



BIOLOGICAL RESOURCES REPORT

8841 Old Redwood Highway,
Cotati, CA

Prepared For:

Brian Flahavan
400 College Avenue
Santa Rosa, CA 95401

Project No. 2201

Prepared By:

Dana Riggs
Principal Biologist
Sol Ecology, Inc.
P.O. Box 5214
Petaluma, CA 94955

driggs@solecology.com
707-241-7718

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LIST OF ACRONYMS AND ABBREVIATIONS

BCC	USFWS Bird of Conservation Concern
CDFG/CDFW	California Department of Fish and Game/Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CTS	California Tiger Salamander
ESA	Federal Endangered Species Act
ITP	Incidental Take Permit
PBO	Programmatic Biological Opinion
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

EXECUTIVE SUMMARY

The purpose of this report is to provide a review of natural communities, sensitive habitats, and special-status species resources and possible impacts from a new tentative map for a major subdivision of the existing parcel at 8841 Old Redwood Highway, in Cotati, California (APN 046-223-018-000; Project Study Area).

On January 14 and May 3, 2022, Sol Ecology biologists conducted a biological resources survey at the Project Study Area. Existing conditions at the Project Study Area were dominated by disturbed valley and foothill grassland consisting primarily of non-native grass species. Several buildings are present at the northeast end of the property, near the road, three of which are residences. Historically, the site was a chicken farm with as many as 10 or more outbuildings/chicken coops removed in recent months.

One seasonal wetland, an earthen roadside ditch, is present within the Project Study Area. A Preliminary Jurisdictional Determination for this wetland determined that the roadside ditch is within the jurisdiction of the U.S. Army Corps of Engineers, and the Regional Water Quality Control Board under sections 404 and 401 of the Clean Water Act, respectively (Appendix E).

Special status species with potential to occur in the Project Study Area include pappose tarplant, congested-headed hayfield tarplant, California tiger salamander, oak titmouse, burrowing owl, Nuttall's woodpecker, pallid bat, and American badger.

Recommendations include Avoidance and Minimization measures to protect sensitive communities and seasonal wetlands, special status plants, trees, nesting birds, special status wildlife, and California tiger salamander to ensure impacts associated with the proposed project are mitigated to a less than significant level.

1.0 INTRODUCTION

On January 14, and May 3, 2022, Sol Ecology, Inc. performed a biological resources study and surveys at 8841 Old Redwood Highway in Cotati, California. The proposed Project includes a new tentative map for a major subdivision of the approximately 7.15-acre parcel into 35 new single-family lots (Appendix A – Figure 1).

The purpose of the assessment 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 City of Cotati. This report describes the results of the site survey and assessment 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 assessment is based on information available at the time of the study 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 the southern edge of the Cotati city limits. It can be accessed via U.S. Highway 101 at the Route 116, Sebastopol exit in Cotati, and east, then southeast on Old Redwood Highway. The approximately 7.15-acre Project Study Area is within APN 046-223-018-000 (Appendix A, Figure 1). The parcel is currently zoned as Neighborhood, Low Density (Cotati 2015). The parcel is bounded by additional Neighborhood, Low Density, Rural Residential, and Agriculture & Residential (Sonoma County 2022). The Project Study Area is surrounded by ruderal residential development to the north and east with limited/fragmented surrounding grassland. Open and relatively undisturbed grassland habitat is present to the southeast. It is situated on a gradual sloping grassland hill with signs of previous agriculture operations (chicken coops and orchard trees). Two small homes are located on the parcel along the eastern portion immediately adjacent to Old Redwood Highway, along with existing gravel compacted driveways. Aerial imagery shows old chicken coops along the south boundary, extending to the center of the parcel. The chicken coops were removed prior to the site assessment in the fall of 2021; evidence of previous foundations, existing compacted gravel driveways, and sparse debris were observed by the biologists. Several nonnative landscape trees are intermittently scattered in the Project Study Area and there is a recently removed strand of eucalyptus along the western boundary.

1.2 Project Description

The proposed project includes a new tentative map for a major subdivision of the existing 7.15-acre parcel into 35 single family lots. A single street will serve as the main access road from Old Redwood Highway, and a short second street will provide access to three lots. Utilities and any

appurtenances will be placed in the streets. The entire parcel will be converted to single family residential housing with associated landscaping and other improvements per the proposed tentative map. Existing structures remaining on the property will be demolished prior to construction. Grubbing will include removal of any existing trees on the site, including at least one large valley oak on the southern boundary of the site, and several black walnut trees; remaining trees are primarily ornamental or fruit trees.

2.0 METHODS

On January 14 and May 3, 2022, 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. Photographs of the site are provided in Appendix B. Species identified during the site visit are provided in Appendix C.

2.1 Literature Review

Prior to the site visit, a desktop analysis was performed 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) A Manual of California Vegetation Online Edition (CNPS 2022a)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory, Wetlands Mapper (USFWS 2022a)
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey (USDA 2019)
- Sonoma County Vegetation & LiDAR Data for Sonoma County (Sonoma Veg Project 2014)
- CNPS's Inventory of Rare and Endangered Plants of California search for U.S. Geological Survey (USGS) 7.5-minute Cotati quadrangle and eight adjacent quadrangles (CNPS 2022b)
- California Natural Diversity Database (CNDDB) search for USGS 7.5-minute Cotati quadrangle and eight adjacent quadrangles (CDFW 2022, Appendix D)
- USFWS Information for Planning and Conservation Species Lists (USFWS 2022b; Appendix D)
- California Department of Fish and Game (CDFG) publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication *California Bird Species of Special Concern* (Shuford and Gardali 2008)

- California Department of Fish and Wildlife (CDFW) and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003)
- Western Bat Working Group Online Species Accounts (WBWG 2015).

2.2 Field Survey

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

Wetlands delineations were previously performed on the property, and a Preliminary Jurisdictional Determination (PJD) was completed for the Project on December 27, 2021. The PJD concluded that the drainage feature within the Project Study Area along Old Redwood Highway was within U.S. Army Corps of Engineers jurisdiction.

Sol Ecology biologists also performed reconnaissance-level surveys for special status species on and adjacent to the Project Study Area on May 3, 2022. The focus of the surveys was to identify whether suitable habitat elements for each of the special status species documented in the surrounding vicinity are present on the Project Study Area or not and whether the project would have the potential to result in impacts to any of these species and/or their habitats either on- or off-site. Habitat elements examined for the potential presence of sensitive plant species included: soil type, elevation, vegetation community, and dominant plant species. For wildlife species, habitat elements examined included the presence of dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting) habitat.

Protocol-level surveys for special status plants with potential to occur were also performed on March 24, April 26, and May 23, 2022 in accordance with CDFW protocol (CDFW 2018) and the Santa Rosa Plain Conservation Strategy guidelines for surveying for listed plants. The entire Project Study Area was traversed on foot and all observed plant species were recorded and identified with Jepson eFlora to a taxonomic level sufficient to determine rarity. All observed plant species were recorded (Appendix C – Observed Species Table)].

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. Qualifications of the field surveyors are provided in Appendix G.

3.0 RESULTS

3.1 Existing Conditions and General Wildlife Use

Elevations within the Project Study Area range from approximately 38 to 60 meters (125 to 197 feet) above mean sea level. The Project Study Area encompasses 2 soil map units identified by the USDA, NRCS (USDA 2019):

- **Haire fine sandy loam, hummocky, 0 to 5 percent slopes (HaB):** this soil map unit consists of soils that are deep and moderately well drained and tend to have very slow permeability. These soils were formed in terrace deposits, as well as in residuum that has been weathered from arkosic sandstone and granodiorite. The natural vegetation that this soil supports mostly consists of annual grasses and forbs. It is typically used for pasture, dry and irrigated. Minor components include Zamora (10%) and Clear Lake (5%). Haire fine sandy loam is the predominant soil type in the project area. Haire fine sandy loam is not rated as hydric.
- **Cotati fine sandy loam, 9 to 15 percent slopes (CtD):** This soil map unit consists of soils that are deep, to sometimes very deep, and well drained. The soil is derived from weathered soft sedimentary rocks. The natural vegetation that this soil supports consists predominantly of annual grasses and forbs, with occasional live oak (*Quercus agrifolia*) and black oak (*Quercus kelloggii*). It is also widely used for pasture and hay, Christmas tree production, and small-scale orchards. Minor components include Goldridge (8%) and Steinbeck (7%). Cotati fine sandy loam occurs in the southwest corner of the project area. Cotati fine sandy loam is not rated as hydric.

Vegetation communities present in the Project Study Area were classified based on existing plant community descriptions described in the California Native Plant Society Online Manual of California Vegetation (CNPS 2022a). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Vegetation communities were classified as non-sensitive or sensitive natural communities as defined by CEQA and other applicable laws and regulations.

Valley and Foothill Grassland Habitat (Non-Native Grassland)

The Project Study Area is dominated by valley and foothill grassland habitat, in which native bunch grass species have been largely or entirely supplanted by introduced, annual Mediterranean grasses (Non-Native Grassland). Stands rich in natives, however, can usually be found on unusual substrates, such as serpentinite or somewhat alkaline soils. (CDFW 2021) These non-native grasslands (Holland/CDFW 1986) are dominated by non-native annual grassland characterized by non-native (and invasive) annual grasses and native forbs and wildflowers.

Common wildlife species in this habitat includes: Botta's pocket gopher (*Thomomys bottae*), deer mouse (*Peromyscus maniculatus*), western kingbird (*Tyrannus verticalis*), and western fence lizard (*Sceloporus occidentalis*).

Most of the trees on the site are remnant orchard species including Prunus species and black walnut (*Juglans* spp.). There are several mature trees along the fence line of the neighboring property to the south, and also along the parcel entrance. This included coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), a non-native oak (*Quercus* ssp.), and redwood (*Sequoia sempervirens*). Herbaceous plant species were predominantly non-native and included wild radish (*Raphanus sativa*), ribwort (*Plantago lanceolata*), soft chess (*Bromus hordeaceus*), Italian rye grass (*Festuca perennis*), scarlet pimpernel (*Lysimachia arvensis*), hairy cats ear (*Hypochaeris radicata*), annual blue grass (*Poa annua*), ripgut brome (*Bromus diandrus*), rose clover (*Trifolium hirtum*), and wild geranium (*Geranium dissectum*). Wildlife species observed consisted mostly of birds including Bewick's wren (*Thromanes bewickii*), turkey vulture (*Cathartes aura*), California scrub-jay (*Aphelocoma californica*), northern mockingbird (*Mimus polyglottos*), California towhee (*Melozone crissalis*), house finch (*Haemorhous mexicanus*), and lesser goldfinch (*Spinus psaltria*). Occasional clusters of Botta's pocket gopher (*Thomomys bottae*) were observed.

3.2 Potential Jurisdictional Features

Seasonal Wetland

An earthen roadside drainage ditch runs along the west side of Old Redwood Highway, parallel along the eastern boundary of the parcel, traversing through approximately 900 SF of the Project Study Area. The ditch has been identified as subject to U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdiction. The USACE issued a Preliminary Jurisdictional Determination for the wetland on December 27, 2022 (Appendix E).

3.3 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 (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) 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, 64 special-status plant species have been documented within 9-quadrangle search of the Project Study Area, of which 11 species have been documented within a five-mile radius (Appendix A, Figure 3). Based on the presence of biological communities described above and soils at the site, as well as recent and historic site disturbance, the Project Study Area has the potential to support 2 of these species; these species are described in Table 1 below.

Species documented in the area are unlikely or have no potential to occur in the Project Study Area for one or more of the following reasons:

- Hydrologic conditions (e.g., marsh habitat, seeps, pond habitat) 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.
- Associated vegetation communities (e.g., cismontane woodland, chaparral, broadleaved upland forest) necessary to support the special-status plants do not exist on site.

