

## MEMORANDUM

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**From:** Allie Sennett, Dudek  
**Subject:** Biological Resources Constraints Assessment for the El Dorado Irrigation District Wastewater Collection Facility Relocation Project  
**Date:** May 7, 2019  
**Attachment(s):** Att. Figures  
Figure 1 – Location Map  
Figure 2 – Project Site  
Att. 1 – Database Queries  
Att. 2 – Table of Potentially Occurring Species

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Dudek conducted a biological resources assessment to identify any potential constraints to development posed by the presence or potential presence of biological resources at the proposed El Dorado Irrigation District Wastewater Collection Facility Relocation Project (project) site, located near El Dorado Hills in El Dorado County, California (Figure 1). A reconnaissance-level field survey was conducted to identify and describe existing biological conditions of the project site including the presence of natural vegetation communities, wetlands and other potential waters of the United States, sensitive habitats, and the potential for special-status plant and wildlife species to occur on the site. This report provides a description of the methodology and results of the assessment based on searches of relevant databases and the field survey of existing conditions.

### METHODS

Special-status biological resources present or potentially present on the project site were identified through a literature and database search using the following sources: the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) Trust Resource Report (USFWS 2019); the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2019a); and the CNPS online Inventory of Rare, Threatened, and Endangered Plants (CNPS 2019). The IPaC report was completed for the project site. Searches of the CNDDB and CNPS databases were completed for the Clarksville and eight surrounding U.S. Geological Survey 7.5-minute quadrangles: Rocklin, Pilot Hill, Coloma, Folsom, Shingle Springs, Buffalo Creek, Folsom SE, and Latrobe.

Following the literature and database review, Dudek Biologist Allie Sennett, M.S., conducted a reconnaissance-level survey of the project site on April 9, 2019. The survey was conducted on foot and included a visual survey of the project site and the immediate surrounding area. Native and naturalized plant and wildlife species

encountered within the project site were identified and recorded. Dudek also assessed the site for wetlands and other aquatic habitat potentially subject to the jurisdiction of state and federal agencies such as the U.S. Army Corps of Engineers (ACOE), California Regional Water Quality Control Boards (RWQCB), and CDFW. Because the focus of this assessment was to identify resources potentially under the jurisdiction of these resource agencies to ensure buffers are observed to ensure impact avoidance, no formal protocol-level jurisdictional delineation was conducted during the field survey.

## RESULTS

### *Site Description*

Elevations at the project site range from approximately 540 to 560 feet above mean sea level. The project site is just within the southern boundary of a parcel developed with an existing wastewater treatment plant (Figure 2). The wastewater treatment plant facility is surrounded by a mix of developed land and disturbed, non-native annual grassland. Many of the dominant plant species in the grassland community are non-natives, such as longbeak stork's bill (*Erodium botrys*), wild oat (*Avena barbata*), and medusa head (*Elymus caput-medusae*), and are typically associated with disturbed sites. Land uses to the west and north include Latrobe Road, industrial and office development, a riparian area associated with Carson Creek, and non-native annual grassland. Lands south and east of the facility are largely developed with residential subdivisions and Blackstone Parkway and local roads. Small areas of disturbed, non-native annual grasslands abut the wastewater treatment facility property, and the project site, on the east and south. A layer of gravel has been applied to a majority of the project site and it is subject to frequent disturbance from facility operations, as it is actively used for secondary vehicle access and temporary materials storage.

### *Special-Status Species*

No special-status plants are expected to occur at the project site due to the disturbed nature of the site and a lack of appropriate habitat and soils at the site.

Five special-status wildlife species have the potential to occur at the project site: Western Pond Turtle (*Emys marmorata*), Burrowing Owl (*Athene cunicularia*), Swainson's Hawk (*Buteo swainsoni*), Tricolored Blackbird (*Agelaius tricolor*), and White-Tailed Kite (*Elanus leucurus*). None of these species were detected at or near the project site during the April 2019 field survey.

**Western pond turtle** is a State Species of Special Concern (CDFW 2019b) with low potential to occur onsite. Carson Creek, which is over 500 feet from the project site at its nearest point at the Latrobe Road crossing, provides potential dispersal habitat for this species. There is marginal aquatic habitat onsite as the swale that runs through the project site lacks aquatic refugia, basking sites, and deeper waters preferred by this species. There is no suitable upland habitat within the project site as a result of regular disking of uplands along the swale. The nearest documented occurrence of this species is in Carson Creek near Latrobe Road, over 675 feet

northwest of the project site. The onsite swale runs for over 2,000 feet and runs under Latrobe Road in an approximately 200-foot-long culvert before connecting to Carson Creek southwest of the project site. WPT are unlikely to travel this distance upstream in the swale and proceed through a dark, lengthy culvert as this species requires regular sun exposure for thermoregulation. As such, western pond turtle are not expected to occur onsite and potential impacts to western pond turtle are not anticipated as a result of the proposed project.

**Burrowing owl** is a State Species of Special Concern (CDFW 2019b) with moderate potential to occur onsite. Open grassland within and adjacent to the project site provides potential habitat for this species. No burrows were observed in the project boundary during the field survey. The nearest documented occurrence for burrowing owl is approximately 1.4 miles northwest of the project site. To avoid/minimize potential impacts to burrowing owl, Dudek recommends conducting a habitat assessment of the project site for this species prior to project construction if construction is to occur during the burrowing owl breeding season (February 1 – August 31). Ideally, the assessment should be conducted prior to the breeding season to allow time for protocol surveys and/or passive relocation, should any suitable burrows and/or burrows with owl sign be detected during the survey. Protocol surveys (if needed) should be conducted in accordance with the CDFW 2012 *Staff Report on Burrowing Owl Mitigation*, and passive relocation (if needed) should be conducted in coordination with CDFW. A habitat assessment and subsequent surveys are only necessary if project construction will occur during the burrowing owl breeding season.

**Swainson's hawk** is a State Threatened species (CDFW 2019b) with low potential to occur onsite. Although grassland at the project site provides potential foraging habitat, there is no suitable nesting habitat present onsite. Although there is potential nesting habitat within the vicinity of the project site, including the riparian corridor along Carson Creek, the nearest documented nest tree for this species is approximately 6 miles southwest of the project site. Many potential nesting trees surrounding the site are visibly-blocked from the project site by existing development and hillsides. To avoid/minimize potential impacts to Swainson's hawk, Dudek recommends conducting a preconstruction survey for Swainson's hawk within 2 weeks prior to project construction. Should any active Swainson's hawk nests be detected in the survey area (project site plus a 500-foot buffer), full-time nest monitoring, in coordination with CDFW, may be necessary. The preconstruction survey is only necessary if project construction will occur during the Swainson's hawk breeding season (March 1 – August 31).

