BIOLOGICAL RESOURCES REPORT

Lovall Road Project, Napa and Sonoma Counties, CA

Prepared For:

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Project No. 1929

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SOL ECOLOGY

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LIST OF ACRONYMS AND ABBREVIATIONS

CDFG/CDFW	California Department of Fish and Game/Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
ESA	Federal Endangered Species Act
NRCS	Natural Resources Conservation Service
PRMD	Permit and Resource Management Department
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

1.0 INTRODUCTION

On May 7, 2020 Sol Ecology, Inc. (Sol Ecology) performed a biological resources survey at 5575 Lovall Road in Napa and Sonoma Counties, California (Project Study Area, see Appendix A – Figure 1).

The purpose of the site visit was to gather information necessary to complete a review of potential biological resource impacts from development of the proposed Project, under the guidelines of the California Environmental Quality Act (CEQA) for the Napa County Planning Department. This report describes the results of a biological resources survey of the Project Study Area for the presence of sensitive biological resources protected by local, state, and federal laws and regulations. This report also contains an evaluation of potential impacts to sensitive biological resources that may occur from the proposed project and potential mitigation measures to compensate for those impacts as warranted. This report is based on information available at the time of the survey and on-site conditions that were observed on the date of the site visit.

1.1 Project Setting

The Project Study Area is located in unincorporated Sonoma County, accessed via Lovall Valley Road, off of Old Winery Road, APN 050-361-013 (Appendix A, Figure 1). The parcel is bounded by land intensive agricultural districts and winery with vineyards. The Project Study Area is hilly from approximately 175 to 230 meters (585 to 750 feet above mean sea level) and covered in oak woodland habitat intermixed with chaparral and underlain with grasses. The portion of the site burned in the 2017 Nuns Fire; however regeneration was observed during the May 2020 site visit.

1.2 Project Description

The proposed project includes the construction of a residential driveway and 30-foot radius wall over an existing dirt road.

2.0 METHODS

On May 7, 2020, the Project Study Area was traversed on foot to determine the presence of (1) plant communities both sensitive and non-sensitive, (2) special status plant and wildlife species, and (3) presence of essential habitat elements for any special status plant or wildlife species.

2.1 Literature Review

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

- California Native Plant Society's (CNPS's) Inventory of Rare and Endangered Plants of California search for U.S. Geological Survey (USGS) 7.5-minute Sonoma quadrangle and eight adjacent quadrangles (CNPS 2020a);
- California Natural Diversity Database (CNDDB) records search for USGS 7.5-minute Sonoma quadrangle and eight adjacent quadrangles (California Department of Fish and Wildlife [CDFW] 2020);
- U.S. Fish and Wildlife Service (USFWS) list of threatened and endangered species for the Project Study Area (USFWS 2020a);
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990);
- CDFG publication California Bird Species of Special Concern (Shuford and Gardali 2008);
- CDFW and University of California Press publication California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016);
- USFWS National Wetlands Inventory, Wetlands Mapper (USFWS 2020b); and
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey (USDA 2019).

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

2.2 Field Survey

Sol Ecology biologists conducted a biological resource survey on May 7, 2020. Biologists walked through accessible portions of the Project Study Area identifying all plant and wildlife species encountered and mapping vegetation communities. Dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting habitat) were noted for wildlife species.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of Sol Ecology biologists with experience working with the species and habitats. If a special status species was observed during the site visit, its presence is recorded and discussed. For some threatened and endangered

species, a site survey at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies.

Protocol-level surveys for special status plants with potential to occur were also performed on May 7, 2020 in accordance with CDFW protocol (CDFW 2018). The entire Project Area (including areas outside the proposed footprint) were traversed on foot. Plant species were recorded and identified to a taxonomic level sufficient to determine rarity using the second edition of the *Jepson Manual* (Baldwin et al. 2012). All plant species observed in the study area are included in Appendix D – Observed Species Table. Vegetation communities were identified using the online version of *A Manual of California Vegetation* (CNPS 2020b).

Field Surveyor Qualifications:

Andrew Georgeades, Senior Ecologist for Sol Ecology received his Bachelor of Science degree in Natural Resource Management and Conservation at San Francisco State University in 2005. Prior to working at Sol Ecology, Andrew worked as a natural resource specialist for the Golden Gate National Recreation Area where he was responsible for monitoring native and rare plant populations and planning and supervising revegetation projects within the park. Andrew also previously worked for the California Native Plant Society as a vegetation project lead on *A Manual of California Vegetation* (CNPS 2020b) publication. As a lead, he performed plant surveys, identified vegetation habitat types, landforms, environmental conditions, and plant species following the project protocol. Andrew currently is responsible for all floristic and focused plant surveys at Sol Ecology and maintains a CDFW scientific collecting permit.

Amy May, Associate Biologist for Sol Ecology received a Bachelor of Science degree in Biological Sciences at Virginia Tech in 2006 and a dual Master of Public Affairs and Master of Science in Environmental Science at Indiana University-Bloomington in 2010. She has worked as a biologist in the public and private industry for over 9 years and specializes in special status plant and wildlife surveys, floristic inventories, and vegetation community mapping with experience in the Bay Area, Mojave Desert, Shasta Cascade Region, Great Basin, and Snake River Plain.

3.0 RESULTS

3.1 Existing Conditions and General Wildlife Use

Soils at the site are mapped as Forward-Kidd complex, 11 to 60 percent slopes, MLRA 15; Forward-Kidd complex, 11 to 60 percent slopes, MLRA 15; and Forward silt loam, 3 to 26 percent slopes, MLRA 15. The Forward soil map unit is well drained typically occurring on hillslopes. The parent material is rhyolitic residuum weathered from volcanic rock. The Forward soil map unit is not listed as hydric. The Kidd soil map unit is also well drained typically occurring on hillslopes. The parent material is residuum weathered from rhyolite. The Kidd soil map unit is not listed as hydric (USDA 2019).

Vegetation communities present in the Project Study Area were classified using the online version of *A Manual of California Vegetation* (CNPS 2020b). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Vegetation communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations. Vegetation communities present on the site are described below. No sensitive communities are present on or immediately adjacent to the Project Study Area. Photographs are provided in Appendix C.

Hardwood Forest

The north facing portion of the Project Study Area is dominated by hardwood forest. Dominant tree species include California black oak (*Quercus kelloggii*) and coast live oak (*Quercus agrifolia*). Other tree species observed in the hardwood forest include California bay (*Umbellularia californica*) and Pacific madrone (*Arbutus menziesii*). The herbaceous layer is dense, consisting of California annual grassland. Many of the trees on the site are small in stature. This community type provides habitat for numerous cavity-nesting songbirds, as well as a number of common small mammals and reptiles.

California Annual Grassland

This vegetation community is characterized by dense cover of non-native annual grasses. Annual grass species observed in the understory of the hardwood forest include annual blue grass (*Poa annua*), bristly dogtail grass (*Cynosurus echinatus*), cheat grass (*Bromus tectorum*), nit grass (*Gastridium phleoides*), rattail sixweeks grass (*Festuca myuros*), ripgut grass (*Bromus diandrus*), rye grass (*Festuca perennis*), soft chess (*Bromus hordeaceus*), wall barley (Hordeum murinum), and wild oat (*Avena fatua*). Common forb species include California poppy (*Eschscholzia californica*), English plantain (*Plantago lanceolata*), redstem filaree (*Erodium cicutarium*), smooth cat's-ear (*Hypochaeris glabra*), and tall sock-destroyer (*Torilis arvensis*).

Annual grass species observed in the portion of the Project Study Area at the top of the road is similar to the annual grass species observed in the hardwood forest understory. However, this portion of the Project Study Area burned during the Nuns Fire in October 2017. Prior to the 2017

Nuns Fire, this area consisted of hardwood forest, California annual grassland, and a shrub layer with chaparral species. Currently, there are small patches of chamise (*Adenostoma fasciculatum*) and Eastwood manzanita (*Arctostaphylos glandulosa* subsp. *glandulosa*). The composition of forb species includes common woolly sunflower (*Eriophyllum lanatum*), Diogene's lantern (*Calochortus amabilis*), gold-wire (*Hypericum concinnum*), mule's ears (*Wyethia angustifolia*), and rayless arnica (*Arnica discoidea*).

Developed Areas

There is an existing dirt fire road within the Project Study Area. The road is lined with hardwood forest and California annual grassland.

3.2 Special Status Plants

Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants with California Rare Plant Ranks of 1 and 2 are also considered special status plant species and must be considered under CEQA.

Based upon a review of the resources and databases given in Section 2.1, fifty-seven (57) special status plant species have been documented within a 9-quad search of the Project Study Area, of which 17 have been documented within a five-mile radius. Eight (8) special status plant species are documented in the region and can be found in woodland and/or grassland habitat (Table 1). Other special status plant species documented in the area are unlikely or have no potential to occur on the Project Study Area for one or more of the following reasons:

- Hydrologic conditions (e.g. marsh habitat, seeps, pond habitat) necessary to support the special status plants do not exist on site;
- Edaphic (soil) conditions (e.g. sandy soils) necessary to support the special status plants do not exist on site;
- Topographic conditions (e.g. slopes) necessary to support the special status plants do not exist on site;
- Unique pH conditions (e.g. serpentine) necessary to support the special status plant species are not present on the Project Study Area; and
- Associated vegetation communities (e.g. chaparral, coastal prairie, vernal pools, estuarine marshes) necessary to support the special status plants do not exist on site.

