

Site 20 Net A





Site 20 Net B



Site 20 Net D

Site 20 Net C



Site 21 Net A





Site 21 Net B



Site 21 Net D

Site 21 Net C





Site 21 Net E

Site 21 Net F



Site 22 Net A





Site 22 Net B



Site 22 Net D

Site 22 Net C



Site 23 Net A





Site 23 Net B



Site 23 Net D

Site 23 Net C



Site 24 Net A





Site 24 Net B



Site 24 Net D

Site 24 Net C



Site 24 Net E



Site 25 Net A





Site 25 Net B



Site 25 Net D

Site 25 Net C



Site 26 Net A





Site 26 Net B



Site 26 Net D

Site 26 Net C



Site 27 Net A





Site 27 Net B



Site 27 Net D

Site 27 Net C



Site 28 Net A





Site 28 Net B



Site 28 Net D

Site 28 Net C



Site 28 Net E



Site 29 Net A





Site 29 Net B



Site 29 Net D

Site 29 Net C



Site 30 Net A





Site 30 Net B



Site 30 Net D

Site 30 Net C



Site 31 Net A





Site 31 Net B



Site 31 Net D

Site 31 Net C



Site 32 Net A





Site 32 Net B



Site 32 Net D

Site 32 Net C



Site 33 Net A



Site 33 Net B





Site 33 Net D

Site 33 Net C



Site 34 Net A



Site 34 Net B



Site 34 Net D

Site 34 Net C



Site 35 Net A





Site 35 Net B



Site 35 Net D

Site 35 Net C



Site 36 Net A



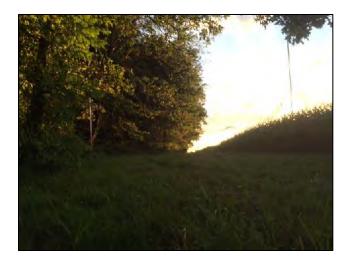


Site 36 Net B



Site 36 Net D

Site 36 Net C



Site 36 Net E



Site 36 Net F



Site 36 Net G



APPENDIX C

Bat Capture Photographs

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

T&E bats

MYSE 172.188_ODNR23551_Site26_24July





MYSE 172.587 _ODNR23552_Site26_26July





MYSO 172.779 _ODNR23553_Site26_26July





MYSE 172.030_ODNR23361_Site18_26July





MYSE 172.137_ODNR23360_Site18_26July





MYSE 172.205_ODNR17178_Site13_26July



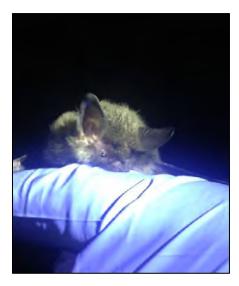


MYSE ODNR17179_Site13_26July





MYSE_ODNR17344_Site12_28July



MYSE_ODNR23362_Site18_28July



MYSE_ODNR17168_Site20_28July





MYSE_ODNR17345_Site15_31July





MYSE 172.450_ODNR17166_Site33_31July





Non T&E bats



Lasiurus cinerus



Eptesicus fuscus



Lasiurus borealis



Perimyotis subflavus



APPENDIX D

Roost Tree Data Sheets

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

ounty _	Servera UTMINE	41.2			State	04	15	Qua Zone	ad <u>Fives</u>	NADES Obs	ervers: 1,V	Johner
Tree Tag #		DBH (cm)		t ft or m Roost	Condition*	% Bark Usable		Tree Ranking***	Available Roost/ Observation	Interior	Habitat	Open
983	Epennsylvanica	27	9	3	S	H	AD	58	barte	Contention	1 Duge	1 Open
1000	Asacchan	111 -	20	-	Ľ.	6	(H)	C	none	Cano	py Cover at Roo	st
	Asacchan	10-2	17	1	L	6	+	C.	none	Open <	Intermediate	Closed
$z = \sqrt{2}$	É. pennsulvania	(02.6	22)	S	L	4	5	hark			
1121	F. grandifolia		19	1	L	D	(#0)	C	none		Basal Area	
	A. Sacchann	1 - 1	18	(L	C	100	C	none	Live Trees	Snags	All Trees
	A. saccharum	71	18	-	L	D	icto	C	none	90	20	0
	A.Saccharum	1021	19	-	L	D	THO	C	none	U		
1.1	A. salchanom	72.5	19	-	V	6	(4)	C	none	1	Roost Location	
	A.saccharum	78.4	19	1	L	0	H	C	none	Bark	Cavity	Crevice
	F. grand Folia	12.8	18	$\sum_{i=1}^{n} (i - 1) $	L	D	(H)	C	canity			
	0			10 million (1997)					1	QUICK REFE	RENCE / 1	CIRCLE
1						1				_		
									1	1.	*Condition	
									· · · · · · · · · · ·	Snag	Live	Live-Damage
			-									
								-			*% Bark Cover	
-			_							High = ≥ 25%	Moderate = \geq 10-<25%	Low = < 10%
		-					1				10-~25%	< 10 ‰
						1					*Tree Ranking	

Copperhead Environmental Consulting Inc. P.O. Box 73, 11641 Richmond Rd. Parnt Lick, KY 40461 (859) 925-9012

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



21

*

F/188 Bat Species/Sex/Frequency Band # ODNR 23551 Roost Tree # Roost Tree Diagram: Location Diagram: TN Bat Days Bat Band Date Bat Sex of No. Observations Freq. # Bat 85983 188 ODNR can see transmi ther 20 12 1 2 3 4 5 roust 6 Ag 7 8 9 10 n 11 1 12 13 CR 23 14 **Emergence** Count Time Focal Cavity or Crevice Characteristics Temp # of Bats Bats Tagged Bat Personnel/ No. Date °F Weather Bats Sunset Start End Bat exit # Comments **Opening Measurements** 7/25 2129 2129 2129 1 No. Nature Aspect Width Height H₂O Level Ground 203 2020 2 71/31 CAMERIA 1 3 2 4 3 Comments: is on a fallen limb off of tree # 4 and leaning herver NODS tree

COPPERHEAD

Copperhead Environmental Consulting Inc. P.O. Box 73, 11641 Richmond Rd. Paint Lick, KY 40461 (859) 925-9012

Location Plot 16 County State OH Lat-Long/UTM: N/E 41.21831 W/N 82.96867									Quad Enceside Zone Datum: NAD83 Observers: A. Astmore							
# Tree Tag #		DBH	Height ft or n		Condition*	% Bark	Cover**	Tree	Available Roost/	Habitat						
		(cm)	Tree	Roost		Usable	Total	Ranking***	Observation	Interior	Edge	Open				
1 394	Prenos scrating		Ss'	35	Shau	L	1-1	C	hard of possible	crivier						
2	Act succession		60'	-	live	L	H	C	(Installer)	Cano	py Cover at Roo	st				
3	Carya sp.	39.4	75	~	1tuc	6	H	C		Open	Intermediate	Closed				
4	Unknown	47.8	70'	-	live	L	17	C	broke eli	1=01-1						
5	FECTIMES PANTALO	56.9	80	~	Sneg	M	14	C			Basal Area					
6	Acer sacchann	28.9	65	12	Tive -	L	14	6		Live Trees	Snags	All Trees				
7	FRAZIONS AMUTIN	443	80'		SAGA	14	H	C		60	100	120				
8	freques enterione	40	101		Shed	L	L	UL	1	100						
9	Acer serchar	19.)	(,s'	1	live	L	14	C		R	Roost Location					
o	FICKING SANDAR		71		Snag	L	1-1	4	4	Bark	Cavity	Crevice				
1	Air sucher		451		Ina	L	1-1	C			1	Citility				
2	Aco sechan	59.5	20		JAig	L	1-1	U		QUICK REFERENCE / CIRCLE						
3					1		P									
4											*Condition					
5										Snag	Live	Live-Damaged				
6		-			1.1.1.1.1.1.1					L oning	Live	erve-Danaget				
7										**	% Bark Cover					
8											1					
9		1.1.1								High = $\geq 25\%$	Moderate = ≥ 10-<25%	Low = < 10%				
0																
1			1								5					
2										***	Tree Ranking					
	nglish prism is used	to identif	fy troop w	ithin the n	lot contanad on	the react to				Canopy	Sub-Canopy	Understory				

COPPERHEAD

Copperhead Environmental Consulting Inc. P.O. Box 73, 11641 Richmond Rd. Paint Lick, KY 40461 (859) 925-9012

	Tree Dia	ree Diagram:								1.							
			1	//			P		-{/		No.	Date	Bat Freq.	Bat Day Bat Band OPt R	Sex of Bat	Ob	servations
		m	Val	/		1	5	111	11	S	1	7/26		23551	F		
			1X				11	111	118	toxies .	2	7/27	10387	23551	F	188 5	hed transmitter co
			pot	ontral			1	1115	$\langle \rangle \rangle$		3	7/28	188	23551	F	shed	transmitter li
			1 10	2051	1		1	111	N.,		4	1					
								TT	15	Sheel	5					-	
								L	-	Sheel	6				_		
								10.00		1	7		1.50				
									7	14	8						2
										Rous	9				-		
							Ag			Cord	10				-	<u>+</u>	
						1	ield			1-1	11					+	
			14							21-1-1	12	+			-		
									1		13 14	-			-	-	
					Emergence	e Count		_	_		14					I	
				1.50	T		ime		Focal				Cavit	y or Crevice C	haracterist	Hat	
		Temp		# of		Bats	Bats	Tagged	Bat	Personnel/	T	-	T	y of clevice c	Indiacterio	ics	
No.	Date	°F	Weather	Bats	Sunset	Start	End	Bat	exit #	Comments					Opening Measurem		nts
	7/26			1		-				transmitter still in the	No.	Nature	Aspect	Width	Height	Ground	H ₂ O Level
1											1						
2	7/28	78	clear	0	2054	~	~			Commern 1	1	_	-			· · · · · ·	1000 C
2		78.	clear	0	2054	~	~			Canern 1 Canzed	1 2						

Comments:

