/CE/G1/S1/1B.1	Vernal pools.	Volcanic ash flow vernal pools. 460-855 m.
San Joaquin spearscale <i>Extriplex joaquinana</i>	G2/S2/1B.2	Chenopod scrub, alkali meadow, playas, valley and foothill grassland.	In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> , etc. 1-835 m.
Adobe-lily <i>Fritillaria pluriflora</i>	G2G3/S2S3/1B.2	Chaparral, cismontane woodland, foothill grassland.	Usually on clay soils; sometimes serpentine. 60-705 m.
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	CE/G2/S2/1B.2	Marshes and swamps (freshwater), vernal pools.	Clay soils; usually in vernal pools, sometimes on lake margins. 10-2375 m.
Toren's grimmia <i>Grimmia torenii</i>	S2/1B.3	Cismontane woodland, lower montane coniferous forest, chaparral.	Openings, rocky, boulder and rock walls, carbonate, volcanic. 325-1160 m.
Hall's harmonia <i>Harmonia hallii</i>	1B.2	Chaparral.	Serpentine hills and ridges. Open, rocky areas within chaparral. 500-900 m.
Glandular western flax <i>Hesperolinon adenophyllum</i>	G2G3/S2S3/1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Serpentine soils; generally found in serpentine chaparral. 150-1315 m.
Two-carpellate western flax <i>Hesperolinon bicarpellatum</i>	G2/S2/1B.2	Serpentine chaparral.	Serpentine barrens at edge of chaparral. 60-1005 m.
Sharsmith's western flax <i>Hesperolinon sharsmithiae</i>	G2/S2/1B.2	Chaparral.	Serpentine substrates. 270-300 m.

Common name Scientific Name	Status*	General habitat**	Microhabitat**
Bolander's horkelia <i>Horkelia bolanderi</i>	G1/S1/1B.2	Yellow Pine Forest, Valley Grassland, wetland-riparian. Meadows, edges. Equally likely to occur in wetlands and non-wetlands (Calflora 2019)	-
California satintail <i>Imperata brevifolia</i>	S3/2B1	Coastal scrub, chaparral, riparian scrub, Mojavean scrub, meadows and seeps (alkali), riparian scrub.	Mesic sites, alkali seeps, riparian areas. 0-1215 m.
Burke's goldfields <i>Lasthenia burkei</i>	FE/CE/G1/S1/1B.1	Vernal pools, meadows and seeps.	Most often in vernal pools and swales. 15-600 m.
Colusa layia <i>Layia septentrionalis</i>	G2/S2/1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 145-1095m.
Legenere <i>Legenere limosa</i>	G2/S2/1B.2	Vernal pools.	In beds of vernal pools. 1-880 m.
Woolly meadowfoam <i>Limnanthes floccosa</i> ssp. <i>floccosa</i>	S3	Chaparral, cismontane woodland, valley and foothill grassland, vernal pools.	Vernally wet areas, ditches, and ponds. 60-1335 m.
Cobb Mountain lupine <i>Lupinus sericatus</i>	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, broadleaved upland forest.	In stands of knobcone pine-oak woodland, on open wooded slopes in gravelly soils; sometimes on serpentine. 275-1525 m.
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	S2/1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest.	Vernal pools and swales; adobe or alkaline soils. 5-1740 m.
Few-flowered navarretia <i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>	FE/CT/S1/1B.1	Vernal pools.	Volcanic ash flow, and volcanic substrate vernal pools. 400-855 m.
Many-flowered navarretia <i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	FE/CE/S1/1B.2	Vernal pools.	Volcanic ash flow vernal pools. 30-950 m.
Shining navarretia <i>Navarretia nigelliformis</i> ssp. <i>radians</i>	S2/1B.2	Cismontane woodland, valley and foothill grassland, vernal pools.	Apparently in grassland, and not necessarily in vernal pools. 200-1000m.
Eel-grass pondweed <i>Potamogeton zosteriformis</i>	S3/2B.2	Marshes and swamps.	Ponds, lakes, streams. 0-1860 m.
California alkali grass <i>Puccinellia simplex</i>	G3/S2/1B.2	Valley Grassland, wetland-riparian. Occurs usually in wetlands, occasionally in non-wetlands (Calflora 2019)	-
Lake County stonecrop <i>Sedella leiocarpa</i>	FE/CE/G1/S1/1B.1	Valley and foothill grassland, vernal pools, cismontane woodland.	Level areas that are seasonally wet and dry out in late spring; substrate usually of volcanic origin. 365-790 m.
Marsh checkerbloom <i>Sidalcea oregana</i> ssp. <i>hydrophila</i>	S1/1B.2	Meadows and seeps, riparian forest.	Wet soil of streambanks, meadows. 1100-2300 m.
Freed's jewelflower <i>Streptanthus brachiatus</i> ssp. <i>hoffmanii</i>	G2/S2/1B.2	Chaparral, cismontane woodland.	Serpentine rock outcrops, primarily in geothermal development areas. 490-1220 m.
Oval-leaved viburnum <i>Viburnum ellipticum</i>	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	215-1400 m.

