Biological Resource Survey

Fisher Vineyards & FIV Partners
APN is 020-150-004
Napa County, CA

Prepared
For

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APN is 020-150-004
Silverado Trail, Calistoga, CA

PROJECT NAME: Fisher Vineyards & FIV Partners
Silverado Trail, Calistoga, CA

ASSESSOR'S PARCELS: APN No. 020-150-004

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PERIOD OF STUDY: Spring 2009

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EXECUTIVE SUMMARY

This study was conducted at the request of Jon M Webb, PLS 6709, Albion Surveys, Inc. and the property owners as part of the background studies required for a use permit from Napa County Conservation, Development and Planning Department. The Fisher Vineyards and FIV partners propose the development of a winery on land that was previously a vineyard (See Plate V Use Permit Map).

The study site is in Napa County, southeast of city of Calistoga with access from the Silverado Trail. The study site is within the Calistoga Quadrangle.

The purpose of the study and report is to identify biological resources that may be impacted by the proposed project. This seasonal spring floristic and biological study follows the Napa County Guidelines, Department of Fish and Game Guidelines, and the California Native Plant Society Guidelines.

Findings:

- The study site is within the watershed of Canyon Creek and the Napa River;
- The study area consists of an existing access road and fallow (ruderal habitat) agricultural lands (cleared vineyard) dominated by non-native weed species;
- No special-status animal species or habitat which would support special-status animal species was observed on the study area;
- The riparian corridor along Canyon Creek on the south side is a significant biological resource as well as the tree line along the west side of the parcel adjacent to the city of Calistoga waste water storage ponds.
- No trees will be removed by the project (there is one heritage Valley Oak (*Quercus lobata)* on the southwest corner of the parcel out side of the proposed project);
- No special-status plant species were observed on the study area or near the project site. The project site does not contain habitat or vegetation associates which would support special-status plants species;
- Decades of agricultural use of the site precludes the presence of any of the potential Special-status Species;
- A sprouting young Blue Elderberry plant was observed within the mowed ruderal habitat of the study site. This plant is the host for the Valley Long horned Elderberry Beetle. The size and location of the plant is such that there is no reason to expect any Elderberry Beetles.
- There is no designated critical habitat identified by the US Fish and Wildlife present on

the study site that would require species-specific studies. The Quadrangle is designated as sensitive habitat for the Peregrine Falcon and the Calistoga Popcorn Flower;

- There are no sensitive plant communities listed by DFG for the Quadrangle or surrounding Quadrangles on the project site;
- There is no bat roosting/breeding habitat on the project site;
- No raptor nests were observed on the project site or surrounding the project site;
- The proposed project will not impact any riparian vegetation, drainages, vernal pools, or wetlands. Avoiding expanding the existing bridge on Silverado Trail will preserve the existing riparian habitat;
- There are no potential impacts to migratory corridors or wildlife nursery sites associated with the proposed project provided the riparian zone referenced above and the tree line along the west side are avoided; and
- The flora and fauna observed are included as an appendix.

Assessment of Impacts

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 and the trees on the edge of the parcel are protected and retained.

The loss of ruderal/agricultural habitat for local wildlife is incremental but on a regional or local scale will be less than significant.

Mitigation Considerations

The loss of ruderal grassland habitat will not result in a significant impact to local wildlife nor will the project impact any special-status species.

A preconstruction raptor survey must be conducted if any construction within 500 ft of Oaks on the property is anticipated during raptor nesting season. The trees surrounding the site are potential nesting habitat for local raptors.

The construction phase of the project will require best management practices to prevent impacts of dust and erosion from the project. The project must prevent any silt, and or sediment movement offsite.

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A PROJECT DESCRIPTION

This study was conducted at the request of Jon M Webb, Albion Surveys, Inc. and the property owners as part of the background studies required for a use permit from Napa County Conservation, Development and Planning Department. The Fisher Vineyards and FIV partners propose the development of a winery on land that was previously a vineyard (See Plate V Use Permit Map).

The study site is in Napa County, southeast of the city of Calistoga with access from the Silverado Trail. The study site is within the Calistoga Quadrangle.

Plate I provides a Location and Site Map and Plate III provides an Aerial Photograph of the property. The findings presented are results of spring 2009 fieldwork conducted by Kjeldsen Biological Consulting.

A.1 Purpose

The purposes of this report is to identify habitat types present on and adjacent to the site, delineate wildlife movement corridors within and across the property, determine if there is a need for additional protocol-level wildlife surveys, determine the presence of or potential for special-status animals, plants and the effects of the proposed project on any on-site or off-site biological resources. This study follows the Napa County Guidelines, Department of Fish and Game (DFG) Guidelines, and the California Native Plant Society CNPS) Guidelines.

A.2 Definitions

Definitions used in this report are attached in Appendix B.

A.3 Regulatory Permits

The relevant state and federal permit regulations are presented in Appendix B.

B BIOLOGICAL SETTING

The study site is located in Napa County at the upper end of Napa Valley southeast of the city of Calistoga. The project site is a parcel that supports a large reservoir and has been a producing vineyard. The vineyard was removed prior to our initiation of our study (See Plate I for Location and Site Map and Plate III for an Aerial Photograph of the property). The project site is in the valley floor at an elevation of approximately 400 feet. The project site has a flat topography and has been in agricultural use for decades.

B.1 Site Description and Biological Resources Evaluation Area

Our survey focused on the project footprint, the entire parcel, road access and immediate surrounding habitat. Figures 1 to 3 illustrate the study site and the conditions present during the duration of our field studies. The "natural habitat" on the property is associated with the riparian corridor of Canyon Creek and the tree line along the west side of the parcel.

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. The variation in vegetation is a function of topography, geology, climate and biotic factors. 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). There is also evidence that vegetation on the site is part of a continuum without well-defined boundaries. There is no agreement as to which system of nomenclature to use for describing plant communities.

The Plant Community on the project sites would be classified by Holland 1986 as Ruderal or fallow agricultural lands. The habitat type or plant community associated with the project site (Holland, 1986) is characterized below. A complete list of all plants encountered on the project site and along the property edges is included in Appendix A.

The CNPS list of rare plants for California associates rare and endangered species with "Habitat Types." The Habitat Type for the project site would be considered to be valley and foothill grassland that has been converted to agriculture.

Ruderal

Ruderal supports a flora that is a result of agriculture and the introduction of non-native plants. The ruderal habitat of the site consists of native and naturalized exotic species that have been introduced and selected for over time. The dominant grasses are in the following genera: *Avena, Bromus*, and *Taeniantherum.*

Figure 1. View to the south from the north edge of the project site. Fallow grassland following the removal of vineyard.

Figure 2. View along the west edge of the site with reservoir on the left.

Figure 3. View to the east from the west edge of the site.

B.2 Surrounding Biological Resources

The aerial photograph Plate III illustrates the site and the surrounding environment. Plate IV provides a Vegetation Map of the property.
The environmental setting of the project site consists of:

- On the north side of the project – Ruderal Grassland, vineyards;
- On the east side of the project – Vineyard and agricultural buildings;
- On the south side of the project – Riparian Corridor of Canyon Creek, vineyards; and
- On the west side of the project – Oak Woodlands associated with the edge of the Calistoga waste water treatment ponds.

B.3 Napa County Defined Drainage

The project sites drains by sheet flow to into the Canyon Creek thence the Napa River.

C SURVEY METHODOLOGY

C.1 Project Scoping

Our scoping included identification of and location of habitat and or vegetation types present on the project site and their potential for support of special-status plant species known for the Quadrangle, surrounding Quadrangles the county or the region.

Special-status species were considered from the most recent records in the Department of Fish and Game California Natural Diversify Data Base (DFG CNDDB Rare Find-3 and the most recent update of California Native Plant Society (CNPS) Electronic Inventory of Rare or Endangered Plants (See Appendix C). Our scoping is also a function of our familiarity with the local flora and previous projects in the area.

"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.

Tables I and II present target special-status species (see Appendix C).

C.2 Field Survey Methodology

Our study was made by walking along the proposed access road and walking transects through and around the project site and the parcel. Our fieldwork included a floristic study and focused on locating target organisms or suitable habitat for target organisms or indications that such habitat exists on the site.

Plants were identified in the field or specimens were collected, when necessary, for laboratory examination with a binocular microscope and appropriate literature references. 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 often very narrow habitat or environmental requirements. Their presence is limited by very 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 pervious 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.

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. Potential bat breeding habitat was surveyed for within 200 feet of the proposed project, by looking for roosting habitat rock outcrops, crevasses, and evidence of roosting.

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

C.3 Map of Boundaries of the Area Surveyed

The area surveyed is shown on Plate III.

C.4 Dates and Person-hours

Our fieldwork time is shown in the table below.

Table I.