Elying severals observed in potential woust site 7/28



Copperhead Environmental Consulting Inc. P.O. Box 73, 11641 Richmond Rd. Paint Lick, KY 40461 (859) 925-9012

	ation_	Genera	site	- 18		State	04		011	d Firesi	40		2712015	
at	-Long/	UTM: N/E_4	1.180	69	(WN_81.	93027	· · ·	Zone _	Datum:	NAOB3 Obs	servers: <u>T.W</u>	etel, A.t	100
#	Tree Tag #	Species	DBH (cm)	Heigh Tree	t ft or m Roost	Condition*	% Bark (Usable	Cover** Total	Tree Ranking***	Available Roost/ Observation	Interior	Habitat	Open	
1	985	F. gennsulvanice	28.5	la	8	S	M	H	C	bark		0		
2		U, americano		9	1	S	L	H	S	none	Cane	opy Cover at Roos	t	
3	1	Vienmericane	38	10	-	Sa	m	F)	S	bart	Open	Intermediate	Closed	
4		U, american		10	-		L	H	S	bark				
5	1	F. pennsulvani	ale.5	14	~	S	L	H	C	None		Basal Area		
6	-	A. Saccharum	21.2	12	(L	L	17	S	vone	Live Trees	Snags	All Trees	
7		A. Saccharum	190	12	-	LA	L	H	2	none	40	170	110	
3		Piserotina		10	-	S	L	H	S	none	10	10		
9		Jingra	350	15	7	L	L	H	C	none		Roost Location		
0	1.000	A, sachanim	12.6	6	-	S	L	H	U	crevice	Bark	Cavity	Crevice	
1	-	Q. albo	107.5	17	-	L	L	H	C	berriforer				
2	-	114 <u> </u>		1.51							QUICK REFE	ERENCE / 1	CIRCLE	
3														
4			1									*Condition		
5											Snag	Live	Live-Damaged	
6	-				100						-			
7				-	:							*% Bark Cover		
18								(High = ≥ 25%	Moderate = ≥	Low =	
9		[-							10-<25%	< 10%	
0				-				-						
21						1		_				**Tree Ranking		
22	1		-								Canopy	Sub-Canopy	Understory	

6 COPPERHEAD DUND 0

		1					and and)	52	1			Bat Day	ys		
		K						L		No.	Date	Bat Freq.	Bat Band	Sex of Bat	Ob	servations
	W						2196			1	22/27	137	23361	F		
	V	Y						(.	1. to	2	-				-	
	1	6			-			V	18	4		h	-		1	
	6	1			(g)					5			-			
				G	3					6						
	2				2					7						
	P				2					8						
	P	A			Z				J.	8						
	8				R				Read Provide State	8 9 10						
	8				M			100	Resort	8 9 10 11						
					Ø			100	And and a start of the start of	8 9 10 11 12						
					ETO	ownsh	un Ra	134	Room	8 9 10 11						
				Emergence		ownsh	up Ra	13.0	All and a second	8 9 10 11 12 13						
			1.1	Emergenc	e Count	owns/n		- 13 LØ Focal		8 9 10 11 12 13		Cavit	y or Crevice C	Characteris	stics	
Jo.	- Temp Date °F	Weather	# of		e Count Ti Bats	me Bats	Tagged	Focal Bat	Personnel/	8 9 10 11 12 13		Cavit	1		A	,×
lo.		Weather Col Telecr	1.1	Emergenc Sunset	e Count Ti Bats Start	me		Focal	Personnel/ Comments	8 9 10 11 12 13	Nature	Cavit	1		Measureme	nts H2O Lev

Comments:

* But was not tracked to this tree on 7/28/15

COPPERHEAD

Co	unty	Servera	100			State	011		Qu	ad Fixesid	Date Fi		
La	-Long/	UTM: NYE_4	1.1.78	1.54.65		WN82	9280	4	Zone	1	N4083 Ob	servers: 13 Rea	ey/ F. McGre
#	Tree Tag #	Species	DBH (cm)	Heigh	t ft or m Roost	Condition*	% Bark Usable	Cover** Total	Tree Ranking***	Available Roost/	-	Habitat	
1	986	A. sarcharing	16.16	15	13	5	M	M	5	Observation	Interior	Edge	Open
2	-	A .Saccharimm	0	25	12	L	L	H	5	Barb	1	opy Cover at Roo	et
3		A sacharim	1	35	- 12	L	2	H	5	NONE	Open	Intermediate	Closed
4	1	A. sacharing	62.7	50	-	LD	m	4	C	Bart Crevice			closed
5	-	A sachanimum	35.3	45	~	5	M	H	6	Bark		Basal Area	
6	-	A. saccharinum	36.9	55	-	L	L	H	C	NONO	Live Trees	Snags	All Trees
7	~	A. saccharimm	27.7	65	-	L	2	H	C	None	200	40	240
8	~	A soccharimm	35.7	17	-	LD	L	M	5	Crevice			
9	-	P. delto:des	89.2	60	-	L	L	H	C	Crevice	1	Roost Location	
10	-	P. dettoides	85.9	65	~	L	L	14	C	NONC	Bark	Cavity	Crevice
11		A. sachaciram		50	-	L	L	H	C	Nore	(T		
12		A sacharinam	C	45	2	L	L	H	C	Nore	QUICK REFE	ERENCE / 1	CIRCLE
13	988	A Sacharina	-	50	-	LD	L	H	C	Crowice/Bu-4			
14	-	A. saccharing m	10100	14	\sim	5	L	M	Ц	everice	1.1	*Condition	
15	~	A. saccharing	1	50	-	L	L	H	C	NONE	Snag	Live	Live-Damaged
16	-	A. saccharinen		60	-	LD	m	H	6	Bark		1. Aug 1. Aug 1.	
17		A. sacchariman	the second second	45	-	2	m	H	C	Bark		*% Bark Cover	
18	~	A satchariman		20	-	S.	L	M	5	Cravice	High = ≥ 25%	Moderate = ≥	Low =
19	~	Asaccharimm	34.4	45	-	L	L	H	C	NOME		10-<25%	< 10%
20	~	A. saccharium		35	-	L	L	H	5	None	c		
21	-	A Saccharian			~	L	L	H	C	NONE		Tree Ranking	and the second s
22	factor Fr	A -sacha-inna		55 ty troops w	ithin the al	L contared	L	H	C	NONE	Canopy	Sub-Canopy	Understory
~	6	A - Sauharine		1111	65	iot, centered on	the roost the	14	C	NONE			

Bat Species/Sex/Frequency: MYSE/F/ 137 Band # ODNR 233101 Location Diagram: 1 Т e al and

			Holow		2			Guybe	hrv				2.1.1	Bat Day	s		
			Do			/	/	2	1		No.	Date	Bat Freq.	Bat Band	Sex of Bat	Ob	ervations
			131				/	\odot	0		1	7-28	137	233111	F		
			YA ,	2		/	1	2+ 986	21988	50 I I I I I I	2	1.0	ļ		-		
			10 /			1					3					()i	
			181/								4		1		1.11		
			E Bar		1	1					5				1		
			KI - Bar	e was		10				1	6						
			R1						- 2		7		1		-		
	130	AC	VAI				6	rest		1	8	10. A 4	-			1	
			K/ L			1.00	10	1. 6. 1			9		-	Brown and			
		l	31			/	1			1	10						
		t	1		1		E.			11	11						
		Ĭ	14		*				STAN	m	12	1 E 1		1		() I	
		6	14			11	//	- 10	T	11	13	-				1	
		Y			ľ	/	/	Fores	/	11	14						
	-			_	Emergene	e Count			_					-			
				2.4	1.0	т	ime	-	Focal	1.00 million			Cavity	y or Crevice C	haracteris	tics	
No.	Date	Temp °F	Weather	# of Bats	Sunset	Bats Start	Bats End	Tagged Bat	Bat exit #	Personnel/ Comments			1010		Opening 1	Measureme	nts
-		81	Clear	1	2053	2110	2110	2110	1		No.	Nature	Aspect	Width	Height	Ground	H ₂ O Level
1	7-28	01							1	- 121. J				2		2	
1 2	7-28			0	20:49	NIA	NIA	NIA	NIA	C. 15/049	1						1
1		76	Clear	0	20:49	NIA	NIK	NIA	NIA	C. 13/04	1	_				_	

Comments:

* tree observed

Roost Tree # 986

Roost Tree Diagram:

1cd 6:45-9:25



Roost Locat		# 988 SC of	Pro	oject No	o./Projec	t Name $_4$		_1_6	ME150		Date Fir	st Found	-27-12
Coun	ty	JTM: D/E	+1 17	elala		State	2925	105	Qua	ad <u>F.</u>	: NADES Obs	ervers & Le	lovie male
		ли. (м/ Е	DBH	-	ft or m		1	Cover**	Tree	Available		Habitat	
#	e Tag #	Species	(cm)	Tree	Roost	Condition*	Usable	Total	Ranking***	Roost/ Observation	Interior	Edge	Open
19	88	A. saccharing	36.3	50	20	LO.	2	H	C	BarrilCrevice			1.000
2		A. sarcharum		20	-	LD	L	H	5	Crevice	Cano	py Cover at Roo	st
3		A. saccharing	1.00	40	÷	LD	L	H	C	Crevice	Open	Intermediate	Closed
4		A. saccharinan		55	-	L	L	H	6	NONE			
5		A. sacharum	1140	30	-	LD	m	M	S	Barr/ crenice	1	Basal Area	
69	86	A. sachariman	16.6	15	13	5	~	m	5	Rark/ capity Crevica	Live Trees	Snags	All Trees
7		A . sacharing	27.7	46	-	L	2	14	C	NONE	230	20	250
8		A gachavirun	62.1	40	Ţ	LD	m	14	C	Create			
9		A sacchariman	36.9	35	-	L	L	H	C	Nore	F	Roost Location	
10	,	A, Gacharizum	35,7	15	-	LD	L	M	5	cravice	Bark	Cavity	Crevice
11		A. Sachrim	28.6	50	-	L	L	H	6	NONC			
12		A. Sacharimm	29.0	30	-	LD	L	14	5	Crovice	QUICK REFE	RENCE / 🕇	CIRCLE
13		A. saccharinum	40.4	10	~	5	L	M	и	Crevice			
14		A - San harirtm	37.2	60	-	L	L	H	C	None		*Condition	
15		A, saccharimum	29.6	40	-	L	L	H	C	NONC	Snag	Live	Live-Damaged
16		A. sadnarinam	37.6	50	-	L	L	14	C	Bark	-	1	10000
17		A. Saccharitan	26.7	45	-	LD	L	H	C	Crevice		*% Bark Cover	
18		A. Saccharinhm	30.2	30	~	L.	L	H	5	Back	High = ≥ 25%	Moderate = ≥	Low =
19		A satcher, Nun	1 33.1	15	-	LD	m	M	5	BA-W/ Crevila	200 But - 2 20 M	10-<25%	< 10%
20		A Seccharinan	34.7	30	-	L.	L	H	5	None			
21		A. rubran	25.8	40	+	L.	L	4	C	NONE	**	*Tree Ranking	_
22	- 11	A saicharing m		40	201	L	L	14	C	none	Canopy	Sub-Canopy	Understory
A 10 fa	ctor En	glish prism is used	l to identi 〜 47,7		ithin the p	olot, centered or	the roost tr	ee. 14		None			

