



September 26, 2024

U.S Fish and Wildlife Service
Colorado Ecological Services Field Office
134 Union Boulevard, Suite 670
Lakewood, CO 80228

RE: Technical Assistance / Effects Determination Concurrence Request

TAILS: 06E24000-2021-TA-0170

Cottages at Kettle Creek Development

El Paso County, Colorado

To Whom It May Concern:

This request for technical assistance from the U.S. Fish and Wildlife Service (USFWS) is being submitted in accordance with the requirements for informal consultation pursuant to 50 CFR § 402.13. Goodwin Knight, LLC (“Proponent”) is planning to construct the Cottages at Kettle Creek housing development (“Project”), to be located at 2210 Old Ranch Road in El Paso County, Colorado (**Attachment A: Site Location Map**). The Project will be constructed on approximately 11.88 acres in El Paso County Parcel No. 6228001007. The Project will consist of up to 174 cottage-style housing units, as well as other attendant features such as parking, stormwater detention facilities, utilities, open spaces, and trails. The Project is located just west of Kettle Creek, which has Designated Critical Habitat (DCH) for the federally threatened Preble’s meadow jumping mouse (*Zapus hudsonius preblei* or Preble’s). A portion of the site (approximately 4.70 acres) is within Preble’s DCH. Because the Project does not have a federal nexus, thus the Critical Habitat designation is not a factor; however, there is suitable habitat for Preble’s along Kettle Creek that overlaps the site which will be affected by site development. The site was previously assessed in 2021 and received concurrence from USFWS for a determination of “Unlikely to Affect” under TAILS number 06E24000-2021-TA-0170. The Project is under new ownership and has a modified site plan; therefore, B.E. is reinitiating consultation with USFWS with an updated effects determination request.

Pursuant to Section 7 of the Endangered Species Act (ESA) and 50 CFR § 402.13, Bristlecone Ecology, LLC (“B.E.”) has prepared this request for informal consultation and determination of effects for listed species that could be affected by the proposed Project. Because DCH is not a factor, B.E. has used the widely accepted methodology for determining the potential extents of Preble’s habitat as 300-feet from the ordinary high water mark (OHWM) – see **Attachment B: Preble’s Meadow Jumping Mouse Habitat Extents**. Attached please find supporting information, including a description of the anticipated environmental impact area (EIA) for federally listed species (including proposed and candidate species) and their respective habitats.

After reviewing the lists of threatened, endangered, proposed, and candidate species/critical habitat provided by the USFWS’ Information for Planning and Consultation (IPaC) tool and considering the effects of the proposed activity within the anticipated EIA, B.E. has determined that species warranting protection under the ESA may, but are unlikely to be adversely affected by the subject activity for the following reasons:



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- A qualified ecologist with B.E. has determined that the Project does not have a federal nexus and the Critical Habitat designation for the eastern 4.70 acres of the site therefore does not apply.
- A qualified ecologist with B.E. has determined a portion of the Project overlaps with the estimated occupied range (EOR) for Preble’s as determined by Colorado Parks and Wildlife (CPW) and that the primary constituent elements (PCEs) of suitable habitat are present at the Project location.
- A qualified ecologist with B.E. has determined that direct, indirect, and cumulative effects on federally protected species and their habitats will be avoided or minimized to a minimal level through project design.
- A qualified ecologist with B.E. has determined that there is no potential to impact any other federally protected species/critical habitat and has provided supporting documentation.

Listed Species Reviewed

B.E. reviewed the USFWS’ IPaC database for information regarding the potential for threatened, endangered, proposed, and candidate species to occur at the Project site (see **Attachment C: IPaC Resource List**). IPaC identified six species as having the potential to occur at the site (**Attachment C**). Two of these species – piping plover (*Charadrius melodus*) and pallid sturgeon (*Scaphirhynchus albus*) – are listed under a conditional effects analysis, and only need to be considered if a project will involve water depletions in the N. Platte, S. Platte, or Laramie River basins. The Project is located in the Arkansas River basin and thus will not affect these species. The four remaining species listed in the IPaC query were the federally threatened Preble’s meadow jumping mouse (*Zapus hudsonius preblei* or Preble’s), Eastern black rail (*Laterallus jamaicensis ssp. jamaicensis*), and Ute ladies’-tresses orchid (*Spiranthes diluvialis* or ULTO), and the candidate for listing monarch butterfly (*Danaus plexippus*). Each species is discussed individually in the table below (**Table 1: Federally Listed T&E Species Potentially Impacted by the Project**). Species potentially affected or those requiring additional information are discussed in greater detail in the sections below.

