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March 18, 2015

Scott Greenwood-Meinert
DICKERSON PEATMAN & FOGARTY
1544 First Street, Suite 301
Napa, California 94559

Subject: Reverie Vineyard & Winery: Current and Historic Riparian Habitat

Dear Mr. Greenwood-Meinert,

At the request of the Reverie Vineyard & Winery, FirstCarbon Solutions conducted a review of historic and existing conditions at the Reverie Winery with special emphasis on riparian vegetation. The purpose of the review is to determine if riparian vegetation has been altered or removed during on-site improvements associated with construction of the wine cave and associated facilities.

Methods

Historic and current aerial photography was reviewed using Google™earth imagery. Starting with the most current aerial imagery available, FCS digitally mapped known locations of facility locations within the Reverie Vineyard & Winery including a wine garden, winery/office building, wine cave, and an unnamed drainage which is located approximately 30 feet east of the winery/office building. These feature locations were digitally mapped on aerials dating 1993, 2003, 2004, 2007, 2008, and 2014 as demonstrated in Attached A.

In addition ,a site visit was conducted by FCS biologist on March 9, 2015, and a review of the County approved Reverie Vineyard & Winery Landscape Plan (1995) was conducted to assess planned, approved and implemented landscape design as it pertains to riparian vegetation.

Findings

An unnamed drainage is located approximately 30 feet east of the existing winery/office building, wine cave and associated facilities. This feature is approximately 200 feet long and approximately 3 feet wide at the ordinary high water mark. The drainage has an earthen bottom with sparse vegetation and the steep banks are composed of river-rock and mud (presumably to reduce erosion during high flow events). This drainage is ephemeral in nature, only flowing after storm events. This drainage flows onto a dual piped culvert under the entrance road to the winery facility and eventually flows into Teal Creek near the southern limits of the site.

Based on a review of historical aerial imagery, the approved landscape design plan, and existing site conditions, the unnamed drainage feature does not now and has not historically supported riparian vegetation or a riparian corridor.

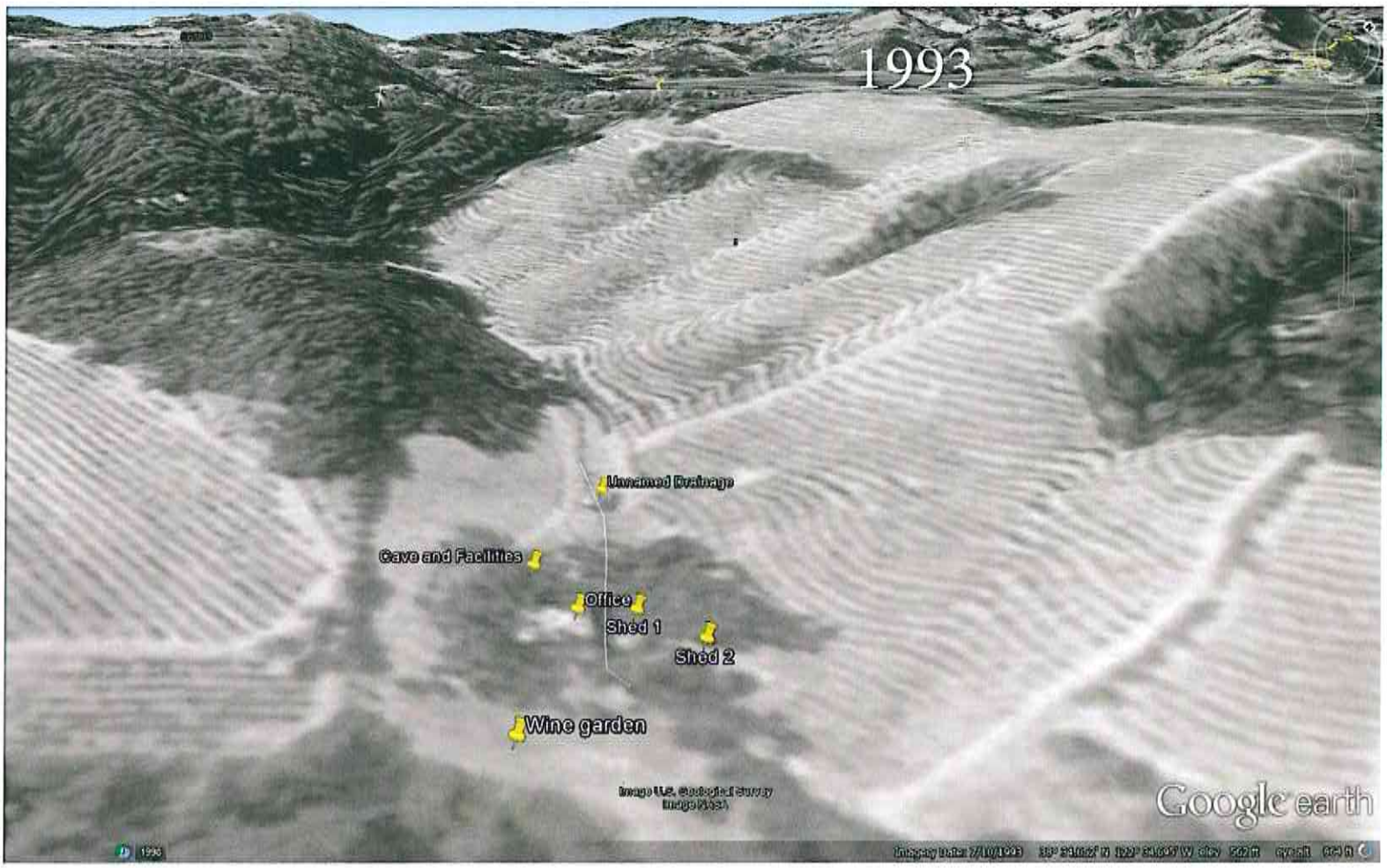
Please contact Jeannette Owen at 916.447.1100 with any questions or concerns.

Sincerely,

Jeannette Owen
Senior Biologist/Regulatory Specialist

Enclosures: Attachment A (Aerial Imagery from Google™earth)

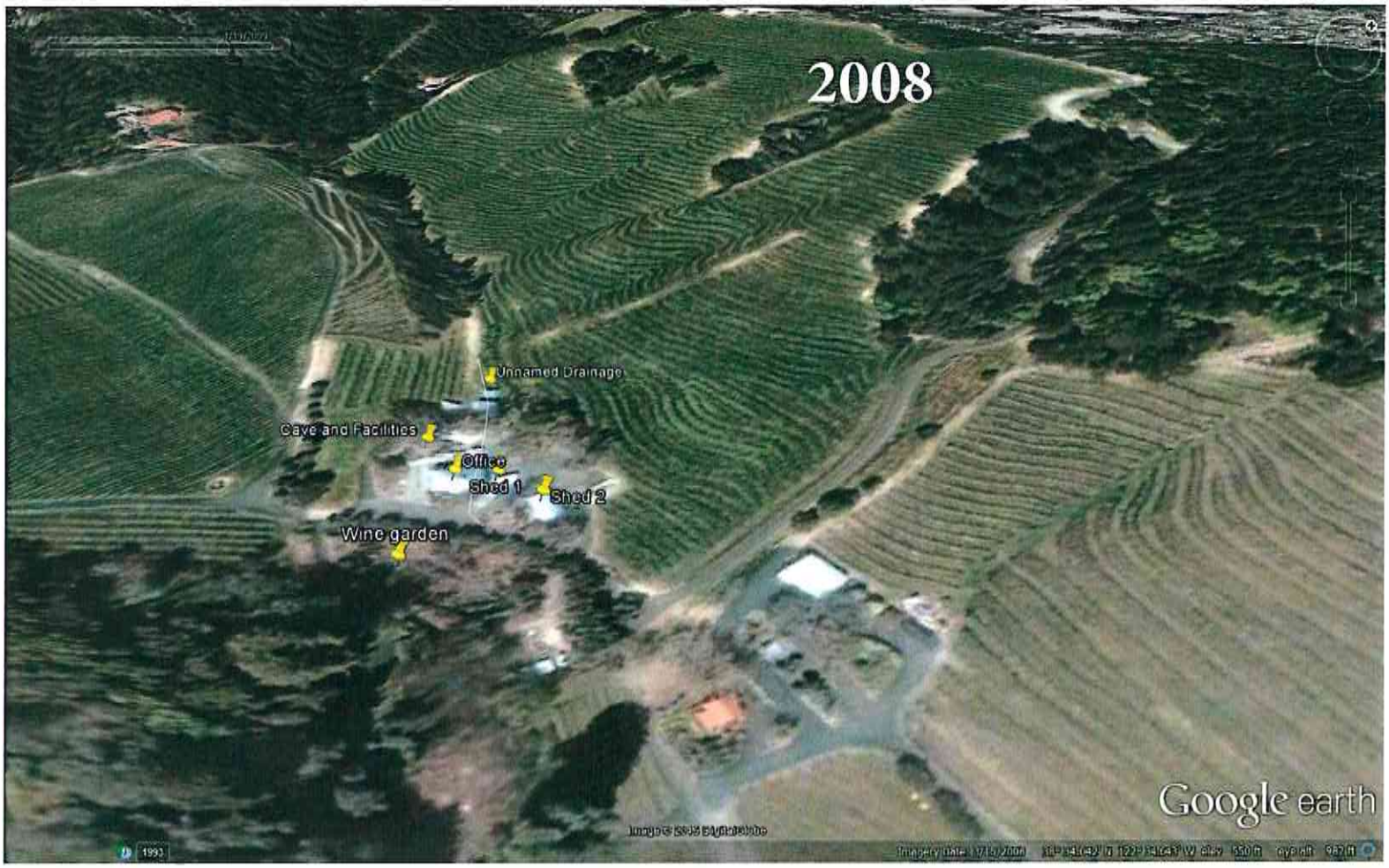
Attachment A


1993
Unnamed Drainage
Cave and Facilities
Office
Shed 1
Shed 2
Wine garden
Google earth


2003
Unnamed Drainage
Cave and Facilities
Office
Shed 1
Shed 2
Wine garden
Image USDA Farm Service Agency
Google earth


2004
Unnamed Drainage
Cave and Facilities
Office
Shed 1
Shed 2
Wine garden
Google earth


2007
Unnamed Drainage
Cave and Facilities
Office
Shed 1
Shed 2
Wine garden
Google earth


2008
Unnamed Drainage
Cave and Facilities
Office
Shed 1
Shed 2
Wine garden
Google earth


2014
Unnamed Drainage
Cave and Facilities
Office
Shed 1
Shed 2
Wine garden
Image NASA
Image © 2015 DigitalGlobe
Google earth

Biological Resources Baseline Conditions Report
Reverie Winery
Napa County, California

Carne Humana Land Grant and Section 6, Township 8 North and Range 6 West Calistoga, California, USGS 7.5-minute Topographic Quadrangle Map

Prepared for:
Reverie Winery
1520 Diamond Mountain Road
Calistoga, CA 94515
(707) 942-6800

Prepared by:
FirstCarbon Solutions
2000 O Street, Suite 200
Sacramento, CA 95811
(916) 447-1100

Contact: Scott Greenwood-Meinert, Land Use Attorney
Contact: Jeannette Owen, Regulatory Specialist/Biologist

October 2014

Table of Contents

List of Appendices

List of Tables

List of Exhibits

SECTION 1: SUMMARY

A reconnaissance-level biological resources and jurisdictional assessment was conducted to document the existing conditions within the 33-acre Reverie Winery property site (the "site") located in the outside the City of Calistoga, within Napa County, California.

The plant communities found onsite include vineyard, northern mixed evergreen forest, urban/developed, and seasonal wetland. None of the 22 special-status plant species recorded within a 5-mile radius of the site were observed during this reconnaissance visit and none are expected to occur onsite due to lack of suitable habitat.

None of the 25 special-status wildlife species recorded within the vicinity (i.e., within the following United States Geological Survey (USGS) quadrangles: Calistoga, Detert Reservoir, Kenwood, St. Helena, and Mark West Springs) of the site were observed onsite during this reconnaissance survey. Two special-status species, the sharp-shinned hawk (*Accipiter striatus*) and pallid bat (*Antrozous pallidus*) may occur within the site. If a project were to be planned and implemented, avoidance and minimization measures have been identified in this document.

The site contains suitable trees and shrubs for nesting migratory birds. If any ground disturbance is to take place during the nesting bird season (February–August), a nesting bird survey should be conducted no more than 30-days prior to construction to reduce impacts to migratory birds protected under the Migratory Bird Treaty Act (MBTA).

