

Appendix A – Biological Resources

Table A-1: Plant Species with the Potential to Occur in the Action Area and Immediate Vicinity.

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A-3: IPaC Resource List

Table A-1. Plant Species with the Potential to Occur in the Action Area and Immediate Vicinity.

Common Name	Scientific Name
Plants	
Antelope bitterbrush	<i>Purshia tridentata</i>
Big sagebrush	<i>Artemisia tridentata</i>
Bluebunch wheatgrass	<i>Pachnathseudoroegneria spicata</i>
Blue grama	<i>Bouteloua sp.</i>
Blue spruce	<i>Picea pungens</i>
Boxelder	<i>Acer negundo</i>
Brittle pricklypear	<i>Opuntia fragilis</i>
Broadleaf cattail	<i>Typha latifolia</i>
Brome species	<i>Bromus sp.</i>
Broom snakeweed	<i>Gutierrezia sarothrae</i>
Bulbous bluegrass	<i>Poa bulbosa</i>
Bull thistle	<i>Cirsium vulgare</i>
Cheatgrass	<i>Bromus tectorum</i>
Chokecherry	<i>Prunus virginiana</i>
Common mullein	<i>Verbascum thapsus</i>
Common reed	<i>Phragmites australis</i>
Common sunflower	<i>Helianthus annuus</i>
Crested wheatgrass	<i>Agropyron cristatum</i>
Dalmatian Toadflax	<i>Linaria dalmatica</i>
Engelmann spruce	<i>Picea engelmannii</i>
Gambel oak	<i>Quercus gambelii</i>
Indian paintbrush	<i>Castilleja sp</i>
Indian ricegrass	<i>Achnatherum hymenoides</i>
James' galleta grass	<i>Pleuraphis jamesii</i>
Kentucky bluegrass	<i>Poa pratensis</i>
Leafy spurge	<i>Euphorbia esula</i>
Little bluestem	<i>Schizachyrium scoparium</i>
Musk thistle	<i>Carduus nutans</i>
Narrowleaf cottonwood	<i>Populus angustifolia</i>
Needle and thread grass	<i>Hesperostipa comata</i>
Orchardgrass	<i>Dactylis glomerata</i>
Perennial ryegrass	<i>Lolium perenne</i>
Purple three-awn	<i>Aristida purpurea</i>
Redstem filaree	<i>Erodium cicutarium</i>
Rubber rabbitbrush	<i>Ericameria nauseosa</i>
Russian knapweed	<i>Acroptilon repens</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Saltcedar	<i>Tamarix ramosissima</i>

Common Name	Scientific Name
Sand dropseed	<i>Sporobolus cryptandrus</i>
Scotch thistle	<i>Onopordum acanthium</i>
Serviceberry	<i>Amelanchier sp.</i>
Siberian elm	<i>Ulmus pumila</i>
Silver sage	<i>Artemisia cana</i>
Skunkbush sumac	<i>Rhus trilobata</i>
Stinging nettle	<i>Urtica dioica</i>
Threadleaf snakeweed	<i>Gutierrezia microcephala</i>
Utah juniper	<i>Juniperus osteosperma</i>
Wavy-leaf Indian paintbrush	<i>Castilleja applegatei</i>
Western wheatgrass	<i>Pascopyrum smithii</i>
Winterfat	<i>Krascheninnikovia lanata</i>
Yellow rabbitbush	<i>Chrysothamnus viscidiflorus</i>

(UANG, 2020)

Table A-2. Species on the Birds of Conservation Concern for the Great Basin Region 9.

