Biological Resource Survey

Girard Winery

1077 Dunaweal Lane
APN# 020-150-017
Calistoga, CA

Prepared
For

Girard Winery

By
Kjeldsen Biological Consulting
923 St. Helena Ave.
Santa Rosa, CA 95404

July 2014

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PROJECT NAME: Girard Winery
1077 Dunaweal Ln.
Calistoga, CA
Use Permit Application
APN 022-150-017

CIVIL ENGINEER: Always Engineering, Inc.
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PERIOD OF STUDY: March –July 2014

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Executive Summary

This study was conducted at the request of Heather McCollister, on behalf of the property owners, as background information for project permits from the Napa County Conservation, Development and Planning Department.

The project proposes a winery, access road, landscaping, parking areas, primary and reserve treated sanitary subsurface drip septic area and associated infrastructure. The property is approximately 26.53 acres. The total disturbed area of the project is 3.59 acres. The entire project is within a disturbed environment. The property is in Napa County located at 1077 Dunaweal Lane east of the city of Calistoga. The property is within the USGS Calistoga Quadrangle.

The purpose of this report is to identify biological resources that may be affected by the proposed project. The fieldwork studied the proposed project envelope, the property and adjoining environment. The findings presented below are the results of fieldwork conducted during the spring and summer of 2014 by Kjeldsen Biological Consulting:

- The project footprint is within a developed landscape. The winery is proposed for an area that was a vineyard that has been removed and prepped for replanting;
- The project as proposed will not have any direct impacts to Federal or State protected wetlands as defined by Section 404 of the Clean Water Act;
- The proposed project will not significantly reduce habitat for or have the potential to negatively impact any special-status plants or animals;
- No sensitive plants, sensitive plant habitat, or special-status plant species was identified on the property. We find that it is unlikely that the proposed project would impact any of the special-status plants known for the Quadrangle or the region based on our fieldwork, the habitat present and historic use within and associated with the project footprint:
- No sensitive animals, sensitive wildlife habitat, or special-status animal species was identified on the project site. We find that it is unlikely that the proposed project would impact any of the special-status animals known for the Quadrangle or the region based on our fieldwork, the habitat present and historic use within and associated with the project footprint:

- One juvenile Northwestern Pond Turtle was observed on the bank of the existing reservoir. There is no potential impact to this species associated with the project.
- No raptor activity or nests were observed on or near the proposed project site;
- No wildlife corridors will be impacted by the proposed project;
- There are no indications of the presence of Sensitive Natural Communities regulated by the California Department of Fish and Wildlife or US Fish and Wildlife within or directly associated with the project footprint;
- No native trees will be removed by the proposed project;
- The footprint of the project will not significantly contribute to habitat loss or habitat fragmentation; and
- The flora and fauna observed on and near the site are included as an Appendix.

Assessment of Impacts

The project is within a developed landscape that has been in agriculture for decades. The property and project site conditions are such that there is no reason to expect any impacts to special-status species on site or off site provided Best Management Practices are implemented.

Recommendations

The following recommended measures are presented to reduce potential biological impacts by the proposed project to a less than significant level pursuant to the California Environmental Quality Act.

Best Management Practices including silt and erosion control measures must be implemented to prevent off-site movement of sediment and dust during and post construction.

Biological Resource Survey
Girard Winery
1077 Dunaweal Lane
Calistoga, CA

A PROJECT DESCRIPTION

This study was conducted at the request of Heather McCollister on behalf the property owner. This study and report are provided as background information necessary for securing permits from Napa County Conservation, Development and Planning Department for the proposed project.

A.1 Introduction

The project proposes a winery, access road, landscaping, parking areas, primary and reserve treated sanitary subsurface drip septic area and associated infrastructure. The property is approximately 26.53 acres. The total disturbed area of the project is 3.59 acres. The entire project is within a disturbed environment.

The property is in Napa County located at 1077 Dunaweal Lane east of the city of Calistoga. The property is within the USGS Calistoga Quadrangle. Plate I provides a site and location map of the property. Plate III provides an aerial photograph of the property. The attached Site Plan prepared by Always Engineering, Inc. Civil Engineering and Topographic Surveying illustrates the project (2/4/2014).

A.2 Background

The surrounding land use consists of vineyards, residences, winery, and oak woodlands. The property is a rectangular shaped parcel within the Napa Valley floor. The parcel at present consists of a fallow field from which vineyard has been removed, reservoir, agricultural storage building, process wastewater ponds and associated infrastructure.

A.3 Purpose

The purpose of this report is to identify biological resources that may be affected by the proposed project as listed below:

- To determine the presence of potential habitat for special-status species which would be impacted by the proposed project, including habitat types which may have the potential for supporting special-status species (target species that are known for the region, habitat, the Quadrangle and surrounding Quadrangles);
- To identify and assess potential impacts to Federal or State protected wetlands as defined by Section 404 of the Clean Water Act; and

- To determine if the project will substantially interfere with native wildlife species, wildlife corridors, and or native wildlife nursery sites;
- Identify any State or Federal biological permits required by the proposed project; and
- Recommend measures to reduce biological impacts to a less than significant level pursuant to the California Environmental Quality Act (CEQA).

A.4 Definitions

Definitions used in this report are attached in Appendix B.

B SURVEY METHODOLOGY

The purpose of the spring-summer floristic survey is to provide a faunal and floristic study of the project site with emphasis on any special-status animals, plants, unique plant populations and or critical habitat associated with the proposed project. The project scoping determined the extent of our surveys which ranged from March to July 2014.

B.1 Project Scoping

The scoping for the project considered seasonal fieldwork, location and type of habitat and or vegetation types present on the property or associated with potential special-status plant species known for the Quadrangles, surrounding Quadrangles the County or the region. Our scoping also considered records in the most recent version of the Department of Fish and Wildlife California Natural Diversity Data Base (DFW CNDDB Rare Find-3) and the California Native Plant Society (CNPS) Electronic Inventory of Rare or Endangered Plants. "Target" special-status species are those listed by the State, the Federal Government or the California Native Plant Society or considered threatened in the region. Our scoping is also a function of our familiarity with the local flora and fauna as well as previous projects on other properties in the area.

Section 15380 of the California Environmental Quality Act [CEQA (September, 1983)] has a discussion regarding non-listed (State) taxa. This section states that a plant (or animal) must be treated as Rare or Endangered even if it is not officially listed as such. If a person (or organization) provides information showing that a taxa meets the State's definitions and criteria, then the taxa should be treated as such.

Tables II and III present DFW CNDDB Rare Find species and U.S. Fish and Wildlife Service listed species for the Quadrangle and surrounding Quadrangles.

B.2 Field Survey Methodology

Our studies were made by walking transects through and around the project site. Our fieldwork focused on locating suitable habitat for organisms or indications that such habitat exists on the site. Digital photographs were taken during our studies to document conditions and selected photographs are included within this report. A floristic and seasonally appropriate survey was conducted in the field at the time of year when rare, threatened, or endangered species are both evident and identifiable for all the species expected to occur within the Study Area.

Plants Field surveys were conducted recording identifying all species on the site and in the near proximity. Transects through the proposed project sites were made methodically by foot. Transects were established and scrutinized to cover topographic and vegetation variations within the study area. The Intuitive Controlled approach calls for the qualified surveyor to conduct a survey of the area by walking through it and around its perimeters, and closely examining portions where target species are especially likely to occur. The open nature of the site, historic and on going agricultural practices, and small size of the proposed development footprint

facilitated our field studies. All plant life was recorded in field notes and is presented in Appendix A

The fieldwork for identifying special-status plant species is based on our knowledge and many years of experience in conducting special-status plant species surveys in the region. Plants were identified in the field or reference material was collected, when necessary, for verification using laboratory examination with a binocular microscope and reference materials. Herbarium specimens from plants collected on the project site were made when relevant. Voucher material for selected individuals is in the possession of the authors. All plants observed (living and/or remains from last season's growth) were recorded in field notes.

Typically, blooming examples are required for identification however; it is not the only method for identifying the presence of or excluding the possibility of rare plants. Vegetative morphology and dried flower or fruit morphology, which may persist long after the blooming period, may also be used. Skeletal remains from previous season's growth can also be used for identification. Some species do not flower each year or only flower at maturity and therefore must be identified from vegetative characteristics. Algae, fungi, mosses, lichens, ferns, Lycophyta and Sphenophyta have no flowers and there are representatives from these groups that are now considered to be special-status species, which require non-blooming identification. For some plants unique features such as the aromatic oils present are key indicator. For some trees and shrubs with unique vegetative characteristics flowering is not needed for proper identification. The vegetative evaluation as a function of field experience can be used to identify species outside of the blooming period to verify or exclude the possibility of special-status plants in a study area.

Habitat is also a key characteristic for consideration of special-status species in a study area. Many special-status species are rare in nature because of their specific and often very narrow habitat or environmental requirements. Their presence is limited by specific environmental conditions such as: hydrology, microclimate, soils, nutrients, interspecific and intraspecific competition, and aspect or exposure. In some situations special-status species particularly annuals may not be present each year and in this case one has to rely on skeletal material from previous years. A site evaluation based on habitat or environmental conditions is therefore a reliable method for including or excluding the possibility of special-status species in an area.

Animals were identified in the field by their sight, sign, or call. Our field techniques consisted of surveying the area with binoculars and walking the perimeter of the project site. Existing site conditions were used to identify habitat, which could potentially support special-status animal species. All animal life was recorded in field notes and is presented in Appendix A.

Trees were surveyed to determine whether occupied raptor nests were present within the proximity of the project site (i.e., within a minimum 500 feet of the areas to be disturbed). Surveys consisted of scanning the trees on the property (500 ft +) with binoculars searching for nest or bird activity. Our search was conducted from the property and by walking under existing trees looking for droppings or nest scatter from nests that may be present that were not observable by binoculars.

Aerial photos were reviewed to look at the habitat surrounding the site and the potential for wildlife movement, or wildlife corridors from adjoining properties onto or through the site.

Wetlands The project site was reviewed to determine from existing environmental conditions with a combination of vegetation, soils, and hydrologic information if seasonal wetlands were present. Wetlands were evaluated using the ACOE's three-parameter approach: Vegetation, Hydrology, and Soils.

Tributaries to Waters of the US are determined by the evaluation of continuity and "ordinary high water mark." The ordinary high water mark is determined based on the top of scour marks and high flow impacts on vegetation.

The area surveyed is shown on Plate III.

Table I. Time and Date of Field Work for Spring and Summer 2014

Date	Personnel	Person-hr.	Time	Conditions
March 13, 2014	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	11:15 to 12:15	Clear, clear cool temperatures.
April 25, 2014	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	11:00 to 12:00	Overcast, no wind, with mild temperatures.
May 8, 2014	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	12:00 to 13:00	Clear, windy with warm temperatures.
July 22, 2014	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	13:00 to 14:00	Clear, no wind, with warm temperatures.

C RESULTS / FINDINGS

C.1 Biological Setting

The study site is located in Napa County within the upper Napa Valley. The parcel drains by direct infiltration or sheet flow into roadside ditches and unnamed tributaries of the Napa River. The proposed winery and support facilities are within a developed landscape (hardscape) and the wastewater disposal system is to be located within fallow agricultural lands (vineyard has been removed) (see Plate I for Location). Figures 1 to 5 illustrate the site conditions.

The property is within the inner North Coast Range Mountains, a geographic subdivision of the larger California Floristic Province (Hickman, 1993). The property and surrounding region is strongly influenced storms and fog from the Pacific Ocean. The region is in climate Zone 14 "Ocean influenced Northern and Central California" characterized as an inland area with ocean or cold air influence. The climate of the region is characterized by hot, dry summers and cool, wet winters, with precipitation that varies regionally from less than 30 to more than 60 inches per year. This climate regime is referred to as a "Mediterranean Climate." The average annual temperature ranges from 45 to 90 degrees Fahrenheit. The variations of abiotic conditions including geology results in a high level of biological diversity per unit area in the region.

Our survey focused on the areas proposed project footprint, irrigation wastewater site, and immediate surrounding habitat. The aerial photo illustrates the site (Plate III) and the photographs that follow further document existing conditions of the project sites.

C.2 Habitat Types Present

The vegetation of California has been considered to be a mosaic with major changes present from one area to another often with distinct vegetation changes within short distances. It is generally convenient to refer to the vegetation associates on a site as a plant community or alliance. Typically plant communities or vegetation alliances are identified or characterized by the dominant vegetation form or plant species present. There have been numerous community classification schemes proposed by different authors using different systems for the classification of vegetation. A basic premise for the designation of plant communities, associations or alliances is that in nature there are distinct plant populations occupying a site that are stable at any one time (climax community is a biotic association, that in the absence of disturbance maintains a stable assemblage over long periods of time).

In general terminology one would refer to the habitat on the property as Ruderal Grassland (agricultural land that has been routinely maintained), and hardscape with some landscape plantings. The dominant land cover types on the project site consist of non-native weeds. In the sections below the habitat types present are described and further categorized with the new system of vegetation classification by Sawyer *et al* A Manual of California Vegetation Second Edition. Sawyer classifies the vegetation on the property as Grassland Semi-natural Stands with Herbaceous Layer Sawyer does not classify hardscape or landscape plantings. This classification is the presently preferred system that over time will replace existing classification systems.

Annual Semi-Natural Herbaceous Grassland Stands present as "weeds" within the agricultural lands of the property (this area can also be classified as "ruderal habitat" which reflects the abundance of non-native annuals as a result of the agricultural disturbance.