Table 1. Federally Listed T&E Species Potentially Impacted by the Project (USFWS 2024)

Common Name	Scientific Name	Habitat Requirements and Likelihood of Impacts	Federal Status ¹
Mammals			
Preble’s meadow jumping mouse	<i>Zapus hudsonius preblei</i>	Inhabits well-developed riparian corridors with a nearby water source and adjacent, relatively undisturbed grassland communities. Riparian habitat includes a dense combination of grasses, forbs, and shrubs; a taller shrub and tree canopy may be present. Has been found to regularly use uplands at least as far out as 100 meters beyond the 100-year floodplain. A portion of the site is within designated Critical Habitat, but the Project will not have a federal nexus. Approximately 3.7 acres on the east side of the site is within CPW’s estimated occupied range (EOR) for Preble’s (CPW 2018). Areas closer to Kettle Creek were more suitable to support Preble’s than areas further west and higher in elevation. Likelihood of impacts: Possible, but unlikely to adversely affect; Preble’s EOR overlaps the eastern third of the site. PCEs are present on the site along Kettle Creek, but habitat suitability decreases further west. A 300-foot buffer of the OHWM was used to determine the extent of Preble’s habitat on the site. Additional discussion of this species is provided below.	FT

¹ FE = Federally Endangered; FT = Federally Threatened; C = Candidate for Listing

Table 1 (cont.). Federally Listed T&E Species Potentially Impacted by the Project (USFWS 2024)

Common Name	Scientific Name	Habitat Requirements and Likelihood of Impacts	Federal Status ¹
Fishes			
Pallid sturgeon	<i>Scaphirhynchus albus</i>	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. Likelihood of impacts: None. The Project is not within the river basins listed for a conditional effects analysis.	FE
Birds			
Piping plover	<i>Charadrius melodus</i>	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. Likelihood of impacts: None. The Project is not within the river basins listed for a conditional effects analysis.	FT
Eastern black rail	<i>Laterallus jamaicensis</i> ssp. <i>jamaicensis</i>	Eastern black rail is a subspecies of black rail that occurs east of the Rocky Mountains in North America. Black rails are small, cryptic marsh/wetland specialists, and depend entirely upon these habitats. Requires dense overhead cover (usually cattails [<i>Typha</i> spp.] or bulrushes [<i>Schoenoplectus</i> / <i>Scirpus</i> spp.]) and moist to saturated soils. Eastern black rails have been expanding their range in Colorado. Likelihood of impacts: None; no suitable marsh habitat is available on-site.	FT
Insects			
Monarch butterfly	<i>Danaus plexippus</i>	Monarch butterflies require milkweeds (<i>Asclepias</i> spp.) as a host plant. This species is a candidate for listing under the ESA. The USFWS determined listing the species was warranted but precluded by work on higher priority listing actions. The species will remain a candidate for listing and reviewed yearly. There are no requirements for candidate species, but due diligence is encouraged. Likelihood of impacts: Unlikely; milkweeds were not observed within the Project footprint. Some milkweeds may be present along Kettle Creek, but will not be affected by site development.	C
Flowering Plants			
Ute ladies'-tresses orchid	<i>Spiranthes diluvialis</i>	Primarily occurs along seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels, and lakeshores. May also occur along irrigation canals, berms, levees, irrigated meadows, gravel pits, borrow pits, and other human-modified wetlands. There are no known populations in El Paso County, and the site is above the elevation threshold (6,500 feet) where populations have been detected in Colorado. There are no wetlands, wet meadows, or other suitable habitats on the site; since the Project will develop only uplands, surveys for ULTO are not required per USFWS 1992 and Fertig <i>et al.</i> 2005. Likelihood of impacts: None; site is above the elevation threshold where species have been detected and there are no known populations in El Paso County. No suitable habitats are present that would require a survey.	FT

