# Appendix B

## Biological Resources Due Diligence Analysis

This document is designed for double-sided printing to conserve natural resources.

Michael Baker
INTERNATIONAL

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April 25, 2024 JN 198494

**University of California, Davis**
Darren Haver
2801 Second Street
Davis, California 95618

**SUBJECT: Results of a Biological Resources Due Diligence Analysis for the South Coast Research and Extension (REC) Engagement Center Project – City of Irvine, Orange County, California**

Dear Mr. Haven,

Michael Baker International, Inc. (Michael Baker) is pleased to submit this biological due diligence analysis to the University of California at Davis for the proposed South Coast Research and Extension (REC) Engagement Center Project (project or project site) located in the City of Irvine, Orange County, California. Michael Baker conducted a literature review and field survey to characterize existing biological conditions and assess the potential for special-status[1] plant and wildlife species to occur on or within the immediate vicinity of the project site that could pose a constraint to implementation of the proposed project.

## Project Location

The project site is located just southwest of the intersection of Modjeska and Portola Springs in the City of Irvine, Orange County, California. Specifically, it is depicted in an un-sectioned area of Township 5 South, Range 8 West, of the U.S. Geological Survey (USGS) *El Toro*, *California* 7.5-minute topographic quadrangle map.

## Project Description

The proposed project would construct a new Engagement Center at the southeast corner of the South Coast REC to support existing programming. The construction of a new Engagement Center would also include internal roadway improvements to facilitate ingress/egress to the proposed development and through the South Coast REC. In addition to these improvements, the project would protect and enhance the existing agricultural research space.

[1] As used in this report, "special-status" refers to plant and wildlife species that are Federally-/State-listed, proposed, or candidates; plant species that have been designated a California Rare Plant Rank species by the California Native Plant Society; wildlife species that are designated by the California Department of Fish and Wildlife as Fully Protected, Species of Special Concern, or Watch List species; and State/locally rare vegetation communities.


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## Methodology

*Literature Review and Records Searches*

Records searches were conducted to determine which special-status plant and wildlife species have been recorded from the project vicinity within the USGS *Tustin and El Toro, California* 7.5-minute quadrangles. This was achieved through a query of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB; CDFW 2023) and the California Native Plant Society's Online Inventory of Rare and Endangered Plants of California (CIRP; CNPS 2023). The U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) online environmental planning tool was also reviewed to identify protected biological resources falling under USFWS jurisdiction that are known or expected to occur on or within the project vicinity (USFWS 2023a). In addition, Michael Baker reviewed the USFWS Environmental Conservation Online System Critical Habitat Mapper (USFWS 2023b), the U.S. Department of Agriculture/Natural Resources Conservation Service (USDA) Web Soil Survey (USDA 2023), and historic/current aerial photographs (Google, Inc. 2022 and Historicaerials.com 2023).

*Habitat Assessment*

A field survey was conducted by Michael Baker senior biologist Mr. Ryan Winkleman on December 12, 2023. The survey was conducted between the hours of 1015 and 1230, with a temperature range of 64 to 72 degrees Fahrenheit, winds from 0-2 miles per hour, and clear skies. Vegetation communities occurring within the project site were mapped on an aerial photograph and classified in accordance with the vegetation descriptions provided in *A Manual of California Vegetation* (Sawyer *et al*., 2009) and cross referenced with the vegetation descriptions provided by Holland (1986). In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site vegetation communities, and the presence of potentially regulated jurisdictional features were noted. Michael Baker used Geographic Information Systems (GIS) ArcView software to digitize the mapped vegetation communities and then transferred these data onto an aerial photograph to further document existing conditions and quantify the acreage of each vegetation community. In addition to the project site, a 500-foot buffer (survey area) was also included in the field survey, as accessible.

All plant and wildlife species observed, as well as dominant plant species within each vegetation community, were recorded in a field notebook. Plant species observed during the field survey were identified by visual characteristics and morphology in the field, while unusual and less familiar plant species were photographed and later identified using taxonomical guides. Strictly ornamental plants were generally not identified unless they were considered to be a dominant plant on the project site. Plant nomenclature used in this report follows the Jepson Flora Project (2023) and scientific names are provided immediately following common names of plant species (first reference only). Wildlife detections were made through aural and visual detection, as well as observation of sign including scat, trails, tracks, burrows, and nests. Field guides used to assist with identification of species during the habitat assessment included *The Sibley Guide to Birds* (Sibley 2014) for birds, *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003) for herpetofauna, and *A Field Guide to Mammals of North America* (Reid 2006). Although common names of wildlife species are well standardized, scientific names are provided immediately following common names of wildlife species in this report (first reference only).

**Summary of Applicable Regulations**

*Federal*

Migratory Bird Treaty Act

Pursuant to the Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) of 1918, as amended in 1972, Federal law prohibits the taking of migratory birds or their nests or eggs (16 USC 703; 50 CFR 10, 21). The statute states:

"Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill...any migratory bird, any part, nest, or egg of any such bird...included in the terms of the [Migratory Bird] conventions…"

The MBTA prohibits take of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered a "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above.

*State*

California Environmental Quality Act

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. Some projects may be determined to be "exempt" from CEQA if they fit certain project categories and meet certain requirements, e.g. no habitat for special-status species for biological resources. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" species as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Fish and Game Code

**Sections 3503, 3503.5, 3511, and 3513**. The CDFW administers the California Fish and Game Code (CFGC). There are particular sections of the CFGC that are applicable to natural resource management. For example, Section 3503 makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey), such as hawks, eagles, and owls, are protected under Section 3503.5 which makes it unlawful to take, possess, or

destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species except for necessary scientific research, relocation for livestock protection, covered species under a Natural Community Conservation Plan, or as recently approved in 2023, if a project meets a very narrow set of parameters. Pertinent species that are State fully protected include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). In addition, Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Local

*Central/Coastal Orange County Natural Community Conservation Plan/Habitat Conservation Plan*

The Central/Coastal Orange County Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) is a comprehensive, multi-jurisdictional habitat conservation plan focusing on conservation of species and their associated habitats in Orange County. The NCCP/HCP focuses on protection of coastal sage scrub habitat and three designated "Target Species": the coastal California gnatcatcher (*Polioptila californica californica*; a federally threatened species and California species of special concern [SSC]), coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*; a California SSC), and orange-throated whiptail (*Aspidoscelis hyperythra*; a California SSC). A reserve area was created to meet the ecological requirements of these three (3) species and thirty-six (36) other "Identified Species," with the understanding that the three target species would serve as "surrogates" for the broader suite of organisms that depend upon coastal sage scrub for their continued survival in the Orange County NCCP/HCP planning area. The Implementing Agreement (IA) satisfies the State and Federal mitigation requirements for designated development and adequately provides for the conservation and protection of the 39 species and their habitats identified in the Orange County NCCP/HCP.

Specifically, the survey area is located within the Coastal Subregion of the Orange County NCCP/HCP and is subject to the requirements and provisions set forth in the Orange County NCCP/HCP, which specifies that the populations of the target species shall be subject to long-term monitoring and that these taxa shall be treated as if they were listed under the California Endangered Species Act/Federal Endangered Species Act.

