Biological Resource Survey

Hourglass Winery Major Modification
701 Lommel Road
Calistoga, CA



Prepared
For

Hourglass Wine Company

By

Kjeldsen Biological Consulting

August 2023

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PROJECT NAME:

Hourglass Winery Major Modification
Hourglass Wine Company, Inc.
701 Lommel Road
Calistoga, CA 94515
APN 018-060-024 , 021-010-001

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PERIOD OF STUDY:

March to August 2023

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Executive Summary

This study was conducted at the request of Albion Surveys, Inc., on behalf of the property owner, as background information for project permits from the Napa County Planning, Building and Environmental Services Department. The project proposes a major modification for additional caves, accessory and production space, a new hospitality center, new tasting pavillion, and improvements of existing roads. The property is located on the east side of the Napa Valley southeast of Calistoga. The property is within the watershed of the Napa River and is within the USGS Calistoga Quadrangle.

The purpose of this report is to identify biological resources that may be affected by the proposed project. The fieldwork studied the proposed project envelope and the adjoining environment. The findings presented below are the results of fieldwork conducted during the spring and summer of 2023 by Kjeldsen Biological Consulting:

- There is an existing cave facility, vineyards and access road on the property. The project footprint is within a Ruderal Grassland, and Mixed Oak Woodlands. The property burned in 2020;
- The project will not adversely impact threatened or endangered plant or animal habitats as designated by state or federal agencies or identified as special-status species;
- The project will not adversely impact any sensitive biotic communities or habitats of limited distribution on the county's Baseline Data Report;
- There are no Sensitive Natural Communities regulated by the California Department of Fish and Wildlife or US Fish and Wildlife within or associated with the project footprint;
- The proposed project will not substantially interfere with native wildlife species, wildlife corridors, and or native wildlife nursery sites;
- The footprint of the project will not significantly contribute to habitat loss or habitat fragmentation;
- The project proposes the removal of a small amount of native Oaks;
- There are two USGS Blue Line drainages on both sides of the property. There is also an ephemeral drainage within the proposed project modifications;
- Road improvements and cave spoils removal are proposed with the stream setback. Road improvements within the setback of Biter Creek will require an exemption to the Conservation Regulations;
- A complete list of all plants and animals encountered on and near the project site is included in Appendix A.

Recommendations

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

All project construction activities must be limited to the project footprint. Best Management Practices including silt and erosion control measures must be implemented to protect off-site movement of sediment and dust during and post construction. The erosion control plan for the project must be implemented.

The project must comply with Napa County General Plan Policy CON-24 Paragraph (c) stating that a project should "provide replacement of lost oak woodlands or preservation of like habitat at a 3:1 ratio."

Tree and vegetation removal must occur from August 15 to January 31, outside of the general bird nesting season. If tree and vegetation removal during this time is not feasible, a pre-construction nesting bird survey must be performed by a qualified biologist no more than 14 days prior to the initiation of tree removal or ground disturbance. The survey must cover the Project Area (including tree removal areas) and surrounding areas within 500 feet. If active bird nests are found during the survey, an appropriate no- disturbance buffer must be established by the qualified biologist. Once it is determined that the young have fledged (let the nest) or the nest otherwise becomes inactive (e.g., due to predation), the buffer may be lifted and work may be initiated within the buffer.

The Ephemeral Drainage should be provided with a 35-foot setback as per Napa County requirements. If the drainage is to be impacted then permits from, California Department of Fish and Wildlife (CDFW), and the Regional Water Quality Control Board (RWQCB) will be required.

If road improvements are proposed within the setback of Biter Creek an exemption to Napa County Conservation Regulations must be approved.

Grading shall occur during the dry season and must be suspended during unseasonable rainfalls of greater than one-half inch over a 24-hour period. If rainfall is in the forecast, standard erosion control measures (e.g., straw waddles, bales, silt fencing) must be deployed adjacent to ephemeral drainages. Construction personnel should be informed of the location of the site's aquatic resources with high-visibility flagging or staking prior to construction. No materials or equipment shall be stored near drainages on the property.

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A. PROJECT DESCRIPTION

This study was conducted at the request of Albion Surveys, Inc., on behalf of the property owner, as background information for project permits from the Napa County Planning, Building and Environmental Services Department.

A.1 Introduction

The project proposes a major modification for additional caves, accessory and production space, a new hospitality center, new tasting pavillion, and improvements of existing roads. The property is located on the east side of the Napa Valley southeast of Calistoga at 701 Lommel Road. Habitat impacted by the project consists of Ruderal Grassland and Mixed Oak Woodlands. Spoils from the cave construction will be stored and hauled offsite. The study site is within the USGS Calistoga Quadrangle. Plate I provides a site and location map of the property. Plate III provides an aerial photograph of the property and study site.

A.2 Background

The project site is located along the edge of the valley floor. The property burned in 2020. Several structures burned where the hospitality center is proposed. Several native Oak will be removed as part of the development. Habitat on the project site consists of Ruderal Grassland, and Mixed Oak Woodland. Access to the project site is via Lommel Road. There is an existing access road adjacent to Biter Creek that will be improved and widened as part of the project. Many of the oaks trees on the property were damaged in the fire. Some of the oak trees are recovering while others are declining. Dead trees have already been removed.

A.3 Purpose

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

- To determine the presence of potential habitat for special-status species which would be impacted by the proposed project, including habitat types which may have the potential for supporting special-status species (target species that are known for the region, habitat, the Quadrangle and surrounding Quadrangles);

- To identify and assess potential impacts to Federal or State protected wetlands as defined by Section 404 of the Clean Water Act;
- To determine if the project will substantially interfere with native wildlife species, wildlife corridors, and or native wildlife nursery sites;
- Identify any State or Federal biological permits required by the proposed project; and
- Recommend measures to reduce biological impacts to a less than significant level pursuant to the California Environmental Quality Act (CEQA).

B. SURVEY METHODOLOGY

Seasonal field work was conducted March to August 2023, to provide an evaluation of flora and fauna with techniques that would provide an analysis for the presence of or potential for any special-status animals, plants, unique plant populations and or critical habitat associated with the proposed project.

B.1 Project Scoping

The scoping for the project considered seasonal fieldwork, location and type of habitat and or vegetation types present on the property or associated with potential special-status plant species known for the Quadrangle, surrounding Quadrangles, the County or the region. Our scoping also considered records in the most recent version of the Department of Fish and Wildlife California Natural Diversity Data Base (CDFW CNDDB RareFind5) and the California Native Plant Society (CNPS) Rare Plant Inventory. "Target" special-status species are those listed by the State, the Federal Government or the California Native Plant Society or considered threatened in the region. Our scoping is also a function of our familiarity with the local flora and fauna as well as previous projects on other properties in the area.

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

B.2 Field Survey Methodology

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

Plants Field surveys were conducted identifying and recording all species on the site and in the near proximity. Transects through the proposed project sites were made methodically by foot. Transects were established to cover topographic and vegetation variations within the study area. The Intuitive Controlled approach calls for the qualified surveyor to conduct a survey of the area by walking through it and around its perimeters, and closely examining portions where target species are especially likely to occur. The open nature of the site, historic use, and ongoing management practices facilitated our field studies. All plant life was recorded in field notes and is presented in Appendix A.

The fieldwork for identifying special-status plant species is based on our knowledge and many years of experience in conducting special-status plant species surveys in the region. Plants were identified in the field or reference material was collected, when necessary, for verification using laboratory examination with a binocular microscope and reference materials. Herbarium specimens from plants collected on the project site were made when relevant. Voucher material

for selected individuals is in the possession of the authors. All plants observed (living and/or remains from last season's growth) were recorded in field notes.

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

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

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

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

Corridors Aerial photos were reviewed to evaluate the habitat surrounding the site and the potential for wildlife movement, or wildlife corridors from adjoining properties onto or through the property. Our field methodology for identifying corridors for movement searched for game trails or habitat that would favor movement of wildlife or potential gene flow. We also looked for barriers that would prevent movement or direct movement to particular areas. No game cameras, track plates, or other field equipment were used.

These five functions were used to evaluate potential wildlife corridors on the property. Corridors are considered suitable for flora and fauna movements if they provide avenues along which:

1. Wide-ranging animals can travel, migrate and meet mates;
2. Plants can propagate;
3. Genetic interchange can occur;
4. Populations can move in response to environmental changes and natural disasters; and
5. Individuals can re-colonize habitats from which populations have been locally extirpated.

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

Tributaries to Waters of the U.S. & Waters of the State are determined by the evaluation of continuity and "ordinary high-water mark." The ordinary high water mark is determined based on the top of scour marks and high flow impacts on vegetation. Waters of the U.S. (WOTUS) are defined as wetlands, ponds, lakes, creeks, streams, rivers, ephemeral drainages, ditches and seasonally ponded areas (EPA and ACOE Rule August 28, 2015). Seasonal stream channels with a definable bed and bank fall within the jurisdiction of EPA, ACOE and CDFW. Tributaries to Waters of the U.S. as well as "Waters of the State" are determined by the presence of a definable bed and bank, evidence of or ability to transport sediment and/or a blue line on the USGS Quadrangle Map.

The Migratory Bird Treaty Act of 1918 makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The MBTA also prohibits disturbance or harassment of nesting migratory birds at any time during their breeding season.

Special-status Species or Listed Species are plants or animals that have been designated by Federal or State agencies as rare, threatened or endangered, and California Native Plant Society.

Plant Communities or Alliances The classification of plant communities in this report is based on A Manual of California Vegetation Sawyer 2009. Plant Communities are vegetation types that are recognizable by the dominant species present with identifiable boundaries. They are a result of site specific edaphic conditions, hydrology, topography, aspect, natural disturbance and elevation. Plant assemblages provide food, cover and habitat for wildlife often with specific species present.

Sensitive Communities CDFW CNDDB identifies environmentally sensitive plant communities that are rare or threatened in nature. Sensitive habitat is defined as any area that meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Wildlife Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting

areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes.

Critical Habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery.

Streams /Drainages

There are two types of streams or drainages; 1) perennial flowing waters and 2) seasonal ephemeral drainages that convey water during and shortly after rainfall. The USGS 7.5 Minute Quadrangle map for the site was analyzed for the presence of "blue line" creeks. Onsite topography and evidence of bed and bank was used for evaluating ephemeral drainages. Drainages were walked and visually evaluated for continuity of bed and bank as well as signs of aquatic life. The streambed was evaluated for flow, pools, substrate, bank and quality of habitat was recorded in field notes. Vegetation in the streambed was recorded if present and quality and quantity of riparian conditions as distinct from surrounding vegetation noted.

