



Lynn Bark Transmission LineBark Transmission Line

Bat Species Presence/Absence Survey

PREPARED FOR

Lynn Bark Energy Center, LLC

DATE

27 January 2026

REFERENCE

2025-0116152



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1. INTRODUCTION

Lynn Bark Energy Center, LLC (Lynn Bark), a wholly owned subsidiary of Savion, LLC, is proposing a transmission line in Martin County, Kentucky (Project). The proposed Project will include tree removal/trimming along approximately 7.25-kilometers (km) of suitable summer roosting habitat (Appendix A). This transmission line is proposed to tie into the project substation at the proposed Lynn Bark Energy Center, 1.25km of the line is internal to the proposed Energy Center and was surveyed as part of those efforts; therefore, this effort covers the 6 kilometers of proposed transmission line that is outside the Lynn Bark Energy Center boundary (Appendix A – Figure 1).

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). 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 timeline is currently unknown. Environmental Resources Management, Inc. (ERM) was contracted by Lynn Bark to conduct a presence/probable absence mist-net survey for IBAT, NLEB, TCB, and GBAT 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 and could potentially support IBAT, NLEB, GBAT and TCB (collectively referred to as “listed bats”). 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 (Guidelines; USFWS 2024). This linear Project may affect up to 6-km of suitable forested habitat. Per the Guidelines, to determine the presence or probable absence of IBAT and NLEB for linear projects, a minimum of 4 net nights per kilometer of suitable habitat must be surveyed across two calendar nights within the appropriate timeframe for hibernating bats (May 15th – August 15th; USFWS 2024).

2.1 AGENCY COORDINATION

Prior to conducting surveys, a site-specific study plan was submitted to the United States Fish and Wildlife Service (USFWS) Kentucky Field Office (KFO) on 17 July, 2025, and received approval the same day. The mist-net survey was completed under USFWS Section 10 Permit Number ESPER5971699 and Kentucky Collection Permit’s 2511207 and 2511179. Appendix B contains relevant agency correspondence.

2.2 LISTED BAT SPECIES AND HABITAT

The listed 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 within the Project Area by USFWS and KDFWR or were observed during field surveys.

General habitat requirements outside of the hibernation period include the availability of calm surface water, foraging areas, and suitable roosts.



3. PROJECT SURVEY METHODS

3.1 SURVEY AREA

The Project is located just southwest of Coldwater Road in Inez, Kentucky and just east of Wolf Creek Road in the town of Three forks, in Martin County, Kentucky. The Project contains potential bat habitat in the form of upland and bottomland forested corridors and creeks for foraging. There are multiple creeks that run through the Project area that provide drinking resources. Land cover was considered optimal at all the sites as the area is largely forested (Appendix A).

Site LBT-01 is on Coldwater Road as well as on Old Road Fork Creek. A T-style net was placed across Coldwater Road where the creek crosses the road as well as crossing off the creek corridor. This site had optimal water resources in the form of the creek and multiple road ruts. Forest structure was considered moderate as the site had some diversity in age of trees. Roost habitat was poor because there were very few snags present. Dominate tree species include American sycamore (*Plantanus occidentalis*), tulip poplar (*Liriodendron tulipifera*), river birch (*Betula nigra*), autumn olive (*Elaeagnus umbellata*), and American hornbeam (*Carpinus caroliniana*).

Site LBT-02 is located on unnamed roads/UTV trails within a reclaimed mine site. The site had moderate water resources being nearby Walnut Creek and road ruts, but were too cluttered to survey. Forest structure was also considered moderate as the site had some diversity in age of trees. Roost habitat was low as there were very few snags present. Dominate tree species include American sycamore, tulip poplar, and was autumn olive dominate.

Site LBT-03 is on an old forested road, steep on both the downhill and uphill side of the road. Water resources were considered moderate at the site in the form of large road ruts. Forest structure was considered to be poor as the habitat was even aged and young with little diversity in the age of trees. Dominate tree species include American beech (*Fagus grandifolia*), with less dominate sugar maple (*Acer saccharum*), hickory Species (*Carya*), Eastern hemlock (*Tsuga canadensis*), and American sycamore.

Site LBT-04 is on an old upland forested road through planted pine tree rows. Water resources and roost habitat were considered poor at the site as there were no drinking resources available and a lack of available snags. Forest structure was also considered poor as the habitat was even aged with little diversity in tree species. Dominate tree species include pitch pine (*Pinus rigida*), Red maple (*Acer rubrum*), sugar maple, autumn olive, and American sycamore.

Site LBT-05 is located on an unnamed wooded trail. Water resources and roost habitat were considered poor at the site due to the lack of water and lack of snags. Forest structure was considered moderate as there was some diversity in age of trees. Dominate tree species include tulip poplar, American beech, white oak (*Quercus alba*), American elm (*Ulmus americana*), and autumn olive.

Site LBT-06 is on Wolf Creek east of Wolf Creek Road. Water resources were considered optimal as the creek was slow moving and accessible to bats. Roost habitat and forest structure were both considered moderate as there were a few snags present, and the site had some diversity in age of the trees within the forest. Dominate tree species include American sycamore, box elder (*Acer negundo*) and honey locust (*Gleditsia triacanthos*).

A habitat description of the mist-net locations was completed on electronic 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, distance to water, stream, or pond characteristics (if mist-net's were 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. 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 source) 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 (Kiser and MacGregor 2005). 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. 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 from 23-24 July, 28-31 July, 4-6 August, and 8-9 August 2025. In accordance with the Guidelines, the Project received a total of 12 net nights of survey effort at six sites (two mist-nets for two nights per site; Table 1). No mist-net locations were netted for more than two consecutive nights. 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
LBT-01	A	23-24 July	37.78611	-82.52126
LBT-01	B	23 July	37.78487	-82.52267
LBT-01	C	24 July	37.78691	-82.52101
LBT-02	A	29-30 July	37.78554	-82.51735
LBT-02	B	29 July	37.78495	-82.51676
LBT-02	C	30 July	37.78488	-82.51660
LBT-03	A	31 July, 04 August	37.77743	-82.50405
LBT-03	B	31 July, 04 August	37.77766	-82.50468
LBT-04	A	05-06 August	37.77447	-82.49998
LBT-04	B	05-06 August	37.77391	-82.49988
LBT-05	A	28-29 July	37.77455	-82.48865
LBT-05	B	28-29 July	37.77487	-82.48771
LBT-06	A	08-09 August	37.77119	-82.47575
LBT-06	B	08-09 August	37.77062	-82.47608

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 Scale, 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.