Ruderal-Grassland Semi-Natural Herbaceous Stands with Herbaceous Layer (Annual Grasslands)

Semi-Natural Herbaceous Grasslands are a result of decades of agriculture and the introduction of non-native grasses and herbs. Sawyer uses the term "Semi-natural Stands to refer to non-native introduced plants that have become established and coexist with native species. This includes what can be termed weeds, aliens, exotics or invasive plants in agricultural and nonagricultural settings. The Semi-natural Herbaceous Stands cannot be mapped due to the small size but if one searches the site one can find small patches of the following;

Avena ssp. Semi-natural Herbaceous Stand, Wild oats grasslands. The membership rules require *Avena ssp*. to be> 50% relative cover of the herbaceous layer. Semi-natural stands are those dominated by non-native species that have become naturalized primarily as a result of historic agricultural practices and fire suppression or management practices for weed abatement and fire suppression.

Bromus diandrus Semi-Natural Herbaceous Stands Annual brome grassland; (Membership Rules *Bromus diandrus >60%* relative cover with other non-natives in the herbaceous layer). *Bromus diandrus* is dominant or co-dominant with non-native in the herbaceous layer. Emergent trees and shrubs may be present at low cover Herbs<75 cm tall are intermittent to continuous. Ripgut brome is an annual grass from Eurasia. This alliance accounts for the largest acreage of grassland vegetation in cismontane California. Stands in our area contain *Aria caryophylla, Cynosurus echinatus, Dichelostemma multiflorum, Erodium botrys, Limnanthes douglasii, Taeniantherum caput-medusae*, and *Baccharis pilularis* shrubs.

Lolium perenne Semi-Natural Herbaceous Stands Perennial Rye Grass Field; (Membership Rules *Lolium perenne*> %50 relative cover, native plants< 15% relative cover). *Lolium perenne* is a non-native grass from Europe introduced into temperate regions throughout the world. It is an annual or a perennial, cool-season bunch grass.

Wildlife Associated with Semi-natural Grasslands

Semi-natural Grasslands with Herbaceous Layer (annual ruderal non-native grasslands) within the study area provide habitat for a variety of birds and Mammals. The vegetation present provides browse for deer (*Odocoileus hemionus*), cover and foraging habitat for mice and voles (*Peromyscus* ssp., *Reithrodontomys* ssp., *Microtus* ssp.), habitat for Pocket Gophers *Thomomys bottae),* foraging habitat for Broad-footed Moles (*Scapanus latimanus*), foraging and habitat for shrews, and cover and foraging habitat for Black-tailed Jackrabbit (*Lepus californicus)*. Numerous bird species forage for insects and seeds in these grasslands. Bats will forage for insects over this area and raptors will feed on reptiles and mammals in this type of vegetation cover. In general, however, the non-native annual grasslands, such as are present on the study site, are not an optimum habitat for wildlife.

Developed Hardscape with Landscape Plantings

This occupies a portion of the property and is visible on the aerial photograph. It consists of agricultural buildings, access roads, parking area, reservoir and process water treatment ponds not part of this project.

Figure 1. Fallow vineyard that has been disked. Proposed Winery Site.

Figure 2. View of proposed winery site.

Figure 3. View of Dunaweal Lane and the location of proposed winery entrance.

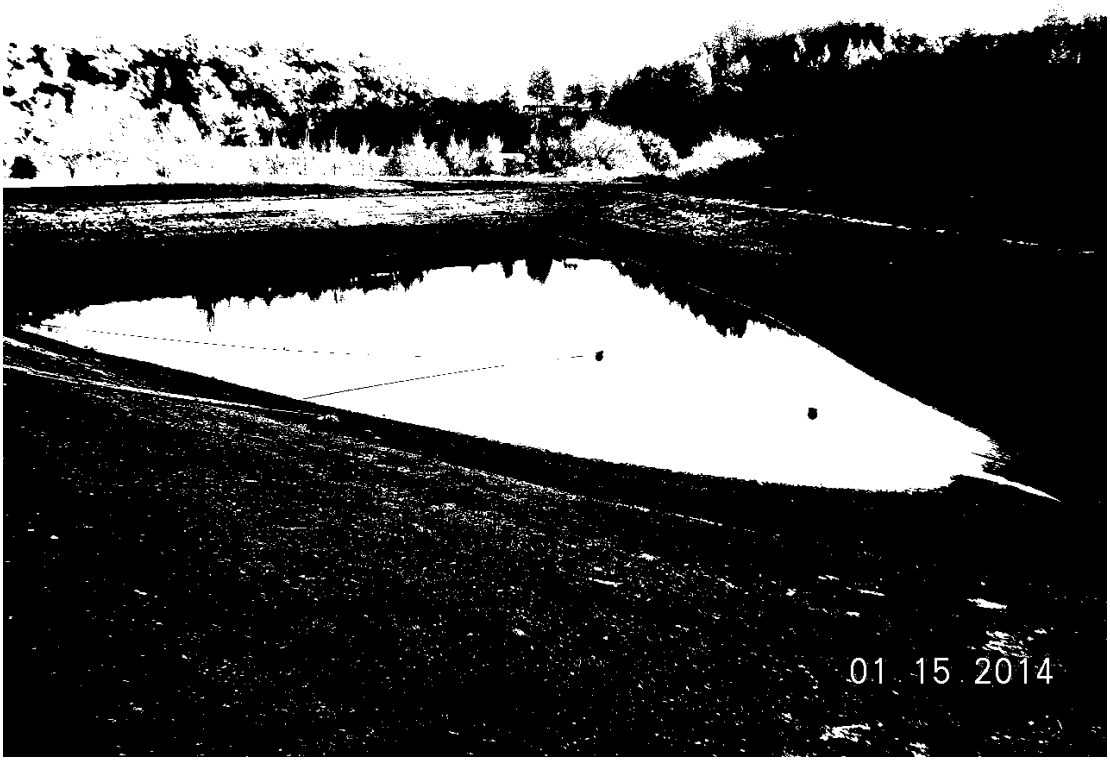

Figure 4. Existing vineyard reservoir. Pond turtle observed.

Figure 5. Created drainage swale adjacent to the waste water ponds.

The aerial photograph, Plate III illustrates the site and the surrounding environment. The environmental setting of the project site consists of:

- On the north side of the project – Vineyard, Rural Residential;
- On the east side of the project – Rural Residential and Riparian Corridor of Napa River;
- On the south side of the project – Vineyards; and
- On the west side of the project - State Highway 29.

The dominant land cover types in the vicinity of the property consist of vineyards followed by riparian corridor and on the edge of the valley floor, and Conifer Oak Woodland (Forest or Woodland Alliance)

Drainage on the site is by sheet flow into seasonal unnamed tributaries of the Napa River, and thence San Pablo Bay.

Napa County Definition for a Defined Drainages is a watercourse designated by a solid line or dash and three dots symbol on the largest scale of the United States Geological Survey maps most recently published, or any replacement to that symbol, and or any watercourse which has a well-defined channel with a depth greater that four feet and banks steeper that 3:1 and contains hydrophilic vegetation, riparian vegetation or woody-vegetation including tree species greater that ten feet in height.

There is a created drainage swale adjacent to the eastern property line. This swale would be not be considered a Napa County Defined Drainages. There are no direct impacts to this drainage associated with the proposed winery site or wastewater irrigation area.

C.3 Special-Status Species

Special-status organisms are plants or animals that have been designated by Federal or State agencies as rare, endangered, or threatened. Section 15380 of the California Environmental Quality Act [CEQA (September, 1983)] has a discussion regarding non-listed (State) taxa. This section states that a plant (or animal) must be treated as Rare or Endangered even if it is not officially listed as such. If a person (or organization) provides information showing that a taxa meets the State's definitions and criteria, then the taxa should be treated as such.

A map from the DFW CNDDB Rare Find shows known special-status species in the proximity of the project as shown on Plate II. These taxa as well as those listed in Appendix C Special-status Species known for the Quadrangle and Surrounding Quadrangles were considered and reviewed as part of our scoping for the project site and property. Reference sites were reviewed as part of our scoping for some of the species.

Tables II and III below provides a list of species that are known to occur DFW CNDDB Rare Find search) and U.S Fish and Wildlife Service. The table includes an analysis / justification for concluding absence.

Table II. Analysis of DFW CNDDB and USFWS special-status plant species from the region. Columns are arranged alphabetically by scientific name.

Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat present on Project Site**	**Bloom Time**	**Obs. on or Near Site**	**Analysis of habitat on project site for presence or absence.**
Allium peninsulare var. *franciscanum* Franciscan onion	Cismontane woodland, Valley & Foothill Grassland/Clay often Serpentinite	No	May-June	No	Absence of requisite edaphic conditions. Historic use precludes presence.
Amorpha californica var. *napensis* Napa False Indigo	Cismontane Woodland	No	April-July	No	Requisite habitat, exposure and historic land use preclude presence on project site.
Amsinkia lunularis Bent-flowered Fiddleneck	Cismontane Woodland, Valley & Foothill Grassland, 3 to 500 M	No	March-June	No	Potential for project site. No indications for presence during our fieldwork. Historic use precludes presence.
Arctostaphylos stanfordiana ssp. *decumbans* Rincon Manzanita	Chaparral, Lower Montane Coniferous Forest (openings), Rocky, often Serpentinite	No	Feb.-April	No	Absence of requisite habitat and vegetation associates on the site or in the immediate vicinity.
Astragalus claranus Clara Hunt's Milk-vetch	Chaparral, Cismontane Woodland, Valley and Foothill Grassland	No	March-May	No	Absence of requisite micro-habitat, vegetation associates and historic land use precludes presence. Lack of finding during our fieldwork.
Astragalus rattanii var. *jepsonianus* Jepson's Milk-vetch	Cismontane Woodland, Valley & Foothill Grassland	No	April-June	No	Requisite habitat absent on the site or in the immediate vicinity. Historic use precludes presence.

Table II Continued Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat present on Project Site**	**Bloom Time**	**Obs. on or Near Site**	**Analysis of habitat on project site for presence or absence**
Balsamorhiza macrolepis var. *macrolepis* Big-scale Balsamroot	Chaparral, Cismontane Woodland, Valley & Foothill Grassland	No	March-June	No	Historic use of site precludes presence.
Blennosperma bakeri Sonoma Sunshine	Valley & Foothill Grassland, Vernal Pools	No	March-May	No	Absence of requisite mesic habitat.
Brodiaea leptandra Narrow-anthered California Brodiaea	Cismontane Woodland	No	May-June	No	Requisite habitat, exposure and historic land use preclude presence on project site.
Ceanothus confusus Rincon Ridge Ceanothus	Closed Cone Conifer Forests, Chaparral	No	Feb.-April	No	Absence of typical habitat and vegetation associates.
Ceanothus divergens Calistoga Ceanothus	Chaparral, Serpentinite or Volcanic-Rocky.	No	May-Sept.	No	Absence of typical habitat and vegetation associates. Lack of finding during our fieldwork.
Ceanothus purpureus Holly-leaved Ceanothus	Chaparral	No	March-May	No	Absence of typical habitat and vegetation associates. Lack of finding during our fieldwork.
Centromadia parryi ssp. *parryi* Pappose Tarplant	Grassland Salt or Alkaline Marshes	No	March-June	No	Requisite mesic conditions absent. Lack of finding during our fieldwork.
Eryngium constancei Loch Lomond Button-celery	Vernal Pools	No	April-June	No	Absence of mesic conditions required for presence. Lack of finding during our fieldwork.

Table II Continued Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat present on Project Site**	**Bloom Time**	**Obs. on or Near Site**	**Analysis of habitat on project site for presence or absence**
Downingia pusilla Dwarf Downingia	Wetlands	No	March May	No	Requisite aquatic habitat absent on the site or in the immediate vicinity.
Fritillaria liliacea Fragrant Fritillary	Open Grasslands	No	Feb.-April	No	Absence of edaphic conditions required for presence.
Hemizonia congesta ssp. *congesta* White Seaside Tarplant	Coastal Scrub, Valley & Foothill Grassland	No	April Oct.	No	Absence of requisite habitat. Historic use precludes presence.
Juncus luciensis Santa Lucia Dwarf Rush	Seeps, Meadows, Vernal Pools, Stream Sides	No	April-June	No	Absence of requisite mesic habitat.
Lasthenia burkei Burke's Goldfields	Vernal Pools	No	April – June	No	Requisite aquatic habitat absent on the site or in the immediate vicinity.
Layia septentrionalis Colusa Layia	Cismontane Woodland, Valley and Foothill Grassland, Serpentinite	No	April-May	No	Historic agricultural use and hardscape as well as absence of requisite edaphic conditions preclude presence.
Leptosiphon jepsonii Jepson's Leptosiphon	Chaparral, Cismontane Woodland, Valley and Foothill Grassland	No	April-May	No	Requisite habitat absent on the site or in the immediate vicinity. Lack of finding during our fieldwork.
Limnanthes floccosea ssp. *floccosa* Woolly Meadowfoam	Meadows & Seeps, Valley & Foothill Grassland, Cismontane Woodland, Vernal Pools.	No	April-May	No	Requisite mesic habitat absent on the site or in the immediate vicinity.