¹ FE = Federally Endangered; FT = Federally Threatened; C = Candidate for Listing

B.E. assessed the Project site for potential habitat to support eastern black rail, ULTO, monarch butterfly, and Preble’s meadow jumping mouse. There was no habitat present for any of the species listed in the IPaC query except Preble’s meadow jumping mouse. Because a portion of the site overlaps with designated Critical Habitat and CPW’s EOR for Preble’s, B.E. assumed the portions of the site overlapping these designations had sufficient PCEs to support Preble’s. A site reconnaissance further clarified the



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suitability of the site to support Preble's, with areas closer to Kettle Creek having a higher habitat suitability than areas further west and higher in elevation above the creek. Because of the potential to affect, this species is discussed in greater detail below.

Preble's Meadow Jumping Mouse

Preble's are found in the Front Range along well-developed riparian corridors with a perennial stream between 4,600 and 7,600 feet in elevation (USFWS 2018). Preble's hibernates for much of the year, entering dormancy in September or October and emerging the following May. Hibernation occurs outside of the active stream channel and alluvial floor in adjacent upland areas, though mice have also been found hibernating in the 100-year floodplain (Shenk and Silvert 1999, Schorr 2001). Upland habitats provide refuge and forage for the mouse, particularly during flood events, which are infrequently necessary to maintain a preferred shrubby vegetation canopy. Preble's constructs nests using forbs, grasses, and other available plant material, sometimes building multiple nests (Ryon 2001). Nests are typically located under well-developed shrubs or clumps of vegetation.

The site is partly within CPW's EOR, and the habitat along Kettle Creek possesses the PCEs necessary to support Preble's. PCEs/habitat suitability at the site declines the further west one moves from Kettle Creek, as the ground is higher, steeper, and less vegetated overall. The generally accepted methodology of 300 feet from an occupied stream's OHWM was used to determine the extent of Preble's habitat on the site (**Attachment B**). This extent varied somewhat from CPW's EOR, which was mapped between 310 and 325 feet from Kettle Creek's OHWM. The Proponent has designed the Project to avoid developing within 300 feet of the OHWM, thereby avoiding direct impacts to Preble's/Preble's habitat. This approach is consistent with the prior project as well, which had only minor disturbance within 300 feet of the Kettle Creek OHWM and was determined "unlikely to affect" listed species.

With regard to Preble's, there are two differences between the prior project design and the current one. The first difference is that the Project now proposes a four-foot wide, soft-surface pedestrian trail along the eastern edge of the site just outside the 300-foot OHWM buffer (**Attachment B**). While the trail itself will not directly affect Preble's habitat, it will introduce pedestrian and pet traffic just outside the habitat boundary. To avoid any potential indirect effects from the trail, the Proponent plans to construct a fence along the habitat boundary and post signs identifying the area as a habitat preservation zone and prohibiting entry.

The second difference from the prior project involves a 24-inch storm pipe that will convey treated stormwater flows into Kettle Creek. Previously, the design had the stormwater pipe routed away from Preble's habitat along Kettle Creek. With the current design, the pipe will cross through the habitat to reach Kettle Creek causing a temporary disturbance; it will be buried and will not result in permanent impacts to Preble's habitat. A small riprap outfall structure will be constructed at the end of the pipe within the floodplain but outside of wetlands along Kettle Creek, resulting in just under 400 square feet of permanent impacts to Preble's habitat. Three (3) manholes located along the buried pipe will account for another 10 square feet of permanent impact each. In total, approximately 430 square feet (less than 0.01 acre) of permanent impact within Preble's habitat will occur. See **Attachment B**.

To prevent unnecessary impacts to Preble's, the easement for the storm pipe will be mowed prior to hibernation and maintained as such until Preble's have begun hibernating, with construction occurring



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during the hibernation period. This temporary disturbance will be restored to preconstruction conditions by reseeding with native grasses. The outfall itself will help prevent erosion and sediment transport in Kettle Creek, thus indirect effects to Preble's are not anticipated.

