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Biological Resources Assessment

Maxville Lake Winery P17-00225-MOD & Conservation Regulations
Exception P18-00189
Planning Commission Hearing August 1, 2018

Biological Resources Assessment

Maxville Lake Winery and Vineyard Permit Modification

Napa County, California

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Date:
May 2017

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1.0 INTRODUCTION

WRA, Inc. (WRA) prepared this biological resources assessment (BRA) report on behalf of Maxville Lake Winery for their proposed Winery and Vineyard Permit Modification (Project) at 4105 Chiles Pope Valley Road in unincorporated Napa County, California (property). The proposed Project involves on-site improvements to the existing vineyards and winery facilities, including a new entrance and access driveway, additional parking, loading and staging areas, improvements to on-site landscaping, use of outdoor patio area for daily visitation, and improvements to water and wastewater storage, treatment, and disposal facilities, drainage systems, and fire suppression systems (Project Area, See Appendix A for Site Plan). The Project Area is located within the Maxville Lake Winery property (APN 025-020-023), and contains the extent of proposed improvements associated with the Project.

The Project Area is located in unincorporated Napa County, approximately 6 miles north of the intersection of Sage Canyon Road (CA Highway 128) and Chiles Pope Valley Road, and approximately 6 miles northeast of downtown Saint Helena. The Project Area resides within a generally north-northwest trending valley and is surrounded in all directions by rural open space, and agricultural land uses. The Project Area includes an existing winery and associated facilities including asphalt and dirt roads, parking, storage facilities, and wastewater treatment ponds.

The purpose of this assessment is to gather information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA). This report describes the results of the site visit, which assessed the Project Area and immediately adjacent areas for: (1) the potential to support special-status plant and wildlife species; (2) the potential presence of sensitive biological communities such as wetlands or riparian habitats; and (3) the potential presence of other sensitive biological resources protected by local, state, and federal laws and regulations. Survey work conducted as part of this biological assessment included rare plant surveys conducted in accordance with the Napa County *Guidelines for preparing special-status plant studies*; with survey methods and results presented here-in. If special-status species were observed during the site visit, they were recorded. Specific findings on the habitat suitability or presence of special-status species or sensitive habitats in the Project Area are addressed. This report also contains an evaluation of potential impacts to special-status species and sensitive biological resources that may occur as a result of the proposed project and potential mitigation measures to compensate for those impacts.

A biological resources assessment provides general information on the potential presence of sensitive species and habitats. The biological assessment is not an official protocol-level survey for listed wildlife species that may be required for project approval by local, state, or federal agencies. This assessment is based on information available at the time of the study and on site conditions that were observed on the date of the site visit.

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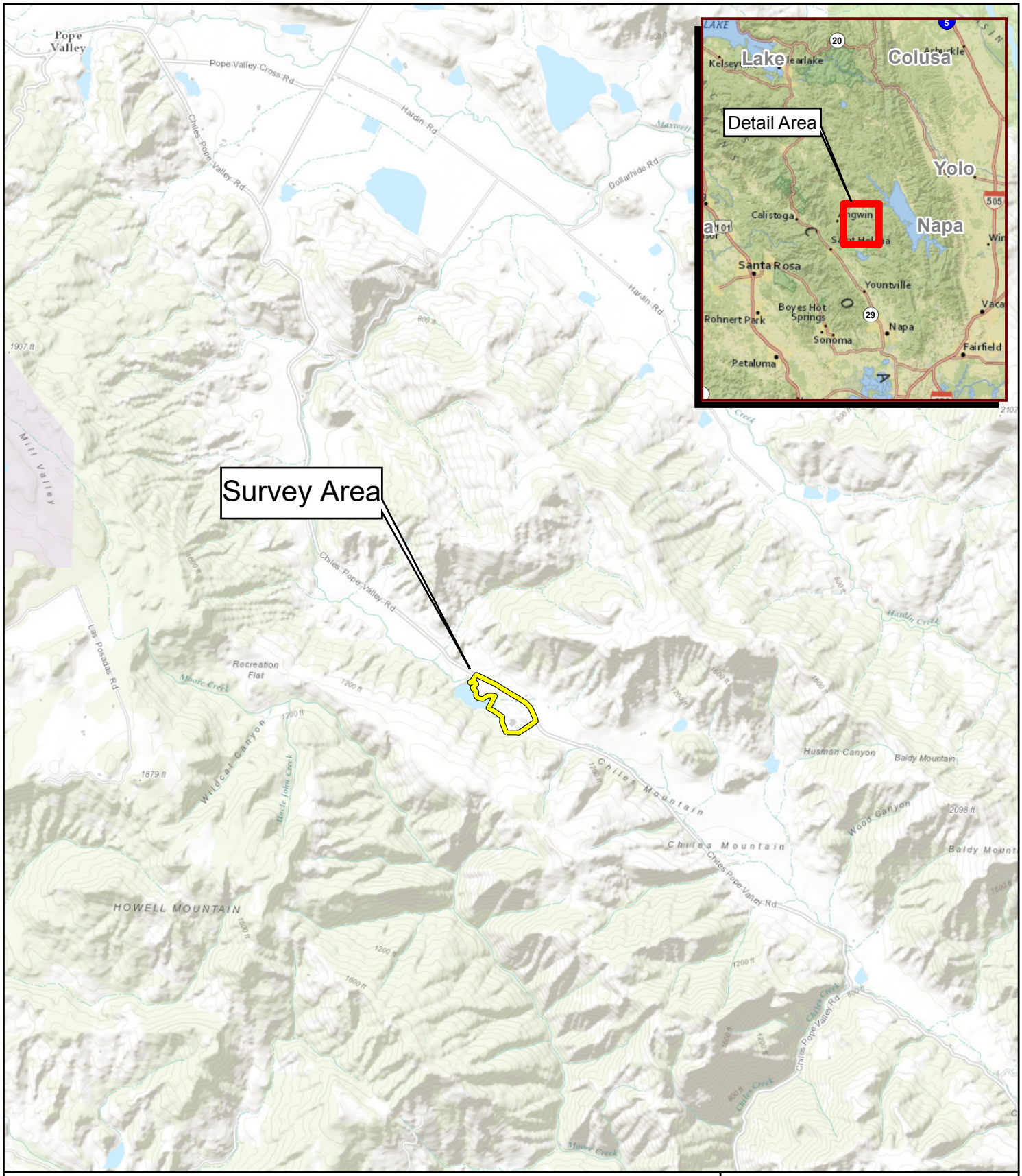

Figure 1. Project Location Map

Maxville Lake Winery
Napa County, California

N
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S

0 0.75 1.5
Miles

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Map Prepared Date: 3/30/2016
Map Prepared By: czumwalt
Base Source: ESRI World Topo Map
Data Source(s): WRA

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2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that informed field investigations and analysis of potential project impacts.

2.1 Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the CWA; state regulations such as the Porter-Cologne Act, the CDFW Streambed Alteration Program, and CEQA; or local ordinances or policies such as city or county tree ordinances, Special Habitat Management Areas, and General Plan Elements.

2.1.1 Waters of the United States

The Corps regulates "Waters of the United States" under Section 404 of the CWA. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology.

Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water mark (OHWM), and herein referred to as non-wetland waters. Non-wetland waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the Corps under Section 404 of the CWA.

2.1.2 Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes wetlands and waters that may not be regulated by the Corps under Section 404.

Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

2.1.3 Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a Notification of Lake or Streambed Alteration. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). “Riparian” is defined as “on, or pertaining to, the banks of a stream.” Riparian vegetation is defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG 1994). Removal of riparian vegetation also requires a Notification of Lake or Streambed Alteration.

2.1.4 Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2017). Sensitive plant communities are also identified by CDFW (CDFG 2003, CDFG 2007, CDFG 2009). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2014) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or United States Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in city or county general plans or ordinances.

2.1.5 Local Policies, Ordinances, and Regulations

<u>Napa County Conservation Regulations</u>

The Napa County Zoning Ordinance (Chapter 18.108) includes language governing earthmoving activities, protection of streams (as defined by the County in chapter 18.108.030), and relationships between state and local permits. For example, this chapter requires the preparation of an erosion control plan for agricultural earthmoving activities, grading, and improvements not otherwise exempt per Chapter 18.108.050 (Exemptions). The conservation regulations also require the preparation of a vineyard replanting programs for vineyard replanting projects (as defined by the County in chapter 18.108.030) not otherwise exempt per Chapter 18.108.050. Chapter 18.108.025 also requires development setbacks from perennial or intermittent streams for ground disturbance activities including construction of main or accessory structures, earthmoving, grading, removal of vegetation or agricultural uses of land as defined by Section 18.08.040. Required stream setbacks vary from 35 to 150 feet, and are based on severity of slope between the outer extent of the development footprint and location of the nearest stream.

Oak Woodland Conservation Act

Under the California Oak Woodlands Conservation Act (2004), impacts to oak woodlands receive consideration under CEQA regardless of whether the woodland is composed of oak (*Quercus* spp.) vegetation types considered to be sensitive by the CDFW. California Public Resources Code (PRC) 21083.4 requires each county in California to implement an oak woodland protection policy to mitigate for the loss of oak woodlands resultant from approved projects within their jurisdiction. In this policy, oak trees are defined as all native species of oaks larger than five inches DBH (diameter at breast height, or 4.5 feet above grade). At least one of four mitigation alternatives for significant conversions of oak woodlands are required in this regulation: 1) conserve oak woodlands through the use of a conservation easement, 2) plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees, 3) contribute funds to the Oak Woodlands Conservation Fund, as established under Section 1363 (a) of the Fish and Game Code, and 4) other mitigation measures developed by the County. Oak woodlands were mapped within the Project Area using aerial imagery (Google Earth 2017) and field observation during the site visit. The oak woodlands observed within the Project Area are described in Section 4.1.2 below.

2.2 Special-Status Species

Plant and Wildlife Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and species proposed for listing. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, USFWS Birds of Conservation Concern, and CDFW special-status invertebrates are all considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the CEQA. In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under this legislation, destroying active nests, eggs, and young is illegal.

Plant species included within the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Rank (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Very few Rank 3 or Rank 4 plant species meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act or Sections 2062 and 2067 of the CDFW Code that outlines CESA. However, CNPS and CDFW strongly recommend that these species be fully considered during the preparation of environmental documentation relating to CEQA. This may be particularly appropriate for the type locality of a Rank 4 plant, for populations at the periphery of a species range or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology or occurring on unusual substrates. A description of the CNPS Ranks is provided below in Table 1.

Table 1. Description of CNPS Ranks and Threat Codes

California Rare Plant Ranks (formerly known as CNPS Lists)	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere
Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

Locally Rare Plants

Categorizing Locally Rare Plant Taxa for Conservation Status (Crain and White 2011) is a scientific paper published in the journal *Biodiversity and Conservation*, which used Napa County as a case study for determining locally rare plant taxa in a given region. The paper identified 89 plant taxa which are considered locally rare in Napa County. The paper categorizes locally rare taxa based on NatureServe's (2014) methodology, using a local (L-rank) system. The paper identifies four L-rank categories, L-1 through 3, and L-H, were L-1 signifies “critically imperiled”, L-2 signifies “imperiled”, L-3 signifies “vulnerable to threat or extinction”, and L-H signifies “possibly extinct”. Species with an L-ranking may receive consideration under sections 15380 and 15125(c) of the CEQA and are considered “locally rare” for the purposes of this report. Any locally rare species observed in the Project Area are discussed in this report.

Critical Habitat

Critical habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species’ recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species but which are needed for the species’ recovery are protected by the prohibition against adverse modification of critical habitat.

3.0 METHODS

During the months of October and December, 2015, and March and May 2016, the Project Area was traversed on foot to determine (1) plant communities present within the Project Area, (2) if existing conditions provided suitable habitat for any special-status plant or wildlife species, and (3) if sensitive habitats are present. Biological surveys in the Project Area during this period were:

- October 27, 2015 - Biological Reconnaissance;
- December 15, 2015 – Wetland and stream survey;
- March 14, 2016 - Protocol-level rare plant surveys;
- March 17, 2016 – Focused wildlife visual surveys and habitat assessment;
- May 9, 2016 - Protocol-level rare plant surveys and wetland survey; and
- May 10, 2016 – Lake habitat survey.

All plant and wildlife species encountered were recorded and are listed in Appendix B. Plants were identified using *The Jepson Manual: Vascular Plants of California 2nd Edition* (Baldwin et al. 2012), to the taxonomic level necessary to determine rarity. Plant nomenclature follows Baldwin et al. (2012) and subsequent revisions by the Jepson Flora Project (2017), except where noted. Because of recent changes in classification for many of the taxa treated by Baldwin et al. and the Jepson Flora Project, relevant synonyms are provided in brackets. For cases in which regulatory agencies, CNPS, or other entities base rarity on older taxonomic treatments, precedence was given to the treatment used by those entities. Special-status species with a potential for occurrence, determined based on field visits and habitat availability, are described in Appendix C.

3.1 Biological Communities

Prior to the site visits, the online soil survey (USDA, NRCS 2016), was examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the Project Area. In addition, we reviewed the Chiles Valley and Saint Helena United States Geological Survey (USGS) 7.5-minute quadrangle topographic maps (USGS 2016a, USGS 2016b), the National Wetlands Inventory (NWI) (USFWS 2016a), and aerial photographs of the Project Area (Google Earth 2017) to identify potential sensitive habitats and areas for further investigation during the site visit. Following the site visit, biological communities present in the Project Area were classified based on existing plant community descriptions described in *A Manual of California Vegetation, Online Edition* (CNPS 2017a) and classified by NatureServe Comprehensive Ecological Reports (2014). However, in some cases it was necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations (see Section 2.2, above).

3.1.1 Non-sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations, and ordinances. These communities may, however, provide suitable habitat for some special-status plant or wildlife species and are identified or described in Section 4.4.1 below.

3.1.2 Sensitive Biological Communities

Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and

ordinances. Applicable laws and ordinances are discussed above in Section 2.0. Special methods used to identify sensitive biological communities are discussed below.

Wetlands and Waters

The Project Area was surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the Corps, RWQCB, or CDFW were present. The assessment was based primarily on the presence of wetland plant indicators, but may also include any observed indicators of wetland hydrology or wetland soils. The preliminary assessment of Waters of the U.S. subject to EPA/Corps jurisdiction under Section 404 of the CWA, as well as stream and riparian areas subject to CDFW jurisdiction under Section 1602 of CFGC is presented in Section 4.4.2 below.

Other Sensitive Biological Communities

The Project Area was evaluated for the presence of other sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFW. Prior to the site visit, aerial photographs, local soil maps, the *List of Vegetation Alliances* (CDFG 2010), and *A Manual of California Vegetation, Online Edition* (CNPS 2017a) were reviewed to assess the potential for sensitive biological communities to occur in the Project Area. These communities are described in Section 4.1.2 below.

3.2 Special-Status Species

3.2.1 Literature Review

The potential for special-status species to occur in the Project Area was evaluated by first determining which special-status species have been documented in the vicinity of the Project Area through a literature and database search. Database searches for known occurrences of special-status species focused on the Saint Helena, Chiles Valley, Aetna Springs, Walter Springs, Rutherford, and Yountville USGS 7.5-minute quadrangles. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the Project Area:

- California Natural Diversity Database (CNDDB) records (CDFW 2017)
- CNPS Inventory records (CNPS 2017b)
- Consortium of California Herbaria (CCH 2017)
- CDFG publication “California Bird Species of Special Concern” (Shuford and Gardali 2008)
- CDFG publication “California’s Wildlife, Volumes I-III” (Zeiner et al. 1990)
- CDFG publication “Amphibians and Reptile Species of Special Concern in California” (Jennings and Hayes 1994)
- A Field Guide to Western Reptiles and Amphibians (Stebbins and McGinnis 2012)

3.2.2 Site Assessment

Habitat conditions were assessed and were used to evaluate the potential for presence of special-status species. The potential for each special-status species to occur in the Project Area was then evaluated according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

The site assessment is intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity in order to determine its potential to occur in the Project Area. The site visit does not constitute a protocol-level survey and is not intended to determine the actual presence or absence of a species. All species observed in the Project Area were recorded and are listed in Appendix B.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of WRA biologists with experience working with the species and habitats. If necessary, recognized experts in individual species biology were contacted to obtain the most up-to-date information regarding species biology and ecology.

If a special-status species was observed during the site visit, its presence was recorded and discussed below in Section 4.5.1 and Appendix C. For some species, a site assessment visit at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, a species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status species for which further protocol-level surveys may be necessary are described in Section 4.5.1 and 5.0.

3.2.3 Additional Protocol-level Surveys and Focused Species Surveys

Floristic, protocol-level rare plant surveys were conducted on March 14, and May 9, 2016. The surveys entailed using wandering transects across the entirety of the Project Area and adjacent habitats, with a disproportionate focus in areas thought to be suitable for rare species and sensitive natural communities. The survey dates corresponded to the peak blooming periods for observing and accurately identifying hundreds of plant species in Napa County, including 48 of the 60 rare plant species documented in the vicinity of the Project Area. Reference sites were visited where feasible to ensure that the surveys were conducted within a period sufficient to identify the potentially occurring rare plant species.

The surveys followed the protocol for plant surveys described in Napa County's Guidelines for Preparing Special-Status Plant Studies (Napa County 2002), and recommended resource agency guidelines (CNPS 2001, CDFG 2000, CDFG 2009, USFWS 1996). All plants were identified using *The Jepson Manual, 2nd Edition* (Baldwin et al. 2012) and subsequent revisions by the Jepson Flora Project (2017), to the taxonomic level necessary to determine whether or not they were rare. Names given follow the Jepson Flora Project (2017) with relevant synonyms provided in brackets. Sensitive natural communities were identified following *A Manual of California Vegetation, Online Edition* (CNPS 2017a), the California Fish and Game Code (CFGC), or other applicable

regulations (Oak Woodland Conservation Act 2004). Plant surveys were floristic in nature with all observed species recorded and included on a species list provided in Appendix B. Rare plant populations and sensitive natural community locations, if present, were mapped using a combination of handheld Global Positioning System equipment with sub-meter accuracy and interpretation of recent aerial imagery (Google Earth 2017) based on field observations.

Focused wildlife species surveys were conducted by biologists on March 17, 2016 to better inform the potential for special-status species to occur in the Project Area. Informed by the biological reconnaissance survey results (October 2015) and a review of available literature and databases (Section 3.2.1); biologists surveyed for California red-legged frog (CRLF; *Rana draytonii*), Western pond turtle (WPT; *Actinemys marmorata*), bald eagle (*Haliaeetus leucocephalus*), and bat roosts. Surveys for CRLF entailed two biologists conducting day/night visual surveys walking the perimeter of aquatic features using binoculars and flashlights to perform visual eyeshine detection surveys. Aquatic habitat was also assessed for CRLF suitability using guidance adapted from the USFWS (2005) *Revised guidance on site assessments and field surveys for the California red-legged frog*. Surveys for WPT involved biologists using binoculars to visually scan suitable aquatic and basking habitat for evidence of the species. Eagle nest surveys were performed by biologists using multiple ground based stations that utilized a spotting scope and binoculars to visually identify all raptors and large avian species during the survey period. Bat roost surveys were performed for buildings and large trees in and immediately adjacent to the Project Area. An acoustic bat detector was also positioned near water sources and along potential flight corridors to record echolocation calls that could be used to determine the species of bat. During the focused wildlife species surveys, biologists also noted any species observed along with general habitat observations.

