



Lynn Bark Energy Center

Bat Species Presence/Absence Survey

PREPARED FOR

Lynn Bark Energy Center, LLC

DATE

7 January 2026

REFERENCE

2025-0116129



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1. INTRODUCTION

Lynn Bark Energy Center, LLC (Lynn Bark) a wholly owned subsidiary of Savion, LLC is proposing to develop a 200-megawatt solar photovoltaic facility located on 1,514 acres of partially reclaimed mining and forested, undeveloped land in Martin County, Kentucky, located approximately 14 miles northeast of the town of Prestonsburg (Project). Tree removal will impact up to 123 acres of suitable Indiana bat, northern long-eared bat, gray bat and tricolored bat habitat (Appendix A).

The Project is located within the consultation range of the federally endangered Indiana bat (*Myotis sodalis*; IBAT), federally endangered northern long-eared bat (*Myotis septentrionalis*; NLEB) and the federally endangered Gray bat (*Myotis grisescens*; GBAT). Although the GBAT is currently listed, on 1 July 2025, the United States Fish and Wildlife Service (USFWS) recommended that the gray bat be removed from the Federal List of Threatened and Endangered Wildlife. The Project is also located within the range of the tricolored bat (*Perimyotis subflavus*; TCB) which is proposed for listing as federally endangered with the final listing determination unknown. Environmental Resources Management, Inc. (ERM) was contracted by Lynn Bark to conduct a presence/probable absence mist-net survey for NLEB, IBAT, GBAT, and TCB within the proposed Project. This report documents agency coordination, describes survey methods, and summarizes results from the 2025 mist-net survey.

2. SCOPE OF THE BAT SURVEY EFFORT

The Project contains suitable bat habitat that could potentially support NLEB, GBAT, IBAT and TCB. Current survey protocols for determining the presence or probable absence of these bats are outlined in the 2024 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines, with no updates in 2025 (Guidelines; USFWS 2024). This non-linear Project may affect up to 123 acres of suitable forested habitat. Per the Guidelines, to determine the presence or probable absence of NLEB, GBAT, IBAT and TCB for non-linear projects, a minimum of 10 net nights per 123 acres of suitable habitat must be surveyed across three calendar nights within the appropriate timeframe for hibernating NLEB, GBAT, IBAT and TCB (May 15th – August 15th; USFWS 2024). Therefore, a total of 10 net nights of survey effort were completed at three sites for the Project. Two sites used three mist-net sets and one site used four mist-net sets. Each site was monitored for one calendar night.

2.1 AGENCY COORDINATION

Prior to conducting surveys, a site-specific study plan (Project Code 2025-0116129) was submitted to the USFWS Kentucky Field Office (KFO) on 9 July 2025, and received approval the next day. The mist-net survey was completed under USFWS Section 10 Permit ESPER5971699 and Kentucky Department of Fish and Wildlife Resources (KDFWR) Collection Permit's 2511207 and 2511179. Appendix B contains relevant agency correspondence.

2.2 LISTED BAT SPECIES AND HABITAT

The bats with the potential to occur in the Project overwinter in caves, culverts, or mines and spend the remainder of the year in forested areas. No known occupied hibernacula were identified



by United States Fish and Wildlife Service (USFWS) and the Kentucky Department of Fish and Wildlife Resources (KDFWR) or were observed during field surveys.

Common habitat requirements outside of the hibernation period include the availability of calm surface water, foraging areas, and suitable roosts. However, the suitability of foraging areas and roosts vary among species, as described in greater detail below.

3. PROJECT SURVEY METHODS

3.1 SURVEY AREA

The Project area is located east of KY-3 and west of Cold-water Road in Martin County, Kentucky. The Project contains potential bat habitat in the form of disturbed wood patches, forested areas, agricultural fields, and is on a reclaimed mine site. Water resources include creeks and streams, such as Jones Branch, Venters Branch and Lynn Bark Fork.

Site LBS-01 was on Jones Branch and a surrounding emergent wetland where water resources were optimal. Roosting habitat was poor as there were few snags, forest structure was moderate having some diversity in trees, and land cover was optimal being in a largely forested bottomland forest. Dominate tree species at LB Solar-01 include American beech (*Fagus grandifolia*), red maple (*Acer rubrum*), American Sycamore (*Platanus Occidentalis*), eastern hemlock (*Tsuga canadensis*), and box elder (*Acer negundo*).

Site LBS-02 was on an upland reclaimed mine site where water resources and roosting habitat were poor. Forest structure was low having little diversity in size of trees and land cover was also poor as the area had small, forested tracks and surrounding agricultural fields. Dominate tree species at LBS-02 include autumn olive (*Elaeagnus umbellata*), American sycamore, tulip poplar (*Liriodendron tulipifera*), and honey locust (*Gleditsia triacanthos*).

Site LBS-03 was also on an upland reclaimed mine site where water resources and roosting habitat were poor. Forest structure was low having little diversity in trees and land cover was also poor as the area had small, forested tracks and surrounding agricultural fields. Tree species at LB Solar-03 included American sycamore, black cherry (*Prunus serotina*), and was autumn olive dominate.

A habitat description of the mist-net locations was completed on digital bat mist-net datasheets (Appendix C). The emphasis of this description was habitat form: size and relative abundance of large trees and snags that may potentially serve as roost trees, canopy closure, understory clutter/openness, water, stream, or pond characteristics (if mist-net was placed over them), and flight areas.

3.2 MIST-NET SITE SELECTION

A federally permitted bat biologist chose suitable net locations within the Project. Site selection targeted areas throughout the Project that were suspected to have high amount of bat activity and the best available bat habitat. Site location was also influenced by property access and terrain. Net placement was based on a variety of characteristics, including canopy cover, presence

of potential flight areas, proximity to water, and forest conditions found within the Project area. General habitat types selected included the following characteristics:

- Large trees (>3 inches DBH) that can support primary maternity roosts;
- An open canopy, allowing solar exposure for warming of roost sites;
- Forested edges and large forested openings; and
- Stream area (or other water sources) for drinking and prey presence.