**Tricolored blackbird** is a State Threatened species (CDFW 2019b) with low potential to occur onsite. Although there is no potential nesting habitat at the project site, there is a nesting colony documented approximately 0.7 mile from the project site. Grassland on the project site provides marginal foraging habitat as it is subject to frequent disturbance associated with treatment plant operations and maintenance such as disking and mowing. Areas adjacent to the project site are also considered to provide marginal foraging habitat as a result of frequent disking and mowing. Additionally, nesting of this species is not documented on or adjacent to the project site and the nearby colony, is unlikely to forage in grassland on or adjacent to the project site as there are numerous

other foraging areas in the vicinity of the documented colony. No avoidance or minimization measures are recommended for this species.

**Nesting and Migratory Birds and Birds of Prey (including White-Tailed Kite).** Trees, shrubs, grassland, disturbed areas, and/or manmade structures at the project site and surrounding areas provide suitable nesting habitat for several local and migratory bird species, including White-tailed kite and ground-nesting killdeer. Native birds of prey are protected by California Fish and Game Code Section 3503.5, migratory bird species are protected by the federal Migratory Bird Treaty Act (MBTA), and White-tailed kite is a California Fully Protected species (CDFW 2019b). To avoid/minimize potential impacts to nesting birds and birds of prey, including White-tailed kite, Dudek recommends conducting a preconstruction nesting bird survey within 2 weeks prior to project construction. The preconstruction survey is only necessary if project construction will occur during the breeding season (February 1 – August 31).

#### *Regulated Waters*

A wetland delineation has not been conducted for the project site; however, a vegetated swale in the eastern portion of the site may be considered potentially jurisdictional by either the ACOE or the RWQCB. The swale drains urban run-off beginning in the hills less than one mile northeast of the project site. The swale enters at the east side of the EDHWWTP property and runs south and adjacent to the primary wastewater storage pond before crossing through the project site where it flows under an existing access road via two existing 30-inch high-density polyethylene culverts. The swale runs offsite for over 2,000 feet before draining into Carson Creek southwest of the project site. Based on field observations and a review of aerial photographs, this feature may be subject to regulation by the ACOE and the RWQCB.

The project would result in no disturbance to the drainage swale or the existing culverts and a minimum 15-foot non-disturbance buffer from the top of bank on both sides of the swale would be identified on plans to ensure no disturbance would occur to the existing swale. Though no direct impacts to the swale are anticipated, Dudek recommend that exclusion fencing be installed between the swale and the limits of the buffer to ensure that construction disturbance results in no inadvertent impacts to the swale. A qualified specialist familiar with wetlands and other waters of the U.S. should guide installation of the exclusion fencing to ensure adequate protection of regulated areas associated with the swale. Appropriate Best Management Practices (BMPs) for erosion control and spill prevention, as required by the project's stormwater pollution prevention plan, should also be implemented to ensure protection of the swale during project construction. If project plans change to include direct impacts to the swale, a formal jurisdictional determination must be prepared and appropriate permits must be obtained from the ACOE and RWQCB.

Subject: *El Dorado Irrigation District Wastewater Collection Facility Relocation Project*  
*Biological Resources Constraints Assessment*

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If you have any questions or concerns regarding the content of this letter report, please contact me at 760.936.7969 or asennett@dudek.com.

Sincerely,



Allie Sennett, M.S.  
Biologist

Att.: *Figures*

*Figure 1 – Project Location*

*Figure 2 – Project Site*

*Att. 1 – Database Queries*

*Att. 2 – Table of Potentially Occurring Species*

cc. *Markus Lang, Dudek*

## REFERENCES CITED

CCH (Consortium of California Herbaria). Last Updated November 2018. Database. Assessed April 2019.  
<http://ucjeps.berkeley.edu/consortium/>

CDFW (California Department of Fish and Wildlife). 2019a. RareFind 5. California Natural Diversity Database. CDFW, Biogeographic Data Branch. Accessed April 2019.  
<https://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>.

CDFW (California Department of Fish and Wildlife). 2019b. Natural Diversity Database. Special Animals List. Periodic publication. Updated November 2018. Accessed April 2019.  
<https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>

CNPS (California Native Plant Society, Rare Plant Program). 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Accessed April 2019.  
<http://www.rareplants.cnps.org>.

USFWS (U.S. Fish and Wildlife Service). 2019. IPaC (Information for Planning and Consultation) Search. Accessed April 2019. <http://www.fws.gov/data>.

ATTACHMENT 1  
*Database Queries*

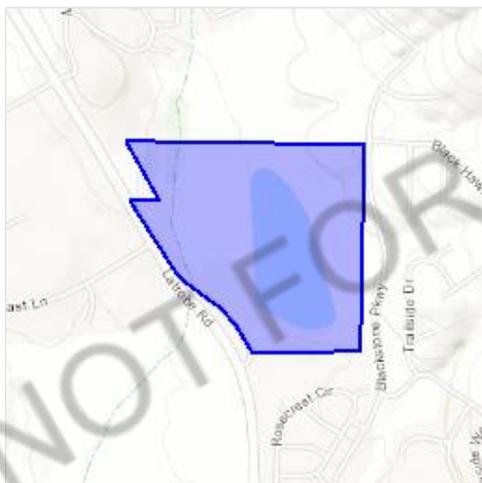
# IPaC resource list

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

El Dorado 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

# 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.
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:

## Reptiles

NAME

STATUS

Giant Garter Snake *Thamnophis gigas* Threatened  
 No critical habitat has been designated for this species.  
<https://ecos.fws.gov/ecp/species/4482>

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2076">https://ecos.fws.gov/ecp/species/2076</a>	Threatened

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened

## Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/7850">https://ecos.fws.gov/ecp/species/7850</a>	Threatened

## Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/498">https://ecos.fws.gov/ecp/species/498</a>	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2246">https://ecos.fws.gov/ecp/species/2246</a>	Endangered

# Flowering Plants

NAME	STATUS
El Dorado Bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/5209">https://ecos.fws.gov/ecp/species/5209</a>	Endangered
Layne's Butterweed <i>Senecio layneae</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4062">https://ecos.fws.gov/ecp/species/4062</a>	Threatened
Pine Hill Ceanothus <i>Ceanothus roderickii</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/3293">https://ecos.fws.gov/ecp/species/3293</a>	Endangered
Pine Hill Flannelbush <i>Fremontodendron californicum</i> ssp. <i>decumbens</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4818">https://ecos.fws.gov/ecp/species/4818</a>	Endangered
Stebbins' Morning-glory <i>Calystegia stebbinsii</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/3991">https://ecos.fws.gov/ecp/species/3991</a>	Endangered

## Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<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 should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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

Additional information can be found using the following links:

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

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

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

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

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

<https://ecos.fws.gov/ecp/species/1626>

<b>Burrowing Owl</b> <i>Athene cunicularia</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/9737">https://ecos.fws.gov/ecp/species/9737</a>	Breeds Mar 15 to Aug 31
<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.	Breeds Jan 1 to Jul 31
<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>	Breeds May 20 to Jul 31
<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>	Breeds Jan 1 to Aug 31
<b>Lawrence's Goldfinch</b> <i>Carduelis 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>	Breeds Mar 20 to Sep 20
<b>Lewis's Woodpecker</b> <i>Melanerpes lewis</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/9408">https://ecos.fws.gov/ecp/species/9408</a>	Breeds Apr 20 to Sep 30
<b>Marbled Godwit</b> <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>	Breeds elsewhere
<b>Nuttall's Woodpecker</b> <i>Picoides 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>	Breeds Apr 1 to Jul 20
<b>Oak Titmouse</b> <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>	Breeds Mar 15 to Jul 15