4.0 RESULTS

The Project Area is located at 4105 Chiles Pope Valley Road (property), in unincorporated Napa County, approximately 6 miles north of the intersection of Sage Canyon Road (CA Highway 128) and Chiles Pope Valley Road, and approximately 6 miles northeast of downtown Saint Helena. The Project Area is bisected by the Saint Helena and Chiles Valley USGS 7.5 minute quadrangles, and is located in the latitudinal center portion of these quadrangles. The Project Area is located within a rural, north-northwest trending valley and includes an existing winery and associated facilities, parking and roads. Existing land uses in the vicinity of the Project Area are primarily agricultural, open space, and rural residential.

4.1 Biological Communities

Table 2 summarizes the area of each biological community type that was assessed at the property. Non-sensitive biological communities encountered include developed areas, gray pine woodland, leather oak chaparral, artificial wetland and non-native grassland. Sensitive biological communities included several wetland and aquatic habitat types, blue oak woodland, valley oak woodland, valley oak riparian woodland, red willow riparian woodland, and Idaho fescue grassland. While several biological communities were encountered in at the property, only a relatively few occur in the Project Area footprint. A description for the biological community in or immediately adjacent to the Project Area are contained in the following sections. Biological communities encountered at the property are illustrated in Figure 2.

Table 2. Summary of Biological Communities Surveyed in the Project Area

Community Type	Area (acres)
Non-Sensitive	
Developed	9.84
Gray pine woodland	1.82
Leather oak chaparral	0.97
Non-native grassland	8.21
Artificial wetland	0.03
Sensitive	
Blue oak woodland	7.37
Valley oak woodland	0.39
Freshwater marsh	1.44
Intermittent stream	2,270 l.f.*
Ephemeral stream	257 l.f.
Pond (Maxville Lake)	1.12
Seasonal wetland	1.14
Valley oak riparian woodland	3.00
Red willow riparian woodland	1.39
Idaho Fescue Grassland	0.27

* Streams are reported in linear feet (l.f.)

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Maxville Lake Winery
Napa County, California

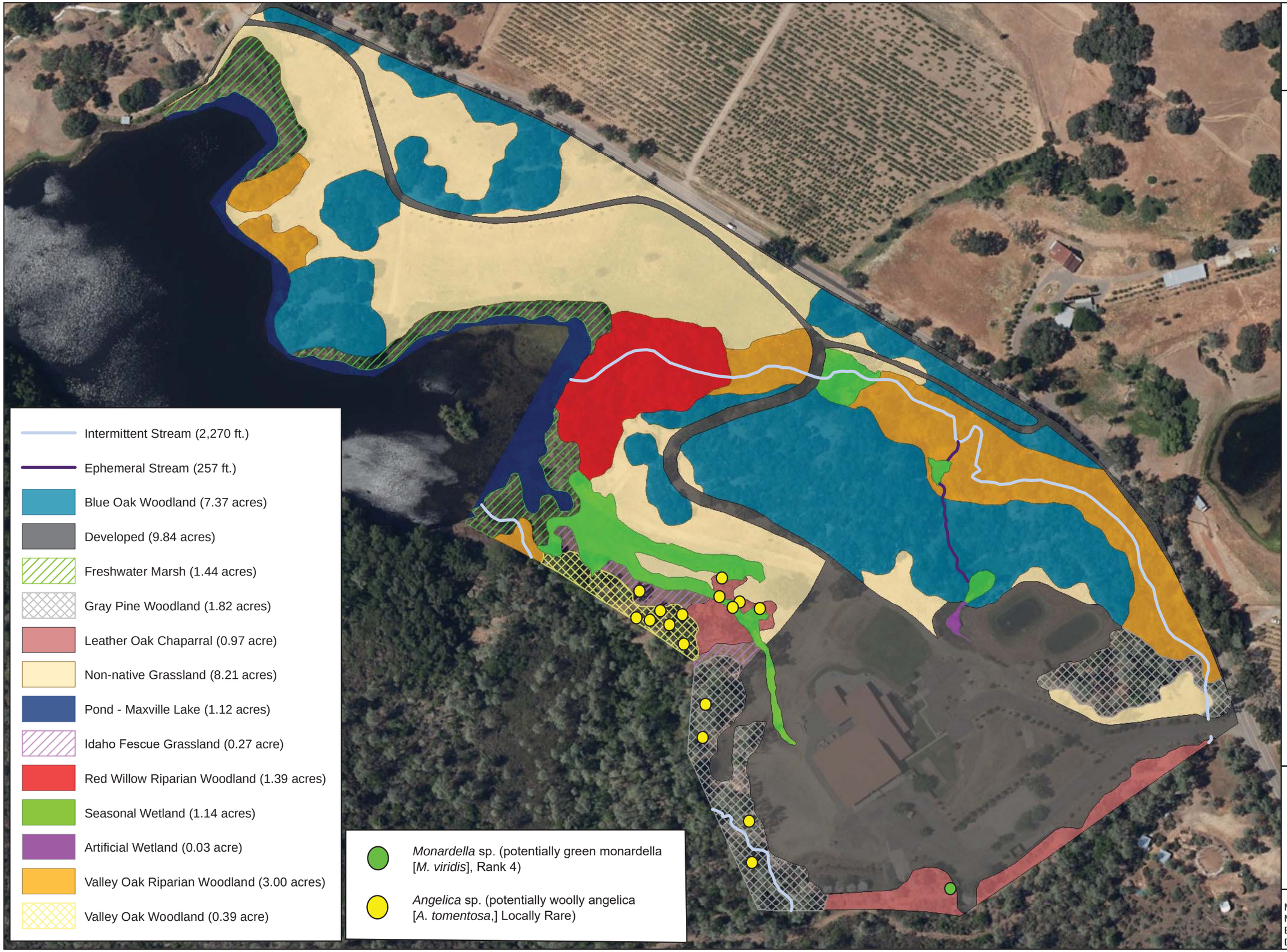

Figure 2.
Biological Communities and Special-Status Plant Species

N
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Map Prepared Date: 4/21/2016
Map Prepared By: pkobylarz
Base Source: Esri Streaming - SFEI 2014
Data Source(s): WRA

Path: L:\Acad 2000 Files\25000\25278\GIS\ArcMap\Rare Plant Study Area\BioComm_RarePlantStudyArea.mxd

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4.1.1 Non-sensitive Biological Communities

Developed. The Project Area contains approximately 9.84 acres of developed and landscaped areas. Developed areas within the Project Area are include the winery building, paved and unpaved roads, parking, water tanks, wastewater treatment ponds, and mowed lawns and landscaped areas. Developed and landscaped areas are generally of low habitat value. Vegetative cover is dominated by planted and maintained ornamental trees and shrubs or ruderal herbaceous plants including Siberian elm (*Ulmus pumila*), olive, Italian stone pine (*Pinus pinea*), golden bamboo (*Phyllostachys aurea*), California burclover (*Medicago polymorpha*), field marigold (*Calendula arvensis*), and non-native annual grasses, including rattail sixweeks grass (*Festuca myuros*).

Gray pine woodland. Gray pine woodland occupies approximately 1.82 acres in the vicinity of the Project Area and is located in the southern portion of the Project Area. Gray pine woodlands occur within California on streamside terraces, valleys, slopes and ridges from the Modoc Plateau, Klamath Mountains, Northern California Coast Ranges, Central Valley, Sierra Nevada Foothills, Sierra Nevada, to the Southern California Mountains and Valleys from Del Norte County to Los Angeles County (CNPS 2017a). Soils within this community are shallow, often stony, infertile, and moderately to excessively drained.

Gray pine woodland is mapped according to CNPS (2017a) as having greater than 10 percent absolute cover and dominant in the tree canopy. Gray pine woodland in the Project Area is located on and off serpentine substrate. Other tree species present within the overstory and understory include California bay (*Umbellaria californica*) and coast live oak (*Quercus agrifolia*). Occasional leather oak (*Quercus durata*), toyon (*Heteromeles arbutifolia*) and white leaf manzanita (*Arctostaphylos viscida* ssp. *pulchella*) shrubs are present in the understory. The herbaceous layer is sparse to non-existent and consisting predominantly of non-native annual grasses.

Leather oak chaparral. Leather oak chaparral occupies approximately 0.97 acre in the vicinity of the Project Area. Leather oak chaparral occurs on varied topography, underlain by shallow, rocky soils, derived from ultramafic substrates (CNPS 2017a). This community is known from the Northern California Coast, Northern California Coast Ranges, Northern California Interior Coast Ranges, Sierra Nevada Foothills, and Central California Coast and Coast Ranges, from Del Norte to Santa Barbara County (CNPS 2017a).

Leather oak chaparral is mapped according to CNPS (2017a) as containing leather oak at more than 30 percent relative cover in the shrub canopy as a dominant or codominant. Leather oak chaparral is dominated by leather oak, with white leaf manzanita, musk brush (*Ceanothus jepsonii*), and California coffeeberry (*Frangula californica*) sometimes codominant. The understory of this community is dominated by mostly native grasses and forbs including blue wild rye (*Elymus glaucus* ssp. *glaucus*), California fescue (*Festuca californica*), blue eyed grass (*Sisyrinchium bellum*), and amole (*Chlorogalum pomeridianum*).

Non-native grassland. Non-native grassland occupies approximately 8.21 acres in the vicinity of the Project Area. Non-native grasslands are known throughout California on all aspects and topographic positions underlain by a variety of substrates. These grasslands are typically dominated by non-native annual species whose populations can shift annually. Non-native grassland is classified by Holland as Non-Native Grassland (1986). CNPS (2017a) describe a variety of non-native grassland alliances such as wild oats grassland (*Avena* spp. Semi-Natural Herbaceous Stands).

Within the vicinity of the Project Area, non-native grasslands are generally dominated by non-native annual grasses including ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and slim oats (*Avena barbata*). Portions of this community are dominated by non-native perennial grasses including Harding grass (*Phalaris aquatica*). Occasional native grasses including blue wild rye are present at low densities. Trees and shrubs are occasionally present at low density within this community, including cherry plum (*Prunus cerasifera*), olive (*Olea europaea*), and coyote brush (*Baccharis pilularis* ssp. *consanguinea*). Codominant herbaceous forbs observed within this community include spring vetch (*Vicia sativa*), hairy vetch (*Vicia villosa*), and amole.

Artificial Wetland. The Project Area contains one artificial, man-induced wetland within the developed portion of the Project Area to the east of the main winery building. The artificial wetland occupies approximately 0.03 acres and is located in the immediate fringe surrounding a pump station associated with non-jurisdictional water quality retention basins. The area contained wetland vegetation, such as annual beard grass (*Polypogon monspeliensis*), and Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and the area was inundated at the time of the site visits. However, the hydrology source appeared to be associated with leakage from the pump station and/or seepage or overland flow from the detention basins. Wetland areas that are maintained by artificial irrigation are generally exempt from jurisdiction under the Clean Water Act. Additionally, historical aerial photographs (NETR 2016) indicate that the area was upland in 1993, prior to the construction of the ponds, further indicating that the hydrology source is artificial, and associated with the pump station.

4.1.2 Sensitive Biological Communities

Blue oak woodland. Blue oak (*Quercus douglasii*) woodland occupies approximately 7.37 acres in the vicinity of the Project Area. Blue oak woodlands are known from valley bottoms, foothills, and rocky outcrops from the Klamath Mountains, Coast Ranges, Central Valley, Sierra Nevada Foothills, Sierra Nevada Range, to the Southern California Mountains and Valleys, Transverse Range, from Humboldt County south to Los Angeles County (CNPS 2017a). This vegetation alliance is typically located on shallow soils which are low in fertility, moderately to excessively drained, with extensive rock fragments (CNPS 2017a).

Blue oak woodland is mapped according to CNPS (2017a) as having blue oak greater than 50 percent relative cover in the tree canopy with other tree species present. Other tree species present in the overstory of this community include gray pine, and coast live oak. The understory is generally dominated by non-native annual grasses including ripgut brome, but includes patches of native grasses including blue wild rye and purple needlegrass (*Stipa pulchra*). Shrubs are occasionally present within the understory including coyote brush, poison oak (*Toxicodendron diversilobum*) and white leaf manzanita. Native and non-native forbs present in the herbaceous layer include amole, miner's lettuce (*Claytonia perfoliata*), cleavers (*Galium aperine*), and baby blue eyes (*Nemophila menziesii* var. *menziesii*). Blue oak woodland is reported by the CDFW with a rarity ranking of G4, S4 (CNPS 2017a), indicating that it is considered secure globally and in California. However, blue oak woodland is considered sensitive under the California Oak Woodland Conservation Act.

Intermittent stream. Three unnamed tributaries of Maxville Creek flow through the property from south to northwest and flow into Maxville Lake. A portion of the northernmost intermittent which flows into Maxville Lake is shown as a USGS intermittent "blue-line" stream (USGS 2016). Intermittent streams occupy 2,270 linear feet, and appear to flow nine to twelve months in a normal rainfall year. During the October 2015 site visit surface water was observed in isolated

pools within the stream banks and during December 2015 and March 2016 site visits, flowing water was observed in all stream channels.

Intermittent stream channels within the Project Area vary from approximately 4 to 8 feet in width. The stream channel along the western border of the Project Area is generally steep and incised with small cascades and pools, whereas the stream channels in the eastern and central portion of the Project Area are generally shallow and low gradient. Intermittent stream channels are predominantly flanked by riparian woodland, including valley oak riparian woodland and red willow (*Salix laevigata*) riparian woodland. Dominant tree species observed on the streambanks include valley oak, red willow, gray pine, and California bay. Understory vegetation along the intermittent stream in the east and central portion of the Project Area is dominated by non-native invasive Himalayan blackberry (*Rubus armeniacus*). Other shrub and herbaceous species observed along intermittent streams within the Project Area spicebush (*Calycanthus occidentalis*), California tea (*Rupertia physodes*), California spikenard (*Aralia californica*) and California blackberry (*Rubus ursinus*). Areas mapped as intermittent stream are jurisdictional under Section 404 of the CWA and Section 1602 of the CFGC.

Seasonal wetland. Seasonal wetlands occupy approximately 1.14 acres in the Project Area and are located along intermittent stream channels, and adjacent to freshwater marsh along Maxville Lake, in the northcentral portion of the Project Area along the east side of the future entrance road. Within the Project Area seasonal wetlands are located in slight to moderately concave depressions and swales. These features are characterized by episaturated conditions; hydrology sources include direct precipitation and under- and over-land sheet flow, which forms a perched water table within the upper portion of the soil profile. These features are likely saturated for the majority of the wet season during a normal rainfall year.

Seasonal wetlands in the Project Area are dominated by herbaceous hydrophytic vegetation including cobwebby hedge nettle, Mexican rush (*Juncus mexicanus*), iris leaved rush (*Juncus xiphioides*), and pennyroyal (*Mentha pulegium*), with the tree canopy meeting the membership rules of valley oak woodland (*Quercus lobata* Woodland Alliance; CNPS 2017a), as it is comprised of a tree canopy dominated by valley oak. Areas mapped as seasonal wetland contain a prevalence or dominance of hydrophytic vegetation, hydric soils, and wetland hydrology sufficient to meet the requirements as jurisdictional features under Section 404 of the Clean Water Act. Additionally, seasonal wetlands within the Project Area are directly adjacent to the banks of ephemeral streams, intermittent streams or Maxville Lake and are therefore considered riparian vegetation under Section 1602 of the CFGC.

Valley oak riparian woodland. Valley oak riparian woodland occupies approximately 0.39 acres in the Project Area and is located predominantly in the eastern portion of the Project Area. Valley oak riparian woodland forms a contiguous canopy along the intermittent stream, and is present in small patches along the fringe of Maxville Lake. Valley oak riparian woodland in the Project Area is mapped according to according to CNPS (2015a) as having valley oak greater than 30 percent relative cover in the tree canopy. Other tree species, including coast live oak, California bay and willows (*Salix* spp.) are present in low densities. Valley oak riparian woodland understory along the intermittent stream is typically dominated by non-native, invasive Himalayan blackberry. Along the Maxville Lake fringe, the understory contains a mixture of native shrubs including arroyo willow (*Salix lasiolepis*) and spicebush. Valley oak riparian woodland is considered a sensitive community under Section 1602 of the CFGC.

4.2 Special-Status Species

4.2.1 Special-Status Plant Species

Based on a review of the resources databases listed in Section 3.2.1, 60 special-status plant species have been documented in the vicinity of the Project Area (Appendix C, Figure 3). Based on an initial assessment of potential habitats prior to field surveys, twenty special-status plant species were determined to have a moderate potential to occur in the Project Area. Protocol-level rare plant surveys were conducted in the Project Area on March 14, and May 9, 2016. A total of 207 plant species were encountered during the surveys. Two special-status plant species were potentially observed during the surveys (Figure 2), and one special-status plant species with potential to occur was not readily identifiable during the March or May surveys. The two species which are presumed present, and one additional species with potential to occur are discussed below.

The remaining species documented to occur in the vicinity of the Project Area have either been determined to be unlikely or have no potential to occur due to one or more of the following factors:

- The species is unique to small defined geographic range (i.e. a very limited range of endemism) and has never been observed in the vicinity of the Project Area;
- Plant species commonly associated with the special-status species, and which indicate the presence of suitable, intact habitat, are absent from the Project Area;
- Edpahic conditions, which are very specific soil characteristics such as soil derived from serpentine or volcanic, are absent from the Project Area;
- Specific hydrologic characteristics, such as perennial saline, are absent from the Project Area;
- Very unique pH characteristics, such as alkali scalds or acidic coniferous forest, are absent from the Project Area.
- The species was not encountered during protocol-level rare plant surveys which were conducted during the documented bloom period of the species.

Special-status species determined to be potentially present as a result of the special-status plant surveys are discussed below:

Green monardella (*Monardella viridis*). CNPS Rank 4. Potentially Present. Green Monardella is a perennial forb in the mint family (Lamiaceae) that blooms from June through September. It typically occurs on serpentine substrates in chaparral, cismontane woodland, and broadleaf upland forest habitat at elevations ranging from 325 to 3,285 feet (CNPS 2017b). This species has a serpentine affinity rank of broad endemic/strict indicator (4.3) (Safford et al. 2005). Observed associated species are not reported in the literature. A monardella species with affinity to green monardella (*Mondardella* cf. *viridis*) was observed in the leather oak chaparral habitat on the southern border adjacent to the Project Area. However, identification to species level was not possible due to the lack of mature inflorescences. This species is presumed present.

Wooly angelica (*Angelica tomentosa*). Locally Rare (L-3). Potentially Present. Wooly angelica is a perennial forb in the carrot family (*Apiaceae*) that blooms from June through August. It typically occurs in wooded areas with serpentine influence, at elevations ranging from 100 to 6760 feet (Jepson eFlora 2017). This species has a serpentine affinity rank of weak indicator (1.3) (Safford et al. 2005). Observed associated species are not reported in the literature. An angelica species with affinity to wool angelica (*Angelica* cf. *tomentosa*), was observed in the western portion in habitat adjacent to the Project Area in valley oak woodland, leather oak

chaparral, and gray pine woodland habitats. Identification to species level was not possible due the lack of mature inflorescences. This species is presumed present.