Roost Tree # 966

Bat Species/Sex/Frequency: MYSE/F/137 Band # OPNR 23361

Roost Tree Diag	ram:		_	L	ocation D											
		1 tap	Vro ser			5	ey 600	N	·····			1.1	Bat Day	/s		
		$ \rangle$			1	2			/	No.	Date	Bat Freq.	Bat Band	Sex of Bat	Ob	servations
		At Er	posol Hearty	how	/	1	D 12+ 986	Ø	156	1	7/29	137	23361	F		
		M					12+ 986	121	986	2	7			1	þ	
		12			/					3	1.000				15	
		3.	τ.		1					4	1.000					
		1/1	ren					1		5	1					-
		144-00	nere	1.11						6	1.1.1.1.1	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	1.2			
		2						1		7					-	
		A				F	orest	27	/	8					/	
								1	12	9	-	-		-	-	_
		1				1			/	10	1	_	-		-	
		1			-		Strens	-		11	-				-	
		1			/ /	1		100	11	13				-	1	
	3	11			1	/	Forts	c_{\geq}	12	14					110	
	-			Emergene	ce Count					-	11.11	1.11.2				
			1000			ime		Focal				Cavit	y or Crevice C	haracteris	stics	
	Temp	147-14	# of	C	Bats	Bats	Tagged	Bat	Personnel/		1		A			
No. Date	°F	Weather Claudy	Bats	Sunset	Start	End	Bat	exit #	Comments			1. 200		Opening 1	Measureme	nts
1 7-29	81	light rain	2	8:53	8:56	8:58		1000	1000	No.	Nature	Aspect	Width	Height	Ground	H ₂ O Leve
2 7.30	80	clear	0	8:50	MÁ	NA	NA	NA	C. Bloyd	1				1		
3		_			-	-	-	-		2						
4			£			1				3			1.5			

Comments:

day or 7/30, the observed that night per emergence. * Trongmitter Fell OFF bat

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ocation	111.7	Pro	ject No	o./Projec	t Name	2003	>	Ener	son Cr	eek Date Fir	st Found 🥏	15142
County	NW 05 Seneca		785	10	State	OH		Qu	ad Fivesi	de		
Tur	UTM: NE 4	DBH	Heigh	t ft or m	V)N_82.0	<u>\$1.74</u> % Bark	Cover**	Zone	Datum Available	n: <u>NAT83</u> 0bs	ervers:	letrel, A.
# #	Species	(cm)	Tree	Roost	Condition*	Usable	Total	Ranking***	Roost/ Observation	Interior	Edge	Open
1 984	F. penasylvani	434.3	12	7	5	H	H	C	park		1 Sac	
2	A.Sachanim		13	1.	S	Ŵ	H	C	crevice	Cano	py Cover at Roo	st
3	A.saccharum	58	15		LD	L	H	C	cremile	Open	Intermediate	Closed
4	A. Salcharum		15	-	LD_	L	H	C	bark			
5	Gavata	540	16	-	E	L	H	C	pare		Basal Area	
6	Alsacchanim		13	-	LD	M	H	S	browner energie	Live Trees	Snags	All Trees
7	V. americana	13	9	-	F	L	H	V	none	70	20	90
8	V. american	8.5	6	-	L	L	H	V	nene			
9	U. americana	13,4	9	-	L	L	H	U	pone	R	oost Location	
0			_							Bark	Cavity	Crevice
1			_	_					1	<u></u>		
2									· · · · ·	QUICK REFE	RENCE / 🕇	CIRCLE
3			_			-		-				
4										-	*Condition	
5										Snag	Live	Live-Damaged
6											-	
7	-	-		<u>1</u>				-		**	% Bark Cover	
8							-			High = $\geq 25\%$	Moderate = \geq 10-<25%	Low = < 10%
9											10 20 70	\$ 10.0
0							_			-		
1			-	-							Tree Ranking	
2	nglish prism is used									Canopy	Sub-Canopy	Understory



10	NAR DV	mor	h	18			N.	-11+	-			2.5		Bat Day	5		
	0	1		1	k l		1				No.	Date	Bat Freq.	Bat Band	Sex of Bat	Ob	servations
-		3.	5	- 50	U ²			- U (1	7/27	030	23360	F	ouly 1	nt seen
2	1	2	1PS -	16,5	18			1			2	7/24	030	23360	F		
			here	0-1	XIN			1 1			3						
		. 1	3 MILLING		1			0			4						
5	1.0	1211	AN					11			5	-					
	11/11.1	ch.	to UN					1.	1		6				-	-	
1.20	1231	A	1000					71	- 'br	4K	7					1	
	V-Q	Ver	TARAL					1			9						
-		Y	1 ALAN					11			10					1.	
		N	Man A					11			11		1.2.1	1		11	
			MAKAM				Ŷ				12	1	1.000	1.1.1	_	0	
		A.	AUG M				1				13				-	C	
			AVENUES (71/ V V	-					_		14			-		1	
		11	a mention of			eCount			-				C	or Crevice C			
-	1	/		1	Emergeno										naracterist		
	July	Temp		# of	Emergeno	T Bats	ime Bats	Tagged	Focal Bat \	Personnel/			Cavity	of clevice c		lics	-
No	Date	°F	Weather	# of Bats	Sunset	Ti Bats Start		Bat	and the second sec	Personnel/ Comments			Cavity			leasuremer	nts
<u>No.</u>	July Date 27 28	Temp °F 72 81	Weather Sunny/clas	# of Bats		T Bats	Bats End 2123	Tagged Bat 2123	Bat \		No.	Nature	Aspect		Opening N		nts H2O Leve

Comments: HO416, TW Olympis

R

COPPERHEAD

Copperhead Environmental Consulting Inc. P.O. Box 73, 11641 Richmond Rd. Paint Lick, KY 40461 (859) 925-9012

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at	ation unty -Longy	UTM: NYE 4	1. 181	79	(State	0H 2.929	33	Qua Zone	ad <u>Fires.</u> Datum	de :Obs	ervers: BRe	aley R. ma
	Tree Tag #		DBH (cm)	-	t ft or m Roost	Condition*		Cover** Total	Tree Ranking***	Available Roost/ Observation	Interior	Habitat Edge	Open
1	987	A. sacchavimm	56,3	40	25	5	m	m	C	Bart	Interior	Luge	Open
2		A. sacchanima	54.1	15	-	S	L	m		Crevice	Cano	opy Cover at Roo	st
3	1614	A saucharinam	1.000	45	-	LD	L	Н	C	Bark	Open	Intermediate	Closed
4		A succharinum	57,5	50	-	L	L	H	C	NONE		(-
5	1.1	A. Saccharinam		30	Ţ	LD	L	H	C	Crevice		Basal Area	
6		A sacchaviora	37.6	45	-	L	4	H	C	NONE	Live Trees	Snags	All Trees
7	la company	A. saccharimm	31.8	30	-	L	L	17	C	NONE	60	30	90
8		A. Sacharima	52.5	50	-	L	L	M	C	NONE			
9		A. saccharing	47.7	20	-	5	n	n	5	Bark	1	Roost Location	
10		100 C 100 C	1.00	0.1	Distant 1					<u></u>	Bark	Cavity	Crevice
11											(FILST CARE AND		
12			1					-			QUICK REFE	RENCE / 1	CIRCLE
13								_			-		
14	_	1211-001	-				1	17.4				*Condition	
5								1			Snag	Live	Live-Damaged
16							-						
17				_	-	17						*% Bark Cover	
18											High = ≥ 25%	Moderate = ≥	Low =
9				-								10-<25%	<10%
20		-											
21												*Tree Ranking	
22					1.000	1.					Canopy	Sub-Canopy	Understory



Bat Species/Sex/Frequency MYSE/F/030

Band # ODNR 23340

Bat

Freq.

030

030

030

020

030

Date

1-29

7.30

7-31

8-2

8-

No.

1

2

3

4

loost	Tree Dia	gram:			L	ocation Di	iagram:		_	
	But al	The second	-Bored	IIIm		1/ may 1/	1 till she	Swamp		- Anna -
					+ + + + +	1/1/	1/1	RTAST	1 1 mail	
					Emergence	re Count	1/1	Rt asi	1 million	
					Emergenc		ime	Rt asi	Focal	
No.	Date	Temp °F	Weather	# of Bats	Emergenc		ime Bats End	R+ 957 Tagged Bat		Personnel/ Comments
No. 1	Date 7-29	Temp °F 80		# of		T Bats	Bats	Tagged	Focal Bat	Comment
		°F	Weather PT19 cldy Clear	# of Bats	Sunset	Ti Bats Start	Bats End	Tagged Bat	Focal Bat exit #	Comments R. Melorey
1	7.29	°F 80	PTIY cldy	# of Bats 3	Sunset 20:51	Ti Bats Start 2.0,59	Bats End 21:2(Tagged Bat 21°21	Focal Bat exit #	

11	1					
12						
13						
14	Str. 12	1				
			or Crevice	1.00.00	Measureme	nts
No.	Nature	Aspect	Width	Height	Ground	H ₂ O Level
1	1.2.4	1.5				
2			1			
3						

Bat Days Bat Band

#

23360

23340

233,00

23360

23360

Sex of

Bat

F

F

E

F

F

Observations

Comments:

Bottery Signal weath an Col2



Copperhead Environmental Consulting Inc. P.O. Box 73, 11641 Richmond Rd. Paint Lick, KY 40461 (859) 925-9012

Roost Tree # 987

·	unty -Long/	UTM: N/E_	11.21	838		W/N_82.	9684S	5		ad <u>fres</u> Datum	NAD8306	ervers: J. S	to/m	-
#	Tree Tag	Species	DBH	Heigh	t Dor m	Condition*	% Bark	Cover**	Tree	Available Roost/		Habitat	_	Rains
	#	1. 1. 0	(cm)	Tree	Roost	contaition	Usable	Total	Ranking***	Observation	Interior	Edge	Open	
1	369	Frazionas punnsylvai	400		9	S	M	L	4	cracks +				
2		Ftax aus Pennsylva		50	-	5	L	L	C	Cracks + Crevie Rg	Cano	py Cover at Roos	t	
3	- 45	Franky Pennsylus		50	-	5	M	H	6	Bark	Open	Intermediate	Closed	
4	(=)	Fronsylvanila	48.0	60	-	S	14	4	C	Bark				
5	1.10	Pine Sp.	37.3	40	-	5	L	14	C	Sur he inclustione		Basal Area		
6	1.	bak sp.	60.2	20	-	2	L	Н	u	cracks clevices	Live Trees	Snags	All Trees	
7	395	cherry	37.8	80	Yes	5	17	17	C	Roost tree	00	10	ITO	
8		SucarMaple	19.8	85	1	L	L	11	C	×				
9		Sugarmaple	34.4	100	\sim		L	17	C		1	Roost Location	2	
10	14.7	Sugarmaple	8.2	20	1	L	L	14	42		Bark	Cavity	Crevice	
11		Sugar Maple	173	80	1	L	L	it	C	1				
12		Sucarmaple	13,2	60	1	V	L	jx.	C		QUICK REFE	RENCE / 1	CIRCLE	
13		Sucar warde	323	100	/	V	L	X	C		-			
14		Sugarmaple	15.5	80	1	L	L	11	50			*Condition		
15	1.2.2	Sugar maple	6.2	40	1	- V	L	14	u		Snag	Live	Live-Damaged	
6		Sugarmaple	4.2	12	1	L	L	1+	U					
7		Sugarmaple	9.0	25	1	2.	V	H	30			% Bark Cover		
18	1.0.1	1				1.00					The base	Moderate = >	Low =	
9							1 2 1				High = $\geq 25\%$	10-<25%	< 10%	
0														
1	211											*Tree Ranking		
22	111	7		1.1	1.124						Canopy	Sub-Canopy	Understory	