The survey area is not located within the NCCP Reserve or within a designated Special Linkage or Existing Use Area. All impacts would occur to an area that is highly disturbed and partially under agricultural usage. None of the three NCCP/HPC target species were found within the project site, and there is no suitable habitat for any of them within the project site. Therefore, this project does not require any additional mitigation for impacts to target or identified species and their habitat. Other than implementation of Best Management Practices (BMPs) and general compliance with standard environmental regulations such as those pertaining to protection of nesting birds, no additional mitigation is expected to comply with the Orange County NCCP/HCP.

## Results

*Existing Site Conditions*

The project site is located at an elevation of approximately 450 to 465 feet above mean sea level, sloping gently downward from east to west. According to the *Custom Soil Resource Report for Orange County and*

*Part of Riverside County, California* (USDA 2024), the project site is underlain by the following soil units: San Emigdio fine sandy loam, 0 to 2 percent slopes (194) and water (W). Based on historic and current aerial imagery, the project site has historically been used for agriculture and water storage, with the first signs of its modern usage appearing sometime between 1952 and 1963 (Google, Inc. 2022; HistoricAerials.com 2023). Agricultural usage appears to have continued to present day, while the agricultural irrigation pond has not been in use since the 1990s. Surrounding land uses consisted almost entirely of agricultural fields until at least 2005, with the current residential development beginning sometime between 2005 and 2009. By 2018 the surrounding area became more or less static, with no appreciable differences in structures or development until present day.

*Vegetation Communities and Land Cover Types*

Eight (8) vegetation communities and land cover types were mapped on-site: coyote brush scrub, arroyo willow thickets, sandbar willow thickets, agricultural fields, eucalyptus – tree of heaven – black locust groves, landscaped/ornamental, disturbed, and developed (refer to Figure 1, *Vegetation Communities and Other Land Uses*).

Coyote Brush Scrub

Approximately 2.20 acres of the survey area were mapped as coyote brush scrub. This vegetation community is located at the north end of the survey area surrounding Bee Canyon Wash, just outside the project site and separated from it by fencing. This portion of Bee Canyon Wash is entirely surrounded by development and appears to direct flows in a northwest direction along the northeastern border of the project site. Plants within this vegetation community consist mostly of native species, with some non-natives encroaching from the surrounding disturbed and developed areas. Dominant species in this vegetation community include coyote brush (*Baccharis pilularis*), with mule fat (*Baccharis salicifolia*), elderberry (*Sambucus mexicana*), and goldenbush (*Isocoma* sp.) as sub-dominants. Additional species observed in lower frequencies include California sycamore (*Platanus racemosa*), cactus (*Opuntia* sp.), laurel sumac (*Malosma laurina*), and Peruvian peppertree (*Schinus molle*). This community occurs adjacent to arroyo willow thickets and sandbar willow thickets, which are growing directly along the wash's flow channel, with coyote brush scrub encircling the willow thickets.

Arroyo Willow Thickets

Approximately 0.35 acre of the survey area was mapped as arroyo willow thickets. This community is growing along the flow channel of Bee Canyon Wash, closer to the western side of the survey area. It is dominated by arroyo willow (*Salix lasiolepis*) and sandbar willow (*Salix exigua*), with the shrub layer dominated primarily by coyote brush.

Sandbar Willow Thickets

Approximately 0.66 acre of the survey area was mapped as sandbar willow thickets. This community is growing along the flow channel of Bee Canyon Wash, closer to the eastern side of the survey area. It is dominated by sandbar willow (*Salix exigua*), with the shrub layer dominated primarily by coyote brush.

Agricultural Fields

Approximately 15.74 acres of the total survey area were mapped as agricultural fields, with 2.01 acres located within the project site. A small portion of these fields were in active use with row crops and avocado (*Persea americana*) trees, but in general the agricultural fields were barren at the time of the field survey.

Eucalyptus – Tree of Heaven – Black Locust Groves

Approximately 0.41 acre of the total survey area were mapped as eucalyptus – tree of heaven – black locust groves, with 0.01 acre located within the project site. This community generally consists of windrows of eucalyptus (*Eucalyptus* sp.) planted between agricultural fields. Tree of heaven (*Ailanthus altissima*) and black locust (*Robinia pseudoacacia*) are not present within the survey area.

Landscaped/Ornamental

Approximately 6.74 acres of the survey area were mapped as landscaped/ornamental. This generally consists of ornamental vegetation planted alongside buildings and roadways and is characterized by a variety of non-native species typical of the area, such as acacia (*Acacia* sp.) and pine trees (*Pinus* sp.).

Disturbed

Approximately 5.20 acres of the total survey area were mapped as disturbed, with 2.82 acres located within the project site. This includes areas within and around the agricultural irrigation pond, unpaved roads, and areas that appear to be regularly cleared of vegetation outside of the existing agricultural areas. Areas where repeated vegetation clearing occurs are now characterized by a relatively diverse inventory of non-native plants. Disturbed areas are generally defined as unpaved areas that lack sufficient native vegetation to be categorized as a natural vegetation community. The project site consists of disturbed areas that are generally either being kept free of vegetation or where non-native vegetation has been allowed to grow relatively unmaintained.

Developed

Approximately 19.29 acres of developed areas were mapped including residences and buildings and infrastructure associated with the development within the total survey area, with 1.31 acres located within the project site. These areas generally have a concrete or paved surface or consist of existing buildings and are generally devoid of vegetation, except for landscaping (primarily ornamental trees and ground cover). The agricultural irrigation pond is concrete-lined but has sparse patches of vegetation growing in it. Dominant species in this land cover type include shortpod mustard (*Hirschfeldia incana*), fountaingrass (*Pennisetum setaceum*), salt heliotrope (*Heliotropium curassavicum*), nightshade (*Solanum* sp.), and spotted spurge (*Euphorbia maculata*).

*Wildlife*

Due to the ecologically disturbed nature of the project site and surrounding developments, habitat within the project site is marginally suitable for wildlife species, and particularly only those that are accustomed and acclimated to urbanized and disturbed environments. A total of twenty-five (25) wildlife species were detected during the field survey, all of which were bird species. Birds detected during the field survey included mourning dove (*Zenaida macroura*), northern flicker (*Colaptes auratus*), American kestrel (*Falco sparverius*), bushtit (*Psaltriparus minimus*), Swinhoe's white-eye (*Zosterops simplex*), ruby-crowned kinglet (*Corthylio calendula*), house finch (*Haemorhous mexicanus*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), Allen's hummingbird (*Selasphorus sasin*), northern mockingbird (*Mimus polyglottos*), lesser goldfinch (*Spinus psaltria*), white-crowned sparrow (*Zonotrichia leucophrys*), song sparrow (*Melospiza melodia*), Anna's hummingbird (*Calypte anna*), Say's phoebe (*Sayornis saya*), California towhee (*Melozone crissalis*), common yellowthroat (*Geothlypis trichas*), yellow-rumped warbler (Audubon's) (*Setophaga coronata auduboni*),

spotted towhee (*Pipilo maculatus*), turkey vulture (*Cathartes aura*), house wren (*Troglodytes aedon*), sharp-shinned hawk (*Accipiter striatus*), and red-tailed hawk (*Buteo jamaicensis*). It should be noted that Bee Canyon Wash could support additional wildlife species that may occasionally occur in the project site.

