



## **BIOLOGICAL RESOURCES EVALUATION REPORT**

**921 Miramontes Street Project  
Half Moon Bay, CA**

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## 1.0 INTRODUCTION

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In accordance with the requirements of Half Moon Bay Municipal Zoning Code Chapter 18.38 and the California Coastal Act, the purpose of the assessment is to identify coastal biological resources, including riparian corridors and coastal wetlands on or within 200 feet of APN 056-260-060 at 921 Miramontes Street, Half Moon Bay, California (Project Study Area) that may be present and/or subject to potential direct or indirect effects as a result of the proposed plans to create new farm labor housing. We understand the project would involve demolishing two existing water tanks and their associated infrastructure to construct a new single-family residence and accessory dwelling unit (ADU) or similar and their associated appurtenances.

The Project Study Area is located within the City of Half Moon Bay and contains two water tanks, a parking area, an agricultural vehicle storage shed and ornamental landscaping. The surrounding area consists primarily of agriculture to the east and residential housing to the west. Arroyo Leon creek runs northward directly west of the Project Study Area. The parcel is zoned as “A-1 Exclusive Floriculture.” Adjacent parcels to the north and east are also zoned as “A-1 Exclusive Floriculture,” while parcels to the south are zoned as “OS-R Open Space Reserve,” parcels to the west are zoned as “R-1-B-2 Single Family Residential (7,500 sq.' lot)” and parcels to the northwest are zoned as “OS-C Open Space Conservation.”

## 2.0 METHODS

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On October 16, 2024, Sol Ecology biologists conducted a biological resources study within 200 feet of the Project Study Area (Project Study Area; Appendix A, Figure 1). 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 study area and vicinity. Sol Ecology biologists reviewed the following:

- Half Moon Bay Local Coastal Program (LCP), Chapter 6: Natural Resources (Huffman-Broadway 2020)
- California Native Plant Society’s (CNPS’s) A Manual of California Vegetation Online Edition (CNPS 2018)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory, Wetlands Mapper (USFWS 2024)
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey for San Mateo County (USDA 2024)
- CNPS’s Inventory of Rare and Endangered Plants of California search for U.S. Geological Survey (USGS) 7.5-minute Half Moon Bay quadrangle and five adjacent quadrangles (CNPS 2024)
- California Natural Diversity Database (CNDDB) search for USGS 7.5-minute Half Moon Bay quadrangle and five adjacent quadrangles (CDFW 2024)
- USFWS Information for Planning and Conservation (IPaC) Species Lists (USFWS 2024; 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)

Sol Ecology biologists performed biological study and reconnaissance-level surveys for Environmentally Sensitive Habitat Areas (ESHA) within the Project Study Area. The LCP defines ESHA as any areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments (Huffman-Broadway 2020). In addition, the surveys focused on determining whether suitable habitat elements for special status species (including those listed in the LCP) documented in the surrounding vicinity are present within 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.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on the best professional judgment of Sol Ecology biologists with experience working with the species and habitats. If a special-status species is observed during the site visit, its presence is recorded and discussed. For some threatened and endangered species, a site survey at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies.

The Project Study Area was surveyed to determine if any wetlands and waters are present. Coastal wetlands are defined as an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground (also known as hydrophytic) (Huffman-Broadway 2020; USFWS 1993). The preliminary assessment of wetland waters was based on the presence/absence of indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. A preliminary waters assessment was based on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high-water mark or a defined drainage course. The wetland/waters assessment was performed in accordance with the U.S. Army Corps of Engineers (USACE) 3-parameter approach based on the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (USACE 2010). A preliminary wetlands and waters assessment was performed in lieu of a formal wetlands delineation. All wetlands exhibiting at least one parameter were identified and mapped.

Location data was collected using a “Bad Elf – Flex” Global Positioning System (GPS) Receiver with sub-meter accuracy. However, due to the dense riparian canopy interrupting GPS signal,

collecting data with acceptable levels of accuracy was difficult. Where accurate data could not be obtained, aerial imagery from multiple sources and publicly available data was analyzed and used for mapping biological resources.

### 3.0 RESULTS

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The Project Study Area is within the City of Half Moon Bay in an area between medium density housing developments and agricultural fields. Vegetation throughout much of the Project Study Area has been disturbed and replaced with hardscape and the ornamental African lily (*Agapanthus praecox*). Bordering the Project Study Area to the west is Arroyo Leon creek and its associated riparian vegetation. Vegetation outside the riparian habitat within the Project Study Area is dominated primarily by ruderal species as described below. Elevation of the site ranges from 17 to 20 meters. Photographs of the Project Study Area are included in Appendix B, and lists of observed plant and wildlife species during the field investigation are included in Appendix C.

#### *Soils*

Soils present on the Project Study Area are comprised of Botella loam, sloping, eroded; and gullied land (alluvial soil material). Minor components of Botella loam include unnamed (5%), Soquel (5%), and Dublin (5%). Minor components of Gullied land (alluvial soil material) include Unnamed (5%), Botella (4%), Soquel (3%), and Farallone (3%). Neither of these soil types are rated as hydric.

#### *Hydrology*

Coastal wetland indicators were absent from the site at the time of the assessment. Arroyo Leon is a perennial stream, which flows into Pilarcitos Creek less than 200 feet to the north, before continuing to the ocean. The stream top of bank was measured in the field approximately 90 feet to the west of the proposed development site as shown in Appendix A, Figure 2. Hydrology sources within the Project Study Area include direct precipitation and sheet flow. Hardscaped driveway, an agricultural building/storage shed, and ornamental vegetation make up the setback area between the creek and the proposed project footprint.

#### *Vegetation*

##### Ruderal / Developed

The majority of the Project Study Area consists of compacted gravel hardscape that currently exists as an access road and parking area and houses a large agricultural building/storage shed and two water tanks. A landscaped area runs north to south between the parking area and the building, which is planted as essentially a monoculture composed entirely of the non-native, ornamental African lily (*Agapanthus praecox*). Separating the African lily plantings from the parking area is a narrow strip of turf dominated by non-native grasses and forbs such as Bermuda grass (*Cynodon dactylon*), dandelion (*Taraxacum officinale*), common groundsel (*Senecio*

*vulgaris*) and sow thistle (*Sonchus oleraceus*). A compacted area is present around the water tanks, which was similarly dominated by variably shade-tolerant and mesophytic non-native forbs, including hairy bitter cress (*Cardamine hirsuta*), Shepherd's purse (*Capsella bursa-pastoris*), purple sand spurry (*Spergularia rubra*), prostrate knotweed (*Polygonum aviculare*) and common purslane (*Portulaca oleracea*). Along the eastern margins of the Project Study Area, several landscaped non-native maple trees (*Acer* sp.) were planted adjacent to the parking area.

### Riparian Woodland

Riparian woodland occurs along the banks and eastern slopes above Arroyo Leon creek. The native California bay (*Umbellularia californica*) and red alder (*Alnus rubra*) form the tree canopy layer, with arroyo willow (*Salix lasiolepis*) dominating the shrub layer (although many mature, arborescent individuals are present as well). Other native shrubs and perennial woody plants occur along the top of bank and open margins of riparian woodland, including California bee plant (*Scrophularia californica*), California blackberry (*Rubus ursinus*), white nightshade (*Solanum Americanum*), stinging nettle (*Urtica holosericea*), mugwort (*Artemisia douglasiana*) and sneezeweed (*Helenium puberulum*). Non-native vines are also present in localized patches, represented primarily by English ivy (*Hedera helix*), cape ivy (*Delairea odorata*) and garden nasturtium (*Tropaeolum majus*).

### Special Status Species

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 with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species. CDFW Species of Special Concern, CDFW Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special-status Invertebrates are all considered special-status species. Furthermore, CDFG Fish and Game Code and the Migratory Bird Treaty Act (MBTA) prohibits the take of actively nesting birds as well as common bats and their roosts (CDFG Code only). Lastly, special status species in this report include all rare or unique species listed in the LCP.

Fifteen (15) special status plants and twelve (12) special status wildlife species have been documented within five miles of the Project Study Area (Appendix A, Figures 2 and 3 and Appendix D, Summary Table Report). Due to the highly disturbed nature of the Project Study Area, as well as lack of associated soils and appropriate ecological conditions, no special status plant species are likely to be present. Three special status avian species, Allen's hummingbird, San Francisco common yellowthroat, and yellow warbler, have the potential to occur in the Project Study Area; additionally, one special status amphibian, California red-legged frog, is unlikely to occur, but it's presence cannot be ruled out completely. Habitat for all four special status species is present only in Arroyo Leon creek and its associated riparian habitat.

Other species identified in the database review or in the Half Moon Bay LCP are not likely to occur on the Project Study Area due to the absence of suitable habitat elements or vegetation communities including forest or woodland, valley and foothill grassland, chaparral, coastal scrub, meadows and seeps, and marshes and swamps. The riparian woodland along Arroyo Leon immediately adjacent to the Project Study Area does have the potential to support nesting birds protected under the MBTA and CDFG Code. However, the Project Study Area's overall disturbed nature likely precludes most native flora and fauna.

The stretch of Arroyo Leon immediately adjacent to the Project Study Area may potentially serve as dispersal habitat for three federal and/or state listed species, central coast steelhead (*Oncorhynchus mykiss irideus*), California red-legged frog (*Rana draytonii*), and San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), as well as San Francisco dusky footed woodrat (*Neotoma fuscipes annectens*), a special status mammal. However, the area within the project footprint is entirely devoid of suitable upland habitat for all 5 of these species. Monarch butterfly, a federal candidate species, is frequently found in riparian habitats along the coast; however, proximity to dense residential development and intensive agriculture make the riparian habitat immediately adjacent to the Project Study Area generally unsuitable for Monarch to overwinter in. The on-site storage shed and several trees within the riparian corridor provide potential habitat for several bat species, namely California myotis, which is not a special status species. However, while common bat roosts are protected under California Fish and Game Code, impacts to bat roost habitat in the Project Study Area are not expected as a result of the proposed project. Special status species which may be affected by the proposed project are discussed below.

**California Red-legged Frog (*Rana draytonii*), Federal Threatened Species, CDFW Species of Special Concern.** The California red-legged frog (CRLF) is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, CRLF disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. Following breeding during the wet season, adult frogs may disperse into upland habitats which include areas up to 300 feet from aquatic and riparian habitat and are comprised of grasslands, woodlands, and/or vegetation that provide shelter, forage, and predator avoidance. At the end of the wet season, CRLF may disperse up to one-mile overland from upland or breeding habitats (often via riparian corridors) to aquatic non-breeding habitats (Bulger 2003, Fellers and Kleeman 2007).