A protocol-level survey for the 8 special status plants with potential to occur (Table 1) was performed on May 7, 2020. The survey was conducted during the appropriate season and was floristic in nature. Plant species in the hardwood forest and California annual grassland communities were evident and easily identifiable. All plant species were recorded and identified to a taxonomic level sufficient to determine rarity using the second edition of the *Jepson Manual*

(Baldwin et al. 2012) and listed in Appendix D – Observed Species Table. No special status plant species were observed within the Project Study Area.

The month of May was selected as an appropriate time to conduct a special status plant survey as most spring flowering herbaceous species are in flower and/or fruit at that time. Twenty (20) perennial herbs and twenty-one (21) annual herbs were observed during the survey. Native perennial herbs observed include blue dicks (*Dipterostemon capitatus*), California milkwort (*Polygala californica*), California poppy (*Eschscholzia californica*), checker lily (*Fritillaria affinis*), Ithuriel's spear (*Triteleia laxa*), soap plant (*Chlorogalum pomeridianum*), and wild pea (*Lathyrus vestitus*). Native annual herbs observed include goose grass (*Galium aparine*), hill lotus (*Acmispon parviflorus*), miner's lettuce (*Claytonia perfoliata*), pineapple weed (*Matricaria discoidea*), slender woolly-marbles (*Psilocarphus tenellus*), and tomcat clover (*Trifolium willdenovii*). None of the 8 special status species was observed.

Weather conditions, including both precipitation and temperature, can influence the likelihood that herbaceous annuals will germinate in a given year. In a year with rainfall above average, it is probable that more annuals will be in bloom or fruiting due to increased availability of the water required for germination and growth. In a year where temperature increases too quickly or too slowly in the spring, the heat regime can affect germination rates.

Spring 2020 was a relatively dry season in the Bay Area. Based on data from the National Oceanic and Atmospheric Administration (NOAA) California Nevada River Forecast Center (Napa State Hospital), the Project Study Area vicinity received 46% of the normal precipitation for the water year to date. The water year starts on October 1 and the most current data are based on the months of October 2019 through May 2020 (NOAA 2020). Temperatures were mild enough to trigger germination. However, the lack of observations of native herbaceous annuals suggests that emergence of annuals was not obvious.

Napa false indigo (*Amorpha californica* var. *napensis*), Rincon Ridge ceanothus (*Ceanothus confusus*), and holly-leaved ceanothus (*Ceanothus purpureus*) are shrubs that are identifiable outside their blooming periods. A reference population of Napa false indigo was visited on June 5, 2020 at the Saddleback Mountain Preserve in eastern Sonoma County and the shrub was still easily identifiable. Waxyleaf ceanothus (*Ceanothus foliosus* var. *foliosus*) was observed within the Project Study Area in flower. Waxyleaf ceanothus typically blooms April-June, a similar blooming period to Rincon Ridge and holly-leaved ceanothus. Given the vitality of the reference site population for Napa false indigo and the presence of waxyleaf ceanothus within the Project Study Area, it is improbable that the survey yielded a false negative for these species. Rather, it is unlikely that Napa false indigo and Rincon Ridge and holly-leaved ceanothus occur within the Project Study Area despite occurrences found within 0.5 mile to the south along the same ridgeline.

Table 1. Special Status Plants with the Potential to Occur in the Project Study Area.

Species	Status[1]	Habitat	Blooming Period
Allium peninsulare var. *franciscanum* Franciscan onion	1B.2	Clay, volcanic, often serpentinite; cismontane woodland and valley and foothill grassland. 52-305m	(Apr) May-June
Amorpha californica var. *napensis* Napa false indigo	1B.2	Broadleafed upland forest (openings), chaparral, and cismontane woodland. 120-2,000 m	April-July
Brodiaea leptandra narrow-flowered California brodiaea	1B.2	Volcanic; broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland. 110-915m	May-July
Calycadenia micrantha small-flowered calycadenia	1B.2	Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas; chaparral, meadows and seeps (volcanic), and valley and foothill grassland. 5-1,500m	June-Sept
Ceanothus confusus Rincon Ridge ceanothus	1B.2	Volcanic or serpentinite; closed-cone coniferous forest, chaparral, and cismontane woodland. 75-1,065m	Feb-June
Ceanothus purpureus holly-leaved ceanothus	1B.2	Volcanic, rocky; chaparral, and cismontane woodland. 120-640 m	Feb-June
Hemizonia congesta subsp. *congesta* congested-headed hayfield tarplant	1B.2	Sometimes roadsides; valley and foothill grassland. 20-560m	April-Nov
Leptosiphon jepsonii Jepson's leptosiphon	1B.2	Usually volcanic; chaparral, cismontane woodland, valley and foothill grassland. 100-500m.	March-May

[1] California Rare Plant Rank

1B – Plants rare, threatened, or endangered in California and elsewhere.

0.1 – Seriously threatened in California

0.2 – Moderately threatened in California

0.3 – Not very threatened in California

3.3 Special Status Wildlife

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

Based upon a review of the resources and databases given in Section 2.1, seventy-five (75) special status wildlife species have been documented within a 9-quad search of the Project Study Area, of which 18 have been documented within five miles of the Project Study Area (Appendix A, Figure 3). Based on the presence of biological communities described above, the Project Study Area has the potential to support seven (7) of these species (Table 2).

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

- Suitable vegetation communities on or adjacent to the Project Study Area were not observed for many species found in the background review (e.g. open grassland, vernal pools, riparian, freshwater marsh or coniferous forest);
- No suitable stream or aquatic habitat on or immediately adjacent to the property (e.g. for steelhead, Delta smelt, California freshwater shrimp, bank swallow, California giant salamander, or foothill yellow-legged frog);
- No suitable tree roosting habitat (e.g. for golden eagle, Swainson's hawk, or other raptor species); note that trees on the site are of smaller stature and not suitable for larger raptor species.

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

Species	Status[1]	Habitat	Potential for Occurrence
Mammals			
Antrozous pallidus Pallid bat	SSC, WBWG High	Found in deserts, grasslands, shrublands, woodlands, and forests. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various human structures such as bridges, barns, and buildings (including occupied buildings).	**Moderate:** May roost in rocky outcrops or in tree cavities on-site. Numerous occurrences in the vicinity of the site.
Taxidea taxus American badger	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**Low-Moderate:** Suitable habitat is present. No appropriately sized burrows observed during site visit. This species may forage in the area opportunistically. The nearest occurrence is approximately 4 miles to the east in Napa Valley.
Birds			
Picoides nuttallii Nuttall's woodpecker	BCC	Typical habitat is dominated by oaks; also occurs in riparian woodland. Nests in tree cavities.	**Moderate:** Suitable habitat is present on the project study area along the existing dirt road.
Baeolophus inornatus oak titmouse	BCC	Occurs year-round in woodland and savannah habitats where oaks are present, as well as riparian areas. Nests in tree cavities.	**Moderate:** Suitable habitat is present on the project study area along the existing dirt road.
Pipilo maculatus clementae spotted towhee	BCC	Lives in chaparral, oak woodlands, and scrub habitat. Often in areas with thick vegetation; nests on the ground or in shrubs.	**Moderate:** Suitable habitat is present on the project study area along the existing dirt road.
Chamaea fasciata wrentit	BCC	Lives in chaparral, oak woodlands, and scrub habitat. Often in areas with thick vegetation; nests on the ground.	**Moderate:** Suitable habitat is present on the project study area along the existing dirt road.

Reptiles			
Actinemys marmorata Western pond turtle	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**Low-Moderate:** Suitable aquatic habitat is not present in the project study area but is found both west and east of the site. This species may nest in open areas of the project study area away from roads. This species may also disperse between sites via the project study area.

[1] Special Status Designations
FE/FT/SE/ST – Federal or State Endangered or Threatened Status
SSC – CDFW Species of Special Concern
BCC- USFWS Birds of Conservation Concern
WBWG High – Western Bat Working Group Priority Species (High)

4.0 POTENTIAL IMPACTS AND MITIGATION

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

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

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

C. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

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

4.1 Potentially Significant Impacts and Mitigation Measures

Sensitive Biological Communities

No sensitive biological communities are present in the Project Study Area. There is an intermittent stream located southwest of the Project Study Area more than 500 feet from proposed activities. As such, no potentially significant impacts are anticipated. Best management practices are recommended to be included within the proposed project description to ensure no accidental discharge to waterways occur.

Special Status Plant Species

Eight special status plant species have the potential to occur within the Project Study Area (Table 1). There are no known occurrences of special status plant species within the Project Study Area and no special status plants were observed during the May 7, 2020 protocol-level special status plant survey. The area of impact within the Project Study Area is relatively small compared with suitable habitat elsewhere on the property. The area of impact consists of an already existing dirt road and walls that will be built within the previously burned habitat of the Project Study Area. Impacts to special status plant species is less than significant given that no special status plants were observed during the 2020 survey and the minimal area of impact. No further mitigation is recommended at this time.