Date	Personnel	Person-hr.	Time	Conditions
March 18, 2009	Chris K. and Daniel T. Kjeldsen	4.0 person-hours	9:00 to 11:00	Clear cool temperatures.
April 21, 2008	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	13:00 to 14:00	Clear, no wind, with mild temperatures.
May 8, 2008	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	15:00 to 16:00	Clear, windy with hot temperatures.
June 9, 2008	Chris K. Kjeldsen and Brent Reed	2.0 person-hours	8:00 to 9:00	Clear, windy with hot temperatures.
July 13, 2008	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	11:00 to 12:00	Clear with light breezes and mild temperatures

C.5 Qualifications of Field Investigators

Chris K. Kjeldsen, Ph.D., Botany, Oregon State University, Corvallis, Oregon. He has over thirty-five 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, DFG Habitat Assessments, DFG Mitigation projects, COE 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 has taught Plant Taxonomy at Oregon State University (three years) and numerous botanical science and aquatic botany courses (thirty-five years) 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 DFG collecting permit.

Daniel T. Kjeldsen, B. S., Natural Resource Management, California Polytechnic State University, San Luis Obispo, California. He spent 1994 to 1996 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, DFG Habitat Assessments, COE 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. A full resume is available upon request.

D RESULTS AND FINDINGS

The results and findings discussed below are based on our fieldwork and the background materials available for the project.

D.1 Analysis of Potential for Special-status Organisms Known for the Area

Table II below provides a list of potential "target species", the results of our field studies and an analysis and justification for concluding absence.

The taxa included in the Tables are selected based on the California Department of Fish and Game Natural Diversity Data Base Five Mile search records for the area of the project (see Plate II) and Appendix C. Species listed in Appendix C are those that are with in the Quadrangle and surrounding Quadrangles.

Table II. Analysis of potential "target" special-status plant species that are recorded in the CNDDB for within five miles of the project site. Columns are arranged alphabetically by scientific name.

Common Name	Scientific Name	Plant Habitat Association	Obs. On Site	Habitat Present	Flower Period	Justification for Negative Occurrence
Napa False Indigo	*Amorpha californica* var. *napensis*	Cismontane Woodland	No	No	April-July	Requisite micro-habitat absent on the site or in the immediate vicinity.
Clara Hunt's Milk-Vetch	*Astragalus clarianus*	Cismontane Woodland, Valley and Foothill Grassland	No	No	March-April	Requisite microhabitat, edaphic requirements, native vegetation associates and exposure not present.
Narrow-anthered California Brodiaea	*Brodiaea californica* var. *leptandra*	Broadleaved upland forest, chaparral, elevation110-915 meters	No	No	May-July	Requisite microhabitat, edaphic requirements, native vegetation associates and exposure not present.
Calistoga Ceanothus	*Ceanothus divergens*	Chaparral serpentinite	No	No	Feb.-March	Requisite habitat and vegetation associates absent on the site or in the immediate vicinity.
Holly-leaved Ceanothus	*Ceanothus purpureus*	Chaparral	No	No	Feb.-June	Requisite habitat and vegetation associates absent on the site or in the immediate vicinity.

Common Name	Scientific Name	Plant Habitat Association	Obs. On Site	Habitat Present	Flower Period	Justification for Negative Occurrence
Pappose Tarplant	*Centromadia parryi* ssp. *rudis*	Grasslands	No	No	May-July	Requisite habitat and vegetation associates absent on the site or in the immediate vicinity.
Colusa Layia	*Layia septentrionalis*	Cismontane Woodland, Valley & Foothill Grassland, Serpentinite	No	No	April-May	Absence of edaphic conditions required for presence.
Sebastopol Meadow-foam	*Limnanthes vinculans*	Meadows and Seeps, Valley and Foothill Grassland, Vernal Pools	No	No	April-May	Requisite mesic habitat absent on the site or in the immediate vicinity.
Jepson's Leptosiphon	*Leptosiphon jepsonii= Linanthus jepsonii*	Chaparral, Cismontane Woodland usually volcanic	No	Yes	April-May	Requisite habitat and vegetation associates absent on the site or in the immediate vicinity.
Woolly Meadow-foam	*Limnanthes floccose* ssp. *floccosa*	Meadows and Seeps, Valley and Foothill Grassland, Cismontane Woodland Vernal Pools.	No	No	April-May.	Requisite mesic habitat absent on the site or in the immediate vicinity.
Cobb Mt. Lupine	*Lupinus sericatus*	Chaparral, Cismontane Woodland	No	No	March-June	Requisite habitat and vegetation associates absent on the site or in the immediate vicinity.
Baker's Navarretia	*Navarretia leucocephala* ssp. *bakeri*	Cismontane Woodland, Meadows and Seeps, Grassland Vernal Pools	No	No	May-July	Absence of requisite mesic habitat or substrate on project site precludes presence.
Sonoma Beardtongue	*Penstemon newberryi* var. *sonomensis*	Cismontane Woodland	No	No	April-August	Requisite habitat and vegetation associates absent on the site or in the immediate vicinity.

Common Name	Scientific Name	Plant Habitat Association	Obs. On Site	Habitat Present	Flower Period	Justification for Negative Occurrence
Calistoga Popcorn-flower	*Plagiobothrys strictus*	Meadows and seeps Valley and Foothill Grassland	No	No	May-Aug.	Requisite mesic habitat absent on the site or in the immediate vicinity.
Napa Blue Grass	*Poa napensis*	Meadows and Seeps, Alkaline	No	No	April-Aug.	Absence of requisite mesic edaphic habitat on the site.
Napa Checker-bloom	*Sidalcea hickmanii ssp. napensis*	Chaparral Serpentinite	No	No	May-June	Absence of requisite habitat on the site.
Saline Clover	*Trifolium depauperatum* var. *hydrophilum*	Marshes and Swamps Grassland	No	No	April-June	Absence of mesic habitat required for presence.

Table II below provides a summary of our field results for potential "target" special-status animal species and justification for negative findings. The taxa included in the Table are selected based the California Department of Fish and Game Natural Diversity Data Base Five Mile search records for the area of the project (see Plate II) and Appendix C. Species listed in Appendix C are known within the quadrangle and surrounding quadrangles.

Table II. Analysis of special-status animals for the area.

Common Name	Scientific Name	Habitat	Potential for Project Site	Observed on or Around Project Site	Justification for Negative Findings
Sharp-Shinned Hawk	*Accipter sriatus*	Avian prey, Nests in conifers or tops of live oaks	No	No	Lack of habitat for prey may nest in trees surrounding site.
Northwestern Pond Turtle	*Actinemys marmorata marmorata*	Slow moving water or ponds.	No	No	Lack of upland and aquatic habitat.
Pallid Bat	*Antrozous pallidus* Pallid Bat	Roosts in Caves and buildings	No	No	Lack of suitable foraging habitat. No roosting habitat.
Prairie Falcon	*Falco mexicanus*	Nests on cliffs	No. May fly over	No	Lack of habitat for nesting and feeding.

Common Name	Scientific Name	Habitat	Potential for Project Site	Observed on or Around Project Site	Justification for Negative Findings
American Peregrine Falcon	*Falco peregrinus anatum*	Nests on cliffs	No	Yes. Observed flying east of site.	Lack of habitat for nesting and feeding.
Bald Eagle	*Haliaeetus leucocephalus*	Nests near Water.	May fly over	No	Lack of nesting and suitable foraging habitat.
Steelhead-central California Coast	*Oncorhynchus mykiss irideus*	Aquatic	No	No.	Lack of habitat
Purple Martin	*Progne subis*	Open areas near water	No	No	Lack of habitat.
Freshwater Shrimp	*Syncaris pacifica* California	Creeks and Estuaries below 300 ft.	No	No	Requisite habitat required for presence lacking.

Our fieldwork did not find any special-status 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 are such that there is little reason to expect the occurrence of any special-status animal species within the footprint of the project.

Listed animals do not have the potential to utilize habitat at the site, because of the lack of suitable foraging for bats and bird species and the lack of aquatic habitat.

The Riparian Corridor along Canyon Creek and the trees along the west side of the property provide nesting and foraging habitat for bird species. The reservoir provides habitat for aquatic birds but is not considered to be a food source or nesting site. The primary function of the reservoir is an area for resting.

The site does not contain any major natural roosting habitat for bat species (i.e. mines, caves).

D.2 Presence of or Potential for Unique, Critical or Sensitive Plant Communities or Animal Habitat

The DFG CNDDB search shows that the Coastal and Valley Freshwater Marsh. The site does not contain any indications of a Freshwater Marsh. Northern Vernal Pool is known for the region and is a recognized sensitive plant community. There are no vernal pools associated with the project site.

Wetlands - No wetlands or vernal pools were present on the proposed project site.

