

FRON bn, LLC (Frontier Solar)
Responses to Siting Board Staff's Post-Hearing Request for Information
Case No. 2023-00360

Request No. 1:

Provide the estimated distance from the closest residence as it relates to each of the following:

- a. The fence
- b. The panels
- c. The inverter
- d. The substation

Response No. 1:

- a. 166 feet
- b. 273 feet
- c. 672 feet
- d. 1,623 feet

Responding Witness: Michael Tincher

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Request No. 2:

Refer to the Application, page 11, paragraph 34. Provide the entities with an ownership interest in Frontier Solar that were referenced as not having any environmental violations.

Response No. 2:

Neither BrightNight, LLC, nor any entities having ownership in FRON bn, LLC ("Frontier Solar") have any environmental violations. Please see the attached affidavit from BrightNight, LLC, Chief Executive Officer, Martin Hermann.

Responding Witness: Martin Hermann

COMMONWEALTH OF KENTUCKY
BEFORE THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING

In the Matter of:

ELECTRONIC APPLICATION OF FRON BN, LLC)
(FRONTIER SOLAR) FOR A CERTIFICATE OF)
CONSTRUCTION FOR AN APPROXIMATELY 120)
MEGAWATT MERCHANT SOLAR ELECTRIC)
GENERATING FACILITY AND NONREGULATED) Case No. 2023-00360
ELECTRIC TRANSMISSION LINE IN MARION AND)
WASHINGTON COUNTIES, KENTUCKY)
PURSUANT TO KRS 278.700 AND 807 KAR)
5:110)

AFFIDAVIT OF MARTIN A. HERMANN

The Affiant, Martin A. Hermann, after having been duly sworn, hereby states and affirms as follows:

1. I am over the age of 18 and am a resident of the state of Florida.
2. I am the Chief Executive Officer of BrightNight, LLC (“BrightNight”) My business address is 515 N. Flagler Drive Suite 250, West Palm Beach, Florida, 33401.
3. As CEO, I am an authorized representative of BrightNight, LLC, with the authority to speak on behalf of the project and the corporate entity.
4. FRON bn, LLC (“Applicant” or “Frontier Solar”), a wholly owned subsidiary of BrightNight, is the applicant for a certificate of construction for a merchant electric generating facility and nonregulated electric transmission line located in Marion and Washington Counties, Kentucky, Case No. 2023-00360 (“Project”).
5. The Kentucky State Board on Electric Generation and Transmission Siting (“Siting Board”), in its Post-Hearing Request for Information, requested confirmation that the list of entities with an ownership interest in Frontier Solar referenced in its application as not having any

environmental violations, including the corporate entities depicted the corporate structure chart submitted in response to Siting Board Staff's First Request for Information, request number 8.

6. I hereby affirm that neither FRON bn, LLC, BrightNight, LLC, nor any other entity with ownership interest in the Project, including any entity included in the corporate structure chart submitted in response to Siting Board Staff's First Request for Information, request number 8, has violated any state or federal environmental laws or regulations.

Further the Affiant sayeth not.

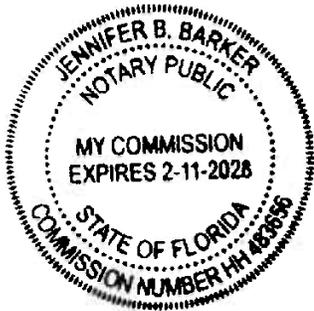
I AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE FOREGOING REPRESENTATIONS ARE TRUE.

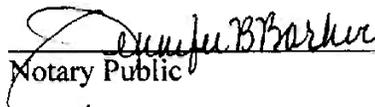


Martin A. Hermann

STATE OF FLORIDA)
) ss.
COUNTY OF WALTON)

Sworn to and subscribed in my presence this 13 day of May, 2024, by Martin A. Hermann who is personally known to me.





Notary Public

Jennifer B. Barker

Printed

My Commission Expires: 2/11/28

County of Residence: Walton

FRON bn, LLC (Frontier Solar)
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Case No. 2023-00360

Request No. 3:

Refer to Siting Board Staff's First Request Information, 8. Confirm whether the applicant, nor any entities with ownership interest in Frontier Solar has violated any state or federal environmental laws or regulations. Specifically, the entities that were included in the corporate structure chart.

Response No. 3:

Confirmed. Please see Response No. 2. The entities shown in the corporate structure chart originally submitted with Response No. 8 to Siting Board Staff's First Request for Information reflects the correct ownership structure of BrightNight, LLC, and none of those entities, including the applicant, have violated any state or federal environmental laws or regulations.

Responding Witness: Martin Hermann

FRON bn, LLC (Frontier Solar)
Responses to Siting Board Staff's Post-Hearing Request for Information
Case No. 2023-00360

Request No. 4:

Provide a copy of all environmental surveys completed by Frontier Solar, including the Phase I Environmental Assessment.

Response No. 4:

Please find attached Frontier Solar's Threatened and Endangered Habitat Assessment Report. Due to file size limitations, please find Frontier Solar's Phase I Environmental Site Assessment and Wetland Delineation Report attached separately.

Responding Witness: Michael Tincher

Memo

To	FRON bn, LLC
From	Jessica Anderson, ERM Michael Tincher, ERM
Date	19 January 2024
Reference	Frontier Solar Project / 0650014
Subject	Threatened and Endangered Species Habitat Assessment

1. INTRODUCTION

On behalf of FRON bn, LLC, Environmental Resources Management, Inc. (ERM) is pleased to provide the following Threatened and Endangered Species Habitat Assessment for the proposed Frontier Solar Project (Site). The purpose of this memorandum is to establish compliance with applicable federal and state environmental regulations. ERM recognizes that the U.S. Fish and Wildlife Service (USFWS) and the Kentucky Department of Fish and Wildlife Resources (KDFWR) responsibility for the protection of various natural resources.

The Site is located in the north-central portion of Marion County and south-central part of Washington County (Figure 1 – Site Location Map). The Site consists of approximately 2,959 acres on private land across numerous parcels. Topography on the Site is gentle to moderately sloping, with elevation ranging from 700 feet to 900 feet above mean sea level and several stream valleys are present (Figure 2 – Topographic Map). Aerial imagery suggests the land is used mainly for agricultural practices.

The Site is located within the Interior Plateau physiographic area and the Outer Bluegrass sub-providence. It is located in the Lower Cartwright Creek Watershed (Hydrologic Unit Code [HUC] 051401030302) and the Upper Cartwright Creek Watershed (HUC 051401030301).

2. DESKTOP DATA REVIEW

ERM reviewed published occurrence records of protected species from available online data sources, including the USFWS Information for Planning and Consultation (IPaC) and data available from the Kentucky Department of Fish and Wildlife Resources (KDFWR), which details species of concern for Marion and Washington counties (Table 1).

