

ODNR
7178

Roost Tree Diagram:

Location Diagram:

[illegible]

Comments:

nts: wall wheat field/woodlot edge to 41.17889; -89.89136 then turn due East to tree
: creek

Table Red Flaying mules feed Emancipant Sport

41. 175375
- 82, 88903



COPPERHEAD
1880 COPPERHEAD, LONG BEACH, CA

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

Bat Days					
No.	Date	Bat Freq.	Bat Band #	Sex of Bat	Observations
1	27 July	18, 205	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						
					Opening Measurements	
No.	Nature	Aspect	Width	Height	Ground	H ₂ O Level
1						
2						
3						

Roost Tree # 314

Project No./Project Name

412.01 / EMERSON CREEK

Date First Found 7-30-15

Location Easton KY40

County SEVEN

State OH

Quad

Fire side

Lat-Long/UTM: N/E 41.17900

W/N - 82.88784

Zone

Datum: NAD83 Observers: MTM, ELS

#	Tree Tag #	Species	DBH (cm)	Height ft or m		Condition*	% Bark Cover**		Tree Ranking***	Available Roost/ Observation
				Tree	Roost		Usable	Total		
1	314	Quercus sp.	91	60'		SNAG	Low	High	C	
2		Ulmus sp	10"	12'		LIVE	Low	High	Sub-C	
3		Ulmus sp	7"	10'		LIVE	Low	High	unhatched	
4		Ulmus sp	23"	40'		LIVE	Low	High	Sub-C	
5		Acer rubra	19.5"	35'		LIVE	Low	High	C	
6		Carya ovata	36"	65'		LIVE	High	High	C	
7		Carya ovata	31"	55'		LIVE	High	High	C	
8		Carya ovata	9"	12'		LIVE	Low	High	ANDER	
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										

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

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

PLIS / Emerald

Habitat		
Interior	Edge	Open

Canopy Cover at Roost		
Open	Intermediate	Closed

Basal Area		
Live Trees	Snags	All Trees
70	10	80

Roost Location		
Bark	Cavity	Crevice

QUICK REFERENCE / ↑ CIRCLE

*Condition		
Snag	Live	Live-Damaged

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

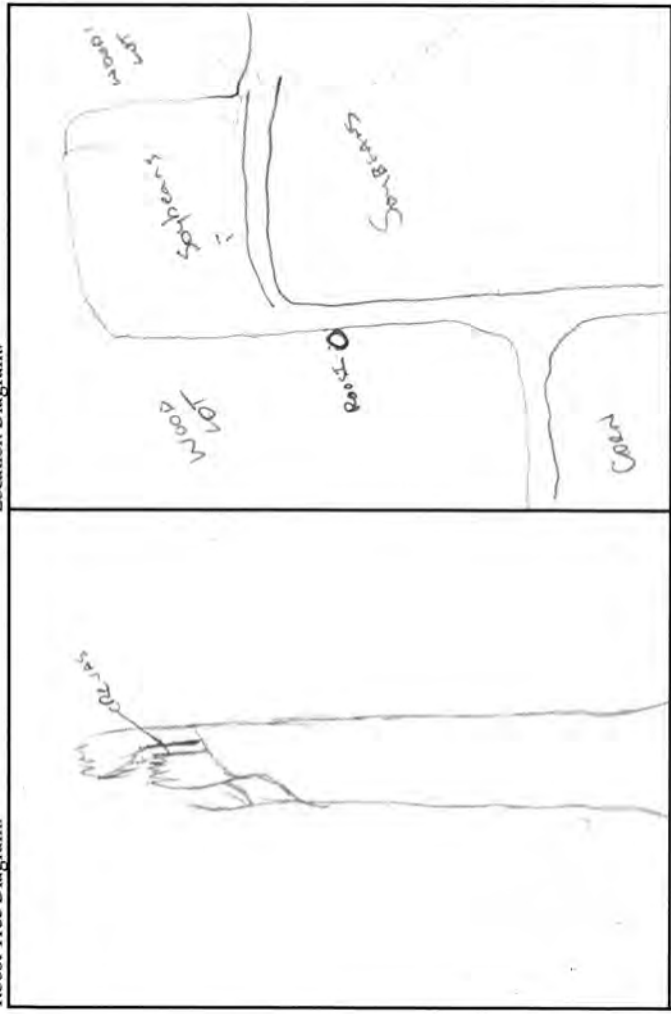
***Tree Ranking		
Canopy	Sub-Canopy	Understory

