Biological Resource Survey

Lupine Hill Vineyard
30 Lupine Hill Road
Napa County



Prepared For

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Napa Valley Vineyard Engineering, Inc

By

Kjeldsen Biological Consulting

August 2024

Biological Resource Survey

Lupine Hill Vineyard
30 Lupine Hill Road

PROJECT NAME:

Lupine Hill Vineyard
30 Lupine Hill Road
APN# 053-170-054
Vineyard Blocks 5.51 Gross Acres
4.52 Net Acres

PROJECT ENGINEER:

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PERIOD OF STUDY:

March-July 2024

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30 Lupine Hill Road

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30 Lupine Hill Road

Executive Summary

This study was conducted at the request of Napa Valley Vineyard Engineering 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 develop +/- 4.52-acres of vineyard on a 10.47-acre property. The property is located east of Napa at 30 Lupine Hill Road. The property is within the watershed of the Napa River. The study site is near the border of the USGS Napa Quadrangle and adjacent to the St. George 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 2024 by Kjeldsen Biological Consulting:

- Habitat on the proposed project sites consists of non-native Ruderal Grassland;
- No trees are proposed to be removed by the project;
- No special-status plant species were identified, on or adjacent to the proposed project sites, nor would they be expected on the project site;
- No sensitive wildlife habitat, or special-status animal species were identified on or adjacent to the project site;
- The proposed project will not significantly reduce habitat for or have the potential to negatively impact any local or regional special-status plants or animals;
- The project footprint will not impact any Federal or State protected wetlands as defined by Section 404 of the Clean Water Act;
- The project footprint will not substantially interfere with native wildlife species, wildlife corridors, and or native wildlife nursery sites;
- The ephemeral drainage on the property has been avoided and provided with setbacks;
- The footprint of the project will not significantly contribute to habitat loss or habitat fragmentation; and
- A complete list of all plants and animals encountered on and near the project site is included in Appendix A.

Assessment of Impacts

- The project has the potential to increase sediment into seasonal drainages within the watershed of the Napa River.

- The addition of deer fencing to the property could entrap local deer populations. Fencing can also reduce the ability of small mammals to move freely through the landscape.
- Herbicides and pesticides can be harmful or lethal specifically to raptors and amphibians in the region.

Recommendations

The following measures are recommended 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 vineyard must be implemented.

Whenever possible Integrated Pest Management practices should be employed with minimally toxic pest control methods. Trapping or raptors should be used for rodent control. Sustainable Farming Practices should be used to ensure that use of herbicides toxic to amphibians will be minimized.

Any new deer fencing should be designed with exit gates. Fencing should use a design that has 6-inch square gaps at the base instead of the typical 3" by 6" rectangular openings to allow small mammals to move through the fence.

Biological Resource Survey
Lupine Hill Vineyard +/-4.52-acre Vineyard
30 Lupine Hill Road

A. PROJECT DESCRIPTION

This study was conducted at the request of Napa Valley Vineyard Engineering 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 develop +/- 4.52-acres of vineyard on a 10.47-acre property. The property is located east of Napa at 30 Lupine Hill Road. The property is within the watershed of the Napa River. The study site is near the border of the USGS Napa Quadrangle and adjacent to the St. George Quadrangle. Plate I provides location and site map of the property. Plate III provides an aerial photograph of the property from 2021.

A.2 Background

The parcel consists generally of open grasslands and oak woodlands. There is a drainage that bisects the property. The property has south and north facing slopes. Slopes on the project site are approximately 5-15%. There is currently a house being built outside of the proposed vineyard area. Vineyard boundaries have been designed to avoid Oak Woodlands on the property. The ephemeral drainage on the property has been avoided and provided with setbacks.

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 or 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 from March to July of 2024 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 location of the project, 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 Rare Find-5) 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 IV and V present CDFW CNDDB Rare Find species (5-Mile search), U.S. Fish and Wildlife Service listed species for the Quadrangle and surrounding Quadrangles, CDFW species listed for the quadrangle and surrounding quadrangles based on habitats on the property.

B.2 Field Survey Methodology

Our study was 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 site and surrounding 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 Area.

Table I. Time and Dates of Field Work

Date	Personnel	Person-hr.	Time	Conditions
March 14, 2024	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	9:00 to 10:00	Clear, cool temperatures, no wind
April 19, 2024	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	11:00 to 12:00	Clear, mild temperatures Light breeze
May 16, 2024	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	11:30 to 12:30	Clear, no wind, warm temperatures
June 11, 2024	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	10:30 to 11:30	Clear, light breeze, with warm temperatures
July 10, 2024	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	09:00 to 10:00	Clear, light breeze, with warm temperatures

Plants Field surveys were conducted identifying and recording all species on the site and in the near proximity. Transects through the proposed project 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 and ongoing management practices, and the relatively small size of the proposed development footprint 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 most 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 their 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

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 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.

Wildlife Movement

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

1. Wide-ranging animals can travel, migrate and meet mates;
2. Genetic interchange can occur;
3. Populations can move in response to environmental changes and natural disasters; and
4. 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 Army Corps of Engineers (ACOE) three-parameter approach: Vegetation, Hydrology, and Soils.

Tributaries to Waters of the U.S. & Waters of the State

Waters of the State and the U.S. 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. 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.

Streams /Drainages

There are two types of streams or drainages; 1) perennial flowing waters and 2) seasonal ephemeral creeks or drainages that convey water during and shortly after rainfall. USGS 7.5 Minute Quadrangle maps for the site were analyzed for the presence of "blue line" creeks. On-site 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 streambeds were evaluated for flow, pools, substrate, bank and quality of habitat recorded in field notes. Vegetation in the streambeds was recorded if present and quality and quantity of riparian conditions as distinct from surrounding vegetation noted.

"Ephemeral" or "intermittent stream"
Ephemeral or intermittent water courses are distinguished by a natural channel with defined bed and banks containing seasonal 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."

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.

The Migratory Bird Treaty Act (MBTA)
The Migratory Bird 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
Special-status Species or Listed Species are plants or animals that have been designated by Federal or State agencies and California Native Plant Society as rare, threatened or endangered.

“Take” is defined in the Endangered Species Act (ESA) as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Federal regulation 50 CFR 17.3 further defines the term "harm" in the “take” definition to mean any act that actually kills or injures a federally listed species, including significant habitat modification or degradation.

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.

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

Critical Habitat is defined as 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.

C. RESULTS / FINDINGS

C.1 Biological Setting

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 by 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.

Napa County is unique because it is located at the edge of three major biological regions. The interface of the San Francisco Bay-Delta, the Sacramento Valley and the North Coast Range is the cause for Napa County to have a high level of biological diversity. The property and study site is just east of the city of Napa with a mix of rural residential housing, agriculture, wineries and golf course. The property has south and north facing slopes that vary from 5-15 degrees. The project site drains by direct infiltration or sheet flow into an ephemeral drainage. The drainage bisects the property from east to west.

The study site is located in Napa County east of the city of Napa. The project site drains by direct infiltration or sheet flow into an ephemeral drainage, Class III drainage on the south side of the property. There are vineyards existing vineyards along the eastern property line that is currently deer fenced. There is currently a house being built outside of the proposed vineyard area. Vineyard boundaries have been designed to avoid the oak woodlands and the ephemeral drainage on the property. The property is fenced and is presently actively grazed as a horse pasture.

C.2 Habitat Present

The project site consists of an Annual Grassland (Grassland Semi-natural Herbaceous Stands with Herbaceous Layer as per Sawyer 2009) and Blue Oak Woodlands which are outside of the project footprint.

Our survey focused on the entire property and surrounding habitat. The aerial photos illustrate the site and land features (Plate III). The photographs that follow, further document existing conditions of the project site.

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 Blue Oak Woodlands.

In the sections below the habitat type present within the footprint of the proposed vineyard blocks is described and further categorized by *A Manual of California Vegetation Second Edition* (Sawyer et al). Sawyer classifies the vegetation on the proposed vineyard blocks as Avena spp. – Bromus spp. Herbaceous Semi-Natural Alliance Wild oats and annual brome grasslands and Quercus douglasii Forest & Woodland Alliance Blue oak woodland and forest

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. The Semi-natural Herbaceous Stands cannot be mapped due to the small size but if one searches the site one can find small patches of the following; *Avena* ssp. Wild Oats Grasslands, *Bromus diandrus* Annual Brome, *Festuca perennis=Lolium perenne* Perennial Rye Grass, and *Phalaris aquatica* Harding grass.

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.

Forest or Woodland Alliance

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.

***Quercus douglasii* Woodland Alliance Blue Oak Woodland**; *Quercus douglasii* is dominant or co-dominant tree in the canopy with *Aesculus californica, Pinus sabiniana, Quercus agrifolia, Q. lobata and Q. wislizeni* (Membership Rules *Quercus douglasii >50%* relative cover in the tree canopy; other hardwoods or conifers may be >30% relative cover in the tree canopy). Trees > 20 m; with conifers < 35 m. Shrub layer is sparse to intermittent. Herbaceous layer is sparse or grassy, and forbs are present seasonally. *Quercus douglasii* is a deciduous, drought and flood tolerant tree

that grows to 20 m in height. The canopy is intermittent to continuous or savanna-like. The alliance establishes in varied stands and form one of the most extensive and conspicuous vegetation types in the state.