ERM consulted online resources to identify federal status species that may be affected by the proposed Project. Reports generated using the USFWS IPaC website identified three federally protected bat species: gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*). Five federally endangered species of molluscs were identified, including: clubshell (*Pleurobema clava*), fanshell (*Cyprogenia stegaria*), orangefoot pimpleback (*Plethobasus cooperianus*), pink mucket (*Lampsilis abrupta*), and ring pink (*Obobaria retusa*). One mollusc species, rabbitsfoot (*Quadrula cylindrica cylindrica*) was identified as federally threatened. The salamander mussel (*Simpsonaias ambigua*) is proposed as federally threatened. The monarch butterfly (*Danaus plexippus*) is a federal candidate

species. The field sparrow (*Spizella pusilla*) was identified as a bird of conservation concern. No designated critical habitat is known to occur within the proposed Site (Appendix A).

Additionally, the Kentucky Biological Assessment Tool (KY-BAT) was used to assess potential state listed species within the Site. The results indicate no known occurrences of state threatened or endangered species or their habitat within 1.0-miles of the Project (Appendix B). The database indicated the presence of two state species of special concern within 1.0-miles of the Project, including loggerhead shrike (*Lanius ludovicianus*) and barn owl (*Tyto alba*). State species of special concern do not have protections with KDFWR and therefore additional consultation is not required. If the listing status of either of these species change, additional coordination or consultation with KDFWR may be required.

3. FIELD HABITAT ASSESSMENT

ERM biologists conducted a field habitat assessment of the Site on May 31 – June 3, 2022, November 13 – November 18, 2022, and December 6 – 13, 2023 to identify ecological communities and land uses to determine whether the Site could support protected species identified in the USFWS IPaC and the KY-BAT. Assessments were conducted in conjunction with a routine wetland delineation and consisted of random meander surveys and targeted habitat reviews with a focus on known protected species habitat requirements. Photographs representative of site conditions are included in Appendix C.

Indiana bat and northern long-eared bat have the potential to utilize the forested areas on the Site for roosting (Figure 3 – Aerial Map). Gray bats are not likely to occur on Site due to the lack of caves. During the summer, many bat species, including the listed *Myotis* species, may utilize living and dead trees of requisite size with sloughing bark, cavities, and crevices for suitable roosting habitat. Bat species may also utilize access to nearby open areas for foraging opportunities.

USFWS – Kentucky Field Office requires mitigation for removal of forested habitat. The amount of mitigation is based on the USFWS designated habitat type and time of tree clearing. The current cost of mitigation through the USFWS – Kentucky Field Office’s Imperiled Bat Fund is \$4,700 per acre and subject to change on an annual basis. Based on the IPaC, the Site is within USFWS designated “potential” habitat areas. Therefore, mitigation will be required as follows:

- 0.5:1 ratio when tree clearing occurs between October 15 and March 31.
- 1:1 ratio when tree clearing occurs between April 1 and October 14.

A habitat assessment report and request will need to be sent to USFWS for their approval prior to tree clearing.

Suitable habitat is not present for the five federally endangered, one federally threateeed, and one proposed federally threatened mussel species that were identified in the IPaC. Although here are several perennial streams throughout the Project, none were of sufficient size or had preferred substrate for the listed species.

Listed monarch butterflies (*Danaus plexippus*) may utilize habitats such as open fields, meadows, wetlands, and disturbed areas. Adult monarch butterflies will feed on the nectar of many wildflower species, including native milkweeds (*Asclepias* spp.), which act as the exclusive larval host plants. The Project consists of abundant hay and pasture fields, with

scattered forested areas. Common milkweed (*Asclepias syriaca*) was observed throughout several open pasture field. Swamp milkweed (*Asclepias incarnata*) was also observed in a limited number of wetlands throughout the Project. These areas provide suitable habitat for monarch butterflies. Since monarch butterfly is currently listed as a federal candidate species, no other coordination or consultation with USFWS is required.

Migratory birds, such as the field sparrows, are birds that migrate annually between breeding grounds and wintering grounds. They use specific areas during breeding and wintering, but also use stopover sites during migration to rest and feed. Based on the IPaC, the Project is within the range of field sparrows during their breeding season of March 1 through August 15. Suitable habitat for field sparrows includes old fields, brushy hillsides, overgrown pastures, thorn scrub, deciduous forest edge, sparse second growth, and fencerows. The Project has areas limited areas around forested edges that provide suitable habitat. If Project activities involve clearing, grubbing, or mowing during the breeding season, a site walk by trained personnel to confirm the absence of active migratory bird nests within the Project area may be recommended.

Table 1 presents a summary of the federal and stated listed species, their suitable habitats, and related findings.

Table 1: Federally and state protected species potentially occurring at or in the vicinity of the Site

Taxonomic Group	Species	Protection Status	Preferred Habitat	Preferred Habitat Observed on Site?	Likelihood for Occurrence on Site
Mammals	Gray bat (<i>Myotis grisescens</i>)	FT ¹	Caves or cave-like structures (dams, mines, quarries, concrete box culverts, and the underside of bridges) for year-round use. Summer habitat must be warm and winter hibernacula typically have deep vertical caves.	No	Unlikely; no caves are present
	Indiana bat (<i>Myotis sodalis</i>)	FT	Winter hibernacula is restricted to large, complex underground hibernacula and potentially other cave-like structures (abandoned mines). Summer hibernacula includes trees with peeling bark and prolonged solar exposure that occur within riparian zones,	Yes	Possible; forested areas in Project

¹ On November 30, 2022, the USFWS reclassified the NLEB from threatened to endangered. This reclassification to endangered and the removal of the 4(d) rule becomes effective on January 30, 2023, 60 days after publication of the final rule in the Federal Register.

Taxonomic Group	Species	Protection Status	Preferred Habitat	Preferred Habitat Observed on Site?	Likelihood for Occurrence on Site
			bottomland and floodplain habitats, wooded wetlands, and upland communities.		
	Northern Long-eared bat (<i>Myotis septentrionalis</i>)	FT	Mixed, hardwood, coniferous forests, and riparian areas. Hibernation occurs in large caves and abandoned mines. Roosts in small crevices and cracks in walls and ceilings and in dead or dying trees.	Yes	Possible; forested areas in Project
Molluscs	Clubshell (<i>Pleurobema clava</i>)	FE	Clean, loose sand and gravel in medium to small rivers and streams that is stable and undisturbed.	No	Unlikely; Cartwright Creek is disturbed; no other streams are of sufficient size.
	Fanshell (<i>Cyprogenia stegaria</i>)	FE	Medium to large rivers with sand or gravel in deep water with a moderate current that is stable and undisturbed.	No	Unlikely; no streams of sufficient size.
	Orangefoot Pimpleback	FE	Substrate composed of silt, sand, and gravel in	No	Unlikely; no streams of sufficient size.

