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Biological Report and Purple needlegrass supplemental letter

The Winery at Mount Veeder Use Permit P22-00248-UP, Exception to the Conservation Regulations P25-00088-UP, and Exception to the Roads and Street Standards
Planning Commission Hearing - June 4, 2025

BIOLOGICAL RESOURCES REPORT

1300 Mount Veeder Road Winery and Driveway Expansion Project, Napa County, California

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SOL ECOLOGY

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LIST OF ACRONYMS AND ABBREVIATIONS

CDFG/CDFW	California Department of Fish and Game/Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
ESA	Federal Endangered Species Act
MBTA	Migratory Bird Treaty Act
NRCS	Natural Resources Conservation Service
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WBWG	Western Bat Working Group

1.0 INTRODUCTION

On June 3 and July 9, 2021, Sol Ecology, Inc. (Sol Ecology) performed a biological resources study at 1300 Mt. Veeder Road, Napa County, California (Project Study Area and Sensitive Communities, see Appendix A – Figure 1). The purpose of the study was to evaluate the proposed winery expansion and driveway improvements project on potential biological resources under the guidelines of the California Environmental Quality Act (CEQA) for the Napa County Planning Department and other applicable state and federal regulations. This report describes the results of the Project Study Area assessment and surveys for the presence of sensitive biological resources protected by local, state, and federal laws and regulations. This report also contains an evaluation of potential impacts to sensitive biological resources that may occur from the proposed project and potential mitigation measures to compensate for those impacts as warranted. This report is based on information available at the time of the study and on-site conditions that were observed on the dates of the site visits.

1.1 Project Setting

The Project Study Area (Study Area) is located at 1300 Mt. Veeder Road in unincorporated Napa County, accessed via Redwood Road, off Highway 29. The approximate 44-acre Project Study Area is within a 114.87-acre parcel (APN 034-230-029, Appendix A, Figure 1). The parcel is currently zoned as Agriculture Watershed (AW) and (County of Napa 2021). The parcel is bounded by vineyard, mixed oak woodland forest, stream, and riparian forest, an existing residential home, and Mt. Veeder Road. The parcel has been historically disturbed and used as operational vineyards.

Elevations within the Project Study Area range from approximately 91 to 296 meters (300 to 970 feet) above mean sea level. General topography of the study area consists of the fairly steep (15 to 20 percent slopes) hillslopes of the Mayacama Mountains on the western side of Napa Valley. The Project Study Area consists of steep mostly west-facing slopes and broader, gently sloping ridgetop areas comprised of vineyards and existing development, including one single-family residence (currently vacant) located in the central portion of the project site, landscaping around the onsite residence, and an existing gravel driveway that provides access to the Project Study Area and project site from Mount Veeder Road.

1.2 Project Description

The proposed winery expansion and driveway improvements project involves the clearing of vegetation, earthmoving, and the installation and maintenance of erosion control measures associated with the development of an approximately 13,754 square foot (SF) wine cave and a 1,052 SF hospitality pavilion, and landscape pathway with stairs. To meet Napa County standards, the proposed project includes improvements to the existing driveway to incorporate turnouts and a bridge replacement connecting the property to Mount Veeder Road. Project earthmoving operations will result in an excess of soil spoils, which will be repurposed for landslide repair

along the western slopes (outside of drainages) and regrading fill onto the previously disturbed vineyard hilltop area.

The bridge at Mt. Veeder Road and Pickle Creek is being replaced to meet baseline conditions and Napa County standards. It is anticipated that the bridge replacement will involve impacts to the jurisdictional stream and the adjacent oak woodland habitat. The Pickle Creek streambank slope break at the bridge replacement cross section is an estimated 5% grade, inciting a 45-foot Napa County streamside setback requirement.

2.0 METHODS

On June 3 and July 9, 2021, the Project Study Area was traversed on foot to determine the presence of (1) plant communities both sensitive and non-sensitive, (2) special status plant and wildlife species, (3) presence of essential habitat elements for any special status plant or wildlife species, and (4) the presence and extent of wetland and non-wetland waters.

2.1 Literature Review

To evaluate whether special status species or other sensitive biological resources (e.g., streams, wetlands) could occur in the Project Study Area and vicinity, Sol Ecology biologists reviewed the following:

- California Native Plant Society's (CNPS's) Inventory of Rare and Endangered Plants of California search for U.S. Geological Survey (USGS) 7.5-minute Rutherford quadrangle and eight adjacent quadrangles (CNPS 2022)
- California Natural Diversity Database (CNDDB) records search for USGS 7.5-minute Rutherford quadrangle and eight adjacent quadrangles (California Department of Fish and Wildlife [CDFW] 2022)
- U.S. Fish and Wildlife Service (USFWS) list of threatened and endangered species for the Project Study Area (IPaC) (USFWS 2022a)
- CDFG (California Department of Fish and Game) publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication *California Bird Species of Special Concern* (Shuford and Gardali 2008)
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- USFWS National Wetlands Inventory, Wetlands Mapper (USFWS 2021b)
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey (USDA 2019)

Based on information from the above sources, Sol Ecology developed lists of special status species and natural communities of special concern that could be present in the project vicinity (Appendix B). Figures 2 and 3 present the results of a 5-mile CNDDB record search around the Project Study Area for special status plants and wildlife (Appendix A). All biological resources are evaluated for their potential to occur within the Project Study Area in Section 3.0 of this report.

2.2 Field Survey

The Project Study Area was evaluated for the presence of sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFW, County-mapped riparian corridors, habitat connectivity corridors, and scenic corridors. Sensitive communities were identified following A Manual of California Vegetation, Online Edition and includes California Wildlife Habitat Relationships habitat classifications.

Protocol-level surveys for special status plants with potential to occur were also performed on June 3, 2021, in accordance with CDFW protocol (CDFW 2018) which corresponded with the period when species with potential to occur would be identifiable. The entire Project Study Area (including areas outside the proposed footprint) was traversed on foot and all observed plant species were recorded and identified with Jepson eFlora to a taxonomic level sufficient to determine rarity. All observed plant species were recorded (Appendix C – Observed Species Table).

Sol Ecology biologists also performed reconnaissance-level surveys for special status species on and adjacent to the Project Study Area on June 3 and July 9, 2021. The focus of the surveys was to identify whether suitable habitat elements for each of the special status species documented in the surrounding vicinity are present on the Project Study Area or not, and whether the project would have the potential to result in impacts to any of these species and/or their habitats either on- or off-site. Habitat elements examined for the potential presence of sensitive plant species included soil type, elevation, vegetation community, and dominant plant species. For wildlife species, habitat elements examined included the presence of dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting) habitat.

2.2.1 Wetland Delineation

A formal wetland delineation was conducted at the time of the June 3 and July 9, 2021, site visit. Concurrently with the botanical and wildlife surveys, biologists identified wetland and non-wetland waters potentially subject to regulation by the federal government (U.S. Army Corps of Engineers [USACE]) and the state of California (Regional Water Quality Control Board [RWQCB] and CDFW). The delineation of wetland boundaries was based on the presence/absence of indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. The boundaries of non-wetland waters were identified by locating the ordinary high-water mark (OHWM).

The USACE and RWQCB recognize a three-parameter approach to wetland delineation where a feature must contain hydrophytic vegetation, hydric soils, and wetland hydrology. The methodology for identifying wetland indicators followed the *USACE Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the USACE of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). Plant species within potential wetlands were assigned a wetland status according to the USACE list of plant species that occur in wetlands (USACE 2018). This wetland plant classification system is based on the expected frequency of occurrence of each species in wetlands. The classification system has the following categories, which determine the frequency with which plants occur in wetlands:

OBL	Obligate, almost always found wetlands	>99% frequency
FACW	Facultative wetland, usually found in wetlands	67-99%
FAC	Facultative, equal in wetland or non-wetlands	34-67%
FACU	Facultative upland, usually found in non-wetlands	1-33%
UPL/NL	Not found in local wetlands	<1%
NI	Wetland preference unknown	

Species with OBL, FACW, and FAC classifications are considered hydrophytic vegetation. If more than 50 percent of the dominant plant species are hydrophytic, the area meets the hydrophytic vegetation criterion.

Soils in the Project Study Area were examined for hydric soil indicators. Soils formed under wetland (anaerobic) conditions generally have a low chroma matrix color, designated 0, 1, or 2, and contain mottles or other redoximorphic features. Soil profiles were characterized by depth, color, redoximorphic features, and texture. Soil color and chroma were determined using the *Munsell Soil Color Book* to determine if the soils in a particular area could be considered hydric (Munsell Color 2009).

Positive indicators of wetland hydrology can include direct evidence (primary indicators), such as visible inundation or saturation, surface sediment deposits, oxidized root channels, and drift lines, or indirect indicators (secondary indicators) such as algal mats, shallow restrictive layers in the soil, or vegetation meeting the FAC-neutral test. Depressions, seeps, and topographic low areas were examined for these hydrological indicators.

3.0 RESULTS

3.1 Existing Conditions and General Wildlife Use

The Project Study Area encompasses three soil map units identified by the USDA, NRCS (USDA 2019):

- **Felton gravelly loam, 30 to 50 percent slopes, MLRA 136**: This soil map unit is well drained and occurs on hillslopes. Soil parent material is residuum weathered from sandstone and shale. Felton gravelly loam soil series is not rated as hydric.
- **Fagan clay loam, 30 to 50 percent slopes and 15 to 30 percent slopes, MLRAs 132 and 133**: Two soil map units are reported within the Fagan clay loam series. These soil map units are well drained and occur on hillslopes. Soil parent material is residuum weathered from sandstone and shale. Fagan clay loam soil series is not rated as hydric.

Vegetation types within the Project Study Area consist of mixed forest, oak woodland, annual grassland, vineyards, and other developed lands. Vegetation communities present in the Project Study Area were classified based on existing plant community descriptions described in the California Native Plant Society Online Manual of California Vegetation (CNPS 2021a). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Vegetation communities were classified as non-sensitive or sensitive natural communities as defined by CEQA and other applicable laws and regulations. Sensitive and non-sensitive communities are shown in Appendix A, Figure 1.

<u>California Annual Grassland</u>

Avena (*barbata, fatua*) Semi-Natural Herbaceous Stand.

Wild oats grasslands are characterized as grassland habitats that have *Avena* spp. (*A. fatua* and/or *A. barbata*) as the dominant representative, with a sparse mix (< 5-10% relative cover) of non-native and occasionally native forbs in the herbaceous layer. In California, they typically occur at low elevations in waste places, rangelands and openings in woodlands. In the Project Study Area, this vegetation association is dominated by a mix of *Avena fatua* and *Avena barbata*, with other non-native annual grasses such as ripgut brome (*Bromus diandrus*) and bristly dogtail grass (*Cynosurus echinatus*) occurring in patchy distributions. Native grasses and forbs such as California melicgrass (*Melica californica*), yellow mariposa lily (*Calochortus luteus*), and Ithuriel's spear (*Triteleia laxa*) were observed in relatively low numbers as well.

3.2.2 Sensitive Vegetation Communities

Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. Sensitive vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) 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 USFWS must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G).

Purple Needle Grass Grassland

Nassella pulchra Herbaceous Alliance.

