Exhibit R. 2015 Bat Mist-Netting Report



Summer 2015 Bat Surveys for the Proposed Republic Wind Project, Seneca and Sandusky Counties, Ohio

USFWS No. 15-045

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412- Republic Wind Project Bat Survey, Seneca & Sandusky Counties, Ohio, July 2015

PROJECT BACKGROUND

Copperhead Environmental Consulting, Inc. (Copperhead) completed a bat mist-net and telemetry survey for the proposed Republic Wind Project (Project) in Seneca and Sandusky counties, Ohio. The Project is located approximately 11 kilometers northeast of Republic Ohio, and covers approximately 37,777 acres, the majority of which is non forested (~94%) based on estimates derived from National Land Cover Dataset (Figure 1). The goals of this survey were to document bat species diversity and abundance within the study area, and inform understanding of roosting habitat, foraging range, and spatial distribution of Indiana bats and northern long-eared bats, if captured.

METHODOLOGY

Level of Effort/Site Selection

Mist-net surveys were implemented in accordance with guidelines outlined in the 2015 Range-wide Indiana Bat Summer Survey Guidelines (USFWS 2015), 2009 Ohio Department of Natural Resources (ODNR) On-Shore Bird and Bat Pre- and Post-Construction Monitoring Protocol for Commercial Wind Energy Facilities in Ohio (ODNR 2009), and the most recent Ohio Division of Wildlife Guidance for Bat Permitted Biologist (ODNR-DOW 2015). Because the survey was not a presence/absence survey for listed bats, the total number of net nights per mist-net site and specific net set requirements followed ODNR (2009). A study plan was submitted to the USFWS and the ODNR on 7 July 2015 and concurrence was received on 13 July (USFWS) and 22 July (ODNR).

The level of effort outlined in the study plan was based on the estimated amount of forested habitat within the Study Area (~4,454 ac) resulting in 36 mist-net sites surveyed from 23 July through 31 July 2015. After field work was completed, the area of the Project was reduced and is denoted as Project Area – Reduced Fall 2015 in Figure 1. The level of effort completed exceeds the level of effort required for the Project Area.

Locations of mist-net sites were chosen based on the best available habitat present within parcels where landowner access was granted, and deemed most likely to yield Indiana and northern long-eared bat captures.

Mist-Net Surveys

Mist-nets were set-up to maximize coverage of flight paths used by bats along suitable travel corridors, foraging areas, or drinking areas. Placement of mist-nets was based on the extent of canopy cover, presence of an open flyway, and forest conditions near the site. Actual location and orientation of each net was determined in the field by permitted biologists and mapped with ArcGIS (v. 10.3.1 ESRI, Redlands, CA).

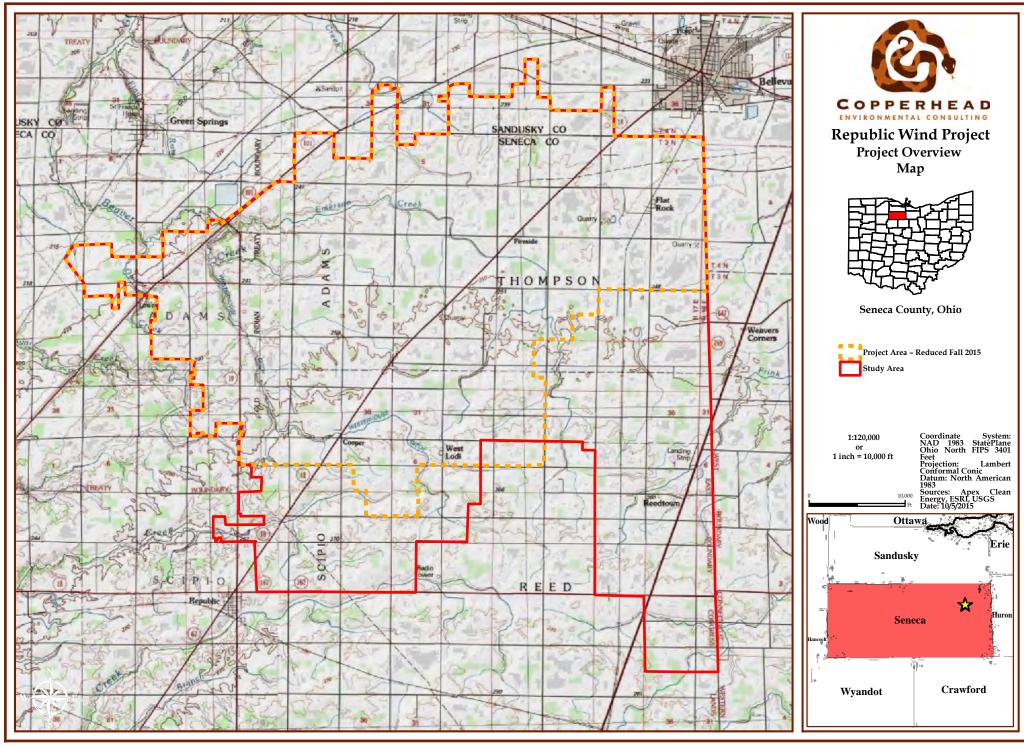


Figure 1. Proposed Republic Wind Project and bat study area overview, Seneca and Sandusky Counties, Ohio, 2015.

Each mist-net site consisted of four net sets with at least one set being a high net (three mist-nets stacked to create one set that was \sim 7.5 m tall). Mist-net sites were surveyed for two nonconsecutive nights (due to an access issue, site 3 was surveyed for only one night), totaling eight net nights per site. Low visibility, high-quality, nylon nets, 4 to 12 meters (\sim 13 - 42 ft.) in length (depending upon the width of the corridor) were used for each net set. Nets were deployed at sunset each night, left open for at least five hours, and checked every 10 minutes.

Disturbance near the nets was kept to a minimum. Weather data, including temperature, wind speed, and cloud cover, were recorded for each site on an hourly basis to ensure compliance with the mist-netting guidelines (e.g., temperature during survey > 50° F).

Bats were live-caught in mist-nets and released unharmed near the point of capture. Biological and morphometric data, i.e., species, sex, age class, reproductive condition, mass, and forearm length were recorded on data sheets 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. All captured northern long-eared bats and Indiana bats were banded utilizing ODNR, Division of Wildlife (DOW) bands as required by ODNR and OH USFWS.

White-Nose Syndrome Protocol

In an effort to minimize the transmission of White-Nose Syndrome (WNS) between captured bats, all netting and field activities followed the most up-to-date guidelines established by USFWS. All hard, non-porous netting equipment was sanitized with a Lysol® IC solution prior to arrival at the project site and after each survey night; all other equipment was submersed in hot water (140°F) for a minimum of 20 minutes. Disposable latex gloves were worn over sanitized handling gloves and changed following the handling of each bat. All non-disposable equipment, e.g., PESOLA® scales, rulers, calipers, etc., coming into contact with bats was sanitized immediately following the handling of each bat. Bats were evaluated for potential WNS infection through wing scoring following the "Wing-Damage Index Used for Characterizing Wing Condition of Bats Affected by White-nose Syndrome" (Reichard and Kunz 2009).

Radio Telemetry

Radio Transmitter Attachment

Captured Indiana and northern long-eared bats were radio-tagged in order to locate diurnal roosts. Radio transmitters (Holohil Systems Ltd. LB-2X, frequency 172 kHz, 0.30 g and Lotek PicoPip Ag337, 172 kHz, <0.32g) were tested before being attached

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between the scapulae of the bat with Permatype, a nontoxic surgical adhesive that degrades over time allowing the transmitter to fall off the bat. Each transmitter had a unique frequency, which was used to identify individual bats during radio-tracking.

Diurnal Radio Telemetry & Emergence Counts

Model TRX-1000S (Wildlife Materials Inc., Carbondale, Illinois, USA) tracking receivers and 172-3 FB 3- and 5-element Yagi directional antennas were used to track radiotagged bats and locate day roosts. Once located, each roost tree was photographed and coordinates were obtained using a handheld GPS unit. In addition, a variable radius plot was established around each roost tree using a 10-factor English prism (Cruise Master Prisms, Inc.) to determine stand characteristics and basal density. Data recorded for each tree within the plot included species, diameter at breast height (dbh), tree height, roost height, canopy cover, and bark condition. Roost tree locations were mapped with ArcGIS (v. 10.3.1 ESRI, Redlands, CA).

Emergence counts were conducted on each roost tree located during telemetry efforts. The number of roost trees monitored on a given evening was determined by availability of personnel and access to roost trees, with priority given to roost trees that were occupied by a radio-tagged bat. Emergence counts were conducted by a biologist or recorded with a night vision video camera, which allowed emergence counts to be conducted on several trees concurrently each night. Observers arrived at roosts before sunset and positioned themselves so that the roost was backlit by the evening sky and remained at the roost until darkness inhibited further counts. Video cameras were positioned at a roost tree before sunset and retrieved after emergence was finished for the night. Videos were watched the next day by biologists and the number of bats emerging was counted. Emergence data were recorded on the back of the roost tree data sheets.

Foraging Telemetry

Foraging telemetry was conducted using a Cessna Sky Hawk 172 fitted with aircraft strut mount assemblies (Advanced Telemetry Systems Inc., [ATS] 1997, Isanti, MN) with two 172-3FB 4-element ATS Yagi directional antennas (ATS model #13886). The use of fixed-winged aircraft to collect foraging data allowed for the collection of data on multiple bats each night, and the ability to move long distances between multiple foraging areas in one night. The aerial crew consisted of a pilot and a navigator/copilot. The pilot maintained an elevation of approximately 455 meters (1500 ft.) above ground level. The navigator monitored the transmitter signal through the receiver estimating the bat location on mapping software (DeLorme Topo North America 9.0, Yarmouth, ME). Two strategies were employed for determining a bat's location. For one method, the pilot flew the airplane in tight circles above the bat with the airplane positioned so the inside antenna was always pointed toward the bat. The

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other method utilized multiple crosses over the bat, listening to signal strength, switching antennas, and viewing the airplane's GPS location on the laptop. When enough information was gathered and the navigator felt confident with the bat's approximate location, a foraging point was plotted on the electronic map and labeled with a bat frequency and time. To estimate error associated with location data collected from the airplane, the aerial crew estimated locations of stationary bats in their roosts during the day (n=6) and compared them to the actual locations of those roosts as documented via ground telemetry. The resulting telemetry error from the airplane was 340.0 ± 128.0 (SE) m (range: 91.0 - 950.0 m).

Locations of foraging bats and capture locations were pooled and examined using the fixed kernel method and a least squares cross-validation smoothing parameter conducted with BiotasTM version 2.0a 3.8 (Ecological Software Solutions LLC, Hegymagas, Hungary) to determine utilization distributions (UD) for each individual. UD's were imported into ArcGIS to calculate the 50%, 75%, and 95% probability contour for each individual bat and for all bats combined. Foraging areas were defined based on the area of use within these probability contours. Most of the foraging area with outlier locations eliminated was defined by the 95% probability contours (majority foraging area), areas within the 75% probability contours were considered intermediate foraging usage areas, and 50% probability contours were considered core foraging areas. Probability contours were imported into ArcGIS for additional analysis using aerial photography, USGS spatial analysis, and GIS layers provided by Apex to characterize foraging areas.

One-sample Student's t-tests were used to determine differences in foraging area sizes (50%, 75%, 95% probability contours) among individual bats and among female northern long-eared bats. Average values were reported with plus or minus standard error (±SE). Pearson's correlation tests (r) were used to determine the relationship between the number of points collected for each foraging bat and the number of nights a bat was tracked. An analysis of variance (one-way ANOVA) was used to determine differences among individual bats in distances foraged from forested habitat.

RESULTS AND DISCUSSION

Mist-Net Survey

Mist-net surveys were conducted at 36 sites from 23 - 31July 2015 (Table 1, Figure 2). A total of 429 bats of six species were captured, including one female Indiana bat and fourteen (12 female, 2 male) northern long-eared bats, over 284 net nights (Table 2). Big brown bats (*Eptesicus fuscus*) comprised 75 percent of total captures (n=320) and eastern red bats (*Lasiurus borealis*) comprised 21 percent of total captures (n=88). Completed bat capture data sheets are provided in Appendix A, photographs of mist-net sites are provided in Appendix B, and representative photographs of each bat species captured are provided in Appendix C.

Table 1. Mi	ist-net site locations,	Republic Wind Pro	ject, Ohio, 2015.
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Site No.	Latitude	Longitude	Site Location
1	41.167111	-82.884334	N. County Rd. 29, Schriner Prop., Woodlot Near Pond
2	41.115820	-82.843740	Stream Corridor Southeast Of Township Rd And Trail 0197
3	41.181645	-82.932637	Wood Lot; Saturated Mud Flats
4	41.155000	-82.855900	Woodlot Off Reedtown Rd
5	41.167295	-82.848025	Woodlot West Of CR 4 With Intermittent Stream
6	41.186530	-82.849620	Woodlot South Of CR 46
7	41.252800	-82.865720	SW Of Site 28
8	41.170720	-82.893070	Stream Off Of CR 136
9	41.143560	-82.929480	Woodlot South Of E Township Road 124
10	41.153120	-82.926210	Forest Gap; Logging Road; Pond In Forest
11	41.139200	-82.992230	CR 122
12	41.184500	-82.935600	Wooded Area Of N. CR 27
13	41.178090	-82.890620	Woodlot Logging Road Off Stream
14	41.224734	-83.028039	Woodlot SE Of Portland Rd
15	41.200800	-83.015200	Creek Along Hwy 19
16	41.157652	-82.989259	Pond In Woodlot West Of CR 28 And S Of East CR 24
17	41.175850	-82.960330	Woodlot Next To Soybean Field Off N Township Rd 183
18	41.179190	-82.928270	Woodlot And Perennial Stream
19	41.176590	-83.003480	Forest/Ag Edge, Stream, Corridor
20	41.186390	-82.931455	Wood Lot Off CR 15 S And East Of North CR 27
21	41.211200	-82.963580	Woodlot South Of Site 26

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Site No.	Latitude	Longitude	Site Location
22	41.219650	-82.944167	5425 N SR 18, Woodlot, Ziegler Property
23	41.249950	-82.962020	Township Road 78 Meacham Prop, Interior Mudflats & Trails @ deer stand
24	41.178040	-82.888610	Logging Road Through Woodlot; Open Water Of Emergent Wetland
25	41.217306	-82.908250	Decker Property Of E CR 32
26	41.218160	-82.967180	Trails Through Woods Behind "Sugar Shack"
27	41.188540	-82.986353	Snavely Property Off TR 138
28	41.253563	-82.868040	Woodlot South Of CR 62, West Of CR 68
29	41.247860	-82.937220	Woodlot Beside Lodi-Colby Road, Ag Field
30	41.182580	-83.024150	Woodlot East Of Township Road 138
31	41.155560	-82.949780	Woodlot Bordered By Bean And Corn, South Of E. County Road 24
32	41.175420	-82.922500	Woodlot South Of East Township Road
33	41.182330	-82.935820	Woodlot And Pond Near Coyote Grove Campground
34	41.153410	-82.961690	Woodlot South Of East County Rd 34 And West Of Township Rd 183
35	41.183680	-82.903440	Recently Logged Wood Lot
36	41.155480	-83.004700	Woodlot South Of County Rd. 24

Table 2. Total bat captures by species, age, sex, and reproductive status, Republic Wind Project, Ohio, 2015.

	Adult I	Adult Female			Juvenile					
Species	NR*	S	Р	L	PL	NR	Female	Male	Escaped	Total
Eptesicus fuscus	42	52	1	10	73	8	51	71	12	320
Lasiurus borealis	2	3	0	4	16	3	37	10	13	88
Lasiurus cinereus	0	0	0	0	0	1	1	3	0	5
Myotis septentrionalis	1	0	0	2	3	2	5	1	0	14
Myotis sodalis	0	0	0	0	1	0	0	0	0	1
Perimyotis subflavus	0	0	0	0	0	0	1	0	0	1

* NR=non-reproductive, S=scrotal, P=pregnant, L=lactating, PL=post-lactating

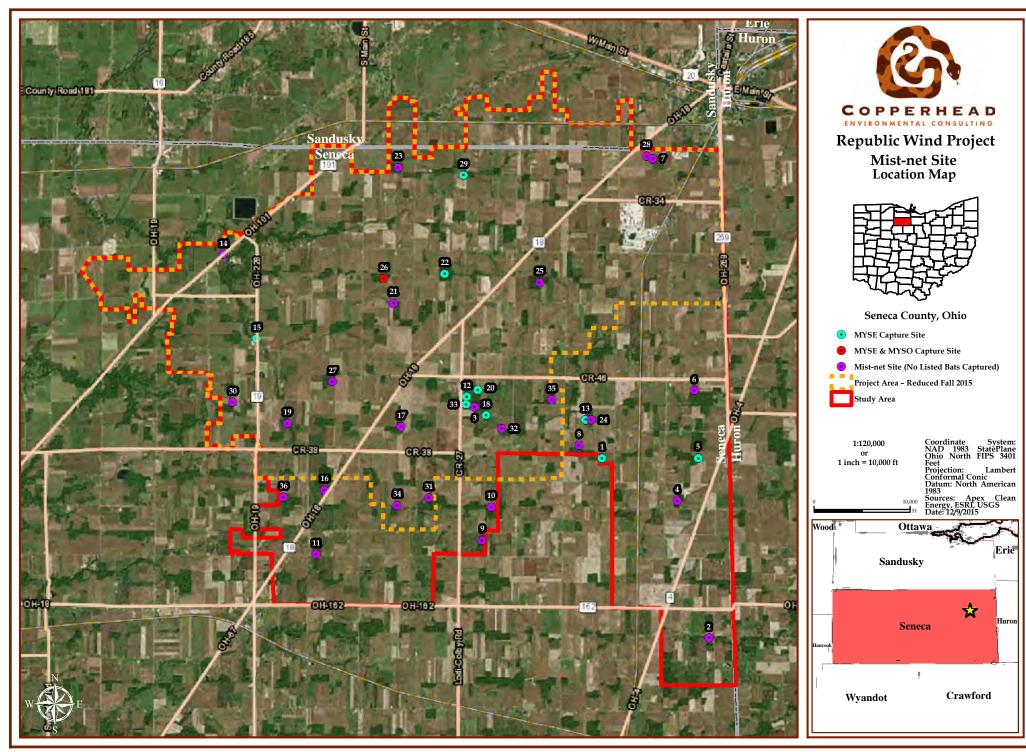


Figure 2. Mist-net site locations, Republic Wind Project study area, Seneca and Sandusky Counties, Ohio, 2015.

Diurnal Radio Telemetry

In accordance with the ODNR/USFWS approved study plan, seven northern longeared bats and the only Indiana bat captured were radio-tagged in order to locate diurnal roost trees (Table 3).

	Site	Band Number			Reproductive		Transmitter Freq. (172.xxx)
Species ¹	No.	(ODNR)	Age ²	Sex ³	Status ⁴	Mass (g)	BAT ID
MYSE	26	23551	A	F	PL	6.5	188
MYSE	26	23552	А	F	PL	7.25	587
MYSE	18	23360	J	F	NR	6.75	030
MYSE	18	23361	А	F	NR	7.5	137
MYSE	13	17179	А	F	L	7.5	205
MYSE	22	17171	А	М	NR	8.0	287
MYSE	33	17166	А	F	NR	6.0	450
MYSE	18	23362	J	F	NR	6.0	-
MYSE	1	17172	А	М	NR	7.0	-
MYSE	5	_5	J	F	NR	6.0	-
MYSE	12	17344	J	F	NR	6.0	-
MYSE	13	17179	А	F	L	7.0	-
MYSE	15	17345	А	F	PL	7.5	-
MYSE	20	17168	J	F	NR	6.0	-
MYSO	26	23553	А	F	PL	8.5	779

Table 3. Indiana and northern long-eared bats captured and radio-tagged during the mist-net survey, Republic Wind Project, Ohio, 2015.

¹MYSE=northern long-eared bat, MYSO=Indiana bat

²A=adult, J=juvenile

³F=female, M=male

⁴ PL=post-lactating, NR=non-reproductive, L=lactating

⁵Escaped before band could be fitted

Of the eight bats that were radio-tagged, three northern long-eared bats and one Indiana bat were tracked for seven days each. One northern long-eared bat (MYSE 188) was tracked for two days, and one (MYSE 137) was tracked for three days, both due to the transmitter falling off. One northern long eared bat (MYSE 450) was captured on the last night of the mist-net survey and was only tracked for two days because the maximum number of bats to be radio-tagged had already been met. The male northern long-eared bat was not tracked during diurnal telemetry because the target number of females were met. As a result of the diurnal radio telemetry effort, 14 northern longeared bat roost trees and two Indiana bat roost trees were located (Table 4, Figures 3-6). Completed roost tree data sheets are in Appendix D and roost tree photographs are in Appendix E.

			Estimated Height (m)					No.
Roost Tree No.	Tree Species	DBH (cm)	Tree	Roost	Condition ²	Tree Ranking ³	Bat Species Use ⁴ _BAT ID	Calendar Days Used
983	Fraxinus pennsylvanica	27.0	9.0	3.0	S	S	MYSE_188	1
395	Prunus serotina	37.2	17.0	10.7	S	С	MYSE_188 MYSE_587	3
985	Fraxinus pennsylvanica	28.5	12.0	8.0	S	С	MYSE_137	1
988	Acer saccharinum	36.3	15.0	20.0	LD	С	MYSE_137	1
986	Acer saccharinum	16.6	5.0	4.0	S	S	MYSE_137	1
984	Fraxinus pennsylvanica	34.3	12.0	7.0	S	С	MYSE_030	2
987	Acer saccharinum	56.3	12.0	8.0	S	С	MYSE_030	5
369	Fraxinus pennsylvanica	40.0	4.0	3.0	S	U	MYSE_587	1
371	Fraxinus pennsylvanica	42.4	18.0	9.0	S	С	MYSE_587	2
372	Carya ovata	34.0	23.0	15.0	L	С	MYSE_587	1
373	Fraxinus sp.	47.2	24.5	12.0	S	С	MYSE_587	2
140	Fraxinus sp.	48.5	25.0	20.0	S	С	MYSE_205	2
314	Quercus sp.	91.0	18.5	-	S	С	MYSE_205	2
396	Fraxinus sp.	31.0	11.0	6.0	S	С	MYSE_450	2
368	Unk. ¹	52.7	21.5	7.5	S	С	MYSO_779	5
370	Fraxinus. pennsylvanica	58.7	18.5	3.0	S	С	MYSO_779	1

Table 4. Northern long-eared bat and Indiana bat roost trees located during radio telemetry
efforts, Republic Wind Project, Ohio, 2015.