Taxonomic Group	Species	Protection Status	Preferred Habitat	Preferred Habitat Observed on Site?	Likelihood for Occurrence on Site
	<i>(Plethobasus cooperianus)</i>		main channel habitats of large rivers with flowing water.		
	Pink Mucket <i>(Lampsilis abrupta)</i>	FE	Shallow riffles and shoals with mud, sand, and no silt in major rivers and tributaries.	No	Unlikely; Cartwright Creek contains too much silt substrate.
	Rabbitsfoot <i>(Quadrula cylindrica cylindrica)</i>	FT	Small to medium-sized streams and some large rivers with a mix of sand and gravel.	No	Unlikely; no streams of sufficient size.
	Ring Pink <i>(Obovaria retusa)</i>	FE	Medium to large rivers with a mixture of sand, silt, and gravel substrate.	No	Unlikely; no streams of sufficient size.
	Salamander Mussel <i>(Simpsonaias ambigua)</i>	PE	Sand or silt under large, flat stones in areas of a swift current in medium to large rivers and lakes.	No	Unlikely; no streams of sufficient size.
Insects	Monarch Butterfly <i>(Danaus plexippus)</i>	FC	Breeding occurs exclusively on patches of milkweed; may occupy old fields and mixed woodland habitats.	Yes	Possible; milkweeds were observed throughout the Project

Taxonomic Group	Species	Protection Status	Preferred Habitat	Preferred Habitat Observed on Site?	Likelihood for Occurrence on Site
Birds	Field Sparrow (<i>Spizella pusilla</i>)	BBC	Old fields, brushy hillsides, overgrown and weedy pastures, thorn scrub, deciduous forest edge, fencerows, untilled and idle cropland. Nest on or near ground in weed clumps or grass tufts and in small thick shrubs with leaves.	Yes	Possible; potential suitable habitat identified along the forested edges.
	Loggerhead Shrike (<i>Lanius ludovicianus</i>)	SOSC	Open country with scattered trees and shrubs, savannah, and open woodland with suitable perches such as poles, wires, and fenceposts	Yes	Possible
	Barn Owl (<i>Tyto alba</i>)	SOSC	Fields of dense grass with open or partially open country (grassland, marsh, lightly grazed pasture, and hayfields) often near anthropogenic structures. Nests in buildings, caves,	Yes	Possible

Taxonomic Group	Species	Protection Status	Preferred Habitat	Preferred Habitat Observed on Site?	Likelihood for Occurrence on Site
			crevices on cliffs, burrows, and hollow trees. Foraging habitat includes grass fields in saltmarsh, wet meadows, lightly grazed pastures, hayfields, and abandoned agricultural fields.		

Note: FT = Federally Threatened; FE = Federally Endangered; FC = Federal Candidate; PE = Proposed Endangered; BCC = Bird of Conservation Concern; SOSC = State Species of Special Concern

Sources: U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC) and NatureServe.org

4. CONCLUSION

Suitable habitat was observed for the federally protected Indiana bat and northern long-eared bat, as well as the federal candidate monarch butterfly. Suitable habitat for two state species of special concern were also identified. No designated critical habitat was present at the Site. Based on reviews of the Site, considerations of the above-mentioned species, and current design plans, ERM concludes that there is potential for federally and state listed sensitive species to occur on the Site and that the development of the proposed project has the potential to affect species under the jurisdiction of the USFWS and KDFWR. If tree clearing occurs, additional consultation with USFWS will be required.

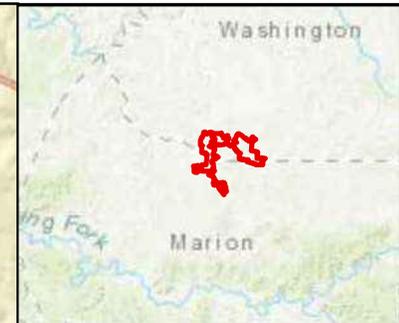
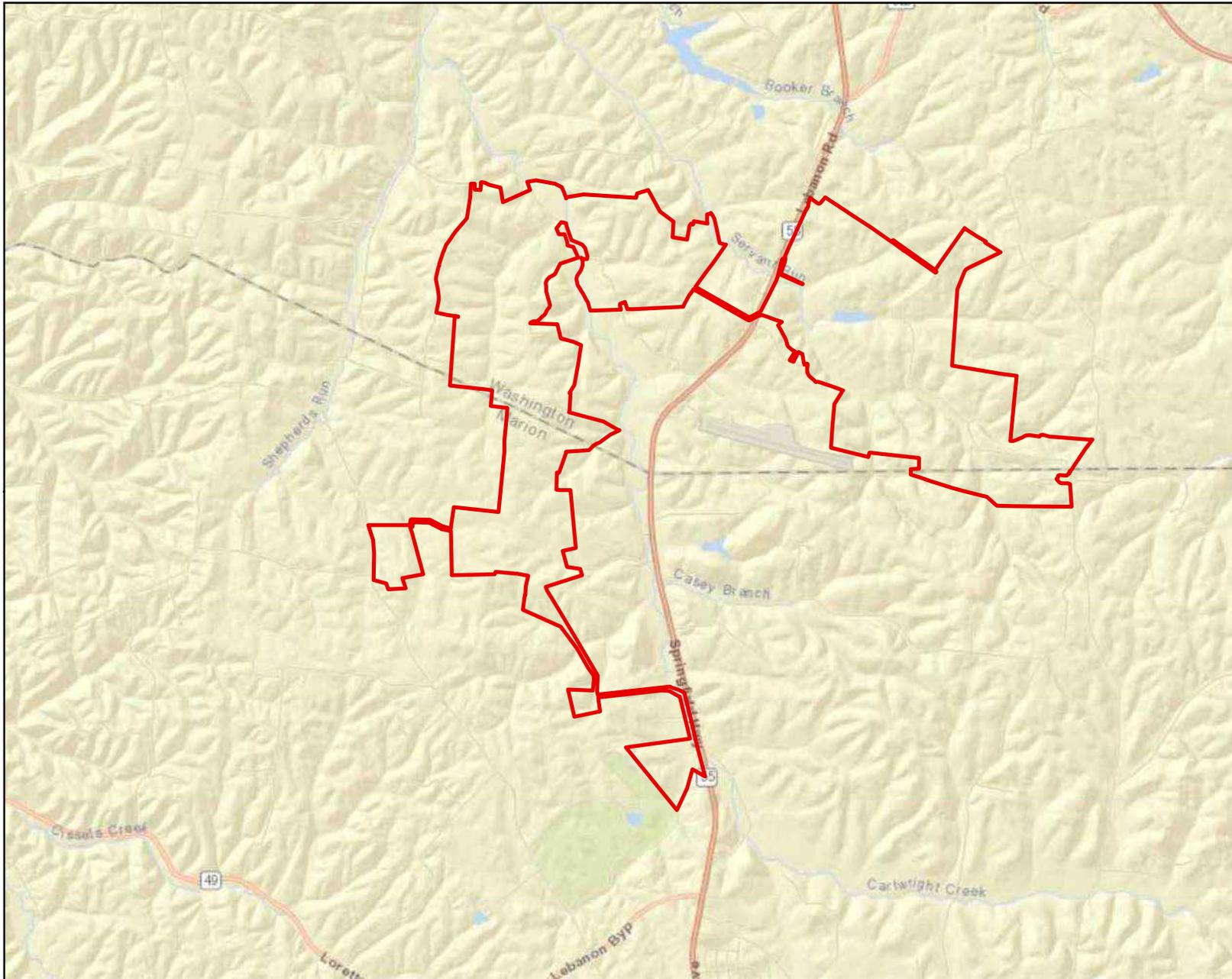
If you have questions concerning this memorandum, please contact do not hesitate to contact me at Michael.Tincher@erm.com or 612-337-3369.