Determination of Effects

B.E.'s desktop review and on-site Preble's habitat assessment concluded that development of the Project is not likely to adversely affect Preble's based on the avoidance and minimization measures employed to limit habitat disturbance. Permanent habitat loss will be less than 0.01 acre, and all other temporary disturbance will be restored to preconstruction conditions. Areas to be disturbed will be mowed to discourage hibernation, and construction of the storm pipe and outfall will occur while mice are inactive. No other listed species or their habitats were present at the site, and downstream effects are not anticipated because the Project will not involve water depletions. Therefore, it is B.E.'s professional opinion that no threatened, endangered, proposed, or candidate species, or their respective habitats would be adversely affected by the development of the Project. B.E. requests concurrence with the determine of not likely to adversely affect in accordance with the informal ESA consultation process pursuant to 50 CFR § 402.13. Should you disagree with this assessment, please contact Bristlecone Ecology at dmaynard@bristleconeecology.com. Thank you for your attention to this matter.

Sincerely,

Bristlecone Ecology, LLC

Daniel Maynard
Owner/Ecologist



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References

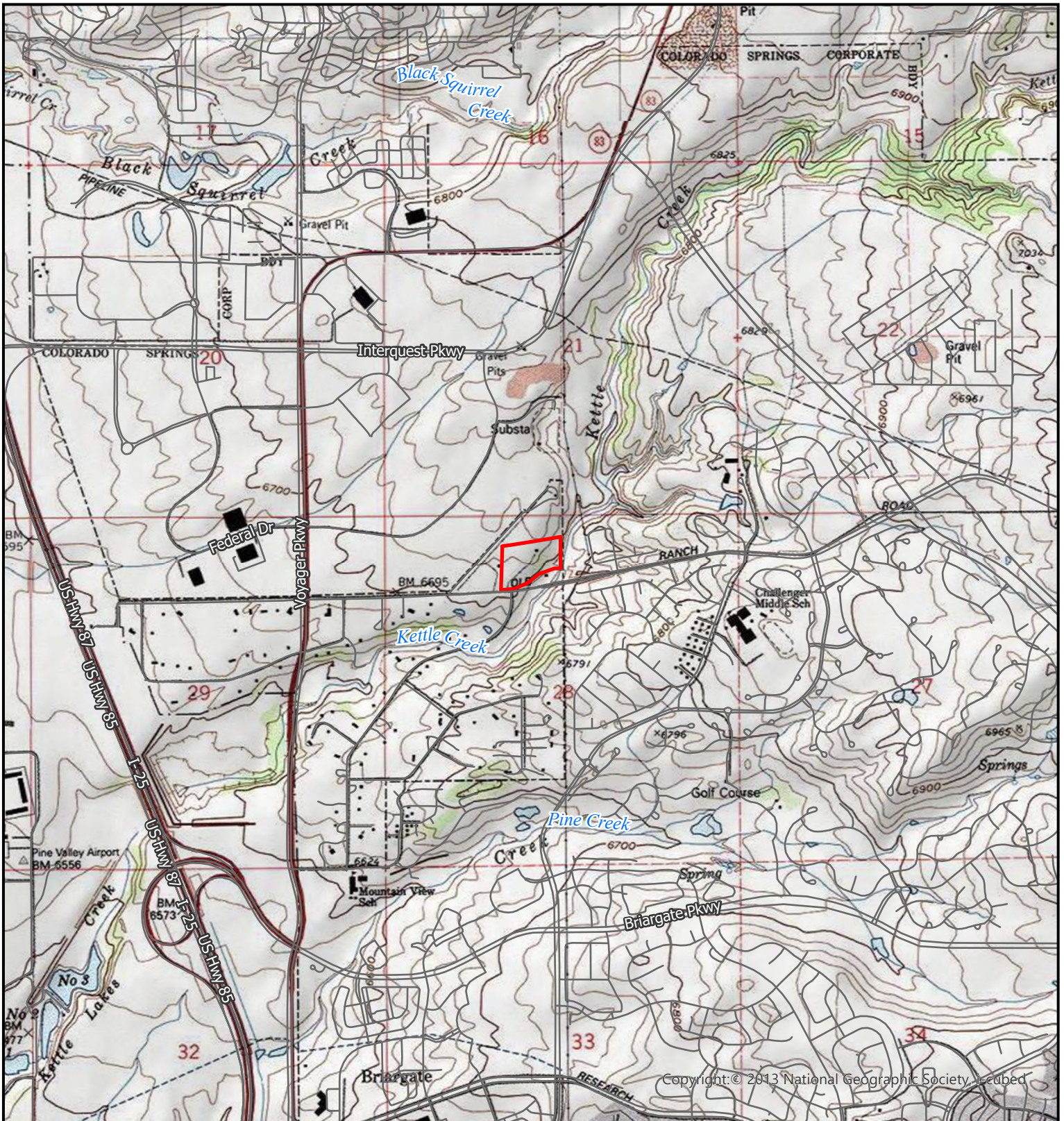
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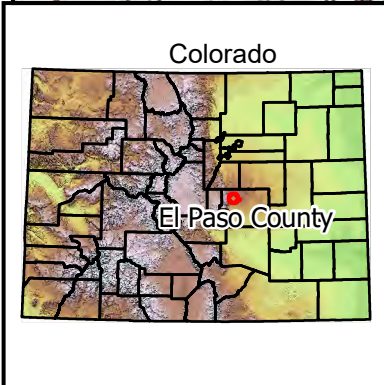
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El Paso County, Colorado

