EXHIBIT B-1

Biological Resource Survey

Acierno Vineyard
Block G, H, I (0.73-Acres)
7070 Silverado Trail, Napa County



Prepared For

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February 2024

Biological Resource Survey

Acierno Vineyard

Block G, H, I (0.73-Acres)

PROJECT NAME:
Acierno Vineyard
7070 Silverado Trail
APN # 032-070-024
Block G, H, I (0.73-Acres)

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PERIOD OF STUDY:
February-July 2023

Biological Resource Survey

Acierno Vineyard
Block G, H, I (0.73-Acres)
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Biological Resource Survey
Acierno Vineyard
7070 Silverado Trail

Executive Summary

This study was conducted at the request of Nick Warnock, P.E., RSA Engineering 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 three vineyard blocks (G, H, and I) that total (0.73-Acres). The property is located north of the city of Napa. The property is within the watershed of the Napa River. The study site is within the USGS Mt. 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 2023 by Kjeldsen Biological Consulting:

- Habitat on the proposed project sites consists of Ruderal Grassland and Mixed Oak Woodlands;
- Trees on the project site were removed prior to our 2023 field work. Trees removed consisted of Live Oaks, Blue Oaks and one Valley Oak;
- A small patch of Native Grasses was identified within Block G. Napa County Biotic Communities of limited distribution include Native Grasslands: This population was flagged in the field and should be avoided;
- Based on aerial photos and the surrounding vegetation it appears that the unpermitted vineyard was planted within Ruderal Grassland, and no native oaks were removed;
- 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 substantially interfere with native wildlife species, wildlife corridors, and or native wildlife nursery sites;
- The footprint of the project will not significantly contribute to habitat loss or habitat fragmentation; 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 removal of native oaks species reduces habitat value for local wildlife.
- Herbicides and pesticides can be harmful or lethal specifically to raptors and amphibians in the region.
- The project has the potential to reduce native grasslands which are considered a sensitive habitat throughout California.
- 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

Recommendations

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

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

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

Native Grassland area identified within Block G should be avoided or replanted at a 3:1 ratio on the property. Construction fencing is recommended around the native grassland are prior to ground disturbing activities to ensure the area is not impacted.

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.

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 should be minimized.

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A PROJECT DESCRIPTION

This study was conducted at the request of Nick Warnock, P.E., RSA Engineering 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 property is located north of the city of Napa, and is within the watershed of the Napa River. The study site is within the USGS Mt. George Quadrangle. Plate I provides a site and location and site map of the property. Plate III provides an aerial photograph of the property 2021.

A.2 Background

The project proposes to develop three vineyard blocks (G, H, and I) that total (0.73-Acres) that are adjacent to existing vineyards as part of redeveloped of vineyards on the property with new ownership. The developed portions of the property consists of vineyards, landscape plantings, undeveloped natural landscape, seasonal drainage, access road, sediment basin, agricultural infrastructure and a residence.

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

B.1 Project Scoping

The scoping for the project considered seasonal fieldwork, location and type of habitat and or vegetation types present on the property or associated with potential special-status plant species known for the Quadrangle, surrounding Quadrangles the County or the region. Our scoping also considered records in the most recent version of the Department of Fish and Wildlife California Natural Diversity Data Base (CDFW CNDDB 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 II and III present CDFW CNDDB Rare Find species and U.S. Fish and Wildlife Service listed species for the Quadrangle and surrounding Quadrangles.

B.2 Field Survey Methodology

Our 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 Areas.

Table I. Time and Date of Field Work

Date	Personnel	Person-hr.	Time	Conditions
March 8, 2023	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	9:00 to 10:00	Clear, clear cool temperatures, no wind
April 6, 2023	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	11:00 to 12:00	Clear, mild temperatures Light breeze
May 17, 2023	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	11:30 to 12:30	Clear, no wind, warm temperatures
June 15, 2023	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	10:30 to 11:30	Clear, light breeze, with warm temperatures
July 18, 2023	Chris K. and Daniel T. Kjeldsen	2.0 person-hours	01:00 to 02:00	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 some trees and shrubs with unique vegetative characteristics flowering is not needed for proper identification. The vegetative evaluation as a function of field experience can be used to identify species outside of the blooming period to verify or exclude the possibility of special-status plants in a study area.

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

Animals

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 (EPA and ACOE Rule August 28, 2015). Seasonal stream channels with a definable bed and bank fall within the jurisdiction of EPA, ACOE and CDFW. Tributaries to Waters of the U.S. as well as Waters of the State are determined by the presence of a definable bed and bank, evidence of or ability to transport sediment and/or a blue line on the USGS Quadrangle Map.

The Migratory Bird Treaty Act

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

Rare and Special-status Species are plants or animals that have been designated by Federal or State agencies 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. Activities otherwise prohibited under ESA Section 9 and subject to the civil and criminal enforcement provisions under ESA Section 11 may be authorized under ESA Section 7 for actions by federal agencies and under ESA Section 10 for non-federal entities.

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.

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.

C. RESULTS / FINDINGS

C.1 Biological Setting

The study site is located in Napa County north of the city of Napa. The project site drains by direct infiltration or sheet flow into an ephemeral Class III drainage on the west side of the study area. Figures 1 to 4 illustrate the site conditions.

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.

Our survey focused on the proposed vineyard Blocks and the immediate surrounding habitat.

C.2 Habitat Present

The three proposed blocks are small areas within existing vineyards that were not previously developed. Trees within the proposed blocks were removed prior to our survey. Historic aerial photographs show that the area was Oak Woodlands prior to tree removal. Plate III.

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 were determined to be present on the on the project site (based on interpretation of aerial photographs and surrounding vegetation. In the sections below the habitat type present within the footprint of the proposed vineyard block is described and further categorized with the new system of vegetation classification by Sawyer *et al* A Manual of California Vegetation Second Edition. Sawyer classifies the vegetation on the proposed vineyard block as Mixed Oak Woodlands, and Grassland Semi-natural Stands with Herbaceous Layer and a small area of Native Bunch Grassland.

The Woodland Alliance present are as per Sawyer (2009) Mixed Oak Forest

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

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

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 (annual ruderal non-native grasslands) 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.