The special-status species determined to have a moderate potential to occur within close proximity to the Project Area which was not readily identifiable during special-status plant surveys as a result of the special-status plant surveys is discussed below:

Marsh checkerbloom (*Sidalcea oregana* ssp. *hydrophila*) CNPS Rank 1B. Moderate Potential. Marsh checkerbloom is a perennial herb in the mallow family (Malvaceae) that blooms from June to September. It typically occurs in wet meadows and seeps or riparian forest at elevations ranging from 3610 to 7550 feet (CDFW 2017, CNPS 2017b). Observed associated species include willows (*Salix* spp.), rushes (*Juncus* spp.), velvet grass (*Holcus lanatus*), annual bluegrass (*Poa annua*), seep monkeyflower (*Mimulus guttatus*), and meadow barley (*Hordeum brachyantherum*) (CDFW 2017). Marsh checkerbloom was determined to have a moderate potential to occur in the seasonal wetland fringe and marsh fringe of Maxville Lake.

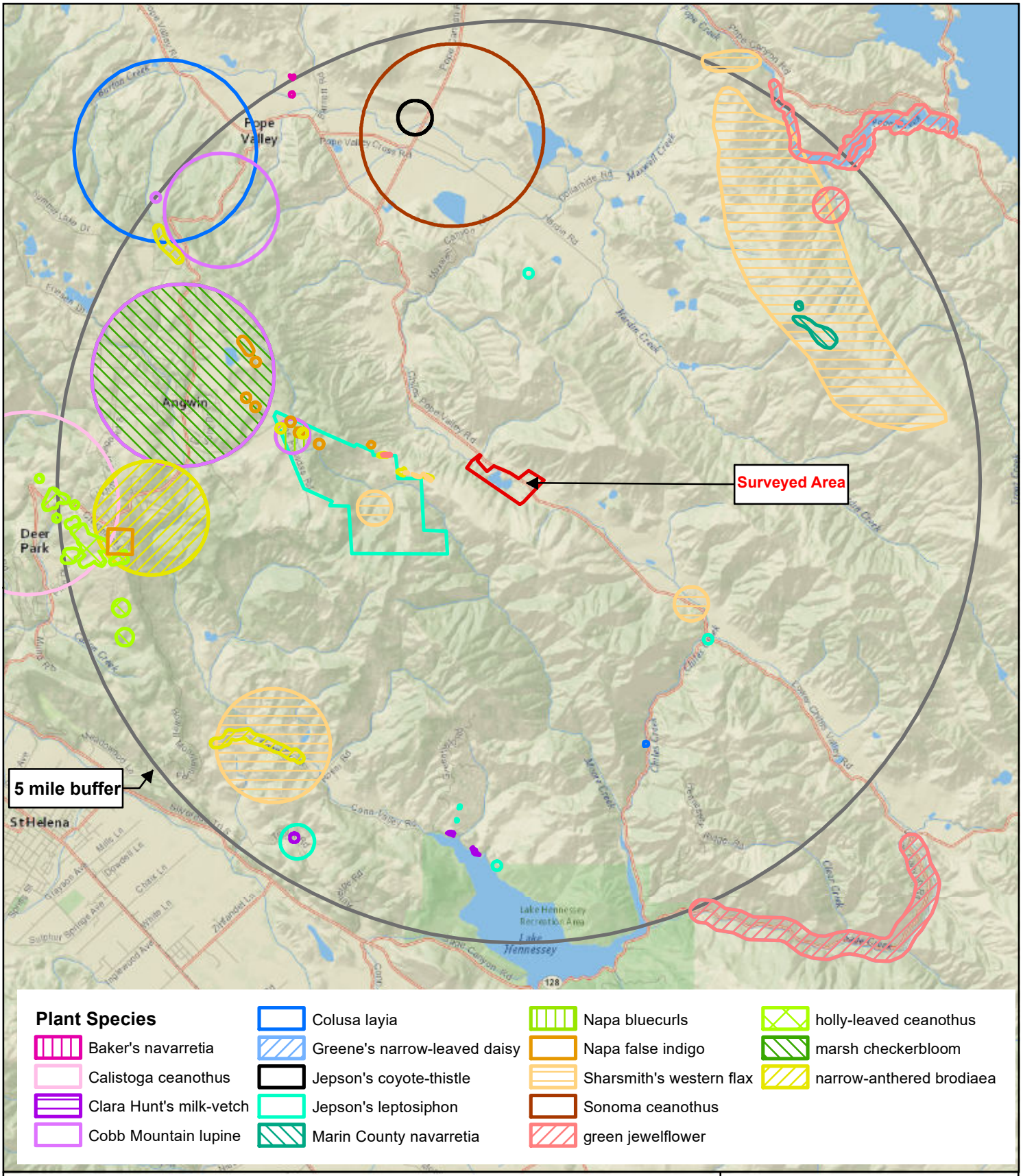

Figure 3. Special Status Plant Species within 5 miles of the Project Area

N
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0 0.5 1 2
Miles

wra
ENVIRONMENTAL CONSULTANTS

Maxville Lake Winery
Napa County, California

Map Prepared Date: 3/2/2017
Map Prepared By: pkobylarz
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA

Path: L:\Acad 2000 Files\25000\25278\GIS\ArcMap\Initial Work\CNDDB_Plants.mxd

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4.2.2 Special-Status Wildlife Species

Based upon a review of the resources databases listed in Section 3.2.1, 64 special-status wildlife species may occur in the vicinity of the Project Area (Figure 5); Appendix C summarizes the potential for each of these species to occur within the Project Area. Five special-status wildlife species were observed within the Project Area during site visits. Additionally, nine other special-status species have not been observed on-site but have a moderate or high potential to occur in the Project Area. Special-status wildlife species that have been observed or have the potential to occur in the Project Area are discussed below. The remaining 48 species are unlikely or have no potential to occur in the Project Area for one or more of the following reasons:

- The Project Area is outside of the known or historical range of the species;
- The Project Area lacks specific habitat requirements (i.e. marsh, old growth confers, etc.),
- The species was not observed during focused wildlife surveys or during the five site visits conducted by biologists in 2015 and 2016;
- Invasive or detrimental species, such as non-native fish and bullfrogs, are present and reduce habitat sutiability;
- The Project Area lacks suitable burrows or breeding habitat; and,
- There are barriers to dispersal that make it unlikely for the species to occur on-site.

Special-Status Wildlife Species Documented in the Project Area

Silver-haired bat (*Lasionycteris noctivagans*). WBWG Medium Priority. Present. Silver-haired bats occur in temperate conifer, mixed conifer and deciduous forests from southern Alaska to northeastern Mexico. Females form maternity roosts almost exclusively inside hollows or under loose bark of large trees and may switch roosts several times (WBWG 2015). Hibernation occurs in trees, rock crevices, leaf litter, in and under buildings, and in caves and mines. Foraging occurs above the tree canopy where the silver-haired bat preys on insects. Silver-haired bats are known to migrate south in the winter, although overwintering at northern latitudes has also been documented (WBWG 2015). Silver-haired bats were detected foraging in the Project Area during the March 2016 site visit, using an acoustic bat detector monitor. The Project Area contains and is immediately adjacent to woodland, forest, riparian and pond habitat suitable for this species. Hollow trees, snags, and buildings on the property could support roosting.

Hoary bat (*Lasiurus cinereus*), WBWG Medium Priority. Present. Hoary bats are highly associated with forested habitats in the western United States, particularly in the Pacific Northwest. They are a solitary species and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches, usually at the edge of a clearing. Roosts are typically 10 to 30 feet above the ground. They have also been documented roosting in caves, beneath rock ledges, in woodpecker holes, in grey squirrel nests, under driftwood, and clinging to the side of buildings, though this behavior is not typical. Hoary bats are thought to be highly migratory, however, wintering sites and migratory routes have not been well documented. This species tolerates a wide range of temperatures and has been captured at air temperatures between 0 and 22 degrees Celsius. Hoary bats probably mate in the fall, with delayed implantation leading to birth in May through July. They usually emerge late in the evening to forage, typically from just over one hour after sunset to after midnight. This species reportedly has a strong preference for moths, but is also known to eat beetles, flies, grasshoppers, termites, dragonflies, and wasps (WBWG 2015). Hoary bat was detected during the March 2016 site visit, using an acoustic monitor. The Project Area contains and is immediately adjacent to dense tree foliage suitable for roosting as well as pond and stream habitat to provide water.

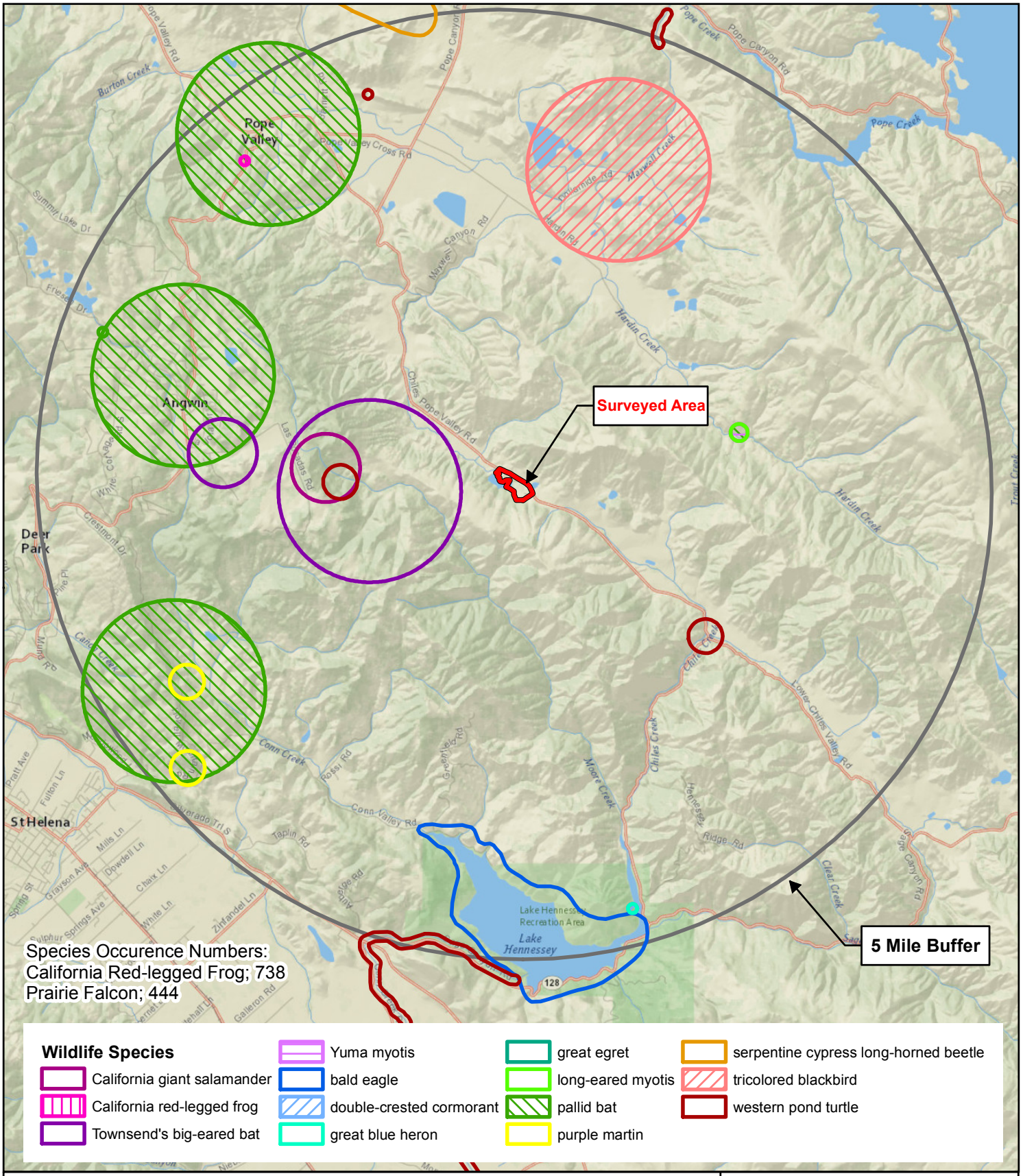

Figure 4. Special Status Wildlife Species within 5 miles of the Project Area

Maxville Lake Winery
Napa County, California

0 0.5 1 2
Miles

ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 3/30/2016
Map Prepared By: czumwalt
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA, CNDDB

Path: L:\Acad 2000 Files\25000\25278\GIS\ArcMap\CNDDB_Wildlife 20160330.mxd

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Long-eared myotis (*Myotis evotis*), WBWG Medium Priority. Present. The long-eared myotis is primarily associated with coniferous forest, but is also found in semiarid shrublands, sage, chaparral, and agricultural areas. This species roosts under loose tree bark, in tree hollows, caves, mines, crevices in rocky outcrops, in buildings, under bridges and occasionally on the ground. Long-eared myotis primarily consume beetles and moths, gleaning prey from foliage, trees, rocks, and from the ground (WBWG 2015). Long-eared myotis was detected during the March 2016 site visit, using an acoustic monitor. The Project Area contains and is immediately adjacent to trees and buildings that may provide suitable roosting habitat.

Yuma myotis (*Myotis yumanensis*), WBWG Low Priority. Present. The Yuma myotis is found throughout most of California at lower elevations in a wide variety of habitats. Day roosts can be found in buildings, trees, mines, caves, bridges, and rock crevices. Night roosts are usually associated with buildings, bridges or other man-made structures (Philpott 1996). Yuma myotis was detected during the March 2016 site visit, and the Project Area contains and is immediately adjacent to trees and buildings that may provide suitable roosting habitat.

Nuttall's woodpecker (*Picoides nuttallii*). USFWS Bird of Conservation Concern. Present. Nuttall's Woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat is oak or mixed woodland, and riparian areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates. This species was detected during the March 2016 site visit. The Project Area contains and is immediately adjacent to suitable oak and riparian woodland habitat for nesting.

Special-status Wildlife Species with the Potential to Occur in the Project Area

Pallid bat (*Antrozous pallidus*), CDFW Species of Special Concern, WBWG High Priority. High Potential. Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. They are most abundant in the arid Sonoran life zones below 6,000 feet, but have been found up to 10,000 feet in the Sierra Nevada. Pallid bats often roost in colonies of between 20 and several hundred individuals. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented in large conifer snags (e.g., ponderosa pine), inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. They have also been reported roosting in stacks of burlap sacks and stone piles. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG 2015). The nearest CNDDB occurrence for this species is located approximately 1.5 miles east of the Project Area and there are several occurrences within 5 miles (CDFW 2016). The Project Area contains and is immediately adjacent to open woodlands, riparian habitat and buildings that could support roosting for pallid bat.

Townsend's big-eared bat, (*Corynorhinus townsendii townsendii*), CDFW Species of Special Concern, WBWG High Priority. Moderate Potential. This species ranges throughout western North America from British Columbia to central Mexico. Its local distribution is strongly associated with the presence of caves, but roosting also occurs within man-made structures including mines and buildings. While many bats species wedge themselves into tight cracks and crevices, big-eared bats hang from walls and ceilings in the open. Males roost singly during the spring and summer months while females aggregate in the spring at maternity roosts to give birth.

Females roost with their young until late summer or early fall, until the young become independent, flying and foraging on their own. In central and southern California, hibernation roosts tend to be made up of small aggregations of individuals (Pierson and Rainey 1998). Foraging typically occurs along edge habitats near streams and wooded areas, where moths are the primary prey (WBWG 2015). The nearest CNDDB occurrences for this species are located 0.9 mile west (from 1945) and 2.2 miles west (from 1988; CDFW 2016). While the Project Area does not contain mines or buildings suitable for a maternity roost, Townsend's big-eared bat may forage in the open forest habitat within and immediately adjacent to the Project Area.

Western red bat (*Lasiurus blossevillii*), CDFW Species of Special Concern, WBWG High Priority. Moderate Potential. This species is highly migratory and broadly distributed, ranging from southern Canada through much of the western United States. Western red bats are believed to make seasonal shifts in their distribution, although there is no evidence of mass migrations (Pierson et al. 2006). They are typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas possibly and association with riparian habitat (particularly willows, cottonwoods, and sycamores; Pierson et al. 2006). It is believed that males and females maintain different distributions during pupping, where females take advantage of warmer inland areas and males occur in cooler areas along the coast. Western red bat has not been documented within the vicinity of the Project Area (CDFW 2016). However, the Project Area contains and is immediately adjacent to trees and riparian edge habitats that may provide suitable roosting habitat for this species.

Fringed myotis (*Myotis thysanodes*), WBWG High Priority. High Potential. The fringed myotis ranges through much of western North America from southern British Columbia, Canada, south to Chiapas, Mexico and from Santa Cruz Island in California, east to the Black Hills of South Dakota. This species is found in desert scrubland, grassland, sage-grass steppe, old-growth forest, and subalpine coniferous and mixed deciduous forest. Oak and pinyon-juniper woodlands are most commonly used. The fringed myotis roosts in colonies from 10 to 2,000 individuals, although large colonies are rare. Caves, buildings, underground mines, rock crevices in cliff faces, and bridges are used for maternity and night roosts, while hibernation has only been documented in buildings and underground mines. Tree-roosting has also been documented in Oregon, New Mexico, and California (WBWG 2015). The nearest CNDDB occurrence for fringed myotis is located 6.8 miles southwest of the Project Area (CDFW 2016). The Project Area contains and is immediately adjacent to dry woodland and grassland that could provide suitable foraging habitat, and buildings and trees on the property could provide suitable roosting habitat for this species.

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. Moderate Potential. The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. The nearest CNDDB record for white-tailed kite is 9 miles south of the Project Area (CDFW 2016), but there are several observations within 5 miles (eBird 2016). The Project Area contains and is immediately adjacent to trees, shrubs, grassland, marsh and vineyard areas that could provide suitable nesting and foraging habitat for this species.

Purple martin (*Progne subis*), CDFW Species of Special Concern. Moderate Potential. The purple martin is an uncommon summer resident in California, occurring in woodlands and low-elevation hardwood and coniferous forest. It usually feeds on insects captured in flight 100-200 feet above ground. The purple martin nests in cavities often located in tall, isolated trees or snags in open forest or woodland. The nearest CNDDB record for purple martin is located 3.8 miles southwest (CDFW 2016). The Project Area contains and is immediately adjacent to woodland habitat, conifers and woodpecker cavities that could provide suitable habitat for this species.

Loggerhead shrike (*Lanius ludovicianus*), CDFW Species of Special Concern, USFWS Bird of Conservation Concern. Moderate Potential. The loggerhead shrike is a year-round resident and winter visitor in lowlands and foothills throughout California. This species is associated with open country with short vegetation and scattered trees, shrubs, fences, utility lines and/or other perches. Although they are songbirds, shrikes are predatory and forage on a variety of invertebrates and small vertebrates. Captured prey items are often impaled for storage purposes on suitable substrates, including thorns or spikes on vegetation, and barbed wire fences. Nests in trees and large shrubs; nests are usually placed three to ten feet off the ground (Shuford and Gardali 2008). Loggerhead shrikes have been observed only rarely in Pope Valley (Berner et al. 2003, eBird 2016). The species has a moderate potential to occur, as the Project Area contains some broken woodland and grassland area that may provide suitable foraging and nesting habitat.