Roost Tree # 314

Bat Species/sex/Frequency: MYSE / F / 205

Band # 0DNR 17178

Roost Tree Diagram:



Location Diagram:

Bat Days					Observations
No.	Date	Bat Freq.	Bat Band #	Sex of Bat	
1	7-30	205	0DNR 17178	F	1
2	7-31	205	17178	F	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

Emergence Count

No.	Date	Temp °F	Weather	# of Bats	Time			Focal Bat exit #	Personnel/ Comments
					Sunset	Bats Start	Bats End		
1	7/30/15	81	Clear	3	8:49	8:47	9:44		TAB
2									
3									
4									

Cavity or Crevice Characteristics					Opening Measurements
No.	Nature	Aspect	Width	Height	
1					
2					
3					

Comments:

81° - Start time: 8:35 pm ; Frequency 206
75° - End Time: 10:14 pm

First bat tree to the right, not Northern
Second - Left Big Barn

1111

847
9:10 > possibly same bat
9:12
9:44 - Northern Emerged - no ping on receiver

8-1-15 off parcel N 41.17860 W 82.88918 - 242
8-2-15 N 41.17904 W 82.88830 - 332



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

Likely tree location
N 41.178988
W 82.888251

Roost Tree # 396

Project No./Project Name

412.01 / Emerson Creek

Date First Found

8-1-15

Location

Wood lot next to 300 year Field & Coyle Grove compound

County

Seneca

State

NY

Zone

82, 93402

Quadrant

Fire side

Datum:

NAD83

Observers:

B. Renley/C. Blom

#	Tree Tag #	Species	DBH (cm)	Height ft or m		Condition*	% Bark Cover**		Tree Ranking***	Available Roost/ Observation
				Tree	Roost		Usable	Total		
1	396	Fraxinus sp.	31	35	20	S	L	L	C	Bark
2	-	Fraxinus sp.	30	40	-	S	L	H	C	Bark
3	-	Fraxinus sp.	26.5	40	-	S	M	H	C	Bark
4	-	Fraxinus sp.	21.5	35	-	S	L	H	C	Bark
5	-	Juglans nigra	62.5	60	-	L	L	H	C	NONE
6	-	Juglans nigra	91	75	-	L	L	H	C	NONE
7	-	Fraxinus sp.	39	55	-	S	M	M	C	Bark
8	-	Fraxinus sp.	16	17	-	S	L	H	S	NONE
9	-	Ulmus rubra	17	20	-	L	L	H	S	NONE
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										