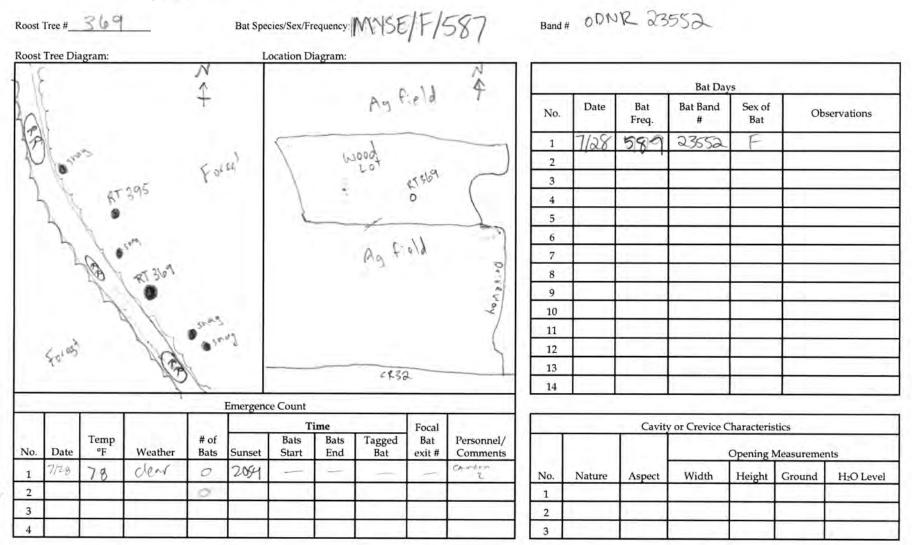
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COPPERHEAD

PLAT REPOR

But loamere



Comments:

COPPERHEAD

Co	unty	Senica UTM: N/E 9	1.1.1				91.02	H	Qu Zone	ad Firesi	NAP83 Obs	orvers: J.S.	al un i K
21	Tree Tag		DBH	1	t ftor m	1		Cover**	Tree	Available		Habitat	0.00 100
#	#	Species	(cm)	Tree	Roost	Condition*	Usable	Total	Ranking***	Roost/ Observation	Interior	Edge	Open
1	371	Prohisilian ca	42.4	60	30	5	L	H	C	Bark		1 1	
2	1.1.1.1.1.1.1	Praving	56.)	65	-	S	1-1	H	C	Bark	Can	ppy Cover at Roos	t
3	1	Prinsinalis	28	50	3	5	M	H	C	Possilie Coostie	Open	Intermediate	Closed
4		pek se	74.3	20	1	5	L	H	SC	(incles)	0	10	
5		mapirmaple	15.5	30	/	Live	L	H	SC	NOVE		Basal Area	
6		Sucarman	20%	60	1	LNE	L	17	C	KD.	Live Trees	Snags	All Trees
7		Cupen whiste	41	100	/	L	1	12	C	10	210	40	250
8		Sucar maple	24	25	1	L	C	H	C	NOVIE			
9	1	DOIGHWOOD	34	35	1	L	L	17	C	none	1	Roost Location	
10		Bod dreim	49.5	100	1	5	1	14	C	Mon 2	Bark?	Cavity	Crevice
11		Sugarmagie	35	25	/	L	1	17	C	none			
12		Succument	20	60	1	L	L	It	C	110HE	QUICK REFE	RENCE / 1	CIRCLE
13		beech	59	10P	1	L	L	L	C	NOS			
14		Sugarmaply	19	50	1	L	4	14	36	nonl		*Condition	
15		Sippeyelm	4	15	/	1-	5	12	K	hove	Snag	Live	Live-Damaged
16	1000	Sugarmorte	23	60	1	L	4	14	50	HOM			
17		Stippey elm	50	100	1	L	1	1×	C	NOME	*	% Bark Cover	
18	1	Sucor maple	3.5	50	1	V	L	17	SC	NONE	High = ≥ 25%	Moderate = ≥	Low =
19	1	Block walnut	43.5	100	1	L	6	H	C	HONE	High - ≥ 25 %	10-<25%	< 10%
20		Sucarmook	12	4D	2	L	1	Q.	50-	noure			
21		SUGAY MADDLE	181	120	1	L	L	12	C	none	**	*Tree Ranking	
22		Supportern	4	20	1	L	6	1-1	U	nonl	Canopy	Sub-Canopy	Understory
. 1(PPERHE T S	Stippert elm spish prism is used Snear maile A Jie H 3 71. RT Stipperty clum Shipperty clum	is 371			agam eved t		he f	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Marked	as	Sub-Canopy Copperhead Enviror P.O. Box 73, 11641 Paint Lick, KY 404	mental Consultin Richmond Rd.

Roost Tree # 37

Bat Species/Sex/Frequency:

Location Diagram:

587

Band # ODNR 23553

Roost Tree	Diagram:	n Ne		-
L	Y	Vi		
17	7	12	1	
1	2	VE	0	-
1	25	A		
	148-18			
	X AX			
	1	1	-	Eme



_	1 1		Bat Day	5	
No,	Date	Bat Freq.	Bat Band #	Sex of Bat	Observations
1	2t July	537	23552	F	
2	30 July	597	23552	F	
3	= L				
4	12000		· · · · · ·		
5		-		· · · · · · · · · · · · · · · · · · ·	
6		-			
7					
8					
9				I	
10	1.0	-			
11	1.00				
12					
13	1.1.1	L			
14					

110	-		-	_	Emergen	ce Count	_		_	· · · · · · · · · · · · · · · · · · ·				
	1.11	1.1	12.1	2011		Т	ïme		Focal				Cavity	or
No.	Date	Temp °F	Weather	# of Bats	Sunset	Bats Start	Bats End	Tagged Bat	Bat exit #	Personnel/ Comments				
1	7/29	79°	orticast	2	2051	2058	2115	2058	1	H.PP	No.	Nature	Aspect	
2	7/30		1	5	2050	2049	2102	2100	-1-1	J. Borre	1			
3			1.0		Anna in the	1.200			-		2			
4					· · · · · · · · · · · · · · · · · · ·						3			ΪŤ.

		Cavity	or Crevice	Characteris	stics	
		1.1	_	Opening 1	Measureme	nts
No.	Nature	Aspect	Width	Height	Ground	H ₂ O Level
1					1	
2	1		1 ·····	1.00		
3					1	

Comments:

Bats emerged from where the two trues touch



Co	unty	eneca UTM: NE4	12192	20	510-1	State_	DV 9714		Qua	ad <u>Fires</u> Datum	Date First	ervers: Ro	a total fory
-	Tree Tag		DBH	1	t ft or m		the second se	Cover**	Tree	Available		Habitat	
#	#	Species	(cm)	Tree	Roost	Condition*	Usable	Total	Ranking***	Roost/ Observation	Interior	Edge	Open
1	372	shag parton	34	754	50St	Live	100	100	Canopy	ShRanall			
2	1	Sugar maple	0	50	/	Live	D	100	Sub-C	none	Cano	py Cover at Roos	t
3		Sugar map.	14.5	50	1	Live	D	Lob	5UD	NEVIL	Open	Intermediate	Closed
4		Sugarmap.	15	50	1	Live	0	100	50.62	110mm			
5	1	Asin Snaa	48.5	100	100	anag	500	150	COMORIA	Limited		Basal Area	
6		Sugarmaple	9,5	50	/	Live	0	160	Sala	MOYE	Live Trees	Snags	All Trees
7		Sugarmo	9.5	40	1	LIVE	5	155	446	VIONE	200	50	250
8		pananah	42.5	110	1	Smag	500	1.07	Eanopil	Inmine?	-		
9		Sug. maple	120	75	1	Live	0	1.92	SHACOO	SNOVE	R	oost Location	
10	1.1.11	Sug maple	65	30	/	Live	7	100	Subran		Bark	Cavity	Crevice
11		Agh yuag	50	120	50	Snaig	0	Ø	canopy	CREVILES			1
12	1	Sugar maple	14	60	/	Live	D	100	54.0	NONE	QUICK REFE	RENCE / †	CIRCLE
13		bacenood?	25,5	25	1	Live	D	100	canopy	none	r		
14	-	Sug. mape	16	50	1	LAV4_	0	120	646	HEM2		*Condition	
15		gua maple	20	60	1	Level -	0	1.2	614 2	HOVA	Snag	(Live)	Live-Damaged
16		514.	10.5	45	1	Live	0	100	549	None	-	\smile	
17		Shan bar Biog	49	90	00	Live	100	100	Com	VIDVIE	**	% Bark Cover	
18	-yoth	hanwood	45.6	80	60	Live	5	106	Canopin	broken	High = ≥ 25%	Moderate = \geq 10-<25%	Low = < 10%
19		GACAN MADLE.	15	30	/	Live	12	100	they a	VIDVI P-	$\left(\right)$	10-~23 /0	S 1070
20			44	10	all	Shaby	30	30	Sub	15% FPLOT			
21		Am Broch	39	100	1	Live	1.12	100	COMO PU)	None	***	Tree Ranking	
22	0 factor Fr	glish prism is used	16.5	fy trees	within the r	Liefe	the roost tr	161	500	NDNK	Canopy	Sub-Canopy	Understory
		0.000	T	6	nom ner	evnerali	a.sh	6	00.0	115	P	O. Box 73, 11641	
	ALL ALL LE BA	Swar maple	10.4	110	1-	LINE	0	100	Saw	Unont	Р	aint Lick, KY 404	461 (859) 925-9012
J		Tumper outline	10.3	1-10	1.0		10	100	Con 1	Jame			

Bat Species/Sex/Frequency: MMSE/F/. 587 Band # ODN R23552 Roost Tree # 372 Roost Tree Diagram: Location Diagram: Bat Days Bat Band Date Bat Sex of No. Observations Bat Freq. OPHR 7/31 587 23557 P 1 2 3 4 5 6 7 8 9 HACESS RA 10 11 12 13 68-32 14 **Emergence** Count Time Cavity or Crevice Characteristics Focal # of Temp Bats Bats Tagged Bat Personnel/ Start 4 Date °F Weather No. Bats Sunset End Bat exit # Comments **Opening Measurements** 7/31 169 1934 70 2104 11 cleri 1 No. Nature Aspect Width Height Ground H₂O Level 2 1 3 2 4 3 Comments: Recent free fall creates forest aap & i bost fire and provides shar expressive from