*Definitions of Status Codes: FE = Federally listed as endangered; FT = Federally listed as threatened; FPE = Federally proposed for listing as endangered; FPT = Federally proposed for listing as threatened; FC = Candidate for Federal listing; CE = California State listed as endangered; CT = California State listed as threatened; CSSC = California species of special concern; CR = California rare species; CFP = California fully protected species; CNPS (California Native Plant Society) List 1A = Plants presumed extinct in California by CNPS; CNPS List 1B = CNPS designated rare or endangered plants in California and elsewhere; and CNPS List 2 = CNPS designated rare or endangered plants in California, but more common elsewhere. Global Ranking: G1 = Critically Imperiled; G2 = Imperiled; G3 = Vulnerable. State Ranking: S1 = Critically Imperiled; S2 = Imperiled; S3 = Vulnerable.

**Copied verbatim from CNDDDB, unless otherwise noted.

3.1. Sensitive Natural Communities

No critical habitat for any species listed under FESA occurs within the Study Area. No CNDDDB records for special-status habitats were detected within the Study Area; however, there are two Class II water courses, and a class III water courses noted during the site survey. Within a 10-mile radius of the Study Area, the CNDDDB reported the following special-status habitats: Great Valley Mixed Riparian Forest, Northern Basalt Flow Vernal Pool, Northern Volcanic Ash Vernal Pool, Northern Basalt Flow Vernal Pool, and Coastal and Valley Freshwater Marsh. The nearest special-status habitat in CNDDDB is Great Valley Riparian Forest, 3.85 miles to the northwest.

4. RESULTS OF FIELD SURVEY

4.1. INVENTORY OF FLORA FROM FIELD SURVEY

All plants detected during the botanical field survey of the Study Area are listed in the Appendix. During the field survey, one population of an unidentified species of *Amsinckia* was observed adjacent to the NW corner of the Project Area. Several species of *Amsinckia* are known to occur in the area, including the special status species bent-flowered fiddleneck (*Amsinckia lunaris* CNPS 1B.2). The phenology was early, with few species in bloom. However, *Amsinckia* basal leaves were visible on this date and the genus was easy to identify. Since no flowering specimens were located, positive identification was not possible.

4.2. VEGETATION COMMUNITIES

The Study Area contains the following terrestrial vegetation communities: ruderal/developed; non-native grassland, mixed oak / conifer woodland, chaparral, and blue oak woodland. These vegetation communities are discussed here and are delineated in the Exhibits. Aquatic vegetation communities are discussed in the section on jurisdictional waters.

Ruderal/Developed: These areas consist of disturbed or converted natural habitat that are now either in a ruderal (constantly disturbed) state, or urbanized with gravel roads, or structure and utility placement. These areas include roads and parking areas, residences, outbuildings, gardens, and lawn. Vegetation within this habitat type consists primarily of nonnative ornamental plants or invasive species lacking a consistent community structure.