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ATTACHMENT A:
SITE LOCATION MAP



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Project Area (11.5 acres)



Cottages at Kettle Creek

Site Location Map





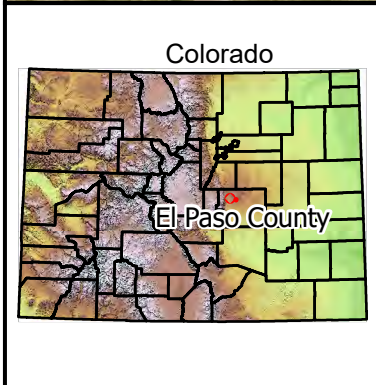
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ATTACHMENT B:
PREBLE'S MEADOW JUMPING MOUSE HABITAT EXTENTS



Maxar, Microsoft



—	Kettle Creek OHMW
—	Kettle Creek OHWM 300ft Buffer
—	Concept Design
—	Wetlands limits (west boundary)
—	Breeze Trail
—	Storm Pipe and Outfall Structure



N

1:2,086

0 Feet 500

 250

Cottages at Kettle Creek

Preble's Meadow
Jumping Mouse
Habitat Extents



bristlecone ecology



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ATTACHMENT C:
IPAC RESOURCE LIST

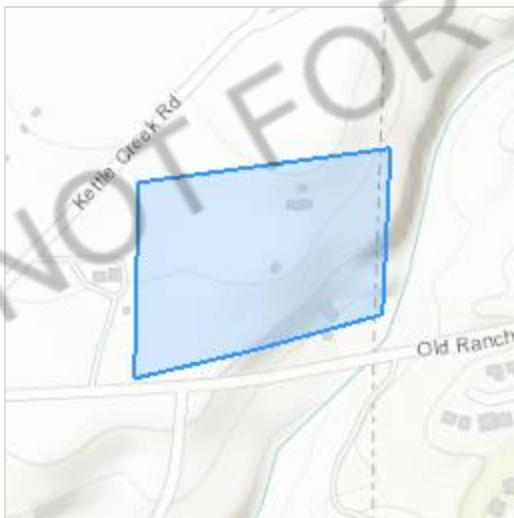
IPaC resource list

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

El Paso County, Colorado



Local office

Colorado Ecological Services Field Office

☎ (303) 236-4773

📅 (303) 236-4005

MAILING ADDRESS

Denver Federal Center
P.O. Box 25486
Denver, CO 80225-0486

PHYSICAL ADDRESS

1 Denver Federal Center
Bldg 25 Room W1911}
Denver, CO 80225-0001

NOT FOR CONSULTATION

Endangered species

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

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

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

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

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

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

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

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

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

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

Mammals

NAME	STATUS
<p>Preble's Meadow Jumping Mouse <i>Zapus hudsonius preblei</i> Wherever found There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/4090</p>	Threatened

Birds

NAME	STATUS
<p>Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477</p>	Threatened
<p>Piping Plover <i>Charadrius melodus</i> This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none"> • Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska. <p>There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039</p>	Threatened

Fishes

NAME	STATUS
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Pallid Sturgeon *Scaphirhynchus albus* Endangered

Wherever found

This species only needs to be considered if the following condition applies:

- Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska.