-picked up but in Style for energence



unty t-Long	e#_373 Same woo Semecici NUTM: N/E_4	1.2193	5A	6	State WZN82	9683	58	Qua	d Fires	NAD83 Obs		
Tree Ta	g Species	DBH (cm)	Heigh Tree	nt ft or m Roost	Condition*	% Bark Usable	Cover** Total	Tree Ranking***	Available Roost/ Observation	Interior	Habitat	0.000
373	Ash Guar	47.2	80	40	5	H		0	Ves	Interior	Edge	Open
	Basswood	Sloit	110	/	L	L	H	C		Cano	py Cover at Roo	st
	Sucarmople	32	80	/	L	L	14	C		Open	Intermediate	Closed
	Sugarmaple	14.5	50	1	L	L	IF	56				
1	Sucarmost	3.0	15	/	L	5	H	и			Basal Area	
-	Becch	5.1	12			L	H	И		Live Trees	Snags	All Trees
	Sycanople	18.4	76	2	L	L	14	50		140	10	170
	Sucarmosta	6.6	12	-	L	4	17.	И				100.0
1 1	Sucarmaple	28.1	76	-	L	5	H	C		R	oost Location	
0	Sucarmople	5,3	15	~	L	L	14	N		Bark	Cavity	Crevice
1	Sugarmaple	5.0	10	~	L	6	H	U				
2	Succemple	214	60	-	V	1	H	50		QUICK REFE	RENCE / 🕇	CIRCLE
3	Sugamonet	5.1	15	1	V		17	Ц				
1	Sugarmaple	2.1	25	-	L	L	17	1A			*Condition	
5	Belch	80.1	90		L	L	H	C		Snag	Live	Live-Damaged
5	Sugarmaple	6.5	30	1	L	L	14	U.				
7	beech	23,8	60	-	L	L	17	C		**	% Bark Cover	
3										High = ≥ 25%	Moderate = ≥ 10-<25%	Low = < 10%
)				10.000		i a conservatione d		m		L		
										1	Tree Ranking	
-		-									The Kanking	

1322 h

used to identify trees within the plot, centered on the roost tree. ngu sn prism



Roost Tree # 373

Bat Species/Sex/Frequency: M15E/F/,5827

Band # ODNR23552

	iagram:				ocation D	iagram:										
150	D.	VI	1										Bat Day	s		
	h	T	1					(lag"		No.	Date	Bat Freq.	Bat Band	Sex of Bat	Ob	servations
2	10	14		1.1	T			6		1	8/1	587	23552	F	for b F.	Brance
	2 1	NUZ			1		C	2		2	812	582	23552	K	. Qon	Y Brond
		SW	2		1					3	11111					
	1	111E-00			/				A	4	1.200					
	1	Pro-				1				5	7				0.000	
511						-		/		6		· · · · · ·			1	
2.11										7	1					
	~	1							2.	8	1		-			
		F							621	9			1			
	1								261	9	-				-	_
									36	10	1	1				
									25							
									(A)	10 11 12						
							-32_		10 A)	10 11 12 13						
							-32		DE)	10 11 12						
				Emergeno			-32-		DA)	10 11 12 13						
	Temp			Emergenc	Т	ime Bate		Focal		10 11 12 13		Cavit	y or Crevice C	haracteris	stics	
	Temp °F	Weather	# of Bats	Emergenc		ime Bats End	32 Tagged Bat	Focal Bat exit #	Personnel/ Comments	10 11 12 13		Cavit		1000	stics	nts
9	Temp °F 21°C		# of	-	T Bats	Bats	Tagged	Bat	Personnel/ Comments	10 11 12 13 14	Nature			Opening I	Measureme	
1 8	°F	CLEGY	# of	Sunset	T Bats Start	Bats End	Tagged	Bat	Personnel/	10 11 12 13	Nature	Cavit		1000	Measureme	
1 8	°F 21°C		# of	Sunset 8:58	T Bats Start	Bats End	Tagged	Bat	Personnel/ Comments	10 11 12 13 14 No,	Nature			Opening I	Measureme	nts H2O Leve

Comments:

Cal every 10 14/15 ADh Shaa 1012 LE MOLDING , NEO vitad NIN in alle canopy rola 3 20 anonos 0 SOUL ners. U



in partie

at	any	111.				State	01	4	Out	d Fires	de		
	-Long/U	TM: N/E_	41.1-	180	88 (WN 82	. 888	251	Zone	Datum	De 17178 Date Fi de NAD85_Obs	ervers: <u>3</u> . <i>P</i> .	may / C.
	Tree Tag	Species	DBH	Heigh	t ft or m	Condition*	% Bark	Cover**		Available Roost/		Habitat	
#	#	Species	(cm)	Tree	Roost	Condition	Usable	Total	Ranking***	Observation	Interior	Edge	Open
1		OFF	Par	rcel			1			1			-
2				1.1				_			Can	opy Cover at Roo	st
3											Open	Intermediate	Closed
4								-					~
5											1	Basal Area 📈	A
6	1						/	1	· · · · · · ·		Live Trees	Snags	All Trees
7	1												
8	1			20.00									
9												Roost Location	IA
10					1.0						Bark	Cavity	Crevice
11					1						П		100 / N 10
12							-				QUICK REFI	ERENCE / T	CIRCLE
13			-										_
14			-									*Condition	
15		_	1		-				-		Snag	Live	Live-Damag
16			1.0.000										
17			-									*% Bark Cover	
18	1.000		10111								High = $\geq 25\%$	Moderate = ≥	Low =
19				_								10-<25%	< 10%
20	_				1.1						ŕ		
21					10.01		1. 2. 21					**Tree Ranking	
22											Canopy	1	

To factor English prism is used to identify frees within the plot, centered on the ro



USE/F/205 Band # ODINE 17178 Roost Tree # N Bat Species/Sex/Frequency: Roost Tree Diagram: Location Diagram: Satorar 8-2-B 8-2-4 Bat Days 0 0 Bat Bat Band Sex of Date Q No. Observations Freq. ODWR Bat

Approximate

10Lation

598 25 92

8-1= 41. 178988

8-1-1-

0

SING

314

8-1

8-2

1

2

3

4

5

2

200

705

171

F

C

						Paybon	fren J.			41.1798937 -82,988234	6 7 8 9 10 11 12 13 14						
				1	Emergenc		ime	_	Easel		-		Cavita	or Crevice	Charactori	tion	
No.	Date	Temp °F	Weather	# of Bats	Sunset	Bats Start	Bats End	Tagged Bat	Focal Bat exit #	Personnel/ Comments			Cavity	of clevice		Measureme	nts
1											No.	Nature	Aspect	Width	Height	Ground	H ₂ O Level
2					12.1					1	1						
3											2)					
4						1					3	1	Sec 1				

Comments:

NI

GPS coordinates 8-1-A = 41, 17860/-82.88918, 242° Back 8 41. 7904 332 8-2-A= 41,7906/-42.88748 66 13mlr 8-2-B= 41,17907 88837 340 Bac



		ta Form (2014)				1		00 5	E. A. G.	00 Band # 17		01	 7 = [
Ro	ost Tree	# 170	Pro	oject No	D./Projec	t Name	112-0	2-1-12	MERTON	07	Date Fin	rst Found 2	F Sug 13
Co	unty	Seneca	10		COP (C)	State	OA	Succ	Qu	ad Firesid	e		-1.2.
Lat	t-Long/	UTM: N/E	1.178	192		W/N_92. 8	1089		Zone	Datum:	14083 Obs	ervers: <u>C</u>	hefting
#	Tree Tag	Species	DBH	Heigh	t ft of m	Condition*	% Bark	Cover**	Tree	Available Roost/		Habitat	
	#	species	(cm)	Tree	Roost	Condition	Usable	Total	Ranking***	Observation	Interior	Edge	Open
1	140	Frokis SIA	48.5	25	20	5000	10	90	CENOPY	Part		0	
2		U, granitana	6.7	3	/	Trie	0	100	126	~	Can	py Cover at Roo	st
3	1	Fraxing 50,	45.8	23	1	Snag	30	70	Canely	Bark	(Open)	Intermediate	Closed
4		Fraxievi S/	54	20	1	Spag	30	30	CANUNY	Bank			
5	1					5		1.	/			Basal Area	
6											Live Trees	Snags	All Trees
7				1					1		.10	30	40
8						1.1.1.1.1.1.1.1			1 2 4	-			
9											1	Roost Location	
10					1.22						Bark?	Cavity	Crevice
11					1.5.8						-0-		
12	1										QUICK REFE	RENCE / 1	CIRCLE
13													
14		10 C 10										*Condition	
15	1					-			1		Snag	Live	Live-Damaged
16	1.1					1			1			Lite	porte Dunaigee
17	ir i			1.1	1.000		1					*% Bark Cover	
18			-					1			10000	10000	Louis-
19			1.00								High = ≥ 25%	Moderate = ≥ 10-<25%	Low = <10%
20				1									
21			14.1	1							**	*Tree Ranking	
22		1 (com	1000			1.	1.00 - 11			1	Canopy	Sub-Canopy	Understory

1.4



			1/4		VA					1 6	-			Bat Day	s		
-0-			11		1	nu	~		~	wood	No.	Date	Bat Freq.	Bat Band	Sex of Bat	Ob	servations
23	1C			X	2			1		0.0	1	27July	192,205	17178	F		
2	1			12P				1	Crist	1/1	2	2854y	172.206	17178	F		
	1	1		1-F	cessi the		,	100°+	C.v.) \	3	-1					
	1	1		4	rent-		L	1 Vot	~/	4	4						
		11					Å	10Armst	1	No News	5				1	-	
		11					1	Propante In	ari		6						
		13	1				1		QU1	BRAND	7	=	11				_
		1	1				lyphi		-	Kair	8		e				
			1.			1			111		9	-		_	-	-	_
			111						18	-	10	-		-	-	-	_
			10						1	all	11	-	-	-	-	-	
			N.						m	In	12	-			-		
			Uh A						1 .	11	13				-	-	
		-			Emergen	ce Count			1)	14				-	-	_
		$\gamma = 1$		100			ime	-	Focal				Cavity	or Crevice C	haracteri	stics	
o.	Date	Temp °F	Weather	# of Bats	Sunset	Bats Start	Bats End	Tagged Bat	Bat exit #	Personnel/ Comments		1			Opening	Measureme	nts
1	27	20°c	clear	2	2055	2109	2113	2113	2		No.	Nature	Aspect	Width	Height	Ground	H ₂ O Lev
	28	68.5		2	2053	21:11	21.20	71:20	2		1		-		0		
_		1400-1		100	Parents (1		1.6		2				2		
3																	

.