Native Bunch Grasslands

Native grasslands dominated by a mixture of annual and perennial grasses, such as small fescue (*Vulpia microstachys*), purple needlegrass (*Nasella pulchra*), and nodding needlegrass (*Nasella*

cernua), likely occurred in the County in most areas currently occupied by annual grassland. Although once extensive in the greater Bay Area and Central Valley, invasion by exotic annual grasses and improper livestock grazing has led to the decline of this land cover type.

The native bunch grassland on the property consists of hummocks of Purple Needlegrass *(Stipa pulchra).* The extent of this population was flagged in the field.



Figure 1. View of typical vegetation and habitat within Block G.



Figure 2. View of typical vegetation and habitat within Block H.



Figure 3. View of typical vegetation and habitat within Block I.



Figure 4. Small area of native bunch grasses (*Stipa pulchra)* adjacent to Block G.

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 shown on Plate II. These taxa as well as those listed in Appendix C Special-status Species known for the Quadrangle and Surrounding Quadrangles were considered and reviewed as part of our scoping for the project site and property. Reference sites were reviewed as part of our scoping for some of the species.

Special-status Plants

Table II below provides a list of plant species that are known to occur within the region of the proposed project (CDFW CNDDB, 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 II. Analysis of CDFW CNDDB, CNPS and USFWS special-status plant species from the region. Columns are arranged alphabetically by scientific name.

Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat present on Project Site**	**Bloom Time**	**Obs. on or Near Site**	**Analysis of habitat on project site for presence or absence**
Agrostis hendersonii Henderson's Bent Grass	Vernal Pools	No	April-June	No	Lack of mesic habitat.
Allium peninsulare var. *franciscanum* Franciscan Onion	Cismontane Woodland, Valley and Foothill Grassland/Clay Serpentinite	No	May-June	No	Absence of requisite edaphic conditions.
Amsinkia lunularis Bent-flowered Fiddleneck	Cismontane Woodland, Valley and Foothill Grassland	No	March-June	No	Potential for project site. No indications for presence during our fieldwork.
Astragalus claranus Clara Hunt's Milk-vetch	Chaparral, Valley and Foothill Grassland	No	March-May	No	Absence of requisite micro-habitat and vegetation associates.
Astragalus tener var. tener Alkali Milk-vetch	Valley and Foothill Grassland, 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 agricultural use precludes presence. No indications for presence during our fieldwork.
Blennosperma bakeri Sonoma Sunshine	Valley and Foothill Grassland, Vernal Pools	No	March-May	No	Absence of requisite mesic habitat.
Brodiaea leptandra Narrow-anthered California Brodiaea	Cismontane Woodland, Valley and Foothill Grassland	No	May-June	No	Requisite habitat, exposure and historic land use preclude presence on project site.
Castilleja ambigua var. *anbigua* Johnny-nip	Low saline areas	No	May-June	No	Lack of habitat.
Ceanothus purpureus Holly-leaved Ceanothus	Chaparral, Serpentinite or Rocky Volcanic	No	March-May	No	Absence of typical habitat and vegetation associates.

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
Downingia pusilla Dwarf Downingia	Valley and Foothill Grassland, vernal pools	No	March-May	No	Requisite aquatic habitat absent on the site or in the immediate vicinity.
Erigeron greenei Green's Narrow-leaved Daisy	Chaparral, (serpentinite)	No	May-Sep.	No	Absence of edaphic conditions required for presence.
Eryngium jepsonii Jepson's Coyote Thistle	Moist Clay Soils	No	April-Aug.	No	Absence of mesic conditions required for presence.
Extriplex joaquinana (=Atriplex) San Joaquin Spearscale	Valley and Foothill Grassland, Alkali	No	April-Oct.	No	Absence of requisite edaphic habitat on the site or in the immediate vicinity precludes presence.
Hesperolinon breweri Brewer's Western Flax	Cismontane Woodland, Valley and Foothill Grassland, Serpentinite	No	May-July	No	Absence of requisite edaphic habitat on the site or in the immediate vicinity precludes presence.
Hesperolinon sharsmithiae Sharsmith's Western Flax	Chaparral endemic	No	May-July	No	Requisite edaphic habitat absent on the site or in the immediate vicinity.
Hemizonia congesta ssp.*congesta* Congested Headed Tarplant	Valley and Foothill Grassland	No	April - Nov.	No	Absence of requisite habitat.
Horkelia tenuiloba Thin-lobed (=Santa Rosa) Horkelia	Broadleaved Upland Forest, Chaparral, Valley and Foothill Grassland, mesic (wet) openings, sandy soils	No	May-July	No	Absence of typical habitat and vegetation associates.
Lasthenia conjugens Contra Costa Goldfields	Vernal Pools	No	March–June	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
Layia septentrionalis Colusa Layia	Cismontane Woodland, Valley and Foothill Grassland, Serpentinite	No	April-May	No	Requisite edaphic habitat absent on the site or in the immediate vicinity.
Leptosiphon aureus Bristly Leptosiphon	Grassy Areas, Woodlands, Chaparral	No	April-July	No	Requisite habitat absent.
Leptosiphon jepsonii Jepson's Leptosiphon	Open or partially shaded grassy slopes	No	April-May	No	Historic disturbance precludes presence. No indications for presence during our fieldwork.
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.
Micropus amphibolus Mt. Diablo Cottonweed	Cismontane Woodland, Valley and Foothill Grassland	No	March-May	No	Absence of requisite vegetation associates and historical use of the site precludes presence.
Navarretia leucocephala ssp. *bakeri* Baker's Navarretia	Meadows and Seeps, Valley and Foothill Grassland, Vernal Pools, (mesic)	No	April-July	No	Absence of typical habitat and vegetation associates.
Navarretia leucocephala ssp. *pauciflora* Few-flowered Navarretia	Vernal Pools	No	May-June	No	Absence of typical habitat and vegetation associates.
Penstemon newberryi var. *sonomensis* Sonoma Beardtongue	Chaparral (rocky)	No	April-Aug.	No	Absence of typical habitat and vegetation associates.
Ranunculus lobbii Lobb's Aquatic Buttercup"	Valley and Foothill Grassland, Vernal Pools	No	Feb-May	No	Requisite mesic habitat absent on the site.
Sidalcea keckii Keck's Checkerbloom	Valley and Foothill Grassland, Cismont Woodland (Serpentinite)	No	April May	No	Historic agricultural use precludes presence. No indications for presence during our fieldwork.