(Brewster's) Yellow warbler (*Setophaga petechia brewsteri*), CDFW Species of Special Concern, USFWS Bird of Conservation Concern. Moderate Potential. The yellow warbler is a neotropical migrant bird that is widespread in North America, but has declined throughout much of its California breeding range. The Brewster's (*brewsteri*) subspecies is a summer resident and represents the vast majority of yellow warblers that breed in California. West of the Central Valley, typical yellow warbler breeding habitat consists of dense riparian vegetation along watercourses, including wet meadows, with willow growth especially being favored (Shuford and Gardali 2008). Insects comprise the majority of their diet. The species has a moderate potential to occure, as yellow warblers are known to breed in the vicinity (Berner et al. 2003), and the Project Area contains and is immediately adjacent to riparian habitat and willows that may be suitable for breeding and foraging habitat.

Oak titmouse (*Baeolophus inornatus*), USFWS Bird of Conservation Concern. High Potential. This relatively common species is year-round resident throughout much of California including most of the coastal slope, the Central Valley and the western Sierra Nevada foothills. In addition, the species may also occur in residential settings where landscaping provides foraging and nesting habitat.Its primary habitat is woodland dominated by oaks. Local populations have adapted to woodlands of pines and/or junipers in some areas (Cicero 2000). The oak titmouse nests in tree cavities, usually natural cavities or those excavated by woodpeckers, though they may partially excavate their own (Cicero 2000). Seeds and arboreal invertebrates make up the birds' diet. Oak titmouse commonly breeds in the region (Berner et al. 2003). The Project Area contains and is immediately adjacent to oak woodland, riparian habitat and tree cavities for this species that provides suitable habitat for this species.

5.0 POTENTIAL IMPACTS, AVOIDANCE, AND MITIGATION MEASURES

Four sensitive biological communities were identified within the Project Area including seasonal wetland, intermittent stream, valley oak riparian woodland, and blue oak woodland. Two special-status plant species were determined to be potentially present, green monardella (CNPS Rank 4), and wooly angelica (Locally Rare; L-3), and one special-status plant species was determined to have a moderate potential to occur in the vicinity of the Project Area. Five special-status wildlife species have been documented within the Project Area and an additional nine species have a moderate or high potential to occur within the Project Area.

Potential impacts to sensitive biological communities and special-status species within the Project Area were evaluated based on the project description and site plans (Summit Engineering, Inc. 2017). Potential impacts were analyzed using the framework provided in Appendix G of the CEQA Guidelines. Based on this framework, the Project is determined to have a potentially significant impact to biological resources if it may:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- 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
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The following sections provide an analysis of potential impacts using the framework outlined above, as well as recommended avoidance and minimization measures to reduce potential impacts and mitigation measures for unavoidable impacts.

5.1 General Mitigation Measures

To reduce the potential for impacts to sensitive communities and special-status species, the following general best management practices (BMPs) are recommended for implementation. Implementation of these general BMPs, in combination with the species- and habitat-specific measures provided in the subsequent sections, will minimize adverse impacts:

- Appropriate perimeter erosion and sediment control measures (i.e. silt fencing, straw waddles) shall be installed around any stockpiles of soil or other materials which could be transported by rainfall or other flows in order to reduce the possibility of soil erosion and sediments flowing into natural habitats.

- All access, staging, and work areas shall be the minimum size necessary to conduct the work, and shall be sited in previously developed areas to the maximum extent feasible.

- All staging, maintenance, and storage of construction equipment shall be performed in a manner to preclude any direct or indirect discharge of fuel, oil, or other petroleum products into the Project Area. No other debris, rubbish, soil, silt, sand, or other construction-related materials or wastes shall be allowed to enter into or be placed where they may be washed by rainfall or runoff into wetland areas. All such debris and waste shall be picked-up daily and shall be properly disposed of at an appropriate facility. If a spill of fluid materials occurs, the area shall be cleaned and contaminated materials disposed of properly. The affected spill area shall be restored to its natural condition.

- Disturbance or removal of vegetation shall not exceed the minimum necessary to conduct the work.

5.2 Sensitive Biological Communities

The Project footprint where new improvements are proposed is predominantly located in previously developed areas including the existing winery area and parking lot, and associated access road. The Project footprint is adjacent to, and may potentially impact four sensitive biological communities, including seasonal wetland, intermittent stream, valley oak riparian woodland, and blue oak woodland. The remaining sensitive biological communities will be completely avoided by the Project as they are located outside of a minimum 50-foot buffer from the Project footprint. Potential impacts and mitigation measures for sensitive biological communities are provided below.

5.2.1 Wetlands and Waters

Potential Impact

The Project has been designed to avoid impacts to wetlands and non-wetland waters, which includes seasonal wetland and intermittent stream communities, by constraining the majority of new improvements within the existing development footprint. No permits would be required and no mitigation measures would apply if the jurisdictional wetlands and non-wetland waters are completely avoided. The existing gravel road crosses over an intermittent stream and is directly adjacent to a seasonal wetland. These areas could be potentially impacted by construction activities as a result of potential accidental discharge during paving activities.

Avoidance, Minimization and Mitigation Measures

To avoid potentially impacting seasonal wetlands and intermittent stream all road paving, within 50 feet of intermittent stream or seasonal wetlands shall be conducted during the dry season dry season (May 1-Oct 15) to minimize water quality impacts. Prior to construction, the delineated wetland boundary shall be demarcated in the field. An erosion control silt fence shall be installed between the edge of the delineated wetland and the road to ensure all construction activities avoid the wetland, and no accidental discharge occurs.

Because the project footprint will avoid directly impacting wetlands and waters, and the implementation of the mitigation and avoidance measures discussed above, the project would result in a less than significant impact to wetlands and waters in the Project Area.

5.2.2 Riparian Vegetation

Potential Impact

The Project has been designed to avoid riparian vegetation, which includes valley oak riparian woodland community, and no riparian vegetation removal will occur. While the existing gravel road crosses through valley oak riparian woodland, no direct impacts associated with the paving or paving activities are anticipated to impact riparian vegetation. Furthermore, the general mitigation measures in Section 5.1 would provide protective measures for riparian vegetation near the Project footprint. As such, there are no anticipated impacts to riparian vegetation.

Avoidance, Minimization and Mitigation Measures

Because there are no anticipated impacts to valley oak riparian woodland, no additional mitigation measures are required for this biological community.

5.2.3 Oak Woodlands

Potential Impact

The Project has been designed to avoid removing oak woodland, which includes and blue oak woodland community; therefore no loss of oaks are anticipated from construction activities. However, the Project plans include installation of a new septic system disposal area (i.e. leach field). The final location and extent of the septic system disposal area has the potential to impact less than 0.1-acre of blue oak woodland, as nutrient and water based discharge associated with the leach field could stress established oaks root structure and cause the potential loss die of trees within the leach field boundary. The extent of leach field impact to oak woodland is anticipated to be negligible, and not result in a decline or reduction in the approximately 7.3 acres of blue oak woodland habitat within the Project Area. Furthermore, the general mitigation measures in Section 5.1 would provide protective measures for oak woodland near the Project footprint. As such, this impact would be less than significant and no mitigation would be required.

Avoidance, Minimization and Mitigation Measures

There are no anticipated impacts to blue oak woodlands; therefore, no additional mitigation measures are required for this biological community.

5.3 Special-Status Plant Species

Two special-status plant species, green monardella, and wooly angelica are potentially present, and one special-status plant, marsh checkerbloom has a moderate potential to occur within the Project Area. A monardella species with affinity to green monardella (*Monardella* cf. *viridis*), and an angelica species with affinity to wooly angelica (*Angelica* cf. *tomentosa*), were observed in the Project Area. Project Area However, the Project footprint does not provide habitat for these species. No individuals were observed within the Project footprint. No project related impacts to special-status plant species or habitats that could support special-status plant species are anticipated. Consequently, no further actions are recommended for special-status plant species.

5.4 Special-Status Wildlife Species

There are nine special-status wildlife species with a moderate or high potential for occurrence, and another five special-status species observed in the Project Area. Special-status wildlife species with potential for occurrence and recommended avoidance measures are discussed below.

5.4.1 Birds

Potential Impacts

Several species of special status birds have been observed or have the potential to occur within the Project Area, and include: White-tailed kite, yellow warbler, Nuttall's woodpecker, loggerhead shrike, oak titmouse, and purple martin. The Project will involve disturbance of non-native grasslands and work near woodland and aquatic features. While the specific disturbance footprint for the project is minimal, Project activities including the enhancement of roads, work on and adjacent to buildings, and vegetation clearing have the potential to impact potential nesting and foraging habitat for avian species. The operation of construction machinery during breeding season could also cause disturbance to breeding birds, and could impact nesting activity. Special-status and other native bird species are protected during the nesting season by the MBTA and Fish and Game Code, as well as CEQA.

Avoidance, Minimization and Mitigation Measures

Potential significant impacts to nesting special-status birds may be mitigated through avoiding disturbance to active nests through implementation of the following measures:

Special-status bird species may use wetland, riparian, woodland, upland and disturbed habitats within the Project Area for breeding (as well as foraging and roosting), and a wide variety of non-special-status bird species that receive baseline protection under the MBTA and CDFW codes may also nest within the Project footprint. To the fullest extent feasible, it is recommended that vegetation removal and ground disturbance within the Project footprint occur outside of the general breeding bird season (September 1 through January 31). If these activities are to occur during the general breeding bird season (February 1 through August 31), pre-construction breeding bird surveys should be conducted within 14 days of the initiation of these activities to avoid disturbance to active nests, eggs, and/or young. All active nests found during the survey should be protected by a no-disturbance buffer until all young from each nest fledge or the nest otherwise becomes inactive. The size of each buffer should be determined by a qualified biologist, and may require consultation with the CDFW; buffers are typically a minimum of 50 feet for non-special-status birds and may be larger for special-status species (up to 500 feet).

5.4.2 Bats

Potential Impacts

Eight special-status species of bat have been observed or have the potential to occur in the Project Area, and include: pallid bat, hoary bat, silver-haired bat, long-eared bat, Yuma myotis, Townsend's big-eared bat, western red bat, and fringed myotis. These species may roost in the woodland habitat edges and within the existing buildings. Foraging may also take place over the aquatic features and the open adjacent upland habitat found throughout and adjacent to much of the Project Area. No impacts are anticipated for bat foraging habitat and there will be no loss or

removal of roost habitat. While habitat is not anticipated by removed for these species, temporary disturbances associated with exterior building work and the operation of loud machinery in the immediate vicinity of a maternity roost site could impact the species by causing the parent to abandon the roost or induce elevated stress levels for the individuals occupying the maternity site.

Avoidance, Minimization, and Mitigation Measures

Potential significant impacts to roosting special-status bats may be mitigated through avoiding disturbance to active roost sites. Four bat species, silver-haired bat, hoary bat, long-eared myotis, Yuma myotis were detecting using acoustic monitors during the March 2016 site visit. Four additional species, including pallid bat, Townsend's big-eared bat, western red bat, and fringed myotis, have the potential to roost in buildings and/or trees within or adjacent to Project footprint. Preconstruction surveys for roosting bats should be conducted by a qualified biologist no less than 14 days prior to removal of large trees (Diameter at breast height > 12inches), snags or buildings within or adjacent to the Project footprint; if the work should begin during the maternity roosting season (defined as: April 1 through August 31).. If special-status bat species are detected during surveys, appropriate, species and roost specific mitigation measures will be developed. Such measures may include postponing work on or adjacent to structures and woodland habitat until the end of the maternity roosting season. Vegetation removal, tree trimming, and exterior building work can be conducted outside of the maternity roosting season without performing preconstruction bat surveys.

6.0 CONCLUSION

In total four sensitive biological plant communities were identified within the Project Area and are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances. The majority of the Project Area is developed or disturbed habitat; neither of which are considered a sensitive habitat.

No special-status plants occur in the Project Area. Two special-status plants were observed in the rare plant survey, and one special-status plant has the potential to occur in habitat surveyed at the property. The Project Area does not contain habitat for these three special-status plants, and will therefore have no impact on special-status plants.

A total of 14 special-status wildlife species, five of which were observed present, and nine of which have a moderate, or high potential to occur in the Project Area. No federal or state listed species were observed within the Project Area during the conduct of these surveys.

Project associated impacts are anticipated to be minimal as the Project footprint occurs primarily on disturbed habitat and has been designed to avoid sensitive habitat communities including wetlands and streams. For the few anticipated impacts to sensitive biological communities and special-status species, inclusion of Project avoidance, minimization and mitigation measures will make these impacts less-than-significant.

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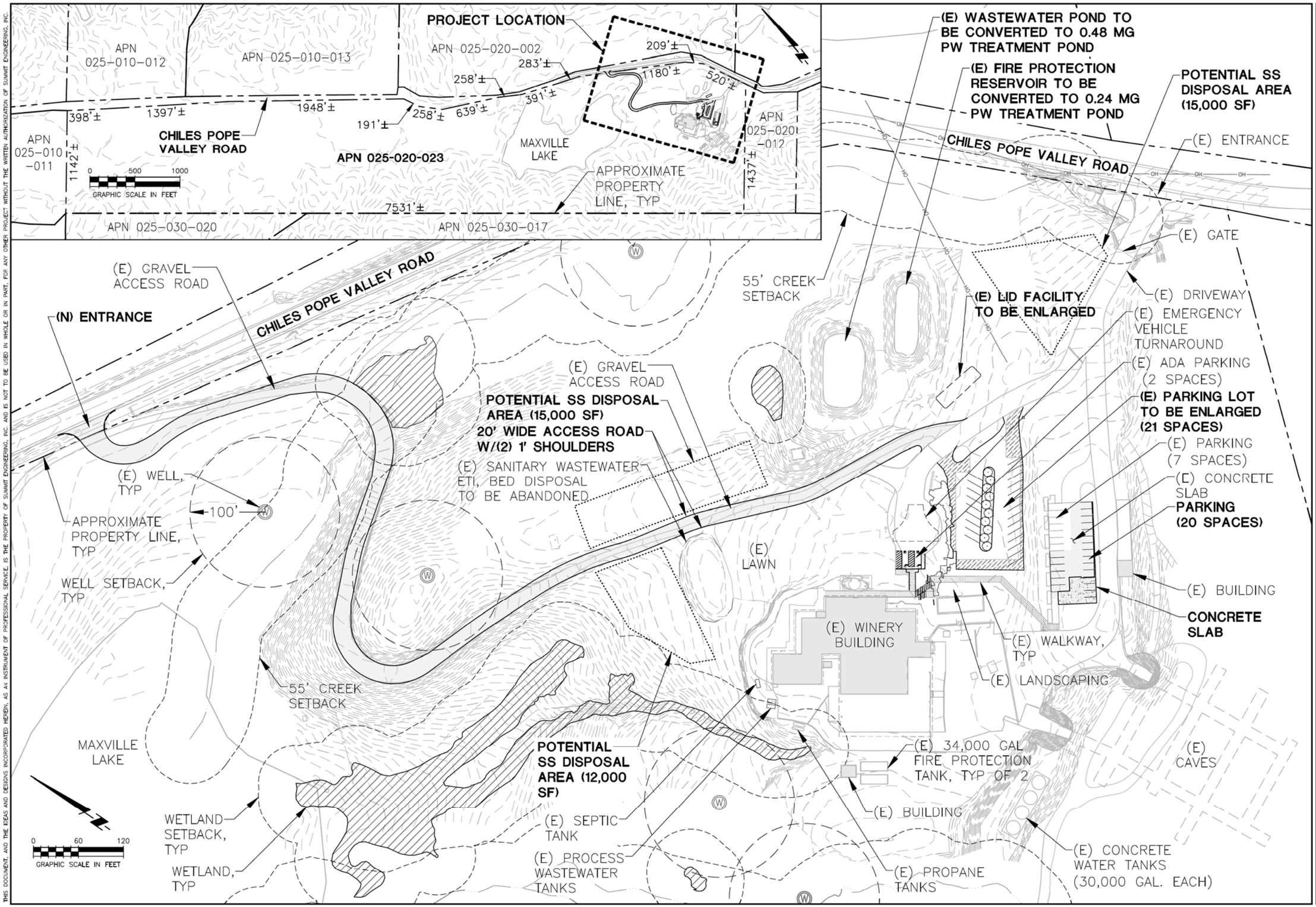
Appendix A

Project Area Design Drawing



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MAXVILLE LAKE WINERY
4105 CHILES POPE VALLEY ROAD
ST. HELENA, CA
APN 025-020-023

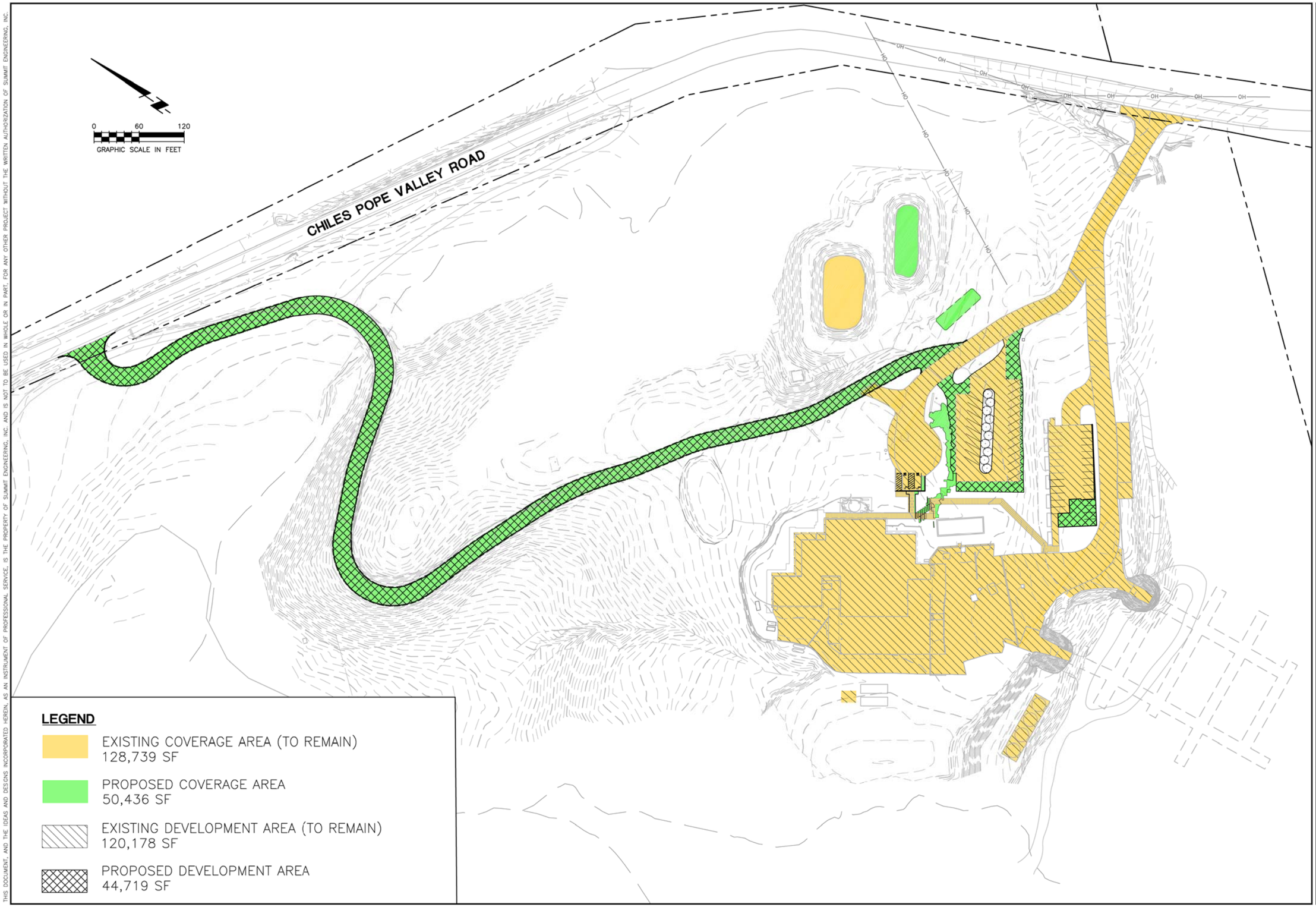
MAXVILLE LAKE WINERY

OVERALL SITE PLAN

	2017-05-30 PERMIT SUBMITTAL

DATE:	2017-05-30
JOB NO:	2015052
SCALE:	AS SHOWN
DRAWN:	TAF
CHECKED:	CIP/TCS

SHEET **UP1**



LEGEND

- EXISTING COVERAGE AREA (TO REMAIN) 128,739 SF
- PROPOSED COVERAGE AREA 50,436 SF
- EXISTING DEVELOPMENT AREA (TO REMAIN) 120,178 SF
- PROPOSED DEVELOPMENT AREA 44,719 SF

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MAXVILLE LAKE WINERY
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ST. HELENA, CA
APN 025-020-023

	2017-05-30 PERMIT SUBMITTAL

DATE: 2017-05-30
JOB NO: 2015052
SCALE: AS SHOWN
DRAWN: TAF
CHECKED: CIP/TCS

SHEET **UP4**

MAXVILLE LAKE WINERY
EXISTING & PROPOSED COVERAGE AND DEVELOPEMENT AREAS

Appendix B

List of Observed Plant and Wildlife Species in the Project Area

Appendix B-1. Plant Species Observed on the Property October 27, 2015, December 15, 2015 and March 14, 2016.