Special Status Wildlife Species

Seven special status wildlife species have the potential to occur within the Project Study Area (Table 2), including four birds of conservation concern (oak titmouse, Nuttall's woodpecker, spotted towhee and wrentit), along with pallid bat, American badger, and western pond turtle. No special status amphibians or invertebrates are likely to occur. The site provides dispersal habitat for two of these species: American badger and western pond turtle. Given the size and current use of the area compared with surrounding habitats, the proposed project is not likely to substantially interfere with the movement of these or any other native species.

Unavoidable impacts to breeding/nesting/maternity sites are considered significant under CEQA. The following avoidance and mitigation measures are recommended to ensure impacts to breeding/nesting/maternity sites are less than significant; these measures will also prevent substantial adverse effects to habitat and/or any special status species that may be present during grading activities.

MM-BIO-1 Nesting Birds: To the extent practical, all construction activities should be performed outside the nesting season between September 1 and January 31. If work must be performed during the nesting season, a pre-construction nesting bird survey should be performed in all areas within 250 feet of proposed activities. If nests are found, an appropriately sized no-disturbance buffer should be placed around the nest at the direction of the qualified biologist conducting the survey. Buffers should remain in place until all young have fledged, or the biologist has confirmed that the nest has been naturally predated.

MM-BIO-2 Maternity Roosting Bats (Pallid and other common bats): Prior to activities in areas where bat roosts may be present, a qualified bat biologist shall perform a pre-construction roost survey (dusk emergence survey) no more than 10 days prior to the start of activities with potential to disturb bats or their habitat during the maternity season between April and September to avoid potential impacts to active maternity sites and/or pregnant females. The survey shall encompass any potential roost site within 100 feet of project activities. If a maternity roost is located whether solitary or colonial, that roost will remain undisturbed until September 1 or until a qualified biologist has determined that the roost is no longer active. A no-disturbance buffer may be established around the roost at the direction of the biologist.

MM-BIO-3 (Roosting Bats): Tree removal may have potential to impact non-maternity roosting pallid bat as well as other common bat species that may be present. Should tree removal be required, felled trees should be left overnight prior to removal from the site or on-site chipping to allow any non-maternity bats to exit the roost.

MM-BIO-4 (Western Pond Turtle): A pre-construction survey is recommended within 48 hours of ground disturbing activities if within 100 meters of any aquatic or riparian habitat for the potential presence of pond turtle nest sites. Alternatively, wildlife exclusion fencing may be placed between the work area and nearby aquatic habitats within 100 meters to prevent pond turtle from nesting within areas proposed for ground disturbance. Fencing shall be placed prior to May 1 for work proposed to occur in the summer/early fall period. Fencing should be a minimum of 36 inches high, with a minimum of 4 inches trenched into the ground.

MM-BIO-5 (American Badger): Prior to any grading activities, a pre-construction survey shall be performed by a qualified biologist to map the location of any potential dens within 300 feet of proposed construction activities. If potential natal dens are observed, a minimum **300-foot no disturbance setback**/buffer will be established around the potential den during the breeding/pupping/rearing season (December 1 to May 31). During the non-breeding season or for non-natal dens (June 1 to November 31), a minimum **100-foot no disturbance setback**/buffer will be established. If a potential den cannot be avoided, a relocation plan shall be prepared by the biologist in consultation with the CDFW prior to work in that area.

6.0 REFERENCES

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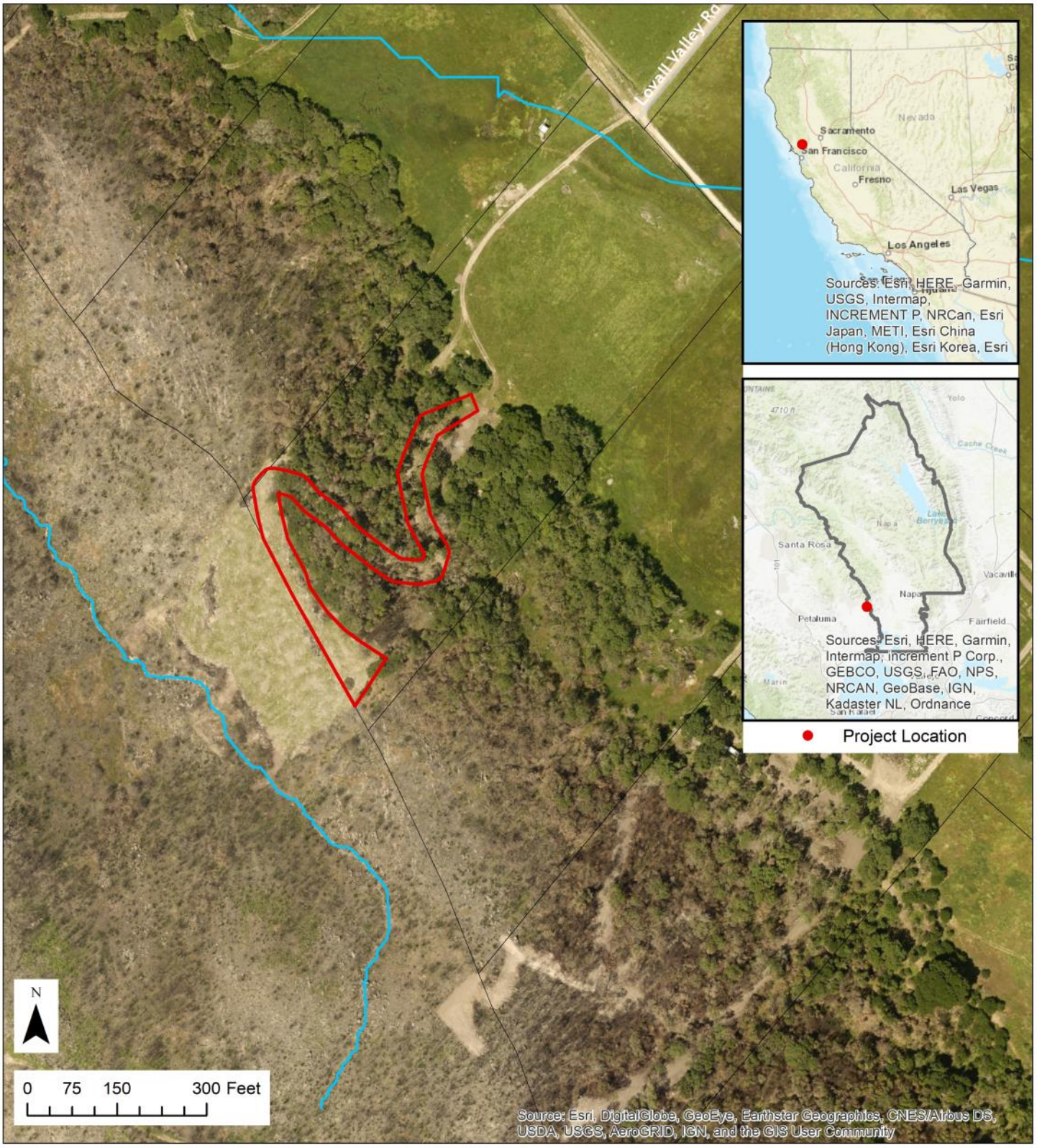
APPENDIX A

PROJECT FIGURES: SITE LOCATION MAP AND CNDDB DATABASE RESULTS

Figure 1: Location of Project Area
5575 Lovall Valley Rd. Sonoma, CA



Date: 7-7-2020
Data: Sol Ecology Inc., Napa Co., USGS, Sonoma Co. Vegetation Mapping & LIDAR Prog.

