

Mist Netting Data Form

Site No. 28 Project No./Name 501 / Emerson West Date 19 July 2010
 Site Location Woodlot N of N Township Rd 181
 County Seneca State OH Time Up 2101 Time Down 0201
 Lat/Lon: UTM: N/E 41.13056 W/N 82.99911 Zone — Datum NAD83 Observers TWetzel
TSmith



COPPERHEAD
ENVIRONMENTAL CONSULTING

#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.
1	2230	EPU	J	F	NR	15.5	48	A	4.5	0	—	—	—
2	2230	EPU	J	F	NR	15	48	E	4.5	0	—	—	—
3	2235	EPU	J	M	NR	10.5	44	A	5.0	0	—	—	—
4	2240	EPU	A	M	S	19.23	49	A	7.0	0	—	—	—
5	2300	EPU	J	F	NR	13	45	E	3.5	0	—	—	—
6	2300	EPU	A	F	PL	21.25	49	E	4.5	0	—	—	—
7	2305	EPU	J	M	NR	13.0	44	A	5.0	0	—	—	—
8	2345	EPU	A	M	S	18.0	47	B	3.0	0	—	—	—
9	0145	LABO	A	F	L	4.5	43	E	3.0	0	—	—	—
10													
11													
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16													
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29													
30													

Moon Phase 99% Wax / Wane

	Rise	Set
Sun	<u>0615</u>	<u>2101</u>
Moon	<u>2040</u>	<u>0603</u>

Time	Temp (F)	Sky	Wind	No. Bats
<u>2100</u>	<u>78</u>	<u>2</u>	<u>0</u>	<u>0</u>
<u>2200</u>	<u>75</u>	<u>1</u>	<u>1</u>	<u>4</u>
<u>2300</u>	<u>70</u>	<u>0</u>	<u>2</u>	<u>4</u>
<u>0000</u>	<u>69</u>	<u>0</u>	<u>1</u>	<u>0</u>
<u>0100</u>	<u>67</u>	<u>0</u>	<u>1</u>	<u>1</u>
<u>0200</u>	<u>66</u>	<u>0</u>	<u>0</u>	<u>—</u>

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
1	Light air: 1-3 mph
2	Light breeze: 4-6 mph
3	Gentle breeze: 7-10 mph
4	Moderate breeze: 11-16 mph

Acoustic Survey: Unit type — Unit # — Date — Start time — Stop time —
 Date — Start time — Stop time —
 Date — Start time — Stop time —

Weatherproofing — Coordinates —

Comments: —

Please Return to:
P.O. Box 73, Paint Lick, KY, 40461.
(859) 925-9012

Mist Net Site Habitat Sheet

Site No. 28

Project No./Name 501 / Emerson West

Date 16 July 2016

Lat/Lon; UTM: N/E 41.13051 W/N 82.99911

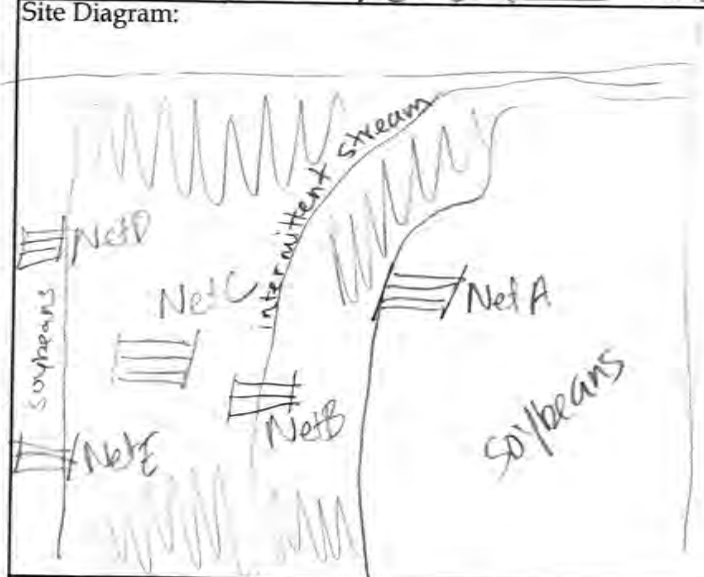
Zone

Observers

Theresa Wetzel
Dane Smith

Datum: NAD83 County Seneca State OH Quad

Site Diagram:



Net	Height (m)	Length (m)	Dates
A	7.8	6	7/16, 7/19
B	5.2	6	7/16, 7/19
C	5.2	9	7/16, 7/19
D	5.2	12	7/16, 7/19
E	5.2	12	7/16, 7/19
F			

Site Photographs

Camera: TW Phone

Photo Log: 1- Net B

2- Net C

3- Net D

4- Net E

5- Net A

Dominant Vegetation

- | | |
|----------------------|---------------------|
| 1. Populus deltoides | 4. Acer saccharinum |
| 2. Quercus laevis | 5. Vitis americana |
| 3. Acer saccharum | 6. |

Net Set by Habitat

Habitat	A	B	C	D	E	F
River						
Stream		X				
Pond						
Corridor						
Cave						
Mine						
Forest						
Gap			X			
Other						
Edge	X			X	X	

Indiana Bat Habitat Characterization (Choose appropriate score for each habitat characteristic)