Non-native Annual Grassland: The non-native grassland habitat is primarily comprised of non-native annual grasses and herbs. Plants common in this habitat type include Medusahead grass (*Elymus caput-medusae*), wand tarplant (*Holocarpha virgata*), slender wild oat (*Avena barbata*), soft chess (*Bromus hordeaceus*), clarkia (*Clarkia* sp.), winter vetch (*Vicia villosa*), spring vetch (*Vicia sativa*) and Italian ryegrass (*Festuca perennis*). Within the Study Area this community contained a high percentage of medusahead on the hillside along the southern boundary. Other areas contained small patches of native grasses, such as purple needle grass (*Stipa pulchra*). This vegetation can be classified as the Holland Type “Non-native Grassland,” and “42.020.03 *Elymus caput-medusae*” (CDFW 2020).

Mixed Oak / Conifer Woodland: The community contains a high diversity of tree species on north-facing slopes, including: blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), gray pine/foothill pine (*Pinus sabiniana*), black oak (*Quercus kelloggii*), madrone (*Arbutus menziesii*), ponderosa pine (*Pinus ponderosa*), valley oak (*Quercus lobata*), and coast live oak (*Quercus agrifolia*). Although the upper canopy is often fairly dense this community, open patches

can have an understory of chaparral or non-native grassland plants. This vegetation can be classified as the Holland Type “Gray Pine – Blue Oak Woodland,” and “71.020.18 *Quercus douglasii* – *Quercus wislizeni* – *Pinus sabiniana*” (CDFW 2020).

Chaparral: The community occurs in xeric, often south-facing slopes, as a successional stage between grasslands and tree dominated landscapes. It is often dominated by shrubs such as manzanita (*Arctostaphylos* spp.), chamise (*Adenostoma fasciculatum*), deerbrush and buckbrush (*Ceanothus* spp.), coyote brush (*Baccharis pilularis*), and toyon (*Heteromeles arbutifolia*). Poison-oak (*Toxicodendron diversilobum*) and yerba santa (*Eriodictyon californicum*) are also common.

Blue Oak Woodland: This vegetation community consists of scattered blue oak trees in from nearly closed-canopy to savanna-like conditions and is usually associated with shallow, rocky, infertile, well-drained soils. Blue oaks are often the only trees species present. The density of trees is related to availability of water. Although chaparral shrubs may be present, annual grasses and forbs dominate the understory. This vegetation can be classified as the Holland Type “Blue Oak Woodland,” and “71.020.00 Blue Oak Woodland” (CDFW 2020).

No sensitive vegetation communities were detected within the Project.

4.2.1. Potential for Special-status Species to Occur in the Project Area

Bent-flowered fiddleneck has a moderate to high potential to occur within the Project Area based upon a known nearby occurrence reported by CNDDB and the presence of suitable habitat (annual grassland). The basal leaves of an unidentified species of fiddleneck (*Amsinckia* sp.) were observed in the Study Area, adjacent the Project Area in the NW corner. This species was not in bloom at the time of the survey; however, the survey was conducted in March, which is at the beginning of the known blooming period (March-June). The genus *Amsinckia* was easy to identify in the field. No *Amsinckia* populations were detected in the Project Area. No other species of special status plant has a moderate to high potential to occur within the Project Area and adjacent Study Area.

5. IMPACT ANALYSES AND MITIGATION MEASURES

This section establishes the impact criteria, then analyzes potential Project-related impacts upon the known biological resources within the Study Area, and then suggests mitigation measures to reduce these impacts to a less-than-significant level.

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

An unidentified species of fiddleneck (*Amsinckia* sp.) was observed on the Property, adjacent to the NW corner of the Phase 2 Project Area. No other *Amsinckia* populations were detected. In lieu of additional surveys to confirm the identification of the fiddleneck, the population of unidentified species of fiddleneck will be considered to be a special status plant species. Due to the proximity of this fiddleneck population to the Project Area, this plant may be directly and indirectly impacted during installation and operations for the cannabis project.

This is a potentially significant impact before mitigation.