3.4 RADIO-TELEMETRY METHODS

Radio-telemetry was conducted on two adult female TCB's and two juvenile male TCB's. The transmitters were 0.27-gram LB-2X transmitter made by Holohil Systems, LTD in 2025. The transmitters were tested before attachment, a small patch of fur trimmed between the scapula of the bat, and the transmitter was attached between the scapula with non-toxic surgical adhesive. A

Model R1000 (Communications Specialists, Inc., Orange, California) tracking receiver and 150 FB 3-element Yagi directional antenna was used in order to locate day roosts used by the radio-tagged bat. Daytime tracking of radio-tagged bat was to be conducted for a maximum of 7 days, unless the transmitter failed or fell off sooner.

4. RESULTS

4.1 MIST-NETTING SURVEY RESULTS

The mist-net survey was successfully completed following the Guidelines and under appropriate weather conditions on 23-24 July, 28-31 July, 04-06 August, and 08-09 August 2025. Survey effort consisted of a total of 12 net nights of survey effort, resulting in a total capture of 36 bats of 4 species (Table 2). Tricolored bats were captured at three of the six sites and a total of nine TCB's were captured; therefore, radiotelemetry was conducted. Radio-transmitters were attached to four of the nine TCB's (Table 3). Additional morphometric data and representative photographs of captured bats are provided in Appendix D and Appendix E.

TABLE 2. SUMMARY OF BAT CAPTURE DEMOGRAPHICS.

Species	Adult Male		Adult Female				Juvenile		Escaped	Total
	NR	SC	NR	PG	L	PL	M	F		
Big brown bat (<i>Eptesicus fuscus</i>)	4	-	-	-	-	4	1	1	1	11
Eastern red bat (<i>Lasiurus borealis</i>)	4	2	-	-	-	3	1	5	-	15
Hoary bat (<i>Lasiurus cinereus</i>)	1	-	-	-	-	-	-	-	-	1
Tricolored bat (<i>Perimyotis subflavus</i>)	2	-	-	-	-	3	3	1	-	9
Total	11	2	-	-	-	10	5	7	1	36

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

TABLE 3. SUMMARY OF TCB CAPTURES ON THE LYNN BARK TRANSMISSION LINE PROJECT.

Date	Site Caught	Age	Sex	Reproductive status	Mass (g)	RFA (mm)	Band (KYF&W)	Transmitter (150.xxx)
23 July	LBT-01	J	M	NR	4.25	34.0	C22640	Too small
28 July	LBT-05	A	M	NR	4.75	34.0	C22639	-
8 August	LBT-06	J	M	NR	5.00	34.0	C22638	-
8 August	LBT-06	A	M	NR	5.00	33.0	C22637	-
9 August	LBT-06	A	F	PL	6.25	35.0	C22636	279
9 August	LBT-06	J	M	NR	5.50	35.0	C22635	041
9 August	LBT-06	J	M	NR	5.75	33.0	C22634	158
9 August	LBT-06	A	F	PL	6.25	34.0	C22633	228
9 August	LBT-06	A	F	PL	7.00	35.0	C22632	-

Notes: Age: (A) adult; (J) juvenile; Sex: (M) Male; and F (Female); Reproductive status: (NR) non-reproductive; (PL) post-lactating.

4.2 RADIO-TELEMETRY RESULTS

Radio-telemetry began on 10 August 2025, when three of the four transmitted bats were bi-angulated (Table 4; Appendix A – Figure 2). Search efforts were not conducted on 11 August but were picked up again on August 12-16. Three out of four radio-tagged bats were located while one bat (150.228) was not heard from on any of the days. The tracking team searched all accessible roads by vehicle within a 3-mile radius of the capture site for a minimum of four hours per day. Two transmitters (150.158 and 150.041) no longer attached to the bats were recovered during tracking efforts on 14 August.

TABLE 4. DAILY LOCATIONS OF RADIO TAGGED TRICOLORED BATS FOUND DURING TRACKING EFFORTS.

Tagged Bat	Daily Bat Locations (2025)						
	8/10	8/11	8/12	8/13	8/14	8/15	8/16
150.158	Bi-angulated (37.77065/-82.47211)	-	150.158-01	150.158-02	Recovered dropped transmitter	-	-
150.279	Bi-angulated (37.77620/-82.47927)	-	150.279-01	150.279-01	150.279-01	150.279-01	150.279-01
150.041	Bi-angulated (37.77252/-82.48306)	-	Heard, but not located	150.041-01	Recovered dropped transmitter	-	-
150.228	Not heard-	-	Not heard	Not heard	Not heard	Not heard	Not heard

A total of four roost trees were located during tracking efforts and were all live American beech trees (Table 5 and 6). The DBH of the four trees ranged in size with the smallest roost tree being 1.8 inches in diameter and the largest being 29.0 inches in diameter and all trees were lacking in good solar exposure. Microhabitats the bats used were dead leaf clusters within the beech trees and all roost trees were located within one mile of water resources. No roost trees were located within the proposed transmission line corridor.

TABLE 5. LOCATIONS OF ROOST TREES USED BY RADIO-TAGGED TRICOLORED BATS IN MARTIN COUNTY, KENTUCKY

Roost ID	Date First Found (2025)	Bat Frequency (150.XXX)	Latitude	Longitude	# of Days Used
150.158-1	12 August	158	37.77125	-82.47197	1
150.279-1	12 August	279	37.77723	-82.48052	5
150.041-1	13 August	041	37.775394	-82.47985	1
150.158-2	13 August	158	37.77123	-82.47199	1

TABLE 6. DETAILS OF ROOST TREES USED BY RADIO TAGGED TRICOLORED BATS IN MARTIN COUNTY, 2025.

Roost ID	Tree Species	DBH (in)	Tree Composition	% Canopy Closure	Roost Type
150.158-1	<i>Fagus grandifolia</i>	10.1	Live	81-100	Dead Leaf Cluster
150.279-1	<i>Fagus grandifolia</i>	29.0	Live	81-100	Dead Leaf Cluster
150.041-1	<i>Fagus grandifolia</i>	1.8	Live	81-100	Dead Leaf Cluster
150.158-2	<i>Fagus grandifolia</i>	6.1	Live	81-100	Dead Leaf Cluster

5. CONCLUSION

A total of 12 net nights of survey effort was completed at six sites for twelve calendar nights each under the appropriate weather conditions, meeting the suggested level of effort to determine the presence or probable absence of listed bats at a site. No IBAT, NLEB, or GBAT were captured. Nine TCB were captured during the survey and radio-telemetry was conducted. A total of four roost trees were located. All roost trees were located outside of the proposed transmission line corridor and will not be impacted by the Project.