Tributaries to Waters of the U. S. - There are no Tributaries to Waters of the U. S. or drainages associated with the project site. Canyon Creek is a blue line creek that is outside of the project scope and will be avoided and preserved.

Riparian Habitat - The project will not impact any riparian vegetation. Avoiding expanding the existing bridge on Silverado Trail will preserve the existing riparian habitat

Trees – No trees will be removed.

The Quadrangle is designated as sensitive habitat for the Peregrine Falcon and the Calistoga Popcorn Flower DFG CNDDB. The project site does not contain habitat for these species.

The Peregrine Falcon is known to nest east of the site in rock cliffs. This species will not be impacted by the proposed project.

There are known locations of Northern Spotted Owls within the Calistoga quadrangle. There will be no impact to these known locations by the proposed project

D.3 Wildlife Corridors Present in Relation to the Proposed Activities

The riparian corridor of Canyon Creek is a significant biological resource that must be avoided and protected. The Canyon Creek Riparian corridor provides habitat for nesting, foraging and cover for birds. A variety of mammals, reptiles and insects would also utilize this habitat for foraging, cover and movement. This corridor provides connectivity to the Napa River. The tree line along the west side of the property associated with the Calistoga wastewater treatment plant may also function as a corridor.

The project will not impact any migratory fish on or off site provided standard erosion control measures must be implemented.

There are no identifiable wildlife corridors that will be impacted by the proposed project.

D.4 Raptor Nests, Wildlife Dens or Burrows

No wildlife dens or burrows other than gophers were observed.

No raptor nests were identified during our survey. We found no indications of nesting raptors on the site or in the near vicinity of the project sites. We did not observe any nests, whitewash or nest droppings, perching or flying raptors in the area.

D.5 Justification for any Negative Occurrence Conclusions Reached

The flora and fauna present are typical for local agricultural lands.

We found no evidence that would indicate the proposed project would impact special-status species on the project site.

No special-status species known for the Quadrangle, surrounding Quadrangles or the region were identified on the project site nor did the project sites contain vegetation associates, habitat or edaphic conditions which would support special-status species. Our floristic 2009 spring survey, and habitat types present, reasonably preclude presence of any special-status species.

D.6 Unique Species that are Exclusive, Rare or Atypical for the Area

Our fieldwork conducted through the spring and summer season did not find any unique species that are exclusive, rare or atypical for the area.

D.7 Unique or Limited Habitats Present

There were no unique habitats associated with the proposed project. The site does not contain any major natural roosting habitat for bat species i.e. mines, caves, riparian woodlands. There are no other man-made structures that will be impacted by the proposed project that would contain roosting habitat. (i.e. bridges, barns, outbuildings.)

D.8 Endemic Populations

There were no endemic populations of plants or animals on the project site. There is no reason to expect any endemic species as indicated by the habitat and the species observed.

E ASSESSMENTS OF POTENTIAL IMPACTS

The sections below address potential biological impacts of the project.

E.1 Distribution of Special-status Species Related to Proposed Activities

A map from the CNDDB records of special-status species in the vicinity of the project is shown on Plate II. No special status plant or animal species were found on the site as shown in the tables above.

A single blue elderberry plant was observed growing in the mowed project area. The blue elderberry is the host plant for the Valley Long-horned Elderberry Beetle. The size of the plant is not that which would support the beetle and there are no records of the beetle in the near vicinity.

E.2 Special-status Species Likely to Utilize the Site/be present

The proposed project will not impact any special-status species known for the region. The project site topography, hydrology, historic use, location and vegetation associates preclude the likely presence of any of the special-status species known for the region.

E.3 Effects of the Project on Special-status Species

There is no reason to expect any significant effects from the proposed project on any of the special-status species known for the area.

E.4 Cumulative Effect on Wildlife Populations

No cumulative impacts to wildlife populations are expected by the proposed project. The loss of agricultural habitat is less than significant.

There are no potential impacts to migratory corridors or wildlife nursery sites associated with the proposed project.

The potential biological impacts of the project include the incremental loss of agricultural habitat. The impact to local wildlife will be undetectable on a regional scale.

An onsite wastewater treatment system with leach fields will be installed. There are no streams or drainages associated with the proposed project sites.

A potential impact is the movement of silt, dust and the creation of noise during site construction.

E.5 Potential Habitat Fragmentation, Species Exclusion, Isolation, Extinction Edge effects, and Changes in Species Composition

The proposed change in land use will result in less than significant changes in avifauna and rodent utilization of the site. The change in land use will incrementally contribute to habitat fragmentation. It is noted that the project site is adjacent to vineyards and managed waste water system adjoining properties.

The major biological resource on the property is the riparian corridor of Canyon Creek and the tree line between the parcel and the Calistoga wastewater treatment ponds.

E.6 Tree Removal

The project will not result in any tree removal.

F. RECOMMENDED MITIGATION MEASURES

Standard construction practices as per Napa County requirements must be implemented to protect offsite movement of sediment and dust during and post construction.

Protection of the riparian corridor and tree line along the west side of the parcel. Mitigation measures during construction should include construction fencing to prevent any equipment movement into and on the root zone of these areas.

F.1 State Federal Permit Mitigation Considerations

There will be no impacts to "Tributaries to waters of the US". The project will not require any biological State or Federal permits.

F.2 Local Permit Mitigation Considerations

During development of the site best management and standard construction practices must be used. All Napa County set backs must be followed in the development of the project.

Equipment movement and site clearing must be limited to the project footprint. Erosion control measures during construction must be implemented and construction fencing installed along the tree lines of the perimeter.

Although, no raptors were observed nesting at the site, there is the potential for raptors to begin nesting in the future. It is recommended that a qualified biologist perform a raptor and nest search prior to any construction, within 500ft, if these activities are to occur between February 1 and July 31. If raptors were found to be nesting on the site, an evaluation of potential impacts to these species as a result of site development would need to be performed.

G. SUMMARY

This study is provided as background material necessary for the assessment on the proposed project on local Biological Resources. The project site was found to be free of any special-status organisms.

No special-status species known for the Quadrangle, surrounding Quadrangles or the region were identified on the project site nor did the project sites contain vegetation associates, habitat or edaphic conditions which would support special-status species. Our floristic 2009 spring survey, and habitat types present, reasonably preclude presence of any special-status species. This project does not pose any threat to special-status species of the region.

The project will not interfere or significantly impact any wildlife corridors. There are no significant biological resources associated with the adjusted project footprint. No significant wildlife dens, nests or burrows were observed. The site does not contain any significant natural roosting habitat for bats.

There was no unique, or sensitive habitats associated with the proposed footprint of project. No vernal pools, wetlands, or jurisdictional tributaries to waters of the US were present or associated directly with the project footprint.

Equipment movement and construction supplies must be limited to the project footprint or the immediate area.

Raptors are known from the local area. A pre-construction raptor survey is recommended prior to initiation of construction if ground breaking is initiated during the raptor-nesting season.

It is concluded that further seasonal biological studies are unwarranted.

H. REFERENCES

Arora, David, 1986. Mushrooms Demystified. Ten Speed Press.

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

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

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 (DFG), Revised May 8, 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities.

California Department of Fish and Game Natural Diversity Data Base Rare Find 3 August, 2009.

California Native Plant Society's. 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.

Grinell, Joseph, Joseph Dixon, and Jean M. Linsdale. 1937. Fur-bearing Mammals of California. University of California Press, two Volumes, 777 pages with many illustrations and figures.

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., 1985. Mammals of the Pacific States. Stanford Press.

Matthews, Mary Ann, 1997. An Illustrated Field Key to the Flowering Plants of Monterey County. California Native Plant Society.

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.

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

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

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.