¹ unk = too decayed to determine species ² L = live, LD = live damaged, S = snag

³ C= canopy, SC = sub canopy, U = understory

⁴ MYSE = northern long-eared bat, MYSO = Indiana bat

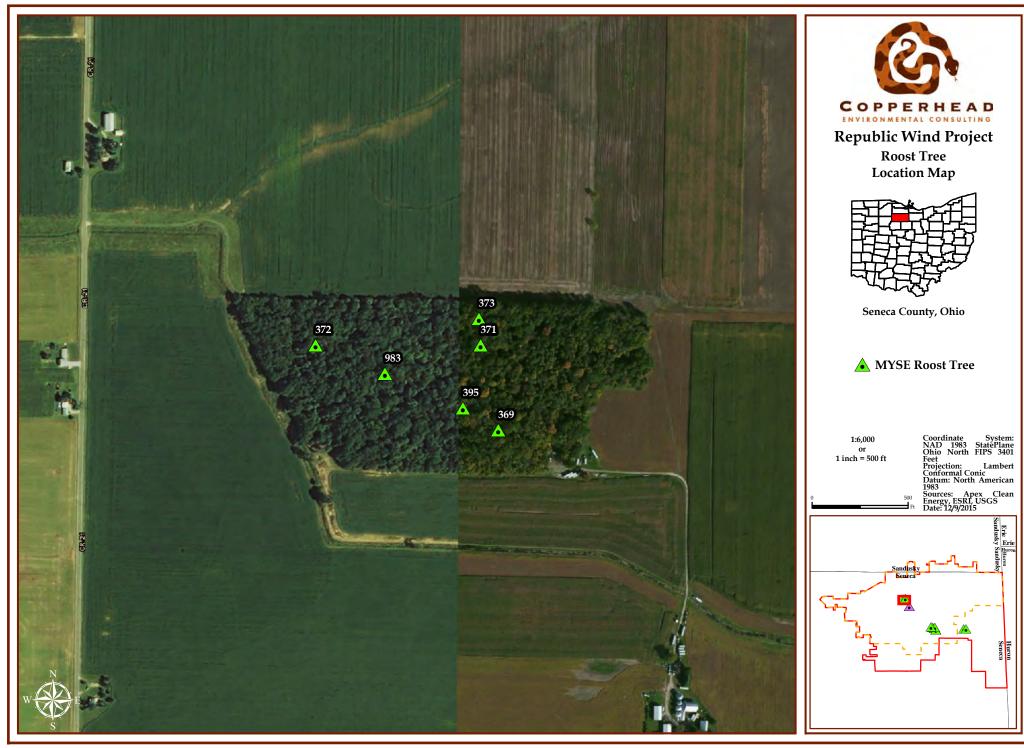


Figure 3. Roost trees used by northern long-eared bats, Republic Wind Project 2015.

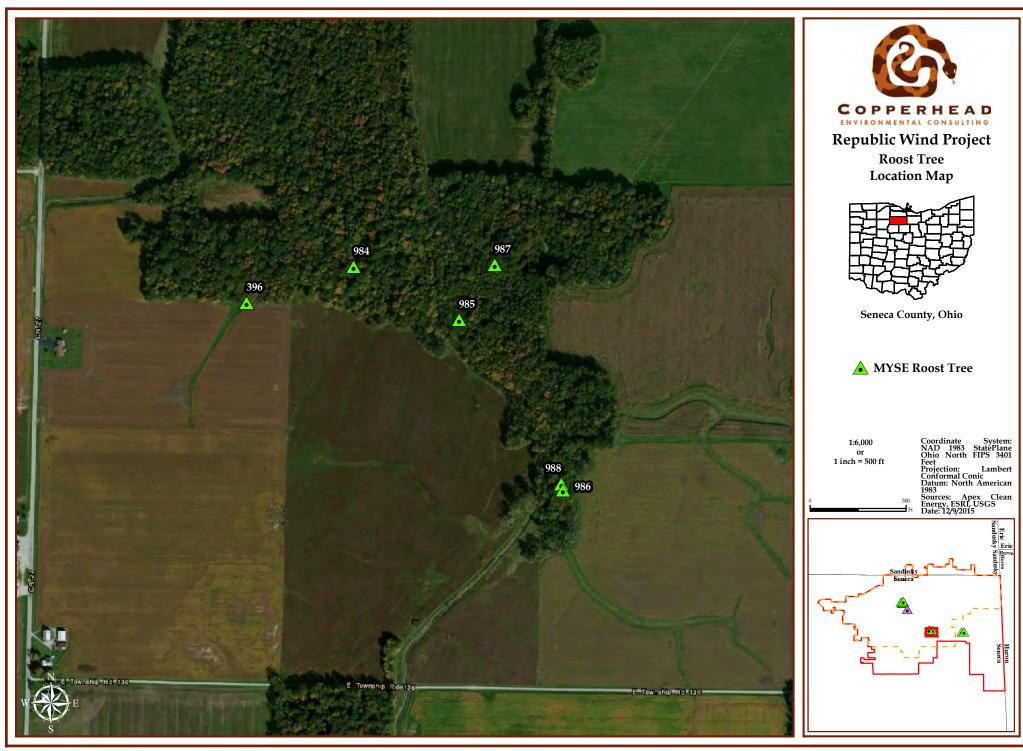


Figure 4. Roost trees used by northern long-eared bats, Republic Wind Project, 2015.

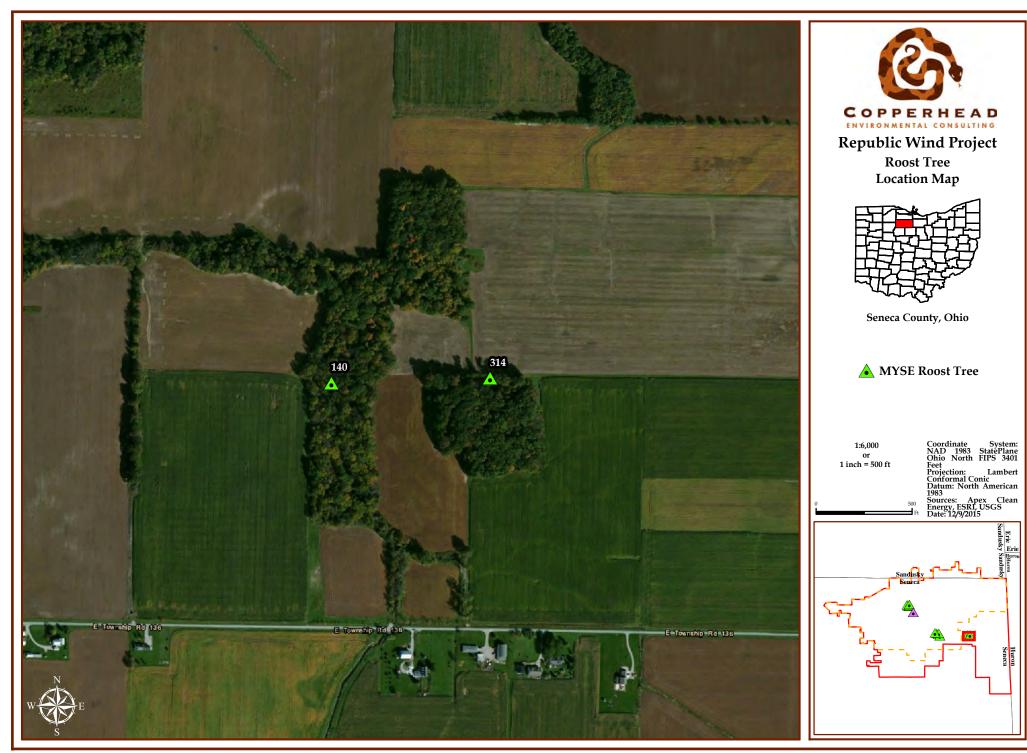


Figure 5. Roost trees used by northern long-eared bats, Republic Wind Project, 2015.

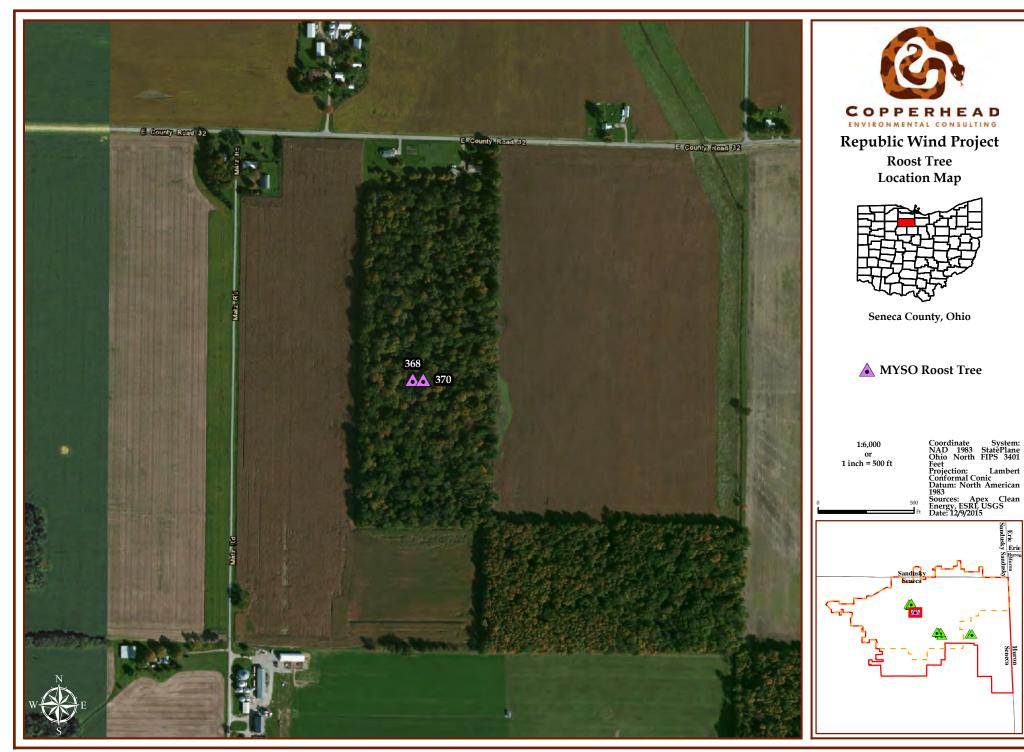


Figure 6. Roost trees used by the Indiana bat, Republic Wind Project, 2015.

Radio-tagged bat(s) not located by ground crew(s) after several hours of searching were located by the airplane the same day. In these cases, the aerial crew provided coordinates of the bat's estimated location to the ground crew, allowing them to quickly pick up the transmitter signal and continue on foot to locate the roost tree. All radio-tagged bats were accounted for during each day of tracking, except for MYSE 205, which could not be located by either the ground or aerial crew on 29 July 2015; MYSE 205 was heard again on 30 July 2015 where it was found in roost tree 314 (Table 5).

The aerial crew was also used to confirm whether a transmitter had been shed by a bat. When a radio-tagged bat did not emerge from its roost tree during an emergence count and was not heard flying during foraging telemetry efforts that evening, it was considered to have been shed by the bat. This occurred with MYSE 188 on day three of tracking and MYSE 137 on day four of tracking (Table 5).

During seven days of tracking, the juvenile female northern long-eared bat switched roost trees the fewest times (n=2), using two roost trees. The greatest number of roost tree switches (n=4) was done by an adult female northern long-eared bat (MYSE 587) that used five roost trees over seven days. The adult female Indiana bat also switched roost trees four times, but only used two different roost trees over seven days (Table 5).

Bat										
ID	Bat ¹	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul	1-Aug	2-Aug
188	AF-MYSE	RT983	RT395	shed	-	-	-	-	-	-
137	AF-MYSE	-	-	RT985	RT986	RT988	shed	-	-	-
030	JF-MYSE	-	-	RT984	RT984	RT987	RT987	RT987	RT987	RT987
587	AF-MYSE	-	-	RT395	RT369	RT371	RT371	RT372	RT373	RT373
205	AF-MYSE	-	-	RT140	RT140	no signal	RT314	RT314	off parcel	off parcel
450	AF-MYSE	-	-	-	-	-	-	-	RT396	RT396
779	AF-MYSO	-	-	RT368	RT370	RT368	off parcel	RT368	RT368	RT368

Table 5. Roost tree (RT) use by radio-tagged northern long-eared and Indiana bats, Republic Wind Project, Ohio, 2015.

¹ AF = adult female, JF = juvenile female, MYSE=northern long-eared bat, MYSO=Indiana bat

Emergence Counts

A total of 37 emergence counts were conducted from 25 July – 2 August 2015 (Table 6). The highest emergence count from a single roost tree was five bats, which occurred at two northern long-eared bat roost trees [RT987 (juvenile female), RT371 (adult female)], and one Indiana bat roost tree [RT368 (adult female)]. In several instances, despite knowing there was at least one radio-tagged bat in a roost tree, the bat(s) did not emerge before dark and those roost trees were given an emergence count of zero (Table 6).

Roost No.	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul	1-Aug	2-Aug
MYSE ¹	~		5					U	0
983	1						1		
395		1		02		02			
985			2	1					
984			1	1					
140			2	2					
986				1			0		
369				02					
987					3	3	5	3	1
988					2	02			
371					3	5			
314						3			
372							1		
396								1	2
373								1	1
Total Bats	1	1	5	5	8	11	7	5	4
MYSO ¹									
368			4	1	2		5	2	1
370				1		0			
Total Bats	1	11 + 10/00	4	2	2	0	5	2	1

Table 6. Emergence counts of northern long-eared and Indiana bat roost trees, Republic Wind Project, Ohio, 2015.

¹ MYSE = northern long-eared bat, MYSO = Indiana bat

² radio-tagged bat was present in tree, but did not emerge before dark

Foraging Telemetry

Foraging telemetry was conducted on one Indiana bat and five northern long-eared bats from 27 - 31 July 2015 as outlined in the USFWS/ODNR approved study plan (Table 7). Two northern long-eared bats, one adult male and one adult female, were tracked for less than five nights because telemetry effort focused on female bats and MYSE 137's transmitter shed after three days. All other radio-tagged bats were tracked for five nights each. The number of foraging points collected for each bat ranged from 10 - 87 with an average of 54.5 ± 11.6 points per bat (Figure 7).

Bat ID	Age*	Sex*	Repro. Status*	Species*	No. Nights Tracked	No. Points Collected
030	J	F	NR	MYSE	5	87
137	А	F	NR	MYSE	3	38
205	А	F	L	MYSE	5	63
587	А	F	PL	MYSE	5	49
287	А	М	NR	MYSE	2	10
779	А	F	PL	MYSO	5	80

Table 7. Data collected on foraging northern long-eared and Indiana bats, 27 July – 31 July, Republic Wind Project, Ohio, 2015.

* J = juvenile, A = adult, F = female, M = male, NR = non-reproductive, L = lactating, PL = post-lactating, MYSE = northern longeared bat, MYSO = Indiana bat

Foraging area sizes were calculated for six radio-tagged bats (Table 8, Fig. 8). Sizes of the 50% and 75% probability contour foraging areas were not different among individuals; however, 95% probability contour foraging areas did vary in size among individuals (Table 9). Variation in total foraging area sizes is to be expected when comparing across multiple species, ages, and sexes; however, total foraging area sizes varied even among female northern long-eared bats (Table 9, 10). Foraging areas for individual bats are displayed in Figures 9 – 14.

Mean foraging distance from forested habitat did not differ among individual bats ($F_{5,121} = 1.692$, P = 0.142), therefore all bats were grouped together resulting in 39 percent of foraging points (n=127) being located outside of forested habitat. The mean distance bats foraged from the forest edge was 57.5±5.1 meters (range: 0.2 – 379.3 m). However, 61 percent of foraging points (n = 202) were within forested habitat.

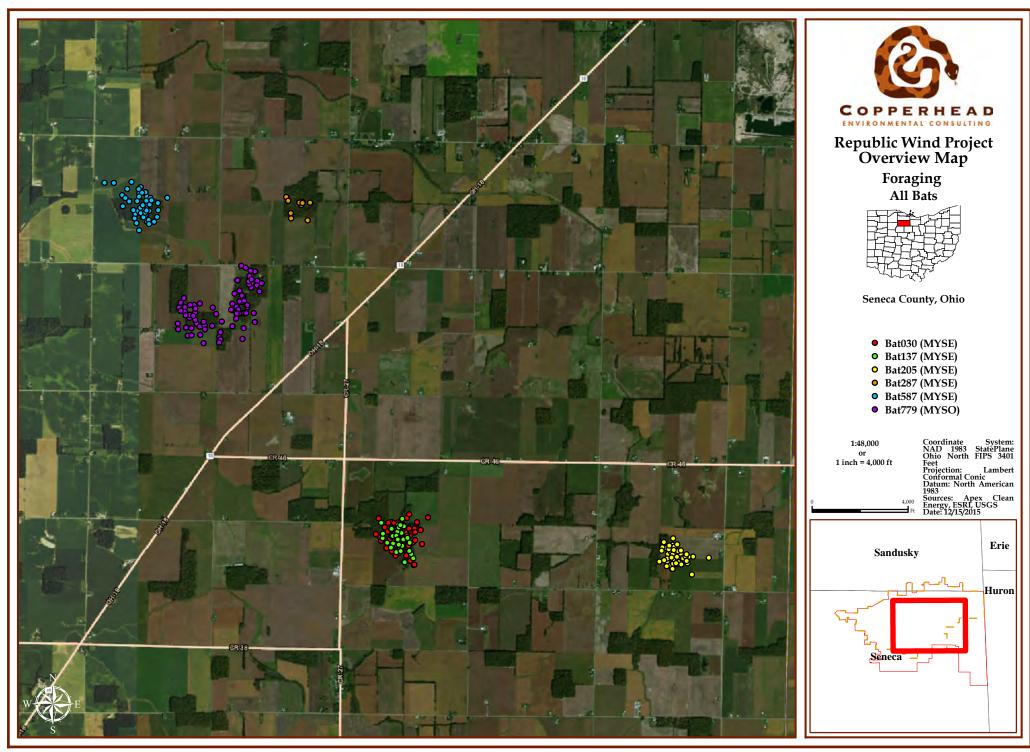


Figure 7. Foraging points collected on five northern long-eared bats and one Indiana bat, Republic Wind Project, 2015.

			For	raging Area (acr	es)	
Bat ID	Bat ID Age* Sex*		Species*	95% contour	75% contour	50% contour
multiple			Sum of All Bats	366.0	74.2	27.6
030	J	F	MYSE	100.6	41.5	20.4
137	А	F	MYSE	65.4	31.2	8.0
205	А	F	MYSE	52.6	22.7	10.6
587	А	F	MYSE	110.2	18.1	45.3
287	А	М	MYSE	15.1	3.2	1.1
779	А	F	MYSO	266.4	138.7	58.1
multiple			Mean of All Bats	101.7±35.8	47.1±3.2	19.4±8.3

Table 8.	Foraging area	sizes for	northern	long-eared	and Indian	na bats,	Republic Wind	d Project,
27 July -	· 31 July, 2015.			0			-	2

* J = juvenile, A = adult, F = female, M = male, MYSE = northern long-eared bat, MYSO = Indiana bat

Table 9. Comparison of foraging area size among individuals, Republic Wind Project, 27 July – 31 July, 2015. Italicized values are significant at level alpha = 0.05.

			Foragin	g Area			
	mean 95%	6 contour	mean 75 ^o	% contour	mean 50% contour		
Bat Group	t	р	t	р	t	р	
All Bats ($n = 6$)	2.347	0.066	2.437	> 0.05	2.841	0.036	
Female MYSE (n=4)	2.479	0.089	5.506	0.012	5.956	0.009	

Table 10. Mean foraging area size for three adult and one juvenile female northern long-eared bats, Republic Wind Project, 27 July – 31 July, 2015.

		1	Foraging A	rea (acres)		
	mean 95%		mean 75%		mean 50%	
Bat group	95% contour	range	contour	range	contour	range
<u> </u>		8*		0*		8.0 -
Female MYSE (n = 4)	82.2±13.8	52.6 - 110.2	35.2±5.1	22.7 - 45.3	14.3±2.9	20.4

The number of foraging points collected per bat was similar to the low end number of foraging points collected in other similar studies that were conducted for much longer periods of time (Menzel et al. 2005, Womack et al. 2013). In addition, the overall number of foraging points collected over five days was similar to the number collected from ground crews over several months in other studies (Menzel et al. 2005, Womack et al. 2013). Although the number of foraging points collected was strongly correlated with the number of nights a bat was tracked (r = 0.879, p = 0.021), the size of the core

¹⁹

⁴¹²⁻ Republic Wind Project Bat Survey, Seneca and Sandusky Counties, Ohio, July 2015

foraging area (50% probability contour) was not correlated to the number of nights a bat was tracked (r = 0.664, p = 0.150) or the number of location points collected (r = 0.557, p = 0.251) for each bat.

⁴¹²⁻ Republic Wind Project Bat Survey, Seneca and Sandusky Counties, Ohio, July 2015

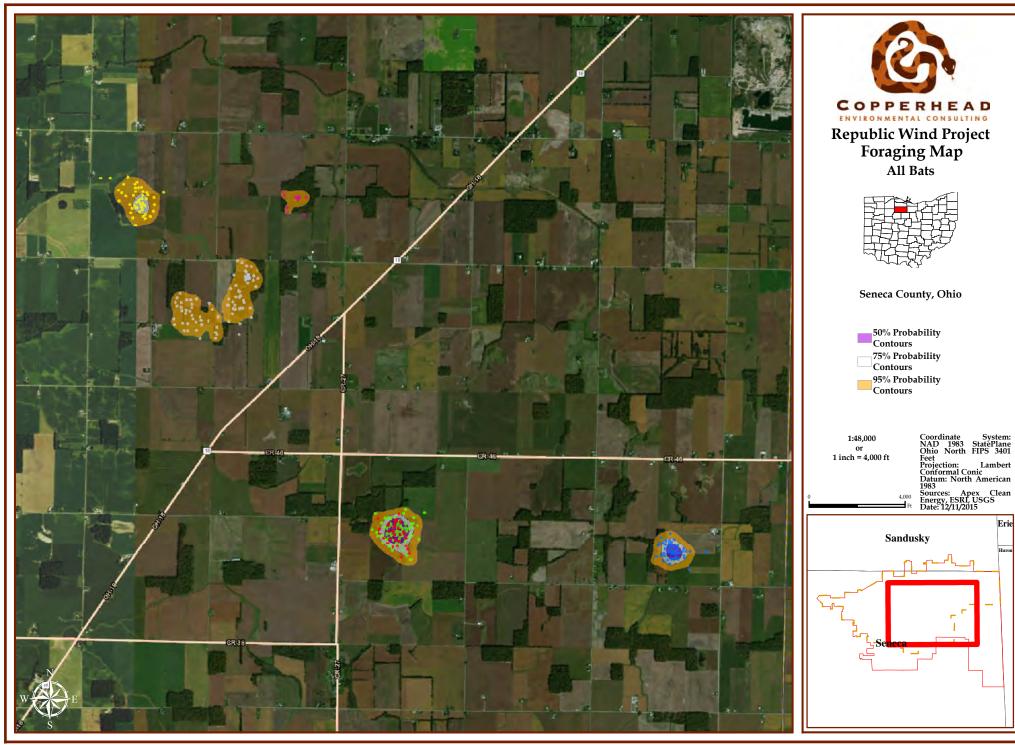


Figure 8. Foraging areas utilized by radio-tagged bats, Republic Wind Project, 2015.