CRLF is known to disperse into upland habitats where available refugia is present. Given the largely disturbed nature of the site and lack of available refugia (e.g., burrows, downed logs, dense woody vegetation) between Arroyo Leon creek and nearby suitable habitat, this species is not likely to be present nor affected by proposed activities at the site, though its presence cannot be ruled out. The large bed of *Agapanthus* may potentially serve as cover for CRLF during dispersal events due to the proximity of documented CRLF occurrences and proximity to suitable habitat in Arroyo Leon, and water leaking from the tanks may attract it to this area. However,

absence of foraging habitat and/or long-term refugia indicates the proposed project would not likely adversely affect this species with implementation of avoidance measures.

**Allen's Hummingbird (*Selasphorus sasin*), USFWS Bird of Conservation Concern.** Allen's hummingbird, common in many portions of its range, is a summer resident along the majority of California's coast and a year-round resident in portions of southern coastal California and the Channel Islands. Breeding occurs in association with the coastal fog belt, and typical habitats used include coastal scrub, riparian, woodland and forest edges, and eucalyptus and cypress groves (Clark and Mitchell 2000). It feeds on nectar, as well as insects and spiders.

Suitable nesting habitat for Allen's hummingbird as well as nectar producing flowers are located within riparian vegetation along Arroyo Leon. If nesting Allen's hummingbirds are present near the Project Study Area during loud project activities, then the project has the potential to indirectly impact the species resulting in reduced nesting success or nest abandonment. Pre-construction nesting bird surveys and implementation of avoidance buffers will ensure the project does not impact Allen's hummingbird.

**San Francisco Common Yellowthroat (*Geothlypis trichas sinuosa*), USFWS Bird of Conservation Concern, CDFW Species of Special Concern.** This subspecies of the common yellowthroat is found in freshwater marshes, coastal swales, riparian thickets, brackish marshes, and saltwater marshes. Their breeding range extends from Tomales Bay in the north, Carquinez Strait to the east, and Santa Cruz County to the south. This species requires thick, continuous cover such as tall grasses, tule patches, or riparian vegetation down to the water surface for foraging and prefers willows for nesting (Shuford and Gardali 2008).

No nesting habitat for this species is located within the project footprint, though marginal nesting habitat for San Francisco common yellowthroat is located within riparian vegetation along Arroyo Leon. Proximity to loud construction activities may indirectly impact nesting birds if present, resulting in reduced nesting success or nest abandonment. Pre-construction nesting bird surveys and implementation of avoidance buffers will ensure the project does not impact San Francisco common yellowthroat.

**Yellow Warbler (*Dendroica petechia*), CDFW Species of Special Concern.** The yellow warbler is a neotropical migrant bird that is widespread in North America but has declined throughout much of its California breeding range. West of the Central Valley, typical yellow warbler breeding habitat consists of dense riparian vegetation along watercourses, including wet meadows, with willow growth especially being favored (Shuford and Gardali 2008). Insects comprise the majority of the diet.

No nesting habitat for this species is located within the project footprint, though suitable nesting habitat for yellow warbler is located within riparian vegetation along Arroyo Leon. Proximity to loud construction activities may indirectly impact nesting birds if present, resulting in reduced nesting success or nest abandonment. Pre-construction nesting bird surveys and implementation of avoidance buffers will ensure the project does not impact yellow warbler.

#### 4.0 IMPACTS DISCUSSION AND RECOMMENDATIONS

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The proposed project would involve demolishing two existing water tanks and their associated infrastructure to construct a new single-family residence and accessory dwelling unit (ADU) or similar and their associated appurtenances.

Two sensitive habitat areas or ESHA were identified during the October 16, 2024, biological resources evaluation: Arroyo Leon creek and its associated riparian woodland habitat. A portion of the proposed project footprint is located within 100 feet of the top of bank of Arroyo Leon; as such it is within the riparian buffer per LCLUP Biological Resource Policy 6-49(a), though it is more than 50 feet away from the outer tree dripline and is separated by existing compacted gravel driveway, a large agricultural building/storage shed, and ornamental plants. Given the entire project footprint has been previously disturbed and development is present, no new adverse impacts to Arroyo Leon are expected to occur. As such, a reduced buffer of 50 feet from the top of bank would likely provide equivalent protection of the biological integrity of the riparian corridor buffer per LCLUP Biological Resource Policy 6-50(b)-i. Additional best management practices are provided below to ensure no impacts to ESHA occur during the construction of the project.

Additionally, three (3) special status avian species and one (1) special status amphibian may be present in the Project Study Area. Allen's hummingbird, saltmarsh yellow throat, yellow warbler, and other migratory birds may nest in surrounding habitats, and if present, could be adversely affected during the nesting season. While CRLF movements are likely to be restricted to the riparian corridor, CRLF may make overland movements during periods of wet weather into ornamental landscaped areas. Given existing site disturbance, the proposed Project is not likely to adversely affect ESHA with implementation of measures and would not likely result in incidental take or mortality to any listed species such as CRLF given the relatively low likelihood of occurrence outside of Arroyo Leon creek and its associated habitat. Avoidance and minimization measures are also prescribed below to ensure no adverse effects occur, if present during proposed construction.

**AMM-1. Best Management Practices** shall be deployed to protect sensitive stream and riparian habitats from accidental discharge of any materials during construction near these areas. Stockpiling of materials, including portable equipment, vehicles and supplies (e.g., chemicals), will be restricted to the designated construction staging areas, exclusive of any riparian and/or ponded areas; refueling of any vehicles or equipment should be done at least 150 feet away from any aquatic habitats. Other general best management practices include:

- a. Check heavy equipment daily for leaks. Do not use equipment until leak is fixed.
- b. No work during wet weather or where saturated ground conditions exist; if a 60% chance of a one-half inch of rain or more within a 24-hour period is forecasted, then the site shall be treated with erosion control measures and construction operations will cease until 24 hours after rain has ceased.

- c. All food scraps, paper wrappers, food containers, cans, bottles, and other trash will be deposited in covered or closed trash containers. The trash containers will be removed from the Project site at the end of each working day.
- d. In areas expected or forecasted to get rainfall during the construction season, effective erosion control measures shall be in place at all times during construction activities. Erosion control structures shall be maintained throughout, and possibly after, construction activities. Sediment shall be removed from sediment controls once it has reached one-third of the exposed height of the control. Whenever straw bales are used, they shall be staked and dug into the ground 12 centimeters (cm).
- e. Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting) rolled erosion control products, or similar material should not be used. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
- f. All construction equipment will be maintained to prevent leaks of fuel, lubricants, or other fluids.

**AMM-2. Delineate Sensitive Habitats:** All sensitive habitats to be avoided (e.g., riparian, sensitive plant occurrences, setback areas) should be demarcated with high-visibility flagging within 200 feet of proposed activities.

**AMM-3. Worker Environmental Awareness Program (WEAP):** Prior to the start of work, environmental awareness training should be provided to all construction crew. Training will include a description of all biological resources that may be found on or near the Project Study Area, the laws and regulations that protect those resources, the consequences of non-compliance with those laws and regulations, instructions for inspecting equipment each morning prior to activities, and a contact person if protected biological resources are discovered on the Project Study Area.

**AMM-4. Wildlife Exclusion Fencing (WEF):** At least 14 days prior to the commencement of construction-related activities, CRLF exclusion fencing with exit funnels shall be installed between the riparian corridor and the Project footprint under the direction of a qualified biologist. Following installation, the fence should be inspected weekly by trained construction personnel to monitor and maintain the fence throughout the duration of the Project's ground-disturbing activities.

**AMM-5. Pre-Construction Wildlife Surveys:** Pre-construction surveys for CRLF shall be conducted prior to initiation of project activities within 48 hours of the start of ground disturbance activities. After the Wildlife Exclusion Fence has been properly erected, scoping of any burrows on the site to ascertain the absence of CRLF is recommended in lieu of daily biological monitoring. Surveys are to be conducted by a qualified biologist. If CRLF is detected

during the survey, the animal should be allowed to leave the area on its own accord before work commences.

**AMM-6. Amphibian Work Windows:** No work shall be performed during or within 48 hours of any rain event (greater than 0.25 inches) between October 15 and April 15 when CRLF is most likely to disperse between habitats. No work shall occur within 30 minutes of sunrise or sunset.

**AMM-7. Nesting Bird Seasonal Work Window or Surveys:** Construction-related activities (including grubbing or ground disturbance) should be initiated during the non-nesting season from September 1 to January 31 to the extent feasible. If work cannot be initiated during this period, then nesting bird surveys should be performed in suitable nesting habitat within 250 feet of the project footprint prior to the start of activities.

If nests are found, a no-disturbance buffer should be placed around the nest until young have fledged or the nest is determined to be no longer active by the biologist. The size of the buffer may be determined by the biologist based on species and proximity to activities but should generally be between 50 feet for songbirds and up to 250 feet for nesting raptors. Surveys are generally valid for 7 to 10 days and should be repeated if there is a lapse in construction-related activities for greater than 7 days during the nesting season.

