

May 9, 2024

Mr. Bryan Day
Little Rock Port Authority
10600 Industrial Harbor Drive
Little Rock, Arkansas 72206

VIA EMAIL: bryan.day@portoflittlerock.com

Re: Threatened & Endangered Species – Preliminary Effects Evaluation
Little Rock Port Authority – Supersite, Little Rock, Arkansas
ECCI Project # 4446-3023

Dear Mr. Day:

At your request, ECCI has conducted an evaluation of potential presence of threatened and endangered (T&E) species regarding the proposed Little Rock Port Authority “Supersite” project, located generally south of Thibault Road and both east and west of a portion of Fraizer Pike Road in the Port of Little Rock area in southeast Little Rock, west of the Arkansas River in Little Rock, Pulaski County, Arkansas (Enclosure 1, Figures). The project area is mapped on United States Geological Survey (USGS) topographic quadrangle Sweet Home, AR (7.5-minute series) (Enclosure 1, Figure 2). The legal description of the project area is generally: the Eastern ½ of the Southeast ¼ of Section 28, Township 1 North, Range 11 West; the Southern ½ of Section 27, Township 1 North, Range 11 West; the Eastern ½ of Section 33, Township 1 North, Range 11 West; and the majority of Section 34, Township 1 North, Range 11 West. Approximate center coordinates for the project area are 34.675°N, -92.180°W (WGS 84).

The proposed project has not been specified as of the writing of this T&E evaluation. It is generally assumed that the proposed use of the project area will include industrial and/or commercial development. For the purposes of this T&E evaluation it is assumed that the entire project site will be cleared, leveled, and developed for industrial/commercial uses.

PROJECT AREA OVERVIEW

The ~1,100 acre project area supports ten primary vegetative community types (based on, and described in more detail in, the March 30, 2023 Section 404 Delineation report prepared by FTN Associates):

- Agricultural field herbaceous wetland community;
- Agricultural herbaceous wetland swale/slough community;
- Forested wetland swale/slough community;
- Herbaceous wetland swale/drainageway community;



- Forested bottomlands wetland community;
- Row-planted forested wetland community;
- Inundated herbaceous wetland community;
- Former borrow area wetland community;
- Agricultural upland field community;
- Row-planted upland forested community;
- Forested upland community.

In addition to onsite wetlands, the project area includes a number of other aquatic features including relatively permanent water (RPW) farm ditches, non-relatively permanent water (non-RPW) ephemeral channels, and man-made open water ponds.

The Federal Emergency Agency (FEMA) maps the majority of the project area as Zone X (shaded and unshaded). Other areas of the site are mapped as Zone AE floodplain and Zone AE Regulatory Floodway (Enclosure 1, Figure 4).

Surrounding land use generally includes agricultural land, undeveloped forested land, residential property, industrial property, and the Arkansas River.

POTENTIAL THREATENED & ENDANGERED SPECIES

ECCI has obtained a record of listed, candidate, and proposed T&E species that have potential to occur within the project area using the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool. The species list, i.e., “IPaC Resource List” is provided in (Enclosure 2). Table 1 below lists the species identified by IPaC as potentially occurring within the project area.

Table 1. Federally Listed Species that may occur within the project area (obtained from IPaC).

Species	Status
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	E
Tricolored Bat (<i>Perimyotis subflavus</i>)	PE
Eastern Black Rail (<i>Laterallus jamaicensis ssp.jamaicensis</i>)	T
Piping Plover (<i>Charadrius melodus</i>)	T
Rufa Red Knot (<i>Calidris canutus rufa</i>)	T
Alligator Snapping Turtle (<i>Macrochelys temminckii</i>)	PT
Monarch Butterfly (<i>Danaus plexippus</i>)	C

E-Endangered; T-Threatened; PE-Proposed Endangered; PT-Proposed Threatened; C-Candidate

The Northern Long-eared Bat (NLEB) is a medium-sized (body length of 3 to 3.7 inches/wingspan of 9-10 inches), dark to pale brown bat, with large ears relative to other bats in the genus *Myotis*. During the winter, this bat hibernates in karst habitats such as small cracks/crevices within caves or mines with constant temperatures, high humidity, and no air currents. During the summer months, this bat roosts, singly or in colonies, in forested areas that





possess living trees or snags with a DBH of ≥ 3 inches and features such as cavities, cracks, crevices, and exfoliating bark. The NLEB feeds on a variety of insects while flying, during and after dusk, primarily through the understory of forested areas. Select areas of suitable roosting/foraging habitat, i.e., forested areas, for the NLEB were observed within the project area.