Stream Classification

Class I - Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.

Class II - Fish always or seasonally present, aquatic habitat for non-fish aquatic species.

Class III - No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high-water flow conditions.

Class IV - Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.

"Ephemeral" or "intermittent stream" means any natural channel with defined bed and banks containing flowing water or showing evidence of having contained flowing water, such as deposit of rock, sand, gravel, or soil, that does not meet the definition of "stream" in this chapter.

Ephemeral or intermittent streams that do not meet the criteria for a stream as defined in Section 18.108.030 shall have a minimum 35-foot setback (per Napa County).

Table I. Time and Date of Field Work.

Date	Personnel	Person-hr.	Time	Conditions
March 30, 2023	Chris K. and Daniel T. Kjeldsen	2.0 person - hours	9:00 to 10:00	Cool
April 27, 2023	Chris K. and Daniel T. Kjeldsen	4.0 person-hours	12:30 to 2:30 pm	Overcast, cool
May 17, 2023	Chris K. and Daniel T. Kjeldsen	4.0 person-hours	10:00 to 12:00 pm	Overcast, no wind, with mild temperatures
June 17, 2023	Chris K. and Daniel T. Kjeldsen	4.0 person-hours	10:00 to 12:00 pm	Clear, light breeze, with warm temperatures
July 12, 2023	Chris K. and Daniel T. Kjeldsen	4.0 person-hours	10:00 to 12:00 pm	Clear, warm temperatures
August 8, 2023	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	9:00 to 10:00	Overcast, cool

C. RESULTS / FINDINGS

C.1 Biological Setting

The study site is located in Napa County southeast of Calistoga along the edge of the valley floor. The property burned in 2020. The project is relatively flat with caves into the hillside. Habitat on the project site consists of disturbed Ruderal Grassland, and Mixed Oak Woodland. Several structures burned where the hospitality center is proposed. Clean up of burned debris has disturbed the area. Many of the oaks trees on the property were damaged in the fire. Some of the oak trees are recovering while others are declining. Dead trees have been removed.

Biter Creek is located along the southern side of the project and contains an oak overstory with little understory vegetation. Access the project site is proposed along the existing gravel road adjacent to Biter Creek. This road will be improved and widened as part of the project. Selby creek is located along the norther property line and vegetation associated burned in recent fires.

The parcel drains by direct infiltration or sheet flow into Biter Creek and Selby Creek, thence the Napa River.

Road improvements within the setback of Biter Creek will require an exemption to the Conservation Regulations.

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

C.2 Habitat Types Present

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

The Napa County Baseline Data Report defines Biotic communities as the characteristic assemblages of plants and animals that are found in a given range of soil, climate, and topographic conditions across a region. The following Napa County vegetation types are found on the project site: Ruderal Grassland (Annual Grasslands) and Mixed Oak Woodlands.

The CNPS Rare Plant Inventory associates rare and endangered species with "Habitat Types." The Habitat Type for the project sites would be classified by CNPS as Valley and Foothill Grassland.

In the sections below the habitat types present within the footprint of the proposed project is described and further categorized with the system of vegetation classification by Sawyer *et al* A Manual of California Vegetation Second Edition. Sawyer classifies the vegetation on the project site as Grassland Semi-natural Stands with Herbaceous Layer and Woodland Alliance of Mixed Oak Woodland. This classification is the presently preferred system that over time will replace existing classification systems.

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

Semi-Natural Herbaceous Grasslands are a result of decades of agriculture and the introduction of non-native grasses and herbs. Sawyer uses the term "Semi-natural Stands to refer to non-native introduced plants that have become established and coexist with native species. This includes what can be termed weeds, aliens, exotics or invasive plants in agricultural and nonagricultural settings.

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

Wildlife Associated with Semi-natural Grasslands

Semi-natural Grasslands with Herbaceous Layer within the study area provide habitat for a variety of birds and small mammals. The vegetation present provides browse for deer, cover and foraging habitat for mice and voles, habitat for Pocket Gopher, foraging habitat for Broad-footed Moles, shrews, and cover and foraging habitat for Black-tailed Jackrabbit. Numerous bird species forage for insects and seeds in these grasslands. Bats will forage for insects over this area and raptors will feed on reptiles and mammals in this type of vegetation cover. In general, however, the non-native annual grasslands, such as are present on the study site, are not an optimum habitat for wildlife.

Forest or Woodland Alliances

Woodland Alliances are characterized by a dominant tree overstory and different degrees of understory development. Fire management, canopy age and degree of closure, windfalls, historic use, grazing, substrate base, aspect and rainfall are variables that control the degree of understory shrubs, herbs and tree recruitment.

Mixed Oak Woodland is dominated by Live Oaks, Black Oaks and Blue Oaks in varying densities. Understory vegetation is limited due to historic use, shade and leaf litter. Scattered herbaceous

vegetation includes native grasses such as California fescue (*Festuca californica*) and blue wildrye (*Elymus glaucus*) and many of the non-native grasses discussed above. Native forbs (herbaceous flowering plants that are not graminoids) in the understory include milk maids (*Cardamine californica*), Indian warrior (*Pedicularis densiflor*a), purple snakeroot (*Sanicula bipnnatifida*) and blue dicks (*Dichellostema capitata*).

***Quercus* (*agrifolia, douglasii, garryana, kelloggii, lobata, wislizeni*) Forest Alliance Mixed Oak Forest**; *Quercus agrifolia, Q. douglasii, Q, garryana, Q. kelloggii, Q. lobata* and/or *Q. wislizeni* are co-dominant in the tree canopy with *Aesculus californica, Arbutus menziesii, Pinus sabiniana, Pseudotsuga menziesii,* and *Umbellularia californica*. Trees > 30 m. The canopy is intermittent to continuous. Shrubs are infrequent or common, herbaceous layer is sparse or abundant, may be grassy. This Alliance is found in valleys and on gentle to steep slopes. The membership rules require three or more *Quercus* species present at >30% constancy and they are co-dominant in the tree canopy.

Wildlife: Mixed Oak Woodlands are productive for wildlife and support a variety species. The understory associates vary with aspect, fire history and grazing pressure. The annual acorn crop provides an important food source for many species of birds and mammals particularly deer and the introduced wild turkey. Numerous insects feed on oaks. The wildlife associated with Oak Woodlands includes the following: deer, squirrels, mountain lion, coyote, striped skunk, bobcat, fox and numerous rodents. Numerous fungi including many mycorrhizal fungi are associated with this species. Many mosses, liverworts and lichens are associated with these trees. Reptiles in this habitat include: western fence lizard, alligator lizard, king snake, common gopher snake, and western rattlesnake. Amphibians include: salamanders, frogs, newts, and toads. Many of California's birds are associated with this habitat.



Figure 1. Location of Hospitality Center.



Figure 2. Location of Tasting Pavillion.



Figure 3. Existing entrance road adjacent to Biter Creek to be widened and improved.



Figure 4. Existing entrance road adjacent to Biter Creek



Figure 5. Existing crush pan and cave entrance.



Figure 6. Ephemeral drainage above the existing winery.



Figure 7. Area of proposed path to new portal for cave spoils removal.

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

- North of the project – Selby Creek, Oak Woodlands, vineyards;
- East of the project – Chaparral, Oak Woodlands;
- South of the project –Biter Creek, Oak Woodlands, Vineyards, Rural Residential;
- West of the project –Vineyards, Lommel Road.

C.3 Special-Status Species

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

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

Special-status Plants

Table II below provides a list of plant species that are known to occur within the region of the proposed project (CDFW CNDDB Rare Find, CNPS search and U.S. Fish and Wildlife Service). The table includes an analysis of habitat for presence or absence. (The status of each species is shown in Appendix B).

Table II. Analysis of CDFW CNDDB, CNPS and USFWS special-status plant species known to be present in the region. Columns are arranged alphabetically by scientific name.

Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat Present on Project Site**	**Bloom Time**	**Obs. on or Near Site**	**Analysis of habitat on project site for presence or absence.**
Allium peninsulare var. *franciscanum* Franciscan Onion	Cismontane Woodland, Valley Foothill Grassland	Yes	May-June	No	Historic use of the project site precludes presance. This plant was not found during our surveys.
Amsinkia lunularis Bent-flowered Fiddleneck	Cismontane Woodland, Valley&Foothill Grassland	Yes	March-June	No	Historic land use and maintenance precludes presence on the project site.
Amorpha californica var. *napensis* Napa False Indigo	Cismontane Woodland	Yes	April-July	No	Species was not observed during our surveys.
Astragalus claranus Clara Hunt's Milk-vetch	Chaparral, Cismontane Woodland, Grassland	Yes	March-May	No	Historic land use and maintenance precludes presence on the project site.
Astragalus rattanii var. *jepsonianus* Jepson's Milk-Vetch	Cismontane Woodland, Valley and Foothill Grassland	Yes	April-June	No	Historic land use and maintenance precludes presence on the project site.
Balsamorhiza macrolepis var. *macrolepis* Big-scale Balsamroot	Chaparral, Valley and Foothill Grassland	No	March-June	No	Historic land use and maintenance precludes presence on the project site.
Blennosperma bakeri Sonoma Sunshine	Valley and Foothill Grassland, Vernal Pools	No	March-May	No	Absence of requisite mesic habitat.

Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat Present** on Project Site	Bloom Time	Obs. on or Near Site	Analysis of habitat on project site for presence or absence.
Brodiaea leptandra Narrow-anthered California Brodiaea	Cismontane Woodland	Yes	May-June	No	Requisite habitat, exposure and historic land use preclude presence on project site.
Calystegia collina ssp. *oxyphylla* Mt. Saint Helena Morning-glory	Chaparral Serpentinite	No	April-June	No	Requisite habitat and edaphic conditions absent.
Ceanothus divergens Calistoga Ceanothus	Chaparral, Serpentinite or Volcanic-Rocky	No	May-Sep.	No	Absence of typical habitat and vegetation associates.
Centromadia parryi ssp. *parryi* Pappose Tarplant	Grassland salt or alkaline Marshes	No	March-June	No	Requisite mesic conditions absent.
Downingia pusilla Dwarf Downingia	Wetlands	No	March-May	No	Requisite aquatic habitat absent on the site or in the immediate vicinity.
Eryngium constancei Loch Lomond Button-celery or Coyote Thistle	Vernal Pools	No	April-June	No	Absence of mesic conditions required for presence.
Fritillaria liliacea Fragrant Fritillary	Heavy Soil, Open Grasslands, Fields near Coast	No	Feb.-April	No	Absence of edaphic conditions required for presence.
Fritillaria pluriflora Adobe-lily	Chaparral, Cismontane Woodland, Valley and Foothill Grassland	Yes	Feb.-April	No	Requisite habitat and vegetation associates absent on the site or in the immediate vicinity.
Hemizonia congesta ssp. *congesta* Congested Headed Tarplant	Coastal Grassland	No	April Oct.	No	Absence of requisite habitat.

Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat Present on Project Site**	**Bloom Time**	**Obs. on or Near Site**	**Analysis of habitat on project site for presence or absence.**
Layia septentrionalis Colusa Layia	Cismontane Woodland, Valley and Foothill Grassland, Serpentinite	No	April-May	No	Requisite edaphic habitat absent on the site or in the immediate vicinity.
Leptosiphon jepsonii Jepson's Leptosiphon	Chaparral, Cismontane Woodland, Grassland	Yes	April-May	No	Species was not observed. Historic land use precludes presence.
Limnanthes floccosea ssp. *floccosa* Woolly Meadowfoam	Meadows and Seeps, Valley and Foothill Grassland, Cismontane Woodland, Vernal Pools	No	April-May	No	Requisite mesic habitat absent on the site or in the immediate vicinity.
Lasthenia californica ssp. *bakeri* Baker's Goldfields	Open Grasslands, Closed-cone Coniferous Forest openings	No	April-Oct.	No	Requisite habitat and vegetation associates absent.
Limnanthes vinculans Sebastopol Meadowfoam	Meadows and Seeps, Grassland, Vernal Pools	No	April-May	No	Requisite mesic habitat absent on the site or in the immediate vicinity.
Lupinus sericatus Cobb Mountain Lupine	Broadleaved Upland Forest, Chaparral, Cismontane Woodland	Yes	March-June	No	Species was not observed during our years of surveying the area. Listed along Biter Creek.
Microseris paludosa Marsh Microseris	Closed Cone Conifer Forests, Cismontane Woodland, Valley and Foothill Grassland	Yes	April-June	No	Absence of typical habitat and vegetation associates as well as absence of moisture.

Scientific Name Common Name	Species Habitat Association or Plant Community	Habitat Present on Project Site	Bloom Time	Obs. on or Near Site	Analysis of habitat on project site for presence or absence.
Navarretia leucocephala ssp. *bakeri* Baker's Navarretia	Meadows and Seeps Cismontane Woodland, Vernal Pools	No	May-July	No	Absence of typical habitat and vegetation associates.
Plagiobothrys strictus Calistoga Popcorn-flower or Calistoga Allocarya	Vernal Pools near thermal springs	No	March-June	No	Requisite mesic habitat absent on the site or in the immediate vicinity.
Poa napensis Napa Blue Grass	Meadows near Hot Springs	No	May-Aug.	No	Requisite mesic habitat absent on the site or in the immediate vicinity.
Puccinella simplex California Alkali Grass	Saline Flats, Mineral Springs	No	March-May	No	Lack of habitat.
Trichostema ruygtii Napa Bluecurls	Grassland	No	June-Aug.	No	Historic land use and maintenance precludes presence on the project site.
Trifolium amoenum, Two-fork Clover	Coastal Bluff Scrub, Grassland, Serpentinite	No	April-June	No	Historical use of the site precludes presence. This species is vulnerable to disturbance.
Trifolium hydrophilum Saline Clover	Marshes and Swamps Grassland	No	April-June	No	Absence of mesic habitat required for presence.
Viburnum ellipticum Oval-leaved Viburnum	Chaparral, Cismontane Woodland, Lower Coniferous Forest	No	May-June	No	Requisite habitat absent on the site or in the immediate vicinity.

The CDFW CNDDB Rare Find records the Quadrangle as a Sensitive Element Occurrence (EO) for the Calistoga Popcorn-flower (*Plagiobothrys strictus).* California Rare Plant Rank 1B1 (rare, threatened, or endangered in CA and elsewhere). State of California status: Threatened. Federal status: Endangered. Its habitat is springs and meadows. The project site does not contain habitat for this species.

The CDFW CNDDB does not show any records of special-status species of plants for the study site. The proposed project site does not contain habitat which would support special-status plant species. The historic use, lack of vernal pools, or wetlands, and vegetation associates reasonably

precludes the presence of special-status species within the proposed project area. Based on existing habitat, it is unlikely that the proposed project would have a substantial impact or result in any take of special-status plant species listed by CDFW and/or USFWS.

Special-status Animals

Table III below provides a list of animal species that are known to occur within the region of the proposed project (CDFW CNDDB and U.S. Fish and Wildlife Service). The table includes an analysis / justification for presence / absence. The status of each species is shown in Appendix B.

Table III. Analysis of CDFW CNDDB and USFWS target special-status animal species from the region. Columns are arranged alphabetically by scientific name.

Scientific Name Common Name	**Habitat**	**Potential for Property**	**Obs. on Project Site**	**Analysis of habitat on project site for presence or absence.**
Antrozous pallidus Pallid Bat	Roosts in Buildings and Overhangs, Woodlands	No May fly over	No	No potential roosting habitat on project site. Recorded in the area.
Buteo swainsoni Swainson's Hawk	Open areas with riparian influence	No	No	Lack of nesting habitat.
Corynorhinus townsendii Townsend's Big-eared Bat	Caves, also in Buildings. Trees min 24"DBH with basal hollow of 2 sq ft.	No May fly over	No	No potential roosting habitat on project site. Recorded in the area.
Danaus plexippus Monarch Butterfly	Milkweed, migrates along Coast	No	No	May pass through. Lack of food sources on project site.
Emys marmorata Western Pond Turtle	Slow moving water or ponds	No	No	Property does not contain habitat to support species.
Elanus leucurus White-tailed Kite	Nests in tall trees near water.	May fly over	No	Species was not observed during our survey.
Falco mexicanus Prairie Falcon	Nests on cliffs	May fly over	No	Lack of nesting habitat on site. Potential east of project.
Falco peregrinus anatum American Peregrine Falcon	Nests on cliffs	May fly over	No	Lack of nesting habitat on site. Potential east of project

Scientific Name Common Name	Habitat	Potential for Property	Obs. on Project Site	Analysis of habitat on project site for presence or absence.
Rana draytonii California Red-legged Frog	Creeks, Rivers, ponds, permanent flowing water	No	No	No breeding or upland estivation habitat on project site.
Strix occidentalis caurina Northern Spotted Owl	Old growth, Forested deep canyons	No	No	Habitat for this species is not present on the project site.
Taxidea taxus American Badger	Grasslands with food source of ground squirrels	No	No	No workings or burrows observed.

The California Department of Fish and Wildlife CNDDB records the Calistoga Quadrangle as a Sensitive Element Occurrence (EO) for the American Peregrine Falcon *(Falco peregrinus anatu).* The project site does not contain nesting or foraging habitat for this species.

The CNDDB RareFind (Plate II) does not show any records for special-status animal species on or near the project site. We found no evidence for the presence of any of the species listed in the table above during our surveys.

C.4 Discussion of Sensitive Habitat Types

The Napa County Baseline Data Report defines Biotic communities as the characteristic assemblages of plants and animals that are found in a given range of soil, climate, and topographic conditions across a region.

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

> Serpentine bunchgrass grassland, Wildflower field (located within native grassland), Creeping ryegrass grassland, Purple needlegrass grassland, One-sided bluegrass grassland, Mixed serpentine chaparral, McNab cypress woodland, Oregon white oak woodland, California bay forests and woodlands, Fremont cottonwood riparian forests, Arroyo willow riparian forests, Black willow riparian forests, Pacific willow riparian forests,, Red willow riparian forests, Narrowleaf willow riparian forests, Mixed willow riparian forests, Sargent cypress woodland, Douglas-fir–ponderosa pine forest (old-growth), Redwood forest, Coastal and valley freshwater marsh, Coastal brackish marsh, Northern coastal salt marsh, and Northern vernal pool.

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

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

Mixed oak woodland found on the project is not considered a California Department of Fish and Wildlife Sensitive habitat. California Natural Community List 71.100.14 Quercus douglasii – Quercus lobata – Quercus agrifolia / Toxicodendron diversilobum. Sensitive Alliance N.

Stream Analysis

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

Biter Creek and Selby Creek would both be considered a Napa County Definition for a Defined Drainage. These drainages would be considered as a Class II - Fish are not present, but there is aquatic habitat for non-fish aquatic species.

There is an ephemeral drainage, within the footprint of the project. There were no pools or water present during our survey, and no aquatic life is present within this drainage. The substrate present consists of rocks and soil. There was no woody vegetation along the bed and banks. This ephemeral drainage would be considered a Class III. This drainage during storm events flows into a drop inlet structure installed by previous development on the site. See Plate III for locations.

D. POTENTIAL BIOLOGICAL IMPACTS

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

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

A small amount of Oak Woodlands will be impacted by development on the project site. In the sections below a discussion of potential impacts of the project on the biological resources is presented.

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

Many special-status species are rare in nature because of their specific and often very narrow habitat or environmental requirements. Their presence is limited by specific environmental conditions such as: hydrology, microclimate, soils, nutrients, interspecific and intraspecific competition, and aspect or exposure. In some situations, special-status species particularly annuals may not be present each year and in this case one has to rely on skeletal material from previous years.

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

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

California Department of Fish and Wildlife Natural Diversity Database, records the Pallid Bat (*Antrozous pallidus*) and Townsend's Big-eared Bat (*Corynorhinus townsendii)* in close proximity to the property.

Pallid Bats occupy a variety of habitats at low elevation including grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Trees on the project site have low potential for this species, due to small size and lack of large cavities.

Townsend's Big-eared Bat occupy a variety of habitats including forested regions, buildings, areas with mosaic of woodland, grassland, and/or shrubland. They forage near the foliage of trees and shrubs, 10- 30 m off the ground; hibernate fall-spring; nurseries are in colonies in caves, mines, and buildings; roosting sites include caves and cave-type dwellings such as tunnels, mines, and bridges. Habitat on the project site does not contain habitat for this species. These species are unlikely to be present and or impacted by the proposed project.

The disturbed open ruderal grassland and mixed oak woodlands on the project site are such that there is no reason to expect any impacts to special-status species off-site provided standard best management practices are utilized and the erosion control plan is implemented.

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

D.2 Analysis of Potential Impacts on Sensitive Habitat

Native Grassland
Native grasslands are dominated by a mixture of annual and perennial grasses, such as small fescue (*Festuca (Vulpia) microstachys*), purple needlegrass (*Stipa* (*Nasella) pulchra*), and nodding needlegrass (*Stipa (Nasella)cernua*). Native grasslands likely occurred in the County in most areas currently occupied by annual grassland. The project site has been disturbed in the past and contains mostly non-native grass species. Patches of purple needlegrass are present on the project site but do not meet the definition of Native Grass Grassland. The project will not impact Native Grass Grasslands.