While riparian areas often provide successful mist-net sites, upland areas (e.g., trails or logging roads) also provide suitable sites. In upland areas, road ruts or other areas of standing water frequently facilitate capture of a variety of bat species. The actual location and orientation of each mist-net was determined in the field. All sites surveyed were indicative of the habitat being removed and the best available habitat to capture bats. Mist-net locations and dates surveys are provided below in Table 1. Mist-net site photographs are provided in Appendix E.

3.3 MIST-NETTING SURVEY METHODS

Mist-net surveys were conducted by qualified biologists on 22 July, 30-31 July, 2025. In accordance with the Guidelines, the Project received a total of 10 net nights of survey effort at three sites (three mist-nets at two sites and four mist-nets at one site; Table 1). No mist-net locations were netted for more than one night. Nets were deployed 30 minutes prior to sunset and monitored every 10 minutes for a total of five hours each night. Bats were live-caught and released unharmed near the point of capture. Biological and morphometric data (e.g., species, sex, age class, reproductive condition, mass, and forearm length) were recorded using Survey123 digital data collection for each individual captured. In addition, the height and the specific net set of capture were recorded for each bat. Processing of bats was completed within 30 minutes from the time the bat was removed from the net.

TABLE 1. MIST-NET LOCATIONS AND DATES SURVEYED.

Site	Net	Dates Surveyed (2025)	Latitude	Longitude
LBS-01	A	22 July	37.799217	-82.561760
LBS-01	B	22 July	37.798256	-82.561669
LBS-01	C	22 July	37.797521	-82.561650
LBS-02	D	30 July	37.787884	-82.551349
LBS-02	E	30 July	37.788160	-82.550890
LBS-02	F	30 July	37.788008	-82.550270
LBS-02	G	30 July	37.787793	-82.548815
LBS-03	H	31 July	37.791575	-82.550395

Site	Net	Dates Surveyed (2025)	Latitude	Longitude
LBS-03	I	31 July	37.792565	-82.551675
LBS-03	J	31 July	37.793090	-82.552679

Weather conditions were documented on Survey123 digital datasheets during the surveys and included temperature obtained from a digital thermometer, wind speed estimated using the Beaufort Wind Scale¹, percent cloud cover estimate, and moon phase (if visible). Surveys were to be repeated if any of the following weather conditions occur:

- Temperature falls below 50°F any time during survey period;
- Precipitation for more than 30 minutes, or intermittent throughout the survey period; or
- Sustained strong (9 miles/hour) winds for 30 minutes or more.

Weather conditions were valid for all nights of survey. Current White-nose Syndrome (WNS) decontamination protocols (WNSDMWG 2024) were followed for all capture and handling equipment.

4. RESULTS

4.1 MIST-NETTING SURVEY RESULTS

Two ERM teams successfully completed mist-net surveys following the Guidelines and under appropriate weather conditions on 22 July and from 30-31 July 2025. Survey effort consisted of a total of 10 net nights of survey effort, resulting in a total capture of 32 bats of two species (Table 2). No NLEB, GBAT, IBAT or TCB were captured; therefore, no tagging or radiotelemetry was conducted. Additional morphometric data and representative photographs of net sets and captured bats are provided in Appendix D and Appendix E.

¹ [Beaufort Wind Scale \(noaa.gov\)](https://www.noaa.gov/education/outreach-and-communication/beaufort-wind-scale)

TABLE 2. SUMMARY OF BAT CAPTURE DEMOGRAPHICS.

Species	Adult Male		Adult Female				Juvenile			Escaped	Total
	NR	SC	NR	PG	L	PL	M (NR)	M (SC)	F (NR)		
Big Brown Bat (<i>Eptesicus fuscus</i>)	2	-	-	-	-	3	2	1	4	1	13
Eastern red bat (<i>Lasiurus borealis</i>)	5	1	2	-	-	3	4	-	3	1	19
Total	7	1	2	-	-	6	6	1	7	2	32

Notes: Reproductive status: (NR) non-reproductive; (SC) Scrotal; (PG) pregnant; (L) lactating; (PL) post-lactating; (M) Male; and F (Female).

5. CONCLUSION

In accordance with the Guidelines (USFWS 2024), this presence/absence mist-net survey was completed with a total of 10 net nights of survey effort across three sites for three calendar nights each under the appropriate weather conditions, meeting the suggested level of effort to determine the presence or probable absence of NLEB, GBAT, IBAT and TCB. No NLEB, GBAT, IBAT or TCB were captured during the survey, indicating these species are not likely present within the Project during the active season. No caves or portals were located during both the wetland delineation and bat survey efforts.

This survey effort has determined the probable absence of NLEB, GBAT, IBAT and TCB within the Project. Therefore, Lynn Bark assumes no impacts to these bat species and assumes no further agency coordination will be required regarding bats for this Project, unless proposed project impacts to suitable habitat exceed 123 acres. Lynn Bark is aware of recent nearby captures of TCB. If TCB becomes listed prior to Project development, Lynn Bark will coordinate with USFWS.