**Rufous Hummingbird** *selasphorus rufus*

Breeds elsewhere

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

<https://ecos.fws.gov/ecp/species/8002>

**Song Sparrow** *Melospiza melodia*

Breeds Feb 20 to Sep 5

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

**Spotted Towhee** *Pipilo maculatus clementae*

Breeds Apr 15 to Jul 20

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

<https://ecos.fws.gov/ecp/species/4243>

**Tricolored Blackbird** *Agelaius tricolor*

Breeds Mar 15 to Aug 10

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

<https://ecos.fws.gov/ecp/species/3910>

**Yellow-billed Magpie** *Pica nuttalli*

Breeds Apr 1 to Jul 31

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

<https://ecos.fws.gov/ecp/species/9726>

## Probability of Presence Summary

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

### Probability of Presence (■)

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

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

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted

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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  $0.05/0.25 = 0.2$ .

- 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.

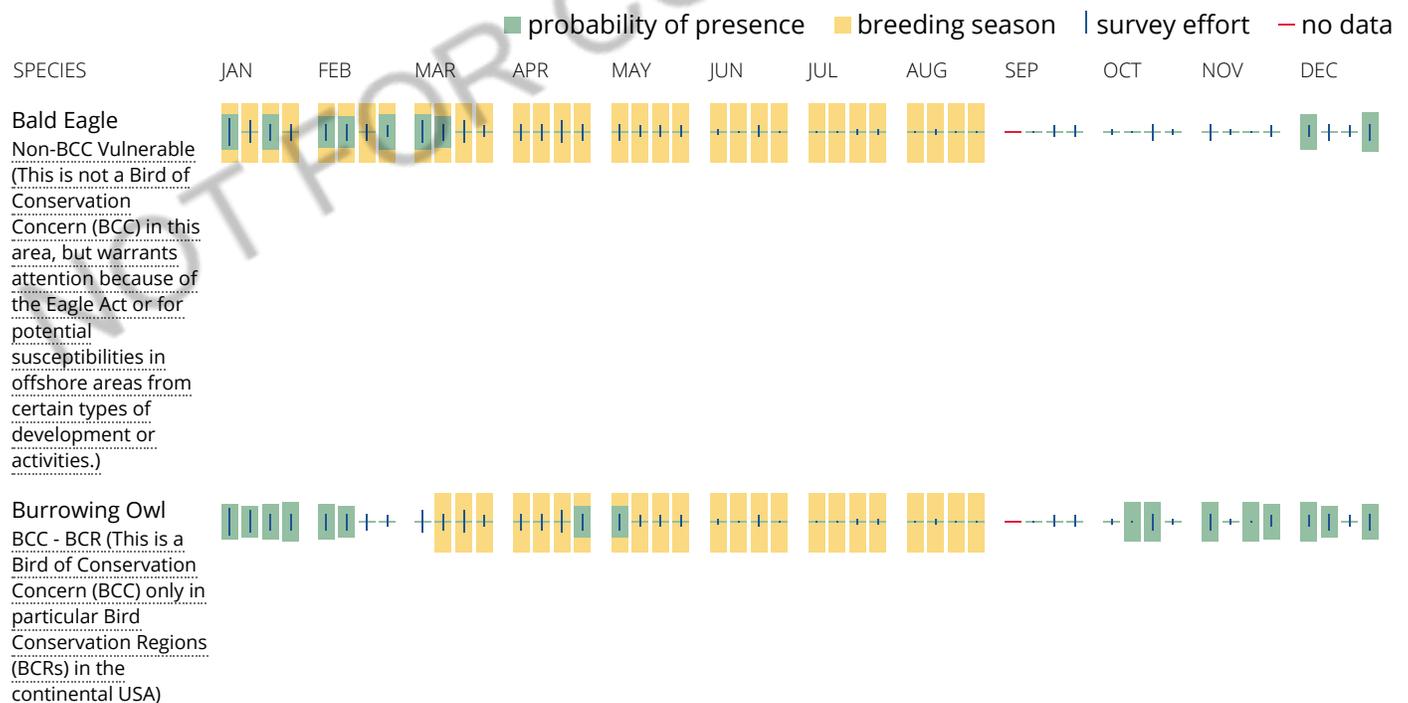
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

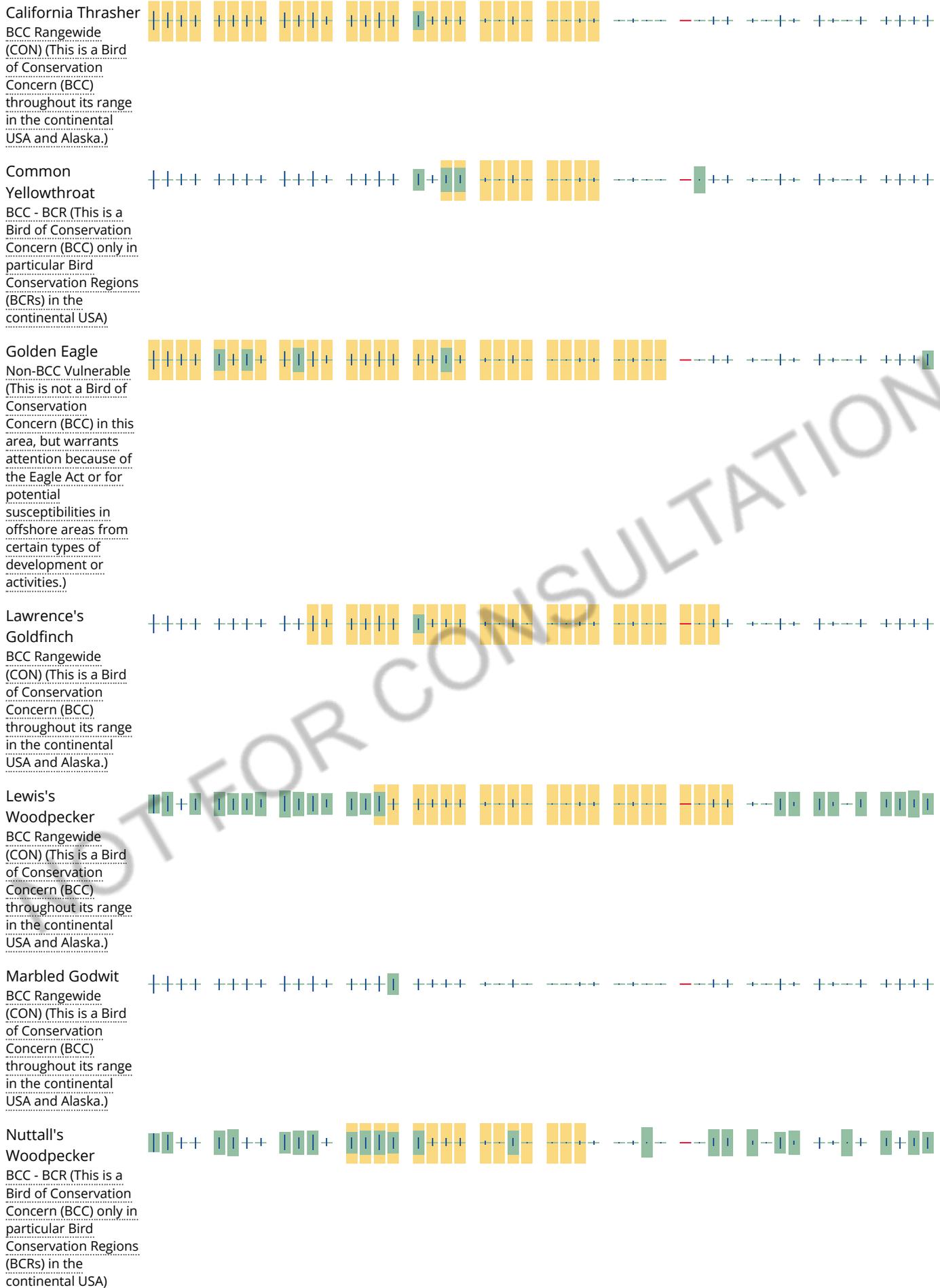
### No Data (-)