Table II Continued Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat present on Project Site**	**Bloom Time**	**Obs. on or Near Site**	**Analysis of habitat on project site for presence or absence**
Limnanthes vinculans Sebastopol Meadowfoam	Meadows and Seeps, Valley and Foothill Grassland, Vernal Pools.	No	April-May	No	Requisite mesic habitat absent on the site or in the immediate vicinity.
Lupinus sericatus Cobb Mountain Lupine	Broadleaved Upland Forest, Chaparral, Cismontane Woodland	No	March-June	No	Absence of requisite vegetation associates as well as historical use of project site precludes presence. Lack of finding during our fieldwork.
Microsris paludosa Marsh Microseris	Moist areas Closed Cone Conifer Forests, Cismontane Woodland, Valley & Foothill Grassland	No	April-June	No	Absence of typical habitat and vegetation associates. Historic use precludes presence.
Navarretia leucocephala ssp. *bakeri* Baker's Navarretia	Meadows and Seeps, Cismontane Woodland, Valley and Foothill Grassland, Vernal Pools	No	May-July	No	Absence of typical habitat and vegetation associates. Historic use precludes presence..
Penstemon newberryi var. *sonomensis* Sonoma Beardtongue	Cismontane Woodland	No	April-Aug.	No	Absence of typical habitat and vegetation associates.
Plagiobothrys strictus Calistoga Popcorn-flower	Vernal pools near thermal springs	No	March-June	No	Requisite mesic habitat absent on the site or in the immediate vicinity.
Poa napensis Napa Blue Grass	Meadows near Hot Springs	No	May-Aug.	No	Requisite mesic habitat absent on the site or in the immediate vicinity. Lack of finding during our fieldwork.

Table II Continued Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat present on Project Site**	**Bloom Time**	**Obs. on or Near Site**	**Analysis of habitat on project site for presence or absence**
Sidalcea hickmanii ssp. *napensis* Napa Checkerbloom	Chaparral Serpentinite	No	May-June	No	Absence of typical habitat and vegetation associates. Lack of finding during our fieldwork.
Sidalcea oregana ssp. *hydrophila* Marsh Checkerbloom	Meadows and seeps, Riparian scrub mesic	No	June-Aug.	No	Requisite mesic habitat absent.
Trifolium amoenum Showy Rancheria Clover	Coastal Bluff Scrub, Valley & Foothill Grassland (Sometimes Serpentinite)	No	April-June	No	Historic use of the site precludes presence. This species is vulnerable to disturbance and livestock grazing.
Trifolium hydrophilum Saline Clover	Marshes and Swamps Grassland	No	April-June	No	Absence of mesic habitat required for presence.
Trichostema ruygtii Napa Bluecurls, Vinegar Weed	Grassland	No	No	June-Aug.	Requisite habitat absent on the site. Historic use of the site precludes presence.
Triquetrella californica Coastal Triquetrella	Endemic To Coastal California < 30 Miles. Thin Soil On Outcrops In Scrub Or Grassland	No	NA	No	Lack of appropriate habitat for this moss.

Table III. Analysis of anmal species that are known to occur (DFW CNDDB Rare Find search). Columns are arranged alphabetically by scientific name.

Scientific Name Common Name	**Habitat**	**Potential for Property**	**Obs. on Project Site**	**Analysis of habitat on project site for presence or absence.**
Accipter sriatus Sharp-Shinned Hawk	Avian prey, Nests in conifers or tops of live oaks	Yes	No	Lack of habitat for prey. May fly over
Ambystoma californiense California Tiger Salamander	Ephemeral Breeding pools with upland oak woodlands for estivation	No	No	No breeding or upland habitat. Surrounded by development
Antrozous pallidus Pallid Bat	Roosts in Buildings and Overhangs, woodlands	No	No	No evidence for presence observed.
Buteo swainsoni Swainson's Hawk	Open areas with riparian influence	No	No	Lack of nesting habitat.
Corynorhinus townsendii Townsend's Big-eared Bat	Caves, also in Buildings	No	No	No roosting habitat present
Elanus leucurus White-tailed Kite	Nests in tall trees near water	No	No	Requisite habitat absent.
Emys marmorata Western Pond Turtle	Slow moving water or ponds	Yes	Yes	No habitat on project site. Observed in reservoir off site.
Falco mexicanus Prairie Falcon	Nests on cliffs	No	No	May fly over. Lack of habitat for nesting and feeding.
Falco peregrinus anatum American Peregrine Falcon	Nests on cliffs	No	No	May fly over. Lack of habitat for nesting and feeding.
Hypomesus transpacificus Delta Smelt	California Delta	No	No	Lack of aquatic habitat.

Table III Continued Scientific Name Common Name	**Habitat**	**Potential for Property**	**Obs. or Potential for Project Site**	**Analysis of habitat on project site for presence or absence.**
Hysterocarpus traski pomo Russian River Tule Perch	Riverine	No	No	Requisite habitat absent on project site.
Hydrochara rickseckeri Ricksecker's Water Scavenger Beetle	Shallow Water	No	No	Requisite habitat absent on project site.
Hydroporus leechi Leech's Skyline Diving Beetle	Ponds	No	No	Requisite habitat absent on project site.
Lavinia symmetricus navarroensis Navarro Roach	Riverine	No	No	Lack of habitat.
Myotis thysanodes Fringed Myotis	Montane Forests or Montane Meadows	Yes	No	No evidence for presence observed during our fieldwork.
Oncorhynchus kisutch Coho Salmon-Central California Coast ESU	Aquatic	No	No	Lack of habitat.
Oncorhynchus mykiss irideus Steelhead-central California Coast	Aquatic	No	No	Potential for presence in Napa River. No aquatic impacts. Habitat not associated with the proposed project.
Oncorhynchus tshawytswcha California Coastal Chinook Salmon	Aquatic	No	No	Lack of habitat.
Progne subis Purple Martin	Cavity nesters. Like open areas near water.	No	No	Habitat associated with proposed project is unlikely to contain feeding or nesting potential.
Rana boylii Foothill Yellow-legged Frog	Streams with pools	No	No	Potential for presence in Napa River. Unlikely to occur on project site.
Rana draytonii California Red-legged Frog	Creeks, Rivers, permanent flowing water.	No	No	Requisite habitat absent on project site.
Strix occidentalis caurina Northern Spotted Owl	Old growth, forested deep canyons.	No	No	Requisite habitat absent. Not associated with project.

Scientific Name Common Name	Habitat	Potential for Property	Obs. or Potential for Project Site	Analysis of habitat on project site for presence or absence.
Stygobromus cherylae Barr's Amphipod	Aquatic	No	No	Requisite habitat absent on project site.
Syncaris pacifica California Freshwater Shrimp	Creeks and Estuaries below 300 ft.	No	No	Requisite habitat required for presence lacking.
Taxidea taxus American Badger	Grasslands with food source of ground squirrels	No	No	Absence of food sources required for presence. No burrows observed

C.4 Discussion of Sensitive Habitat Types

The Napa County Baseline Data Report defines Biotic communities as the characteristic assemblages of plants and animals that are found in a given range of soil, climate, and topographic conditions across a region. Sensitive biotic communities in the County were identified using a two-step process for the Napa County Baseline Data Report. The two steps were:

1. An existing list of sensitive biotic communities prepared by the California Department of Fish and Wildlife (DFW) (2003a) was first reviewed by senior Jones & Stokes biologists, and those communities that may occur in the County were identified. Because the community names in the DFW list (2003a) did not correspond directly with the names used in the Land Cover Layer, a determination was made as to which land cover types on the Land Cover Layer correspond to the communities on the DFW list.

2. The aerial extent of each land cover types mapped in the County was generated from the land cover layer. Those biotic communities with an areal extent of less than 500 acres in the County (approximately 0.1% of the County) were identified. These communities were discussed with local experts and their conservation importance established. Those that were not already on the original DFW list and that were determined to be worthy of conservation were added to the list.

The Napa County Baseline Data Report as well as the California Department of Fish and Wildlife Natural Diversity Data Base (DFW CNDDB) lists recognized Sensitive Biotic Communities. The Napa County Baseline Data Report lists twenty-three communities which are considered sensitive by DFW due to their rarity, high biological diversity, and/or susceptibility to disturbance or destruction. The CNDDB communities in Napa County are the following:

Serpentine bunchgrass grassland,
Wildflower field (located within native grassland),
Creeping ryegrass grassland,
Purple Needlegrass grassland,
One-sided bluegrass grassland,
Mixed serpentine chaparral,

McNab cypress woodland,
Oregon white oak woodland,
California bay forests and woodlands,
Fremont cottonwood riparian forests,
Arroyo willow riparian forests,
Black willow riparian forests,
Pacific willow riparian forests,
Red willow riparian forests,
Narrow willow riparian forests,
Mixed willow riparian forests,
Sargent cypress woodland,
Douglas-fir-ponderosa pine forest (old-growth),
Redwood forest,
Coastal and valley freshwater marsh,
Coastal brackish marsh,
Northern coastal salt marsh, and
Northern vernal pool.

Napa County biotic communities of limited distribution that are sensitive include:
Native grassland;
Tanbark oak alliance;
Brewer willow alliance;
Ponderosa pine alliance;
Riverine, lacustrine, and tidal mudflats; and
Wet meadow grasses super alliance.

The grasslands within the footprint of the project do not consist of any of the sensitive grassland communities listed by the County Baseline Data Report of DFW.

The California Department of Fish and Wildlife Natural Diversity Database five-mile search shows that Serpentine Bunchgrass and Valley Needlegrass Grassland are present near the project site. There are no marshes or wetlands associated with the project footprint or the property.

D. POTENTIAL BIOLOGICAL IMPACTS

The project's effect on onsite or regional biological resources is considered to be significant if the project results in:

- Alteration of unique characteristics of the area, such as sensitive plant communities and habitats (i.e. serpentine habitat, wetlands, riparian habitat);
- Adverse impacts to special-status plant and animal species;
- Adverse impacts to important or vulnerable resources as determined by scientific opinion or resource agency concerns (i.e. sensitive biotic communities, special status habitats; e.g. wetlands);
- Loss of critical breeding, feeding or roosting habitat; and
- Interference with migratory routes or habitat connectivity.

In the sections below a discussion of potential impacts of the project on the biological resources is presented.

D.1 Analysis of Potential Impacts to Special-status Species

The proposed project is primarily within a previously developed landscape. There is no reason to expect any impacts to special-status species provided BMP's.

Western Pond Turtle *(Emys marmorata)* The pond turtle is found throughout California and is listed by the State as a Species of Concern. It does not have Federal status. Suitable habitat consists of any permanent or nearly permanent body of water or slow moving stream with suitable refuge, basking sites and nesting sites. Refuge sites include partially submerged logs or rocks or mats of floating vegetation. Basking sites can be partially submerged rocks or logs, as well as shallow-sloping banks with little or no cover. Nesting occurs in sandy banks or in soils up to 100 meters away from aquatic habitat.

It is unlikely that turtles would move in the area proposed for winery site. The disturbed area and vineyard do not provide potential nesting habitat, due to soil compaction dry ground with no cover or vegetated cover. Turtles most likely have moved in from the adjacent pond southeast of the property.

The **Calistoga Popcorn-Flower (*Plagiobothrys strictus)*** is shown with a confidence interval that overlaps that of the study area . This is a species that is limited in nature and is historically known from sites on the west side of State Highway 29. It is associated with geothermal springs or swales in clay loam soil. There is no habitat on the property that would support this species. We found no evidence that would indicate any potential for presence on the property. The other species known for the quadrangle and surrounding quadrangles and those listed in the table above are reasonably precluded by the historic use of the property and the hardscape present.

Pallid Bat (*Antrozous pallidus*): The Pallid Bat occupies a wide variety of habitats, such as grasslands, shrublands, and forested areas of oak and pine, but prefer rocky outcrops with desert scrub. The pallid bat roosts in caves, mines, crevices, and occasionally in hollow trees or buildings.

They forage over open country and within woodlands. No roosts or evidence of their presence was observed within the proposed project area potential. . The project and property do not contain potential roosting habitat.

Northern Spotted Owl (*Strix occidentalis caurina*): Northern spotted owls require mature forest patches with permanent water and suitable nesting trees and snags (Zeiner et al. 1990a). Northern spotted owls use dense, old-growth forests, or mid- to late- seral stage forests, with a multi-layered canopy for breeding (Remsen 1978). Mixed conifer, redwood, and Douglas-fir habitats are required for nesting and roosting. The project and property do not contain potential nesting habitat and the project sited do not contain potential foraging habitat.

Our fieldwork did not find any habitat for any special-status animal species known for the Quadrangle surrounding Quadrangles or for the region that would be impacted by the proposed project. The present conditions of the project site and historic use is such that there is little reason to expect the occurrence of any special-status animal species on the property or within the footprint of the project.

Habitat impacted by the proposed project is such that it will not substantially reduce or restrict the range of listed animals.

D.2 Analysis of Potential Impacts on Sensitive Habitat

There are no DFW Sensitive Communities or Napa County Sensitive Biotic Communities present on project site. The project footprint is primarily within a historically developed landscape.

Native Grassland - The project will not impact any populations of native grasslands.

Seasonal Wetland generally denotes areas where the soil is seasonally saturated and/or inundated by fresh water for a significant portion of the wet season, and then seasonally dry during the dry season. To be classified as "Wetland," the duration of saturation and/or inundation must be long enough to cause the soils and vegetation to become altered and adapted to the wetland conditions. Varying degrees of pooling or ponding, and saturation will produce different edaphic and vegetative responses. These soil and vegetative clues, as well as hydrological features, are used to define the wetland type. Seasonal wetlands typically take the form of shallow depressions and swales that may be intermixed with a variety of upland habitat types. Seasonal wetlands fall under the jurisdiction of the U.S. Army Corps of Engineers. There are no potential seasonal wetlands or vernal pools associated with the project footprint.

"Waters of the State" include drainages which are characterized by the presence of definable bed and bank that meet ACOE, and RWQCB definitions and or jurisdiction. Any direct discharge of storm water into "Waters of the State" will require ACOE, DFW, and RWQCB permits. There are no drainages or creeks associated with the project.

Riparian Vegetation is by all standards considered sensitive. Riparian Vegetation functions to control water temperature, regulate nutrient supply (biofilters), bank stabilization, rate of runoff, wildlife habitat (shelter and food), release of allochthonous material, release of woody debris which functions as habitat and slow nutrient release, and protection for aquatic organisms.