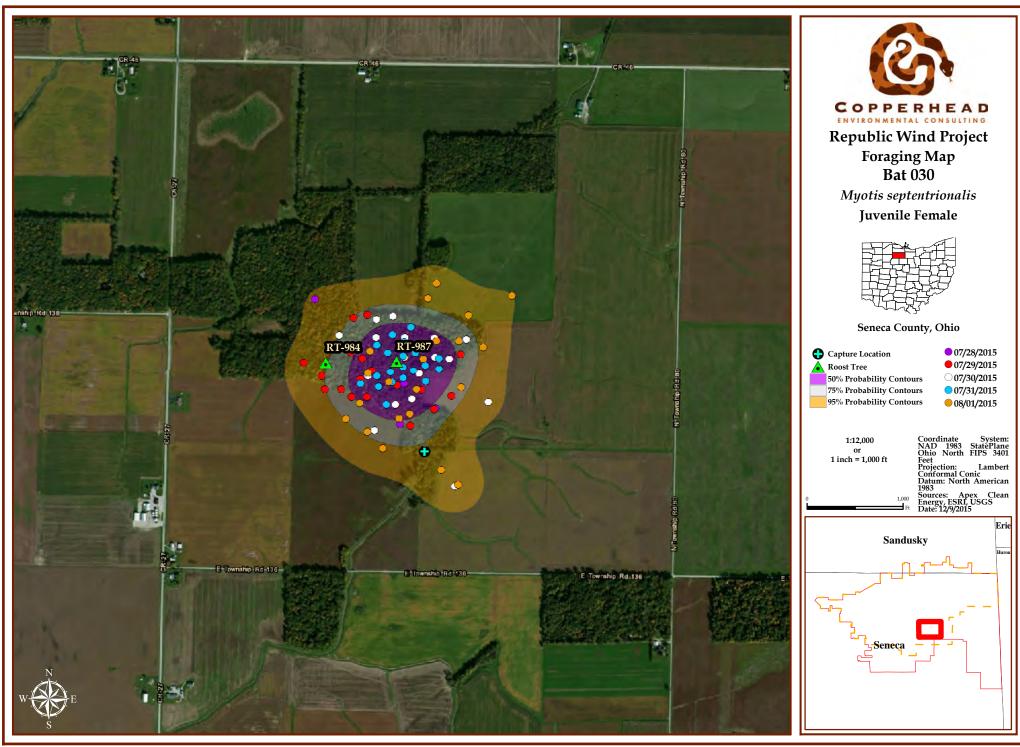


Figure 9. Foraging area utilized by bat 030, Republic Wind Project, 2015.

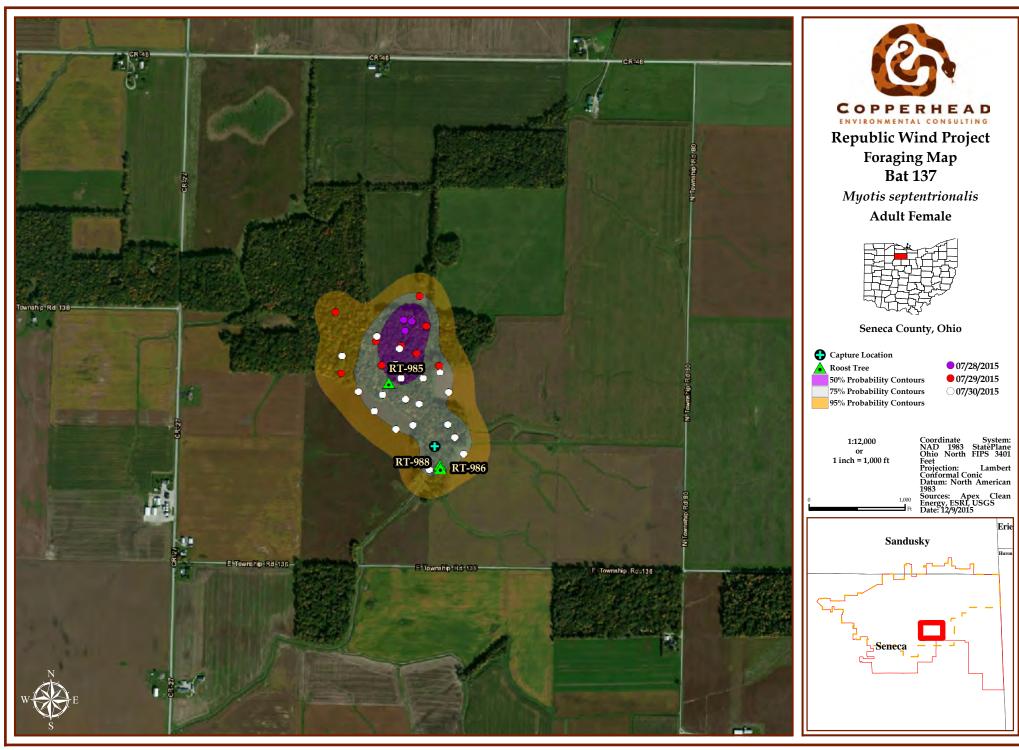


Figure 10. Foraging area utilized by bat 137, Republic Wind Project, 2015.

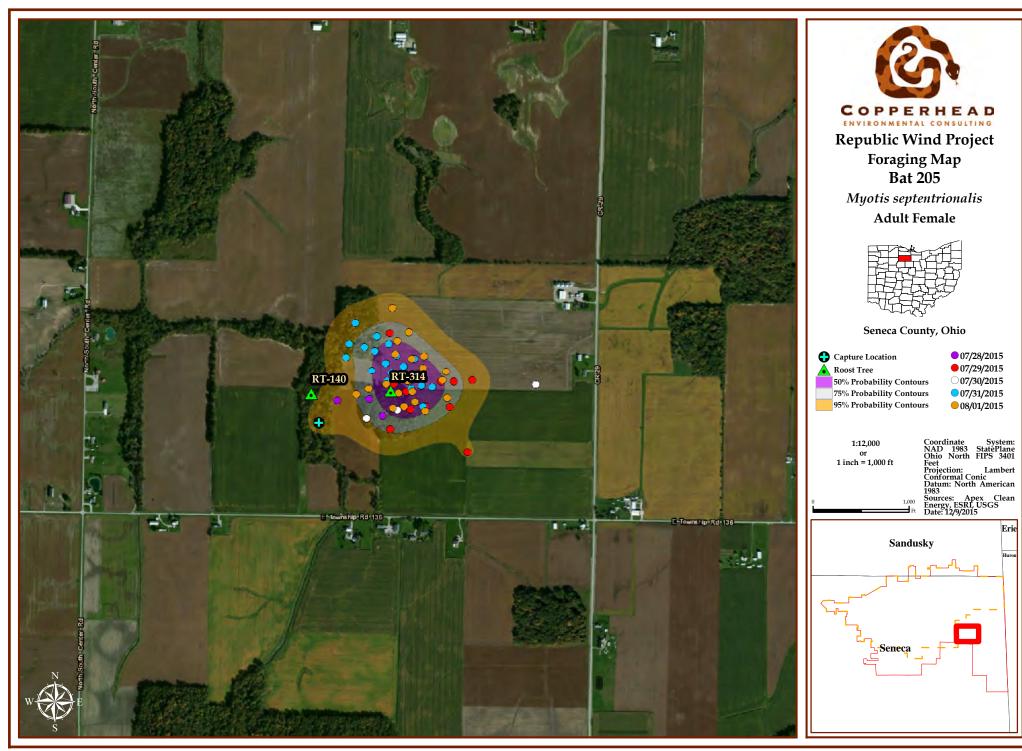


Figure 11. Foraging area utilized by bat 205, Republic Wind Project, 2015.

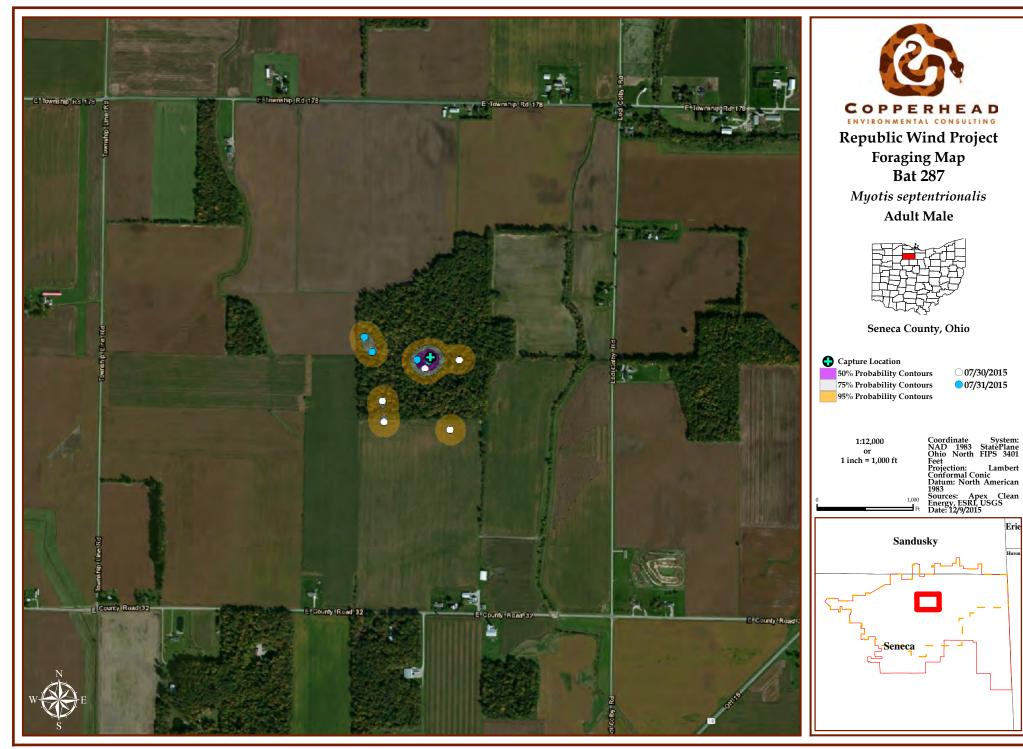


Figure 12. Foraging area utilized by bat 287, Republic Wind Project, 2015.

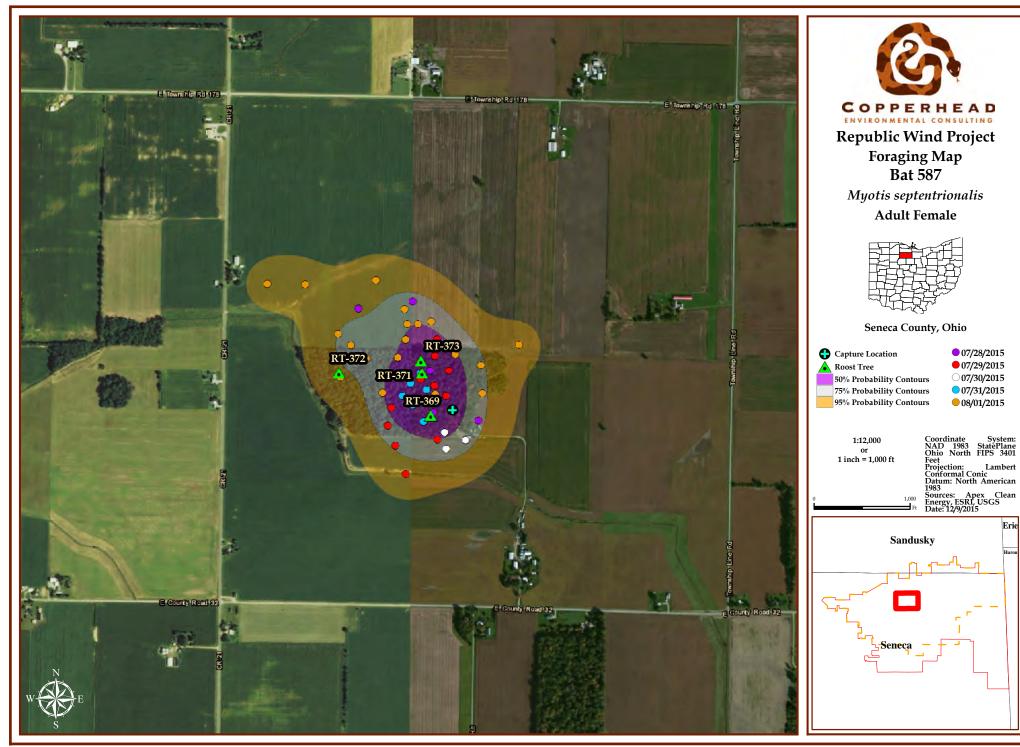


Figure 13. Foraging area utilized by bat 587, Republic Wind Project, 2015.

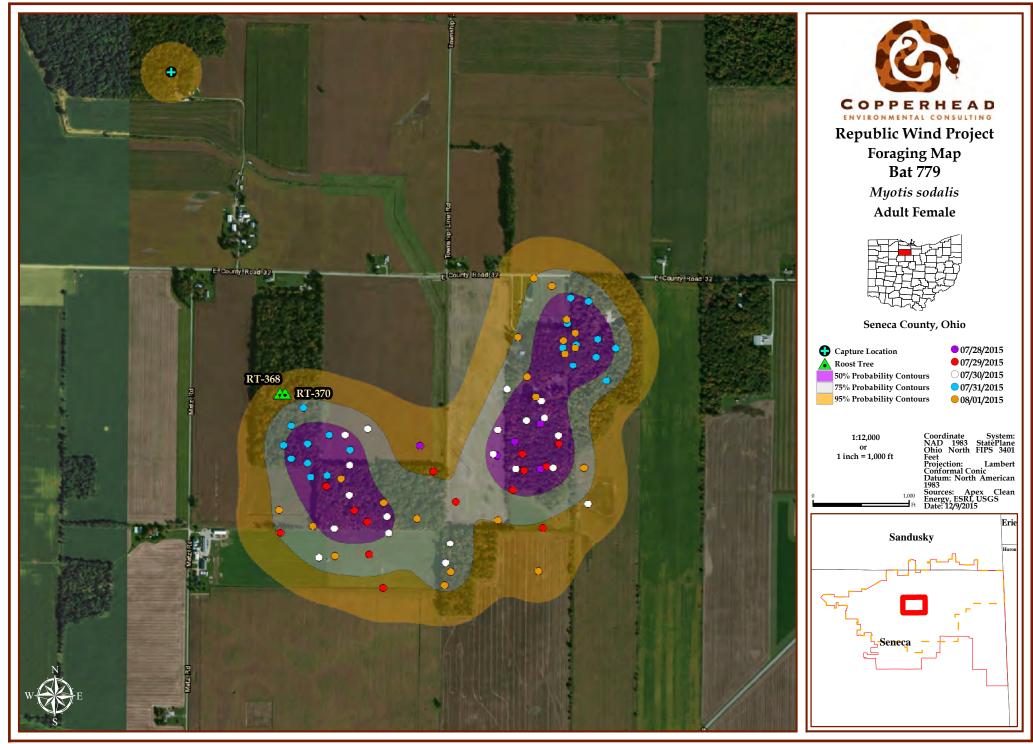


Figure 14. Foraging area utilized by bat 779, Republic Wind Project, 2015.

CONCLUSIONS

Of the 429 bats captured during this survey, big brown bats comprised 75 percent (n=320) and eastern red bats comprised 21 percent (n=88) of the total captures. The remaining 14 percent of captures included 14 northern long-eared bats and one Indiana bat. Notably fewer northern long-eared bats were captured during this survey (14 bats/284 net nights) than in 2011 (95 bats/200 net nights; ESI 2011). One female Indiana bat was captured in both 2015 and 2011.

Capture data and diurnal and foraging telemetry data from this study suggest that at least eight areas within the Study Area are being used by northern long-eared bats. However, three of these areas are not within the Project Area (Figure 2). The close proximity of the 2015 and 2011 Indiana bat captures and the overlap in foraging areas from both studies suggests that 2015 and 2011 captures are from the same colony.

Foraging areas of northern long-eared and Indiana bats were primarily restricted to forest and forest edges, similar to Menzel et al. (2005), with individual location points well clustered. All northern-long eared bats were captured within their respective estimated foraging areas, however, the Indiana bat was captured in a woodlot that it did not revisit during the collection of foraging data. The Indiana bat utilized several woodlots in close proximity to one another during foraging bouts, suggesting that this Indiana bat was more likely than the northern long-eared bats to travel between noncontiguous woodlots during foraging bouts. Differences in the sizes of the 50% and 75% probability contour foraging areas among the female northern long-eared bats suggests that foraging data collected from one individual within each sex/age class is likely not representative of the population's use of the area; however, grouping all bats into one foraging area can provide a representation of land use by listed bats within the area studied. Telemetry data from this study suggests that avoiding turbine placement within 380 meters of suitable habitat would likely reduce interactions of summer resident Indiana or northern long-eared bats with turbines therefore decreasing the likelihood of collision caused mortality during the maternity season.

⁴¹²⁻ Republic Wind Project Bat Survey, Seneca and Sandusky Counties, Ohio, July 2015

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⁴¹²⁻ Republic Wind Project Bat Survey, Seneca and Sandusky Counties, Ohio, July 2015



APPENDIX A

Mist-Net Data Sheets

#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	don Sin	PS:	RONHINIAL	Vax / Wan
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N/R?: N = new capture, unbanded when captured, R = recapture, already banded when captured; **HABITAT** (at capture site): C = creek/riparian, B = bottomland forest, U = upland forest, P = pond, O = other (note type in margin); **ARM BANDED**: L = left, R = right (typically males are banded on the right forearm and females on the left); **SEX:** M = male, F = female; **AGE:** A = adult, J = juvenile, U = unknown; **REPRODUCTIVE CONDITION:** S = scrotal, P = pregnant, L = lactating, PL = post lactating, NR = nonreproductive, U = unknown

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1 Light all 1-5 mph				7	1	-			-			100 m	-						
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9 3 Gentle breeze: 7-10 mph 0 4 Moderate breeze: 11-16 mph				-		-	-							-					_

ite N ite L	lo ocation_	Stream hera 1: N/E 41.	Project	No./N	lame	412 of (cra A	PEX F	Emel	son C	97	o.	Date	31 Jul	y 2015	2	0	2
oun at/I	on ; UTN	A: N/E_4/.	11 58	State_	_W/N_	- 8:	11me Up 2 . 84	3 74	Zone	ne Dowi	Datum_	JAD 83	Observe	ALEXIE	man Padover	- c c	PPEF	HEAD
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase			G	Vax / Wan
1	2135	EPFU	1	F	NR	12.25	46	B	5	0		-	-			Rise		Set
2	2218	EPFV	A	F	PL	20.0	50	B	6	0	1	-		Sun		062	5	1050
3	2245	EPFV	A	F	PL	21.0	49	B	6	0	-			Moon		20		0642
4	0155	LABO	+	Ŧ	NR	1075	41	в	6	0	-						2	
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22			()				(1.1.1	a a			-	1	5	Drizzle or	light rain		
23	a	· · · · · · · · · · · · · · · · · · ·											1	.6	Heavy rair	- thunde	er storm	
24	0		· · · · ·			1							1	St				
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30							14 martin	1				1		4	Moderate b	oreeze: 11	-16 mph	-
cou	stic Surv	vey: Unit typ	e		Unit #	-	Date		Start tin			Stop time						
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Lat/Lon; UTM	1: N/E 41. 11582	Site NoW/N	-82,8	L13-	74	Name Zone	_	Observers_	K Per	Linan	A	0 + 1 +	adon	
	10 23 County	seneca	State	OH	Quad_	Cente	rton		1.0				-	-
Site Diagram:				1.5		Length			4.17		nant Veg	7		
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2 Roos 2. Mo 3. Op 2. Mo openi 3. Op availa Fores 1. Poo 2. Mo may b 3. Op 3. Op 2 availa Fores 1. Poo 2. Mo may b 3. Op 2. Mo	thabitat: 1. Poor: No oderate: Snags with slou or measures: 1. Poor: oderate: Ephemeral or i ings or canopy gaps all otimal: Streams or pond able. at <u>Structure</u> : (if hardwo or: Habitat even aged a oderate: some diversity be present but rare. ofimal: Mature forest. I that facilitate bat foragi <u>Cover</u> : 1. Poor: Squar	or few snags > ughing bark or bat drinking re ntermittent stra ow bats easy ad s (including ro oods are absent ind young. Tre in age of trees Diverse age clas- ing. re kilometer su in the form of s	= 5" DBH with other roost fea- sources not pre- eams or ponde- cess to the res- ad ruts) prese or nearly abse es smaller tha- in the stand. " sees of trees pre- trounding site mall woodlots	a sloug atures p cures pre- esent a ed areas ource. nt that ent or i n 5 incl Trees 5 esent. predor and w	hing barl present 5 resent >1 at the site s present appear to f stand is h DBH. I to 15 inc Trees > 1 minantly cooded fe	k or other -15 inch D 5 inch D - - - - - - - - - - - - -	r usable roost fea DBH within 1000 BH within 1000 cluttered to allow rinking resource lture, area auton ry growth clutter ent. Understory BH frequent. Va ted. Few mature 5. Little connection	tures (cracks, 0 feet of forested feet of forested v many bats to throughout th natically quali red and restri clutter domin arying tree he e trees present on to adjacent	ed areas. d areas. o drink eas ne majority ifies as a 1: cts flying/ iant but no ight and tro t not conne t forested a	ily or simu of the sur poor). foraging t ubiquito eefalls allo ected to otl ureas.	mmer. Fly us. Trees ow for free her areas	yways to greater ti quent sma of trees.	resources han 15″ E all openiu	овн
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Lat/Lon? UTM: N/E 91-1/582 WN -82.84374	t No./N	Zone -	-	Observers	Kite	armar		ausob	6 July	
	Quad (ente	rton				4.4.2			
	Height		·····			Domir	nant Veg	etation	1.00	
- Paved road Bridge Net	(m)	(m)	Dates	1. Pope	1	Utoider	1,	of J	accline	nin
- Paved Poad A	5.2	4	26 July			incantha	£5			
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SOIL ECON THE CONFT	-			River	A	. 0	C.	D	É.	r
S PLUCE MOL				Stream	1		1			-
III ON TWE SILLANT				Pond	1	-		_		
The Step Site P	hotogra	aphs		Corridor			V	V		-
Came	era: K	elsey-	·	Cave	-			1	1	
1 Soft Photo	Log:	st		Mine						
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KN WOOTON THE YOU				Gap	-	V			·	-
tree cover forest contract				Other				1000		
i mowed grass cover of white for										
					-					-
diana Bat Habitat Characterization (Choose appropriate score fo <u>Roost habitat</u> : 1. Poor: No or few snags >= 5" DBH with sloughi						-			-7-	
2. Moderate: Snags with sloughing bark or other roost features pr						etc)				
	sent >15	inch DB	H within 1000	feet of foreste	d areas.					
Water Resources: 1. Poor: bat drinking resources not present at	the site.									
2. Moderate: Ephemeral or intermittent streams or ponded areas p	present b	out too cl	attered to allow	w many bats t	o drink ea	sily or simu	ltaneousl	y. No co	rridors,	
openings or canopy gaps allow bats easy access to the resource. 3. Optimal: Streams or ponds (including road ruts) present that ap	nnear to	offer driv	king resource	throughout t	ho maioril	w of the sup	nmor Elu	wave to		
and Malala	ppear to	oner ann	iking resource	unoughout	ne majorn	y of the sun	inner. Fly	ways to	resources	are
- available.	stand is r	monocult	ure, area autor	matically qual	ifies as a 1	: poor).				
Forest Structure: (if hardwoods are absent or nearly absent or if s 1. Poor: Habitat even aged and young. Trees smaller than 5 inch l	DBH. U	nderstory	growth clutte	ered and restri	cts flying	/foraging				
 Forest Structure: (if hardwoods are absent or nearly absent or if s 1. Poor: Habitat even aged and young. Trees smaller than 5 inch l 2. Moderate: some diversity in age of trees in the stand. Trees 5 to 	DBH. U o 15 inch	nderstory les preser	growth clutte at. Understory	ered and restriction of the second se	ant but n	/foraging ot ubiquitou	us. Trees	greater th	nan 15" E	BH
 Forest Structure: (if hardwoods are absent or nearly absent or if s 1. Poor: Habitat even aged and young. Trees smaller than 5 inch l 2. Moderate: some diversity in age of trees in the stand. Trees 5 to may be present but rare. 	o 15 inch	ies preser	it. Understory	clutter domin	nant but n	ot ubiquitor				
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Net