Datum: NAD 83
Base: ESRI
GIS: AJG1929

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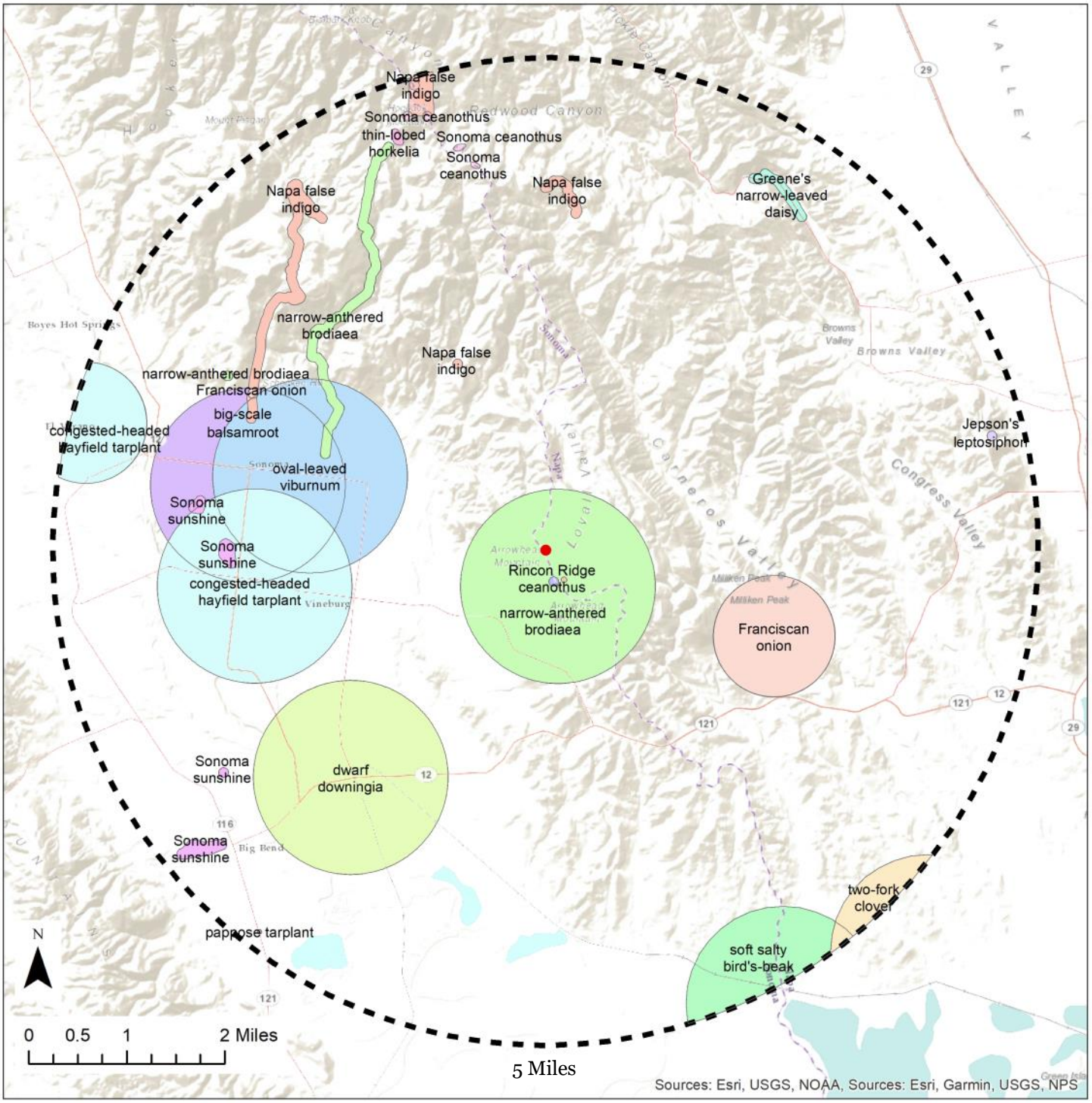
Figure 2: Special Status Plant Species within 5 Miles of the Project Site
5575 Lovall Valley Rd. Sonoma, CA



- Project Location
- 5-Mile Buffer
- Cobb Mountain lupine (1)
- Franciscan onion (2)
- Greene's narrow-leaved daisy (1)
- Jepson's leptosiphon (1)
- Napa false indigo (5)
- Rincon Ridge ceanothus (1)
- Sonoma ceanothus (2)
- Sonoma sunshine (4)
- big-scale balsamroot (1)
- congested-headed hayfield tarplant (2)
- dwarf downingia (1)
- narrow-anthered brodiaea (3)
- oval-leaved viburnum (1)
- pappose tarplant (1)
- soft salty bird's-beak (1)
- thin-lobed horkelia (1)
- two-fork clover (1)

Date: 7-7-2020
Data: Sol Ecology Inc., Napa Co., CDFW
Datum: NAD 83
Base: ESRI
GIS: AJG 1929

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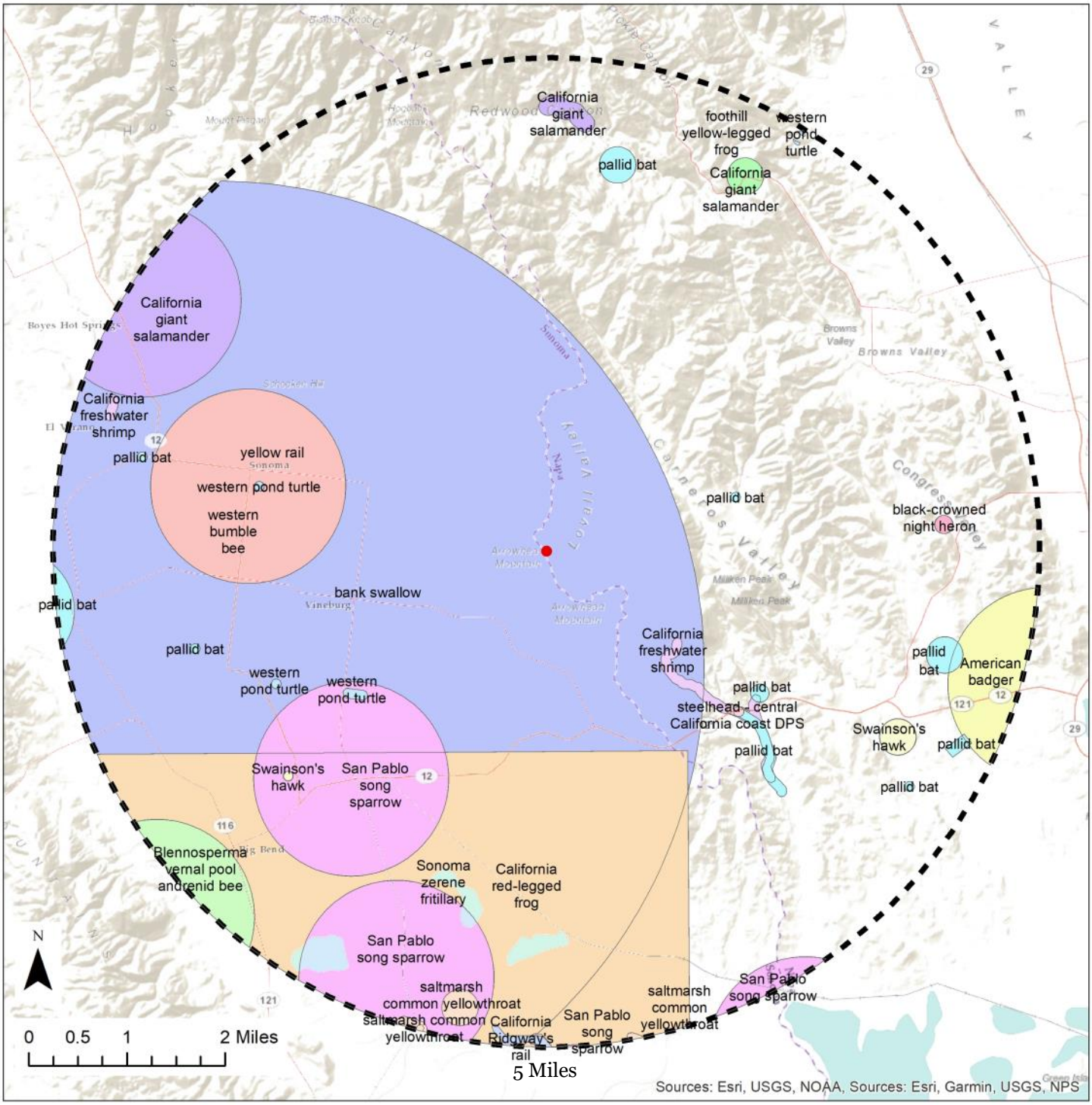
Figure 3: Special Status Animal Species within 5 Miles of the Project Site
5575 Lovall Valley Rd. Sonoma, CA



- Project Location
- 5-Mile Buffer
- American badger (1)
- Blennosperma vernal pool andrenid bee (1)
- California Ridgway's rail (2)
- California freshwater shrimp (2)
- California giant salamander (3)
- California red-legged frog (1)
- San Pablo song sparrow (4)
- Sonoma zerene fritillary (1)
- Swainson's hawk (2)
- bank swallow (1)
- black-crowned night heron (1)
- foothill yellow-legged frog (1)
- pallid bat (10)
- saltmarsh common yellowthroat (3)
- steelhead - central California coast DPS (1)
- western bumble bee (1)
- western pond turtle (4)
- yellow rail (1)

Date: 7-7-2020
Data: Sol Ecology Inc., Napa Co., CDFW
Datum: NAD 83
Base: ESRI
GIS: AJG1929

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APPENDIX B

CNDDB, CNPS, AND USFWS IPAC RESULTS FOR THE PROJECT STUDY AREA

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

54 matches found. *Click on scientific name for details*

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B], Found in Quads 3812245, 3812244, 3812243, 3812235, 3812234, 3812233, 3812225 3812224 and 3812223;

Modify Search Criteria Export to Excel Modify Columns Modify Sort Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium peninsulare var. franciscanum	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	1B.2	S2	G5T2
Alopecurus aequalis var. sonomensis	Sonoma alopecurus	Poaceae	perennial herb	May-Jul	1B.1	S1	G5T1
Amorpha californica var. napensis	Napa false indigo	Fabaceae	perennial deciduous shrub	Apr-Jul	1B.2	S2	G4T2
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S3	G3
Arctostaphylos bakeri ssp. bakeri	Baker's manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	1B.1	S1	G2T1
Arctostaphylos stanfordiana ssp. decumbens	Rincon Ridge manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr(May)	1B.1	S1	G3T1
Astragalus claranus	Clara Hunt's milk-vetch	Fabaceae	annual herb	Mar-May	1B.1	S1	G1
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S1	G2T1
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Blennosperma bakeri	Sonoma sunshine	Asteraceae	annual herb	Mar-May	1B.1	S1	G1
Brodiaea leptandra	narrow-anthered brodiaea	Themidaceae	perennial bulbiferous herb	May-Jul	1B.2	S3?	G3?
Calycadenia micrantha	small-flowered calycadenia	Asteraceae	annual herb	Jun-Sep	1B.2	S2	G2
Carex lyngbyei	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	2B.2	S3	G5
Castilleja ambigua var. meadii	Mead's owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	Apr-May	1B.1	S1	G4T1
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Jun	1B.1	S1	G1
Ceanothus divergens	Calistoga ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr	1B.2	S2	G2