Adverse conditions from yearly weather patterns may prevent accurate identification of some special status plants in the project area. Disease, drought, predation, fire, herbivory, or other disturbances may also preclude presence in a given year. The Project Study Area is located outside the footprint of recent fires in Sonoma County.

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

Scientific Name/ Common Name	Status ¹	Habitat	Blooming Period	Potential for Occurrence
<i>Centromadia parryi</i> ssp. <i>Parryi</i> pappose tarplant	1B.2	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley, and foothill grassland. Vernal mesic, often alkaline soils; 1-500m	May-Nov	Low Potential. Suitable mesic conditions exist in a roadside drainage feature on site. However, it was not observed during botanical surveys. The nearest occurrence (#13) is for plants collected in 1987 in the vicinity of Willow Brook near Penngrove at a location approximately 2.4 miles south.
<i>Hemizonia congesta</i> subsp. <i>Congesta</i> congested-headed hayfield tarplant	1B.2	Valley and foothill grassland, sometimes roadsides, often in fallow fields; <100m	Apr-Nov	Low Potential. There is suitable roadside grassland habitat on the site. However, it was not observed during botanical surveys. The nearest CNDDDB record (#12) is from a 1931 plant collection from the Project Study Area vicinity. The exact collection location is unknown.

¹ FE/FT – Federally endangered/ threatened
CE/CT – California endangered/threatened
California Rare Plant Rank

- 1A – Plants presumed extirpated in California and either rare or extinct elsewhere.
- 1B – Plants rare, threatened, or endangered in California and elsewhere.
- 2A – Plants presumed extirpated in California but common elsewhere.
- 2B – Plants rare, threatened, or endangered in California but more common elsewhere.

3.4 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 (CFGF), i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.

38 special-status wildlife species have been documented within 9-quadrangle search of the Project Study Area, of which 16 species have been documented within a five-mile radius (Appendix A, Figure 4). Based on the presence of biological communities described above, the Project Study Area has the potential to support four of these species; these species are described in Table 2 below.

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:

- No suitable aquatic habitat on or immediately adjacent to the property (e.g., cold freshwater stream habitat, vernal pools, lake, salt or brackish waters, perennial water source, deep water) necessary to support the special status wildlife (e.g., for western pond turtle, California linderiella, California red-legged frog, vernal pool adrenid bee).

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

Scientific Name/ Common Name	Status ¹	Habitat	Potential for Occurrence
Amphibians and Reptiles			
<p><i>Ambystoma californiense</i> California tiger salamander – Sonoma County Distinct Population Segment</p>	<p>FE, ST, CH</p>	<p>Inhabits grassland, oak woodland, ruderal and seasonal pool habitats. Adults are fossorial and utilize mammal burrows and other subterranean refugia. Breeding occurs primarily in vernal pools and other seasonal water features.</p>	<p>Low Potential. The Project is within designated critical habitat and has been designated as having potential to affect CTS (USFWS 2020). The Project Study Area provides marginal upland aestivation habitat for nearby CTS populations with a lack of high-quality habitat (abundant burrows), and relatively small amount of potential breeding habitat in the area. The nearest documented breeding habitat is located 2,201 feet from the site. The nearest suitable breeding habitat is located approximately 900 to the southeast of the site in small roadside drainage ditch. The on-site roadside drainage ditch located on the eastern property boundary does not provide suitable breeding habitat due to insufficient ponding indicators.</p>
Birds			

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

Scientific Name/ Common Name	Status ¹	Habitat	Potential for Occurrence
<i>Athene cunicularia</i> burrowing owl	SSC, BCC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	Low Potential. No suitable nesting habitat is present as this species is not documented to nest in Sonoma County but may overwinter. The site contains sandy soils but is highly disturbed and surrounded by development. No suitable burrows were observed during the site surveys. The nearest occurrence is more than 3 miles away. Thus, only marginal wintering habitat is present.
<i>Baeolophus inornatus</i> oak titmouse	BCC	Inhabit oak woodlands or oak-pine woodland. Nests in cavities high in trees (20 to 40 feet above the ground).	Low Potential. There are a few suitable nesting trees at or adjacent to the site.
<i>Dryobates nuttallii</i> Nuttall's woodpecker	BCC	Inhabits oak woodlands, wooded suburban areas and riparian corridors. Nests in cavities of primarily oaks, willows, cottonwoods, sycamores, or alders.	Low Potential. There are a few suitable nesting trees adjacent to the site.

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

Scientific Name/ Common Name	Status 1	Habitat	Potential for Occurrence
<i>Elanus leucurus</i> white-tailed kite	CFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	Moderate Potential. There are a few suitable nesting trees within and adjacent to the site, as well as numerous rodent burrows at the site.
Mammals			
<i>Antrozous pallidus</i> pallid bat	WBW G	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. 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). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Moderate Potential. There is marginally suitable roost habitat within the attic potentially in two of the house structures present on the site, and possibly in a large valley oak to be removed on the southern boundary.

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

Scientific Name/ Common Name	Status ¹	Habitat	Potential for Occurrence
<i>Taxidea taxus</i> 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 Potential. Suitable friable soils, rodent burrows, and open, uncultivated ground are present at the site. However, the habitat connectivity at the site is minimal, and the nearest documented occurrence is 1.2 miles from the site.

¹ FE/SE – Federal/State Endangered
 SCE/T – State Candidate Endangered/Threatened
 SSC – Species of Special Concern
 SSI – Special Status Invertebrate
 WBWG – Western Bat Working Group – Medium or High Priority Species

FT/ST – Federal/State Threatened
 CFP – California Fully Protected
 BCC – Bird of Conservation Concern
 LC – Species of Local Concern

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 [Wildlife] 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 U.S. Fish and Wildlife Service.
- C. Have a substantial adverse effect on state or 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 any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- F. 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

4.1.1 Jurisdictional Aquatic Resources

Seasonal Wetland

One seasonal wetland, an earthen roadside ditch is present within the Project Study Area. This wetland was determined to be within the jurisdiction of the USACE and RWQCB and is protected under sections 401 and 404 of the Clean Water Act (CWA). The proposed project may result in minor impacts to the existing roadside ditch including partial fill and/or replacement of the existing culvert. Impacts to this feature are considered significant under CEQA.

4.1.2 Special-Status Plant Species

A total of sixty-eight (68) special status plant species have been documented within a 9-quad search of the Project Study Area. No federally listed plants have potential to occur in the Project Study Area, however, two CNPS list 1B.2 plants have a low potential to occur. These include pappose tarplant and congested-headed hayfield tarplant. Neither species was observed during protocol-level floristic plant surveys performed in the spring of 2022, which coincided with peak blooming periods for both listed and non-listed plants in the region. Based on this, the project is not likely to affect special status plants.

4.1.3 Special-Status Wildlife Species

A total of 47 special status wildlife species have been documented within a 9-quad search of the Project Study Area (Appendix D) and 13 are documented within five miles. A total of 7 of these special status wildlife species have potential to occur within the Project Study area.

California Tiger Salamander (*Ambystoma californiense*)

CTS requires two primary habitat components: aquatic breeding sites and upland terrestrial aestivation or refuge sites. Adult CTS spend most of their time underground in upland subterranean refugia (Trenham 2001). Underground retreats in the Santa Rosa Plain usually consist of small mammal burrows (namely pocket gophers), but also under logs and piles of lumber (Holland et al. 1990). CTS emerge from underground to breed and lay eggs primarily in vernal pools and other ephemeral water bodies. Adults migrate from upland habitats to aquatic breeding sites during the first major rainfall events, between November and February (Barry and Shaffer 1994) and return to upland habitats after breeding. Following metamorphosis, juvenile CTS may disperse into uplands up to 1.3 miles from breeding ponds (USFWS 2004). Trenham (2001) found up to 25 percent of CTS in one pond were found within 2,200 feet of the breeding pond. In a more recent study Orloff (2011) found both adults and juveniles at least 800 meters

(2,624 feet) from the nearest breeding pond, with a smaller number of salamanders as far as 2.2 km (1.3 miles) away.

The nearest breeding occurrence is more than 2,200 feet from the site, while the nearest potential breeding habitat is 900 feet. Based on the existing surrounding development and known barriers between nearby breeding sites, the Project overall has a minimal likelihood to affect CTS. However, given this species may disperse into upland habitats more than one mile from their breeding pool, the potential presence cannot be eliminated and if present, CTS would be subject to direct mortality during construction as a result of the proposed project. Furthermore, the project would result in removal of suitable upland habitat. Both direct mortality and removal of upland habitat is considered significant under CEQA. Given that existing barriers to dispersal are present, the project would not result in any permanent barrier between documented breeding habitats. Mitigation measures prescribed in Section 4.2 must be implemented to ensure a less than significant effect to CTS.

Migratory Birds

The Project Study Area provides nesting habitat for birds protected by the federal Migratory Bird Treaty Act and California Fish and Game Code § 3513. Impacts to nesting birds resulting in nest abandonment or direct mortality to chicks or eggs is considered a significant impact under CEQA.

Burrowing Owl (*Athene cunicularia*)

The burrowing owl occurs as a year-round resident and winter visitor in much of California's lowlands, inhabiting open areas with sparse or non-existent tree or shrub canopies. Typical habitat is annual or perennial grassland, although human-modified areas such as agricultural lands and airports are also used (Poulin et al. 1993). This species is dependent on burrowing mammals to provide the burrows that are characteristically used for shelter and nesting, and in northern California is typically found in close association with California ground squirrels (*Spermophilus beecheyi*). Manmade substrates such as pipes or debris piles may also be occupied in place of burrows. Prey consists of insects and small vertebrates. Breeding typically takes place from March to July.

Marginal overwintering habitat is present on the Project Site based on the presence of sandy soils. However, the project is surrounded by development and is highly disturbed. Trees and fences provide perches for predators, and the proximity to dense residential housing yield an increased risk of predation by mammalian predators, including domestic species. Preferred open grassland habitat is present approximately one mile to the east. Nonetheless, if present they may be impacted by construction during their overwintering period resulting in mortality which is considered significant under CEQA.

Oak titmouse (*Baeolophus inornatus*)

This relatively common species is year-round resident throughout much of California including most of the coastal slope, the Central Valley and the western Sierra Nevada foothills. In addition, the species may also occur in residential settings where landscaping provides foraging and nesting habitat. Its primary habitat is woodland dominated by oaks. Local populations have adapted to woodlands of pines and/or junipers in some areas (Cicero 2000). The oak titmouse nests in tree cavities 20 to 40 feet above the ground, usually natural cavities or those excavated by woodpeckers, though they may partially excavate their own (Cicero 2000). Seeds and arboreal invertebrates make up the birds' diet.

There are a few trees within and adjacent to the Project Study Area that provide suitable nesting habitat for oak titmouse, therefore there is a low potential for it to nest in the area. Impacts to nesting birds if present is considered significant under CEQA.

Nuttall's woodpecker (*Dryobates nuttallii*)

Nuttall's Woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat is oak or mixed woodland, and riparian areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates.

There are a few trees within and adjacent to the Project Study Area that provide suitable nesting habitat for Nuttall's woodpecker, therefore there is a low potential for it to nest in the area. Impacts to nesting birds if present is considered significant under CEQA.

White-tailed Kite (*Elanus leucurus*)

The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates.

There are a few trees within and adjacent to the Project Study Area that provide suitable nesting habitat for white-tailed kite, therefore there is a low potential for it to nest in the area. Impacts to nesting birds if present is considered significant under CEQA.