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

Habitat	
Interior	Edge
Open	Open

Canopy Cover at Roost	
Open	Intermediate
Closed	Closed

Basal Area	
Live Trees	Snags
30	100
90	90

Roost Location	
Bark	Cavity
Crevice	Crevice

QUICK REFERENCE / ↑ CIRCLE

*Condition	
Snag	Live
Live-Damaged	Live-Damaged

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

***Tree Ranking	
Canopy	Sub-Canopy
Understory	Understory

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

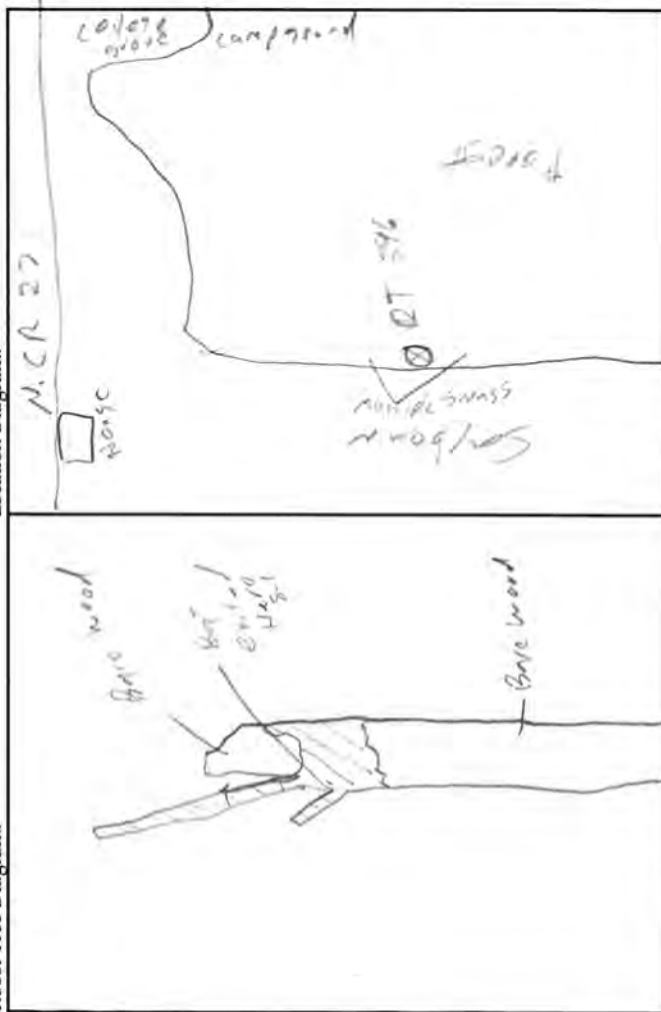
Roost Tree # 396

Bat Species/Sex/Frequency: MYSE/F/450

Band # DDNR 17106

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	8-1	75	Clear	1	2046	2127	2127	1	B. L. m. d.
2	8-2	77	Clear	2	2047	2105	2134	2	B. L. m. d.
3									
4									

No.	Date	Bat Freq.	Bat Band	Sex of Bat	Observations
1	8-1	450	DDNR 17106	F	
2	8-2	450	DDNR 17106	F	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

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

Comments:

Snags are dead ash trees, evidence of Emerald Ash borer
* Study 1st bat to enter was large (maybe Red bat or Big brown)

927

ODNR 23553

Roost Tree # 370

Project No./Project Name

Date First Found

Location Site 26

County Seneca

State OH

Quad Fireside

Lat-Long/UTM: N/E 41.20894

W/N 82.9628

Zone

Datum: NAD83 Observers: J. Storm

#	Tree Tag #	Species	DBH (cm)	Height (m)		Condition*	% Bark Cover**		Tree Ranking***	Available Roost/ Observation
				Tree	Roost		Usable	Total		
1	370	Fraxinus americana	58.7	60	710	S	M	L	C	
2		Fraxinus americana	46.2	20	-	S	L	H	SC	cracks & crevices
3		Beech	42.3	18	-	S	L	H	SC	Bark
4		Oak sp	70	30	-	S	L	H	C	Bark & cracks
5		Unknown	44	40	-	S	L	L	C	cracks & crevices
6		Fraxinus americana	42.3	25	-	S	L	H	SC	cracks & crevices
7		Sugar maple	17.1	50	-	L	L	H	SC	
8		Sugar maple	18.6	50	-	L	L	H	SC	
9		Sugar maple	4.3	15	-	L	L	H	U	
10		Sugar maple	12.9	40	-	L	L	H	SC	
11		Sugar maple	16.9	30	-	L	L	H	SC	
12		Sugar maple	11.6	40	-	L	L	H	SC	
13		Sugar maple	14.4	40	-	L	L	H	SC	
14		Sugar maple	11.8	30	-	L	L	H	SC	
15		elm	58.3	100	-	L	L	H	C	
16		Sugar maple	16.9	25	-	L	L	H	SC	
17		Sugar maple	10.2	60	-	L	L	H	SC	
18		Sugar maple	11.6	60	-	L	L	H	SC	
19		Sugar maple	14.9	25	-	L	L	H	SC	
20										
21										
22										