- 2 **Roost habitat:** 1. Poor: No or few snags $\geq 5"$ DBH with sloughing bark or other usable roost features (cracks, crevices, etc)
2. Moderate: Snags with sloughing bark or other roost features present 5-15 inch DBH within 1000 feet of forested areas.
3. Optimal: Snags with sloughing bark or other roost features present >15 inch DBH within 1000 feet of forested areas.
- 2 **Water Resources:** 1. Poor: bat drinking resources not present at the site.
2. Moderate: Ephemeral or intermittent streams or ponded areas present but too cluttered to allow many bats to drink easily or simultaneously. No corridors, openings or canopy gaps allow bats easy access to the resource.
3. Optimal: Streams or ponds (including road ruts) present that appear to offer drinking resource throughout the majority of the summer. Flyways to resources are available.
- 2 **Forest Structure:** (if hardwoods are absent or nearly absent or if stand is monoculture, area automatically qualifies as a 1: poor).
1. Poor: Habitat even aged and young. Trees smaller than 5 inch DBH. Understory growth cluttered and restricts flying/foraging
2. Moderate: some diversity in age of trees in the stand. Trees 5 to 15 inches present. Understory clutter dominant but not ubiquitous. Trees greater than 15" DBH may be present but rare.
3. Optimal: Mature forest. Diverse age classes of trees present. Trees > 15 inch DBH frequent. Varying tree height and treefalls allow for frequent small openings and gaps that facilitate bat foraging.
- 2 **Land Cover:** 1. Poor: Square kilometer surrounding site predominantly un-forested. Few mature trees present not connected to other areas of trees.
2. Marginal: Trees present in the form of small woodlots and wooded fence rows. Little connection to adjacent forested areas.
3. Optimal: Area is largely forested. Wooded stands are connected to other wooded stands via wooded stream, fence row, or other wooded corridor.

Total Habitat Score (Should be between 4 & 12)

Comments: Stream intermittent and VERY cluttered. Very little foraging space in woodlot. Lots of available roosts and downed trees.

Please return to:

P.O. Box 73, Paint Lick, KY. 40461

859-925-9012

COPPERHEAD
ENVIRONMENTAL CONSULTING

Mist Netting Data Form

Site No. 29 Project No./Name 501 / Emerson West Date 20 July 2016
 Site Location Woodlot South of Trail 0106
 County Seneca State OH Time Up 2059 Time Down 0159
 Lat/Lon ; UTM: N/E 41.09148 W/N -82.866430 Zone — Datum NAD83 Observers J Adams, H Price

COPPERHEAD
ENVIRONMENTAL CONSULTING

#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.
1	2155	EPFU	J	M	NR	12.00	43.0	A	3.5	0	—	—	—
2	2225	EPFU	A	M	NR	18.00	50.0	A	1.5	0	—	—	—
3	2225	EPFU	J	F	NR	13.00	43.0	A	6.5	0	—	—	—
4	2238	EPFU	A	M	NR	19.00	49.0	B	3.0	0	—	—	—
5	2255	EPFU	J	F	NR	15.00	47.0	B	3.0	0	—	—	—
6	2255	EPFU	J	M	NR	16.75	44.0	A	4.5	0	—	—	—
7	2305	EPFU	F	F	L	21.00	48.0	A	5.5	1	—	—	—
8	2312	EPFU	A	M	TD	18.50	46.0	B	2.5	0	—	—	—
9	2320	EPFU	J	M	NR	16.25	46.0	A	4.5	0	—	—	—
10	2325	EPFU	A	F	PL	18.25	47.0	A	4.0	1	—	—	—
11	2355	EPFU	A	F	PL	22.00	51.0	D	1.5	0	—	—	—
12	0020	EPFU	J	F	NR	13.50	47.0	A	3.5	0	—	—	—
13	0040	EPFU	J	F	NR	11.25	45.0	A	4.5	0	—	—	—
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													

Moon Phase 98% Wax / Wane

	Rise	Set
Sun	<u>0615</u>	<u>2059</u>
Moon	<u>2123</u>	<u>0702</u>

Time	Temp (F)	Sky	Wind	No. Bats
<u>2059</u>	<u>73</u>	<u>0</u>	<u>0</u>	<u>1</u>
<u>2159</u>	<u>70</u>	<u>0</u>	<u>0</u>	<u>5</u>
<u>2259</u>	<u>68</u>	<u>0</u>	<u>0</u>	<u>5</u>
<u>2359</u>	<u>66</u>	<u>0</u>	<u>0</u>	<u>2</u>
<u>0059</u>	<u>68</u>	<u>0</u>	<u>1</u>	<u>0</u>
<u>0159</u>	<u>66</u>	<u>0</u>	<u>0</u>	

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
1	Light air: 1-3 mph
2	Light breeze: 4-6 mph
3	Gentle breeze: 7-10 mph
4	Moderate breeze: 11-16 mph

Acoustic Survey: Unit type _____ Unit # _____ Date _____ Start time _____ Stop time _____

Date _____ Start time _____ Stop time _____

Date _____ Start time _____ Stop time _____

Weatherproofing _____ Coordinates _____

Comments:

Please Return to:
P.O. Box 73, Paint Lick, KY, 40461.
(859) 925-9012

Site No. 29 Project No./Name SAL / Emerson West Date 18 Jul
 Site Location Woodlot South of Trail 0106
 County Seneca State OH Time Up 2100 Time Down 0201
 Lat/Lon ; UTM: N/E 41.09148 W/N -82.866430 Zone — Datum NAD 83 Observers J. Adams
H. Price

COPPERHEAD
 ENVIRONMENTAL CONSULTING



COPPERHEAD

[illegible]

Moon Phase 98% Wax / Wane		
	Rise	Set
Sun	0614	2101
Moon	1953	0507

Time	Temp (F)	Sky	Wind	No. Bats
2100	77	2	0	1
2200	70	2	0	0
2300	66	2	0	0
0000	66	0	0	0
0100	63	0	0	0
0200	63	0	0	0

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
1	Light air: 1-3 mph
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3	Gentle breeze: 7-10 mph
4	Moderate breeze: 11-16 mph

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Species Abbreviations: *Corynorhinus rafinesquii* (CORA); *Corynorhinus t. virginianus* (COVI); *Eptesicus fuscus* (EPFU); *Lasiurus borealis* (LABO); *Lasiurus cinereus* (LACI); *Lasiurus seminolus* (LASE); *Lasionycteris noctivagans* (LANO); *Myotis austroriparius* (MYAU); *Myotis grisescens* (MYGR); *Myotis leibii* (MYLE); *Myotis lucifugus* (MYLU); *Myotis septentrionalis* (MYSE); *Myotis sodalis* (MYSO); *Nycticeius humeralis* (NYHU); *Perimyotis subflavus* (PESU); *Tadarida brasiliensis* (TABR)

Other Abbreviations: Male: M; Female: F; Pregnant: P; Lactating: L; Post Lactating: PL; Scrotal: S; Non Repro: NR

Mist Net Site Habitat Sheet

Site No. 29

Project No./Name 501 Emerson West

Date 18 July 2016

Lat/Lon ; UTM: N/E 41.09148

W/N -82.860430

Zone

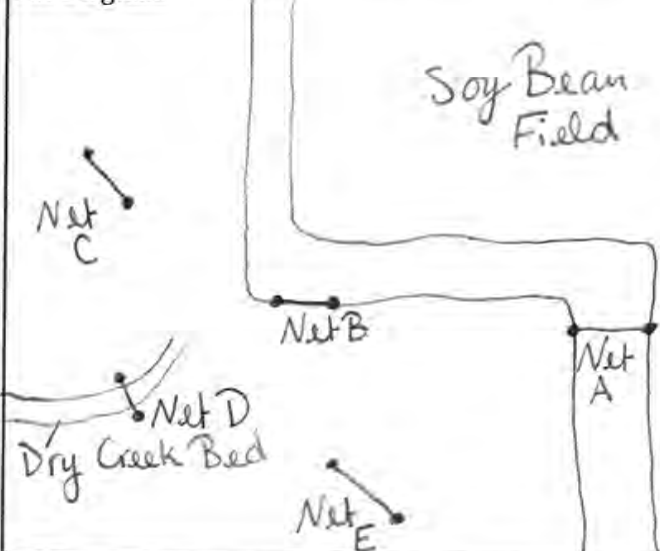
Observers J Adams, H Price

Datum: NAD83

County Seneca

State OH Quad Centerton

Site Diagram:



Net	Height (m)	Length (m)	Dates
A	7.3	6	18 July
B	5.2	9	18 July
C	5.2	6	18 July
D	5.2	4	18 July
E	5.2	6	18 July
F			

Site Photographs
 Camera: _____
 Photo Log: _____

Dominant Vegetation						
1. <i>Carya ovata</i>						
2. <i>Carthagus sp.</i>						
3. <i>Quercus palustris</i>						
4. _____						
5. _____						
Net Set by Habitat						
Habitat	A	B	C	D	E	F
River						
Stream				✓		
Pond						
Corridor						
Cave						
Mine						
Forest						
Gap			✓		✓	
Other	✓	✓				
Edge						
Edge						

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6 **Total Habitat Score** (Should be between 4 & 12)

Comments:

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859-925-9012



APPENDIX B

Mist-Net Site Photographs

501- Emerson West Wind Project Bat Survey, Seneca County, Ohio, July 2015 and 2016.