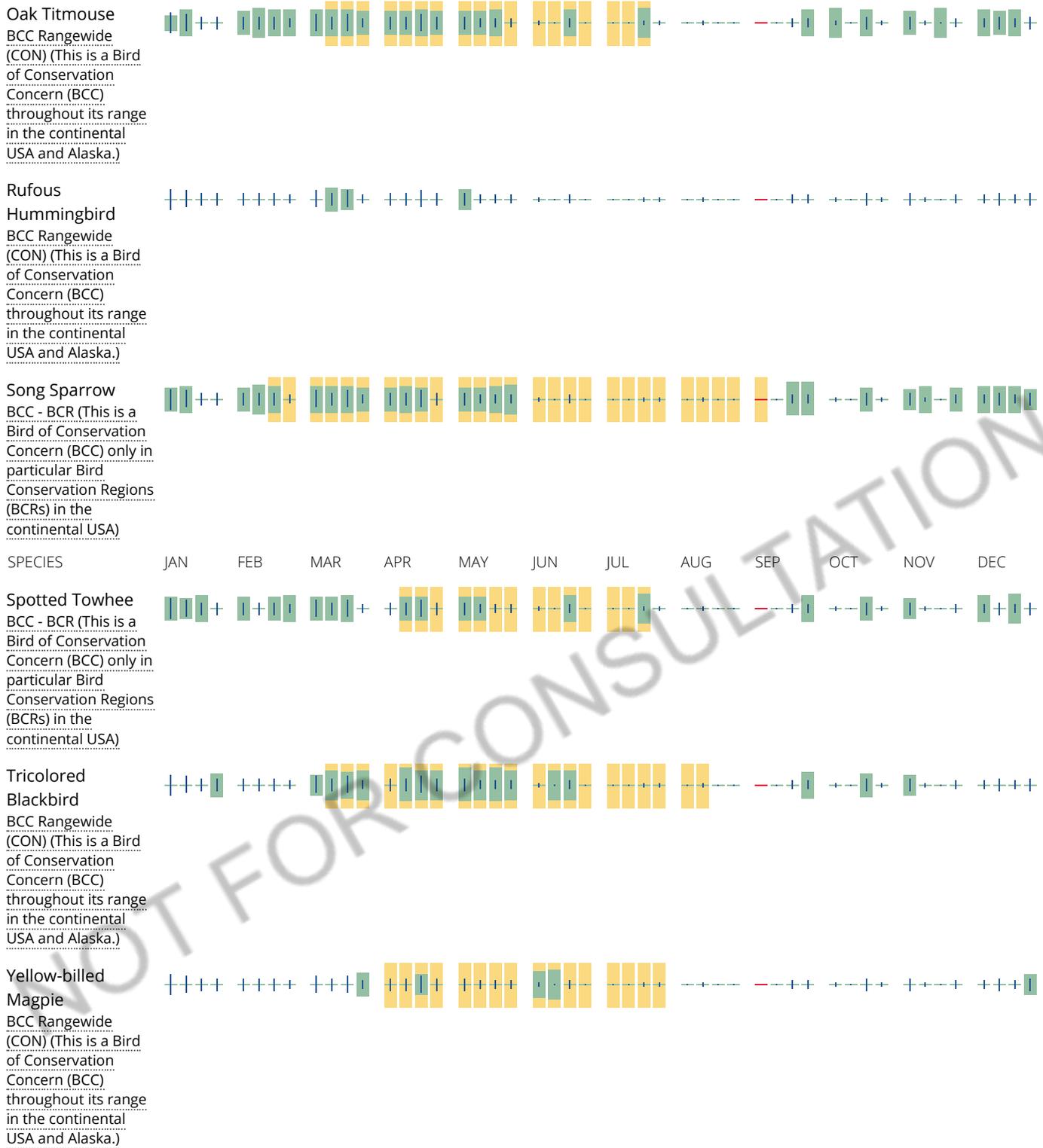
A week is marked as having no data if there were no survey events for that week.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## Facilities

### National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

### Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

# Wetlands in the National Wetlands Inventory

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

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

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

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1Ax](#)

[PEM1Kx](#)

FRESHWATER POND

[PUBFx](#)

[PUBKx](#)

RIVERINE

[R4SBC](#)

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

## Data limitations

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

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

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

## Data exclusions

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



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



**Query Criteria:** Quad IS  OR Rocklin (3812172) OR Pilot Hill (3812171) OR Coloma (3812078) OR Folsom (3812162) OR Folsom SE (3812151) OR Clarksville (3812161) OR Shingle Springs (3812068) OR Buffalo Creek (3812152) OR Latrobe (3812058)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
<i>Allium jepsonii</i> Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
<i>Ammodramus savannarum</i> grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
<i>Andrena blennospermatis</i> Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S2	
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Ardea alba</i> great egret	ABNGA04040	None	None	G5	S4	
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
<i>Banksula californica</i> Alabaster Cave harvestman	ILARA14020	None	None	GH	SH	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Branchinecta mesovallensis</i> midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
<i>Buteo regalis</i> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<i>Calystegia stebbinsii</i> Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
<i>Carex xerophila</i> chaparral sedge	PMCYP03M60	None	None	G2	S2	1B.2