Riparian vegetation is also a moderator of water temperature has a cascade effect in that it relates to oxygen availability. The project will not impact any riparian vegetation.

Trees The project will not remove any native trees. Domestic walnuts along Dunaweal Lane will be removed by the proposed entrance.

Wildlife Habitat and Wildlife Corridors

Are natural areas interspersed with developed areas are important for animal movement, increasing genetic variation in plant and animal populations, reduction of population fluctuations, and retention of predators of agricultural pests and for movement of wildlife and plant populations. Wildlife corridors have been demonstrated to not only increase the range of vertebrates including avifauna between patches of habitat but also facilitate two key plant-animal interactions: pollination and seed dispersal. Corridor users can be grouped into two types: passage species and corridor dwellers. The data from various studies indicate that corridors should be at least 100 feet wide to provide adequate movement for passage species and corridor dwellers in the landscape. There are no identifiable wildlife corridors through the property.

Raptor Nests, Bird Rookeries, Bat Roosts, Wildlife Dens or Burrows

No raptor nests were identified during our survey. We found no indications of nesting raptors on the property or in the near vicinity of the project sites. We did not observe any nests, whitewash or nest droppings, perching associated with the project site or trees along Dunaweal lane or adjoining parcels. No bird rookeries were present on the property or within the project footprint.

Very few burrows were observed, but small mammals and songbirds likely utilize habitats on the project site for foraging and cover. No significant wildlife dens or burrows were observed.

Unique Species that are Endemic, Rare or Atypical for the Area

No unique or unusual populations of plants or animals were present on the property or the project site.

The flora and fauna present are typical for the developed landscape of the region. There were no unique species, endemic populations of plants or animals or species that are rare or atypical for the area present on the project site or property.

Habitat Fragmentation

The proposed project is within a historically developed landscape. The project will not result in habitat fragmentation.

D.3 Potential Off-site Impacts of the Project

There is no expected impact to biological resources by the proposed project. BMP's during development of the site will prevent any significant off-site impacts.

D.4 Potential Cumulative Impacts

Cumulative biological effects are the result of incremental losses of biological resources within a region. The site location, historic development and use of the area within the footprint of the project negate the potential for cumulative biological resource effects. The project development is proposed for an area of the property that has had a long historic use. There is nothing to indicate that there will be any cumulative biological impacts of the project provided.

D.5 State and Federal Permit

Any impact to wetlands or drainages will require agency consultation and permits from the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and Regional Water Quality Control Boards for impacts to "Waters of the State."

The project as proposedwill not impact any wetlands or seasonal drainages.

E. RECOMMENDATIONS TO AVOID IMPACTS

E.1 Significance

The significance of potential impacts is a function of the scope and scale of the proposed project within the existing Federal, State and Local regulations and management practices. The determination of significance of impacts to biological resources consists of an understanding of the project as proposed and an evaluation of the context in which the impact may occur. The extent and degree of any impact on-site or off-site must be evaluated consistent with known or expected site conditions. Therefore, the significance of potential impacts is assessed relevant to a site-specific scale and the larger regional context.

E.2 Recommendations

The historic use of the property and project site conditions are such that there is no reason to expect any impacts to special-status species on-site or off-site provided standard construction practices are utilized. The project must comply with Napa County SWPPP requirements to ensure that best management practices are adopted in order to minimize the amount of sediment and other pollutants leaving the site during construction activities.

F. SUMMARY

This study is provided as background information necessary for evaluating potential impacts of the project on local Biological Resources.

We find that the proposed project following BMPs will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

The site is primarily developed landscape, and the history of use reasonably preclude presence of any special-status plant species on the project site.

We find that the project as proposed will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

We find that the project as proposed will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. No wetlands or vernal pools are associated with the proposed project.

We find that the proposed project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

We find that the proposed project will not conflict with any local policies or ordinances protecting biological resources.

G. LITERATURE CITED / REFERENCES

G.1 Literature and References

Arora, David, l986. Mushrooms Demystified. Ten Speed Press.

Bailey, L. H., 1951. Manual of Cultivated Plants. The MacMillan Company New York.

Baldwin, B.G., D.H. Goldman, D.J.Keil, R.Patterson, T.J.Rosati, and D.H.Wilkens, editors, 2012. The Jepson Manual Vascular Plants of Caifornai. U.C. Berkley Press

Barbe, G. D. 1991. Noxious Weeds of California. Department of Food and Agriculture, Sacramento, CA.

Beidleman, L. H and E. N. Kozloff, 2003. Plants of the San Francisco Bay Region. University of California Press, Berkeley.

Best, Catherine, et al. 1996. A Flora of Sonoma County, California Native Plant Society.

Barbour, M.G., Todd Keeler-wolf, and Allan A. Schoenherr, eds. 2007. Terrestrial Vegetation of California. Third Edition. University of California Press.

Best, Catherine, et al. 1996. A Flora of Sonoma County, California Native Plant Society.

Brodo, Irwin M., Sylvia Duran Sharnoff and Stephen Sharnoff, 2001. Lichens of North America. Yale University Press. 795 pp.

California Department of Fish and Game Natural Diversity Data Base Rare Find 3 July 2014..

California Department of Fish and Wildlife RareFind 5 Internet application.

California Natural Resources Agency Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities State of California Department of Fish and Game November 24, 2009.

California Native Plant Society 2001. Inventory or Rare and Endangered Plants of California. Special Publication No 1, Sixth Edition.

California Native Plant Society Electronic Inventory of Rare and Endangered Vascular Plants of California, Current Online.

California Native Plant Society (CNPS), Botanical Survey Guidelines (Revised June 2, 2001).

Crain, Caitlin Mullan and Mark D. Bertness, 2006. Ecosystem Engineering Across Environmental Gradients: Implications for Conservation and Management. BioScience March Vol. 56 No.3, pp. 211 to 218.

DiTomaso, Joseph M. and Evelyn A. Healy, 2007. Weeds of California and Other Western States Vol. 1 and 2. University of California Agriculture and Natural Resources Publication 3488.

Federal Interagency Committee for Wetland Delineation. 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. U. S. Army, Corps of Engineers, U. S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U. S. D. A. Soil Conservation Service, Washington, D. C. Cooperative technical publication. 76 pp. plus appendices.

Grinell, Joseph, Joseph Dixon, and Jean M. Linsdale. 1937. Fur-bearing Mammals of California, University of California Press.

Hale, Mason Jr. and M. Cole,1988. Lichens of California. U of California Press, Berkeley

Hemphill, Don, Gilbert Muth, Joe Callizo, et al. 1985. Napa County Flora. Gilbert Muth Pacific Union College, Angwin, California 94508.

Hickman, James C. ed. 1993. The Jepson Manual Higher Plants of California. U. C. Berkeley Press.

Hitchcock, A. S. 1950 Manual of the Grasses of the United States. U. S. Government Printing Office, Washington D. C.

Holland, Robert. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game, Sacramento, CA.

Ingles, Lloyd C., l985. Mammals of the Pacific States. Stanford Press.

Jameson, E. W. and H. J. Peeters, 2004. Mammals of California. Revised Edition. U.C. Press.

Kruckeberg, Arthur R. 1984. California Serpentines: Flora, Vegetation, Geology, Soils and Management Problems. University of California Publications in Botany, Volume 78. University of California Press, LTD.

Lawton, E., 1971. Moss Flora of the Pacific Northwest, Hattori Botanical Laboratory Nichinan, Miyazaki, Japan, pp. 1to 362 plates 1 to 195.

Lyons, R. and J. Ruygt. 1996 100 Napa County Roadside Wildflowers. Stonecrest Press, Napa, California.

Malcolm, Bill and Nancy, Jim Shevock and Dan Norris, 2009 California Mosses, Micro Optics Press, Nelson New Zeland, pp. 1 to 430.

Malcolm, Bill and Nancy, 2000 Mosses and Other Bryophytes An Illustrated Glossary, Micro Optics Press, Nelson New Zeland, pp 1 to 220.

Mason, Herbert L. 1957. A Flora of the Marshes of California. UC California Press.

Napa County Conservation, Development and Planning Department, November 30, 2005. Napa County Baseline Data Report.

Naiman R J, Decamps H, Pollock M. 1993. The role of riparian corridors in maintaining regional biodiversity. Ecological Application 3: 209-212.

Norris, Daniel H. and James R. Shevock, 2004. Contributions Toward a Bryoflora of California: I. A specimen-Based Catalogue of Mosses. Madrono Volume 51, Number 1, pp. 1 to 131.

Norris, Daniel H. and James R. Shevock, 2004. Contributions Toward a Bryoflora of California: II. A Key to the Mosses. Madrono Volume 51, Number 2, pp. 1 to 133.

Peterson, Roger T. 1961, 1990. A Field Guide to Western Birds. Houghton Mifflin Co., Boston, MA.

Peters, Hans and Pam Peters, 2005. Raptors of California Califronia Naural History Guides. Univeristy of California Press, Berkeley and Los Angles.

Sawyer, J. O., T. Keeler-wolf and Julie M. Evans 2009. A Manual of California Vegetation Second Edition California Naïve Plant Society, Sacramento, California.

Schoenherr, Allan A. 1992. A Natural History of California. California Natural History Guides: 56. University of California Press, Berkeley.

Schofield, W. B. 1969. Some Common Mosses of British Columbia. British Columbia Provincial Museum, Victoria, Canada.

Schofield, W. B. 2002. Field Guide to Liverwort Genera of Pacific North America. Univeristy of Washington Press.

Stebbins, Robert C., 1966. A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin.

Stewart, John D and John O. Sawyer, 2001 Trees and Shrubs of California. University of California Press.

G.2 Qualifications of Field Investigators

Chris K. Kjeldsen, Ph.D., Botany, Oregon State University, Corvallis, Oregon. He has over forty years of professional experience in the study of California flora. He was a member of the Sonoma County Planning Commission and Board of Zoning (1972 to 1976). He has over thirty years of experience in managing and conducting environmental projects involving impact assessment and preparation of compliance documents, Biological Assessments, DFW Habitat Assessments, DFW Mitigation projects, ACOE Mitigation projects and State Parks and Recreation Biological Resource Studies. Experience includes conducting special-status species surveys, jurisdictional wetland delineations, general biological surveys, 404 and 1600 permitting, and consulting on various projects. He taught Plant Taxonomy at Oregon State University and numerous botanical science and aquatic botany courses at Sonoma State University including sections on wetlands and wetland delineation techniques. He has supervised numerous graduate theses, NSF, DOE and local agency grants and served as a university administrator. He has a valid DFW collecting permit.

Daniel T. Kjeldsen, B. S., Natural Resource Management, California Polytechnic State University, San Luis Obispo, California. He spent l994 to l996 in the Peace Corps managing natural resources in Honduras, Central America. His work for the Peace Corps in Central America focused on watershed inventory, mapping and the development and implementation of a protection plan. He has over ten years of experience in conducting Biological Assessments, DFW Habitat Assessments, ACOE wetland delineations, wetland rehabilitation, and development of and implementation of mitigation projects and mitigation monitoring. He has received 3.2 continuing education units MCLE 27 hours in Determining Federal Wetlands Jurisdiction from the University of California Berkeley Extension. Attended Wildlife Society Workshop Falconiformes of Northern California Natural History and Management California Tiger Salamander 2003, Natural History and Management of Bats Symposium 2005, Western Pond Turtle Workshop 2007, and Western Section Bat Workshop 2011. Laguna Foundation & The Wildlife Project Rare Pond Species Survey Techniques 2009. A full resume is available upon request.

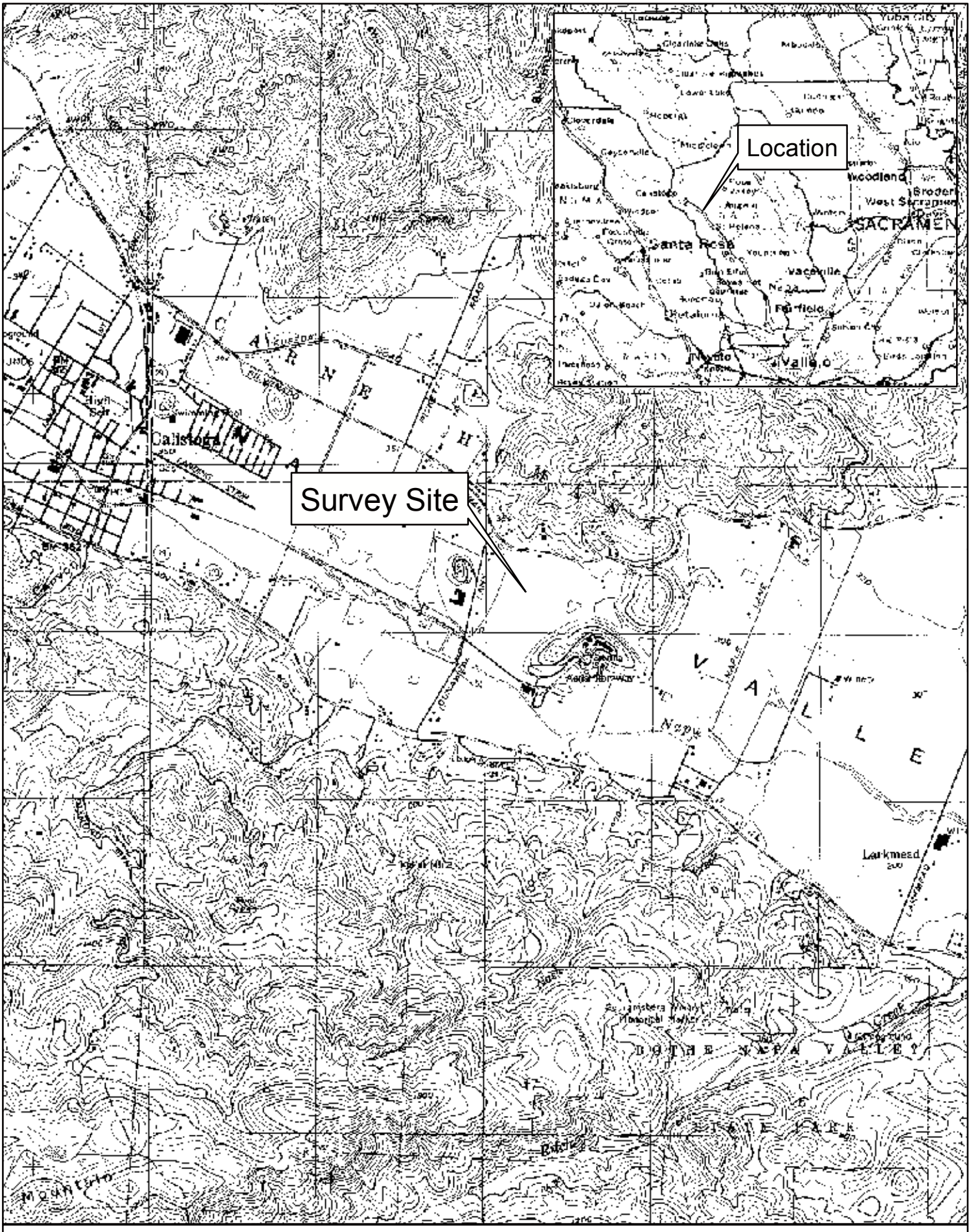

Plate I. Site / Location Map (Calistoga Quadrangle)