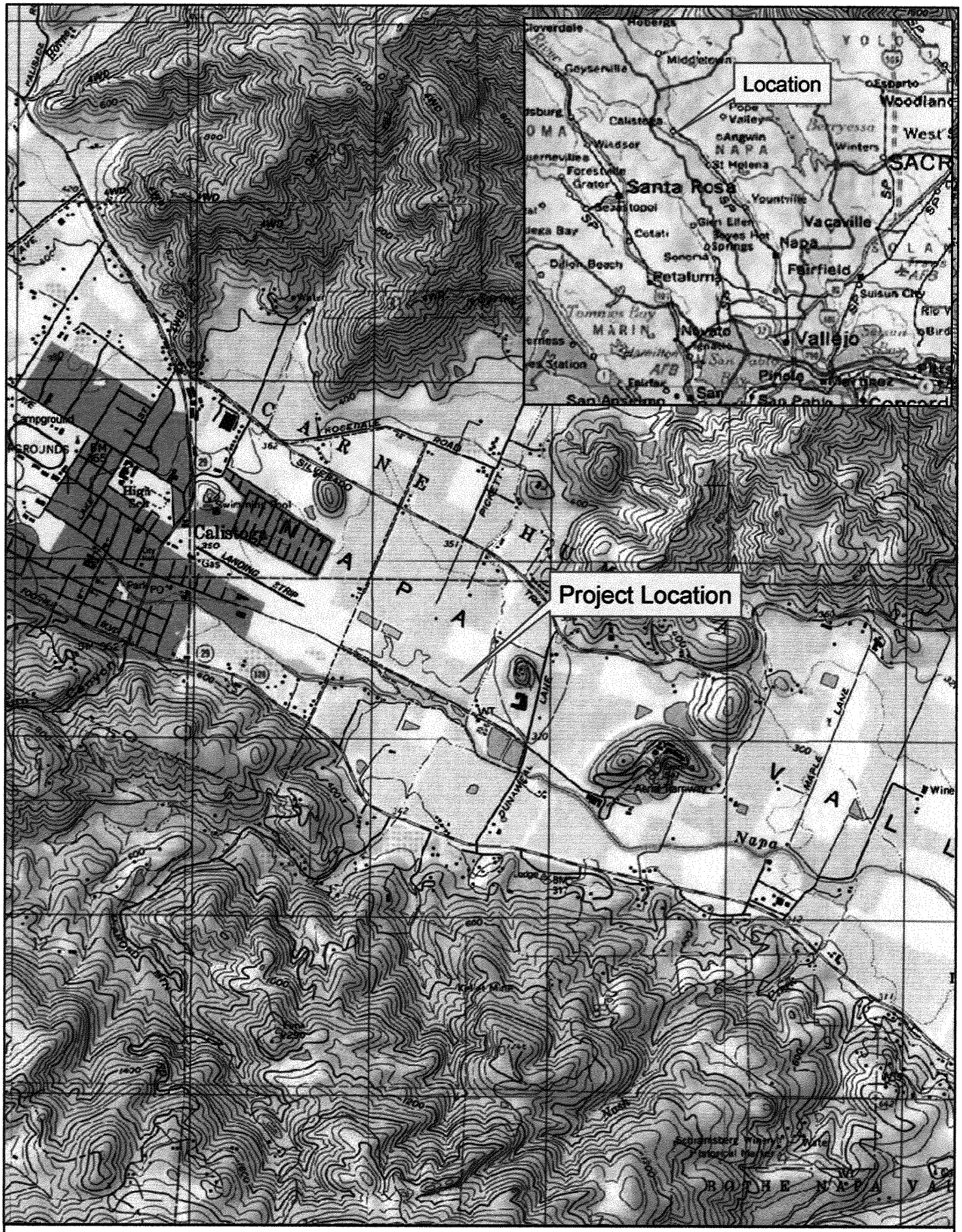


Plate I. Site / Location Map Calistoga Quadrangle

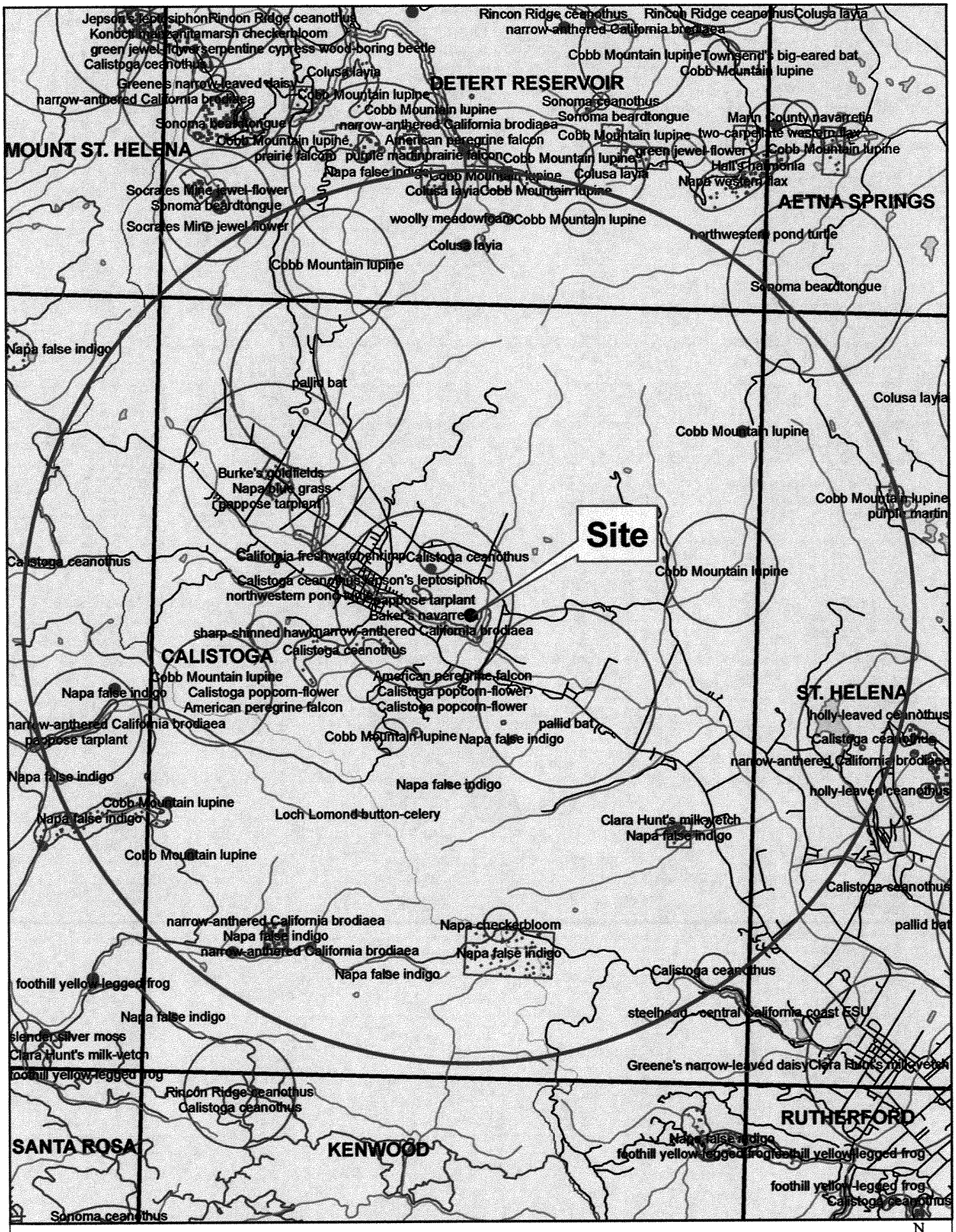


Plate II. CNDDB Rare Find 3 5-Mile Search (Data Date August 2009)