_		л: N/E <u>-41.</u>	14164	15	_W/N_	- 82	.932 6	37	Zone		Datum <u>N</u>	AD83	Observe	7-29-3 rs <u>steve</u> S Verdi Bro	Samoral Wareit	teo	PPE	HEAD
#	Time	Species	Age	Sex	Repr.			Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	90%			Wax)/ Wan
1	2125	EPFU	5	M	NR	12.5	44.5	D	20	0		-			-	Rise	-	Set
2	2125	EPFO	A	F	NR	18.0	47.0	C	5.0	0	-	1		Sun		0623		2053
3	2135	EPEU	4	M	NR	15.15	50.5	0	1.0	O.			-	Moon		1824	4	0431
4	0010	1100.00	A	t	PL	15.5		B	1.0	0	-	-	-	1.11.1		1.0	-	
5	0105	CABO	1	E	NR	9.5	41.0	B	2.0	0	-	-		Time	Temp (F)	Sky	Wind	No. Bats
7	100		1		- L. D	C						1		20534	81	3	0	3
8										-	· · · · · · · · · · · · · · · · · · ·	-		21530	-19	3	Ô	0
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12	101.2		1		L	2			•					01532	75	0	0	-
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14			1 mar 1)		1					1	· · · · · · ·		- L	11
15 16			1	-	-										-	Sky Code		
17	£		· · · · · · · ·		-				1				100	0	Clear			
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19			10410		1	1.1.1.1)T						Partly Clou			_
20		-	No. 44		1 - 1		· · · · · · · ·								Cloudy or			
21			1.22	11.11										4	Fog or smo	oke		
22	L		1.000			(I)				1			5 m	5	Drizzle or	light rain		
23	1000 E		12									1	1	6	Heavy rain	n - thunde	r storm	
24	1		1	1.		<u> </u>	200		1	a			2	for the second		1.11	1	
25	· · · · · · · · · · · · · · · · · · ·) — — ·	1		1				1.50			1	1.	Beau	fort Wind	Scale	
26			1	1	A second la					17		1:		0	Calm: <1 n	nph		
27			-	1.1	1					1 mar 1	1.1	and the second second		1	Light air: 1			
28				1	1					0.00				2	Light breez	ze: 4-6 mp	h	
29	-		1.00	·						1		100 million (1996)		3	Gentle bree	eze: 7-10 r	nph	
0	P	11.			10.000	100		(C., 1)	1.1.1		1			4	Moderate l	oreeze: 11	16 mph	

1.45 + 14

ite Diagram:	83 County_	Forest	State		Quad_ Height	Length				Domi	nant Ve	getation		
	sand -	18	N	Net	(m)	(m)	Dates	1.Acer	sarchar	um >	4. Fr	ASCINUS CL	meria	na-dow
1000	Ch-	R		Α	5,2	9	7-29	2. Tilip	aneric	ana S	5	oper	not a	3 tot
131		e	Smiddle	B	5.2	18	7.29	3. Ulmur	rubro	~ ~	6.	1 not	naa	alabi
EN SA	2		Shine Shine	C	7.8	le	7.29				e	100	-Camp	× 1
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	Sun Moon Time 9.00	Temp (F)	Rise		Set 2055
	Moon Time	Temp (F)			
	Time	Temp (F)			
		Temp (F)			
		Temp (F)	-		
		Temp (F)			
	9:00	10000	Sky	Wind	No. Bats
		82	1	0	0
	10:00	79	0	0	3
	11:06	76	0	0	0
	12:00	15	0	0	1
	1:00	75	3	1	0
	2:00	73	2		0
11.000				1.	1.00
11 12	1.				
			1.01		
			Sky Code	e	
	0	Clear			
	1	Few Cloud	ds		
	2	Partly Clo	udy		
	3	Cloudy or	overcast		
	4	Fog or sm	oke		
	5	Drizzle or	light rain	1	
	6	Heavy rai	n - thunde	er storm	
	12		1.27	1.	
	1	Beau	fort Win	d Scale	
	0	Calm: <1 r	mph		
	1	Light air: 1	1-3 mph		
	2	Light breez	ze: 4-6 mj	ph	
		Condit	0701 7 10	and the	
	3	Gentle bre	eze: /-10	mpn	
		0 1 2 3 4 5 6	0 Clear 1 Few Cloud 2 Partly Clo 3 Cloudy or 4 Fog or sma 5 Drizzle or 6 Heavy rain Beau 0 Calm: <1 r	Sky Code 0 Clear 1 Few Clouds 2 Partly Cloudy 3 Cloudy or overcast 4 Fog or smoke 5 Drizzle or light rain 6 Heavy rain - thunde Beaufort Wing 0 Calm: <1 mph	Sky Code 0 Clear 1 Few Clouds 2 Partly Cloudy 3 Cloudy or overcast 4 Fog or smoke 5 Drizzle or light rain 6 Heavy rain - thunder storm Beaufort Wind Scale 0 Calm: <1 mph

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#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	e100 %		V	Vax / Wane
1	10:45	LABO	A	F	PL	14.5	40	E	1	0		-	-			Rise		Set
2	10:45	EPFU	A	M	5	17	47	B	a	0	-	-	-	Sun				8:50
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19		3.	0			1					-		1	2	Partly Clou	ıdy		
20	1	10		1.1				L					1	3	Cloudy or	overcast		
21	1.1								-	A				4	Fog or smo	ke		
22		N	1		1	0.20								5	Drizzle or l	light rain		
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#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	e %		v	Vax / Wan
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2	11:00	MYSE	9	F	NK	6	20	A	2	0	.e	except Sty	e banding	Sun				8.55
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20			· · · · · · · · · · · · · · · · · · ·			-		1						3	Cloudy or			
21	1					-								4	Fog or smo			
22			1(_						1.1.1	1			5	Drizzle or			
23	1		-	_			-						1.1.1.1	6	Heavy rair	n - thunde	er storm	
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25			-				-	-			1			-		fort Wind	d Scale	
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borea (MYA	lis (LABC U); Myot	viations: Corynon)); Lasiurus cinere tis grisescens (MY ceius humeralis (l	us (LAC GR); My	I); Lasivotis leit	urus semi bii (MYLE	inolus (L); Myoti	ASE); Lasi s lucifugus	onycteri (MYLU	is noctivag); Myotis s	ans (LAN eptentrio	O); Myotis	austroripariu	s	Please Re P.O. Box 2 (859) 925-	73, Paint I	.ick, KY	, 40461.	

Mist Netting Data Form

#	Time	Species	1672 Age	Sex	Repr.	Mass	FA (mm)	Net	Height	WDI	G/H/B/T	Band#	Freq.	Moon Phas	e %	1.15 9.14	W	Vax / Wan
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1 2	1.30	-MB0	5	F	INN	1a	21	D	d	0	-			Sun		Mise		8:59
3			-	1	1	-		1					1	Moon	-			0.51
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5					1000									-	T (T)			
6	-	-	1	-	1	1	-			-	11	1		Time	Temp (F)	Sky	Wind	No. Bats
7				-	1	1	-				1			9:00	80	0	2	0
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19				1 - A	-	1	1				6		· · · · · ·	2	Partly Clou	ıdy		
20					_				A					3	Cloudy or	overcast		
21	· · · · · ·		1.	<u></u>	1000			77141			1.1			4	Fog or smo	ke		
22			·				<	1.1		-				5	Drizzle or	light rain		
23		1												6	Heavy rain	- thunder	r storm	
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3 Roost ha 2. Moder 3. Optim Water Re 2. Moder openings 3. Optim available 5 Forest St 1. Poor: 1 2. Moder may be p 3. Optim gaps tha	abitat: 1. Poor: No or few snags > erate: Snags with sloughing bark or nal: Snags with sloughing bark or esources: 1. Poor: bat drinking re- erate: Ephemeral or intermittent str s or canopy gaps allow bats easy a nal: Streams or ponds (including re- e. <u>structure</u> : (if hardwoods are absen Habitat even aged and young. Tre- erate: some diversity in age of trees present but rare. nal: Mature forest. Diverse age cla at facilitate bat foraging.	= 5" DBH with s r other roost featu esources not pre- reams or ponded access to the reso oad ruts) present at or nearly abser- ees smaller than s in the stand. The asses of trees pre-	sloughing ures preser sent at the areas pre- urce. t that appe t or if star 5 inch DB rees 5 to 15 sent. Tree	bark or othe nt 5-15 inch t >15 inch I site. sent but too ar to offer c ad is monoc H. Underst i inches pre- s > 15 inch I	er usable roost f i DBH within 10 DBH within 100 cluttered to all drinking resource ulture, area auto ory growth clut sent. Understor DBH frequent.	eatures (cracks, 100 feet of foreste D feet of foreste ow many bats to the throughout the omatically qual- tered and restri- by clutter domin Varying tree he	ted areas. d areas. o drink eas he majority ifies as a 1 cts flying/ hant but no ight and tr	sily or simu y of the sur : poor). /foraging of ubiquitor reefalls allo	mmer. Fly us. Trees ow for free	yways to greater t quent sm	resource han 15" I	ОВН
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ut/Lon; UTM: NE 41.167295 W/N	12, 748025 Zone	Observers_	ES,K	R				-
te Diagram: Stress	State OH Quad Flat Rock Height Length			Domi	nant Veg	retation		
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	Photo Log:	Cave		-	1		1	-
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idiana Bat Habitat Characterization (Choose ap <u>Roost habitat</u> : 1. Poor: No or few snags >= 5	Set and the set of		, crevices,	etc)				
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#	Time	Species	Age	Sex	Repr.		FA (mm)		Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	e %		W	Vax / Wane
1	9:10	EPFU	A	M	S	17-	44	B	2	D			-			Rise	-	Set
2		LABO	5	F	NR	11	41	C	2	0	-		5	Sun		040	22	8'51
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8	<u></u> 3				1							1 = -1	1	10:00	78	1	1	0
9					11 11 1									11,00	78	2	2	1
10	C	P			1		-							12:00	78	1	2	0
11			1		1. 27	1	L		10.00			1000	1	1:00	76	0	2	0
12					1		-	-		· · · · · · · · · · · · · · · · · · ·		-		2:00	74	0	2	0
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14			-	-	1				1				-		1.1.1.1		1	h
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18				-	-	-	-	-				_		1	Few Cloud			
19		_	-	-			-							2	Partly Clou	-		
20	-		-		-	-		-						3	Cloudy or o			
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22				-			-			1	() () () () () () () () () ()			5	Drizzle or l Heavy rain			
23 24			-	-		-		-					-	0	Heavy rain	- thunde	r storm	
25	-	_	-	-		-		-		-			-		Real	ort Wind	Scale	
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orea MYA MYS	lis (LABC AU); Myot O); Nycti	viations: Coryno)); Lasiurus cine is grisescens (M ceius humeralis tions: Male: M;	reus (LA) YGR); M (NYHU)	CI); Lasi yotis leil : Perimy	urus sem pii (MYLE votis subf	inolus (L E); Myoti avus (Pl	ASE); Lasi is lucifugu ESU); Tada	ionycteri s (MYLU irida bra	s noctivag); Myotis s siliensis (T	ans (LAN septentrio ABR)	O); Myotis nalis (MYSI	austroripari	us	Please Ret P.O. Box 7 (859) 925-	turn to: 73, Paint L		, 40461.	p. 1

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#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	e %		W	/ax / Wane
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at/Lon; UTM: NYE 41,18653 WN 9 Datum: NADE3 County Schecg	State OH	Ouad		Rock			-				
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3 Roost habitat: 1. Poor: No or few snags >= 5 2. Moderate: Snags with sloughing bark or oth	her roost features	s present 3	5-15 inch	DBH within 1000	unes (clacks,	ad among	cic)				
 Poor: Habitat even aged and young. Trees e Moderate: some diversity in age of trees in may be present but rare. Optimal: Mature forest. Diverse age classes gaps that facilitate bat foraging. Land Cover: 1. Poor: Square kilometer surrow Marginal: Trees present in the form of sma 	arces not present ns or ponded are ss to the resource ruts) present that nearly absent or smaller than 5 in the stand. Trees s of trees present anding site preda ll woodlots and	at the site as presen as presen it appear to if stand is ch DBH. 5 to 15 inc . Trees > ominantly wooded for	15 inch D 2. 1 but too o 20 offer di 21 s monocu Understo 21 ches prese 15 inch D 2 un-fores 2 ence rows	BH within 1000 f cluttered to allow rinking resource f llture, area autom ry growth clutter ent. Understory o BH frequent. Va sted. Few mature s. Little connectio	eet of forestec many bats to throughout the natically quali- red and restric clutter domin rying tree hei trees present on to adjacent	I areas. o drink eas ne majority fies as a 1 cts flying/ ant but no ght and th not conne forested a	y of the sur : poor). (foraging ot ubiquito reefalls allo ected to otl areas.	nmer. Fl us. Trees ow for fre ner areas	lyways to s greater t equent sm of trees.	resources han 15" [овн
 <u>Water Resources</u>: 1. Poor: bat drinking resources. 2. Moderate: Ephemeral or intermittent stream openings or canopy gaps allow bats easy access. 3. Optimal: Streams or ponds (including road available. <u>Forest Structure</u>: (if hardwoods are absent or 1. Poor: Habitat even aged and young. Trees 2. Moderate: some diversity in age of trees in may be present but rare. 3. Optimal: Mature forest. Diverse age classes gaps that facilitate bat foraging. <u>Land Cover</u>: 1. Poor: Square kilometer surrou 2. Marginal: Trees present in the form of sma 3. Optimal: Area is largely forested. Wooded 	arces not present ns or ponded are ss to the resource ruts) present that nearly absent or smaller than 5 in the stand. Trees s of trees present anding site prede ll woodlots and of stands are conn	at the site as presen as presen it appear to if stand is ch DBH. 5 to 15 inc . Trees > ominantly wooded for	15 inch D 2. 1 but too o 20 offer di 21 s monocu Understo 21 ches prese 15 inch D 2 un-fores 2 ence rows	BH within 1000 f cluttered to allow rinking resource f llture, area autom ry growth clutter ent. Understory o BH frequent. Va sted. Few mature s. Little connectio	eet of forestec many bats to throughout the natically quali- red and restric clutter domin rying tree hei trees present on to adjacent ooded stream Please retur	d areas. o drink eas the majority fies as a 1 cts flying/ ant but no ght and th cont conne forested a forested a forested a forested a forested a	y of the sur : poor). (foraging ot ubiquito reefalls allo reefalls allo areas. w, or other	nmer. Fl us. Trees ow for fre ner areas wooded	lyways to s greater t equent sm of trees.	resources han 15" [овн
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	#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas		Ge	v	Vax / Wa
E	1	2119	LABO	A	F	PL	11,75	39.5	D	6.0	0		~	(Rise		Set
	2	2205	CPFU	A	M	S	1725	148.0	3	15	0				Sun		060	72	2050
ų.	3	2207	LABO	J	F	NR	10,5	40.1	C	1.5	0		-		Moon		1911	0	043
H	4	2207	LABO	A	F	E	13.25	41.0	C	1.0	0	-	-	-					
< L	5	2210	EFFO	5	M	NR	146	47	D	1.5	0.	~	5		Time	Temp (F)	Sky	Wind	No. Bat
٩Ŀ	6	2245	EPFU	A	M	S	1625	1.45	B	25	0		-	-	Constant in	remp (r)	OKy	white	IVO. Dat
H	7	82417	EPFU	A	M	5	16.0	43	C	1.0	0	-			2100	81	ð	0	1
H	8	2247	EPEU	3	m	NR	-17.0	47	C	1.0	0			-	- 2200	80	1	0	9
H	9	2253	E PEU	1	F	NR	20,75	49	D	40	0	-	-		2300	79	2	2	3
H	10	2253	ELFU	A	M	5	19.0	47.5	D	50	0	~	5	~ ~	0000	77	0	1 1	2
H	11	2310	EPPU	A	M1	S	16.0	410	D	50	()	-		~	0100	72	G	1	1
H	12	235	EVEL	5	VVI	NK	140	46	B	10	0	-		-	0200	70	0	1	-
H	13	2335	FILV	H	M	So	leids	41	B	5.0	0	/	1	1	-	1 (1) (1) (1) (1) (1) (1) (1) (1		1.	
_	14 15	0090	EVID	1	YXI.	NK	15.5	41	Y	20	0		-	-	-		2.2.2		
H	15	alte	FORT	7	M	AIT	50	14	B	4.0	~		~~	- PT					
H	17	0150	EREL	2	m	NK	17.5	49	B	4.0	0			~		-	Sky Code		_
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H	19	0 - 00	PAPE	5	1	/V/×	1,15	251	P	50	0		-		1	Few Cloud			_
E	20	C 1			-	-		-			-		-		2	Partly Clou		_	
T	21	-		-			-		-			-			4	Cloudy or Fog or smo		-	_
	22	C		-	-	1	-		-	-				-	5	Drizzle or			
	23	1			1201	1	2								6	Heavy rain	-		_
	24					1		1			-	-				ricavy fail	- ununue	1 Storm	
	25		-						1						1	Beau	fort Wind	Scale	
	26			1.121		1.00	1000		1						0	Calm: <1 m			
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L	28	5.01				10.10		·			-		1		2	Light breez		h	
L	29											-			3	Gentle bree			-
	30			1.1.1									-1	122.1	4	Moderate b			
A	cous	tic Surv	ey: Unit type	ė		Unit #_	-	Date		Start tim	ne		Stop time_	-	1	10.00			
W	Veath	nerproof	ing		_			Date Date Coordin	ates	Start tim Start tim			Stop time_ Stop time_		Please Re P.O. Box 7 (859) 925-	73, Paint L	ick, KY	, 40461.	
		nents:												-	(00) 120-	1012			p. 2