Two drainage features (unnamed drainage and Teal Creek) and one seasonal wetland are present within the site which appear to be a feature under the jurisdiction of the United States Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). Although no projects are currently planned within the drainage features within the site, authorization from the appropriate agencies may be necessary prior to construction within these features.

The site is surrounded by wooded open space to the north and west and vineyards to the south and east of the site. The site does not function as a significant wildlife corridor for local or regional wildlife movement.

There are no Habitat Conservation Plans or Natural Community Conservation Plans associated with the site. The United States Fish and Wildlife Service (USFWS) designated Critical Habitat for the central California Coast Distinct Population Segment of steelhead trout along the entire length of the Napa River. No suitable habitat for this species occurs within the site.

SECTION 2: INTRODUCTION

At the request of the Reverie Winery, FirstCarbon Solutions (FCS) conducted a reconnaissance-level biological resources and jurisdictional assessment to document the existing resources within the 33-acre Reverie Winery site located in the outside of the City of Calistoga, within Napa County, California.

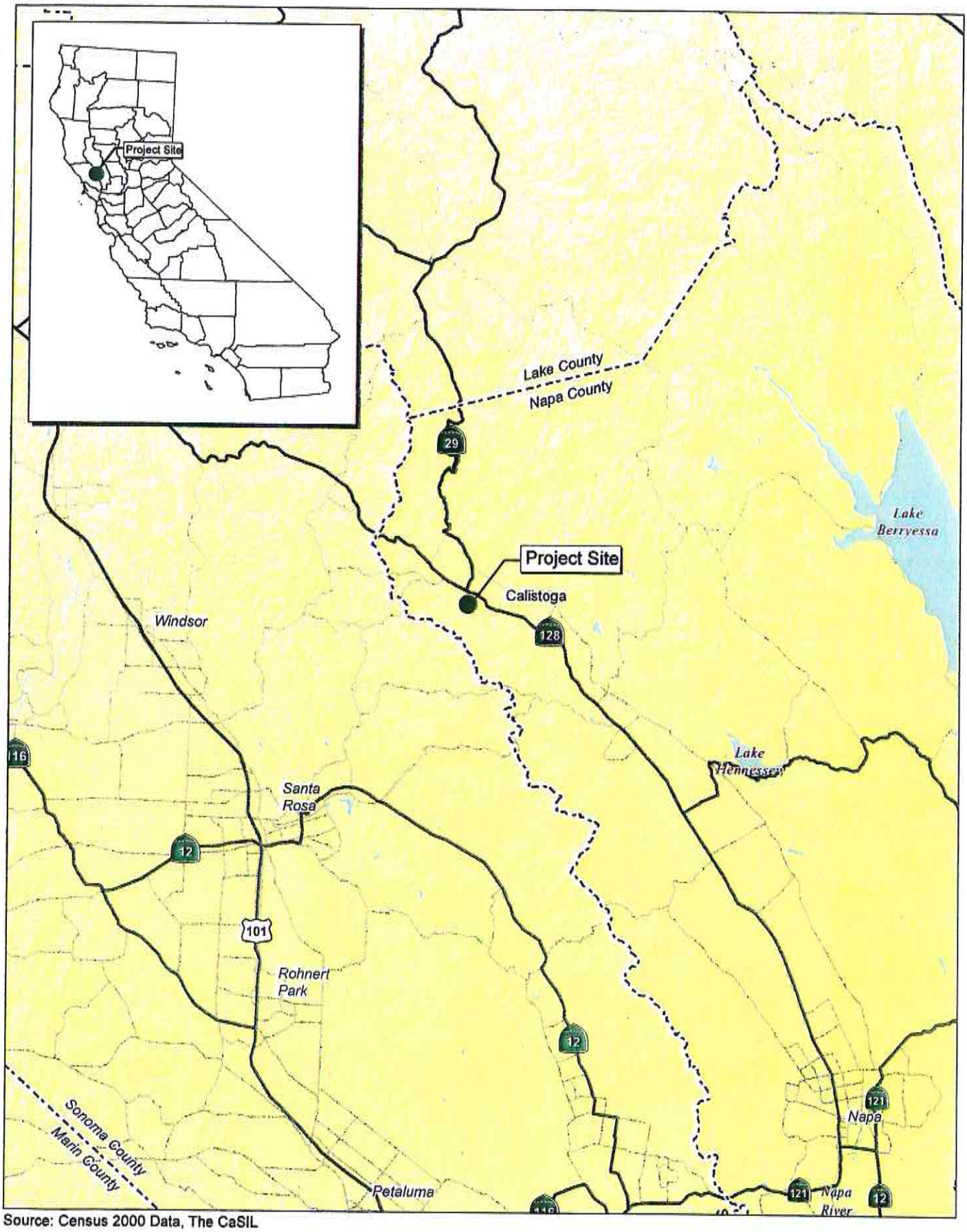
This report provides a detailed description of existing conditions, including vegetation communities, common plant and wildlife species, and potentially jurisdictional features. The information contained herein is intended to provide a baseline for which subsequent evaluations can be made of potential biological resource impacts associated with future projects, based upon the environmental policies and regulations discussed in Appendix A, including the Clean Water Act (CWA), the Federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and California Environmental Quality Act (CEQA).

As of January 1, 2013, the agency formerly known as the California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife (CDFW). Some publications written prior to the change refer to the CDFG; therefore, this document refers to CDFG and the CDFW, as appropriate, referring to the same state agency.

2.1 - Site Location

The site is generally located north of State Route 12 (SR-12) and southwest of SR-128 (Exhibit 1). The majority of the site can be found on the Carne Humana Land Grant and the southeastern corner of the site is contained within Section 6, Township 8 North, and Range 6 West of the Calistoga, California, USGS 7.5-minute topographic quadrangle map. The center point of the site is at Latitude 38°34'15" North, Longitude 122°34'65" West (Exhibit 2).

The site specifically occurs south of SR-128; southeast of Kartum Canyon Road; and northwest of Diamond Mountain Road in Napa County, California (Exhibit 3), just outside of Calistoga. The site has an address of 1520 Diamond Mountain Road, Calistoga, California. The site consists of the following Napa County Assessor's Parcel Number: 020-440-005.



Source: Census 2000 Data, The CaSIL

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5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

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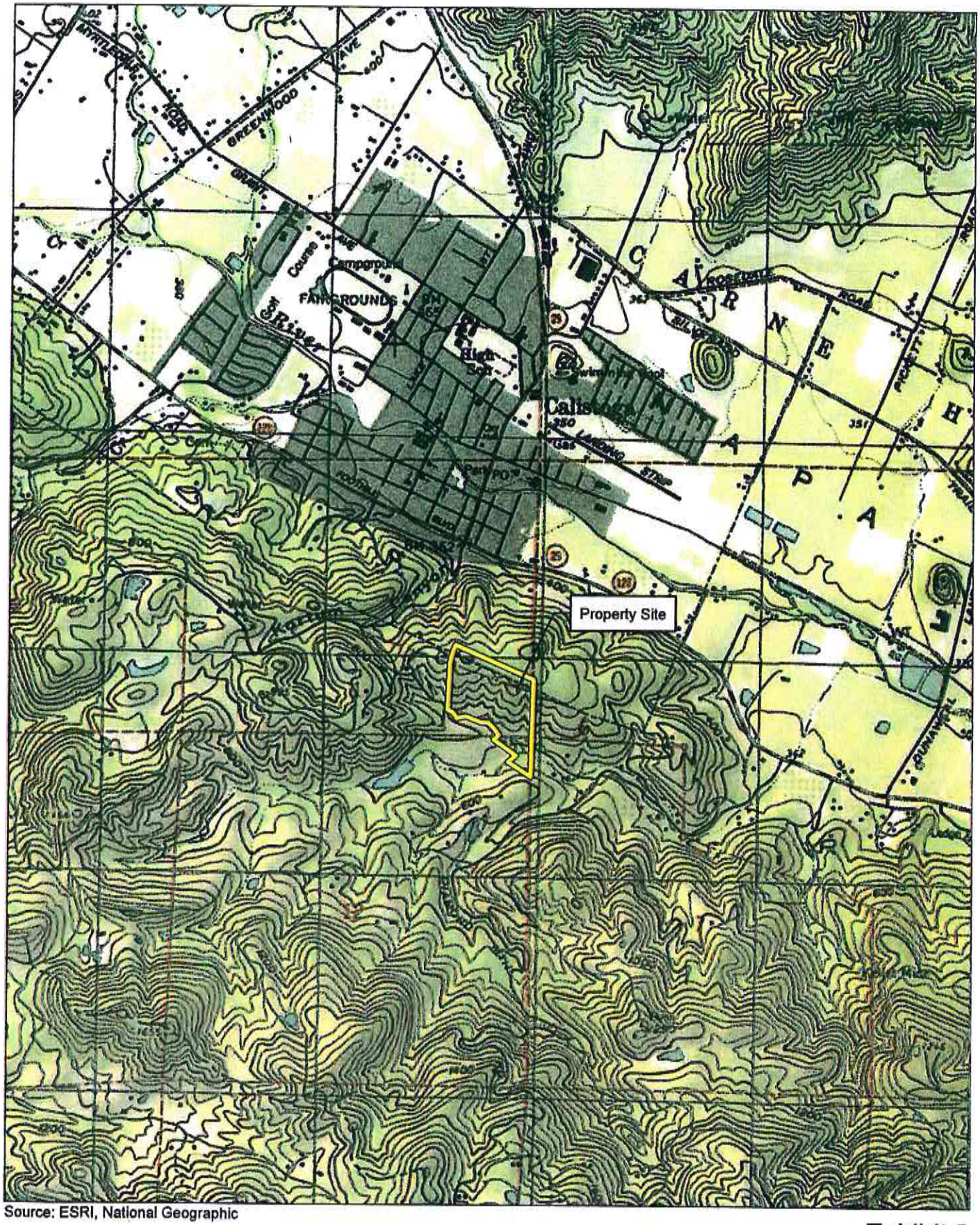
REVERIE WINERY
BIOLOGICAL RESOURCES BASELINE CONDITIONS



Source: ESRI, National Geographic

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2,000 1,000 0 2,000 Feet

Exhibit 2
Local Vicinity Map
Topographic Base

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REVERIE WINERY
BIOLOGICAL RESOURCES BASELINE CONDITIONS

Source: ESRI, National Geographic

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1,000 500 0 1,000 Feet

Exhibit 3
Local Vicinity Map
Aerial Base

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REVERIE WINERY
BIOLOGICAL RESOURCES BASELINE CONDITIONS

SECTION 3: METHODOLOGY

Analysis of the biological resources associated with the site began with a thorough review of relevant literature followed by a reconnaissance-level field survey. The primary objective of the survey is to document existing site conditions and determine the potential presence of sensitive biological resources.

For the purpose of this report, special-status species refers to all species formally listed as threatened and/or endangered under the ESA and CESA, California Species of Special Concern, designated as Fully Protected by CDFW; given a status of 1A, 1B, or 2 by the California Native Plant Society (CNPS); or designated as sensitive by city, county, or other regional planning documents. Federal and state listed threatened and/or endangered species are legally protected under the ESA. The remaining species mentioned above have no direct legal protection, but they require significance analysis under CEQA guidelines if a project were to be planned and implemented.

3.1 - Literature Review

The literature review provides a baseline from which to evaluate the biological resources potentially occurring on the site, as well as the surrounding area.

3.1.1 - Existing Environmental Documentation

As part of the literature review, FCS examined existing environmental documentation for the site and local vicinity. This documentation included biological studies for the area; literature pertaining to habitat requirements of special-status species potentially occurring near the site; as well as federal register listings, protocols, and species data provided by the United States Fish and Wildlife Service (USFWS) and CDFW. These and other standard reference documents/guides are listed in Section 8: References in this document.

3.1.2 - Topographic Maps and Aerial Photographs

FCS reviewed current USGS 7.5-minute topographic quadrangle map(s) and aerial photographs for its preliminary analysis of the existing conditions within the site and immediate vicinity. Information obtained from the review of the topographic maps included elevation range, general watershed information, and potential drainage feature locations. Aerial photographs provide an aerial perspective of the most current site conditions with regard to onsite and offsite land use, plant community locations, and potential locations of wildlife movement corridors.

3.1.3 - Soil Surveys

Many special-status plant species have a limited distribution based exclusively on soil type. The United States Department of Agriculture (USDA) has published soil surveys that describe the soil series that occur within a particular area. A soil series is a group of soils with similar profiles. These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units, which provide specific information regarding soil characteristics. Pertinent USDA soil survey maps were reviewed to

determine the existing soil mapping units within the site and to establish if soil conditions onsite are suitable for any special-status plant species.