**Biological Constraints**

The following section identifies various types of special-status or sensitive biological resources that are known to be present in the region and discusses whether they may pose a constraint to the project.

*Special-Status Biological Resources*

Special-Status Plants

Thirty-five (35) special-status plant species were identified in the project vicinity by reviews of the CNDDB, CIRP, and IPaC online database (refer to Attachments C through E). Of these 35 species, none are expected to occur within the project site based on a review of specific habitat preferences, known occurrences and distributions, and elevation ranges. Therefore, special-status plants are not considered to be a constraint to project implementation.

Special-Status Wildlife

Forty-one (41) special-status wildlife species were identified in the project vicinity by reviews of the CNDDB and IPaC online database (refer to Attachments C and E). Of these 41 species, despite any local occurrence records in the general vicinity, based on a review of specific habitat preferences, known occurrences and distributions, and elevation ranges, only two (2) species would be expected to potentially occur within the project site: Cooper's hawk (*Accipiter cooperii*; a California Watch List [WL] species) and California horned lark (*Eremophila alpestris actia*; a California WL species). Both species have been recorded nearby within the surrounding agricultural fields (eBird 2024) and both are considered to have a high potential to occur on-site based on prey and/or availability of suitable habitat. Neither of these species is considered "covered" under the NCCP/HCP. Riparian habitat in the adjacent Bee Canyon Wash has a moderate potential to support migrant least Bell's vireo (*Vireo bellii pusillus*; a California and federal endangered species) and yellow-breasted chat (*Icteria virens*; a California species of special concern), but habitat in the portion of Bee Canyon Wash that is adjacent to the project may not be adequate to support breeding birds. Regardless, there is no habitat within the project site boundary that would support either of these species or any other special-status species, and any impacts to bird nesting on- and offsite would be avoided through compliance with the MBTA and CFGC. Therefore, special-status wildlife are not considered to be a constraint to project implementation.

Special-Status Vegetation Communities

Five (5) special-status vegetation communities have been reported in the *Tustin and El Toro, California* 7.5-minute quadrangles by the CNDDB: Southern Coast Live Oak Riparian Forest, Southern Coastal Salt Marsh, Southern Cottonwood Willow Riparian Forest, Southern Riparian Scrub, and Southern Sycamore Alder Riparian Woodland. Special-status vegetation communities are not present within the project site and are not considered to be a constraint to project implementation.

Critical Habitat

According to the most recent final designations at the time of writing (USFWS 2023b), the project site does not fall within designated Critical Habitat for any federally listed species, and therefore there would be no impacts to designated Critical Habitat from the project.

State and Federal Jurisdictional Resources

Although Bee Canyon Wash is located within the survey area, it is not located within the project site and would not be directly impacted by development of the project site. No aquatic features were observed within the project site, and therefore, a jurisdictional delineation is not expected and aquatic features that may fall under state and/or federal jurisdiction are not considered to be a constraint to project implementation.

Tree Preservation

Any trees in the right-of-way of public streets, in and around public parks and other public facilities, in common areas located in village edges and landscape or parking lot setbacks on arterial streets, in eucalyptus windbreaks or any tree included in a remnant of a eucalyptus windbreak, and private trees on nonresidential properties to the extent Zoning Ordinance requirements are effected, are within jurisdiction of the City of Irvine (City). Any tree removal that meets the criteria for a permit, requires the replacement of removed trees at a 1:1 ratio and payment of the applicable fee by the applicant. The project may require the removal of trees along its southern border and trimming of trees along its eastern border. While trees on the southern edge of the project site are avocado and are not part of a eucalyptus windrow, trees along the project's eastern edge along Modjeska are located within the landscaping of a public right-of-way and may require coordination with the City to determine if a Tree Removal Permit will be required for project-related (i.e., not routine maintenance) trimming of trees overhanging into the project site.

Orange County NCCP/HCP

The survey area is not located within the NCCP Reserve or within a designated Special Linkage or Existing Use Area. All impacts would occur to an area that is highly disturbed and partially under agricultural usage. None of the three NCCP/HPC target species (i.e. coastal California gnatcatcher, coastal cactus wren, and orange-throated whiptail) were found within the project site, and there is no suitable habitat for any of them within the project site. Therefore, this project does not require any additional mitigation for impacts to target or identified species and their habitat. Other than implementation of Best Management Practices (BMPs) and general compliance with standard environmental regulations, such as those pertaining to protection of nesting birds, no additional mitigation is expected under the NCCP/HCP.

**Conclusion and Recommendations**

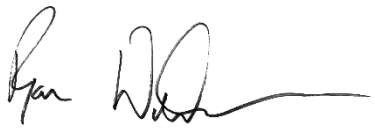
Based on Michael Baker's vegetation mapping in December 2023, the entire project site consists of manipulated land cover types and is composed almost entirely of non-native weeds and ornamental vegetation. No special-status plant or wildlife species were observed during the survey and there is no habitat on-site to support special-status species, although special-status bird species documented in the vicinity may occur in Bee Canyon Wash, immediately north of the project site. The only special-status species that are expected to occur within the project site include Cooper's hawk and California horned lark (both California WL species and neither covered under the NCCP/HCP). A lack of suitable trees for nesting and continuous ground disturbances that occur on-site likely preclude either species from nesting on-site, although both may forage on-site. Based on the results of the field survey and a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that none of

the special-status species identified by the CNDDB, CNPS, and IPaC are expected to occur within the project site.

Because the project site has no suitable habitat to support special-status species, no further biological studies are anticipated at this time. Although certain special-status birds may occur in Bee Canyon Wash, this feature is entirely offsite and will not be directly impacted by the proposed project. Therefore, offsite focused surveys are not expected to be required. However, pursuant to the MBTA and CFGC, if future development of the project site occurs during the avian nesting season (generally February 1 through August 31), Michael Baker recommends that a pre-construction nesting bird clearance survey be conducted by a qualified biologist within a biologically defensible buffer zone surrounding the project site, likely including Bee Canyon Wash as it provides the only native habitat in the immediate area, to determine if nesting birds are present that may be impacted by construction.

Please do not hesitate to contact me at (949) 533-0918 or ryan.winkleman@mbakerintl.com should you have any questions or require further information regarding this report.