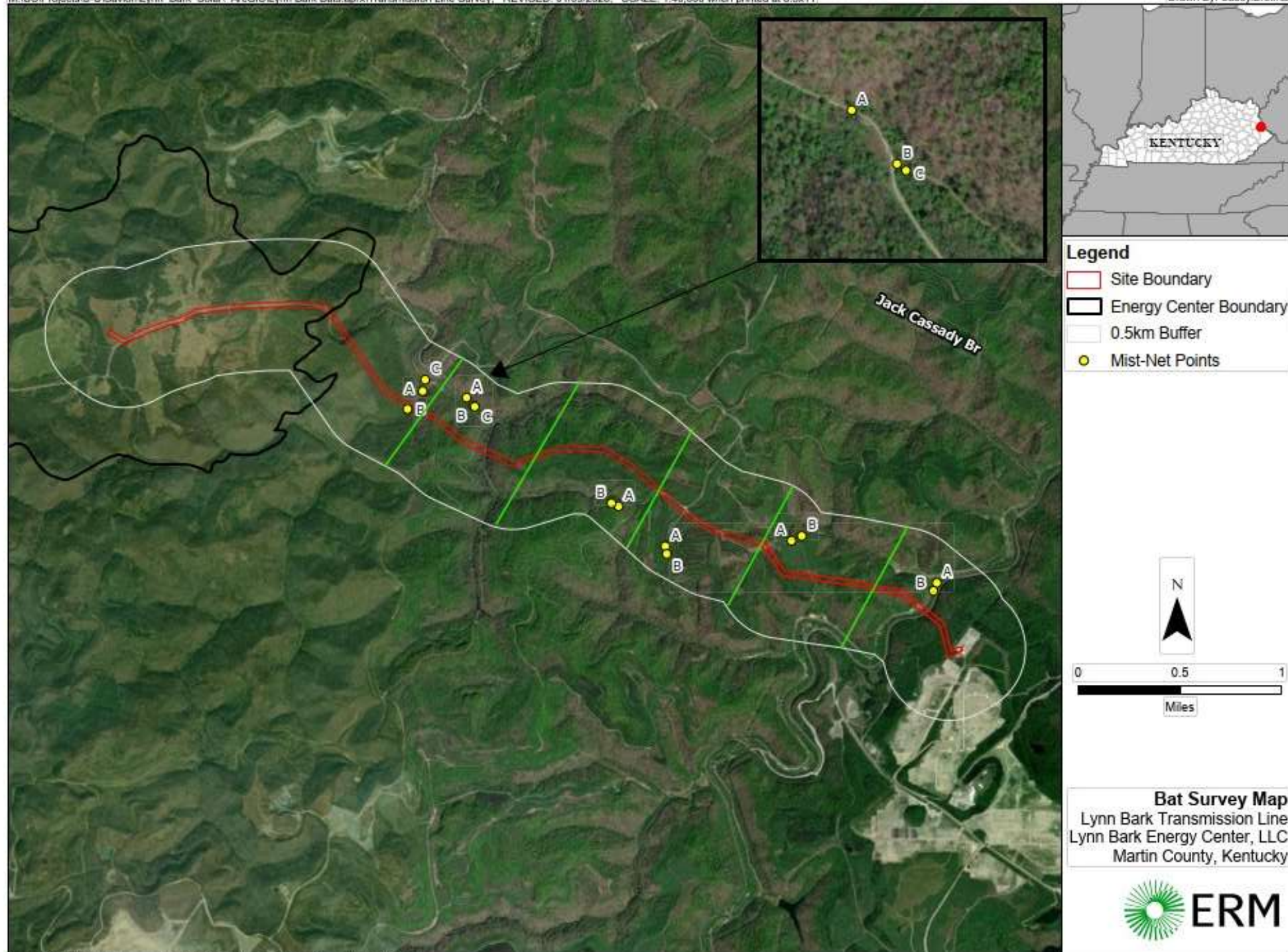
This presence/absence survey effort has determined the probable absence of NLEB, GBAT, IBAT within the Project. Therefore, Lynn Bark assumes no impacts to these bat species and also assumes no further agency coordination will be required regarding bats for this Project. TCB are currently proposed for federal listing as endangered and are not yet protected under the ESA; therefore, no further coordination is required unless the TCB gets uplisted prior to Project completion or the transmission line route changes significantly.