3.1.4 - Special-status Species Database Search

FCS compiled a list of threatened, endangered, and otherwise sensitive species previously recorded to occur near the site. The list was based on a search of the CDFW's California Natural Diversity Database (CNDDB)—a special-status species and plant community account database—and the CNPS's Electronic Inventory of Rare and Endangered Vascular Plants of California database for the USGS 7.5-minute topographic quadrangle maps containing the site and immediate vicinity.

The CNDDB Geographic Information System (GIS) database along with ArcGIS software was used to determine the distance between known recorded occurrences of special-status species and the site.

3.2 - Reconnaissance-Level Field Survey

FCS biologist Jeannette Owen conducted the reconnaissance-level field survey on August 29, 2014. Special attention was given to sensitive habitats or those areas potentially supporting special-status floral and faunal species.

The reconnaissance-level field survey was conducted by vehicle and on foot during daylight hours. The survey was conducted by walking accessible areas adjacent to the existing roads within the site. The object of the survey was not to extensively search for every species occurring within the site, but to ascertain general site conditions and identify potentially suitable habitat areas for various special-status plant and wildlife species.

3.2.1 - Plant Community Mapping

Plant communities were mapped using 7.5-minute USGS topographic base maps and recent aerial photography. Sensitive or unusual biological resources identified during the literature review were ground-truthed during the reconnaissance-level survey for mapping accuracy. The plant communities within the site were classified according to Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1996 update), and cross-referenced with CDFG's List of Terrestrial Natural Communities (2003). Modifications were made by FCS's biologists where appropriate.

3.2.2 - Plant Species

Common plant species observed during the reconnaissance-level survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Uncommon and less familiar plants were identified offsite using taxonomical guides. A list of all species observed during the site survey was compiled from the survey data, shown in Appendix B. Taxonomic nomenclature used in this study follows Hickman (1993). Common plant names, when not available from Hickman (1993), were taken from other regionally specific references. In this report, scientific names are provided immediately following common names of plant species for the first reference only.

3.2.3 - Wildlife Species

Wildlife species detected during the reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded in a field notebook. Notations were made regarding suitable habitat for those special-status species determined to potentially occur within the site. Appropriate field guides were used to assist with species identification during surveys. Common names of wildlife species are standard; however, scientific names are provided immediately following common names for the first reference only. Appendix B lists all wildlife species observed or detected on the site during the survey.

3.2.4 - Jurisdictional Waters and Wetlands

Prior to conducting the site visit, FCS's biologists reviewed USGS topographic maps and aerial photography to identify any potential natural drainage features and water bodies. In general, all surface drainage features indicated as blue-line streams on USGS maps and linear patches of vegetation expected to exhibit evidence of flows are considered potentially subject to state and federal regulatory authority as "waters of the U.S. and/or State." Features with the potential to be under federal or state jurisdictional were noted.

3.2.5 - Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat, separating different populations of a single species. Corridors effectively act as links between these populations.

The site was evaluated for evidence of a wildlife movement corridor to determine if the alteration of current land use on the site would have significant impacts on the regional movement of wildlife. However, the scope of the biological resources study did not include a formal wildlife movement corridor study utilizing track plates, camera stations, scent stations, or snares. These conclusions are based on the information compiled from the literature review, including aerial photographs, USGS topographic maps, and resource maps for the vicinity; the field survey; and knowledge of desired topography and resource requirements for wildlife potentially utilizing the site and vicinity.

3.3 - Limitations

The reconnaissance-level survey was conducted in late summer; therefore, all of the spring blooming native annual wildflowers and most of the grasses were not identifiable. In addition, many mammalian species are nocturnal and would not be active during any portion of the reconnaissance-level survey.

SECTION 4: EXISTING CONDITIONS

The reconnaissance-level field survey was conducted on August 29 between 11:00 a.m. and 5:00 p.m. Weather conditions during the field survey included temperatures ranging from 65 to 85 degrees Fahrenheit (°F), with clear skies and winds between 0 and 1 mile per hour. The last measurable rain event in the area occurred on July 1, 2014 (www.wunderground.com).

4.1 - Environmental Setting

The site is surrounded agricultural land to the south and east and by northern mixed evergreen forest to the north and west.

The site is not within the boundaries of any designated Habitat Conservation Plan or other area designated as part of the Natural Community Conservation Planning Act.

4.1.1 - Topographic Features

The site consists of a hillside that ranges in elevation from 784 feet above sea level at the northern boundary south of Kortum Canyon Road to 510 feet above sea level at the southern boundary of the site.

4.1.2 - Soils

The Napa County soil survey provides soil data for the site including four independent soils series: Bale, Boomer, Forward, and Felta (Exhibit 4). The majority of the site consists of soil mapping units Forward gravelly loam and the Boomer-Forward-Felta complex. Soil within the potential, offsite reclaimed water line alignment includes Bale loam (103) and Bale complex (106). Soil within the offsite replacement sewer line alignment includes Bale loam (103), Bale complex (106), and Forward gravelly loam (140). Certain soils such as serpentine soils (derived from ultramafic rock), alkaline soils, and clay soils associated with vernal pools have specific characteristics that are known to provide suitable microhabitat for special-status plant species. None of the soils present on the site provide suitable microhabitat for special-status plant species.

Bale loam (103)

The Bale series consists of very deep, somewhat poorly drained soils on alluvial fans and terraces. These soils formed in stratified, gravelly, and sandy alluvium from mixed sources. Slopes range from 0 to 3 percent.

Boomer-Forward-Felta complex (111)

The Boomer-Forward-Felta complex comprises the three listed soil series. The Boomer series consists of deep and very deep, well-drained soils on uplands that formed in material weathered from metavolcanic rock. Boomer soils slopes range from 2 to 75 percent. The Forward series consists of moderately deep, well-drained soils on hills and mountains that formed in material weathered from rhyolithic tuff. Forward soils slopes range from 2 to 75 percent. The Felta series

consists of well-drained soils on alluvial fans that formed in mixed gravelly alluvium from mixed igneous rocks. Felta soils slopes range from 5 to 75 percent.

Forward gravelly loam (140)

The Forward series consists of moderately deep, well-drained soils on hills and mountains that formed in material weathered from rhyolithic tuff. Forward soils slopes range from 2 to 75 percent.

4.2 - Plant Communities

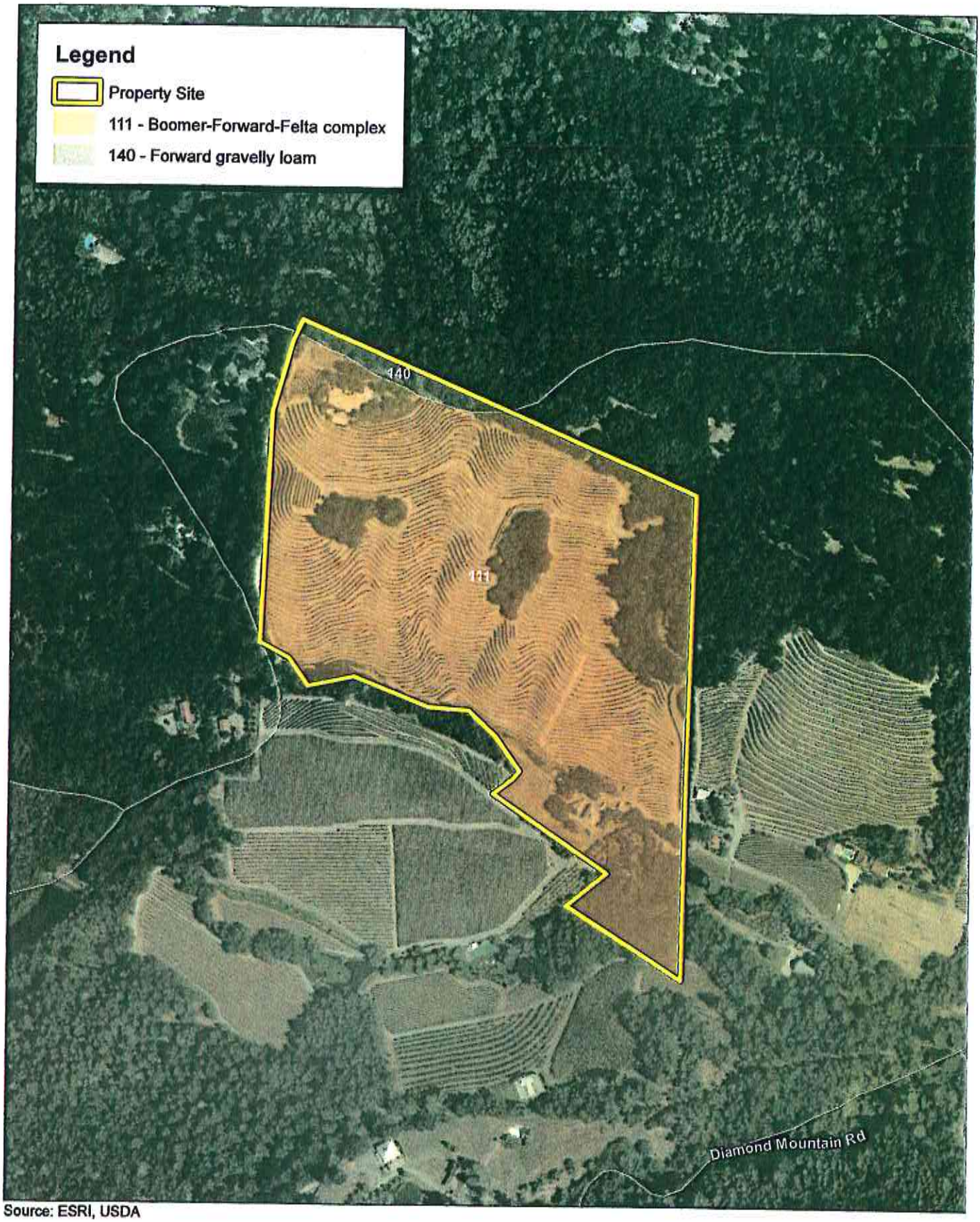
The site consists of vineyard, northern mixed evergreen forest, developed areas and one seasonal wetland (Exhibit 5). Table 1provides a summary of the plant community acreages. Representative photos of the communities onsite can be found in Appendix C.

Table 1: Plant Community Acreages

Plant Community	Approximate Area (acres)
Vineyard	22.11
Northern mixed evergreen forest	7.16
Developed	3.58
Sessional wetland	0.15
Total	**33.00**

4.2.1 - Vineyard (22.11 acres)

Vineyards generally occur in areas that once supported productive and diverse biological communities. The conversion of native vegetation to agricultural lands has greatly reduced the wildlife species diversity and habitat value. However, some common and agricultural "pest" species forage in these habitats, and cultivated vegetation can provide benefits such as cover, shade, and moisture for these and other species during hot summer months. Typical species found in agricultural lands include red-tailed hawk (*Buteo jamaicensis*), barn owl (*Tyto alba*), American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), house finch (*Carpodacus mexicanus*), California ground squirrel (*Spermophilus beecheyi*), and western harvest mouse (*Reithrodontomys megalotis*).