Common Name	Scientific Name	Identified during Camp Williams Bird Surveys	Scarcity
Greater Sage-Grouse (a)	<i>Centrocercus urophasianus</i>	No	—
Eared Grebe (nb)	<i>Podiceps nigricollis</i>	No	—
Ferruginous Hawk	<i>Buteo regalis</i>	No	—
Yellow Rail	<i>Coturnicops noveboracensis</i>	No	—
Snowy Plover (c)	<i>Charadrius alexandrinus nivosus/tenuirostris</i>	No	—
Long-billed Curlew	<i>Numenius americanus</i>	No	—
Marbled Godwit (nb)	<i>Limosa fedoa</i>	No	—
Flammulated Owl	<i>Otus flammeolus</i>	No	—
Black Swift	<i>Cypseloides niger</i>	No	—
Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	No	—
Calliope Hummingbird	<i>Stellula calliope</i>	No	—
Rufous Hummingbird	<i>Selasphorus rufus</i>	No	—
Lewis's Woodpecker	<i>Melanerpes lewis</i>	No	—
Williamson's Sapsucker (Rocky Mountain subspecies only)	<i>Sphyrapicus thyroideus</i>	No	—
White-headed Woodpecker (California subspecies only)	<i>Picoides albolarvatus</i>	No	—
Olive-sided Flycatcher	<i>Contopus cooperi</i>	No	—
Willow Flycatcher (c)	<i>Empidonax traillii</i>	Yes	Occasional
Loggerhead Shrike (c)	<i>Lanius ludovicianus</i>	Yes	Rare
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	Yes	Uncommon
Sage Thrasher	<i>Oreoscoptes montanus</i>	Yes	Rare
Virginia's Warbler	<i>Vermivora virginiae</i>	Yes	Common
Green-tailed Towhee	<i>Pipilo chlorurus</i>	Yes	Common
Brewer's Sparrow	<i>Spizella breweri</i>	Yes	Common
Black-chinned Sparrow	<i>Spizella atrogularis</i>	No	—
Sage Sparrow	<i>Amphispiza belli</i>	Yes	Occasional
Tricolored Blackbird	<i>Agelaius tricolor</i>	No	—
Black Rosy-Finch	<i>Leucosticte atrata</i>	No	—

Notes:

(a) = ESA candidate

(b) = ESA delisted

(c) = Non-listed subspecies or population of threatened or endangered

species(nb) = Nonbreeding in the BCR

Scarcity reflects how often out of 11 bird survey years: solitary = either one or single sighting outside of survey;

occasional = 1 to 2; rare = 3 to 5; uncommon = 6 to 9; common = 10 to 11

Sources: <http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/BCC2008/BCC2008.pdf>.http://www.ut.ngb.army.mil/enviro/Natural_Resources.htm. (Table from Maneuver Trails EA, 2020)

Table A-3. Mammal Species Observed in the Northern Lower Garrison During April 2009 Site Visit and the CEM Site Visits in May and July 2014

Common Name	Scientific Name	Observations
Mammals		
Bobcat	<i>Felis rufus</i>	Scat
Coyote	<i>Canis latrans</i>	Scat and footprints
Least chipmunk	<i>Eutamias minimus</i>	
Mule deer	<i>Odocoileus hemionus</i>	
Northern pocket gopher	<i>Thomomys talpoides</i>	Burrows
Rock squirrel	<i>Spermophilus variegates</i>	

(Table from Maneuver Trails EA, 2020)

Table A-4. Special Status Species Occurring in Utah or Salt Lake Counties

Common Name	Scientific Name	Federal Status	State Status	Habitat	Potential for Occurrence on Sites Based on Habitat Availability
Plants					
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	T	None	Wet meadows, along streams, abandoned stream meanders, springs, lake shores	None
Deseret milk-vetch	<i>Astragalus deserticus</i>	T	None	Steep facing slopes in open pinyon-juniper-sagebrush communities	None
Clay phacelia	<i>Phacelia argillacea</i>	E	None	Endemic to Spanish Fork Canyon in Utah County	None
Birds					
American white pelican	<i>Pelecanus erythrorhynchos</i>	None	SPC	Lakes, rivers	Potentially present
Bald eagle	<i>Haliaeetus leucocephalus</i>	None	SPC	Lakes, rivers	Potentially present
Black Swift	<i>Cypseloides niger</i>	None	SPC	Cliffs, waterfalls	None
Bobolink	<i>Dolichonix oryzivorus</i>	None	SPC	Wetlands	None
Ferruginous hawk	<i>Buteo regalis</i>	None	SPC	Dry, open country	Potentially present
Grasshopper sparrow	<i>Ammodramus savannarum</i>	None	SPC	Pastures, grasslands	Potentially present
Greater sage-grouse	<i>Centrocercus urophasianus</i>	None	SPC	Sagebrush	Potentially present

Common Name	Scientific Name	Federal Status	State Status	Habitat	Potential for Occurrence on Sites Based on Habitat Availability
Lewis's Woodpecker	<i>Melanerpes lewis</i>	None	SPC	Open woodland	Unlikely
Long-billed curlew	<i>Numenius mericanus</i>	None	SPC	Wet and dry uplands	Potentially present
Northern goshawk	<i>Accipiter gentilis</i>	None	CS	Mature mountain forest and riparian zone habitats	Unlikely
Short-eared owl	<i>Asio flammeus</i>	None	SPC	Open country	Potentially present
Three-toes woodpecker	<i>Picoides tridactylus</i>	None	SPC	Engelmann spruce, sub-alpine fir, Douglas-fir, grand fir, ponderosa pine, tamarack, aspen, and lodgepole pine	None
Western burrowing owl	<i>Athene cunicularia</i>	None	SPC	Open country	Potentially present
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	T	None	Riparian, woodlands	Potentially present