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

"Waters of the State" include drainages which are characterized by the presence of definable bed and bank that meet ACOE, and RWQCB definitions and or jurisdiction. Any direct discharge of into "Waters of the State" will require ACOE, CDFW, and RWQCB permits. Biter Creek, Selby Creek, and the ephemeral drainage on the property would all be considered Waters of the State.

There is an ephemeral drainage within the project footprint. Impact to this feature will require agencies permits.

Riparian Vegetation is by all standards considered sensitive. Riparian Vegetation functions to control water temperature, regulate nutrient supply (biofilters), bank stabilization, rate of runoff, wildlife habitat (shelter and food), release of allochthonous material, release of woody debris which functions as habitat and slow nutrient release, and protection for aquatic organisms. Riparian vegetation is also a moderator of water temperature has a cascade effect in that it relates to oxygen availability. The project will not impact or remove any riparian vegetation.

Trees Napa County requires the replacement of lost oak woodlands or preservation of like habitat on site. Removal of oak species limited in distribution shall be avoided to the maximum extent feasible. Within the Agricultural Watershed zoning district, require replacement of lost oak woodlands or permanent preservation of like habitat at a minimum 3:1 ratio when retention of existing vegetation is found to be infeasible.

The project proposes to remove a small amount of native Oak trees.

Wildlife Habitat and Wildlife Corridors are natural areas interspersed with developed areas are important for animal movement, increasing genetic variation in plant and animal populations, reduction of population fluctuations, and retention of predators of agricultural pests and for movement of wildlife and plant populations. Wildlife corridors have been demonstrated to not only increase the range of vertebrates including avifauna between patches of habitat but also facilitate two key plant-animal interactions: pollination and seed dispersal. Corridor users can be grouped into two types: passage species and corridor dwellers. The data from various studies indicate that corridors should be at least 100 feet wide to provide adequate movement for passage species and corridor dwellers in the landscape. Habitat on the project site do provide some degree for movement at a local scale, although the project site itself does not provide corridor functions beyond connecting similar forested and wooded parcels in surrounding areas. There are no identifiable wildlife corridors associated with the property.

Raptor Nests, Bird Rookeries, Bat Roosts, Wildlife Dens or Burrows
No bird rookeries or raptor nests were observed during our surveys on the property. Trees adjacent to the project do not contain suitable bat habitat.

Very few burrows were observed, but small mammals and songbirds likely utilize habitats on the project site for foraging and cover. No significant wildlife dens or burrows were observed. The project will not result in a significant negative impact to wildlife.

Unique Species that are Endemic, Rare or Atypical for the Area
The flora and fauna present are typical for the region. There were no unique species, endemic populations of plants or animals or species that are rare or atypical for the area present on the project site or property.

Habitat Fragmentation
Habitat fragmentation can result in a net-loss in overall habitat, an increase in edge habitat, and isolation effects, including genetic isolation. Due to these and other factors, small and isolated patches of habitat generally support lower species diversity than do large undeveloped areas. As a consequence of habitat fragmentation, abundance and diversity of species originally present often decline, and losses are most noticeable in small fragments. Loss of habitat, including habitat fragmentation, is the single most important factor affecting the long-term survival of rare, threatened and endangered species.

Habitat fragmentation is a local and global concern. The project will incrementally reduce a small amount of ruderal grassland habitat on the property. The proposed project will not lead to significant impacts to habitat fragmentation in the region, significant species exclusion, or significant change in species composition in the region. The project site is generally within a developed disturbed landscape and will not result in significant habitat fragmentation.

D.3 Potential Off-site Impacts of the Project

The project has the potential to impact aquatic species downstream by sediment loss. There are no expected significant impacts to off-site or local biological resources by the proposed project provided Recommendations in this report, Erosion Control Plan, and Best Management Practices are implemented during the development of the site.

D.4 Potential Cumulative Impacts

Cumulative biological effects are the result of incremental losses of biological resources within a region. Removal of vegetation can reduce the abundance and diversity of species in an area. Ruderal grasslands provide limited foraging, cover, and breeding habitat for native wildlife species.

Factors that were considered in the evaluation of cumulative biological impacts include:

1. Any known rare, threatened, or endangered species or sensitive species that may be directly or indirectly affected by project activities.

Significant cumulative effects on listed species may be expected from the results of activities over time that combine to have a substantial effect on the species or on the habitat of the species.

2. Any significant, known wildlife or fisheries resource concerns within the immediate project area and the biological assessment area (e.g. loss of oaks creating forage problems for a local deer herd, species requiring special elements, sensitive species, and significant natural areas).

Significant cumulative effects may be expected where there is a substantial reduction in required habitat or the project will result in substantial interference with the movement of

resident or migratory species. The significance of cumulative impacts on non-listed species viability was determined relative to the benefits to other non-listed species.

3. The aquatic and near-water habitat conditions on the site and immediate surrounding area. Habitat conditions of major concern are: pools and riffles, large woody material in the stream, and near-water vegetation.

No cumulative impacts to wildlife populations are expected by the proposed project provided that the recommendations are implemented. The project will reduce the area available to small mammals and foraging habitat for birds in the area. The loss of habitat is considered to be less than significant.

There are no significant impacts to migratory corridors or wildlife nursery site associated with the proposed project. The potential biological impacts of the project include the incremental loss of semi-natural grasslands and native oaks. The impact to local wildlife will be undetectable on a regional scale.

D.5 State and Federal Permit

Impact to the ephemeral drainages on the property will require agency consultation and permits from the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and Regional Water Quality Control Board.

E. RECOMMENDATIONS TO AVOID IMPACTS

E.1 Significance

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

E.2 Recommendations

The project must comply with Napa County SWPPP requirements to ensure that best management practices are adopted in order to minimize the amount of sediment and other pollutants leaving the site during construction activities.

Site development has the potential to impact biological resources without appropriate avoidance and protection measures.

Recommendation 1. All project construction activities must be limited to the project footprint. Best Management Practices including silt and erosion control measures must be implemented to protect off-site movement of sediment and dust during and post construction. The erosion control plan for the project must be implemented.

Recommendation 2. The project must comply with Napa County General Plan Policy CON-24 Paragraph (c) stating that a project should "provide replacement of lost oak woodlands or preservation of like habitat at a 3:1 ratio."

Recommendation 3. Tree and vegetation removal must occur from August 15 to January 31, outside of the general bird nesting season. If tree and vegetation removal during this time is not feasible, a pre-construction nesting bird survey must be performed by a qualified biologist no more than 14 days prior to the initiation of tree removal or ground disturbance. The survey must cover the Project Area (including tree removal areas) and surrounding areas within 500 feet. If active bird nests are found during the survey, an appropriate no- disturbance buffer must be established by the qualified biologist. Once it is determined that the young have fledged (let the nest) or the nest otherwise becomes inactive (e.g., due to predation), the buffer may be lifted and work may be initiated within the buffer.

Recommendation 4. The Ephemeral Drainage should be provided with a 35-foot setback as per Napa County requirements. If the drainage is to be impacted then permits from, California Department of Fish and Wildlife (CDFW), and the Regional Water Quality Control Board (RWQCB) will be required.

Recommendation 5. If road improvements are proposed within the setback of Biter Creek an exemption to Napa County Conservation Regulations must be approved.

Recommendation 65. Grading shall occur during the dry season and must be suspended during unseasonable rainfalls of greater than one-half inch over a 24-hour period. If rainfall is in the forecast, standard erosion control measures (e.g., straw waddles, bales, silt fencing) must be deployed adjacent to ephemeral drainages. Construction personnel should be informed of the location of the site's aquatic resources with high-visibility flagging or staking prior to construction. No materials or equipment shall be stored near drainages on the property.

F. SUMMARY

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

The project proposes a major modification for additional caves, accessory and production space, a new hospitality center, new tasting pavillion, and improvements of existing roads.

Spring and Summer 2023 floristic surveys did not find any special status plant species. Habitat impacted by the proposed project is typical of that found in the area. We find that the proposed project will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

The project does not adversely impact threatened or endangered plant or animal habitats as designated by state or federal agencies or identified as special-status species, sensitive biotic communities or habitats of limited distribution on the county's Baseline Data Report

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

We find that the project as proposed with implementation of recommendations, will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Following recommendations within this report the proposed project will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plans.

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

We conclude that the proposed project following recommendations included in this report and implementation of Erosion Control Plan and best management practices, will not result in any significant adverse biological impacts to the environment.

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G.2 Qualifications of Field Investigators