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
Trichostema ruygtii Napa Bluecurls	Grassland, Chaparral, Cismontane Woodland Vernal Pools	No	June-Aug.	No	Historic agricultural use precludes presence. No indications for presence during our fieldwork.
Trifolium amoenum Two-fork Clover	Coastal Bluff Scrub, Valley and Foothill Grassland	No	April-June	No	Historical use of the site precludes presence. This species is vulnerable to disturbance and livestock grazing.
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.

The CDFW CNDDB shows a known occurrence for the Sonoma Beardtongue in the area. Sonoma Beardtongue (*Penstemon newberryi var. sonomensis*) is a woody perennial endemic to rocky outcrops and talus slopes. Habitat for this species is not present within the historic grassland of the project site.

The proposed project site does not contain habitat which would support special-status plant species. The historic 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 surrounding and probable habitat prior to development, it is unlikely that the proposed project had a substantial impact or resulted in the take of any special-status plant species.

Special-status Animals

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

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

Scientific Name Common Name	**Habitat**	**Potential for Property**	**Obs. on Project Site**	**Analysis of habitat on project site for presence or absence.**
Antrozous pallidus Pallid Bat	Roosts in Buildings and Overhangs, Woodlands	No	No	No potential roosting habitat on project site.
Aquila chrysaetos Golden Eagle	Nests near water	No	No	Lack of nesting and aquatic habitat.
Asio flammeus Short-eared Owl	Nests on the ground. Feeds in Grasslands	No	No	Lack of suitable nesting and foraging habitat.
Athene cunicularia Burrowing Owl	Low lying grasslands Nests in burrows	No	No	Lack of suitable nesting and foraging habitat.
Bombus pensylvanicus American Bumble Bee	Open fields, farmlands. Feeds on clover.	No	No	Lack of suitable 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	Unlikely feeding habitat on site. No raptor nests were observed.
Buteo swainsoni Swainson's Hawk	Open areas with riparian influence, nests in lone trees	May Fly Over	No	Lack of suitable nesting and foraging habitat.
Calasellus californicus An Isopod	Freshwater Wells and Springs	No	No	Lack of habitat.
Corynorhinus townsendii Townsend's Big-eared Bat	Caves, Buildings. Trees min 24"DBH with basal hollow of 2 sq ft.	May Fly Over	No	Unlikely due to size and condition of trees removed.
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.

Scientific Name Common Name	Habitat	Potential for Property	Obs. on Project Site	Analysis of habitat on project site for presence or absence.
Rana boylii Foothill Yellow-legged Frog	Streams with pools	No	No	Lack of habitat precludes presence.
Rana draytonii California Red-legged Frog	Creeks, Rivers, permanent flowing water	No	No	Requisite habitat absent on project site.
Strix occidentalis caurina Northern Spotted Owl	Old growth, forested deep canyons	No	No	Requisite habitat absent. Not associated with project.
Syncaris pacifica California Freshwater Shrimp	Creeks and Estuaries below 300 ft.	No	No	Requisite habitat required for presence lacking.

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 hydrology/topography. It is unlikely that the project negatively impacted special-status animals 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. There are no vernal pools, marshes or wetlands associated with the project footprint.

<u>Block G contains a small area of Purple Needlegrass Grassland (native grassland).</u>

Stream Analysis

Drainage from the project area is by direct infiltration or by sheet flow into an ephemeral drainage which is a tributary of the Napa River.

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

There is an ephemeral drainage on the west side of the study that would be considered a Waters of the State. This drainage would only contain water during storm events, and therefore is classified as a Class III drainage.

This drainage is not a U.S.G.S Blue Line Drainage but contains woody vegetation greater than ten feet in height, and contains banks steeper than 3:1, therefore it would be considered a Napa County Definition for a Defined Drainage

D. POTENTIAL BIOLOGICAL IMPACTS

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

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

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

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

Many special-status species are rare in nature because of their specific and often very narrow habitat or environmental requirements. Their presence is limited by specific environmental conditions such as: hydrology, microclimate, soils, nutrients, interspecific and intraspecific competition, and aspect or exposure.

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 Analysis of Potential Impacts on Sensitive Habitat

Native Grassland

The majority of 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 majority of the project site do not meet the definition of Native Grass Grassland. A small patch of native grassland was identified within proposed block G. Native Grasslands are considered a sensitive natural plant community. The project as proposed will impact a small area of native grassland.

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 must be provided with a setback. There are no drainages or creeks within the project footprint.

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 Blocks

Trees Plate III shows the conditions on the site in 2021. Recent 2023 Aerial Photos are not available for the property. Review of aerial photos and stumps indicates that native trees were removed within Block G, H and I. Tree Removal consisted of 5-Live Oaks, 9 Blue Oaks and 1 Valley Oak, Total of 15 Oaks >5" DBH. Tree count provided by RSA.

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 are no identifiable wildlife corridors within the proposed vineyard, however fencing could limit small mammal movement.

Raptor Nests, Bird Rookeries, Bat Roosts, Wildlife Dens or Burrows
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.

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 the area available to small mammals and foraging habitat for birds in the area. The loss of habitat is considered to be less than significant.

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

Water extraction linked to agricultural development may have a negative impact on listed salmonids. Adequate analysis of the water demands of the proposed vineyard and potential stream flow impacts should be analyzed if direct water diversions are used to irrigate vineyards or for frost protection.

D.5 State and Federal Permit

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

E. RECOMMENDATIONS TO AVOID IMPACTS

E.1 Significance

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

E.2 Recommendations

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

Site development has the potential to impact biological resources without appropriate avoidance and protection measures. Biological resources present include an ephemeral drainage.

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

Recommendation 1.3. Native Grassland area identified within Block G should be avoided or replanted at a 3:1 ratio on the property. Construction fencing is recommended around the native grassland are prior to ground disturbing activities to ensure the area is not impacted.

Recommendation 1.4. 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.

Recommendation 1.5. 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 should be minimized.

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.

We conclude that the proposed project with the implementation of standard construction practices, 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.