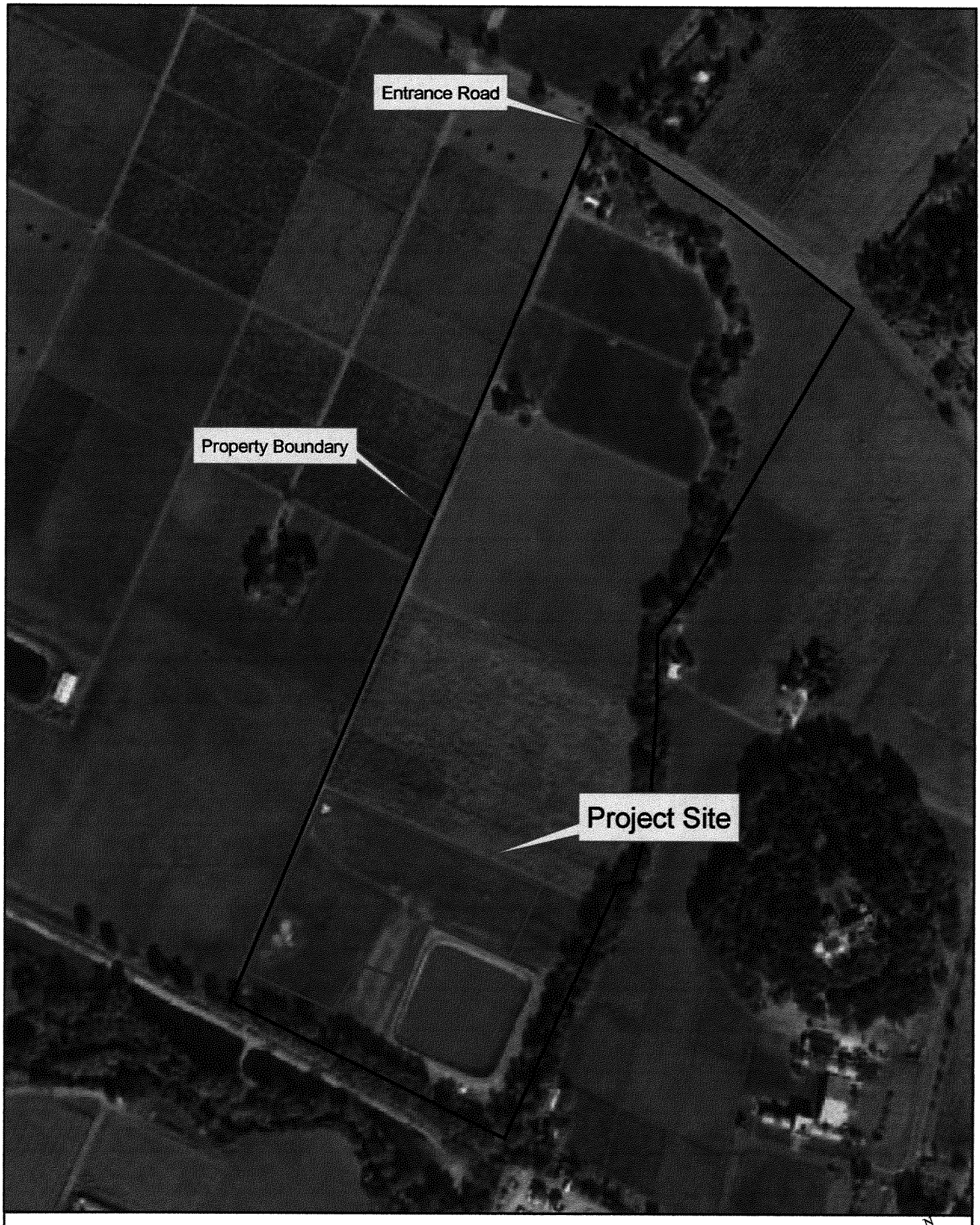
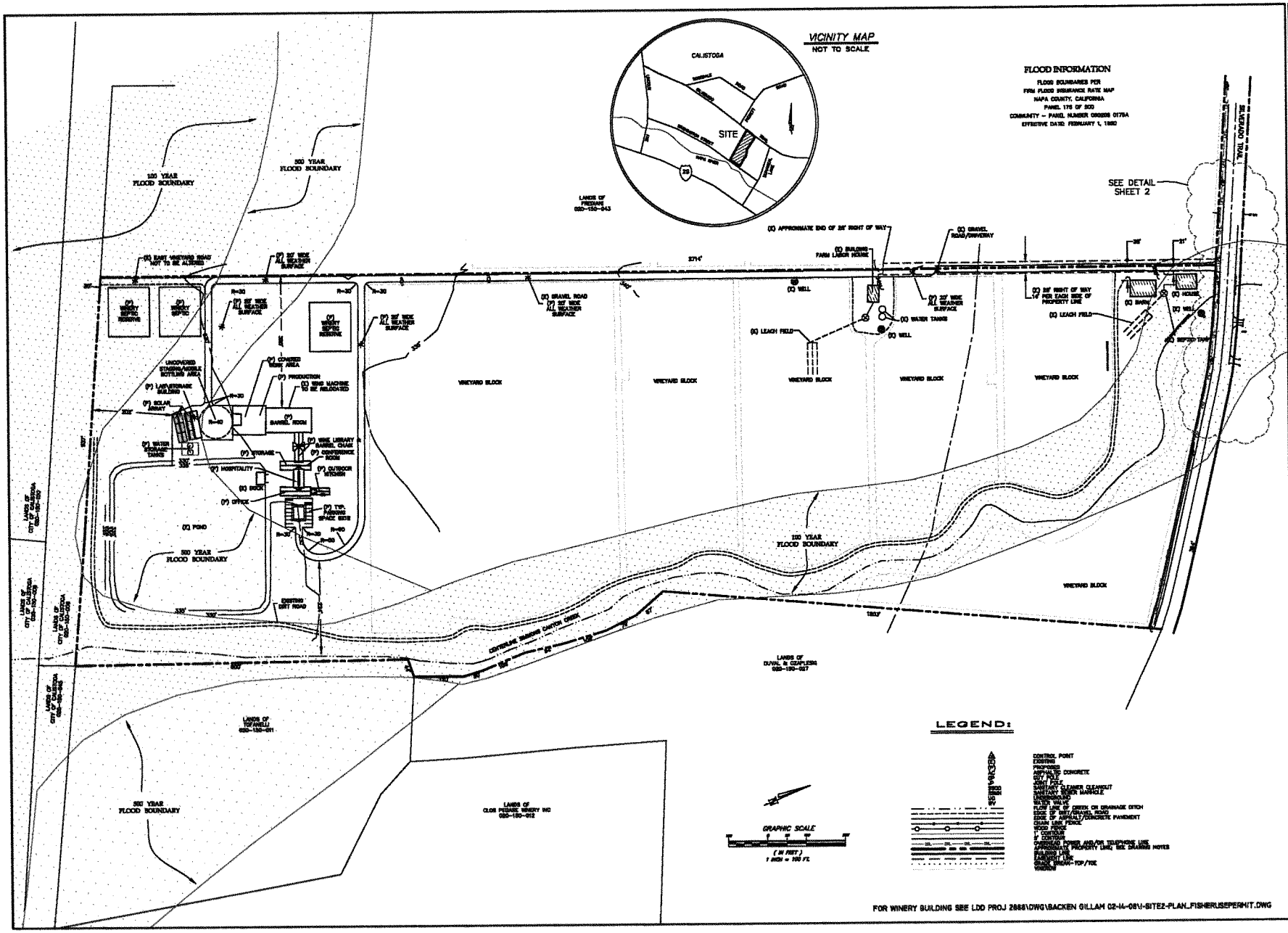


Plate III. Aerial Photo

Plate IV. Vegetation Map



ALBION SURVEYS, INC.
CONSULTING LAND SURVEYORS
1113 HUNT AVENUE
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FAX (707) 963-1228

DRAWING NOTES

THIS MAP IS NOT A BOUNDARY SURVEY. IT IS PROVIDED TO LOCATE THE PROPOSED SUBJECT PROPERTY IN RELATION TO CALIFORNIA LANDS, ROADWAYS, ROADS, STREETS AND NOT TO ENGINEERING ANY FIELD IMPROVEMENTS OR APPROVAL.
A FIELD SURVEY SHOULD BE PERFORMED PRIOR TO ANY CONSTRUCTION OR ENGINEERING. CIVIL ENGINEER MAY APPLY SITE PROPERTY. THIS SURVEYOR WAS NOT PROVIDED ANY ADDITIONAL INFORMATION REGARDING EASEMENTS BY THE OWNER.

SITE INFORMATION

APN: 020-150-004
STREET: SILVERADO TRAIL
CITY: CALISTOGA
SITE CONTACT: ROBERT FISHER
PHONE: 707-339-7681

ARCHITECT

COMPANY: BACKEN & GILLAM
CONTACT: JEANA JAMES
PHONE: 967-1930 OR 967-1934
EMAIL: jjaines@bgarch.com

ENGINEER

COMPANY: APPLIED CIVIL ENGINEERING INC.
CONTACT: JODEE HINTON
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EMAIL: jhinton@appliedcivil.com

USE PERMIT MAP
OF A PORTION OF THE LANDS OF
FISHER VINEYARDS & FIV PARTNRES
COUNTY OF NAPA STATE OF CALIFORNIA

REVISIONS & ADDITIONS

DATE: FEBRUARY 19, 2008
FIELD BOOK NO:
PAGE(S):
DRAWN BY: A. DAMRON
DATE: MAY 6, 2008
FIELD BOOK NO:
PAGE(S):
DRAWN BY: A. DAMRON
DATE: MARCH 26, 2009
FIELD BOOK NO:
PAGE(S):
DRAWN BY: S. STEWART

ALBION REFERENCES

PROJECT NO: 2868
ASSOCIATED DWG(S): N/A
PROJECT MANAGER: JON WEISS
ORIGINAL FIELD BOOK NO: 903
DATE: APRIL 2, 2009

SCALE: 1"=100'

CONTOUR INTERVAL=5'
VERTICAL DATUM BASED ON NAPA COUNTY
BENCHMARK 9 307 ELEVATION 344.9'
DIRECTION OF NORTH BASED ON
U.S.G.S.

SHEET 1 OF 1
LDD PROJECT: 2868
DRB: ZONLAN-USE PERMIT

APPENDIX A
Plants and Animals Observed Associated With The Project Site

The nomenclature for the list of plants found on the project site and the immediate vicinity follows: Hale and Cole –1988, for the lichens; Laughton-1967 and W.B. Schofield –1992, for the mosses; and Hickman-1993, for the vascular plants.

The plant list is organized by major plant group in the following order: Lichens, Mosses, Vascular Plants – Gymnosperms Conifers, Vascular Plants – Anthophyta Dicots Trees, Vascular Plants – Anthophyta Dicots Shrubs and Woody Vines, Vascular Plants – Anthophyta Dicots Herbs, Vascular Plants Monocots-Grasses, Vascular Plants Monocots – Herbs.