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

Habitat		Edge	Open
Interior			

Canopy Cover at Roost		Closed
Open	Intermediate	

Basal Area		All Trees
Live Trees	Snags	
130	100	190

Roost Location		Crevise
Bark	Cavity	

↓ QUICK REFERENCE / ↑ CIRCLE

*Condition		Live-Damaged
Snag	Live	

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

***Tree Ranking		Understory
Canopy	Sub-Canopy	



COPPERHEAD

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

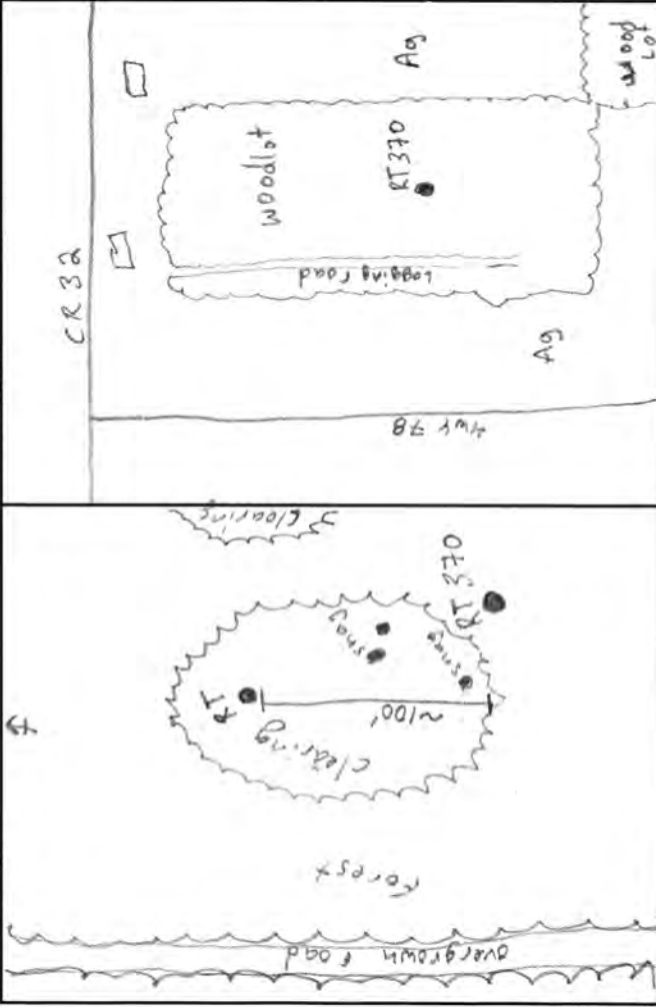
Roost Tree # 370

Bat Species/Sex/Frequency: W/50/F/17-19

Band # ODNR-23553

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		
1	7/28	79°	Clear/Hot	1	2054	2100	2100	1	
2	7/30	80°	Clear	0					
3									
4									

Comments:

RT 370 is approximately 100ft south of RT 368

No.	Date	Bat Freq.	Bat Days			Sex of Bat	Observations
			Bat Band #	Bat Band #	Bat Band #		
1	7/28	79	23553			F	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

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

Roost Tree # 368

Project No./Project Name 412 / APex

Date First Found 27 July 2015

Location in same woodlot as must not site 21

County Seneca

Quad E 4000

Zone

Datum: NAD83

Observers: K. Pearson, A. Ashme

Lat-Long/UTM: N 41.20927

State OH

W 82.90308

#	Tree Tag #	Species	DBH (cm)	Height (ft or m)		Condition*	% Bark Cover**		Tree Ranking***	Available Roost/ Observation
				Tree	Roost		Usable	Total		
1	368	unk.	52.7	70	25	snag	L	Low	C	squeaking
2		acer	60.3	50	-	snag	L	H	SC	
3		acer	29.7	50	-	snag	L	H	SC	
4		acer	66.9	70	-	snag	L	L	US	spoke
5										trunk
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										

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

Habitat		
Interior	Edge	Open

Canopy Cover at Roost		
Open	Intermediate	Closed

Basal Area		
Live Trees	Snags	All Trees
0	40	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