Business Confidential – Not for Public Disclosure

2015 Mist-Net Site Photographs



Site 1 Net A



Site 1 Net B



Site 1 Net C



Site 1 Net D



Site 2 Net A - 1



Site 2 Net B - 1



Site 2 Net C - 1



Site 2 Net D - 1



Site 2 Net A - 2



Site 2 Net B - 2



Site 2 Net C - 2



Site 2 Net D - 2



Site 4 Net A



Site 4 Net B



Site 4 Net C



Site 4 Net D



Site 5 Net A



Site 5 Net B



Site 5 Net C



Site 5 Net D



Site 6 Net A - 1



Site 6 Net B - 1



Site 6 Net C - 1



Site 6 Net D - 1



Site 6 Net A - 2



Site 6 Net B - 2



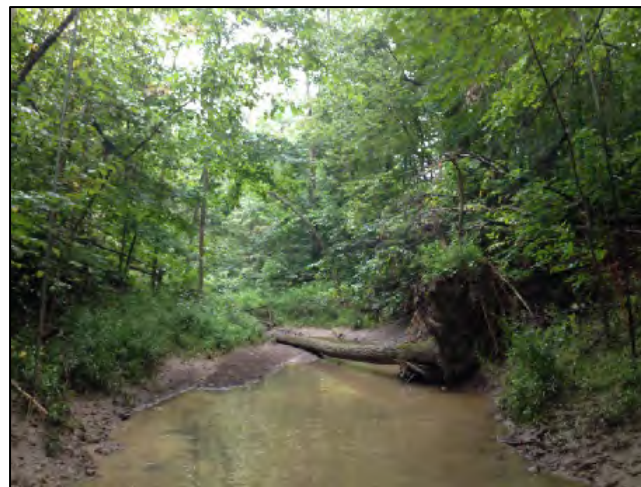
Site 6 Net C - 2



Site 6 Net D - 2



Site 8 Net A



Site 8 Net B



Site 8 Net C



Site 8 Net D



Site 8 Net E



Site 9 Net A



Site 9 Net B



Site 9 Net C



Site 9 Net D



Site 10 Net A



Site 10 Net B



Site 10 Net C



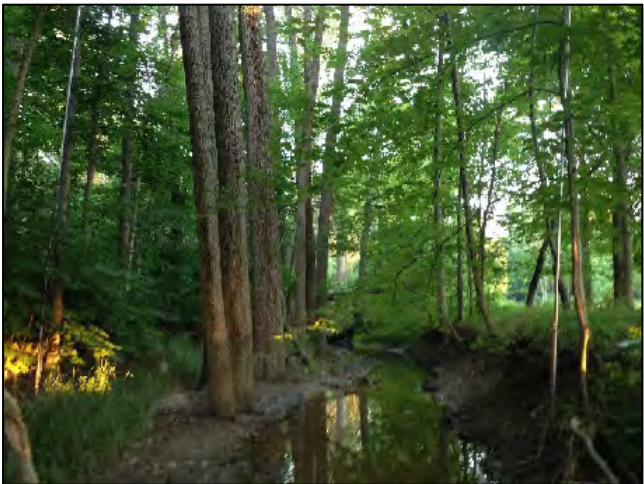
Site 10 Net D



Site 11 Net A



Site 11 Net B



Site 11 Net C



Site 11 Net D



Site 13 Net A



Site 13 Net B



Site 13 Net C



Site 13 Net D



Site 16 Net A



Site 16 Net B



Site 16 Net C



Site 16 Net D



Site 24 Net A



Site 24 Net B



Site 24 Net C



Site 24 Net D



Site 24 Net E



Site 36 Net A