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n ; UTM	N/F LL	000				lime Ur	20:	30 Ti	me Down	0:50			That			10	1
	I. N/ L <u></u>	252	¢0	_W/N_	42	865	72	Zone	-	Datum_	VAD83	Observe	T. Wetz	++ raumer	rereco	PPEF	THEA
Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WINDER	G/H/B/T	Band# Type	Freq.					Vax)/ Wa
225	EPFU	A	M	SC	14.0	45.0	D	5.0	0	1		V			Rise		Set
2143	EPFU	A	M	NR		48.0	D	6.5	0	-	1	~	Sun 🛠		062	D	2050
2143	LABO	t	F	NR			P	4.0	0	1	-	-	Moon	3	20	50	0642
al5	EPFU	A	F	NR	215	48.5	D	3.5	0	-			21				
2215	EPFU	A	F	A	22.5	50.0	D	4.0	0	1		~	Time	Tomm (E)	ctu	Wind	NI- D.
215	EPFU	A	AA	50	14,5	46.0	D	4.5	0			-	Time	remp (r)	БКУ	wind	No. Ba
2210	EPEN	T	M	NR	15.5	48.0	C	2.5	0	1			8100	760	0	0	3
2210	EPPU	A	M	NZ	18.25	47.0	C	3.0	0				2200	72	0	0	14
205	EPFL	A	M	SC	14.25	44.0	B	3.5	0	19-21			2300	72	2	0	3
219	LABO	J	F	NR	14.0	45.0	D	2.5	0	1			0000	69	2	V	2
alb	EPFU	A	M	SC	17.0	45.0	Ď	4.0	0				0100	67	0	1	0
2250	EPFU	A	F	PL	21.5	50.0	D	510	0				0200	65	Ð	1	0
2250	EPFU	す	F	NR	19.0	47,0	D	35	0								
1250	EPFU	7	M	NR	18.9	49.0	P	4.0	0								
2250	EPFU	J.	M	NR	15.75	46.0	D	45	0	-				1	1.1.1		
255	EPPU	A	M	NR	18.5	47.0	C	0.5	0						Sky Code		
1255	LABD	A	F	NR	120	46.0	C	1.0	0			_	0	Clear			
1300	FPFU	J	F	NR	18.5	46.0	E	4.0	0				1	Few Cloud	ls	-	
305	EPFU	J	F	NR	20.75	49.0	D	7.0	0				2	Partly Clou	udv	1.0	
133D :	EPFU	J.	M	NR	13.0	45.0	E	0.5	0	-			3			1	
1025	LABO	5	F	NR	16.5	44	D		0	-			- 4				
0045	EPFU	4.	M	NR	1675	46.0	E	3.0	0	-			5				
E			1.1.1.1					11.000			12	1 - 1	6				
1		1				1000	- 1		×			1.00					
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=			-			2 ± 1	-				No. 1		2	0		h	100
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			11								F			Moderate l			
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(g)ALAS $EPFU$ AMSC14.0ALAS $EPFU$ AMNR18.01.43 $LABO$ TFNR13.0215 $EPFU$ AFNR13.0215 $EPFU$ AFNR13.0215 $EPFU$ AFNR13.0205 $EPFU$ AFNR13.0205 $EPFU$ AMNR15.5205 $EPFU$ AMSC14.25205 $EPFU$ AMSC14.25205 $EPFU$ AMSC14.25205 $EPFU$ AMSC17.0255 $EPFU$ AFNR19.0255 $EPFU$ AFNR19.0255 $EPFU$ JMNR15.75255 $LABD$ AFNR18.5350 $EPFU$ JFNR18.5350 $EPFU$ JFNR13.0025 $LABO$ JFNR10.5	Alts EPFU A M SC 14.0 45.0 ALAS EPFU A M SC 14.0 45.0 ALAS EPFU A M NR 18.0 48.0 ALAS EPFU A M NR 18.0 39.0 ALAS LABO J F NR 13.0 39.0 ALAS EPFU A F NR 13.0 39.0 ALAS EPFU A F NR 13.0 39.0 ALAS EPFU A F NR 14.5 48.5 ALS EPFU A M SC 14.5 48.0 ALO EPFU A M SC 14.0 45.0 ALO EPFU A M SC 14.0 45.0 ALO EPFU A M SC 17.0 45.0 ALABO J F <td>Interview Spectes Age Sex Rep. 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 <u>Roost habitat</u>: 1. Poor: No or few snags >= 5" DBH 2. Moderate: Snags with sloughing bark or other roo 	with sloughing bark or other us st features present 5-15 inch DBI	ble roost features (c within 1000 feet of	orested a	areas.	c)				
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1 0° Septime A M S 2° 4/4 C 1.5° 0 $ -$ Rise 3 1 1 1 1 1 1 1 0° 0 0° 0 0° 0 0° 0 4 1 1 1 1 1 1 0° 0	Site No Site Loca County_	ation	STREAM	Project	t No./N 136 State_	o 1410	416	/	B.	510_Tin	ne Dowr	n 2:00	>	Date_/	-29-15	-		R	2
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Lat/Lon ; UTM: N	/E 41.17072	W/N -9	62.89307		Zone			Observers_	MTM	RRR		Date		_
Datum: NADR	3 County Ser		State 0	Quad	Fire	side				10161				
Site Diagram:				Heigh				1		Domin	ant Veg	etation		
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the second	itat Characterization bitat: 1. Poor: No or f							nires (cracks	crovicos	etc)				
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201	al: Snags with sloughi	ing bark or othe	r roost features	s present >	15 inch D	BH within	n 1000 fe	eet of forestee	d areas.					
	sources: 1. Poor: bat										Contraction of the			
	ate: Ephemeral or inte				it but too	cluttered	to allow	many bats to	o drink eas	sily or simu	ultaneous	ly. No co	rridors,	
	or canopy gaps allow al: Streams or ponds (i				to offer d	rinking re	source t	hroughout th	ne maiorit	v of the sur	nmer Fly	ways to	resources	are
3 available.		including roud i	ins) present i	aruppen	to oner a		bource .	moughout n	ie indjorite	, or the sta		in a yo to	coourec.	ure
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	ate: some diversity in	age of trees in t	he stand. Tree	s 5 to 15 in	iches pres	ent. Unde	erstory o	clutter domin	nant but no	ot ubiquito	us. Trees	greater th	han 15" I	DBH
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		and the second second second	nding site pre	dominantl	v un-fores	sted. Few	mature	trees presen	t not conn	ected to of	ier areas o	of trees.		
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gaps that 2 Land Cov	ver: 1. Poor: Square k nal: Trees present in th	he form of smal	woodlots and	mooded	ence row	s. Little co	onnectic	in to adjacen	e roreoteu .	and the second				
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gaps that <u>2</u> <u>Land Cov</u> 2. Margir 3. Optima <u>1</u> <u>Total Habi</u>	nal: Trees present in th	ested. Wooded						ooded stream Please retur	n, fence ro m to:	w, or other		corridor.	3	
gaps that <u>Land Cov</u> 2. Margir 3. Optima	nal: Trees present in thal: Area is largely for	ested. Wooded						ooded stream	n, fence ro r n to: . Paint Licl	w, or other		COPID	හ	EA

#	Time	Species	4356 Age	Sex	Repr.	Mass	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	e %	1141	онититет И	/ax / Wan
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29			-					1					-	3	Gentle bree			
30	1												1	4	Moderate l	preeze: 11	-16 mph	

Type	Freq.	Moon Phase Sun Moon Time 9.00 10:00 11:00 13:00 1:00	e % Temp (F) 79 77 75 73 72 70	Rise 000 180 Sky 1 1 2 1 1	23	Wax / Wand Set 8:55 0356 No. Bats 4 3 3 3 3 0 0
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		Stop time	1 2 3 4 Stop time Stop time Stop time Please Report Please Report Stop time	3 Cloudy or 4 Fog or smoth 5 Drizzle or 6 Heavy rain 0 Calm: <1 m	3 Cloudy or overcast 4 Fog or smoke 5 Drizzle or light rain 6 Heavy rain - thunde Beaufort Win 0 Calm: <1 mph	3 Cloudy or overcast 4 Fog or smoke 5 Drizzle or light rain 6 Heavy rain - thunder storm Beaufort Wind Scale 0 Calm: <1 mph

Lat/Lon, UTM: N/E_4	1, 14356 W/N 8	292948	Zone		Observers_	ESM	th				
Datum: NAD83 C	County Seneca	State OH Quad	Fire	Side							
Site Diagram:		Height			1		Domi	nant Veg	getation	A	
		Net (m)	(m)	Dates	1. Rel	Maple		4. K	at a	de	
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		В	6		3. E4			6			
field		C	6		1		- A.F	1.5.1.5	122		
0/		D	17_		h	A	Net S	Set by H	labitat		
		E			Habitat	A	В	C	D	E	F
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1	~				Stream		X		11.5.11		c — —
C Z	treaki R	-		1.5.5	Pond	1	2	12.201			1
	B.	Site Photogr	raphs		Corridor			X	X		
<u> </u>		Camera:			Cave						
- I		Photo Log:_			Mine			· · · · · · · ·	11.5.1	11900	
Fiel A		· · · · · · · · · · · · · · · · · · ·			Forest	X					
1. T.					Gap	~		1		1	
					Other				1	1.1	1.00
					1.1						
	Poor: No or few snags >= 5	5" DBH with sloughing barl	k or other i		atures (cracks		tc)				11
2. Moderate: Snag 3. Optimal: Snag Water Resources: 2. Moderate: Eph openings or canop 3. Optimal: Strear available. Forest Structure: 1. Poor: Habitat e 2. Moderate: som may be present b 3. Optimal: Matu gaps that facilitate Land Cover: 1. P	gs with sloughing bark or ot s with sloughing bark or oth ; 1. Poor : bat drinking reso iemeral or intermittent streau py gaps allow bats easy acce ms or ponds (including road (if hardwoods are absent or even aged and young. Trees ne diversity in age of trees in ut rare. ure forest. Diverse age classe ie bat foraging. Poor : Square kilometer surro	5" DBH with sloughing barl ther roost features present 5 rer roost features present >1 surces not present at the site ms or ponded areas present ess to the resource. It ruts) present that appear to r nearly absent or if stand is smaller than 5 inch DBH. It the stand. Trees 5 to 15 inc es of trees present. Trees > 1 bounding site predominantly	k or other i 5-15 inch DB 5 inch DB 2 t but too ch o offer drin s monocult Understory thes preser 15 inch DB	usable roost fe BH within 100 H within 1000 uttered to allow hking resource ure, area autor growth clutte t. Understory H frequent. V	atures (cracks 10 feet of fores feet of foreste w many bats t throughout t matically qual ered and restr clutter domin arying tree he re trees presen	ted areas. d areas. o drink eas he majority lifies as a 1: icts flying/ nant but no right and tro it not conne	ily or simu of the sur poor). foraging t ubiquito cefalls allo cted to otl	nmer. Fl us. Trees ow for fre	yways to s greater tl quent sma	resources han 15″ E	овн
2. Moderate: Snag 3. Optimal: Snag Water Resources: 2. Moderate: Ephy openings or canop 3. Optimal: Stream available. Forest Structure: 1. Poor: Habitat e 2. Moderate: som may be present bu 3. Optimal: Matu gaps that facilitate Land Cover: 1. P 2. Marginal: Tree 3. Optimal: Area	gs with sloughing bark or ot s with sloughing bark or oth : 1. Poor : bat drinking reso iemeral or intermittent stream py gaps allow bats easy acce ms or ponds (including road (if hardwoods are absent or even aged and young. Trees he diversity in age of trees in ut rare. ure forest. Diverse age classe be bat foraging.	5" DBH with sloughing barl ther roost features present 5 ter roost features present >1 purces not present at the site ms or ponded areas present ess to the resource. It ruts) present that appear to r nearly absent or if stand is smaller than 5 inch DBH. It the stand. Trees 5 to 15 inc es of trees present. Trees > 1 punding site predominantly all woodlots and wooded fe d stands are connected to of	k or other i 5-15 inch DB 5 inch DB 2. but too ch o offer drin s monocult Understory ches preser 15 inch DB un-foreste ence rows.	usable roost fe BH within 100 H within 1000 uttered to allow hking resource ure, area autor growth clutte t. Understory H frequent. V ed. Few matur Little connect	atures (cracks 00 feet of fores feet of foreste w many bats t throughout t matically qual ered and restri- clutter domin arying tree he te trees presen ion to adjacen vooded strear Please retu	ted areas. d areas. o drink eas he majority lifies as a 1: icts flying/ hant but no right and tro it not conne it forested a n, fence row	ily or simu of the sur poor). foraging t ubiquito cefalls allo cted to oth reas. r, or other	mmer. Fl us. Trees ow for fre her areas wooded	yways to s greater tl quent sma of trees.	resources han 15″ E	овн
2. Moderate: Snag 3. Optimal: Snag Water Resources: 2. Moderate: Eph openings or canop 3. Optimal: Strear available. Forest Structure: 1. Poor: Habitat e 2. Moderate: som may be present bu 3. Optimal: Matu gaps that facilitate Land Cover: 1. P 2. Marginal: Tree 3. Optimal: Area	gs with sloughing bark or ot s with sloughing bark or oth ; 1. Poor : bat drinking reso temeral or intermittent stream py gaps allow bats easy acce ms or ponds (including road (if hardwoods are absent or even aged and young. Trees the diversity in age of trees in out rare. The forest. Diverse age classe to bat foraging. Poor : Square kilometer surro es present in the form of smal a is largely forested. Wooded	5" DBH with sloughing barl ther roost features present 5 ter roost features present >1 purces not present at the site ms or ponded areas present ess to the resource. It ruts) present that appear to r nearly absent or if stand is smaller than 5 inch DBH. It the stand. Trees 5 to 15 inc es of trees present. Trees > 1 punding site predominantly all woodlots and wooded fe d stands are connected to of	k or other i 5-15 inch DB 5 inch DB 2. but too ch o offer drin s monocult Understory ches preser 15 inch DB un-foreste ence rows.	usable roost fe BH within 100 H within 1000 uttered to allow hking resource ure, area autor growth clutte t. Understory H frequent. V ed. Few matur Little connect	atures (cracks 00 feet of fores feet of foreste w many bats t throughout t matically qual ered and restri- clutter domin arying tree he re trees presen ion to adjacen vooded strean	ted areas. d areas. o drink eas he majority lifies as a 1: icts flying/ nant but no right and tro t not conne t forested a n, fence row rn to: , Paint Lick	ily or simu of the sur poor). foraging t ubiquito cefalls allo cted to oth reas. r, or other	mmer. Fl us. Trees ow for fre her areas wooded	yways to s greater tl quent sma of trees.	resources han 15″ E	овн

Count Lat/Lo	y Se on;UTN	у Farest дар; МССА И: NE_41.	15312	State_	W/N	82.	Time Up 9262	9:0	0Tir Zone	me Down	n <u>2:00</u> Datum <u>N</u>	JAD83	_ Observe	rs_J.Stor	m, J. K	inger	PPE	
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	e %	68	10	Vax / W
1	9.20	EPFU	21	m	NR	11	46	A	3.0	0	na	na	na		1	Rise		Set
2	9.26	EPFU	JV	m	NR	11.25	45	A	5.0	0	na	na	na	Sun		6:2	Oam	8:5
3	10.00	LABO	TV	m	NR	6.5	39	P	0.5	0	04	06	na	Moon			frm	1:26
4	10:00	EPFU	JV	m	NR	8,75	41	A	30	0	na	na	na					
5	10:00	EPFU	JV	M	NR	13.00	44	A	3.0	0	na	Aa		T	T	CI.	117.1	
6	10 00	EPFU	A	F	PL	17,75	47	A	3.0	61	na	na	-	Time	Temp (F)	Sky	Wind	No. E
	10-01	EPFU	A	F	PL	20.5	49	A	5.0	0	ne	-		9:00	730	1	2	2
8	10:00	EPPU	JV	m	NR	14.5	46	A	6.0	Ó	5-	1	1	10.00	70.5	G		11
		EPFU	A	F	FL	16.75	48	A	5.0	0	na	Y	-	11:00	69.8	1	1	4
		LABO	JV	F	NR	8.0	41	A	2.0	0	-	1	1	12.00	69.4	1	1	0
		EPFU	A	M	S	160	44	Å	7.0	0		•	•	1:00	70.3	1	0	0
		EPFU	A	m	5	16.5	45	A	6.0	0	-	1	1	2:00	70.1		3	-
		EPFU	A	1=	PL	20.0	47	A	4.0	5	-	1	L		1	1.00	1.11	1.000
		EPFU	JV	F	NR	130	46	A	3,0	0	1	1		1	1			
_	11:50	EPFU	A	m	5	1915		A	3.0	Ð	~	*	1					-
	1.50	ERFU	TV	19		14.5		A	3.0	0	4	1	1			Sky Code		
	11:50	BREV	A	F	8L	2025	48	A	5.5	6	5	1	1	0	Clear			
18	1111		1.	1000	1.1	1000		1997 - 1995 - 1905 - 19		1. Sec. 1. Sec. 1.	1		1.1.1	1	Few Cloud	s		
19					1				127-01		111 111			2	Partly Clou	ıdy		
20	1			1	1	1.1			1				1	3	Cloudy or	overcast	-	
21		A	1.1	1	27.2		1				122	E	1.	4	Fog or smo	ke		
22	1	2			1				1	200		-		5	Drizzle or l	light rain		
23			1	1.21			1		1		1		1	6	Heavy rain	- thunde	er storm	
24			1 2 2 3		1 mar 1		·				1000	-	·					
25							1		2	1.	· · · · · · ·	1	1	1 T	-	fort Wind	d Scale	
26			-		10 mm		2-23	-		1.	01111	11	1 (0	Calm: <1 m			
27	1		1	1. 1			E. 194			1.7.1		1	1	1	Light air: 1			
28 29									-	· = - (5	1	·	2	Light breez			
30	- · ·			-		1 20			-	12.726		10000		3	Gentle bree		-	
	1				100		10 million	10. a	A			1.00		4	Moderate b	reeze: 11	-16 mph	

	1	Data Form	Project	No./N	ame_	112,0	1/ 6	cme	NSOV	1 CX	eek		Date	7/30/15		-	-	
ite L	ocation_	Forest gap	109917	A Con	6 Por	nd in	torest	4:0) T:-	Down	1.00			-			12	2
at/L	on ; UTN	Forest gap meca M: N/E_41.	15312	State_	WYN_	- 82.	9262	1	Zone	The Down	n_/:50 Datum_!	NAD83	Observe	rs J. Stor	m. M. 1	co	PPER	RHEA
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	e %	97.6	, e	Vax / Wa
1	9:05	LABO	E	cap	ed	fre	m /	le +	A	1		1000	(in 1997)			Rise		Set
2	9:30	EPFU	JV	NF 1	NR	11,75	47min	A	6	0	1	Y	V	Sun		6:25	am	3:51p
3	9:30	ERFU	JV	F	NR	11	46 mm	A	6	1	1	-	-	Moon		8:10	pm i	5:350
4	9:30	EPFU	A	F	PL	16	49 000	A	4	0	1	1	-				<u> </u>	
5	9:30	EPFU	A	M	TD	14.5	47mm	A	2	0	-	1	-	Time	Temp (F)	Sky	Wind	No. Bat
6	9:30	EPFU	JV	M	NR	10.35	44mm	A	2	0	-		-	Time	Temp (r)	Эку	wind	INO. Dat
7	9:50	EPFU	A	下颅	L	17	47mm	D	1.5	0	0	-	1	HORD PH	-74.1	0	3	14-
8	10:20	LABO	JV	F	NB	9	38m	A	35	0	1	-	-	HADE DO	68.5	-0	2	
9	10:20	LACI	JV	M	NB	11,25	4900	A	3	0		1		9:00	N.	.0	3	Ŧ
10	10:20	EPFU	JV	L.	NR	16.5	48mm	A	.4	Õ	1	1	1	10:00	74.1	0	3	8
11	10:20	EPFU	A	M	TD	1625	45mm	A	2	0		1	1	11:00	108.5	0	2	Ĭ
12	10:40	LABO	JV	F	NR	9.25	39 min	*	2	0	J	1	1	12:00	64.3	0		0
13	10:40	EPFU	A	F	L	21	49mm	G	4.5	1		1	Í.	1:00	63.1	0	8	1
14	VO:40	EPEU	JV	N.	NR.	8.15	201 000	A	2	0		1	Ń	2:00	62.8	Ó	1	1
15	11:15	EPFU	JV	F	NR	13.5	4Smm	A	1	0	4	1	-	(-		1000	
16	1:50	LABO	JV	F	NR	9.75	Hann	A	2	0	5	1	1			Sky Code		
17	(). The last (<u></u>		1 C 1		1.000			1.11.11		11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1			0	Clear			-
18				12.21										1	Few Cloud	ls		
19			1											2	Partly Clo	ıdy		
20			200-024	E			1	· · · .		-			1	3	Cloudy or	overcast		
21			1.1.1.1	1 - 1	1	1	T		1					4	Fog or smo	oke		
22			1			1	P	1		÷				5	Drizzle or			
23	1		1.1			01	· · · · ·	1		N			0.000	6	Heavy rain	- thunde	r storm	
24			111-11		1.11	1	(10.2	1						
25	1.000		h []		1000									£	Beau	fort Wind	Scale	
26		1	1.11			E D	1	1						0	Calm: <1 r	nph		
27							1		· · · · ·		-			1	Light air: 1	-3 mph		
28			1		1	E					1			2	Light bree:	e: 4-6 mp	h	
29	1		1	-	1	·			c = 1					3	Gentle bre	eze: 7-10 n	nph	100
30			1						-			100 m	1	4	Moderate	oreeze: 11-	16 mph	
cou	stic Surv	vey: Unit typ	be	-	Unit #	_	Date		Start tin			Stop time						
5							Date		Start tin			Stop time		Please Re		A. 47	100	
							Date	_	Start tin	ne		Stop time		P.O. Box 7		ick, KY,	40461.	
eatl	nerproo.	fing					Coordin	ates						(859) 925-	9012			