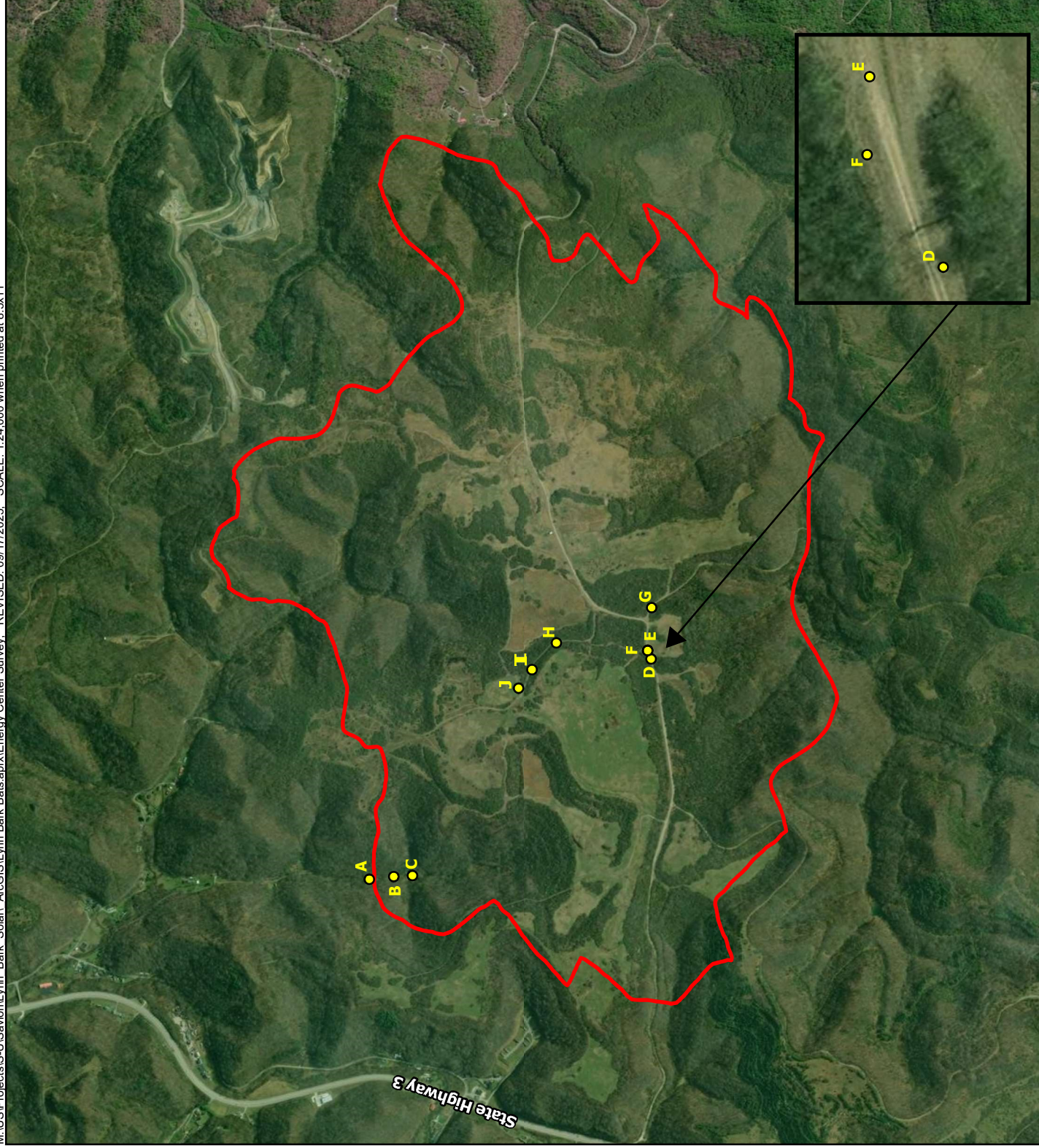
6. REFERENCES

- U.S. Fish and Wildlife Service (USFWS). 2024. Range-wide Indiana Bat & Northern Long-eared Bat Survey Guidelines. U.S. Fish and Wildlife Service, Region 3, Bloomington, MN. 95 pp.
<https://www.fws.gov/library/collections/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>
- White-nose Syndrome Disease Management Working Group. 2024. National White-nose Syndrome Decontamination Protocol. In White-nose Syndrome Response Team (pp. 1–10).
<https://www.whitenosesyndrome.org/mmedia-education/national-wns-decontamination-protocol-u-s>. Accessed Sept 18, 2024.



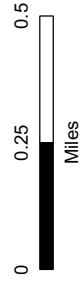
APPENDIX A

SITE MAP



Legend

- Site Boundary
- Net Location



Bat Survey Map
Lynn Bark Energy Center
Lynn Bark Energy Center, LLC
Martin County, Kentucky



ERM



APPENDIX B

AGENCY COORDINATION



Study Plan Form for Bat Surveys and Monitoring (v. 2.4)

PROJECT & SURVEY INFORMATION

Project Name: Lynn Bark Energy Center Proposed Survey Start Date: 15 July 2025
 Project Proponent's Name (e.g., client/company/institution): Lynn Bark Energy Center, LLC
 Project Location: State(s): KY County(s): Martin
 Latitude: 37.790272 Longitude: -82.549390
 REQUIRED: Attach shapefiles and/or Google Earth® KMZ files
 (mapping must show project boundaries, impacted forest habitat (if known) and all proposed survey sites)
 Files are attached: Yes ☒ No ☐
 File link/URL (if applicable): _____

Project Summary. In the space provided below, please provide a description of the proposed action, including any activities that will permanently or temporarily alter the current environment and existing habitat features.

The Project consists of a proposed up to 200-megawatt solar photovoltaic facility located on 1,514 acres of partially reclaimed mining and forested, undeveloped land in Martin County, Kentucky, located approximately 14 miles northeast of the town of Prestonsburg. Although the majority of projects development will avoid suitable habitat, the project could remove up to 123 acres of suitable Indiana bat, northern long-eared bat, gray bat, and tricolored bat summer habitat.

CONTACT INFORMATION

Project Manager/Primary Point of Contact (POC): Justin Ahn Phone: 610-573-0764
 Field Survey Crew Leader (if different from POC): Theresa Wetzel or Crystal Birdsall Cell Phone: 931-273-8921; 413-579-4150
 Institution/Company Name: ERM
 Mailing Address: 8425 Woodfield Crossing Boulevard, Suite 560-W, Indianapolis, IN 46240
 POC Email Address: justin.ahn@erm.com
 USFWS Sec. 10(a)(1)(A) Permit No.(s) (if applicable): ESPER5971699
 State Permit No.(s) (if applicable): SC2511179, SC2511207

Have project proponents been informed that abiding by protective time-of-year restrictions (where available) may be sufficient to avoid take of federally listed bats and (in some cases) may negate the need for a bat survey? Yes ☒ No ☐