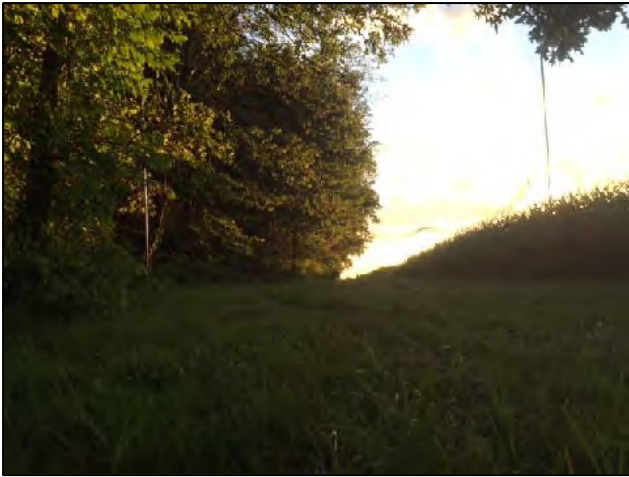
Site 36 Net B



Site 36 Net C



Site 36 Net D



Site 36 Net E



Site 36 Net F

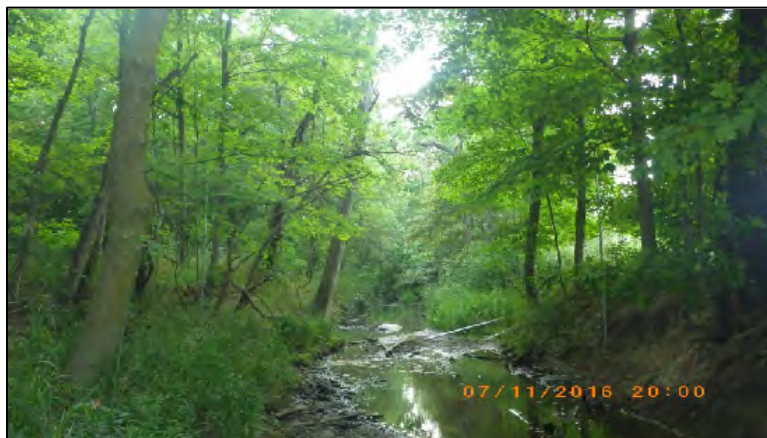


Site 36 Net G

2016 Mist-net Site Photos



Site 1 Net A



Site 1 Net B



Site 1 Net C



Site 1 Net D



Site 1 Net E



Site 2 Net A



Site 2 Net B



Site 2 Net C



Site 2 Net D



Site 2 Net E



Site 3 Net A



Site 3 Net B



Site 3 Net C



Site 3 Net E



Site 4 Net A



Site 4 Net B



Site 4 Net C



Site 4 Net D



Site 4 Net E



Site 5 Net A



Site 5 Net B



Site 5 Net C



Site 5 Net D



Site 5 Net E



Site 6 Net A



Site 6 Net B



Site 6 Net C



Site 6 Net D



Site 6 Net E



Site 7 Net A



Site 7 Net B



Site 7 Net C



Site 7 Net D



Site 7 Net E



Site 8 Net A



Site 8 Net B



Site 8 Net C



Site 8 Net D



Site 8 Net E



Site 9 Net A



Site 9 Net B



Site 9 Net C



Site 9 Net D



Site 9 Net E



Site 10 Net A



Site 10 Net B



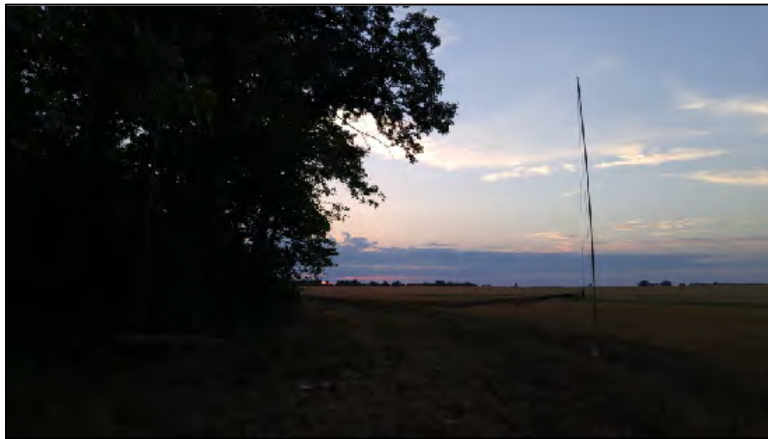
Site 10 Net C



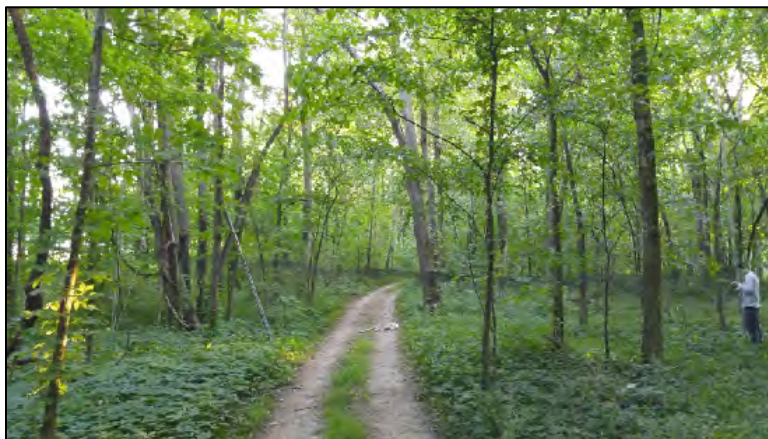
Site 10 Net D



Site 10 Net E



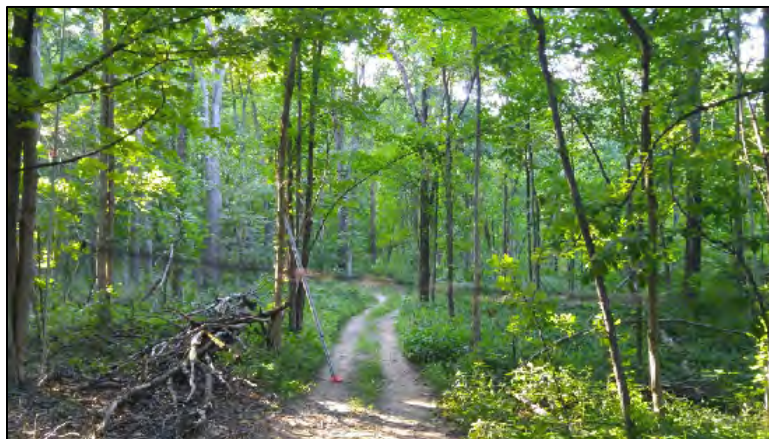
Site 10 Net F



Site 11 Net A



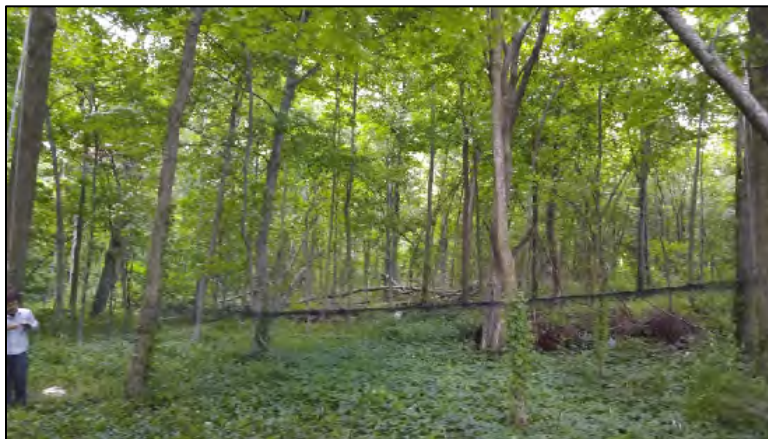