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Agavaceae	*Chlorogalum pomeridianum*	Amole	native	perennial herb	-	-
Alismataceae	*Alisma triviale*	Northern water plantain	native	perennial herb (aquatic)	-	-
Anacardiaceae	*Toxicodendron diversilobum*	Poison oak	native	vine, shrub	-	-
Apiaceae	*Angelica* cf. *tomentosa*	Woolly angelica	native	perennial herb	L-3	-
Apiaceae	*Daucus* sp.	Wild carrot	unknown	unknown	-	-
Apiaceae	*Perideridia kelloggii*	Yampah	native	perennial herb	-	-
Apiaceae	*Perideridia oregana*	Oregon yampah	native	perennial herb	-	-
Apiaceae	*Sanicula crassicaulis*	Pacific sanicle	native	perennial herb	-	-
Apiaceae	*Torilis arvensis*	Field hedge parsley	non-native (invasive)	annual herb	-	Moderate
Araliaceae	*Aralia californica*	California spikenard	native	perennial herb	-	-
Asteraceae	*Achillea millefolium*	Yarrow	native	perennial herb	-	-
Asteraceae	*Ancistrocarphus filagineus*	Woolly fishhooks	native	annual herb	-	-
Asteraceae	*Anthemis cotula*	Dog fennel	non-native (invasive)	annual herb	-	-
Asteraceae	*Artemisia douglasiana*	California mugwort	native	perennial herb	-	-
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	Coyote brush	native	shrub	-	-
Asteraceae	*Calendula arvensis*	Field marigold	non-native	annual herb	-	-
Asteraceae	*Carduus pycnocephalus* ssp. *pycnocephalus*	Italian thistle	non-native	annual herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Asteraceae	*Centaurea solstitialis*	Yellow starthistle	non-native (invasive)	annual herb	-	High
Asteraceae	*Cirsium vulgare*	Bullthistle	non-native (invasive)	perennial herb	-	Moderate
Asteraceae	*Eriophyllum lanatum*	Wooly sunflower	native	perennial herb	-	-
Asteraceae	*Helminthotheca echioides*	Bristly ox-tongue	non-native (invasive)	annual, perennial herb	-	-
Asteraceae	*Hemizonia congesta* ssp. *luzulifolia*	Woodrush tarweed	native	annual herb	-	-
Asteraceae	*Hesperevax sparsiflora* var. *sparsiflora*	Few flowered evax	native	annual herb	-	-
Asteraceae	*Heterotheca sessiliflora* ssp. *echioides*	Bristly goldenaster	native	perennial herb	-	-
Asteraceae	*Hypochaeris glabra*	Smooth cats ear	non-native (invasive)	annual herb	-	Limited
Asteraceae	*Hypochaeris radicata*	Hairy cats ear	non-native (invasive)	perennial herb	-	Moderate
Asteraceae	*Lactuca serriola*	Prickly lettuce	non-native (invasive)	annual herb	-	-
Asteraceae	*Logfia gallica*	Narrowleaf cottonrose	non-native	annual herb	-	-
Asteraceae	*Madia gracilis*	Gumweed	native	annual herb	-	-
Asteraceae	*Packera greenei*	Flame ragwort	native	perennial herb	-	-
Asteraceae	*Pseudognaphalium luteoalbum*	Jersey cudweed	non-native	annual herb	-	-
Asteraceae	*Psilocarphus tenellus*	Slender woolly heads	native	annual herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Asteraceae	*Senecio vulgaris*	Common groundsel	non-native	annual herb	-	-
Asteraceae	*Soliva sessilis*	South american soliva	non-native	annual herb	-	-
Asteraceae	*Sonchus asper* ssp. *asper*	Sow thistle	non-native (invasive)	annual herb	-	-
Asteraceae	*Sonchus oleraceus*	Sow thistle	non-native	annual herb	-	-
Asteraceae	*Taraxacum officinale*	Red seeded dandelion	non-native (invasive)	perennial herb	-	-
Asteraceae	*Tragopogon porrifolius*	Salsify	non-native	perennial herb	-	-
Asteraceae	*Uropappus lindleyi*	Silver puffs	native	annual herb	-	-
Asteraceae	*Wyethia glabra*	Smooth mule ears	native	perennial herb	-	-
Asteraceae	*Xanthium strumarium*	Cocklebur	native	annual herb	-	-
Boraginaceae	*Amsinckia intermedia*	Common fiddleneck	native	annual herb	-	-
Boraginaceae	*Cynoglossum grande*	Houndstongue	native	perennial herb	-	-
Boraginaceae	*Eriodictyon californicum*	Yerba santa	native	shrub	-	-
Boraginaceae	*Nemophila heterophylla*	Canyon nemophila	native	annual herb	-	-
Boraginaceae	*Nemophila menziesii* var. *menziesii*	Baby blue eyes	native	annual herb	-	-
Boraginaceae	*Plagiobothrys nothofulvus*	Rusty haired popcorn flower	native	annual herb	-	-
Brassicaceae	*Brassica nigra*	Black mustard	non-native (invasive)	annual herb	-	Moderate
Brassicaceae	*Brassica rapa*	Common mustard	non-native (invasive)	annual herb	-	Limited
Brassicaceae	*Capsella bursa-pastoris*	Shepherd's purse	non-native	annual herb	-	-
Brassicaceae	*Cardamine oligosperma*	Idaho bittercress	native	annual, perennial herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Brassicaceae	*Hirschfeldia incana*	Mustard	non-native (invasive)	perennial herb	-	Moderate
Brassicaceae	*Lepidium nitidum*	Shining pepper grass	native	annual herb	-	-
Brassicaceae	*Nasturtium officinale*	Watercress	native	perennial herb (aquatic)	-	-
Brassicaceae	*Raphanus raphanistrum*	Jointed charlock	non-native	annual, perennial herb	-	-
Cactaceae	*Opuntia* sp.	Prickly pear	non-native	shrub	-	-
Calycanthaceae	*Calycanthus occidentalis*	Spicebush	native	shrub	-	-
Caprifoliaceae	*Lonicera hispidula*	Pink honeysuckle	native	vine, shrub	-	-
Caprifoliaceae	*Symphoricarpos albus* var. *laevigatus*	Snowberry	native	shrub	-	-
Caryophyllaceae	*Cerastium glomeratum*	Large mouse ears	non-native	annual herb	-	-
Caryophyllaceae	*Scleranthus annuus* ssp. *annuus*	German knotgrass	non-native	annual herb	-	-
Caryophyllaceae	*Stellaria media*	Chickweed	non-native	annual herb	-	-
Caryophyllaceae	*Stellaria nitens*	Shining chickweed	native	annual herb	-	-
Convolvulaceae	*Calystegia collina* ssp. *collina*	Hillside morning glory	native	perennial herb	-	-
Convolvulaceae	*Convolvulus arvensis*	Field bindweed	non-native (invasive)	perennial herb, vine	-	-
Convolvulaceae	*Cuscuta* sp.	Dodder	native	annual herb	-	-
Crassulaceae	*Crassula tillaea*	Mediterranean pygmy weed	non-native	annual herb	-	-
Cupressaceae	*Sequoia sempervirens*	Coast redwood	native	tree	-	-
Cyperaceae	*Carex serratodens*	Bifid sedge	native	perennial grasslike herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Cyperaceae	*Carex tumulicola*	Split awn sedge	native	perennial grasslike herb	-	-
Cyperaceae	*Eleocharis macrostachya*	Spike rush	native	perennial grasslike herb	-	-
Cyperaceae	*Schoenoplectus acutus* var. *occidentalis*	Tule	native	perennial grasslike herb	-	-
Cyperaceae	*Schoenoplectus californicus*	California bulrush	native	perennial grasslike herb	-	-
Ericaceae	*Arbutus menziesii*	Madrono	native	tree	-	-
Ericaceae	*Arctostaphylos viscida* ssp. *pulchella*	White leaf manzanita	native	tree, shrub	-	-
Euphorbiaceae	*Croton setiger*	Turkey-mullein	native	perennial herb	-	-
Fabaceae	*Acmispon americanus* var. *americanus*	Spanish lotus	native	annual herb	-	-
Fabaceae	*Acmispon brachycarpus*	Short podded lotus	native	annual herb	-	-
Fabaceae	*Acmispon glaber*	Deerweed, california broom	native	perennial herb	-	-
Fabaceae	*Acmispon wrangelianus*	Chilean trefoil	native	annual herb	-	-
Fabaceae	*Lotus corniculatus*	Bird's foot trefoil	non-native (invasive)	perennial herb	-	-
Fabaceae	*Lupinus bicolor*	Lupine	native	annual, perennial herb	-	-
Fabaceae	*Medicago polymorpha*	California burclover	non-native (invasive)	annual herb	-	Limited
Fabaceae	*Melilotus indicus*	Annual yellow sweetclover	non-native	annual herb	-	-
Fabaceae	*Rupertia physodes*	California tea	native	perennial herb	-	-
Fabaceae	*Trifolium dubium*	Shamrock	non-native	annual herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Fabaceae	*Trifolium hirtum*	Rose clover	non-native (invasive)	annual herb	-	Limited
Fabaceae	*Trifolium microcephalum*	Small head clover	native	annual herb	-	-
Fabaceae	*Trifolium repens*	White clover	non-native	perennial herb	-	-
Fabaceae	*Trifolium variegatum* var. *variegatum*	Variegated clover	native	annual herb	-	-
Fabaceae	*Vicia sativa*	Spring vetch	non-native	annual herb, vine	-	-
Fabaceae	*Vicia villosa*	Hairy vetch	non-native (invasive)	annual herb, vine	-	-
Fagaceae	*Quercus agrifolia* var. *agrifolia*	Coast live oak	native	tree	-	-
Fagaceae	*Quercus berberidifolia*	Inland scrub oak	native	tree	-	-
Fagaceae	*Quercus douglasii*	Blue oak	native	tree	-	-
Fagaceae	*Quercus durata*	Leather oak	native	shrub	-	-
Fagaceae	*Quercus lobata*	Valley oak	native	tree	-	-
Geraniaceae	*Erodium botrys*	Big heron bill	non-native (invasive)	annual herb	-	-
Geraniaceae	*Erodium cicutarium*	Coastal heron's bill	non-native (invasive)	annual herb	-	Limited
Geraniaceae	*Geranium dissectum*	Wild geranium	non-native (invasive)	annual herb	-	Limited
Geraniaceae	*Geranium molle*	Crane's bill geranium	non-native (invasive)	annual, perennial herb	-	-
Iridaceae	*Sisyrinchium bellum*	Blue eyed grass	native	perennial herb	-	-
Juncaceae	*Juncus bufonius*	Common toad rush	native	annual grasslike herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Juncaceae	*Juncus mexicanus*	Mexican rush	native	perennial grasslike herb	-	-
Juncaceae	*Juncus patens*	Rush	native	perennial grasslike herb	-	-
Juncaceae	*Juncus xiphioides*	Iris leaved rush	native	perennial grasslike herb	-	-
Lamiaceae	*Mentha pulegium*	Pennyroyal	non-native (invasive)	perennial herb	-	Moderate
Lamiaceae	*Monardella* cf. *viridis*	Green monardella	native	perennial herb	Rank 4.3	-
Lamiaceae	*Stachys albens*	Cobwebby hedge nettle	native	perennial herb	-	-
Lamiaceae	*Stachys rigida*	Rough hedgenettle	native	perennial herb	-	-
Lauraceae	*Umbellularia californica*	California bay	native	tree	-	-
Liliaceae	*Calochortus amabilis*	Golden fairy lantern	native	perennial herb	-	-
Liliaceae	*Fritillaria recurva*	Scarlet fritillary	native	perennial herb	-	-
Lythraceae	*Lythrum hyssopifolia*	Hyssop loosestrife	non-native	annual, perennial herb	-	-
Malvaceae	*Malva parviflora*	Cheeseweed	non-native	annual herb	-	-
Malvaceae	*Sidalcea diploscypha*	Fringed checker mallow	native	annual herb	-	-
Melanthiaceae	*Toxicoscordion fremontii*	Fremont's star lily	native	perennial herb	-	-
Montiaceae	*Calandrinia menziesii*	Red maids	native	annual herb	-	-
Montiaceae	*Claytonia exigua* ssp. *exigua*	Viridis	native	annual herb	-	-
Montiaceae	*Claytonia parviflora* ssp. *parviflora*	Miner'slettuce	native	annual herb	-	-
Montiaceae	*Claytonia perfoliata*	Miner's lettuce	native	annual herb	-	-
Myrsinaceae	*Lysimachia arvensis*	Scarlet pimpernel	non-native	annual herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Oleaceae	*Olea europaea*	Olive	non-native (invasive)	tree, shrub	-	Limited
Onagraceae	*Camissoniopsis* sp.	Sun cup	native	annual herb	-	-
Onagraceae	*Clarkia purpurea* ssp. *quadrivulnera*	Purple clarkia	native	annual herb	-	-
Onagraceae	*Epilobium brachycarpum*	Willow herb	native	annual herb	-	-
Onagraceae	*Epilobium ciliatum*	Slender willow herb	native	perennial herb	-	-
Onagraceae	*Epilobium densiflorum*	Willow herb	native	annual herb	-	-
Onagraceae	*Epilobium minutum*	Minute willowherb	native	annual herb	-	-
Orobanchaceae	*Castilleja rubicundula* ssp. *lithospermoides*	Cream sacs	native	annual herb	-	-
Orobanchaceae	*Pedicularis densiflora*	Indian warrior	native	perennial herb	-	-
Papaveraceae	*Eschscholzia californica*	California poppy	native	annual, perennial herb	-	-
Phrymaceae	*Mimulus guttatus*	Yellow monkey flower	native	annual, perennial herb (rhizomatous)	-	-
Pinaceae	*Pinus sabiniana*	Bull pine	native	tree	-	-
Pinaceae	*Pinus* sp.	Pine	non-native	tree	-	-
Pinaceae	*Pseudotsuga menziesii* var. *menziesii*	Douglas fir	native	tree	-	-
Plantaginaceae	*Collinsia sparsiflora* var. *sparsiflora*	Few flowered collinsia	native	annual herb	-	-
Plantaginaceae	*Plantago erecta*	California plantain	native	annual herb	-	-
Plantaginaceae	*Plantago lanceolata*	Ribwort	non-native (invasive)	perennial herb	-	Limited

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Plantaginaceae	*Veronica catenata*	Chain speedwell	non-native	perennial herb	-	-
Poaceae	*Aira caryophyllea*	Silvery hairgrass	non-native (invasive)	annual grass	-	-
Poaceae	*Avena barbata*	Slim oat	non-native (invasive)	annual, perennial grass	-	Moderate
Poaceae	*Avena fatua*	Wildoats	non-native (invasive)	annual grass	-	Moderate
Poaceae	*Brachypodium distachyon*	Purple false brome	non-native (invasive)	annual, perennial grass	-	Moderate
Poaceae	*Briza minor*	Little rattlesnake grass	non-native	annual grass	-	-
Poaceae	*Bromus diandrus*	Ripgut brome	non-native (invasive)	annual grass	-	Moderate
Poaceae	*Bromus hordeaceus*	Soft chess	non-native (invasive)	annual grass	-	Limited
Poaceae	*Bromus laevipes*	Narrow flowered brome	native	annual, perennial grass	-	-
Poaceae	*Bromus madritensis* ssp. *rubens*	Foxtail brome	non-native (invasive)	annual grass	-	High
Poaceae	*Crypsis schoenoides*	Swamp grass	non-native	annual grass	-	-
Poaceae	*Cynodon dactylon*	Bermuda grass	non-native (invasive)	perennial grass	-	Moderate
Poaceae	*Cynosurus echinatus*	Dogtail grass	non-native (invasive)	annual grass	-	Moderate
Poaceae	*Deschampsia danthonioides*	Annual hairgrass	native	annual grass	-	-
Poaceae	*Elymus caput-medusae*	Medusa head	non-native	annual grass	-	-
Poaceae	*Elymus glaucus* ssp. *glaucus*	Blue wild rye	native	perennial grass	-	-
Poaceae	*Festuca arundinacea*	Reed fescue	non-native (invasive)	perennial grass	-	Moderate