Pallid Bat (*Antrozous pallidus*)

Pallid bats occur in a variety of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. They are most abundant in the arid Sonoran life zones below 6,000 feet but have been found up to 10,000 feet in the Sierra Nevada. Pallid bats often roost in colonies of between 20 and several hundred individuals. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented in large conifer snags (e.g., ponderosa pine), inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. They have also been reported roosting in stacks of burlap sacks and stone piles. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight.

There is marginally suitable roost habitat within the attic potentially in two of the house structures present on the site, and possibly in a large valley oak to be removed on the southern boundary. Impacts to roosting bats – particularly maternity or hibernating species is considered significant under CEQA. Measures prescribed in Section 4.2 will ensure such impacts are mitigated to a less than significant level.

American Badger (*Taxidea taxus*)

The American badger is a large, semi-fossorial member of the Mustelidae (i.e., weasel family). It is found uncommonly within the region in drier open stages of most scrub, forest, and herbaceous habitats where friable soils and prey populations are present. Badgers are typically solitary and nocturnal, digging burrows to provide refuge during daylight hours. Badger burrows are constructed mainly in the pursuit of prey, but they are also used for sleeping. Burrow entrances are usually elliptical (rather than round), and each burrow generally has only one entrance. Young are born in the spring and independent by the end of summer. Badgers use multiple burrows within their home range, and they may not use the same burrow more than once a month. In the summer months they may dig a new burrow each day. (Long 1999). Badgers are carnivores, preying on a variety of fossorial mammals (especially ground squirrels or gophers) and occasionally other vertebrates and their eggs. Home ranges for this species tend to be large, depending on the habitat available with larger ranges typical of patchy habitats.

Suitable prey habitat is present within the Project Study Area, and biologists observed numerous rodent burrows at the site. Additionally, the soils within the Project Study Area are friable and therefore suitable for badger burrows. The nearest documented occurrence of American badger is 1.24 miles from the site, but connectivity to this occurrence is minimal, with significant dispersal barriers. Given these habitat conditions, and a lack of badger burrows observed within the Project Study Area, there is a low potential for American badger to occur within the Project and as such and the Project is not likely to significantly affect American badgers or their habitat.

Wildlife Corridors

The Project Study Area is on the outskirts of the City of Cotati where there are patchworks of large housing tracts adjacent to semi-rural undeveloped parcels to the north and primarily large undeveloped parcels to the south and east. The roadside ditch where the seasonal wetlands are located may provide limited movement for native and non-native aquatic species depending upon the conditions of culverts beneath driveways along Old Redwood Highway. There are no barriers preventing terrestrial species from traversing the Project Study Area. The project once constructed will be consistent with surrounding areas (a mix of housing tracts and undeveloped parcels) and will not prevent the movement of wildlife through the area. Therefore, the project is not likely to substantially interfere with the movement of any native species or native nursery site.

4.2 Recommended Avoidance and Minimization Measures

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

BIO-1. Sensitive Communities/Seasonal Wetlands

During construction exclusion fence should be placed around the avoided seasonal wetland to avoid impacts during construction. Because the proposed project will likely require a small amount of fill and/or removal and replacement of the existing culvert, during road improvements, both a Clean Water Act Section 404 Nationwide permit application must be submitted to the USACE, and a Section 401 Water Quality Certification application must be submitted to the RWQCB prior to the commencement of construction. Compensatory mitigation for the any impacts will be required at a minimum 1:1 ratio through purchase of wetland mitigation bank credits or through permittee-responsible mitigation either on or off-site. No other sensitive communities are present or will be impacted by the project.

BIO-2. Indirect Impacts

The Sonoma County Best Management Practice Guidelines must be employed to ensure impacts to off-site habitats and resources are avoided.

BIO-3. Tree Removal

The City of Cotati tree ordinance regulates the protection, preservation and maintenance of native trees, trees of historic or cultural significance, groves and stands of mature tree, and mature trees in general that are associated with proposals for development (Cotati 2022). A tree removal permit for a vacant parcel must be obtained from the City prior to the removal of trees other than native oaks. For the removal of any native oaks with a trunk circumference of 12 inches measures at fifty-four inches above natural grade is prohibited, except where approved

by the city council after a public hearing in conjunction with the approval of a subdivision. At least one valley oak is proposed for removal on the southern boundary of the parcel for public safety concerns.

BIO-4. Nesting Birds

To prevent impacts to nesting birds, the following avoidance and minimization measures are recommended:

1. If construction begins between February 1 and August 31, a pre-construction nesting bird (both passerine and raptor) survey of the habitats within 500 feet of all work areas shall be performed within 7 days of groundbreaking. If no nesting birds are observed, no further action is required, and grading must occur within one week of the survey to prevent “take” of individual birds that could begin nesting after the survey. A follow up survey is required if a stoppage in work occurs for longer than 7 days between February 1 and July 1.
2. If active bird nests (passerine and/or raptor) are observed during the pre-construction survey, a disturbance-free buffer zone shall be established around the nest tree(s) until the young have fledged or the nest has naturally failed or been predated, as determined by a qualified biologist. The radius of the required buffer zone can vary depending on the species, with the dimension of any required buffer zone to be determined by a qualified biologist.
3. To delineate the “no-work” buffer zone around a nesting tree, orange construction fencing must be placed at the specified radius from the base of the tree within which no construction related activity or machinery shall intrude.

BIO-5. Burrowing Owl. A qualified biologist shall follow the California a Department of Fish and Game (now CDFW) 2012 Staff Report on Burrowing Owl Mitigation (CDFW 2012 Staff Report) habitat assessment and survey methodology prior to project activities occurring during the burrowing owl wintering season from September 1 to January 31. If work is initiated outside of the wintering season, no surveys are needed. The habitat assessment and surveys shall encompass a sufficient buffer zone to detect owls nearby that may be impacted. Time lapses between surveys or project activities shall trigger subsequent surveys, as determined by a qualified biologist, including but not limited to a final survey within 24 hours prior to ground disturbance and before construction equipment mobilizes to the Project area. The qualified biologist shall have a minimum of two years of experience implementing the CDFW 2012 Staff Report survey methodology resulting in detections. Detected burrowing owls shall be avoided pursuant to the buffer zone prescribed in the CDFW 2012 Staff Report, unless otherwise approved in writing by CDFW, and any eviction plan shall be subject to CDFW review.

Please be advised that CDFW does not consider eviction of burrowing owls (i.e., passive removal of an owl from its burrow or other shelter) as a “take” avoidance, minimization, or mitigation

measure: therefore, offsite habitat compensation shall be included in the eviction plan if an eviction plan is required. Habitat compensation acreages shall be approved by CDFW, as the amount depends on site-specific conditions, and completed before project construction to ensure impacts are mitigated to a less than significant level. It shall also include placement of a conservation easement and preparation and implementation of a long-term management plan.

BIO-6. Roosting Bats (including pallid bat)

Prior to demolition of existing structures and/or trees over 16 inches dbh, the biologist shall perform bat roost emergence surveys no more than 120 days prior to the start of activities outside of the hibernation period (November 1 to March 1). If bats are found, a bat exclusion plan shall be prepared and submitted to CDFW. Bats shall be excluded between March 1 (once overnight low temperatures exceed 45 degrees Fahrenheit) and April 15, or between September 1 and October 15 to ensure no impact to maternity roosting occurs. Once bats have been fully excluded, the structure may be demolished or removed. If a maternity roost is found, a replacement roost must be established either on-site or at a nearby off-site at a permanently protected location in consultation with CDFW to ensure impacts are mitigated to a less than significant level.

Tree removal for trees greater than 16-inch dbh shall be performed using the three-step removal process. First the crown or upper 1/3 of the tree shall be removed and any limbs removed and left overnight. The following the rest of the tree shall be felled and left overnight. On the third day, the biologist shall examine the felled tree to make sure any bats have escaped prior to chipping on-site or hauling to an off-site location for disposal. The three-step process will ensure significant impacts including bat mortality is avoided.

BIO-7. American Badger

Pre-construction surveys shall be performed within 10 days prior to the start of construction activities for American badger. If a potential den is found, a minimum 100-foot buffer shall be established around the potential den. The den should be monitored using wildlife cameras or track plates to confirm the animal has left the area on its own accord. Following confirmation by the biologist the potential den is no longer active, it may be excavated by hand under the direction of the biologist and the buffer removed.

BIO-8. California Tiger Salamander

Given the close proximity of CTS occurrences, the following avoidance and minimization measures are recommended to ensure that the Project does not result in the take of CTS:

1. Develop and implement an approved erosion and sediment control plan to prevent impacts of construction on habitat outside the work areas.

2. A Section 2081 Incidental Take Permit (ITP) from CDFW is required, along with avoidance measures prescribed in the 2020 Programmatic Biological Opinion (PBO) for CTS (USACE, 2020). Should Impacts to the ditch along Old Redwood Highway be necessary, formal consultation through the 2020 PBO would also be required. If no federal nexus exists, the Applicant may pursue a concurrence determination from USFWS with the 2081 ITP.
3. In accordance with the PBO, impacts must be mitigated at a 1:1 ratio for Projects that are greater than 2,200 feet and within 1.3 miles of a known breeding site. Also, per the PBO, mitigation for projects on parcels with existing hardscape (including structural foundations, compacted gravel surfaces, buildings, or other structures) shall be removed from the mitigation calculation. Based on this, a total of 6.2 acres of CTS upland habitat would need to be mitigated for at either an approved CDFW conservation bank or through the acquisition of CDFW approved permitted-responsible mitigation lands elsewhere on the Santa Rosa Plain.
4. A USFWS and CDFW approved biological monitor must conduct a training session for all construction workers before work begins. The biological monitor will be present on-site during excavation activity, and each morning when an open trench is uncovered to check for trapped animals or animals under equipment. The biological monitor will check all excavated steep-walled holes or trenches greater than one foot deep for any CTS. If CTS are found, work will be halted and the USFWS and/or CDFW contacted. Only a USFWS CTS recovery permit holder may relocate CTS. Translocation will be performed as described in USFWS 2005 protocol to a location outside the Project Site, as directed by USFWS or CDFW.
5. Fencing to exclude CTS must be installed between the grasslands and the construction footprint. The biological monitor will assist in making sure the correct fence material is utilized and that it is installed properly.
6. Limit access routes and number and size of staging and work areas to the minimum necessary to achieve the project goals. Clearly mark routes and boundaries of the roadwork prior to initiation construction/site disturbance.
7. Enclose all foods and food-related trash items in sealed trash containers at the end of each day and remove completely from the site once every three days.
8. No pets shall be allowed anywhere in the Project site during construction.
9. Maintain all equipment such that there will be no leaks of automotive fluids such as gasoline, oils, or solvents.
10. Store any hazardous materials such as fuels, oils, solvents, etc., in sealable containers in a designated location that is at least 200 feet from aquatic habitats. All fueling and maintenance of vehicles and other equipment, and staging areas shall occur at least 200 feet from any aquatic habitat.
11. Conduct any grading and clearing between June 15 and October 15, of any given year, depending on the level of rainfall and/or site conditions.
12. Revegetate Project areas temporarily disturbed by construction activities with native plants.

Because there is potential for direct impacts to CTS, a Section 2081 ITP from CDFW is required, along with avoidance measures prescribed in the 2020 PBO for CTS (USACE, 2020). Should Impacts to the roadside ditch be necessary, formal consultation through the 2020 PBO would also be required. If no federal nexus exists, the Applicant may pursue a concurrence determination from USFWS with the 2081 ITP.

In accordance with the PBO, impacts to upland habitat must be mitigated at a 1:1 ratio for Projects that are greater than 2,200 feet and within 1.3 miles of a known breeding site. Also, per the PBO, mitigation for projects on parcels with existing hardscape (including structural foundations, compacted gravel surfaces, buildings, or other structures) shall be removed from the mitigation calculation. Based on this, a total of 6.2 acres of CTS upland habitat would need to be mitigated for at either an approved CDFW conservation bank or through the acquisition of CDFW approved permitted-responsible mitigation lands elsewhere on the Santa Rosa Plain.