## 5.0 REFERENCES

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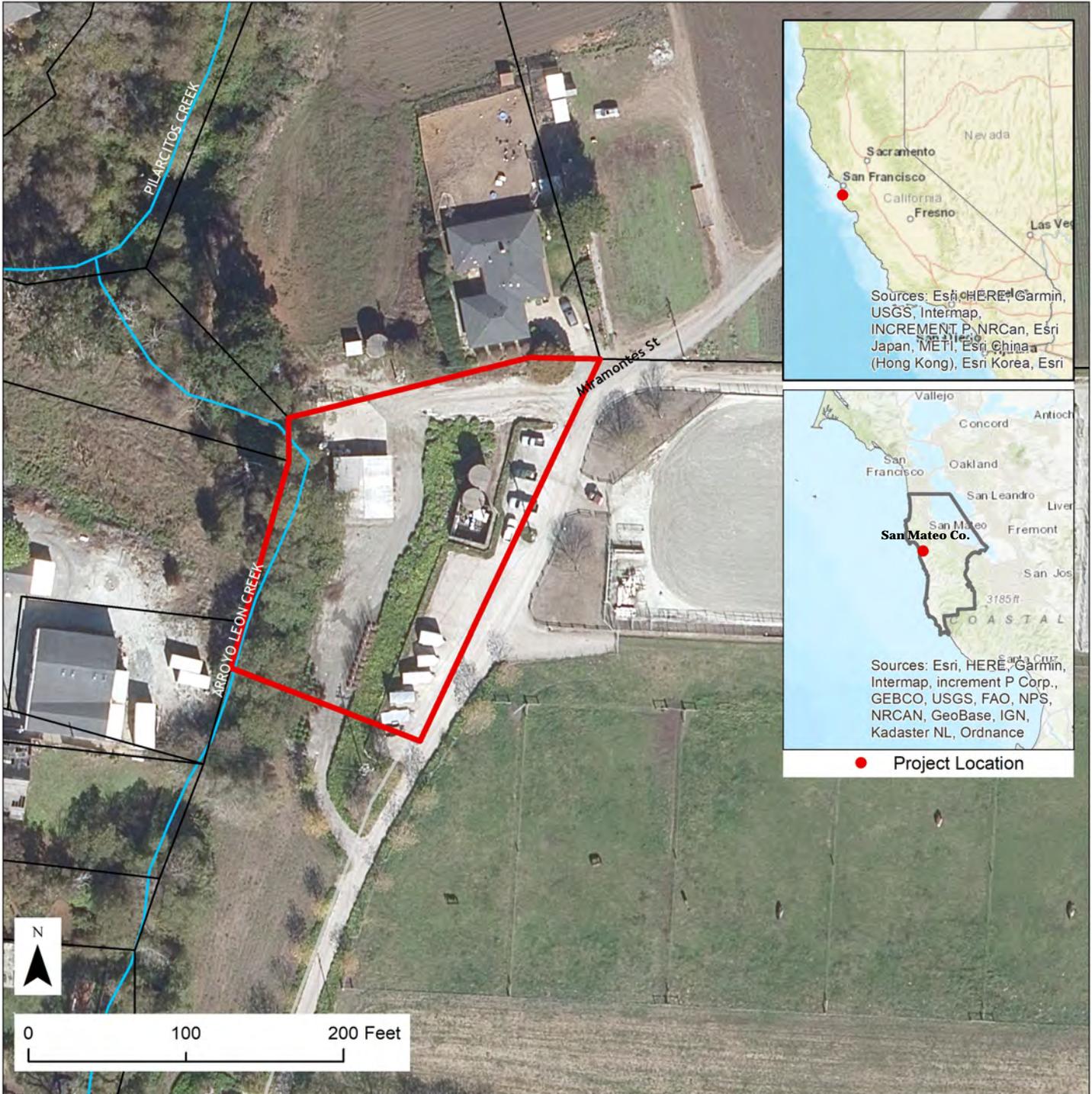
## APPENDIX A

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### PROJECT FIGURES

# Figure 1: Location of Project Area

921 Miramontes Street, Half Moon Bay, San Mateo County, CA (APN 056-260-060)



- Project Study Area
- Parcels
- Streets
- Streams

## Figure 2. Sensitive Communities and Standard Setbacks)

921 Miramontes St., Half Moon Bay, CA

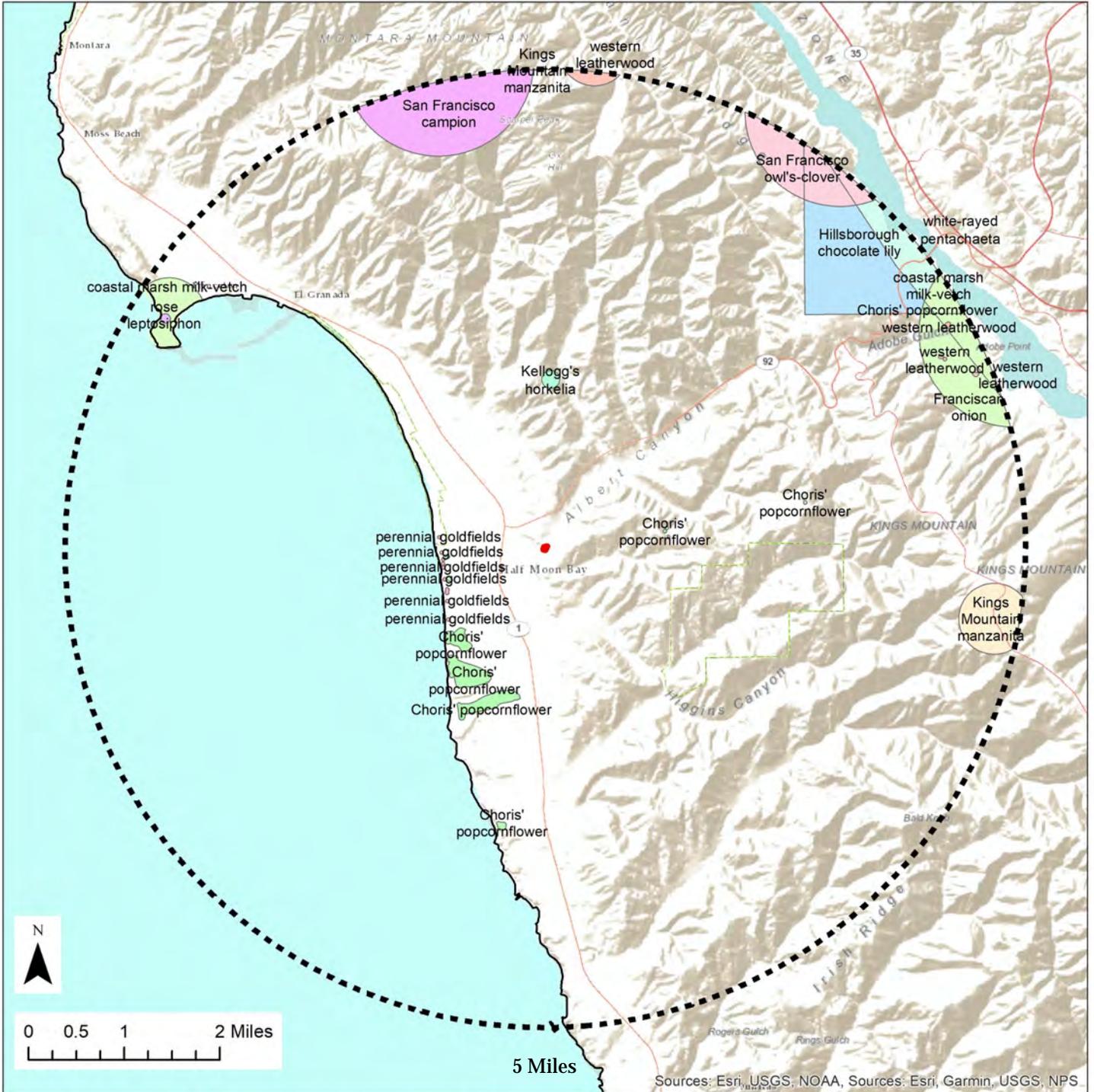


Parcels  
Streams

Top of Bank  
100' Setback from Top of Bank

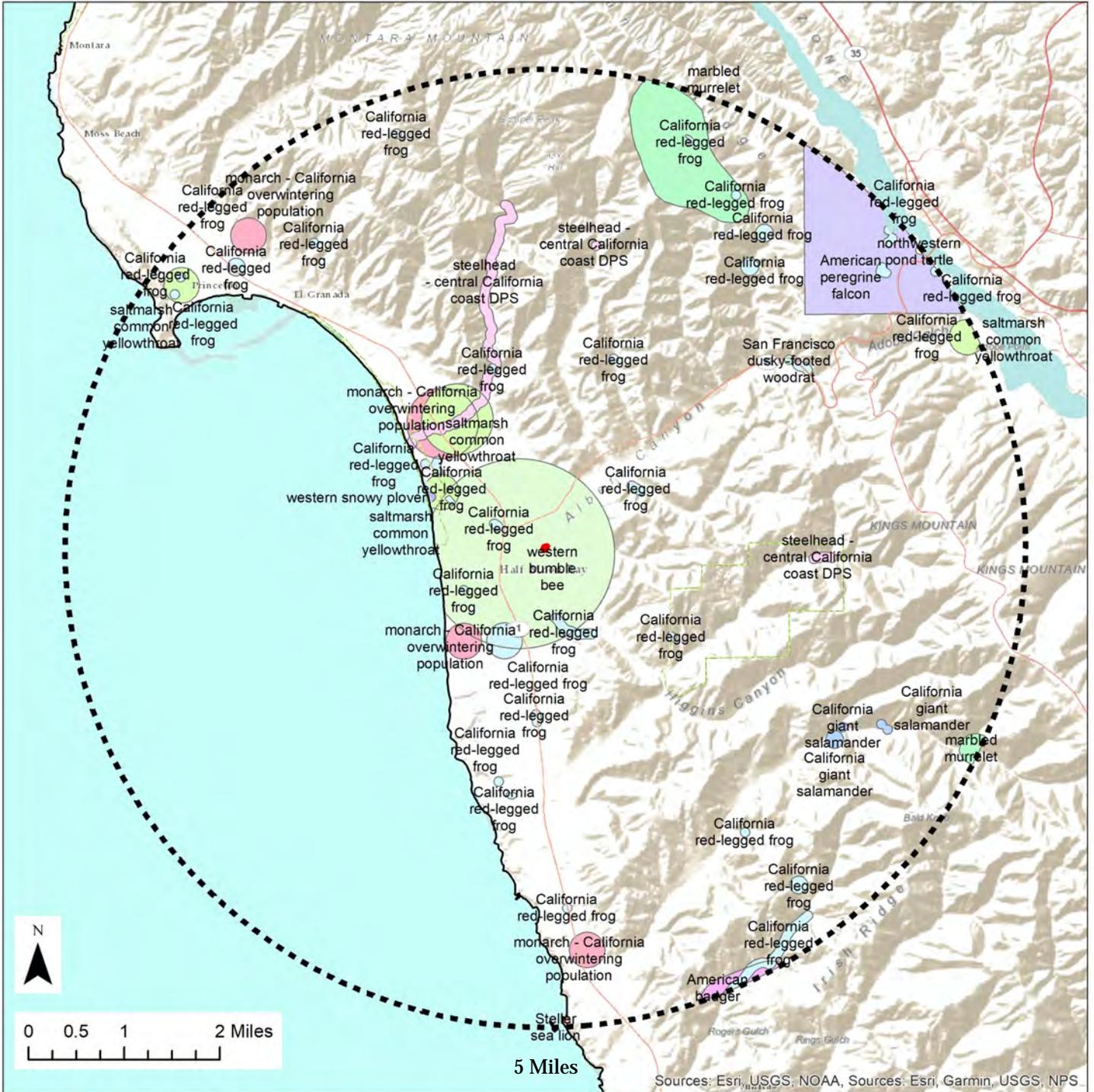
Riparian Vegetation  
50' Setback from Riparian Vegetation