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Poaceae	*Festuca bromoides*	Brome fescue	non-native	annual grass	-	-
Poaceae	*Festuca californica*	California fescue	native	perennial grass	-	-
Poaceae	*Festuca idahoensis*	Idaho fescue	native	perennial grass	-	-
Poaceae	*Festuca microstachys*	Small fescue	native	annual grass	-	-
Poaceae	*Festuca myuros*	Rattail sixweeks grass	non-native (invasive)	annual grass	-	-
Poaceae	*Festuca perennis*	Italian rye grass	non-native	annual, perennial grass	-	-
Poaceae	*Hordeum marinum* ssp. *gussoneanum*	Barley	non-native	annual grass	-	-
Poaceae	*Hordeum murinum*	Foxtail barley	non-native (invasive)	annual grass	-	-
Poaceae	*Phalaris aquatica*	Harding grass	non-native (invasive)	perennial grass	-	Moderate
Poaceae	*Phyllostachys aurea*	Golden bamboo	non-native	vine	-	-
Poaceae	*Poa annua*	Annual blue grass	non-native	annual grass	-	-
Poaceae	*Poa pratensis* ssp. *pratensis*	Kentucky blue grass	non-native (invasive)	perennial grass	-	-
Poaceae	*Polypogon monspeliensis*	Annual beard grass	non-native (invasive)	annual grass	-	Limited
Poaceae	*Stipa pulchra*	Purple needle grass	native	perennial grass	-	-
Poaceae	*Triticum aestivum*	Common wheat	non-native	annual grass	-	-
Polygalaceae	*Polygala californica*	Milkwort	native	perennial herb	-	-
Polygonaceae	*Rumex crispus*	Curly dock	non-native (invasive)	perennial herb	-	Limited
Portulacaceae	*Portulaca oleracea*	Common purslane	non-native	annual herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Pteridaceae	*Adiantum jordanii*	California maidenhair fern	native	fern	-	-
Ranunculaceae	*Ranunculus californicus*	Common buttercup	native	perennial herb	-	-
Ranunculaceae	*Ranunculus muricatus*	Buttercup	non-native	annual, perennial herb	-	-
Rhamnaceae	*Ceanothus jepsonii*	Musk brush	native	shrub	-	-
Rhamnaceae	*Frangula californica*	California coffeeberry	native	shrub	-	-
Rosaceae	*Adenostoma fasciculatum* var. *fasciculatum*	Chamise	native	tree, shrub	-	-
Rosaceae	*Cotoneaster franchetii*	Cotoneaster	non-native (invasive)	shrub	-	Moderate
Rosaceae	*Heteromeles arbutifolia*	Toyon	native	shrub	-	-
Rosaceae	*Malus* sp.	Apple	non-native	tree	-	-
Rosaceae	*Prunus cerasifera*	Cherry plum	non-native (invasive)	tree	-	Limited
Rosaceae	*Rosa californica*	California wild rose	native	shrub	-	-
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	non-native (invasive)	shrub	-	High
Rosaceae	*Rubus ursinus*	California blackberry	native	vine, shrub	-	-
Rubiaceae	*Galium andrewsii* ssp. *andrewsii*	Phlox leaved bedstraw	native	perennial herb	-	-
Rubiaceae	*Galium aparine*	Cleavers	native	annual herb	-	-
Rubiaceae	*Galium californicum* ssp. *californicum*	California bedstraw	native	perennial herb	-	-
Rubiaceae	*Galium parisiense*	Wall bedstraw	non-native	annual herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Rubiaceae	*Sherardia arvensis*	Field madder	non-native	annual herb	-	-
Salicaceae	*Populus fremontii* ssp. *fremontii*	Cottonwood	native	tree	-	-
Salicaceae	*Salix exigua*	Narrowleaf willow	native	tree, shrub	-	-
Salicaceae	*Salix laevigata*	Polished willow	native	tree	-	-
Salicaceae	*Salix lasiolepis*	Arroyo willow	native	tree, shrub	-	-
Sapindaceae	*Aesculus californica*	Buckeye	native	tree	-	-
Scrophulariaceae	*Verbascum blattaria*	Moth mullein	non-native	perennial herb	-	-
Themidaceae	*Dichelostemma capitatum*	Blue dicks	native	perennial herb	-	-
Themidaceae	*Triteleia laxa*	Ithuriel's spear	native	perennial herb	-	-
Typhaceae	*Typha angustifolia*	Narrow leaf cattail	non-native	perennial herb (aquatic)	-	-
Typhaceae	*Typha latifolia*	Boradleaf cattail	native	perennial herb (aquatic)	-	-
Ulmaceae	*Ulmus pumila*	Siberian elm	non-native (invasive)	tree	-	-
Viscaceae	*Arceuthobium campylopodum*	Pine dwarf mistletoe	native	perennial herb (parasitic)	-	-
Viscaceae	*Phoradendron leucarpum* ssp. *tomentosum*	Mistletoe	native	shrub (parasitic)	-	-
Vitaceae	*Vitis californica*	California wild grape	native	vine, shrub	-	-
Zygophyllaceae	*Tribulus terrestris*	Puncture vine	non-native (invasive)	annual herb	-	-

- All species identified using the *Jepson eFlora* [Jepson Flora Project (eds.) 2017]; nomenclature follows *Jepson eFlora* [Jepson Flora Project (eds.) 2017]

[1]Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2017)

FE: Federal Endangered
FT: Federal Threatened
SE: State Endangered
ST: State Threatened
SR: State Rare
Rank 1A: Plants presumed extinct in California
Rank 1B: Plants rare, threatened, or endangered in California and elsewhere. Generally regarded as special-status in native stands only.
Rank 2: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3: Plants about which we need more information – a review list
Rank 4: Plants of limited distribution – a watch list

[2]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2017)

High:	Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
Moderate:	Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited-moderate distribution ecologically
Limited:	Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
Assessed:	Assessed by Cal-IPC and determined to not be an existing current threat

Appendix B-2. Wildlife Species Observed in the Vicinity of the Project Area on October 27, 2015, March 17 and May 10, 2016

Common Name	Scientific Name
MAMMALS	
California vole	*Microtus californicus*
mule deer	*Odocoileus hemionus*
hoary bat	*Lasiurus cinereus*
Brazilian free-tailed bat	*Tadarida brasiliensis*
California myotis	*Myotis californicus*
Yuma myotis	*Myotis yumanensis*
long-eared myotis	*Myotis evotis*
silver-haired bat	*Lasionycteris noctivagans*
BIRDS	
Great blue heron	*Ardea herodias*
American robin	*Turdus migratorius*
Anna's hummingbird	*Calypte anna*
black phoebe	*Sayornis nigricans*
brewer's blackbird	*Euphagus cyanocephalus*
Canada goose	*Branta canadensis*
California towhee	*Melozone crissalis*
lesser goldfinch	*Spinus psaltria*
American goldfinch	*Spinus tristis*
mallard	*Anas platyrhynchos*
mourning dove	*Zenaida macroura*
red-winged blackbird	*Agelaius phoeniceus*
western scrub jay	*Aphelocoma californica*
white-crowned sparrow	*Zonotrichia leucophrys*
gold-crowned sparrow	*Zonotrichia atricapilla*
double-crested cormorant	*Phalacrocorax auritus*
pied-billed grebe	*Podilymbus podiceps*
acorn woodpecker	*Melanerpes formicivorus*
Nuttall's woodpecker	*Picoides nuttallii*
turkey vulture	*Cathartes aura*
common raven	*Corvus corax*
song sparrow	*Melospiza melodia*
bushtit	*Psaltriparus minimus*
western bluebird	*Sialia mexicana*
dark-eyed junco	*Junco hyemalis*
house finch	*Haemorhous mexicanus*
belted kingfisher	*Megaceryle alcyon*
bufflehead	*Bucephala albeola*
American kestrel	*Falco sparverius*
chestnut backed chickadee	*Poecile rufescens*

Common Name	Scientific Name
spotted towhee	*Pipilo maculatus*
northern flicker	*Colaptes auratus*
cliff swallow	*Petrochelidon pyrrhonota*
ring-necked duck	*Aythya collaris*
REPTILES	
western fence lizard	*Sceloporus occidentalis*
AMPHIBIANS	
American bullfrog	*Lithobates catesbeianus*
Pacific tree frog	*Pseudacris regilla*
western toad	*Anaxyrus boreas*
California slender salamander	*Batrachoseps attenuatus*
Skilton's skink	*Plestiodon skiltonianus skiltonianus*
FISH	
Largemouth bass	*Micropterus salmoides*
Bluegill	*Lepomis macrochirus*
INVERTEBRATES	
swallowtail butterfly	Papilionidae
water strider	Gerridae
western forktail (damselfly)	*Ischnura perparva*
Pacific forktail (damselfly)	*Ischnura cervula*

Appendix C

Potential for Occurrence of Special-Status Species in the Project Area

Appendix C. Potential for special-status plant and wildlife species to occur in the Project Area. List compiled from a search of the California Department of Fish and Wildlife Natural Diversity Database (CDFW 2017a), and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2017b) for the Aetna Springs, Walter Springs, Chiles Valley, Saint Helena, Rutherford, and Yountville USGS 7.5' quadrangles (USGS 2016), the U.S. Fish and Wildlife Service (USFWS) IPaC Trust Report (2017), University of California at Davis Information Center for the Environment Distribution Maps for Fishes in California (2016), The Cornell Lab of Ornithology & Audubon eBird (2017), a review of historical and current satellite imagery via Google Earth (2017), Western Bat Working Group (WBWG 2017), and a review of other CDFW lists, and publications (Shuford and Gardali 2008, Jennings and Hayes 1994, Zeiner et al. 1990, Eriksen and Belk 1999, and Jameson and Peters 2004).