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Ceanothus roderickii</i></b> Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
<b><i>Central Valley Drainage Hardhead/Squawfish Stream</i></b> Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
<b><i>Chlorogalum grandiflorum</i></b> Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
<b><i>Clarkia biloba ssp. brandegeae</i></b> Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
<b><i>Cosumnoperla hypocreana</i></b> Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
<b><i>Crocانthemum suffrutescens</i></b> Bisbee Peak rush-rose	PDCIS020F0	None	None	G2?Q	S2?	3.2
<b><i>Desmocerus californicus dimorphus</i></b> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
<b><i>Downingia pusilla</i></b> dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
<b><i>Dumontia oregonensis</i></b> hairy water flea	ICBRA23010	None	None	G1G3	S1	
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Erethizon dorsatum</i></b> North American porcupine	AMAFJ01010	None	None	G5	S3	
<b><i>Eryngium pinnatisectum</i></b> Tuolumne button-celery	PDAP10Z0P0	None	None	G2	S2	1B.2
<b><i>Falco columbarius</i></b> merlin	ABNKD06030	None	None	G5	S3S4	WL
<b><i>Fremontodendron decumbens</i></b> Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
<b><i>Galium californicum ssp. sierrae</i></b> El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
<b><i>Gratiola heterosepala</i></b> Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
<b><i>Haliaeetus leucocephalus</i></b> bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
<b><i>Hydrochara rickseckeri</i></b> Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
<b><i>Juncus leiospermus var. ahartii</i></b> Ahart's dwarf rush	PMJUN011L1	None	None	G2T1	S1	1B.2
<b><i>Lasionycteris noctivagans</i></b> silver-haired bat	AMACC02010	None	None	G5	S3S4	



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Laterallus jamaicensis coturniculus</i></b> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<b><i>Legenere limosa</i></b> legenere	PDCAM0C010	None	None	G2	S2	1B.1
<b><i>Lepidurus packardi</i></b> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
<b><i>Linderiella occidentalis</i></b> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<b><i>Navarretia myersii ssp. myersii</i></b> pincushion navarretia	PDPLM0C0X1	None	None	G2T2	S2	1B.1
<b>Northern Hardpan Vernal Pool</b> Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
<b>Northern Volcanic Mud Flow Vernal Pool</b> Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	G1	S1.1	
<b><i>Oncorhynchus mykiss irideus pop. 11</i></b> steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
<b><i>Orcuttia tenuis</i></b> slender Orcutt grass	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
<b><i>Orcuttia viscida</i></b> Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
<b><i>Packera layneae</i></b> Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
<b><i>Pandion haliaetus</i></b> osprey	ABNKC01010	None	None	G5	S4	WL
<b><i>Pekania pennanti</i></b> fisher - West Coast DPS	AMAJF01021	None	Threatened	G5T2T3Q	S2S3	SSC
<b><i>Phalacrocorax auritus</i></b> double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
<b><i>Phrynosoma blainvillii</i></b> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<b><i>Progne subis</i></b> purple martin	ABPAU01010	None	None	G5	S3	SSC
<b><i>Rana boylei</i></b> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<b><i>Rana draytonii</i></b> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<b><i>Riparia riparia</i></b> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<b><i>Sagittaria sanfordii</i></b> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<b><i>Spea hammondi</i></b> western spadefoot	AAABF02020	None	None	G3	S3	SSC



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



<b>Species</b>	<b>Element Code</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Global Rank</b>	<b>State Rank</b>	<b>Rare Plant Rank/CDFW SSC or FP</b>
<b><i>Taxidea taxus</i></b> American badger	AMAJF04010	None	None	G5	S3	SSC
<b><i>Thamnophis gigas</i></b> giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
<b><i>Valley Needlegrass Grassland</i></b> Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
<b><i>Wyethia reticulata</i></b> El Dorado County mule ears	PDAST9X0D0	None	None	G2	S2	1B.2

**Record Count: 65**

## Plant List

### Inventory of Rare and Endangered Plants

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

#### Search Criteria

Found in Quads 3812172, 3812171, 3812078, 3812162, 3812161, 3812068, 3812152 3812151 and 3812058;

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Allium jepsonii</a>	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
<a href="#">Allium sanbornii var. sanbornii</a>	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S3S4	G4T3T4
<a href="#">Balsamorhiza macrolepis</a>	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
<a href="#">Brodiaea rosea ssp. vallicola</a>	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr-May(Jun)	4.2	S3	G5T3
<a href="#">Calandrinia breweri</a>	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	4.2	S4	G4
<a href="#">Calystegia stebbinsii</a>	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	1B.1	S1	G1
<a href="#">Carex xerophila</a>	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	1B.2	S2	G2
<a href="#">Ceanothus fresnensis</a>	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3	S4	G4
<a href="#">Ceanothus roderickii</a>	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	1B.1	S1	G1
<a href="#">Chlorogalum grandiflorum</a>	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	1B.2	S3	G3
<a href="#">Clarkia biloba ssp. brandegeae</a>	Brandegee's clarkia	Onagraceae	annual herb	May-Jul	4.2	S4	G4G5T4
<a href="#">Claytonia parviflora ssp. grandiflora</a>	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
<a href="#">Crocanthemum suffrutescens</a>	Bisbee Peak rush-rose	Cistaceae	perennial evergreen shrub	Apr-Aug	3.2	S2?	G2?Q
<a href="#">Downingia pusilla</a>	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
<a href="#">Erigeron miser</a>	starved daisy	Asteraceae	perennial herb	Jun-Oct	1B.3	S3?	G3?
<a href="#">Eriophyllum jepsonii</a>	Jepson's woolly sunflower	Asteraceae	perennial herb	Apr-Jun	4.3	S3	G3
<a href="#">Eryngium pinnatisectum</a>	Tuolumne button-celery	Apiaceae	annual / perennial herb	May-Aug	1B.2	S2	G2
<a href="#">Fremontodendron decumbens</a>	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	1B.2	S1	G1
<a href="#">Galium californicum ssp. sierrae</a>	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	1B.2	S1	G5T1

<a href="#">Gratiola heterosepala</a>	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2
<a href="#">Horkelia parryi</a>	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.2	S2	G2
<a href="#">Juncus leiospermus var. ahartii</a>	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	1B.2	S1	G2T1
<a href="#">Legenere limosa</a>	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
<a href="#">Lilium humboldtii ssp. humboldtii</a>	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	4.2	S3	G4T3
<a href="#">Navarretia myersii ssp. myersii</a>	pincushion navarretia	Polemoniaceae	annual herb	Apr-May	1B.1	S2	G2T2
<a href="#">Orcuttia tenuis</a>	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	1B.1	S2	G2
<a href="#">Orcuttia viscida</a>	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	1B.1	S1	G1
<a href="#">Packera layneae</a>	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	1B.2	S2	G2
<a href="#">Sagittaria sanfordii</a>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
<a href="#">Trichostema rubisepalum</a>	Hernandez bluecurls	Lamiaceae	annual herb	Jun-Aug	4.3	S4	G4
<a href="#">Wyethia reticulata</a>	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	1B.2	S2	G2

### Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 08 April 2019].