Lat/Lon ; UTM: Datum: NK			NIL	Ourt	Zone		Observers_	J.54	in, T	klaser	C	-	-
Site Diagram:		State	<u>- 41</u>	Quad_ Height	Length		1		Domin	ant Veg	zetation	-	
3	A m		Net		(m)	Dates	1. Redi	Aaple			Pery &		
1	4 11		A	7.8	9	7/25=7/20	2. Red	on K =	Pingal	5. Fe		Swamp W	L. Nr o
4	1 2 - 2		В	5.2	10	7/25 + 7/30	3. shagt	borkhi	chary	6. 5	VER M.	afle	
5	B Let	20	C	5.1	0	7/25 47/30			(
3 15	40 ·	22	D	5.2	6	2/25 2-7/30	L			Set by H			
5	843	-10	E	and "			Habitat	A	В	C	D	E	F
3	not a	(wat	F	1.1	C	1 ·····	River			1		-	-
how	I gamma		-				Stream			-			1
	BHT	~	Cite	Photogr	anha		Pond Corridor	x	12		X		
	11	1		r notogi nera:	apris		Cave	~	X	X			-
	Tim 18	x1 PM	the second se	to Log:_			Mine						-
	a trans literal	63	1.1.0	10 208			Forest	1					
Forest I	A LET AN	3					Gap	×					
	A 15	1	1				Other	-					
	City	í.	1								1 17 5	0 - 1	
	1	4			-					214			
2. Roost	labitat Characterization (<u>t habitat</u> : 1. Poor: No or fev	v snags >= 5" DBH with	h slough	ning bark	or other	usable roost feat	tures (cracks,	crevices,	etc)				
2. Moo 3. Opt 2. Moo 3. Opt 2. Moo openir 3. Opt 3. Opt 3. Opt 3. Opt 1. Poo 2. Moo 0. Moo 1. Poo 2. Moo 0. Moo	thabitat: 1. Poor: No or few derate: Snags with sloughing timal: Snags with sloughing <u>r Resources</u> : 1. Poor: bat du derate: Ephemeral or interm ngs or canopy gaps allow ba timal: Streams or ponds (inc ble. <u>t Structure</u> : (if hardwoods a or: Habitat even aged and you derate: some diversity in ag be present but rare.	w snags >= 5" DBH with the bark or other roost for g bark or other roost for rinking resources not p hittent streams or pond ats easy access to the re- cluding road ruts) pres- are absent or nearly ab- bung. Trees smaller that ge of trees in the stand.	th slough eatures particles provide the slough present a led areas source. ent that a sent or iff an 5 inch Trees 5	ning bark present 5 resent >1 t the site. s present appear to stand is DBH. L to 15 incl	or othen -15 inch D 5 inch D but too o o offer dr monocu Jndersto hes prese	usable roost feal DBH within 1000 BH within 1000 fe cluttered to allow inking resource t lture, area autom ry growth clutter ent. Understory c	feet of forest eet of forestec many bats to hroughout th atically quali ed and restric clutter domin	ed areas. 1 areas. 9 drink eas 9 e majority fies as a 1 cts flying/ ant but no	sily or simu y of the sum : poor). /foraging ot ubiquitou	nmer. Fly 15. Trees	yways to greater t	resource han 15" [овн
Roost 2. Moo 3. Opt 2. Moo 0. Optiming 3. Optiming<	thabitat: 1. Poor: No or few derate: Snags with sloughing <u>rResources</u> : 1. Poor: bat de derate: Ephemeral or interm ngs or canopy gaps allow ba timal: Streams or ponds (inc ble. <u>tStructure</u> : (if hardwoods a br: Habitat even aged and yc derate: some diversity in ag be present but rare. timal: Mature forest. Divers that facilitate bat foraging. <u>Cover</u> : 1. Poor: Square kilo rginal: Trees present in the timal: Area is largely foreste	w snags >= 5" DBH with ng bark or other roost fea- rinking resources not p- nittent streams or pond ats easy access to the re- cluding road ruts) pres- are absent or nearly ab- pung. Trees smaller than the of trees in the stand. se age classes of trees p- ometer surrounding site form of small woodlot ed. Wooded stands are	th slough eatures p interest a led areas source. ent that a sent or if an 5 inch Trees 5 resent.	ning bark present 5 resent >1 t the site present appear to stand is DBH. L to 15 incl Trees > 1 ninantly poded fer	or other -15 inch D 5 inch D but too c o offer dr monocu Jndersto hes prese 5 inch D un-fores nce rows	usable roost feal DBH within 1000 BH within 1000 fe duttered to allow inking resource t lture, area autom ry growth clutter ent. Understory c BH frequent. Van ted. Few mature . Little connectio	feet of forest eet of forestec many bats to hroughout th atically quali ed and restric lutter domin rying tree hei trees present n to adjacent	ed areas. l areas. o drink eas e majority fies as a 1 :ts flying/ ant but no ght and tr not conne forested a	sily or simu y of the sum poor). (foraging ot ubiquitou ceefalls allow ected to oth areas.	nmer. Fly us. Trees w for frec er areas c	yways to greater t quent sm of trees.	resource han 15" [all openii	овн
Roost 2. Moo 3. Opt 2. Moo 0. Optiming 3. Optiming<	thabitat: 1. Poor: No or few oderate: Snags with sloughing timal: Snags with sloughing <u>Resources</u> : 1. Poor: bat du derate: Ephemeral or interm ngs or canopy gaps allow ba timal: Streams or ponds (inc ble. tStructure: (if hardwoods a br: Habitat even aged and yo derate: some diversity in ag be present but rare. timal: Mature forest. Divers that facilitate bat foraging. <u>Cover</u> : 1. Poor: Square kilo rginal: Trees present in the	w snags >= 5" DBH with ng bark or other roost fea- rinking resources not p- nittent streams or pond ats easy access to the re- cluding road ruts) pres- are absent or nearly ab- pung. Trees smaller than the of trees in the stand. se age classes of trees p- ometer surrounding site form of small woodlot ed. Wooded stands are	th slough eatures p interest a led areas source. ent that a sent or if an 5 inch Trees 5 resent.	ning bark present 5 resent >1 t the site present appear to stand is DBH. L to 15 incl Trees > 1 ninantly poded fer	or other -15 inch D 5 inch D but too c o offer dr monocu Jndersto hes prese 5 inch D un-fores nce rows	usable roost feal DBH within 1000 BH within 1000 fe cluttered to allow inking resource to lture, area autom ry growth clutter ent. Understory of BH frequent. Van ted. Few mature . Little connection ded stands via wo	feet of forest eet of forestec many bats to hroughout th atically quali ed and restric lutter domin rying tree hei trees present n to adjacent	ed areas. 1 areas. 9 drink eas 1 e majority fies as a 1 cts flying/ ant but no ght and tr not conne forested a , fence roo	sily or simu y of the sum poor). (foraging ot ubiquitou ceefalls allow ected to oth areas.	nmer. Fly us. Trees w for frec er areas c	yways to greater t quent sm of trees.	resource han 15" [all openii	овн
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Freq.	Moon Phase		Rise	PPER	Vax W
Freq.	Sun	e 50 %	Rise	(v	Vax W
			Rise		
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	Moon		de	12	205
			132		OD
	1				
	-	/T		1.1	N. D
1	Time	Temp (F)	Sky	Wind	No. B
1	9 00	75	0	0	0
	10:00	73	0	0	1
	11 00	70	0	0	0
	12 00	68	0	1	0
	1.00	66	0	2	1
	2.00	65	0	2	0
	1			1	
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1 × 1	0			_	
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	3				
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	6	Heavy rai	n - thunde	er storm	
	-	14.1.1.1.1		d Scale	
_	0				
	-			-	
		Light bree	-		
			070: 7 10	mph	
	3	Gentle bre Moderate			
		11 00 12 00 1 00 2:00 0 1 2 3 4 5 6 0 1	11 00 70 12 00 68 12 00 66 2 00 65 0 Clear 1 Few Cloud 2 Partly Clo 3 Cloudy or 4 Fog or sma 5 Drizzle or 6 Heavy rain 0 Calm: <1 r	11 00 70 0 12 00 68 0 12 00 66 0 2 00 65 0 2 00 65 0 0 Clear 1 1 Few Clouds 2 2 Partly Cloudy 3 3 Cloudy or overcast 4 Fog or smoke 5 Drizzle or light rain 6 Heavy rain - thunde Beaufort Wing 0 Calm: <1 mph	11 00 70 0 0 12 00 68 0 1 1 00 66 0 2 2:00 65 0 2 2:00 65 0 2 1 Few Clouds 1 1 2 Partly Cloudy 3 Cloudy or overcast 3 Cloudy or overcast 4 Fog or smoke 5 Drizzle or light rain 6 Heavy rain - thunder storm Beaufort Wind Scale 0 Calm: <1 mph

Count Lat/L	y se on ; UTM	11 <u>CR</u> 1: N/E		State_	OH W/N_		Time Up	8:4	25 Tin Zone	ne Dowi	n Datum	-	Observe	rs MTM,	RRR	- C 0	PPER	PHEAT
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	e SD %	ι i	C	ax) / War
1		LABO	A	M		14	37	B	2	0	-	(-			Rise		Set
2	9:40	EPFU	2	F	NR	19	46	B	4	1	1	1	-	Sun		-06		8:55
3	10:20	EPFU	A	M	S	22	51	B	4	0		1	-	Moon		173		024
4	11:30	EPFU	A	M	S	22.5	49	B	5	0	-	-	-					C. 10.00
5			1	1			1.	1		1000				Time	Temp (F)	Sky	Wind	No. Bat
6	12400						-						1	A distance in a	1	ony		Tito. Dut.
7				-	-									9:00	76			2
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11	1		-					1.77		1	· · · · ·			1:00	71	0	1	Ö
12	1.1.1.1.1		-				1		1.000	·		-		2:00	68	0		0
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16			1		0-2-2	-			11 - T		-			J		ky Code		
17			-	1		1.00	_	-	-		the second			0	Clear	-		
18	-	_	-						2					1	Few Clouds			
19				1						_	10 C			2	Partly Clou			
20			· · · ·	-										3	Cloudy or o		_	_
21			-		-	1		_						4	Fog or smol			
22	-		-				-		-					5	Drizzle or li			
23			1		-	-	-	_	-	-				6	Heavy rain	- thunde	r storm	
24 25	-		-	-		-	-	-	-		1		1				10.1	
25				-	1		-							-		ort Wind	Scale	
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29	-		-		-	-	-	_			-		-	2	Light breeze			
30		1			-		-			-			-		Gentle bree			
	stic Surv	ey: Unit typ	1		Unit #	-	Date	1.000	Start tin	10		Stop time_		4	Moderate b	reeze: 11	-16 mph	_
	nerproof				0.m. #_		Date Date Coordin	ates_	Start tin Start tin	ne		Stop time_ Stop time_ Stop time_		Please Ref P.O. Box 7 (859) 925-	3, Paint Li	ick, KY	, 40461.	

	J/E_41,13920	W/N_82	99223			Zone	_	Observers_	MTM , 1	ZRR				-
Datum:	County	AS CA	State_	OH	Quad_	Fires	ide							
Site Diagram:				- (Height	Length	in the second second			Domi	nant Veg	etation		
102	1	2	M	Net	(m)	(m)	Dates	1. COTTON			_4. ELM			
-10-1	12			A	6	6	7/23/15 7.27	2. ROPMI			_5	ALLET		
7211 -	-0	2.1		В	9	9	7/23/15 7-27	3. RED OF	¥		_ 6			
atop 2	21122	Ral		C	6	b	7/23/15 7.21		-		0.1.1		_	_
12	alp s	2 Ter	1 100	D	6	6	7/23/15 7-27				Set by H		F	-
VIO	~1-1-	2731 1	118.05	E	_			Habitat	A	B	C	D	E	I
ala"	$\beta = 0$	-J9/ /n	L	F	_			River	_	-			1	-
212 0	102	134 /		-				Stream			(~	1	-
2/10	235-2	5		Site	Photogr	anhe		Pond Corridor	~	×	V	-		-
211 22	Q Im	1		the second se	era:	apits		Cave	v	Y	×			2
1100	55-1	120		and the second	to Log:			Mine		1.1			1 7	1
11 -	2 1	100						Forest		· · · · · · ·	1			-
aller E	-An	6 - 1	1.1					Gap						
0110-		1.0						Other	-				1	
11 5-	0~ .	0	11					1000						
11 -2	1	00	11								10000			
2. Optim 2. Water Re 2. Moder openings 3. Optim		hing bark or other at drinking resour termittent streams w bats easy access (including road r	roost featu ces not pre or pondec to the resc uts) presen	ures pr esent a d areas ource. at that a	resent >1 t the site. present appear to	5 inch D but too o o offer di	BH within 1000 fo	eet of forested many bats to	l areas.) drink ea: ne majorit	/ of the su		6		are
							lture, area autom							
3 Forest St 1. Poor: H 2. Moder may be p 3. Optim gaps that 2 Land Co 2. Margin	Habitat even aged an rate: some diversity in present but rare. nal: Mature forest. Di t facilitate bat foragin ver: 1. Poor: Square nal: Trees present in nal: Area is largely fo	id young. Trees si n age of trees in th iverse age classes ng. kilometer surrou the form of small	naller than he stand. T of trees pre nding site p woodlots a	5 inch rees 5 esent. oredon and we	to DBH. U to 15 incl Trees > 1 ninantly ooded fer	Jndersto hes prese 5 inch D un-fores nce rows	ry growth clutter ent. Understory o BH frequent. Va ted. Few mature . Little connectic	ed and restric clutter domin rying tree hei trees present on to adjacent	cts flying/ ant but no ght and to not conn forested a	foraging of ubiquito reefalls allo ected to of areas.	ow for free ther areas o	quent sm of trees.		
3Forest St1. Poor: I2. Modermay be p3. Optimgaps that22Land Cor2. Margin3. Optim	Habitat even aged an rate: some diversity in present but rare. nal: Mature forest. Di t facilitate bat foragin <u>ver</u> : 1. Poor : Square nal: Trees present in nal: Area is largely fo	id young. Trees si n age of trees in th iverse age classes ng. kilometer surrou: the form of small prested. Wooded s	naller than he stand. T of trees pre nding site p woodlots a	5 inch rees 5 esent. oredon and we	to DBH. U to 15 incl Trees > 1 ninantly ooded fer	Jndersto hes prese 5 inch D un-fores nce rows	ry growth clutter ent. Understory o BH frequent. Va ted. Few mature . Little connectic	ed and restric clutter domin rying tree hei trees present on to adjacent ooded stream	cts flying/ ant but no ght and th not conn forested a , fence ro	foraging of ubiquito reefalls allo ected to of areas.	ow for free ther areas o	quent sm of trees.		
3Forest St1. Poor: I2. Modermay be p3. Optimgaps that22Land Cor2. Margin3. Optim	Habitat even aged an rate: some diversity in present but rare. nal: Mature forest. Di t facilitate bat foragin ver: 1. Poor: Square nal: Trees present in	id young. Trees si n age of trees in th iverse age classes ng. kilometer surrou: the form of small prested. Wooded s	naller than he stand. T of trees pre nding site p woodlots a	5 inch rees 5 esent. oredon and we	to DBH. U to 15 incl Trees > 1 ninantly ooded fer	Jndersto hes prese 5 inch D un-fores nce rows	ry growth clutter ent. Understory o BH frequent. Va ted. Few mature Little connectio ded stands via wo	ed and restric clutter domin rying tree hei trees present on to adjacent	cts flying/ ant but no ght and th not conn forested a forested a forece ro n to :	foraging of ubiquito reefalls allo ected to ot areas. w, or other	ow for free ther areas o r wooded o	quent sm of trees.		

Site L Count Lat/L	ocation_ ty_ <u>Se</u> on ; UTN	12000LOT 1200 1: N/E_4	off . 1.184	State_	OH _W/N_	-82	Time Up	8:3	Zone	ne Dowr	Datum⊥	DAD83	Observe	rs MTM	RRR	- c o	PPEF	
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	e %		v	Vax / Wan
1	9:10	EPFU	J	F	NR	145	46	C	1	0		1	1		1	Rise		Set
2		EPFU	A	F	PL	19	50	C	6	0	1		1	Sun		060	23	2055
3		EPFU	J	F	NR	14	46	C	8	0	1	-	1	Moon		182	7	0356
4		MYSE	5	F	NR	6	36	B	3	0	l	17344	1					
5		EPFU	A	F	PL	19.5		B	8	0	-	-	-	Time	Temp (F)	Sky	Wind	No. Bats
6	12:50	EPFU	A	M	S	16	45	C	2	0	-		-		remp (r)	DRy	wind	NO. Date
7	1.		. 1			1	1	-			2000 - C	-		9:00	80	1	0	9
8				1272					1					10:00	74	1	0	1
9	i i					- 2				1	1			11:00	69	0	0	0
10					·	-					1.1			12:00	65	0	0	1
11	7		A			1.00		100	1					1.00	65	0	0	6
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17	31	· · · · · · · · · · · · · · · · · · ·		1		10.01	1				· · · · · · ·			0	Clear			
18			1	4.11)******	1	-		·			1	Few Clouds	5		
19	1.1	A			· · · · · · · · · · · · · · · · · · ·		1		(· · · · · · · · · · · · · · · · · · ·			2	Partly Clou	dy		
20	1.1	ļ												3	Cloudy or o	overcast		
21	÷			1	_	1.20					1			4	Fog or smol	ke		
22	-			1	NEL T		= =	-		·	1			5	Drizzle or l	ight rain	-	
23				1.00	V		1			-				6	Heavy rain	- thunde	r storm	-
24						1.2.1		1		1-0								
25	1.1				· · · · · · ·	2			1		C			1	111	ort Wind	Scale	
26	1.0	1	-		1	1222		1.000						0	Calm: <1 m			
27	1	(1	1.000	1.110				1				1	Light air: 1-			
28					1	1								2	Light breeze			
29					1	1	1	2000	A	1				3	Gentle bree			
30			15.00	1.1.1		1.2.41	(P. 19)							4	Moderate b	reeze: 11-	-16 mph	
Acous	stic Surv	vey: Unit typ	e	_	Unit #		Date		Start tim	ne		Stop time_						
							Date		Start tim	ne		Stop time_		Please Ret				
	herproof						Date Coordin	-	Start tim	ne		Stop time_	_	P.O. Box 7	73, Paint L 9012	ick, KY	, 40461.	

County at/Lo	on; UTN	ne(a 1: N/E_41.1	845	State_	_W/N_	-82	Time Up 9356	8:5	Zone	ne Dowr	Datum M	JAD83	Observe	rs MTM , RI	28	- C o	PPER	HEAD
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	se 50 %		R	ax/ Wan
1	9:45	EPFU	A	F	PL	20	42	A	5	0	-					Rise	2	Set
2	10:15	EPFU	A	M	5	17	46	Ċ	52	0	-)	-	Sun		de		205
3	10:15	EPFU	A	F	L	17.5		B	5	0	()	_	Moon		142	10	-
4	10:15	EPFU	Es	scape	2			10	LT.		in the second			(
5	10:45	FPFU	A	F	PL	16.5	50	B	2	0	1	J	$\mathcal{L}_{\mathrm{res}} \xrightarrow{\sim} \mathcal{L}_{\mathrm{res}}$	Time	Temp (F)	Sky	Wind	No. Bats
6	10:45	EPFU	A	M	5	17.5	49	Č	10	0	-	1	-	Time	remp (r)	UNY	Trate	INO. Dato
7	11:30	EPFU	N	F	NR	13.5	43	С	4	0	-	1	-	9:00	79	1	0	1
8	1:15	EPFU	A	F	PL	22.5	47	C	5	0	-	-	-	10:00	77	1	0	5
9				1777			12				1			11 00	75	0	0	1
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11	1)								1:00	72	0	0	_
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13						2 1		-				1					1.1.1.1	
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15	·			1					1		1.00							
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17	1	R	·	11 - 21	· · · · · ·	F.,							a free day	0	Clear	_		
18	1	1		1	1		P			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			1	Few Cloud	S		
19														2	Partly Clou	-		
20														3	Cloudy or	overcast		
21		1		17	1.1	a second			L					4	Fog or smo			
22	h	P		0 S					()	1		1	1	5	Drizzle or l	0		
23					1			_		-				6	Heavy rain	- thunde	er storm	
24					-	1.000				1								
25	J.				1.11	·						1	i			fort Wind	d Scale	
26											-	1		0	Calm: <1 m			
27	-			1		-								1	Light air: 1			_
28	1000			1000	1000									2	Light breez			
29)				1000		-	1.1	· · · · · ·		1		1	3	Gentle bree		and the second s	
30					1.1.1	1.11					1000		Charles 1	4	Moderate b	reeze: 11	-16 mph	