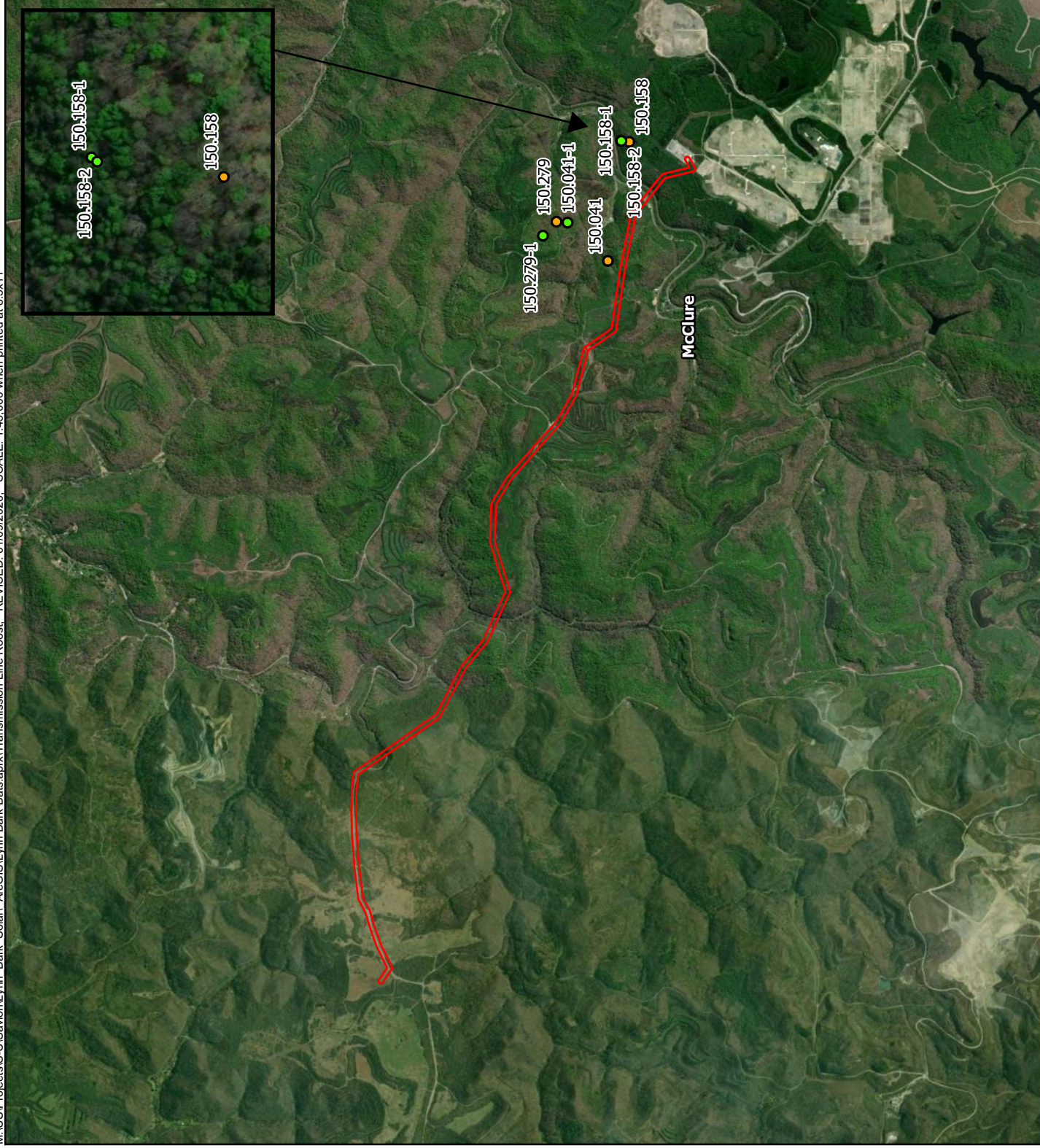
6. REFERENCES

- Kiser, J.D. and J.R. MacGregor. 2005. Indiana bat (*Myotis sodalis*) mist-net surveys for coal mining activities. Pp.45-54 in Proceedings of Indiana bat % coal mining: a technical interactive forum (K. Vories and A. Harrington, eds). U.S. Department of Interior, Office of Surface Mining, Alton, Illinois, 229 pp.
- USFWS. 2024. Range-wide Indiana Bat & Northern Long-eared Bat Survey Guidelines. In U.S. Fish and Wildlife Service [Report]. U.S. Fish and Wildlife Service, Region 3, Bloomington, MN. <https://www.fws.gov/library/collections/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>. Updated April 14, 2025.
- White-nose Syndrome Disease Management Working Group (WNSDMWG). 2024. National White-nose Syndrome Decontamination Protocol. In White-nose Syndrome Response Team (pp. 1–10). https://www.whitenosesyndrome.org/_files/ugd/89ad3b_08588927deb04c37a2ba97bbc75a95f8.pdf



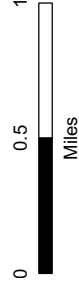
APPENDIX A FIGURES





Legend

- Site Boundary
- Bi-angulation
- Roost Tree



Roost Tree Location Map
Lynn Bark Transmission Line
Lynn Bark Energy Center, LLC
Martin County, Kentucky



ERM



APPENDIX B

AGENCY COORDINATION

From: [Armstrong, Mike](#)
Sent on: Thursday, July 17, 2025 12:59:33 PM
To: [Theresa Wetzel](#)
CC: [Ellen Mullins](#)
Subject: Re: [EXTERNAL] Bat Survey Study Plan_Consultation Code 2025-0116152_Martin County
Attachments: USFWS Study Plan_Consultation Code 2025-0116152_Martin County_07172025_KFO approved with conditions.pdf (3.2 MB)

EXTERNAL MESSAGE

Afternoon Theresa.

I have reviewed the subject study plan and approve with conditions. Please let me know if you have any questions.

Good luck and stay safe,

Mike

Mike Armstrong
Southeast Region Bat Recovery Biologist
U.S. Fish & Wildlife Service
Kentucky Field Office
330 W. Broadway, Room 265
Frankfort, KY 40601
Cell: 502-229-4632
Office/Teams: 502-653-0498

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From: Theresa Wetzel <theresa.wetzel@erm.com>
Sent: Thursday, July 17, 2025 10:22 AM
To: Armstrong, Mike <mike_armstrong@fws.gov>
Cc: Ellen Mullins <ellen.mullins@erm.com>
Subject: [EXTERNAL] Bat Survey Study Plan_Consultation Code 2025-0116152_Martin County

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good morning, Mike,

Please find attached a bat survey study plan and associated potential mist-net site KMZ for the proposed Lynn Bark Transmission Project in Martin County, Kentucky. Please let me know if you have any questions or need additional information during your review.

Thank you!



Sustainability is our business

Theresa Wetzel
Managing Technical Consultant
Biologist
She/Her/Hers

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APPENDIX C MIST-NET SITE DATA

LBT-06

CONTAINS PRIVILEGED INFORMATION
DO NOT RELEASE

General Site Information			
Site Coordinates:	37.770943N, -82.475905W	Team Lead:	Crystal Birdsall
County:	Martin	State:	KY
Night 1 Conditions (Valid Survey Night: Yes)			
Night 1 Date:	August 8, 2025	Start and End Time:	20:31 to 01:31
Temperature In (°F):	73.2	Temperature Out (°F):	67.4
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Clear	Moon Phase:	Waxing Gibbous
Comments:			
Night 2 Conditions (Valid Survey Night: Yes)			
Night 2 Date:	August 9, 2025	Start and End Time:	20:30 to 01:30
Temperature In (°F):	81.6	Temperature Out (°F):	68.8
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Clear	Moon Phase:	Full
Comments:			
Net Setup			
	Net Width (m)	Net Count	Habitat Type
Net Set A	9	2	Stream Corridor
Net Set B	9	2	Stream Corridor

LBT-04

CONTAINS PRIVILEGED INFORMATION
DO NOT RELEASE

General Site Information			
Site Coordinates:	37.774098N, -82.499928W	Team Lead:	Crystal Birdsall
County:	Martin	State:	KY
Night 1 Conditions (Valid Survey Night: Yes)			
Night 1 Date:	August 5, 2025	Start and End Time:	20:34 to 01:34
Temperature In (°F):	80.5	Temperature Out (°F):	69.1
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Few Clouds	Moon Phase:	Waxing Gibbous
Comments:			
Night 2 Conditions (Valid Survey Night: Yes)			
Night 2 Date:	August 6, 2025	Start and End Time:	20:33 to 01:33
Temperature In (°F):	76.6	Temperature Out (°F):	68.1
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Few Clouds	Moon Phase:	Waxing Gibbous
Comments:			
Net Setup			
	Net Width (m)	Net Count	Habitat Type
Net Set A	9	2	Road Corridor
Net Set B	12	3	Road Corridor