Mammals

Fringed myotis	<i>Myotis thysanodes</i>	None	SPC	Caves, mines, and buildings, most often in desert and woodland areas	Unlikely
Kit fox	<i>Vulpes macrotis</i>	None	SPC	Sandy soils, sagebrush	Potentially present
Pygmy rabbit	<i>Sylvilagus idahoensis</i>	None	SPC	Sandy soils, sagebrush	Potentially present
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	None	SPC	Forested areas	Unlikely
Spotted bat	<i>Euderma maculatum</i>	None	SPC	Range from deserts to forested mountains; roost and hibernate incaves and rock crevices	Unlikely
Western red bat	<i>Lasiurus blossevillii</i>	None	SPC	Near water, often in wooded areas	Unlikely
White-tailed prairie dog	<i>Cynomys leucurus</i>	None	SPC	Desert grasslands and shrub grasslands	Potentially present
Brown (Grizzly) bear	<i>Ursus arctos horribilis</i>	T	None	Mountains, forests, coastal areas, streams and rivers	None (Extirpated)

Amphibians

Columbia spotted frog	<i>Rana luteiventris</i>	C	CS	Perennial aquatic habitats, small pools or ponds	Potentially present
Western (boreal) toad	<i>Bufo boreas</i>	None	SPC	Slow moving streams, wetlands, desert springs, ponds, lakes, meadows, and woodlands	Potentially present

Reptiles

Smooth greensnake	<i>Opheodrys vernalis</i>	None	SPC	Moist, grassy areas and meadows	Unlikely
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Common Name	Scientific Name	Federal Status	State Status	Habitat	Potential for Occurrence on Sites Based on Habitat Availability
Fish					
Bonneville cutthroat trout	<i>Oncorhynchus clarkia utah</i>	None	CS	High elevation streams and lakes	None
Bluehead sucker	<i>Catostomus discobolus</i>	None	CS	Streams	None
Colorado River Cutthroat trout	<i>Oncorhynchus clarkia pleuriticus</i>	None	CS	Isolated high-elevation headwater streams	None
June sucker	<i>Chasmistes liorus</i>	E	None	Utah Lake and Provo River	None
Least chub	<i>lotichthys phlegethontis</i>	None	CS	Ponds, streams, springs	None
Roundtail chub	<i>Gila robusta</i>	None	CS	Pools in large rivers and streams	None
Southern leatherside chub	<i>Lepidomeda aliciae</i>	None	SPC	Streams and rivers	None
Invertebrates					
California floater	<i>Anodonta californiensis</i>	None	SPC	Shallow areas of lakes, ponds, and large rivers	None
Utah physa	<i>Physella utahensi</i>	None	SPC	Spring-fed pools; Utah Lake (extirpated)	None
Southern Bonneville springsnail	<i>Pyrgulopsis transversa</i>	None	SPC	Springs	None
Eureka mountainsnail	<i>Oreohelix eurekaensis</i>	None	SPC	Limestone rocks	None
Lyrate mountainsnail	<i>Oreohelix haydeni</i>	None	SPC	Limestone rocks	None
Western pearlshell	<i>Margaritifera falcate</i>	None	SPC	Small streams, possibly extirpated	None

Notes:

C = Candidate

CS = Species receiving special management under a Conservation Agreement in order to preclude the need for Federal listing.

E = Endangered

SPC = Species of concern

T = Threatened

Sources: Utah Division of Wildlife Resources (UDWR), 2009a, 2009b, 2009c, 1999; USFWS, 2009; UTARNG, 2009.**(Table from (EA Assessment for the Maneuver Trail System Improvement Project, 2020 with minor edits)**

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

Utah County, Utah



Local office

Utah Ecological Services Field Office

☎ (801) 975-3330

📠 (801) 975-3331

2369 West Orton Circle, Suite 50

West Valley City, UT 84119-7603

<http://www.fws.gov>

<http://www.fws.gov/utahfieldoffice/>

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](#).

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1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
 2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Birds

NAME	STATUS
Yellow-billed Cuckoo <i>Coccyzus americanus</i> There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
June Sucker <i>Chasmistes liorus</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/4133	Threatened

Insects

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

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 Act¹ and the Bald and Golden Eagle Protection Act².