Purple needle grass grasslands are characterized by purple needle grass (*Nassella pulchra*) being either dominant or abundant in the herbaceous layer, with a diverse assemblage of native grasses (*Melica californica*, *Melica imperfecta, Nassella lepida, Poa secunda,* etc.) and forbs (*Calochortus* spp., *Sisyrinchium bellum, Lupinus* spp., *Clarkia* spp., etc.) as well as occasional non-native grasses (*Avena* spp., *Bromus hordaceus*, *Bromus rubens*, etc.) and forbs (*Erodium* spp., *Geranium* spp., *Hypochaeris* spp., etc.), and occasionally emergent shrubs and trees, but at low cover. Purple needle grass grasslands are widespread throughout California, occurring in valley and foothill settings, associated with shallow and rocky soils along or near the coast, and deep, clay-rich soils in interior localities. In the Project Study Area, purple needle grass grassland occurs in localized patches amidst the more extensive assemblage of wild oats grassland. Associated species observed were hairy vetch (*Vicia villosa*), narrow-leaved mules ears (*Wyethia angustifolia*), soft brome (*Bromus hordaceus*), Ithuriel's spear (*Triteleia laxa*) and Italian thistle (*Carduus pycnocephalus*). Approximately **0.73 acre** of purple needle grassland habitat is present on the site.

Mixed Oak Forest

Quercus (*agrifolia*, *douglasii*, *garryana*, *kelloggii*, *lobata*, *wislizeni*) Forest Alliance.

Mixed oak forests are characterized by the presence of three or more co-occurring oaks (*Quercus* spp.) present at > 30% constancy, where they are co-dominant in the tree canopy. This forest alliance occurs from Sonoma and Napa County south to northern Santa Barbara County, occurring on deep soils in valleys or gentle to occasionally steep slopes in the coastal ranges. Other species associated with mixed oak forest types are California buckeye (*Aesculus californica*), madrone (*Arbutus menziesii*), California bay (*Umbellularia californica*) gray pine (*Pinus sabiniana*) and Douglas fir (*Pseudotsuga menziesii*), with an understory consisting of sparse shrubs, forbs, or grasses. In the project area, coast live oak (*Q. agrifolia*), California black oak (*Q. kelloggii*) and Oregon oak (*Q. garryana*) are co-dominant in the tree layer, with a more patchy distribution of madrone (*A. menziesii*), California buckeye (*A. californica*) and California bay (*U. californica*) occupying the tree canopy layer as well. In the understory, toyon (*Heteromeles arbutifolia*) and poison oak (*Toxicodendron diversilobum*) were present in the shrub layer, as well as a scattered assortment of species such as blue wildrye (*Elymus glaucus*), pink honeysuckle

(*Lonicera hispidula*) and woodland strawberry (*Fragaria vesca*) in the herbaceous layer. Approximately **81 acres** of mixed oak forest is present on the site.

3.2.1. Potentially Jurisdictional Features

The Project Study Area includes two blueline stream tributaries, including Pickle Creek, a tributary to Redwood Creek, and an unnamed tributary to Redwood Creek (which drains to the Napa River). These qualify as intermittent and perennial streams within the Project Study Area. Pickle Creek, a perennial stream flows generally north to south through the western edge of the Study Area, and adjacent to Mount Veeder Road. Access to the Project Study Area is provided by a truss bridge that crosses Pickle Creek, which will be replaced by the project to improve access and safety. The second blueline stream is an unnamed intermittent tributary to Redwood Creek that originates in the northeastern part of the property, which begins as headwaters and flows first westward, and then turns to flow in southerly direction where it connects to Redwood Creek outside of the Project Study Area. The Project Study Area also includes several steep gullies and potentially relict ephemeral stream channels that run generally westward and discharge to Pickle Creek at the base of the hillslope.

<u>Perennial and Intermittent Streams</u>

Pickle Creek runs generally from north to south within a large, incised channel with steep, nearly vertical banks within the Project Study Area. The jurisdictional limits of Pickle Creek were delineated by Sol Ecology, Inc., on June 3, 2021, and July 9, 2021, by identifying indicators of the OHWM, the location of which is generally consistent with the top-of-bank elevations that are easily discernible along the incised channel of Pickle Creek within the Project Study Area. Stream flow in Pickle Creek is intermittent to perennial in most years and the feature would qualify as relatively permanent water of the U.S. for the purpose of defining federal jurisdiction.

The Project Study Area includes a second blueline intermittent unnamed stream that originates as headwaters within the ridgetop vineyard in the eastern portion of the Project Study Area, and then connects to Redwood Creek outside of the Project Study Area (Appendix A Figure 1). This stream connects to Redwood Creek downstream of Pickle Creek's confluence with Redwood Creek. This stream channel is located adjacent to an existing access road and vineyard. The stream channel begins just below the newly-planted vineyard and continues generally south through open grassland before entering the mixed forest community, and ultimately draining to Redwood Creek.

<u>Ephemeral Streams</u>

The Project Study Area also includes several ephemeral stream channels with identifiable indicators of OHWM (Appendix A Figure 1). These channels generally originate on the southern-facing slopes of the Study Area and drain to Pickle Creek. The channels are often associated with erosional gullies or washes due to steep terrain and were delineated in the field using discernible OHWM indicators, including, but not limited to sediment sorting, wrack lines and debris accumulation, which are continuous along the delineated stream reaches, and contiguous with the OWHM indicators observed in Pickle Creek. Vegetation in the vicinity of the ephemeral

stream channels is comprised of mixed forest. The ephemeral stream channels include two culverted crossings of the lower portion of the existing gravel driveway within the Project Study Area. These culverted crossings show signs of severe erosion and scour at both the upstream and downstream ends of the crossings, which has exacerbated the gullying that was observed within these reaches.

The Project Study Area also includes steep erosional gullies within the west-facing hillside in the vicinity of the grading and stockpiling activities that are proposed for disposing of the excavated cave winery and pavilion spoils. The gullies and ephemeral stream channels were dry during the surveys conducted by Sol Ecology, Inc., in 2021, however, these features exhibited indicators of a continuous OHWM, including beds and banks topography, sediment sorting, wrack and debris lines, and changes in vegetation communities. Thus, the erosional gullies and associated ephemeral stream channels would likely be considered non-wetland waters, and accordingly, these features would likely be considered jurisdictional.

Seasonal Wetland

The Project Study Area includes contains approximately **0.04 acre** of seasonal wetlands in the northern part of the site outside proposed project activities (see Appendix A, Figure 1). This seasonal wetland is located in a topographic swale associated with the unnamed blueline stream tributary that originates as headwaters within the ridgetop vineyard. During the 2021 surveys conducted by Sol Ecology, Inc., the seasonal wetland exhibited positive indicators of seasonal hydrology and wetland vegetation where runoff from upslope areas converges within the drainage corridor. The swale has a diminutive channel in its center and adjacent seasonally saturated areas that are dominated by wetland vegetation, including tall Cyperus (*Cyperus eragrostis*), sedge (*Carex densa*), slender willow herb (*Epilobium densiflorum*), fiddleneck dock (*Rumex pulcher*), little rattlesnake grass (*Briza minor*), and bristly ox-tongue (*Helminthotheca echioides*).

Riparian Habitats

The Project Study Area includes approximately 6.7 acre of riparian woodland habitat that borders both sides of Pickle Creek; other stream features on the site are within mixed oak forest and lack a developed riparian canopy due to flashy flows that prohibit the growth of hydrophytic species characteristic of riparian communities. Dominant species present along Pickle Creek include big leaf maple (*Acer macrophylllum*), box elder (*Acer negundo*), California buckeye (*Aesculus californica*), common horsetail (*Equisetum arvense*), California blackberry (*Rubus ursinus*), and French broom (*Genista monspessulana*), an invasive plant species.

3.2 Special Status Plants

Special status plant species include plant 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 those that are formal candidates for listing. Plant species on CNPS' Inventory of Rare and Endangered Plants of California with California Rare Plant Ranks of 1 and 2 are also considered special status plant species and must be considered under CEQA. Further,

California Rare Plant Ranks 3 and 4 are evaluated within this report to ensure locally important plant species are evaluated for impact significance.
Protocol-level surveys were performed on June 3 and July 9, 2021, throughout the Project Study Area with negative findings. As such, no further surveys are warranted.

Based upon a review of the resources and databases given in Section 2.1, 74 special status plant species have been documented within a 9-quad search of the Project Study Area (Appendix B). Based on the presence of vegetation communities described above and soils at the site as well as historic site disturbance, the Project Study Area has the potential to support six special status plant species. Other special status plant species documented within the 9-quad search are unlikely or have no potential to occur in the Project Study Area for one or more of the following reasons:

- Hydrologic conditions (e.g., marsh habitat, seeps, riverine, pond habitat) necessary to support the special status plants do not exist on site.
- Edaphic (soil) conditions (e.g., rocky soils, sandy soils) necessary to support the special status plants do not exist on site.
- Topographic conditions (e.g., flats- plains or prairies) necessary to support the special status plants do not exist on site.
- Unique pH conditions (e.g., serpentine) necessary to support the special status plant species are not present on site

Table 1 Special Status Plant Species With Potential to Occur in the Project Area

Scientific name/ Common name	Status	Habitat	Elevation (meters)	Flowering period	Likelihood of presence
Amorpha californica var. *napensis* Napa false indigo	1B.2	Chaparral	< 800	May-Jul	**Moderate potential:** associated species and appropriate habitat present
Hemizonia congesta ssp. *congesta* Congested-headed hayfield tarplant	1B.2	Grassy sites, marsh edges	< 100	May-Nov	**Moderate potential:** associated species and appropriate habitat present
Lilium rubescens Chaparral lily	4.2	Dry soils in chaparral, gaps in conifer forest	30-1800	May-Aug	**Moderate potential**; associated species and appropriate habitat present
Monardella viridis Green monardella	4.3	Chaparral, oak woodland, conifer forest, serpentine	150-800	Jun-Aug	**Moderate potential**; appropriate habitat and nearby occurrence record
Triteleia lugens Coast range triteleia	4.3	Edges of chaparral, mixed forest, foothill woodland, streambanks	100-1000	Apr-Jun	**Moderate potential**; appropriate habitat
Viburnum ellipticum Oval-leaved viburnum	2B.3	Chaparral, yellow-pine forest, generally north-facing slopes	300-1400	Jun-Aug	**Moderate potential**; associated species and appropriate habitat present

[1] FE/FT – Federally endangered/ threatened
CE/CT – California endangered/threatened
California Rare Plant Rank
1A – Plants presumed extirpated in California and either rare or extinct elsewhere.
1B – Plants rare, threatened, or endangered in California and elsewhere.
2A – Plants presumed extirpated in California but common elsewhere.
2B – Plants rare, threatened, or endangered in California but more common elsewhere.
3 – Review List: Plants about which more information is needed
4 – Watch List: Plants of limited distribution

3.3 Special Status Wildlife

In addition to wildlife listed as federal or state endangered and/or threatened, federal and state candidate species, CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special-status Invertebrates are all considered special-status species. Although these species generally have no special legal status, they are given special consideration under CEQA. The federal Bald and Golden Eagle Protection Act also provides broad protections to both eagle species that are roughly analogous to those of listed species. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a "High Priority" or "Medium Priority" species for conservation by the WBWG are typically considered special-status and considered under CEQA; bat roosts are protected under CDFW Fish and Game Code (CFGC). In addition to regulations for special-status species, most native birds in the United States (including non-status species) are protected by the federal Migratory Bird Treaty Act of 1918 (MBTA) and the CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.

Based on the databases given in Section 2.1, 52 special status wildlife species have been documented within a 9-quad search of the Project Study Area (Appendix B). Based on the presence of biological communities described above, the Project Study Area has the potential to support 2 of these special status wildlife species, neither of which are federal and/or state listed special status wildlife species (Table 2). A discussion of potential impacts or unlikelihood for impacts to occur is also provided in Section 4.1.