Recommended Mitigation Measures

Impacts to the unidentified species of fiddleneck will be avoided by creation of a 25-foot buffer around the population and moving the proposed boundary of the Phase 2 cultivation compound. With the implementation of this mitigation measure, adverse impacts upon special-status plant would be reduced to a less-than-significant level.

6. QUALIFICATIONS OF SURVEYORS

TIMOTHY R. D. NOSAL, M.S.

Timothy R. D. Nosal holds a B.S. and M.S. in Biological Sciences. Mr. Nosal has statewide experience performing sensitive plant and animal surveys in addition to terrestrial vegetation investigations. Mr. Nosal has over 25 years of experience in botanical surveys, environmental assessment and teaching with employers that include California Department of Fish and Wildlife, State Water Resources Control Board, American River College, MTI College and Pacific Municipal Consultants.

Mr. Nosal's experience with the flora of the Lake County region includes numerous botanical field surveys for associated Biological Studies on properties located in the county.

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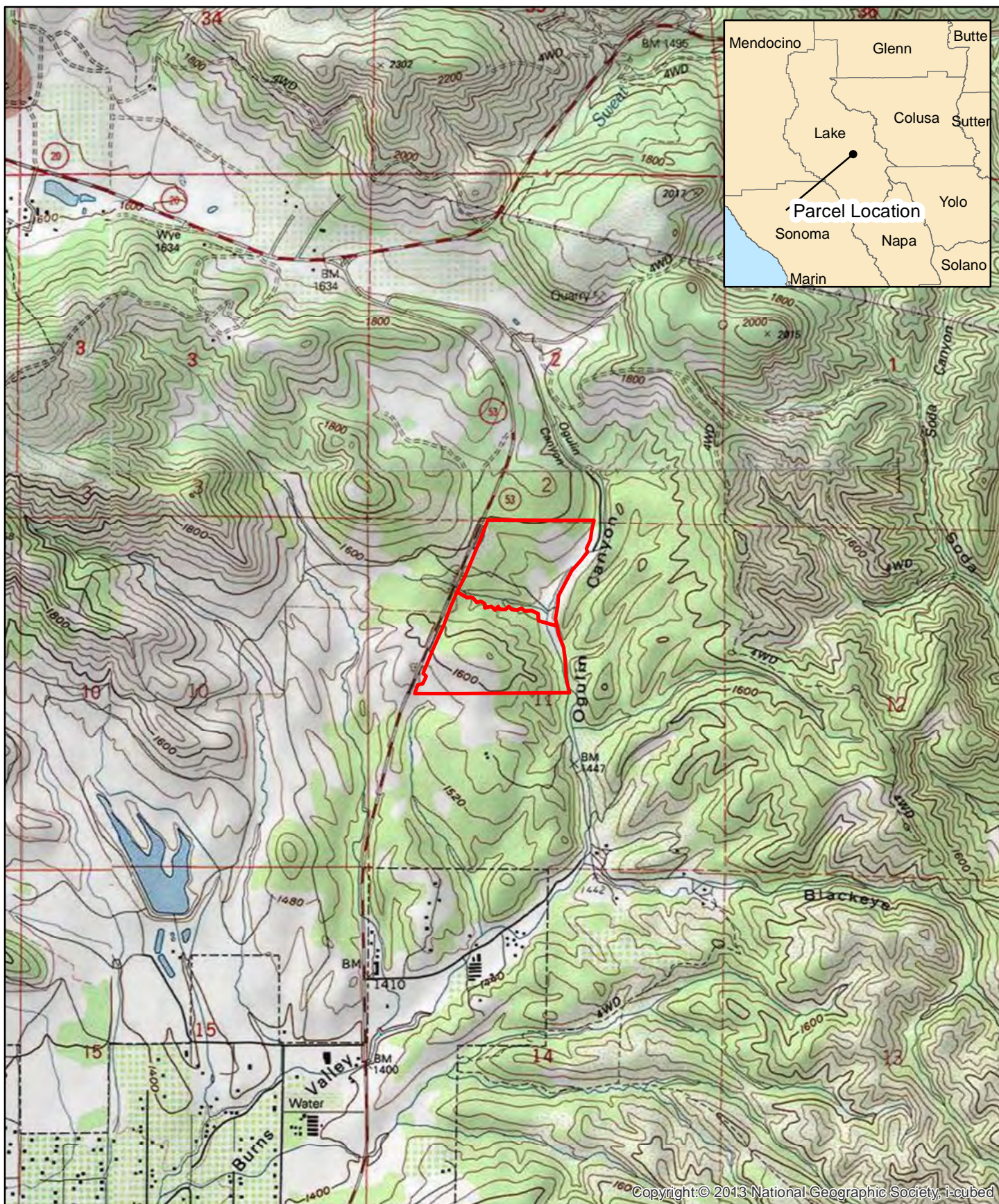
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EXHIBITS