Have project proponents been informed that the Service does not require presence/probable absence surveys for federally listed species and that presence can be assumed in a project area containing suitable habitat? Yes ☒ No ☐

Will this survey be conducted on private or public lands? (Check both if applicable): Private ☒ Public ☐

Has permission of all necessary landowners/managing agencies been obtained? Yes ☒ No ☐

If no, explain: _____

Does this project have a federal nexus¹? Yes ☐ No ☒ Unsure ☐

If yes, explain: _____

IPaC² Consultation Code (if applicable): 2025-0116129

Purpose of Survey: Official P/A Survey ☒ Research ☐ Monitoring ☐
Educational Outreach/Training ☐ Other: _____

Survey Target Species: Indiana bat (IBAT) ☐ Northern long-eared bat (NLEB) ☐
Tricolored bat (TCB) ☐ Other: gray bat

Has a Phase-1 Habitat Assessment* of the project area been conducted? Yes ☒ No ☐
If yes, how was the habitat assessment conducted? Field ☐ Desktop ☐ Combo ☒
(*if available, attach a written report)

Is suitable habitat³ present (or assumed present) for all “target” species? Yes ☒ No ☐

If no, explain: _____

Does this project fall within the outer-tier⁴ of any “target” species known home range? Yes ☐ No ☒ Unsure ☐

If yes, which species: _____

Project Configuration

Is this project **linear** (>1 km in total length)? Yes ☐ No ☐ Combo ☐ Unsure ☐

If yes, how many 1-km sections containing suitable IBAT/NLEB habitat will be impacted? _____

Is this project **non-linear**? Yes ☒ No ☐ Combo ☐ Unsure ☐

If yes, how many acres of suitable IBAT/NLEB habitat is in the overall project area? 1,514

If yes, how many acres of suitable IBAT/NLEB habitat will be directly impacted/cleared? up to 123

PROPOSED METHODS & SURVEY LEVEL OF EFFORT

Identify which method (acoustics, mist-netting, combination) proposed to be used: Mist-netting

Has availability of high-quality sites for target species been assessed via ground-truthing to meet the required LOE?

Yes ☒ ☐ No (If No, justify method selection):

Additional ground-truthing for the highest quality sites will be completed by the permitted bat surveyor.

¹ A project or action that is authorized, funded, and/or permitted by a federal agency.

² <https://ipac.ecosphere.fws.gov/>

³ See Appendix A of the Bat Survey Guidelines regarding suitable habitat definitions.

⁴ See Appendix G of the Bat Survey Guidelines regarding what constitutes “out-tier” of a known range.

ACOUSTICS

Total number of detector sites proposed to be surveyed: _____ Number of detector nights/site: _____

Total number of detector nights for entire survey: _____

Total proposed number of calendar nights to complete the entire survey: _____

Detector(s) (Brand, Model): _____ Microphone(s): directional ☐ omnidirectional ☐

Recording Format: Full Spectrum ☐ Zero-Crossing ☐

FWS-Approved⁵ Acoustic Bat ID Software: **KaPro**: vers.____ Classifier, NA vers. ____ **BCID** vers.____
SonoBat: vers. ____ Classifier ____ Other: _____

Species to be included for automatic software ID classification analysis:

EPFU ☐ CORA ☐ COTO ☐ LABO ☐ LACI ☐ LANO ☐ LASE ☐ TABR ☐ MYCI ☐ MYEV ☐ MYGR ☐ MYLU ☐
MYLE ☐ MYSE ☐ MYSO ☐ MYTH ☐ MYVO ☐ NYHU ☐ PESU ☐ Others: _____

Will qualitative analysis (i.e., manual vetting) be used? Yes ☐ No ☐ Unsure ☐

Name(s) of qualified biologist(s) conducting qualitative/manual identifications (attach resume or link with qualifications):

MIST-NETTING

Total number of net sites to be surveyed: ³ _____ Total number of net nights/site: ^{3 or 4} _____

Total number of net nights for entire survey (No. of sites X No. of net nights/site): ¹⁰ _____

Total proposed number of calendar nights to complete the entire survey: ³ _____

A) Maximum number of net set-ups that will be operated/checked (10-min interval) on a given calendar night at a given survey site: ⁴ _____

B) Minimum Number of personnel present to operate/check X (see A) net set-ups on a given site: ² _____

C) Proposed Staffing Rate (A divided by B): ² _____

Staffing Rate

Number of Section 10-permitted biologists per net site (or state-permitted in USFWS R5): _____

Do you propose to band bats? Yes ☒ No ☐

If yes, please answer the following:

What species will be banded? COTO ☐ MYGR ☒ MYLU ☒ MYSE ☐ MYSO ☒ PESU ☒

Others: _____ All captured bats: _____

If banding *Myotis* sp. or PESU, specify band size: ^{2.4mm (PESU); 2.9mm (MYSO, MYLU, MYGR)} _____

Describe your proposed bands (color and letter-numbers) and banding scheme: ^{KDFWR provided aluminum bands} _____

Will banding pliers be used? Yes ☒ No ☐

Will any biological samples be collected from captured bats (e.g., guano, hair, swab, wing punch)? Yes ☐ No ☒

If yes, explain: _____

Name of institution or facility to conduct DNA analysis: _____

⁵ <https://www.fws.gov/media/automated-acoustic-bat-id-software-programs>

RADIO-TRACKING

Will any bats be radio-tagged and tracked? Yes ☒ No ☐

If yes, please answer following:

Which species will be radio-tagged? MYSO, MYSE, PESU

Name of USFWS Section 10 permitted biologist(s) who will apply transmitter(s): Theresa Wetzel or Crystal Birdsall

Make/model and approximate weight of transmitter(s) to be used: LB-2X, 0.27g

Manufacturer date and estimated life-span of transmitters to be used: 2025, 12 days

Frequency range (MHz) of transmitters (e.g., 150.xxx or 172.xxx): 150.xxx

If radio-tracking multiple targeted bats/species, what criteria will be used in selecting which bats will be tracked?

The first 2 MYSO captured regardless of sex/age and then all MYSO females and juveniles captured after. For MYSE/PESU, all individuals.