Yours sincerely,

A handwritten signature in blue ink that reads "Michael Tincher". The signature is written in a cursive, flowing style.

Michael Tincher, PWS, QHP
Principal Consultant/Scientist, ERM

FIGURES



Legend

 Project Boundary

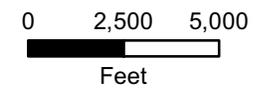
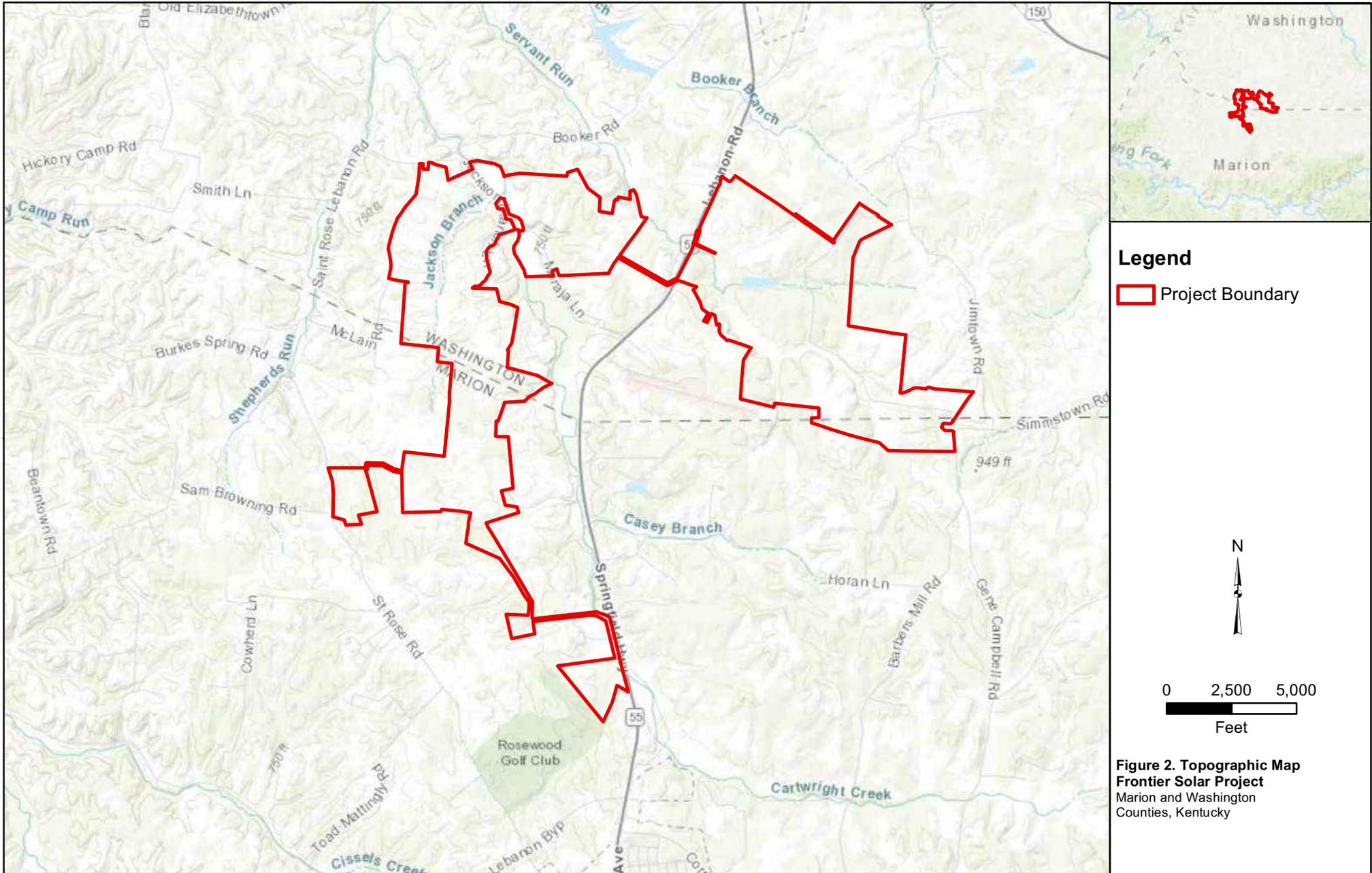
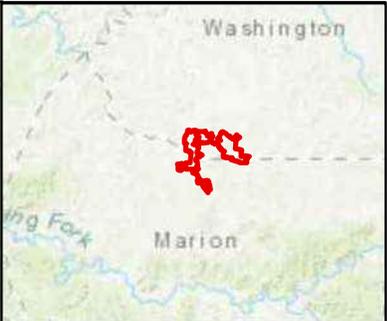
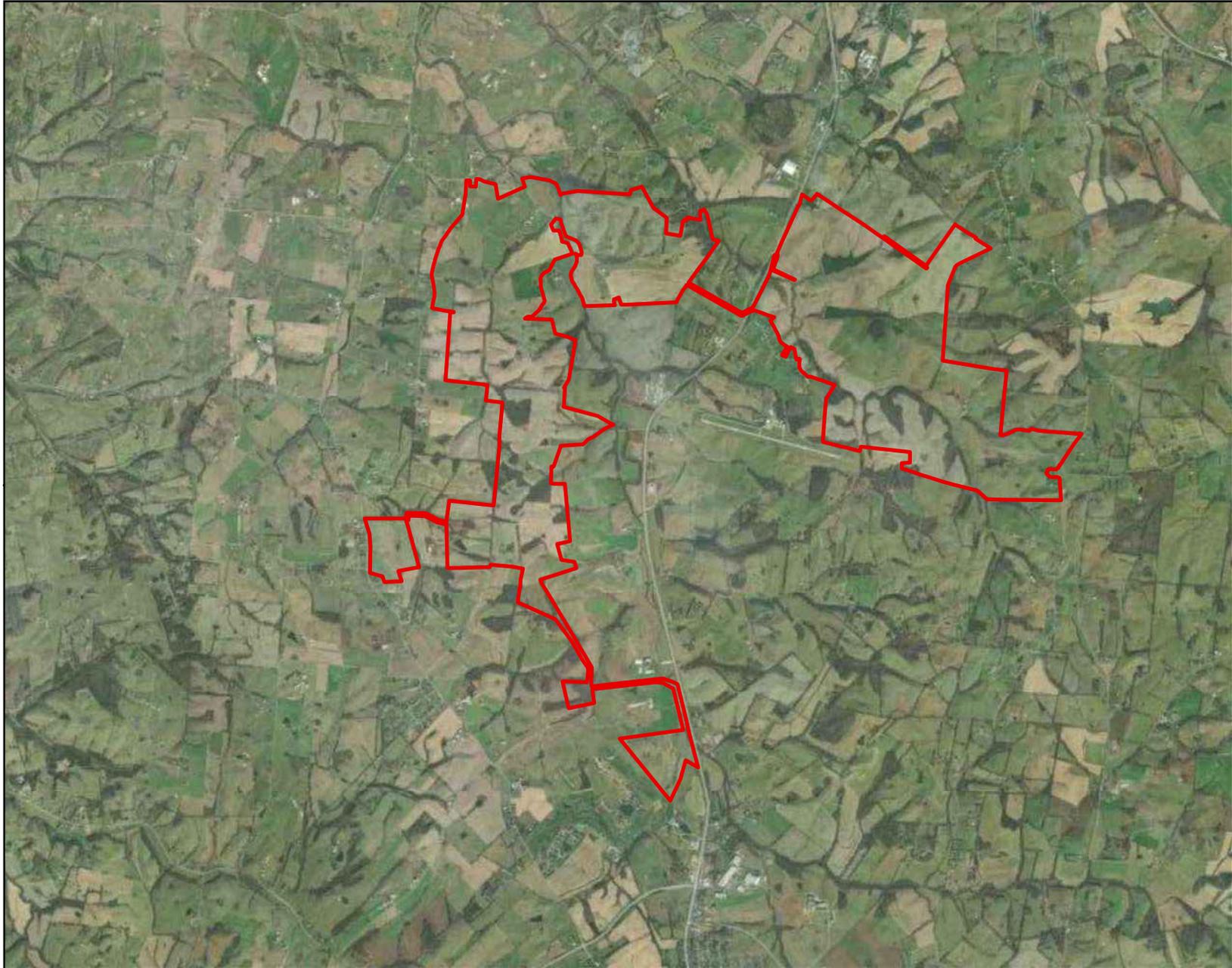