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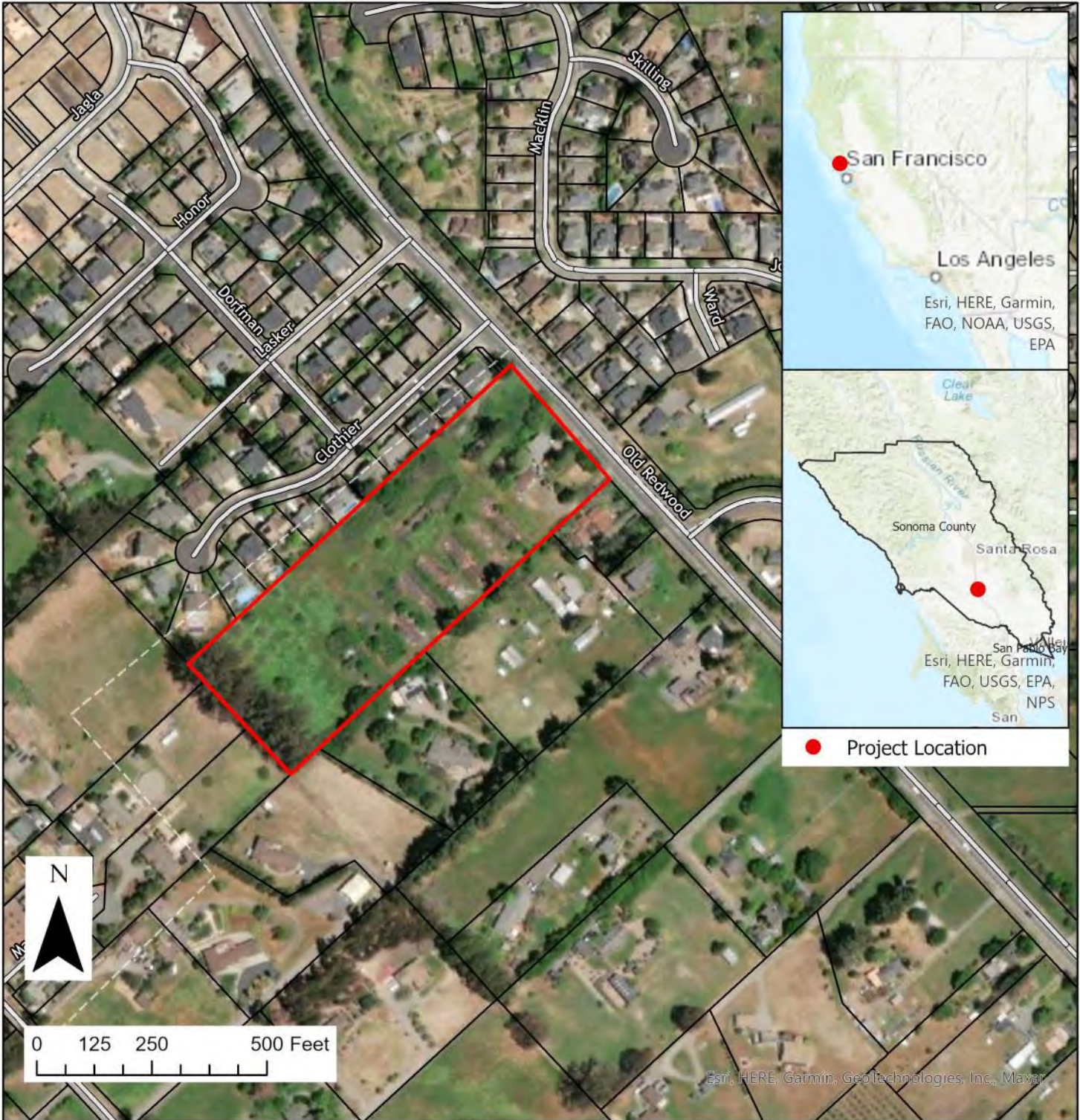
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APPENDIX A

PROJECT FIGURES: SITE LOCATION MAP, SENSITIVE COMMUNITIES, AND CNDDDB DATABASE RESULTS

Figure 1: Location of Project Area
8841 Old Redwood Highway, Cotati, CA






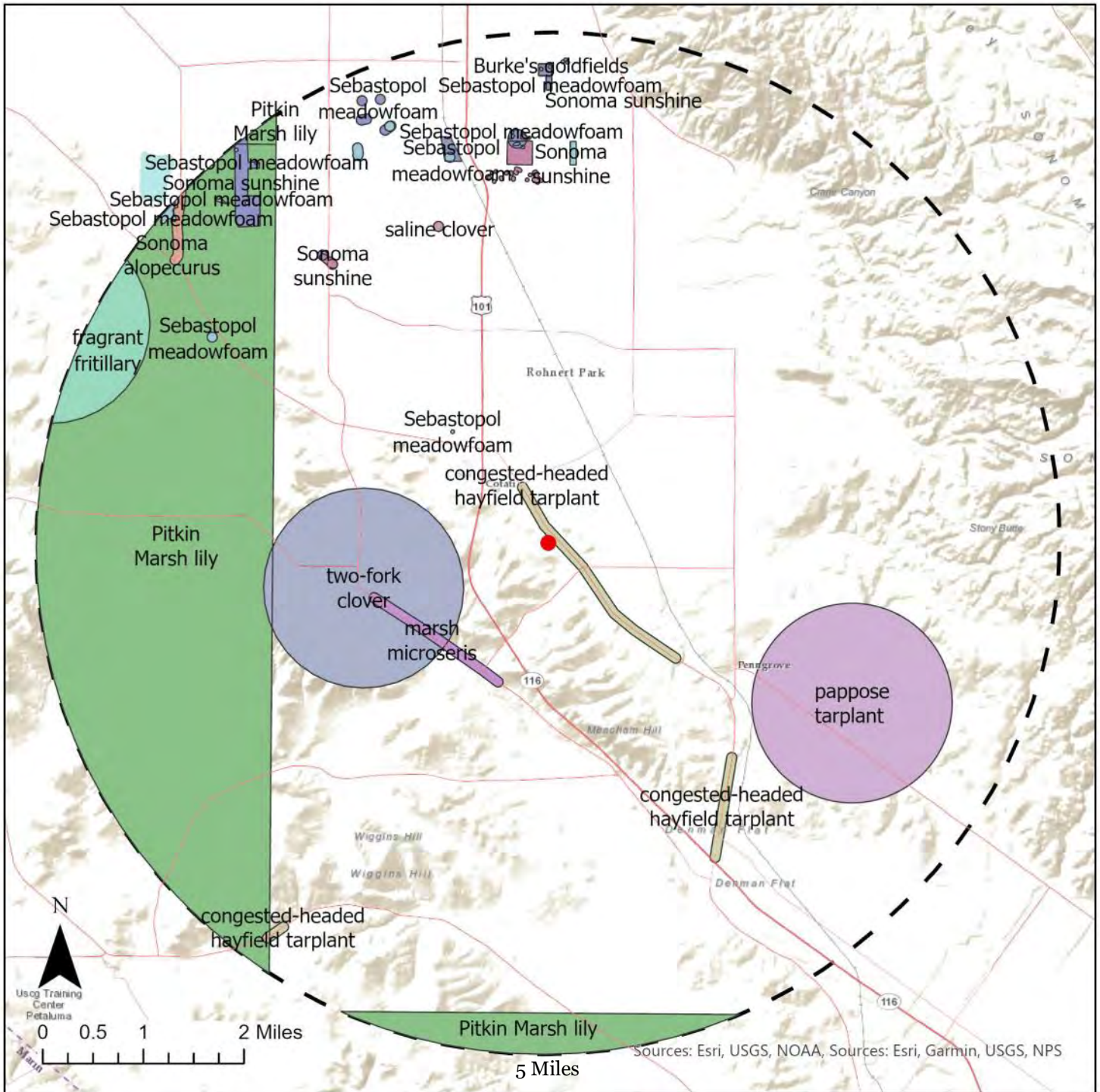
-  Project Site
-  Parcel Boundary
-  Streets

Figure 2: Special Status Plant Species within 5 Miles of the Project Site

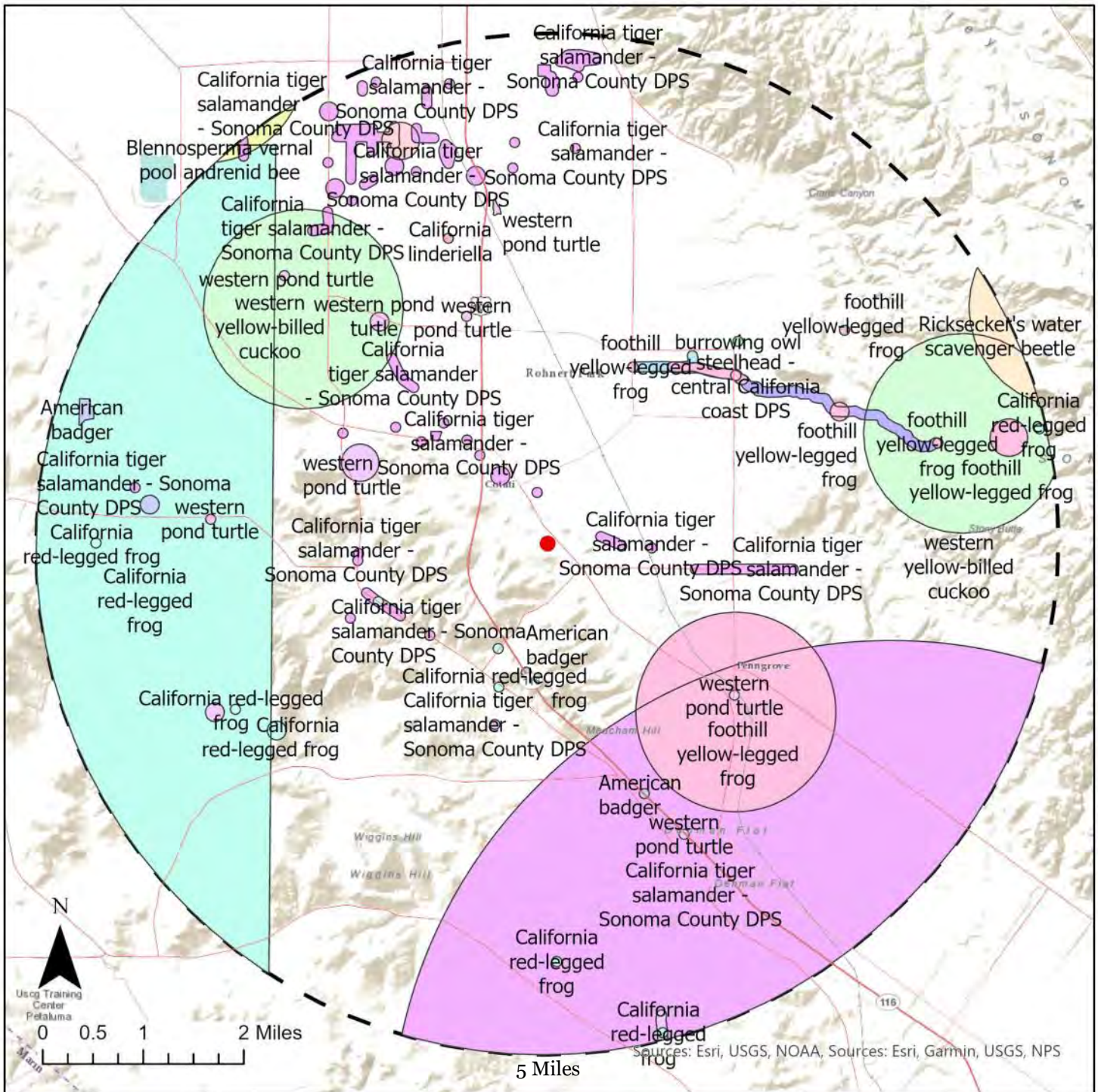
8841 Old Redwood Highway, Cotati, CA



- Project Location
- 5 Miles
- Burke's goldfields (4)
- Pitkin Marsh lily (4)
- Sebastopol meadowfoam (11)
- Sonoma alopecurus (1)
- Sonoma sunshine (7)
- congested-headed hayfield tarplant (3)
- fragrant fritillary (1)
- marsh microseris (1)
- pappose tarplant (1)
- saline clover (1)
- two-fork clover (1)