Will all radio-tagged bats be tracked (min. of 4-hrs. search effort/day) to their diurnal roosts for the minimum recommended period of 7 days? Yes ☒ No ☐

If no, explain: _____

Will night-time foraging data/telemetry be collected? Yes ☐ No ☒

Glue used for attaching transmitters: Type: Latex-based Surgical Cen Name: Torbot

Manufacturer Torbot Group, Inc. Other: _____

EMERGENCE SURVEYS

After diurnal roost sites of radio-tagged bats are identified, will emergence surveys be conducted at each identified roost (assuming landowner permission is obtained)? Yes ☒ No ☐

If yes, how many emergence surveys/roost? 2

Have you identified a small number (e.g., ≤10) of potentially suitable roost trees* that you propose to conduct emergence surveys for? Yes ☐ No ☒

(*If yes, provide photographs of each tree documenting that all of the tree can be observed by the surveyor along with coordinates (lat/long and/or KML/shapefile) of all trees to be surveyed.)

POTENTIAL HIBERNACULA SURVEYS

Are you aware of any known hibernacula used by the target species within the project area itself or nearby?

Yes ☐ No ☒ Unknown ☐

If yes or unknown, list sites or explain: _____

Has your desktop analysis identified any natural or man-made features that could be used as a hibernaculum by any of the target bat species? Yes ☐ No ☒ Unknown ☐

If yes, underground features (e.g., caves, mines, tunnels, bunkers, cisterns) present: Yes ☐ No ☐

If yes, above-ground features* (e.g., crawl spaces) present: Yes ☐ No ☐

If unknown, explain: _____

Are you requesting approval of a field survey for potential hibernacula at this time? Yes* ☐ No ☒

(*If yes, attach a separate narrative explaining how the project area(s) will be surveyed for potential hibernacula.)

Are you submitting the results of a Phase 1 Habitat Assessment of potentially suitable hibernacula identified from field surveys? Yes* ☐ No ☒

(*If yes, provide a Phase 1 Habitat Assessment Data Sheet for each potential hibernaculum/portal(s)⁶ identified to be surveyed.)

⁶ If multiple cave entrances/portals, please list all locations.

BRIDGE & CULVERT ASSESSMENTS

Will any bridges or culverts be surveyed for bat presence? Yes ☐ No ☒

If yes, please answer the following:

Structure type(s) (check all that apply): Bridge ☐ Culvert ☐ Other ☐

If "other", explain: _____

Survey methodology for structure(s) (check all that apply):

Visual inspection ☐ Guano collection ☐ Emergence survey ☐ Acoustics* ☐

Mist-net* ☐ Harp-trap* ☐ Other _____

(*Due to site-specific conditions of structures, coordination with the local USFWS Field Office and appropriate state agency(ies) is necessary before proceeding with these survey methodologies)

Will guano be collected and analyzed to confirm species ID? Yes ☐ No ☐

If "yes", name of institution/entity performing analysis: _____

Acknowledgment that USFWS bats & transportation structures virtual training materials¹⁰ have been viewed: Yes ☐

ADDITIONAL SURVEY INFORMATION

Will the proposed bat survey deviate from the current version of the USFWS Survey Guidelines?⁷ Yes ☐ No ☒

If yes, provide justification for any departures or modifications to the guidelines (if applicable) below:

I hereby acknowledge that the information being provided to the Service is accurate and complete as of today's date.

Signature: _____

Date: 7/10/2025

⁷ Proposed surveys deviating from the current Range-wide Bat Survey Guidelines will only be accepted with a thoroughly described justification; coordinate with your local USFWS Field Office (<https://www.fws.gov/our-facilities>) for acceptable modifications.

United States Department of the Interior

Fish and Wildlife Service

Kentucky ES Field Office



SITE-SPECIFIC AUTHORIZATION - BAT SURVEYS

Our Field Office has reviewed your study plan and found it to contain sufficient information for our approval. When signed, this statement serves as your site-specific authorization to conduct the proposed activities at the specified locations included in the attached Study Plan Form and supporting files and must be carried with your federal permit when conducting work for this project. All activities must be carried out with strict adherence to permit conditions and authorizations specified in your federal permit as well as your state permit(s) (if needed). The section 10(a)(1) (A) permit authorizing the activities (if applicable) must remain with the surveyor at all times. For proposed activities on private lands, this authorization is not valid without explicit private landowner permission.

In addition to the final survey report, please use the appropriate U.S. Fish and Wildlife Service (USFWS) bat survey data spreadsheet, available on the Range-wide Bat Survey Guidelines website⁸, for reporting live capture and acoustic survey results. To mitigate the risk of viral transmission between bats and humans (e.g., SARS-CoV-2), USFWS requests anyone directly handling or working in close proximity to bats follow current guidelines prepared by the CDC⁹ and IUCN Bat Specialist Group¹⁰ in addition to the following the standard WNS decontamination protocols¹¹.

If the work expands beyond the scope of your original study plan or if there are adverse effects to bats that were not anticipated, cease all survey and/or research activities, and contact this office prior to continuing. Additionally, if a federally listed bat is captured, this USFWS Field Office must be notified within 48 hours.