Wildlife: 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 utilize oaks. The wildlife associated with Blue 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 oaks. 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.

Table II provides an estimate of the vegetation alliances on the property and the acreage that will be removed by the proposed project. The vegetation mapping for the property is shown on Plate IV.

Table II Approximate Acreage of Plant Communities / Alliances on the Property and Approximate Acreage to be removed by the Project

Plant Community / Vegetation Alliance	Estimated Acreage on Property 10.47-Acres	Proposed Developed Acreage 5.51+/-Acres
Annual Grasslands / Wild oats and annual brome grasslands	7.97	5.51-acres
Blue Oak Woodlands / Blue oak woodland and forest	2.3	0.0
Developed	0.2	NA

Table III. Respective Characteristics of Plant Communities

Plant Community or Vegetation Alliance	Respective Characteristics Approximate tree density (Average trees and species per acre)
Annual Grasslands / Wild oats and annual brome grasslands	Semi-Natural Herbaceous Grasslands are a result of and the introduction of non-native grasses and herbs. Grasslands on the property contained wildflowers during the spring months.
Blue Oak Woodlands / Blue oak woodland and forest	Woodlands on the property consists of Blue Oaks with Live Oaks and California Bay trees. There is one large Valley Oak located in the south west corner of the property There was is understory vegetation. Dead and dying oaks along with bay trees were removed during our survey for fire and safety concerns.



Figure 1. Current conditions, vegetation, and habitat on project site. Block B.



Figure 2. Typical vegetation associated with Block A. The trees are outside of the proposed vineyard block.



Figure 3. View of existing conditions of south side of property.



Figure 4. Ephemeral drainage that bisects the property.

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 shows known special-status species in the proximity of the project as displayed 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 IV below provides a list of plant species that are known to occur within the region of the proposed project (CDFW CNDDB, CNPS, and U.S. Fish and Wildlife Service). The table includes a brief analysis of habitat for presence or absence on the project site. The status of each species is shown in Appendix B.

Table IV. Analysis of Special-status Plant Species. 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
Agrostis hendersonii Henderson's Bent Grass	Vernal Pools, Valley and Foothill Grassland (mesic)	No	April-June	No	Lack of vernal pools.
Allium peninsulare var. *franciscanum* Franciscan Onion	Cismontane Woodland, Valley and Foothill Grassland, (clay, serpentinite)	No	May-June	No	Absence of requisite edaphic conditions.
Amsinckia lunaris Bent-flowered Fiddleneck	Cismontane Woodland, Valley and Foothill Grassland, Coastal Bluff Scrub	No	March-June	No	Historic agricultural use.
Astragalus claranus Clara Hunt's Milk-vetch	Cismontane Woodland, Chaparral, (clay, rocky serpentinite)	Yes	March-May	No	Absence of typical habitat and vegetation associates. Present and historic site management.

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
Astragalus tener var. *tener* Alkali Milk-vetch	Valley and Foothill Grassland (adobe clay), Vernal Pools, (alkaline)	No	March-June	No	Absence of requisite mesic habitat or substrate on project site precludes presence.
Balsamorhiza macrolepis Big-scale Balsamroot	Chaparral, Cismontane Woodland, Valley and Foothill Grassland	No	March-June	No	Historic use of site precludes presence.
Blennosperma bakeri Sonoma Sunshine	Valley and Foothill Grassland (mesic), Vernal Pools	No	March-May	No	Absence of requisite mesic habitat.
Brodiaea leptandra Narrow-anthered California Brodiaea	Cismontane Woodland, Valley and Foothill Grassland, Chaparral	Yes	May-June	No	Requisite habitat, exposure and historic land use preclude presence on project site.
Castilleja affinis var. *neglecta* Tiburon Indian Paintbrush	Valley and Foothill Grassland, (serpentinite)	No	April-June	No	Absence of requisite edaphic habitat on the site as well as historic use precludes presence.
Castilleja ambigua var. *ambigua* Johnny-nip	Coastal Bluff Scrub, Marshes and Swamps, Vernal pools, Valley and Foothill Grassland	No	March-Aug.	No	Absence of typical habitat and vegetation associates.
Ceanothus purpureus Holly-leaved Ceanothus	Chaparral, Cismontane Woodland	No	March-May	No	Absence of typical habitat and vegetation associates.
Centromadia parryi ssp. *parryi* Pappose Tarplant	Valley and Foothill Grassland Marshes and Swamps (coastal salt), Chaparral, Coastal Prairie	No	May-Nov.	No	Requisite mesic conditions absent.
Downingia pusilla Dwarf Downingia	Vernal Pools, Valley and Foothill Grassland (mesic)	No	March-May	No	Requisite aquatic habitat absent on the site or in the immediate vicinity.

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
Erigeron greenei Green's Narrow-leaved Daisy	Chaparral, (serpentinite, volcanic)	No	May-Sep.	No	Absence of edaphic conditions required for presence.
Eryngium jepsonii Jepson's Coyote-thistle	Valley and Foothill Grassland, Vernal Pools (Clay)	No	April-Aug.	No	Absence of mesic conditions required for presence.
Extriplex joaquinana San Joaquin Spearscale	Chenopod Scrub, Meadows and Seeps, Valley and Foothill Grassland, Playas, (alkali)	No	April-Oct.	No	Absence of requisite edaphic habitat on the site or in the immediate vicinity precludes presence.
Erythronium helenae St. Helena Fawn Lily	Cismontane Woodland, Valley and Foothill Grassland, Chaparral, Lower Montane Coniferous Forest, (volcanic, serpentinite)	Yes	March-May	No	Absence of typical habitat and vegetation associates. Present and historic site management. Species was not observed.
Hemizonia congesta ssp. *congesta* Congested-headed Hayfield Tarplant	Valley and Foothill Grassland, (sometimes roadsides)	Yes	April Nov.	No	Historic and ongoing agricultural use precludes presence. Species was not observed.
Horkelia tenuiloba Thin-lobed Horkelia	Broadleaf Upland Forest, Chaparral, Valley and Foothill Grassland, (mesic openings, sandy soils)	No	May-July	No	Absence of typical habitat and vegetation associates. Present on adjacent parcels.
Isocoma arguta Carquinez Goldenbush	Valley and Foothill Grassland (alkali)	No	Aug-Dec.	No	Absence of requisite edaphic habitat on the site or in the immediate vicinity precludes presence.
Lasthenia conjugens Contra Costa Goldfields	Cismontane Woodland, Playas, (alkaline), Vernal Pools, Valley and Foothill Grassland	No	March-June	No	Requisite mesic absent on the site or in the immediate vicinity.

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
Leptosiphon aureus Bristly Leptosiphon	Cismontane Woodland, Chaparral, Coastal Prairie, Valley and Foothill Grassland	Yes	April-July	No	Absence of typical habitat and vegetation associates. Existing and historic agricultural use. Species was not observed.
Leptosiphon jepsonii Jepson's Leptosiphon	Valley and Foothill Grassland, Chaparral, Cismontane Woodland, (volcanic)	Yes	April-May	No	Absence of typical habitat and vegetation associates. Present and historic site management. Species was not observed.
Limnanthes vinculans Sebastopol Meadowfoam	Meadows and Seeps, Valley and Foothill Grassland, Vernal Pools	No	April-May	No	Requisite mesic habitat absent on the site or in the immediate vicinity.
Lilaeopsis masonii Mason's Lilaeopsis	Marshes and Swamps (brackish, freshwater), Riparian Scrub	No	April-Nov.	No	Lack of requisite habitat.
Ranunculus lobbii Lobb's Aquatic Buttercup	Cismontane Woodland, Valley and Foothill Grassland, Vernal Pools, North Coast Coniferous Forest, (mesic)	Yes	Feb.-May	No	Historic and ongoing agricultural use as well as absence of requisite mesic habitat. Species was not observed.
Rhynchospora californica California Beaked-rush	Bogs and Fens, Lower Montane Coniferous Forest, Meadows and Seeps, Marshes and Swamps (freshwater)	No	May-July	No	Absence of requisite mesic edaphic habitat on the site.
Sidalcea hickmanii ssp. *napensis* Napa Checkerbloom	Chaparral, (rhyolitic)	No	May-June	No	Lack of edaphic conditions.