Source: ESRI, USDA

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400 200 0 400
Feet

Exhibit 4
Map of Soils

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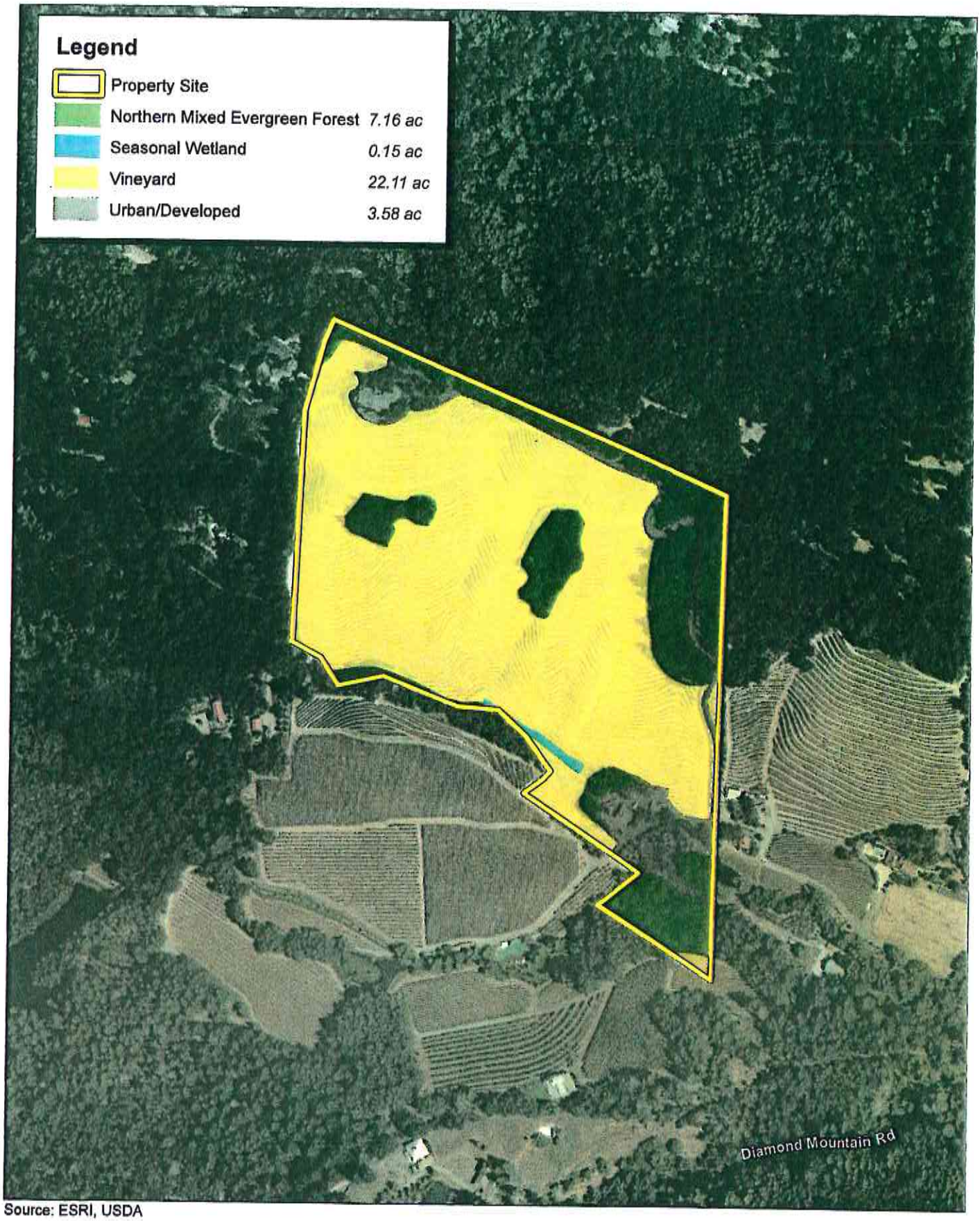
REVERIE WINERY
BIOLOGICAL RESOURCES BASELINE CONDITIONS



Source: ESRI, USDA

FirstCarbon SOLUTIONS

400 200 0 400 Feet

Exhibit 5
Vegetation Communities Map

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REVERIE WINERY
BIOLOGICAL RESOURCES BASELINE CONDITIONS

4.2.2 - Northern Mixed Evergreen Forest (7.16 acres)

Approximately 7.16 acres of the site consist of mature northern mixed evergreen forest with a closed canopy of approximately 80 percent cover. The dominant species observed include Douglas fir (*Pseudotsuga menziesii*), pacific madrone (*Arbutus menziesii*), coast live oak (*Quercus agrifolia*), and California bay laurel (*Umbellularia californica*) and coast redwood (*Sequoia sempervirens*).

Scattered stands of tan-oak (*Lithocarpus densiflorus*), blue oak (*Quercus douglasii*), black oak (*Quercus kelloggii*), and big-leaf maple (*Acer macrophyllum*) are also present in this community. The understory was composed of common Manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), other unidentified *Arctostaphylos* subspecies, California rose (*Rosa californica*), and French broom (*Genista monspessulana*).

4.2.3 - Urban/Developed (3.58 acres)

These areas are characterized by human disturbance. Although such areas may exhibit patches of sparse ruderal vegetation and an occasional scattering of ornamental plant species, this type of "habitat" is not considered a plant community and is of little or no value to wildlife. Disturbed areas include dirt roads and other recently disturbed areas that have not naturally revegetated.

Buildings, lawns and paved roadways are also included in this community description. Several ornamental plantings associated with wine tasting facilities include scattered periwinkle (*Vinca major*), Himalayan blackberry (*Rubus armeniacus*), domestic grape (*Vitis vinifera*), and English ivy (*Hedra helix*). The few ornamental plantings are scattered and cover a small area; therefore they are not be considered a separate vegetation community.

4.2.4 - Seasonal Wetland (0.15 acre)

Seasonal wetlands are relatively shallow bodies of water that pond for a short duration, support a low diversity of plant species, and tend to support species with a high tolerance for disturbance. Seasonal wetlands, including the aquatic environments that occur on the floor of flood control channels, are often formed when ditches and depressions are excavated. Wetland plant species that are either low-growing, tenacious perennials that tolerate disturbance or annuals that tolerate seasonal wetness often colonize seasonal wetlands. Characteristic plant species within the seasonal wetland within the site primarily consist of cattails (*Typha latifolia)* and blackberry (*Rubus discolor*). They also typically qualify as wetlands under Section 404 of the federal Clean Water Act and are under USACE jurisdiction.

4.3 - Wildlife

The northern mixed evergreen forest and seasonal wetland plant communities discussed above provide habitat for a number of local wildlife species. The following are brief discussions of wildlife species observed within the site during the field survey, separated into taxonomic groups. Each discussion contains representative examples of a particular taxonomic group either observed onsite or expected to occur. A complete list of wildlife species observed or detected within the site during the field survey is presented in Appendix B.

4.3.1 - Invertebrates

The weather conditions prior to conducting the survey were relatively warm and dry, but invertebrate observations were expected to be low at this time of year. Invertebrates observed include buckeye butterfly (*Precis coenia*), mountain skipper (*Ochlodes sylvanoides*), and honey bee (*Apis mellifera*).

4.3.2 - Amphibians

No terrestrial amphibians were observed within the site. Suitable habitat for terrestrial amphibians on the site is marginal, but may support common species such as California slender salamander (*Batrachoseps attenuatus*). No aquatic amphibians were observed within the site. Common aquatic amphibians with the potential to occur within offsite areas include California toad (*Bufo boreas halophilus*) and American bullfrog (*Rana catesbeiana*).

4.3.3 - Reptiles

A single reptile species, side-blotched lizard (*Uta stansburiana*), was observed along the northern boundary of the site during the reconnaissance-level survey. Other reptiles with the potential to be present onsite include western fence lizard (*Sceloporus occidentalis*) and northern alligator lizard (*Elgaria coerulea*).

4.3.4 - Birds

Birds observed include Anna's hummingbird (*Calypte anna*), black Phoebe (*Sayornis nigricans*), bushtit (*Psaltriparus minimus*), oak titmouse (*Baeolophus inornatus*), house wren (*Troglodytes aedon*), northern flicker (*Colaptes auratus*), northern rough-winged swallow (*Stelgidopteryx serripennis*), Townsend's warbler (*Dendroica townsendi*), great egret (*Ardea alba*), western scrub jay (*Aphelocoma californica*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), and turkey vulture (*Cathartes aura*).

4.3.5 - Mammals

Mammals observed or detected within the site include Douglas squirrel (*Tamiasciurus douglasii*) and coyote (*Canis latrans*). Other common mammals for which suitable habitat are present onsite include bobcat (*Lynx rufus*) and spotted skunk (*Mephitis mephitis*). No mammal burrows were observed within the adjacent agricultural fields or the dirt access roads.

SECTION 5: SPECIAL-STATUS BIOLOGICAL RESOURCES

Based on the results of the literature review and reconnaissance-level field survey, FCS documented existing site conditions and determined if special-status biological resources occur or potentially occur within the site. Special-status plant and wildlife species that have been previously documented within 1 mile of the site are shown in Exhibit 6.

5.1 - Special-status Plant Communities

Plant communities are potentially special-status biological resources based on federal, state, or local laws regulating their development, limited distributions, and habitat requirements of sensitive plants or wildlife species that occur within them. Special-status plant communities recorded near the site include coastal and valley freshwater marsh, northern vernal pool, and valley needlegrass grassland (CNDDB). None of these or any other special-status plant communities are present onsite.

5.2 - Special-status Plant Species

Based on FCS's literature review, 22 special-status plant species have been previously recorded within a 5-mile radius of the site. However, no special-status plant species were observed during the reconnaissance-level survey. The special-status plant species evaluated for potential occurrence within the site are summarized in Table 2 below.

Table 2: Special-Status Plant Species

Species		Status			Preferred Habitat	Life Form	Blooming Period	Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	USFWS	CDFW	CNPS				
Allium peninsulare var. *franciscanum*	Franciscan onion	None	None	1B.2	Cismontane woodland, and valley and foothill grassland on ultramific soils	Perennial bulbiferous herb	May–June	**Not Likely to Occur** not recorded within 3 miles of the site, marginal habitat within the site.
Alopecurus aequalis var. sonomensis	Sonoma alopecurus	FE	None	1B.1	Freshwater marsh, marsh and swamp, riparian scrub, and wetland	Perennial herb	May–July	**Not Likely to Occur** not recorded within 3 miles of the site, marginal habitat within the site
Amorpha californica var. *napensis*	Napa False Indigo	None	None	1B.2	Broadleaved upland forest, Chaparral, Cismontane woodland Known Elevation Limits: 120–2000 m.	Deciduous shrub	April–July	**Low Potential to Occur** not recorded within 3 miles of the site, marginal habitat within the site
Astragalus claranus	Clara Hunt's milk-vetch	FE	ST	1B.1	Chaparral, Cismontane woodland, Valley and foothill grassland Known Elevation Limits: 75–275 m.	Annual herb	March–May	**Low Potential to Occur** not recorded within 3 miles of the site, marginal habitat within the site
Arctostaphylos manzanita ssp. *elegans*	Konocti manzanita	None	None	1B.3	Chaparral, Cismontane woodland, lower montane coniferous forest.	Perennial evergreen shrub	March–May	**Low Potential to Occur** not recorded within 3 miles of the site, marginal habitat within the site
Brodiaea californica var. *leptandra*	narrow-anthered California brodiaea	None	None	1B.2	Broadleaved upland forest, Chaparral, Lower montane coniferous forest Known Elevation Limits: 110–915 m.	Bulbiferous herb	May–July	**Not Likely to Occur** site lacks suitable microhabitat.

Table 2 (cont.): Special-Status Plant Species

Species		Status						
Scientific Name	Common Name	USFWS	CDFW	CNPS	Preferred Habitat	Life Form	Blooming Period	Potential to Occur/ Known Occurrence/ Suitable Habitat
Ceanothus confusus	Rincon Ridge ceanothus	None	None	1B.1	Chaparral, Cismontane woodland, Closed-cone coniferous forest in ultramafic soils Known Elevation Limits: 75–1065 m.	Evergreen shrub	May–June	**Not Likely to Occur** Not recorded in vicinity; site lacks suitable microhabitat and soils.
Ceanothus divergens	Calistoga ceanothus	None	None	1B.2	Chaparral, Cismontane woodland in ultramafic soils Known Elevation Limits: 170–950 m.	Evergreen shrub	February–March	**Not Likely to Occur** Site lacks suitable microhabitat and soils.
Centromadia parryi ssp. *parryi*	pappose tarplant	None	None	1B.2	Coastal prairie, Marsh and swamp, Meadow and seep, Valley and foothill grassland Known Elevation Limits: 2–240 m.	Annual herb	May–November	**Not Likely to Occur** Site lacks suitable habitat.
Eryngium constancei	Loch Lomond button-celery	FE	SE	1B.1	Vernal pool, Wetland Known Elevation Limits: 460–855 m.	Annual/perennial herb	April–June	**Not Likely to Occur** Site lacks suitable habitat, outside of elevation range.
Lasthenia burkei	Burke's goldfields	FE	SE	1B.1	Meadow and seep, Vernal pool, Wetland Known Elevation Limits: 15–600	Annual herb	April–June	**Not Likely to Occur** Site lacks suitable habitat.
Layia septentrionalis	Colusa layia	None	None	1B.2	Chaparral, Cismontane woodland in Ultramafic soils, Valley and foothill grassland Known Elevation Limits: 100–1095 m.	Annual herb	April–May	**Not Likely to Occur** not recorded in vicinity; site lacks suitable microhabitat.