The Tricolored Bat is a small bat, weighing less than 0.4 ounce, with distinctive tricolored fur, i.e., dark brown at the base, a band of yellowish- to light- brown, and a narrow band of dark brown at the tip. During the winter, this bat enters caves and other underground sites, either singularly or in small colonies, where they enter a state of torpor. When not in caves or underground, these bats use a variety of habitats for roosting. The Tricolored bat feeds on a variety of insects while flying after dusk. Select areas of suitable roosting/foraging habitat, i.e., forested areas, for the Tricolored bat were observed within the project area.

The Eastern Black Rail is a small, secretive marsh bird that occurs as a vagrant in Arkansas, passing through the state only during seasonal migration. This bird is an opportunistic forager, feeding on aquatic and terrestrial invertebrates, as well as seeds. The primary habitat for the Eastern Black Rail is salt or brackish marshlands (although there have been occurrences in freshwater flooded grasslands). The project area does not provide suitable habitat for the species, i.e., brackish wetlands/marshes with herbaceous vegetation.

The Piping Plover is a small shorebird that migrates seasonally through Arkansas. During migration, it could be found in almost any Arkansas county, but it remains for no more than a few days. The preferred habitat for this species is gravel/sand bars of major waterways. Although the Arkansas River is proximate to the project area and select places along the Arkansas River have suitable habitat for the Piping Plover, the project area does not provide suitable habitat for the species, i.e., gravel/sand bars.

The Rufa Red Knot is a shorebird of uncommon but occasional occurrence in Arkansas during seasonal migration. It has exacting food preference, and Arkansas does not provide good sources of its preferred food items or habitat. Preferential habitat for this species during its seasonal migrations includes marine type habitats, e.g., sandy beaches, salt marshes, lagoons, etc. The project area does not provide suitable habitat for the species.

The Alligator Snapping Turtle (AST) is a large turtle (weighing up to 200 pounds) covered in a rough/ridged shell. The AST has a sharply hooked beak from which it derives its name. Preferred habitat for this species is slow-moving rivers, lakes, and swamps with muddy bottoms and sufficient vegetative cover where they spend much of their time submerged and hidden while ambushing prey which includes fish, amphibians, small mammals, birds, and other turtles. Although not extensive, some aquatic features onsite have the possibility of providing appropriate habitat for the AST.

The Monarch Butterfly is a distinctive butterfly with orange, black, and white coloration, having a wingspan up to 4 inches. This butterfly is known for its annual migration (involving multiple generations) of thousands of miles between North and Central America. Although found in a



variety of habitats such as meadows, fields, and gardens, this species is closely associated with the milkweed (*Asclepias* sp.) which serves as the Monarch's exclusive host plant for feeding and breeding. Although the Monarch may use the project area as a stopover, the host plant, i.e., milkweed, of this species was not observed in the project area; therefore, the project area does not provide the habitat necessary for feeding or breeding for this species.

PRELIMINARY EFFECTS DETERMINATION

Based on observed onsite habitat and prior project experience, ECCI has developed preliminary effects determinations (Table 2) for each of the potential species. Please note that the determinations provided below are opinions and should not be considered formal until approved by a federal agency.

Table 2. Preliminary Effects Determinations.

Species (Common Name)	Preliminary Determination	Primary Rational for Determination
Northern Long-eared Bat	May Affect, Not Likely to Adversely Affect	Possible use of the project area for foraging / lack of known hibernaculum or maternity roost sites near project area.
Tricolored Bat	May Affect, Not Likely to Adversely Affect	Possible use of the project area for foraging / lack of known hibernaculum or maternity roost sites near project area.
Eastern Black Rail	No Effect	Lack of suitable habitat within project area.
Piping Plover	No Effect	Lack of suitable habitat within project area.
Rufa Red Knot	No Effect	Lack of suitable habitat within project area.
Alligator Snapping Turtle	May Effect	It is possible that the AST could be present in aquatic features onsite. Coordination with the USFWS is needed to determine likelihood and if a species survey is needed.
Monarch Butterfly	Not Applicable / No Effect	The Monarch Butterfly is currently a Candidate, rather than a Threatened or Endangered Species. Host plant, i.e., milkweed, is not known to be onsite.