Sincerely,



Ryan Winkleman
Senior Biologist/Project Manager
Natural Resources

Attachments:

A. *Figure 1: Vegetation Communities and Other Land Cover Types*
B. *Site Photographs*
C. *CDFW CNDDB Species Lists*
D. *CNPS Species List*
E. *USFWS IPaC Species List*
F. *References*

**Attachment A**

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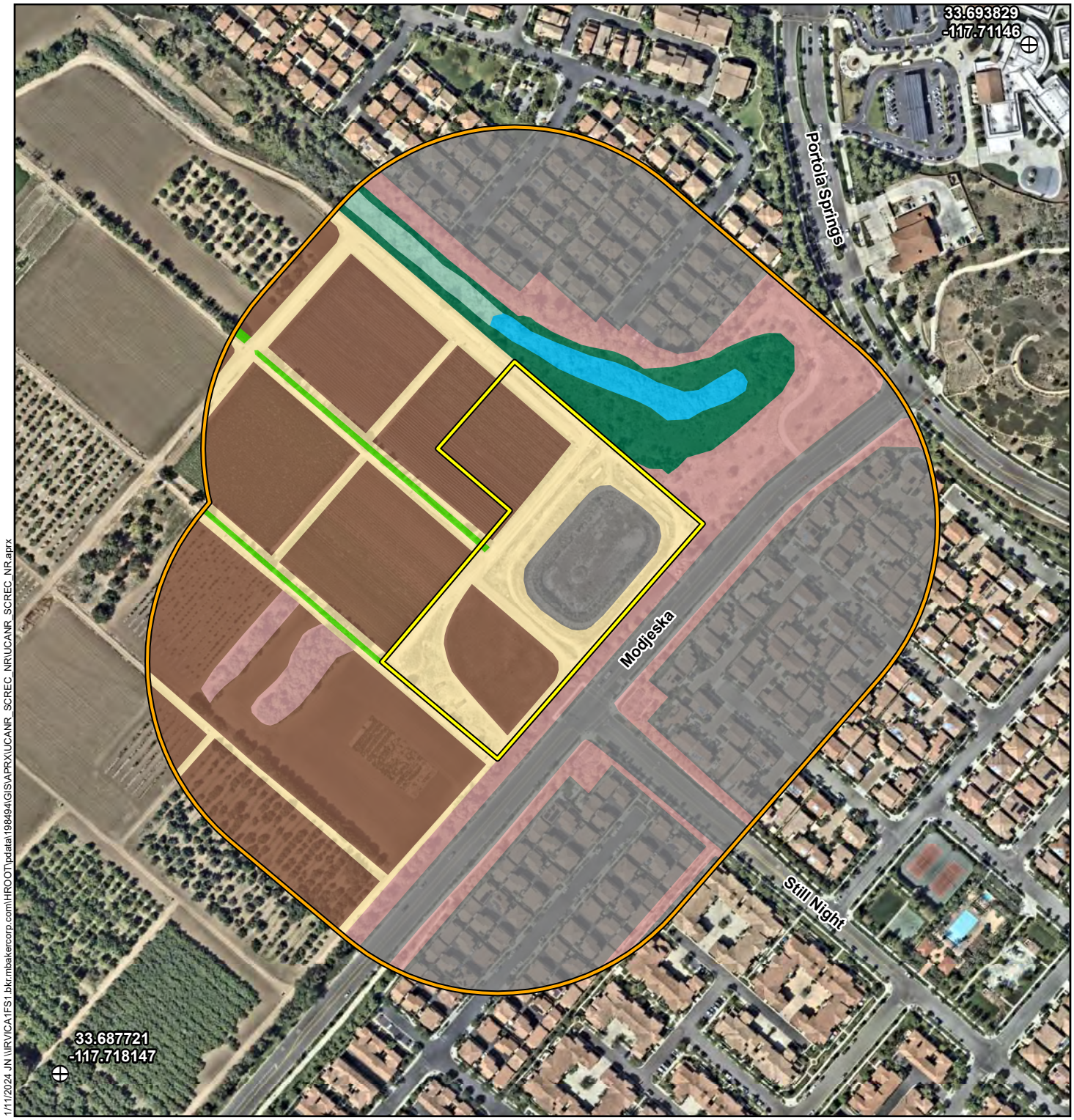
Figure 1: Vegetation Communities and Other Land Cover Types

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**Legend**

- Project Site
- Survey Area
- Reference Point
- Coyote Brush Scrub (2.20 acres)
- Arroyo Willow Thickets (0.35 acre)
- Sandbar Willow Thickets (0.66 acre)
- Agricultural (15.74 acres)
- Eucalyptus - Tree of Heaven - Black Locust Groves (0.41 acre)
- Landscaped/Ornamental (6.74 acres)
- Disturbed (5.20 acres)
- Developed (19.29 acres)

SOUTH COAST RESEARCH AND EXTENSION (REC) ENGAGEMENT CENTER PROJECT
BIOLOGICAL RESOURCES DUE DILIGENCE REPORT

Michael Baker INTERNATIONAL

0 150 300 Feet

# Vegetation Communities and Other Land Uses

Source: Nearmap (09/2023)

Figure 1

**Attachment B**

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Site Photographs

**Photograph 1:** North-facing view of the southeastern corner of the project site, facing a weedy agricultural field.

**Photograph 2:** Southwest-facing view from the northern end of the agricultural irrigation pond.

**Photograph 3:** North-facing view from within the agricultural irrigation pond.

**Photograph 4:** Northeast-facing view along the western side of the agricultural irrigation pond (visible on the right side of the photo).

**Photograph 5:** West-facing view of the western side of the project site.

**Photograph 6:** West-facing view of an agricultural field south of the project site, within the 500-foot survey area.

**Photograph 7:** East-facing view of the western side of the project site. The raised perimeter of the agricultural irrigation pond is visible in the background.

**Photograph 8:** Northeast-facing view from near the western edge of the project site.

**Photograph 9:** Northeast-facing view of Bee Canyon Wash from the northern edge of the project site. This wash has abundant native habitat.