0	untv -	SENECA UTM: N/E_4				Stata	ON I		0	1 TIMOC	Date Fi		
#	Tree Tag #	Species	DBH (cm)	Height Tree	ft or m Roost	Condition*	% Bark Usable	Cover** Total	Tree Ranking***	Available Roost/ Observation	Interior	Habitat	2
1	314	Quereus Sp.	91	60'		SNAC	Luw	HILH	C	Coservation	Interior	Edge	Open
2		ULAUS SP	10"	12'	- 1	LIVE	Low	Hield	SHE C		Can	opy Cover at Roo	st
3		Ulaus Sp	7"	10'		LIVE	Lou	4164	UNDOR		Open	Intermediate	Closed
4		Minas Spin	23°	40'		LIVE	Low	LiGH	Sun C	(
5	·	Acer rubrin	19.5"	35'		LIVE	Low	Hist	Cn			Basal Area	n anna Al
6		Carga oraila	36 "	55	1.000	LIVE	Hert	Chart	C	1.0	Live Trees	Snags	All Trees
7		Carya nuale	31"	55		Live	HIGH	HIGH	с	V.	70	10	80
8		Carya ovata	9"	12		LIVE	Low	HIGH	BANDER				
9	_		had a l	2.41				-				Roost Location	
10									1.000	1	Bark	Cavity	Crevice
1 2 3											QUICK REFE	ERENCE / 🕇	CIRCLE
4			11211	·								*Condition	
5			1 - 11						1		Snag	Live	Live-Damage
6					<u> </u>			1.2		-			
7	-							1				*% Bark Cover	
8 9	21										High = ≥ 25%	Moderate = ≥ 10-<25%	Low = < 10%
0	201			1									
1		1	514									Tree Ranking	
2			1.1			1		1.11	1		Canopy	Sub-Canopy	Understory

Puis / Enu



														Bat Day	ys			
			Mi Lones	25)	1		140001	No.	Date	Bat Freq.	Bat Band	Sex of Bat	OŁ	servations	
			Minit			001	2	14	pears		1	7.30	205	17178	F	1		
		1	M		1.1	~100°	5	4	,	1.1	2	7.31	205	17178	F	1		
		F	5		1.1			ì			3							
		Y	1					1		_	4	1			1			
		1					200 - 0				5							
			1				to.		Souther	XAT .	6	-	-		-			
		1						11	_N	1.0 1.0	7					-		
											9		1			-		
								(}			10		-					
			1				~				11		123103	·				
7		-1	1								12					2		
		1			11	Coers		11		_	13	10.000		1	1.2.8	1		
		1	1	_			1.000	1.1			14		-					
-	Emergence Count										-							
3		Temp	1.1.1.1.1.1	# of	of Bats Bats Tagged				Focal Bat	Personnel/	1	-	Cavity		y or Crevice Characteristics			
No.	Date	°F	Weather	Bats	Sunset	Start	End	Bat	exit #	Comments		1.000	6.0.5		Opening	Measureme	ents	
1	7/30/15	81	Clear	3	8:49	8:47	4:44	9:44		TAB	No.	Nature	Aspect	Width	Height	Ground	H ₂ O Level	
2					()				-		1							
3		-		-	-						2	2.1			-	-		
omi	nents:	Nine	: 8:3:	Spm	; FA	quanco	201			Ēi		bet	tree	to the	(in the	+ not	Northern	
510	d T	ine			1	17-	40,	0		5	econd	- let	er-	Big Bra		110	100 1000 000	
E									0	3-1-15 0	EG &	arcel	1/	41.17	460	W 82	. 88919	
Er			Sila						4	1-1-19 0	IT I	-1	·V	1111	· /	6	101.7	
Er			847			JELL			6	8-2-15	1			4117	904	W 82	. 888 30	

100 · · ·

1.2

a	unty	Seveca JUTM NE 4	Nex	F F0	Soyle	State	+ Coyo 01+	te 600	Ve campe Qua Zone	ad Fires	Date Fin de NAD83_Obs	ervers: BA	enley/ C B	
	Tree Tag #		DBH (cm)		t ft or m Roost	Condition*		Cover** Total	Tree Ranking***	Available Roost/		Habitat		
1	396		31	35	20	5		/	6	Observation	Interior	Edge	Open	
	270		20	40	20	5	1	1.1		Ba-K				
	-	Fraximus sp Fraximus sp	26.5	40	-	5	M	H	5	Bart	\sim	ppy Cover at Roo	1. A. M. M. M.	
		, , , , , , , , , , , , , , , , , , , ,	215	35		2	1	14	17	· · · · · · · · · · · · · · · · · · ·	Open	Intermediate	Closed	
		Fraxions Sp Juglams Mora	6.10	60	-	1.	1	14	5	Ba-V	-	Basal Area		
	/	Juglens Migron	0.1	75	2	T	1	H	1	NONE	Live Trees	1	All Trees	
-		Frankings SP	39	55	-	S	M	M	1	Bart	30	Snags	90	
	-	Fraximus 21	16	17	~	6	1	11	5	None		1 00		
	-	Alnus vubru	17	24	-	1	Ĩ.	- H	5	NENE		Roost Location		
0				20				-pr			Bark	Cavity	Crevice	
1					-		1.000	1.2						
2					1.000			-			QUICK REFE	RENCE /	CIRCLE	
3	1.1.1									1				
E.	-											*Condition		
5	~ 100		11.00					11.0			Snag	Live	Live-Damaged	
		1					1.21	1						
,			1111					1 in the second			25.00	*% Bark Cover		
			100.00								Walan area	Moderate = >	Low =	
						1		1			High = $\geq 25\%$	10-<25%	< 10%	
			1 - 1							N	×			
	12.1	-				·						*Tree Ranking		
2	1.2.1		1.000	11	12.0			1		1 11	Canopy	Sub-Canopy	Understory	



Roost Tree # 396

Bat Species/Sex/Frequency: MY3E/F/450 Band # ODNR 17166

					ocation Di	agram.				-					_	
				1		N.CI	R 27			-			Bat Day	ys		
	A	Gar	0 W#0	, A	130+	40			310107	No.	Date	Bat Freq.	Bat Band	Sex of Bat	Ob	servations
	11	1						/	100	1	8-1	450	17166	F		
	1	N.	16-1	1		1			L	2	8-2	450	17/106	F	11	
	T	1V	Brita	a					low	3	-				1	
	01	1	1 8	-						4						
	N	48A			1.7				12	5	_		-	-	1	
	1	in			5	2	nT 59	2		6		10.000			-	_
					20	10	21 21	C		8				-		_
					2	13		I.	-	9						
		1		1	1	Suns?		100	<u>}</u>	10						
		+ 31	ve we		0	554		2100						-		
		+B.	ve we	ord	Q	580		t sea		10						
		+ 3-	ve we	and .	0	510		73100		10 11						
		1 - 3-			VI	684		73000		10 11 12						
		18.		Emergene	ce Count			73000		10 11 12 13						
	Temp	+8-			ce Count	ime	Tagged	Focal	Personnel/	10 11 12 13		Cavit	y or Crevice C	Characteris	stics	
o, Date	Temp °F	Weather			ce Count		Tagged Bat	Focal Bat exit #	Personnel/ Comments	10 11 12 13		Cavit	1.000		stics Measuremen	nts
8-1	Temp °F 75		# of	Emergeno	ce Count T: Bats Start	ime Bats		Bat	Comments	10 11 12 13	Nature	Cavit	1.000	Opening 1		
8-1	°F	Weather	# of	Emergend	ce Count T: Bats Start	ime Bats End	Bat 21:27	Bat		10 11 12 13 14	Nature	T. S		Opening 1	Measureme	
1 8-1	°F 75	Weather Cleur	# of	Emergene Sunset 2046	ce Count Ti Bats Start 2 2 7	ime Bats End 2/27	Bat 21:27	Bat exit #	Comments B. Renta	10 11 12 13 14 No.	Nature	1.4		Opening 1	Measureme	H ₂ O Leve

Comments:

S COPPERHEAD 927

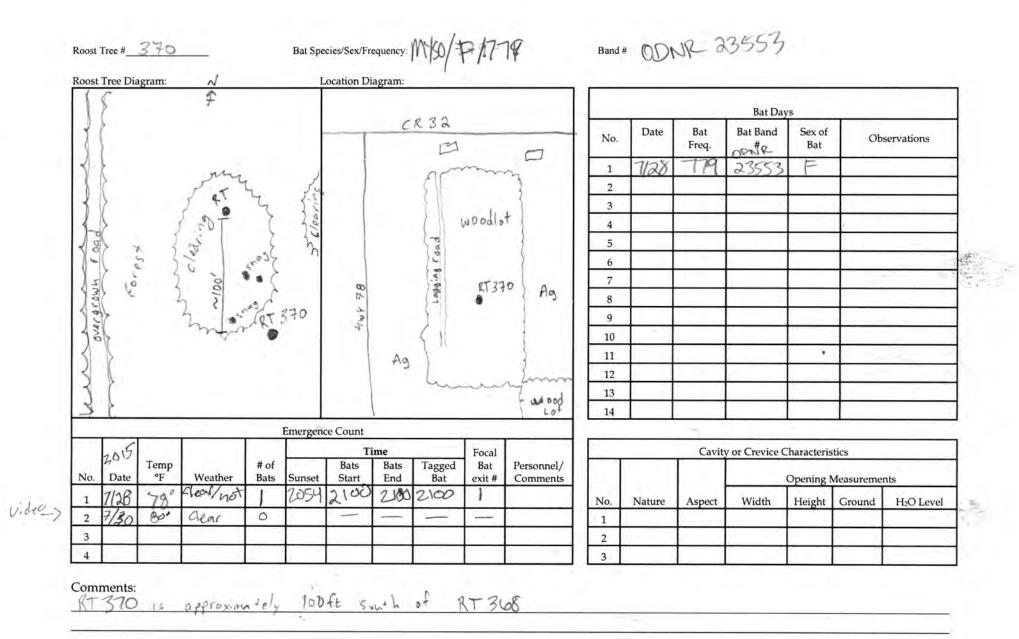
4

trees ovidence of Emerald Ash borg ash arc deal SNASS W.v.A. 15 601 millio 12d ba 3 in brown Hatty