THREATENED & ENDANGERED SPECIES AUTHORITY

The Endangered Species Act (ESA) prohibits “take” of a listed species. From Section 3(19) of the Federal Endangered Species Act: *The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.* The term “harm” has been defined as *...an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.*

The USFWS is tasked (along with the National Oceanic and Atmospheric Administration for marine species) with implementation and oversight of the ESA. The USFWS will only provide T&E species concurrence/non-concurrence effects determinations, i.e., “consultation”, for projects that require a federal permit, have federal funding, and/or are carried out by or at the direction of a federal agency (e.g., federal nexus). When a project has no federal nexus, the USFWS will only provide technical assistance. A USFWS technical assistance letter can only request or recommend, i.e., not require, that actions, studies, surveys, etc. be conducted related to a project that does not have a federal nexus.

At this time, it is assumed that the project, following development of project plans, will have a federal nexus. Therefore, the USFWS is not being engaged for consultation or technical assistance at this time. Rather, this letter provides the opinions of ECCI regarding the potential for listed species to occur at the site and possibly be impacted by future development. In the event the project proceeds and does have a federal nexus, consultation with the USFWS will be advised by the lead federal agency. In the event the project proceeds and does not have a federal nexus, it is the recommendation of ECCI that the project proponent engage with the USFWS requesting technical assistance regarding potential impacts to T&E species.

Sincerely,

ECCI

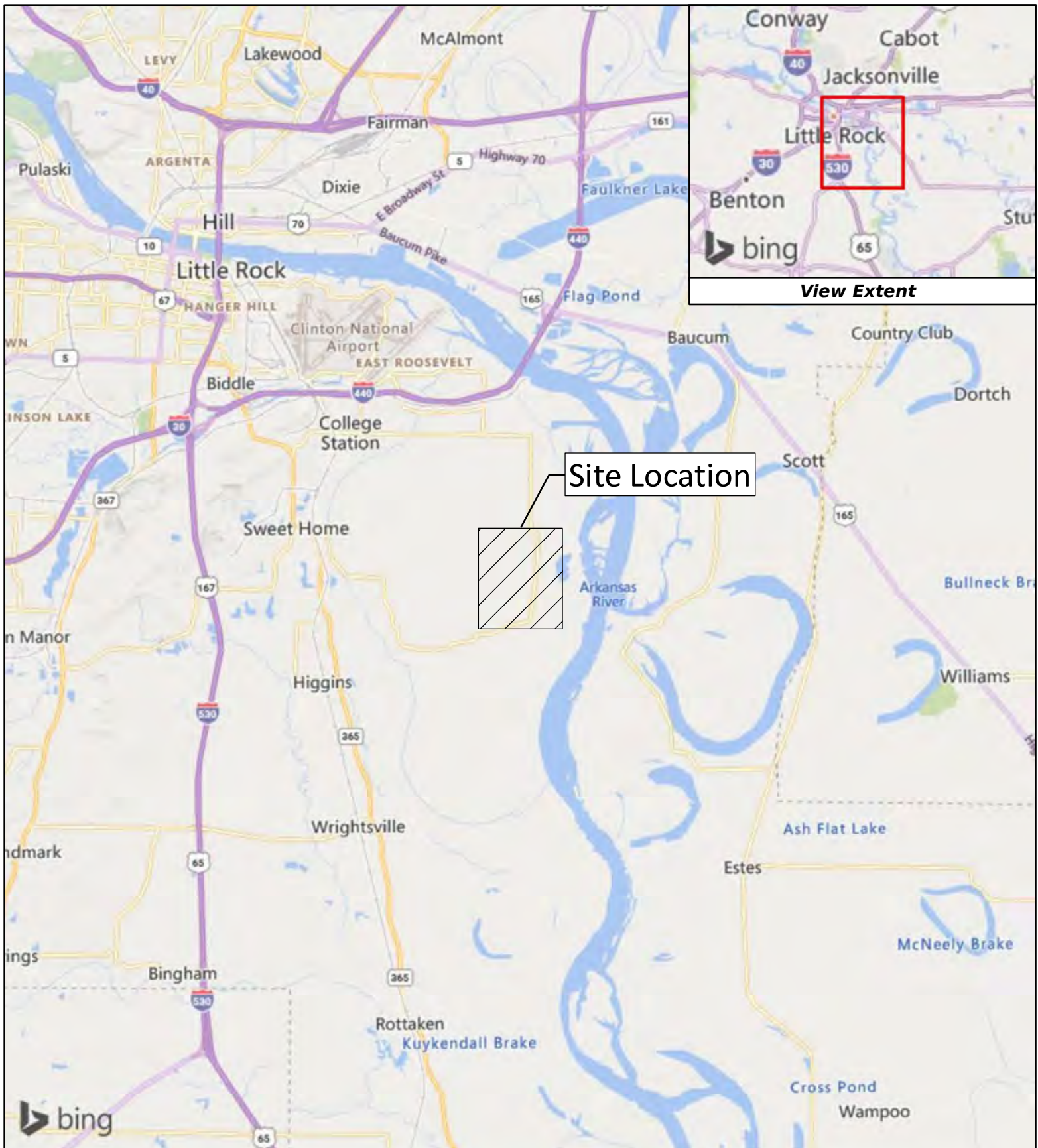
Jimmy Rogers
Senior Environmental Scientist