**Photograph 10:** North-facing view of Bee Canyon Wash from the northeastern end of the project site.

**Attachment C**

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CDFW CNDDB Species Lists

# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (Tustin (3311767) OR El Toro (3311766))<br /> AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Accipiter cooperii*** Cooper's hawk | ABNKC12040 | None | None | G5 | S4 | WL |
| ***Agelaius tricolor*** tricolored blackbird | ABPBXB0020 | None | Threatened | G1G2 | S2 | SSC |
| ***Aimophila ruficeps canescens*** southern California rufous-crowned sparrow | ABPBX91091 | None | None | G5T3 | S4 | WL |
| ***Ammodramus savannarum*** grasshopper sparrow | ABPBXA0020 | None | None | G5 | S3 | SSC |
| ***Anaxyrus californicus*** arroyo toad | AAABB01230 | Endangered | None | G2G3 | S2 | SSC |
| ***Anniella stebbinsi*** Southern California legless lizard | ARACC01060 | None | None | G3 | S3 | SSC |
| ***Arizona elegans occidentalis*** California glossy snake | ARADB01017 | None | None | G5T2 | S2 | SSC |
| ***Aspidoscelis hyperythra*** orange-throated whiptail | ARACJ02060 | None | None | G5 | S2S3 | WL |
| ***Aspidoscelis tigris stejnegeri*** coastal whiptail | ARACJ02143 | None | None | G5T5 | S3 | SSC |
| ***Athene cunicularia*** burrowing owl | ABNSB10010 | None | None | G4 | S2 | SSC |
| ***Bombus crotchii*** Crotch bumble bee | IIHYM24480 | None | Candidate Endangered | G2 | S2 | |
| ***Bombus pensylvanicus*** American bumble bee | IIHYM24260 | None | None | G3G4 | S2 | |
| ***Buteo regalis*** ferruginous hawk | ABNKC19120 | None | None | G4 | S3S4 | WL |
| ***Campylorhynchus brunneicapillus sandiegensis*** coastal cactus wren | ABPBG02095 | None | None | G5T3Q | S2 | SSC |
| ***Chaetodipus fallax fallax*** northwestern San Diego pocket mouse | AMAFD05031 | None | None | G5T3T4 | S3S4 | |
| ***Choeronycteris mexicana*** Mexican long-tongued bat | AMACB02010 | None | None | G3G4 | S1 | SSC |
| ***Cicindela latesignata*** western beach tiger beetle | IICOL02110 | None | None | G2G3 | S1 | |
| ***Coccyzus americanus occidentalis*** western yellow-billed cuckoo | ABNRB02022 | Threatened | Endangered | G5T2T3 | S1 | |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Coturnicops noveboracensis***<br>yellow rail | ABNME01010 | None | None | G4 | S2 | SSC |
| ***Crotalus ruber***<br>red-diamond rattlesnake | ARADE02090 | None | None | G4 | S3 | SSC |
| ***Elanus leucurus***<br>white-tailed kite | ABNKC06010 | None | None | G5 | S3S4 | FP |
| ***Emys marmorata***<br>western pond turtle | ARAAD02030 | Proposed Threatened | None | G3G4 | S3 | SSC |
| ***Eremophila alpestris actia***<br>California horned lark | ABPAT02011 | None | None | G5T4Q | S4 | WL |
| ***Eumops perotis californicus***<br>western mastiff bat | AMACD02011 | None | None | G4G5T4 | S3S4 | SSC |
| ***Icteria virens***<br>yellow-breasted chat | ABPBX24010 | None | None | G5 | S4 | SSC |
| ***Laterallus jamaicensis coturniculus***<br>California black rail | ABNME03041 | None | Threatened | G3T1 | S2 | FP |
| ***Neotoma lepida intermedia***<br>San Diego desert woodrat | AMAFF08041 | None | None | G5T3T4 | S3S4 | SSC |
| ***Oncorhynchus mykiss irideus pop. 10***<br>steelhead - southern California DPS | AFCHA0209J | Endangered | Candidate Endangered | G5T1Q | S1 | |
| ***Onychomys torridus ramona***<br>southern grasshopper mouse | AMAFF06022 | None | None | G5T3 | S3 | SSC |
| ***Passerculus sandwichensis beldingi***<br>Belding's savannah sparrow | ABPBX99015 | None | Endangered | G5T3 | S3 | |
| ***Perognathus longimembris pacificus***<br>Pacific pocket mouse | AMAFD01042 | Endangered | None | G5T2 | S2 | SSC |
| ***Phrynosoma blainvillii***<br>coast horned lizard | ARACF12100 | None | None | G4 | S4 | SSC |
| ***Polioptila californica californica***<br>coastal California gnatcatcher | ABPBJ08081 | Threatened | None | G4G5T3Q | S2 | SSC |
| ***Rallus obsoletus levipes***<br>light-footed Ridgway's rail | ABNME05014 | Endangered | Endangered | G3T1T2 | S1 | FP |
| ***Rhinichthys osculus ssp. 8***<br>Santa Ana speckled dace | AFCJB3705K | None | None | G5T1 | S1 | SSC |
| ***Salvadora hexalepis virgultea***<br>coast patch-nosed snake | ARADB30033 | None | None | G5T4 | S3 | SSC |
| ***Setophaga petechia***<br>yellow warbler | ABPBX03010 | None | None | G5 | S3 | SSC |
| ***Sorex ornatus salicornicus***<br>southern California saltmarsh shrew | AMABA01104 | None | None | G5T1? | S1 | SSC |
| ***Spea hammondii***<br>western spadefoot | AAABF02020 | None | None | G2G3 | S3S4 | SSC |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Sternula antillarum browni*** | ABNNM08103 | Endangered | Endangered | G4T2T3Q | S2 | FP |
| California least tern | | | | | | |
| ***Streptocephalus woottoni*** | ICBRA07010 | Endangered | None | G1G2 | S2 | |
| Riverside fairy shrimp | | | | | | |
| ***Thamnophis hammondii*** | ARADB36160 | None | None | G4 | S3S4 | SSC |
| two-striped gartersnake | | | | | | |
| ***Tryonia imitator*** | IMGASJ7040 | None | None | G2 | S2 | |
| mimic tryonia (=California brackishwater snail) | | | | | | |
| ***Vireo bellii pusillus*** | ABPBW01114 | Endangered | Endangered | G5T2 | S3 | |
| least Bell's vireo | | | | | | |

**Record Count: 44**

# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (Tustin (3311767) OR El Toro (3311766))<br /> AND Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Astragalus brauntonii*** Braunton's milk-vetch | PDFAB0F1G0 | Endangered | None | G2 | S2 | 1B.1 |
| ***Atriplex coulteri*** Coulter's saltbush | PDCHE040E0 | None | None | G3 | S1S2 | 1B.2 |
| ***Atriplex pacifica*** south coast saltscale | PDCHE041C0 | None | None | G4 | S2 | 1B.2 |
| ***Atriplex serenana var. davidsonii*** Davidson's saltscale | PDCHE041T1 | None | None | G5T1 | S1 | 1B.2 |
| ***Brodiaea filifolia*** thread-leaved brodiaea | PMLIL0C050 | Threatened | Endangered | G2 | S2 | 1B.1 |
| ***Calochortus weedii var. intermedius*** intermediate mariposa-lily | PMLIL0D1J1 | None | None | G3G4T3 | S3 | 1B.2 |
| ***Centromadia parryi ssp. australis*** southern tarplant | PDAST4R0P4 | None | None | G3T2 | S2 | 1B.1 |
| ***Dudleya multicaulis*** many-stemmed dudleya | PDCRA040H0 | None | None | G2 | S2 | 1B.2 |
| ***Helianthus nuttallii ssp. parishii*** Los Angeles sunflower | PDAST4N102 | None | None | G5TX | SX | 1A |
| ***Lasthenia glabrata ssp. coulteri*** Coulter's goldfields | PDAST5L0A1 | None | None | G4T2 | S2 | 1B.1 |
| ***Lepidium virginicum var. robinsonii*** Robinson's pepper-grass | PDBRA1M114 | None | None | G5T3 | S3 | 4.3 |
| ***Monardella hypoleuca ssp. intermedia*** intermediate monardella | PDLAM180A4 | None | None | G4T2? | S2? | 1B.3 |
| ***Nama stenocarpa*** mud nama | PDHYD0A0H0 | None | None | G4G5 | S1S2 | 2B.2 |
| ***Nasturtium gambelii*** Gambel's water cress | PDBRA270V0 | Endangered | Threatened | G1 | S1 | 1B.1 |
| ***Nolina cismontana*** chaparral nolina | PMAGA080E0 | None | None | G3 | S3 | 1B.2 |
| ***Pentachaeta aurea ssp. allenii*** Allen's pentachaeta | PDAST6X021 | None | None | G4T1 | S1 | 1B.1 |
| ***Senecio aphanactis*** chaparral ragwort | PDAST8H060 | None | None | G3 | S2 | 2B.2 |
| ***Sidalcea neomexicana*** salt spring checkerbloom | PDMAL110J0 | None | None | G4 | S2 | 2B.2 |
| ***Suaeda esteroa*** estuary seablite | PDCHE0P0D0 | None | None | G3 | S2 | 1B.2 |
| ***Symphyotrichum defoliatum*** San Bernardino aster | PDASTE80C0 | None | None | G2 | S2 | 1B.2 |