Figure 1. Site Location Map
Frontier Solar Project
 Marion and Washington
 Counties, Kentucky

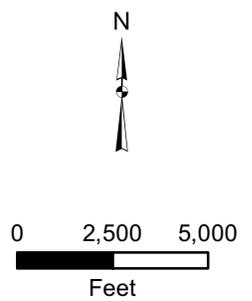
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
 Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; NAD 1983 StatePlane Kentucky South FIPS 1602 Feet



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; NAD 1983 StatePlane Kentucky South FIPS 1602 Feet



Legend
Project Boundary



**Figure 3. Aerial Map
Frontier Solar Project**
Marion and Washington
Counties, Kentucky

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; NAD 1983 StatePlane Kentucky South FIPS 1602 Feet

APPENDIX A – USFWS IPAC UNOFFICIAL SPECIES LIST

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Marion and Washington counties, Kentucky



Local office

Kentucky Ecological Services Field Office

☎ (502) 695-0468

📅 (502) 695-1024

✉ kentuckyes@fws.gov

J C Watts Federal Building, Room 265
330 West Broadway
Frankfort, KY 40601-8670

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>Gray Bat <i>Myotis grisescens</i></p> <p>Wherever found</p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none"> The project area includes potential gray bat habitat. <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6329</p>	Endangered
<p>Indiana Bat <i>Myotis sodalis</i></p> <p>Wherever found</p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none"> The project area includes 'potential' habitat. All activities in this location should consider possible effects to this species. <p>There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5949</p>	Endangered
<p>Northern Long-eared Bat <i>Myotis septentrionalis</i></p> <p>Wherever found</p> <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045</p>	Endangered

Birds

NAME	STATUS
<p>Whooping Crane <i>Grus americana</i></p> <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/758</p>	EXPN

Clams

NAME	STATUS
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Clubshell <i>Pleurobema clava</i>	Endangered
This species only needs to be considered if the following condition applies:	
<ul style="list-style-type: none">The species may be affected by projects that significantly impact the Salt River mainstem, and/or any of its following tributaries: Beech Fork, and/or Rolling Fork.	
No critical habitat has been designated for this species.	
https://ecos.fws.gov/ecp/species/3789	
Fanshell <i>Cyprogenia stegaria</i>	Endangered
Wherever found	
This species only needs to be considered if the following condition applies:	
<ul style="list-style-type: none">The species may be affected by projects that significantly impact the Salt River mainstem, and/or any of its following tributaries: Beech Fork, and/or Rolling Fork.	
No critical habitat has been designated for this species.	
https://ecos.fws.gov/ecp/species/4822	
Orangefoot Pimpleback (pearlymussel) <i>Plethobasus cooperianus</i>	Endangered
Wherever found	
This species only needs to be considered if the following condition applies:	
<ul style="list-style-type: none">The species may be affected by projects that significantly impact the Salt River mainstem, and/or any of its following tributaries: Beech Fork, and/or Rolling Fork.	
No critical habitat has been designated for this species.	
https://ecos.fws.gov/ecp/species/1132	
Pink Mucket (pearlymussel) <i>Lampsilis abrupta</i>	Endangered
Wherever found	
No critical habitat has been designated for this species.	
https://ecos.fws.gov/ecp/species/7829	

Rabbitsfoot *Quadrula cylindrica cylindrica*

Threatened

Wherever found

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

- The species may be affected by projects that significantly impact the Salt River mainstem, and/or any of its following tributaries: Beech Fork, and/or Rolling Fork.

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/5165>

Ring Pink (mussel) *Obovaria retusa*

Endangered

Wherever found

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

- The species may be affected by projects that significantly impact the Salt River mainstem, and/or any of its following tributaries: Beech Fork, and/or Rolling Fork.

No **critical** habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4128>

Salamander Mussel *Simpsonaias ambigua*

Proposed Endangered

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/6208>

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

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

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>

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
Field Sparrow <i>Spizella pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Aug 15

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 $0.05/0.25 = 0.2$.

- 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.

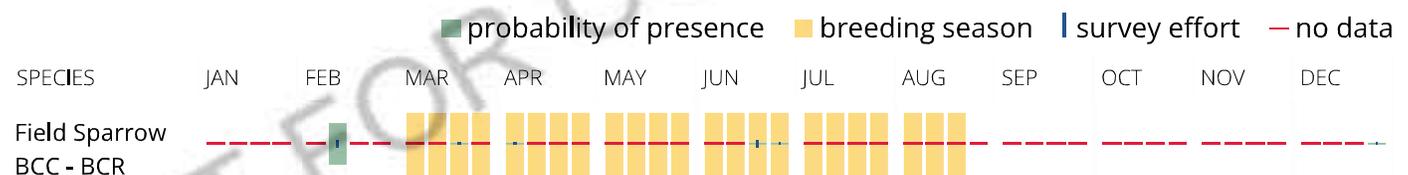
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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 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 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](#).

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

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1C](#)

FRESHWATER POND

[PUBHh](#)

[PUBH](#)

[PUBFx](#)

[PUSCx](#)

[PUSC](#)

[PUBHx](#)

RIVERINE

[R5UBH](#)

[R4SBC](#)

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

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.