**Figure 3: Special Status Plant Species within 5 Miles of the Project Site**  
 921 Miramontes Street, Half Moon Bay, San Mateo County, CA (APN 056-260-060)



- |                                 |                                |                             |
|---------------------------------|--------------------------------|-----------------------------|
| Project Study Area              | Kings Mountain manzanita (2)   | perennial goldfields (1)    |
| 5-Mile Buffer                   | San Francisco campion (1)      | rose leptosiphon (1)        |
| Choris' popcornflower (6)       | San Francisco collinsia (1)    | western leatherwood (4)     |
| Franciscan onion (1)            | San Francisco owl's-clover (1) | white-rayed pentachaeta (1) |
| Hillsborough chocolate lily (1) | coastal marsh milk-vetch (2)   | woodland woollythreads (1)  |
| Kellogg's horkelia (1)          | Choris' popcornflower (1)      | fragrant fritillary (1)     |

**Figure 4: Special Status Animal Species within 5 Miles of the Project Site**  
 921 Miramontes Street, Half Moon Bay, San Mateo County, CA (APN 056-260-060)



- |                                 |   |  |
|---------------------------------|---|--|
| Project Study Area              | California red-legged frog (29)                   | northwestern pond turtle (1)                 |
| 5-Mile Buffer                   | San Francisco dusky-footed woodrat (1)            | saltmarsh common yellowthroat (4)            |
| American badger (1)             | Steller sea lion (1)                              | steelhead - central California coast DPS (3) |
| American peregrine falcon (1)   | marbled murrelet (2)                              | western bumble bee (1)                       |
| California giant salamander (1) | monarch - California overwintering population (4) | western snowy plover (1)                     |

APPENDIX B

SITE PHOTOGRAPHS



L to R: storage shed, landscaped African lily, ruderal grassland, parking lot. Facing northeast.



Riparian woodland (left), storage shed (center right). Facing north.



Riparian woodland dominants: arroyo willow, California blackberry, stinging nettle. Facing northwest



Facing southwest from the northern boundary of the Project Study Area.



Facing west: storage shed, with riparian woodland beyond to the west.

APPENDIX C

OBSERVED SPECIES TABLES

Observed Vascular Plant Species

Scientific Name	Common Name	Native / Non-Native
<b>Amaranthaceae</b>		
<i>Amaranthus powellii</i>	Powell's amaranth	Native
<b>Amaryllidaceae</b>		
<i>Agapanthus praecox</i>	African lily	Non-Native
<b>Apiaceae</b>		
<i>Conium maculatum</i>	Poison hemlock	Non-Native
<b>Araliaceae</b>		
<i>Hedera helix</i>	English ivy	Non-Native
<b>Asteraceae</b>		
<i>Artemisia douglasiana</i>	Mugwort	Native
<i>Baccharis pilularis</i>	Coyote brush	Native
<i>Cirsium vulgare</i>	Bull thistle	Non-Native
<i>Cotula australis</i>	Brass buttons	Non-Native
<i>Delairea odorata</i>	Cape ivy	Non-Native
<i>Erigeron canadensis</i>	Canada horseweed	Native
<i>Eriophyllum staechadifolium</i>	Lizard tail	Native
<i>Helenium puberulum</i>	Sneezeweed	Native
<i>Helminthotheca echioides</i>	Bristly ox-tongue	Non-Native
<i>Lactuca serriola</i>	Prickly lettuce	Non-Native
<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	Non-Native
<i>Senecio vulgaris</i>	Common groundsel	Non-Native

<i>Sonchus asper</i>	Spiny sowthistle	Non-Native
<i>Sonchus oleraceus</i>	Sow thistle	Non-Native
<i>Taraxacum officinale</i>	Dandelion	Non-Native
<b>Betulaceae</b>		
<i>Alnus rubra</i>	Red alder	Native
<b>Brassicaceae</b>		
<i>Capsella bursa-pastoris</i>	Shepherd's purse	Non-Native
<i>Cardamine hirsuta</i>	Hairy bitter cress	Non-Native
<i>Nasturtium officinale</i>	Watercress	Native
<i>Raphanus sativus</i>	Jointed charlock	Non-Native
<b>Caryophyllaceae</b>		
<i>Polycarpon tetraphyllum</i>	Four leaved allseed	Non-Native
<i>Spergularia rubra</i>	Purple sand spurry	Non-Native
<b>Convolvulaceae</b>		
<i>Convolvulus arvensis</i>	Field bindweed	Non-Native
<b>Equisetaceae</b>		
<i>Equisetum telmateia</i> ssp. <i>braunii</i>	Giant horsetail	Native
<b>Euphorbiaceae</b>		
<i>Euphorbia peplus</i>	Petty spurge	Non-Native
<i>Euphorbia serpens</i>	Matted sandmat	Non-Native
<b>Fabaceae</b>		
<i>Lotus tenuis</i>	Narrow-leaf bird's-foot trefoil	Non-Native
<i>Medicago polymorpha</i>	Burclover	Non-Native
<b>Gentianaceae</b>		
<i>Zeltnera muehlenbergii</i>	Muehlenberg's centaury	Native

<b>Geraniaceae</b>		
<i>Erodium cicutarium</i>	Coastal heron's bill	Non-Native
<b>Malvaceae</b>		
<i>Malva neglecta</i>	Dwarf mallow	Non-Native
<b>Onagraceae</b>		
<i>Epilobium brachycarpum</i>	Willow herb	Native
<b>Oxalidaceae</b>		
<i>Oxalis corniculata</i>	Creeping wood sorrel	Non-Native
<b>Papaveraceae</b>		
<i>Fumaria capreolata</i>	White ramping fumitory	Non-Native
<b>Plantaginaceae</b>		
<i>Kickxia elatine</i>	Sharp point fluellin	Non-Native
<i>Plantago coronopus</i>	Cut leaf plantain	Non-Native
<i>Plantago major</i>	Common plantain	Non-Native
<i>Veronica persica</i>	Bird's eye speedwell	Non-Native
<b>Poaceae</b>		
<i>Bromus catharticus</i>	Rescue grass	Non-Native
<i>Cynodon dactylon</i>	Bermuda grass	Non-Native
<i>Ehrharta erecta</i>	Upright veldt grass	Non-Native
<i>Festuca perennis</i>	Italian rye grass	Non-Native
<i>Poa annua</i>	Annual blue grass	Non-Native
<i>Polypogon monspelliensis</i>	Annual beard grass	Non-Native
<b>Polygonaceae</b>		
<i>Polygonum aviculare</i>	Prostrate knotweed	Non-Native
<b>Portulacaceae</b>		

<i>Portulaca oleracea</i>	Common purslane	Non-Native
<b>Rosaceae</b>		
<i>Rubus ursinus</i>	California blackberry	Native
<b>Salicaceae</b>		
<i>Salix lasiolepis</i>	Arroyo willow	Native
<b>Sapindaceae</b>		
<i>Acer</i> sp. (ornamental)	Maple	Non-Native
<b>Scrophulariaceae</b>		
<i>Scrophularia californica</i>	California bee plant	Native
<b>Solanaceae</b>		
<i>Solanum americanum</i>	White nightshade	Native
<b>Tropaeolaceae</b>		
<i>Tropaeolum majus</i>	Garden nasturtium	Non-Native
<b>Urticaceae</b>		
<i>Urtica holosericea</i>	Stinging nettle	Native

#### Observed Wildlife

Scientific Name	Common Name
<b>Birds</b>	
<i>Zenaida macroura</i>	Mourning dove
<i>Calypte anna</i>	Anna's hummingbird
<i>Buteo lineatus</i>	Red-shouldered hawk
<i>Sayornis nigricans</i>	Black Phoebe
<i>Vireo huttoni</i>	Hutton's vireo
<i>Poecile rufescens</i>	Chestnut-backed chickadee
<i>Psaltriparus minimus</i>	Bushtit
<i>Sitta pygmaea</i>	Pygmy nuthatch
<i>Turdus migratorius</i>	American robin
<i>Haemorhous mexicanus</i>	House finch
<i>Spinus psaltria</i>	Lesser goldfinch
<i>Spinus pinus</i>	Pine siskin
<i>Junco hyemalis</i>	Dark-eyed junco
<i>Melospiza melodia</i>	Song sparrow
<i>Melospiza fusca</i>	California towhee

<i>Zonotrichia leucophrys</i>	White-crowned sparrow
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Setophaga coronata</i>	Yellow-rumped warbler
<i>Setophaga townsendi</i>	Townsend's warbler
<b>Mammals</b>	
<i>Thomomys bottae</i>	Botta's pocket gopher

## APPENDIX D

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### DATABASE SEARCH RESULTS



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** Quad (Half Moon Bay (3712244) OR Montara Mountain (3712254) OR San Mateo (3712253) OR Woodside (3712243) OR La Honda (3712233) OR San Gregorio (3712234)) AND Taxonomic Group (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Name (Scientific/Common)	CNDDDB 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>Acanthomintha duttonii</i> San Mateo thorn-mint	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	170 600	5 S:5	0	1	0	1	2	1	4	1	3	1	1
<i>Agrostis blasdalei</i> Blasdale's bent grass	G2G3 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	50 50	62 S:1	0	0	0	1	0	0	0	1	1	0	0
<i>Allium peninsulare var. franciscanum</i> Franciscan onion	G4G5T2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	20 1,025	25 S:15	2	6	1	0	0	6	4	11	15	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	220 475	93 S:4	0	2	1	0	0	1	1	3	4	0	0
<i>Aphyllon robbinsii</i> Robbins' broomrape	G1 S1	None None	Rare Plant Rank - 1B.1	0 35	13 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Arctostaphylos andersonii</i> Anderson's manzanita	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	950 1,622	64 S:3	0	0	0	2	0	1	2	1	3	0	0
<i>Arctostaphylos montaraensis</i> Montara manzanita	G1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	1,000 1,500	4 S:3	2	0	1	0	0	0	2	1	3	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>Arctostaphylos regismontana</i> Kings Mountain manzanita	G2 S2	None None	Rare Plant Rank - 1B.2 SB_UCSC-UC Santa Cruz	586 2,100	17 S:15	1	3	3	3	0	5	7	8	15	0	0
<i>Astragalus pycnostachyus var. pycnostachyus</i> coastal marsh milk-vetch	G2T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	10 500	24 S:9	0	5	1	0	0	3	7	2	9	0	0
<i>Centromadia parryi ssp. parryi</i> pappose tarplant	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	10 23	39 S:2	0	0	0	1	0	1	1	1	2	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 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	5 5	80 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Chorizanthe cuspidata var. cuspidata</i> San Francisco Bay spineflower	G2T1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		17 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Cirsium andrewsii</i> Franciscan thistle	G3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	200 450	31 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Cirsium fontinale var. fontinale</i> fountain thistle	G2T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	400 600	5 S:3	0	1	1	0	1	0	2	1	2	1	0