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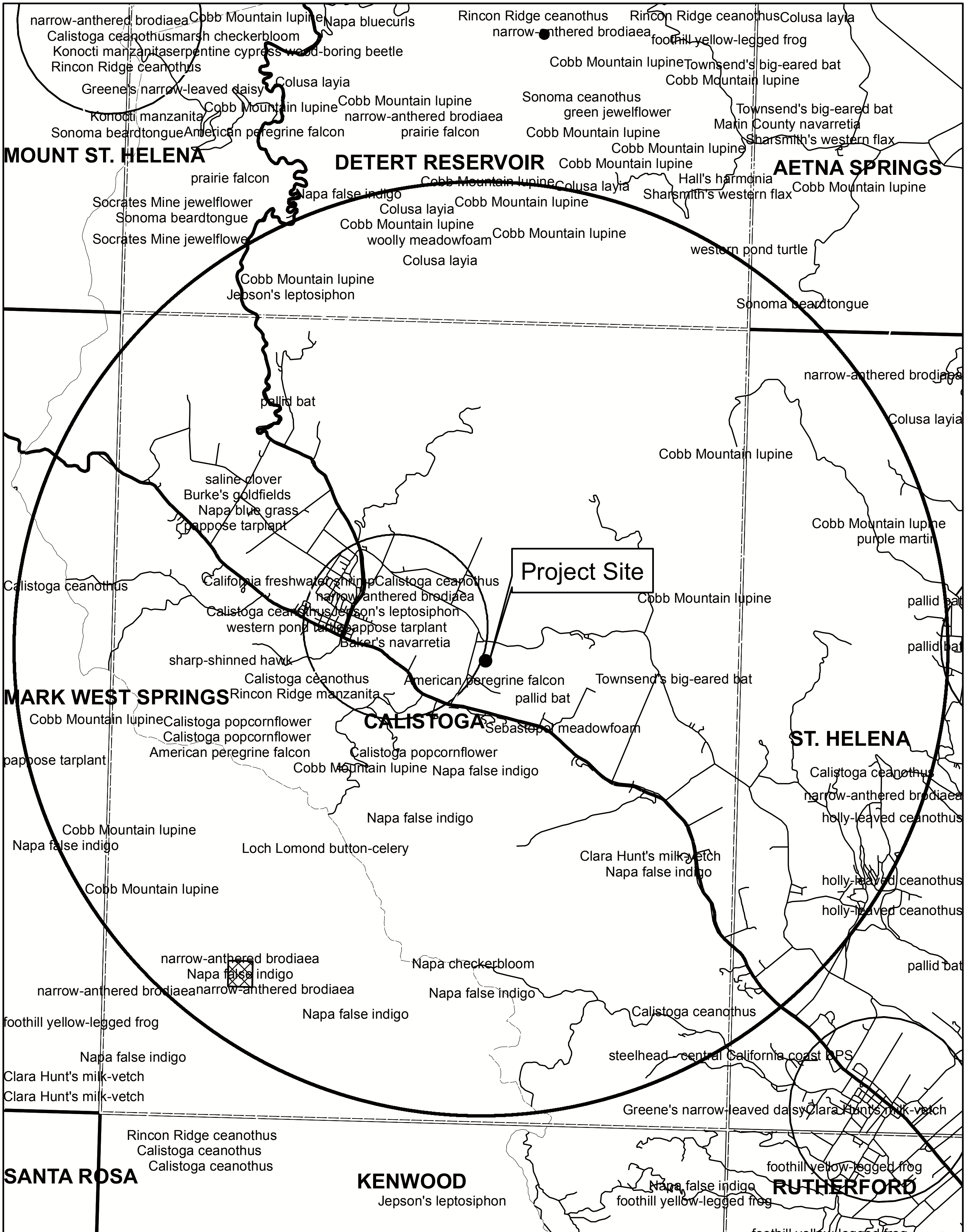


Plate II DFG CNDDB 5-Mile Search

0 0.5 1 2 Miles

(Data Date July 2014)

Plate III. Aerial Photo / Survey Area

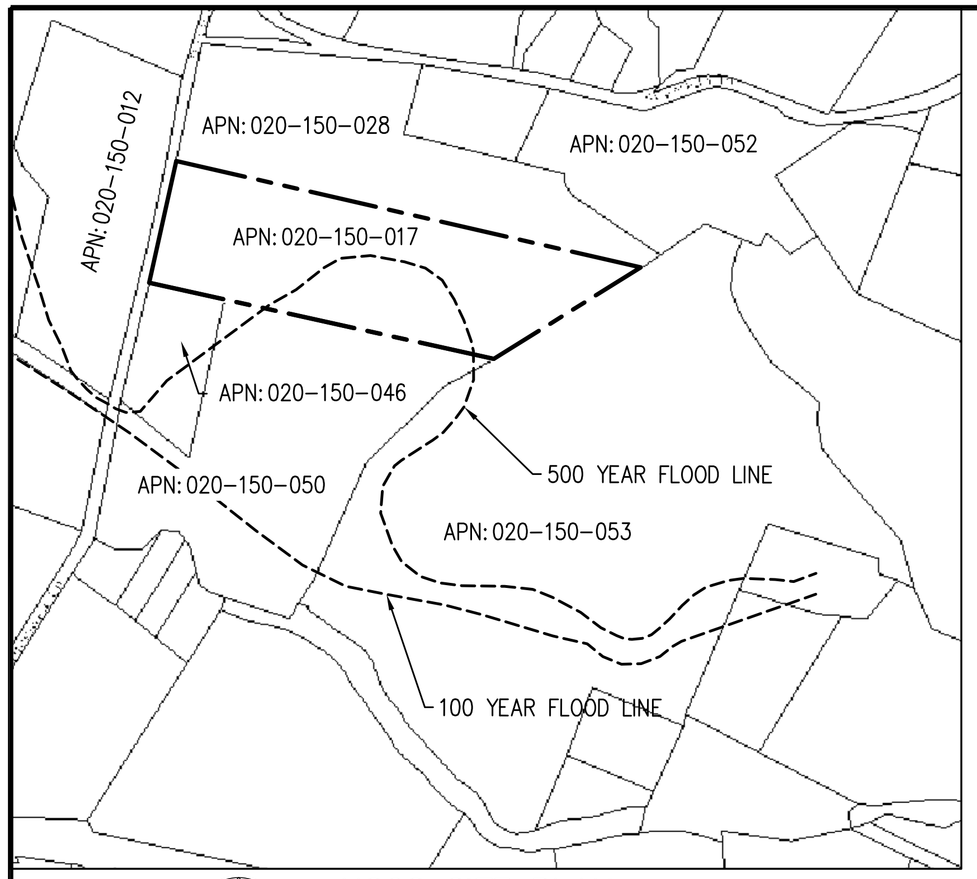
GIRARD WINERY

1077 Dunaweal Ln.

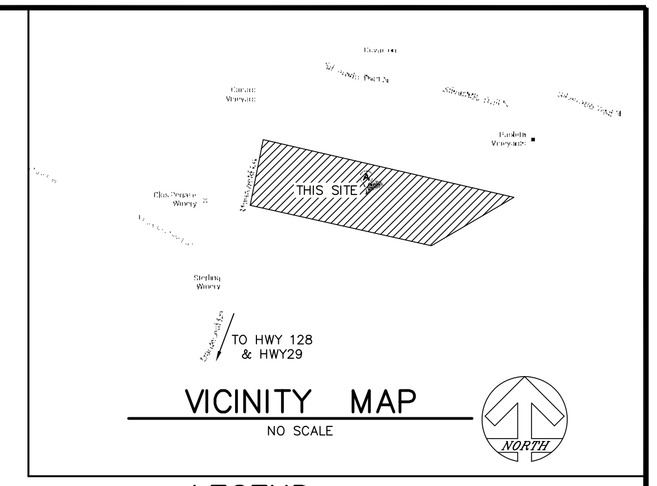
Calistoga, California 94515

APN 022-150-017

USE PERMIT APPLICATION



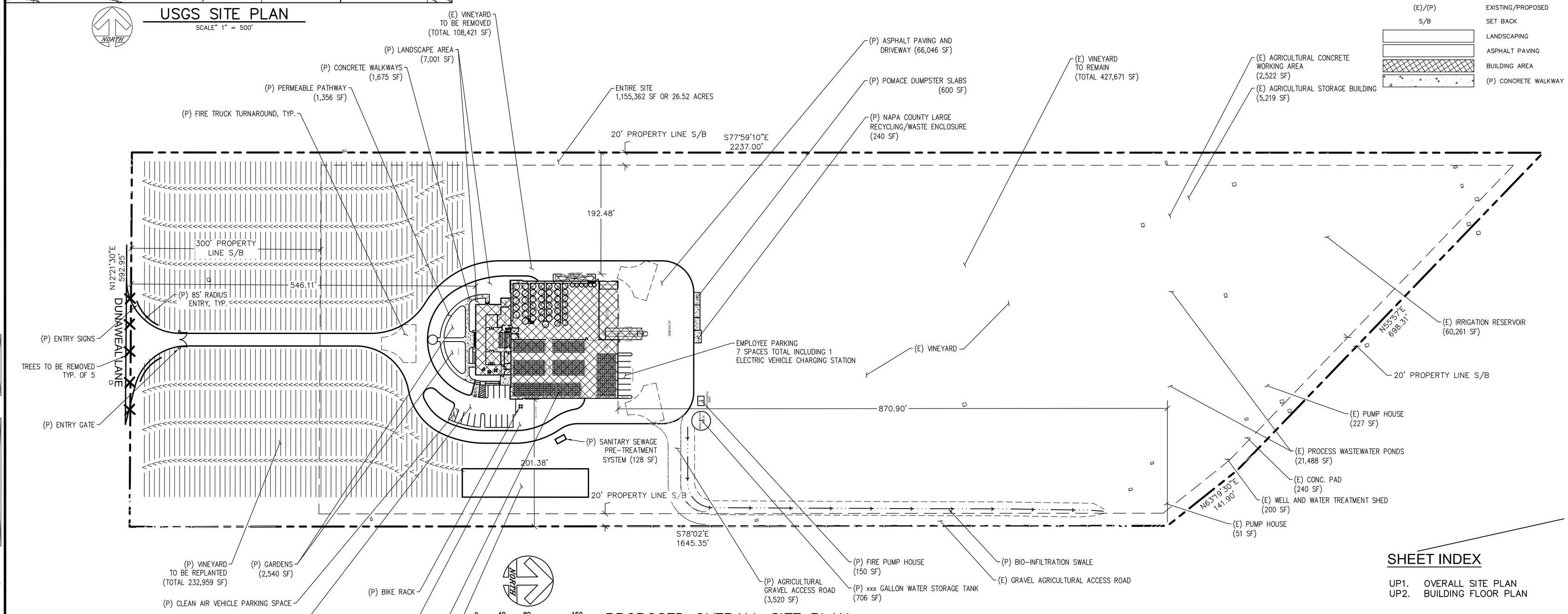
USGS SITE PLAN
SCALE" 1" = 500'



VICINITY MAP
NO SCALE

LEGEND

- APPROXIMATE PROPERTY LINE
- FENCE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL DRIVEWAY
- DRAINAGE COURSE FLOWLINE
- VINEROW
- OVERHEAD UTILITIES
- SETBACK
- 100 YEAR FLOOD PLAIN
- 500 YEAR FLOOD PLAIN
- 20 / 15 — 5 FOOT INDEX / 1' INTERVAL CONTOURS
- W — WELL
- (E)/(P) — EXISTING/PROPOSED
- S/B — SET BACK
- LANDSCAPING
- ASPHALT PAVING
- BUILDING AREA
- (P) CONCRETE WALKWAY



NORTH
0 40 80 160
SCALE: 1" = 80'

PROPOSED OVERALL SITE PLAN

SCALE: 1" = 80'

OWNER/APPLICANT
VINTAGE WINE ESTATES
205 CONCOURSE BLVD.
SANTA ROSA, CA 95403
CONTACT: PAT RONEY
PH. (877) 289-9463

ARCHITECT
DEL STARRETT ARCHITECT
181 CONCOURSE BLVD., SUITE A
SANTA ROSA, CA 95403
CONTACT: DEL STARRETT
PH. (707) 526-9645

LANDSCAPE ARCHITECT
PARKER SMITH LANDSCAPE ARCHITECT
1945 PINER RD. #25
SANTA ROSA, CA 95403
PH. (707) 477-7502

ARCHITECT
ALWAYS ENGINEERING INC.
131 STONY CIRCLE, SUITE 1000
SANTA ROSA, CA 95401
CONTACT: BEN MONROE
PH. (707) 542-8795

Grading Quantities:
Site Grading is based upon subgrade to existing grade. No account has been taken for strippings, expansion or contraction. Volumes should be verified and determined independently by the Contractor.