The remaining species found in the review of background literature were determined to be unlikely to occur due to absence of suitable habitat elements in and immediately adjacent to the Project Study Area. Habitat elements that were evaluated but found to be absent from the immediate area of the Project Study Area or surrounding habitats subject to potential indirect impacts include the following:

- Absence of suitable hydrologic conditions (e.g., riverine, wetland, adequate freshwater stream habitat, ponds, vernal pools, lake, salt or brackish waters) necessary to support the special status wildlife (e.g., vernal pool fairy shrimp, obscure bumble bee, rails, cormorant, Suisun shrew, Cowan's amphipod, leaf cutter bee, western ridged mussel)

- In-channel barriers (dams) have blocked fish migration to upper watershed streams such as Pickle Creek (e.g., steelhead)

- Absence of associated vegetation communities (e.g., salt marsh habitat, old growth coniferous forest, coastal redwood forest) necessary to support the special-status wildlife (e.g., salt marsh common yellowthroat, San Pablo song sparrow, red-bellied newt, northern spotted owl).

- Absence of suitable habitat elements (e.g., cliffs, caves, mines etc.) for special status wildlife (e.g., Townsend's big-eared bat).
- No occurrences within maximum dispersal distance or within 5 miles of the Project Study Area (e.g., California red-legged frog)
- No suitably sized burrows or evidence of potential dens are present on or immediately adjacent to the Project Study Area (e.g., burrowing owl, American badger).
- Outside of known breeding range (e.g., Swainson's hawk).
- Species is extirpated from watershed (e.g., California freshwater shrimp)

Table 2. Special Status Wildlife with Potential to Occur in the Project Study Area

Scientific Name/ Common Name	Status[1]	Habitat	Potential for Occurrence
Fish, Invertebrates, Amphibians, Reptiles			
Actinemys marmorata (Pacific) western pond turtle)	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**High Potential.** There are three (3) documented occurrences of the species within five (5) miles of the Project Study Area. The onsite stream provides suitable dispersal habitat while nearby uplands within 100 meters may provide marginal nesting habitat. Suitable basking habitat is lacking along Pickle Creek where dense vegetative cover exists.
Rana boylii foothill yellow-legged frog	SE, SSC	Woodland and forest streams and rivers, prefers flowing water with a rocky substrate, to which egg masses are attached.	**High Potential.** There are five (5) documented occurrences of foothill yellow-legged frog (FYLF) within five (5) miles of the Project Study Area. One of these occurrences is in Pickle Canyon. Pickle Creek offers rocky substrate which FYLF needs for egg-laying and basking.
Dicamptodon ensatus California giant salamander	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent, or semi-permanent streams. Larvae usually remain aquatic for over a year.	**Moderate Potential.** There are five (5) documented occurrences of California giant salamander within the 5 miles of the Project Study Area. A permanent stream is present within the Project Study Area, however there are no permanent pools near proposed activities.
Birds			
Baeolophus inornatus oak titmouse	BCC	Occurs year-round in woodland and savannah habitats where oaks are present, as well as riparian areas. Nests in tree cavities.	**Moderate Potential**. May be present in oak woodlands.
Elanus leucurus white-tailed kite	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.	**Low Potential**. There is 1 CNDDB occurrences of this species within the 5-mile search area. Marginally suitable nesting substrate is present in the Project Study Area in open grassland habitats; trees and shrubs may offer marginal nesting opportunity.

Picoides nuttallii Nuttall's woodpecker	BCC	Year-round resident in lowland woodlands throughout California west of the Sierra Nevada. Typical habitat is dominated by oaks; also occurs in riparian woodland. Nests in tree cavities.	**Moderate Potential.** May be present in oak woodlands.
Mammals			
Antrozous pallidus pallid bat	WBWG SSC	Occurs throughout California and most abundant in grasslands, shrublands, and woodlands. Roosts in crevices and cavities of buildings, bridges, tunnels, rocks, cliffs, and trees.	**Moderate Potential.** There are 17 CNDDB occurrence within the 9-quad search area and 0 occurrences within the 5-mile search radius. There is moderate potential for this species to maternity roost or day roost in crevices along the existing bridge structure and adjacent tree snags in riparian and oak forest.

[1] FE/SE – Federal/State Endangered
FT/ST – Federal/State Threatened
SCE/T – State Candidate Endangered/Threatened
CFP – California Fully Protected
SSC – Species of Special Concern
BCC – Bird of Conservation Concern
SSI – Special Status Invertebrate
WBWG – Western Bat Working Group – Medium or High Priority Species

4.0 POTENTIAL IMPACTS AND MITIGATION

The assessment of impacts under CEQA is based on the change caused by the Project relative to the existing conditions within the Project Study Area. In applying CEQA Appendix G, the terms "substantial" and "substantially" are used as the basis for significance determinations in many of the thresholds but are not defined qualitatively or quantitatively in CEQA or in technical literature. In some cases, the determination requires application of best professional judgment based on knowledge of site conditions as well as the ecology and physiology of biological resources present in a given area. The CEQA and State CEQA Guidelines defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Pursuant to Appendix G, Section IV of the State CEQA Guidelines, the proposed Project would have a significant impact on biological resources if it would:

A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.

C. 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.

D. 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.

E. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.1 Potentially Significant Impacts

Sensitive Natural Communities

Project impacts to Sensitive Natural Communities are summarized in Table 3 below, and depicted in Appendix A, Figure 4.

Table 3. Project Impacts to Sensitive Natural Communities

Project Impact	Sensitive Natural Community	Estimated Direct Permanent Impact	Estimated Temporary Impact
Bridge widening and abutments	Waters of the US / State	5 linear feet (200 SF)	2,000 SF
Bridge widening	Riparian woodland	0.04 acre	N/A
Cave Winery	Purple Needle Grass	0.03 acre	N/A
No activities	Seasonal Wetland	N/A	N/A
Driveway widening	Ephemeral Stream	<10 linear feet	<10 linear feet
All improvements	Mixed Oak Forest	2.1 acre	N/A

Mixed Oak Forest

Select tree removals in oak woodlands will take place to construct the winery improvements, including the cave winery, new bridge, and driveway widening as shown in Appendix A, Figure 4. Tree avoidance measures and BMPs will also be implemented during project construction to minimize tree disturbance and tree mortality. The Project's tree removals are limited to the least amount necessary to accomplish the Project goals while avoiding mature trees and will ensure a minimum of 81 percent retention of existing mixed oak forest.

It is understood that a total of 78 trees will be removed to establish winery structure grading pads and facilitate minor driveway widening and sighting along the driveway where needed, including 21 live oak (*Q. agrifolia*), 7 white oak (*Quercus alba*), 7 California bay (*Umbellularia californica*), 14 Pacific madrones (*Arbutus menziesii*), 2 Douglas fir (*Pseudotsuga menziesii*), and 2 pine (*Pinus* ssp.). These trees and affected understory habitats are located within the proposed grading at the cave winery structure and immediately adjacent to the existing roadway and new bridge; given the comparatively small impacts of the two new structures and road / bridge work, the project is well within the County's vegetation retention requirements, of the approximate 83 acres of canopy, 99.06 percent of the canopy shall be retained (see calculations in RSA plan set).

Purple Needlegrass

Isolated populations of purple needlegrass occur near the proposed cave winery and driveway improvements (see Appendix A, Figure 4). An approximate 800 SF area (0.03 acre) of purple needle grass is estimated to be permanently impacted by placement of cave winery dredge spoils.

Perennial / Ephemeral Stream Channel and Riparian Setback

Jurisdictional streams are present within the Project Study Area. Construction of the new bridge/bridge widening will result in 5 linear feet (200 SF) of permanent impacts to the bank, plus 2000 square feet of temporary impacts during construction activities. Other impacts to ephemeral drainages on the site may occur as a result of culvert placement, and/or replacement and widening. Driveway widening passes by several ephemeral streams and gullies, in some instances, the existing driveway obstructs or diverts flows, causing sheet flow to pass over the driveway or diverting the flows into roadside ditches. The driveway widening involves stormwater improvements that include drain intakes and an extension of crossing culverts.

Napa County's Conservation Regulations include the Water Quality and Tree Protection Ordinance (WQTPO), adopted on May 10, 2019, which establishes stream setbacks for proposed project activities. Napa County's WQTPO establishes a 35-foot setback for ephemeral and intermittent streams, and a 45-foot setback for all other streams with 1-5 percent slopes, as in the case of riparian corridor that abuts Pickle Creek within the Project Study Area. Stream setbacks will be maintained accordingly except for as necessary to replace any existing culverts and/or the bridge improvements.

Special Status Plant Species

While the Project Study Area and surrounding site are heavily disturbed there are six special status plant species have the potential to occur within the Project Study Area; however, none were found to be present during protocol-level surveys conducted in 2021 which focused on the cave winery, dredge spoils site, and driveway improvements areas. Therefore, potential impacts to special status plant populations from proposed grading activities are anticipated to be less than significant. Tree mitigation planting however, does have the potential to impact special status plants if present, which is considered significant under CEQA. The 2021 plant surveys did not include this area, and as such there is a potential for mortality associated with tree planting to occur.

Special Status Wildlife Species

Eight special status wildlife species have potential to occur in the Project Study Area, particularly along the Pickle Creek riparian corridor. These species include foothill yellow-legged frog, California giant salamander, western pond turtle, and pallid bat. These species may be affected during proposed bridge replacement activities if present. Driveway widening may impact nesting pond turtle if present in adjacent uplands. Pallid bat may also be affected by proposed tree removal. Direct mortality to any special status species is considered significant under CEQA. Furthermore, removal of potential bat maternity roosts (common and special status) is also considered significant under CEQA.

Migratory birds

The Project Study Area provides suitable nesting substrate (trees, shrubs, grasses) for may non-status migratory birds, as well as 3 special status avian species (e.g., white-tailed kite, oak titmouse, and Nuttall's woodpecker). Impacts to nesting birds resulting in nest abandonment or direct mortality to chicks or eggs is considered a significant impact under CEQA.

4.2 Recommended Avoidance and Minimization Measures

The following measures are recommended to be implemented to a less than significant level. In the event any of the impacts described in Section 4.1 cannot be completely avoided by project design and/or recommended work windows (e.g., vegetation removal between Sept. 1 and Feb. 1.).

BIO-1. Oak and Riparian Woodland

Removal of any vegetation canopy within the streamside setbacks shall be mitigated in accordance with Napa County Sec. 18.108.020D by permanent replacement or preservation of comparable vegetation canopy cover on an acreage basis at a minimum 3:1 ratio. For specific planting details please refer to the tree planting plan in the plan set provided by RSA Consultants. Compensatory mitigation for oak woodland impacts and vegetation removal within the 35-foot streamside setback will be combined where feasible, in order to comply with the County oak tree replacement and streamside setback requirements. Tree canopy retention after mitigation will be 99.06 percent. Implementation of this measure will reduce the impact to a less than significant level.

BIO-2. Perennial and Ephemeral Stream Channels

Compensatory mitigation for impacts to the perennial and ephemeral stream channels shall be provided on-site through planting and restoration-enhancement of an equivalent area. Permit authorizations are likely required from CDFW, RWQCB, and USACE for proposed impacts to the stream channel for the bridge widening and new culvert placement. Permits will require development and implementation of plans and specifications for the compensatory mitigation project, and interim monitoring and maintenance, in order to compensate for unavoidable impacts to streams. The unavoidable impacts to ephemeral streams would be considered less-than-significant with issuance of permits and successful completion of required compensatory mitigation for aquatic resource alterations For driveway widening details, please refer to plan sheets 5 to 12 in the plan set provided by RSA Consultants.

The following is recommended to ensure potentially significant impacts to ephemeral stream channel are avoided:

- Provide a notice of proposed discharges and submit permit applications for work in jurisdictional areas for the proposed bridge and driveway culvert. This would include a Clean Water Act Section 404 to the USACE, and Section 401 to the San Francisco RWQCB, and a 1602 Streambed Alteration Agreement to the CDFW. The permit applications must include plans for providing compensatory mitigation for the unavoidable impacts through on-site creation and/or restoration of an equivalent area of stream channel. Potential impacts to water quality and wildlife will be avoided and minimized by adhering to the BMPs and permit conditions established by San Francisco RWQCB, CDFW, and USACE.