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

FUNGI		
Basidiomycota- Club Fungi		
POLYPORACEAE		
Schizophyllum commune Split-gill	Woodlands on Dead Wood	Common
Stereum hirsutum False Turkey Tail	Woodlands on Dead Wood	Common
TREMELLALES		
Tremella mesenterica Witch's Butter	Woodland on Dead Wood	Common
MOSSES		
MINACEAE		
Alsia californica NCN	On Oaks	Common
Dendroalsia abietina (Hook.) Brit. NCN	Woodlands	Common
Funaria hygrometrica Hedw. NCN	Ruderal, Burned Areas	Common
Homalothecium nuttallii NCN	Epiphytic on Trees	Common
Orthotrichum lyellii Hook & Tayl. NCN	Woodlands, Upper Canopy	Common
Scleropodium touretii (Brid.) L Koch. NCN	Woodlands	Common
Syntrichia princeps (*Tortula*) NCN	Ruderal	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

LICHENS		
FOLIOSE		
Collema furfurascens	On Oaks	Occasional
NCN		
Flavoparmelia caperata	On Oaks	Common
NCN		
Flavopunctilia flaventor	On Oaks	Common
NCN		
Melanelia glabera	On Oaks	Common
California Camouflauge Lichen		
Parmelia sulcata	On Oaks	Common
NCN		
Phaeophysica orbicularis	On Oaks	Common
NCN		
Physcia adscendens	On Oaks	Common
NCN		
Physconia detersa	On Oak Limbs	Common
NCN		
Xanthoria polycarpa	On Oaks	Common
NCN		
FRUTICOSE		
Evernia prunastri	On Oaks	Common
NCN		
Ramalina farinacea	On Oaks	Common
NCN		
Ramalina menziesii	On Oaks	Common
NCN		
Teloschistes chrysophthalmus	On Oaks	Common
NCN		
Usnea arizonica	On Oaks	Common
NCN		
CRUSTOSE		
Pertusaria armaria	On Oaks	Common
NCN		

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

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

FABACEAE		
**Acacia dealbata* Silver Wattle-Acacia	Naturalized Ruderal	Common
FAGACEAE		
Quercus agrifolia Live Oak	Woodlands	Common
Quercus lobata Valley Oak	Valley Grasslands	Common
JUGLANDACEAE		
**Juglans nigra* Black Walnut	Ruderal Escape	Common
LAURACEAE		
Umbellularia californica California Bay	Woodlands	Common
OLEACEAE		
Fraxinus latifolia Oregon Ash	Woodlands	Occasional
ROSACEAE		
**Prunus domestica.* Prune	Escape, Ruderal	Occasional
SALICACEAE		
**Populus nigra* Lombardy Poplar	Domestic Introduction	Occasional
Salix laevigata Red Willow	Riparian	Common
Salix lucida ssp. *lasiandra* Yellow Willow, Shining Willow	Riparian	Common
SIMAROUBIACEAE		
**Ailanthus altissima* Tree of Heaven	Ruderal Escape	Common

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

ANACARDIACEAE		
Toxicodendron diversilobum Poison Oak	Woodlands	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

APOCYANACEAE		
*Vinca major Periwinkle	Woodlands, Riparian, Ruderal	Common
ASTERACEAE		
Baccharis pilularis Coyote Brush	Woodlands, Grasslands	Common
CAPRIFOLIACEAE		
Sambucus mexicana = (S. caerulea) Elderberry	Seedling in Mowed Ruderal Grassland	Occasional
Symphoricarpos albus var. laevigatus Snowberry	Riparian, Shrub/Scrub Woodlands	Common
ROSACEAE		
Heteromeles arbutifolia Christmas Berry, Toyon	Shrub/Scrub	Common
*Rubus armeniacus = R. procerus Himalayan Blackberry	Ruderal	Common
VITACEAE		
Vitis californica California Wild Grape	Riparian Woodlands	Occasional

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

APIACEAE		
*Dacus carota Wild Carrot, Queen Anne's Lace	Ruderal Grasslands	Common
*Foeniculum vulgare Fennel	Ruderal	Common
*Torilis arvensis Hedge-parsley	Grasslands Woodlands	Common
ASTERACEAE		
Artemesia douglasiana Mugwort	Riparian	Common
*Carduus pycnocephalus Italian Thistle	Woodlands	Common
*Centaurea solstitalis Yellow Star Thistle	Grasslands, Ruderal	Common
*Chamomilla suavolens Pineapple Weed	Ruderal	Common
*Circium vulgare Bull Thistle	Grasslands, Ruderal	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

**Cichorium intybus* Chicory	Ruderal	Occasional
**Hypochaeris glabra* Cat's Ear	Ruderal	Common
**Hypochaeris radiata* Harry Cat's Ear	Ruderal	Common
**Lactuca serriola* Prickly Lettuce	Ruderal	Occasional
**Lentodon taraxacoides* Harry Hawkbite	Grasslands Woodlands	Common
**Picris echioides* Ox-tongue	Ruderal	Occasional
**Rhagadiolus stellatus* Wild Endive	Riparian	Common
**Senecio vulgaris* NCN	Ruderal	Common
**Silybum marianum* Milk Thistle	Ruderal	Common
**Sonchus asper* var. *asper* Prickly Sow Thistle	Ruderal	Common
**Sonchus oleraceus* Common Sow Thistle	Ruderal	Common
**Taraxacum officinale* Dandelion	Ruderal	Common
**Tragopogon porrifolius* Salsify	Grasslands	Occasional
BORAGINACEAE		
Amsinckia menziesii var. *intermedia* Rancher's Fireweed	Grasslands	Occasional
BRASSICACEAE		
**Brassica rapa* Field Mustard	Grasslands, Ruderal	Common
**Capsella bursa-pastoris* Shepherd's Purse	Ruderal	Common
**Cardamine hirsuta=C. oligosperma* Bitter-cress	Ruderal	Common
**Hirschfeldia incana (B. geniculata)* Summer Mustard	Ruderal	Common
**Raphanus sativus* Wild Radish	Ruderal	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

**Sisymbrium officinalis* Hedge Mustard	Ruderal, Grasslands	Common
CARYOPHYLLACEAE		
**Stellaria media* Chickweed	Ruderal	Common
CONVOLVULACEAE		
Convolvulus arvensis Morning-glory, Bindweed	Grasslands	Common
DIPSACACEAE		
** Dipsacus sativus* Fuller's Teasel	Ruderal	Common
EUPHORBIACEAE		
Euphorbia crenulata Chinese Caps	Ruderal	Common
FABACEAE		
**Lathyrus latifolius* Perennial Sweet Pea	Ruderal	Occasional
**Lotus corniculatus = L. tenus* Birdfoot Trefoil	Grasslands, Ruderal	Common
Lotus micranthus Small Flowered Lotus	Grasslands, Ruderal	Common
Lotus purshianus var. *purshianus* Spanish Clover	Grasslands, Ruderal	Common
Lupinus bicolor Miniature lupine	Grassland	Common
**Medicago arabica* Spotted Bur Clover	Ruderal	Common
**Trifolium hybridum* Alsike Clover	Ruderal	Common
**Trifolium hirtum* Rose Clover	Ruderal	Common
**Vicia villosa* ssp. *villosa* Hairy Vetch, Winter Vetch	Ruderal	Common
**Vicia sativa* ssp. *nigra* Narrow Leaved-vetch	Grasslands, Ruderal	Common
GERANIACEAE		
**Erodium botrys* Broadleaf Filaree, Long-beaked Filaree	Grasslands	Common
**Geranium dissectum* Common Geranium	Grasslands	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

*Geranium molle Dove's Foot Geranium	Grasslands	Common
*Geranium robertianum Red Robin	Canyons Oak Woodlnd, Shady Areas	Common
MALVACEAE		
*Malva parviflora Cheeseweed, Mallow	Ruderal	Common
PLANTAGINACEAE		
*Plantago lanceolata English Plantain	Ruderal	Common
POLYGONACEAE		
*Polygonum agrocoleon Persian Wireweed	Ruderal Wet Ground	Occasional
*Rumex acetosella Sheep Sorrel	Ruderal	Common
*Rumex crispus Curly Dock	Ruderal	Common
PORTULACACEAE		
Calandrinia ciliata Red Maids	Grasslands	Common
Claytonia perfoliata ssp. perfoliata Miners Lettuce	Woodlands, Riparian	Common
PRIMULACEAE		
*Anagallis arvensis Scarlet Pimpernel	Ruderal	Common
RUBIACEAE		
Galium aparine Goose Grass	Woodlands, Riparian, Ruderal	Common
SCROPHULARIACEAE		
*Kickxia spuria Fluellin	Ruderal	Occasional
*Verbascum blattaria Moth Mullein	Ruderal	Occasional
*Verbascum thapsus Wooley Mullein	Ruderal	Occasional
VISCACEAE		
Phoradendron villosum Oak Mistletoe	Woodlands	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