Field Office POC: Mike Armstrong

email: Mike_Armstrong@fws.gov

phone: (502) 229-4632

Authorized as Proposed ☐

Authorized with Conditions (see below)

1. Ensure net set placements reflect variation of habitats present on site and preferred by MYSO and MYSE. 2. Ensure transmitters are thoroughly tested for proper functioning prior to the study (see Appendix D of Survey Guidance). 3. Contact the POC if any modification:

Not Authorized. (see comments)

Signature: _____

Date: 7/10/2025

⁸ <https://www.fws.gov/library/collections/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>

⁹ <https://www.cdc.gov/healthypets/covid-19/wildlife.html>

¹⁰ https://www.iucnbsg.org/uploads/6/5/0/9/6509077/amp_recommendations_for_researchers_final.pdf

¹¹ <https://whitenosesyndrome.org/mmedia-education/national-wns-decontamination-protocol-u-s>



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Kentucky Ecological Services Field Office
J C Watts Federal Building, Room 265
330 West Broadway
Frankfort, KY 40601-8670
Phone: (502) 695-0467 Fax: (502) 695-1024
Email Address: kentuckyes@fws.gov

In Reply Refer To:

07/01/2025 13:28:51 UTC

Project Code: 2025-0116129

Project Name: Lynn Bark Solar

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do..>

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

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 <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Kentucky Ecological Services Field Office

J C Watts Federal Building, Room 265

330 West Broadway

Frankfort, KY 40601-8670

(502) 695-0467

PROJECT SUMMARY

Project Code: 2025-0116129

Project Name: Lynn Bark Solar

Project Type: Power Gen - Solar

Project Description: Potential site for solar development.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@37.792776399999994,-82.5467338864506,14z>



Counties: Martin County, Kentucky

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [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.

MAMMALS

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: The project area includes potential gray bat habitat. Species profile: https://ecos.fws.gov/ecp/species/6329 General project design guidelines: https://ipac.ecosphere.fws.gov/project/MY2NJVTFORCBBNBZ4FFOUYOPFQ/documents/generated/6422.pdf	Endangered
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: The project area includes 'potential' habitat. All activities in this location should consider possible effects to this species. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/MY2NJVTFORCBBNBZ4FFOUYOPFQ/documents/generated/6422.pdf	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity

Name: Theresa Wetzel

Address: 8425 Woodfield Crossing Boulevard, Suite 560-W

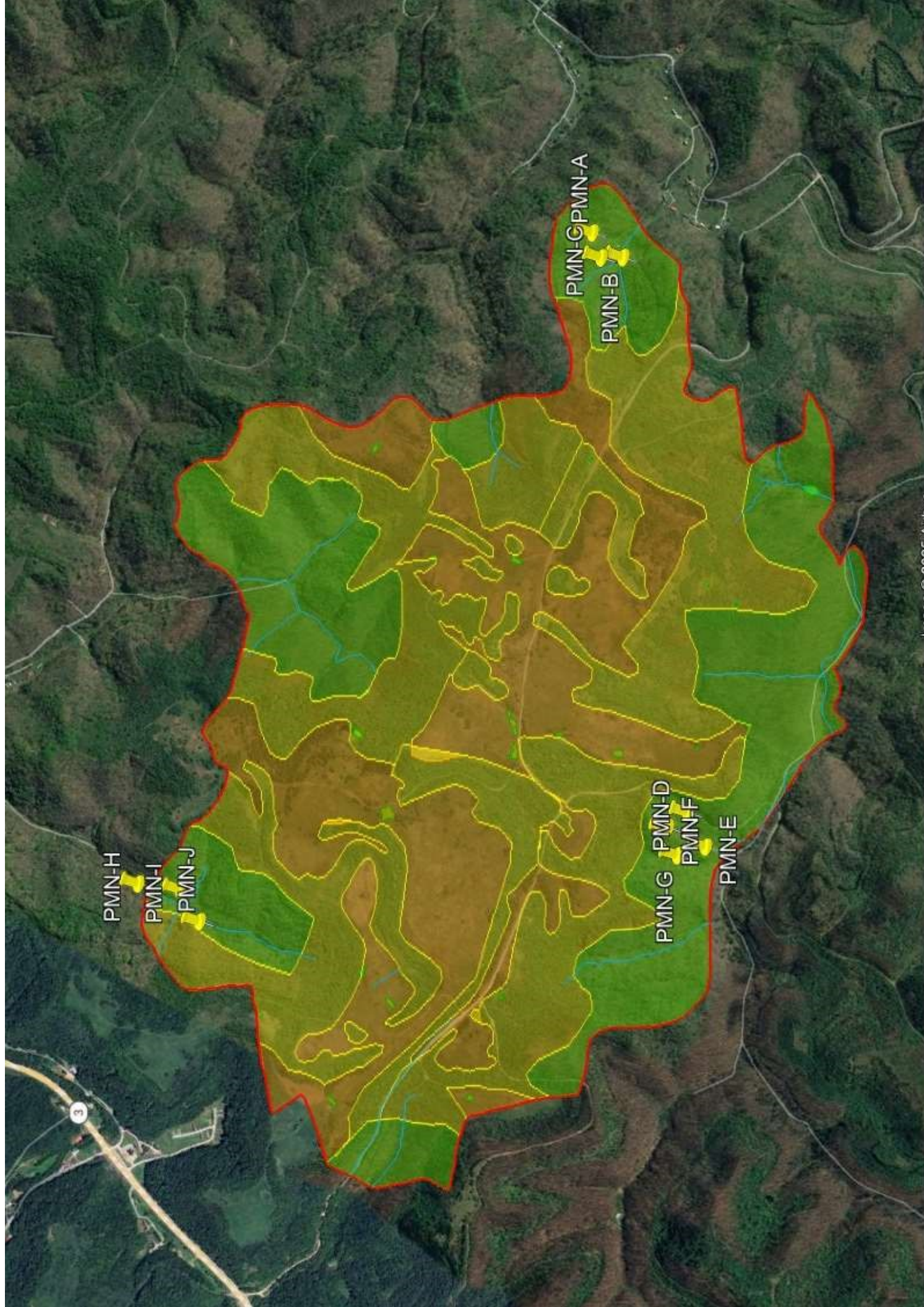
City: Indianapolis

State: IN

Zip: 46240

Email: theresa.wetzel@erm.com

Phone: 9312738921





APPENDIX C

SITE DATA

LBS-01

General Site Information			
Site Coordinates:	37.798719N, - 82.561739W	Team Lead:	Crystal Birdsall
County:	Martin	State:	KY
Night 1 Conditions (Valid Survey Night: Yes)			
Night 1 Date:	July 22, 2025	Start and End Time:	20:47 to 01:47
Temperature In (°F):	79.5	Temperature Out (°F):	63.2
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Clear	Moon Phase:	Waning Crescent
Comments:			
Net Setup			
	Net Width (m)	Net Count	Habitat Type
Net Set A	6	3	Stream Corridor
Net Set B	18	2	Emergent wetland
Net Set C	18	2	Wetland with small creek running into it