Site 11 Net B



Site 11 Net C



Site 11 Net D



Site 11 Net E



Site 11 Net F



Site 12 Net A



Site 12 Net B



Site 12 Net C



Site 12 Net D



Site 12 Net E



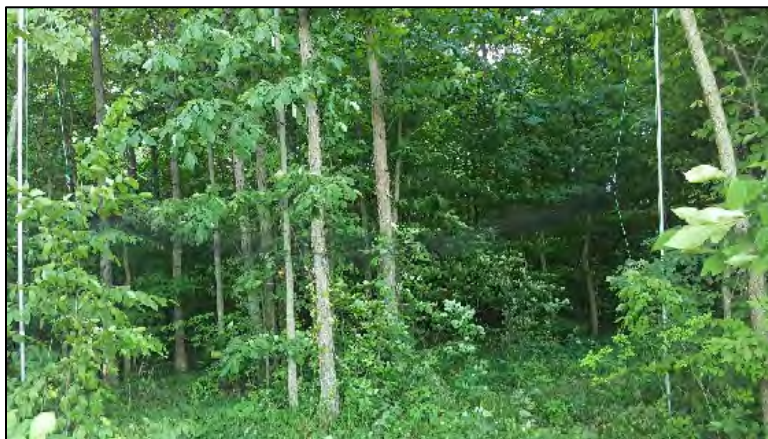
Site 13 Net A



Site 13 Net B



Site 13 Net C



Site 13 Net D



Site 13 Net E



Site 14 Net A



Site 14 Net B



Site 14 Net C



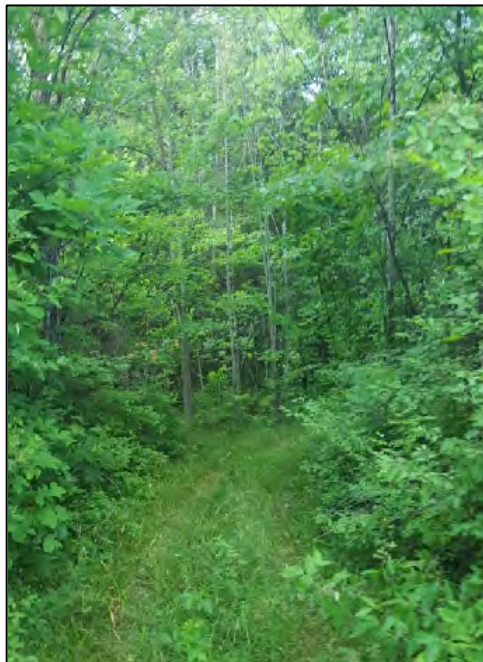
Site 14 Net D



Site 14 Net E



Site 15 Net A



Site 15 Net B



Site 15 Net C



Site 15 Net D



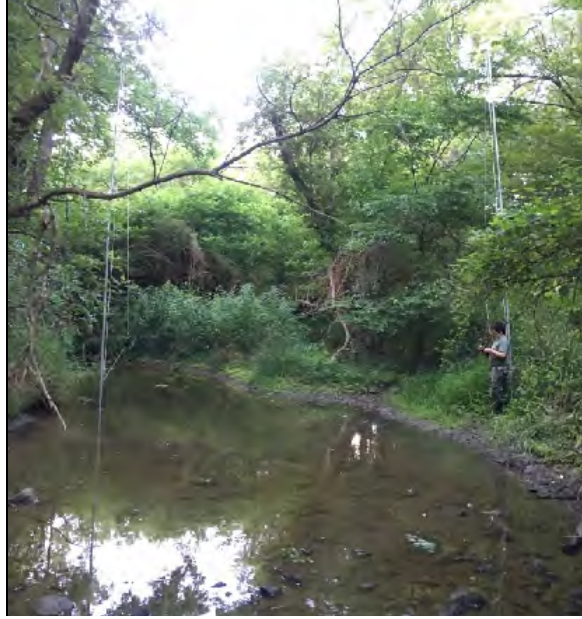
Site 15 Net E



Site 16 Net A



Site 16 Net B



Site 16 Net C



Site 16 Net D



Site 16 Net E



Site 17 Net A



Site 17 Net B



Site 17 Net C



Site 17 Net D



Site 17 Net E



Site 18 Net A



Site 18 Net B



Site 18 Net C



Site 18 Net D



Site 18 Net E



Site 19 Net A



Site 19 Net B



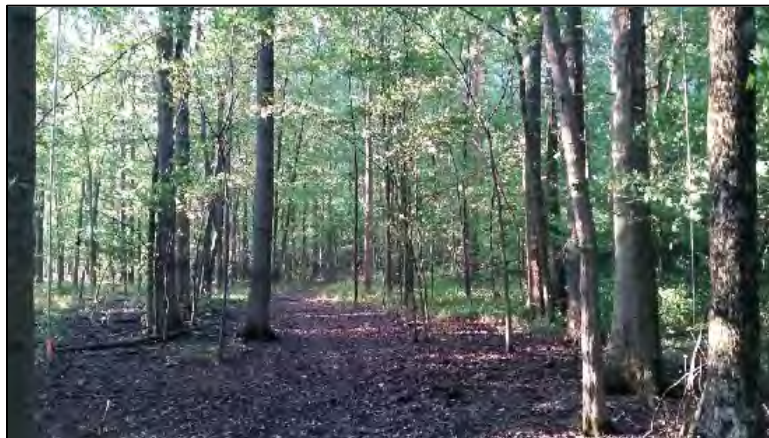
Site 19 Net C



Site 19 Net D



Site 19 Net E



Site 20 Net A



Site 20 Net B



Site 20 Net C



Site 20 Net D



Site 20 Net E



Site 20 Net F



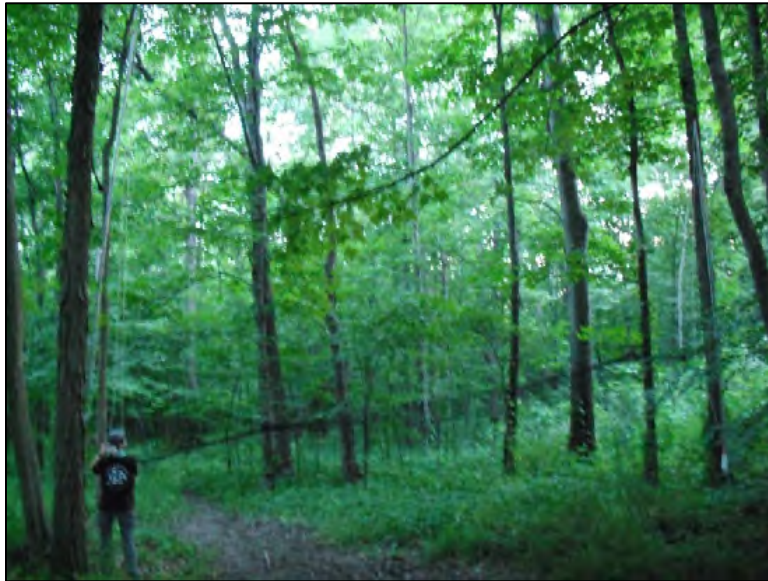
Site 20 Net G



Site 20 Net H



Site 21 Net A



Site 21 Net B



Site 21 Net C



Site 21 Net D



Site 21 Net E



Site 22 Net A