Ceanothus purpureus	holly-leaved ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Jun	1B.2	S2	G2
Ceanothus sonomensis	Sonoma ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr	1B.2	S2	G2
Centromadia parryi ssp. parryi	pappose tarplant	Asteraceae	annual herb	May-Nov	1B.2	S2	G3T2
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	1B.2	S2	G4? T2
Chloropyron molle ssp. molle	soft bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Nov	1B.2	S1	G2T1
Chorizanthe valida	Sonoma spineflower	Polygonaceae	annual herb	Jun-Aug	1B.1	S1	G1
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
Erigeron greenei	Greene's narrow-leaved daisy	Asteraceae	perennial herb	May-Sep	1B.2	S3	G3
Eriogonum luteolum var. caninum	Tiburon buckwheat	Polygonaceae	annual herb	May-Sep	1B.2	S2	G5T2
Eryngium jepsonii	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	1B.2	S2?	G2?
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2	G2
Hemizonia congesta ssp. congesta	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	1B.2	S2	G5T2
Hesperolinon bicarpellatum	two-carpellate western flax	Linaceae	annual herb	May-Jul	1B.2	S2	G2
Hesperolinon congestum	Marin western flax	Linaceae	annual herb	Apr-Jul	1B.1	S1	G1
Hesperolinon sharsmithiae	Sharsmith's western flax	Linaceae	annual herb	May-Jul	1B.2	S2	G2Q
Horkelia tenuiloba	thin-lobed horkelia	Rosaceae	perennial herb	May-Jul(Aug)	1B.2	S2	G2
Juglans hindsii	Northern California black walnut	Juglandaceae	perennial deciduous tree	Apr-May	1B.1	S1	G1
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	1B.1	S1	G1
Lathyrus jepsonii var. jepsonii	Delta tule pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	1B.2	S2	G5T2
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	Apr-May	1B.2	S2	G2
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	Mar-May	1B.2	S2S3	G2G3
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	1B.1	S2	G2
Limnanthes vinculans	Sebastopol meadowfoam	Limnanthaceae	annual herb	Apr-May	1B.1	S1	G1
Lupinus sericatus	Cobb Mountain lupine	Fabaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G4T2
Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	Polemoniaceae	annual herb	May-Jun	1B.1	S1	G4T1
	many-flowered	Polemoniaceae	annual herb	May-Jun	1B.2	S1	G4T1

Navarretia leucocephala ssp. plieantha	navarretia						
Penstemon newberryi var. sonomensis	Sonoma beardtongue	Plantaginaceae	perennial herb	Apr-Aug	1B.3	S2	G4T2
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Sidalcea oregana ssp. valida	Kenwood Marsh checkerbloom	Malvaceae	perennial rhizomatous herb	Jun-Sep	1B.1	S1	G5T1
Streptanthus hesperidis	green jewelflower	Brassicaceae	annual herb	May-Jul	1B.2	S2	G2
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	1B.2	S2	G2
Trichostema ruygtii	Napa bluecurls	Lamiaceae	annual herb	Jun-Oct	1B.2	S1S2	G1G2
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	1B.1	S1	G1
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3	S3?	G4G5

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 06 May 2020].

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Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Kenwood (3812245) OR Rutherford (3812244) OR Yountville (3812243) OR Glen Ellen (3812235) OR Sonoma (3812234) OR Napa (3812233) OR Petaluma River (3812225) OR Sears Point (3812224) OR Cuttings Wharf (3812223))
 AND Taxonomic Group IS (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Allium peninsulare var. franciscanum Franciscan onion	G5T2 S2	None None	Rare Plant Rank - 1B.2	280 600	25 S:4	0	0	1	0	0	3	2	2	4	0	0
Alopecurus aequalis var. sonomensis Sonoma alopecurus	G5T1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	1,180 1,180	21 S:1	1	0	0	0	0	0	0	1	1	0	0
Amorpha californica var. napensis Napa false indigo	G4T2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	330 1,670	76 S:15	2	2	2	1	0	8	7	8	15	0	0
Amsinckia lunaris bent-flowered fiddleneck	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley SB_UCSC-UC Santa Cruz	195 195	93 S:1	0	0	0	0	0	1	0	1	1	0	0
Arctostaphylos stanfordiana ssp. decumbens Rincon Ridge manzanita	G3T1 S1	None None	Rare Plant Rank - 1B.1	300 670	12 S:2	0	0	1	0	0	1	1	1	2	0	0
Astragalus claranus Clara Hunt's milk-vetch	G1 S1	Endangered Threatened	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	330 330	6 S:1	0	1	0	0	0	0	0	1	1	0	0
Astragalus tener var. tener alkali milk-vetch	G2T1 S1	None None	Rare Plant Rank - 1B.2	7 30	65 S:3	0	0	1	0	2	0	3	0	1	0	2
Balsamorhiza macrolepis big-scale balsamroot	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive		51 S:1	0	0	0	0	0	1	1	0	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Blennosperma bakeri Sonoma sunshine	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	30 330	24 S:6	0	3	1	0	2	0	3	3	4	0	2
Brodiaea leptandra narrow-anthered brodiaea	G3? S3?	None None	Rare Plant Rank - 1B.2	450 1,932	39 S:13	0	4	0	0	0	9	6	7	13	0	0
Carex lyngbyei Lyngbye's sedge	G5 S3	None None	Rare Plant Rank - 2B.2	4 4	29 S:1	0	0	1	0	0	0	0	1	1	0	0
Castilleja ambigua var. meadii Mead's owls-clover	G4T1 S1	None None	Rare Plant Rank - 1B.1	1,600 1,600	3 S:2	0	0	0	0	0	2	0	2	2	0	0
Ceanothus confusus Rincon Ridge ceanothus	G1 S1	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	960 2,700	33 S:7	1	1	0	0	0	5	2	5	7	0	0
Ceanothus divergens Calistoga ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	350 1,900	26 S:14	2	2	1	2	0	7	5	9	14	0	0
Ceanothus purpureus holly-leaved ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2 SB_SBBG-Santa Barbara Botanic Garden	475 2,350	43 S:14	0	4	1	0	1	8	8	6	13	1	0
Ceanothus sonomensis Sonoma ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2 SB_SBBG-Santa Barbara Botanic Garden	475 2,600	30 S:27	3	1	0	1	0	22	20	7	27	0	0
Centromadia parryi ssp. parryi pappose tarplant	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	15 15	39 S:1	0	0	0	1	0	0	0	1	1	0	0
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	G4?T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	4 4	76 S:1	1	0	0	0	0	0	1	0	1	0	0
Chloropyron molle ssp. molle soft salty bird's-beak	G2T1 S1	Endangered Rare	Rare Plant Rank - 1B.2	0 5	27 S:6	0	1	0	0	4	1	5	1	2	4	0
Chorizanthe valida Sonoma spineflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	30 30	6 S:1	0	0	0	0	1	0	1	0	0	1	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Coastal Brackish Marsh Coastal Brackish Marsh	G2 S2.1	None None			30 S:3	0	0	0	0	0	3	3	0	3	0	0
Downingia pusilla dwarf downingia	GU S2	None None	Rare Plant Rank - 2B.2	10 1,600	132 S:8	1	0	0	1	1	5	5	3	7	0	1
Erigeron greenei Greene's narrow-leaved daisy	G3 S3	None None	Rare Plant Rank - 1B.2	300 600	20 S:6	0	0	0	0	0	6	5	1	6	0	0
Eriogonum luteolum var. caninum Tiburon buckwheat	G5T2 S2	None None	Rare Plant Rank - 1B.2		26 S:1	0	0	0	0	0	1	0	1	1	0	0
Eryngium jepsonii Jepson's coyote-thistle	G2 S2	None None	Rare Plant Rank - 1B.2		19 S:1	0	0	0	0	0	1	1	0	1	0	0
Extriplex joaquinana San Joaquin spearscale	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	5 5	127 S:3	0	0	2	0	0	1	3	0	3	0	0
Fritillaria liliacea fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	200 215	82 S:5	0	1	0	0	0	4	3	2	5	0	0
Hemizonia congesta ssp. congesta congested-headed hayfield tarplant	G5T2 S2	None None	Rare Plant Rank - 1B.2 SB_UCBG-UC Botanical Garden at Berkeley	20 1,705	52 S:5	0	0	0	0	0	5	4	1	5	0	0
Hesperolinon congestum Marin western flax	G1 S1	Threatened Threatened	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	200 560	27 S:3	1	1	0	0	0	1	0	3	3	0	0
Hesperolinon sharsmithiae Sharsmith's western flax	G2Q S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	800 2,200	32 S:7	0	2	3	0	0	2	2	5	7	0	0
Horkelia tenuiloba thin-lobed horkelia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	1,230 1,230	27 S:1	0	0	0	0	0	1	1	0	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Lasthenia conjugens Contra Costa goldfields	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	60 280	36 S:4	0	1	1	0	2	0	2	2	2	1	1
Lathyrus jepsonii var. jepsonii Delta tule pea	G5T2 S2	None None	Rare Plant Rank - 1B.2 SB_BerrySB-Berry Seed Bank SB_RSABG-Rancho Santa Ana Botanic Garden	0 7	133 S:12	0	2	0	1	1	8	9	3	11	1	0
Layia septentrionalis Colusa layia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley		57 S:2	0	0	0	0	0	2	1	1	2	0	0
Legenere limosa legenere	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley	40 1,400	83 S:2	0	0	1	0	1	0	2	0	1	0	1
Leptosiphon jepsonii Jepson's leptosiphon	G2G3 S2S3	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	350 1,900	51 S:12	0	1	1	0	0	10	3	9	12	0	0
Lilaeopsis masonii Mason's lilaeopsis	G2 S2	None Rare	Rare Plant Rank - 1B.1	2 10	197 S:2	1	1	0	0	0	0	1	1	2	0	0
Lilium pardalinum ssp. pitkinense Pitkin Marsh lily	G5T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_BerrySB-Berry Seed Bank SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture		4 S:1	0	0	0	0	1	0	1	0	0	1	0
Limnanthes vinculans Sebastopol meadowfoam	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	90 90	46 S:1	0	1	0	0	0	0	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Lupinus sericatus Cobb Mountain lupine	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	900 1,860	46 S:4	0	0	1	1	0	2	4	0	4	0	0
Navarretia leucocephala ssp. bakeri Baker's navarretia	G4T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	640 1,320	64 S:5	0	2	0	0	1	2	3	2	4	1	0
Navarretia leucocephala ssp. pauciflora few-flowered navarretia	G4T1 S1	Endangered Threatened	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	1,600 1,600	10 S:1	0	1	0	0	0	0	0	1	1	0	0
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	G3 S3.2	None None			53 S:4	0	0	0	0	0	4	4	0	4	0	0
Northern Vernal Pool Northern Vernal Pool	G2 S2.1	None None		20 1,400	20 S:5	0	0	0	0	0	5	5	0	5	0	0
Penstemon newberryi var. sonomensis Sonoma beardtongue	G4T2 S2	None None	Rare Plant Rank - 1B.3	600 2,600	11 S:2	0	1	0	0	0	1	2	0	2	0	0
Plagiobothrys mollis var. vestitus Petaluma popcornflower	G4?TX SX	None None	Rare Plant Rank - 1A	20 20	1 S:1	0	0	0	0	1	0	1	0	0	1	0
Polygonum marinense Marin knotweed	G2Q S2	None None	Rare Plant Rank - 3.1	5 5	32 S:4	1	1	0	0	0	2	2	2	4	0	0
Sagittaria sanfordii Sanford's arrowhead	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	80 80	126 S:1	0	0	1	0	0	0	0	1	1	0	0
Sidalcea calycosa ssp. rhizomata Point Reyes checkerbloom	G5T2 S2	None None	Rare Plant Rank - 1B.2	30 30	34 S:1	0	0	0	0	0	1	1	0	1	0	0
Sidalcea oregana ssp. valida Kenwood Marsh checkerbloom	G5T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	400 400	2 S:1	0	0	1	0	0	0	0	1	1	0	0
Streptanthus anomalus Mount Burdell jewelflower	G1 S1	None None	Rare Plant Rank - 1B.1	235 235	2 S:1	0	0	0	0	0	1	0	1	1	0	0
Streptanthus hesperidis green jewelflower	G2 S2	None None	Rare Plant Rank - 1B.2		19 S:2	0	0	0	0	0	2	2	0	2	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Symphyotrichum lentum Suisun Marsh aster	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	0 5	175 S:3	0	0	0	1	0	2	3	0	3	0	0
Trichostema ruygtii Napa bluecurls	G1G2 S1S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	95 1,600	19 S:9	0	0	1	0	0	8	1	8	9	0	0
Trifolium amoenum two-fork clover	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley SB_USDA-US Dept of Agriculture	20 100	26 S:4	0	0	0	0	1	3	4	0	3	1	0
Trifolium hydrophilum saline clover	G2 S2	None None	Rare Plant Rank - 1B.2	5 160	56 S:4	0	0	1	0	1	2	2	2	3	0	1
Trifolium polyodon Pacific Grove clover	G1 S1	None Rare	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_USDA-US Dept of Agriculture	20 20	21 S:1	0	0	0	0	0	1	1	0	1	0	0
Valley Needlegrass Grassland Valley Needlegrass Grassland	G3 S3.1	None None		1,200 1,200	45 S:1	0	0	0	0	0	1	1	0	1	0	0
Viburnum ellipticum oval-leaved viburnum	G4G5 S3?	None None	Rare Plant Rank - 2B.3		39 S:2	0	0	0	0	0	2	2	0	2	0	0