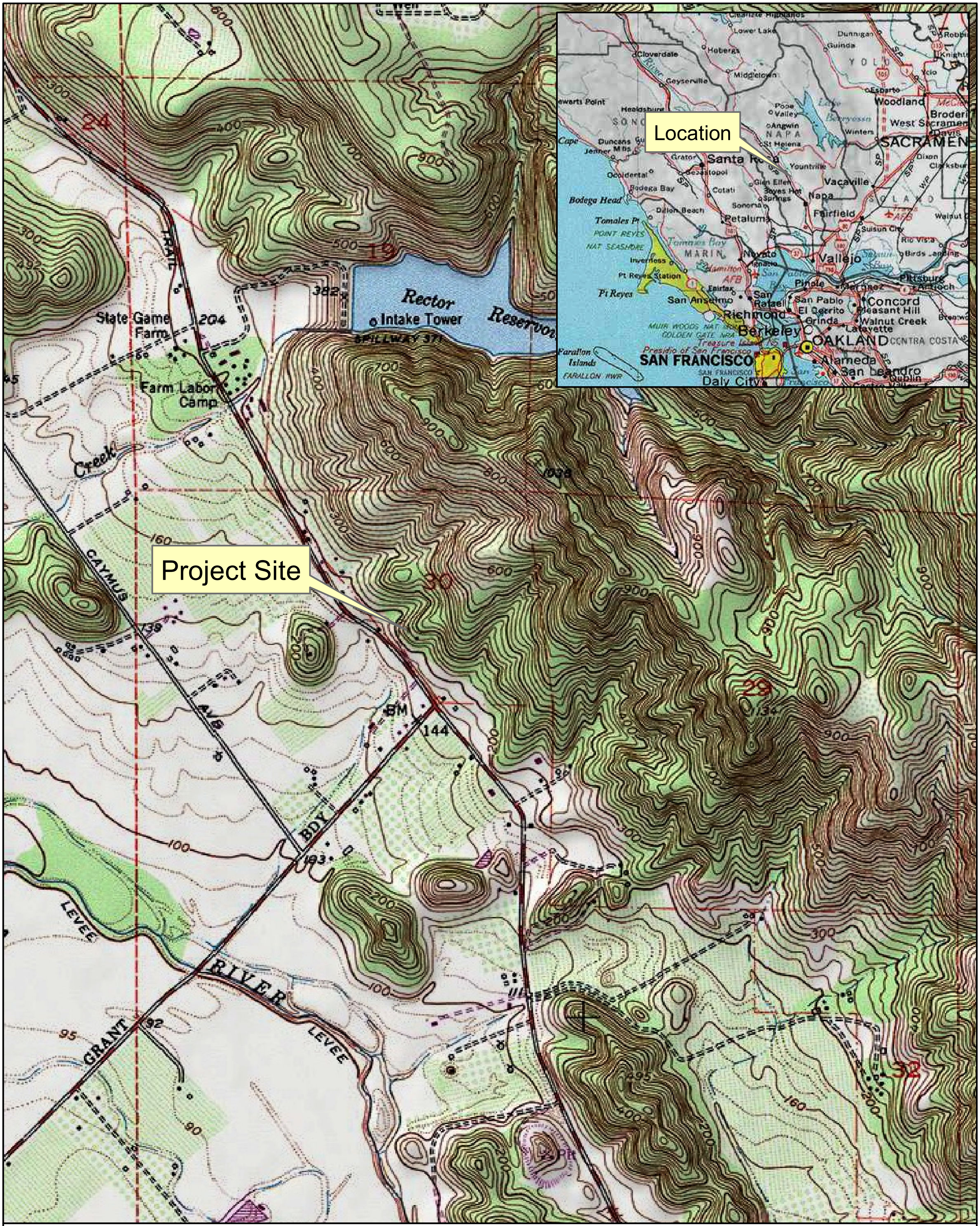


Plate I. Location and Site Map (Yountville Quadrangle)