LBT-03

CONTAINS PRIVILEGED INFORMATION
DO NOT RELEASE

General Site Information			
Site Coordinates:	37.777476N, -82.504314W	Team Lead:	Crystal Birdsall
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):	76.8	Temperature Out (°F):	73.2
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Cloudy or Overcast	Moon Phase:	First Quarter
Comments:			
Night 2 Conditions (Valid Survey Night: Yes)			
Night 2 Date:	August 4, 2025	Start and End Time:	20:35 to 01:35
Temperature In (°F):	80.3	Temperature Out (°F):	68.3
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Cloudy or Overcast	Moon Phase:	Waxing Gibbous
Comments:			
Net Setup			
	Net Width (m)	Net Count	Habitat Type
Net Set A	6	2	Road Corridor
Net Set B	6	2	Road Corridor

LBT-02

CONTAINS PRIVILEGED INFORMATION
DO NOT RELEASE

General Site Information			
Site Coordinates:	37.7853N, -82.517011W	Team Lead:	Theresa Wetzel
County:	Martin	State:	KY
Night 1 Conditions (Valid Survey Night: Yes)			
Night 1 Date:	July 29, 2025	Start and End Time:	20:41 to 01:41
Temperature In (°F):	80.1	Temperature Out (°F):	74
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Clear	Moon Phase:	Waxing Crescent
Comments: Humid			
Night 2 Conditions (Valid Survey Night: Yes)			
Night 2 Date:	July 30, 2025	Start and End Time:	20:40 to 01:40
Temperature In (°F):	79	Temperature Out (°F):	74
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Clear	Moon Phase:	Waxing Crescent
Comments: Removed net B and added net C			
Net Setup			
	Net Width (m)	Net Count	Habitat Type
Net Set A	6	2	Road Corridor
Net Set B	9	2	Road Corridor
Net Set C	6	2	UTV corridor

LBT-05

CONTAINS PRIVILEGED INFORMATION
DO NOT RELEASE

General Site Information			
Site Coordinates:	37.774698N, -82.488256W	Team Lead:	Crystal Birdsall
County:	Martin	State:	KY
Night 1 Conditions (Valid Survey Night: Yes)			
Night 1 Date:	July 28, 2025	Start and End Time:	20:43 to 01:43
Temperature In (°F):	78.1	Temperature Out (°F):	75.3
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Cloudy or Overcast	Moon Phase:	Waxing Crescent
Comments:			
Night 2 Conditions (Valid Survey Night: Yes)			
Night 2 Date:	July 29, 2025	Start and End Time:	20:42 to 13:42
Temperature In (°F):	73.8	Temperature Out (°F):	76.4
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	5.2	Road Corridor
Net Set B	6	3	Road Corridor

LBT-01

CONTAINS PRIVILEGED INFORMATION
DO NOT RELEASE

General Site Information			
Site Coordinates:	37.785291N, -82.521906W	Team Lead:	Crystal Birdsall
County:	Martin	State:	KY
Night 1 Conditions (Valid Survey Night: Yes)			
Night 1 Date:	July 23, 2025	Start and End Time:	20:46 to 01:46
Temperature In (°F):	85.1	Temperature Out (°F):	72.2
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Clear	Moon Phase:	Waning Crescent
Comments: Nets A and Net B were used.			
Night 2 Conditions (Valid Survey Night: Yes)			
Night 2 Date:	July 24, 2025	Start and End Time:	20:46 to 01:46
Temperature In (°F):	77.4	Temperature Out (°F):	71.6
Wind Direction:		Wind Speed:	Calm (0 mph)
Precipitation:		Precipitation Duration:	
Sky Condition:	Clear	Moon Phase:	Waning Crescent
Comments: Net A and net C were used. Net B was removed and replaced with net C due to no captures in that net. Net C is a 15 meter net crossing one road corridor and a 12 meter crossing the other road corridor and are next to each other. Both bats on night 2 were caught in the 15 meter net.			
Net Setup			
	Net Width (m)	Net Count	Habitat Type
Net Set A	12	2	Road Corridor
Net Set B	13	2	Stream Corridor
Net Set C	27	2	Road Corridor



APPENDIX D

BAT CAPTURE DATA

Demographics and Morphometric Data

Site ID	Net Night	Date	Capture Time	Net Set	Species	Sex	Age	Reproductive Status	Mass (g)	Right Forearm (mm)	Comment
LBT-01	1	July 23, 2025	21:15	Net Set A	PESU	Male	Juvenile	Non-reproductive	4.25	34	
LBT-01	1	July 23, 2025	21:50	Net Set A	LABO	Male	Adult	Scrotal	10.25	39	
LBT-01	1	July 23, 2025	01:00	Net Set A	LABO	Female	Adult	Post-Lactating	10.50	43	
LBT-01	1	July 23, 2025	01:00	Net Set A	LABO	Female	Juvenile	Non-reproductive	11.25	44	
LBT-01	2	July 24, 2025	21:15	Net Set C	LABO	Female	Adult	Post-Lactating	13.75	41	
LBT-01	2	July 24, 2025	23:45	Net Set C	LACI	Male	Adult	Scrotal	27.50	56	

Mist Net Setup Details

Site Name	Net Set Code	Net Width (m)	Number of Nets in Set	Habitat Type
LBT-01	Net Set A	12	2	Road Corridor
LBT-01	Net Set B	13	2	Stream Corridor
LBT-01	Net Set C	27	2	Road Corridor

APPENDIX C – NET AND CAPTURE DATA

Demographics and Morphometric Data

Site ID	Net Night	Date	Capture Time	Net Set	Species	Sex	Age	Reproductive Status	Mass (g)	Right Forearm (mm)	Comment
LBT-03	1	July 31, 2025	22:00	Net Set A	EPFU	Escaped	Escaped	Escaped	-	-	

Mist Net Setup Details

Site Name	Net Set Code	Net Width (m)	Number of Nets in Set	Habitat Type
LBT-03	Net Set A	6	2	Road Corridor
LBT-03	Net Set B	6	2	Road Corridor