Table 2 (cont.): Special-Status Plant Species

Species		Status						
Scientific Name	Common Name	USFWS	CDFW	CNPS	Preferred Habitat	Life Form	Blooming Period	Potential to Occur/ Known Occurrence/ Suitable Habitat
Leptosiphon jepsonii	Jepson's leptosiphon	None	None	1B.2	Chaparral, Cismontane woodland in Ultramafic soils Known Elevation Limits: 100–500 m.	Annual herb	March–May	**Not Likely to Occur** Not recorded in vicinity; site lacks suitable microhabitat.
Limnanthes floccosa ssp. *floccosa*	woolly meadowfoam	None	None	4.2	Chaparral, Cismontane woodland, Valley and foothill grassland, Vernal pool, Wetland Known Elevation Limits: 60–1095 m.	Annual herb	March–May	**Not Likely to Occur** Not observed during 2009 focused plant survey; not recorded in vicinity; site lacks suitable microhabitat.
Lupinus sericatus	Cobb Mountain lupine	None	None	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest in Ultramafic soils Known Elevation Limits: 275–1525 m.	Perennial herb	March–June	**Not Likely to Occur** Not Site lacks suitable microhabitat.
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	None	None	1B.1	Cismontane woodland, Lower montane coniferous forest, Meadow and seep, Valley and foothill grassland, Vernal pool, Wetland Known Elevation Limits: 5–1740 m.	Annual herb	March–July	**Not Likely to Occur** Not Site lacks suitable microhabitat.
Penstemon newberryi var. *sonomensis*	Sonoma beardtongue	None	None	1B.3	Chaparral Known Elevation Limits: 700–1370 m.	Perennial herb	April–August	**Not Likely to Occur** Site lacks suitable habitat.

Table 2 (cont.): Special-Status Plant Species

Species		Status						
Scientific Name	**Common Name**	**USFWS**	**CDFW**	**CNPS**	**Preferred Habitat**	**Life Form**	**Blooming Period**	**Potential to Occur/ Known Occurrence/ Suitable Habitat**
Plagiobothrys strictus	Calistoga popcorn-flower	FE	ST	1B.1	Meadows and seeps, Valley and foothill grassland, Vernal pools in alkaline areas near thermal springs Known Elevation Limits: 90–160 m.	Annual herb	March–June	**Not Likely to Occur** Site lacks suitable habitat.
Poa napensis	Napa blue grass	FE	SE	1B.1	Meadows and seeps, valley and foothill grassland in alkaline soils, near thermal springs Known Elevation Limits: 100–200 m.	Perennial herb	May–August	**Not Likely to Occur** Site lacks suitable habitat.
Sidalcea hickmanii ssp. *napensis*	Napa checkerbloom	None	None	1B.1	Chaparral in rhyolitic soils Known Elevation Limits: 415–610 m.	Perennial herb	April–June	**Not Likely to Occur** Site lacks suitable habitat.
Streptanthus brachiatus ssp. *brachiatus*	Socrates Mine jewel-flower	None	None	1B.2	Chaparral, closed-cone coniferous forest in ultramafic soils Known Elevation Limits: 545–1000 m.	Perennial herb	May–June	**Not Likely to Occur** Site lacks suitable habitat and soils.
Trifolium depauperatum var. *hydrophilum*	saline clover	None	None	1B.2	Marsh and swamp, Valley and foothill grassland, Vernal pool, Wetland Known Elevation Limits: 0–300 m	Annual herb	April–June	**Not Likely to Occur** Site lacks suitable habitat.

U.S. Fish and Wildlife Service
FE Federal Endangered
FT Federal Threatened
PE Proposed Endangered

California Department of Fish and Game
CE California Endangered
CT California Threatened
CR California Rare

California Native Plant Society
1A Plants presumed extinct in California.
1B Plants rare, threatened, or endangered in California and elsewhere.

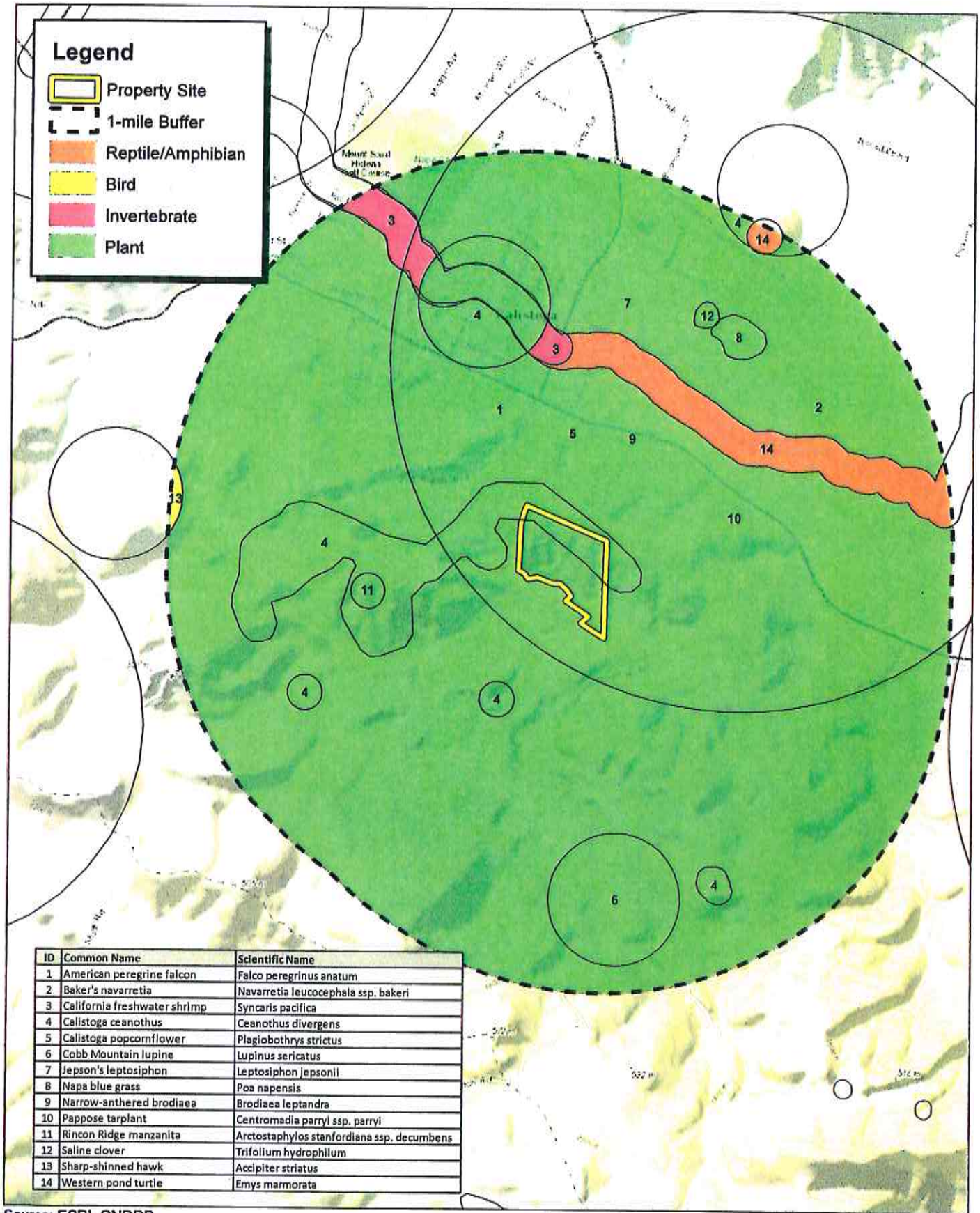
Table 2 (cont.): Special-Status Plant Species

Species		Status						
Scientific Name	Common Name	USFWS	CDFW	CNPS	Preferred Habitat	Life Form	Blooming Period	Potential to Occur/ Known Occurrence/ Suitable Habitat

PT Proposed Threatened
FC Federal Candidate
FSC Species of Concern*
* No longer recognized as a federal designation.

2 Plants rare, threatened, or endangered in California, but more common elsewhere.
3 Plants in need of more information.
4 Plants of limited distribution.
** No Longer Recognized as Sensitive by CNPS

Not Likely to Occur—There are no present or historical records of the species occurring on or in the immediate vicinity, (within 2 miles) of the site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the site.
Low Potential to Occur—There is a historical record of the species in the vicinity of the site and potentially suitable habitat onsite, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The site is above or below the recognized elevation limits for this species.
Moderate Potential to Occur—The diagnostic habitats associated with the species occur on or in the immediate vicinity of the site, but there is not a recorded occurrence of the species within the immediate vicinity (within 2 miles). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.
High Potential to Occur—There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the site (within 2 miles).
Species Present—The species was observed on the site at the time of the survey.



ID	Common Name	Scientific Name
1	American peregrine falcon	Falco peregrinus anatum
2	Baker's navarretia	Navarretia leucocephala ssp. bakeri
3	California freshwater shrimp	Syncaris pacifica
4	Calistoga ceanothus	Ceanothus divergens
5	Calistoga popcornflower	Plagiobothrys strictus
6	Cobb Mountain lupine	Lupinus sericatus
7	Jepson's leptosiphon	Leptosiphon jepsonii
8	Napa blue grass	Poa napensis
9	Narrow-anthered brodiaea	Brodiaea leptandra
10	Pappose tarplant	Centromadia parryi ssp. parryi
11	Rincon Ridge manzanita	Arctostaphylos stanfordiana ssp. decumbens
12	Saline clover	Trifolium hydrophilum
13	Sharp-shinned hawk	Accipiter striatus
14	Western pond turtle	Emys marmorata

Source: ESRI, CNDDB

FirstCarbon SOLUTIONS

2,000 1,000 0 2,000 Feet

Exhibit 6
Previously Recorded Occurrences of Special-status Species (1 mile)

5.2.1 - Threatened or Endangered Species

Of the 22 plant species recorded within 5 miles of the site, five are federally or state listed as endangered or threatened. Following is a brief discussion of each listed species and an evaluation of its likelihood to occur on or within the vicinity of the site. It is important to note that all federally or state listed as endangered or threatened plant species discussed below that have been determined not likely to occur onsite, primarily based on the absence of suitable habitat and a lack of any closely recorded occurrence within the vicinity of the site, have been excluded from further analysis within this study.

Clara Hunt's milk-vetch (*Astragalus claranus*)

Clara Hunt's milk-vetch, an annual herb in the bean family, is a state listed threatened and federally listed endangered plant that is threatened by urbanization, recreational development, grazing, and non-native plants. This species is known from Napa and Sonoma counties, and it occurs in serpentinite, volcanic, rocky, or clay soils within cismontane woodland, chaparral and valley, and foothill grassland habitat. While the site contains suitable cismontane woodland habitat, no suitable soils are present onsite. In addition, no individuals of this species were observed on the site during the reconnaissance survey.

Loch Lomond button-celery (*Eryngium constancei*)

Loch Lomond button-celery, an annual to perennial herb in the carrot family, is a state and federally listed endangered plant that is threatened by development. This species is known from Lake, Napa, and Sonoma counties and occurs in vernal pools. There is no vernal pool habitat on or within the vicinity of the site.

Burke's goldfields (*Lasthenia burkei*)

Burke's goldfields, an annual herb in the sunflower family, is a state and federally listed endangered plant that is threatened by agriculture, urbanization, development, and grazing. This species is known from Lake, Napa, Mendocino, and Sonoma counties, and it occurs in meadows and seeps, vernal pools, and wetlands. No suitable habitat occurs on or within the vicinity of the site.

Calistoga popcorn-flower (*Plagiobothrys strictus*)

Calistoga popcorn-flower, an annual herb in the forget-me-not family, is a state listed threatened- and federally listed endangered plant that is threatened by urbanization. This species is known from Napa County, and occurs in meadows and seeps, valley and foothill grassland, and vernal pools in alkaline areas near thermal springs. No suitable habitat occurs on or within the vicinity of the site.

Napa blue grass (*Poa napensis*)

Napa blue grass, a perennial herb in the true-grass family, is a state and federally listed endangered plant that is threatened by development and hydrological alterations. This species is known from Napa County, and it occurs in meadows and seeps, valley and foothill grassland, and vernal pools in alkaline areas near thermal springs. No suitable habitat occurs on or within the vicinity of the site.

5.2.2 - California Native Plant Society List Species

The CNPS designation of rare plants does not provide any state or federal legal protection; however, it does warrant evaluation for significance under the CEQA process. The CNPS listed species recorded within 5 miles of the site are:

- Napa false indigo (*Amorpha californica var. napensis*)
- Narrow-anthered California brodiaea (*Brodiaea californica* var. *leptandra*)
- Rincon Ridge ceanothus (*Ceanothus confusus*)
- Calistoga ceanothus (*Ceanothus divergens)*
- Pappose tarplant (*Centromadia parryi* ssp. *parryi*)
- Colusa layia (*Layia septentrionalis*)
- Jepson's linanthus (*Leptosiphon jepsonii*)
- Woolly meadowfoam (*Limnanthes floccosa* ssp. *floccosa*)
- Cobb Mountain lupine (*Lupinus sericatus*)
- Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*)
- Sonoma beardtongue (*Penstemon newberryi* var. *sonomensis*)
- Napa checkerbloom (*Sidalcea hickmanii* ssp. *napensis*)
- Socrates Mine jewel-flower (*Streptanthus brachiatus* ssp. *brachiatus*)
- Saline clover (*Trifolium depauperatum* var. h*ydrophilum*).