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California Natural Diversity Database

Query Criteria: Quad IS (Kenwood (3812245) OR Rutherford (3812244) OR Yountville (3812243) OR Glen Ellen (3812235) OR Sonoma (3812234) OR Napa (3812233) OR Petaluma River (3812225) OR Sears Point (3812224) OR Cuttings Wharf (3812223))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Adela oplerella Opler's longhorn moth	G2 S2	None None		400 400	14 S:1	0	0	0	0	0	1	1	0	1	0	0
Agelaius tricolor tricolored blackbird	G2G3 S1S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	6 75	955 S:6	1	3	0	0	0	2	5	1	6	0	0
Ambystoma californiense California tiger salamander	G2G3 S2S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable		1231 S:1	0	0	0	0	1	0	1	0	0	1	0
Ammodramus savannarum grasshopper sparrow	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,150 2,150	27 S:1	1	0	0	0	0	0	0	1	1	0	0
Andrena blennospermatis Blennosperma vernal pool andrenid bee	G2 S2	None None		110 110	15 S:1	0	0	0	0	0	1	1	0	1	0	0
Antrozous pallidus pallid bat	G5 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	15 730	420 S:20	1	6	2	1	3	7	14	6	17	1	2

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California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Aquila chrysaetos golden eagle	G5 S3	None None	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	55 1,800	321 S:2	1	0	0	0	1	0	0	2	1	1	0
Ardea alba great egret	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	350 350	43 S:1	0	0	1	0	0	0	0	1	1	0	0
Ardea herodias great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	350 350	155 S:1	0	0	1	0	0	0	0	1	1	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	-1 2,400	1989 S:13	2	5	2	1	2	1	6	7	11	1	1
Bombus caliginosus obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	800 2,500	181 S:2	0	0	0	0	0	2	2	0	2	0	0
Bombus crotchii Crotch bumble bee	G3G4 S1S2	None Candidate Endangered		300 300	276 S:1	0	0	0	0	0	1	1	0	1	0	0
Bombus occidentalis western bumble bee	G2G3 S1	None Candidate Endangered	USFS_S-Sensitive XERCES_IM-Imperiled	25 750	279 S:6	0	0	0	0	0	6	6	0	6	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	15 15	770 S:1	0	1	0	0	0	0	0	1	1	0	0
Buteo regalis ferruginous hawk	G4 S3S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	30 2,278	107 S:2	0	1	1	0	0	0	1	1	2	0	0
Buteo swainsoni Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	7 140	2518 S:10	0	2	3	0	1	4	1	9	9	1	0

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California Natural Diversity Database

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Caecidotea tomalensis Tomales isopod	G2 S2S3	None None		1,640 2,120	6 S:2	1	0	0	0	0	1	2	0	2	0	0
Calasellus californicus An isopod	G2 S2	None None		25 25	3 S:1	0	0	0	0	0	1	1	0	1	0	0
Calicina diminua Marin blind harvestman	G1 S1	None None		150 150	1 S:1	0	0	0	0	0	1	1	0	1	0	0
Charadrius alexandrinus nivosus western snowy plover	G3T3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	5 10	138 S:2	2	0	0	0	0	0	1	1	2	0	0
Circus hudsonius northern harrier	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	5 5	53 S:2	0	2	0	0	0	0	0	2	2	0	0
Coccyzus americanus occidentalis western yellow-billed cuckoo	G5T2T3 S1	Threatened Endangered	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	600 600	164 S:1	0	0	0	0	0	1	1	0	1	0	0
Corynorhinus townsendii Townsend's big-eared bat	G3G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	30 120	635 S:2	1	0	0	0	0	1	1	1	2	0	0
Coturnicops noveboracensis yellow rail	G4 S1S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	60 60	45 S:1	0	0	0	0	0	1	1	0	1	0	0