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

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

Additional information can be found using the following links:

- Birds of Conservation Concern <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 Dec 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>

Cassin's Finch <i>Carpodacus cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Franklin's Gull <i>Leucophaeus pipixcan</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Lesser Yellowlegs <i>Tringa flavipes</i> 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
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay <i>Gymnorhinus cyanocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Rufous Hummingbird <i>selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds Apr 15 to Jul 15

Sage Thrasher *Oreoscoptes montanus*

Breeds Apr 15 to Aug 10

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/9433>

Virginia's Warbler *Vermivora virginiae*

Breeds May 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/9441>

Willet *Tringa semipalmata*

Breeds Apr 20 to Aug 5

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

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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.

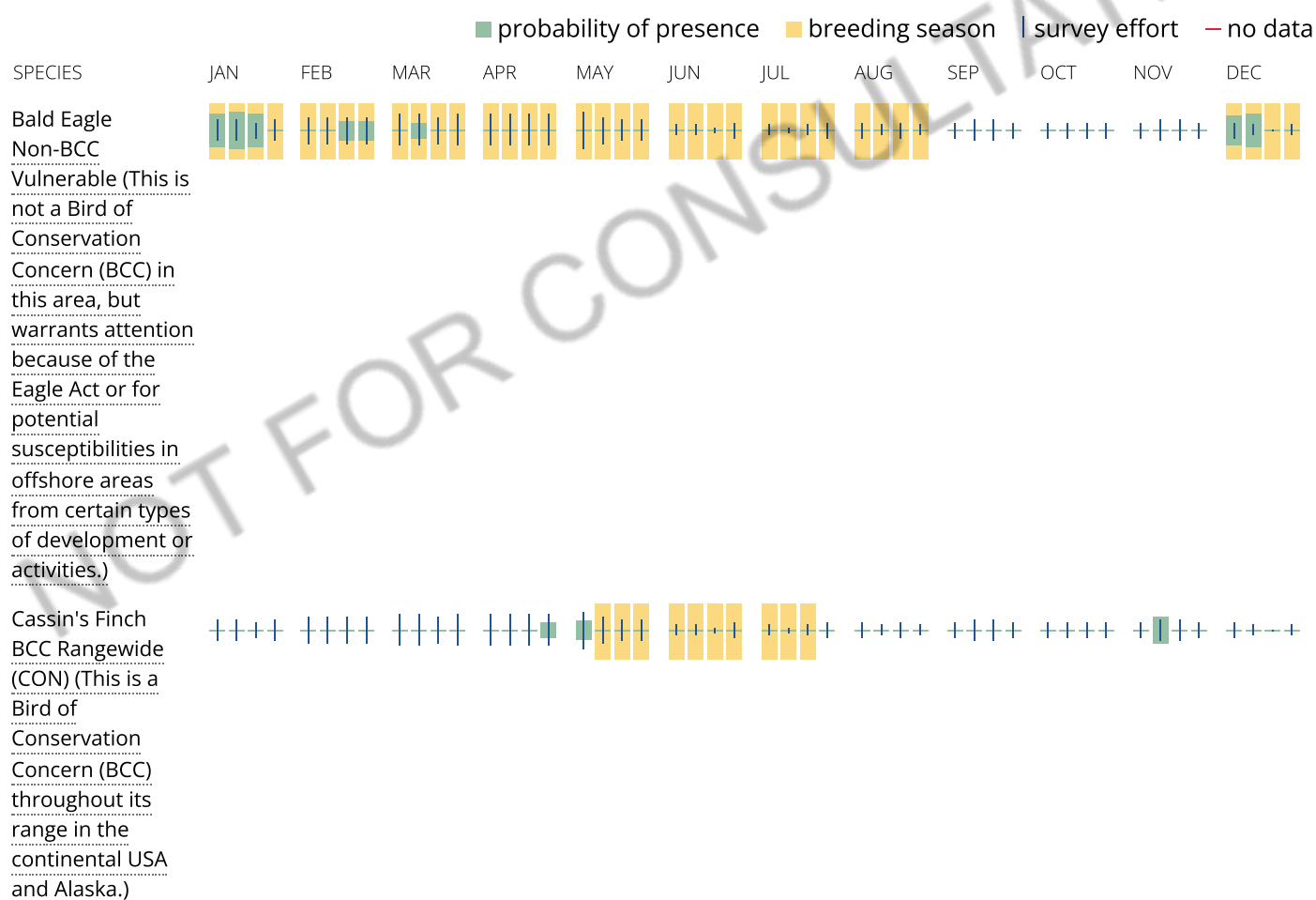
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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.







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



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

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

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

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

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

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

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

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

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds](#)

[guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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:

RIVERINE

[R4SBCx](#)

[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.