Figure 3: Special Status Animal Species within 5 Miles of the Project Site

8841 Old Redwood Highway, Cotati, CA



- Project Location
- 5 Miles
- American badger (4)
- Blennosperma vernal pool andrenid bee (1)
- California linderiella (1)
- California red-legged frog (10)
- California tiger salamander - Sonoma County DPS (39)
- Ricksecker's water scavenger beetle (1)
- burrowing owl (1)
- foothill yellow-legged frog (7)
- steelhead - central California coast DPS (1)
- tricolored blackbird (1)
- western bumble bee (1)
- western pond turtle (10)
- western yellow-billed cuckoo (2)

APPENDIX B

SITE PHOTOGRAPHS



Photo 1. Taken from the center of the southeastern edge of the property, facing southwest



Photo 2. Taken from the southeastern edge of the property, facing northwest

APPENDIX C

OBSERVED SPECIES TABLE

Observed Wildlife Species

Scientific Name	Common Name
Birds	
<i>Cathartes aura</i>	Turkey vulture
<i>Aphelocoma californica</i>	California scrub jay
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Melospiza crissalis</i>	California towhee
<i>Haemorhous mexicanus</i>	House finch
<i>Spinus psaltria</i>	Lesser goldfinch
Mammals	
<i>Thomomys bottae</i>	Botta's pocket gopher

Observed Plant Species

Scientific Name	Common Name
<i>Bromus diandrus</i>	Ripgut brome
<i>Crassula connata</i>	Sand pygmy weed
<i>Geranium dissectum</i>	Wild geranium
<i>Geranium molle</i>	Crane's bill geranium
<i>Hordeum brachyantherum</i>	Meadow barley
<i>Juncus bufonius</i>	Common toad rush
<i>Lythrum hyssopifolia</i>	Hyssop loosestrife
<i>Raphanus sativus</i>	Jointed charlock
<i>Senecio vulgaris</i>	Common groundsel
<i>Stellaria media</i>	Chickweed
<i>Vicia sativa</i>	Spring vetch

APPENDIX D

CNDDDB, CNPS, AND USFWS IPAC DATABASE RESULTS



Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Cotati (3812236) OR Two Rock (3812237) OR Petaluma (3812226) OR Petaluma River (3812225) OR Glen Ellen (3812235) OR Kenwood (3812245) OR Santa Rosa (3812246) OR Sebastopol (3812247))
 AND Taxonomic Group (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.
<i>Allium peninsulare</i> var. <i>franciscanum</i> Franciscan onion	G5T2 S2	None None	Rare Plant Rank - 1B.2	600 600	25 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Alopecurus aequalis</i> var. <i>sonomensis</i> Sonoma alopecurus	G5T1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	100 1,180	21 S:6	0	0	0	1	2	3	5	1	4	2	0
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	G4T2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	330 900	76 S:7	1	0	1	1	0	4	2	5	7	0	0
<i>Amsinckia lunaris</i> 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		93 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Arctostaphylos densiflora</i> Vine Hill manzanita	G1 S1	None Endangered	Rare Plant Rank - 1B.1	200 240	2 S:2	0	0	1	1	0	0	1	1	2	0	0
<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> Rincon Ridge manzanita	G3T1 S1	None None	Rare Plant Rank - 1B.1	300 800	12 S:6	0	0	2	1	1	2	4	2	5	0	1
<i>Astragalus claranus</i> Clara Hunt's milk-vetch	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	770 1,165	6 S:2	0	1	0	0	0	1	0	2	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.
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	G2T1 S1	None None	Rare Plant Rank - 1B.2	30 30	65 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	890 1,230	51 S:2	2	0	0	0	0	0	2	0	2	0	0
<i>Blennosperma bakeri</i> Sonoma sunshine	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	70 330	24 S:17	0	8	3	0	3	3	5	12	14	2	1
<i>Brodiaea leptandra</i> narrow-anthered brodiaea	G3? S3?	None None	Rare Plant Rank - 1B.2	650 650	39 S:4	0	1	0	0	0	3	4	0	4	0	0
<i>Calamagrostis crassiglumis</i> Thurber's reed grass	G3Q S2	None None	Rare Plant Rank - 2B.1	150 150	15 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Campanula californica</i> swamp harebell	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	150 150	155 S:2	0	0	0	0	2	0	2	0	0	1	1
<i>Castilleja uliginosa</i> Pitkin Marsh paintbrush	GXQ SX	None Endangered	Rare Plant Rank - 1A	150 200	2 S:2	0	0	0	0	2	0	2	0	0	2	0
<i>Ceanothus confusus</i> Rincon Ridge ceanothus	G1 S1	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	510 2,700	33 S:7	0	0	1	0	1	5	3	4	6	0	1
<i>Ceanothus divergens</i> Calistoga ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2	680 1,900	26 S:9	1	1	0	2	0	5	3	6	9	0	0
<i>Ceanothus foliosus</i> var. <i>vineatus</i> Vine Hill ceanothus	G3T1 S1	None None	Rare Plant Rank - 1B.1	150 250	6 S:3	0	0	1	0	0	2	1	2	3	0	0
<i>Ceanothus masonii</i> Mason's ceanothus	G1 S1	None Rare	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	700 700	8 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Ceanothus purpureus</i> holly-leaved ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2 SB_SBBG-Santa Barbara Botanic Garden	475 475	43 S:2	0	0	0	0	0	2	2	0	2	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Ceanothus sonomensis</i> Sonoma ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2 SB_SBBG-Santa Barbara Botanic Garden	475 1,900	30 S:14	2	0	0	0	0	12	11	3	14	0	0
<i>Centromadia parryi ssp. parryi</i> pappose tarplant	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	80 80	39 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Chloropyron maritimum ssp. palustre</i> Point Reyes salty bird's-beak	G4?T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	4 4	80 S:1	1	0	0	0	0	0	1	0	1	0	0
<i>Chloropyron molle ssp. molle</i> soft salty bird's-beak	G2T1 S1	Endangered Rare	Rare Plant Rank - 1B.2	5 5	27 S:2	0	0	0	0	2	0	2	0	0	2	0
<i>Chorizanthe valida</i> Sonoma spineflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	30 150	6 S:2	0	0	0	0	2	0	2	0	0	2	0
<i>Clarkia imbricata</i> Vine Hill clarkia	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	230 232	2 S:2	0	1	1	0	0	0	1	1	2	0	0
<i>Coastal and Valley Freshwater Marsh</i> Coastal and Valley Freshwater Marsh	G3 S2.1	None None		65 65	60 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Coastal Brackish Marsh</i> Coastal Brackish Marsh	G2 S2.1	None None			30 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Cuscuta obtusiflora var. glandulosa</i> Peruvian dodder	G5T4? SH	None None	Rare Plant Rank - 2B.2		6 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Delphinium bakeri</i> Baker's larkspur	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	705 705	6 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Delphinium luteum</i> golden larkspur	G1 S1	Endangered Rare	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	150 150	11 S:2	0	0	0	0	1	1	2	0	1	1	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Downingia pusilla</i> dwarf downingia	GU S2	None None	Rare Plant Rank - 2B.2	85 700	132 S:12	4	1	0	1	2	4	7	5	10	1	1
<i>Eriogonum luteolum var. caninum</i> Tiburon buckwheat	G5T2 S2	None None	Rare Plant Rank - 1B.2	550 550	26 S:2	1	0	0	0	0	1	0	2	2	0	0
<i>Fritillaria liliacea</i> fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	150 800	82 S:13	0	3	1	0	3	6	8	5	10	3	0
<i>Hemizonia congesta ssp. congesta</i> 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:17	0	2	0	0	2	13	14	3	15	2	0
<i>Hesperolinon congestum</i> Marin western flax	G1 S1	Threatened Threatened	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	200 560	27 S:4	2	1	0	0	0	1	0	4	4	0	0
<i>Horkelia tenuiloba</i> thin-lobed horkelia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	200 250	27 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Lasthenia burkei</i> Burke's goldfields	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	50 442	36 S:23	3	9	5	1	4	1	8	15	19	1	3
<i>Lasthenia californica ssp. bakeri</i> Baker's goldfields	G3T1 S1	None None	Rare Plant Rank - 1B.2	125 125	19 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Lasthenia conjugens</i> Contra Costa goldfields	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	280 280	36 S:1	0	1	0	0	0	0	0	1	1	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Layia septentrionalis</i> Colusa layia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley		69 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Legenere limosa</i> legenere	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley	90 1,400	83 S:2	0	0	1	0	1	0	2	0	1	0	1
<i>Leptosiphon jepsonii</i> Jepson's leptosiphon	G2G3 S2S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	400 1,900	51 S:8	0	0	1	0	0	7	1	7	8	0	0
<i>Lilium pardalinum ssp. pitkinense</i> Pitkin Marsh lily	G5T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_BerrySB-Berry Seed Bank SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	132 200	4 S:4	0	2	0	0	1	1	3	1	3	0	1
<i>Limnanthes vincularis</i> Sebastopol meadowfoam	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	50 139	46 S:40	2	9	6	2	7	14	17	23	33	5	2
<i>Microseris paludosa</i> marsh microseris	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz	40 80	38 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Navarretia leucocephala ssp. bakeri</i> Baker's navarretia	G4T2 S2	None None	Rare Plant Rank - 1B.1	50 1,320	64 S:15	1	2	0	0	5	7	11	4	10	3	2



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Northern Coastal Salt Marsh</i> Northern Coastal Salt Marsh	G3 S3.2	None None			53 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Northern Hardpan Vernal Pool</i> Northern Hardpan Vernal Pool	G3 S3.1	None None		60 135	126 S:5	3	0	1	0	1	0	5	0	4	1	0
<i>Northern Vernal Pool</i> Northern Vernal Pool	G2 S2.1	None None		73 1,400	20 S:6	0	1	0	0	0	5	6	0	6	0	0
<i>Penstemon newberryi var. sonomensis</i> Sonoma beardtongue	G4T3 S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive	2,600 2,600	15 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Plagiobothrys mollis var. vestitus</i> 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
<i>Pleuropogon hooverianus</i> North Coast semaphore grass	G2 S2	None Threatened	Rare Plant Rank - 1B.1 SB_BerrySB-Berry Seed Bank SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden	460 780	27 S:2	1	1	0	0	0	0	0	2	2	0	0
<i>Polygonum marinense</i> Marin knotweed	G2Q S2	None None	Rare Plant Rank - 3.1	5 5	32 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Potentilla uliginosa</i> Cunningham Marsh cinquefoil	GX SX	None None	Rare Plant Rank - 1A	150 150	1 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Rhynchospora alba</i> white beaked-rush	G5 S2	None None	Rare Plant Rank - 2B.2 IUCN_LC-Least Concern	200 200	11 S:1	0	1	0	0	0	0	1	0	1	0	0
<i>Rhynchospora californica</i> California beaked-rush	G1 S1	None None	Rare Plant Rank - 1B.1	150 150	9 S:3	0	0	0	0	1	2	3	0	2	0	1
<i>Rhynchospora capitellata</i> brownish beaked-rush	G5 S1	None None	Rare Plant Rank - 2B.2 IUCN_LC-Least Concern	150 150	25 S:2	0	0	1	0	1	0	1	1	1	1	0
<i>Rhynchospora globularis</i> round-headed beaked-rush	G4 S1	None None	Rare Plant Rank - 2B.1	150 150	2 S:2	0	0	0	0	1	1	2	0	1	1	0
<i>Sidalcea calycosa ssp. rhizomata</i> 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