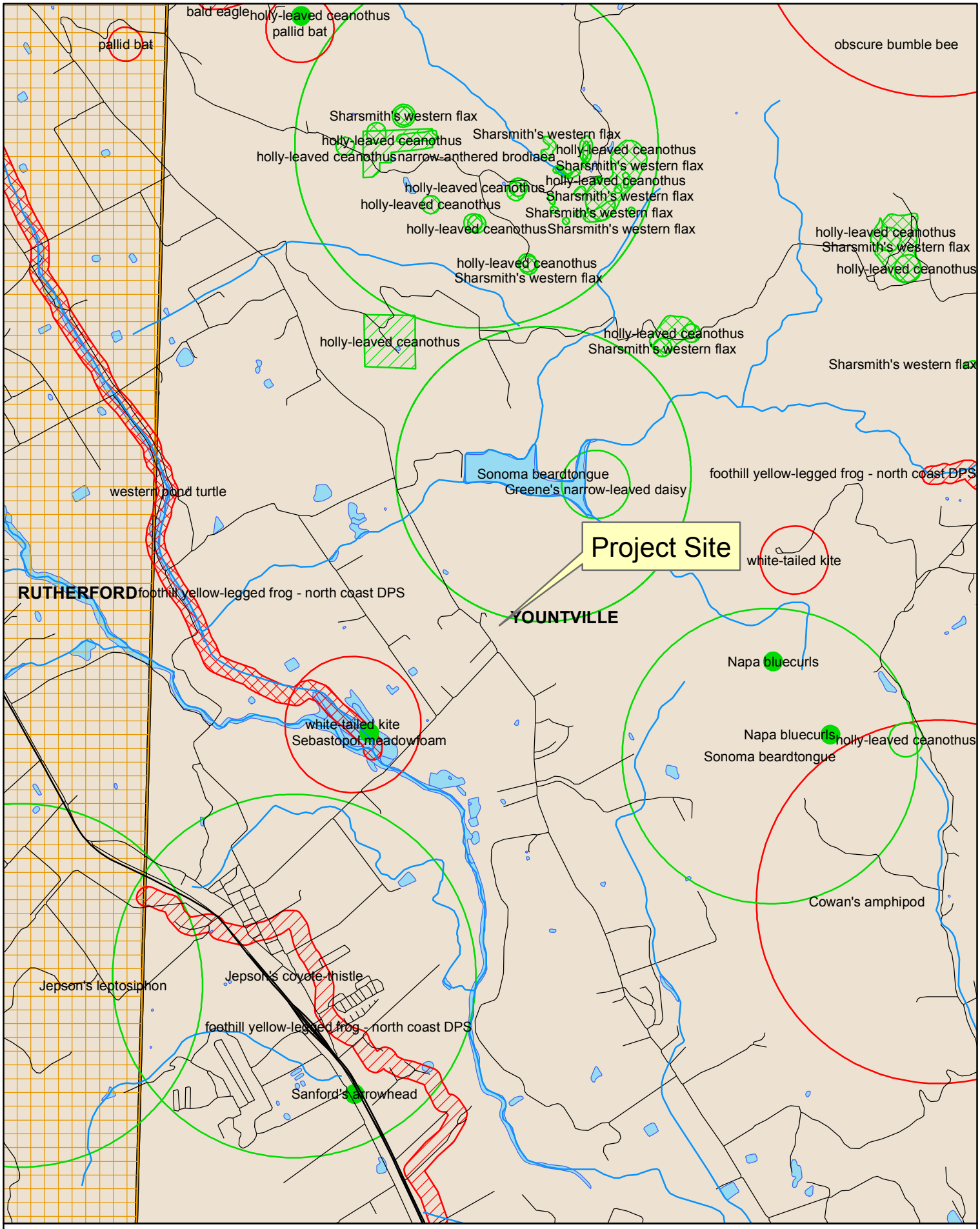


Plate II. CDFW CNDDB Rare Find Data

(Data Date November 2023)

N



Plate III. Aerial Photo 2021 / Location of Native Grasses

N

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

FUNGI		
Basidiomycota- Club Fungi		
POLYPORACEAE		
Schizophyllum commune Fr. Split-gill	Woodlands on Dead Wood	Common
Trametes hirsuta (Wild.) Pers. Hairy Turkey Tail	Woodlands on Dead Wood	Common
MOSSES.		
BRACHYTHECIACEAE		
Scleropodium touretii (Brid.) L Koch. NCN	Woodlands	Common
ORTHOTRICHACEAE		
Orthotrichum lyellii Hook & Tayl. NCN	Woodlands, Upper Canopy	Common
LICHENS		
FOLIOSE		
Flavoparmelia caperata (L.) Hale Common Green Shield	On Oaks	Common
Flavopunctilia flaventor (Stirt.) Hale Speckled Green Shield	On Oaks or Rocks	Common
Parmelia sulcata Taylor Hamered Shield Lichen	On Bark	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

Xanthoria polycarpa (Hoffm.) Rieber Pin-cushion Sunburst Lichen	On Oaks Young Twigs	Common
FRUTICOSE		
Evernia prunastri (L.) Ach. NCN	On Oaks	Common
Ramalina farinacea (L.) Ach. NCN	On Oaks	Common
Ramalina menziesii Taylor non Tuck. Lace Lichen, Old Man's Beard	On Oaks	Common
Usnea intermedia=U. arizonica Western Bushy Beard	On Oaks	Common

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

EUDICOTS

FAGACEAE Oak Family		
Quercus agrifolia Nee Live Oak	Woodlands	Common
Quercus douglasii Hook.&Arn. Blue Oak (Hybridizes with *Q. garryana* and *Q. lobata*)	Woodlands	Common
Quercus lobata Nee. Valley Oak	Valley Grasslands	Common
MYRTACEAE Myrtle family		
**Eucalyptus globulus* Labill Blue Gum	Ruderal Escape	Occasional
OLEACEAE Olive Family		
**Olea europaea* L. Olive	Domestic Ruderal	Occasional
SALICACEAE Willow Family		
**Salix babylonica* L. Weeping Willow	Cultivated	Occasional

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

EUDICOTS

ANACARDIACEAE Sumac Family		
Toxicodendron diversilobum (Torry&Gray) E.Green Poison Oak	Woodlands	Common

MAJOR PLANT GROUP
Family

Genus	Habitat Type	Abundance
Common Name		

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

POLYGONACEAE Buckwheat Family

Polygonum bolanderi W.H. Brewer	Open Dry Rocky, Chaparral	Common
Bolander's Knotweed		

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

EUDICOTS

APIACEAE (Umbelliferae) Carrot Family

**Dacus carota* L.	Ruderal Grasslands	Common
Wild Carrot, Queen Anne's Lace		

ASTERACEAE (Compositae) Sunflower Family

**Calendula arvensis* L.	Ruderal	Occasional
Field Marigold		
**Carduus pycnocephalus* L.subsp.*pycnocephalus*	Woodlands	Common
Italian Thistle		
**Centaurea solstitalis* L.	Grasslands, Ruderal	Common
Yellow Star Thistle		
Circium occidentale (Nutt.) Jeps. var. *occidentale*	Grasslands, Oak Woodland	Common
Cobwebby Thistle		
**Circium vulgare* (Savi) Ten.	Grasslands, Ruderal	Common
Bull Thistle		
**Cichorium intybus* L.	Ruderal	Occasional
Chicory		
**Helminthotheca echioides* (L.) Holub	Ruderal	Common
Ox-tongue (=*Picris echioides)*		
**Hypochaeris glabra* L.	Ruderal	Common
Cat's Ear		
**Hypochaeris radicata* L.	Ruderal	Common
Harry Cat's Ear		
**Lactuca serriola* L.	Ruderal	Occasional
Prickly Lettuce		
**Logifa gallica* (L.) Cros&Germ	Ruderal Grasslands	
Common		
Herba Impa, Daggerleaf Cottonrose (=*Filago gallica)*		
**Pseudognaphalium luteoalbum* (L.) Hill.&Burtt	Ruderal	Common
White Cudweed (=*Gnaphalium luteo-album)*		
**Senecio vulgaris* L.	Ruderal	Occasional
NCN		
**Silybum marianum* (L.) Gaertn.	Ruderal	Common
Milk Thistle		