	CUT:	ENGINEERED FILL:	NET:
TOTAL EARTHWORK:	2,172 CY	4,034 CY	1,862 CY (FILL)

TOTAL DISTURBED AREA = 3.59 ACRES

Note: Excess spoils will be disposed of in a county approved site or spread in onsite vineyards. Temporary grading spoils will be stockpiled onsite in the unplanted vineyard area until ready for use.

REGISTERED PROFESSIONAL ENGINEER
JASON FRANK HOOREN
No. C66429
CIVIL
STATE OF CALIFORNIA

SHEET INDEX

REVISION	DESCRIPTION	BY	DATE

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
2360 Professional Drive (707) 542-8795
Santa Rosa, CA 95403 Fax (707) 542-6147
www.alwayseng.com

Prepared for: GIRARD WINERY
1077 DUNAWEAL LN., CALISTOGA, CA

Prepared on: February 4, 2014

USE PERMIT
OVERALL SITE PLAN
1077 DUNAWEAL LN., CALISTOGA, CA
APN:020-150-017

JOB# 13530

SHEET
UP1
OF
UP2

APPENDIX A
Plants and Animals Observed Associated With The Project Site

PLANTS

The nomenclature for the list of plants found on the project site and the immediate vicinity follows: Brodo, Irwin M., Sylvia Duran Sharnoff and Stephen Sharnoff, 2001, for the lichens;; S Norris and Shevrock - 2004, for the mosses; and Baldwin, B.G., D.H. Goldman, D.J.Keil, R.Patterson, T.J.Rosati, and D.H.Wilkens, editors, 2012 - for the vascular plants.. The plant list is organized by major plant group.

Habitat type indicates the general associated occurrence of the taxon on the project site or in nature.
Abundance refers to the relative number of individuals on the project site or in the region.

MAJOR PLANT GROUP **Family** **Genus** **Common Name**	**Habitat Type**	**Abundance**

NCN = No Common Name, * = Non-native, @= Voucher Specimen

MINACEAE		
Alsia californica (W.J.Hooker&Arnott) Sullivant NCN	Epiphytic on Trees	Common
Dendroalsia abietina (Hook.) Brit. NCN	Epiphytic on Trees	Common
Homalothecium nuttallii (Wilson) Jaeger NCN	Epiphytic on Trees	Common
Orthotrichum lyellii Hook & Tayl. NCN	Epiphytic on Trees	Common
Scleropodium touretii (Brid.) L Koch. NCN	Epiphytic on Trees	Common
LICHENS		
FOLIOSE		
Flavoparmelia caperata (L.) Hale NCN	Epiphytic on Trees	Common
Flavopunctilia flaventor (Stirt.) Hale NCN	Epiphytic on Trees	Common
Parmelia sulcata Taylor NCN	Epiphytic on Trees	Common
Xanthoria polycarpa (Hoffm.) Rieber Pin-cushion Sunburst Lichen	Epiphytic on Trees	Common

MAJOR PLANT GROUP **Family** **Genus** **Common Name**	**Habitat Type**	**Abundance**

NCN = No Common Name, * = Non-native, @= Voucher Specimen

FRUTICOSE		
Evernia prunastri (L.) Ach. NCN	Epiphytic on Trees	Common
Ramalina farinacea (L.) Ach. NCN	Epiphytic on Trees	Common
VASCULAR PLANTS DIVISION CONIFEROPHYTA--GYMNOSPERMS		
PINACEAE		
Pseudotsuga menziesii (Vassey) Mayr var. *menziesii* Douglas-fir	On Property Line	Common
TAXODIACEAE		
Sequoia sempervirens (D.Don) Endl. Redwood	Planted	Common
VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS		
CLASS--DICOTYLEDONAE- TREES		
MAGNOLIIDS		
LAURACEAE		
Umbellularia californica (Hook.&Arn.) Nutt. California Laurel, Sweet Bay, Pepperwood, California Bay	On Property Line	Occasional
EUDICOTS		
ERICACEAE Heath Family		
Arbutus menziesii Pursh Madrone	On Property Line	Common
FAGACEAE Oak Family		
Quercus agrifolia Nee Live Oak	On Property Line	Common
Quercus kelloggii Newb. Black Oak	On Property Line	Common
Quercus lobata Nee. Valley Oak	On Property Line	Common
JUGLANDACEAE Walnut Family		
**Juglans nigra* L. Black Walnut	Planted	Common
**Juglans regia* L. English Walnut	Planted	Common
OLEACEAE Olive Family		
**Olea europaea* L. Olive	Domestic Ruderal	Occasional

MAJOR PLANT GROUP **Family** **Genus** **Common Name**	**Habitat Type**	**Abundance**

NCN = No Common Name, * = Non-native, @= Voucher Specimen

PLATANACEAE Sycamore Family		
**Platanus acerifolia* Wild London Plane Tree, Sycamore	Domestic Introduction	Occasional
ROSACEAE Rose Family		
**Pyrus communis* (L.) Pear	Escape or Domestic	Occasional
SALICACEAE Willow Family		
Populus fremontii S.Watson ssp. *fremontii* Fremont Cottonwood	Along property Line	Occasional
Salix laevigata Bebb. Red Willow	On Property Line	Common
SAPINDACEAE Soapberry Family		
Acer macrophyllum Prush Big-leaf Maple	On Property Line	Common

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--DICOTYLEDONAE-SHRUBS AND WOODY VINES

MAGNOLIIDS

EUDICOTS

ASTERACEAE (Compositae) Sunflower Family		
Baccharis pilularis deCandolle Coyote Brush	On Property Line	Common
ROSACEAE Rose Family		
**Rubus armeniacus* Focke Himalayan Blackberry	On Property Line	Common

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--DICOTYLEDONAE-HERBS

EUDICOTS

APIACEAE (Umbelliferae) Carrot Family		
**Dacus carota*L. Wild Carrot, Queen Anne's Lace	Ruderal	Common
ASTERACEAE (Compositae) Sunflower Family		
**Anthemis cotula* L. Mayweed, Stinkweed, Dog-fennel	Ruderal	Common
**Calendula arvensis* L. Field Marigold	Ruderal	Occasional
**Helminthotheca echioides* (L.) Holub Ox-tongue (=*Picris echioides)*	Ruderal	Common
**Lactuca serriola* L. Prickly Lettuce	Ruderal	Occasional

MAJOR PLANT GROUP **Family** **Genus** **Common Name**	**Habitat Type**	**Abundance**

NCN = No Common Name, * = Non-native, @= Voucher Specimen

**Senecio vulgaris* L. NCN	Ruderal	Occasional
**Taraxacum officinale* F.H.Wigg Dandelion	Ruderal	Common
Xanthium strumarium L. Cocklebur	Ruderal	Occasional
BRASSICACEAE Mustard Family		
**Brassica nigra* (L.) Koch Black Mustard	Ruderal	Common
DIPSACACEAE Teasel Family		
**Dipsacus sativus* L. Fuller's Teasel	Ruderal	Common
FABACEAE (Leguminosae) Legum Family		
**Vicia sativa* L. subsp. *nigra* Narrow Leaved-vetch	Ruderal	Common
GERANIACEAE Geranium Family		
**Erodium botrys* (Cav.) Bertol. Broadleaf Filaree, Long-beaked Filaree	Ruderal	Common
MALVACEAE Mallow Family		
**Malva parviflora* L. Cheeseweed, Mallow	Ruderal	Common
ONAGRACEAE Evening-primrose Family		
Epilobium brachycarpum C.Presl Willow Herb	Ruderal Dry Areas	Common
PLANTAGINACEAE Plantain Family		
**Plantago lanceolata* L. English Plantain	Ruderal	Common
POLYGONACEAE Buckwheat Family		
**Polygonum aviculare* L. subsp. *depressum* Common Prostrate Knotweed (=*P. arenastrum)*	Ruderal	Common
**Rumex crispus* L. Curly Dock	Ruderal	Common
VISCACEAE Misteltoe Family		
Phoradendron serotinum (Raf.) Johnst. subsp. *tomentosum* Oak Mistletoe (=*P. villosum)*	Woodlands	Common

MAJOR PLANT GROUP **Family** **Genus**	**Habitat Type**	**Abundance**
Common Name		

NCN = No Common Name, * = Non-native, @= Voucher Specimen

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--MONOCOTYLEDONAE-GRASSES

POACEAE Grass Family		
**Avena barbata* Link. Slender Wild Oat	Rudera	Common
**Bromus diandrus* Roth Ripgut Grass	Ruderal	Common
Elymus glaucus Buckley ssp. *glaucus* Blue Wildrye	Ruderal	Common
Festuca microstachys Nutt. NCN (=*Vulpia microstachys)*	Ruderal	Common
**Festuca myuros* L. Rattail Fescue,Zorro Annual Fescue (=*Vulpia myuros)*	Ruderal s	Common
**Phalaris aquatica* L. Harding Grass	Grasslands	Common

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--MONOCOTYLEDONAE-SEDGES AND RUSHES

CYPERACEAE Sedge Family		
Cyperus eragrostis Lam. Nut-grass	Ruderal Moist Areas	Common

Fauna Species Observed in the Vicinity of the Project Site

The nomenclature for the animals found on the project site and in the immediate vicinity follows: Mc Ginnis –1984, for the fresh water fishes; Stebbins -l985, for the reptiles and amphibians; and Udvardy and Farrand – 1998, for the birds; and Jameson and Peeters -l988 for the mammals.

AMPHIBIA AND REPTILIA		
ORDER		
Common Name	**Genus**	**Observed**
CHELONIA		
Northwestern Pond Turtle	*Actinemys marmorata marmorata*	X

AVES		
ORDER		
Common Name	**Genus**	**Observed**
AVES		
California Quail	*Callipepla californica*	X
Canada Goose	*Branta canadensis*	X
Common Crow	*Corvus brachyrhynchos*	X
European Starling	*Sturnus vulgaris*	*X*
CHELONIA		
Western Pond Turtle	*Emys marmorata*	X

MAMMALS		
ORDER		
Common Name	**Genus**	**Observed**
LAGOMORPHA		
Black-tailed Jackrabbit	*Lepus californicus*	Scat
RODENTIA		
Pocket Gopher	*Thomomys bottae*	Sight

APPENDIX B

Definitions (Not all are relevant to this project)

Absolute Cover. The percentage of ground covered by the vertical projection of the plant crowns of a species or defined set of plants as viewed from above The absolute cover of herbaceous plants includes any standing (attached to a living palnt, and not lying on the grouns) plant parts, whether alive or dead; this deviniton escludes litter and other searated plant material. The cover may include mosses, lichens and recognizable cryptogamic crusts.

Best Management Practices. Best management practices represent the construction or agricultural practices that are consistent with regulatory laws or industry standards which are prudent and consistent with site conditions.

Confidence Interval. The California Department of Fish and Wildlife (DFW) California Natural Diversity Data Base (CNDDB) uses map polygon projections for indicating potential for occurrence of special-status plant populations around a recorded occurrence.

Critical Habitat. Critical habitat is by definition a designated by U.S. Fish and Wildlife Service as essential for the existence of a particular population of species. The U.S. Fish and Wildlife Service designates critical habitat for special-status species as an area or region within which a species may be found. "Critical habitat" is defined as areas essential for the "conservation" of the species in question.

Habitat Fragmentation. The issue of habitat fragmentation is of concern locally, nationally, and globally. The term habitat fragmentation refers to the loss of connections within the biosphere such that the movement, genetic exchange, and dispersal of native populations is restricted or prevented. Anthropogenic habitat fragmentation can be the result of a road construction, logging, agriculture, or urban growth. The practice of retaining or planning for "Corridors" is an attempt to address this issue. Corridors that allow movement of wildlife through and around a site include stream and riparian areas and also areas that connect two or more sites of critical wildlife habitat.

Habitat Types. Habitat types are used by DFW to categorize elements of nature associated with the physical and biological conditions in an area. These are of particular importance for the wildlife they support, and they are important as indicators of the potential for special-status species.

Relative Cover. A measure of the cover of a species in relation to that of other species within a set area or sample of vegetation. This is usually calculated for species that occur in the same layer (stratum) of vegetation, and this measure can be calculated across a group of samples.

Riparian Corridor. Riparian corridors can be defined as the stream channel between the low-water and high-water marks plus the terrestrial landscape above the high water-mark (where vegetation may be influenced by elevated water tables or extreme flooding and by the ability of the soils to hold water; Naiman, et. al. 1993).

Riparian Corridor or Riparian Ecosystem. Riparian ecosystems occupy the ecotone between upland and lotic aquatic realms. Riparian corridors can be defined as the stream channel between the low- and high-water marks plus the terrestrial landscape above the high water-mark (where vegetation may be influenced by elevated water tables or extreme flooding and by the ability of the soils to hold water; Naiman, et. al. 1993).