Scientific Name Common Name	Species Habitat Association or Plan Community	Habitat present on Project Site	Bloom Time	Obs. on or Near Site	Analysis of habitat on project site for presence or absence
Sidalcea keckii Keck's Checkerbloom	Cismontane Woodland, Valley and Foothill Grassland, (clay, serpentinite)	No	April-May	No	Lack of edaphic conditions.
Symphyotrichum lentum Suisun Marsh Aster	Marshes and Swamps (brackish, freshwater)	No	May-Nov.	No	Requisite habitat absent on the project site.
Trichostema ruygtii Napa Bluecurls	Valley and Foothill Grassland, Vernal Pools, Chaparral, Lower Montane Coniferous Forest, Cismontane Woodland	No	June-Aug.	No	Absence of typical mesic habitat and vegetation associates. Present and historic agricultural use and management.
Trifolium amoenum Two-fork Clover	Coastal Bluff Scrub, Valley and Foothill Grassland (sometimes serpentinite)	No	April-June	No	Absence of typical habitat and vegetation associates. Present and historic site management.
Trifolium hydrophilum Saline Clover	Marshes and Swamps, Valley and Foothill Grassland (mesic, alkaline), Vernal Pools	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 proposed project site does not contain habitat which would support special-status plant species. The historic maintenance and present use, absence of serpentine or serpentinite soils, lack of vernal pools, wetlands, and vegetation associates reasonably precludes the presence of special-status plant species within the proposed planting area. Based on existing site conditions, it is unlikely that the proposed project will have a substantial impact or result in the "take" of any special-status plant species.

Special-status Animals

Table V 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 of presence or absence. The status of each species is shown in Appendix B.

Table V. Analysis of target Special-status Animal Species. 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.**
Adela oplerella Opler's Longhorn Moth	Grasslands with *Platystemon californica* as host plant	No	No	Property does not support the host species.
Actinemys marmorata Northwestern Pond Turtle USFWS	Slow moving water or ponds	No	No	Property does not contain aquatic habitat to support species.
Agelaius tricolor Tricolored Blackbird	Tule Marshes	No	No	Lack of nesting habitat.
Antrozous pallidus Pallid Bat	Roosts in Buildings and Overhangs, Woodlands	No	No	No potential roosting habitat on project site.
Aquila chrysaetos Golden Eagle	Nests near water	No	No	Lack of nesting and aquatic habitat.
Athene cunicularia Burrowing Owl	Low lying grasslands nests in burrows	No	No	Species was not observed. Potential wintering habitat.
Bombus pensylvanicus American Bumble Bee	Open fields, farmlands. Feeds on clover.	Yes	No	Nesting habitat for this species was not observed.
Branchinecta conservatio Conservancy Fairy Shrimp	Vernal Pools	No	No	Lack of mesic habitat.
Branchinecta lynchi Vernal Pool Fairy Shrimp	Vernal Pools	No	No	Lack of habitat.
Buteo regalis Ferruginous Hawk	Hunts from perches in arid grasslands, Migrates through area	No	No	Potential feeding habitat however lack of perches and nesting on site. Species was not observed.
Buteo swainsoni Swainson's Hawk	Open areas with riparian influence, nests in lone trees	May fly over	No	Lack of suitable nesting habitat. Species was not observed.

Scientific Name Common Name	Habitat	Potential for Property	Obs. on Project Site	Analysis of habitat on project site for presence or absence.
Circus hudsonius Northern Harrier	Preference for Wetlands and marshes both salt and freshwater	May fly over	No	Lack of suitable nesting habitat. Species was not observed.
Calasellus californicus Isopod	Freshwater Wells and Springs	No	No	Lack of habitat.
Danaus plexippus Monarch Butterfly	Milkweed, Migrates along Coast	No	No	Lack of food sources on the property.
Elanus leucurus White-tailed Kite	Nests in tall trees near water	May fly over	No	Species was not observed.
Emys marmorata Western Pond Turtle	Slow moving water or ponds	No	No	Lack of aquatic habitat on project site for this species.
Falco mexicanus Prairie Falcon	Nests on cliffs	No	No	May fly over. Lack of habitat for nesting and feeding.
Falco peregrinus anatum American Peregrine Falcon	Nests on cliffs	No	No	May fly over. Lack of habitat for nesting and feeding.
Geothlypis trichas sinuosa Saltmarsh Common Yellowthroat	Salt Marsh Tule Habitat	No	No	Lack of habitat.
Oncorhynchus mykiss irideus Steelhead-central California Coast	Aquatic	No	No	The ephemeral drainage does not provide aquatic habitat on project site for this species.
Speyeria zerene myrtleae Myrtle's Silverspot Butterfly	Coastal Dunes, Larva feed on *Viola adnucta*, adults feed on nectar from thistle, aster, yarrow and pearly everlasting	No	No	Requisite habitat required for presence lacking. Host plant not recorded onsite.
Rana boylii Foothill Yellow-legged Frog	Streams with pools	No	No	Lack of aquatic habitat precludes presence.
Rana draytonii California Red-legged Frog	Creeks, Rivers, permanent flowing water	No	No	Lack of aquatic habitat precludes presence.

Scientific Name Common Name	Habitat	Potential for Property	Obs. on Project Site	Analysis of habitat on project site for presence or absence.
Reithrodontomys raviventis Salt-marsh Harvest Mouse	Pickleweed Salt Marsh	No	No	Lack of habitat.
Sterna antillarum browni California Least Tern	Coastal	No	No	Lack of suitable habitat
Progne subis Purple Martin	Open areas near water	No	No	Lack of habitat.
Strix occidentalis caurina Northern Spotted Owl	Old growth, forested deep canyons	No	No	Requisite habitat absent. Habitat for this species is not associated with the property or area.
Taxidea taxus American Badger	Hillsides with suitable food sources	No	No	No evidence of presence. Species or workings was not observed.

The CDFW CNDDB Rare Find does not show records of any Special-status animal species for the study site.

Based on habitat associated with the proposed project site we conclude that it is unlikely that any of the species shown in the table above, or others known for the region, would occur on the site given the history of disturbance and lack of proper habit. It is unlikely that the project will negatively impact special-status animals, result in any take or have any significant habitat loss for special-status animal species.

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.

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 California Department of Fish and Wildlife Natural Diversity lists: Northern Vernal Pool, Serpentine Bunchgrass, Valley Needlegrass Grassland and Wildflower Grassland. Sensitive habitat types listed are not present on the property. There are no native grasslands, vernal pools, marshes or wetlands associated with the project footprint.

Non-native grasslands and or Blue Oak Woodlands (*Quercus douglasii*) are not listed as a CDFW Sensitive Natural community

Stream Analysis

Drainage from the project area is by direct infiltration or by sheet flow into an ephemeral drainage on the property.

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 2:1 and contains hydrophilic vegetation, riparian vegetation or woody-vegetation including tree species greater that ten feet in height.

There is an ephemeral drainage on the property that is considered a Waters of the State. This drainage does not contain permeant water, and therefore would be classified as a Class III drainage. There is an existing crossing on the east side of the property.

This drainage is not a U.S.G.S Blue Line Drainage does not fit the Napa County Definition for a Defined Drainage. The vineyard blocks have been designed to avoid and provide a setback from this feature.

D. ANALYSIS of 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.

In the sections below a discussion of potential impacts of the project on the biological resources is presented.

D.1 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.

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

The property and project site conditions are such that there is no reason to expect any impacts to other 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 Potential Impacts on Sensitive Habitat

Native Grassland

The grassland within the footprint of the project does not consist of any of the sensitive grassland communities listed by the County Baseline Data Report or CDFW. Grasslands on the project site do not meet the definition of Native Grass Grassland and would not be considered a species with limited distribution or a sensitive natural plant community. The project will not impact any native 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 are no seasonal wetlands associated with the proposed vineyard block.

Waters of the U.S. and "Waters of the State" include drainages which are characterized by the presence of definable bed and bank that meet CDFW, ACOE, and RWQCB definitions and or jurisdiction. Any direct discharge of storm water into "Waters of the State" will require ACOE, CDFW, and RWQCB permits. The ephemeral drainage on the property is a Waters of the U.S and Waters of the State, and has been provided with a setback. The drainage on the property has been avoided and provided with a setback.

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 and has a cascade effect in that it relates to oxygen availability. No riparian vegetation is associated with the proposed vineyard

Trees. 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 2:1 ratio. The project has been designed to avoid the Oak Woodland on the property.

Raptor Nests, Bird Rookeries, Bat Roosts, Wildlife Dens or Burrows
Grasslands on the property proposed for development provide marginal habitat for a small amount of birds species. The removal of ruderal grasslands on the property would not be considered a significant loss of foraging habitat for birds and raptors within the surrounding area. No bird rookeries or raptor nests were present on the property or within the project footprint.

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.

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.

Vineyards provide limited foraging, cover and breeding habitat, they may support a reduced number of species, and may be incompatible with surrounding wildlife habitat. Conversion of the habitat to vineyard may adversely affect bird communities by enhancing favorable conditions for predators.

Habitat fragmentation is a local and global concern. The project will incrementally reduce a small amount of habitat in the area. The proposed change in land use will result in less than significant changes in avifauna and rodent utilization in the area. 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 will not result in significant habitat fragmentation.

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. 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. There area existing vineyards on two sides of the property with existing deer fencing. Deer fencing exists along the eastern property line. There are no identifiable wildlife corridors associated with the property, however additional fencing could limit small mammal movement.

Mosses, Liverworts and Hornworts
The communities or habitat for Mosses, Liverworts and Hornworts on the property are very limited. The property does not contain typical habitat i.e., moisture regime, rock outcrops, fieldstones, rock walls, road cuts or decaying logs.