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California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Cypseloides niger black swift	G4 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_YWL-Yellow Watch List USFWS_BCC-Birds of Conservation Concern	2,500 2,500	46 S:1	0	0	0	0	0	1	1	0	1	0	0
Danaus plexippus pop. 1 monarch - California overwintering population	G4T2T3 S2S3	None None	USFS_S-Sensitive		383 S:1	0	0	0	0	0	1	1	0	1	0	0
Dicamptodon ensatus California giant salamander	G3 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	350 2,185	234 S:13	4	2	0	0	0	7	4	9	13	0	0
Elanus leucurus white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	10 2,160	180 S:5	3	1	0	0	1	0	2	3	4	1	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	5 2,240	1385 S:22	3	8	7	0	0	4	4	18	22	0	0
Eremophila alpestris actia California horned lark	G5T4Q S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	2,275 2,275	94 S:1	1	0	0	0	0	0	0	1	1	0	0
Erethizon dorsatum North American porcupine	G5 S3	None None	IUCN_LC-Least Concern	277 277	523 S:1	0	0	0	0	0	1	0	1	1	0	0
Geothlypis trichas sinuosa saltmarsh common yellowthroat	G5T3 S3	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	0 12	112 S:35	5	2	3	0	0	25	28	7	35	0	0
Haliaeetus leucocephalus bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	315 315	327 S:1	1	0	0	0	0	0	1	0	1	0	0

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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Hydrochara rickseckeri Ricksecker's water scavenger beetle	G2? S2?	None None		1,500 1,500	13 S:1	0	0	0	0	0	1	1	0	1	0	0
Hydroporus leechi Leech's skyline diving beetle	G1? S1?	None None		1,180 1,180	13 S:1	0	0	0	0	0	1	1	0	1	0	0
Hydroprogne caspia Caspian tern	G5 S4	None None	IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	6 6	3 S:1	1	0	0	0	0	0	1	0	1	0	0
Hypomesus transpacificus Delta smelt	G1 S1	Threatened Endangered	AFS_TH-Threatened IUCN_EN-Endangered	0 0	27 S:3	0	3	0	0	0	0	2	1	3	0	0
Laterallus jamaicensis coturniculus California black rail	G3G4T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	0 7	303 S:17	1	9	1	0	0	6	2	15	17	0	0
Melospiza melodia samuelis San Pablo song sparrow	G5T2 S2	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	0 10	41 S:19	10	2	0	0	0	7	10	9	19	0	0
Myotis thysanodes fringed myotis	G4 S3	None None	BLM_S-Sensitive IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	210 210	86 S:1	0	0	0	0	0	1	1	0	1	0	0
Myotis volans long-legged myotis	G5 S3	None None	IUCN_LC-Least Concern WBWG_H-High Priority	210 210	117 S:1	0	0	0	0	1	0	1	0	0	1	0
Myotis yumanensis Yuma myotis	G5 S4	None None	BLM_S-Sensitive IUCN_LC-Least Concern WBWG_LM-Low-Medium Priority	210 210	265 S:1	0	0	0	0	0	1	1	0	1	0	0
Nycticorax nycticorax black-crowned night heron	G5 S4	None None	IUCN_LC-Least Concern	157 157	37 S:1	0	0	0	0	0	1	0	1	1	0	0

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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	G5T2T3Q S2S3	Threatened None	AFS_TH-Threatened	0 600	44 S:6	1	2	1	2	0	0	1	5	6	0	0
Phalacrocorax auritus double-crested cormorant	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	350 350	39 S:1	0	0	1	0	0	0	0	1	1	0	0
Pogonichthys macrolepidotus Sacramento splittail	GNR S3	None None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	0 2	15 S:4	2	2	0	0	0	0	2	2	4	0	0
Rallus obsoletus obsoletus California Ridgway's rail	G5T1 S1	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List	1 18	99 S:21	2	6	4	0	0	9	12	9	21	0	0
Rana boylii foothill yellow-legged frog	G3 S3	None Candidate Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	21 2,100	2468 S:29	9	7	2	1	2	8	9	20	27	2	0
Rana draytonii California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	10 2,230	1543 S:21	3	10	7	0	0	1	4	17	21	0	0
Reithrodontomys raviventris salt-marsh harvest mouse	G1G2 S1S2	Endangered Endangered	CDFW_FP-Fully Protected IUCN_EN-Endangered	1 10	144 S:19	0	9	0	0	0	10	11	8	19	0	0
Riparia riparia bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	25 25	298 S:1	0	0	0	0	0	1	1	0	1	0	0
Sorex ornatus sinuosus Suisun shrew	G5T1T2Q S1S2	None None	CDFW_SSC-Species of Special Concern	2 100	15 S:5	0	1	0	0	0	4	4	1	5	0	0
Speyeria zerene sonomensis Sonoma zerene fritillary	G5T1 S1	None None		200 200	1 S:1	0	0	0	0	0	1	0	1	1	0	0
Spirinchus thaleichthys longfin smelt	G5 S1	Candidate Threatened		0 0	46 S:2	0	0	0	0	0	2	0	2	2	0	0
Syncaris pacifica California freshwater shrimp	G2 S2	Endangered Endangered	IUCN_EN-Endangered	100 300	20 S:6	3	2	1	0	0	0	1	5	6	0	0
Talanites ubicki Ubick's gnaphosid spider	G1 S1	None None		150 150	1 S:1	0	0	0	0	0	1	1	0	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Taricha rivularis red-bellied newt	G4 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	20 800	136 S:3	0	0	0	0	0	3	3	0	3	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	20 2,200	592 S:4	1	0	0	0	0	3	3	1	4	0	0
Tryonia imitator mimic tryonia (=California brackishwater snail)	G2 S2	None None	IUCN_DD-Data Deficient	6 6	39 S:1	0	0	0	0	0	1	1	0	1	0	0

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

IPaC resource list

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

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

Location

Napa and Sonoma counties, California

Local office

Sacramento Fish And Wildlife Office

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

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

Endangered species

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

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

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

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

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

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

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

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

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

Mammals

NAME	STATUS

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

Birds

NAME	STATUS
Northern Spotted Owl Strix occidentalis caurina There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened

Reptiles

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

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
San Bruno Elfin Butterfly Callophrys mossii bayensis There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3394	Endangered

Crustaceans

NAME	STATUS

California Freshwater Shrimp Syncaris pacifica — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7903

Flowering Plants

NAME	STATUS
Sonoma Sunshine Blennosperma bakeri No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1260	Endangered

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

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

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

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

Additional information can be found using the following links:

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

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list

will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

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

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Burrowing Owl Athene cunicularia 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/9737	Breeds Mar 15 to Aug 31
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31

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

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

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

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

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

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

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

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

Survey Effort (|)

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

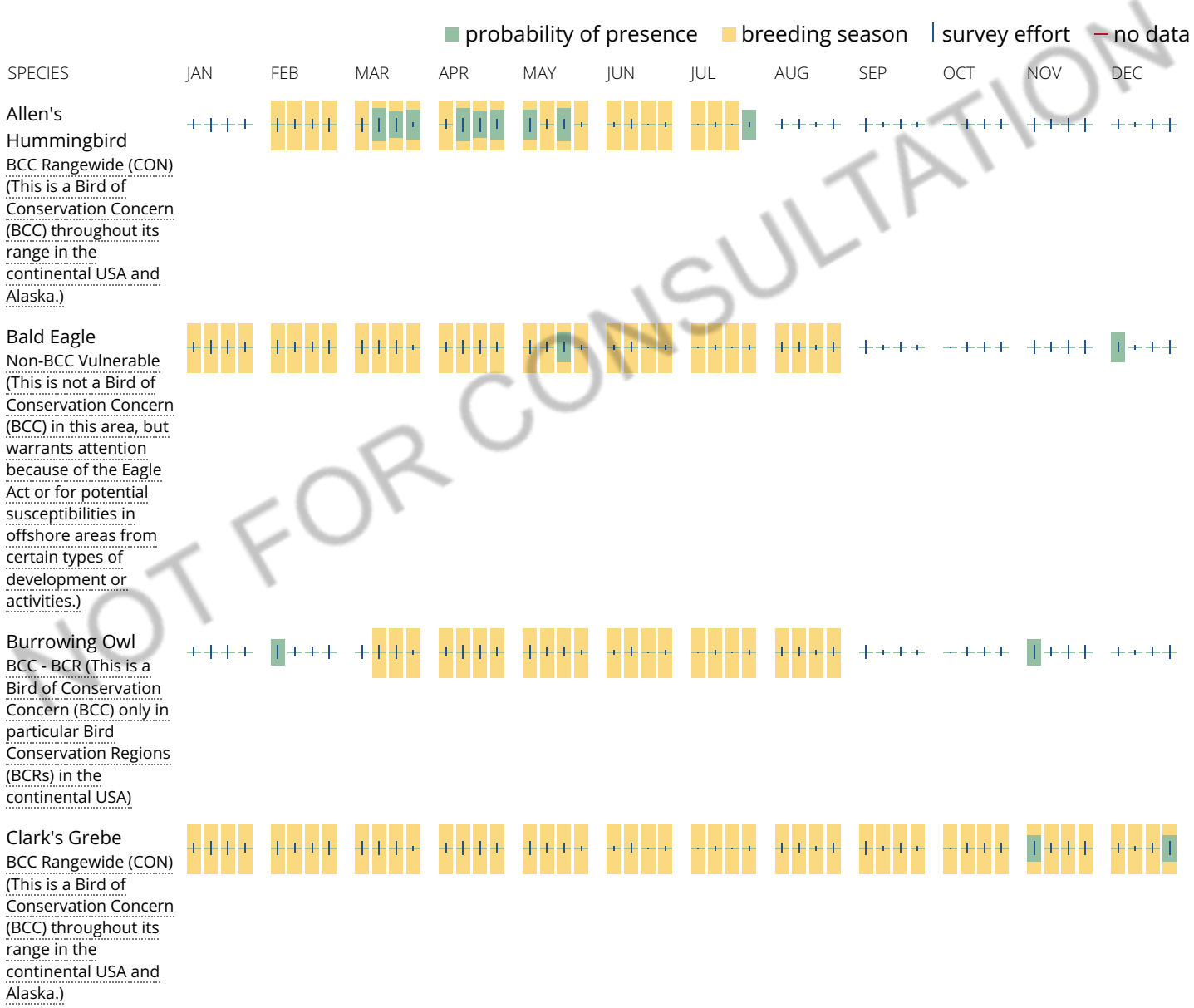
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