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Sidalcea oregana ssp. valida</i> Kenwood Marsh checkerbloom	G5T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/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
<i>Streptanthus anomalus</i> Mount Burdell jewelflower	G1 S1	None None	Rare Plant Rank - 1B.1	235 535	2 S:2	0	0	0	0	0	2	0	2	2	0	0
<i>Trifolium amoenum</i> two-fork clover	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley SB_USDA-US Dept of Agriculture	160 300	26 S:6	0	0	0	0	0	6	6	0	6	0	0
<i>Trifolium buckwestiorum</i> Santa Cruz clover	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz SB_USDA-US Dept of Agriculture		64 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Trifolium hydrophilum</i> saline clover	G2 S2	None None	Rare Plant Rank - 1B.2	75 100	56 S:5	0	1	0	1	2	1	3	2	3	1	1
<i>Trifolium polyodon</i> 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
<i>Triquetrella californica</i> coastal triquetrella	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	328 328	13 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Valley Needlegrass Grassland</i> Valley Needlegrass Grassland	G3 S3.1	None None		835 1,200	45 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Viburnum ellipticum</i> 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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Query Criteria: Quad (Cotati (3812236) OR Two Rock (3812237) OR Petaluma (3812226) OR Petaluma River (3812225) OR Glen Ellen (3812235) OR Kenwood (3812245) OR Santa Rosa (3812246) OR Sebastopol (3812247)) AND Taxonomic Group (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Accipiter cooperii</i> Cooper's hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	133 133	118 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Agelaius tricolor</i> tricolored blackbird	G1G2 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	106 139	955 S:2	0	0	0	0	1	1	2	0	1	1	0
<i>Ambystoma californiense pop. 3</i> California tiger salamander - Sonoma County DPS	G2G3T2 S2	Endangered Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	50 475	82 S:82	10	25	24	5	4	14	16	66	78	3	1
<i>Ammodramus savannarum</i> 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
<i>Andrena blennospermatis</i> Blennosperma vernal pool andrenid bee	G2 S2	None None		90 130	15 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Antrozous pallidus</i> pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	80 730	420 S:7	0	2	0	1	2	2	6	1	5	1	1
<i>Aquila chrysaetos</i> golden eagle	G5 S3	None None	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected CDFW_WL-Watch List IUCN_LC-Least Concern	1,800 1,800	325 S:1	1	0	0	0	0	0	0	1	1	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Athene cunicularia</i> 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	2011 S:7	0	2	4	0	0	1	0	7	7	0	0
<i>Bombus caliginosus</i> obscure bumble bee	G2G3 S1S2	None None	IUCN_VU-Vulnerable	150 150	181 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Bombus crotchii</i> Crotch bumble bee	G2 S1S2	None None		300 300	437 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Bombus occidentalis</i> western bumble bee	G2G3 S1	None None	USFS_S-Sensitive	30 750	306 S:6	0	0	0	0	0	6	6	0	6	0	0
<i>Buteo regalis</i> ferruginous hawk	G4 S3S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	2,278 2,278	107 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Buteo swainsoni</i> Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	120 120	2547 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Caecidotea tomalensis</i> Tomales isopod	G2 S2S3	None None		1,640 2,120	6 S:2	1	0	0	0	0	1	2	0	2	0	0
<i>Calicina diminua</i> Marin blind harvestman	G1 S1	None None		150 150	1 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	G5T2T3 S1	Threatened Endangered	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive	90 600	165 S:2	0	0	0	0	1	1	2	0	1	1	0
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	G4 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	2	0	2	0	0



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<i>Coturnicops noveboracensis</i> 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	283 283	45 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Dicamptodon ensatus</i> California giant salamander	G2G3 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	350 2,185	234 S:9	4	2	0	0	0	3	1	8	9	0	0
<i>Elanus leucurus</i> white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	120 2,160	184 S:3	2	1	0	0	0	0	0	3	3	0	0
<i>Emys marmorata</i> western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	12 2,240	1404 S:41	6	12	15	6	0	2	17	24	41	0	0
<i>Eremophila alpestris actia</i> 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
<i>Erethizon dorsatum</i> North American porcupine	G5 S3	None None	IUCN_LC-Least Concern	163 163	523 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	G5T3 S3	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	0 9	112 S:3	2	0	0	0	0	1	1	2	3	0	0
<i>Hydrochara rickseckeri</i> 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
<i>Hydroporus leechi</i> 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
<i>Lasiurus blossevillii</i> western red bat	G4 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	67 67	128 S:1	0	0	0	0	0	1	0	1	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.
<i>Lasiurus cinereus</i> hoary bat	G3G4 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		238 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Laterallus jamaicensis coturniculus</i> California black rail	G3T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List	0 7	303 S:7	1	5	0	0	0	1	0	7	7	0	0
<i>Linderiella occidentalis</i> California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	90 1,693	508 S:7	0	1	0	0	0	6	5	2	7	0	0
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	G5T2 S2	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	0 9	41 S:5	2	1	0	0	0	2	2	3	5	0	0
<i>Myotis thysanodes</i> 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
<i>Myotis volans</i> long-legged myotis	G4G5 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
<i>Myotis yumanensis</i> 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
<i>Oncorhynchus kisutch pop. 4</i> coho salmon - central California coast ESU	G5T2Q S2	Endangered Endangered	AFS_EN-Endangered	445 445	23 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Oncorhynchus mykiss irideus pop. 8</i> steelhead - central California coast DPS	G5T2T3Q S2S3	Threatened None	AFS_TH-Threatened	260 400	44 S:4	1	2	0	1	0	0	1	3	4	0	0
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	G3 S3	None None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	1 1	15 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.
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	G3T1 S1	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List	3 18	99 S:6	1	4	0	0	0	1	0	6	6	0	0
<i>Rana boylei</i> foothill yellow-legged frog	G3 S3	None Endangered	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	21 2,100	2478 S:26	10	6	4	2	0	4	8	18	26	0	0
<i>Rana draytonii</i> California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	10 2,230	1671 S:41	7	19	12	0	0	3	5	36	41	0	0
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	G1G2 S1S2	Endangered Endangered	CDFW_FP-Fully Protected IUCN_EN-Endangered	3 8	144 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Riparia riparia</i> 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
<i>Syncaris pacifica</i> California freshwater shrimp	G2 S2	Endangered Endangered	IUCN_EN-Endangered	120 300	20 S:5	2	2	1	0	0	0	1	4	5	0	0
<i>Talanites ubicki</i> Ubick's gnaphosid spider	G1 S1	None None		150 150	1 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Taricha rivularis</i> red-bellied newt	G2 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
<i>Taxidea taxus</i> American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	24 2,200	594 S:11	1	4	2	2	0	2	2	9	11	0	0
<i>Tryonia imitator</i> 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

CNPS Rare Plant Inventory



Search Results

98 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3812236:3812237:3812227:3812226:3812225:3812235:3812245:3812246:3812247]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK
<i>Allium peninsulare</i> <i>var. franciscanum</i>	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May- Jun	None	None	G5T2	S2	1B.2
<i>Alopecurus aequalis</i> <i>var. sonomensis</i>	Sonoma alopecurus	Poaceae	perennial herb	May-Jul	FE	None	G5T1	S1	1B.1
<i>Amorpha californica</i> <i>var. napensis</i>	Napa false indigo	Fabaceae	perennial deciduous shrub	Apr-Jul	None	None	G4T2	S2	1B.2
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2
<i>Antirrhinum virga</i>	twig-like snapdragon	Plantaginaceae	perennial herb	Jun-Jul	None	None	G3?	S3?	4.3
<i>Arabis</i> <i>blepharophylla</i>	coast rockcress	Brassicaceae	perennial herb	Feb-May	None	None	G4	S4	4.3
<i>Arctostaphylos</i> <i>densiflora</i>	Vine Hill manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	None	CE	G1	S1	1B.1
<i>Arctostaphylos</i> <i>stanfordiana</i> ssp. <i>decumbens</i>	Rincon Ridge manzanita	Ericaceae	perennial evergreen shrub	Feb- Apr(May)	None	None	G3T1	S1	1B.1
<i>Astragalus claranus</i>	Clara Hunt's milk- vetch	Fabaceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2
<i>Balsamorhiza</i> <i>macrolepis</i>	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2
<i>Blennosperma bakeri</i>	Sonoma sunshine	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1
<i>Brodiaea leptandra</i>	narrow-anthered brodiaea	Themidaceae	perennial bulbiferous herb	May-Jul	None	None	G3?	S3?	1B.2
<i>Calamagrostis</i> <i>bolanderi</i>	Bolander's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	None	None	G4	S4	4.2
<i>Calamagrostis</i> <i>crassiglumis</i>	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	None	None	G3Q	S2	2B.1
<i>Calamagrostis</i> <i>ophitidis</i>	serpentine reed grass	Poaceae	perennial herb	Apr-Jul	None	None	G3	S3	4.3
<i>Calandrinia breweri</i>	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar- Jun	None	None	G4	S4	4.2
<i>Calochortus</i> <i>umbellatus</i>	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	None	None	G3?	S3?	4.2
<i>Calochortus uniflorus</i>	pink star-tulip	Liliaceae	perennial	Apr-Jun	None	None	G4	S4	4.2

bulbiferous herb

<i>Calystegia collina</i> <i>ssp. oxyphylla</i>	Mt. Saint Helena morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jun	None	None	G4T3	S3	4.2
<i>Campanula</i> <i>californica</i>	swamp harebell	Campanulaceae	perennial rhizomatous herb	Jun-Oct	None	None	G3	S3	1B.2
<i>Castilleja ambigua</i> <i>var. ambigua</i>	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G4T4	S3S4	4.2
<i>Castilleja uliginosa</i>	Pitkin Marsh paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun-Jul	None	CE	GXQ	SX	1A
<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Jun	None	None	G1	S1	1B.1
<i>Ceanothus divergens</i>	Calistoga ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr	None	None	G2	S2	1B.2
<i>Ceanothus foliosus</i> <i>var. vineatus</i>	Vine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Mar-May	None	None	G3T1	S1	1B.1
<i>Ceanothus gloriosus</i> <i>var. exaltatus</i>	glory brush	Rhamnaceae	perennial evergreen shrub	Mar- Jun(Aug)	None	None	G4T4	S4	4.3
<i>Ceanothus masonii</i>	Mason's ceanothus	Rhamnaceae	perennial evergreen shrub	Mar-Apr	None	CR	G1	S1	1B.2
<i>Ceanothus purpureus</i>	holly-leaved ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Jun	None	None	G2	S2	1B.2
<i>Ceanothus</i> <i>sonomensis</i>	Sonoma ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr	None	None	G2	S2	1B.2
<i>Centromadia parryi</i> <i>ssp. parryi</i>	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2
<i>Chloropyron</i> <i>maritimum</i> <i>ssp.</i> <i>palustre</i>	Point Reyes salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	None	None	G4?T2	S2	1B.2
<i>Chloropyron molle</i> <i>ssp. molle</i>	soft salty bird's- beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Nov	FE	CR	G2T1	S1	1B.2
<i>Chorizanthe valida</i>	Sonoma spineflower	Polygonaceae	annual herb	Jun-Aug	FE	CE	G1	S1	1B.1
<i>Cirsium andrewsii</i>	Franciscan thistle	Asteraceae	perennial herb	Mar-Jul	None	None	G3	S3	1B.2
<i>Clarkia breweri</i>	Brewer's clarkia	Onagraceae	annual herb	Apr-Jun	None	None	G4	S4	4.2
<i>Clarkia imbricata</i>	Vine Hill clarkia	Onagraceae	annual herb	Jun-Aug	FE	CE	G1	S1	1B.1
<i>Cordylanthus tenuis</i> <i>ssp. brunneus</i>	serpentine bird's- beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug	None	None	G4G5T3	S3	4.3
<i>Cuscuta obtusiflora</i> <i>var. glandulosa</i>	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	None	None	G5T4?	SH	2B.2
<i>Delphinium bakeri</i>	Baker's larkspur	Ranunculaceae	perennial herb	Mar-May	FE	CE	G1	S1	1B.1
<i>Delphinium luteum</i>	golden larkspur	Ranunculaceae	perennial herb	Mar-May	FE	CR	G1	S1	1B.1
<i>Downingia pusilla</i>	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2
<i>Eleocharis parvula</i>	small spikerush	Cyperaceae	perennial herb	(Apr)Jun- Aug(Sep)	None	None	G5	S3	4.3