BIO-3. Pre-Construction Surveys for Special Status Plants

Pre-construction surveys for special status plants shall be performed prior to any tree planting in the tree mitigation area. If special status species are found, orange construction fencing shall be placed around the perimeter of any plants to ensure trampling and/or removal of plants is avoided, and impacts are reduced to a less than significant level.

BIO-4. Pre-Construction Surveys for Special Status Wildlife

Pre-construction surveys for special status wildlife shall be performed within 48 hours of the onset of project-related activities. These surveys will minimize impacts to species to a less than significant level. If special status species are found, they should be allowed to leave the area on their own accord. If the species does not move out of the area, or if a federal or state listed species is found, then the Applicant shall consult with CDFW prior to proceeding with work in the area.

BIO-5. Purple Needlegrass Fencing

Orange construction fencing must be placed around the plant groups to ensure impacts during project-related activities do not occur. In the event a plant cannot be completely avoided, then a propagation plan shall be prepared and implemented prior to activities in those areas. Avoidance or reseeding (propagation) will ensure no significant impacts to special status plants occur. A Propagation Plan will need to be developed and seed will be collected the season prior to be propagated in nearby habitat.

BIO-6. Wildlife Exclusion Fencing

Wildlife exclusion fencing (WEF) shall be installed around the perimeter of proposed activities prior to the start of any ground-disturbing activities to prevent listed species including FYLF, and/or non-listed species such as California giant salamander and western pond turtle (which may nest in uplands within the project footprint) from entering the project footprint during construction. Fencing must be installed outside the WPT nesting window (April 1 to August 31) to avoid separating juvenile turtles from nearby aquatic habitat. WEF shall remain in place until all activities are complete and any temporarily disturbed areas have been restored to pre-existing conditions. Implementation of WEF as per this measure will reduce any impacts to a less than significant level.

BIO-7. Bat Surveys

To the extent feasible, tree removal will be performed outside the maternity season (between September 1 to April 15) to avoid the period when maternity bat roosts may be present. If not possible, an acoustic emergence survey shall be performed to determine if bats are present including any solitary species. If present, the roost shall be avoided until after September 1 to ensure no significant effects to maternity bat roosts occur.

Provided no maternity roost is present, tree removal must be performed using the two-step tree removal process which includes allowing any felled trees or tree limbs to be left overnight prior to removal from the site or onsite chipping to allow any non-maternity roosting bats to exit the roost. For large tree species (e.g., eucalyptus), it is recommended that tree is pruned from the bottom up to 30 feet on day 1, followed by complete removal on day 2 to allow any bats to leave the site prior to felling. Implementation of this measure will ensure potential effects to bat species are less than significant.

BIO-8. Migratory Nesting Bird Surveys

For vegetation removal and construction activities that have the potential to affect nesting birds and raptors, including special status species white-tailed kite (nesting season February 1 to August 31), the following is recommended to ensure potentially significant impacts to nesting birds are reduced to a less than significant level:

- Conduct initial vegetation removal and ground disturbance from September 1 to October 14 when feasible.
- Pre-construction nesting bird surveys should be performed within the Project Study Area and within the immediate vicinity of proposed activities.
- If nests are found, a no-disturbance buffer should be placed around the nest until young have fledged or the nest is determined to be no longer active by the biologist. The size of the buffer may be determined by the biologist based on species, ambient conditions, and proximity to project-related activities.

BIO-9. Worker-Awareness Environmental Training

Environmental training shall be provided to all persons working on the project site prior to the initiation of project-related activities. Training will include a description of all biological resources that may be found on or near the project site, the laws and regulations that protect those resources, the consequences of non-compliance with those laws and regulations, instructions for inspecting equipment each morning prior to activities, and a contact person if protected biological resources are discovered on the project site. Worker Awareness Environmental Training ensures impacts to biological resources will be less than significant.

BIO-10. Erosion Control Materials

Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting) rolled erosion control products, or similar non-natural material should not be used. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

5.0 REFERENCES

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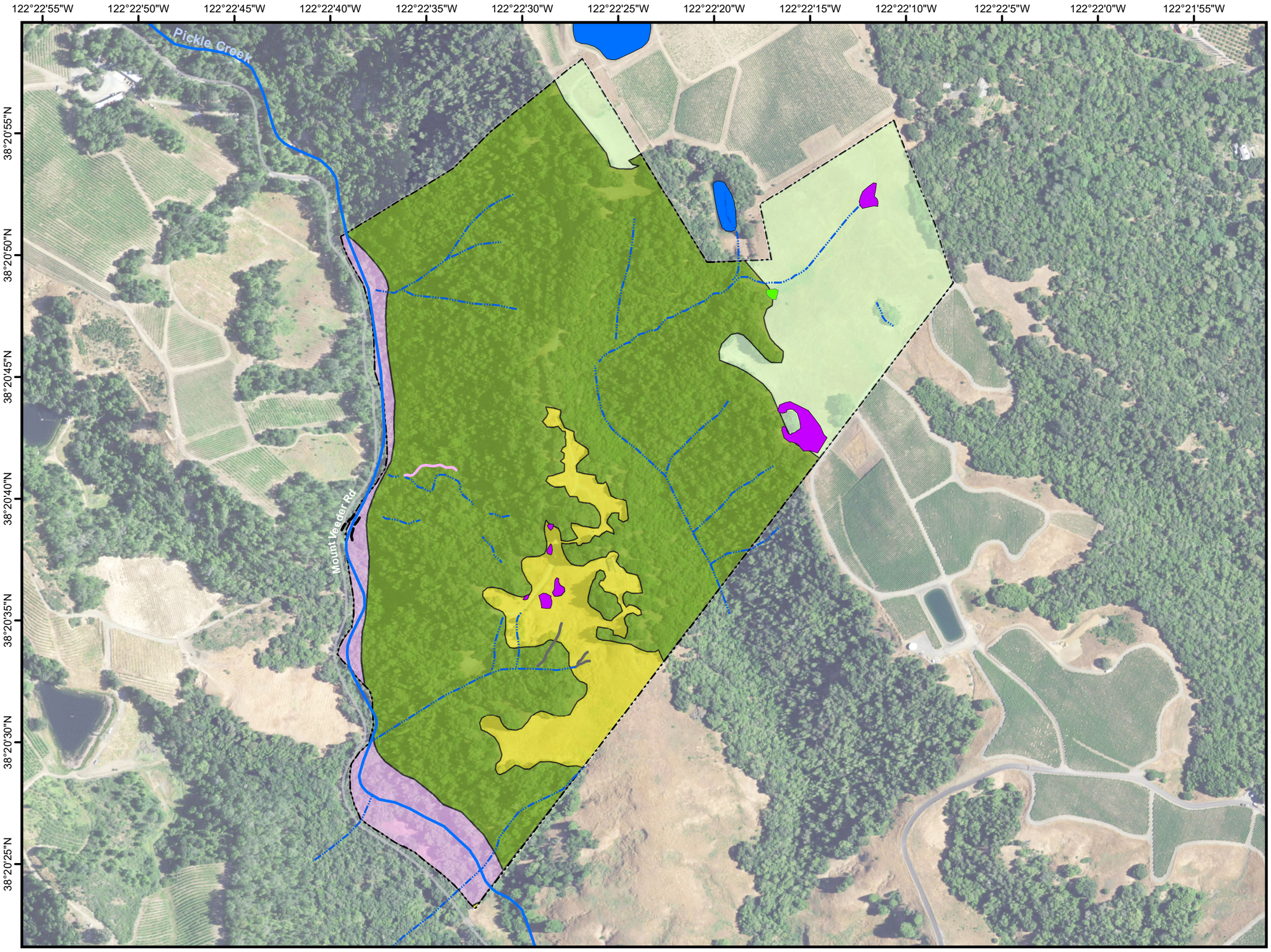
APPENDIX A

PROJECT FIGURES:

Figure 1. Sensitive Communities



Sensitive Communities Map

1300 Mt. Veeder Road
Winery & Driveway Expansion Project
Napa County, California

Sensitive Communities
- Mixed Oak (81.0 ac)
- Riparian Woodland (6.7 ac)
- Purple needlegrass (0.73 ac)
- Seasonal Wetland (0.04 ac)
- Pond

Streams & Stream Features
- Ephemeral Stream
- Top of Bank
- Relict Channel
- Gully
- Stream (Pickle Creek)

Other Communities
- California Annual Grasslands (9.2)
- Agriculture

Coordinate System:
NAD_1983_StatePlane_California_II_FIPS_0402_Feet
Projection: Lambert_Conformal_Conic
Datum: North American 1983

Map created: 4-26-2022
Data: Sol Ecology Inc, Napa Co., WRA
Base: NAIP 2016
GIS: AG2139

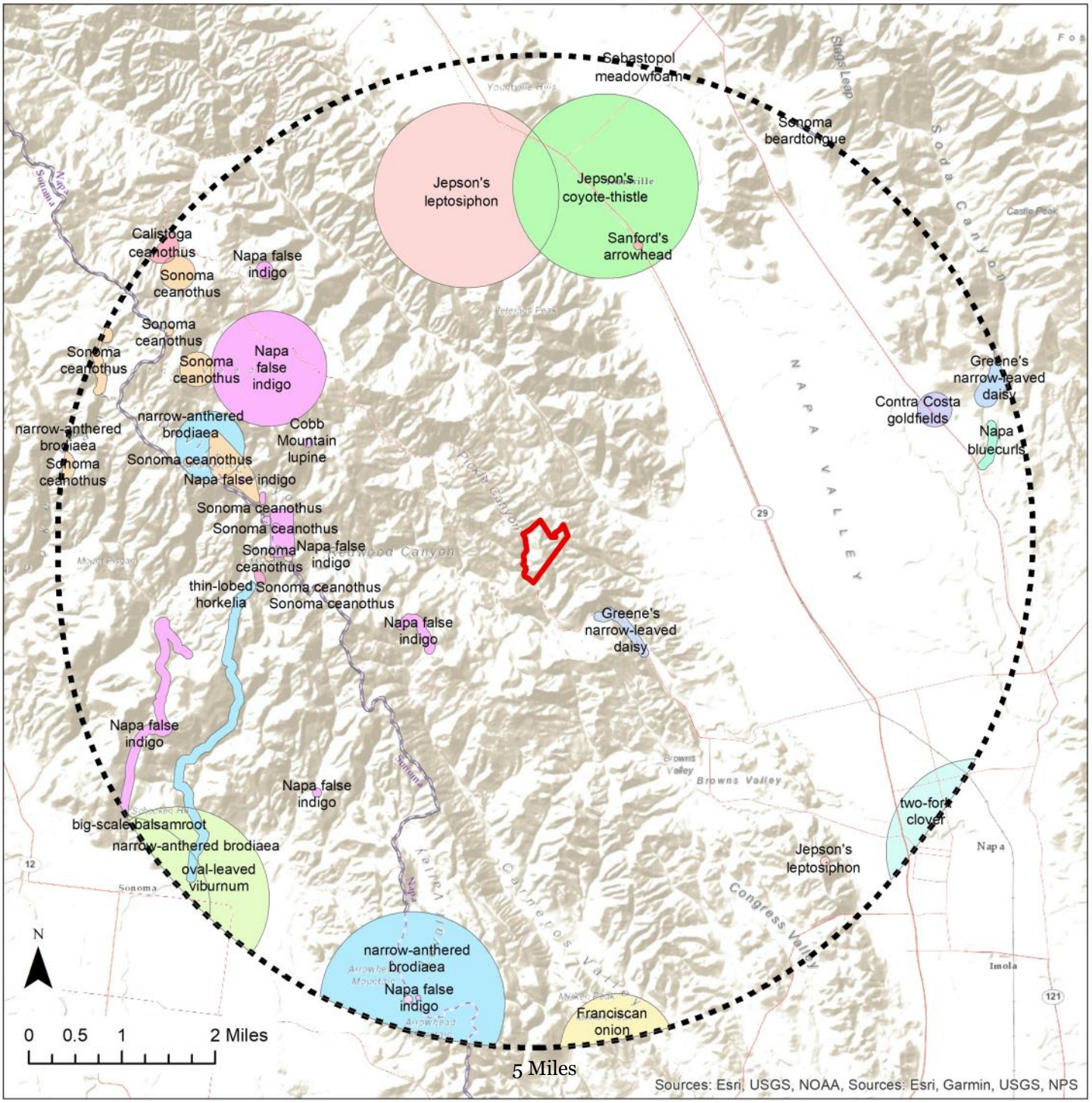
N

0 125 250 500
Feet

1 inch = 400 feet

SOL ECOLOGY
solecology.com

Figure 2: Special Status Plant Species within 5 Miles of the Project Site
1300 Mt. Veeder Road, Napa County, CA (APN 034-230-029)