APPENDIX C – NET AND CAPTURE DATA

Demographics and Morphometric Data

Site ID	Net Night	Date	Capture Time	Net Set	Species	Sex	Age	Reproductive Status	Mass (g)	Right Forearm (mm)	Comment
LBT-04	1	August 5, 2025	21:40	Net Set A	EPFU	Male	Juvenile	Non-reproductive	15.25	48	
LBT-04	1	August 5, 2025	21:50	Net Set A	EPFU	Male	Adult	Non-reproductive	15.75	46	
LBT-04	1	August 5, 2025	22:20	Net Set B	EPFU	Female	Adult	Post-Lactating	17.25	48	
LBT-04	1	August 5, 2025	22:20	Net Set A	EPFU	Male	Adult	Non-reproductive	16.25	44	
LBT-04	1	August 5, 2025	22:40	Net Set A	EPFU	Male	Adult	Non-reproductive	15.75	45	
LBT-04	1	August 5, 2025	23:00	Net Set A	EPFU	Female	Juvenile	Non-reproductive	12.50	45	
LBT-04	1	August 5, 2025	23:00	Net Set A	LABO	Male	Adult	Non-reproductive	10.00	37	
LBT-04	1	August 5, 2025	00:49	Net Set B	LABO	Male	Adult	Scrotal	9.50	40	
LBT-04	2	August 6, 2025	21:23	Net Set A	LABO	Female	Juvenile	Non-reproductive	10.00	41	
LBT-04	2	August 6, 2025	22:08	Net Set A	EPFU	Female	Adult	Post-Lactating	15.50	47	

LBT-04	2	August 6, 2025	22:20	Net Set A	LABO	Female	Juvenile	Non-reproductive	9.75	38	
LBT-04	2	August 6, 2025	22:38	Net Set A	EPFU	Female	Adult	Post-Lactating	19.25	49	
LBT-04	2	August 6, 2025	00:00	Net Set A	LABO	Male	Juvenile	Non-reproductive	9.25	43	

Mist Net Setup Details

Site Name	Net Set Code	Net Width (m)	Number of Nets in Set	Habitat Type
LBT-04	Net Set A	9	2	Road Corridor
	Net Set B	12	3	Road Corridor

APPENDIX C – NET AND CAPTURE DATA

Demographics and Morphometric Data

Site ID	Net Night	Date	Capture Time	Net Set	Species	Sex	Age	Reproductive Status	Mass (g)	Right Forearm (mm)	Comment
LBT-05	1	July 28, 2025	01:29	Net Set B	PESU	Male	Adult	Non-reproductive	4.75	34	
LBT-05	2	July 29, 2025	00:14	Net Set B	LABO	Male	Juvenile	Non-reproductive	9.00	38	

Mist Net Setup Details

Site Name	Net Set Code	Net Width (m)	Number of Nets in Set	Habitat Type
LBT-05	Net Set A	6	2	Road Corridor
LBT-05	Net Set B	6	3	Road Corridor

APPENDIX C – NET AND CAPTURE DATA

Demographics and Morphometric Data

Site ID	Net Night	Date	Capture Time	Net Set	Species	Sex	Age	Reproductive Status	Mass (g)	Right Forearm (mm)	Comment
LBT-06	1	August 8, 2025	20:45	Net Set A	PESU	Male	Juvenile	Non-reproductive	5.00	34	
LBT-06	1	August 8, 2025	20:45	Net Set B	LABO	Male	Adult	Non-reproductive	10.75	41	
LBT-06	1	August 8, 2025	21:07	Net Set A	PESU	Male	Adult	Non-reproductive	5.00	33	
LBT-06	1	August 8, 2025	21:25	Net Set A	LABO	Female	Adult	Post-Lactating	13.00	43	
LBT-06	1	August 8, 2025	21:25	Net Set A	LABO	Male	Adult	Non-reproductive	8.25	39	
LBT-06	1	August 8, 2025	21:50	Net Set A	EPFU	Male	Adult	Non-reproductive	15.50	49	
LBT-06	1	August 8, 2025	23:20	Net Set B	LABO	Male	Adult	Non-reproductive	8.25	38	
LBT-06	1	August 8, 2025	23:20	Net Set A	LABO	Female	Juvenile	Non-reproductive	10.50	41	
LBT-06	2	August 9, 2025	21:10	Net Set A	PESU	Female	Adult	Post-Lactating	6.25	35	
LBT-06	2	August 9, 2025	21:45	Net Set A	PESU	Male	Juvenile	Non-reproductive	5.50	35	

LBT-06	2	August 9, 2025	22:05	Net Set B	PESU	Male	Juvenile	Non-reproductive	5.75	33	
LBT-06	2	August 9, 2025	23:24	Net Set A	EPFU	Female	Adult	Post-Lactating	19.75	48	
LBT-06	2	August 9, 2025	23:40	Net Set A	PESU	Female	Adult	Post-Lactating	6.25	34	
LBT-06	2	August 9, 2025	00:15	Net Set B	PESU	Female	Adult	Post-Lactating	7.00	35	

Mist Net Setup Details

Site Name	Net Set Code	Net Width (m)	Number of Nets in Set	Habitat Type
LBT-06	Net Set A	9	2	Stream Corridor
LBT-06	Net Set B	9	2	Stream Corridor



APPENDIX E

PHOTO LOG

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 1.	DATE 23-24 July 2025	
NET SITE: LBT-01		
DESCRIPTION: Net A		