APPENDIX B – KENTUCKY BIOLOGICAL ASSESSMENT DATA REQUEST



Andy Beshear
Governor

Energy and Environment Cabinet

Office of Kentucky Nature Preserves

300 Sower Boulevard
Frankfort, Kentucky 40601
Telephone: 502-782-7828
EEC.KYBAT@ky.gov

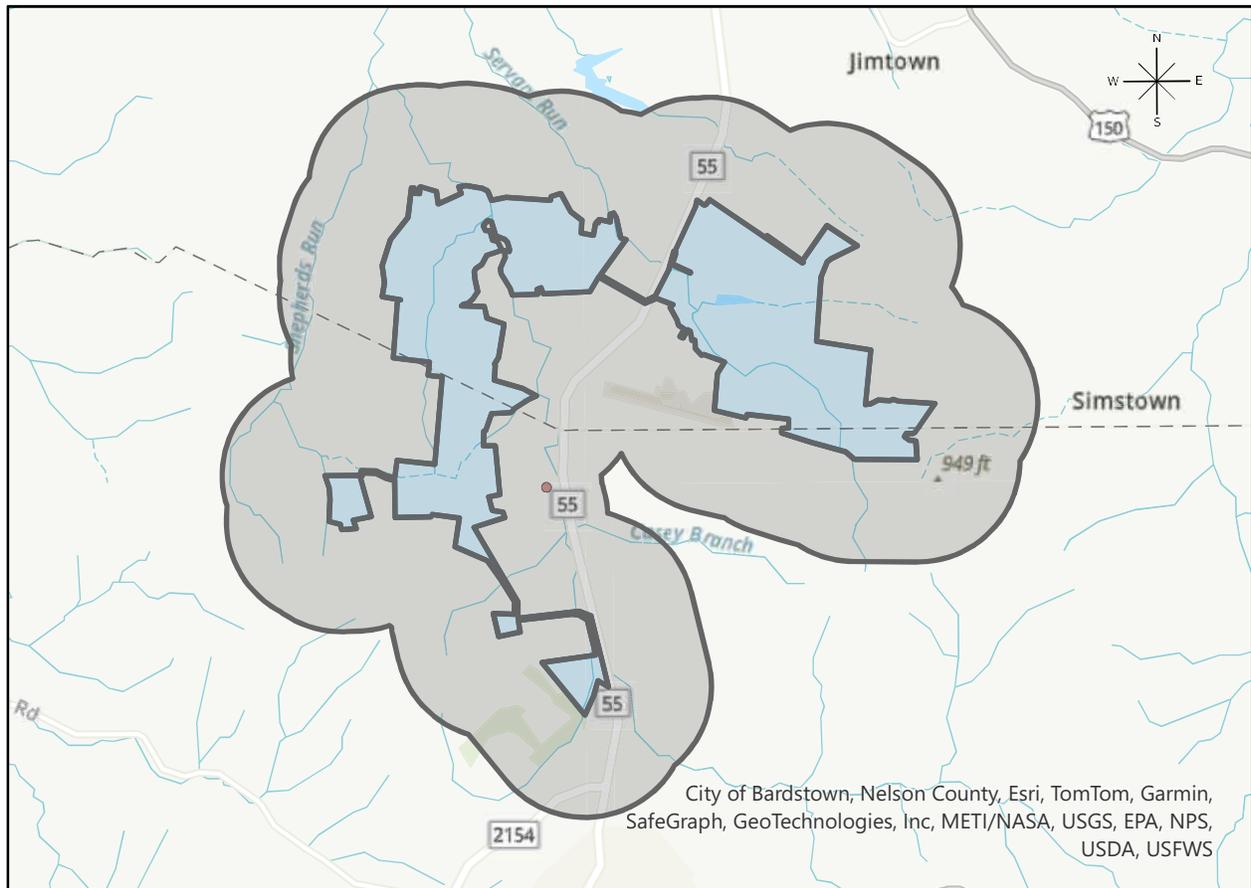
Rebecca W. Goodman
Secretary

Sunni Carr
Executive Director

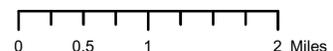
Requested on Wednesday, January 17, 2024 by Jessica Anderson, ERM

Re: Kentucky Biological Assessment Data Request 240117J01
Solar Project - Solar Project
Other, 1 mile buffer.
MARION-WASHINGTON County, Kentucky

This letter is in response to your data request for the project referenced above. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants, animals, features or exemplary natural communities monitored by the Office of Kentucky Nature Preserves are noted within your submitted project area.



City of Bardstown, Nelson County, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS





Andy Beshear
Governor

Energy and Environment Cabinet

Office of Kentucky Nature Preserves

300 Sower Boulevard
Frankfort, Kentucky 40601
Telephone: 502-782-7828
EEC.KYBAT@ky.gov

Rebecca W. Goodman
Secretary

Sunni Carr
Executive Director

This report includes the following items:

- A - A report for occurrences which intersect the project area
- B - A report for occurrences which intersect the buffer around the project area
- C - A list of best management practices relevant to occurrences near to or within the project area
- D - A list of best management practices relevant to the chosen project type

Thank you for using Office of Kentucky Nature Preserves' Biological Assessment Tool.

We would like to take this opportunity to remind you of the terms of the data request license, which you agreed upon in order to submit your request. The license agreement states "Data and data products received from the Office of Kentucky Nature Preserves, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Office of Kentucky Nature Preserves." The exact location of plants, animals, and natural communities, if released by the Office of Kentucky Nature Preserves, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Office of Kentucky Nature Preserves Biological Assessment Branch (300 Sower Blvd - 4th Floor, Frankfort, KY, 40601. Phone: 502-782-7828).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the occurrences being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions, or if we can be of further assistance, please do not hesitate to contact our office by email at EEC.KYBAT@ky.gov or by phone at 502-782-7828.

Sincerely,

Alexis R. Schoenlaub
Geoprocessing Specialist
Office of Kentucky Nature Preserves

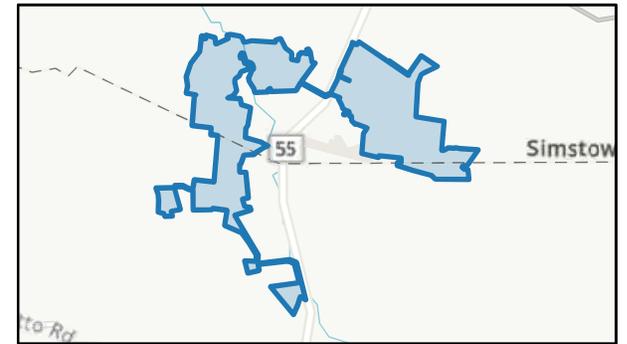
A.1. Project Area - Occurrence Report

The following table outlines occurrences found within your project footprint (if any). You can find more information about global and state rank status definitions on our [Standard Occurrence Report Key](#). Please note that certain sensitive occurrences found within the buffer area may be listed in this table but are not represented on the map. Please contact the appropriate source as outlined in the “Directions” column should you have further questions related to sensitive occurrences found within the project area.