Lichens
Lichens are symbiotic associations of a fugus and a photosynthic alga or cyanobacteria. The symbiosis is a sensitive balance between the two or more partners and as such is vulnerable to air pollution or disturbance. Undisturbed areas with suitable moisture often have a rich assemblage of lichens living on soil, rocks or vascular plants. The project site has limited habitat for lichen presence due to recent fires.

The literature indicates that there are no records of occurrence of target special-status bryophytes, or lichens species within Napa County. The special-status species of non-vascular plants which were the focus of the study are those listed by the California Native Plant Society. No special-status bryophytes, or lichens were found on the property. Suitable habitat for the special-status species known for northern California is not present.

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, Standard Erosion Control 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. Vineyards provide limited foraging, cover, and breeding habitat for native wildlife species. Vineyards can be used by wildlife but the diversity is low within vineyards and foraging may be difficult. Loss of habitat can also be an important factor affecting the long-term survival of rare, threatened and endangered 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 a small area available to large and 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. The impact to local wildlife will be undetectable on a regional scale.

D.5 State and Federal Permits

Any impact to the drainage 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.

There is an existing culverted crossing on the east side of the property, Fish and Game Code requires that any person, state or local governmental agency, or public utility to notify CDFW prior to beginning any activity that may do one or more of the following:

- Divert or obstruct the natural flow of any river, stream, or lake;
- Change the bed, channel, or bank of any river, stream, or lake;
- Use material from any river, stream, or lake; or
- Deposit or dispose of material into any river, stream, or lake.

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. Biological resources on the site include drainages, wildlife, and amphibians.

- The project has the potential to increase sediment into seasonal drainages within the watershed of the Napa River.
- Herbicides and pesticides can be harmful or lethal specifically to raptors and amphibians in the region.
- The addition of deer fencing to the property could entrap large mammals (deer). Fencing can also reduce the ability of small mammals to move freely through the landscape.

Recommendation 1.1. 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 vineyard must be implemented.

Recommendation 1.2. Whenever possible Integrated Pest Management practices should be employed with minimally toxic pest control methods. Trapping or raptors should be used for rodent control. Sustainable Farming Practices should be used to insure that use of herbicides toxic to amphibians will be minimized.

Recommendation 1.3. Any new deer fencing should be designed with exit gates. Fencing should use a design that has 6-inch square gaps at the base instead of the typical 3" by 6" rectangular openings to allow small mammals to move through the fence.

F. SUMMARY

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

We find that the proposed project following recommendations included in this report 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.

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 U.S. Fish and Wildlife Service.

We find that the project as proposed 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.

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.

In order for the proposed project to not conflict with any local policies or ordinances protecting biological resources, the project must comply with Napa County General Plan Policy CON-24 Paragraph (c) and provide setbacks from all drainages on the property as per Napa County requirements.

We conclude that the proposed project with the implementation of erosion control plan, and implementing setbacks from the drainage 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 fifty years of professional experience in the study of California flora. He was a member of the Sonoma County Planning Commission and Board of Zoning (4-years). 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 (35-years) including sections on wetlands and wetland delineation techniques. He has supervised numerous graduate theses, NSF, DOE and local agency grants and served as a university administrator.

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 five 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.

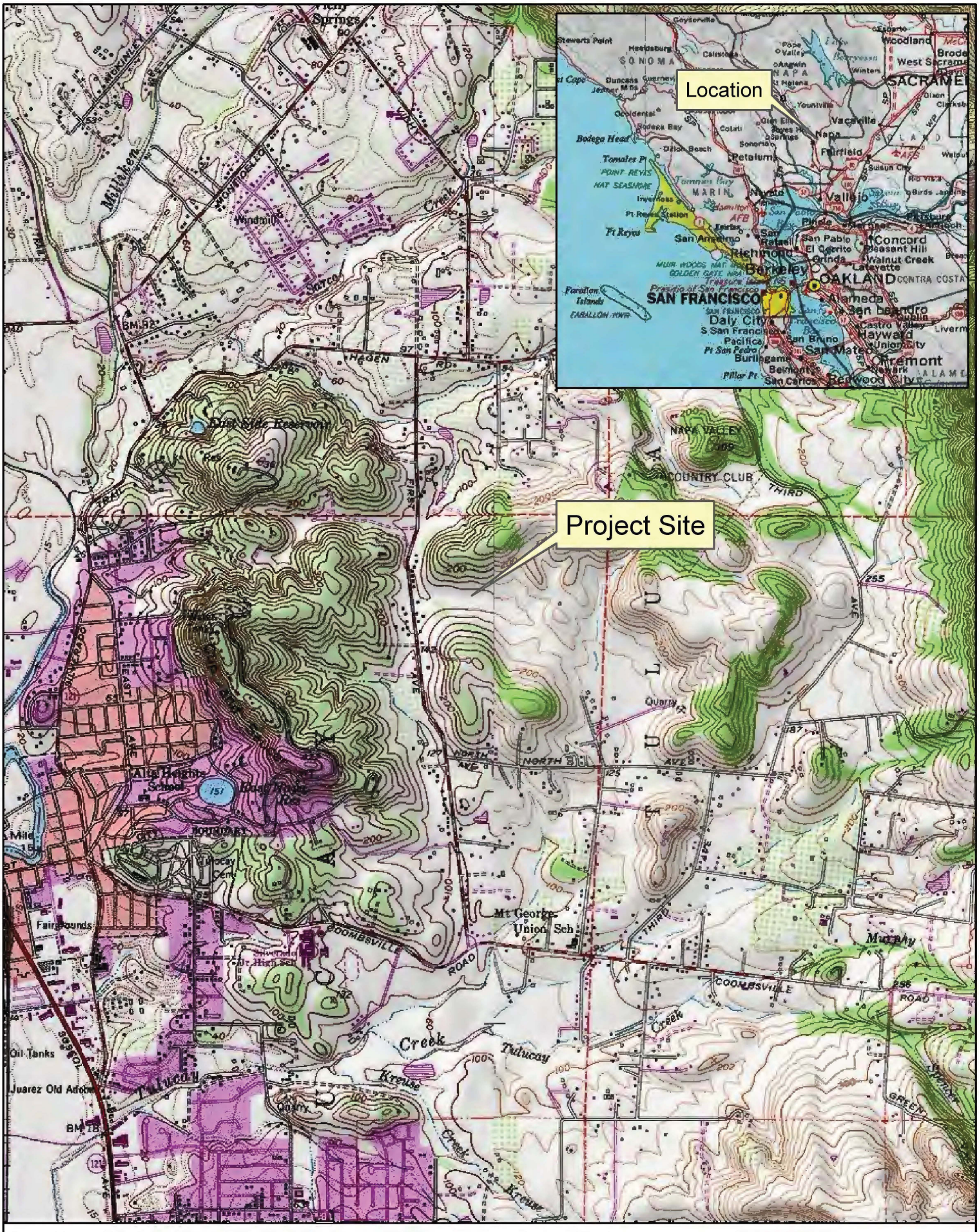


Plate I. Location and Site Map (Napa Quadrangle)