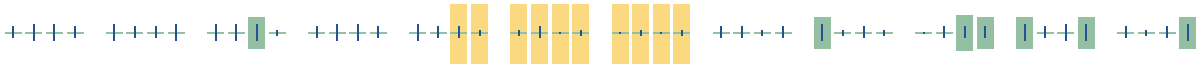
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

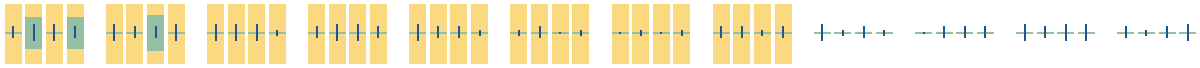
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



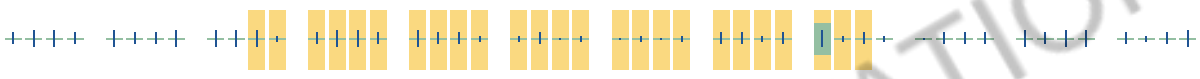
Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



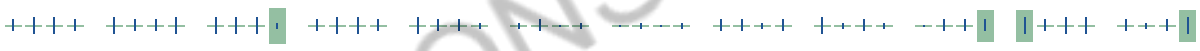
Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



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



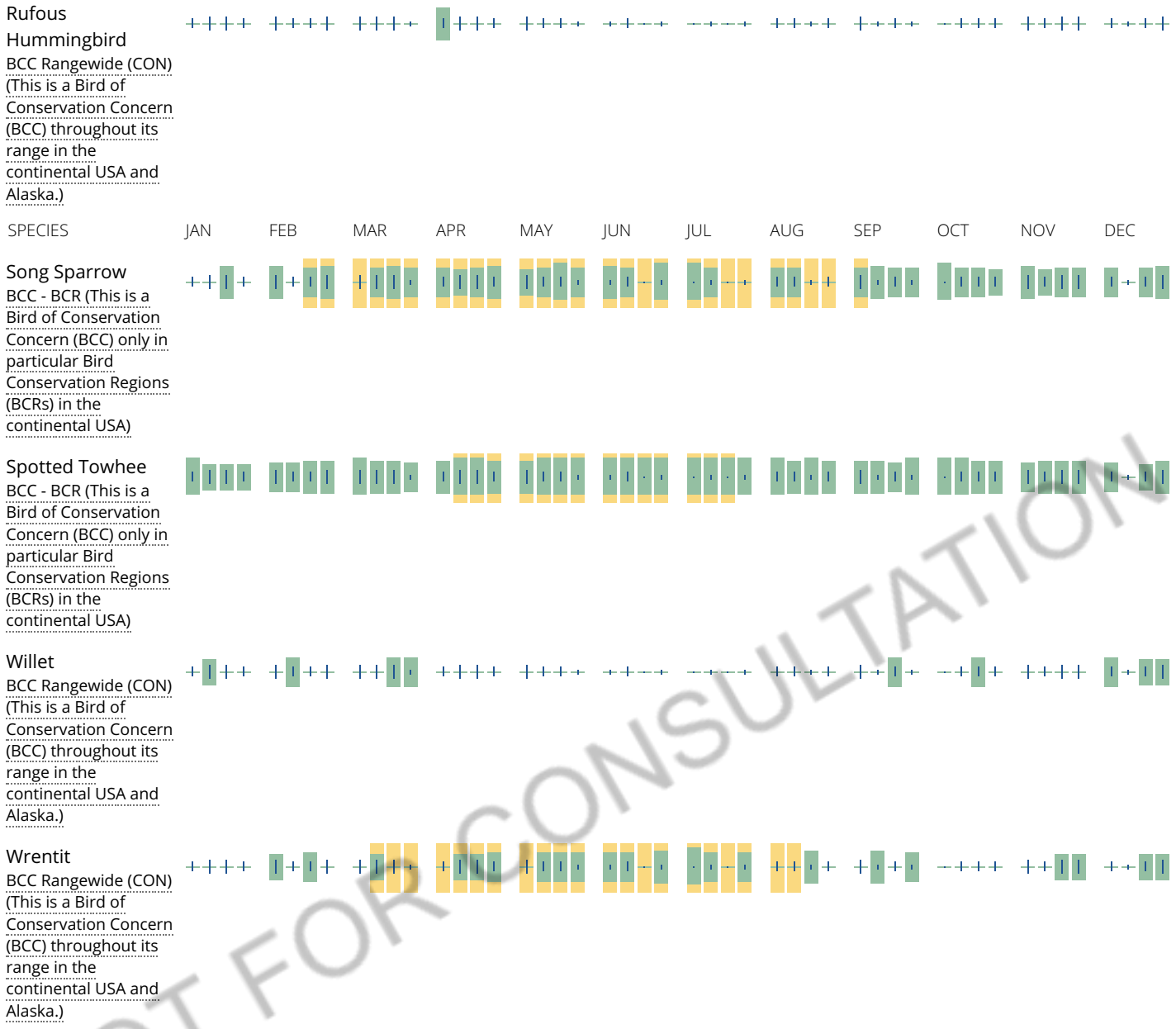
Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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

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

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



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 and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

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

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

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

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

This location overlaps the following wetlands:

RIVERINE

R4SBC

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

Data limitations

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

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

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

Data exclusions

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

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX C

SITE PHOTOGRAPHS

Photo 1. Existing dirt road facing south on May 7, 2020.

Photo 2. Existing dirt road facing northeast on May 7, 2020.

Photo 3. California annual grassland at the top of the dirt road facing northwest on May 7, 2020.

Photo 4. California annual grassland facing southeast toward intermittent stream on May 7, 2020.

APPENDIX D

OBSERVED SPECIES TABLE

Scientific Name	Common Name
Acmispon parviflorus	hill lotus
Adenostoma fasciculatum	chamise
Aira caryophyllea	silver hair grass
Aquilegia formosa	columbine
Arbutus menziesii	Pacific madrone
Arctostaphylos glandulosa subsp. *glandulosa*	Eastwood manzanita
Arnica discoidea	rayless arnica
Avena fatua	wild oat
Baccharis pilularis	coyote brush
Brassica nigra	black mustard
Bromus diandrus	ripgut grass
Bromus hordeaceus	soft chess
Bromus tectorum	cheat grass
Calochortus amabilis	Diogene's lantern
Carduus pycnocephalus subsp. *pycnocephalus*	Italian thistle
Ceanothus foliosus var. *foliosus*	waxyleaf ceanothus
Chlorogalum pomeridianum	soap plant
Claytonia perfoliata	miner's lettuce
Cynosurus echinatus	bristly dogtail grass
Dactylis glomerata	orchard grass
Diplacus aurantiacus	orange bush monkeyflower
Dipterostemon capitatus	blue dicks
Eriophyllum lanatum	common woolly sunflower
Erodium cicutarium	redstem filaree
Eschscholzia californica	California poppy
Festuca myuros	rattail sixweeks grass
Festuca perennis	rye grass
Fritillaria affinis	checker lily

Scientific Name	Common Name
Galium aparine	goose grass
Gastridium phleoides	nit grass
Genista monspessulana	French broom
Geranium purpureum	cranesbill
Heteromeles arbutifolia	toyon
Holcus lanatus	common velvet grass
Hordeum murinum	wall barley
Hypericum concinnum	gold-wire
Hypochaeris glabra	smooth cat's-ear
Lathyrus vestitus	wild pea
Logfia gallica	daggerleaf cottonrose
Lysimachia latifolia	Pacific starflower
Matricaria discoidea	pineapple weed
Melica californica	California melic
Parentucellia viscosa	yellow glandweed
Plantago lanceolata	English plantain
Poa annua	annual blue grass
Polygala californica	California milkwort
Pseudognaphalium sp.	cudweed
Psilocarphus tenellus	slender woolly-marbles
Quercus agrifolia	coast live oak
Quercus kelloggii	California black oak
Raphanus sativus	radish
Rupertia physodes	Rupert's scurf-pea
Sanicula crassicaulis	Pacific sanicle
Sonchus oleraceus	common sow thistle
Spergularia rubra	red sand-spurrey
Stachys stricta	hedge-nettle
Symphoricarpos albus var. *laevigata*	snowberry
Torilis arvensis	tall sock-destroyer
Toxicodendron diversilobum	western poison oak
Trifolium dubium	little hop clover

Scientific Name	Common Name
Trifolium hirtum	rose clover
Trifolium resupinatum	reversed clover
Trifolium subterraneum	subterranean clover
Trifolium willdenovii	tomcat clover
Triteleia laxa	Ithuriel's spear
Umbellularia californica	California bay
Wyethia angustifolia	mule's ears