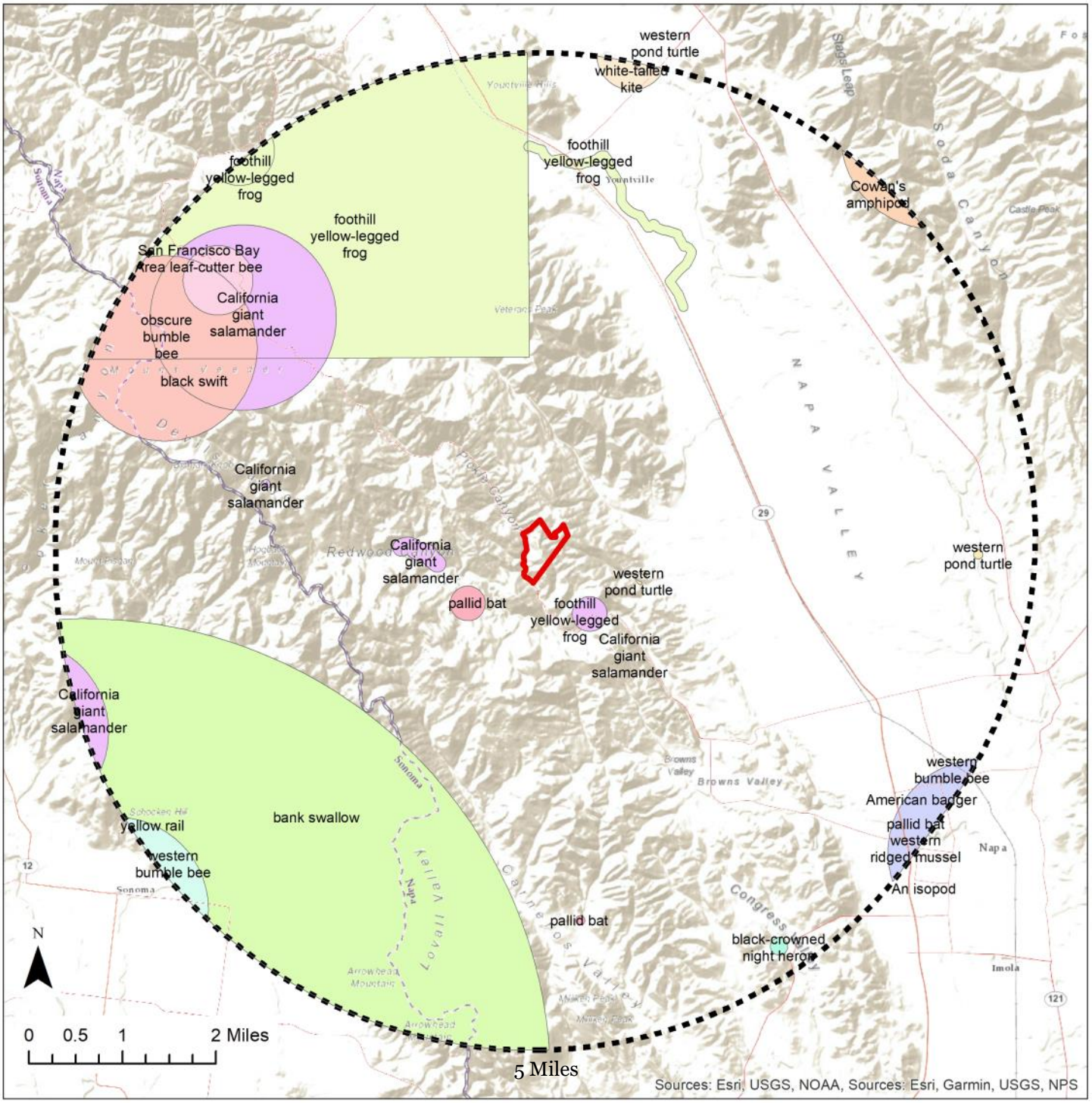


Date: 3-17-2022
Data: Sol Ecology Inc., Sonoma Co., CDFW

Base: ESRI
GIS: LM2139

SOL ECOLOGY
solecology.com

Figure 3: Special Status Animal Species within 5 Miles of the Project Site
1300 Mt. Veeder Road, Napa County, CA (APN 034-230-029)



- Project Study Area
- 5-Mile Buffer
- American badger (1)
- An isopod (1)
- California giant salamander (5)
- Cowan's amphipod (1)
- San Francisco Bay Area leaf-cutter bee (1)
- bank swallow (1)
- black swift (1)
- black-crowned night heron (1)
- foothill yellow-legged frog (4)
- obscure bumble bee (1)
- pallid bat (3)
- western bumble bee (2)
- western pond turtle (3)
- western ridged mussel (1
- white-tailed kite (1)
- yellow rail (1)

Date: 3-17-2022
Data: Sol Ecology Inc., Sonoma Co., CDFW

Base: ESRI
GIS: LM2139

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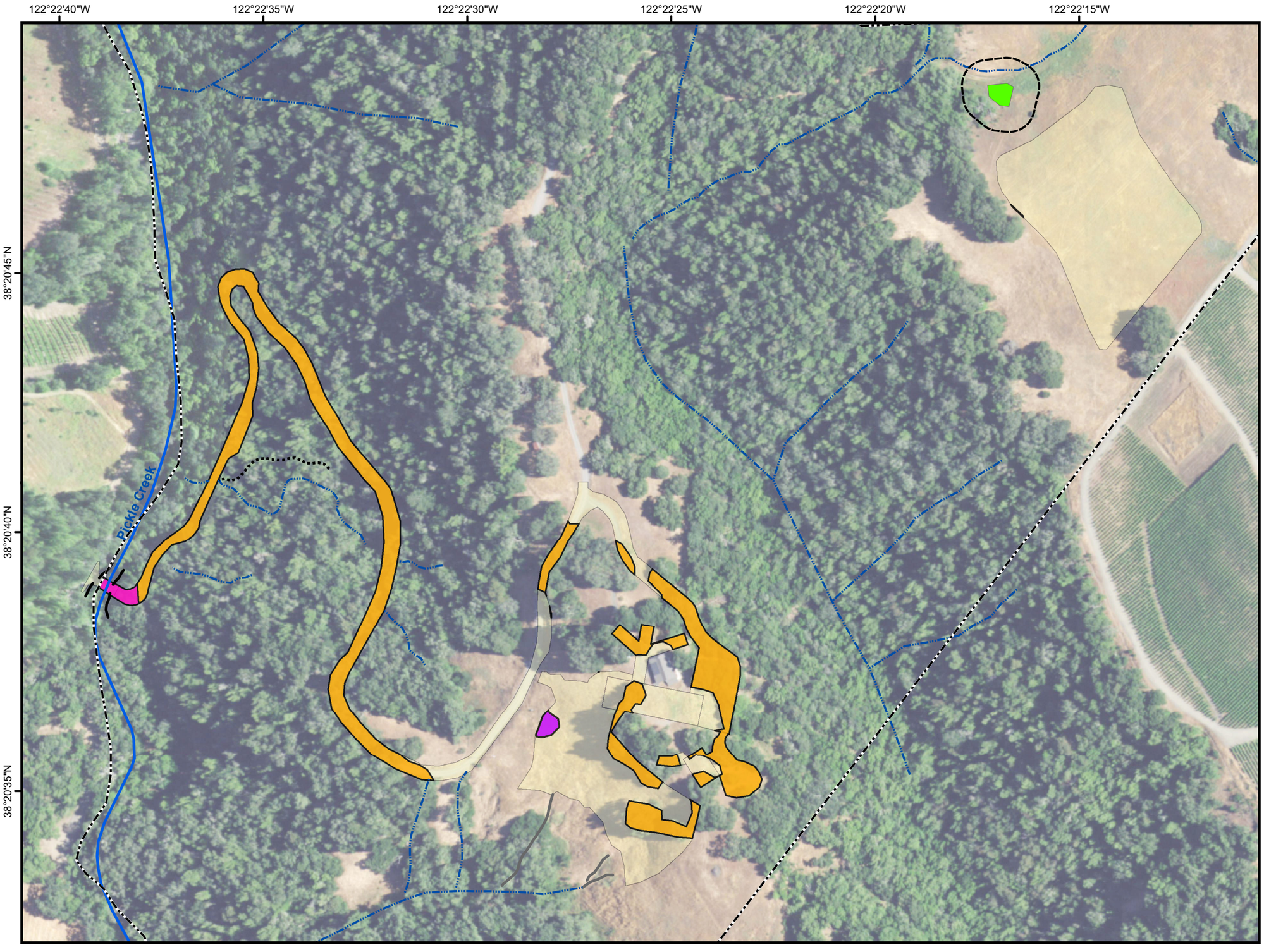
Figure 4. Potential Impacts



Potential Impacts Map

1300 Mt. Veeder Road
Winery and Driveway Expansion Project
Napa County, California

Potential Impacts
- Mixed Oak Canopy (2.1 ac)
- Riparian Woodland (0.04 ac)
- Purple needlegrass (0.03 ac)

Wetlands
- Seasonal Wetland (0.04 ac)
- 50' Setback from Wetland

- Ephemeral Stream
- Top of Bank
- Relict Channel
- Gully
- Stream (Pickle Creek)

- Project Study
- Project

Coordinate System:
NAD_1983_StatePlane_California_II_FIPS_0402_Feet
Projection: Lambert_Conformal_Conic
Datum: North American 1983

Map created: 4-26-2022
Data: Sol Ecology Inc, Napa Co., WRA
Base: NAIP 2016
GIS: AG2139