N

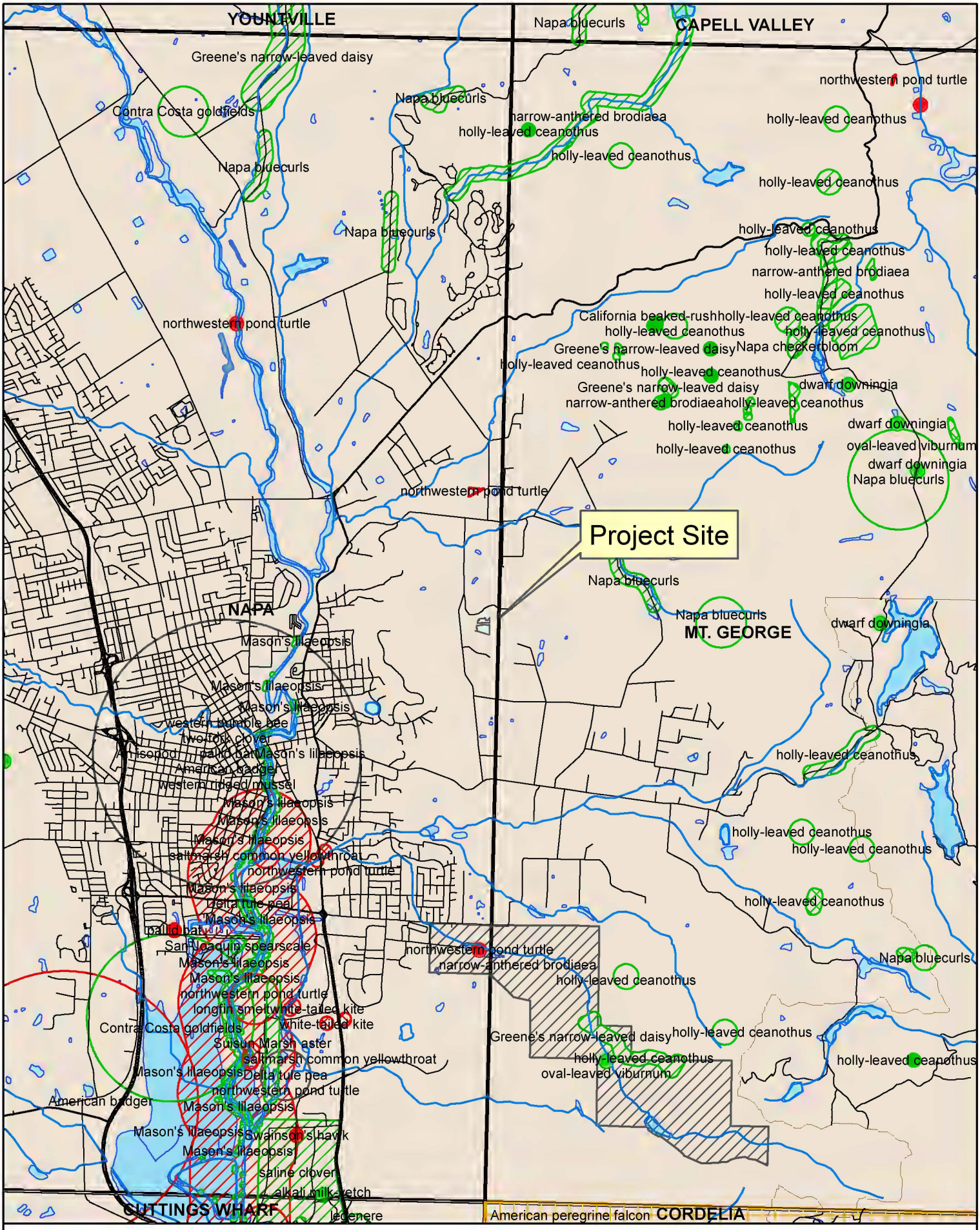


Plate II. CDFW CNDDB Rare Find Data

(Data Date August 2024)



Plate III. Aerial Photo Aerial Photo 2021

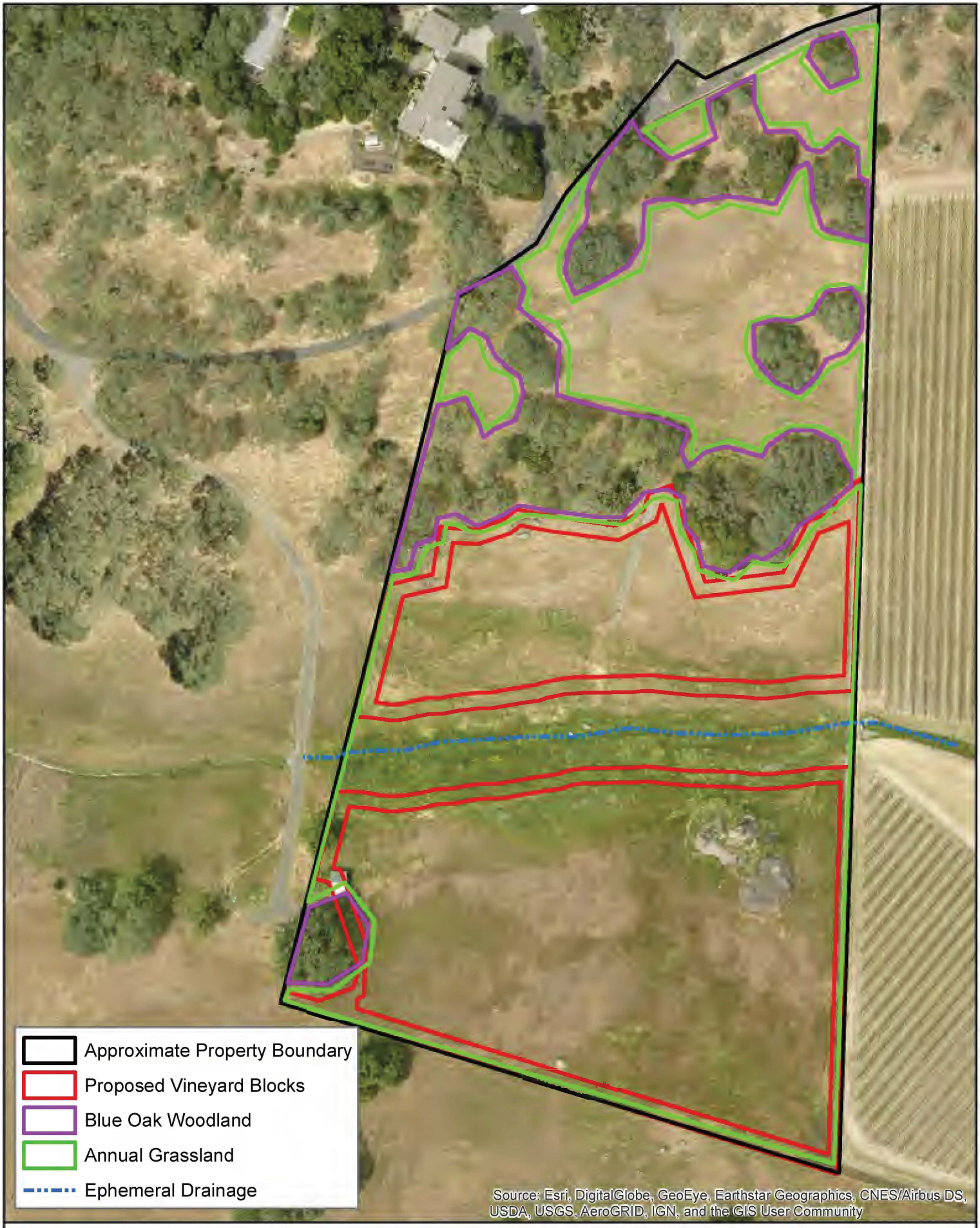


Plate IV. Aerial Photo / Vegetation Map Aerial Photo 2021

APPENDIX A

Plants and Animals Observed On or Around 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		
ALGAE		
CHLOROPHYCEAE		
XANTHOPHYCEAE		
Vaucheria ssp. Water Velvet	On Moist Soil	Common
FUNGI		
Basidiomycota- Club Fungi		
BOLBITACEAE		
Bolbitius titubans (Bull.) Fr. Sunny Side Up *(=B. vitellinus)*	On Dung	Common
POLYPORACEAE		
Schizophyllum commune Fr. Split-gill	Woodlands on Dead Wood	Common
MOSSES		
BRACHYTHECIACEAE		
Homalothecium nuttallii (Wilson) Jaeger NCN	Logs, Tree Trunks, Rocks	Common
Scleropodium touretii (Brid.) L Koch. NCN	Woodlands	Common
GRIMMIACEAE		
Grimmia leibergii Paris NCN	On exposed Rocks	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 On Speckled Green Shield	Oaks, Occasional on Rocks	Common
@Melanelixia subargentifera (Nyl.) Essl. NCN (=*Melanelia*)	On Bark of Deciduous Trees	Common
@ Physconia californica California Frost Lichen	On Oak Bark	Common
Parmelia sulcata Taylor Hamered Shield Lichen	On Bark	Common
Physcia caesia NCN (Sorideate form of *P. phaea)*	On Rocks and Bark	Common
@Sticta fulginosa (Hoffm.) Ach. NCN	On Oaks	Common
Xanthoparmelia mexicana (Gyeln.) Hale Common Rock-shield	On Rocks	Common
Xanthoria polycarpa (Hoffm.) Rieber Pin-cushion Sunburst Lichen	On Oaks Young Twigs	Common
UMBILICATE		
Umbilicaria phaea Tuck. NCN	On Rocks	Common
FRUTICOSE		
@Evernia prunastri (L.) Ach. Evernia, Perfume Lichen	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
Teloschistes chrysophthalmus (L.) Th. Fr. Gold Eye Lichen	On Oak	Common
Usnea intermedia=U. arizonica Western Bushy Beard	On Oaks	Common
CRUSTOSE		
@ Caloplaca citrina (Hoffm.) Th. Fr. Mealy Firedot Lichen	Rocks	Common
@Caloplaca impolita Fan Lobed Frie Dot Lichen	On Bark	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

MAGNOLIIDS		
LAURACEAE		
Umbellularia californica (Hook.&Arn.) Nutt.	Conifer&Oak Woodlands	Occasional
California Laurel, Sweet Bay, Pepperwood, California Bay,		
EUDICOTS		
FAGACEAE Oak Family		
Quercus agrifolia Nee	Woodlands	Common
Live Oak		
Quercus douglasii Hook.&Arn.	Woodlands	Common
Blue Oak (Hybridizes with *Q. garryana* and *Q. lobata*)		
Quercus lobata Nee.	Valley Grasslands	Common
Valley Oak		
ROSACEAE Rose Family		
**Prunus domestica* L.	Escape, Ruderal	Occasional
Prune		
SALICACEAE Willow Family		
Salix laevigata Bebb.	Growing out of burn pile	Common
Red Willow		

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

EUDICOTS		
ASTERACEAE (Compositae) Sunflower Family		
Baccharis pilularis deCandolle	Woodlands, Grasslands	Common
Coyote Brush		