**Record Count: 20**

# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (Tustin (3311767) OR El Toro (3311766))<br /> AND Taxonomic Group IS (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine)

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Southern Coast Live Oak Riparian Forest*** | CTT61310CA | None | None | G4 | S4 | |
| Southern Coast Live Oak Riparian Forest | | | | | | |
| ***Southern Coastal Salt Marsh*** | CTT52120CA | None | None | G2 | S2.1 | |
| Southern Coastal Salt Marsh | | | | | | |
| ***Southern Cottonwood Willow Riparian Forest*** | CTT61330CA | None | None | G3 | S3.2 | |
| Southern Cottonwood Willow Riparian Forest | | | | | | |
| ***Southern Riparian Scrub*** | CTT63300CA | None | None | G3 | S3.2 | |
| Southern Riparian Scrub | | | | | | |
| ***Southern Sycamore Alder Riparian Woodland*** | CTT62400CA | None | None | G4 | S4 | |
| Southern Sycamore Alder Riparian Woodland | | | | | | |

**Record Count: 5**

**Attachment D**

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CNPS Species List

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

## Search Results

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

Search Criteria: Quad is one of [**3311767:3311766**]

| ▲ SCIENTIFIC NAME | COMMON NAME | FAMILY | LIFEFORM | BLOOMING PERIOD | FED LIST | STATE LIST | GLOBAL RANK | STATE RANK | CA RARE PLANT RANK | CA ENDEMIC | DATE ADDED | PHOTO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Astragalus brauntonii* | Braunton's milk-vetch | Fabaceae | perennial herb | Jan-Aug | FE | None | G2 | S2 | 1B.1 | Yes | 1974-01-01 |  © 2009 Thomas Stoughton |
| *Atriplex coulteri* | Coulter's saltbush | Chenopodiaceae | perennial herb | Mar-Oct | None | None | G3 | S1S2 | 1B.2 | | 1994-01-01 | No Photo Available |
| *Atriplex pacifica* | south coast saltscale | Chenopodiaceae | annual herb | Mar-Oct | None | None | G4 | S2 | 1B.2 | | 1994-01-01 | No Photo Available |
| *Atriplex serenana* var. *davidsonii* | Davidson's saltscale | Chenopodiaceae | annual herb | Apr-Oct | None | None | G5T1 | S1 | 1B.2 | | 1994-01-01 | No Photo Available |
| *Brodiaea filifolia* | thread-leaved brodiaea | Themidaceae | perennial bulbiferous herb | Mar-Jun | FT | CE | G2 | S2 | 1B.1 | Yes | 1974-01-01 |  © 2016 Keir Morse |
| *Calochortus catalinae* | Catalina mariposa lily | Liliaceae | perennial bulbiferous herb | (Feb)Mar-Jun | None | None | G3G4 | S3S4 | 4.2 | Yes | 1974-01-01 | No Photo Available |
| *Calochortus plummerae* | Plummer's mariposa-lily | Liliaceae | perennial bulbiferous herb | May-Jul | None | None | G4 | S4 | 4.2 | Yes | 1994-01-01 | No Photo Available |
| *Calochortus weedii* var. *intermedius* | intermediate mariposa-lily | Liliaceae | perennial bulbiferous herb | May-Jul | None | None | G3G4T3 | S3 | 1B.2 | Yes | 1994-01-01 | No Photo Available |
| *Camissoniopsis lewisii* | Lewis' evening-primrose | Onagraceae | annual herb | Mar-May(Jun) | None | None | G4 | S4 | 3 | | 1994-01-01 | No Photo Available |
| *Centromadia parryi* ssp. *australis* | southern tarplant | Asteraceae | annual herb | May-Nov | None | None | G3T2 | S2 | 1B.1 | | 1994-01-01 | No Photo Available |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Convolvulus simulans* | small-flowered morning-glory | Convolvulaceae | annual herb | Mar-Jul | None | None | G4 | S4 | 4.2 | | 1994-01-01 | No Photo Available |
| *Deinandra paniculata* | paniculate tarplant | Asteraceae | annual herb | (Mar)Apr-Nov | None | None | G4 | S4 | 4.2 | | 2001-01-01 | No Photo Available |
| *Diplacus clevelandii* | Cleveland's bush monkeyflower | Phrymaceae | perennial rhizomatous herb | Apr-Jul | None | None | G4 | S4 | 4.2 | | 1980-01-01 |  © 2020 W. Juergen Schrenk |
| *Dudleya multicaulis* | many-stemmed dudleya | Crassulaceae | perennial herb | Apr-Jul | None | None | G2 | S2 | 1B.2 | Yes | 1974-01-01 | No Photo Available |
| *Helianthus nuttallii* ssp. *parishii* | Los Angeles sunflower | Asteraceae | perennial rhizomatous herb | Aug-Oct | None | None | G5TX | SX | 1A | Yes | 1974-01-01 | No Photo Available |
| *Hordeum intercedens* | vernal barley | Poaceae | annual herb | Mar-Jun | None | None | G3G4 | S3S4 | 3.2 | | 1994-01-01 | No Photo Available |
| *Juglans californica* | Southern California black walnut | Juglandaceae | perennial deciduous tree | Mar-Aug | None | None | G4 | S4 | 4.2 | Yes | 1994-01-01 |  © 2020 Zoya Akulova |
| *Juncus acutus* ssp. *leopoldii* | southwestern spiny rush | Juncaceae | perennial rhizomatous herb | (Mar)May-Jun | None | None | G5T5 | S4 | 4.2 | | 1988-01-01 |  © 2019 Belinda Lo |
| *Lasthenia glabrata* ssp. *coulteri* | Coulter's goldfields | Asteraceae | annual herb | Feb-Jun | None | None | G4T2 | S2 | 1B.1 | | 1994-01-01 |  © 2013 Keir Morse |
| *Lepidium virginicum* var. *robinsonii* | Robinson's pepper-grass | Brassicaceae | annual herb | Jan-Jul | None | None | G5T3 | S3 | 4.3 | | 1994-01-01 |  © 2015 Keir Morse |
| *Lycium californicum* | California box-thorn | Solanaceae | perennial shrub | Mar-Aug(Dec) | None | None | G4 | S4 | 4.2 | | 2001-01-01 | No Photo Available |
| *Monardella hypoleuca* ssp. *intermedia* | intermediate monardella | Lamiaceae | perennial rhizomatous herb | Apr-Sep | None | None | G4T2? | S2? | 1B.3 | Yes | 2012-10-16 |  © 2016 Ron Vanderhoff |
| *Nama stenocarpa* | mud nama | Namaceae | annual/perennial herb | Jan-Jul | None | None | G4G5 | S1S2 | 2B.2 | | 1994-01-01 | No Photo Available |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Nasturtium gambelii* | Gambel's water cress | Brassicaceae | perennial rhizomatous herb | Apr-Oct | FE | CT | G1 | S1 | 1B.1 | | 1980-01-01 | No Photo Available |
| *Nolina cismontana* | chaparral nolina | Ruscaceae | perennial evergreen shrub | (Mar)May-Jul | None | None | G3 | S3 | 1B.2 | Yes | 2001-01-01 |  © 2005 Santa Monica Mountains National Recreation Area |
| *Pentachaeta aurea* ssp. *allenii* | Allen's pentachaeta | Asteraceae | annual herb | Mar-Jun | None | None | G4T1 | S1 | 1B.1 | Yes | 2008-05-08 |  ©2008 Bob Allen |
| *Phacelia hubbyi* | Hubby's phacelia | Hydrophyllaceae | annual herb | Apr-Jul | None | None | G4 | S4 | 4.2 | Yes | 2007-02-02 | No Photo Available |
| *Romneya coulteri* | Coulter's matilija poppy | Papaveraceae | perennial rhizomatous herb | Mar-Jul(Aug) | None | None | G4 | S4 | 4.2 | | 1974-01-01 | No Photo Available |
| *Senecio aphanactis* | chaparral ragwort | Asteraceae | annual herb | Jan-Apr(May) | None | None | G3 | S2 | 2B.2 | | 1994-01-01 | No Photo Available |
| *Sidalcea neomexicana* | salt spring checkerbloom | Malvaceae | perennial herb | Mar-Jun | None | None | G4 | S2 | 2B.2 | | 1994-01-01 | No Photo Available |
| *Suaeda esteroa* | estuary seablite | Chenopodiaceae | perennial herb | (Jan-May)Jul-Oct | None | None | G3 | S2 | 1B.2 | | 1984-01-01 | No Photo Available |
| *Suaeda taxifolia* | woolly seablite | Chenopodiaceae | perennial evergreen shrub | Jan-Dec | None | None | G4 | S4 | 4.2 | | 1994-01-01 | No Photo Available |
| *Symphyotrichum defoliatum* | San Bernardino aster | Asteraceae | perennial rhizomatous herb | Jul-Nov | None | None | G2 | S2 | 1B.2 | Yes | 2004-01-01 | No Photo Available |
| *Viguiera laciniata* | San Diego County viguiera | Asteraceae | perennial shrub | Feb-Jun(Aug) | None | None | G4 | S4 | 4.3 | | 1974-01-01 | No Photo Available |