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Collinsia multicolor</i> San Francisco collinsia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	100 700	36 S:11	0	5	0	0	0	6	3	8	11	0	0
<i>Dirca occidentalis</i> western leatherwood	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	255 1,320	90 S:30	8	7	2	0	0	13	4	26	30	0	0
<i>Eriophyllum latilobum</i> San Mateo woolly sunflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	100 900	8 S:7	1	2	1	0	1	2	1	6	6	1	0
<i>Fissidens pauperculus</i> minute pocket moss	G3? S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	250 250	22 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Fritillaria biflora var. ineziana</i> Hillsborough chocolate lily	G3G4T1 S1	None 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	550 550	2 S:2	0	1	0	0	0	1	1	1	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	295 800	82 S:7	0	5	0	0	0	2	3	4	7	0	0
<i>Grindelia hirsutula var. maritima</i> San Francisco gumplant	G5T1Q S1	None None	Rare Plant Rank - 3.2 SB_UCSC-UC Santa Cruz	200 200	15 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Hesperevax sparsiflora var. brevifolia</i> short-leaved evax	G4T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	400 400	72 S:1	0	0	0	0	0	1	1	0	1	0	0



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<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	200 700	27 S:9	0	5	2	0	2	0	5	4	7	2	0
<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	G4T1? S1?	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz USFS_S-Sensitive	600 600	58 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Horkelia marinensis</i> Point Reyes horkelia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	300 300	36 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Hypogymnia schizidiata</i> island tube lichen	G2G3 S2	None None	Rare Plant Rank - 1B.3	1,290 1,780	10 S:3	2	0	0	0	0	1	0	3	3	0	0
<i>Lasthenia californica ssp. macrantha</i> perennial goldfields	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	40 350	59 S:4	0	1	1	1	0	1	0	4	4	0	0
<i>Leptosiphon croceus</i> coast yellow leptosiphon	G1 S1	None Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	50 50	1 S:1	0	0	0	1	0	0	0	1	1	0	0
<i>Leptosiphon rosaceus</i> rose leptosiphon	G1 S1	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	70 70	31 S:4	0	1	0	0	2	1	2	2	2	2	0



**Summary Table Report**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Name (Scientific/Common)	CNDDDB 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>Lessingia arachnoidea</i> Crystal Springs lessingia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	300 550	11 S:8	2	2	1	0	0	3	3	5	8	0	0
<i>Limnanthes douglasii ssp. ornduffii</i> Ornduff's meadowfoam	G4T1 S1	None None	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz	30 50	2 S:2	0	0	0	0	1	1	0	2	1	1	0
<i>Malacothamnus arcuatus var. arcuatus</i> arcuate bushmallow	G2Q S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	10 851	34 S:13	0	1	1	1	1	9	7	6	12	0	1
<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 40	38 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Monolopia gracilens</i> woodland woollythreads	G3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	575 675	94 S:6	0	1	0	0	0	5	3	3	6	0	0
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	500 520	14 S:3	1	0	0	0	1	1	3	0	2	0	1
<i>Plagiobothrys chorisianus var. chorisianus</i> Choris' popcornflower	G3T1Q S1	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	35 1,250	42 S:18	1	9	4	0	0	4	3	15	18	0	0
<i>Polemonium carneum</i> Oregon polemonium	G3G4 S2	None None	Rare Plant Rank - 2B.2		16 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Potentilla hickmanii</i> Hickman's cinquefoil	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	25 240	4 S:2	0	1	0	0	1	0	1	1	1	0	1



## 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>Senecio aphanactis</i> chaparral ragwort	G3 S2	None None	Rare Plant Rank - 2B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	640 640	98 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Silene scouleri ssp. scouleri</i> Scouler's catchfly	G5T4T5 S2S3	None None	Rare Plant Rank - 2B.2	800 1,025	23 S:4	0	0	0	0	0	4	2	2	4	0	0
<i>Silene verecunda ssp. verecunda</i> San Francisco campion	G5T1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	375 1,500	20 S:3	0	1	0	0	1	1	2	1	2	1	0
<i>Trifolium hydrophilum</i> saline clover	G2 S2	None None	Rare Plant Rank - 1B.2		56 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Triphysaria floribunda</i> San Francisco owl's-clover	G2? S2?	None None	Rare Plant Rank - 1B.2	5 450	50 S:5	0	0	0	0	1	4	5	0	4	0	1
<i>Triquetrella californica</i> coastal triquetrella	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	1,180 1,180	13 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Usnea longissima</i> Methuselah's beard lichen	G5 S4	None None	Rare Plant Rank - 4.2 BLM_S-Sensitive	590 590	206 S:1	0	0	0	0	1	0	1	0	0	1	0



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** Quad (Half Moon Bay (3712244) OR Montara Mountain (3712254) OR San Mateo (3712253) OR Woodside (3712243) OR La Honda (3712233) OR San Gregorio (3712234)) AND Taxonomic Group (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Acipenser medirostris</i> pop. 1 green sturgeon - southern DPS	G2T1 S1	Threatened None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	0 0	14 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Actinemys marmorata</i> northwestern pond turtle	G2 SNR	Proposed Threatened None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	21 949	1102 S:12	1	10	1	0	0	0	0	12	12	0	0
<i>Ambystoma californiense</i> pop. 1 California tiger salamander - central California DPS	G2G3T3 S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	400 400	1328 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Aneides niger</i> Santa Cruz black salamander	G3 S3	None None	CDFW_SSC-Species of Special Concern	534 1,487	78 S:3	0	0	0	0	0	3	2	1	3	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	40 420	424 S:4	0	0	0	0	0	4	4	0	4	0	0
<i>Ardea herodias</i> great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	5 5	156 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Athene cunicularia</i> burrowing owl	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	5 842	2057 S:3	0	1	0	0	0	2	0	3	3	0	0
<i>Bombus caliginosus</i> obscure bumble bee	G2G3 S1S2	None None	IUCN_VU-Vulnerable	40 500	181 S:6	0	0	0	0	0	6	6	0	6	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>Bombus occidentalis</i> western bumble bee	G3 S1	None Candidate Endangered	IUCN_VU-Vulnerable USFS_S-Sensitive	40 100	306 S:5	0	0	0	0	0	5	5	0	5	0	0
<i>Brachyramphus marmoratus</i> marbled murrelet	G3 S2	Threatened Endangered	CDF_S-Sensitive IUCN_EN-Endangered	200 800	110 S:6	0	0	0	0	0	6	3	3	6	0	0
<i>Calicina minor</i> Edgewood blind harvestman	G1 S1	None None		400 560	2 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Callophrys mossii bayensis</i> San Bruno elfin butterfly	G4T2 S2	Endangered None		600 1,882	6 S:4	2	0	0	0	0	2	0	4	4	0	0
<i>Charadrius nivosus nivosus</i> western snowy plover	G3T3 S3	Threatened None	CDFW_SSC-Species of Special Concern	10 17	140 S:3	1	0	0	0	0	2	2	1	3	0	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	190 2,170	635 S:7	0	0	0	1	0	6	2	5	7	0	0
<i>Danaus plexippus plexippus pop. 1</i> monarch - California overwintering population	G4T1T2Q S2	Candidate None	IUCN_EN-Endangered USFS_S-Sensitive	40 150	400 S:5	0	1	1	0	2	1	5	0	3	2	0
<i>Dicamptodon ensatus</i> California giant salamander	G2G3 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	300 1,400	233 S:11	1	2	0	0	0	8	8	3	11	0	0
<i>Dipodomys venustus venustus</i> Santa Cruz kangaroo rat	G4T1 S1	None None		42 42	29 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Eucyclogobius newberryi</i> tidewater goby	G3 S3	Endangered None	AFS_EN-Endangered CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	15 20	127 S:2	0	1	0	0	0	1	2	0	2	0	0
<i>Eumetopias jubatus</i> Steller sea lion	G3 S2	Delisted None	IUCN_NT-Near Threatened MMC_SSC-Species of Special Concern	15 15	38 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Euphydryas editha bayensis</i> Bay checkerspot butterfly	G4G5T1 S3	Threatened None		300 640	30 S:4	0	1	0	0	3	0	3	1	1	2	1