N

0 100 200 400
Feet

1 inch = 187 feet

SOL ECOLOGY
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APPENDIX B

CNDDB, CNPS, AND IPAC SUMMARY TABLES

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Napa (3812233) OR Rutherford (3812244) OR Yountville (3812243) OR Capell Valley (3812242) OR Mt. George (3812232) OR Cordelia (3812222) OR Cuttings Wharf (3812223) OR Sears Point (3812224) OR Sonoma (3812234))
 AND Taxonomic Group IS (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Agrostis hendersonii Henderson's bent grass	G2Q S2	None None	Rare Plant Rank - 3.2	790 790	26 S:1	0	1	0	0	0	0	0	1	1	0	0
Allium peninsulare var. franciscanum Franciscan onion	G5T2 S2	None None	Rare Plant Rank - 1B.2	280 280	25 S:2	0	0	1	0	0	1	1	1	2	0	0
Amorpha californica var. napensis Napa false indigo	G4T2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	500 1,670	76 S:11	2	2	1	0	0	6	8	3	11	0	0
Amsinckia lunaris bent-flowered fiddleneck	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley SB_UCSC-UC Santa Cruz	195 195	93 S:1	0	0	0	0	0	1	0	1	1	0	0
Arctostaphylos stanfordiana ssp. decumbens Rincon Ridge manzanita	G3T1 S1	None None	Rare Plant Rank - 1B.1	670 670	12 S:1	0	0	0	0	0	1	0	1	1	0	0
Astragalus claranus Clara Hunt's milk-vetch	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	330 330	6 S:1	0	1	0	0	0	0	0	1	1	0	0
Astragalus tener var. tener alkali milk-vetch	G2T1 S1	None None	Rare Plant Rank - 1B.2	7 15	65 S:2	0	0	1	0	1	0	2	0	1	0	1
Balsamorhiza macrolepis big-scale balsamroot	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	145 800	51 S:4	0	3	0	0	0	1	2	2	4	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Blennosperma bakeri Sonoma sunshine	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	30 65	24 S:4	0	1	1	0	2	0	3	1	2	0	2
Brodiaea leptandra narrow-anthered brodiaea	G3? S3?	None None	Rare Plant Rank - 1B.2	450 1,932	39 S:15	3	3	0	0	0	9	6	9	15	0	0
Carex lyngbyei Lyngbye's sedge	G5 S3	None None	Rare Plant Rank - 2B.2 IUCN_LC-Least Concern	4 4	37 S:1	0	0	1	0	0	0	0	1	1	0	0
Castilleja affinis var. neglecta Tiburon paintbrush	G4G5T1T2 S1S2	Endangered Threatened	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	580 580	7 S:1	0	1	0	0	0	0	0	1	1	0	0
Castilleja ambigua var. meadii Mead's owls-clover	G4T1 S1	None None	Rare Plant Rank - 1B.1	1,470 1,600	3 S:3	0	0	0	0	0	3	1	2	3	0	0
Ceanothus confusus Rincon Ridge ceanothus	G1 S1	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	960 1,900	33 S:4	1	1	0	0	0	2	2	2	4	0	0
Ceanothus divergens Calistoga ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2	350 1,250	26 S:5	1	1	1	0	0	2	2	3	5	0	0
Ceanothus purpureus holly-leaved ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2 SB_SBBG-Santa Barbara Botanic Garden	600 2,350	43 S:36	4	5	1	0	1	25	22	14	35	1	0
Ceanothus sonomensis Sonoma ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2 SB_SBBG-Santa Barbara Botanic Garden	700 2,600	30 S:14	2	1	0	1	0	10	10	4	14	0	0
Centromadia parryi ssp. parryi pappose tarplant	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	15 20	39 S:2	0	0	0	1	0	1	1	1	2	0	0
Chloropyron molle ssp. molle soft salty bird's-beak	G2T1 S1	Endangered Rare	Rare Plant Rank - 1B.2	0 5	27 S:4	0	1	0	0	2	1	3	1	2	2	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Coastal Brackish Marsh Coastal Brackish Marsh	G2 S2.1	None None			30 S:2	0	0	0	0	0	2	2	0	2	0	0
Downingia pusilla dwarf downingia	GU S2	None None	Rare Plant Rank - 2B.2	10 1,930	132 S:12	3	3	0	0	1	5	9	3	11	0	1
Erigeron greenei Greene's narrow-leaved daisy	G3 S3	None None	Rare Plant Rank - 1B.2	300 1,500	20 S:9	1	2	0	0	0	6	5	4	9	0	0
Eryngium jepsonii Jepson's coyote-thistle	G2 S2	None None	Rare Plant Rank - 1B.2		19 S:2	0	0	0	0	0	2	2	0	2	0	0
Extriplex joaquinana San Joaquin spearscale	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	5 5	127 S:3	0	0	2	0	0	1	3	0	3	0	0
Hemizonia congesta ssp. congesta congested-headed hayfield tarplant	G5T2 S2	None None	Rare Plant Rank - 1B.2 SB_UCBG-UC Botanical Garden at Berkeley		52 S:2	0	0	0	0	0	2	2	0	2	0	0
Hesperolinon breweri Brewer's western flax	G2 S2	None None	Rare Plant Rank - 1B.2	825 825	29 S:3	0	0	0	0	0	3	2	1	3	0	0
Hesperolinon sharsmithiae Sharsmith's western flax	G2Q S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	800 2,200	32 S:9	0	2	3	0	0	4	5	4	9	0	0
Horkelia tenuiloba thin-lobed horkelia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	1,230 1,230	27 S:1	0	0	0	0	0	1	1	0	1	0	0
Isocoma arguta Carquinez goldenbush	G1 S1	None None	Rare Plant Rank - 1B.1		14 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasthenia conjugens Contra Costa goldfields	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	60 1,465	36 S:4	0	1	1	0	2	0	3	1	2	1	1

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Lathyrus jepsonii var. jepsonii Delta tule pea	G5T2 S2	None None	Rare Plant Rank - 1B.2 SB_BerrySB-Berry Seed Bank SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	0 7	133 S:12	0	2	0	1	1	8	10	2	11	1	0
Legenere limosa legenere	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley	40 40	83 S:1	0	0	1	0	0	0	1	0	1	0	0
Leptosiphon jepsonii Jepson's leptosiphon	G2G3 S2S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	350 1,800	51 S:12	0	1	0	0	0	11	2	10	12	0	0
Lilaeopsis masonii Mason's lilaeopsis	G2 S2	None Rare	Rare Plant Rank - 1B.1	2 10	198 S:2	1	1	0	0	0	0	1	1	2	0	0
Limnanthes vinculans Sebastopol meadowfoam	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	90 90	46 S:1	0	1	0	0	0	0	1	0	1	0	0
Lupinus sericatus Cobb Mountain lupine	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	900 1,860	46 S:4	0	0	1	1	0	2	4	0	4	0	0
Navarretia leucocephala ssp. pauciflora few-flowered navarretia	G4T1 S1	Endangered Threatened	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	1,460 1,600	10 S:2	1	1	0	0	0	0	0	2	2	0	0
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	G3 S3.2	None None			53 S:3	0	0	0	0	0	3	3	0	3	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Northern Vernal Pool	G2	None		20	20	1	0	0	0	0	3	4	0	4	0	0
Northern Vernal Pool	S2.1	None		1,460	S:4											
Penstemon newberryi var. sonomensis	G4T3	None	Rare Plant Rank - 1B.3 BLM_S-Sensitive		15	0	0	0	0	0	2	1	1	2	0	0
Sonoma beardtongue	S3	None			S:2											
Polygonum marinense	G2Q	None	Rare Plant Rank - 3.1	5	32	1	1	0	0	0	1	1	2	3	0	0
Marin knotweed	S2	None		5	S:3											
Rhynchospora californica	G1	None	Rare Plant Rank - 1B.1	875	9	0	1	0	0	0	0	0	1	1	0	0
California beaked-rush	S1	None		875	S:1											
Sagittaria sanfordii	G3	None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	80	126	0	0	1	0	0	0	0	1	1	0	0
Sanford's arrowhead	S3	None		80	S:1											
Serpentine Bunchgrass	G2	None		550	22	0	1	0	0	0	0	1	0	1	0	0
Serpentine Bunchgrass	S2.2	None		550	S:1											
Sidalcea hickmanii ssp. napensis	G3T1	None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	1,380	2	0	0	0	0	0	1	1	0	1	0	0
Napa checkerbloom	S1	None		1,380	S:1											
Sidalcea keckii	G2	Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	780	50	0	0	0	0	0	2	2	0	2	0	0
Keck's checkerbloom	S2	None		780	S:2											
Streptanthus hesperidis	G2G3	None	Rare Plant Rank - 1B.2 BLM_S-Sensitive		35	0	0	0	0	0	2	2	0	2	0	0
green jewelflower	S2S3	None			S:2											
Symphyotrichum lentum	G2	None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	0	175	0	1	0	1	0	2	4	0	4	0	0
Suisun Marsh aster	S2	None		10	S:4											
Trichostema ruygtii	G1G2	None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	95	19	0	0	1	0	1	14	3	13	15	0	1
Napa bluecurls	S1S2	None		1,930	S:16											

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Trifolium amoenum two-fork clover	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley SB_USDA-US Dept of Agriculture	20 100	26 S:3	0	0	0	0	1	2	3	0	2	1	0
Trifolium hydrophilum saline clover	G2 S2	None None	Rare Plant Rank - 1B.2	5 775	56 S:7	0	0	1	0	1	5	3	4	6	0	1
Viburnum ellipticum oval-leaved viburnum	G4G5 S3?	None None	Rare Plant Rank - 2B.3	600 1,480	39 S:4	0	0	0	0	0	4	2	2	4	0	0

CNPS Rare Plant Inventory

California Native Plant Society

Search Results

74 matches found. Click on scientific name for details

Search Criteria: Quad is one of [**3812233:3812244:3812243:3812242:3812232:3812222:3812223:3812224:3812234**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK
Agrostis hendersonii	Henderson's bent grass	Poaceae	annual herb	Apr-Jun	None	None	G2Q	S2	3.2
Allium peninsulare var. *franciscanum*	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G5T2	S2	1B.2
Amorpha californica var. *napensis*	Napa false indigo	Fabaceae	perennial deciduous shrub	Apr-Jul	None	None	G4T2	S2	1B.2
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2
Antirrhinum virga	twig-like snapdragon	Plantaginaceae	perennial herb	Jun-Jul	None	None	G3?	S3?	4.3
Arabis modesta	modest rockcress	Brassicaceae	perennial herb	Mar-Jul	None	None	G3	S3	4.3
Arctostaphylos stanfordiana ssp. *decumbens*	Rincon Ridge manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr(May)	None	None	G3T1	S1	1B.1
Astragalus claranus	Clara Hunt's milk-vetch	Fabaceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1
Astragalus clevelandii	Cleveland's milk-vetch	Fabaceae	perennial herb	Jun-Sep	None	None	G4	S4	4.3
Astragalus tener var. *tener*	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2
Blennosperma bakeri	Sonoma sunshine	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1
Brodiaea leptandra	narrow-anthered brodiaea	Themidaceae	perennial bulbiferous herb	May-Jul	None	None	G3?	S3?	1B.2
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	None	None	G4	S4	4.2
Carex lyngbyei	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	None	None	G5	S3	2B.2
Castilleja affinis var. *neglecta*	Tiburon paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Jun	FE	CT	G4G5T1T2	S1S2	1B.2
Castilleja ambigua var. *ambigua*	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G4T4	S3S4	4.2
Castilleja ambigua var. *meadii*	Mead's owls-clover	Orobanchaceae	annual herb (hemiparasitic)	Apr-May	None	None	G4T1	S1	1B.1
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Jun	None	None	G1	S1	1B.1