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

APIACEAE (Umbelliferae) Carrot Family		
Sanicula bipinnatifida Hook	Grasslands, Woodlands	Common
Purple Sanicle		
Sanicula crassicaulis DC.	Woodlands	Common
Pacific Sanicle, Gambler Weed		
**@Torilis arvensis* (Huds.) Link	Grasslands Woodlands	Common
Hedge-parsley		
ASTERACEAE (Compositae) Sunflower Family		
Agoseris heterophylla (Nutt.) Green	Ruderal	Occasional
Annual Agoseris		

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

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

**Anthemis cotula* L. Mayweed, Stinkweed, Dog-fennel	Ruderal	Common
**Calendula arvensis* L. Field Marigold,	Ruderal	Occasional
**Carduus pycnocephalus* L.subsp.*pycnocephalus* Italian Thistle	Woodlands	Common
**Centarea calcitrapa* L. Purple Star Thistle	Grasslands	Common
Centromadia parryi (Green) Green ssp. *parryi* Pappose Spikeweed, Parry's Tar Weed (*Hemizonia p)*	Grasslands	Occasional
Circium occidentale (Nutt.) Jeps. var. *occidentale* Cobwebby Thistle	Grasslands, Oak Woodland	Common
**Circium vulgare* (Savi) Ten. Bull Thistle	Grasslands, Ruderal	Common
**Cichorium intybus* L. Chicory	Ruderal	Occasional
**Erigeron sumatrensis* Retz. Tropical Horseweed (*Conyza floribunda*)	Ruderal	Occasional
**Helminthotheca echioides* (L.) Holub Ox-tongue (*Picris echioides)*	Ruderal	Common
**Heterothecia grandiflora* Nutt. Telegraph Weed	Ruderal,	Occasional
**Hypochaeris glabra* L. Cat's Ear	Ruderal	Common
**Hypochaeris radicata* L. Harry Cat's Ear	Ruderal	Common
**Lactuca saligna* L. Willow Lettuce,	Ruderal	Occasional
**Lactuca serriola* L.S Prickly Lettuce	Ruderal	Occasional
@Lasthenia californica Lindl. ssp. *californica.* Goldfields	Grasslands	Comon
Layia chrysanthemoides (DC.) A.Gray Smooth Layia Tidy-tips	Grasslands	Occasional
**Logifa gallica* (L.) Cros&Germ Herba Impa, Daggerleaf Cottonrose (*Filago gallica*)	Ruderal Grasslands	Common
**Matricaria discoidea* DC. Pineapple Weed, Rayless Chamomile (*Chamomilla suavolens)*	Ruderal	Common
**Rhagadiolus stellatus* (L.) Green Wild Endive	Shaded understory invasive	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

**Senecio vulgaris* L. Common Grounsel	Ruderal	Occasional
**Silybum marianum* (L.) Gaertn. Milk Thistle	Ruderal	Common
**Sonchus asper* (L.) Hill var. *asper* Prickly Sow Thistle	Ruderal	Common
**Sonchus oleraceus* L. Common Sow Thistle	Ruderal	Common
**Taraxacum officinale* F.H.Wigg Dandelion	Ruderal	Common
**Tragopogon porrifolius* L. Salsify	Grasslands	Occasional
Wyethia angustifolia (DC.) Nutt. Narrow Leafed Mules Ears, California Compas Plant	Grasslands, Chaparral, Mixed Oak W.	Occasional
BORAGINACEAE Borage or Waterleaf Family		
Amsinckia intermedia Fisher&C. Meyer Common Fiddleneck (*A. menziesii* var. *intermedia*, N. S	Grasslands, Woodlands, Ruderal	Occasional
Nemophila heterophylla Frisch.&Mey. Canyon Nemophila	Woodlands	Occasional
Pectocarya pusilla (A.DC.) A. Gray Little Pectocarya	Grasslands, Ruderal	Common
@Phacelia distans Benth. Common Phacelia, Wild-heliotrope	Woodlands, Grasslands	Occasional
Plagiobothrys fulvus (Hook & Arn.) var. *campestris* Fulvous Popcorn Flower	Grasslands	Common
BRASSICACEAE Mustard Family		
**Brassica nigra* (L.) Koch Black Mustard	Ruderal	Common
**Capsella bursa-pastoris* L. Shepherd's Purse	Ruderal	Common
Cardamine oligosperma Nutt. Bitter-cress	Ruderal	Common
Nasturtium officinale W.T. Aiton Water Cress (*Rorippa nasturtium-aquaticum*)	Palustrine	Occasional
**Raphanus sativus* L. Wild Radish	Ruderal	Common
**Sisymbrium officinalis* L. Hedge Mustard	Ruderal, Grasslands	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

CARYOPHYLLACEAE Pink Family		
@Minuartia *californica* (A.Gray) Mattf. California Sandwort	Exposed Rock, Grasslands	Occasional
**Silene gallica* L. Small Flower Catchfly Windmill Pink	Ruderal/Grasslands/oakWoodlands	Common
CONVOLVULACEAE Morning-glory Family		
Convolvulus arvensis L. Morning-glory, Bindweed	Grasslands	Common
CRASSULACEAE Stoncrop Family		
Crassula connata (Ruiz.& Pav.) A Berg. Sand Pygmy Weed(*Tillia erecta.)*	Grasslands	Common
EUPHORBIACEAE Spurge Family		
Croton setigerus Hook. Turkey Mullein, Dove Weed (*Eremocarpus setigerus)*	Ruderal	Common
FABACEAE (Leguminosae) Legume Family		
Lupinus nanus Benth. Sky Lupine	Grasslands	Common
**Medicago polymorpha* L. Bur Clover	Ruderal, Grasslands	Common
**Meliotus indica* (L.) All. Yellow Sourclover	Grasslands	Common
**Trifolium hirtum* All. Rose Clover	Ruderal	Common
Trifolium varigatum Nut. White-tipped Clover	Grasslands	Common
Trifolium wildenovii Sprengl. Tomcat Clover	Grasslands, Woodlands	Common
Vicia sativa L. subsp. *nigra* Narrow Leaved-vetchn (*V. angustifolia* var. *segetalis)*	Grasslands, Ruderal	Common
**Vicia villosa* Roth. subsp. *villosa* Hairy Vetch, Winter Vetch	Ruderal	Common
GERANIACEAE Geranium Family		
**Erodium botrys* (Cav.) Bertol. Broadleaf Filaree, Long-beaked Filaree	Grasslands	Common
@**Geranium dissectum* L. Common Geranium	Grasslands	Common
LAMIACEAE (Labiatae) Mint Family		
**Mentha x piperita* L. Peppermint	Palustrine, Escape	Occasional

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

LIMNANTHACEAE Meadofoam Family		
@*Limnanthes douglasii* R.Br.subsp. *douglasii* Meadow Foam	Wet Meadows	Occasional
MALVACEAE Mallow Family		
**Malva neglecta* Wallr. Common Mallow	Ruderal	Common
MONTIACEAE Miner's lettuce Family		
Claytonia perfoliate Willd. ssp. *perfoliata* Miners Lettuce (*Montia)*	Woodlands, Riparian	Common
ONAGRACEAE Evening-primrose Family		
Taraxia ovata (Torr.& A. Gray) Small Sun Cup (*Camissonia, Oenothera)*	Grasslands	Common
OROBANCHACEAE Broomrape Family		
@*Castilleja densiflora* (Benth.) Chuang& Heckard subsp.*densiflora* Dense Owl's Clover	Grasslands	Common
Castilleja exserta (Heller) Chuang&Heckard subsp. *exserta* Purple Owl's Clover (*Orthocarpus purpurescens.*	Grasslands	Common
Triphysaria eriantha (Benth.) Chuang&Heckard subsp. *eriantha* Butter and Eggs	Grassland	Common
PAPAVERACEAE Poppy Family		
Eschscholzia californica Cahm. California Poppy	Grasslands	Common
**Bromus hordeaceus* L. Soft Chess, Blando Brome (*B.mollis*)	Grasslands, Woodlands	Common
PLANTAGINACEAE Plantain Family		
Collinisia sparsiflora Fisch&Mey var. *sparsiflora* Blue-eyed Mary	Woodlands,	Occasional
**Kickxia spuria* (L.) Dumort. Round-leaved Fluellin	Ruderal	Occasional
Plantago erecta E. Morris California Plantain	Grassland, Open Woodland	Common
**Plantago lanceolata* L. English Plantain	Ruderal	Common
POLYGONACEAE Buckwheat Family		
Persicaria amphibium(L.) Delarbre Swamp Smartweed (*Polygonum*)	Moist Areas	Common
**Rumex acetosella* L. Sheep Sorrel	Ruderal, Grasslands	Common
**Rumex crispus* L. Curly Dock	Ruderal, Moist Areas, Seasonal Wet	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