Parcel Location

0

0.5

1

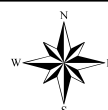
Kilometers

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0.5

1

Miles

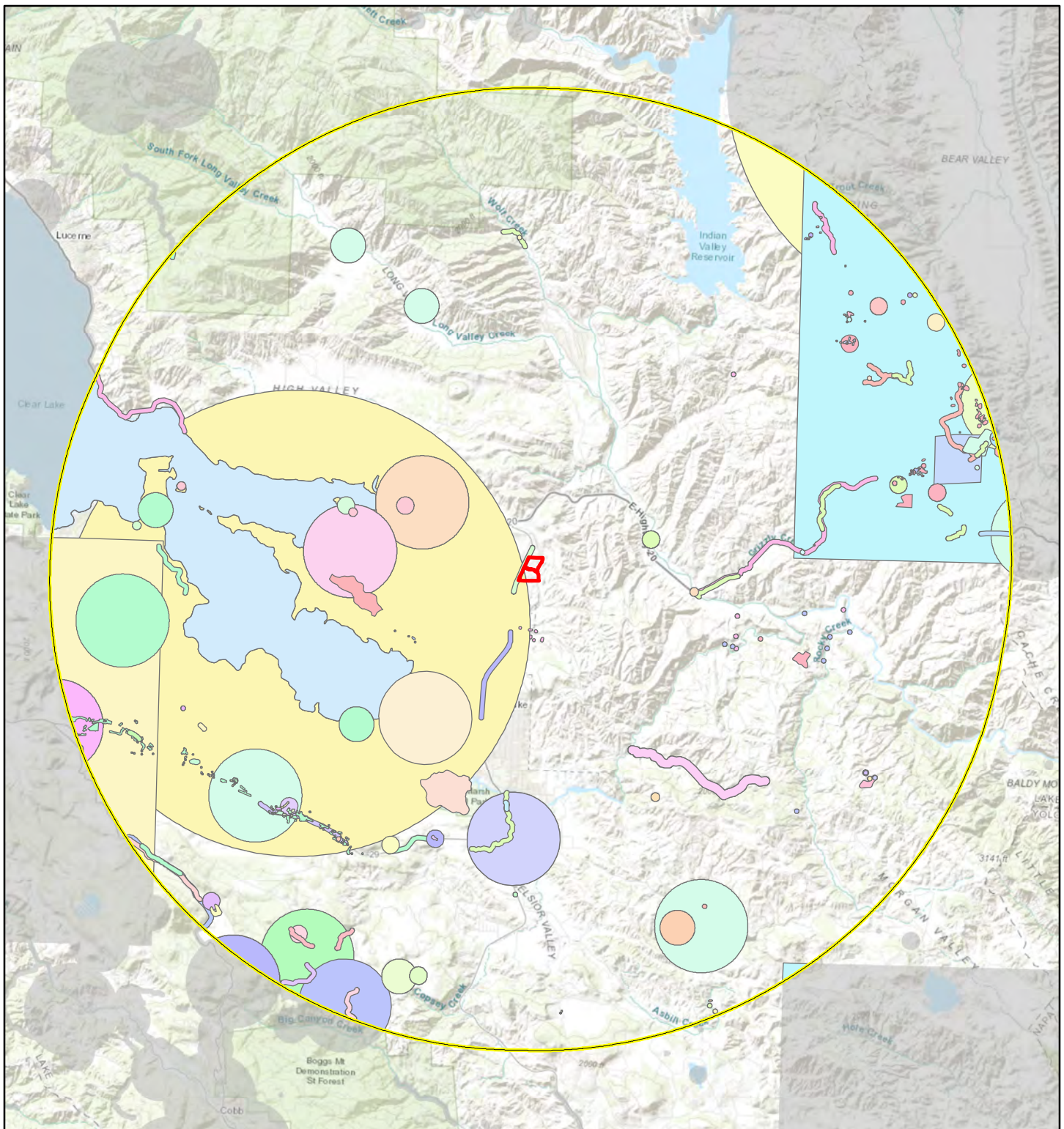


1:24,000

1000 & 1270 Highway 53
Project Location Map



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Project Location 10 Mile Buffer

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



Notes:

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

Special-Status Species Occurrences Map

1000 & 1270 Highway 53

Lower Lake 1993 Quadrangle: Township 13N, Range 7W, Section 11



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Survey Area

Amsinckia sp.

Survey Area

Google Earth

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215B

1000 ft



APPENDIX: CHECKLIST OF PLANTS DETECTED IN THE STUDY AREA

Appendix 2:

Plants Observed at 1000 & 1270 Ogulin Canyon Road, Clearlake on March 4, 2021

Common Name	Scientific Name
Mountain dandelion	<i>Agoseris sp.</i>
Fiddleneck	<i>Amsinckia sp.</i>
Slender wild oat	<i>Avena barbata</i>
Brodiaea	<i>Brodiaea sp.</i>
Soft chess	<i>Bromus hordeaceus</i>
Calochortus	<i>Calochortus sp.</i>
Western bittercress	<i>Cardamine oligosperma</i>
Italian thistle	<i>Carduus pycnocephalus</i>
Maltese star thistle	<i>Centaurea melitensis</i>
Wavy leaf soap plant	<i>Chlorogalum pomeridianum</i>
Clarkia	<i>Clarkia sp.</i>