Lat/Lon	; UTM: N/E_	41.1845		- 82 9356		_	Zone -	\sim		Observers_	MTM, RR	R	_			_
Datum:	NAD83	_ County_	ENBEA.	State 04	10	Quad_	FIRES	DE								_
Site Dia	gram:			//	H	Height	Length	1.1.1				Domin	nant Veg	etation		
	\sim	L was	502	(woods I	Jet	(m)	(m)	Da	ates	1. RED MAP	LE.		4			
	Cà		// A		A	6	6	7-24	7.8	2. RED BAN	4		5			
100	05	6	1	11	В	6	9	7.24	7.20	3. HICKORY	_		_6	_		
ope	t	[]	60000		C	9	12	7-24		1		-	S			
	serat	B woods (03000		D	6	6	7.24	7-28		_		Set by H			_
					E	1.1.1.1			-	Habitat	A	B	C	D	E	I
					F		1			River	1		12.2.4	1.11		
		DITOR			10		1 - 1			Stream	1 i	1	-	2.34		1
-			~~~~			t. 2.	1	-		Pond	-	1	-			-
	T					hotogr	aphs			Corridor	~	V		~		_
44	5	ant	9			era:	-			Cave						-
Dec .	2 (MOOD	·	P	hoto	Log:_	-			Mine	· · · · · · · · ·					-
OPEN C	7	V	E			-			-	Forest						
	4		PAIL	-						Gap)
	10		-	S					-	Other						
	5	NOOP	>													
	Roost habita 2. Moderate:	Characterizat	tion (Choose a or few snags >= ughing bark or c	ppropriate sco 5" DBH with slo other roost featur	ughi es pr	ing bark resent 5	or othe 15 inch	r usable r DBH wit	roost fea thin 1000	tures (cracks,) feet of forest	ed areas.	etc)				-
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2 2 2 3	Roost habita 2. Moderate: 3. Optimal: S Water Resou 2. Moderate: openings or c 3. Optimal: S available. Forest Struct 1. Poor: Habi 2. Moderate: may be prese 3. Optimal: M gaps that fact Land Cover: 2. Marginal: 3. Optimal: A	Characterizat T: 1. Poor: No of Snags with sloug Inces: 1. Poor: 1 Ephemeral or in canopy gaps allo Streams or pond ture: (if hardwork itat even aged at some diversity ent but rare. Mature forest. I ilitate bat foragi 1. Poor: Squar Trees present in Area is largely f	tion (Choose a or few snags >= ughing bark or of bat drinking res- ntermittent strea- ow bats easy acc s (including roa odds are absent of nd young. Tree in age of trees in Diverse age class ing. e kilometer surr n the form of sm forested. Woode	5" DBH with slo other roost feature her roost feature ources not present ams or ponded a ress to the resour d ruts) present the or nearly absent of s smaller than 5 in the stand. Tree wes of trees present ounding site pre- hall woodlots and ed stands are cor	ughin es pr s pres nt at l reas p cce. aat ap or if s nch I es 5 tc nt. Tr domi 1 woo	ing bark resent 5 sent >1 the site present ppear to stand is DBH. U o 15 inc rees > 1 inantly oded fe	or othe -15 inch 5 inch D but too o offer du monocu Judersta hes pres 5 inch D un-fores nce rows	r usable i DBH with BH within cluttered rinking re- liture, are ory growt ent. Und DBH frequ sted. Few 5. Little c	roost fea thin 1000 in 1000 f to allow esource ea autom th clutten lerstory uent. Va v mature connectio	tures (cracks,) feet of forested v many bats to throughout th natically quali red and restric clutter domin arying tree hei trees present on to adjacent	ed areas. I areas. I areas. I areas. I areas. I are majority fies as a 1 cts flying/ ant but no cts flying/ ant but no ght and tr not conne forested a , fence row n to:	sily or simu y of the sur poor). foraging ot ubiquito reefalls allo ected to oth areas. w, or other	nmer. Fly us. Trees ow for free ner areas o wooded o	ways to r greater th quent sma of trees.	esources an 15″ E	вн

OHIO BAT BANDING DATA FORM

M Location (lat/longs in D:M:S format) 41.18453/-82.93529 Principle Investigator(s) 000 Janle. 7/24/15 enera Site Description Woodlot off of County Total mist net nights Survey dates

Band Number	N/R?	Date of Capture	Time of Capture	Habitat	Species	Arm Banded	Sex	Age	Repro- ductive Status	Weight (g)	Forearm Length
17344	N	7/28/15	2145	V	MYSE	L	F	J	NR	6	36
										,	
									-	-	
										-	-
					1						

N/R?: N = new capture, unbanded when captured, R = recapture, already banded when captured; **HABITAT** (at capture site): C = creek/riparian, B = bottomland forest, U = upland forest, P = pond, O = other (note type in margin); **ARM BANDED**: L = left, R = right (typically males are banded on the right forearm and females on the left); **SEX:** M = male, F = female; **AGE:** A = adult, J = juvenile, U = unknown; **REPRODUCTIVE CONDITION:** S = scrotal, P = pregnant, L = lactating, PL = post lactating, NR = nonreproductive, U = unknown

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+	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	JAD83 Band# TypeODW		Moon Pha		77.5		Vax / Wa
L	130	WYSE	A	F	L	7.0	35	B	2	0	n B	ODNRX	17179			Rise		Set
2	130	MYSE	A	F	L	7.5	36	B	3.5	0	B	17178	172.205	Sun		6:21		3:56
3	1										-			Moon	-	4:52	pm .	2:46
Ł			+		1						-			1000				
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2			1		÷	1	-	-	-	-				4	Fog or smo		_	
3	-	-	- F		5	1	-	-						5	Drizzle or		- Index -	
1			1					-		-				6	Heavy rain	- thunde	r storm	
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2								1		-		1	Sun		6	23	8:54
3)				1		· · · · · · · ·			Moon		6:27	Pm-	3.56 m
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Testle serves	roofing					Coordin	ates						(859) 925-				
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	on; UTM: N/E 41, 17809	W/N 82.8	19062		Zone -		Observers		mi T.	KLinge	Date		
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3 3 3 1	 <u>Roost habitat</u>: 1. Poor: No or few s <u>2. Moderate</u>: Snags with sloughing b <u>Water Resources</u>: 1. Poor: bat drint <u>2. Moderate</u>: Ephemeral or intermite openings or canopy gaps allow bats <u>3. Optimal</u>: Streams or ponds (incluavailable. <u>Forest Structure</u>: (if hardwoods are <u>1. Poor</u>: Habitat even aged and your <u>2. Moderate</u>: some diversity in age of may be present but rare. <u>3. Optimal</u>: Mature forest. Diverse agaps that facilitate bat foraging. <u>Land Cover</u>: 1. Poor: Square kilom <u>2. Marginal</u>: Area is largely forested 	snags >= 5" DBH bark or other roos ark or other roos aking resources n tent streams or p easy access to th ding road ruts) p e absent or nearly ng. Trees smalle of trees in the sta age classes of tre eter surrounding rm of small wood . Wooded stand	with slough st features p ot present a onded areas e resource. resent that absent or if than 5 inch nd. Trees 5 es present.	hing bark present 5 resent >1 t the site s present appear to f stand is n DBH. U to 15 inc Trees > 1 ninantly ooded fe	c or other -15 inch D 5 inch D but too c o offer dr monocu Jnderston hes prese 5 inch D un-fores nce rows	e usable roost feat DBH within 1000 BH within 1000 fe cluttered to allow inking resource t lture, area autom ry growth cluttere ent. Understory c BH frequent. Van ted. Few mature . Little connectio led stands via wo	tures (cracks, feet of forestect many bats to hroughout th atically quali ed and restric clutter domin rying tree heit trees present n to adiacent	ed areas. 1 areas. 2 drink eas 3 drink eas 4 majority fies as a 1: cts flying/ ant but no cts flying/ ant but no ght and tro forested a forested a forested a	ily or simul of the sum poor). foraging t ubiquitous eefalls allow ected to othe reas	mer. Fly s. Trees v for frec er areas c	yways to r greater th quent sma of trees.	resources nan 15″ E	овн
3 3 2 1	 <u>Roost habitat</u>: 1. Poor: No or few s 2. Moderate: Snags with sloughing b <u>Water Resources</u>: 1. Poor: bat drim 2. Moderate: Ephemeral or intermite openings or canopy gaps allow bats 3. Optimal: Streams or ponds (inclu available. <u>Forest Structure</u>: (if hardwoods are 1. Poor: Habitat even aged and your 2. Moderate: some diversity in age of may be present but rare. 3. Optimal: Mature forest. Diverse agaps that facilitate bat foraging. <u>Land Cover</u>: 1. Poor: Square kilom 2. Marginal: Area is largely forested 	snags >= 5" DBH bark or other roos ark or other roos aking resources n tent streams or p easy access to th ding road ruts) p e absent or nearly ng. Trees smalle of trees in the sta age classes of tre eter surrounding rm of small wood . Wooded stand	with slough st features p ot present a onded areas e resource. resent that absent or if than 5 inch nd. Trees 5 es present.	hing bark present 5 resent >1 t the site s present appear to f stand is n DBH. U to 15 inc Trees > 1 ninantly ooded fe	c or other -15 inch D 5 inch D but too c o offer dr monocu Jnderston hes prese 5 inch D un-fores nce rows	e usable roost feat DBH within 1000 BH within 1000 fe cluttered to allow inking resource t lture, area autom ry growth cluttere ent. Understory c BH frequent. Van ted. Few mature . Little connectio led stands via wo	tures (cracks, feet of forestect many bats to hroughout the atically qualited and restric clutter domining trees present trees present n to adjacent boded stream	ed areas. I areas. I drink eas the majority fies as a 1: cts flying/ ant but no ght and tra- not conne forested a , fence row n to:	ily or simul of the sum poor). foraging t ubiquitous eefalls allow ected to othe reas. v, or other v	mer. Fly s. Trees v for frec er areas c	yways to r greater th quent sma of trees.	resources nan 15″ E	овн

OHIO BAT BANDING DATA FORM

Band Number	N/R?	Date of Capture	Time of Capture	Habitat	Species	Arm Banded	Sex	Age	Repro- ductive Status	Weight (g)	Forearm Length
ODWR				2	101			1-	Suitus		
17179	N	7-26-15	0130	Ç	MISE	L	A	F	L	7.0	35
17178	N	7-26-15	0130	C	WUSE		A	F	L	7.5	36
	_				-						
											1

N/R?: N = new capture, unbanded when captured, R = recapture, already banded when captured; **HABITAT** (at capture site): C = creek/riparian, B = bottomland forest, U = upland forest, P = pond, O = other (note type in margin); **ARM BANDED:** L = left, R = right (typically males are banded on the right forearm and females on the left); **SEX:** M = male, F = female; **AGE:** A = adult, J = juvenile, U = unknown; **REPRODUCTIVE CONDITION:** S = scrotal, P = pregnant, L = lactating, PL = post lactating, NR = nonreproductive, U = unknown

oun t/L	ty <u>Ser</u> on; UTM	H Necal A: N/E <u>N4</u>	1.224	State_ 734	OH _W/N_	<u>ω</u> - ·	Time Up 83,02	9:0	Zone	ne Dowr	Datum 1	MAD83	Observe	rs <u>ES</u> ,-	TAB	- c o	PPER	7
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	e %		v	Vax / Wane
1	10:40	LABO	5	M	NR	110	39	B	1.5	1	-	-	+			Rise		Set
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1						[1]		-						1:00	68	1	0	0
2		6			10.00	1								2:00	67	1	0	0
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Ĺ) <u>(</u>)	1			11.00									4	Fog or smo	ke		
2			1		1									5	Drizzle or l	light rain		
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	1		1.2231	1								1		1		_		
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5	1				H.						· · · · · · · · · · · · · · · · · · ·	1	1	0	Calm: <1 m	nph		
7											1			1	Light air: 1	-3 mph		
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)	-								in mi	-		14		4	Moderate b	preeze: 11	-16 mph	
ou	stic Surv	ey: Unit typ	e		Unit #	-	Date		Start tin			Stop time_						
					_		Date	_	Start tin			Stop time_		Please Re		1.500.00		
							Date	-	Start tin	ne		Stop time_		P.O. Box		ick, KY	, 40461.	
at	herproof	ing					Coordin	ates					1	(859) 925-	9012			
m	ments:																	p. 2

ite N ite L Count Lat/L	lo ocation ty <u>Ser</u> .on ; UTN	H Woodle neca A: N/E <u>N 4</u>	Project	State_ 134	Jame SFF OH W/N	w-8	Time Up	Rd. 8:5	<u>Spr</u> Tin Zone	ne Down	2€4 Datum_	VAD83	Date	rs <u>ES,</u> 7	AB		PPER	PHEAD
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phas	e %	60	Ċ	Vax)/ Wane
1	10:50	PESUL	U	F	NR	7	35	A	3	0	-	-	-	S		Rise	-	Set
2	12:30	EPFU	A	F	PL	19	48	A	2.5	0	-	4	(Sun		06	22	8.54
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borea (MY)	alis (LABC AU); Myot	viations: Coryn)); Lasiurus cine tis grisescens (M ceius humeralis	reus (LAC YGR); My	CI); Lasin yotis leib	urus semi bii (MYLE	inolus (L E); Myoti	ASE); Lasi s lucifugus	onycteri (MYLU	s noctivaga); Myotis s	ans (LAN eptentric	O); Mvotis	austroripariu	s	Please Re P.O. Box 2 (859) 925-	turn to: 73, Paint I			

Lat/Lon; UTM: N/E // 41.224734 W/N	W 83,02803	ect No./Name_ 9 Zone		Observers_	Eric	Smith	, Tod	ld Biz	kler	
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K //		Photographs		Corridor	X	X	×	-		-
trail 7/ stream		iera:		Cave	<u>5.4.1</u>					1.2
ST /	Phot	to Log:		Mine		-	- E		-	-
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				Other	10.00		11 12		1	
50	ybeing									
2. Moderate: Snags with sloughing bark o	>= 5" DBH with slough or other roost features p	ning bark or oth present 5-15 inc	er usable roost f h DBH within 10	eatures (cracks, 000 feet of forest	ted areas.	etc)				
 <u>Roost habitat</u>: 1. Poor: No or few snags > 2. Moderate: Snags with sloughing bark or <u>Noderate</u>: Snags with sloughing bark or <u>Water Resources</u>: 1. Poor: bat drinking r <u>Moderate</u>: Ephemeral or intermittent stropenings or canopy gaps allow bats easy a <u>Optimal</u>: Streams or ponds (including r available. <u>Forest Structure</u>: (if hardwoods are abser <u>Poor</u>: Habitat even aged and young. Tr <u>Moderate</u>: some diversity in age of trees may be present but rare. 	>= 5" DBH with slough or other roost features protection of the roost features protection of the resources not present a reams or ponded areas access to the resource, road ruts) present that a not or nearly absent or if rees smaller than 5 inch is in the stand. Trees 5	ning bark or oth present 5-15 inch resent >15 inch t the site. s present but to appear to offer stand is mono to DBH. Unders to 15 inches pr	her usable roost f h DBH within 10 DBH within 100 o cluttered to all drinking resourc culture, area auto tory growth clut esent. Understor	eatures (cracks, 000 feet of forest 0 feet of forester ow many bats to be throughout the omatically quali- tered and restri- ry clutter domin	ted areas. d areas. o drink ea he majorit ifies as a 1 icts flying, hant but no	sily or sim y of the su : poor). /foraging ot ubiquite	mmer. Fly ous. Trees	yways to greater t	resources han 15" I	овн
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#	Time	Species	Age	1.1.1	1		FA (mm)				G/H/B/T	Band# Type		Moon Phase			W	ax / Wan
1	10:20	EPFU	7	M	NR	14	45	D		0	_		-	10		Rise		Set
		EPFU	A	F	L	20.5	44	D	15	0	10-	-	-	Sun		OVER	3	8:55
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18						1.00								1	Few Cloud	ls	-	
19				·								1	1	2	Partly Clo			
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21			1			1 ·····	1		1		1 m m		ň		Fog or smo			
22								0.000	1						Drizzle or			
23						1					ie 1	1		6	Heavy rai	n - thunder	storm	
24			1000			1.5		1			1			1			10	
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26			11			1.00			11-Y					0	Calm: <1 r	nph		
27						1					· · · · · · · · · · · · · · · · · · ·				Light air: 1	-3 mph		
28				()			-							2	Light bree	ze: 4-6 mp	h	
29			1								1		1.0	3	Gentle bre	eze: 7-10 n	nph	
30			1					h-si						4	Moderate	breeze: 11-	16 mph	
MY/ MY/ MYS	alis (LABC AU); Myol 50); Nycti	viations: Coryn)); Lasiurus cine iis grisescens (M ceius humeralis	ereus (LAC IYGR); My (NYHU);	CI); Lasi yotis leil Perimy	urus sem bii (MYLI votis subf	inolus (L E); Myoti lavus (Pl	ASE); Lasi is lucifugus ESU); Tada	onycteri (MYLU rida bra	s noctivaga I); Myotis s siliensis (T.	ans (LAN eptentric ABR)	IO); Myotis onalis (MYSI	austroripari	us	Please Ref P.O. Box 7 (859) 925-	73, Paint I	Lick, KY,		
her	Abbrevia	tions: Male: M;	Female: F	; Pregna	ant: P; La	ctating: I	L; Post Lac	tating: P	L; Scrotal:	S; Non R	epro: NR							p. 1

ite No ite Lo ount at/Lo	$p_{15} = \frac{5}{2}$ $p_{15} = \frac{5}{2}$ p_{1	CRE612 NECEA M: N/E4	Project PUDNG	No./N Itwy State_	lame (9 6H W/N	- 85	/ 1	nieso B.	Tin Zone	ne Dowr	2:00 Datum	UND83	Date	7-31-15	AB		0	5
#	Time	Species	Age	Sex		Mass (g)	FA (mm)	-	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	-	197)		Vax / Wan
1	10:00	EPFU	A	F	PL	19	47	E	0.5	0		-	-			Rise	A	Set
2	10 00	EPFU	A	F	PL	18	47	E	4	6	-			Sun		126	25	8:50
		MYSE	A	F	PL	7.5		A	1	0	-	17345		Moon		21		0910
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5	1.000				N		·				1				-	~		628.27
6	1		·		2000	1.00			1			1	1	Time	Temp (F)	Sky	Wind	No. Bats
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8							1				11	III	10.000	10:00	12	0	1	2
9			1											11.00	72	0	1	1
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16						1				1				4	5	Sky Code		
17	_				-					1				0	Clear			
18		1	/		12.1	1				1				1	Few Cloud	S		
19	-	11			· · · · ·	1	1							2	Partly Clou	ıdy		
20					2	1								3	Cloudy or o	overcast	-	
21			-						1.00	1	-		-	4	Fog or smo	ke		
22			1		-			Li	1		(C		1	5	Drizzle or l	ight rain		
23	-		-			1	-			-	(i			6	Heavy rain	- thunde	r storm	
24																		
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28 29					· · · · ·				2					2	Light breez			
30	-	_		(),		_		_	1		1		1 1	3	Gentle bree			_
	tia Com	vey: Unit typ			Lin's P		Data					0		4	Moderate b	reeze: 11	-16 mph	
	erproof		e		Unit #_		Date Date Date Coordina	atas	Start tim Start tim Start tim	le		Stop time_ Stop time_ Stop time_		Please Ret P.O. Box 7	3, Paint L	ick, KY	, 40461.	
	erproof	ung		-			Coordina	ates						(859) 925-9	9012			p. 2

Datu	on; UTM: N/E_41, 2003 W/N	B3 0152 Zone	-	Observers_		MTM	TAB			1.0
	m: NAD83 County SENECA	State OH Quad Wats	no	18 9 484 341 3 -	,					
	Diagram:	Height Length				Domi	inant Ve	getation		
		Net (m) (m)	Dates	1. MAPLE	E CUMPER		4. ELI	-		
		A 3 6 7	7-24 7-31	2. Corrun			5. Hics	Locy		
	1	B 9 6	7-24 7-31	3. ASH IN	ASSIN S	NAGS NO-1	S6. WAL	ALLT		
E	1.		7-24				00.152	2012		
-	Creek .	× D69	7-24 7-31	1		Net	Set by H	labitat	-	c
0	9 7	E 6 9	7-31	Habitat	Α	B	C	D	E	F
AT-	- till	F	1.00	River			1.000	10.00	1.1.1	-
-	tril B			Stream	5		X	x	X	-
				Pond		1	· ·····	1.0.1	1.1.277	
		Site Photographs		Corridor	X	X	1	1	· · · · · · ·	
		Camera:		Cave	the set of	1	1		1.0.0	-
		Photo Log:		Mine	-	_			11 H 4	
				Forest		1				
	1 I I I I			Gap		-	-	-		-
	x 1 1			Other		11 11	1.11	1000		
				1.11		L			1.1.1	
3		r roost features present >15 inch DBH rces not present at the site. is or ponded areas present but too clu	I within 1000 fe	eet of forested	l areas.	sily or sim	ultaneous	sly. No co	orridors,	
2	 openings or canopy gaps allow bats easy acces 3. Optimal: Streams or ponds (including road available. Forest Structure: (if hardwoods are absent or 1. Poor: Habitat even aged and young. Trees s 2. Moderate: some diversity in age of trees in t 	ruts) present that appear to offer drin nearly absent or if stand is monocultu maller than 5 inch DBH. Understory	ire, area autom growth clutter	atically quali ed and restric	fies as a 1 cts flving	: poor). /foraging				
	 openings or canopy gaps allow bats easy acces 3. Optimal: Streams or ponds (including road) available. <u>Forest Structure</u>: (if hardwoods are absent or 1. Poor: Habitat even aged and young. Trees s 	ruts) present that appear to offer drin nearly absent or if stand is monocultu maller than 5 inch DBH. Understory he stand. Trees 5 to 15 inches present of trees present. Trees > 15 inch DBH unding site predominantly un-forested l woodlots and wooded fence rows. I	rre, area autom growth clutter t. Understory c I frequent. Var d. Few mature Little connectio	atically quali ed and restri- lutter domin rying tree hei trees present n to adiacent	ifies as a 1 cts flying, ant but n ight and t not conn forested	: poor). /foraging ot ubiquito reefalls all rected to ot areas.	ous. Trees ow for fre her areas	s greater t quent sm of trees,	han 15″ I all openi	ОВН