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

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

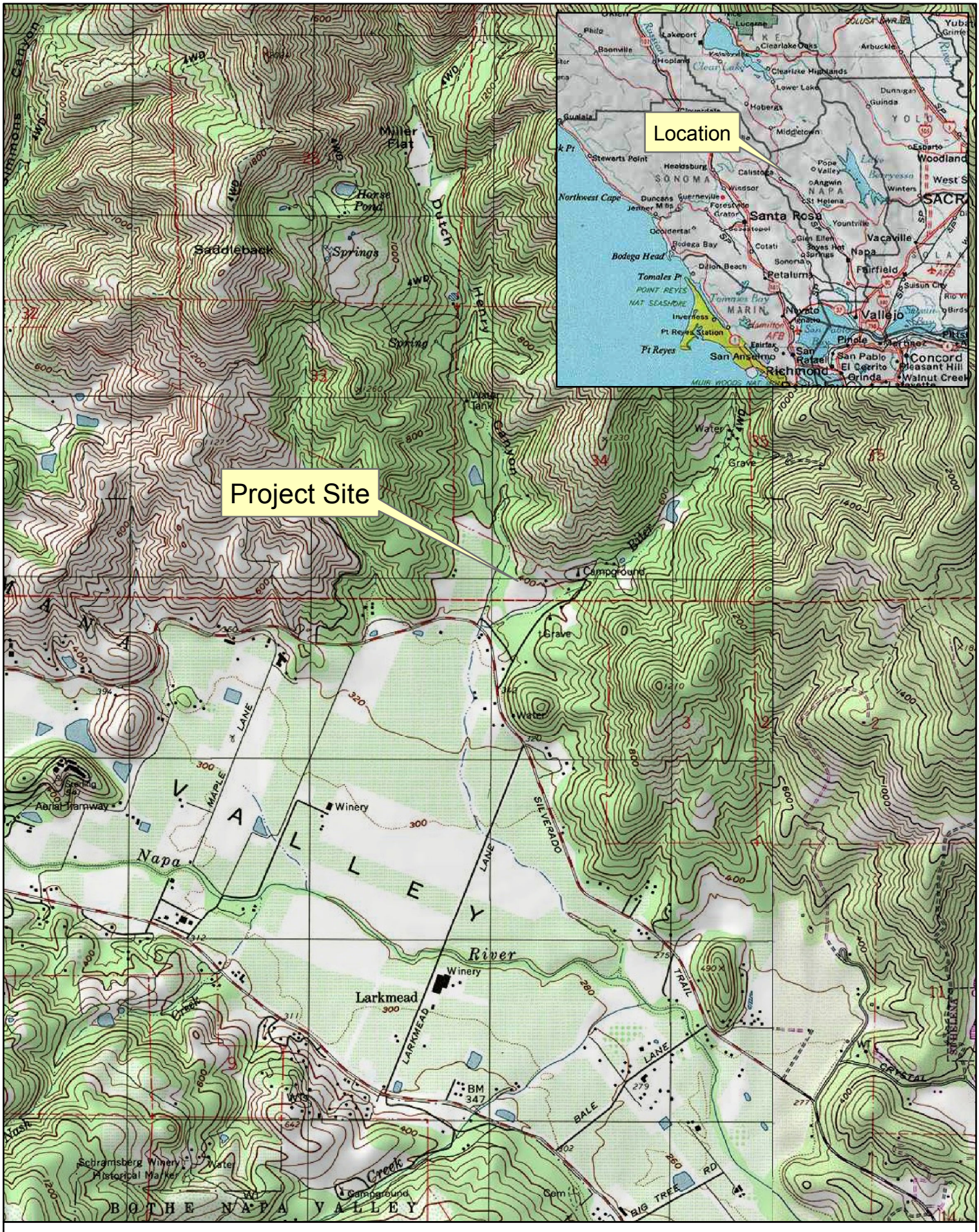


Plate I. Location and Site Map (Calistoga Quadrangle)

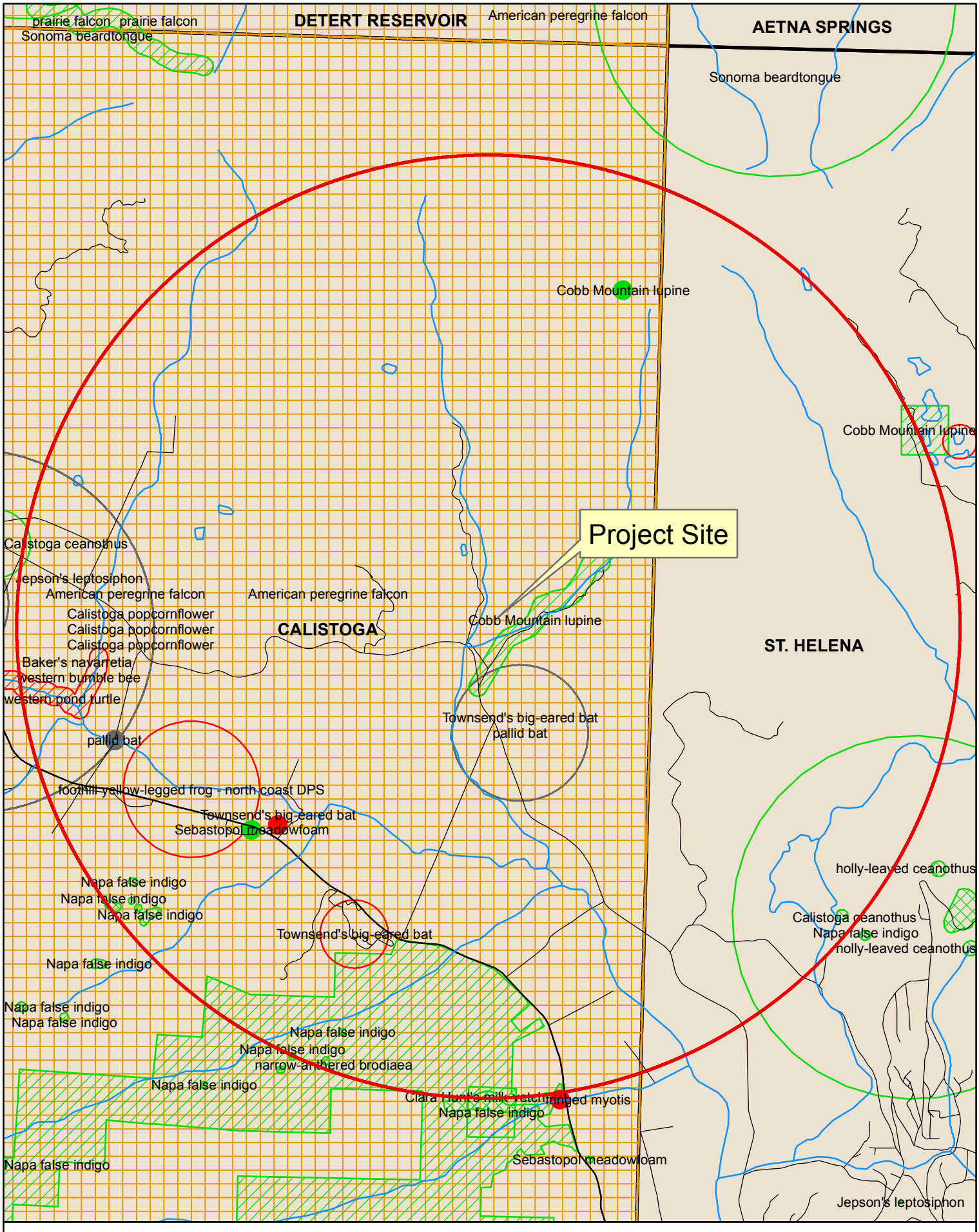


Plate II. CDFW CNDDB Rare Find Data

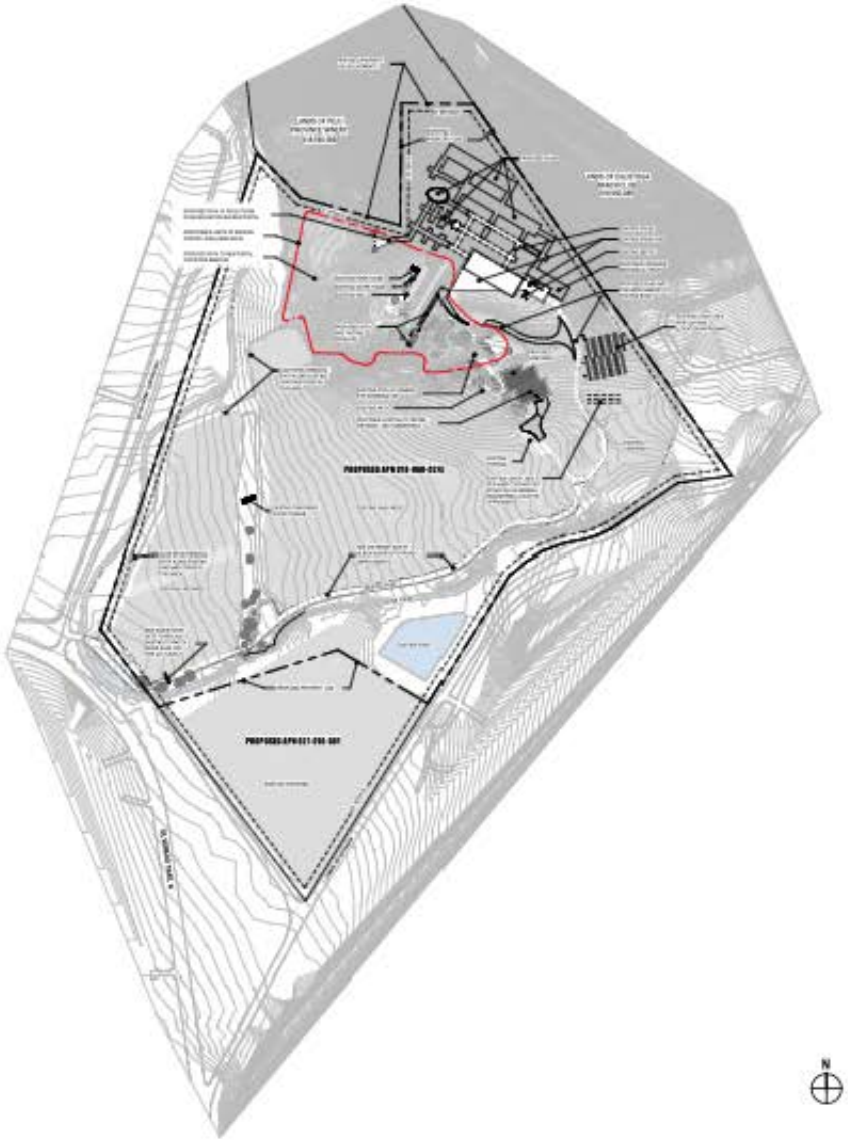
(Data Date August 2023)

N



Plate III. Aerial Photo / Survey Area

N



LUNDBERGDESIGN
2020 THIRD STREET
SAN FRANCISCO CA 94107-3115
T 415.995.0338 F 415.995.0339

Hourglass Winery Major Modification

701 Lommel Road, Calistoga, CA 94515

Issued Revisions		
Issue #	Description	Date
1	PERMIT SET	02/03/2023
2	RCRWT SET REVISION	6/16/2023

Print Date: 6/20/2023 11:02:41 AM
Drawn By: MK / CC
Project By: RW
Scale: 1" = 100'-0"

All drawings and written material appearing herein constitute original and unpublished work of the architect and the same may not be used in any manner without written consent of the architect.