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Plants				
Napa false indigo *Amorpha californica var. napensis*	Rank 1B.2	Broadleafed upland forest (openings), chaparral, cismontane woodland. Elevation ranges from 390 to 6560 feet (120 to 2000 meters). Blooms Apr-Jul.	**Unlikely.** Despite potentially suitable woodland and chaparral habitat, this species was not observed during the May rare plant survey conducted during the bloom period for this species.	No further actions are recommended for this species.
bent-flowered fiddleneck *Amsinckia lunaris*	Rank 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Elevation ranges from 10 to 1640 feet (3 to 500 meters). Blooms Mar-Jun.	**Unlikely.** Despite potentially suitable woodland and grassland habitats within the Project Area, this species was not observed during the March or May rare plant surveys, conducted during the bloom period of this species.	No further actions are recommended for this species.
twig-like snapdragon *Antirrhinum virga*	Rank 4.3	Chaparral, lower montane coniferous forest/rocky, openings, often serpentine. Elevation ranges from 330 to 6610 feet (100 to 2015 meters). Blooms Jun-Jul.	**Unlikely.** Although the Project Area contains chaparral habitat underlain by serpentine substrate, the Project Area lacks rocky openings known to support this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Rincon Ridge manzanita *Arctostaphylos stanfordiana ssp. decumbens*	Rank 1B.1	Chaparral (rhyolitic), cismontane woodland. Elevation ranges from 250 to 1210 feet (75 to 370 meters). Blooms Feb-Apr (May).	**No Potential.** This species is a highly restricted endemic to red rhyolite in Sonoma County (CDFW 2017). The Project Area lacks rhyolitic substrates known to support this species.	No further actions are recommended for this species.
Brewer's milk-vetch *Astragalus breweri*	Rank 4.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (open, often gravelly)/often serpentine, volcanic. Elevation ranges from 300 to 2400 feet (90 to 730 meters). Blooms Apr-Jun.	**Unlikely.** Despite potentially suitable chaparral, woodland, vernally mesic grassland, and serpentine substrates within the Project Area, this species was not May rare plant surveys.	No further actions are recommended for this species.
Clara Hunt's milk-vetch *Astragalus claranus*	FE, ST, Rank 1B.1	Chaparral (openings), cismontane woodland, valley and foothill grassland/serpentine or volcanic, rocky, clay. Elevation ranges from 250 to 900 feet (75 to 275 meters). Blooms Mar-May.	**Unlikely.** Despite potentially suitable woodland and grassland habitats, and serpentine substrates present within the Project Area, this species was not observed during March rare plant surveys. This species was observed in full bloom at a reference site on the same day of the March survey. .	No further actions are recommended for this species.
Cleveland's milk-vetch *Astragalus clevelandii*	Rank 4.3	Chaparral, cismontane woodland, riparian forest/serpentine seeps. Elevation ranges from 660 to 4920 feet (200 to 1500 meters). Blooms Jun-Sep.	**Unlikely.** Although the Project Area contains chaparral, woodland, and riparian forest habitats, this species is commonly associated with serpentine seeps, which are not present in the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Jepson's milk-vetch *Astragalus rattanii var. jepsonianus*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/often serpentine. Elevation ranges from 970 to 2300 feet (295 to 700 meters). Blooms Mar-Jun.	**Unlikely.** Despite potentially suitable chaparral, woodland habitat with serpentine substrate, this species was not observed during the March rare plant survey which was conducted during the bloom period for this species.	No further actions are recommended for this species.
narrow-anthered brodiaea *Brodiaea leptandra*	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/volcanic. Elevation ranges from 360 to 3000 feet (110 to 915 meters). Blooms May-Jul.	**Unlikely.** Despite potentially suitable woodland and chaparral habitat, this species was not observed during the May rare plant survey conducted during the bloom period of this species.	No further actions are recommended for this species.
serpentine reed grass *Calamagrostis ophitidis*	Rank 4.3	Chaparral (open, often north-facing slopes), lower montane coniferous forest, meadows and seeps, valley and foothill grassland/serpentine, rocky. Elevation ranges from 300 to 3490 feet (90 to 1065 meters). Blooms Apr-Jul.	**Unlikely.** Despite potentially suitable chaparral on north facing slopes, grasslands, and serpentine substrates, this species was not observed during the May rare plant survey conducted during the bloom period of this species.	No further actions are recommended for this species.
small-flowered calycadenia *Calycadenia micrantha*	Rank 1B.2	Chaparral, meadows and seeps (volcanic), valley and foothill grassland/roadsides, rocky, talus, scree, sometimes serpentine, sparsely vegetated areas. Elevation ranges from 20 to 4920 feet (5 to 1500 meters). Blooms Jun-Sep.	**Unlikely.** The Project Area lacks sparsely vegetated rocky talus or scree habitats known to support this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Mt. Saint Helena morning-glory *Calystegia collina ssp. oxyphylla*	Rank 4.2	Chaparral, lower montane coniferous forest, valley and foothill grassland/serpentine. Elevation ranges from 920 to 3310 feet (279 to 1010 meters). Blooms Apr-Jun.	**Unlikely.** Despite potentially suitable chaparral, grassland, and serpentine substrates, this species was not observed during the May rare plant survey conducted during the bloom period of this species.	No further actions are recommended for this species.
johnny-nip *Castilleja ambigua var. ambigua*	Rank 4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal poolsmargins. Elevation ranges from 0 to 1430 feet (0 to 435 meters). Blooms Mar-Aug.	**Unlikely.** The Project Area lacks coastal prairie, coastal scrub, and vernal pools. .	No further actions are recommended for this species.
Mead's owl's-clover *Castilleja ambigua var. meadii*	Rank 1B.1	Meadows and seeps, vernal pools/gravelly, volcanic, clay. Elevation ranges from 1480 to 1560 feet (450 to 475 meters). Blooms Apr-May.	**Unlikely.** The Project Area lacks seeps, vernal pools, and clay or volcanic soils known to support this species.	No further actions are recommended for this species.
Rincon Ridge ceanothus *Ceanothus confusus*	Rank 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland/volcanic or serpentine. Elevation ranges from 250 to 3490 feet (75 to 1065 meters). Blooms Feb-Jun.	**Unlikely**. Despite potentially suitable chaparral, woodland and serpentine substrates, this species was not observed during the March or May rare plant surveys conducted during the bloom period of this species. Musk brush (*C. jepsonii*), was the only species in this genus observed in the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Calistoga ceanothus *Ceanothus divergens*	Rank 1B.2	Chaparral (serpentine or volcanic, rocky). Elevation ranges from 560 to 3120 feet (170 to 950 meters). Blooms Feb-Apr.	**Unlikely**. Despite potentially suitable chaparral habitat this species was not observed during the March rare plant survey conducted during the bloom period of this species. Musk brush (*C. jepsonii*), was the only species in this genus observed in the Project Area.	No further actions are recommended for this species.
holly-leaved ceanothus *Ceanothus purpureus*	Rank 1B.2	Chaparral, cismontane woodland/volcanic, rocky. Elevation ranges from 390 to 2100 feet (120 to 640 meters). Blooms Feb-Jun.	**Unlikely.** The Project Area lacks volcanic soils known to support this species.	No further actions are recommended for this species.
Sonoma ceanothus *Ceanothus sonomensis*	Rank 1B.2	Chaparral (sandy, serpentine or volcanic). Elevation ranges from 710 to 2620 feet (215 to 800 meters). Blooms Feb-Apr.	**Unlikely.** Despite potentially suitable chaparral habitat and serpentine substrates, this species was not observed during the March rare plant survey which was conducted during this species' bloom period. Musk brush (*C. jepsonii*), was the only species in this genus	No further actions are recommended for this species.
pappose tarplant *Centromadia parryi ssp. parryi*	Rank 1B.2	Chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), valley and foothill grassland (vernally mesic)/often alkaline. Elevation ranges from 0 to 1380 feet (0 to 420 meters). Blooms May-Nov.	**No Potential.** The Project Area lacks coastal prairie, seeps, coastal salt marsh, and alkaline substrate.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Brewer's clarkia *Clarkia breweri*	Rank 4.2	Chaparral, cismontane woodland, coastal scrub/often serpentine. Elevation ranges from 710 to 3660 feet (215 to 1115 meters). Blooms Apr-Jun.	**Unlikely.** Although the Project Area contains potentially suitable chaparral, woodland, and serpentine substrate, this species is not known to occur in Napa County (CNPS 2017b).	No further actions are recommended for this species.
Tracy's clarkia *Clarkia gracilis ssp. tracyi*	Rank 4.2	Chaparral (openings, usually serpentine). Elevation ranges from 210 to 2130 feet (65 to 650 meters). Blooms Apr-Jul.	**Unlikely.** Despite potentially suitable chaparral and serpentine substrates, this species was not observed during May rare plant survey.	No further actions are recommended for this species.
serpentine collomia *Collomia diversifolia*	Rank 4.3	Chaparral, cismontane woodland/serpentine, rocky or gravelly. Elevation ranges from 980 to 1970 feet (300 to 600 meters). Blooms May-Jun.	**Unlikely.** Although the Project Area contains potentially suitable chaparral underlain by serpentine derived soils, the Project Area lacks rocky or gravelly sites known to support this species (CDFW 2017).	No further actions are recommended for this species.
serpentine bird's-beak *Cordylanthus tenuis ssp. brunneus*	Rank 4.3	Closed-cone coniferous forest, chaparral, cismontane woodland/usually serpentine. Elevation ranges from 1560 to 3000 feet (475 to 915 meters). Blooms Jul-Aug.	**Unlikely.** The Project Area lacks barren rocky serpentine soils known to support this species.	No further actions are recommended for this species.
mountain lady's-slipper *Cypripedium montanum*	Rank 4.2	Broadleafed upland forest, cismontane woodland, lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 610 to 7300 feet (185 to 2225 meters). Blooms Mar-Aug.	**Unlikely.** The Project Area lacks north coast coniferous forest. This species is not known from Napa County (CNPS 2017b).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
swamp larkspur *Delphinium uliginosum*	Rank 4.2	Chaparral, valley and foothill grassland/serpentine seeps. Elevation ranges from 1120 to 2000 feet (340 to 610 meters). Blooms May-Jun.	**Unlikely.** Despite potentially suitable chaparral, grassland, creek beds, and mesic drainages over serpentine substrate, this species was not observed during the May rare plant survey.	No further actions are recommended for this species.
dwarf downingia *Downingia pusilla*	Rank 2B.2	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 0 to 1460 feet (1 to 445 meters). Blooms Mar-May.	**No Potential.** The Project Area lacks vernal pools known to support this species.	No further actions are recommended for this species.
streamside daisy *Erigeron biolettii*	Rank 3	Broadleafed upland forest, cismontane woodland, north coast coniferous forest/rocky, mesic. Elevation ranges from 100 to 3610 feet (30 to 1100 meters). Blooms Jun-Oct.	**Unlikely.** The Project Area lacks north coast coniferous forest and rocky sites known to support this species.	No further actions are recommended for this species.
Greene's narrow-leaved daisy *Erigeron greenei*	Rank 1B.2	Chaparral (serpentine or volcanic). Elevation ranges from 260 to 3300 feet (80 to 1005 meters). Blooms May-Sep.	**Unlikely.** Despite potentially suitable chaparral underlain by serpentine substrate, this species was not observed during the May rare plant survey conducted during the species' bloom period.	No further actions are recommended for this species.
Jepson's coyote thistle *Eryngium jepsonii*	Rank 1B.2	Valley and foothill grassland, vernal pools. Clay. Elevation ranges 10 to 980 feet (3 to 300 meters). Blooms April – August.	**No Potential.** The Project Area lacks vernal pools associated with this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
St. Helena fawn lily *Erythronium helenae*	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/volcanic or serpentine. Elevation ranges from 1150 to 4000 feet (350 to 1220 meters). Blooms Mar-May.	**Unlikely.** Despite potentially suitable chaparral, woodland, grassland, and serpentine substrate, this species was not observed during the May rare plant survey conducted during the species' bloom period.	No further actions are recommended for this species.
adobe-lily *Fritillaria pluriflora*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/often adobe. Elevation ranges from 200 to 2310 feet (60 to 705 meters). Blooms Feb-Apr.	**Unlikely.** The Project Area lacks adobe clay soils known to support this species. This species was not observed during the March rare plant survey which was conducted during this species' bloom period. Scarlet fritillary (*F. recurva*) was the only species in this genus observed during the March rare plant survey.	No further actions are recommended for this species.
Purdy's fritillary *Fritillaria purdyi*	Rank 4.3	Chaparral, cismontane woodland, lower montane coniferous forest/usually serpentine. Elevation ranges from 570 to 7400 feet (175 to 2255 meters). Blooms Mar-Jun.	**Unlikely.** The Project Area lacks adobe clay soils known to support this species. This species was not observed during the March rare plant survey which was conducted during this species' bloom period.	No further actions are recommended for this species.
Hall's harmonia *Harmonia hallii*	Rank 1B.2	Chaparral (serpentine). Elevation ranges from 1640 to 3200 feet (500 to 975 meters). Blooms Apr-Jun.	**Unlikely.** Although the Project Area contains chaparral habitat underlain by serpentine substrate, the Project Area lacks rocky openings known to support this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
nodding harmonia *Harmonia nutans*	Rank 4.3	Chaparral, cismontane woodland/rocky or gravelly, volcanic. Elevation ranges from 250 to 3200 feet (75 to 975 meters). Blooms Mar-May.	**Unlikely.** The Project Area lacks rocky, volcanic substrates known to support this species.	No further actions are recommended for this species.
serpentine sunflower *Helianthus exilis*	Rank 4.2	Chaparral, cismontane woodland/serpentine seeps. Elevation ranges from 490 to 5000 feet (150 to 1525 meters). Blooms Jun-Nov.	**Unlikely.** The Project Area lacks serpentine seeps known to support this species.	No further actions are recommended for this species.
two-carpellate western flax *Hesperolinon bicarpellatum*	Rank 1B.2	Chaparral (serpentine). Elevation ranges from 200 to 3300 feet (60 to 1005 meters). Blooms May-Jul.	**Unlikely.** Although the Project Area contains chaparral habitat underlain by serpentine substrate, the Project Area lacks serpentine barrens known to support this species (CDFW 2017).	No further actions are recommended for this species.
Sharsmith's western flax *Hesperolinon sharsmithiae*	Rank 1B.2	Chaparral/serpentine. Elevation ranges from 890 to 980 feet (270 to 300 meters). Blooms May-Jul.	**Unlikely.** Despite potentially suitable chaparral underlain by serpentine substrate, this species was not observed during the May rare plant survey.	No further actions are recommended for this species.
Colusa layia *Layia septentrionalis*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/sandy, serpentine. Elevation ranges from 330 to 3590 feet (100 to 1095 meters). Blooms Apr-May.	**Unlikely.** Despite potentially suitable chaparral, woodland, grassland, and serpentine substrate, this species was not observed during the May rare plant surveys.	No further actions are recommended for this species.
Jepson's leptosiphon *Leptosiphon jepsonii*	Rank 1B.2	Chaparral, cismontane woodland/usually volcanic. Elevation ranges from 330 to 1640 feet (100 to 500 meters). Blooms Mar-May.	**Unlikely.** Despite potentially suitable chaparral habitat, this species was not observed during March or May rare plant surveys	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
broad-lobed leptosiphon *Leptosiphon latisectus*	Rank 4.3	Broadleafed upland forest, cismontane woodland. Elevation ranges from 560 to 4920 feet (170 to 1500 meters). Blooms Apr-Jun.	**Unlikely.** Despite potentially suitable woodland habitat, this species was not observed during March or May rare plant surveys.	No further actions are recommended for this species.
Bolander's lily *Lilium bolanderi*	Rank 4.2	Chaparral, lower montane coniferous forest/serpentine. Elevation ranges from 100 to 5250 feet (30 to 1600 meters). Blooms Jun-Jul.	**Unlikely.** Although the Project Area contains chaparral underlain by serpentine substrate, chaparral habitat within the Project Area lacks open, stony patches with clayey soils known to support this species (CDFW 2017). This species is only known from Del Norte, Humboldt, and Siskiyou counties within California (CNPS 2017b).	No further actions are recommended for this species.
Sebastopol meadowfoam *Limnanthes vinculans*	FE, SE, Rank 1B.1	Meadows and seeps, valley and foothill grassland, vernal pools/vernally mesic. Elevation ranges from 50 to 1000 feet (15 to 305 meters). Blooms Apr-May.	**No Potential.** The Project Area lacks vernal pools and seeps. This species is likely restricted to Sonoma County. There is one documented occurrence within Napa County which may be introduced (CNPS 2017b).	No further actions are recommended for this species.
Napa lomatium *Lomatium repostum*	Rank 4.3	Chaparral, cismontane woodland/serpentine. Elevation ranges from 300 to 2720 feet (90 to 830 meters). Blooms Mar-Jun.	**Unlikely.** Although the Project Area contains chaparral underlain by serpentine substrate, the Project Area lacks rocky areas with mixed chaparral and black oak woodland communities known to support this species (CDFW 2017).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Cobb Mountain lupine *Lupinus sericatus*	Rank 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 900 to 5000 feet (275 to 1525 meters). Blooms Mar-Jun.	**Unlikely.** Despite potentially suitable chaparral, and woodland habitat, the Project Area lacks gravelly soils in stands of knobcone pine-oak woodland where this species is known to occur (CDFW 2017).	No further actions are recommended for this species.
Mt. Diablo cottonweed *Micropus amphibolus*	Rank 3.2	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland/rocky. Elevation ranges from 150 to 2710 feet (45 to 825 meters). Blooms Mar-May.	**Unlikely.** Despite potentially suitable chaparral, woodland, and grassland habitats, the Project Area lacks bare or rocky slopes known to support this species (CDFW 2017).	No further actions are recommended for this species.
green monardella *Monardella viridis*	Rank 4.3	Broadleafed upland forest, chaparral, cismontane woodland. Elevation ranges from 330 to 3310 feet (100 to 1010 meters). Blooms Jun-Sep.	**Potentially Present.** A monardella species with affinity to green monardella (*Mondardella* cf. *viridis*) was observed in the leather oak chaparral habitat on the southern border of the Project Area. However, identification to species level was not possible due to the lack of mature inflorescences. This species is presumed potentially present.	Despite the potential for this species to be present within the Project Area, this species was not found to be present within the Project footprint. No impacts to this species are anticipated. No further actions are recommended for this species.
cotula navarretia *Navarretia cotulifolia*	Rank 4.2	Chaparral, cismontane woodland, valley and foothill grassland/adobe. Elevation ranges from 10 to 6000 feet (4 to 1830 meters). Blooms May-Jun.	**Unlikely.** The Project Area lacks adobe clay soils known to support this species (CDFW 2017).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Jepson's navarretia *Navarretia jepsonii*	Rank 4.3	Chaparral, cismontane woodland, valley and foothill grassland/serpentine. Elevation ranges from 570 to 2810 feet (175 to 855 meters). Blooms Apr-Jun.	**Unlikely.** The Project Area contains suitable chaparral, woodland, grassland, and serpentine substrate that may potentially support this species.	No further actions are recommended for this species.
Baker's navarretia *Navarretia leucocephala ssp. bakeri*	Rank 1B.1	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools/mesic. Elevation ranges from 20 to 5710 feet (5 to 1740 meters). Blooms Apr-Jul.	**No Potential.** The Project Area lacks vernal pools and adobe or alkaline soils known to support this species (CDFW 2017).	No further actions are recommended for this species.
few-flowered navarretia *Navarretia leucocephala ssp. pauciflora*	FE, ST, Rank 1B.1	Vernal pools (volcanic ash flow). Elevation ranges from 1310 to 2810 feet (400 to 855 meters). Blooms May-Jun.	**No Potential.** The Project Area lacks vernal pools underlain by volcanic substrates which are known to support this species.	No further actions are recommended for this species.
Porter's navarretia *Navarretia paradoxinota*	Rank 1B.3	Openings, vernally mesic, often drainages. Meadows and seeps. Serpentine. Elevation ranges from 540 to 2760 feet (165 to 840 meters). Blooms May-July	**Unlikely.** Despite potentially suitable vernally mesic habitat and serpentine substrate, this species was not observed during the May rare plant survey.	No further actions are recommended for this species.
Marin County navarretia *Navarretia rosulata*	Rank 1B.2	Closed-cone coniferous forest, chaparral/serpentine, rocky. Elevation ranges from 660 to 2080 feet (200 to 635 meters). Blooms May-Jul.	**Unlikely.** Despite potentially suitable chaparral underlain by serpentine substrate, this habitat lacks open rocky sites known to support this species (CDFW 2017).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Wooly angelica *Angelica tomentosa*	L-3	A perennial forb that typically occurs in wooded areas with serpentine influence, at elevations ranging from 100 to 6760 feet.	**Potentially Present.** An angelica species with affinity to wool angelica (*Angelica cf. tomentosa*), was observed in the western portion of the Project Area in valley oak woodland, leather oak chaparral, and gray pine woodland habitats. Identification to species level was not possible due the lack of mature inflorescences. This species is presumed present.	Despite the potential for this species to be present near the Project Area, this species was not found to be present within the Project footprint. No impacts to this species are anticipated. No further actions are recommended for this species.
Sonoma beardtongue *Penstemon newberryi var. sonomensis*	Rank 1B.3	Chaparral (rocky). Elevation ranges from 2300 to 4490 feet (700 to 1370 meters). Blooms Apr-Aug.	**No Potential.** The Project Area lacks rock outcrops and talus slopes known to support this species (CDFW 2017). The Project Area is also well below the documented elevation range of this species.	No further actions are recommended for this species.
Lobb's aquatic buttercup *Ranunculus lobbii*	Rank 4.2	Cismontane woodland, north coast coniferous forest, valley and foothill grassland, vernal pools/mesic. Elevation ranges from 50 to 1540 feet (15 to 470 meters). Blooms Feb-May.	**Unlikely.** Despite The potentially suitable wetlands and pond edges, this species was not observed during March or May rare plant surveys.	No further actions are recommended for this species.
Cleveland's ragwort *Senecio clevelandii var. clevelandii*	Rank 4.3	Chaparral (serpentine seeps). Elevation ranges from 1200 to 2950 feet (365 to 900 meters). Blooms Jun-Jul.	**Unlikely.** The Project Area lacks serpentine seeps known to support this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
marsh checkerbloom *Sidalcea oregana ssp. hydrophila*	Rank 1B.2	Meadows and seeps, riparian forest/mesic. Elevation ranges from 3610 to 7550 feet (1100 to 2300 meters). Blooms (Jun), Jul-Aug.	**Moderate Potential.** The habitat in close proximity to the Project Area contains suitable wet meadows and marsh habitat that could potentially support this species.	Although this species has potential to occur within the seasonal wetland and marsh fringe of Maxville lake the Project footprint does not contain suitable habitat. No impacts to this species are anticipated. No further actions are recommended for this species.
green jewelflower *Streptanthus hesperidis*	Rank 1B.2	Chaparral (openings), cismontane woodland/serpentine, rocky. Elevation ranges from 430 to 2490 feet (130 to 760 meters). Blooms May-Jul.	**Unlikely.** Despite potentially suitable chaparral habitat underlain by serpentine substrate, the Project Area lacks open, rocky serpentine sites known to support this species (CDFW 2017).	No further actions are recommended for this species.
Three Peaks jewelflower *Streptanthus morrisonii ssp. elatus*	Rank 1B.2	Chaparral (serpentine). Elevation ranges from 300 to 2670 feet (90 to 815 meters). Blooms Jun-Sep.	**Unlikely.** The Project Area lacks serpentine barrens, outcrops and talus known to support this species (CDFW 2017).	No further actions are recommended for this species.
marsh zigadenus *Toxicoscordion fontanum*	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, marshes and swamps/vernally mesic, often serpentine. Elevation ranges from 50 to 3280 feet (15 to 1000 meters). Blooms Apr-Jul.	**Unlikely.** Despite potentially suitable vernally mesic wetlands, marshes and serpentine substrate that may potentially support this species, this species was not observed during the May rare plant survey. .	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Napa bluecurls *Trichostema ruygtii*	Rank 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, vernal pools. Elevation ranges from 100 to 2230 feet (30 to 680 meters). Blooms Jun-Oct.	**Unlikely.** Despite potentially suitable chaparral, woodland, and grassland habitats, this species is generally associated with thin clay soils near volcanic bedrock which are not present in the Project Area (Lewis 2006).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Mammals				
American badger *Taxidea taxus*	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**Unlikely.** There are no CNDDB occurrences of this species in the vicinity of the Project Area (CDFW 2017). There were also no signs of badger and no suitable burrows observed during the site visit.	No further actions are recommended for this species.
Ringtail (ring-tailed cat) *Bassariscus astutus*	CFP	Is widely distributed throughout most of California, but absent from some portions of the Central Valley and northeastern California. The species is nocturnal, primarily carnivorous and is associated with a mixture of dry forest and shrubland in close association with rocky areas and riparian habitat, using hollow trees and cavities for shelter. Usually not found more than 1 km (0.6 mi) from permanent water.	**Unlikely.** Only marginal or unsuitable habitat exists in the Project Area, as the site does not contain undisturbed forest and shrubland habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
pallid bat *Antrozous pallidus*	SSC, WBWG:	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various human structures such as bridges, barns, and human-occupied as well as vacant buildings. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**High Potential.** The nearest CNDDB occurrence for this species is located approximately 1.5 miles east of the Project Area and there are several occurrences within 5 miles (CDFW 2017). The Project Area contains open woodlands, riparian habitat and buildings that could support roosting for this species.	Recommendations for this species are provided in Section 5.4.2.