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

POACEAE

**Avena fatua* Wild Oat	Grasslands	Common
**Avena sativa* Cultivated Oat	Grasslands, Ruderal	Common
**Bromus diandrus =(B. rigidus)* Ripgut Grass	Ruderal, Grasslands	Common
**Bromus hordeaceus =(B. mollis)* Soft Chess, Blando Brome	Grasslands	Common
**Cynosurus echinatus* Hedgehog, Dogtail	Ruderal	Common
Elymus glaucus ssp. *glaucus* Blue Wildrye	Woodlands	Common
Hordeum depressum Low Barley	Grasslands	Occasional
**Hordeum marinum* ssp. *gussoneanum* Mediterranean Barley	Grasslands	Common
**Hordeum murinum* ssp. *leporinum* Farmers Foxtail	Grasslands	Common
**Lolium multiflorum* Italian Rye Grass	Grasslands	Common
**Lolium perenne* Perennial Rye Grass	Grasslands	Common
**Vulpia myuros* var. *myuros* Rattail Fescue,Zorro Annual Fescue	Grasslands	Common

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

CYPERACEAE

Caryx bolanderi Bolander's Sedge	Woodlands	Common
@Carex multicaulis Many-stemmed Sedge	Forests, Rirparian	Occasional
Cyperus eragrostis var. *eragrostris* Nut-grass	Riparian	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

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

	Weed	
IRIDACEAE		
**Iris pseudoacoris* Yellow Iris	Riparian	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 -1985, for the reptiles and amphibians; and Udvardy and Farrand – 1998, for the birds; and Jameson and Peeters -1988 for the mammals.

AMPHIBIA AND REPTILIA		
ORDER		
Common Name	**Genus**	**Observed**
SQUAMATA		
Gopher Snake	*Pituophis melanoleucus*	
Western Fence Lizard	*Sceloporus occidentalis*	

AVES		
ORDER		
Common Name	**Genus**	**Observed**
AVES		
Acorn Woodpecker	*Melanerpes fomicivorus*	X
Black Phoebe	*Sayornis nigricans*	X
California Quail	*Callipepla californica*	X
Canada Goose	*Branta canadensis*	X
Common Crow	*Corvus brachyrhynchos*	X
House Finch	*Carpodactus mexicanus*	X
Killdeer	*Charadrius vociferus*	X
Mallard	*Anas platyrhynchos*	X
Peregrine Falcon	*Falco peregrinus*	East of Property
Plain Titmouse	*Parus inornatus*	X
Red-shouldered Hawk	*Buteo lineatus*	X
Red-winged Blackbird	*Agelaius phoeniceus*	X
Turkey Vulture	*Cathartes aura*	X

MAMMALS		
ORDER		
Common Name	**Genus**	**Observed**
CARNIVORA		
Coyote	*Canis latrans*	Skat
Raccoon	*Procyon lotor*	Tracks
CERVIDAE		
Black-tailed Deer	*Odocoileus hemionus*	Tracks

INSECTIVORA		
Broad-footed Mole	*Scapanus latimanus*	
LAGOMORPHA		
Black-tailed Jackrabbit	*Lepus californicus*	X
RODENTIA		
Pocket Gopher	*Thomomys bottae*	Sight
Deer Mouse	*Peromyscus maniculatus*	Trails

APPENDIX B

Definitions (Not all are relevant to this project)

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 Game (DFG) 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 DFG 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.

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. DFG 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 Game 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 DFG seasonal streams DFG.

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 as "target organisms." The target species for the Quadrangle are discussed below. 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.

Streams. The DFG 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. DFG'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 DFG Five Mile radius CNDDB Rarefind 3 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 Game Code, a permit from Department of Fish and Game (DFG) 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 Game 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 DFG pursuant to Section 1600 of the California Fish and Game 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 DFG 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

California Native Plant Society Electronic Inventory &
California Department of Fish and Game Rare Find Three
Special-status species for the Quadrangle and Surrounding Quadrangles

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - For the Quadrangle and Surrounding Quadrangle

	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	***Actinemys marmorata marmorata*** northwestern pond turtle	ARAAD02031			G3G4T3	S3	SC
3	***Agelaius tricolor*** tricolored blackbird	ABPBXB0020			G2G3	S2	SC
4	***Allium peninsulare var. franciscanum*** Franciscan onion	PMLIL021R1			G5T2	S2.2	1B.2
5	***Alopecurus aequalis var. sonomensis*** Sonoma alopecurus	PMPOA07012	Endangered		G5T1Q	S1.1	1B.1
6	***Ambystoma californiense*** California tiger salamander	AAAAA01180	Threatened	unknown code...	G2G3	S2S3	SC
7	***Amorpha californica var. napensis*** Napa false indigo	PDFAB08012			G4T2	S2.2	1B.2
8	***Amsinckia lunaris*** bent-flowered fiddleneck	PDBOR01070			G2	S2.2	1B.2
9	***Andrena blennospermatis*** Blennosperma vernal pool andrenid bee	IIHYM35030			G2	S2	
10	***Anomobryum julaceum*** slender silver moss	NBMUS80010			G4G5	S1.3	2.2
11	***Antrozous pallidus*** pallid bat	AMACC10010			G5	S3	SC
12	***Arctostaphylos canescens ssp. sonomensis*** Sonoma canescent manzanita	PDERI04066			G3G4T2	S2.1	1B.2
13	***Arctostaphylos manzanita ssp. elegans*** Konocti manzanita	PDERI04271			G5T2	S2.3	1B.3
14	***Arctostaphylos stanfordiana ssp. decumbens*** Rincon Ridge manzanita	PDERI041G4			G3T1	S1.1	1B.1
15	***Astragalus claranus*** Clara Hunt's milk-vetch	PDFAB0F240	Endangered	Threatened	G1	S1.1	1B.1
16	***Astragalus rattanii var. jepsonianus*** Jepson's milk-vetch	PDFAB0F7E1			G4T2	S2.2	1B.2
17	***Balsamorhiza macrolepis var. macrolepis*** big-scale balsamroot	PDAST11061			G3G4T2	S2.2	1B.2
18	***Blennosperma bakeri*** Sonoma sunshine	PDAST1A010	Endangered	Endangered	G1	S1.2	1B.1
19	***Brodiaea californica var. leptandra*** narrow-anthered California brodiaea	PMLIL0C022			G4?T2T3	S2S3.2	1B.2
20	***Calystegia collina ssp. oxyphylla*** Mt. Saint Helena morning-glory	PDCON04032			G4T3	S3.2	4.2
21	***Carex albida*** white sedge	PMCYP030D0	Endangered	Endangered	G1	S1.1	1B.1
22	***Ceanothus confusus*** Rincon Ridge ceanothus	PDRHA04220			G2	S2.2	1B.1
23	***Ceanothus divergens*** Calistoga ceanothus	PDRHA04240			G2	S2.2	1B.2

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24	***Ceanothus purpureus*** holly-leaved ceanothus	PDRHA04160			G2	S2.2	1B.2
25	***Ceanothus sonomensis*** Sonoma ceanothus	PDRHA04420			G2	S2.2	1B.2
26	***Centromadia parryi ssp. parryi*** pappose tarplant	PDAST4R0P2			G4T2	S2.2	1B.2
27	***Coastal and Valley Freshwater Marsh***	CTT52410CA			G3	S2.1	
28	***Corynorhinus townsendii*** Townsend's big-eared bat	AMACC08010			G4	S2S3	SC
29	***Cryptantha clevelandii var. dissita*** serpentine cryptantha	PDBOR0A0H2			G5T1	S1.1	1B.1
30	***Cypseloides niger*** black swift	ABNUA01010			G4	S2	SC
31	***Downingia pusilla*** dwarf downingia	PDCAM060C0			G3	S3.1	2.2
32	***Elanus leucurus*** white-tailed kite	ABNKC06010			G5	S3	
33	***Erigeron greenei*** Greene's narrow-leaved daisy	PDAST3M5G0			G2	S2	1B.2
34	***Eriogonum nervulosum*** Snow Mountain buckwheat	PDPGN08440			G2	S2.2	1B.2
35	***Eryngium constancei*** Loch Lomond button-celery	PDAPI0Z0W0	Endangered	Endangered	G1	S1.1	1B.1
36	***Falco mexicanus*** prairie falcon	ABNKD06090			G5	S3	
37	***Falco peregrinus anatum*** American peregrine falcon	ABNKD06071	Delisted	Endangered	G4T3	S2	
38	***Fritillaria liliacea*** fragrant fritillary	PMLIL0V0C0			G2	S2.2	1B.2
39	***Fritillaria pluriflora*** adobe-lily	PMLIL0V0F0			G3	S3	1B.2
40	***Haliaeetus leucocephalus*** bald eagle	ABNKC10010	Delisted	Endangered	G5	S2	
41	***Harmonia hallii*** Hall's harmonia	PDAST650A0			G2	S2.2	1B.2
42	***Hemizonia congesta ssp. congesta*** seaside tarplant	PDAST4R065			G5T2T3	S2S3	1B.2
43	***Hesperolinon bicarpellatum*** two-carpellate western flax	PDLIN01020			G2	S2.2	1B.2
44	***Hesperolinon sp. nov. "serpentinum"*** Napa western flax	PDLIN010D0			G2	S2.1	1B.1
45	***Hydrochara rickseckeri*** Ricksecker's water scavenger beetle	IICOL5V010			G1G2	S1S2	
46	***Hydroporus leechi*** Leech's skyline diving beetle	IICOL55040			G1?	S1?	
47	***Hysterocarpus traski pomo*** Russian River tule perch	AFCQK02011			G5T2	S2	SC