Narrow leaved miner's lettuce	<i>Claytonia parviflora ssp. parviflora</i>
Dogtail grass	<i>Cynosurus echinoides</i>
Larkspur	<i>Delphinium sp.</i>
Blue dicks	<i>Dichelostemma capitatum</i>
Medusa-head grass	<i>Elymus caput-medusae</i>
Tall willowherb	<i>Epilobium brachycarpum</i>
Broadleaf filaree	<i>Erodium botrys</i>
Red-stemmed filaree	<i>Erodium cicutarium</i>
Bedstraw	<i>Galium sp.</i>
Cutleaf geranium	<i>Geranium dissectum</i>
Dove's foot geranium	<i>Geranium molle</i>
Wand tarplant	<i>Holocarpha virgata</i>
Lupine	<i>Lupinus sp.</i>
Common madia	<i>Madia elegans</i>
Tarplant	<i>Madia sp.</i>
Slender cottonweed	<i>Micropus californicus</i>
Slender phlox	<i>Microsteris gracilis</i>
Navarretia	<i>Navarretia sp.</i>
American mistletoe	<i>Phoradendron leucarpum</i>
Popcornflower	<i>Plagiobothrys sp.</i>
Blue oak	<i>Quercus douglasii</i>
Western buttercup	<i>Ranunculus occidentalis</i>
Poison sanicle	<i>Sanicula bipinnata</i>
Purple sanicle	<i>Sanicula bipinnatifida</i>
Pacific sanicle	<i>Sanicula crassicaulis</i>
Old man of spring	<i>Senecio vulgare</i>
Sidalcea	<i>Sidalcea sp.</i>
Hedge mustard	<i>Sisymbrium officinale</i>
Chickweed	<i>Stellaria media</i>

Common Name	Scientific Name
Purple needlegrass	<i>Stipa pulchra</i>
Showy fringepod	<i>Thysanocarpus radians</i>
Clover	<i>Trifolium sp.</i>
Triplet lily	<i>Triteleia sp.</i>
Winter vetch	<i>Vicia villosa</i>