Ceanothus divergens	Calistoga ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr	None	None	G2	S2	1B.2
Ceanothus purpureus	holly-leaved ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Jun	None	None	G2	S2	1B.2
Ceanothus sonomensis	Sonoma ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr	None	None	G2	S2	1B.2
Centromadia parryi ssp. *parryi*	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2
Centromadia parryi ssp. *rudis*	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	G3T3	S3	4.2
Chloropyron molle ssp. *molle*	soft salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Nov	FE	CR	G2T1	S1	1B.2
Clarkia breweri	Brewer's clarkia	Onagraceae	annual herb	Apr-Jun	None	None	G4	S4	4.2
Clarkia gracilis ssp. *tracyi*	Tracy's clarkia	Onagraceae	annual herb	Apr-Jul	None	None	G5T3	S3	4.2
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	May-Jun	None	None	G4	S4	4.3
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2
Eleocharis parvula	small spikerush	Cyperaceae	perennial herb	(Apr)Jun-Aug(Sep)	None	None	G5	S3	4.3
Erigeron biolettii	streamside daisy	Asteraceae	perennial herb	Jun-Oct	None	None	G3?	S3?	3
Erigeron greenei	Greene's narrow-leaved daisy	Asteraceae	perennial herb	May-Sep	None	None	G3	S3	1B.2
Eryngium jepsonii	Jepson's coyote-thistle	Apiaceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2
Erythronium helenae	St. Helena fawn lily	Liliaceae	perennial bulbiferous herb	Mar-May	None	None	G3	S3	4.2
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2
Harmonia nutans	nodding harmonia	Asteraceae	annual herb	Mar-May	None	None	G3	S3	4.3
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2
Helianthus exilis	serpentine sunflower	Asteraceae	annual herb	Jun-Nov	None	None	G3	S3	4.2
Hemizonia congesta ssp. *congesta*	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	None	None	G5T2	S2	1B.2
Hesperolinon bicarpellatum	two-carpellate western flax	Linaceae	annual herb	(Apr)May-Jul	None	None	G2	S2	1B.2
Hesperolinon breweri	Brewer's western flax	Linaceae	annual herb	May-Jul	None	None	G2	S2	1B.2
Hesperolinon sharsmithiae	Sharsmith's western flax	Linaceae	annual herb	May-Jul	None	None	G2Q	S2	1B.2
Horkelia tenuiloba	thin-lobed horkelia	Rosaceae	perennial herb	May-Jul(Aug)	None	None	G2	S2	1B.2

Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May(Jun)	None	None	G3	S3	4.2
Isocoma arguta	Carquinez goldenbush	Asteraceae	perennial shrub	Aug-Dec	None	None	G1	S1	1B.1
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	FE	None	G1	S1	1B.1
Lathyrus jepsonii var. *jepsonii*	Delta tule pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	None	None	G5T2	S2	1B.2
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1
Leptosiphon acicularis	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	Mar-May	None	None	G2G3	S2S3	1B.2
Leptosiphon latisectus	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	None	CR	G2	S2	1B.1
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	Apr-Aug(Sep)	None	None	G3	S3	4.2
Limnanthes vinculans	Sebastopol meadowfoam	Limnanthaceae	annual herb	Apr-May	FE	CE	G1	S1	1B.1
Lomatium repostum	Napa lomatium	Apiaceae	perennial herb	Mar-Jun	None	None	G2G3	S2S3	1B.2
Lupinus sericatus	Cobb Mountain lupine	Fabaceae	perennial herb	Mar-Jun	None	None	G2?	S2?	1B.2
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	None	None	G3G4	S3S4	3.2
Monardella viridis	green monardella	Lamiaceae	perennial rhizomatous herb	Jun-Sep	None	None	G3	S3	4.3
Navarretia leucocephala ssp. *pauciflora*	few-flowered navarretia	Polemoniaceae	annual herb	May-Jun	FE	CT	G4T1	S1	1B.1
Penstemon newberryi var. *sonomensis*	Sonoma beardtongue	Plantaginaceae	perennial herb	Apr-Aug	None	None	G4T3	S3	1B.3
Polygonum marinense	Marin knotweed	Polygonaceae	annual herb	(Apr)May-Aug(Oct)	None	None	G2Q	S2	3.1
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2
Rhynchospora californica	California beaked-rush	Cyperaceae	perennial rhizomatous herb	May-Jul	None	None	G1	S1	1B.1
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2
Sidalcea hickmanii ssp. *napensis*	Napa checkerbloom	Malvaceae	perennial herb	Apr-Jun	None	None	G3T1	S1	1B.1

Sidalcea keckii	Keck's checkerbloom	Malvaceae	annual herb	Apr-May(Jun)	FE	None	G2	S2	1B.1
Streptanthus hesperidis	green jewelflower	Brassicaceae	annual herb	May-Jul	None	None	G2G3	S2S3	1B.2
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	None	None	G2	S2	1B.2
Trichostema ruygtii	Napa bluecurls	Lamiaceae	annual herb	Jun-Oct	None	None	G1G2	S1S2	1B.2
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	FE	None	G1	S1	1B.1
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2
Triteleia lugens	dark-mouthed triteleia	Themidaceae	perennial bulbiferous herb	Apr-Jun	None	None	G4?	S4?	4.3
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	None	None	G4G5	S3?	2B.3

Showing 1 to 74 of 74 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2022. Rare Plant Inventory (online edition, v9-01 1.5). Website https://www.rareplants.cnps.org [accessed 17 March 2022].

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Napa County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Salt Marsh Harvest Mouse Reithrodontomys raviventris Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/613	Endangered

Birds

NAME	STATUS
California Least Tern Sterna antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Northern Spotted Owl Strix occidentalis caurina Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/1123	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle Chelonia mydas No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6199	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS
California Freshwater Shrimp Syncaris pacifica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7903	Endangered
Conservancy Fairy Shrimp Branchinecta conservatio Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8246	Endangered

Flowering Plants

NAME	STATUS
Contra Costa Goldfields Lasthenia conjugens Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/7058	Endangered
Showy Indian Clover Trifolium amoenum Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6459	Endangered
Sonoma Sunshine Blennosperma bakeri Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1260	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN

THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird Selasphorus sasin — Breeds Feb 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9637

California Spotted Owl Strix occidentalis occidentalis — Breeds Mar 10 to Jun 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/7266

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

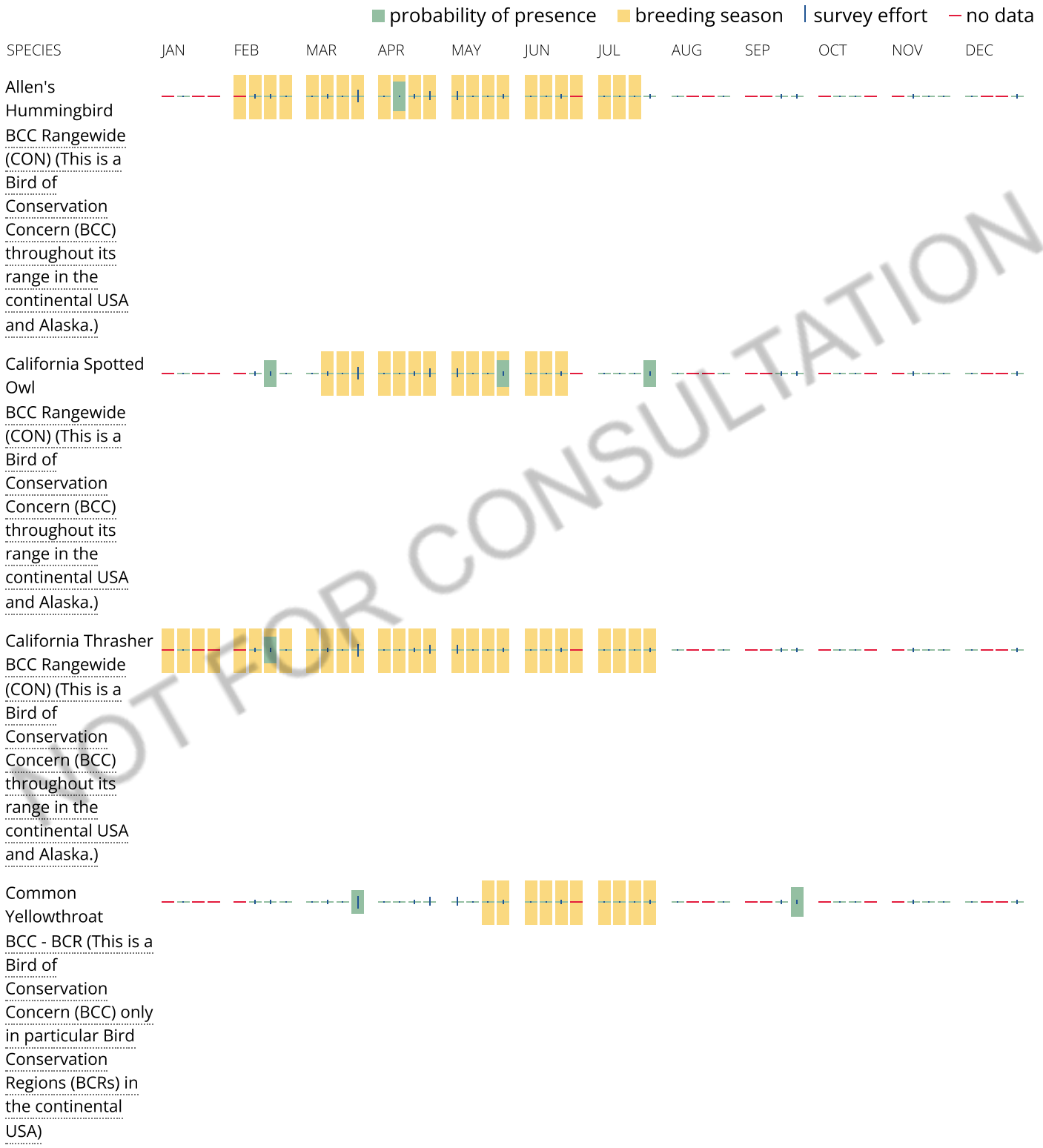
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

A week is marked as having no data if there were no survey events for that week.

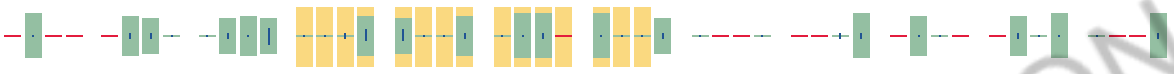
Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

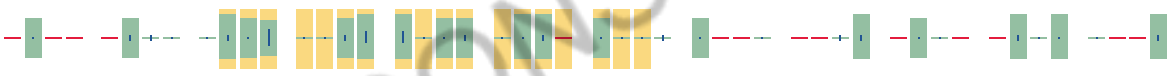


Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Oak Titmouse BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Wrentit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in

activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX C

FIELD SURVEYOR QUALIFICATIONS

Biological Assessment

Dana Riggs, Principal Biologist for Sol Ecology received her Bachelor of Science degree in Earth Systems, Science and Policy at California State University of Monterey Bay in 2001. Prior to founding Sol Ecology, she was a principal biologist and head of the Wildlife and Fisheries Department at WRA, a mid-size environmental consulting firm in San Rafael, California. She has 20 years of experience directing a broad range of resource studies from planning level to post-construction including: biological habitat assessments and mapping, special status species surveys, corridor studies, site restoration and monitoring, federal and state regulatory permitting, local permitting, mitigation and restoration planning for aquatic species, and NEPA and CEQA documentation for a variety of public and private sector clients. Dana has extensive experience working with species including California red-legged frog and California tiger salamander and has been approved by USFWS and CDFW to monitor for these species on projects throughout the state.

Mark Kalnins, Senior Regulatory Specialist for Sol Ecology received a Bachelor of Science in Plant Biology from Ohio State University in 1997 and a Master of Science in Environmental Science from Christopher Newport University-Virginia in 2000. He has worked as a professional wetland delineator, biologist, and regulatory permitting specialist in public, private, and non-profit sectors for over 17 years. Mark specializes in wetland delineation, assessments, and permitting, compensatory mitigation planning and implementation, special status plant surveys, floristic inventories, and vegetation community mapping in the SF Bay Area and Northern California.