Site 22 Net B



Site 22 Net C



Site 22 Net D



Site 22 Net E



Site 23 Net A



Site 23 Net B



Site 23 Net C



Site 23 Net D



Site 23 Net E



Site 24 Net A



Site 24 Net B



Site 24 Net C



Site 24 Net D



Site 24 Net E



Site 25 Net A



Site 25 Net B



Site 25 Net C



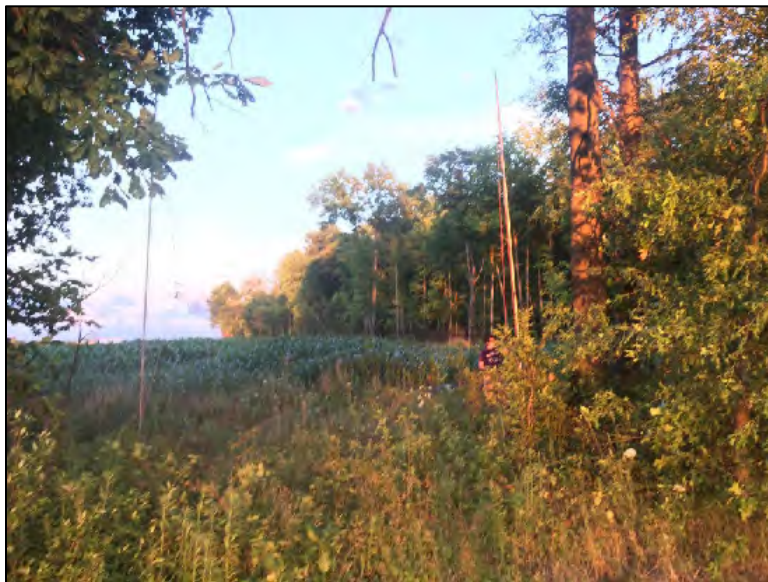
Site 25 Net D



Site 25 Net E



Site 26 Net A



Site 26 Net B



Site 26 Net C



Site 26 Net D



Site 26 Net E



Site 27 Net A



Site 27 Net B



Site 27 Net C



Site 27 Net D



Site 27 Net E



Site 28 Net A



Site 28 Net B



Site 28 Net C



Site 28 Net D



Site 28 Net E



Site 29 Net A



Site 29 Net B



Site 29 Net C



Site 29 Net D



Site 29 Net E

APPENDIX C

Bat Capture Photographs

501- Emerson West Wind Project Bat Survey, Seneca County, Ohio, July 2015 and 2016.

Business Confidential – Not for Public Disclosure

Representative Bat Photographs



Big Brown Bat (*Eptesicus fuscus*)



Eastern Red Bat (*Lasiurus borealis*)



Hoary Bat (*Lasiurus cinereus*)



Northern Long-Eared Bat (*Myotis septentrionalis*)

APPENDIX D

Roost Tree Data Sheets

501- Emerson West Wind Project Bat Survey, Seneca County, Ohio, July 2015 and 2016.