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Falco columbarius</i> merlin	G5 S3S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	65 65	38 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Falco peregrinus anatum</i> American peregrine falcon	G4T4 S3S4	Delisted Delisted	CDF_S-Sensitive	5 5	76 S:1	0	0	0	0	0	1	0	1	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	10 480	114 S:12	1	2	2	0	0	7	12	0	12	0	0
<i>Hydrochara rickseckeri</i> Ricksecker's water scavenger beetle	G2? S2?	None None		35 280	13 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Icaricia icarioides missionensis</i> Mission blue butterfly	G5T2 S2	Endangered None		500 700	14 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Ischnura gemina</i> San Francisco forktail damselfly	G2 S2	None None	IUCN_EN-Endangered	26 75	7 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Lasiurus cinereus</i> hoary bat	G3G4 S4	None None	IUCN_LC-Least Concern		238 S:6	0	0	0	0	0	6	6	0	6	0	0
<i>Laterallus jamaicensis coturniculus</i> California black rail	G3T1 S2	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_EN-Endangered	5 5	304 S:1	0	0	0	1	0	0	1	0	1	0	0
<i>Lichnanthe ursina</i> bumblebee scarab beetle	G2 S2	None None		15 15	8 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Melospiza melodia pusillula</i> Alameda song sparrow	G5T2T3 S2	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	10 42	38 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Microcina edgewoodensis</i> Edgewood Park micro-blind harvestman	G1 S1	None None		600 600	1 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Myotis thysanodes</i> fringed myotis	G4 S3	None None	BLM_S-Sensitive IUCN_LC-Least Concern USFS_S-Sensitive	500 500	86 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Nannopterum auritum</i> double-crested cormorant	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	30 30	39 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>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	G5T2T3 S2S3	None None	CDFW_SSC-Species of Special Concern	270 522	42 S:7	0	2	0	0	0	5	1	6	7	0	0
<i>Nyctinomops macrotis</i> big free-tailed bat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	150 150	32 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Oncorhynchus mykiss irideus pop. 8</i> steelhead - central California coast DPS	G5T3Q S3	Threatened None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern	100 550	44 S:6	0	2	0	0	0	4	6	0	6	0	0
<i>Pomatiopsis californica</i> Pacific walker	G1 S1	None None	IUCN_DD-Data Deficient	20 20	4 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	G3T1 S2	Endangered Endangered	CDFW_FP-Fully Protected	0 15	99 S:4	0	1	1	0	1	1	2	2	3	1	0
<i>Rana boylei pop. 4</i> foothill yellow-legged frog - central coast DPS	G3T2 S2	Threatened Endangered	BLM_S-Sensitive USFS_S-Sensitive	192 878	181 S:8	0	1	0	0	2	5	8	0	6	0	2
<i>Rana draytonii</i> California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	6 4,005	1782 S:112	16	36	20	13	1	26	21	91	111	1	0
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	G1G2 S3	Endangered Endangered	CDFW_FP-Fully Protected IUCN_EN-Endangered	2 2	151 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Riparia riparia</i> bank swallow	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern		299 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Speyeria zerene myrtleae</i> Myrtle's silverspot butterfly	G5T1 S1	Endangered None		20 60	17 S:3	0	0	0	0	3	0	3	0	0	0	3
<i>Spirinchus thaleichthys</i> longfin smelt	G5 S1	Proposed Endangered Threatened	IUCN_LC-Least Concern	20 20	11 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Spirinchus thaleichthys pop. 2</i> longfin smelt - San Francisco Bay-Delta DPS	G5TNRQ S1	Endangered None		0 0	35 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Taxidea taxus</i> American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	187 1,599	647 S:9	0	0	0	0	0	9	1	8	9	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Thamnophis sirtalis tetrataenia</i> San Francisco gartersnake	G5T2Q S2	Endangered Endangered	CDFW_FP-Fully Protected	5 1,355	66 S:37	5	11	4	0	1	16	21	16	36	0	1
<i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	G2 S2	None None	IUCN_DD-Data Deficient	3 40	39 S:2	0	1	0	0	0	1	1	1	2	0	0



CNPS Rare Plant Inventory.

**Search Results**

70 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [3712244:3712253:3712243:3712234:3712233:3712254]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE		DATE ADDED
									PLANT RANK	CA ENDEMIC	
<a href="#"><u><i>Acanthomintha duttonii</i></u></a>	San Mateo thorn-mint	Lamiaceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1974-01-01
<a href="#"><u><i>Agrostis blasdalei</i></u></a>	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	None	None	G2G3	S2	1B.2	Yes	1974-01-01
<a href="#"><u><i>Allium peninsulare</i> var. <i>franciscanum</i></u></a>	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G4G5T2	S2	1B.2	Yes	2001-01-01
<a href="#"><u><i>Amsinckia lunaris</i></u></a>	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2	Yes	1974-01-01
<a href="#"><u><i>Aphyllon robbinsii</i></u></a>	Robbins' broomrape	Orobanchaceae	annual herb (achlorophyllous)	Apr-Jul	None	None	G1	S1	1B.1		2023-03-28
<a href="#"><u><i>Arabis blepharophylla</i></u></a>	coast rockcress	Brassicaceae	perennial herb	Feb-May	None	None	G4	S4	4.3	Yes	1974-01-01
<a href="#"><u><i>Arctostaphylos andersonii</i></u></a>	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	None	None	G2	S2	1B.2	Yes	1974-01-01
<a href="#"><u><i>Arctostaphylos montaraensis</i></u></a>	Montara manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	None	None	G1	S1	1B.2	Yes	1974-01-01
<a href="#"><u><i>Arctostaphylos regismontana</i></u></a>	Kings Mountain manzanita	Ericaceae	perennial evergreen shrub	Dec-Apr	None	None	G2	S2	1B.2	Yes	1994-01-01
<a href="#"><u><i>Astragalus nuttallii</i> var. <i>nuttallii</i></u></a>	ocean bluff milk-vetch	Fabaceae	perennial herb	Jan-Nov	None	None	G4T4	S4	4.2	Yes	2001-01-01
<a href="#"><u><i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i></u></a>	coastal marsh milk-vetch	Fabaceae	perennial herb	(Apr-May)Jun-Oct	None	None	G2T2	S2	1B.2	Yes	2001-01-01
<a href="#"><u><i>Calandrinia breweri</i></u></a>	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	None	None	G4	S4	4.2		1994-01-01
<a href="#"><u><i>Calochortus umbellatus</i></u></a>	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	None	None	G3?	S3?	4.2	Yes	1980-01-01
<a href="#"><u><i>Calochortus uniflorus</i></u></a>	pink star-tulip	Liliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G4	S4	4.2		2010-03-04
<a href="#"><u><i>Castilleja ambigua</i> var. <i>ambigua</i></u></a>	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G5T4	S3S4	4.2		2009-02-04
<a href="#"><u><i>Centromadia parryi</i> ssp. <i>parryi</i></u></a>	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2	Yes	2004-01-01

<u><i>Chloropyron maritimum ssp. palustre</i></u>	Point Reyes salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	None	None	G4?T2	S2	1B.2			1974-01-01
<u><i>Chorizanthe cuspidata var. cuspidata</i></u>	San Francisco Bay spineflower	Polygonaceae	annual herb	Apr-Jul(Aug)	None	None	G2T1	S1	1B.2	Yes		1994-01-01
<u><i>Cirsium andrewsii</i></u>	Franciscan thistle	Asteraceae	perennial herb	Mar-Jul	None	None	G3	S3	1B.2	Yes		1974-01-01
<u><i>Cirsium fontinale var. fontinale</i></u>	fountain thistle	Asteraceae	perennial herb	(Apr)May-Oct	FE	CE	G2T1	S1	1B.1	Yes		1974-01-01
<u><i>Clarkia breweri</i></u>	Brewer's clarkia	Onagraceae	annual herb	Apr-Jun	None	None	G4	S4	4.2	Yes		1974-01-01
<u><i>Collinsia multicolor</i></u>	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	None	None	G2	S2	1B.2	Yes		1974-01-01
<u><i>Cypripedium fasciculatum</i></u>	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	None	None	G4	S4	4.2			1980-01-01
<u><i>Cypripedium montanum</i></u>	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	None	None	G4G5	S4	4.2			1980-01-01
<u><i>Deinandra paniculata</i></u>	paniculate tarplant	Asteraceae	annual herb	(Mar)Apr-Nov	None	None	G4	S4	4.2			2001-01-01
<u><i>Dirca occidentalis</i></u>	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	None	None	G2	S2	1B.2	Yes		1974-01-01
<u><i>Elymus californicus</i></u>	California bottle-brush grass	Poaceae	perennial herb	May-Aug(Nov)	None	None	G4	S4	4.3	Yes		1974-01-01
<u><i>Eriophyllum latilobum</i></u>	San Mateo woolly sunflower	Asteraceae	perennial herb	May-Jun	FE	CE	G1	S1	1B.1	Yes		1974-01-01
<u><i>Eryngium jepsonii</i></u>	Jepson's coyote-thistle	Apiaceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	Yes		2016-09-13
<u><i>Erysimum franciscanum</i></u>	San Francisco wallflower	Brassicaceae	perennial herb	Mar-Jun	None	None	G3	S3	4.2	Yes		1974-01-01
<u><i>Fissidens pauperculus</i></u>	minute pocket moss	Fissidentaceae	moss		None	None	G3?	S2	1B.2			2001-01-01
<u><i>Fritillaria biflora var. ineziana</i></u>	Hillsborough chocolate lily	Liliaceae	perennial bulbiferous herb	Mar-Apr	None	None	G3G4T1	S1	1B.1	Yes		1994-01-01
<u><i>Fritillaria lanceolata var. tristulis</i></u>	Marin checker lily	Liliaceae	perennial bulbiferous herb	Feb-May	None	None	G5T2	S2	1B.1	Yes		1994-01-01
<u><i>Fritillaria liliacea</i></u>	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2	Yes		1974-01-01
<u><i>Grindelia hirsutula var. maritima</i></u>	San Francisco gumplant	Asteraceae	perennial herb	Jun-Sep	None	None	G5T1Q	S1	3.2	Yes		1974-01-01
<u><i>Hesperevax sparsiflora var. brevifolia</i></u>	short-leaved evax	Asteraceae	annual herb	Mar-Jun	None	None	G4T3	S3	1B.2			1994-01-01
<u><i>Hesperolinon congestum</i></u>	Marin western flax	Linaceae	annual herb	Apr-Jul	FT	CT	G1	S1	1B.1	Yes		1974-01-01

<u><i>Horkelia cuneata</i></u> <u>var. <i>sericea</i></u>	Kellogg's horkelia	Rosaceae	perennial herb	Apr-Sep	None	None	G4T1?	S1?	1B.1	Yes	1988- 01-01
<u><i>Horkelia marinensis</i></u>	Point Reyes horkelia	Rosaceae	perennial herb	May-Sep	None	None	G2	S2	1B.2	Yes	1974- 01-01
<u><i>Hosackia gracilis</i></u>	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2		2004- 01-01
<u><i>Hypogymnia</i></u> <u><i>schizidiata</i></u>	island tube lichen	Parmeliaceae	foliose lichen		None	None	G2G3	S2	1B.3		2014- 03-01
<u><i>Iris longipetala</i></u>	coast iris	Iridaceae	perennial rhizomatous herb	Mar- May(Jun)	None	None	G3	S3	4.2	Yes	2006- 10-12
<u><i>Lasthenia</i></u> <u><i>californica</i> ssp.</u> <u><i>macrantha</i></u>	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	None	None	G3T2	S2	1B.2	Yes	2001- 01-01
<u><i>Leptosiphon</i></u> <u><i>ambiguus</i></u>	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	Yes	1994- 01-01
<u><i>Leptosiphon aureus</i></u>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Yes	1994- 01-01
<u><i>Leptosiphon croceus</i></u>	coast yellow leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	CE	G1	S1	1B.1	Yes	2001- 01-01
<u><i>Leptosiphon</i></u> <u><i>grandiflorus</i></u>	large-flowered leptosiphon	Polemoniaceae	annual herb	Apr-Aug	None	None	G3G4	S3S4	4.2	Yes	1994- 01-01
<u><i>Leptosiphon</i></u> <u><i>latisectus</i></u>	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3	Yes	2001- 01-01
<u><i>Leptosiphon</i></u> <u><i>rosaceus</i></u>	rose leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G1	S1	1B.1	Yes	2001- 01-01
<u><i>Lessingia</i></u> <u><i>arachnoidea</i></u>	Crystal Springs lessingia	Asteraceae	annual herb	Jul-Oct	None	None	G2	S2	1B.2	Yes	1994- 01-01
<u><i>Lessingia hololeuca</i></u>	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3	Yes	1994- 01-01
<u><i>Limnanthes</i></u> <u><i>douglasii</i> ssp.</u> <u><i>ornduffii</i></u>	Ornduff's meadowfoam	Limnanthaceae	annual herb	Nov-May	None	None	G4T1	S1	1B.1	Yes	2014- 03-18
<u><i>Lupinus arboreus</i></u> <u>var. <i>eximius</i></u>	San Mateo tree lupine	Fabaceae	perennial evergreen shrub	Apr-Jul	None	None	G2Q	S2	3.2	Yes	1980- 01-01
<u><i>Malacothamnus</i></u> <u><i>arcuatus</i> var.</u> <u><i>arcuatus</i></u>	arcuate bushmallow	Malvaceae	perennial deciduous shrub	Apr-Sep	None	None	G2Q	S2	1B.2	Yes	1974- 01-01
<u><i>Microseris paludosa</i></u>	marsh microseris	Asteraceae	perennial herb	Apr-Jun(Jul)	None	None	G2	S2	1B.2	Yes	2001- 01-01
<u><i>Monolopia gracilens</i></u>	woodland woollythreads	Asteraceae	annual herb	(Feb)Mar-Jul	None	None	G3	S3	1B.2	Yes	2010- 04-06
<u><i>Pentachaeta</i></u> <u><i>bellidiflora</i></u>	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1	Yes	1974- 01-01
<u><i>Perideridia gairdneri</i></u> <u>ssp. <i>gairdneri</i></u>	Gairdner's yampah	Apiaceae	perennial herb	Jun-Oct	None	None	G5T3T4	S3S4	4.2	Yes	1974- 01-01