Map Credits: City of Bardstown, Nelson County, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical
- Ecological
- Zoological



There were no occurrences found within your project footprint based on available data.

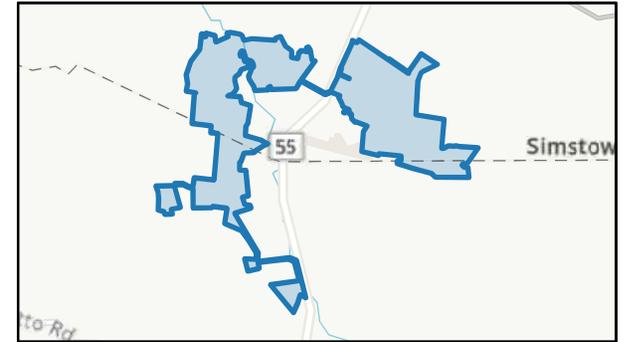
A.2. Project Area – Occurrence Habitat and Location

The following table provides supplemental occurrence information found within your project footprint (if any). You can find more information about global and state rank status definitions on our [Standard Occurrence Report Key](#). Please note that certain sensitive occurrences found within the buffer area may be listed in this table but are not represented on the map. Please contact the appropriate source as outlined in the “Directions” column should you have further questions related to sensitive occurrences found within the



Map Credits: City of Bardstow, Nelson County, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical
- Ecological
- Zoological



There were no occurrences found within your project footprint based on available data.

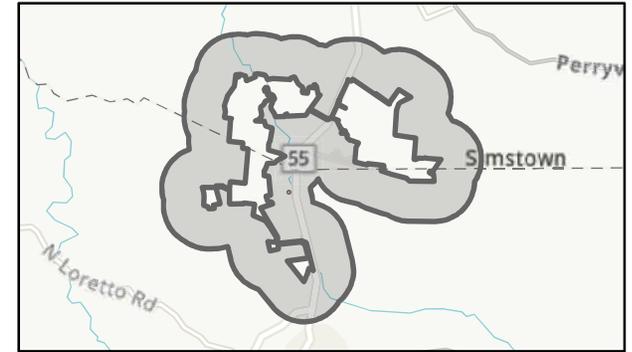
B. Buffer Area - Occurrence Report

The following table outlines occurrences found within your buffered project footprint (if any). You can find more information about global and state rank status definitions on our [Standard Occurrence Report Key](#). Please note that certain sensitive occurrences found within the buffer area may be listed in this table but are not represented on the map. Please contact the appropriate source as outlined in the “Directions” column should you have further questions related to sensitive occurrences found within the project area.



Map Credits: City of Bardstown, Nelson County, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical
- Ecological
- Zoological



EO ID	Scientific Name	Common Name	G Rank	S Rank	Fed. Status	State Status	SWAP	Precision	Last Obs. Date
15772	<i>Lanius ludovicianus</i>	Loggerhead Shrike	G4	S3S4B, S4N	None	S	Y	Q	1990-06-12
11142	<i>Tyto alba</i>	Barn Owl	G5	S3	None	S	Y	S	2004-08-26

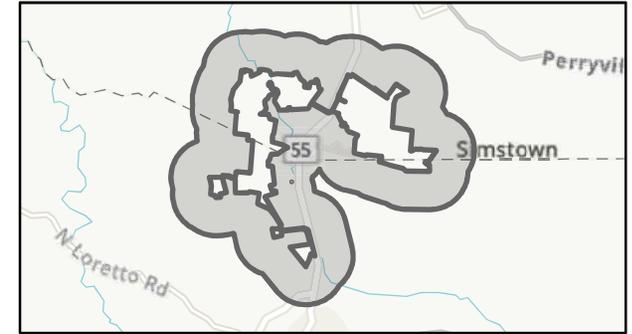
C. Occurrence References and Recommendations (1 of 1)

OKNP references the following references and recommendations regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact the applicable office should you have further questions with regard to these references and recommendations related to the project area.



Map Credits: City of Bardstown, Nelson County, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical 
- Ecological 
- Zoological 



Per the U.S. Fish and Wildlife Service's recommendations: Birds covered under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) should be considered during project reviews. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish & Wildlife Service (50 C.F.R. § 10.12 and 16 U.S.C. § 668(a)). For more information regarding these acts go to: <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

The MBTA currently has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within a NEPA document (if there is a federal nexus), a Bird- or Eagle-specific Conservation Plan, or both. Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds to the project-related stressors; proponents should also implement a rigorous plan to monitor the effectiveness of conservation measure. For more information on avian stressors and recommended conservation measures go to: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html>.

In addition to MBTA and BGEPA, Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <http://www.fws.gov/migratorybirds/AboutUS.html>.

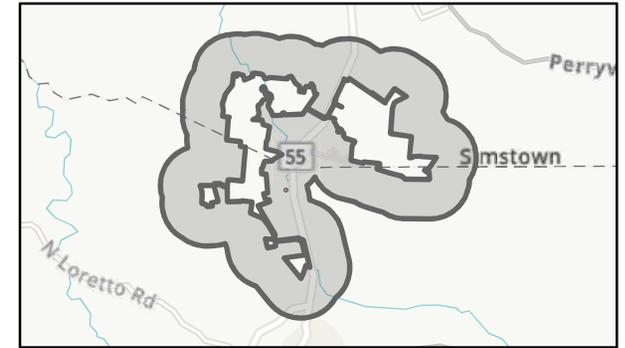
D. Project References and Recommendations (1 of 1)

OKNP references the following references and recommendations regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact the applicable office should you have further questions with regard to these references and recommendations related to the project area.



Map Credits: City of Bardstown, Nelson County, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical
- Ecological
- Zoological





Thank you for using the Office of Kentucky Nature Preserves
Biological Assessment Tool.

OKNP's species dataset relies on continuous monitoring and surveying for species of concern throughout the state. Any records of species of concern found within this project area would greatly benefit the quality and comprehensiveness of the statewide dataset for rare, threatened and endangered species. If you would like to contribute any additional species information, please do not hesitate to contact our office by email at EEC.KYBAT@ky.gov or by phone at 502-782-7828.

APPENDIX C – SITE PHOTOGRAPHS



**Frontier Solar Project
Photographic Record**

Project No. 0650014

**Location:
Marion and Washington Counties,
Kentucky**

**Client:
FRON bn, LLC**

Photo No.
1

Date:
06/03/2022

Description:
View facing north
representative of herbaceous
habitat.



Photo No.
2

Date:
06/03/2022

Description:
View facing south
representative of herbaceous
habitat.