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
48	***Juncus luciensis*** Santa Lucia dwarf rush	PMJUN013J0			G3	S3	1B.2
49	***Lasionycteris noctivagans*** silver-haired bat	AMACC02010			G5	S3S4	
50	***Lasiurus cinereus*** hoary bat	AMACC05030			G5	S4?	
51	***Lasthenia burkei*** Burke's goldfields	PDAST5L010	Endangered	Endangered	G1	S1.1	1B.1
52	***Lavinia symmetricus navarroensis*** Navarro roach	AFCJB19023			G5T1T2	S1S2	SC
53	***Layia septentrionalis*** Colusa layia	PDAST5N0F0			G2	S2.2	1B.2
54	***Leptosiphon jepsonii*** Jepson's leptosiphon	PDPLM09140			G2	S2.2	1B.2
55	***Limnanthes floccosa ssp. floccosa*** woolly meadowfoam	PDLIM02043			G4T4	S3.2	4.2
56	***Limnanthes vinculans*** Sebastopol meadowfoam	PDLIM02090	Endangered	Endangered	G2	S2.1	1B.1
57	***Linderiella occidentalis*** California linderiella	ICBRA06010			G3	S2S3	
58	***Lupinus sericatus*** Cobb Mountain lupine	PDFAB2B3J0			G2	S2.2	1B.2
59	***Microseris paludosa*** marsh microseris	PDAST6E0D0			G2	S2.2	1B.2
60	***Myotis thysanodes*** fringed myotis	AMACC01090			G4G5	S4	
61	***Navarretia leucocephala ssp. bakeri*** Baker's navarretia	PDPLM0C0E1			G4T2	S2.1	1B.1
62	***Navarretia leucocephala ssp. plieantha*** many-flowered navarretia	PDPLM0C0E5	Endangered	Endangered	G4T1	S1.2	1B.2
63	***Navarretia myersii ssp. deminuta*** small pincushion navarretia	PDPLM0C0X2			G1T1	S1.1	1B.1
64	***Navarretia rosulata*** Marin County navarretia	PDPLM0C0Z0			G2?	S2?	1B.2
65	***Northern Vernal Pool***	CTT44100CA			G2	S2.1	
66	***Oncorhynchus mykiss irideus*** steelhead - central California coast ESU	AFCHA0209G	Threatened		G5T2Q	S2	
67	***Penstemon newberryi var. sonomensis*** Sonoma beardtongue	PDSCR1L483			G4T1	S1.3	1B.3
68	***Plagiobothrys strictus*** Calistoga popcorn-flower	PDBOR0V120	Endangered	Threatened	G1	S1.1	1B.1
69	***Poa napensis*** Napa blue grass	PMPOA4Z1R0	Endangered	Endangered	G1	S1.1	1B.1
70	***Potamogeton filiformis*** slender-leaved pondweed	PMPOT03090			G5	S1S2	2.2
71	***Progne subis*** purple martin	ABPAU01010			G5	S3	SC

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
72	***Rana boylii*** foothill yellow-legged frog	AAABH01050			G3	S2S3	SC
73	***Rana draytonii*** California red-legged frog	AAABH01022	Threatened		G4T2T3	S2S3	SC
74	***Serpentine Bunchgrass***	CTT42130CA			G2	S2.2	
75	***Sidalcea hickmanii ssp. napensis*** Napa checkerbloom	PDMAL110A6			G1	S1	1B.1
76	***Sidalcea oregana ssp. hydrophila*** marsh checkerbloom	PDMAL110K2			G5T2?	S2?	1B.2
77	***Sidalcea oregana ssp. valida*** Kenwood Marsh checkerbloom	PDMAL110K5	Endangered	Endangered	G5T1	S1.1	1B.1
78	***Streptanthus brachiatus ssp. brachiatus*** Socrates Mine jewel-flower	PDBRA2G072			G2T1	S1.2	1B.2
79	***Streptanthus brachiatus ssp. hoffmanii*** Freed's jewel-flower	PDBRA2G071			G2T1	S1.2	1B.2
80	***Streptanthus breweri var. hesperidis*** green jewel-flower	PDBRA2G092			G5T2	S2.2	1B.2
81	***Streptanthus morrisonii*** Morrison's jewel-flower	PDBRA2G0S0			G2	S2	
82	***Streptanthus vernalis*** early jewel-flower	PDBRA2G120			G1	S1	1B.2
83	***Syncaris pacifica*** California freshwater shrimp	ICMAL27010	Endangered	Endangered	G1	S1	
84	***Trachykele hartmani*** serpentine cypress wood-boring beetle	IICOLX6010			G1	S1	
85	***Trifolium amoenum*** showy rancheria clover	PDFAB40040	Endangered		G1	S1.1	1B.1
86	***Trifolium depauperatum var. hydrophilum*** saline clover	PDFAB400R5			G5T2?	S2.2?	1B.2
87	***Triquetrella californica*** coastal triquetrella	NBMUS7S010			G1	S1.2	1B.2
88	***Valley Needlegrass Grassland***	CTT42110CA			G1	S3.1	
89	***Vandykea tuberculata*** serpentine cypress long-horned beetle	IICOLX7010			G1	S1	
90	***Viburnum ellipticum*** oval-leaved viburnum	PDCPR07080			G5	S2.3	2.3
91	***Wildflower Field***	CTT42300CA			G2	S2.2	

CNPS California Native Plant Society — Inventory of Rare and Endangered Plants

v7-09c 7-14-09

Status: search results - Mon, Aug. 10, 2009 14:45 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	Liliaceae	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 2.2
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 var. macrolepis	big-scale balsamroot	Asteraceae	List 1B.2

Blennosperma bakeri	Sonoma sunshine	Asteraceae	List 1B.1
Brodiaea californica var. leptandra	narrow-anthered California brodiaea	Liliaceae	List 1B.2
Carex albida	Sonoma white sedge	Cyperaceae	List 1B.1
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 clevelandii var. dissita	serpentine cryptantha	Boraginaceae	List 1B.1
Downingia pusilla	dwarf downingia	Campanulaceae	List 2.2
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
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	List 1B.2
Fritillaria liliacea	fragrant fritillary	Liliaceae	List 1B.2

Fritillaria pluriflora	adobe-lily	Liliaceae	List 1B.2
Harmonia hallii	Hall's harmonia	Asteraceae	List 1B.2
Hemizonia congesta ssp. congesta	pale yellow hayfield tarplant	Asteraceae	List 1B.2
Hesperolinon bicarpellatum	two-carpellate western flax	Linaceae	List 1B.2
Hesperolinon serpentinum	Napa western flax	Linaceae	List 1B.1
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	Scrophulariaceae	List 1B.3
Plagiobothrys strictus	Calistoga popcorn-flower	Boraginaceae	List 1B.1
Poa napensis	Napa blue grass	Poaceae	List 1B.1
Potamogeton filiformis	slender-leaved pondweed	Potamogetonaceae	List 2.2
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 breweri var. hesperidis	green jewel-flower	Brassicaceae	List 1B.2
Streptanthus morrisonii ssp. elatus	Three Peaks jewel-flower	Brassicaceae	List 1B.2
Streptanthus morrisonii ssp.	Kruckeberg's jewel-	Brassicaceae	List

kruckebergii	flower		1B.2
Streptanthus vernalis	early jewel-flower	Brassicaceae	List 1B.2
Trichostema ruygtii	Napa bluecurls	Lamiaceae	List 1B.2
Trifolium amoenum	two-fork clover	Fabaceae	List 1B.1
Trifolium depauperatum var. hydrophilum	saline clover	Fabaceae	List 1B.2
Triquetrella californica	coastal triquetrella	Pottiaceae	List 1B.2
Viburnum ellipticum	oval-leaved viburnum	Caprifoliaceae	List 2.3