#### Search the Inventory

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#### Contributors

[The Calflora Database](#)  
[The California Lichen Society](#)  
[California Natural Diversity Database](#)  
[The Jepson Flora Project](#)  
[The Consortium of California Herbaria](#)  
[CalPhotos](#)

#### Questions and Comments

[rareplants@cnps.org](mailto:rareplants@cnps.org)

ATTACHMENT 2  
*Table of Potentially Occurring Species*

**Attachment 2 Special-Status Species with Known or Potential Occurrence in the Vicinity of the EID  
WWTP Expansion Project,  
El Dorado County, California.**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal/State Status <sup>1</sup></b>	<b>Habitat Associations</b>	<b>Potential to Occur in the Project Site</b>
<i>Invertebrates</i>				
valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT/None	The valley elderberry longhorn beetle is completely dependent on its host plant, elderberry ( <i>Sambucus</i> sp.), which occurs in riparian and other woodland communities in California's Central Valley and the associated foothills.	<b>Not expected to occur.</b> No elderberry shrubs are present within the project site.
vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT/None	Vernal pool fairy shrimp is adapted to seasonally inundated features and occur primarily in vernal pools, seasonal wetlands that fill with water during fall and winter rains and dry up in spring and summer.	<b>Not expected to occur.</b> Suitable aquatic habitat for this species is not present within or adjacent to the project site.
vernal pool tadpole shrimp	<i>Lepidurus packardi</i>	FE/None	Vernal pool tadpole shrimp is associated with low-alkalinity seasonal pools in grasslands. They are found only in clear to turbid ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands.	<b>Not expected to occur.</b> Suitable aquatic habitat for this species is not present within or adjacent to the project site.
<i>Fish</i>				
Central Valley steelhead	<i>Oncorhynchus mykiss irideus</i>	FT/None	Central Valley steelhead spawn downstream of dams on major tributaries within the Sacramento and San Joaquin River systems. Rainbow trout and steelhead spend their first one or two years in cool, clear, fast-flowing perennial streams and rivers where riffles predominate, there is ample cover from riparian vegetation or undercut banks, and invertebrate life is diverse and abundant.	<b>Not expected to occur.</b> Suitable aquatic habitat for this species is not present within or adjacent to the project site.

Common Name	Scientific Name	Federal/State Status <sup>1</sup>	Habitat Associations	Potential to Occur in the Project Site
Delta smelt	<i>Hypomesus transpacificus</i>	FT/Endangered	Delta smelt are a euryhaline species (tolerant of saline waters) that spend a large part of their one-year life span along the freshwater edge of the mixing zone, where the salinity is approximately 2 ppt. Shortly before spawning, adults migrate upstream from the brackish-water habitat associated with the mixing zone and disperse widely into river channels and tidally influenced backwater sloughs. Most spawning happens in tidally influenced backwater sloughs and channel edgewater.	<b>Not expected to occur.</b> Suitable aquatic habitat for this species is not present within or adjacent to the project site.
<b>Amphibians</b>				
California red-legged frog	<i>Rana draytonii</i>	FT/SSC	California red-legged frog breeding habitat includes coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, ponded and backwater portions of streams, and sometimes artificial impoundments including stock ponds. Adult frogs prefer dense, shrubby or emergent riparian vegetation near deep ( $\geq 2$ to 3 feet), still or slow moving water, especially where dense stands of overhanging willow and cattail occur adjacent to open water.	<b>Not expected to occur.</b> Although suitable aquatic habitat is present within Carson Creek, it is not present within the project site. There are no known breeding populations within 15 miles of the project site. The nearest documented occurrence is based on historical collections in 1942, approximately 12 miles southeast of the project site (CDFW 2019a).
California tiger salamander	<i>Ambystoma californiense</i>	FT/ST	California tiger salamander occur in riparian and wet meadow habitats, but may be more common in grasslands. They spend most of their life cycle underground in valley oak woodland or grassland habitat, primarily in rodent burrows. Breeding takes place following the first heavy winter rains. Temporary or permanent freshwater pools or slowly flowing streams are required for egg-laying and larval development.	<b>Not expected to occur.</b> Suitable aquatic habitat for this species is not present within or adjacent to the project site. The nearest documented occurrence is approximately 15 miles south of the project site (CDFW 2019a).

Common Name	Scientific Name	Federal/State Status <sup>1</sup>	Habitat Associations	Potential to Occur in the Project Site
foothill yellow-legged frog	<i>Rana boylei</i>	None/SSC, PST	Foothill yellow-legged frog are rarely found far from aquatic habitat, which primarily consists of rocky streams and rivers with open banks in forest, chaparral, and woodland.	<b>Not expected to occur.</b> Suitable aquatic habitat for this species is not present within or adjacent to the project site. The nearest documented occurrence is for a historical collection that is now considered extirpated, approximately 5 miles north of the project site (CDFW 2019a).
western spadefoot	<i>Spea hammondi</i>	None/SSC	Western spadefoot primarily occur in grassland and vernal pool habitats. They may also occur in ephemeral wetlands that persist for at least 3 weeks in chaparral, coastal scrub, valley-foothill woodlands, pastures, and other agriculture habitats.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site. The nearest documented occurrence is for an aural detection in 2008, approximately 5 miles north of the project site; the species was not detected at the site during subsequent surveys in 2009, 2010, and 2011 (CDFW 2019a).
<b>Reptiles</b>				
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	None/SSC	Blainville's horned lizard occur in open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley-foothill hardwood, conifer, riparian, pine-cypress, juniper, and annual grassland habitats.	<b>Not expected to occur.</b> Suitable habitat for this species, including sandy soils, is not present within or adjacent to the project site. The nearest documented occurrence is approximately 4 miles northeast of the project site (CDFW 2019a).
giant gartersnake	<i>Thamnophis gigas</i>	FT/ST	Giant gartersnake is found in isolated populations restricted to the Central Valley of California. It is found in freshwater marsh and wetlands, irrigation ditches, low gradient streams and rice fields containing emergent vegetation. Adjacent upland habitat is necessary for cover and aestivation.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site, and the project site is outside of the species range.