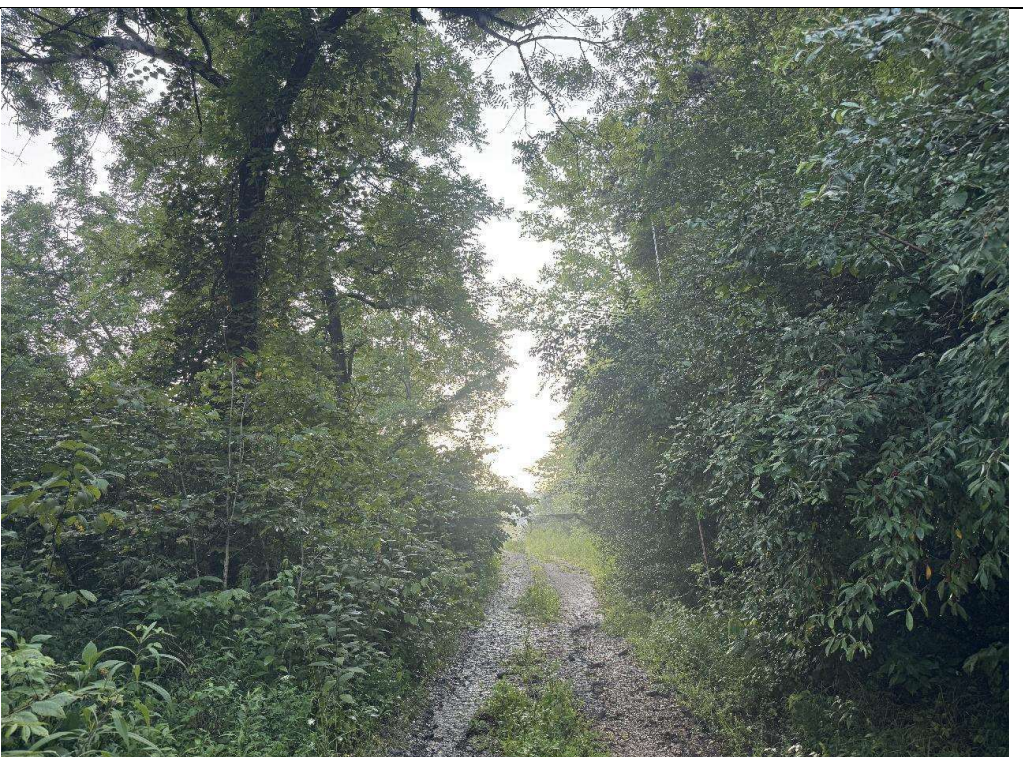
PHOTO NO. 2.	DATE 23 July 2025	
NET SITE: LBT-01		
DESCRIPTION: Net B		

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 3.	DATE 24 July 2025	
NET SITE: LBT-01		
DESCRIPTION: Net C		

PHOTO NO. 4.	DATE 29-30 July 2025	
NET SITE: LBT-02		
DESCRIPTION: Net A		

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 5.	DATE 29 July 2025	
NET SITE: LBT-02		
DESCRIPTION: Net B		

PHOTO NO. 6.	DATE 30 July 2025	
NET SITE: LBT-02		
DESCRIPTION: Net C		

Photographic Log

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 7.	DATE 31 July, 4 August 2025	
NET SITE: LBT-03		
DESCRIPTION: Net A		

PHOTO NO. 8.	DATE 31 July, 4 August 2025	
NET SITE: LBT-03		
DESCRIPTION: Net B		

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 9.	DATE 5-6 August 2025	
NET SITE: LBT-04		
DESCRIPTION: Net A		

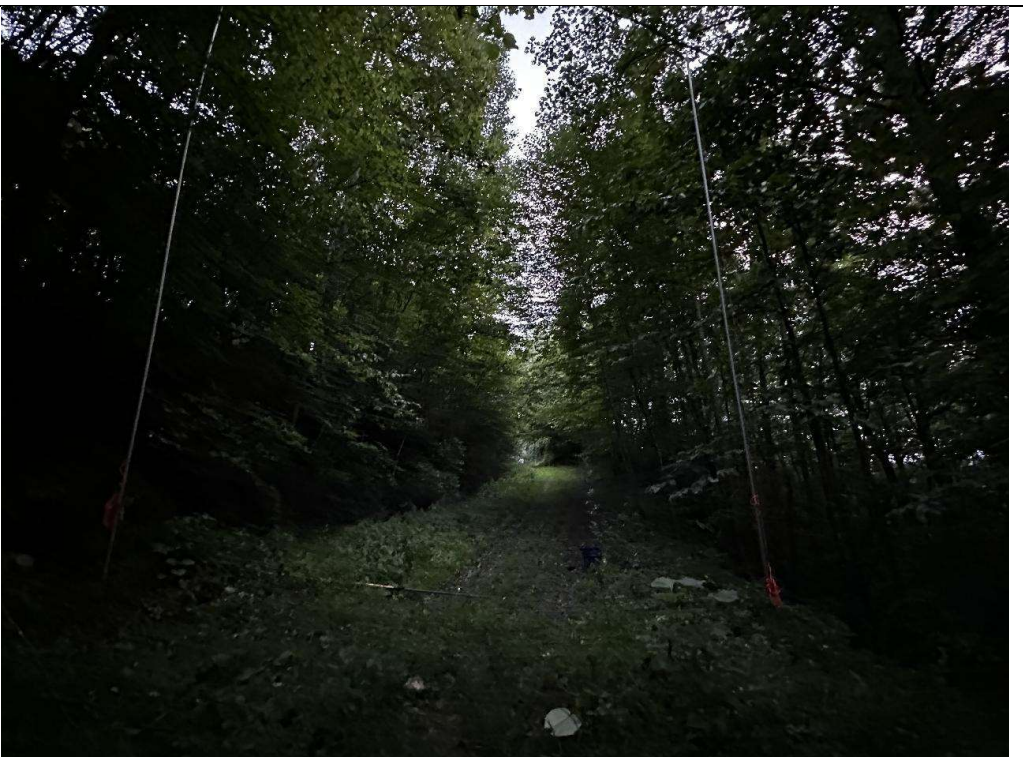
PHOTO NO. 10.	DATE 5-6 August 2025	
NET SITE: LBT-04		
DESCRIPTION: Net B		

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 11.	DATE 28-29 July 2025	
NET SITE: LBT-05		
DESCRIPTION: Net A		

PHOTO NO. 12.	DATE 28-29 July 2025	
NET SITE: LBT-05		
DESCRIPTION: Net B		

Photographic Log

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 13.	DATE 8-9 August 2025	
NET SITE: LBT-06		
DESCRIPTION: Net A		

PHOTO NO. 14.	DATE 8-9 August 2025	
NET SITE: LBT-06		
DESCRIPTION: Net B		



Photographic Log

CLIENT: Lynn Bark Energy Center,
C

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO.
15.

DATE
5 August
2025

SITE:
LBT-04

DESCRIPTION:
Representative photo of big
brown bat (*Eptesicus*
fuscus)



PHOTO NO.
16.

DATE
23 July 2025

SITE:
LBT-01

DESCRIPTION:
Representative photo of
eastern red bat (*Lasiurus*
borealis)



Photographic Log

ter,	SITE LOCATION: Martin County, Kentucky	PROJECT NO.: 2025-0116152
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CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 19.	DATE 23 July 2025	
SITE: LBT-01		
DESCRIPTION: Photo of tricolored bat (<i>Perimyotis subflavus</i>), band number KYF&W C22640.		

PHOTO NO. 20.	DATE 23 July 2023	
SITE: LBT-01		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22640.		