Ruderal Habitat. Ruderal habitat is characterized by disturbance and the establishment and dominance of non-native introduced weed species. Ruderal plant communities are a function of or result of agricultural or logging practices. This habitat is typically found along graded roads, erosional surfaces or sites influenced by agricultural animal populations.

Sensitive Habitat. DFW Natural Diversity Data Base uses environmentally sensitive plant communities for plant populations that are rare or threatened in nature. Sensitive habitat is defined as any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Wildlife Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes. Sensitive Habitat also includes wetlands and tributaries to “Waters of the US” as defined by the Corps of Engineers (ACOE) and DFW seasonal streams DFW.

Serpentinite. Serpentinite or serpentine consists of ultramafic rock outcrops that due to the unique mineral composition support a unique flora often of endemics. Kruckeberg, 1984, indicates that the taxonomy and evolutionary responses to serpentines include ”1) taxa endemic to serpentine, 2) local or regional indicator taxa, largely confined to serpentine in parts of their ranges, 3) indifferent or “bodenvag” taxa that range on and off serpentine, and 4) taxa that are excluded from serpentine.” Serpentine outcrops or serpentinites support numerous special-status plant taxa.

Special-status Species. Special-status organisms are plants or animals that have been designated by Federal or State agencies as rare, endangered, or threatened. We have also included plant species listed by the CNPS. Section 15380 of the California Environmental Quality Act [CEQA (September, 1983)] has a discussion regarding non-listed (State) taxa. This section states that a plant (or animal) must be treated as Rare or Endangered even if it is not officially listed as such. If a person (or organization provides information showing that a taxa meets the State’s definitions and criteria, then the taxa should be treated as such.

Standard Agricultural Practices. Standard agricultural practices are best management practices which are prudent as applied in the agricultural industry such as the use of regulated pesticides,

methods of and timing of weed control, appropriate fertilizer application, irrigation management, frost protection, erosion control and soil conservation and management, and dust control among other practices.

Streams. The DFW definition of stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports wildlife, fish, or other aquatic life. This includes watercourses having a surface or subsurface flow that support or have supported riparian vegetation. DFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife.

Target organisms. Special-status species that are listed by: the California Department of Fish and recorded in the Natural Diversity Data Base for the Quadrangle and surrounding Quadrangles of the project site; the California Native Plant Society for the habitat present on the project site Quadrangle and surrounding Quadrangles; Federal Endangered and Threatened Species that Occur in the U.S.G.S. 7 1/2 Minute Quadrangle; our experience with the local flora and fauna; any species identified by local individuals that are considered to be rare in the region; and DFW Five Mile radius CNDDB Rarefind search (See Plate II).

Wetlands. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Many surface waters and wetlands in California meet the criteria for waters of the United States, including intermittent streams and seasonal lakes and wetlands.

Vernal Pools. Vernal pools are a type of seasonal wetland distinct for California and the western US. Typically they are associated with seasonal rainfall or "Mediterranean climate" and have a distinct flora and fauna, an impermeable or slowly permeable substrate and contain standing water for a portion of the year. They are characterized by a variable aquatic and dry regime with standing water during the spring plant growth regime. They have a high degree of endemism of flora and fauna.

Federal Regulations

Federal Endangered Species Act Pursuant to the federal Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (FWS) and the National Oceanic and Atmospheric Administration (NOAA), have authority over projects that may affect the continued existence of a species that is federally listed as threatened or endangered. Section 9 of ESA prohibits the take of a federally listed species; take is defined, in part, as killing, harming, or harassment and includes habitat modification or degradation where it actually results in death or injury to wildlife by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering.

Section 404 of the Clean Water Act Section 404 of the Clean Water Act establishes a requirement to obtain a permit before any activity that involves any discharge of dredged or fill material into "waters of the United States," including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce,

tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

Army Corps of Engineers (ACOE) regulates and issues 404 permits for activities that involve the discharge of dredged or fill materials into waters of the United States. A Water Quality Certification 401 permit must also be obtain from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Board to the nine Regional Water Quality Control Boards (RWQCBs).

State Regulations

California Endangered Species Act Pursuant to the California Endangered Species Act (CESA) and Section 2081 of the Fish and Wildlife Code, a permit from Department of Fish and Wildlife (DFW) is required for projects that could result in the take of a state listed threatened or endangered species. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but the definition does not include "harm" or "harass," as the ESA does. As a result, the threshold for a take under CESA is higher than that under the ESA.

California Fish and Wildlife Code Section 1600 – Lake and Streambed Alteration Permit. All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by DFW pursuant to Section 1600 of the California Fish and Wildlife Code. Section 1600 states that it is unlawful for any person, government agency, state, local, or any public utility to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or deposit or dispose of waste, debris, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake without first notifying DFW of such activity.

Porter-Cologne Water Quality Control Act Under the Porter-Cologne Water Quality Control Act, "waters of the state" fall under the jurisdiction of the RWQCB. Under the act, the RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control non-point and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the Clean Water Act.

APPENDIX C

CNPS Special Status-species Listed for the Project Quadrangle and Surrounding Quadrangles

DFW CNDDB Rare Find Special-status Species Listed for the Quadrangle and Surrounding Quadrangles

U.S. Fish and Wildlife Service Listed Species for the Quadrangle

Inventory of Rare and Endangered Plants - 7th edition interface

v7-14jun 6-11-14

Status: search results - Wed, Jul. 16, 2014 16:06 ET c

Your Quad Selection: Calistoga (517D) 3812255, Kenwood (501A) 3812245, Santa Rosa (501B) 3812246, Aetna Springs (516B) 3812264, St. Helena (516C) 3812254, Rutherford (500B) 3812244, Detert Reservoir (517A) 3812265, Mount St. Helena (517B) 3812266, Mark West Springs (517C) 3812256

scientific	common	family	CNPS
Allium peninsulare var. franciscanum	Franciscan onion	Alliaceae	List 1B.2
Alopecurus aequalis var. sonomensis	Sonoma alopecurus	Poaceae	List 1B.1
Amorpha californica var. napensis	Napa false indigo	Fabaceae	List 1B.2
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	List 1B.2
Anomobryum julaceum	slender silver moss	Bryaceae	List 2B.2
Arctostaphylos canescens ssp. sonomensis	Sonoma canescent manzanita	Ericaceae	List 1B.2
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	List 1B.3
Arctostaphylos stanfordiana ssp. decumbens	Rincon Ridge manzanita	Ericaceae	List 1B.1
Astragalus claranus	Clara Hunt's milk-vetch	Fabaceae	List 1B.1
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	Fabaceae	List 1B.2
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	List 1B.2
Blennosperma bakeri	Sonoma sunshine	Asteraceae	List 1B.1
Brodiaea leptandra	narrow-anthered brodiaea	Themidaceae	List 1B.2

Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	List 1B.1
Ceanothus divergens	Calistoga ceanothus	Rhamnaceae	List 1B.2
Ceanothus purpureus	holly-leaved ceanothus	Rhamnaceae	List 1B.2
Ceanothus sonomensis	Sonoma ceanothus	Rhamnaceae	List 1B.2
Centromadia parryi ssp. parryi	pappose tarplant	Asteraceae	List 1B.2
Cryptantha dissita	serpentine cryptantha	Boraginaceae	List 1B.2
Downingia pusilla	dwarf downingia	Campanulaceae	List 2B.2
Erigeron biolettii	streamside daisy	Asteraceae	List 3
Erigeron greenei	Greene's narrow-leaved daisy	Asteraceae	List 1B.2
Eriogonum nervulosum	Snow Mountain buckwheat	Polygonaceae	List 1B.2
Eryngium constancei	Loch Lomond button-celery	Apiaceae	List 1B.1
Fritillaria liliacea	fragrant fritillary	Liliaceae	List 1B.2
Fritillaria pluriflora	adobe-lily	Liliaceae	List 1B.2
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	List 1B.2
Harmonia hallii	Hall's harmonia	Asteraceae	List 1B.2
Hemizonia congesta ssp. congesta	white seaside tarplant	Asteraceae	List 1B.2
Hesperolinon bicarpellatum	two-carpellate western flax	Linaceae	List 1B.2
Hesperolinon sharsmithiae	Sharsmith’s western	Linaceae	List

	flax		1B.2
Juncus luciensis	Santa Lucia dwarf rush	Juncaceae	List 1B.2
Lasthenia burkei	Burke's goldfields	Asteraceae	List 1B.1
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	List 1B.1
Layia septentrionalis	Colusa layia	Asteraceae	List 1B.2
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	List 1B.2
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	List 3
Limnanthes vinculans	Sebastopol meadowfoam	Limnanthaceae	List 1B.1
Lupinus sericatus	Cobb Mountain lupine	Fabaceae	List 1B.2
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	List 3.2
Microseris paludosa	marsh microseris	Asteraceae	List 1B.2
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Polemoniaceae	List 1B.1
Navarretia leucocephala ssp. plieantha	many-flowered navarretia	Polemoniaceae	List 1B.2
Navarretia myersii ssp. deminuta	small pincushion navarretia	Polemoniaceae	List 1B.1
Navarretia rosulata	Marin County navarretia	Polemoniaceae	List 1B.2
Penstemon newberryi var. sonomensis	Sonoma beardtongue	Plantaginaceae	List 1B.3
Plagiobothrys strictus	Calistoga popcorn-flower	Boraginaceae	List 1B.1
Poa napensis	Napa blue grass	Poaceae	List

			1B.1
Sidalcea hickmanii ssp. napensis	Napa checkerbloom	Malvaceae	List 1B.1
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	Malvaceae	List 1B.2
Sidalcea oregana ssp. valida	Kenwood Marsh checkerbloom	Malvaceae	List 1B.1
Streptanthus batrachopus 📷	Tamalpais jewel-flower	Brassicaceae	List 1B.3
Streptanthus brachiatus ssp. brachiatus	Socrates Mine jewel-flower	Brassicaceae	List 1B.2
Streptanthus brachiatus ssp. hoffmanii 📷	Freed's jewel-flower	Brassicaceae	List 1B.2
Streptanthus hesperidis	green jewel-flower	Brassicaceae	List 1B.2
Streptanthus morrisonii ssp. elatus 📷	Three Peaks jewel-flower	Brassicaceae	List 1B.2
Streptanthus morrisonii ssp. kruckebergii	Kruckeberg's jewel-flower	Brassicaceae	List 1B.2
Streptanthus vernalis 📷	early jewel-flower	Brassicaceae	List 1B.2
Stuckenia filiformis ssp. alpina	slender-leaved pondweed	Potamogetonaceae	List 2B.2
Trichostema ruygtii 📷	Napa bluecurls	Lamiaceae	List 1B.2
Trifolium amoenum 📷	two-fork clover	Fabaceae	List 1B.1
Trifolium hydrophilum	saline clover	Fabaceae	List 1B.2
Triquetrella californica 📷	coastal triquetrella	Pottiaceae	List 1B.2
Viburnum ellipticum 📷	oval-leaved viburnum	Adoxaceae	List 2B.3

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the CALISTOGA (517D) U.S.G.S. 7 1/2 Minute Quad

Report Date: July 16, 2014

Listed Species

Invertebrates

Syncaris pacifica
California freshwater shrimp (E)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus kisutch
coho salmon - central CA coast (E) (NMFS)

Oncorhynchus mykiss
Central California Coastal steelhead (T) (NMFS)
Central Valley steelhead (T) (NMFS)
Critical habitat, Central California coastal steelhead (X) (NMFS)

Oncorhynchus tshawytscha
California coastal chinook salmon (T) (NMFS)
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Rana draytonii
California red-legged frog (T)

Birds

Strix occidentalis caurina
northern spotted owl (T)

Plants

Astragalus clarianus
Clara Hunt's milk-vetch (E)

Eryngium constancei
Loch Lomond coyote-thistle (=button-celery) (E)

Lasthenia burkei
Burke's goldfields (E)

Plagiobothrys strictus
Calistoga allocarya (popcorn-flower) (E)

Poa napensis
Napa bluegrass (E)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the . Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Five Mile

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	*Accipiter striatus* sharp-shinned hawk	ABNKC12020			G5	S3	
2	*Amorpha californica var. napensis* Napa false indigo	PDFAB08012			G4T2	S2	1B.2
3	*Antrozous pallidus* pallid bat	AMACC10010			G5	S3	SC
4	*Arctostaphylos stanfordiana ssp. decumbens* Rincon Ridge manzanita	PDERI041G4			G3T1	S1	1B.1
5	*Astragalus claranus* Clara Hunt's milk-vetch	PDFAB0F240	Endangered	Threatened	G1	S1	1B.1
6	*Brodiaea leptandra* narrow-anthered brodiaea	PMLIL0C022			G3?	S3?	1B.2
7	*Ceanothus confusus* Rincon Ridge ceanothus	PDRHA04220			G1	S1	1B.1
8	*Ceanothus divergens* Calistoga ceanothus	PDRHA04240			G2	S2	1B.2
9	*Ceanothus purpureus* holly-leaved ceanothus	PDRHA04160			G2	S2	1B.2
10	*Centromadia parryi ssp. parryi* pappose tarplant	PDAST4R0P2			G3T1	S1	1B.2
11	*Coastal and Valley Freshwater Marsh*	CTT52410CA			G3	S2.1	
12	*Corynorhinus townsendii* Townsend's big-eared bat	AMACC08010		Candidate Threatened	G3G4	S2S3	SC
13	*Emys marmorata* western pond turtle	ARAAD02030			G3G4	S3	SC
14	*Eryngium constancei* Loch Lomond button-celery	PDAPI0Z0W0	Endangered	Endangered	G1	S1	1B.1
15	*Falco mexicanus* prairie falcon	ABNKD06090			G5	S4	
16	*Falco peregrinus anatum* American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
17	*Juncus luciensis* Santa Lucia dwarf rush	PMJUN013J0			G2G3	S2S3	1B.2
18	*Lasthenia burkei* Burke's goldfields	PDAST5L010	Endangered	Endangered	G1	S1	1B.1
19	*Layia septentrionalis* Colusa layia	PDAST5N0F0			G2	S2	1B.2
20	*Leptosiphon jepsonii* Jepson's leptosiphon	PDPLM09140			G2	S2	1B.2
21	*Limnanthes floccosa ssp. floccosa* woolly meadowfoam	PDLIM02043			G4T4	S3.2	4.2
22	*Limnanthes vinculans* Sebastopol meadowfoam	PDLIM02090	Endangered	Endangered	G1	S1	1B.1
23	*Lupinus sericatus* Cobb Mountain lupine	PDFAB2B3J0			G2	S2	1B.2