ENCLOSURE 1

Figures

Used from the March 2023 delineation report prepared by FTN Associates, Ltd.



Port of Little Rock – 1,000+ Acre Project

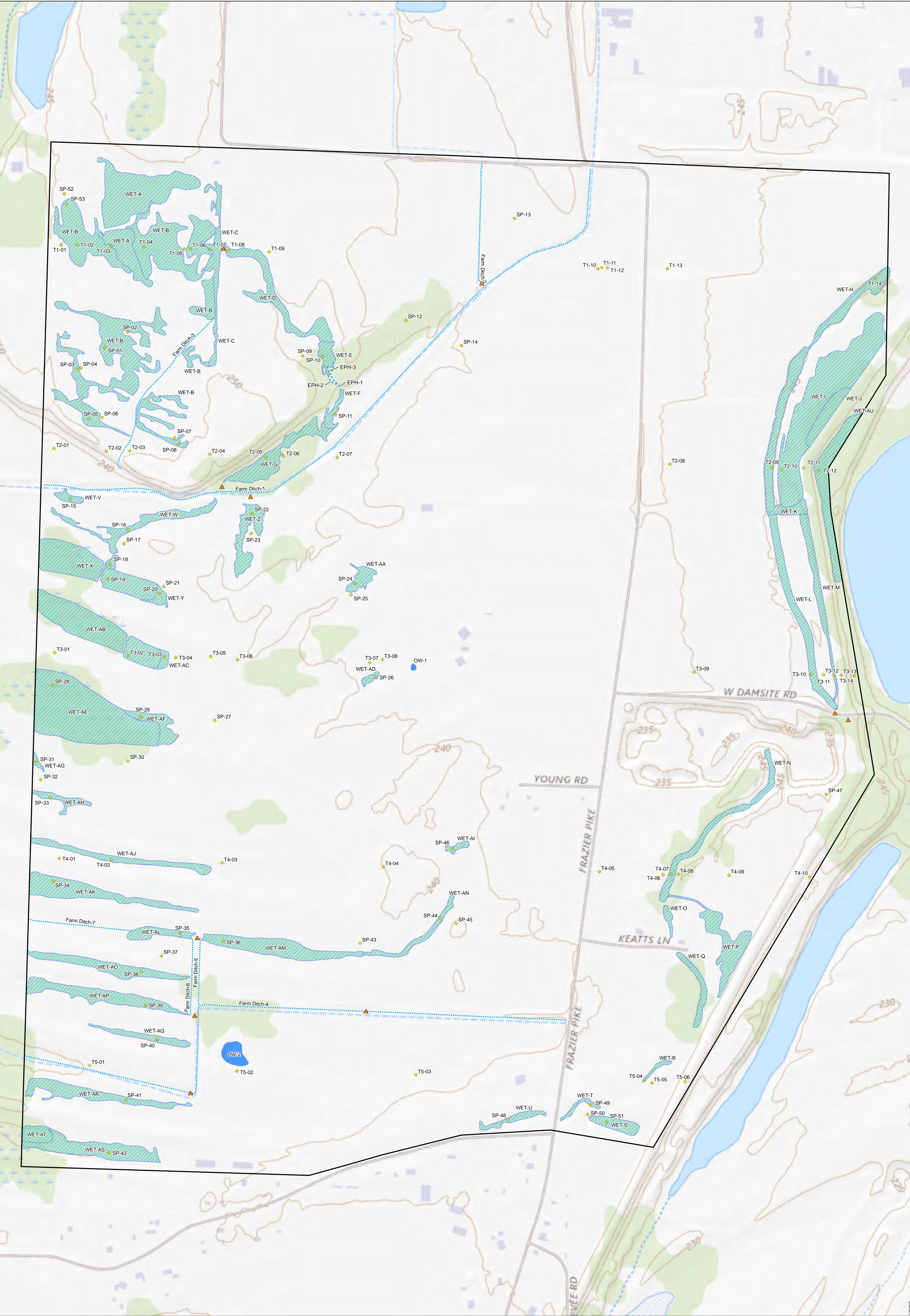
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Miles