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

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

**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
BORAGINACEAE Borage or Waterleaf Family		
*Adellnia grandis (*Lehm.) Cohen Hound's Tongue (=*Cyanoglossum grande)*	Woodlands	Common
Amsinckia menziesii (Lehm) Nelson&Macbr. Rancher's Fireweed	Grasslands	Occasional
Nemophila parviflora Hook.&Arn. var. *parviflora* Nemophila	Woodlands	Occasional
Phacelia ciliata Benth. NCN	Grasslands	Occasional
Phacelia distans Benth. Wild-heliotrope	Woodlands	Occasional
Plagiobothrys infectivus I.M.Johnst. Popcorn Flower	Grasslands, Woodlands	Common
BRASSICACEAE Mustard Family		
**Brassica napus* L. Swede Rape, Rapeseed	Grasslands, Ruderal	Common
Cardamine oligosperma Nutt. Bitter-cress	Ruderal	Common
**Raphanus sativus* L. Wild Radish	Ruderal	Common
CARYOPHYLLACEAE Pink Family		
**Cerastium fontanum* Baumg. subsp.*vulgare* Mouse-ear-chickweed	Ruderal	Common
Minuartia californica (A.Gray) Mattf. California Sandwort	Exposed Rock, Grasslands	Occasional
**Stellaria media* (L.) Vill. Chickweed	Ruderal	Common
CHENOPODIACEAE Goosfoot Family		
Atriplex prostrataDC. Spearscale, Fat Hen (=*A. triangularis)*	Wet Places,	Common
**Chenopodium album* L. Lamb's Quarters, Pigweed	Ruderal	Common

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

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

CONVOLVULACEAE Morning-glory Family		
Convolvulus arvensis L. Morning-glory, Bindweed	Grasslands	Common
EUPHORBIACEAE Spurge Family		
Croton setigerus Hook. Turkey Mullein, Dove Weed (=*Eremocarpus setigerus)*	Ruderal	Common
**Euphorbia verigatai* Waldst & Kit. Leafy Spurge (=*Euphorbia esula)*	Ruderal	Common
FABACEAE (Leguminosae) Legume Family		
@Acmispon americanus (Nutt.) Rydb. var. *americanus* Spanish Clover (=*Lotus purshianus)*	Ruderal	Common
Acmispon brachycarpus (Benth.) Sokoloff NCN (=*Lotus humistratus)*	Grasslands, Ruderal	Common
Lupinus bicolor Lindl. Miniature lupine	Grassland	Common
Lupinus nanus Benth. Sky Lupine	Grasslands	Common
**Medicago polymorpha* L. Bur Clover	Ruderal, Grasslands	Common
**Trifolium hirtum* All. Rose Clover	Ruderal	Common
**Trifolium pratense* L. Red Clover	Grassland	Common
**Vicia ludovigiana* Torr.. & A. Gray Slender Vetch, California Vetch	Ruderal	Common
**Vicia sativa* L. subsp. *nigra* Narrow Leaved-vetch	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
**Geranium molle* L. Dove's Foot Geranium	Grasslands	Common
LAMIACEAE (Labiatae) Mint Family		
**Lamium purpureum* L. Red Dead Nettle	Ruderal.	Common

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

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Salvia leucophyllia L. Purple Sage	Landscaping	Occasional
MALVACEAE Mallow Family		
**Malva parviflora* L. Cheeseweed, Mallow	Ruderal	Common
MONTIACEAE Miner's lettuce Family		
Calandrinia ciliata Ruiz& Pav. DC. Red Maids	Grasslands	Common
*Claytonia perfoliata*Willd. ssp. *perfoliata* Miners Lettuce	Woodlands, Riparian	Common
ONAGRACEAE Evening-primrose Family		
Epilobium ciliatum Raf. Subsp. *ciliatum* Northern Willow Herb	Ruderal	Common
PAPAVERACEAE Poppy Family		
Eschscholzia californica Cahm. California Poppy	Grasslands	Common
PLANTAGINACEAE Plantain Family		
**Kickxia spuria* (L.) Dumort. Fluellin	Ruderal	Occasional
**Plantago lanceolata* L. English Plantain	Ruderal	Common
POLEMONIACEAE Phlox Family		
Leptosiphon bicolor Nutt. NCN (= *Linanthus)*	Grassland, Open Areas	Occasional
POLYGONACEAE Buckwheat Family		
**Rumex acetosella* L. Sheep Sorrel	Ruderal	Common
**Rumex crispus* L. Curly Dock	Ruderal	Common
PRIMULACEAE Primrose Family		
**Anagallis arvensis*L. Scarlet Pimpernel	Ruderal	Common
RANUNCULACEAE Buttercup Family		
Ranunculus californicus Benth. Buttercup	Grasslands, Woodlands	Common
RUBIACEAE Madder Family		
Galium aparine L. Goose Grass	Woodlands,Ruderal	Common

MAJOR PLANT GROUP
Family

Genus	Habitat Type	Abundance
Common Name		

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

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

POACEAE Grass Family

**Avena barbata* Link.	Grasslands	Common
Slender Wild Oat		
**Bromus diandrus* Roth	Ruderal, Grasslands	Common
Ripgut Grass		
**Bromus hordeaceus* L.	Grasslands	Common
Soft Chess, Blando Brome (*B.mollis*)		
**Cynosurus echinatus* L.	Ruderal	Common
Hedgehog, Dogtail		
Festuca microstachys Nutt.	Grasslands, Ruderal	Common
NCN (=*Vulpia microstachys)*		
**Festuca myuros* L.	Grasslands	Common
Rattail Fescue,Zorro Annual Fescue (=*Vulpia myuros)*		
**Festuca bromoides* L.	Ruderal,	Common
Six-weeks Fescue *(=Vulpia bromoides)*		
**Festuca perennis* (L.) Columubus & Sm.	Grasslands	Common
Perennial Rye Grass (=*Lolium multiflorum, L. perenne)*		
**Hordeum murinum* Huds. subsp. *leporinum*	Grasslands	Common
Farmers Foxtail		
**Hordeum vulgare* L.	Grasslands	Common
Barley		
**Phalaris aquatica* L.	Grasslands	Common
Harding Grass		
Stipa pulchra Hitchc.	Grasslands, Chap.	Common
Purple Needle Grass (*Nassella pulchra)*		

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

AGAVACEAE Centuray Plant Family

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

THEMIDACEAE Brodiaea Family

Brodiaea elegans Hoover subsp.*elegans*	Grasslands	Common
Harvest Brodiaea		
Dichelostemma capitatum (Benth.) Wood	Grasslands, Open Woodlands	Occasional
Blue Dicks		

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

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

TYPHACEAE Cat-tail Family		
Typha angustifolium L. Narrow-leaved Cattail	Riparian	Common

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.