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24	*Myotis thysanodes* fringed myotis	AMACC01090			G4	S4	
25	*Navarretia leucocephala ssp. bakeri* Baker's navarretia	PDPLM0C0E1			G4T2	S2	1B.1
26	*Oncorhynchus mykiss irideus* steelhead - central California coast DPS	AFCHA0209G	Threatened		G5T2Q	S2	
27	*Penstemon newberryi var. sonomensis* Sonoma beardtongue	PDSCR1L483			G4T1	S2	1B.3
28	*Plagiobothrys strictus* Calistoga popcornflower	PDBOR0V120	Endangered	Threatened	G1	S1	1B.1
29	*Poa napensis* Napa blue grass	PMPOA4Z1R0	Endangered	Endangered	G1	S1	1B.1
30	*Progne subis* purple martin	ABPAU01010			G5	S3	SC
31	*Sidalcea hickmanii ssp. napensis* Napa checkerbloom	PDMAL110A6			G3T1	S1	1B.1
32	*Sidalcea oregana ssp. hydrophila* marsh checkerbloom	PDMAL110K2			G5T3	S3	1B.2
33	*Syncaris pacifica* California freshwater shrimp	ICMAL27010	Endangered	Endangered	G1	S1	
34	*Trifolium hydrophilum* saline clover	PDFAB400R5			G2	S2	1B.2

CALIFORNIA DEPARTMENT OF **RareFind**

Query Summary:
Quad (Calistoga (3812255) Kenwood (3812245) Santa Rosa (3812246) Aetna Springs (3812264) St. Helena (3812254) Rutherford (3812244) Detert Reservoir (3812265) Mount St. Helena (3812266) Mark West Springs (3812256))
Habitat (Valley & foothill grassland Aquatic)

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CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Allium peninsulare var. franciscanum	Franciscan onion	Monocots	PMLIL021R1	14	1	None	None	G5T1	S1	1B.2	null	Cismontane woodland | Ultramafic | Valley & foothill grassland
Ambystoma californiense	California tiger salamander	Amphibians	AAAAA01180	1094	25	Threatened	Threatened	G2G3	S2S3	null	CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Cismontane woodland | Meadow & seep | Riparian woodland | Valley & foothill grassland | Vernal pool | Wetland
Amsinckia lunaris	bent-flowered fiddleneck	Dicots	PDBOR01070	64	2	None	None	G2?	S2?	1B.2	BLM_S-Sensitive	Cismontane woodland | Valley & foothill grassland
Antrozous pallidus	pallid bat	Mammals	AMACC10010	402	10	None	None	G5	S3	null	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	Chaparral | Coastal scrub | Desert wash | Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Riparian woodland | Sonoran desert scrub | Upper montane coniferous forest | Valley & foothill grassland
Astragalus claranus	Clara Hunt's milk-vetch	Dicots	PDFAB0F240	6	6	Endangered	Threatened	G1	S1	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Valley & foothill grassland
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	Dicots	PDFAB0F7E1	47	1	None	None	G4T3	S3	1B.2	BLM_S-Sensitive	Cismontane woodland | Ultramafic | Valley & foothill grassland
Balsamorhiza macrolepis	big-scale balsamroot	Dicots	PDAST11061	43	2	None	None	G2	S2	1B.2	BLM_S-Sensitive | USFS_S-Sensitive	Chaparral | Cismontane woodland | Ultramafic | Valley & foothill grassland
Blennosperma bakeri	Sonoma sunshine	Dicots	PDAST1A010	23	4	Endangered	Endangered	G1	S1	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Valley & foothill grassland | Vernal pool | Wetland
												Broadleaved upland forest | Chaparral |

Brodiaea leptandra	narrow-anthered brodiaea	Monocots	PMLIL0C022	29	19	None	None	G3?	S3?	1B.2	null	Cismontane woodland | Lower montane coniferous forest | Valley & foothill grassland
Buteo swainsoni	Swainson's hawk	Birds	ABNKC19070	2394	1	None	Threatened	G5	S3	null	ABC_WLBCC-Watch List of Birds of Conservation Concern | BLM_S-Sensitive | IUCN_LC-Least Concern | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Great Basin grassland | Riparian forest | Riparian woodland | Valley & foothill grassland
Centromadia parryi ssp. parryi	pappose tarplant	Dicots	PDAST4R0P2	29	4	None	None	G3T1	S1	1B.2	BLM_S-Sensitive	Coastal prairie | Marsh & swamp | Meadow & seep | Valley & foothill grassland
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	487	10	None	Candidate Threatened	G3G4	S2S3	null	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	Broadleaved upland forest | Chaparral | Chenopod scrub | Great Basin grassland | Great Basin scrub | Joshua tree woodland | Lower montane coniferous forest | Meadow & seep | Mojavean desert scrub | Riparian forest | Riparian woodland | Sonoran desert scrub | Sonoran thorn woodland | Upper montane coniferous forest | Valley & foothill grassland
Downingia pusilla	dwarf downingia	Dicots	PDCAM060C0	127	1	None	None	GU	S2	2B.2	null	Valley & foothill grassland | Vernal pool | Wetland
Elanus leucurus	white-tailed kite	Birds	ABNKC06010	158	1	None	None	G5	S3	null	BLM_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern	Cismontane woodland | Marsh & swamp | Riparian woodland | Valley & foothill grassland | Wetland
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1136	23	None	None	G3G4	S3	null	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable |	Aquatic | Artificial flowing waters | Klamath/North coast flowing waters | Klamath/North coast standing waters | Marsh & swamp | Sacramento/San Joaquin flowing waters |

											USFS_S-Sensitive	Sacramento/San Joaquin standing waters | South coast flowing waters | South coast standing waters | Wetland
Falco mexicanus	prairie falcon	Birds	ABNKD06090	457	2	None	None	G5	S4	null	CDFW_WL-Watch List | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Sonoran desert scrub | Valley & foothill grassland
Fritillaria liliacea	fragrant fritillary	Monocots	PMLIL0V0C0	69	6	None	None	G2	S2	1B.2	USFS_S-Sensitive	Coastal prairie | Coastal scrub | Ultramafic | Valley & foothill grassland
Fritillaria pluriflora	adobe-lily	Monocots	PMLIL0V0F0	107	1	None	None	G3	S3	1B.2	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Ultramafic | Valley & foothill grassland
Hemizonia congesta ssp. congesta	white seaside tarplant	Dicots	PDAST4R065	33	1	None	None	G5T2T3	S2S3	1B.2	null	Coastal scrub | Valley & foothill grassland
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	Insects	IICOL5V010	13	1	None	None	G2?	S2?	null	null	Aquatic | Sacramento/San Joaquin flowing waters | Sacramento/San Joaquin standing waters
Hydroporus leechi	Leech's skyline diving beetle	Insects	IICOL55040	13	1	None	None	G1?	S1?	null	null	Aquatic
Hysterocarpus traski pomo	Russian River tule perch	Fish	AFCQK02011	4	1	None	None	G5T2	S2	null	AFS_VU-Vulnerable | CDFW_SSC-Species of Special Concern	Aquatic | Klamath/North coast flowing waters
Lavinia symmetricus navarroensis	Navarro roach	Fish	AFCJB19023	4	1	None	None	G4T1T2	S1S2	null	CDFW_SSC-Species of Special Concern	Aquatic | Sacramento/San Joaquin flowing waters
Layia septentrionalis	Colusa layia	Dicots	PDAST5N0F0	46	11	None	None	G2	S2	1B.2	BLM_S-Sensitive	Chaparral | Cismontane woodland | Ultramafic | Valley & foothill grassland
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Dicots	PDLIM02043	54	1	None	None	G4T4	S3.2	4.2	null	Chaparral | Cismontane woodland | Valley & foothill grassland | Vernal pool | Wetland
Limnanthes vinculans	Sebastopol meadowfoam	Dicots	PDLIM02090	43	8	Endangered	Endangered	G1	S1	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Meadow & seep | Valley & foothill grassland | Vernal pool | Wetland
Microseris	marsh											Cismontane woodland | Closed-cone

paludosa	microseris	Dicots	PDAST6E0D0	31	1	None	None	G2	S2	1B.2	null	coniferous forest | Coastal scrub | Valley & foothill grassland
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Dicots	PDPLM0C0E1	58	8	None	None	G4T2	S2	1B.1	BLM_S-Sensitive	Cismontane woodland | Lower montane coniferous forest | Meadow & seep | Valley & foothill grassland | Vernal pool | Wetland
Oncorhynchus mykiss irideus	steelhead - central California coast DPS	Fish	AFCHA0209G	38	2	Threatened	None	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic | Sacramento/San Joaquin flowing waters
Plagiobothrys strictus	Calistoga popcornflower	Dicots	PDBOR0V120	3	3	Endangered	Threatened	G1	S1	1B.1	SB_UCBBG-UC Berkeley Botanical Garden	Meadow & seep | Valley & foothill grassland | Vernal pool | Wetland
Poa napensis	Napa blue grass	Monocots	PMPOA4Z1R0	2	2	Endangered	Endangered	G1	S1	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Meadow & seep | Valley & foothill grassland | Wetland
Rana boylii	foothill yellow-legged frog	Amphibians	AAABH01050	805	19	None	None	G3	S2S3	null	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened | USFS_S-Sensitive	Aquatic | Chaparral | Cismontane woodland | Coastal scrub | Klamath/North coast flowing waters | Lower montane coniferous forest | Meadow & seep | Riparian forest | Riparian woodland | Sacramento/San Joaquin flowing waters
Rana draytonii	California red-legged frog	Amphibians	AAABH01022	1335	3	Threatened	None	G2G3	S2S3	null	CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Aquatic | Artificial flowing waters | Artificial standing waters | Freshwater marsh | Marsh & swamp | Riparian forest | Riparian scrub | Riparian woodland | Sacramento/San Joaquin flowing waters | Sacramento/San Joaquin standing waters | South coast flowing waters | South coast standing waters | Wetland
Serpentine Bunchgrass	Serpentine Bunchgrass	Herbaceous	CTT42130CA	22	1	None	None	G2	S2.2	null	null	Valley & foothill grassland
Stygobromus cherylae	Barr's amphipod	Crustaceans	ICMAL05D60	1	1	None	None	G1	S1	null	null	Aquatic
Syncaris pacifica	California freshwater shrimp	Crustaceans	ICMAL27010	18	3	Endangered	Endangered	G1	S1	null	IUCN_EN-Endangered	Aquatic | Sacramento/San Joaquin flowing waters

Taxidea taxus	American badger	Mammals	AMAJF04010	476	1	None	None	G5	S4	null	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Alkali marsh | Alkali playa | Alpine | Alpine dwarf scrub | Bog & fen | Brackish marsh | Broadleaved upland forest | Chaparral | Chenopod scrub | Cismontane woodland | Closed-cone coniferous forest | Coastal bluff scrub | Coastal dunes | Coastal prairie | Coastal scrub | Desert dunes | Desert wash | Freshwater marsh | Great Basin grassland | Great Basin scrub | Interior dunes | Ione formation | Joshua tree woodland | Limestone | Lower montane coniferous forest | Marsh & swamp | Meadow & seep | Mojavean desert scrub | Montane dwarf scrub | North coast coniferous forest | Oldgrowth | Pavement plain | Redwood | Riparian forest | Riparian scrub | Riparian woodland | Salt marsh | Sonoran desert scrub | Sonoran thorn woodland | Ultramafic | Upper montane coniferous forest | Upper Sonoran scrub | Valley & foothill grassland
Trichostema ruygtii	Napa bluecurls	Dicots	PDLAM220H0	19	2	None	None	G2	S2	1B.2	null	Chaparral | Cismontane woodland | Lower montane coniferous forest | Valley & foothill grassland | Vernal pool | Wetland
Trifolium amoenum	showy rancheria clover	Dicots	PDFAB40040	26	2	Endangered	None	G1	S1	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden | SB_USDA-US Dept of Agriculture	Coastal bluff scrub | Ultramafic | Valley & foothill grassland
Trifolium												Marsh & swamp | Valley & foothill

hydrophilum	saline clover	Dicots	PDFAB400R5	49	4	None	None	G2	S2	1B.2	null	grassland | Vernal pool | Wetland
Triquetrella californica	coastal triquetrella	Bryophytes	NBMUS7S010	11	1	None	None	G1	S1	1B.2	USFS_S-Sensitive	Coastal bluff scrub | Coastal scrub | Valley & foothill grassland
Valley Needlegrass Grassland	Valley Needlegrass Grassland	Herbaceous	CTT42110CA	45	2	None	None	G3	S3.1	null	null	Valley & foothill grassland
Wildflower Field	Wildflower Field	Herbaceous	CTT42300CA	5	1	None	None	G2	S2.2	null	null	Valley & foothill grassland