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Background: Microsoft Corporation and its data suppliers

Figure 1. Vicinity Map



Port of Little Rock – 1,000+ Acre Project

300 Feet

Project Area Open Waters Project Wetlands Farm Ditches Ephemeral Channels Sample Points Culverts

Select culverts shown for drainage reference; NOT ALL CULVERTS ARE SHOWN.

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Figure 2. Map showing project area details overlaid on the USGS *The National Map* Topo basemap for quadrangle Sweet Home, AR (7.5-minute series).



Port of Little Rock – 1,000+ Acre Project

300
Feet

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Project Area

Open Waters

Project Wetlands

Farm Ditches

Ephemeral Channels

Sample Points

Culverts

Select culverts shown for drainage reference; NOT ALL CULVERTS ARE SHOWN.

Background: Arkansas GIS Office; ESRI (Maxar)

Figure 3. Map showing project area details overlaid on aerial imagery via ESRI World Imagery service (captured July 2022.)

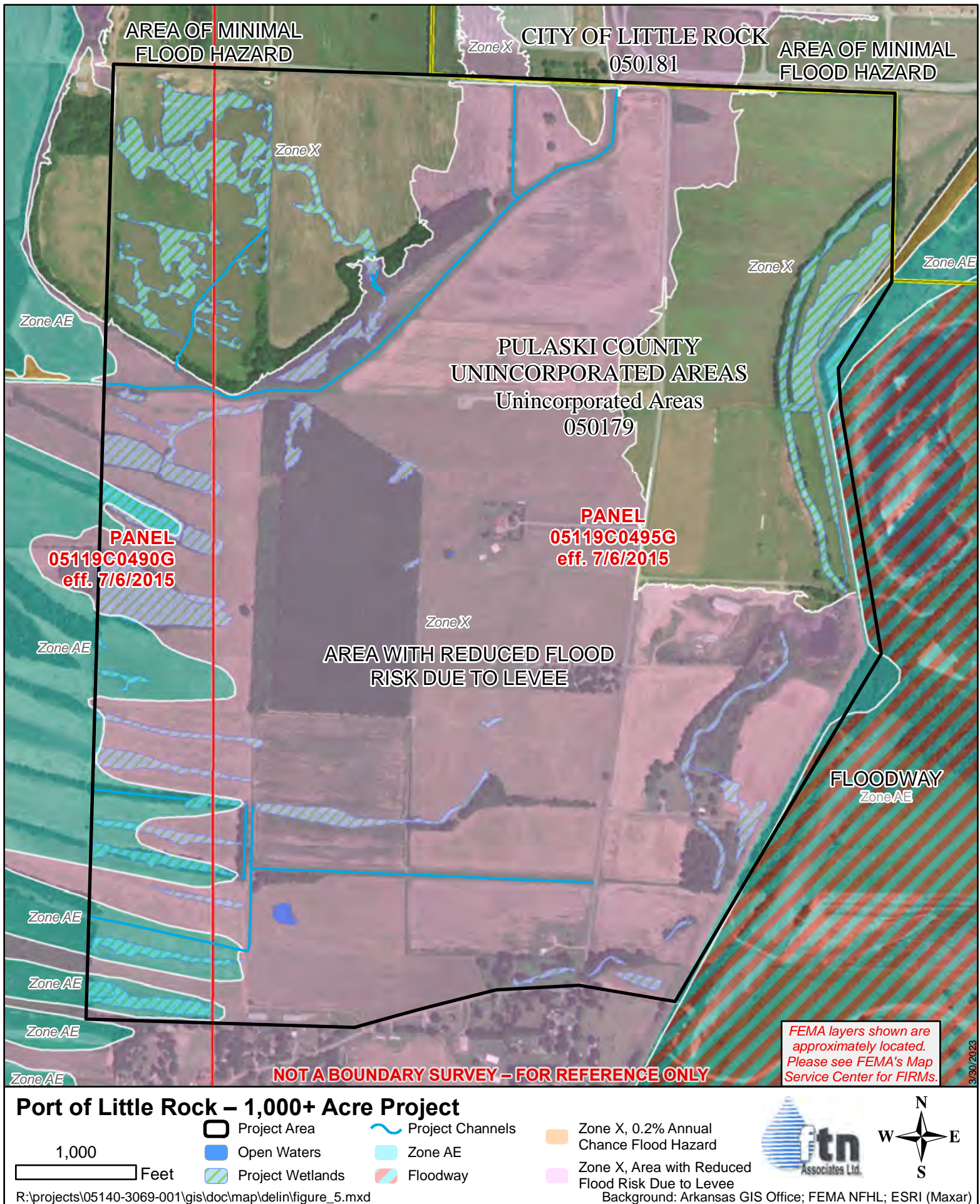


Figure 4. Map showing project area details with FEMA's National Flood Hazard Layer data overlaid on aerial imagery via ESRI World Imagery service (captured July 2022.)

ENCLOSURE 2

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

Pulaski County, Arkansas



Local office

Arkansas Ecological Services Field Office

☎ (501) 513-4470

🏢 (501) 513-4480

110 South Amity Suite 300
Conway, AR 72032-8975

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](#).

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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:

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> Wherever found This species only needs to be considered if the following condition applies: <ul style="list-style-type: none">• This species only needs to be considered if the project includes wind turbine operations. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

Birds

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis</i> ssp. <i>jamaicensis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened
Piping Plover <i>Charadrius melodus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> Wherever found There is proposed critical habitat for this species. https://ecos.fws.gov/ecp/species/1864	Threatened

Reptiles

NAME	STATUS
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Alligator Snapping Turtle *Macrochelys temminckii*

Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4658>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

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

Critical habitats

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

There are no critical habitats at this location.

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

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection 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 Sep 1 to Jul 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.

- 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 $0.05/0.25 = 0.2$.
- 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.

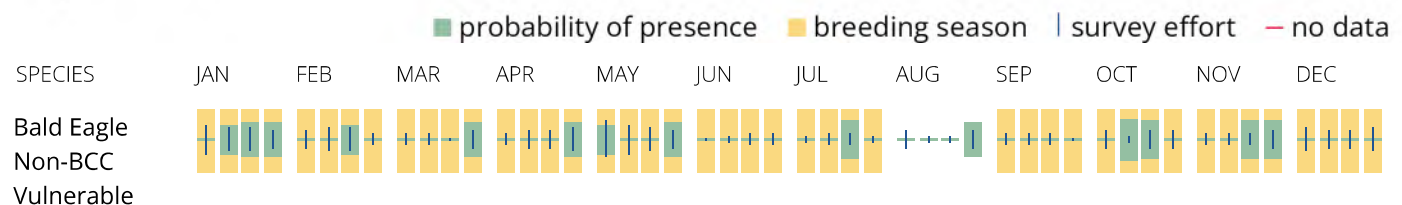
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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
American Golden-plover <i>Pluvialis dominica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
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 Sep 1 to Jul 31
Cerulean Warbler <i>Setophaga cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 25 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25

Kentucky Warbler *Geothlypis formosa*

Breeds Apr 20 to Aug 20

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

Least Tern *Sternula antillarum antillarum*

Breeds Apr 25 to Sep 5

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

Lesser Yellowlegs *Tringa flavipes*

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/9679>

Little Blue Heron *Egretta caerulea*

Breeds Mar 10 to Oct 15

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

Pectoral Sandpiper *Calidris melanotos*

Breeds elsewhere

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

Prairie Warbler *Setophaga discolor*

Breeds May 1 to Jul 31

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

Prothonotary Warbler *Protonotaria citrea*

Breeds Apr 1 to Jul 31

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

Red-headed Woodpecker *Melanerpes erythrocephalus*

Breeds May 10 to Sep 10

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

Rusty Blackbird *Euphagus carolinus*

Breeds elsewhere

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

Semipalmated Sandpiper *Calidris pusilla*

Breeds elsewhere

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

Wood Thrush *Hylocichla mustelina*

Breeds May 10 to Aug 31

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

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

Breeding Season (■)

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

project area.