RANUNCULACEAE Buttercup Family		
@*_Ranunculus arvensis_ L. Hunger Weed	Grasslands	Common
Ranunculus californicus Benth. Buttercup	Grasslands, Woodlands	Common
*_Ranunculus muricatus_ L. Pickle-fruited Buttercup	Grasslands, Ruderal	Occasional
RUBIACEAE Madder Family		
Galium aparine L. Goose Grass Bedstraw	Woodlands, Riparian, Ruderal	Common
SAXIFRAGACEAE Saxifrage Family		
@_Micranthes californica_ (Green) Small California Saxifrage (=_Saxifraga californica_)	Woodlands, Grasslands	Common
SCROPHULARIACEAE Figwort Family		
*Verbascum blattari L. Moth Mullein	Ruderal	Occasional
VIOLACEAE Violet Family		
Viola purpurea Kellogg ssp. _purpurea_ Mountain Violet	Grasslands, Woodlands	Occasional

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

POACEAE Grass Family		
*_Avena barbata_ Link. Slender Wild Oat	Grasslands	Common
*_Briza minor_ L. Small Quaking Grass	Grasslands, Ruderal	Common
*_Bromus diandrus_ Roth Ripgut Grass	Ruderal, Grasslands	Common
*_Cynosurus echinatus_ L. Hedgehog, Dogtail Grass	Ruderal, Grassands, Oak Woodland	Common
*_Festuca bromoides_ L. Six-weeks Fescue _(Vulpia bromoides)_	Ruderal, Moist Flats become Dry	Common
*_Festuca myuros_ L. Rattail Fescue,Zorro Annual Fescue (_Vulpia myuros_)	Ruderal, Woodlands, Chaparral	Common
*_Hordeum marinum_ L. subsp. _glucanum_ Mediterranean Barley	Ruderal, Grasslands	Common
*_Hordeum murinum_ Huds. subsp. _leporinum_ Farmers Foxtail	Grasslands, Ruderal	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

**Phalaris aquatica* L. Harding Grass	Grasslands, Ruderal	Common
**Polypogon monspeliensis* (L.) Desf. Rabbitfoot Grass, Annual Beard Grass	Wetlands	Common

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

JUNCACEAE Juncus Family

Juncus bufonius L.var. *bufonius* Toad Rush	Ruderal, Grasslands	Common
**Juncus effusus* L. *effusus* Rush	Wet Pastures, Ruderal	Common
Juncus xiphioides Mey Flat Leafed Rush	Grasslands, Seeps	Common

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

AGAVACEAE Centuray Plant Family

Chlorogalum pomeridianum (DC.) Kunth var. *pomeridianum* Soap Plant	Woodlands, Grasslands	Common

ALLIACEAE Onion Family

Allium ssp Onion,	Moist Areas, Grassl,	Common

THEMIDACEAE Brodiaea Family

Dichelostemma capitatum (Benth.) Blue Dicks (*Brodiaea pucherla)*	Wood Grasslands, Open Woodlands	Occasional
Triteleia hyacinthine (Lindl.) Greene White Brodiaea(*Brodiaea. hy.*)	Grasslands	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
American Robin	*Turdus migratorius*	X
California Quail	*Callipepla californica*	X
California/Brown Towhee	*Pipilo fuscus*	X
Mourning Dove	*Zenaida macroura*	X
Northern Flicker	*Colaptes auratus*	X
Oregon Junco	*Junco oreganus*	X
Red-tailed Hawk	*Cathartes aura*	X
Spotted Towhee	*Pipilo erythrophthalmus*	X
Scrub Jay	*Aphelocoma coerulescens*	X
Wild Turkey	*Meleagris gallopavo*	X

MAMMALS		
ORDER		
Common Name	**Genus**	**Observed**
CERVIDAE		
Black-tailed Deer	*Odocoileus hemionus*	Sight
RODENTIA		
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

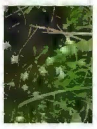
U.S. Fish and Wildlife Service Listed Species for the Quadrangle

CALIFORNIA NATIVE PLANT SOCIETY

Search Results

14 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3812233**], 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
Allium peninsulare var. franciscanum	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G4G5T2	S2	1B.2	Yes	2001-01-01	 © 2019 Aaron Arthur
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2	Yes	1994-01-01	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
Castilleja ambigua var. ambigua	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G5T4	S3S4	4.2		2009-02-04	 ©2011 Dylan Neubauer
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2		1980-01-01	 © 2013 Aaron Arthur
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
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	Yes	1988-01-01	No Photo Available
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	FE	None	G1	S1	1B.1	Yes	1974-01-01	 © 2013 Neal Kramer
Leptosiphon aureus	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Yes	1994-01-01	 © 2007 Len

												© 2007 Zan Blumin
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	Mar-May	None	None	G2G3	S2S3	1B.2	Yes	2001-01-01	 © 2012 Aaron Arthur
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2		1974-01-01	No Photo Available
Trichostema ruygtii	Napa bluecurls	Lamiaceae	annual herb	Jun-Oct	None	None	G1G2	S2	1B.2	Yes	2007-01-03	No Photo Available
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	FE	None	G1	S1	1B.1	Yes	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 14 of 14 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 16 August 2024].

California Natural Diversity Database RareFind

Query Summary:
Quad IS (Rutherford (3812244) OR Yountville (3812243) OR Capell Valley (3812242) OR Sonoma (3812234) OR Napa (3812233) OR Mt. George (3812232) OR Sears Point (3812224) OR Cuttings Wharf (3812223) OR Cordelia (3812222))
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
Adela oplerella	Opler's longhorn moth	None	None	G2	S2	null	Ultramafic, Valley & foothill grassland
Agrostis hendersonii	Henderson's bent grass	None	None	G2Q	S2	3.2	Valley & foothill grassland, Vernal pool, Wetland
Allium peninsulare var. franciscanum	Franciscan onion	None	None	G4G5T2	S2	1B.2	Cismontane woodland, Ultramafic, Valley & foothill grassland
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, Coastal scrub, Valley & foothill grassland
Aquila chrysaetos	golden eagle	None	None	G5	S3	null	Broadleaved upland forest, Cismontane woodland, Valley & foothill grassland
Astragalus claranus	Clara Hunt's milk-vetch	Endangered	Endangered	G1	S1	1B.1	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Astragalus tener var. tener	alkali milk-vetch	None	None	G2T1	S1	1B.2	Alkali playa, Valley & foothill grassland,

							Vernal pool, Wetland
Athene cunicularia	burrowing owl	None	None	G4	S2	null	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, 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
Bombus pensylvanicus	American bumble bee	None	None	G3G4	S2	null	Coastal prairie, Great Basin grassland, Valley & foothill grassland
Branchinecta lynchi	vernal pool fairy shrimp	Threatened	None	G3	S3	null	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 regalis	ferruginous hawk	None	None	G4	S3S4	null	Great Basin grassland, Great Basin scrub, Pinon & juniper woodlands, Valley & foothill grassland
Buteo swainsoni	Swainson's hawk	None	Threatened	G5	S4	null	Great Basin grassland, Riparian forest, Riparian

							woodland, Valley & foothill grassland
Castilleja affinis var. neglecta	Tiburon paintbrush	Endangered	Threatened	G4G5T1T2	S1S2	1B.2	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
Circus hudsonius	northern harrier	None	None	G5	S3	null	Coastal scrub, Great Basin grassland, Marsh & swamp, Riparian scrub, Valley & foothill grassland, Wetland
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
Extriplex joaquinana	San Joaquin spearscale	None	None	G2	S2	1B.2	Alkali playa, Chenopod scrub, Meadow & seep, Valley & foothill grassland
Hemizonia congesta ssp. congesta	congested-headed hayfield tarplant	None	None	G5T2	S2	1B.2	Valley & foothill grassland
Hesperolinon breweri	Brewer's western flax	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland

Horkelia tenuiloba	thin-lobed horkelia	None	None	G2	S2	1B.2	Broadleaved upland forest, Chaparral, Valley & foothill grassland
Isocoma arguta	Carquinez goldenbush	None	None	G1	S1	1B.1	Valley & foothill grassland
Lasthenia conjugens	Contra Costa goldfields	Endangered	None	G1	S1	1B.1	Alkali playa, Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland
Leptosiphon jepsonii	Jepson's leptosiphon	None	None	G2G3	S2S3	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Limnanthes vinculans	Sebastopol meadowfoam	Endangered	Endangered	G1	S1	1B.1	Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Serpentine Bunchgrass	Serpentine Bunchgrass	None	None	G2	S2.2	null	Valley & foothill grassland
Sidalcea keckii	Keck's checkerbloom	Endangered	None	G2	S2	1B.1	Cismontane woodland, Ultramafic, Valley & foothill grassland
Speyeria zerene sonomensis	Sonoma zerene fritillary	None	None	G5T1	S1	null	Valley & foothill grassland
Taxidea taxus	American badger	None	None	G5	S3	null	Alkali marsh, , Upper Sonoran scrub, Valley & foothill grassland
Trichostema ruygtii	Napa bluecurls	None	None	G1G2	S2	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

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.

NOT FOR CONSULTATION

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

NOT FOR CONSULTATION

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.