Common Name	Scientific Name	Federal/State Status <sup>1</sup>	Habitat Associations	Potential to Occur in the Project Site
western pond turtle	<i>Emys marmorata</i>	None/SSC	Western pond turtle are found in rivers, lakes, streams, ponds, wetlands, ephemeral creeks, reservoirs, agricultural ditches, estuaries, and brackish waters. They prefer areas that provide vegetation cover from predators and basking sites for thermoregulation. Adults tend to favor deeper, slow moving water, whereas hatchlings search for slow and shallow water that is slightly warmer. Terrestrial habitats are used for nesting and wintering and usually consist of burrows in leaves and soil.	<b>Low potential to occur.</b> Although the seasonal wetland swale at the project site provides potential dispersal habitat, western pond turtle are unlikely to travel through culverts to access the swale onsite. The nearest documented occurrence is in Carson Creek, approximately 675 feet northwest of the project site (CDFW 2019a).
<b>Birds</b>				
bald eagle	<i>Haliaeetus leucocephalus</i>	FDL/SE, FP	Bald eagle lives near large bodies of open water such as lakes, marshes, estuaries, seacoasts and rivers where fish are abundant. Usually nests within one mile of water in tall trees with open branchwork bordering lakes or large rivers. In Central California, bald eagles prefer foothill pines for nesting.	<b>Not expected to occur.</b> Suitable nesting and aquatic foraging habitat is not present within or adjacent to the project site.
bank swallow	<i>Riparia riparia</i>	None/ST	Bank swallow nest in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils. They are also known to nest in dense blackberry brambles. They utilize open country and water during migration.	<b>Not expected to occur.</b> Suitable nesting habitat is not present within or adjacent to the project site. The nearest documented breeding occurrence is from 1987, approximately 11 miles south-southeast of the project site (CDFW 2019a).
burrowing owl	<i>Athene cunicularia</i>	None/SSC	Burrowing owl utilizes abandoned ground squirrel burrows in open habitats and grasslands, also disturbed areas. Diet consists of insects, small mammals, reptiles and amphibians. Commonly uses burrows on levees or mounds where there are unobstructed views of possible predators such as raptors or foxes.	<b>Moderate potential to occur.</b> Suitable habitat for this species occurs in the annual grassland and disturbed habitat at the project site. The nearest documented occurrence is for owls nesting in rock outcroppings, approximately 1.4 miles west of the project site (CDFW 2019a).

Common Name	Scientific Name	Federal/State Status <sup>1</sup>	Habitat Associations	Potential to Occur in the Project Site
California black rail	<i>Laterallus jamaicensis coturniculus</i>	None/ST, FP	California black rail occurs near freshwater marshes along the margins of ponds, lakes, and water impoundments; also herb dominated wetlands on sloped ground associated with springs, canal leaks, seepage from impoundments and agricultural irrigation. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site and the project site is outside of the species range.
golden eagle	<i>Aquila chrysaetos</i>	None/FP	Golden eagle is found in open country including mountains, foothills, and plains. In the west, they are found over prairie, rangeland, or desert. They are very wide-ranging in winter, and more restricted to areas with good nest sites in summer, which consist of cliff ledges or often large trees.	<b>Not expected to occur.</b> Suitable nesting habitat for this species is not present within or adjacent to the project site. The nearest documented occurrence is for eagles nesting in oak woodland and pines along steep hillsides, approximately 2.7 miles north-northwest of the project site (CDFW 2019a).
grasshopper sparrow	<i>Ammodramus savannarum</i>	None/SSC	Grasshopper sparrow nest and forage in moderately open grassland with tall forbs or scattered shrubs used for perches.	<b>Not expected to occur.</b> Suitable nesting habitat for this species is not present within or adjacent to the project site. There are no documented occurrences within 5 miles of the project site (CDFW 2019a).
purple martin	<i>Progne subis</i>	None/SSC	Purple martin nest and forage in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region often nests in weep holes under elevated freeways.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site and the project site is outside of the species range.

Common Name	Scientific Name	Federal/State Status <sup>1</sup>	Habitat Associations	Potential to Occur in the Project Site
short-eared owl	<i>Asio flammeus</i>	None/SSC	Short-eared owl lives in open terrain such as prairies and marshes. They nests on the ground and forage on small mammals.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site. The nearest documented occurrence is approximately 57 miles southwest of the project site (CDFW 2019a).
Swainson's hawk	<i>Buteo swainsoni</i>	BCC/ST	Swainson's hawk nest in open woodland and savanna, riparian, and in isolated large trees. They forage in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture.	<b>Low potential to occur.</b> Grassland at the project site provides potential foraging habitat. There is no suitable nesting habitat present onsite. There is potential nesting habitat within the vicinity of the project site, including the riparian corridor along Carson Creek; some of these areas are visibly-blocked from the project site by existing development and hillsides.
tricolored blackbird	<i>Agelaius tricolor</i>	None/SE, SSC	Tricolored blackbird is a colonial species found almost exclusively in California. It utilizes wetlands, marshes and agricultural grain fields for foraging and nesting.	<b>Low potential to occur.</b> Suitable nesting for this species is not present within or adjacent to the project site. Foraging habitat onsite is marginal as the grasslands onsite are frequently mowed. The nearest documented occurrence is birds nesting in blackberry and willows, approximately 0.7 mile southwest of the project site (CDFW 2019a).
white-tailed kite	<i>Elanus leucurus</i>	None/None, FP	White-tailed kite is common in savannas, open woodlands, marshes, desert grasslands, partially cleared lands, and cultivated fields, but tends to avoid heavily grazed areas. Nests in riparian or open grasslands, in isolated tress or along the forest edge.	<b>Moderate potential to occur.</b> Grassland at the project site provides suitable foraging habitat. Suitable nesting habitat is not present within or adjacent to the project site. There nearest documented occurrence is approximately 3.3 miles northwest of the project site (CDFW 2019a).

Common Name	Scientific Name	Federal/State Status <sup>1</sup>	Habitat Associations	Potential to Occur in the Project Site
<b>Mammals</b>				
American badger	<i>Taxidea taxus</i>	None/SSC	American badger occur in dry, open, treeless areas, including grasslands, coastal scrub, agriculture, and pastures. Prefer habitats with friable soils for burrow excavation and foraging.	<b>Not expected to occur.</b> Although grassland at the site provides potential dispersal habitat, there are no suitable areas onsite for burrowing or foraging. In addition, the site experiences regular human disturbance and is fenced from the surrounding area. The nearest documented occurrence is approximately 6 miles northwest of the project site (CDFW 2019a).
fisher - West Coast DPS	<i>Pekania pennanti</i>	None/SSC, ST	The west coast DPS of fisher are found a wide range of forested regions. They prefer to use heavy stands of mixed species of mature trees.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site and the project site is outside of the species range.
pallid bat	<i>Antrozous pallidus</i>	None/SSC	Pallid bat occur in grasslands, shrublands, woodlands, and forests. They are most common in open, dry habitats with rocky outcrops for roosting, but may also roost in man-made structures and trees. These species are extremely sensitive to disturbance of their roosts.	<b>Not expected to occur.</b> Suitable roosting habitat for this species is not present within or adjacent to the project site. In addition, the site is located in an area of regular human disturbance. The nearest documented occurrence is approximately 8.4 miles northwest of the project site (CDFW 2019a).
<b>Plants</b>				
Ahart's dwarf rush	<i>Juncus leiospermus</i> var. <i>ahartii</i>	None/1B.2	Annual herb found in valley and foothill grassland (mesic). Elevation 95-750 feet. Blooms Mar-May.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site. This species is not known to occur in El Dorado County (CNPS 2019a). The nearest documented occurrence is at Mather Air Force Base, approximately 12 miles southwest of the project site (CCH 2019).