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/7162>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus* Candidate

Wherever found

No critical habitat has been designated for this species.

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

Flowering Plants

NAME

STATUS

Ute Ladies'-tresses *Spiranthes diluvialis* Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/2159>

Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME

TYPE

Preble's Meadow Jumping Mouse *Zapus hudsonius preblei* Final

<https://ecos.fws.gov/ecp/species/4090#crithab>

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, 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 likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

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

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Jul 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 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.

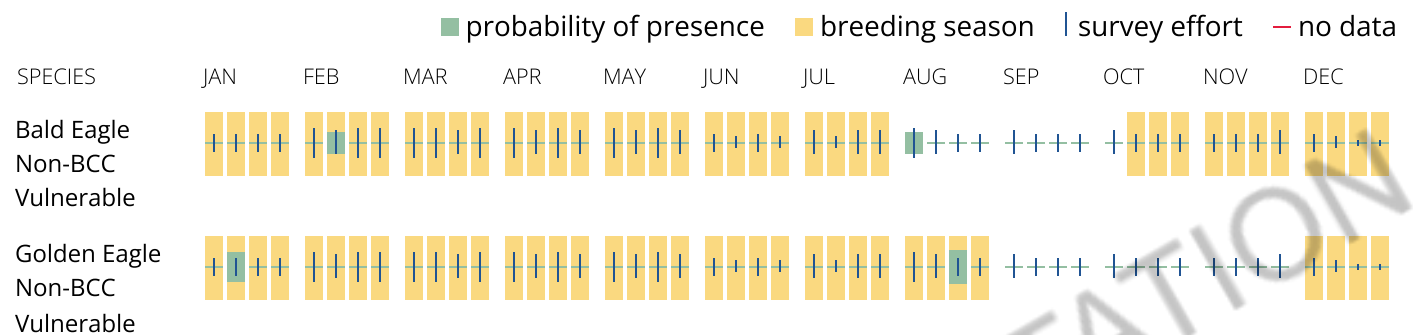
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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 Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

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

Additional information can be found using the following links:

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

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

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

NAME	BREEDING SEASON
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p>	Breeds Oct 15 to Jul 31
<p>Broad-tailed Hummingbird <i>Selasphorus platycercus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 25 to Aug 21
<p>Chestnut-collared Longspur <i>Calcarius ornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 1 to Aug 10
<p>Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 15 to Aug 25
<p>Ferruginous Hawk <i>Buteo regalis</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6038</p>	Breeds Mar 15 to Aug 15
<p>Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680</p>	Breeds Dec 1 to Aug 31
<p>Grasshopper Sparrow <i>Ammodramus savannarum</i> <i>perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329</p>	Breeds Jun 1 to Aug 20