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).**

NOT FOR CONSULTATION

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Mammals

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

Birds

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

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS

NOT FOR CONSULTATION

California Red-legged Frog Rana draytonii — Threatened

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

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus	Candidate

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/9743

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio	Endangered

Wherever found

There is final critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/8246

Flowering Plants

NAME	STATUS
Contra Costa Goldfields Lasthenia conjugens	Endangered

Wherever found

There is final critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/7058

Showy Indian Clover Trifolium amoenum — Endangered

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/6459

Critical habitats

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

NOT FOR CONSULTATION

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[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management 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
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

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

NAME	BREEDING SEASON

NOT FOR CONSULTATION

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.
https://ecos.fws.gov/ecp/species/1626

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

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "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.

NOT FOR CONSULTATION

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.

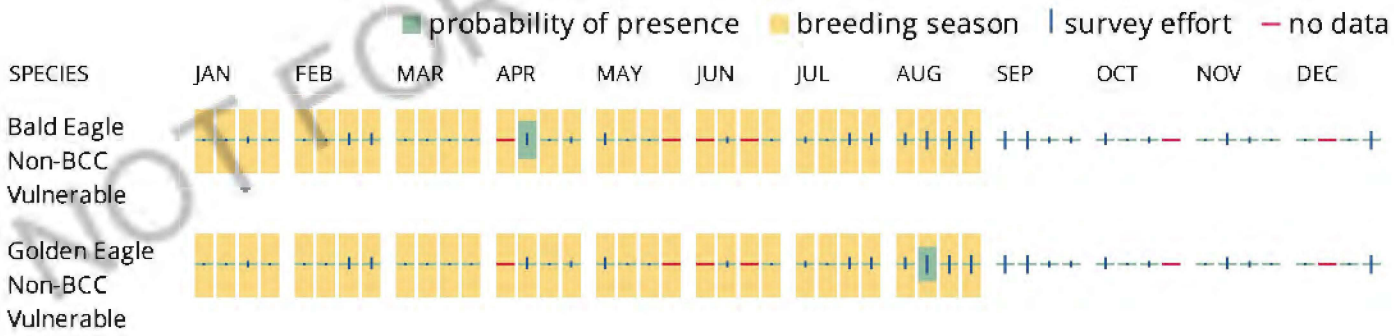
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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.



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?

NOT FOR CONSULTATION

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.

NOT FOR CONSULTATION

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[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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:

- Eagle Management 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
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

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, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

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 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/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow Passerculus sandwichensis beldingi 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	Breeds Apr 1 to Aug 15
Bullock's Oriole Icterus bullockii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25

NOT FOR CONSULTATION

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.

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

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 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/8350

Nuttall's Woodpecker Dryobates 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

NOT FOR CONSULTATION

Santa Barbara Song Sparrow Melospiza melodia graminea 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/5513	Breeds Mar 1 to Sep 5
Western Gull Larus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 21 to Aug 25
Western Screech-owl Megascops kennicottii cardonensis This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jun 30
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "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.

NOT FOR CONSULTATION

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.

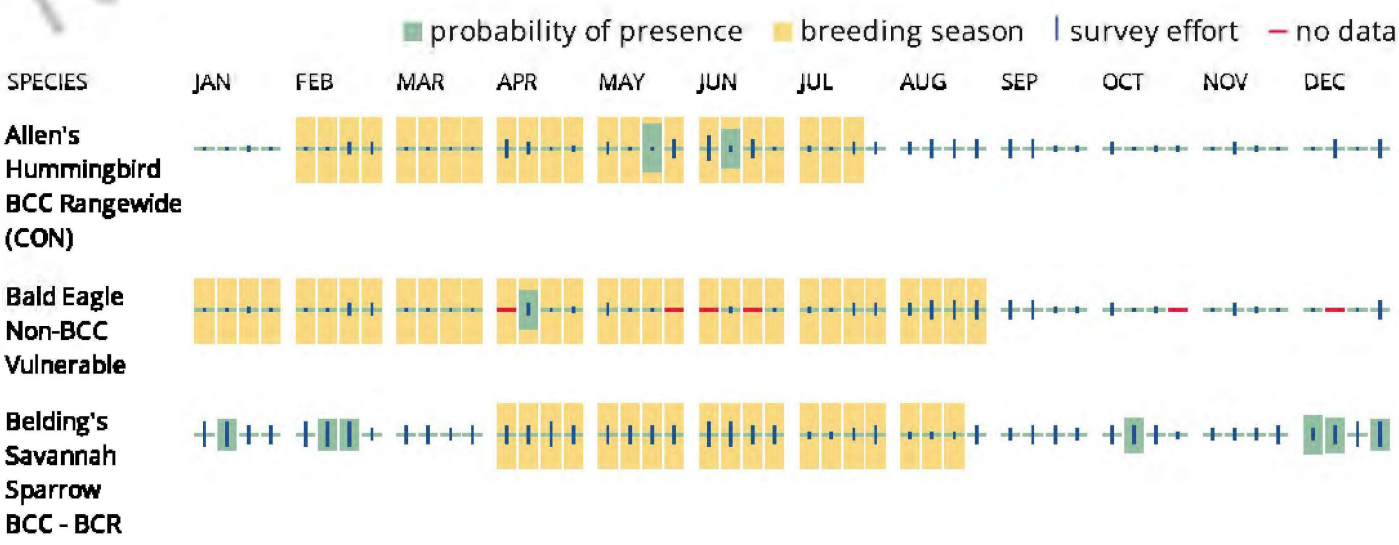
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

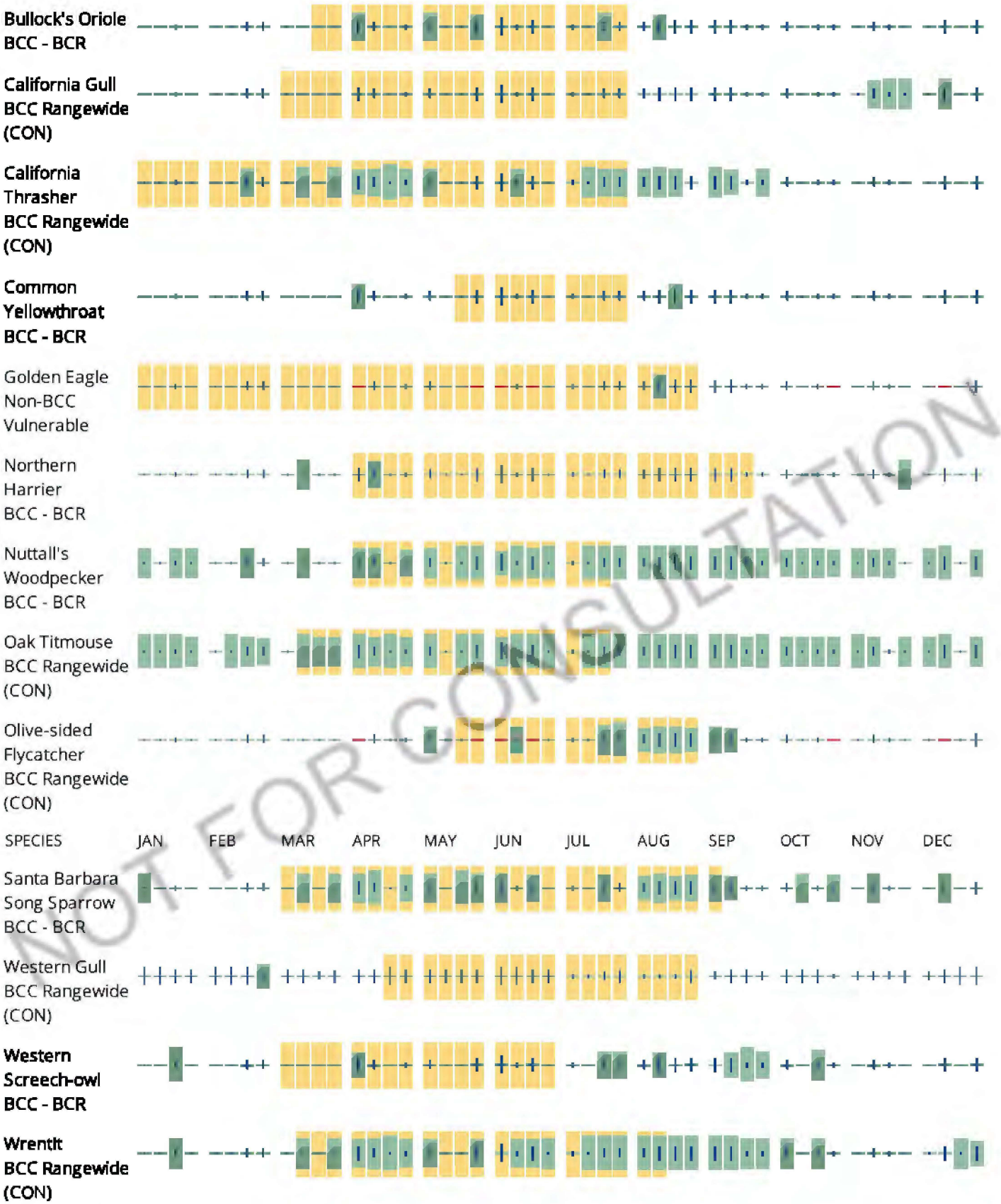
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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.

NOT FOR CONSULTATION





NOT FOR CONSULTATION

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.

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:

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

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be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (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

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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.

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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