Business Confidential – Not for Public Disclosure

MYSE/F/172.205

ODNR
17178

Roost Tree #

140

Project No./Project Name

412-02, Emerson CI

Date First Found

27 July 15

Location

near wood lot w/ creek bordered by agriculture

County

Spencer

State

OH

Quad

Fireside

Lat-Long/UTM: N/E

41.17892

W/N

82.89089

Zone

—

Datum: NAD83

Observers:

C. Lettich

#	Tree Tag #	Species	DBH (cm)	Height ft of m		Condition*	% Bark Cover**		Tree Ranking***	Available Roost/Observation
				Tree	Roost		Usable	Total		
1	140	Fraxinus sp.	48.5	25	20	Snag	10	90	Canopy	Bark
2		U. americana	6.7	3	—	Live	0	100	Sub	—
3		Fraxinus sp.	45.8	23	—	Snag	30	70	Canopy	Bark
4		Fraxinus sp.	54	20	—	Snag	30	50	Canopy	Bark
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										

Habitat		
Interior	Edge	Open

Canopy Cover at Roost		
Open	Intermediate	Closed

Basal Area		
Live Trees	Snags	All Trees
10	30	40

Roost Location		
Bark	Cavity	Crevice

↓ QUICK REFERENCE / ↑ CIRCLE

*Condition		
Snag	Live	Live-Damaged

**% Bark Cover		
High = ≥ 25%	Moderate = ≥ 10-25%	Low = < 10%

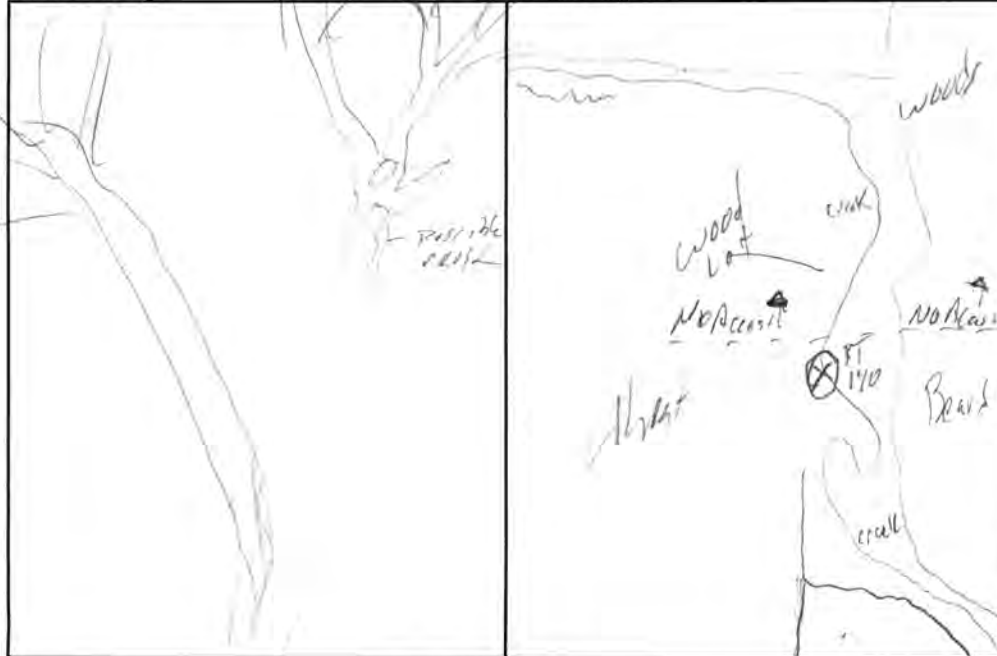
***Tree Ranking		
Canopy	Sub-Canopy	Understory

A 10 factor English prism is used to identify trees within the plot, centered on the roost tree.

Roost Tree # 140Bat Species/Sex/Frequency: MYSE/F/172.205Band # ODNR 17178

Roost Tree Diagram:

Location Diagram:



Emergence Count

No.	Date	Temp °F	Weather	# of Bats	Time				Focal Bat exit #	Personnel/Comments
					Sunset	Bats Start	Bats End	Tagged Bat		
1	27	20°C	clear	2	20:55	21:09	21:13	21:13	2	
2	28	68.5	clear	2	20:53	21:11	21:20	21:20	2	
3										
4										

Bat Days

No.	Date	Bat Freq.	Bat Band #	Sex of Bat	Observations
1	27 July	172.205	ODNR 17178	F	
2	28 July	172.206	17178	F	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

Cavity or Crevice Characteristics

No.	Nature	Aspect	Opening Measurements			
			Width	Height	Ground	H ₂ O Level
1						
2						
3						

Comments:

walk wheel field/woodlot edge to 41.17889; -82.89136 then turn due East to tree
 across creek
 - Double Red Flagging marks good emergence spot

Per 16 = 41.175375
 -82.889903

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

Summary: Application Exhibit J Part 17 of 33 electronically filed by Teresa Orahoud on behalf of Dylan F. Borchers