Showing 1 to 34 of 34 entries

**Suggested Citation:**

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 12 December 2023].

**Attachment E**

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USFWS IPaC Species List

# 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

Orange County, California


## Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

# Endangered species

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

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

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

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

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

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

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

---

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

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 |
|---|---|
| Coastal California Gnatcatcher *Polioptila californica californica*<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/8178 | Threatened |
| Least Bell's Vireo *Vireo bellii pusillus*<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/5945 | Endangered |

# Reptiles

| NAME | STATUS |
|---|---|
| Southwestern Pond Turtle *Actinemys pallida*<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/4768 | Proposed Threatened |

# Amphibians

| NAME | STATUS |
|---|---|
| Arroyo (=arroyo Southwestern) Toad *Anaxyrus californicus*<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/3762 | Endangered |

# Insects

| NAME | STATUS |
|---|---|

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

## Crustaceans

| NAME | STATUS |
|---|---|
| Riverside Fairy Shrimp Streptocephalus woottoni<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/8148 | Endangered |

## Flowering Plants

| NAME | STATUS |
|---|---|
| Santa Monica Mountains Dudleyea Dudleya cymosa ssp. ovatifolia<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/2538 | Threatened |
| Thread-leaved Brodiaea Brodiaea filifolia<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/6087 | Threatened |



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

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

Additional information can be found using the following links:

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

**There are bald and/or golden eagles in your project area.**

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, 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 |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Jan 1 to Aug 31 |
| Golden Eagle *Aquila chrysaetos*<br>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.<br>https://ecos.fws.gov/ecp/species/1680 | Breeds Jan 1 to Aug 31 |

# 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.

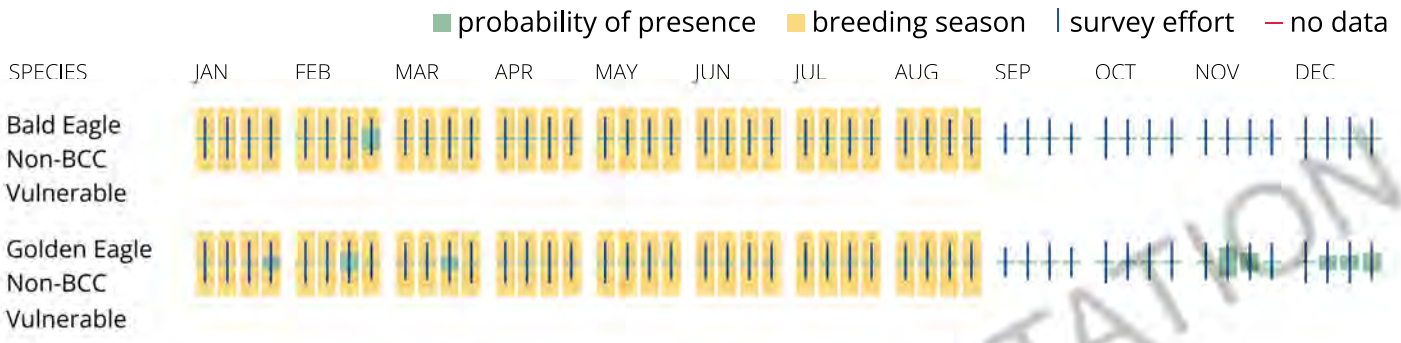
**Breeding Season** (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**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[1] and the Bald and Golden Eagle Protection Act[2].