LBS-02

CONTAINS PRIVILEGED INFORMATION
DO NOT RELEASE

General Site Information			
Site Coordinates:	37.787989N, -82.550911	Team Lead:	Crystal Birdsall
County:	Martin	State:	KY
Night 2 Conditions (Valid Survey Night: Yes)			
Night 2 Date:	July 30, 2025	Start and End Time:	20:40 to 02:15
Temperature In (°F):	86.6	Temperature Out (°F):	72.9
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Cloudy or Overcast	Moon Phase:	Waxing Crescent
Comments:			
Net Setup			
	Net Width (m)	Net Count	Habitat Type
Net Set D	9	2	Road Corridor
Net Set E	6	2	Road Corridor
Net Set F	9	3	Road Corridor
Net Set G	9	2	Road Corridor

LBS-03

CONTAINS PRIVILEGED INFORMATION
DO NOT RELEASE

General Site Information			
Site Coordinates:	37.793049N, -82.552959W	Team Lead:	Theresa Wetzel
County:	Martin	State:	KY
Night 1 Conditions (Valid Survey Night: Yes)			
Night 1 Date:	July 31, 2025	Start and End Time:	20:39 to 01:39
Temperature In (°F):	75	Temperature Out (°F):	73.4
Wind Direction:	SE	Wind Speed:	Light wind (1-3 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Cloudy or Overcast	Moon Phase:	First Quarter
Comments: Some fog around 11 and intermittent light sprinkles for less than 15 min.			
Net Setup			
	Net Width (m)	Net Count	Habitat Type
Net Set H	6	2	Road Corridor
Net Set I	9	2	Road Corridor
Net Set J	12	3	Woodland Edge



APPENDIX D

BAT CAPTURE DATA

LBS-02 - Demographics and Morphometric Data

Site ID	Net Night	Date	Capture Time	Net Set	Species	Sex	Age	Reproductive Status	Mass (g)	Right Forearm (mm)
LBS-02	2	July 30, 2025	21:29	Net Set G	EPFU	Female	Adult	Post-Lactating	19.00	49
LBS-02	2	July 30, 2025	21:29	Net Set G	EPFU	Female	Juvenile	Non-reproductive	15.50	46
LBS-02	2	July 30, 2025	21:29	Net Set G	EPFU	Escaped	Escaped	Escaped	-	-
LBS-02	2	July 30, 2025	21:29	Net Set F	EPFU	Male	Juvenile	Non-reproductive	15.50	47
LBS-02	2	July 30, 2025	21:29	Net Set G	EPFU	Male	Juvenile	Non-reproductive	16.50	45
LBS-02	2	July 30, 2025	21:29	Net Set F	EPFU	Male	Juvenile	Scrotal	12.50	42
LBS-02	2	July 30, 2025	21:29	Net Set E	LABO	Male	Adult	Non-reproductive	8.75	38
LBS-02	2	July 30, 2025	22:03	Net Set F	LABO	Male	Adult	Scrotal	8.75	38
LBS-02	2	July 30, 2025	22:03	Net Set E	LABO	Male	Juvenile	Non-reproductive	9.25	39
LBS-02	2	July 30, 2025	22:08	Net Set G	EPFU	Female	Juvenile	Non-reproductive	16.25	50
LBS-02	2	July 30, 2025	22:51	Net Set D	LABO	Female	Adult	Post-Lactating	14.50	44
LBS-02	2	July 30, 2025	23:13	Net Set F	LABO	Male	Juvenile	Non-reproductive	9.00	39
LBS-02	2	July 30, 2025	23:21	Net Set F	LABO	Female	Adult	Non-reproductive	11.25	41
LBS-02	2	July 30, 2025	23:41	Net Set G	EPFU	Female	Adult	Post-Lactating	16.50	47
LBS-02	2	July 30, 2025	00:00	Net Set G	EPFU	Male	Adult	Non-reproductive	17.25	48
LBS-02	2	July 30, 2025	00:42	Net Set F	LABO	Female	Adult	Post-Lactating	10.50	43
LBS-02	2	July 30, 2025	01:30	Net Set G	LABO	Male	Adult	Non-reproductive	8.75	38
LBS-02	2	July 30, 2025	02:08	Net Set E	LABO	Female	Juvenile	Non-reproductive	10.75	40

LBS-02 - Mist Net Setup Details

Site Name	Net Set Code	Net Width (m)	Number of Nets in Set	Habitat Type
LBS -02	Net Set D	9	2	Road Corridor
LBS -02	Net Set E	6	2	Road Corridor
LBS -02	Net Set F	9	3	Road Corridor
LBS -02	Net Set G	9	2	Road Corridor

LBS-03 - Demographics and Morphometric Data

Site ID	Net Night	Date	Capture Time	Net Set	Species	Sex	Age	Reproductive Status	Mass (g)	Right Forearm (mm)	Comment
LBS-03	1	July 31, 2025	20:55	Net Set H	LABO	Male	Juvenile	Non-reproductive	8.50	39	
LBS-03	1	July 31, 2025	21:15	Net Set J	LABO	Male	Juvenile	Non-reproductive	8.50	39	
LBS-03	1	July 31, 2025	21:34	Net Set J	EPFU	Female	Juvenile	Non-reproductive	16.50	50	
LBS-03	1	July 31, 2025	21:45	Net Set H	EPFU	Female	Adult	Post-Lactating	22.25	48	
LBS-03	1	July 31, 2025	22:10	Net Set J	LABO	Female	Juvenile	Non-reproductive	10.25	42	
LBS-03	1	July 31, 2025	22:30	Net Set H	LABO	Female	Juvenile	Non-reproductive	10.75	43	
LBS-03	1	July 31, 2025	22:40	Net Set I	EPFU	Female	Juvenile	Non-reproductive	16.75	49	
LBS-03	1	July 31, 2025	23:30	Net Set I	LABO	Male	Adult	Non-reproductive	11.00	39	
LBS-03	1	July 31, 2025	23:55	Net Set I	LABO	Male	Adult	Non-reproductive	9.25	38	