Lesser Yellowlegs *Tringa flavipes*

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

<https://ecos.fws.gov/ecp/species/9679>

Breeds elsewhere

Lewis's Woodpecker *Melanerpes lewis*

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

<https://ecos.fws.gov/ecp/species/9408>

Breeds Apr 20 to Sep 30

Long-billed Curlew *Numenius americanus*

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/5511>

Breeds Apr 1 to Jul 31

Northern Harrier *Circus hudsonius*

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/8350>

Breeds Apr 1 to Sep 15

Pectoral Sandpiper *Calidris melanotos*

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

Breeds elsewhere

Red-headed Woodpecker *Melanerpes erythrocephalus*

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

Breeds May 10 to Sep 10

Probability of Presence Summary

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

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

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

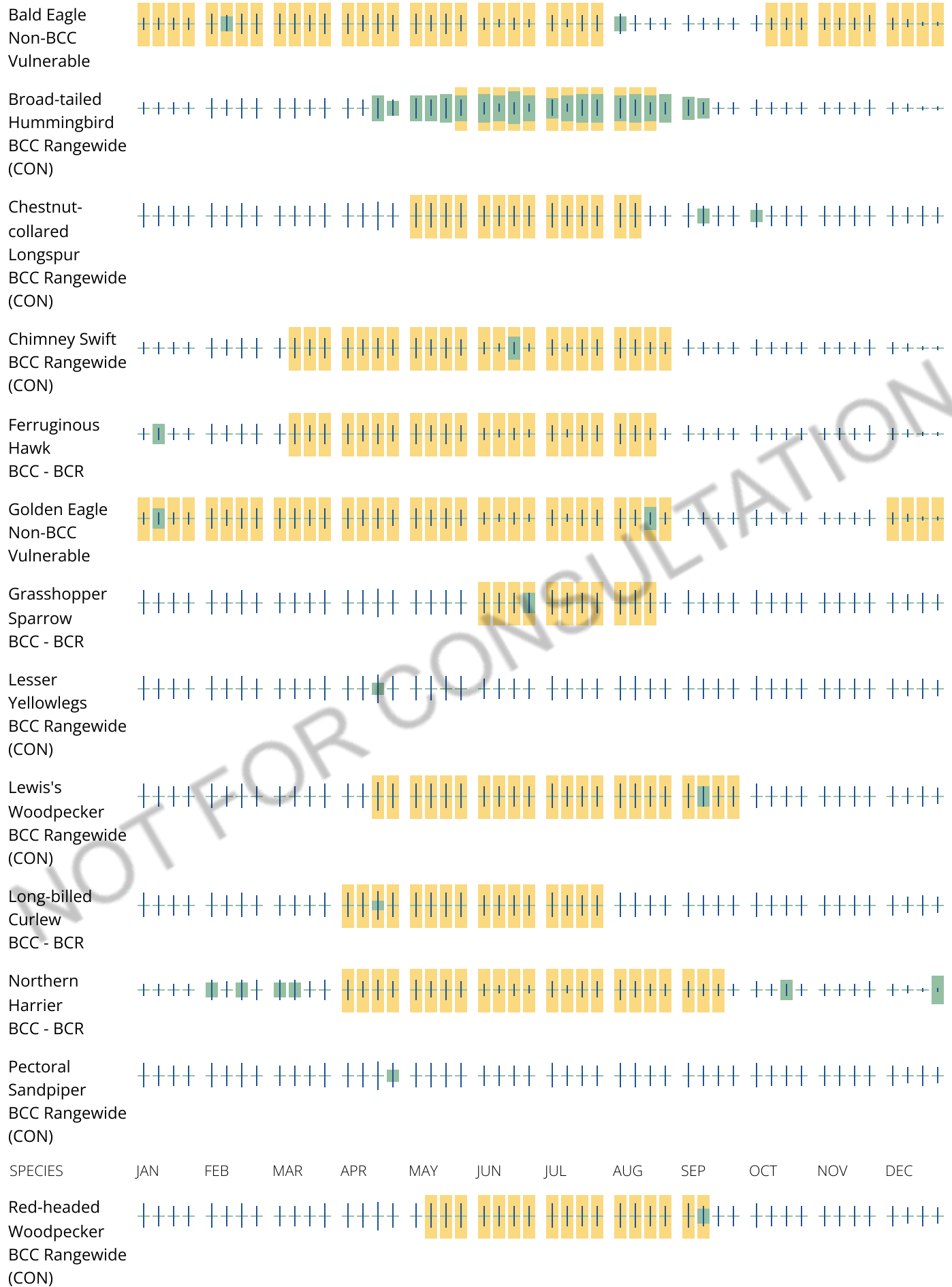
No Data (—)

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

Survey Timeframe

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





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

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

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

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

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

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

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

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

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

This location did not intersect any wetlands mapped by NWI.

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

Data limitations

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

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

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

Data exclusions

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

Data precautions

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