Proposed Site Plan

A1.02

APPENDIX A
Plants and Animals Observed On or Around The Project Site

PLANTS

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

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

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

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

FUNGI		
Basidiomycota- Club Fungi		
POLYPORACEAE		
Fomitopsis pinicola (Sw.) Karst Red-belted Conk	On Dead Conifers	Common
Trametes versicolor (L.) Lloyd Turkey Tail (=*Coriolus versicolor, Polyporus versicolor*	Woodlands on Dead Hardwood	Common
Trametes hirsuta (Wild.) Pers. Hairy Turkey Tail	Woodlands on Dead Wood	Common
MOSSES		
MINACEAE		
Funaria hygrometrica Hedw. NCN	Ruderal, Burned Areas	Common
Homalothecium nuttallii (Wilson) Jaeger NCN	Epiphytic on Trees	Common
Orthotrichum lyellii Hook & Tayl. NCN	Woodlands, Upper Canopy	Common
Scleropodium touretii (Brid.) L Koch NCN	.Woodlands	Common

MAJOR PLANT GROUP
Family

Genus	Habitat Type	Abundance
Common Name		

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

LICHENS

FOLIOSE

Flavoparmelia caperata (L.) Hale Common Green Shield	On Oaks	Common
Flavopunctilia flaventor (Stirt.) Hale Speckled Green Shield	On Oaks, Occasional on Rocks	Common
Parmelia sulcata Taylor Hamered Shield Lichen	On Bark	Common
Physcia adscendens (Fr.) H. Olivier NCN	On Oaks	Common
Xanthoparmelia mexicana (Gyeln.) Hale	On Rocks	Common
Xanthoria polycarpa (Hoffm.) Rieber Pin-cushion Sunburst Lichen	On Oaks Young Twigs	Common

FRUTICOSE

Evernia prunastri (L.) Ach. NCN	On Oaks	Common
Ramalina farinacea (L.) Ach. NCN	On Oaks	Common
Ramalina menziesii Taylor non Tuck. Lace Lichen, Old Man's Beard	On Oaks	Common
Usnea intermedia=U. arizonica NCN	On Oaks	Common

CRUSTOSE

Ochrolechia orgonensis H. Magn. NCN	On Bark	Common
Pertusaria californica Dibben NCN	On Oaks	Common

VASCULAR PLANTS DIVISION CONIFEROPHYTA--GYMNOSPERMS

PINACEAE

Pinus sabiniana Douglas Gray or Foothill Pine	Dry Ridges	Occasional
Pseudotsuga menziesii (Vassey) Mayr var. *menziesii* Douglas-fir	Woodlands	Common

TAXODIACEAE

Sequoia sempervirens (D.Don) Endl Redwood	Planted	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

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

LAURACEAE		
Umbellularia californica (Hook.&Arn.) Nutt. California Laurel, Sweet Bay, Pepperwood, California Bay	Conifer&Oak Woodlands	Occasional
EUDICOTS		
FAGACEAE Oak Family		
Quercus agrifolia Nee Live Oak	Woodlands	Common
Quercus douglasii Hook.&Arn. Blue Oak (Hybridizes with *Q. garryana* and *Q. lobata*)	Woodlands	Common
Quercus kelloggii Newb. Hybrid *Q. kelloggii x Q.agrifolia* Black Oak		Occasional
Quercus lobata Nee. Valley Oak	Valley Grasslands	Common
ERICACEAE Heath Family		
Arbutus menziesii Pursh Madrone	Woodlands	Common
JUGLANDACEAE Walnut Family		
Fraxinus latifolia Benth. Oregon Ash	Woodlands, Riparian	Occasional
**Juglans nigra* L. Black Walnut	Ruderal Escape	Common
OLEACEAE Olive Family		
**Olea europaea* L. Olive	Domestic Ruderal	Occasional
SAPINDACEAE Soapberry Family		
Acer macrophyllum Prush Big-leaf Maple	Riparian, Stream Banks, Canyons	Common
Aesculus californica (Spach) Nutt. California Buckeye	Woodlands, Riparian	Common

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

EUDICOTS		
ADOXACEAE Muskroot Family		
Sambucus nigra subsp *caerulea* (Raf.) Bolli Blue Elderberry (=*S. mexicana, S. caerulea)*	Shrub/Scrub	Occasional

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

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

ANACARDIACEAE Sumac Family		
Toxicodendron diversilobum (Torry&Gray) E.Green Poison Oak	Woodlands	Common
APOCYANACEAE Dogbane Family		
**Vinca major* L. Periwinkle	Woodlands, Riparian, Ruderal	Common
ARALIACEAE Ginsing Family		
**Hedra helix* L. English Ivy	Ruderal	Occasional
ASTERACEAE (Compositae) Sunflower Family		
Baccharis pilularis deCandolle Coyote Brush	Woodlands, Grasslands	Common
CACTACEAE Cactus Family		
* *Cylindropuntia californica* Cholla	Ruderal Escape	Occasional
**Opuntia ficus-indica* (L.) Miller Mission Prickly-Pear, Indian-Fig Burbank's Spineless Prickly Pear	Escape	Common
CAPRIFOLIACEAE Honeysuckle Family		
Lonicera hispidula Douglas var. *vacillans* Honeysuckle	Woodlands, Riparian	Occasional
Symphoricarpos albus (L.) SF Blake *var.laevigatus* Snowberry	Riparian, Shrub/Scrub	Common
ERICACEAE Heath Family		
Arctostaphylos manzanita Parry ssp. *glaucesens* Common Manzanita	Woodlands	Common
FABACEAE (Leguminosae) Legume Family		
Acmispon glabor (Vogel) Bouillet Deerweed, California Broom (=*Lotus scoparius*)	Grasslands, Chaparral	Common
**Genista monspessulana* (L.) Johnson Broom, French Broom	Woodlands	Common
PHRYMACEAE Lopseed Family		
Mimulus aurantiacus Curtis Bush Monkey Flower	Woodlands	Occasional
RHAMNACEAE Buckthorn Family		
Ceanothus cuneatus Nutt.var. *cuneatus* Buckbrush	Chaparral	Common
ROSACEAE Rose Family		
Adenostoma fasciculatum Hooker&Arn. Chamise	Shrub/Scrub	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

Heteromeles arbutifolia (Lind.) M. Rome. Christmas Berry, Toyon	Shrub/Scrub	Common
VITACEAE Grape Family		
Vitis californica Benth California Wild Grape	Riparian Woodlands	Occasional
Vitis vinifera L. Grape	Domestic Introduction	Occasional

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

EUDICOTS

APIACEAE (Umbelliferae) Carrot Family		
**Conicum maculatum* L. Poison Hemlock	Riparian	Common
**Dacus carota* L. Wild Carrot, Queen Anne's Lace	Ruderal Grasslands	Common
Sanicula crassicaulis DC. Pacific Sanicle	Woodlands	Common
**Torilis arvensis* (Huds.) Link Hedge-parsley	Grasslands Woodlands	Common
ASTERACEAE (Compositae) Sunflower Family		
**Carduus pycnocephalus* L.subsp.*pycnocephalus* Italian Thistle	Woodlands	Common
**Centaurea solstitalis* L. Yellow Star Thistle	Grasslands, Ruderal	Common
**Circium vulgare* (Savi) Ten. Bull Thistle	Grasslands, Ruderal	Common
**Helminthotheca echioides* (L.) Holub Ox-tongue (=*Picris echioides)*	Ruderal	Common
**Hypochaeris glabra* L. Cat's Ear	Ruderal	Common
**Lactuca serriola* L. Prickly Lettuce	Ruderal	Occasional
**Pseudognaphalium luteoalbum* (L.) Hill.&Burtt White Cudweed (=*Gnaphalium luteo-album)*	Ruderal	Common
**Senecio vulgaris* L. NCN	Ruderal	Occasional
**Sonchus asper* (L.) Hill var. *asper* Prickly Sow Thistle	Ruderal	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

Sonchus oleraceus L. Common Sow Thistle	Ruderal	Common
Taraxacum officinale F.H.Wigg Dandelion	Ruderal	Common
Wyethia glabra A.Gray Coast Mules Ears	Edge of Woodlands	Common
BORAGINACEAE Borage or Waterleaf Family		
Cyanoglossum grande Lehm. Hound's Tongue	Woodlands	Common
Plagiobothrys bracteatus (Howell) I.M.Johnst. Bracted Popcorn Flower	Grasslands, Moist areas	Common
BRASSICACEAE Mustard Family		
Brassica rapa L. Field Mustard	Grasslands, Ruderal	Common
Raphanus sativus L. Wild Radish	Ruderal	Common
Sisymbrium officinalis L. Hedge Mustard	Ruderal, Grasslands	Common
CARYOPHYLLACEAE Pink Family		
Silene gallica L. Small Flower Catchfly Windmill Pink	Ruderal/Grasslands/oakWoodlands	Common
Stellaria media (L.) Vill. Chickweed	Ruderal	Common
EUPHORBIACEAE Spurge Family		
Euphorbia oblongata Grseb. Oblong Spurge	Ruderal, Invasive Noxious Weed	Common
FABACEAE (Leguminosae) Legume Family		
Lathyrus vestitus Nutt. var. *vestitus* Hillside Pea	Woodlands	Occasional
Lupinus nanus Benth. Sky Lupine	Grasslands	Common
Medicago polymorpha L. Bur Clover	Ruderal, Grasslands	Common
Lotus corniculatus L. Bird's-foot Trefoil	Grasslands, Ruderal	Common
Trifolium hirtum All. Rose Clover	Ruderal	Common
Vicia sativa L. subsp. *nigra* Narrow Leaved-vetch	Grasslands, Ruderal	Common

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

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

**Vicia villosa* Roth. subsp. *varia* Hairy Vetch, Winter Vetch, Lana Vetch	Ruderal	Common
GERANIACEAE Geranium Family		
**Erodium botrys* (Cav.) Bertol. Broadleaf Filaree, Long-beaked Filaree	Grasslands	Common
**Geranium dissectum* L. Common Geranium	Grasslands	Common
**Geranium robertianum* L. Red Robin	Canyons Oak Woodland, Shady	Common
HYPERICACEAE St John's Wort Family		
*@*Hypericum perforataum* L. ssp *perforatum* Klamath Weed	Grassland, Woodlands	Occasional
LAMIACEAE (Labiatae) Mint Family		
Stachys ajugoides Benth. Hedge-nettle	Moist Open Places	Occasional
MALVACEAE Mallow Family		
**Malva parviflora* L. Cheeseweed, Mallow	Ruderal	Common
MONTIACEAE Miner's lettuce Family		
*Claytonia perfoliata*Willd. ssp. *perfoliata* Miners Lettuce	Woodlands, Riparian	Common
ONAGRACEAE Evening-primrose Family		
+Clarkia purpurea (Curtis) Nels.&Macbr. subsp. *quadrivulnera* Godetia, Wine-cup Clarkia	Grasslands	Common
Epilobium ciliatum Raf. Subsp. *ciliatum* Northern Willow Herb	Ruderal	Common
OXILIDACEAE Oxalis Family		
**Oxalis pes-caprae* L. Bermuda Buttercup	Ruderal	Common
PAPAVERACEAE Poppy Family		
Eschscholzia californica Cahm. California Poppy	Grasslands	Common
PLANTAGINACEAE Plantain Family		
@Antirrhinum virga A.Gray Tall Snapdragon, N	Ruderal	Occasional
**Kickxia spuria* (L.) Dumort. Round-leaved Fluellin	Ruderal	Occasional
**Plantago lanceolata* L. English Plantain	Ruderal	Common