<u><i>Elymus californicus</i></u>	California bottle-brush grass	Poaceae	perennial herb	May-Aug(Nov)	None	None	G4	S4	4.3
<u><i>Erigeron biolettii</i></u>	streamside daisy	Asteraceae	perennial herb	Jun-Oct	None	None	G3?	S3?	3
<u><i>Eriogonum luteolum</i></u> <u>var. <i>caninum</i></u>	Tiburon buckwheat	Polygonaceae	annual herb	May-Sep	None	None	G5T2	S2	1B.2
<u><i>Eriophorum gracile</i></u>	slender cottongrass	Cyperaceae	perennial rhizomatous herb (emergent)	May-Sep	None	None	G5	S4	4.3
<u><i>Fritillaria lanceolata</i></u> <u>var. <i>tristulis</i></u>	Marin checker lily	Liliaceae	perennial bulbiferous herb	Feb-May	None	None	G5T2	S2	1B.1
<u><i>Fritillaria liliacea</i></u>	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2
<u><i>Gilia capitata</i></u> ssp. <u><i>tomentosa</i></u>	woolly-headed gilia	Polemoniaceae	annual herb	May-Jul	None	None	G5T2	S2	1B.1
<u><i>Harmonia nutans</i></u>	nodding harmonia	Asteraceae	annual herb	Mar-May	None	None	G3	S3	4.3
<u><i>Hemizonia congesta</i></u> <u>ssp. <i>congesta</i></u>	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	None	None	G5T2	S2	1B.2
<u><i>Hesperolinon congestum</i></u>	Marin western flax	Linaceae	annual herb	Apr-Jul	FT	CT	G1	S1	1B.1
<u><i>Horkelia tenuiloba</i></u>	thin-lobed horkelia	Rosaceae	perennial herb	May-Jul(Aug)	None	None	G2	S2	1B.2
<u><i>Hosackia gracilis</i></u>	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2
<u><i>Iris longipetala</i></u>	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May(Jun)	None	None	G3	S3	4.2
<u><i>Lasthenia burkei</i></u>	Burke's goldfields	Asteraceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1
<u><i>Lasthenia californica</i></u> <u>ssp. <i>bakeri</i></u>	Baker's goldfields	Asteraceae	perennial herb	Apr-Oct	None	None	G3T1	S1	1B.2
<u><i>Lasthenia conjugens</i></u>	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	FE	None	G1	S1	1B.1
<u><i>Layia septentrionalis</i></u>	Colusa layia	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.2
<u><i>Legenere limosa</i></u>	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1
<u><i>Leptosiphon acicularis</i></u>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2
<u><i>Leptosiphon jepsonii</i></u>	Jepson's leptosiphon	Polemoniaceae	annual herb	Mar-May	None	None	G2G3	S2S3	1B.2
<u><i>Leptosiphon latisectus</i></u>	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3
<u><i>Lessingia hololeuca</i></u>	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3
<u><i>Lilium pardalinum</i></u> <u>ssp. <i>pitkinense</i></u>	Pitkin Marsh lily	Liliaceae	perennial bulbiferous herb	Jun-Jul	FE	CE	G5T1	S1	1B.1
<u><i>Lilium rubescens</i></u>	redwood lily	Liliaceae	perennial bulbiferous herb	Apr-Aug(Sep)	None	None	G3	S3	4.2
<u><i>Limnanthes vinculans</i></u>	Sebastopol meadowfoam	Limnanthaceae	annual herb	Apr-May	FE	CE	G1	S1	1B.1
<u><i>Lomatium repostum</i></u>	Napa lomatium	Apiaceae	perennial herb	Mar-Jun	None	None	G2G3	S2S3	1B.2

<u>Micropus amphibolus</u>	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	None	None	G3G4	S3S4	3.2
<u>Microseris paludosa</u>	marsh microseris	Asteraceae	perennial herb	Apr-Jun(Jul)	None	None	G2	S2	1B.2
<u>Monardella viridis</u>	green monardella	Lamiaceae	perennial rhizomatous herb	Jun-Sep	None	None	G3	S3	4.3
<u>Navarretia cotulifolia</u>	cotula navarretia	Polemoniaceae	annual herb	May-Jun	None	None	G4	S4	4.2
<u>Navarretia heterandra</u>	Tehama navarretia	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3
<u>Navarretia leucocephala ssp. bakeri</u>	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G4T2	S2	1B.1
<u>Penstemon newberryi var. sonomensis</u>	Sonoma beardtongue	Plantaginaceae	perennial herb	Apr-Aug	None	None	G4T3	S3	1B.3
<u>Perideridia gairdneri ssp. gairdneri</u>	Gairdner's yampah	Apiaceae	perennial herb	Jun-Oct	None	None	G5T3T4	S3S4	4.2
<u>Plagiobothrys mollis var. vestitus</u>	Petaluma popcornflower	Boraginaceae	perennial herb	Jun-Jul	None	None	G4?TX	SX	1A
<u>Pleuropogon hooverianus</u>	North Coast semaphore grass	Poaceae	perennial rhizomatous herb	Apr-Jun	None	CT	G2	S2	1B.1
<u>Pleuropogon refractus</u>	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Mar)Apr- Aug	None	None	G4	S4	4.2
<u>Polygonum marinense</u>	Marin knotweed	Polygonaceae	annual herb	(Apr)May- Aug(Oct)	None	None	G2Q	S2	3.1
<u>Potentilla uliginosa</u>	Cunningham Marsh cinquefoil	Rosaceae	perennial herb	May-Aug	None	None	GX	SX	1A
<u>Ranunculus lobbii</u>	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2
<u>Rhynchospora alba</u>	white beaked-rush	Cyperaceae	perennial rhizomatous herb	Jun-Aug	None	None	G5	S2	2B.2
<u>Rhynchospora californica</u>	California beaked- rush	Cyperaceae	perennial rhizomatous herb	May-Jul	None	None	G1	S1	1B.1
<u>Rhynchospora capitellata</u>	brownish beaked- rush	Cyperaceae	perennial herb	Jul-Aug	None	None	G5	S1	2B.2
<u>Rhynchospora globularis</u>	round-headed beaked-rush	Cyperaceae	perennial rhizomatous herb	Jul-Aug	None	None	G4	S1	2B.1
<u>Sidalcea calycosa ssp. rhizomata</u>	Point Reyes checkerbloom	Malvaceae	perennial rhizomatous herb	Apr-Sep	None	None	G5T2	S2	1B.2
<u>Sidalcea oregana ssp. valida</u>	Kenwood Marsh checkerbloom	Malvaceae	perennial rhizomatous herb	Jun-Sep	FE	CE	G5T1	S1	1B.1
<u>Streptanthus anomalus</u>	Mount Burdell jewelflower	Brassicaceae	annual herb	May-Jun	None	None	G1	S1	1B.1
<u>Trichostema ruygtii</u>	Napa bluecurls	Lamiaceae	annual herb	Jun-Oct	None	None	G1G2	S1S2	1B.2
<u>Trifolium amoenum</u>	two-fork clover	Fabaceae	annual herb	Apr-Jun	FE	None	G1	S1	1B.1
<u>Trifolium buckwestiorum</u>	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.1
<u>Trifolium</u>	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2

hydrophilum

<u><i>Trifolium polyodon</i></u>	Pacific Grove clover	Fabaceae	annual herb	Apr-Jun(Jul)	None	CR	G1	S1	1B.1
<u><i>Triquetrella californica</i></u>	coastal triquetrella	Pottiaceae	moss		None	None	G2	S2	1B.2
<u><i>Triteleia lugens</i></u>	dark-mouthed triteleia	Themidaceae	perennial bulbiferous herb	Apr-Jun	None	None	G4?	S4?	4.3
<u><i>Viburnum ellipticum</i></u>	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	None	None	G4G5	S3?	2B.3

Showing 1 to 98 of 98 entries

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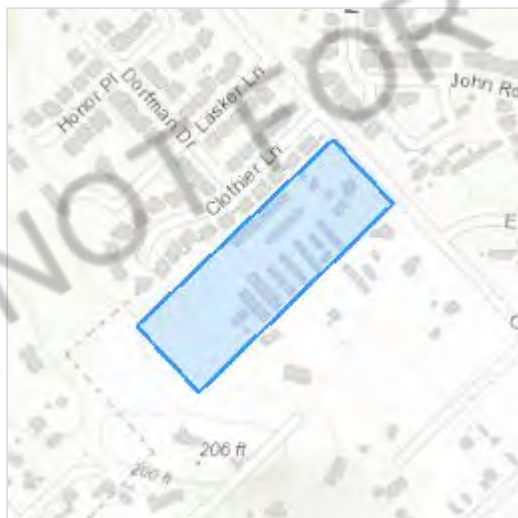
IPaC resource list

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

Sonoma County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

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

NOT FOR CONSULTATION

Endangered species

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

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

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

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

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

Listed species¹ 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 Fisheries²).

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

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

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

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

Birds

NAME	STATUS
<p>Northern Spotted Owl <i>Strix occidentalis caurina</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. The location of the critical habitat is not available.</p> <p>https://ecos.fws.gov/ecp/species/1123</p>	Threatened
<p>Yellow-billed Cuckoo <i>Coccyzus americanus</i></p> <p>There is final critical habitat for this species. The location of the critical habitat is not available.</p> <p>https://ecos.fws.gov/ecp/species/3911</p>	Threatened

Reptiles

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

Amphibians

NAME	STATUS
<p>California Red-legged Frog <i>Rana draytonii</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. The location of the critical habitat is not available.</p> <p>https://ecos.fws.gov/ecp/species/2891</p>	Threatened
<p>California Tiger Salamander <i>Ambystoma californiense</i></p> <p>There is final critical habitat for this species. Your location overlaps the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/2076</p>	Endangered

Insects

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

Crustaceans

NAME	STATUS
California Freshwater Shrimp <i>Syncaris pacifica</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7903	Endangered

Flowering Plants

NAME	STATUS
Burke's Goldfields <i>Lasthenia burkei</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4338	Endangered
Sebastopol Meadowfoam <i>Limnanthes vinculans</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/404	Endangered
Showy Indian Clover <i>Trifolium amoenum</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6459	Endangered
Sonoma Alopecurus <i>Alopecurus aequalis</i> var. <i>sonomensis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/557	Endangered
Sonoma Sunshine <i>Blennosperma bakeri</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1260	Endangered

Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME	TYPE
California Tiger Salamander <i>Ambystoma californiense</i> https://ecos.fws.gov/ecp/species/2076#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

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

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

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

list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

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

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

Clark's Grebe *Aechmophorus clarkii*

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

Breeds Jun 1 to Aug 31

Common Yellowthroat *Geothlypis trichas sinuosa*

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>

Breeds May 20 to Jul 31

Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Tricolored Blackbird <i>Agelaius tricolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

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 (I)

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.