**Frontier Solar Project
Photographic Record**

Project No. 0650014

**Location:
Marion and Washington Counties,
Kentucky**

**Client:
FRON bn, LLC**

**Photo No.
3**

**Date:
06/03/2022**

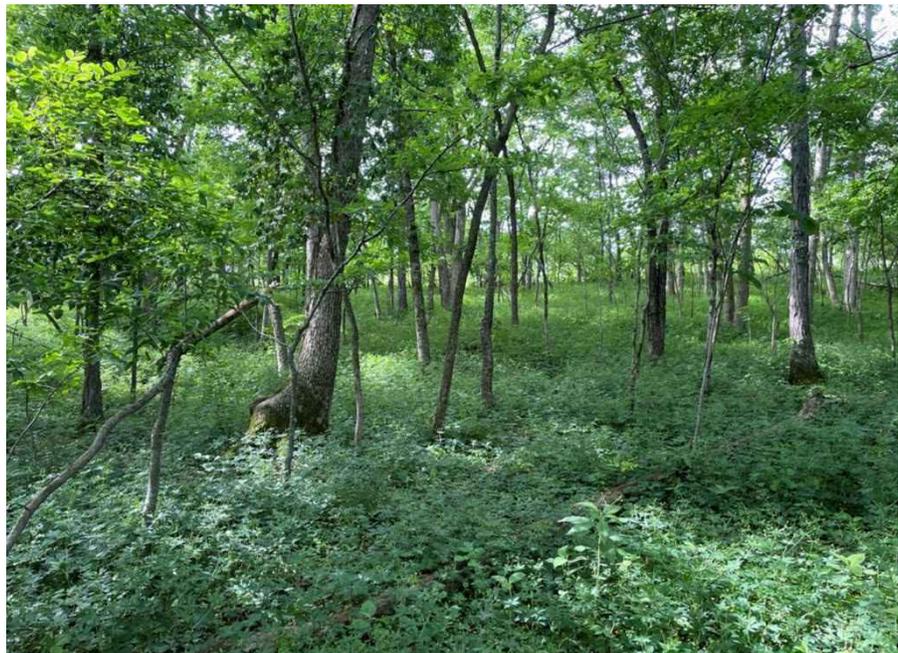
**Description:
View facing east
representative of forested
habitat.**



**Photo No.
4**

**Date:
06/03/2022**

**Description:
View facing west
representative of forested
habitat.**





**Frontier Solar Project
Photographic Record**

Project No. 0650014

**Location:
Marion and Washington Counties,
Kentucky**

**Client:
FRON bn, LLC**

Photo No.
5

Date:
Date:
06/03/2022

Description:
View facing southwest
representative of open water
and herbaceous habitats.



Photo No.
6

Date:
06/03/2022

Description:
View facing downstream of
an ephemeral stream.





**Frontier Solar Project
Photographic Record**

Project No. 0650014

**Location:
Marion and Washington Counties,
Kentucky**

**Client:
FRON bn, LLC**

**Photo No.
7**

**Date:
06/03/2022**

**Description:
Upstream view of Stream 1
(Cartwright Creek)**



**Photo No.
8**

**Date:
06/03/2022**

**Description:
Downstream view of Stream
1 (Cartwright Creek)**





**Frontier Solar Project
Photographic Record**

Project No. 0650014

**Location:
Marion and Washington Counties,
Kentucky**

**Client:
FRON bn, LLC**

Photo No.
9

Date:
06/03/2022

Description:
Upstream view of a perennial
stream



FRON bn, LLC (Frontier Solar)
Responses to Siting Board Staff's Post-Hearing Request for Information
Case No. 2023-00360

Request No. 5:

Confirm that the distances in the noise study are still accurate. If not, explain why not.

Response No. 5:

Confirmed.

Responding Witness: Michael Tincher

FRON bn, LLC (Frontier Solar)
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Request No. 6:

Identify each neighborhood and each of the noise receptors that are homes and of those homes which are participating landowners. Include whether the participating homeowner is a lessor and which lease is applicable. Color code your response for each neighborhood the participating homeowners and include a legend.

Response No. 6:

Please see the attached table that identifies the noise sensitive receptor homes that are within a residential neighborhood as defined by KRS 278.700(6). As shown on the table, no participating landowner is located within a residential neighborhood, so no leases are applicable. The table has been color coded based on the neighborhood in which the noise sensitive receptor is located.

Responding Witness: Michael Tincher

Structure Type	Distance to Site Fence (ft)	Distance to Closest Panel (ft)	Distance to Closest Inverter (ft)	Distance to Substation (ft)	LATITUDE	LONGITUDE	Participating Landowner	Neighborhood
Residence	839	957	1347	9002	37.64156682	-85.28276001	No	1
Residence	1302	1394	1854	8931	37.64069972	-85.28451572	No	1
Residence	1188	1364	1921	8491	37.63937386	-85.28442477	No	1
Residence	1426	1595	2117	8699	37.6396731	-85.28523682	No	1
Residence	765	967	1953	10618	37.64577396	-85.28457532	No	2
Residence	181	383	1264	10325	37.64568768	-85.28197954	No	2
Residence	166	338	1287	11558	37.64909126	-85.28259835	No	2
Residence	200	331	1313	11369	37.64854361	-85.28260268	No	2
Residence	187	273	1380	10966	37.64744935	-85.28234079	No	2
Residence	198	408	1517	10539	37.64612236	-85.28266731	No	2
Residence	263	403	1654	10728	37.64663119	-85.28280865	No	2
Residence	1664	1740	1901	15079	37.66023347	-85.2697913	No	3
Residence	1497	1523	2012	15320	37.6608176	-85.26642292	No	3
Residence	1477	1535	2021	15219	37.66057551	-85.26747792	No	3
Residence	1490	1567	2049	15198	37.66052839	-85.2678503	No	3
Residence	1534	1651	2073	15098	37.66027208	-85.26892147	No	3
Residence	1507	1600	2077	15178	37.66047963	-85.26818876	No	3
Residence	1734	1778	2256	15623	37.66160995	-85.26553914	No	3
Residence	900	957	1507	14895	37.65899728	-85.25965751	No	4
Residence	1457	1526	2105	15386	37.66058586	-85.26128787	No	4
Residence	1447	1509	2107	15402	37.66052501	-85.26046258	No	4
Residence	1463	1528	2147	15400	37.66058575	-85.26097909	No	4
Residence	1700	1731	2228	15618	37.66139662	-85.26284154	No	4
Residence	1615	1678	2283	15562	37.66099258	-85.26061776	No	4
Legend								
Neighborhood 1								
Neighborhood 2								
Neighborhood 3								
Neighborhood 4								

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Request No. 7:

Confirm the distance of generating equipment from the neighborhood was measured from the equipment to the closest home. If not confirmed, identify the beginning point of the measurement to the end point of the measurement for purposes of determining the measurements related to the motion for deviation.

Response No. 7:

The distances provided in the motion for deviation for generating equipment and inverters to the nearest residential neighborhood were measured from the geographic coordinates of the nearest solar panel and inverter to the nearest neighborhood boundary line, not the closest home within a residential neighborhood. The distances were confirmed to be 271 feet from the nearest residential neighborhood to a solar panel, while the nearest residential neighborhood to an inverter was determined to be no closer than 1,130 feet. See Responses 1a. – d. of this Request for Information for distances to the closest home, regardless of the presence of a residential neighborhood.

Responding Witness: Michael Tincher