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

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

POLYGONACEAE Buckwheat Family		
**Rumex crispus* L. Curly Dock	Ruderal	Common
PRIMULACEAE Primrose Family		
**Anagallis arvensis*L. Scarlet Pimpernel	Ruderal	Common
Dodecatheon hendersonii A. Gray Shooting Star, Mosquito Bills	Woodlands	Common
RUBIACEAE Madder Family		
Galium aparine L. Goose Grass	Woodlands, Riparian, Ruderal	Common
Galium porrigens Dempster Climbing Bedstraw	Grasslands, Woodlands	Common
SCROPHULARIACEAE Figwort Family		
**Verbascum blattaria* L. Moth Mullein	Ruderal	Occasional
SOLONACEAE Nightshade Family		
Necotiana aciuminata (Gram.) Hook var. *multiflora* Reiche Many Flowered Tobacco, N	Ruderal	Occasional
**Solanum americanum* Mill. Small Flowered Nightshade (*S. nodiflorum*),	Ruderal	Occasional

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

POACEAE Grass Family		
**Aira caryophyllea* L. Silver European Hairgrass	Grassland	Common
**Avena barbata* Link. Slender Wild Oat	Grasslands	Common
**Avena fatua* L. Wild Oat	Grasslands	Common
**Briza maxima* L. Large Quaking Grass, Rattlesnake Grass	Grasslands, Ruderal	Common
**Bromus diandrus* Roth Ripgut Grass	Ruderal, Grasslands	Common
**Cynosurus echinatus* L. Hedgehog, Dogtail	Ruderal	Common
Elymus glaucus Buckley ssp. *glaucus* Blue Wildrye	Woodlands	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

**Festuca bromoides* L. Six-weeks Fescue *(=Vulpia bromoides)*	Ruderal, Moist Flats become Dry	Common
Festuca microstachys Nutt. NCN (*=Vulpia microstachys)*	Grasslands, Ruderal	Common
**Festuca myuros* L. Rattail Fescue,Zorro Annual Fescue (*=Vulpia myuros)*	Grasslands	Common
**Festuca perennis* (L.) Columubus & Sm. Perennial Rye Grass (*=Lolium multiflorum, L. perenne)*	Grasslands	Common
**Hordeum murinum* Huds. subsp. *leporinum* Farmers Foxtail	Grasslands	Common
**Hordeum vulgare* L. Barley	Grasslands	Common
Gastridium phleoides (Nees& Meyen) Hubb. Nit Grass (*=Gastridium ventricosum)*	Ruderal, Grasslands	Occasional

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

CYPERACEAE Sedge Family		
Caryx Ssp. Nursery Cultavar	Landscape Planting	Landscape
JUNCACEAE Juncus Family		
Luzula comosa Mey var. *comosa* Wood Rush	Grasslands, Woodlands	Common

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

AGAVACEAE Centuray Plant Family		
Chlorogalum pomeridianum (DC.) Kunth var. *pomeridianum* Soap Plant	Woodlands, Grasslands	Common
ASPHODELACEAE Asphodel Family		
**Aloe maculata* All. Aloe	Garden Escape	Occasional
IRIDACEAE Iris Family		
Sisyrinchium bellum Watson Blue-eyed Grass	Grasslands	Common
LILIACEAE Lily Family		
Calochortus amabilis Purdy Yellow Globe Lily, Diogenes' Lantern	Grasslands, Woodlands	Occasional

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

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

MELANTHIACEAE False-hellebore Family		
Toxicoscordion micranthum (Eastw.) Heller NCN (= *Zigadenus)*	Dry Slopes Flats	Occasional
THEMIDACEAE Brodiaea Family		
Brodiaea elegans Hoover subsp.*elegans* Harvest Brodiaea	Grasslands	Common
Dichelostemma capitatum (Benth.) Wood Blue Dicks	Grasslands, Open Woodlands	Occasional

Fauna Species Observed in the Vicinity of the Project Site

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

AMPHIBIA AND REPTILIA		
ORDER		
Common Name	**Genus**	**Observed**
SQUAMATA		
Western Fence Lizard	*Sceloporus occidentalis*	X

AVES		
ORDER		
Common Name	**Genus**	**Observed**
AVES		
Acorn Woodpecker	*Melanerpes fomicivorus*	X
Common Crow	*Corvus brachyrhynchos*	X
House Finch	*Carpodactus mexicanus*	X
Scrub Jay	*Aphelocoma coerulescens*	X
Western Kingbird	*Tyrannus verticalis*	X
Violet-green Swallow	*Tachycineta thalassina*	*X*

MAMMALS		
ORDER		
Common Name	**Genus**	**Observed**
CARNIVORA		
Coyote	*Canis latrans*	Scat
RODENTIA		
California Ground Squirrel	*Citellus beecheyoi*	Den/Sight
Pocket Gopher	*Thomomys bottae*	Sight

APPENDIX B

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

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

U.S. Fish and Wildlife IPAC Service Listed Species for the Project Site

Search Results

16 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3812255**], Habitat is one of [**VFGrs**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Astragalus breweri	Brewer's milk-vetch	Fabaceae	annual herb	Apr-Jun	None	None	G3	S3	4.2	Yes	1974-01-01	No Photo Available
Astragalus claranus	Clara Hunt's milk-vetch	Fabaceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Brodiaea leptandra	narrow-anthered brodiaea	Themidaceae	perennial bulbiferous herb	May-Jul	None	None	G3?	S3?	1B.2	Yes	2001-01-01	 © 2018 Zoya Akulova
Calamagrostis ophitidis	serpentine reed grass	Poaceae	perennial herb	Apr-Jul	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
Centromadia parryi ssp. *parryi*	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2	Yes	2004-01-01	 © 2016 John Doyen
Erythronium helenae	St. Helena fawn lily	Liliaceae	perennial bulbiferous herb	Mar-May	None	None	G3	S3	4.2	Yes	1974-01-01	No Photo Available
Leptosiphon aureus	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Yes	1994-01-01	 © 2007 Len Blumin
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	Mar-May	None	None	G2G3	S2S3	1B.2	Yes	2001-01-01	 © 2012 Aaron Arthur
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3	Yes	1994-01-01	 © 2015 Aaron Schusteff
Limnanthes vinculans	Sebastopol meadowfoam	Limnanthaceae	annual herb	Apr-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 © 2015 Vernon

												Smith
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G4T2	S2	1B.1	Yes	1994-01-01	 © 2018 Barry Rice
Plagiobothrys strictus	Calistoga popcornflower	Boraginaceae	annual herb	Mar-Jun	FE	CT	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Poa napensis	Napa blue grass	Poaceae	perennial herb	May-Aug	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	None	None	G2	S2	1B.2		2015-10-15	No Photo Available
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2		1974-01-01	No Photo Available
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	2001-01-01	 © 2005 Dean Wm Taylor

Showing 1 to 16 of 16 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 30 August 2023].

California Department of Fish and Wildlife Rare Find

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

CNDDB Element Query Results

Scientific Name	Common Name	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Habitats
Allium peninsulare var. franciscanum	Franciscan onion	None	None	G4G5T2	S2	1B.2	Cismontane woodland, Ultramafic, Valley & foothill grassland
Ambystoma californiense pop. 3	California tiger salamander - Sonoma County DPS	Endangered	Threatened	G2G3T2	S2	null	Cismontane woodland, Meadow & seep, Riparian woodland, Valley & foothill grassland, Vernal pool, Wetland
Amsinckia lunaris	bent-flowered fiddleneck	None	None	G3	S3	1B.2	Cismontane woodland, Coastal bluff scrub, Valley & foothill grassland
Antrozous pallidus	pallid bat	None	None	G4	S3	null	Chaparral, Valley & foothill grassland
Astragalus claranus	Clara Hunt's milk-vetch	Endangered	Endangered	G1	S1	1B.1	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	None	None	G4T3	S3	1B.2	Cismontane woodland, Ultramafic, Valley & foothill grassland
Balsamorhiza macrolepis	big-scale balsamroot	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley

							& foothill grassland
Blennosperma bakeri	Sonoma sunshine	Endangered	Endangered	G1	S1	1B.1	Valley & foothill grassland, Vernal pool, Wetland
Brodiaea leptandra	narrow-anthered brodiaea	None	None	G3?	S3?	1B.2	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley & foothill grassland
Buteo swainsoni	Swainson's hawk	None	Threatened	G5	S4	null	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	None	None	G4T3	S3	4.2	Chaparral, Lower montane coniferous forest, Ultramafic, Valley & foothill grassland
Centromadia parryi ssp. parryi	pappose tarplant	None	None	G3T2	S2	1B.2	Chaparral, Coastal prairie, Marsh & swamp, Meadow & seep, Valley & foothill grassland
Corynorhinus townsendii	Townsend's big-eared bat	None	None	G4	S2	null	Broadleaved upland forest, Valley & foothill grassland
Downingia pusilla	dwarf downingia	None	None	GU	S2	2B.2	Valley & foothill grassland, Vernal pool, Wetland
Elanus leucurus	white-tailed kite	None	None	G5	S3S4	null	Cismontane woodland, Marsh & swamp, Riparian woodland, Valley & foothill grassland, Wetland

Eryngium jepsonii	Jepson's coyote-thistle	None	None	G2	S2	1B.2	Valley & foothill grassland, Vernal pool
Falco mexicanus	prairie falcon	None	None	G5	S4	null	Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland
Fritillaria liliacea	fragrant fritillary	None	None	G2	S2	1B.2	Cismontane woodland, Coastal prairie, Coastal scrub, Ultramafic, Valley & foothill grassland
Fritillaria pluriflora	adobe-lily	None	None	G2G3	S2S3	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Hemizonia congesta ssp. congesta	congested-headed hayfield tarplant	None	None	G5T2	S2	1B.2	Valley & foothill grassland
Layia septentrionalis	Colusa layia	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Leptosiphon jepsonii	Jepson's leptosiphon	None	None	G2G3	S2S3	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	None	None	G4T4	S3	4.2	Chaparral, Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland
Limnanthes vinculans	Sebastopol meadowfoam	Endangered	Endangered	G1	S1	1B.1	Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland

Microseris paludosa	marsh microseris	None	None	G2	S2	1B.2	Cismontane woodland, Closed-cone coniferous forest, Coastal scrub, Valley & foothill grassland
Navarretia leucocephala ssp. bakeri	Baker's navarretia	None	None	G4T2	S2	1B.1	Cismontane woodland, Lower montane coniferous forest, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Plagiobothrys strictus	Calistoga popcornflower	Endangered	Threatened	G1	S1	1B.1	Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Poa napensis	Napa blue grass	Endangered	Endangered	G1	S1	1B.1	Meadow & seep, Valley & foothill grassland, Wetland
Puccinellia simplex	California alkali grass	None	None	G2	S2	1B.2	Chenopod scrub, Meadow & seep, Valley & foothill grassland, Vernal pool
Serpentine Bunchgrass	Serpentine Bunchgrass	None	None	G2	S2.2	null	Valley & foothill grassland
Taxidea taxus	American badger	None	None	G5	S3	null	Chaparral, Chenopod scrub, Cismontane woodland, Valley & foothill grassland
Trichostema ruygtii	Napa bluecurls	None	None	G1G2	S1S2	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley & foothill grassland, Vernal pool, Wetland
Trifolium amoenum	two-fork clover	Endangered	None	G1	S1	1B.1	Coastal bluff scrub, Ultramafic, Valley & foothill grassland
Trifolium hydrophilum	saline clover	None	None	G2	S2	1B.2	Marsh & swamp, Valley & foothill

							grassland, Vernal pool, Wetland
Valley Needlegrass Grassland	Valley Needlegrass Grassland	None	None	G3	S3.1	null	Valley & foothill grassland
Wildflower Field	Wildflower Field	None	None	G2	S2.2	null	Valley & foothill grassland

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.