<u><i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i></u>	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	None	None	G3T1Q	S1	1B.2	Yes	1984-01-01
<u><i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i></u>	Hickman's popcornflower	Boraginaceae	annual herb	Apr-Jun	None	None	G3T3Q	S3	4.2	Yes	2001-01-01
<u><i>Polemonium carneum</i></u>	Oregon polemonium	Polemoniaceae	perennial herb	Apr-Sep	None	None	G3G4	S2	2B.2		2008-11-03
<u><i>Potentilla hickmanii</i></u>	Hickman's cinquefoil	Rosaceae	perennial herb	Apr-Aug	FE	CE	G1	S1	1B.1	Yes	1974-01-01
<u><i>Ranunculus lobbii</i></u>	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2		1974-01-01
<u><i>Senecio aphanactis</i></u>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	2B.2		1994-01-01
<u><i>Silene scouleri</i> ssp. <i>scouleri</i></u>	Scouler's catchfly	Caryophyllaceae	perennial herb	(Mar-May)Jun-Aug(Sep)	None	None	G5T4T5	S2S3	2B.2		2017-12-13
<u><i>Silene verecunda</i> ssp. <i>verecunda</i></u>	San Francisco champion	Caryophyllaceae	perennial herb	(Feb)Mar-Jul(Aug)	None	None	G5T1	S1	1B.2	Yes	1980-01-01
<u><i>Trifolium hydrophilum</i></u>	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	2001-01-01
<u><i>Triphysaria floribunda</i></u>	San Francisco owl's-clover	Orobanchaceae	annual herb	Apr-Jun	None	None	G2?	S2?	1B.2	Yes	1974-01-01
<u><i>Triquetrella californica</i></u>	coastal triquetrella	Pottiaceae	moss		None	None	G2	S2	1B.2		2001-01-01
<u><i>Usnea longissima</i></u>	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		None	None	G5	S4	4.2		2014-03-01

Showing 1 to 70 of 70 entries

**Suggested Citation:**

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 11 October 2024].

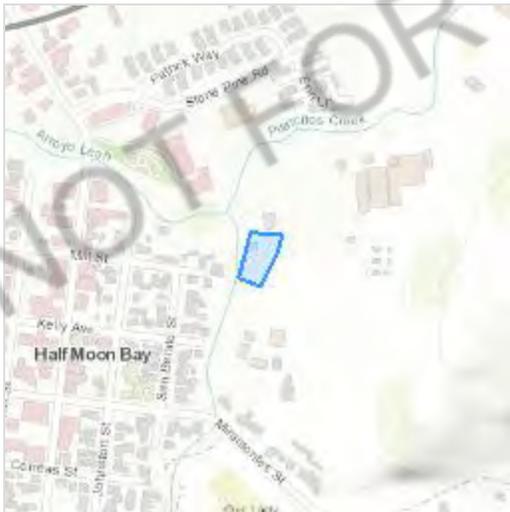
# IPaC resource list

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

San Mateo County, California



## Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

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

NOT FOR CONSULTATION

# Endangered species

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

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

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

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

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

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

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
<b>California Least Tern</b> <i>Sternula antillarum browni</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/8104">https://ecos.fws.gov/ecp/species/8104</a>	<b>Endangered</b>
<b>Marbled Murrelet</b> <i>Brachyramphus marmoratus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/4467">https://ecos.fws.gov/ecp/species/4467</a>	<b>Threatened</b>
<b>Western Snowy Plover</b> <i>Charadrius nivosus nivosus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	<b>Threatened</b>

## Reptiles

NAME	STATUS
<b>Green Sea Turtle</b> <i>Chelonia mydas</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/6199">https://ecos.fws.gov/ecp/species/6199</a>	<b>Threatened</b>
<b>Northwestern Pond Turtle</b> <i>Actinemys marmorata</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/1111">https://ecos.fws.gov/ecp/species/1111</a>	<b>Proposed Threatened</b>
<b>San Francisco Garter Snake</b> <i>Thamnophis sirtalis tetrataenia</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/5956">https://ecos.fws.gov/ecp/species/5956</a>	<b>Endangered</b>

## Amphibians

NAME	STATUS
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California Red-legged Frog *Rana draytonii* Threatened

Wherever found

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

<https://ecos.fws.gov/ecp/species/2891>

Foothill Yellow-legged Frog *Rana boylei* Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/5133>

## Fishes

NAME

STATUS

Tidewater Goby *Eucyclogobius newberryi* Endangered

Wherever found

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

<https://ecos.fws.gov/ecp/species/57>

## Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus* Candidate

Wherever found

No critical habitat has been designated for this species.

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

## Critical habitats

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

There are no critical habitats at this location.

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

# Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds  
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

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

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

NAME	BREEDING SEASON
<p>Bald Eagle <i>Haliaeetus leucocephalus</i></p> <p>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.</p> <p><a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a></p>	Breeds Jan 1 to Aug 31

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

<https://ecos.fws.gov/ecp/species/1680>

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

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

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

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

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

### Breeding Season (■)

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

### Survey Effort (|)

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

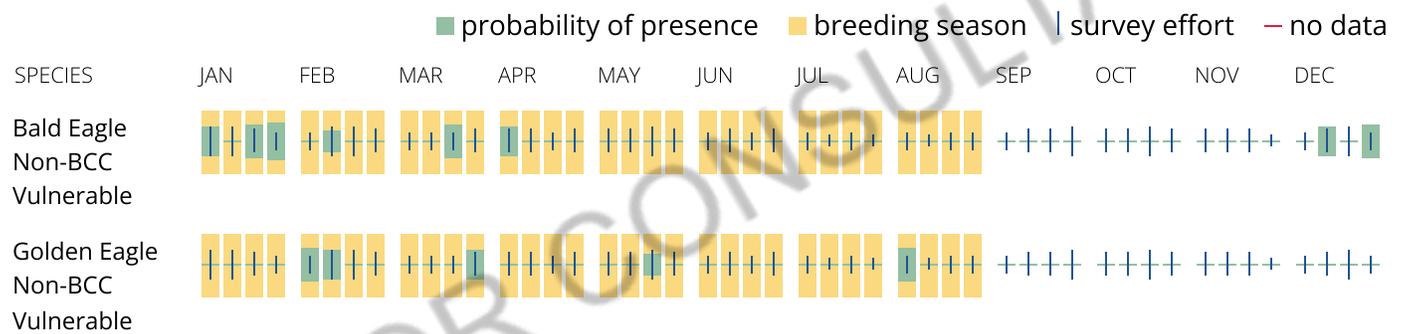
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (-)

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

### Survey Timeframe

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



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

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

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

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

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

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

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

### What if I have eagles on my list?

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

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

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

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

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

**The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around

your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

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

NAME	BREEDING SEASON
<b>Allen's Hummingbird</b> <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9637">https://ecos.fws.gov/ecp/species/9637</a>	Breeds Feb 1 to Jul 15
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</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. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Jan 1 to Aug 31
<b>Belding's Savannah Sparrow</b> <i>Passerculus sandwichensis beldingi</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8">https://ecos.fws.gov/ecp/species/8</a>	Breeds Apr 1 to Aug 15
<b>Black Oystercatcher</b> <i>Haematopus bachmani</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9591">https://ecos.fws.gov/ecp/species/9591</a>	Breeds Apr 15 to Oct 31
<b>Black Swift</b> <i>Cypseloides niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8878">https://ecos.fws.gov/ecp/species/8878</a>	Breeds Jun 15 to Sep 10
<b>Black Turnstone</b> <i>Arenaria melanocephala</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

<p><b>Black-chinned Sparrow</b> <i>Spizella atrogularis</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9447">https://ecos.fws.gov/ecp/species/9447</a></p>	Breeds Apr 15 to Jul 31
<p><b>Brandt's Cormorant</b> <i>Urile penicillatus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 15 to Sep 15
<p><b>Bullock's Oriole</b> <i>Icterus bullockii</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Mar 21 to Jul 25
<p><b>California Gull</b> <i>Larus californicus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 1 to Jul 31
<p><b>California Thrasher</b> <i>Toxostoma redivivum</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jan 1 to Jul 31
<p><b>Clark's Grebe</b> <i>Aechmophorus clarkii</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jun 1 to Aug 31
<p><b>Common Yellowthroat</b> <i>Geothlypis trichas sinuosa</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/2084">https://ecos.fws.gov/ecp/species/2084</a></p>	Breeds May 20 to Jul 31
<p><b>Elegant Tern</b> <i>Thalasseus elegans</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/8561">https://ecos.fws.gov/ecp/species/8561</a></p>	Breeds Apr 5 to Aug 5
<p><b>Golden Eagle</b> <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.  <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a></p>	Breeds Jan 1 to Aug 31