2 3	 openings or canopy gaps allow bats easy acces 3. Optimal: Streams or ponds (including road a available. Forest Structure: (if hardwoods are absent or 1. Poor: Habitat even aged and young. Trees s 2. Moderate: some diversity in age of trees in t may be present but rare. 3. Optimal: Mature forest. Diverse age classes gaps that facilitate bat foraging. Land Cover: 1. Poor: Square kilometer surrou 2. Marginal: Trees present in the form of smal 3. Optimal: Area is largely forested. Wooded 	ruts) present that appear to offer drin nearly absent or if stand is monocultu maller than 5 inch DBH. Understory he stand. Trees 5 to 15 inches present of trees present. Trees > 15 inch DBH unding site predominantly un-forested l woodlots and wooded fence rows. I	ire, area autom growth cluttere t. Understory c I frequent. Var d. Few mature Little connectio d stands via wo	atically quali ed and restri- clutter domin rying tree hei trees present n to adjacent poded stream	ifies as a 1 cts flying, ant but n ight and t not conn forested t, fence ro	: poor). /foraging ot ubiquito reefalls all rected to ot areas.	ous. Trees ow for fre her areas	s greater t quent sm of trees,	han 15″ I all openi	ОВН
2 3	 openings or canopy gaps allow bats easy acces 3. Optimal: Streams or ponds (including road a available. Forest Structure: (if hardwoods are absent or 1. Poor: Habitat even aged and young. Trees s 2. Moderate: some diversity in age of trees in t may be present but rare. 3. Optimal: Mature forest. Diverse age classes gaps that facilitate bat foraging. Land Cover: 1. Poor: Square kilometer surrout 2. Marginal: Trees present in the form of small 3. Optimal: Area is largely forested. Wooded Total Habitat Score (Should be between 4 & 12) 	ruts) present that appear to offer drin nearly absent or if stand is monocultu maller than 5 inch DBH. Understory he stand. Trees 5 to 15 inches present of trees present. Trees > 15 inch DBH unding site predominantly un-forested l woodlots and wooded fence rows. I	rre, area autom growth clutter t. Understory c I frequent. Var I. Few mature Little connectio d stands via wo	atically quali ed and restri- lutter domin rying tree hei trees present n to adjacent boded stream Please retur	ifies as a 1 cts flying, ant but n ight and t not conn forested forested forested forested forested	: poor). /foraging ot ubiquito reefalls allo rected to ot areas. w, or other	ous. Trees ow for fre her areas r wooded	s greater t quent sm of trees,	han 15″ I all openi	ОВН
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#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	e 49 %	a per pu	C	Nax / Wan
1		EPFU		aped	uh:le	lower	ing he	B	3	-	-	-	/			Rise		Set
2		EPFU	A	F	PL	175	44	A	2	0	NA	NIA	NA	Sun		6:	12	20:52
3		EPFU	A	F	P2	19.75		D	2	0	NIA	ILA	NA	Moon			28	00:45
4		EPFU	J	M	NIL	9.75	43	A	5	0	NA	NA	NA		Contraction of the			
5		EPFU	A	F	PL	19.0	47	Á	6	1	NIA	NIA	NIA	Time	Tanan (E)	Ċ.	TATE	N. D.
6		EPFU	T	F	NR	15.0	46	Å	7	0	NIA	NA	N/A	Time	Temp (F)	Sky	Wind	No. Bats
7	11:20	EPFU	A	F	PL	22.0	49	A	6	0	NIA	NIA	NA	0900	74	1	0	NIA
8					1. · · · · · ·	100	1.00							1000	68	Ö	0	3
9	-				1.201					-		1.1.1.1.1.1		1100	63	0	0	3
10	_		-							-			1	1200	60	0	0	1
11	1.00		· · · · ·			1	2							0100	61	0	0	0
12				-	_	100	1 T.	_					172	0200	61	0	0	0
13				1									1000					. 10 million
14 15						_		-							· · · · · · · · ·		1	
15					-				-				1000			-		
10			-			- C	-					1			-	Sky Code		
17				-		1		-	1	-				0	Clear			
10	-		-	-										1	Few Cloud	s		
20					100	1		-					1		Partly Clou			
20				-		1		1.4					· · · · ·		Cloudy or a			
22	-			-		-		-		_					Fog or smo			
23															Drizzle or l			
24				-				-						6	Heavy rain	- thunder	r storm	
25			-		-		-	-	-									
26	12		-	-	-	-	-								1.4.1	ort Wind	Scale	_
27						-			-				-		Calm: <1 m			1
28		I	1	-	-	-		-		_			-		Light air: 1-			
29					-	-	-								Light breez			
30				-	-				_	-					Gentle bree			
orea MYA MYS	U); Myoti	r iations: Corync); Lasiurus ciner s grisescens (M [*] eius humeralis (eus (LAC (GR); My	I); Lasiu otis leibi	rus semir ii (MYLE)	olus (L. Mvotis	ASE); Lasio lucifugus	nycteris (MYLU	noctivaga	ns (LAN	D). Muntie	Inchroningarin		Please Ret P.O. Box 7 (859) 925-9	3, Paint L	-		

Count Cat/L	y_ <u></u> y <u></u> on ; UTM	Condin Pondin NCCA A: O/E_H.	Wood 15769	State_	West of 04 W/N	-ST	Time Up 2,989	259	SS Tin Zone —	ne Dowr	Datum_	5 24 NAD83	Observer	rs B. Ren	Vey/R	4 Grez		
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	e %	86	(m	Vax / Wan
1	10:00	EPFU	A	F	PL	16,5	46	A	3	0	MA	NIt	NA			Rise		Set
2		EPFU	A	M	NR	16.0	45	A	3	0	VIA	1/A	NA	Sun		6:2	2m	8:55
3	10:00	FEPFU	A	F	PL	18,5	48	A	4	0	NA	NIX	NA	Moon		5:3	Ien	2:46
4	10:30	EPFU	J	M	NR	13,5	46	A	2.5	0	NIA	NIA	N/A			- 6		
5	11.00	EPFU	5	M	NR	15,0	45	6	1,5	0	N/A	N/t	VIF	Time	Temp (F)	Sky	Wind	No. Bat
6	11750	EPFU	A	M	NR	19,0	46	A	5	0	NIA	MA	N/A	Time	remp (r)	ЗКУ	wind	NO. Date
7	13:40	LADO	J	F	NR	9.0	41	C	4.5	0	N/A	NIA	NA	900	77	0	0	NA
8					2	16-201		1000	1.2 11		2121	1.		1000	74	1	0	0
9					11		ir 1			-				1100	73	1	0	4
10		1			1		· · · · · i	1.00				-		1200	71	D	0	2
11			· · · · · ·	1	1	1	1	1		6				100	70	0	0	1
12							1	1. S. ([m	P.,				200	69	0	0	
13	2													1.1.1.1				
14				-	1										1		1	
15	2 - 1				1						5	V	1	Q				
16	ľ	(1		1		277780					1				Sky Code		
17			1		1			6.51			-	1		0	Clear			
18												ł.,	the second	1	Few Cloud	ls		
19					<u></u>	K						· · · · · · · · · · · · · · · · · · ·	ļ	2	Partly Clo	ıdy		
20			1				i				1		1	3	Cloudy or	overcast		
21	-				1		1			-				4	Fog or smo	oke		
22	1						1						1.1	5	Drizzle or			
23	1	2					1	1.0			((1	6	Heavy rain	n - thunde	r storm	
24						1000	(1.	-	0		1					
25	0	-		1.00			1		1				·		Beau	fort Wind	d Scale	
26				-		1	1 - C	· · · · · ·				1	12.72.6	0	Calm: <1 r		_	
27				1	1	·	·	1.4					1000 million	1	Light air: 1			
28	1	· · · · · · · · · · · · · · · · · · ·		-			-			_		-		2	Light bree			
29									1			1		3	Gentle bre			
30	L	-						_			1	1.5.1	1.000	4	Moderate	oreeze: 11	-16 mph	
cou	stic Sur	vey: Unit typ	e		Unit #		Date		Start tin			Stop time						-
							Date		Start tin		_	Stop time		Please Re			10 A 10	
							Date Coordin	·····	Start tin	ne		Stop time		P.O. Box 7	73, Paint I	lick, KY	, 40461.	

at/Lon; UTM: N/E 41,157652 (W/N - 82,98	9259	Z	one -		Observers_	B. Rem	lay /R	McGu	1901		-
	OHO		-ires	le	4 200 . Q				-		
ite Diagram (loss) /			ength		1	100	Domin	ant Veg	etation	1.	_
		(m)	(m)	Dates	1. 54 gar	maple		4. R.C		K	
		7.8	9	7/23/15 +7/27		bark H:	charg	5.			
FR GIT		5.2	12	7/23/15+2/27	A 1	white		6.			
Not A FUICST	C	5.2	6	7/23/15 +7/27	25						
1/		57	6	7/23/5 27/27		1	Net S	Set by H	abitat	2-25	
vit cottails - Note	E	9.4	*	112/102 9 1 1	Habitat	A	В	C	D	E	
F CONTRACT	F		200		River	11044					1
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I II N T	-				Ponder	1111.19	V	1	1.00		-
	Site Ph	hotogra	phs		Corridor	1	1 1 1	V	V		
Pond 18 NET	Camer				Cave						
TT P		Log:			Mine			10-11	1	2.00	
Finor /	70 0	200010	dr	JE 5: te 16	Forest						
aver					Gap					-	1
Dewind Forest					Other	11110		-	Parent, 177		
1.											
									_		
<u>Roost habitat</u> : 1. Poor: No or few snags >= 5" DBH wit							(C)				
 Moderate: Snags with sloughing bark or other roost fee Optimal: Snags with sloughing bark or other roost fee <u>Water Resources</u>: 1. Poor: bat drinking resources not p Moderate: Ephemeral or intermittent streams or pond openings or canopy gaps allow bats easy access to the re Optimal: Streams or ponds (including road ruts) prese available. 	eatures pres itures pres resent at t ed areas p source. ent that ap	esent 5-1 sent >15 the site. present b opear to o	5 inch 1 inch DI ut too c offer dr	DBH within 1000 BH within 1000 fe luttered to allow inking resource t	feet of forest eet of forested many bats to hroughout th	ed areas, l areas. o drink eas e majority	ily or simu of the sur				s are
 Moderate: Snags with sloughing bark or other roost fee Optimal: Snags with sloughing bark or other roost fee <u>Water Resources</u>: 1. Poor: bat drinking resources not p Moderate: Ephemeral or intermittent streams or pond openings or canopy gaps allow bats easy access to the re Optimal: Streams or ponds (including road ruts) preservailable. 	eatures pres intures present at t ed areas p source. ent that ap sent or if se an 5 inch D Trees 5 to	esent 5-1 sent >15 che site. oresent b opear to o tand is n OBH. Ur o 15 inche	5 inch 1 inch DI ut too c offer dr nonocu ndersto es prese	DBH within 1000 BH within 1000 fe luttered to allow inking resource t lture, area autom ry growth clutter ent. Understory o	feet of foreste ent of forested many bats to throughout th natically quali red and restric clutter domin	ed areas, l areas. o drink eas e majority fies as a 1: cts flying/i ant but no	ily or simu of the sur poor). foraging t ubiquitor	nmer. Fly us. Trees	ways to greater t	resources han 15″ I	DBH
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at/L	J;UTM	NECA 1: ()/E_41.1	7585	State_	OH Ø/N_	-82	Time Up. 9603	090	Zone	ne Down	Datum_	(an	Observer	7-24 B.Rent	y /R.M.	Green) HEAL
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	e %	60	G	Var) War
1	9:30	EPFU	J	F	NR	13.0	48	D	5	0	MA	NIA	NA			Rise		Set
2	10:20	LABO	A	F	PL	140	39	P	45	0	NIA	NA	N/A	Sun			:13	20:5
3	10:50	EPPU	A	F	PL	23.	50	A	3.5	0	N/A	NIA	N/A	Moon		14	:26	NM
4	11:10	EPFU	J	F	NR	14.25	44	A	2.5	0	NIA	NIA	NIA	2				
5		EPFU	A	M	NR	15.75	44 45 46	A	2	0	NIA	NIA	NA	Time	Temp (F)	Sky	Wind	No. Bat
7	1	6113	1.0		123	1.10	10	~			- m	1.11	1ª m	0900	28	1	0	N/A
8				100000							1			1000	76	- 1	0	1
9	()				· · · · ·	1.1.2	1		1. I.I. I.I.					1100		1	0	2
10														1200	74	1	0	2
11		· · · · · · · · · · · · · · · · · · ·			0 = 10				1		1			100	67.5	1	0	1
12	1				11111	1.1.1.1				·	1	1.00		0200	66		0	0
13									1							A		
14									1	1	· · · · · ·				1.000	P		
15	1.000									· · · · · · · · · · · · · · · · · · ·	1		·					
16	1000 cm				1.1	1	1.1.1			-						Sky Code		
17						1 1								0	Clear			
18	1.22.21							i	P				1	1	Few Cloud	ls		
19		1.11							[2	Partly Clou	udy .		
20		1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		1.1.1					1					3	Cloudy or	overcast		
21					1		1 11							4	Fog or smo	oke		
22					1	1			1.0				2		Drizzle or	0		
23					1.00									6	Heavy rair	n - thunde	r storm	
24	(*****)			$ \mathbf{r} < \hat{\mathbf{r}}$	2								1.00	-		_		
25	1000		1		1			1.1	0.000		1		1	1	Beau	fort Wind	Scale	
26			- 1	E				-					1		Calm: <1 n			
27	·		-	2.75	1000	10.4		-	1.1.1.1.1.1		· · · · · ·		t;		Light air: 1		-	
28	-	· · · · · · · · · · · · · · · · · · ·		1.21	(Light breez			
29	1		-		1	- 1			/					3	Gentle bree	1.551 1.5 1.5 2.5	4	
30						100								4	Moderate l	preeze: 11-	16 mph	

Mist Netting Data Form

#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	%	100	Full w	lax / Wane
1	9:50	EPFU	5	F	NR	12.0	46	D	6	0	N/A	NIA	N/H			Rise		Set
2		EPFU	ナ	_				17	4	0	NA		NIA	Sun		6	25an	8:52
3	1.1.1.1		2	142 1				1.000	1	S	0.223		20.0	Moon		81	10 nm	5:75
4					1.000			-	(1	10			,	
5		-			0150									Time	Temp (F)	Sky	Wind	No. Bats
5				12.00	11.4.1			i						Time	remp (r)	1.5.3.1	wind	
7			1		1000				1					9:00	76	0	1	NA
3	1.1				1, 221	1.41	1		1000	1				10:00		0	1	2
9					11.000			1		1.000				11:00	23	0	-1	0
0															69	0	1	0
1														0100	68	0	1	0
2				1) — (i) ()				· · · · · ·	0200	67	0	l	0
3					1				1				(1					
4			-					_		<u> </u>			1					
15									0				· · · · · ·		-			
16		1	1		í		-		1						-	Sky Code	10	
7		-	-					-					-	0	Clear	_		
8			1	9		-		-		1	-	-		1	Few Cloud			
9					-			-	1.11				1	2	Partly Clou		_	
20				-	-	-	-	-		_			-	3	Cloudy or			
21					-	-				-			-		Fog or smo		_	
2	-					-					-	-	-	5	Drizzle or	<u>.</u>		
23	-		1		-				1				-	6	Heavy rair	n - thunde	er storm	
.4 5	-		-	-				-			-				Perro	fort Wind	d Casla	
26			-			_	-	-	-					0		1.55.030.0250	a Scale	_
27			-	-							-	-	-	1	Calm: <1 n		-	
8		-	-	-									-	-	Light air: 1 Light breez		â.	
.0			-	-										3	Gentle bree			
0	-	-			-					-	-		-	4	Moderate l			
	stic Surv	ey: Unit typ	e	-	Unit #		Date		Start tin	ne	-	Stop time	-	4	Moderate	neeze; 11	-ro mpn	_
ou	suc Surv	ey. Ont typ	e		Unit #_	-	Date		Start tin			Stop time		Please Ret	urn to:	-	_	-
							Date	-	Start tin			Stop time		P.O. Box 7		ick KV	10461	

Lat/Lo	DR; UTM: 0/E 41.17535				Zone	<u> +12.0(1 E.</u>	Observers_	B. Per	ley / A	2 McG	regor	9.0	
	n: NAD83 County	Deneca	State Olt			eside	n		Domi	nant Veg	atation		-
site D	iagram:		Ne	Height et (m)	Length (m)	Dates	1 6	ar na		4		when he	che
-		4	A	A	6	7/24+7/30		Oak	pic	5	ing ba	- 1	Crie
Γ	LUT Kul	x Vind	7 / B		12	7/24	3. wh:		ar	6.			
F		SI VINI	110	5.2	9	7/24							
1		L.X.V	TO		9	7/24-7/30			Net	Set by Ha	abitat		- 1
/		ATV YASI	DE		6	7/30/15	Habitat	Α	B	C	D	Ε	1
/	- 5 150	LH C	F		9	7/30/15	River		1		12 221		
	I S Mot	1221/1	NetA	Contraction of			Stream		Sec. 1	1	11 11	1	_
/	Tid F	12/1/					Pond	1224	V	1.4.1	1.21	1-1	1.3
1	with the second	1 1/ +1	Site	e Photogr	aphs		Corridor	V	V	V	V	V	V
15)		tipling		mera:	1	1.11	Cave			11 L - 1	1.1		
/	1. 1.	-HOV/10		oto Log:	down	1 lorded	Mine	-				11	
/	Forcest We we	AVY		to 900	sie i	avive	Forest						
	To a wa	EA KI	NX /-				Gap			-			-
/	1.04	00 × 11 016	13, -				Other				1.00		0.000
	////	INTS HOM	Pour								1.1		
3 3 3	 <u>Roost habitat</u>: 1. Poor: No 2. Moderate: Snags with slou <u>Water Resources</u>: 1. Poor: 2. Moderate: Ephemeral or openings or canopy gaps all 3. Optimal: Streams or pone available. <u>Forest Structure</u>: (if hardw 1. Poor: Habitat even aged a 2. Moderate: some diversity may be present but rare. 3. Optimal: Mature forest. gaps that facilitate bat forag 	bughing bark or other ighing bark or other r bat drinking resource intermittent streams of low bats easy access t ds (including road rut oods are absent or ne and young. Trees sm. y in age of trees in the Diverse age classes of	roost features oost features j es not present or ponded are o the resource (s) present tha arly absent or aller than 5 in stand. Trees	s present 5- present >1! at the site. as present at appear to if stand is ch DBH. U 5 to 15 incl	15 inch D 5 inch D but too o offer d monocu Jnderste hes pres	DBH within 1000 BH within 1000 for cluttered to allow rinking resource to alture, area autom ory growth clutter ent. Understory of	feet of forest eet of forestee many bats to hroughout th attically qual ed and restri clutter domin	ed areas. d areas. o drink ea ne majorit ifies as a 1 cts flying/ ant but no	sily or simu y of the sur : poor). /foraging of ubiquito	mmer. Fly us. Trees	ways to) greater tl	resource nan 15″ I	ЭВН
2	Land Cover: 1. Poor: Squa 2. Marginal: Trees present 3. Optimal: Area is largely	re kilometer surround in the form of small v forested. Wooded sta	voodlots and	wooded fer	nce row	s. Little connectio	on to adjacen ooded strean	t forested an, fence ro	areas.				0
11	Total Habitat Score (Should	be between 4 & 12)					Please retur					5	•
Comm	Total Habitat Score (Should nents:	be between 4 & 12)					Please retur P.O. Box 73, 859-925-901	Paint Lic	k, KY. 4046	51	COPP	5	EA

Coun	V See	Wordlot + 4: N/E_41.1		State	OH		Time Up 12227	205	Zone	ne Dowr	Datum_A	140 83	Observe	ers ST. Sam	oray	- c o		HEAD
#	Time	Species	Age	Śex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type <u>ODWR</u>	Freq.	Moon Pha	se 74 %		C	Vax / Wan
1	2125	EPFU'	A	M	NR	17.5	46.5	4	2.0	0	-	-	Y			Rise		Set
2	2125	EPEU	A	F	PL	18.5	48.0	A	3.5	0.	-	-	-	Sun		062	1	2055
3	2125	EPEU		-	-	-	-	A	5.5	-	-	ESCAPE?	NET	Moon		1625	1	0245
4	2135	EPÉW	A	F	PL	18.75	47.0	A	1.5	0	-	-	-	-	-			
5	3135	EPFU	1.0	19-01	10-11	-	1.20	A	6.5		~	ESCAVE ?	NET	Time	Temp (F)	Sky	Wind	No. Bat
6	2145	LARO	T	M	NR	9.5	39.0	B	2.0	0		-	(cuite.	1.1.1.1.1.1			. to but
7	2145	EPFU	A	Ŧ	PL	R.S	17.0	B	2.5	0	-	-	-	2100	79 0	C)	0	9
8	21415	EPFU	A	F	PL	18.0	45.0	A	1.0	0		(~	2200	720	2	0	2
9	2145	MYSE	A	F	NR	7.5	35.5	C	2.0	6	-	23360	137	2300	710	2	0	2
10	2245	EPFU	A	F	PL	21.5	48.0	A	1.0	0			-	0000	68	2	0	1
11	2245	EPFU	J	F	NR	17.0	46.0	A	0.5	0		-	Cert.	0100	67"	2	0	a
12	2315	LAEO	1	F	1	15-		A	6.0	(1)	-	ESCAPE C	NET	0000	60	2	0	0
13	2345	EPEU	A	F	PL	24.7	419.5	4	6.0	0								
14	0030	EPEU	J	M	NR	17.0	47.5	A	6.5	0	÷	-	-)			1	
15	0110	ERFU	T	M	NR	16.15	45.0	A	4.0	0	-	-						
16	0140	MYSE	J.	F	NR	6.75	34.0	B	2.0	O	-	23361	030			Sky Code	2	
17			1		1000									0	Clear	1000		
18	1					1	1 m	· Internet				·		1	Few Cloud			
19	-		1	1	-		h	-	12	-	1.1	1		2	Partly Clo			
20		1			1		1	l				·		3	Cloudy or			
21		-	. is	·	_	_		1		1	I.		1.000	4	Fog or smo			
22	P	1				14		12.1	1.11					5	Drizzle or			
23	-				· · · · · · · · · · · · · · · · · · ·	1.0	· · · · ·	1						6	Heavy rain	ı - thunde	er storm	
24			-	_		-												
25			-		-	-					-	· · · · · · · · · · · · · · · · · · ·	-			fort Wind	d Scale	
26												1	5	0	Calm: <1 n		-	
27		-	-		÷	-		_		1	A	1		1	Light air: 1		_	
28	1		-			-			-					2	Light breez			
29			-					-				1.0	1.000	3	Gentle bree		*	
30	Ha Cu	TT TT	1		LL		Det				2	0		4	Moderate l	preeze: 11	-16 mph	
cou	suc Sur	vey: Unit typ	e	_	Unit #		Date Date		Start tin Start tin	ne		Stop time_ Stop time_		Please Re				
							Date		Start tim	ne		Stop time_		P.O. Box	73, Paint L	ick. KY	, 40461.	

in the second

-		1. IV/L	1 1 1		_w/N_	Mass	12-69	* /	Zone Height		1	WAD 83 Band#	Freq.	HBrau	nreiter	- CO		CONFREI-H
#	Time	Species	Age	Sex	Repr.	(g)	FA (mm)	Net	(m)	WDI	G/H/B/T	Туре		Moon Phas	e 90%		(V	Vax) / Wan
1	2130	EPFU	A	P	PL	16.5	47.5	A	1.5	0						Rise		Set
2	2130	EPFU	65	CAP	ED F	ROI	n n	ET	A" 50					Sun		0623	3	2653
3	245	MYSE	J	F	NR	6.0	34.0	C	3.0	0	-	23362	1	Moon		10224		043]
4		EPFU	A	M	SC	18.5	47	A	1.5	0	1					10		
5		EPFU	A	F	PL	23.5	51.0	A	0.5	0	-			Time	Temp (F)	Sky	Wind	No. Bat
6	2345	EPFU	A	M	SC	20,5	47,5	A	6.0	0	-		1	Time	remp (r)	SKY	wind	INO. Date
7	0000	EPFU	A	F	PL	20.0	46.5	A	6.0	0	1			2100	81	0	0	3
8			100	1	t	U.	1							2006	78	0	0	1
9					-	1		1	-				-	2300	70	1	0	1
10														0000	73		0	
11				10		h	1	1				÷	E www.	(2010)	73	1-	Ó	0
12						1000				1				0200	71	- 1	0	Ø
13				[]								1	Approval and a second		1		1	1
14		6.00 c			1	1				1.2.1		1	5 10 14	1	1			
15	T				· · · · · · · · · · · · · · · · · · ·		1	÷					-			1. T. S.	7	
16				12		1	1.000						1.1		9.000	Sky Code	-	
17												· · · · · · · · · · · · · · · · · · ·	Sec. 12	0	Clear			
18								-	4	1		1		1	Few Cloud	ls		
19				·	1	-	1000			0.000		1	1.1	2	Partly Clo	udy		
20				· · · · ·	1000	- I	1221		0.10			2.14	1	3	Cloudy or	overcast	3 C	
21					1							hr10		4	Fog or smo	oke		
22					5	A						1		5	Drizzle or	light rain		
23	È				P	in	· · · · · · · · · · · · · · · · · · ·							6	Heavy rain	n - thunde	r storm	
24						_	1					A 444 11			1.0			
25							1.000						17 mar 1		Beau	fort Wind	Scale	
26				A	10-10-1	1.00	(== = :					1	1	0	Calm: <1 r	nph		
27							1	1				1		1	Light air: 1			
28			-		1	5			, I			1. T		2	Light bree		h	
29					1	Sec								3	Gentle bre			
30														4	Moderate			

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in

Case No(s). 17-2295-EL-BGN

Summary: Application Exhibit R - Part 1 of 3 electronically filed by Teresa Orahood on behalf of Sally W. Bloomfield