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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

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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).

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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:

Birds

NAME	STATUS
Northern Spotted Owl Strix occidentalis caurina Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. 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. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2891	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

Flowering Plants

NAME	STATUS

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Burke's Goldfields Lasthenia burkei Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4338

Calistoga Allocarya Plagiobothrys strictus Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6161

Clara Hunt's Milk-vetch Astragalus clarianus Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/3300

Loch Lomond Coyote Thistle Eryngium constancei Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5106

Napa Bluegrass Poa napensis Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2266

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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.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

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

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

There are bald and/or golden eagles in your project area.

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
Bald Eagle Haliaeetus leucocephalus 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.	Breeds Jan 1 to Aug 31
Golden Eagle Aquila chrysaetos 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	Breeds Jan 1 to Aug 31

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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.

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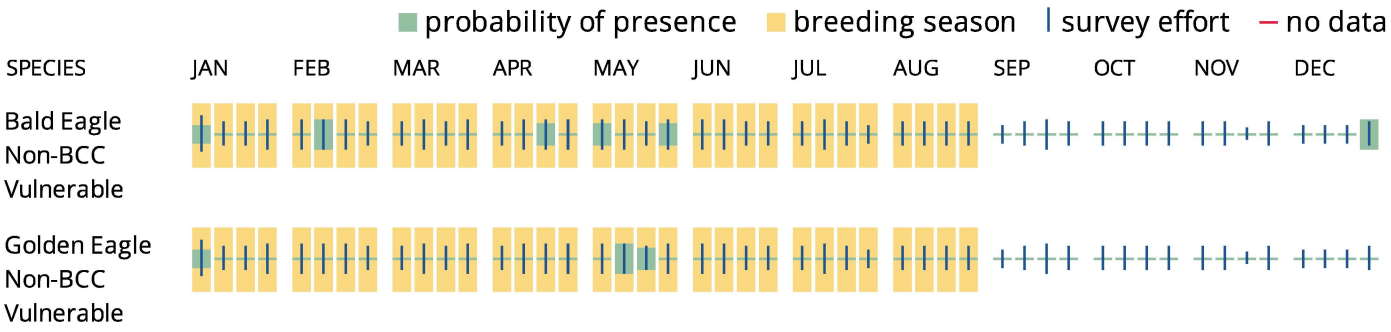

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence 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). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles 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 Rapid Avian Information Locator (RAIL) Tool.

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. Please contact your local Fish and Wildlife Service Field Office if you have questions.

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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 https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.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.

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

Bald Eagle Haliaeetus leucocephalus — 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.

Belding's Savannah Sparrow Passerculus sandwichensis beldingi — Breeds Apr 1 to Aug 15

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/8

Bullock's Oriole Icterus bullockii — Breeds Mar 21 to Jul 25

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull Larus californicus — Breeds Mar 1 to Jul 31

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

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.

Cassin's Finch Carpodacus cassinii — Breeds May 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/9462

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

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Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

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

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

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.

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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 (■)

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

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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.

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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

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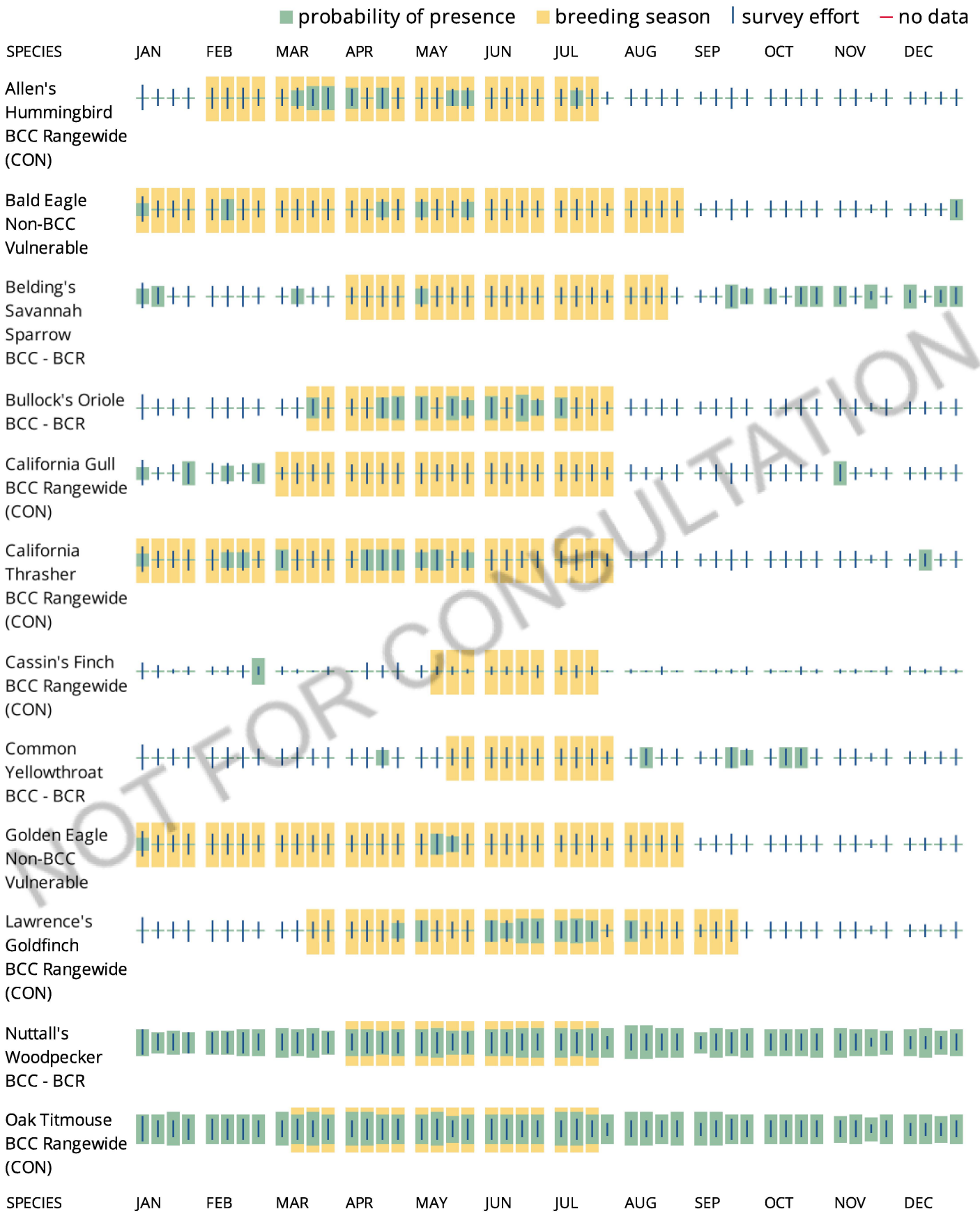
more sparse.



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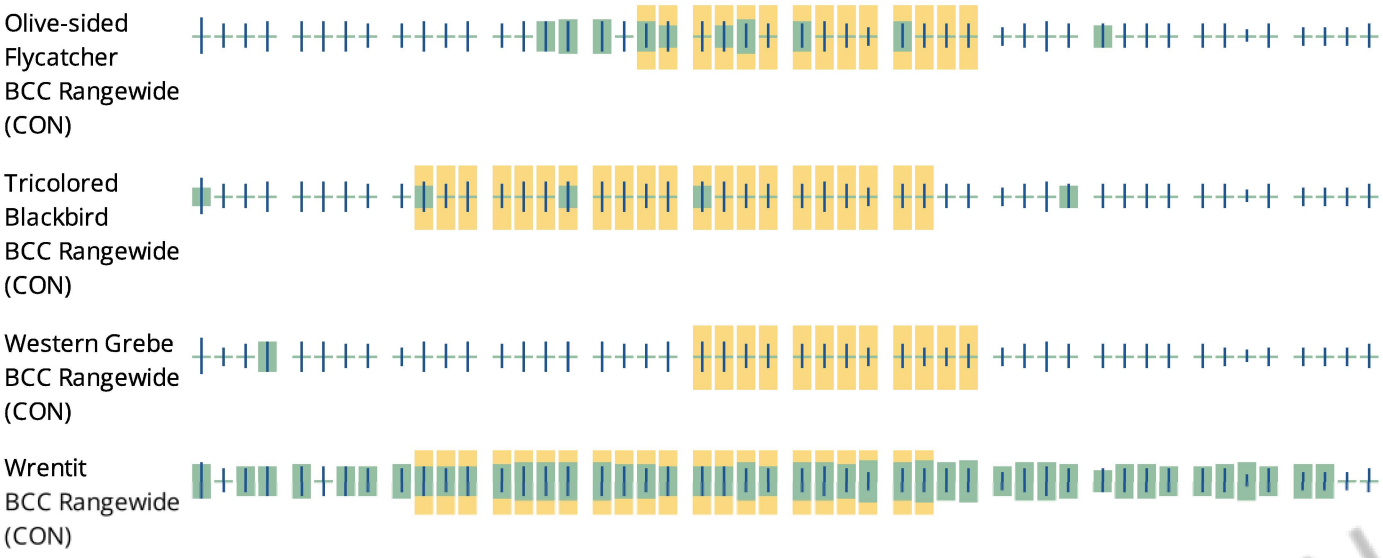

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

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 list of migratory birds that potentially occur 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 Rapid Avian Information Locator (RAIL) 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.

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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 or migrating in my 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 query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. 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.

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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.

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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 (NWI)

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.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

- R4SBC
- R4SBA

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does not replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

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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.

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