Of these species, only Napa false indigo, Calistoga ceanothus, Jepson's leptosiphon, Cobb Mountain lupine, and Baker's navarretia have low potential to occur on the site based on suitable habitat on or within the immediate vicinity of the site. Similar to the federal and state listed specieòs, though the site contains suitable northern mixed evergreen forest for these species, no individuals were observed on the site during the reconnaissance survey. The rest of the species are commonly found in habitats that are not present on the site as summarized in Table 2.

5.3 - Special-status Wildlife Species

Based on FCS's literature review, 25 special-status wildlife species have been previously recorded within the vicinity of the site (i.e., within the following USGS quadrangle maps: Calistoga, Detert Reservoir, Kenwood, St. Helena, and Mark West Springs) (Appendix D). No special-status wildlife species were observed during the reconnaissance-level survey. The special-status wildlife species evaluated for potential occurrence within the site are summarized in Table 3 below.

All special-status wildlife species that are not federally or state-listed as endangered, threatened, fully protected, or a California Species of Special Concern, and have been determined not likely to occur onsite, have been excluded from further analysis within this study and include:

- Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*)
- Leech's skyline diving beetle (*Hydroporus leechi*)
- Prairie falcon (*Falco mexicanus*)
- Silver-haired bat (*Lasionycteris noctivagans*)

5.3.1 - Threatened or Endangered Species

Of the 25 special-status wildlife species evaluated for potential to occur on the site, six are federally or state listed as endangered or threatened. Following is a brief discussion of each of the six listed species and an evaluation of its likelihood to occur on or within the vicinity of the site. All federally or state listed as endangered or threatened that have been determined not likely to occur onsite.

California freshwater shrimp (*Syncaris pacifica*)

California freshwater shrimp is a state and federally listed endangered species. This species is found in pool areas of low-elevation, in low gradient streams, among exposed live tree roots (e.g., willows and alders) of undercut banks, in overhanging woody debris, or in overhanging vegetation. Suitable streams have low summer flows but may transport heavy runoff during the rainy season. The historic distribution of the California freshwater shrimp is unknown, as geologic and climatic changes since the early Quaternary Period have greatly altered drainage and river courses along the central coast of California. Currently this species is found in 17 stream segments within Marin, Napa, and Sonoma counties. Many of these stream segments are isolated from the others by barriers, dewatered areas, and low-quality habitat. The California freshwater shrimp feeds on decomposing plants and other detrital material.

The closest reported occurrence of California freshwater shrimp is in Garnett Creek, a tributary to the Napa River in Calistoga, California, approximately 1.5 miles north of the site (Serpa 1996). Given the low population numbers and highly fragmented populations of this species, even minor impacts could prove to be significant. No habitat for this species occurs within the site.

Steelhead trout (*Oncorhynchus mykiss irideus*; central California coast DPS)

The Central California Coast Steelhead Distinct Population Segment (DPS) is federally listed as threatened. This species requires basic habitat requirements, including adequate flows to reach optimal over-summering habitats. Minimum water depth required is approximately 5 inches, and maximum water velocities required are between 9 and 13 feet per second during migration. Cool, clean, well-oxygenated water is critical for reproduction.

Spawning takes place in gravel-bottom streams with temperatures of 39° to 52°F; embryos die at water temperatures greater than 55°F. The majority of this steelhead DPS spawn in late spring. Fry prefer water depths of 10 to 20 inches with temperatures of 59 to 64°F. Juveniles of this steelhead DPS do not occur in waters with temperatures of 77 to 79°F, and adults do not occur in temperatures of 73 to 75°F. Juveniles prefer complex habitat with large physical structures that provide forage and refuge. Clearing channels for navigation during the 19th century removed this type of habitat from rivers below the currently existing major dams. Today, complex aquatic habitat is largely found in small tributaries. Juvenile steelhead generally feed on aquatic and terrestrial insects and larvae. Stream flows must provide for annual lagoon bar failure so that adults can migrate upstream to spawn and juveniles can emigrate to foraging in the estuaries.

Table 3: Special-Status Wildlife Species

Species		Status				Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	Federal	State	Other	Required Habitat	
Insects						
*Hydrochara ricksecker*i	Ricksecker's water scavenger beetle	None	None	—	Aquatic, Sacramento/San Joaquin flowing or standing waters	**Not likely to occur** No record of occurrence on or within 1 mile of the site; No suitable habitat onsite.
Hydroporus leechi	Leech's skyline diving beetle	None	None	—	Aquatic	**Not likely to occur** No record of occurrence on or within 1 mile of the site; No suitable habitat onsite
Lavinia symmetricus navarroensis	Navarro roach	None	SSC	—	Aquatic, Sacramento/San Joaquin flowing waters	**Not likely to occur** No record of occurrence within 1 mile of the site; Teal Creek and unnamed drainage do not provide habitat for the species.
Syncaris pacifica	California freshwater shrimp	FE	SE	IUCN-EN	Aquatic, Sacramento/San Joaquin flowing waters	**Not likely to occur** One record of occurrence within 1 mile of the site; Teal Creek and unnamed drainage do not provide habitat for the species.
Fish						
Oncorhynchus mykiss irideus	steelhead—central California coast distinct population segment	FT	None	—	Aquatic, Sacramento/San Joaquin flowing waters	**Not likely to occur** No record of occurrence on or within 1 mile of the site; Teal Creek and unnamed drainage do not provide habitat for the species.

Table 3 (cont.): Special-Status Wildlife Species

Species		Status			Required Habitat	Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	Federal	State	Other		
Reptiles and Amphibians						
Actinemys [Emys] marmorata	western pond turtle	None	SSC	CDF-S IUCN-VU	Aquatic, artificial flowing waters, Klamath/North coast flowing or standing waters, marsh and swamp, Sacramento/San Joaquin flowing or standing waters, south coast flowing or standing waters, wetland	**Not likely to occur** One record of occurrence within 1 mile of the site; Teal Creek and unnamed drainage do not provide habitat for the species.
Ambystoma californiense	California tiger salamander	FT	ST	IUCN-VU	Grassland, oak savanna, and edges of mixed woodland and lower elevation coniferous forest. Breed in predator-free ephemeral ponds.	**Not likely to occur** No record of occurrence on or within 1 mile of the site; No suitable habitat.
Rana boylii	foothill yellow-legged frog	None	SSC	BLM-S IUCN-NT USFS-S	Aquatic, chaparral, cismontane woodland, coastal scrub, Klamath/North coast flowing waters, lower montane coniferous forest, meadows and seeps, riparian forest, riparian woodland, Sacramento/San Joaquin flowing waters, with adjacent woodlands.	**Not likely to occur** No record of occurrence on or within 1 mile of the site; Teal Creek and unnamed drainage do not provide habitat for the species.
Rana draytonii	California red-legged frog	FT	SSC	IUCN-VU	Aquatic, artificial flowing or standing waters, freshwater marsh, marsh and swamp, riparian forest, riparian scrub, riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, south coast flowing waters or standing waters, and wetland, with adjacent woodlands.	**Not likely to occur** No record of occurrence on or within 1 mile of the site; Teal Creek and unnamed drainage do not provide habitat for the species.

Table 3 (cont.): Special-Status Wildlife Species

Species		Status				
Scientific Name	Common Name	Federal	State	Other	Required Habitat	Potential to Occur/ Known Occurrence/ Suitable Habitat
Spea hammondii	western spadefoot toad	None	SSC	IUCN-NT	Open areas with sandy or gravelly soils, in mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Breed in predator-free ephemeral ponds.	Not likely to occur No suitable habitat.
Avian						
Accipiter striatus	sharp-shinned hawk	None	SSC	—	(Nesting and Wintering) Ponderosa pine, black oak, riparian deciduous, mixed conifer and Jeffrey pine habitats. Prefers riparian areas.	Moderate potential to occur Potentially suitable habitat (northern mixed evergreen forest) onsite, record of occurrence within 5 miles of the site.
Agelaius tricolor	tricolored blackbird	None	SSC	BLM-S IUCN-EN USFWS-BCC	Freshwater marsh, marshes and swamps, wetlands	Not likely to occur Lack of suitable habitat onsite and in vicinity.
Athene cunicularia	burrowing owl	None	SSC	BLM-S IUCN-LC USFWS-BCC	Grassland, agricultural fields	Not likely to occur Lack of suitable habitat onsite.
Falco peregrinus anatum	American prairie falcon	None	WL	IUCN-LC USFWS-BCC	Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley and foothill grassland	Not likely to occur Lack of suitable habitat onsite and in vicinity, one occurrence with 1-mile of site.

Table 3 (cont.): Special-Status Wildlife Species

Species		Status				Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	Federal	State	Other	Required Habitat	
Falco peregrinus anatum	American peregrine falcon	Delisted	FP	CDF-S USFWS-BCC	Found in a variety of habitats, most with cliffs for nesting and open areas for foraging. Uses large cities and nests on buildings. The nest is a shallow, unlined scrape placed on a ledge of a cliff or building, or in an old raven nest.	Not likely to occur Lack of suitable habitat onsite and in vicinity.
Haliaeetus leucocephalus	bald eagle	Delisted	SE FP	CDF-S IUCN-LC USFS-S USFWS-BCC	Nests in lower montane coniferous forest and old growth near large bodies of water. Winters in coastal areas, along large rivers and unfrozen lakes. Feeds largely on fish but will eat mammals and carrion opportunistically.	Not likely to occur Lack of suitable habitat onsite and in vicinity.
Progne subis	purple martin	None	SSC	IUCN-LC	Lower montane coniferous forests and woodlands. Nesting habitat consists primarily of old woodpecker cavities within tall, isolated trees and snags, but also abandoned structures.	Low potential to occur Marginally suitable nesting habitat onsite; no record within 1 mile of the site.
Strix occidentalis caurina	Northern spotted owl	FT	SSC	CDF-S	Multi-layered mixed conifer, redwood, and Douglas-fir forests with a permanent water source. Prefers narrow, steep canyons.	Low potential to occur Vegetation structure and preferred habitats are not present onsite.
Mammals						
Antrozous pallidus	pallid bat	None	SSC	BLM-S IUCN-LC USFS-S WBWG-H	Chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grassland	Moderate potential to occur Potentially suitable habitat (northern mixed evergreen forest) onsite, record of occurrence within 1 mile of the site.

Table 3 (cont.): Special-Status Wildlife Species

Species		Status				
Scientific Name	Common Name	Federal	State	Other	Required Habitat	Potential to Occur/ Known Occurrence/ Suitable Habitat
Myotis thysanodes	fringed myotis	None	None	BLM-S IUCN-LC WBWG-H	Found in a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer. Uses caves, mines, buildings, or crevices for maternity colonies and roosts.	Low potential to occur Potentially suitable habitat onsite in forest and abandoned buildings; however, no record of occurrence within 1 mile of the site.
Taxidea taxus	American badger	None	SSC	IUCN-LC	Dry, open grasslands, fields, and pastures.	Not likely to occur Lack of suitable habitat onsite and in vicinity.

Federal

FE	Federal Endangered
FT	Federal Threatened
FSC	Federal Species of Concern
PFT	Proposed Federal Threatened
C	Candidate for Federal Listing
D	Delisted

State

SE	State Endangered
ST	State Threatened
SSC	Species of Special Concern
FP	Fully Protected Species
P	Protected Species
WL	Watch List

Other

BLM-S	Bureau of Land Management-Sensitive
CDF-S	California Dept. of Forestry-Sensitive
IUCN-EN	IUCN-Endangered
IUCN-NT	IUCN-Near Threatened
IUCN-VU	IUCN-Vulnerable
IUCN-LC	IUCN-Least Concern
USFS-S	US Forestry Service -Sensitive
USFWS-BCC	USFWS-Birds of Conservation Concern
USFWS- LC	USFWS-Least Concern
WBWG-H	West. Bat Working Group-High Priority
WBWG-M	West. Bat Working Group-Medium Priority

Not Likely to Occur—There are no present or historical records of the species occurring on or in the immediate vicinity, (within 1 mile) of the site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the site.
Low Potential to Occur—There is a historical record of the species in the vicinity of the site and potentially suitable habitat onsite, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The site is above or below the recognized elevation limits for this species.
Moderate Potential to Occur—The diagnostic habitats associated with the species occur on or in the immediate vicinity of the site, but there is not a recorded occurrence of the species within the immediate vicinity (within 1 mile). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.
High Potential to Occur—There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the site (within 1 mile).
Species Present—The species was observed on the site at the time of the survey or during a previous biological survey.