<p>Heermann's Gull <i>Larus heermanni</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	<p>Breeds Mar 15 to Aug 31</p>
<p>Lawrence's Goldfinch <i>Spinus lawrencei</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9464">https://ecos.fws.gov/ecp/species/9464</a></p>	<p>Breeds Mar 20 to Sep 20</p>
<p>Long-eared Owl <i>asio otus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/3631">https://ecos.fws.gov/ecp/species/3631</a></p>	<p>Breeds Mar 1 to Jul 15</p>
<p>Marbled Godwit <i>Limosa fedoa</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a></p>	<p>Breeds elsewhere</p>
<p>Northern Harrier <i>Circus hudsonius</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/8350">https://ecos.fws.gov/ecp/species/8350</a></p>	<p>Breeds Apr 1 to Sep 15</p>
<p>Nuttall's Woodpecker <i>Dryobates nuttallii</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/9410">https://ecos.fws.gov/ecp/species/9410</a></p>	<p>Breeds Apr 1 to Jul 20</p>
<p>Oak Titmouse <i>Baeolophus inornatus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a></p>	<p>Breeds Mar 15 to Jul 15</p>
<p>Olive-sided Flycatcher <i>Contopus cooperi</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a></p>	<p>Breeds May 20 to Aug 31</p>

<p>Santa Barbara Song Sparrow <i>Melospiza melodia graminea</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/5513">https://ecos.fws.gov/ecp/species/5513</a></p>	Breeds Mar 1 to Sep 5
<p>Short-billed Dowitcher <i>Limnodromus griseus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a></p>	Breeds elsewhere
<p>Tricolored Blackbird <i>Agelaius tricolor</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/3910">https://ecos.fws.gov/ecp/species/3910</a></p>	Breeds Mar 15 to Aug 10
<p>Western Grebe <i>aechmophorus occidentalis</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/6743">https://ecos.fws.gov/ecp/species/6743</a></p>	Breeds Jun 1 to Aug 31
<p>Western Gull <i>Larus occidentalis</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 21 to Aug 25
<p>Western Screech-owl <i>Megascops kennicottii cardonensis</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Mar 1 to Jun 30
<p>Willet <i>Tringa semipalmata</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p>Wrentit <i>Chamaea fasciata</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 15 to Aug 10

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read

["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

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

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

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

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

### Breeding Season (■)

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

### Survey Effort (|)

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

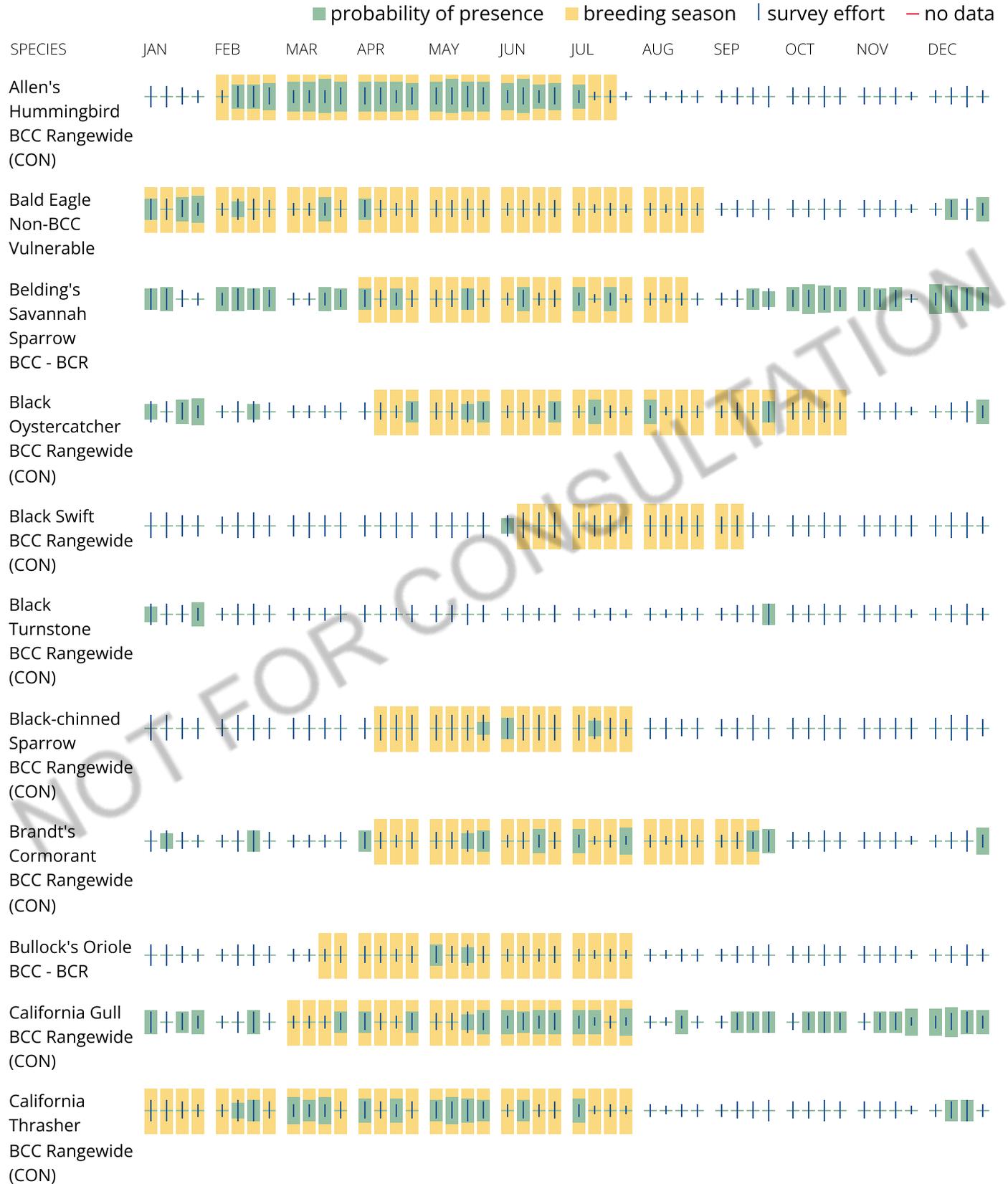
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (—)

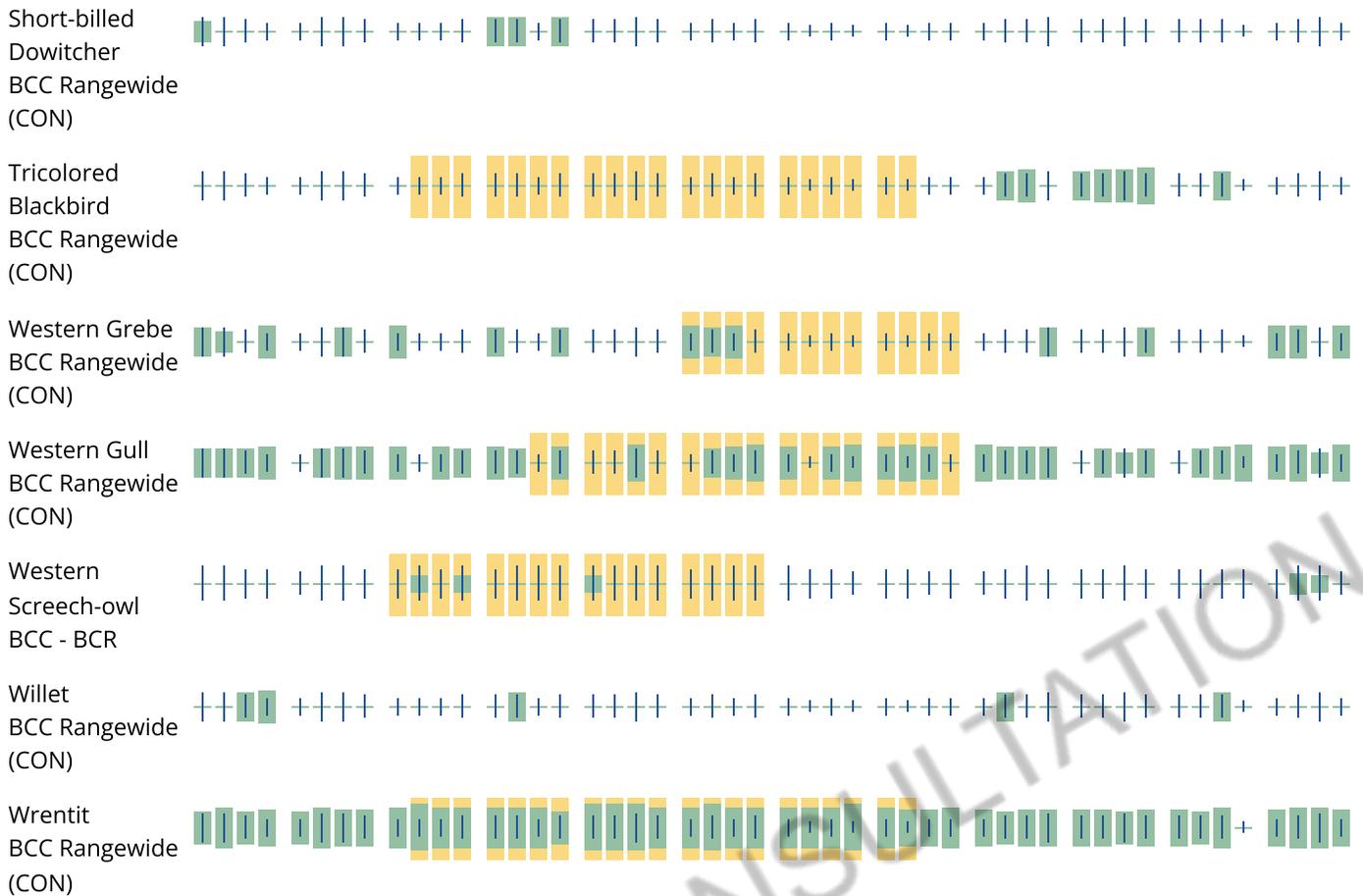
A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

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







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

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

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

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

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

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

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

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

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

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

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

### **Details about birds that are potentially affected by offshore projects**

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

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

### What if I have eagles on my list?

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

### Proper Interpretation and Use of Your Migratory Bird Report

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

## Facilities

### National Wildlife Refuge lands

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

There are no refuge lands at this location.

# Fish hatcheries

There are no fish hatcheries at this location.

## Wetlands in the National Wetlands Inventory (NWI)

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

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

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

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PSSC](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

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

### Data limitations

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

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

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

### **Data exclusions**

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