AVES ORDER Common Name	Genus	Observed
AVES		
Acorn Woodpecker	*Melanerpes fomicivorus*	X
Common Crow	*Corvus brachyrhynchos*	X

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

MAMMALS ORDER Common Name	Genus	Observed
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

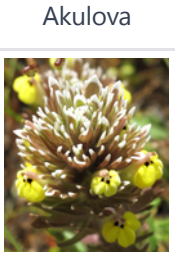
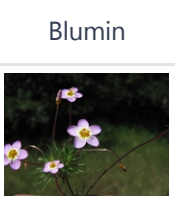
CNPS Rare Plant Inventory

California Native Plant Society

Search Results

10 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3812243**], 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
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	G4T4	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
Eryngium jepsonii	Jepson's coyote-thistle	Apiaceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	Yes	2016-09-13	No Photo Available
Leptosiphon aureus	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Yes	1994-01-01	 © 2007 Len Blumin
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	Mar-May	None	None	G2G3	S2S3	1B.2	Yes	2001-01-01	 © 2012 Aaron Arthur
Limnanthes vinculans	Sebastopol meadowfoam	Limnanthaceae	annual herb	Apr-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 © 2015 Vernon Smith
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	None	None	G3G4	S3S4	3.2	Yes	1974-01-01	 © 2008 Aaron Arthur
Ranunculus lobbii	Lobb's aquatic	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2		1974-01-01	No Photo

	buttercup												Available
Trichostema ruygtii	Napa bluecurls	Lamiaceae	annual herb	Jun-Oct	None	None	G1G2	S1S2	1B.2	Yes	2007-01-03	No Photo Available

Showing 1 to 10 of 10 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 11 August 2023].

Query Summary:
Quad IS (Yountville (3812243) OR St. Helena (3812254) OR Chiles Valley (3812253) OR Lake Berryessa (3812252) OR Rutherford (3812244) OR Capell Valley (3812242) OR Sonoma (3812234) OR Napa (3812233) OR Mt. George (3812232))
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
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, , Upper montane coniferous forest, Valley & foothill grassland
Aquila chrysaetos	golden eagle	None	None	G5	S3	null	Upper montane coniferous forest, 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
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
Brodiaea leptandra	narrow-anthered brodiaea	None	None	G3?	S3?	1B.2	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley & foothill grassland
Buteo swainsoni	Swainson's hawk	None	Threatened	G5	S4	null	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland
Corynorhinus townsendii	Townsend's big-eared bat	None	None	G4	S2	null	Broadleaved upland forest, Upper montane coniferous forest, Valley & foothill grassland
Downingia pusilla	dwarf downingia	None	None	GU	S2	2B.2	Valley & foothill grassland, Vernal pool, Wetland
Elanus leucurus	white-tailed kite	None	None	G5	S3S4	null	Cismontane woodland, Marsh & swamp, Riparian woodland, Valley & foothill grassland, Wetland

Eryngium jepsonii	Jepson's coyote-thistle	None	None	G2	S2	1B.2	Valley & foothill grassland, Vernal pool
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
Lasthenia conjugens	Contra Costa goldfields	Endangered	None	G1	S1	1B.1	Alkali playa, Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland
Layia septentrionalis	Colusa layia	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Leptosiphon jepsonii	Jepson's leptosiphon	None	None	G2G3	S2S3	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Limnanthes vinculans	Sebastopol meadowfoam	Endangered	Endangered	G1	S1	1B.1	Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Navarretia leucocephala ssp. bakeri	Baker's navarretia	None	None	G4T2	S2	1B.1	Cismontane woodland, Lower montane coniferous forest, Meadow & seep,

							Valley & foothill grassland, Vernal pool, Wetland
Sidalcea keckii	Keck's checkerbloom	Endangered	None	G2	S2	1B.1	Cismontane woodland, Ultramafic, Valley & foothill grassland
Taxidea taxus	American badger	None	None	G5	S3	null	Valley & foothill grassland
Trichostema ruygtii	Napa bluecurls	None	None	G1G2	S1S2	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley & foothill grassland, Vernal pool, Wetland
Trifolium amoenum	two-fork clover	Endangered	None	G1	S1	1B.1	Coastal bluff scrub, Ultramafic, Valley & foothill grassland
Trifolium hydrophilum	saline clover	None	None	G2	S2	1B.2	Marsh & swamp, Valley & foothill grassland, Vernal pool, Wetland

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.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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:

Birds

NAME	STATUS
Northern Spotted Owl Strix occidentalis caurina Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened

Reptiles

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

Insects

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

Crustaceans

NAME	STATUS

NOT FOR CONSULTATION

Conservancy Fairy Shrimp Branchinecta conservatio 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	Endangered

Flowering Plants

NAME	STATUS
Contra Costa Goldfields Lasthenia conjugens 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	Endangered
Few-flowered Navarretia Navarretia leucocephala ssp. pauciflora (=N. pauciflora) Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8242	Endangered
Sebastopol Meadowfoam Limnanthes vinculans Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/404	Endangered

Critical habitats

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

There are no critical habitats at this location.

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

Bald & Golden Eagles

NOT FOR CONSULTATION

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 below.

Additional information can be found using the following links:

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

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

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

NOT FOR CONSULTATION

Probability of Presence Summary

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

Probability of Presence (▪)

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

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

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

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

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

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

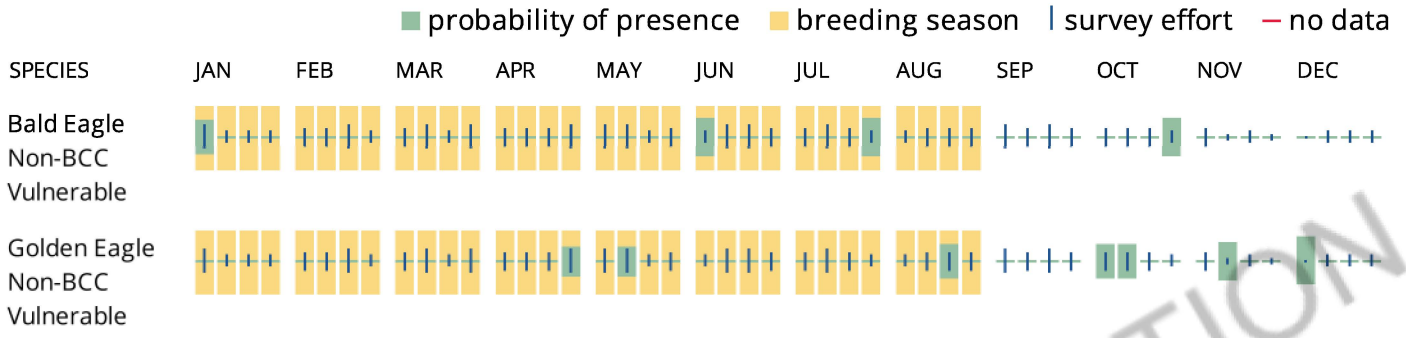
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

NOT FOR CONSULTATION

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

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



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

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

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

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

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

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 below.