Survey Effort (I)

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

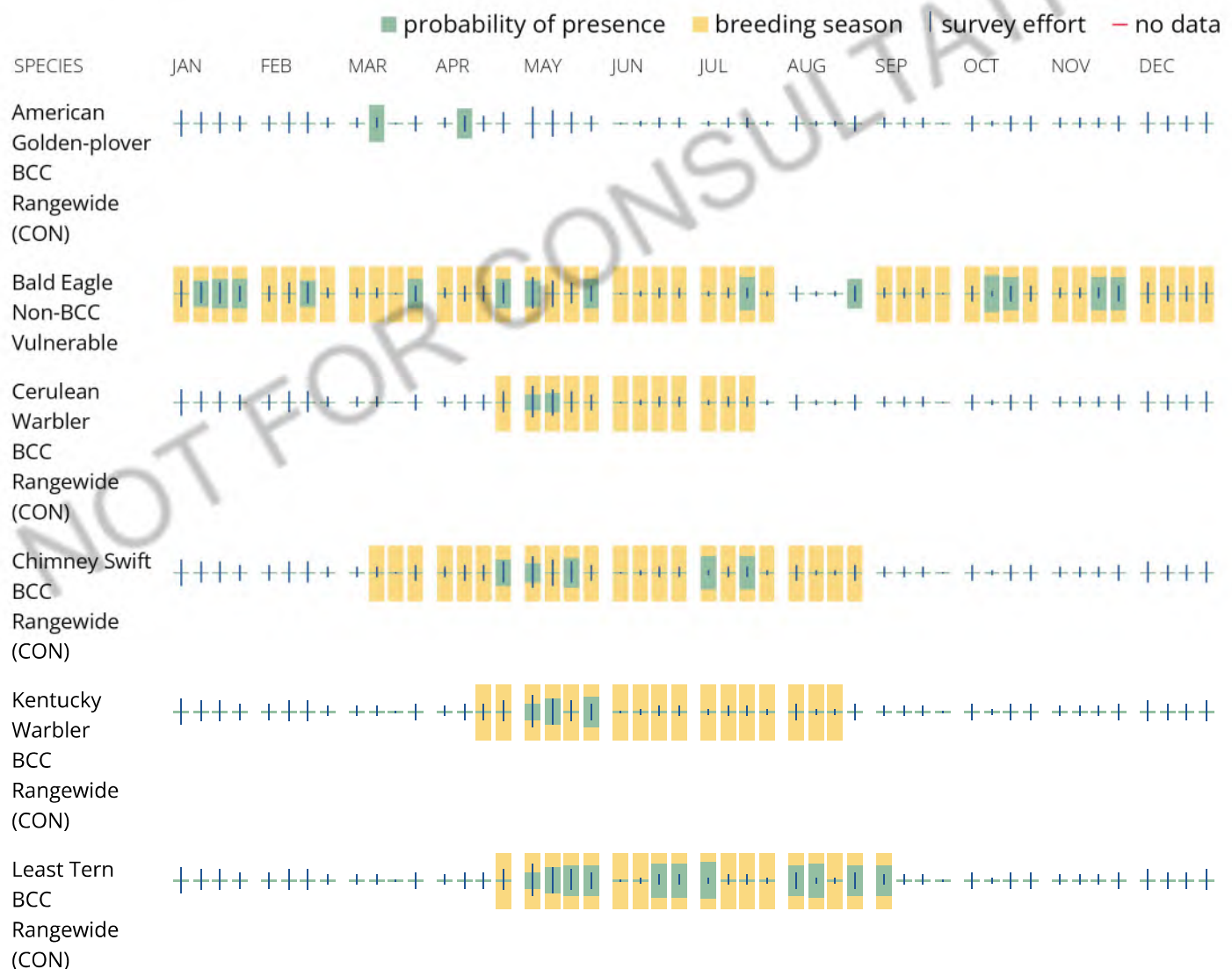
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