This steelhead DPS includes all populations below stream barriers in the Russian River south to Aptos Creek, and in drainages of the San Francisco, San Pablo, and Suisun bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin rivers. This species is threatened by water diversions, dams, and water pollution.

Suitable habitat is present within the vicinity of the site for steelhead trout. The entire Napa River is designated as Critical Habitat by the USFWS for steelhead trout. However, the most recently recorded occurrence within the vicinity of the site was reported in 2004 within York Creek, 5.86 linear miles southeast of the site. No suitable habitat for this species occurs within the site.

California tiger salamander (*Ambystoma californiense*)

California tiger salamander is listed as threatened by the federal government. This species is found in annual grassland. Seasonal ponds or vernal pools are crucial to breeding, though permanent ponds or reservoirs are sometimes used. Aquatic larvae seek cover in turbid water, clumps of vegetation, and other submerged debris.

No potentially suitable breeding habitat for the California tiger salamander occurs on or in the vicinity of the site, and there is no record of occurrence in the vicinity of the site. Therefore, this species is not expected to occur on or in the vicinity of the site.

California red-legged frog (*Rana draytonii*)

California red-legged frog is a federally listed threatened species and is a state listed Species of Special Concern. This species is found in aquatic habitats, including artificial flowing or standing waters, freshwater marsh, marshes and swamps, wetlands, riparian forest, riparian scrub, and riparian woodland. Specifically, this species is known from streams and ponds in Sacramento, San Joaquin, and the south coast of California. Preferred breeding habitat consists of deep permanent pools in stream courses characterized by a thick over-story of willows, frequently punctuated with sycamores and oaks that have under-cut banks and submerged root balls.

Potentially suitable habitat for red-legged frog occurs in the Napa River; however, the closest red-legged frog Critical Habitat designated by the USFWS is over 10 miles south of the site in Annadel State Park. In addition, the closest recorded occurrence of red-legged frog is approximately 8.3 linear miles from the site on the other side of the mountain range that contains Mount Saint Helena. Therefore, this species is not expected to occur within or in the vicinity of the site.

American peregrine falcon (*Falco peregrinus anatum*)

The American peregrine falcon is a California fully protected species; it was delisted as a federal threatened species list in 1999. The American peregrine falcon requires cliffs, ledges or canyons for nesting and bodies of water in open areas for foraging. Its primary prey are medium- to large-sized birds, especially waterfowl and shorebirds.

No American peregrine falcon nests have been observed on or in the vicinity of the site. No suitable nesting or foraging habitat exists on or in the vicinity of the site.

Bald eagle (*Haliaeetus leucocephalus*)

The bald eagle is a state listed endangered and fully protected species; it was delisted as a federal threatened species list in 2007. The bald eagle requires large, old-growth trees or snags in remote, mixed stands near water. Preferred perching sites are high in large, stoutly limbed trees, on snags or broken-topped trees, or on rocks near water. In the winter, the bald eagle roosts communally in dense, sheltered, remote conifer stands. This species nests in large, old-growth, trees with open branch work, especially ponderosa pine. Nests are placed 50 to 200 feet above ground, usually below the tree crown near a permanent water source.

No bald eagle nests have been observed on or in the vicinity of the site. No permanent bodies of water that support fish populations suitable for the bald eagle exist on or in the vicinity of the site; therefore, the species is not anticipated to occur within the site.

Northern spotted owl (*Strix occidentalis caurina*)

The northern spotted owl is a federally listed threatened species. The northern spotted owl occurs in low and mid-elevation mature forests with dense canopy. It prefers forests of Douglas fir with complex vegetation at multiple levels and are found near streams or other water sources. It requires large areas of undisturbed forest and are severely affected by fragmented habitat. Nesting occurs in snags or natural hollows and in old stick nests of other species.

No northern spotted owls have been observed within the site; however, a pair was previously recorded within 2 miles of the site. Vegetation at the site does not have the vertical complexity preferred by this species and is surrounded on three sides by areas with open fields or urban development; therefore, minimal if any suitable habitat is present for this species onsite.

5.3.2 - California Species of Special Concern

The CDFW designation "Species of Special Concern" does not provide any legal protection; however, these species must be assessed under the CEQA process. The CDFW designated California Species of Special Concern that have the potential to occur on or in the vicinity of the site include Navarro roach (*Lavinia symmetricus navarroensis*), foothill yellow-legged frog (*Rana boylii*), sharp-shinned hawk (*Accipiter striatus*), tricolored blackbird (*Agelaius tricolor*), purple martin (*Progne subis*), pallid bat (*Antrozous pallidus*), and Townsend's big-eared bat (*Corynorhinus townsendii*). These species are discussed below. All Species of Special Concern that have been determined not likely to occur onsite have been excluded from further discussion within this study.

Navarro roach (*Lavinia symmetricus navarroensis*)

The Navarro roach is a state listed Species of Special Concern that inhabits aquatic habitats, particularly within Sacramento and San Joaquin flowing waters. There are no recorded occurrences of this species on or within the vicinity of the site. Teal Creek and the unnamed drainage within the site do not provide suitable habitat for this species.

Western pond turtle (*Actinemys [Emys] marmorata*)

The western pond turtle is a California Species of Special Concern that can be found from sea level to over 5,900 feet from San Francisco Bay north, west of the crest of the Cascades and Sierras, into Washington and British Columbia. This species is known to inhabit ponds, lakes, rivers, streams, creeks, and marshes in woodlands, forests, and grasslands. It can be found basking on logs, rocks, cattail mats, and exposed banks within brackish water and seawater. This turtle feeds primarily on aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, crayfish, carrion, and—occasionally—frogs and fish. It mates in April and May, eggs are laid sometime between April and August, and hatchlings emerge in early fall or over winter in the nest.

There is one record of occurrence within 1 mile of the site. Teal Creek and the unnamed drainage within the site do not provide suitable habitat for this species; therefore, the western pond turtle is not likely to occur within the site.

Foothill yellow-legged frog (*Rana boylii*)

The foothill yellow-legged frog is a state listed Species of Special Concern that inhabits rivers and streams with clear water, rocky substrates, and open banks that flow through chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest. This species is also found in habitats with meadows and seeps or shaded pools fed by springs.

There is no record of occurrence within 1 mile of the site. Teal Creek and the unnamed drainage within the site do not provide suitable habitat for this species; therefore, the foothill yellow-legged frog is not likely to occur within the site.

Western spadefoot toad (*Spea hammondii*)

Western spadefoot toad is a state listed Species of Special Concern that inhabits open areas with sandy or gravelly soils, in mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. This species requires predator-free ephemeral ponds for breeding.

No potentially suitable breeding habitat for the western spadefoot toad occurs on or in the vicinity of the site, and there is no record of occurrence in the vicinity of the site; therefore, this species is not expected to occur on or in the vicinity of the site.

Purple martin (*Progne subis*)

The purple martin is a state listed Species of Special Concern, particularly while nesting. This species inhabits lower montane coniferous forests and woodlands. The purple martin nests old woodpecker cavities within tall, isolated trees and snags, and in abandoned structures.

The nearest recorded occurrence of purple martin is approximately 5.5 linear miles north of the site. While potentially suitable habitat is present on the site (within northern mixed evergreen forest), this species was not detected or observed, and no known nest sites occur on the site.

Sharp-shinned hawk (*Accipiter striatus*)

The sharp-shinned hawk is a state listed Species of Special Concern particularly while nesting and wintering. This species inhabits forests dominated by ponderosa pine, black oak, or Jeffrey pine, as well as riparian deciduous forests and mixed conifer forests.

The nearest recorded occurrence of sharp-shinned hawk is approximately 1 linear mile west of the site, and suitable habitat is present on the site within the northern mixed evergreen forest.

Tricolored blackbird (*Agelaius tricolor*)

The tricolored blackbird is a state listed Species of Special Concern that inhabits freshwater marshes, swamps, and wetlands. There are no recorded occurrences of this species, and there is no suitable habitat on or within the vicinity of the site.

Burrowing owl (*Athene cunicularia*)

The burrowing owl is a state listed Species of Special Concern that inhabits grassland and agricultural fields. There are no recorded occurrences of this species on or within the vicinity of the site. No suitable habitat for this species occurs within the site.

Pallid bat (*Antrozous pallidus*)

The pallid bat is a state listed Species of Special Concern that inhabits a wide variety of habitats, including chaparral, coastal scrub, desert wash, Great Basin grassland and scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, and valley and foothill grassland. This species requires available water near the roosting sites. This species hibernates in buildings, mines, bridges, tree hollows, caves, or rocks crevices. Pallid bats mate in autumn and give birth to young in late spring. The pups begin to fly at about 5 weeks old.

The nearest recorded occurrence of pallid bat is approximately 3 linear miles and suitable habitat is present on the site within the northern mixed evergreen forest.

Townsend's big-eared bat (*Corynorhinus townsendii*)

The Townsend's big-eared bat is a state listed Species of Special Concern that inhabits chaparral desert scrub, coniferous forest, broadleaved upland forest, riparian forest and woodland, great basin grassland, Joshua tree woodland, meadows and seeps, and valley and foothill grassland. This species prefers to roost in caves or mines with large open areas. Townsend's big-eared bat mates in late autumn. Maternity colonies form in early spring and pups are born in late spring or early summer. The pups begin to fly at about 3 weeks old.

The nearest recorded occurrence of Townsend's big-eared bat is approximately 10.5 linear miles north of the site and suitable habitat is present on the site within the northern mixed evergreen forest .

California mastiff bat (*Eumops perotis californicus*)

The California mastiff bat is a state listed Species of Special Concern that inhabits a wide variety of habitats including dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, montane meadows, and agricultural areas. This species requires roosts in buildings and cliffs. Suitable habitat is present on the site within the northern mixed evergreen forest, however there is no recorded occurrence on or within the vicinity of the site.

American badger (*Taxidea taxus*)

The American badger is a state listed Species of Special Concern that inhabits dry, open grasslands, fields, and pastures. No suitable habitat is present on or within the vicinity of the site.

5.4 - Nesting Migratory Birds

The site contains a moderately dense stand of northern mixed evergreen forest. Any birds nesting within the site or in adjacent trees may be considered a significant impact if project-related activities causes an active nest to fail. The nesting bird season extends approximately from mid-March to the end of August. If any future projects onsite are conducted during the nesting season, then a pre-construction nesting bird survey must be conducted and if active nests are found, work near the nests should be monitored by a qualified biologist.

5.5 - Wildlife Movement Corridors

Foothill Boulevard (SR-29), development associated with the City of Calistoga, and ongoing agricultural activity within the Napa Valley are significant movement barriers to the north of the site. The Mayacamas Mountains, north of the site, provides a natural wildlife corridor that connects the open space areas west of Napa Valley to the areas east of the valley. This mountain range separates Napa Valley to the south from Knights Valley to the north. Therefore, the site is not located within a local or regional wildlife movement corridor.

5.6 - Jurisdictional Waters and Wetlands

Two jurisdictional drainage features occur within the site including Teal Creek and an unnamed tributary to Teal Creek (Exhibit 7). The unnamed drainage is located east of the existing office building and winery facilities. This feature is approximately 200 feet long and approximately 3 feet wide at the ordinary high water mark. The drainage has an earthen bottom with no vegetation and the sleep banks are composed of river-rock and mud (presumably to reduce erosion during high flow events). This drainage is ephemeral in nature and only flows after storm events. This feature flows onto a dual piped culvert under the entrance road to the winery facility and eventually flows into Teal Creek near the southern limits of the site.