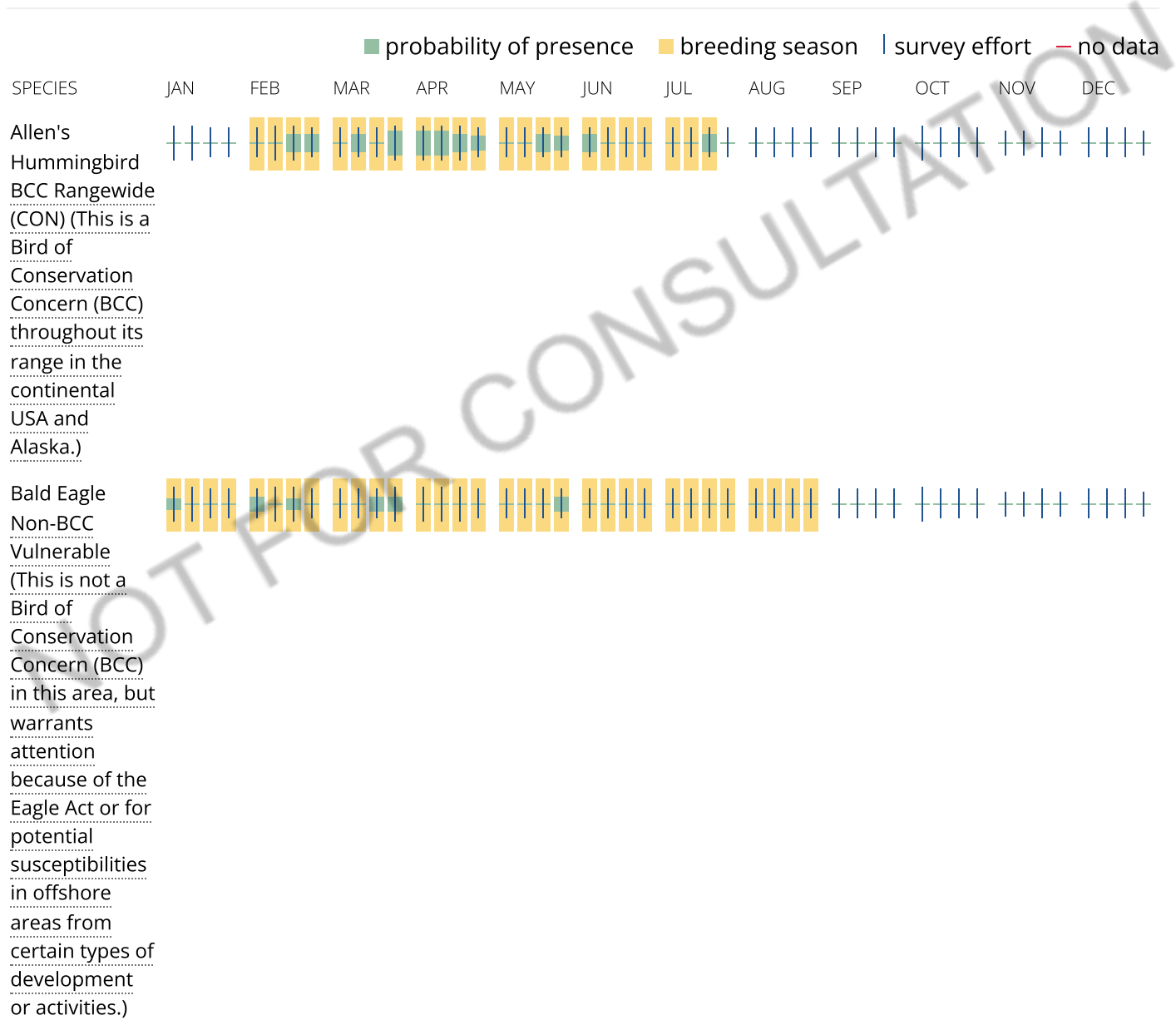
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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.



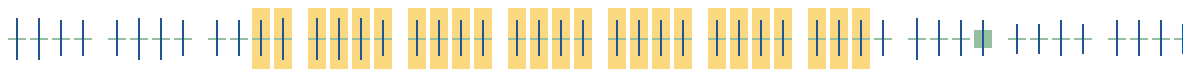
Clark's Grebe
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental
USA and
Alaska.)

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.)

NOT FOR CONSULTATION

Lawrence's
 Goldfinch
 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.)



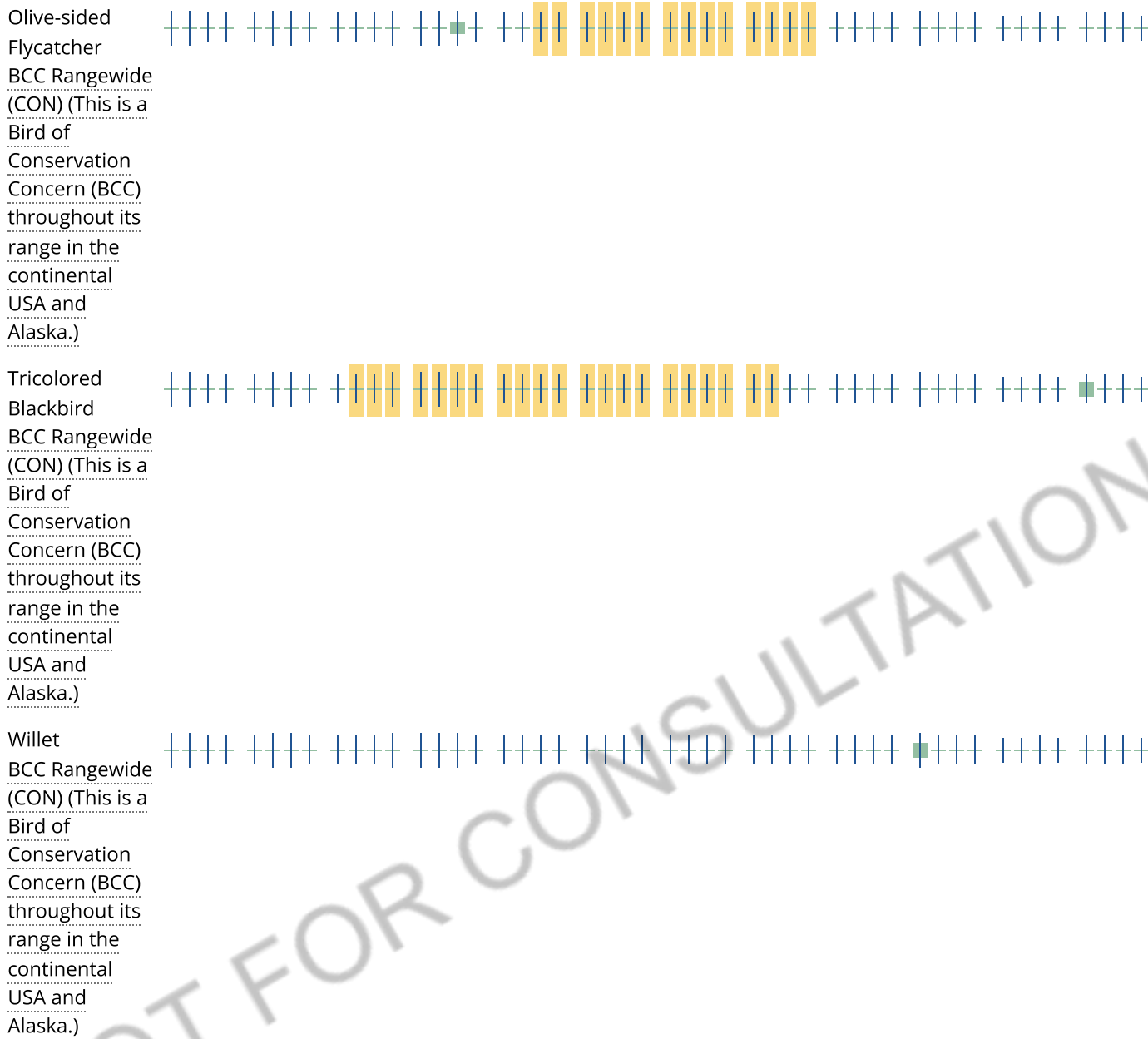
Nuttall's
 Woodpecker
 BCC - BCR (This
 is a Bird of
 Conservation
 Concern (BCC)
 only in
 particular Bird
 Conservation
 Regions (BCRs)
 in the
 continental
 USA)



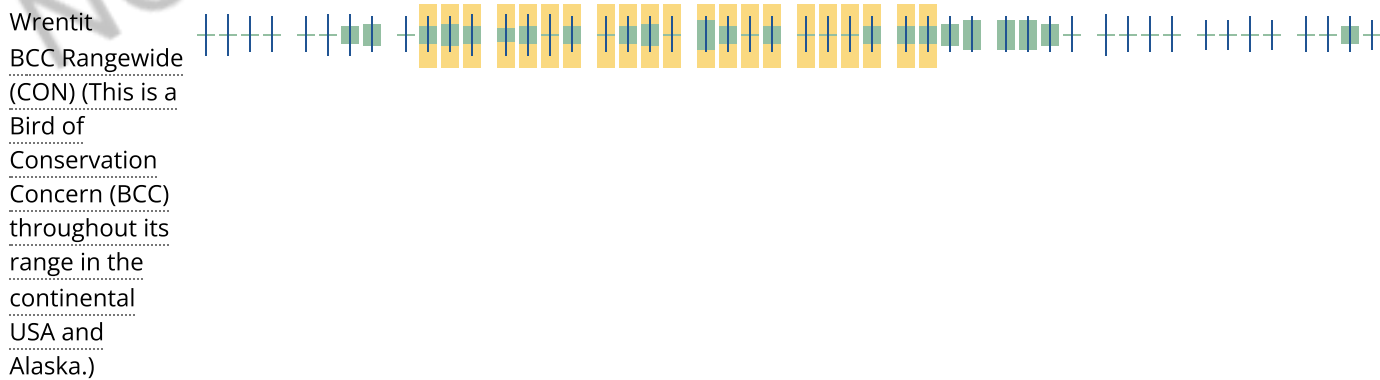
Oak Titmouse
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)



NOT FOR CONSULTATION



SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC



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

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

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

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

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

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

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

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

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to 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.

Coastal Barrier Resources System

Projects within the [John H. Chafee Coastal Barrier Resources System](#) (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local [Ecological Services Field Office](#) or visit the [CBRA Consultations website](#). The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the [official CBRS maps](#). The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

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

Data limitations

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

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

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

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid 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.

NOT FOR CONSULTATION

APPENDIX E

PRELIMINARY JURISDICTIONAL DETERMINATION




U.S. Army Corps
of Engineers
San Francisco District
Regulatory Division

Preliminary Jurisdictional Determination,
Pursuant to Section 404 Clean Water Act

8841 Old Redwood Highway
Cotati, Sonoma County, California

(APN: 046-223-018-000)

 Study Area Boundary
Accurate as depicted in legend

File ID. 2021-00343

Date: December 27, 2021

Sheet 1 of 1



Figure 3r. Site Detail (revised 12/27/21)

8841 Old Redwood Highway, Cotati, Calif.

NORTH



Source/Prepared by:
C. Patterson; Dec., 2021

Applicant: Pink Viking
ORH LLC, Santa Rosa, CA

Sonoma County
A. P. Number
046-223-018-000

Basemap: 2018 GoogleEarth air photo
No Scale

Approx. 7.12 ac

Request For JD/PJD