Co	cation unty t-Long/	Site 26 Seneca UTM: N/E 41	,2089	4	1	State W/N	04		Qua Zone	ad <u>Fires</u> — Datum	NAD83 Obs	ervers: <u>J</u> , <i>S</i> +	orm
#	Tree Tag #	Species	DBH (cm)	Heigh Tree	t ftor m Roost	Condition*	% Bark Usable	Cover** Total	Tree Ranking***	Available Roost/ Observation	Interior	Habitat	Oren
1	370	Fraxinus Peansylva.ca	58.7	60	710	S	M	L	C	Observation	Interior	Euge	Open
2	-	Fronking &	46.2	20	-	S	L	H	SC	(racks & Clevices	Cano	opy Cover at Roos	it
3		Beech ?	42.3	18	-	5	L	H	SC	Barle	Open	Intermediate	Closed
4		oaksp	70	30	1	5	L	H	6	Bark & cracks			
5	10.15	Unknown	44	40		S	L	L	c	crachs crevices		Basal Area	
6	1.11	Fraxing Vanica	42.3	25	-	5	L	H	SC	traches revices	Live Trees	Snags	All Trees
7		Sucampple	14.1	50	1	L	L	17	50		130	60	190
8	12.5	Sucar maple	18:46	50	~	L	L	H	50		-		
9		Signi mogle	4.3	15	1	Ĺ	L	17	u		I	Roost Location	
10		Sugarmaple_	12.9	40	/	L	L	1+	50		Bark	Cavity	Crevice
11	1.000	Saccinicale	4.1	30	1	L	L	17	4				
12		Sucreit map [1	11.6	40	~	L	V	14	SC		QUICK REFE	RENCE / T	CIRCLE
13	4	mannaple	14.4	40	~	L	V	17	56				
14	-	Sugarmaple	11.8	30	1	L	V	14	56			*Condition	
15	-	elm	58.3	100	-	L	L	H	C		Snag	Livé	Live-Damage
16		Suciarmaple	169	25	1	L	L	H	°C				_
17		sugar maple	10.2	60	/	Ç	L	11	50		*	*% Bark Cover	
18		Science maple	11.6	60	1	Y	C	[+	9		High = ≥ 25%	Moderate = \geq	Low =
19	-	riger maple	149	75		L	L	1+	gi	· · · · · · · · · · · · · · · · · · ·		10-<25%	< 10%
20			14	-			1						
21											**	*Tree Ranking	
22				1.51	C	lot, centered on					Canopy	Sub-Canopy	Understory

PLOT REDO

COPPERHEAD



COPPERHEAD

at	Long/	UTM: NYE <u>-11</u>	,209	21	(State	0H 9430	8	Qua	ad <u>tires</u> Datum:	NAD83 Obs	ervers: K. P.	July 2015
-	Free Tag #		DBH (cm)		t ft or m Roost	Condition*	% Bark Usable	Cover** Total	Tree Ranking***	Available Roost/		Habitat	
1	368	Unk.	52.7	70	25	SARA	LO		C	Observation	Interior	Edge	Open
2	200	heer succhan		50	-	Shaq	1	1-1	90		Cano	py Cover at Roos	t
3		FORY IN SALES	6 0	50	0	Spea	L	14	30	1	Open	Intermediate	Closed
4		Acor sociler		20	1	SIEN	L	L	US	sphendoll	- Chino		
5						1		1		-Inink	1	Basal Area	
6								1			Live Trees	Snags	All Trees
7											0	40	40
8				100 - T					1				
9)									F	Roost Location	
0											Bark	Cavity	Crevice
1		10 · · · · · · · · · · · · · · · · · · ·						1					
2											QUICK REFE	RENCE /	CIRCLE
3									1.5				
4					+						-	*Condition	
5	-				-				1		Snag	Live	Live-Damaged
6	-												
7											**	% Bark Cover	
8				-							U:-h => 25%	Moderate = >	Low =
9										1	High = ≥ 25%	10-<25%	< 10%
20								1	1				
											-	*Tree Ranking	

6

COPPERHEAD

Bat Species/Sex/Frequency: WYS0/F/779

Band # 001NR-23553

oost Tree D	iagram:			1	ocation D	iagram:	1.1			-						
	VY.	XIV	11	2		R	1368		11		-	_	Bat Day	/s		
	N	NE	X						11	No.	Date	Bat Freq.	Bat Band #	Sex of Bat	Ob	servations
	1	NF4	1		1					1	7h7	,779	73553	F		
		1.	F	- I	11					2	7/29	,179	23553	F	9	
					-11					3	7/31	.779	23553	F	1	
		1/1				mite				4	8/1	,779	93553	F	Rain	Brande
						ang -			-	5	8/2	1776	73:42	6	Raw	- Exant
		1/1								6			1.1		1 1	- 120010
								- 1	's	7	17. 19	100				
rip'in	1 .1	124			C	-5-1			\	8	1.000				1.	
ripilie Wood ia	11 (11)	in l			2011	· E-I		11	m	9					1	
	lit-lu \							1	1 11	10	1.000				1	
101	1	11							L	11					()	
		111							1	12	1000	1		S		
)	1			-	V.	rel			13	1.000		A	· · · · · ·		
		11				14	10.		5	14		6 S	· · · · ·			
_		1.1		Emergen	ce Count										0.1	
	1.00	-	100	100		ime		Focal				Cavit	y or Crevice C	haracteris	stics	
lo. Date	Temp °F	Weather	# of Bats	Sunset	Bats Start	Bats End	Tagged Bat	Bat exit #	Personnel/ Comments	1				Opening I	Measureme	nts
7/17	75	clear	4	2054	2109	72.21	2109	1	1	No.	Nature	Aspect	Width	Height	Ground	H ₂ O Leve
2 7/28	78	CLERY	1	2054	2104	2104	_	-		1		1 Mar 1			· · · · · · · · · · · · · · · · · · ·	
3 7/29	820	p-c+- nady	2	2053	2013	2800	2453	1		2	Second Second	1.00		-	5 J	
4 7/3/	700	Clear	5	20	20:56	21.31	20.56	1		3			· · · · · · · · · · · · · · · · · · ·	1 - 1	·	
8/1		Clear	2	1	20:56	20:58	20:38	2	Brandon Smill Brandon	that		_				
mments		clear	1		8:57											
Touse /	De ca	16 or al	dies	1 24	0- 1	2DF	12. 8	Real of	Jowe to	2						
uppedv.	021-	72 " 15 -11	6 L .	96 D.	de	-01/74	e lu	1.00	objected	4=00	is conte	2204				
- 4 - 1/	18	and when	.J. 164			-	-									

Roost Tree # 368

Copperhead Environmental Consulting Inc. P.O. Box 73, 11641 Richmond Rd. Paint Lick, KY 40461 (859) 925-9012

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APPENDIX E

Roost Tree Photographs

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



RT 140



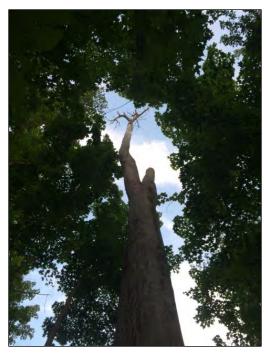
RT 314



RT 368



RT 369



RT 370



RT 371



RT 372



RT 373



RT 395



RT 396



RT 983



RT 984



RT 985



RT 986



RT 987



RT 988



Summer 2016 Bat Survey for the Proposed Republic Wind Project, Seneca and Sandusky Counties, Ohio

USFWS #16-037

Completed by:

Theresa Wetzel, Christopher McNees, and Chris Leftwich

1 November 2016

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PROJECT BACKGROUND

In 2015, Copperhead Environmental Consulting, Inc. (Copperhead) completed a bat mist-net and telemetry survey for the Republic Wind Project (Project) in Seneca and Sandusky counties, Ohio. Since completion of the 2015 survey, the Project boundary changed to include an additional area (~7,882 acres) along the northern and western edges of the original Project. Therefore, Copperhead completed a mist-net survey of the expansion area, referred to as the 2016 assessment area (Figure 1). The goals of this survey were to document bat species diversity and abundance within the assessment area, and inform understanding of roosting habitat, foraging range, and spatial distribution of federally listed Indiana bats (*Myotis sodalis*) and northern long-eared bats (*Myotis septentrionalis*), and state listed Rafinesque's big-eared bats (*Corynorhinus rafinesquii*) and eastern small-footed bats (*Myotis leibeii*), if captured.

METHODOLOGY

Level of Effort/Site Selection

Mist-net surveys were implemented in accordance with guidelines outlined in the 2016 *Range-wide Indiana Bat Summer Survey Guidelines* (USFWS 2016), 2009 *Ohio Department of Natural Resources 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). A study plan was submitted to the USFWS and the ODNR on 6 July 2016 and concurrence was received on 6 July (USFWS) and 17 July (ODNR).

The level of effort outlined in the study plan was based on the estimated amount of forested habitat within the 2016 assessment area (~540 acres) resulting in 5 mist-net sites surveyed from 19 July through 22 July 2016.

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).

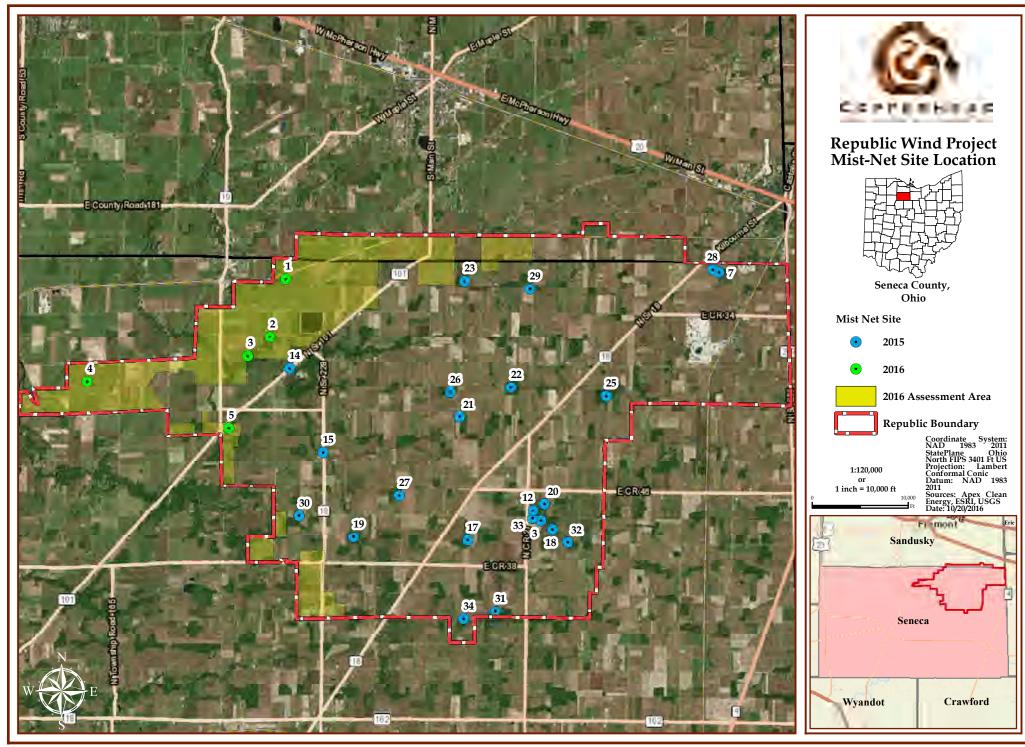


Figure 1. Proposed Republic Wind Project overview with bat assessment area and mist-net sites, Seneca and Sandusky Counties, Ohio, 2016.