LBS-03 – Mist Net Setup Details

Site Name	Net Set Code	Net Width (m)	Number of Nets in Set	Habitat Type
LBS-03	Net Set H	6	2	Road Corridor
LBS-03	Net Set I	9	2	Road Corridor
LBS-03	Net Set J	12	3	Woodland Edge



APPENDIX E

PHOTO LOG

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Lynn Bark Energy
Center

PROJECT NO.: 0718084

PHOTO NO. 1.	DATE 22 July 2025	
NET SITE: LBS-01		
DESCRIPTION: NET A		

PHOTO NO. 2.	DATE 22 July 2025	
NET SITE: LBS-01		
DESCRIPTION: NET B		

Photographic Log

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Lynn Bark Energy
Center

PROJECT NO.: 0718084

PHOTO NO. 3.	DATE 22 July 2025	
NET SITE: LBS-01		
DESCRIPTION: NET C		

PHOTO NO. 4.	DATE 30 July 2025	
NET SITE: LBS-02		
DESCRIPTION: NET D		

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Lynn Bark Energy
Center

PROJECT NO.: 0718084

PHOTO NO. 5.	DATE 30 July 2025	
NET SITE: LBS-02		
DESCRIPTION: NET E		

PHOTO NO. 6.	DATE 30 July 2025	
NET SITE: LBS-02		
DESCRIPTION: NET F		

CLIENT: Lynn Bark Energy Center, LLC	SITE LOCATION: Lynn Bark Energy Center	PROJECT NO.: 0718084
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PHOTO NO. 7.	DATE 30 July 2025	
NET SITE: LBS-02		
DESCRIPTION: NET G		

PHOTO NO. 8.	DATE 31 July 2025	
NET SITE: LBS-03		
DESCRIPTION: NET H		



Photographic Log

CLIENT: Lynn Bark Energy Center, LLC

SITE LOCATION: Lynn Bark Energy Center

PROJECT NO.: 0718084

PHOTO NO.
9.

DATE
31 July 2025

NET SITE:
LBS-03

DESCRIPTION: NET I

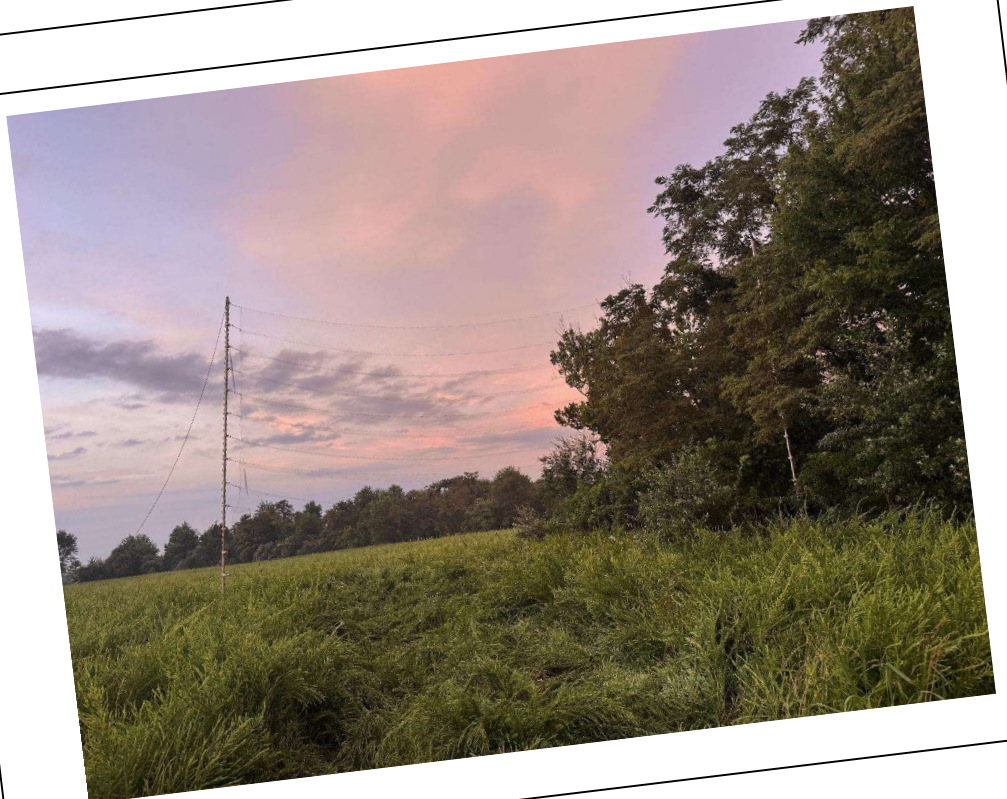


PHOTO NO.
10.

DATE
31 July 2025

NET SITE:
LBS-03

DESCRIPTION: NET J



CLIENT: Lynn Bark Energy Center, LLC

SITE LOCATION: Lynn Bark Energy Center

PROJECT NO.: 0718084

PHOTO NO. 11.	DATE 31 July 2025			
SITE: LBS-03				
DESCRIPTION: Representative photo of big brown bat (<i>Eptesicus fuscus</i>)				

PHOTO NO. 12.	DATE 31 July 2025			
SITE: LBS-02				
DESCRIPTION: Representative photo of big brown bat (<i>Eptesicus fuscus</i>)				

CLIENT: Lynn Bark Energy Center, LLC

SITE LOCATION: Lynn Bark Energy Center

PROJECT NO.: 0718084

PHOTO NO. 13.	DATE 31 July 2025	
SITE: LBS-03		
DESCRIPTION: Representative photo of Eastern Red bat (<i>Lasiurus borealis</i>)		

PHOTO NO. 14.	DATE 31 July 2025	
SITE: LBS-02		
DESCRIPTION: Representative photo of eastern red bat (<i>Lasiurus borealis</i>)		



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