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

Additional information can be found using the following links:

- 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, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON

NOT FOR CONSULTATION

Allen's Hummingbird Selasphorus sasin — Breeds Feb 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9637

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31

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

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

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8

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

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

California Gull Larus californicus — Breeds Mar 1 to Jul 31

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

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31

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

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 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

NOT FOR CONSULTATION

Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Nuttall's Woodpecker Picoides nuttallii 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	Breeds Apr 1 to Jul 20
Oak Titmouse Baeolophus inornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Western Grebe aechmophorus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
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

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Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

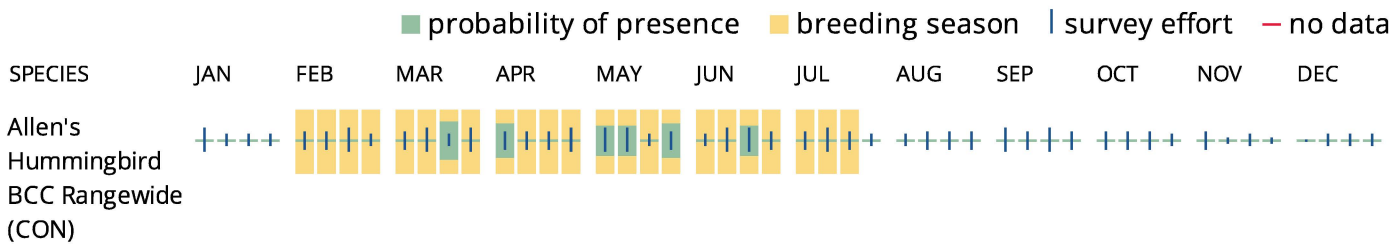
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

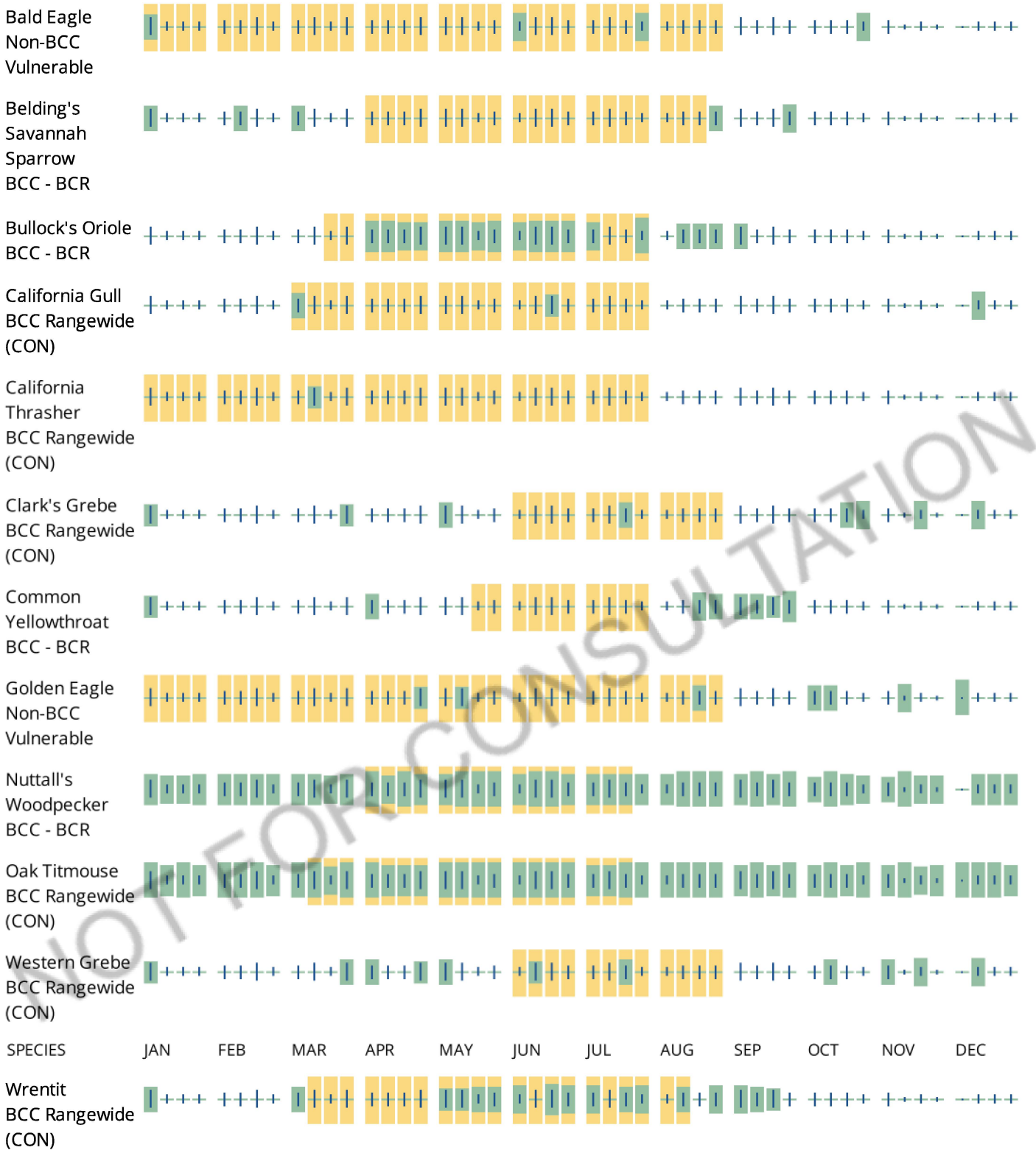
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

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



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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:

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

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3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

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Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

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

This location did not intersect any wetlands mapped by NWI.

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.

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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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