Elspeth Mathau, Biologist for Sol Ecology received a Bachelor of Science in Environmental Studies, Biology, and Psychology at the University of Toronto in 2016 and a Master of Science in Ethnobotany at the University of Kent in Canterbury UK with training at Kew Royal Botanical Gardens in 2018. She started working in the environmental science education field in 2009 and has experience with plant restoration projects and floristic inventories. Her master's research was on ecological change and climate adaptation in the Moroccan High Atlas Mountains with indigenous communities. She has also worked with sustainable agriculture and STEM education non-profits focused on equity and inclusion programs. Elspeth specializes in special status wildlife surveys.

APPENDIX D

OBSERVED SPECIES TABLE

Appendix D. Observed Species Table at the Mt. Veeder Study Area on June 3, 2022

SCIENTIFIC NAME	COMMON NAME
WILDLIFE	
Amphibians and Reptiles	
Elgaria multicarinata multicarinata	California alligator lizard
Sceloporus occidentalis	western fence lizard
Birds	
Sialia mexicana	Western bluebird
Cathartes aura	turkey vulture
Mammals	
Neotoma lepida	Woodrat (nest- no direct sighting)
PLANTS	
Acer macrophyllum	Big Leaf Maple
Acer negundo	*box elder*
Achillea millefolium	common yarrow
Acmispon brachycarpus	foothill deervetch
Acmispon glaber	deerweed
Adiantum jordanii	California maiden hair fern
Aesculus californica	California Buckeye
Amsinckia tessellata	Fiddleneck
Arbutus menziesii	Pacific madrone
Avena sp.	(no fruits/flowers to id)
Baccharis pilularis	coyote bush
Briza maxima	rattle snake grass
Briza minor	little quaking grass
Brodiaea elegans	harvest brodiaea
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft brome
Calochortus luteus	Yellow mariposa lily
Carduus pycnocephalus	Italian thistle
Ceanothus sp.	
Centaurea solstitialis	yellow star thistle
Chlorogalum pomeridianum	soap root plant
Cirsium vulgare	bull thistle
Claytonia perfoliata	miner's lettuce
Convolvulus arvensis	field bindweed
Cynosurus echinatus	bristly dogstail grass
Diplacus aurantiacus	(sticky) bush monkey flower
Dipterostemon capitatus	blue dicks
Elymus glaucus	blue wildrye
Equisetum arvense	*common horsetail*
Erigeron canadensis	horseweed
Erodium sp.	
Erythranthe cardinalis	scarlet monkeyflower
Ficus carica L.	Common fig

SCIENTIFIC NAME	COMMON NAME
Fragaria vesca	woodland strawberry
Frangula californica	coffeeberry
Galium aparine	common bedstraw
Genista monspessulana	French broom
Heteromeles arbutifolia	Toyon
Hirschfeldia incana	wild mustard
Hordeum murinum	foxtail barley
Juncus sp.	
Lonicera hispidula	pink honeysuckle
Lupinus albifrons	silver Lupine
Lupinus bicolor	miniature Lupine
Lupinus nana	sky lupine
Medicago polymorpha	California burclover
Melica californica	California melicgrass
Micropus amphibolus	Mount Diablo cottonseed
Osmorhiza berteroi	mountain Sweet Cicely
Phalaris aquatica	Harding grass
Physocarpus capitatus	Pacific ninebark
Plantago lanceolata	English plantain
Plantago lanceolata	narrow leaf plantain
Polypogon monspeliensis	rabbit foot grass
Pseudotsuga menziesii	Douglas fir
Pteridium aquilinum	Western brackenfern
Quercus agrifolia	coast live oak
Quercus douglasii	blue oak
Quercus garryana	Oregon white oak
Rhinotropis Californica	California Milkwort
Rosa sp.	
Rubus armeniacus	Himalayan blackberry
Rubus ursinus	California blackberry
Rumex crispus L.	Curly dock
Rupertia physodes	common rupertia
Salix lasiolepis	Arroyo willow
Sambucus sp.	elderberry
Carex spp.	Sedge sp.
Silybum marianum	milk thistle
Sisyrinchium bellum	blue-eyed grass
Sonchus asper	prickly sowthistle
Stachys bullata	California hedgenettle
Stipa pulchra	purple needle grass
Symphoricarpos albus var. *laevigatus*	snowberry
Taraxacum officinale	common dandelion
Torilis arvensis	field hedge parsley
Toxicodendron diversilobum	western poison oak
Tragopogon porrifolius	purple salsify

SCIENTIFIC NAME	COMMON NAME
Trifolium hirtum	rose clover
Triteleia laxa	Ithuriel's Spear
Umbellularia californica	California bay laurel
Urtica dioica	California nettle
Vicia villosa	hairy vetch
Vinca minor	Common periwinkle
Vitis californica	California Grape
Wyethia mollis	Mule Ears

Photo 1. View of existing bridge looking towards Mt. Veeder Road.

Photo 2. . View of Pickle Creek and riparian vegetation

Photo 3. Underside of existing bridge showing structural foundation on west bank.

Photo 4. View of existing driveway with roadside drainage ditch.

Photo 5. Proposed spoils disposal area with mixed oak forest in the background.

Photo 6. Proposed alternative spoils disposal area showing existing vineyard and disturbed/developed ground cover.

Photo 7. Proposed winery and hospitality pavilion development area, existing residential structure is to remain.

December 2, 2022

Attn: Maggie Schneider
RSA Project Engineer
1515 Fourth Street
Napa, Ca 94559

Ms. Schneider,

RSA Civil has identified the need to conduct grading on a failing slope below a proposed winery at the Mt. Veeder Project site (WRA Project # 26082). The slope proposed to be graded includes an area identified in a Habitat Mitigation and Monitoring Plan (HMMP) written by WRA, Inc. (WRA 2020[1]) as part of P19-00080-ECPA to be used to establish purple needlegrass grassland to mitigate for the loss of purple needlegrass grassland from the vineyard installation (reestablishment area). The HMMP and actions therein have been approved as a Condition of Approval for the Mt. Veeder vineyard installation.

The reestablishment area identified in the HMMP includes an area of non-native grassland where purple needlegrass grassland is proposed to be established through planting/seeding and subsequent management. The proposed reestablishment area totals 0.15-acre.

It is WRA's understanding that a portion of the proposed grading overlaps with a portion of the proposed purple needlegrass reestablishment area. RSA Civil is seeking an opinion as to any potential conflict between their proposed grading activities and the purple needlegrass establishment. This letter provides a discussion addressing such. It is the opinion of WRA that the proposed grading and proposed reestablishment are compatible.

Discussion

As discussed in the HMMP, site preparation of the reestablishment area includes removal of existing vegetation and excavation of topsoil to diminish the non-native seedbank. The proposed grading is presumed to do such actions. As communicated to WRA, the slope of the reestablishment area will increase from the existing slope. The HMMP mentions reestablishment in locations between 10 to 30 percent; however, a steeper slope is not anticipated to hinder establishment of purple needlegrass. Measures to stabilize the slope are identified in the HMMP and should be utilized to the level applicable to existing conditions following slope grading to ensure success of mitigation activities and reduce potential erosion from regular access to the reestablishment area during installation and maintenance activities.

The HMMP identifies pre-disturbance data collection of existing purple needlegrass grassland. Based on the grading plans provided to WRA, it appears existing purple needlegrass grassland will

[1] WRA, Inc. 2020. *Purple Needlegrass Re-Establishment Plan, Mt. Veeder Vineyard, Napa County*. May

be avoided. As these existing grasslands will need to be visited to collect baseline data for HMMP success criteria, these areas of grassland should be flagged and/or otherwise delineated to ensure that they are avoided by grading activities. If these areas cannot be avoided, then data should be collected prior to land disturbance.

Conclusion

The proposed grading will provide site preparation of the reestablishment area as discussed in the HMMP. Existing purple needlegrass grassland located near the proposed grading should either be flagged or otherwise delineated for avoidance; if avoidance is not feasible, data collection as identified in the HMMP should be conducted in April or May and prior to land disturbance. Erosion and other slope stabilizing measures installed following proposed grading should be sufficient to accommodate maintenance actions within the reestablishment area.

Should you have any questions, you can reach me at korhummel@wra-ca.com

Sincerely,

Rhiannon Korhummel
Senior Scientist, Plant Biologist

July 11, 2023

Attn: Bruce Fenton
RSA Project Engineer
1515 Fourth Street
Napa, Ca 94559

Mr. Fenton,

RSA Civil has identified the need to conduct grading and cave spoils placement on a failing slope below a proposed winery at the Mt. Veeder Project site (WRA Project # 26082). The slope proposed to be graded includes an area identified in a Habitat Mitigation and Monitoring Plan (HMMP) written by WRA, Inc. (WRA 2020[1]) as part of P19-00080-ECPA to be used to establish purple needlegrass grassland to mitigate for the loss of purple needlegrass grassland from the vineyard installation (reestablishment area). The HMMP and actions therein have been approved as a Condition of Approval for the Mt. Veeder vineyard installation.

The reestablishment area identified in the HMMP includes an area of non-native grassland where purple needlegrass grassland is proposed to be established through planting/seeding and subsequent management. The proposed reestablishment area totals 0.15-acre.

It is WRA's understanding that a portion of the proposed grading overlaps with a portion of the proposed purple needlegrass reestablishment area. According to RSA, the area proposed for grading will have the topsoil and slide debris removed down to bedrock, then have primary cave spoils placed as a hillside buttress fill on bedrock. According to the geologist, the topsoil in the area is approximately 0.5 feet due to landslide debris. RSA Civil is seeking an opinion as to any potential conflict between their proposed grading and cave spoil placement activities and the purple needlegrass establishment. This letter provides a discussion addressing such. It is the opinion of WRA that the proposed grading, cave spoils placement, and proposed reestablishment are compatible.

Discussion

As discussed in the HMMP, site preparation of the reestablishment area includes removal of existing vegetation and excavation of topsoil to diminish the non-native seedbank. The proposed grading and cave spoils placement is presumed to do such actions with the following recommendations. According to the geologist, the cave spoils would classify as clay once crush and compacted. According to Soil Survey of Napa County, existing soils are clay loam. WRA recommends mixing existing topsoil with crushed and compacted cave spoils to incorporate loam into the spoils. The mixing of the two soils, rather than placement of topsoil on top of cave spoils will reduce the

[1] WRA, Inc. 2020. *Purple Needlegrass Re-Establishment Plan, Mt. Veeder Vineyard, Napa County*. May

amount of non-native plant establishment. The mixing should be 0.5 feet deep to match current topsoil depths.

As communicated to WRA, the slope of the reestablishment area will increase from the existing slope. The HMMP mentions reestablishment in locations between 10 to 30 percent; however, a steeper slope is not anticipated to hinder establishment of purple needlegrass. Measures to stabilize the slope are identified in the HMMP and should be utilized to the level applicable to existing conditions following slope grading to ensure success of mitigation activities and reduce potential erosion from regular access to the reestablishment area during installation and maintenance activities.

The HMMP identifies pre-disturbance data collection of existing purple needlegrass grassland. Based on the grading plans provided to WRA, it appears existing purple needlegrass grassland will be avoided. As these existing grasslands will need to be visited to collect baseline data for HMMP success criteria, these areas of grassland should be flagged and/or otherwise delineated to ensure that they are avoided by grading activities. If these areas cannot be avoided, then data should be collected prior to land disturbance.

Conclusion

The proposed actions, with the inclusion of WRA recommendations, will provide site preparation of the reestablishment area as discussed in the HMMP. Existing purple needlegrass grassland located near the proposed grading should either be flagged or otherwise delineated for avoidance; if avoidance is not feasible, data collection as identified in the HMMP should be conducted in April or May and prior to land disturbance. Erosion and other slope stabilizing measures installed following proposed grading should be sufficient to accommodate maintenance actions within the reestablishment area.

Should you have any questions, you can reach me at korhummel@wra-ca.com

Sincerely,

Rhiannon Korhummel
Senior Scientist, Plant Biologist