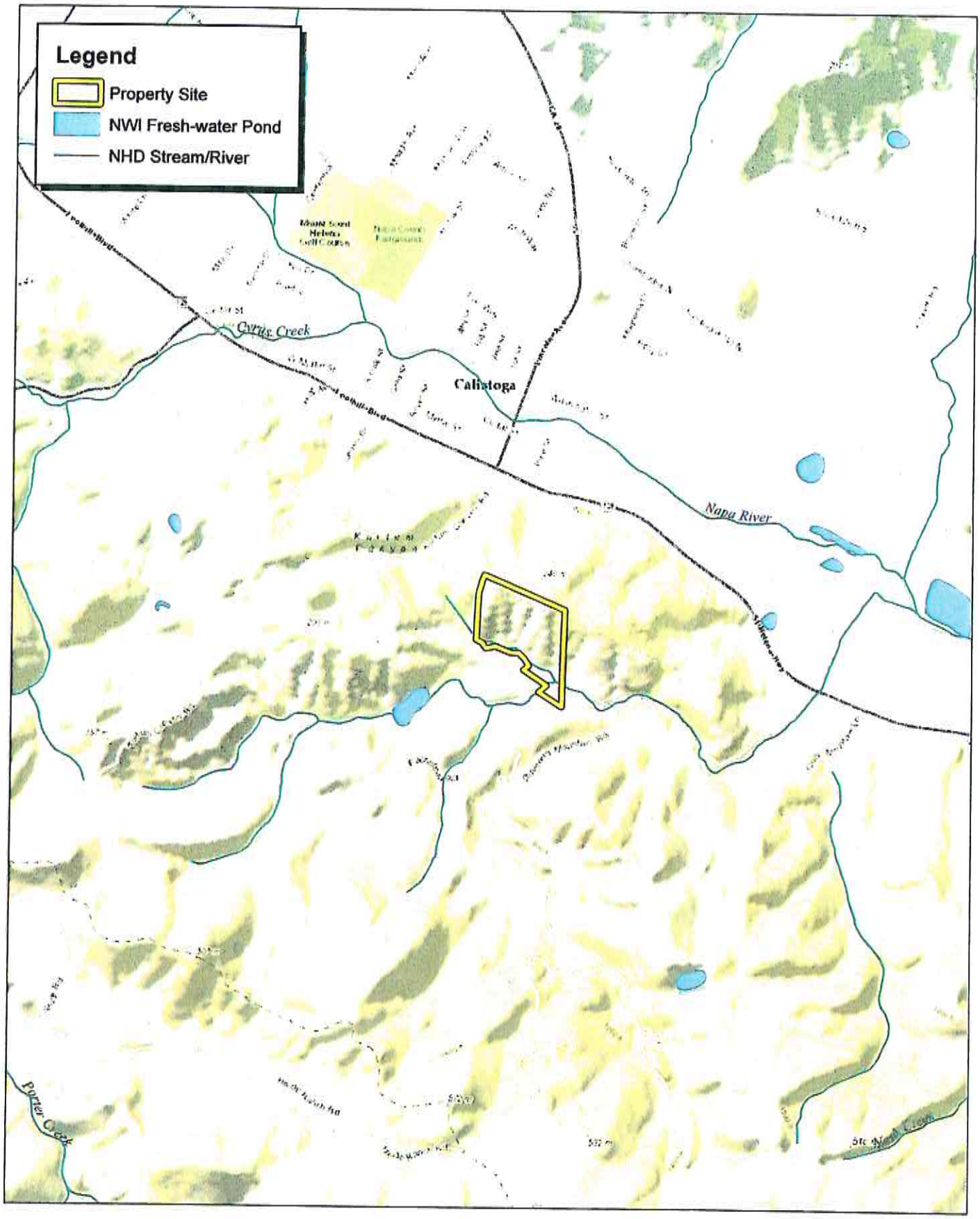
Teal Creek enters the site near the southwest boundary of the site and flows east towards the Napa River. Teal Creek has an earthen bottom with no vegetation and the steep banks are composed of

old river-rock walls and mud . This creek is also ephemeral in nature and only flows after storm events.

Within the site, two wooden footbridges cross both the unnamed drainage and Teal Creek. These bridges are outside of the ordinary high water mark. Neither drainage provide riparian habitat within the site.

Within Teal Creek, one large tree is protruding from the northern side of the river-rock walled bank just east of the existing footbridge. The growth of the tree has caused minor erosion of the creek-bank and minor buckling of the rock wall. Photos of these areas are included in Appendix C. One small seasonal wetland occurs within the site and is associated with the unnamed drainage feature. The seasonal wetland contains cattails and blackberry and would likely be considered jurisdictional by both the USACE and the state.

Modifications (including erosion control improvements) to any of these potentially jurisdictional features would require agency (USACE, RWQCB and CDFW) authorization.



FirstCarbon SOLUTIONS

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Exhibit 7
National Wetlands Inventory Map

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REVERIE WINERY
BIOLOGICAL RESOURCES BASELINE CONDITIONS

SECTION 6: RECOMMENDATIONS

This report was prepared to document the existing conditions and to provide a baseline to provide recommendations for future onsite improvements (no current plans for development or improvements have been proposed at the time of this document). Recommendations in this section are a guide for the site owner(s) during future project (including erosion improvements).

6.1 - Special-status Plant and/or Wildlife Species

The site also contains suitable habitat for the following Species of Special Concern: sharp-shinned hawk and pallid bat. Finally, potentially significant impacts to nesting migratory birds may occur if ground-disturbance activities are conducted during the nesting season. The following avoidance measures are recommended to reduce any potential impacts to less than significant.

Sharp-shinned Hawk

If any nesting sharp-shinned hawks are discovered during construction, a biological monitor shall survey the nesting area. The biological monitor shall establish an appropriate no-work buffer around the nest site during the breeding season (between mid-March and the end of August). If work must be conducted within the no-work buffer during the nesting season, the biological monitor shall conduct a nest survey prior to construction to determine whether the sharp-shinned hawk nest is still active. When the biological monitor determines that the nest is no longer active, construction may commence within the no-work buffer.

Pallid Bat

Prior to ground disturbance, all existing structures within site and associated utility alignments should be surveyed for pallid bats and their roosts.

If pallid bats or their roost sites are found within the site and/or associated utility alignments, the following avoidance measures are recommended:

- Structures providing roost sites for this species must be avoided to the maximum extent practicable.
- If any breeding bats are discovered during construction, a biological monitor shall survey the area where roosting bats were discovered. If bats are observed nesting during the breeding season (between mid-October and the end of June), the biological monitor shall establish an appropriate no-work buffer around the nest or roost site for the duration of the breeding season. If work must be conducted within the no-work buffer during the breeding season, the biological monitor shall conduct a daytime survey prior to construction to determine whether the bats are still present. When the biological monitor determines that the bats are no longer nesting, construction may commence within the no-work buffer.
- All construction activity in the vicinity of an active roost must be limited to daylight hours and lights will not be used around roost sites at night.
- Demolition of any roost sites must be timed for the period when bats are not present on the site.

Special-status Avian Species and Nesting Migratory Birds

The site and portions of the associated utility alignments support trees that provide suitable nesting habitat for special-status avian species and migratory birds protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game (CFG) Code. Therefore, pursuant to the MBTA and CFG Code, removal of potential nesting habitat should be conducted outside the avian nesting season. The nesting season generally extends from mid-March through the end of August but can vary slightly from year to year, based upon seasonal weather conditions.

If construction activities are conducted during the nesting season, a qualified biologist should conduct a nesting bird survey to identify any potential nesting activity within the vicinity of the site (within 500 feet). If active nests occur onsite, the biological monitor will establish an appropriate avoidance buffer around the nest. All ground-disturbance activities are prohibited within the avoidance buffer until the nest is no longer active or the nestlings have fledged. Ground-disturbance activities may occur within the buffer area at the discretion of the biological monitor.

6.2 - Drainage Features and Seasonal Wetlands

Prior to any specific project development approval, the project proponent shall contact the USACE, RWCQB and CDFW to identify the jurisdictional status and extent of potentially jurisdictional features identified onsite (including seasonal wetlands, Teal Creek and the unnamed drainage). Project plans shall identify all jurisdictional boundaries with a unique graphic symbol. No construction, landscape irrigation, paving, or other impermeable surface treatment shall be placed within any jurisdictional area beyond any jurisdictional boundary. Encroachment into the USACE, RWCQB and/or CDFW jurisdictional area shall not occur unless a Section 404/Section 401 permit and/or Streambed Alteration Agreement, respectively, are acquired the project proponent(s) replaces the lost value of the jurisdictional area to the satisfaction of the resources agencies issuing the permits.

6.3 - Wildlife Movement Corridors

The site does not function as a significant wildlife corridor to facilitate local or regional wildlife movement. The site is surrounded by adjacent wooded open space and agricultural areas to the north, west, south, and northeast. In addition, the project features development within the context of the forest and seeks to preserve as much forested land on the site as possible. Therefore, implementation of the 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.

6.4 - HCPs or Other Conservation Plans

There are currently no Habitat Conservation Plans (HCPs) or other conservation plans in progress for this area. The site will not conflict with the provisions of an adopted HCP, or other approved local, regional, or state habitat conservation plan.

SECTION 7: CERTIFICATION

I certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: October 1, 2014

Signed: _____

Jeannette Owen, Regulatory Specialist/Biologist
FirstCarbon Solutions
Sacramento, CA

Appendix C: Site Photographs

Photograph 1: Footbridge across unnamed drainage

Photograph 2: Unnamed drainage

Photograph 3: Unnamed drainage illustrating culverts

Photograph 4: Unnamed drainage illustrating river-rock creek banks

Photograph 5: Unnamed drainage illustrating river-rock creek banks

Photograph 6: Seasonal wetland associated with the unnamed drainage

Photograph 7: Seasonal wetland associated with the unnamed drainage

Photograph 8: Seasonal wetland associated with the unnamed drainage

Photograph 9: Seasonal wetland associated with the unnamed drainage

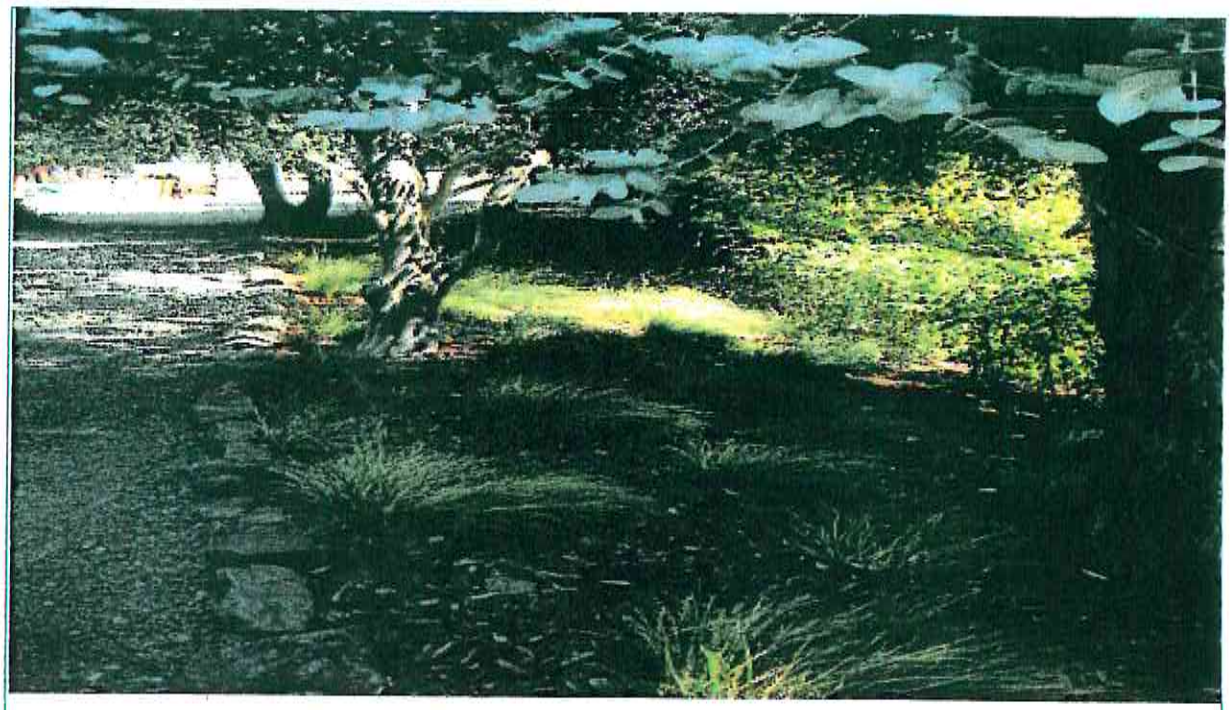
Photograph 10: Seasonal wetland associated with the unnamed drainage

Photograph 11: Teal Creek footbridge

Photograph 12: Teal Creek river-rock banks with tree and erosion

Photograph 13: Teal Creek

Photograph 14: Teal Creek footbridge with vegetation over growing from outside the top of bank



Photograph 15: Landscaping associated with Teal Creek

Photograph 16: Teal Creek footbridge

Photograph 17: Teal Creek footbridge

Photograph 18: Teal Creek river-rock banks

Photograph 19: Teal Creek river-rock banks

Photograph 20: Teal Creek footbridge