silver-haired bat *Lasionycteris noctivagans*	WBWG: Medium	Summer habitats include coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. This species is primarily a forest dweller, feeding over streams, ponds, and open brushy areas. It roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark.	**Present.** The species was detected foraging in the Project Area during the March 2017 site visit. The Project Area contains woodland, forest, riparian and pond habitat suitable for this species. The Project Area could also support roosting in hollow trees, snags and buildings on the property.	Recommendations for this species are provided in Section 5.4.2.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Townsend's big-eared bat *Corynorhinus townsendii*	SSC, WBWG high	This species is associated with a wide variety of habitats from deserts to mid-elevation mixed coniferous-deciduous forest. Females form maternity colonies in buildings, caves and mines and males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.	**Moderate Potential.** The nearest CNDDB occurrences for this species are located 0.9 mile west (from 1945) and 2.2 miles west (from 1988; CDFW 2017). However, the Project Area does not contain mines or buildings suitable for a maternity roost. The species may forage in the open forest habitat within the Project Area.	Recommendations for this species are provided in Section 5.4.2.
western red bat *Lasiurus blossevillii*	SSC, WBWG high	This species is highly migratory and is typically solitary, roosting primarily in the foliage of trees or shrubs. It is associated with broad-leaved tree species, including cottonwoods, sycamores, alders, and maples. Day roosts are common in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	**Moderate Potential.** This species has not been documented within the vicinity of the Project Area (CDFW 2017). However, the Project Area contains trees and riparian edge habitats that may provide suitable roosting habitat for this species.	Recommendations for this species are provided in Section 5.4.2.
hoary bat *Lasiurus cinereus*	WBWG medium	Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	**Present.** The species was detected during the March 2017 site visit. The Project Area contains dense tree foliage suitable for roosting as well as pond and stream habitat to provide water.	Recommendations for this species are provided in Section 5.4.2.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
fringed myotis *Myotis thysanodes*	WBWG high	Associated with a wide variety of habitats including dry woodlands, desert scrub, mesic coniferous forest, grassland, and sage-grass steppes. Buildings, mines and large trees and snags are important day and night roosts.	**High Potential.** The nearest CNDDB occurrence for this species is located 6.8 miles southwest of the Project Area (CDFW 2017). The Project Area contains dry woodland and grassland habitat that could provide suitable foraging for this species. Buildings and trees within the Project Area could also provide suitable roosting habitat for this species.	Recommendations for this species are provided in Section 5.4.2.
long-eared myotis *Myotis evotis*	WBWG medium	Occurs in semiarid shrublands, sage, chaparral, and agricultural areas, but is usually associated with coniferous forests from seal level to 9000 feet. Individuals roost under exfoliating tree bark, and in hollow trees, caves, mines, cliff crevices, and rocky outcrops on the ground. They also sometimes roost in buildings and under bridges.	**Present.** This species was detected during the March 2017 site visit, and the Project Area contains trees and buildings that may provide suitable roosting habitat.	Recommendations for this species are provided in Section 5.4.2.
Yuma myotis *Myotis yumanensis*	WBWG low	Known for its ability to survive in urbanized environments. Also found in heavily forested settings. Day roosts in buildings, trees, mines, caves, bridges and rock crevices. Night roosts associated with man-made structures.	**Present.** This species was detected during the March 2017 site visit, and the Project Area contains trees and buildings that may provide suitable roosting habitat.	Recommendations for this species are provided in Section 5.4.2.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Birds				
golden eagle *Aquila chrysaetos*	CFP, BCC, EPA	Resident in rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees in open areas.	**Unlikely.** The nearest CNDDB record for this species is located 9.8 miles northeast of the Project Area (CDFW 2017) and the species was not observed during field surveys. The Project Area provides marginal or suboptimal foraging and nesting habitat for this species. High quality habitat is found on the more arid oak woodland ridge lines that are outside of the Project Area.	No further actions are recommended for this species.
bald eagle *Haliaeetus leucocephalus*	FD, SE, CFP, BCC, EPA	Occurs year-round in California, but primarily a winter visitor. Nests in large trees in the vicinity of larger lakes, reservoirs and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	**Unlikely.** The species was not observed during field surveys and no nests were observed within or adjacent to the Project Area. The species may occasionally fly over the area; however, higher quality nesting and foraging habitat occurs around Lake Hennessey which is >3.8 miles to the south.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
ferruginous hawk *Buteo regalis*	BCC	Winter visitor. Frequents open habitats including grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys and fringes of pinyon-juniper habitats. Preys on rodents and other vertebrates.	**Unlikely.** This species is not known to breed in Napa County (Berner et al. 2003).	No further actions are recommended for this species.
Swainson's hawk *Buteo swainsonii*	ST, BCC	Summer resident in the region. Forages in grasslands and nests in the immediate vicinity, often in relatively isolated, trees or tree groves. Most of the California population breeds in the Central Valley. Forages on insects and rodents, also other vertebrates.	**Unlikely.** The nearest CNDDB occurrence for this species is located about 7.3 miles south of the Project Area and the species is not documented to nest in Napa County.	No further actions are recommended for this species.
northern harrier *Circus cyaneus*	SSC	Nests and forages in grassland habitats, usually in association with coastal salt and freshwater marshes. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. May also occur in alkali desert sinks.	**Unlikely.** The species is not known to nest in the vicinity (CDFW 2017, Berner et al. 2003). The Project Area does not contain sufficient marsh habitat to support nesting of this species. However, the species may occasionally forage in the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
white-tailed kite *Elanus leucurus*	CFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	**Moderate Potential.** The nearest CNDDB record for this species is 9 miles south of the Project Area (CDFW 2017), but there are several observations within 5 miles (eBird 2017). The Project Area contains trees, shrubs, grassland, marsh and vineyard areas that could provide suitable nesting and foraging habitat for this species.	Recommendations for this species are provided in Section 5.4.1.
prairie falcon *Falco mexicanus*	BCC	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	**Unlikely.** This species is only known to be resident in the northeastern shore of Lake Berryessa within Napa County (Berner et al. 2003). The Project Area does not contain cliffs suitable for breeding of this species.	No further actions are recommended for this species.
American peregrine falcon *Falco peregrinus anatum*	CFP, BCC	Year-round resident and winter visitor. Occurs in a wide variety of habitats, though often associated with coasts, bays, marshes and other bodies of water. Nests on protected cliffs and also on man-made structures including buildings and bridges. Preys on birds, especially waterbirds. Forages widely.	**Unlikely.** There are no CNDDB records of this species and the species is not known to breed in the vicinity (CDFW 2017, Berner et al. 2003).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
burrowing owl *Athene cunicularia*	BCC, SSC	Inhabits, dry annual or perennial grassland, desert and scrubland characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably California ground squirrel.	**Unlikely.** The nearest CNDDB record for this species is located over 9 miles northeast of the Project Area and the species is not confirmed to breed in Napa County (Berner et al. 2003).	No further actions are recommended for this species.
short-eared owl *Asio flammeus*	SSC	Occurs year-round, but primarily as a winter visitor; breeding very restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles.	**Unlikely.** There are no documented occurrences of this species in the vicinity, and the species is not known to breed in Napa County. Further, the Project Area contains treeless grasslands or marshes suitable for foraging and roosting.	No further actions are recommended for this species.
long-eared owl *Asio otus*	SSC	Occurs year-round in California. Nests in trees in a variety of woodland habitats, including oak and riparian, as well as tree groves. Requires adjacent open land with rodents for foraging, and the presence of old nests of larger birds (hawks, crows, magpies) for breeding.	**Unlikely.** This species is not known to breed or occur in the vicinity (CDFW 2017, eBird 2017, Berner et al. 2003).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
northern spotted owl *Strix occidentalis caurina*	FT,SC (T) SSC	Year-round resident in dense, structurally complex forests, primarily those with old-growth conifers. Nests on platform-like substrates in the forest canopy, including in tree cavities. Preys on mammals.	**Unlikely.** The nearest spotted owl observation is located approximately 0.6 mile southwest of the Project Area (CDFW 2017). However, the Project Area does not contain dense forest with old-growth conifers suitable for nesting.	No further actions are recommended for this species.
least bittern *Ixobrychus exilis*	SSC, BCC	Summer resident in portions of the Central Valley and southern California. Typically breeds in deeper freshwater marshes with dense emergent and woody vegetation.	**No Potential.** The Project Area is outside of the known range for this species.	No further actions are recommended for this species.
long-billed curlew *Numenius americanus*	BCC	Breeds in upland shortgrass prairies and wet meadows in northeastern California. Habitats on gravelly soils and gently rolling terrain are favored over others	**Unlikely.** The Project Area does not contain suitable wet meadows and shortgrass prairie habitat.	No further actions are recommended for this species.
great egret *Ardea alba*	CDF sensitive	(Rookery) Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	**Unlikely.** The Project Area does not contain lakes or rivers that are suitable for a rookery.	No further actions are recommended for this species.
marbled godwit *Limosa fedoa*	BCC	Winter visitor to the Pacific Coast and Central Valley. Nests in grassy marshes. Forages along beach and pond shores.	**Unlikely.** This species has not been documented in the vicinity (CDFW 2017) and is not known to breed in Napa County (Berner et al. 2003).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
purple martin *Progne subis*	SSC	Inhabits woodlands and low elevation coniferous forests. Nests in old woodpecker cavities and human-made structures. Nest is often located in tall, isolated tree or snag.	**Moderate Potential.** The nearest CNDDB record for this species is located 3.8 miles southwest (CDFW 2017). The Project Area contains woodland habitat, conifers and woodpecker cavities that could provide suitable habitat for this species.	Recommendations for this species are provided in Section 5.4.1.
bank swallow *Riparia riparia*	ST	Migrant in riparian and other lowland habitats in western California. Colonial nester in riparian areas with vertical cliffs and bands with fine-textured or fine-textured sandy soils near streams, rivers, lakes or the ocean. Historical range in southern and central areas of California has been eliminated by loss of nesting habitat due to flood and erosion-control projects, but currently is known to breed in Siskiyou, Shasta, and Lassen Cos., and along Sacramento River from Shasta Co. south to Yolo Co.	**Unlikely.** The Project Area is outside of the known breeding range for this species and no suitable bank habitat exists within the Project Area.	No further actions are recommended for this species.
Nuttall's woodpecker *Picoides nuttallii*	BCC	Year-round resident in lowland woodlands throughout much of California west of the Sierra Nevada. Typical habitat is dominated by oaks; also occurs in riparian woodland. Nests in tree cavities.	**Present.** This species was detected during the March 2017 site visit. The Project Area contains suitable oak and riparian woodland habitat.	Recommendations for this species are provided in Section 5.4.1.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Lewis's woodpecker *Melanerpes lewis*	BCC	Uncommon winter resident occurring on open oak savannahs, broken deciduous and coniferous habitats.	**Unlikely.** This species has not been documented to breed in Napa County (Berner et al. 2003). There are no CNDDB records in the vicinity of the Project Area (CDFW 2017).	No further actions are recommended for this species.
black swift *Cypseloides niger*	SSC, BCC	Summer resident with a fragmented breeding distribution; most occupied areas in California either montane or coastal. Breeds in small colonies on cliffs behind or adjacent to waterfalls, in deep canyons, and sea-bluffs above surf. Forages aerially over wide areas.	**Unlikely.** The Project Area does not contain suitable cliff or deep canyon habitat.	No further actions are recommended for this species.
Vaux's swift *Chaetura vauxi*	SSC	Summer resident, breeding primarily in forested areas. Nests in tree cavities, favoring those with a large vertical extent; also uses chimneys and other man-made substrates. Forages aerially for insects.	**Unlikely.** This species has not been documented to breed in Napa County (Berner et al. 2003).	No further actions are recommended for this species.
loggerhead shrike *Lanius ludovicianus*	BCC, SSC	Found in broken woodlands, savannah, pinyon-juniper, Joshua tree and riparian woodlands, and desert oases, scrub, and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	**Moderate Potential.** Loggerhead shrike have been observed only rarely in Pope Valley (Berner et al. 2003, eBird 2017). The Project Area contains some broken woodland area that may provide suitable foraging and nesting habitat.	Recommendations for this species are provided in Section 5.4.1.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
double-crested cormorant *Phalacrocorax auritus* not SSC or BCC	DFG:WL	(Rookery site) colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	**Unlikely.** The species was observed foraging within the pond in the Project Area. However, the Project Area does not contain suitable rookery habitat for this species, and nesting is only suspected or known to occur at Lake Hennessey and southern Napa County (Berner et al. 2003).	No further actions are recommended for this species.
great blue heron *Ardea herodias*	none (breeding sites protected by CDFW); CDF sensitive	Year-round resident. Nests colonially or semi-colonially in tall trees and on cliffs, also sequested terrestrial substrates. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Unlikely.** The species was observed foraging in the pond located in the Project Area. However, the Project Area does not contain suitable breeding sites for a colony.	No further actions are recommended for this species.
great egret *Ardea alba*	none (breeding sites protected by CDFW); CDF sensitive	Year-round resident. Nests colonially or semi-colonially, usually in trees, occasionally on the ground or elevated platforms. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Unlikely.** The Project Area does not contain suitable breeding sites for a colony.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
least Bell's vireo *Vireo bellii pusillus*	FE, SE	Summer resident. Breeds in riparian habitat along perennial or intermittent rivers and creeks; prefers a multi-tiered canopy with dense early successional vegetation in the understory. Willows, mulefat and other understory species are typically used for nesting.	**No Potential.** The Project Area is outside of the known breeding range for this species.	No further actions are recommended for this species.
olive-sided flycatcher *Contopus cooperi*	SSC, BCC	Summer resident. Typical breeding habitat is montane coniferous forests. At lower elevations, also occurs in wooded canyons and mixed forests and woodlands. Often associated with forest edges. Arboreal nest sites located well off the ground.	**Unlikely.** The Project Area is not located within montane coniferous forest, and the species has not been observed in the vicinity (eBird 2017, CDFW 2017).	No further actions are recommended for this species.
yellow warbler *Setophaga (Dendroica) petechia brewsteri*	SSC, BCC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting variable, but dense willow growth is typical. Occurs widely on migration.	**Moderate Potential.** This species is known to breed in the vicinity (Berner et al. 2003). The Project Area contains riparian habitat and willows that may be suitable for breeding.	Recommendations for this species are provided in Section 5.4.1.
oak titmouse *Baeolophus inornatus*	BCC	Occurs year-round in woodland and savannah habitats where oaks are present, as well as riparian areas. Nests in tree cavities.	**High Potential.** This species commonly breeds in the region (Berner et al. 2003). The Project Area contains oak woodland, riparian habitat and tree cavities for this species that provides suitable habitat for this species.	Recommendations for this species are provided in Section 5.4.1.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
yellow-breasted chat *Icteria virens*	SSC	Summer resident, occurring in riparian areas with an open canopy, very dense understory, and trees for song perches. Nests in thickets of willow, blackberry, and wild grape.	**Unlikely.** The Project Area does not occur within the Napa Velley where this species is known to breed (Berner et al. 2003).	No further actions are recommended for this species.
tricolored blackbird *Agelaius tricolor*	SC, BCC, SSC	Usually nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs. Nesting area must be large enough to support about 50 pairs.	**Unlikely.** The nearest CNDDB record for this species is located 2.5 miles north of the Project Area and it is known to nest in Pope Valley (2 miles north to northeast); however, the Project Area does not contain areas with dense cattails that could support a nesting colony. Additionally, the species was not observed during any of the survey dates.	No further actions are recommended for this species.
yellow-headed blackbird *Xanthocephalus xanthocephalus*	SSC	Summer resident. Breeds colonially in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. Requires abundant large insects such as dragonflies; nesting is timed for maximum emergence of insect prey.	**Unlikely.** This species is only known to breed in far southern Napa County (Berner et al. 2003).	No further actions are recommended for this species.
fox sparrow *Passerrella iliaca*	BCC	Winter resident. Breeds in coniferous forests, riparian woodland, scrub and chaparral habitats.	**Unlikely.** This species is not known to breed in Napa County (Berner et al 2003).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Bell's sage sparrow *Amphispiza belli belli*	BCC, SSC	Year-round resident, though shows seasonal movements. Prefers dense chaparral and scrub habitats for breeding; strongly associated with chamise. Also occurs in more open habitats during winter.	**No Potential.** This species is not known to occur or breed in the vicinity (CDFW 2017, eBird 2017).	No further actions are recommended for this species.
Reptiles and Amphibians				
western spadefoot *Spea (=Scaphiopus) hammondii*	SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Shallow temporary pools formed by winter rains are essential for breeding and egg-laying.	**No Potential.** The Project Area is outside of the known range for this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
California red-legged frog *Rana draytonii*	FT, SSC, RP	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Unlikely.** The nearest CNDDB record for this species is located 3.5 miles northwest of the Project Area, dated 1979, and there are no other reported occurrences within 5 miles (CDFW 2017). The species was not detected during targeted day and night surveys and there are invasive predatory fish and bullfrogs in the pond/lake features within or in close proximity to the Project Area and the habitat immediately adjacent. While there are a number of agricultural ponds outside of the Project Area, there is no evidence that CRLF occurs in the Project Area or immediate vicinity.	No further actions are recommended for this species.
foothill yellow-legged frog *Rana boylii*	SSC	Found in or near rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.	**Unlikely.** The nearest CNDDB record for this species is located 4.4 miles north of the Project Area, and is dated 1974 (CDFW 2017). The Project Area does not contain perennial cobble streams with available basking habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
California tiger salamander *Ambystoma californiense*	FE/FT, ST, RP	Populations in Santa Barbara and Sonoma Counties are currently listed as endangered, and the Central Valley populations are listed as threatened. Inhabits grassland, oak woodland, ruderal and seasonal pool habitats. Seasonal ponds and vernal pools are crucial to breeding. Adults utilize mammal burrows as estivation habitat.	**No Potential.** The Project Area is outside of the known range for this species.	No further actions are recommended for this species.
giant garter snake *Thamnophis gigas*	FT, ST, RP	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	**No Potential.** The Project Area is outside of the known range for this species.	No further actions are recommended for this species.
western pond turtle *Actinemys marmorata*	SSC	Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter.	**Unlikely.** This species was not observed during any of the six surveys conducted in 2015 or 2016.	No further actions are recommended for this species.
Fishes				
Delta smelt *Hypomesus transpacificus*	FT, SE, RP	Lives in the Sacramento-San Joaquin estuary in areas where salt and freshwater systems meet. Occurs seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt; most often at salinities < 2 ppt.	**No Potential.** The Project Area does not contain estuary habitat suitable for this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Chinook salmon - central valley spring-run ESU *Oncorhynchus tshawytscha*	FT,ST	Occurs in the Feather River and the Sacramento River and its tributaries, including Butte, Mill, Deer, Antelope and Beegum Creeks. Adults enter the Sacramento River from late March through September. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams from mid-August through early October. Juveniles migrate soon after emergence as young-of-the-year, or remain in freshwater and migrate as yearlings.	**No Potential.** The Project Area is outside of the known range for this species.	No further actions are recommended for this species.
Chinook salmon - central valley fall/late fall-run ESU *Oncorhynchus tshawytscha*	SSC, RP, NMFS	Populations spawning in the Sacramento and San Joaquin Rivers and their tributaries. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean	**No Potential.** The Project Area is outside of the known range for this species.	No further actions are recommended for this species.
steelhead - central CA coast DPS *Oncorhynchus mykiss irideus*	FT, NMFS	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**Unlikely.** There is a total fish barrier on Conn Creek that blocks migration of this species to the stream running through the Project Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
Invertebrates				
Ricksecker's water scavenger beetle *Hydrochara rickseckeri*	SSI	Small aquatic beetle known only from pond habitats scattered around the San Francisco Bay area, including Marin, Sonoma, Alameda, and Contra Costa counties. Extensive surveys from 1988 failed to locate this species. The locations of existing populations remain unknown (Hafernick 1989).	**No Potential.** The Project Area is outside of the known range for this species.	No further actions are recommended for this species.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT, SSI, RP	Occurs only in the central valley of California, in association with blue elderberry (*Sambucus nigra* ssp. *caerulea*). Prefers to lay eggs in elderberry 2 to 8 inches in diameter; some preference shown for "stressed" elderberry.	**No Potential.** The Project Area is outside of the known range for this species.	No further actions are recommended for this species.
California freshwater shrimp *Syncaris pacifica*	FE, SE, SSI, RP	Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main stream flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	**Unlikely.** The nearest CNDDB occurrence for this species is located over 10 miles west of the Project Area. The Project Area does not contain structurally complex banks suitable for this species.	No further actions are recommended for this species.
vernal pool fairy shrimp *Branchinecta lynchi*	FT, SSI, RP	Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains, in astatic rain-filled pools. Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**No Potential.** The Project Area does not contain appropriate vernal pool habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
vernal pool tadpole shrimp *Lepidurus packardi*	FE, SSI, RP	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**No Potential.** The Project Area does not contain appropriate vernal pool habitat.	No further actions are recommended for this species.
conservancy fairy shrimp *Branchinecta conservatio*	FE, SSI, RP	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	**No Potential.** The Project Area does not contain appropriate vernal pool habitat.	No further actions are recommended for this species.
California linderiella *Linderiella occidentalis*	SSI, RP	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and TDS	**No Potential.** The Project Area does not contain appropriate vernal pool habitat.	No further actions are recommended for this species.
Delta green ground beetle *Elaphrus viridis*	FT, SSI, RP	Restricted to the margins of vernal pools in the grassland area between Jepson Prairie and Travis Air Force Base. Prefers the sandy mud substrate where it slopes gently into the water, with low-growing vegetation, 25 to100% cover.	**No Potential.** The Project Area does not contain appropriate vernal pool habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE	RECOMMENDATIONS
monarch butterfly *Danaus plexippus*	SSI	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	**No Potential.** The Project Area is not located along the coast where roost sites occur.	No further actions are recommended for this species.

*** Key to status codes:**

BCC	USFWS Birds of Conservation Concern
CFP	CDFW Fully Protected Animal
EPA	Eagle Protection Act Species
FE	Federal Endangered
FT	Federal Threatened
NMFS	Species under the Jurisdiction of the NMFS
RP	Species included in a USFWS Recovery Plan or Draft Recovery Plan
SE	State Endangered
ST	State Threatened
SSC	CDFW Species of Special Concern
SSI	CDFW Special-Status Invertebrate
WBWG	Western Bat Working Group (High or Medium) Priority species
Rank 1A	CRPR Rank 1A: Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	CRPR Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2B	CRPR Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3	CRPR Rank 3: Plants about which CNPS needs more information (a review list)
Rank 4	CRPR Rank 4: Plants of limited distribution - A watch list
L-3	Locally Rare; vulnerable locally equivalent to G3 ranking

Species Evaluations: See evaluation definitions in Section 3.2. of the report.