Common Name	Scientific Name	Federal/State Status <sup>1</sup>	Habitat Associations	Potential to Occur in the Project Site
big-scale balsamroot	<i>Balsamorhiza macrolepis</i>	None/1B.2	Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland (sometimes serpentinite soils). Elevation 145-5,100 feet. Blooms Mar–June.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site. This species is not known to occur in El Dorado County (CNPS 2019a).
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	None/SE, 1B.2	Annual herb found in marshes and swamps (lake margins) and vernal pools (clay). Elevation 30-7,790 feet. Blooms Apr–Aug.	<b>Not expected to occur.</b> No marshes, swamps, or lake margins present within or adjacent to the project site. This species is not known to occur in El Dorado County (CNPS 2019a).
chaparral sedge	<i>Carex xerophila</i>	None/1B.2	Perennial herb found in chaparral, cismontane woodland, and lower montane coniferous forest (serpentinite, gabbroic soils). Elevation 1,440-2,525 feet. Blooms Mar–June.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site. The nearest documented occurrence is for plants growing in chaparral, approximately 5 miles northeast of the project site (CCH 2019).
dwarf downingia	<i>Downingia pusilla</i>	None/2B.2	Annual herb found in valley and foothill grassland (mesic), and vernal pools. Elevation 0-1,460 feet. Blooms Mar–May.	<b>Not expected to occur.</b> Although margins of the wetland swale at the site provide potential habitat, this species was not observed onsite during the April 2019 fieldwork, which was conducted during the evident and identifiable period for this species. In addition, the site is generally dominated by non-native species and experiences frequent disturbance, such as seasonal mowing and disking (Google Earth 2019).
El Dorado bedstraw	<i>Galium californicum</i> ssp. <i>sierrae</i>	FE/SR, 1B.2	Perennial herb found in chaparral, cismontane woodland, lower montane coniferous forest (gabbroic soils). Elevation 440-1,050 feet. Blooms May–Jun.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site.

Common Name	Scientific Name	Federal/State Status <sup>1</sup>	Habitat Associations	Potential to Occur in the Project Site
El Dorado County mule ears	<i>Wyethia reticulata</i>	None/1B.2	Perennial herb found in chaparral, cismontane woodland, and lower montane coniferous forest (clay or gabbroic soils). Elevation 605-2,065 feet. Blooms Apr–Aug.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site.
Jepson's onion	<i>Allium jepsonii</i>	None/1B.2	Perennial bulbiferous herb found in chaparral, cismontane woodland, and lower montane coniferous forest (serpentinite or volcanic soils). Elevation 980-4,330 feet. Blooms Apr–Aug.	<b>Not expected to occur.</b> No suitable habitat present at the project site, which is located below the elevation range of this species.
Layne's ragwort	<i>Packera layneae</i>	FT/SR, 1B.2	Perennial herb found in chaparral and cismontane woodland (gabbroic or serpentine soils). Elevation 600-3,200 feet. Blooms Apr–Aug.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site.
legenere	<i>Legenere limosa</i>	None/1B.1	Annual herb found in vernal pools. Elevation 0-2,885 feet. Blooms Apr–June.	<b>Not expected to occur.</b> No vernal pools present within or adjacent to the project site. This species is not known to occur in El Dorado County (CNPS 2019a).
Parry's horkelia	<i>Horkelia parryi</i>	None/1B.2	Perennial herb found in chaparral and cismontane woodland (lone formation and other soils). Elevation 260-3,510 feet. Blooms Apr–Sep.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site.
pincushion navarretia	<i>Navarretia myersii</i> ssp. <i>myersii</i>	None/1B.1	Annual herb found in vernal pools (often acidic soils). Elevation 65-1,085 feet. Blooms Apr–May.	<b>Not expected to occur.</b> No vernal pools present within or adjacent to the project site. This species is not known to occur in El Dorado County (CNPS 2019a).
Pine Hill ceanothus	<i>Ceanothus roderickii</i>	FE/SR, 1B.1	Perennial evergreen shrub found in chaparral, cismontane woodland (serpentine, gabbroic, or gabbro-derived soils). Elevation 735-3,270 feet. Blooms Apr–Jun.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site.
Pine Hill flannelbush	<i>Fremontodendron decumbens</i>	FE/SR, 1B.2	Perennial evergreen shrub found in chaparral and cismontane woodland (serpentinite or gabbroic). Elevation 1,275-2,280 feet. Blooms Apr–Jun.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site.

Common Name	Scientific Name	Federal/State Status <sup>1</sup>	Habitat Associations	Potential to Occur in the Project Site
Red Hills soaproot	<i>Chlorogalum grandiflorum</i>	None/1B.2	Perennial bulbiferous herb found in chaparral, cismontane woodland, and lower montane coniferous forest (serpentinite, gabbroic and other soils). Elevation 800-5,545 feet. Blooms May-Jun.	<b>Not expected to occur.</b> No suitable habitat present at the project site, which is located below the elevation range of this species.
Sacramento Orcutt grass	<i>Orcuttia viscida</i>	FE/SE/1B.1	Annual herb found in vernal pools. Elevation 95-330 feet. Blooms Apr-Jul (sometimes through Sep).	<b>Not expected to occur.</b> No vernal pools present within or adjacent to the project site. This species is only known to occur in Sacramento County (CNPS 2019a).
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	None/None/1B.2	Emergent perennial rhizomatous herb found in marshes and swamps (assorted shallow freshwater). Elevation 0-2,135 feet. Blooms May-Oct.	<b>Not expected to occur.</b> No marshes or swamps present within or adjacent to the project site.
slender Orcutt grass	<i>Orcuttia tenuis</i>	FT/SE/1B.1	Annual herb found in vernal pools (often gravelly). Elevation 110-5,775 feet. Blooms May-Sep (sometimes through Oct).	<b>Not expected to occur.</b> No vernal pools present within or adjacent to the project site. This species is not known to occur in El Dorado County (CNPS 2019a).
starved daisy	<i>Erigeron miser</i>	None/None/1B.3	Perennial herb found in upper montane coniferous forest (rocky). Elevation 6,035-8,595 feet. Blooms Jun-Oct.	<b>Not expected to occur.</b> No suitable habitat present at the project site, which is located below the elevation range of this species.
Stebbin's morning glory	<i>Calystegia stebbinsii</i>	FE/SE, CRPR 1B.1	Perennial rhizomatous herb found in chaparral (openings) and cismontane woodland (gabbroic or serpentinite) Elevation 555-3,270 feet. Blooms Apr-Jul.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site.
Tuolumne button-celery	<i>Eryngium pinnatisectum</i>	None/None/1B.2	Annual or perennial herb found in cismontane woodland, lower montane coniferous forest, and vernal pools (mesic). Elevation 225-3,000 feet. Blooms May-Aug.	<b>Not expected to occur.</b> Suitable habitat for this species is not present within or adjacent to the project site. This species is not known to occur in El Dorado County (CNPS 2019a).

**<sup>1</sup>Status Abbreviations:**

FE: Federally Endangered

FT: Federally Threatened

FDL: Federally Delisted

BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern

SSC: California Species of Special Concern

FP: California Fully Protected Species

SE: State Endangered

ST: State Threatened

PST: Proposed State Threatened

SR: State Rare

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere

CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere

CRPR 2A: Plants presumed extirpated in California but common elsewhere

CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere

.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)