CLIENT: Lynn Bark Energy Center, LLC	SITE LOCATION: Martin County, Kentucky	PROJECT NO.: 2025-0116152
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PHOTO NO. 21.	DATE 28 July 2025	
SITE: LBT-05		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22639.		

PHOTO NO. 22.	DATE 28 July 2025	
SITE: LBT-05		
DESCRIPTION: Photo of tricolored bat, Band number KYF&W C22639.		

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 23.	DATE 8 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22638.		

PHOTO NO. 24.	DATE 8 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22638.		

CLIENT: Lynn Bark Energy Center, LLC	SITE LOCATION: Martin County, Kentucky	PROJECT NO.: 2025-0116152
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PHOTO NO. 25.	DATE 8 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22637.		

PHOTO NO. 26.	DATE 8 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22637.		

CLIENT: Lynn Bark Energy Center, LLC	SITE LOCATION: Martin County, Kentucky	PROJECT NO.: 2025-0116152
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PHOTO NO. 27.	DATE 9 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22636. Frequency 150.279		

PHOTO NO. 28.	DATE 9 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22636. Frequency 150.279		

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 29.	DATE 9 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22635. Frequency 150.041		

PHOTO NO. 30.	DATE 9 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22635. Frequency 150.041		

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 31.	DATE 9 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22634. Frequency 150.158		

PHOTO NO. 32.	DATE 9 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22634. Frequency 150.158		

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

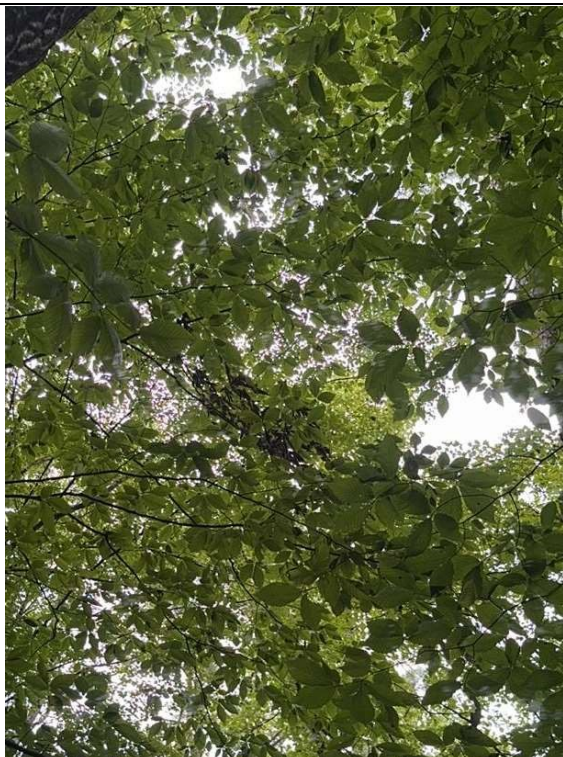
PROJECT NO.: 2025-0116152

PHOTO NO. 33.	DATE 9 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22633. Frequency 150.228		

PHOTO NO. 34.	DATE 9 August 2025	
SITE: LBT-06		
DESCRIPTION: Photo of tricolored bat, band number KYF&W C22632.		

CLIENT: Lynn Bark Energy Center, LLC	SITE LOCATION: Martin County, Kentucky	PROJECT NO.: 2025-0116152
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PHOTO NO. 1.	DATE 12 August 2025		
ROOST TREE: 150.158-01			
DESCRIPTION: An American Beech (<i>Fagus grandifolia</i>) roost tree used by a juvenile male tricolored bat for one day on 12 August 2025.			

PHOTO NO. 2.	DATE 12 August 2025	
ROOST TREE: 150.158-01		
DESCRIPTION: Microhabitat used by bat 150.158: a dead leaf cluster		

Photographic Log

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO.

3.

DATE

13 August
2025

ROOST TREE:
150.158-02

DESCRIPTION:

An American Beech roost
tree used by a juvenile male
tricolored bat for one day on
13 August 2025.



PHOTO NO.

4.

DATE

13 August
2025

ROOST TREE:
150.158-02

DESCRIPTION:

Microhabitat used by bat
150.158: a dead leaf cluster

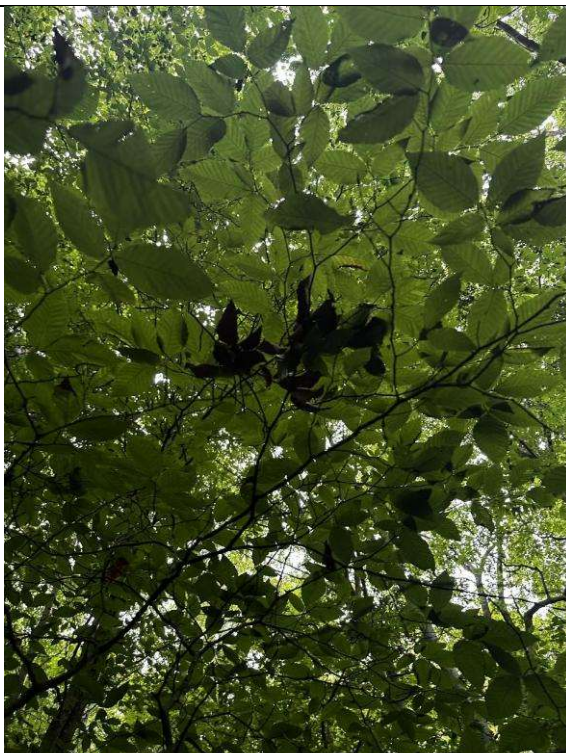


CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 2025-0116152

PHOTO NO. 5.	DATE 13 August 2025			
ROOST TREE: 150.041-01				
DESCRIPTION: An American Beech roost tree used by a juvenile male tricolored bat for one day on 13 August 2025.				

PHOTO NO. 6.	DATE 13 August 2025			
ROOST TREE: 150.041-01				
DESCRIPTION: Microhabitat used by bat 150.041: a dead leaf cluster				

CLIENT: Lynn Bark Energy Center, LLC	SITE LOCATION: Martin County, Kentucky	PROJECT NO.: 2025-0116152
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PHOTO NO. 7.	DATE 12 August 2025	
ROOST TREE: 150.279-01		
DESCRIPTION: An American Beech roost tree used by an adult female tricolored bat for five days 12 – 16 August 2025.		

PHOTO NO. 8.	DATE 12 August 2025	
ROOST TREE: 150.279-01		
DESCRIPTION: Microhabitat used by bat 150.279: a dead leaf cluster in the canopy		