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

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

Additional information can be found using the following links:

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

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

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

| NAME | BREEDING SEASON |
|---|---|
| **Allen's Hummingbird** *Selasphorus sasin*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9637 | Breeds Feb 1 to Jul 15 |
| **Bald Eagle** *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Jan 1 to Aug 31 |
| **Belding's Savannah Sparrow** *Passerculus sandwichensis beldingi*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/8 | Breeds Apr 1 to Aug 15 |
| **Black-chinned Sparrow** *Spizella atrogularis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9447 | Breeds Apr 15 to Jul 31 |
| **Bullock's Oriole** *Icterus bullockii*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Mar 21 to Jul 25 |
| **California Gull** *Larus californicus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 1 to Jul 31 |
| **California Thrasher** *Toxostoma redivivum*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Jan 1 to Jul 31 |

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

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

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10

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

# Probability of Presence Summary

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

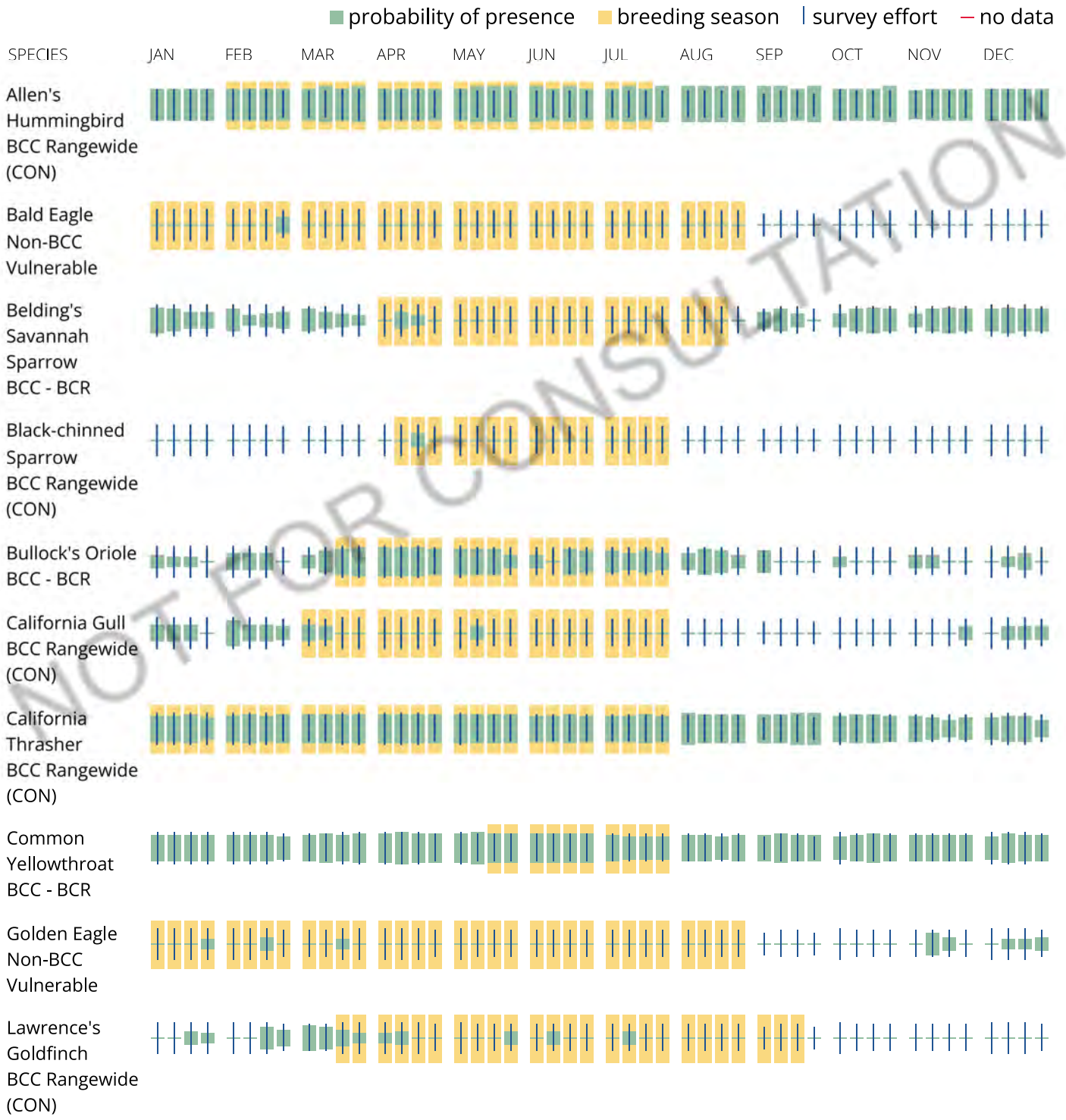
**Breeding Season** (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

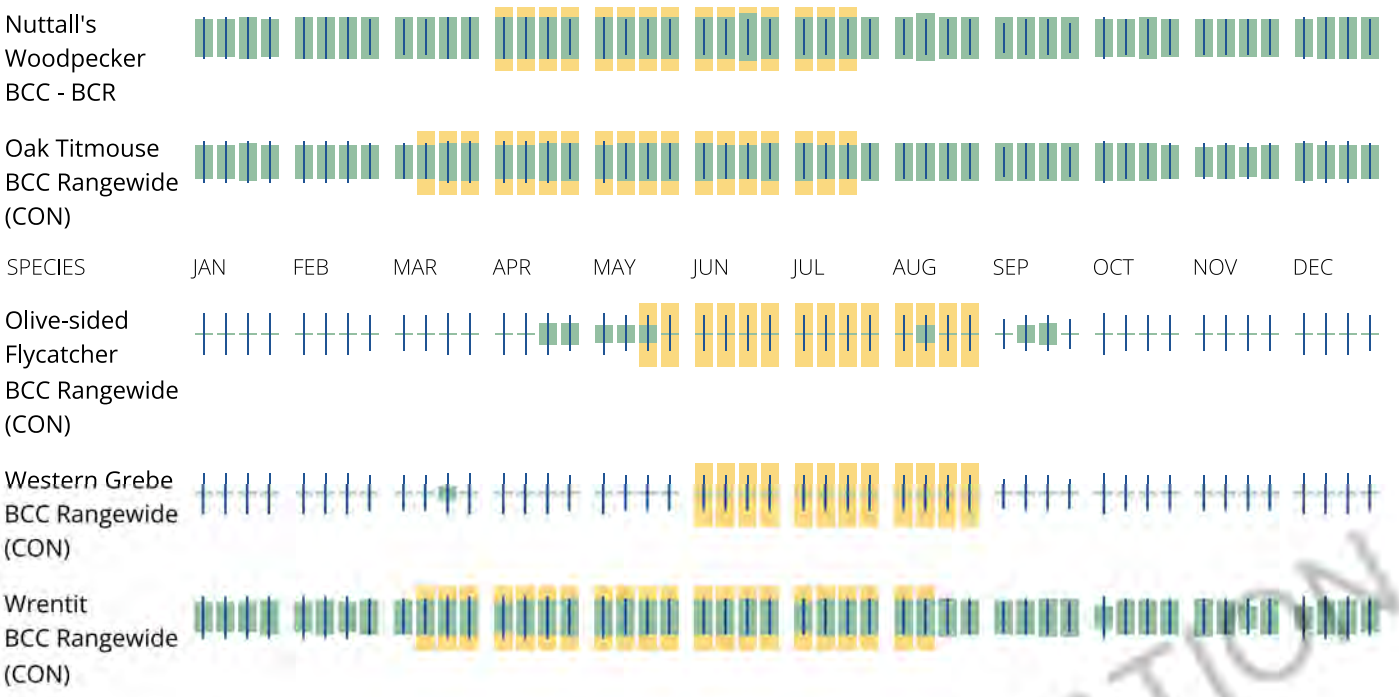
**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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 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.

## Wetland information is not available at this time

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



### Data limitations

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

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

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

### Data exclusions

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

### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local

government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

**Attachment F**

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