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Nine net nights of effort were completed at each site over two non-consecutive nights, with at least one mist-net set being a high net (three mist-nets stacked to create one set that was ~7.5 m tall) each night. Low visibility, high-quality, nylon nets, 4 to 12 meters 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. For each individual captured, the following biological and morphometric data were recorded: species, sex, age class, reproductive condition, mass, and forearm length. 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.

Radio-Telemetry & Emergence Counts

If captured, Indiana, northern long-eared, Rafinesque's big-eared, and eastern smallfooted bats were to be radio-tagged in order to locate day roosts, conduct emergence counts, and to estimate foraging range. Radio-telemetry and emergence counts were not conducted because no target species were captured during this survey.

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 "*National White-Nose Syndrome Decontamination Protocol - Version 04.12.2016*", established by USFWS. All netting equipment was sanitized in > 55°C (>131°F) water for 20 minutes prior to arrival and after each survey night. Individual bats were kept in unused paper bags while awaiting processing. 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 were sanitized immediately with isopropyl alcohol disinfecting wipes following the handling of each bat. Bats were evaluated for potential WNS infection through wing scoring following Reichard and Kunz (2009).

RESULTS AND DISCUSSION

Mist-Net Survey

Mist-net surveys were conducted at five sites from 19 – 22 July 2016 (Table 1, Figure 1). A total of 78 bats of three species were captured over 45 net nights. No Indiana or northern long-eared bats were captured (Table 2). Big brown bats (*Eptesicus fuscus*) comprised 85 percent of total captures (n=66), and eastern red bats (*Lasiurus borealis*) comprised 13 percent of total captures (n=10). 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.

Weather conditions during the surveys were within the parameters outlined in the USFWS survey guidance, including no rain or heavy winds and temperatures above 10° C (50° F) during the entire five-hour survey period. No deviations from the survey methodology occurred during the course of the field survey. Captured bats were examined for any sign of WNS by using the Reichard Wing-Damage Index (WDI). No major traumas (i.e., WDI > 1) were observed on captured bats.

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Site No.	Latitude	Longitude	Site Location	
1	41.25035	-83.02975	trail through woodlot and ephemeral wetland	
2	41.23370	-83.03558	wood lot and stream of 180	
3	41.22830	-83.04389	large riparian forest along beaver creek	
4	41.22067	-83.10469	wood lot off TR0164	
5	41.20766	-83.05096	wide corridors leading to ag fields	

Table 1. Mist-net site locations, Republic Wind Project, Ohio, 2016.

Table 2. Total bat captures by species, age, sex, and reproductive status, Republic Wind Project, Ohio, 2016.

	Adult N	Male		Adu	lt Fem	ale	Juver	ile		
Species	NR*	S	Р	L	PL	NR	Female	Male	Escaped	Total
Eptesicus fuscus	5	11	0	2	13	0	12	21	2	66
Lasiurus borealis	1	4	0	0	2	1	1	1	0	10
Lasiurus cinereus	0	0	0	0	1	0	0	0	1	2

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

CONCLUSIONS

No federally or state listed species were captured during this survey. The lack of Indiana and northern long-eared bat captures suggests that these species are not using this portion of the project area during the summer maternity season, or the species are present in such low densities that current survey techniques failed to detect them.

LITERATURE CITED

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- Ohio Division of Natural Resources Division of Wildlife (ODNR-DOW). 2015. Ohio Division of Wildlife and USFWS (OH Field Office) Guidance for Bat Permitted Biologist.
- Reichard, J. D. and T. H. Kunz. 2009. White-nose syndrome inflicts lasting injuries to the wings of little brown myotis (*Myotis lucifugus*). Acta Chiropterologica, 11(2) 457-464.
- United States Fish and Wildlife Service (USFWS). 2016. Range-wide Indiana Bat Summer Survey Guidelines.



APPENDIX A

Mist-Net Data Sheets

513- Republic Wind Project Bat Survey, Seneca and Sandusky Counties, Ohio, July 2016

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20										-				3	Cloudy or	overcast		
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# Ti	ime	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	e /00 %		W	Vax / War
1 9:1	P	LABO	A	F	PL	11.5	42	P	4	0	-	١	-			Rise		Set
2 9:4		EPFU	A	F	PL	16	44	E	2	1	-	1	10-2-10	Sun		10:16	11. a. (11.11)	2100
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5 94		EPFU.	A	M	5	16	41	D	55	0	-	ł	4	Time	Temp (F)	Sky	Wind	No. Bats
		EPFU	Ч	F	NR	16.5	43	A	1	0	1	-	-	Time	Temp (r)	Эку	wind	NO. Dats
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8 /0,4	40	EPFU	Ъ	M	NR	14	45	D	7	0	1	-		10:00	75	D	0	3
9 11-1	05	EPFU	A	M	S	16.5	42	D	1	D	-	-		11:00	73	0	0	3
10 11:	15	EPPU	A	P	PL	18.5	45	E	5.5	0	-	-	-	12:00	72	0	0	2
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21				1-21		-6E-1		(4	Fog or smo	oke		
22		1.12.21	1.00	0.750	1		1.2.2.2				1			5	Drizzle or	light rain	ALCOURT	
23			1	1.2.1					1		1			6	Heavy rair	- thunde	r storm	
24			1200		1		0	100	C		1)		-		100		
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		,							-	Zone		Datum	141.900	Observe	IS MIN	MUG		PPE	RHEA
	#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	e %			Wax / Wa
	1	9:40	EPFU	A	F	PL	17.5	49	E	1	1	-	-	-			Rise		Set
	2	9:90	EPFU	A	M	5	16	45	E	2	0	1	-	-	Sun		61	7	10:55
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Lat/Lo	Net Site Habitat Sheet Site N on ; UTM: N/E 41.2337 W/	N - 83.03558	oject No./N	Zone			Observers_	MTM	, MJG		Date_7	-1-	
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<u>z</u> 9	3. Optimal: Area is largely forested. W						Please retu	n to:				2	÷.,
9							Please return P.O. Box 73		KY 4046	1		හ	•

at/L	on ; UTN	7 10rge ripini 1000 1: (Ny E 1/2)	2830	,	W/N_	83.0	24389)	Zone /		Datum	AD83		A. A.	shman	CO	PPEF	CHEA
#	Time	Species	Age	Sex	Repr.	Mass (g)	FA (mm)	Net	Height (m)	WDI	G/H/B/T	Band# Type	Freq.	Moon Phase	e %	100	v	Vax / Wa
1	2145	EPFU	A	F	PL.	18.75	46	E	2.5	0	-					Rise	×.	Set
2	2150	EPFU	A	m	NR	15.0	46	G	2.0	0	1			Sun		0616	2	210
3	1062	EPFU	A	m	NR	145	45	E	2.0	0			(Moon		2125	Y	070
4	2215	EPFU	5	m	NR	14.95	45	E	3.5	0	-	-	-	1			-	
5	2215	EPFU	Z	F	NK	15.5	44	E	4.0	0				Time	Temp (F)	Sky	Wind	No. Bat
6		EPFU	E	SC.	APR	ED	-	E					-	Time	Temp (r)	SKy	wind	INO. Dat
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Andian 2 3 3 3 4 L Comm	a Bat Habitat Characterization <u>Roost habitat</u> : 1. Poor: No or fo 2. Moderate: Snags with sloughin <u>Water Resources</u> : 1. Poor: bat 2. Moderate: Ephemeral or inter openings or canopy gaps allow 3. Optimal: Streams or ponds (in available. <u>Forest Structure</u> : (if hardwoods 1. Poor: Habitat even aged and y 2. Moderate: some diversity in a may be present but rare. 3. Optimal: Mature forest. Dive gaps that facilitate bat foraging. <u>Land Cover</u> : 1. Poor: Square ki 2. Marginal: Trees present in th 3. Optimal: Area is largely fore <u>Total Habitat Score</u> (Should be ba	ew snags >= 5" DBH of ing bark or other roost ing bark or other roost drinking resources no critent streams or po- bats easy access to the including road ruts) pro- s are absent or nearly young. Trees smaller age of trees in the stan erse age classes of tree lometer surrounding the form of small wood sted. Wooded stands	with sloughing to features preserves features preserves of present at the onded areas pre- resource. resent that apper absent or if star than 5 inch DB od. Trees 5 to 15 s present. Treeves site predomina lots and woode	bark or other ent 5-15 inch D nt >15 inch DB e site. esent but too cli ear to offer drin nd is monocult H. Understory 5 inches preser es > 15 inch DB antly un-foreste ed fence rows.	usable roost fe 2BH within 100 H within 1000 uttered to allow nking resource ture, area autor y growth clutte nt. Understory 2H frequent. V ed. Few matur Little connect	atures (cracks, 00 feet of forester feet of forester w many bats to e throughout the matically quali- ered and restrict clutter domin darying tree heit re trees present tion to adjacent wooded stream	ed areas. I areas. I areas. I areas. I areas. I are majority Ifies as a 1: Ifies as a	ily or simu of the sum poor). foraging t ubiquitou cefalls allo cted to oth reas. v, or other	nmer. Fly us. Trees ; w for freq ner areas o wooded c	ways to greater t uent sm f trees.	resources han 15″ E all openir	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	e 100 %		v	Vax / Wan
1						10					1f					Rise		Set
2			11.11	2.1		1			1		1			Sun		00:15	1	2100
3														Moon		20	41	000
4									1		L		1.1.1.1.1				121	-
5		h	10		1		X			-				Time	Temp (F)	Sky	Wind	No. Bat
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16	1		11.772.0		10.27				-					1000		Sky Code	(C	
17		1	÷											0	Clear			
18			()		1.1.1							L		1	Few Cloud	s		
19					1							r		2	Partly Clou	ıdy		
20	-	-												3	Cloudy or	overcast		
21		1		101	1		(*****);		1					4	Fog or smo	ke		
22	_				i = i				_				in the second second	5	Drizzle or	light rain		
23	· ··· · · ·		1.0	i = i)ii								6	Heavy rair	- thunde	r storm	
24	-												, and the l	-				
25					1	1	-				-					fort Wind	Scale	
26	1		12021		1201									0	Calm: <1 n			
27	1		1.00		11 T	-								1	Light air: 1		· · · · · ·	
28			0-2-4		1									2	Light breez			
29			S. 199	1.0	1							1		3	Gentle bre			
30	1000					128		1.1				-		4	Moderate	preeze: 11	-16 mph	

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Summary: Application Exhibit J Appendix E - Part 8 of 12 electronically filed by Teresa Orahood on behalf of Sally W. Bloomfield