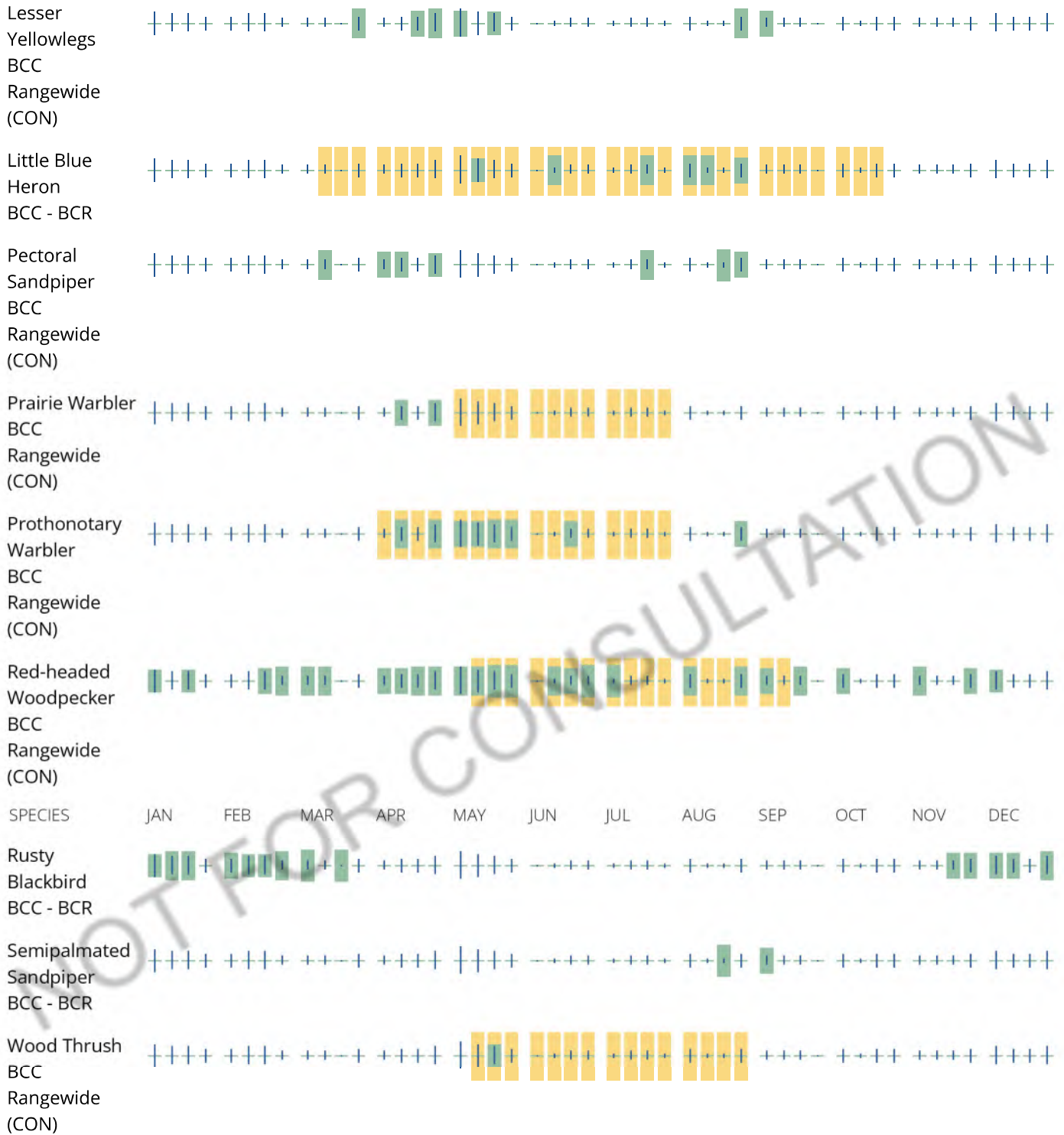
No Data (-)

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

Survey Timeframe

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





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

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

you are conducting and the type of infrastructure or bird species present on your project site.

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

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

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

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

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

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

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

How do I know if a bird is breeding, wintering or migrating in my area?

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

What are the levels of concern for migratory birds?

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

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

offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

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

Wetland information is not available at this time

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

Data limitations

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

site may result in revision of the wetland boundaries or classification established through image analysis.

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

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

Data exclusions

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