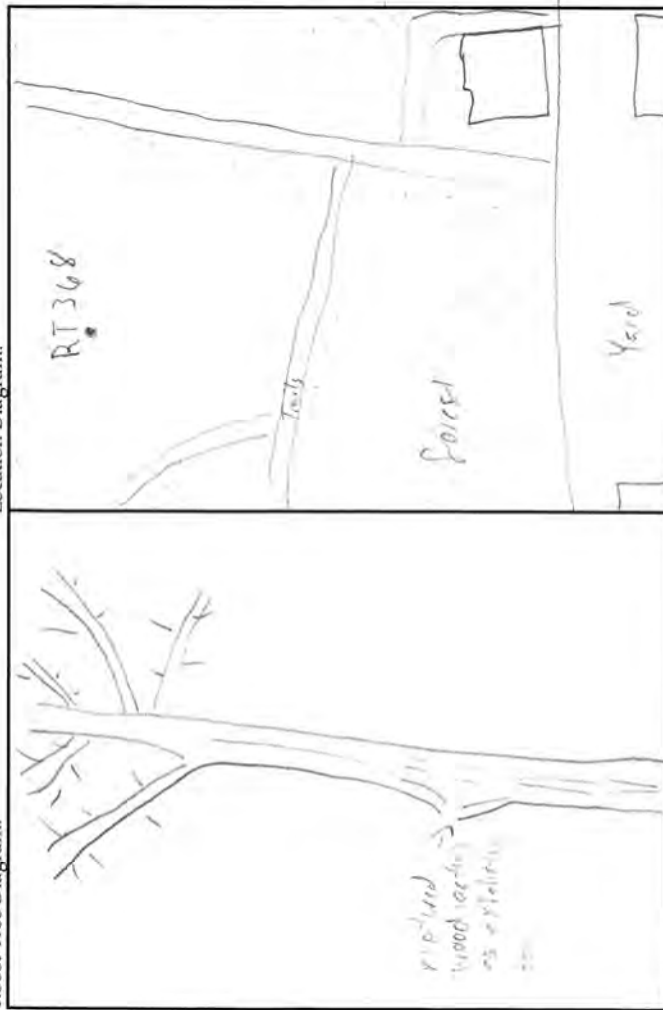
COPPERHEAD

ENVIRONMENTAL CONSULTING

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

Band # 00NPR-23553

Location Diagram:



Bat Days					
No.	Date	Bat Freq.	Bat Band #	Sex of Bat	Observations
1	7/7	779	23553	F	
2	7/29	779	23553	F	
3	7/31	779	23553	F	
4	8/1	779	93553	F	Rain + Bunch
5	8/2	779	93553	F	Rain + Bunch
6					
7					
8					
9					
10					
11					
12					
13					
14					

Emergence Count										
No.	Date	Temp °F	Weather	# of Bats	Time				Focal Bat exit #	Personnel/ Comments
					Sunset	Bats Start	Bats End	Tagged Bat		
1	7/27	75	clear	4	2054	2109	2111	2109	1	
2	7/28	78	clear	1	2054	2104	2104	—		
3	7/29	82°	partly cloudy	2	2053	2053	2110	2053	1	
4	7/31	70°	cloudy	5	20	20:56	21:31	20:56	1	

	8/1	20:56	20:58	20:58	2	Branston Summit
Comments:	clear	clear	8:57	8:57	1	Branston Summit
Moose / Elk	Cave out	low elk	one deer	one deer		downy tree

Cavity or Crevice Characteristics						
No.	Nature	Aspect	Opening Measurements			
			Width	Height	Ground	H ₂ O Level
1						
2						
3						

[illegible]

COPPERHEAD

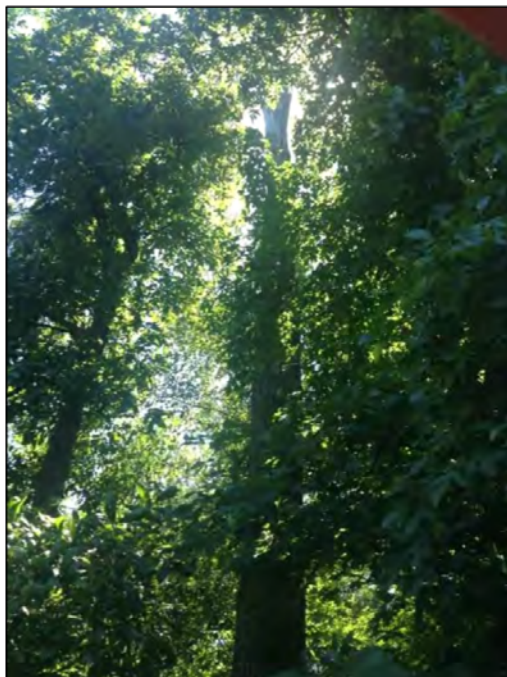
Copperhead Environmental Consulting Inc.
P.O. Box 73, 11641 Richmond Rd.
Paint Lick, KY 40461 (859) 925-9012

APPENDIX E

Roost Tree Photographs



RT 140



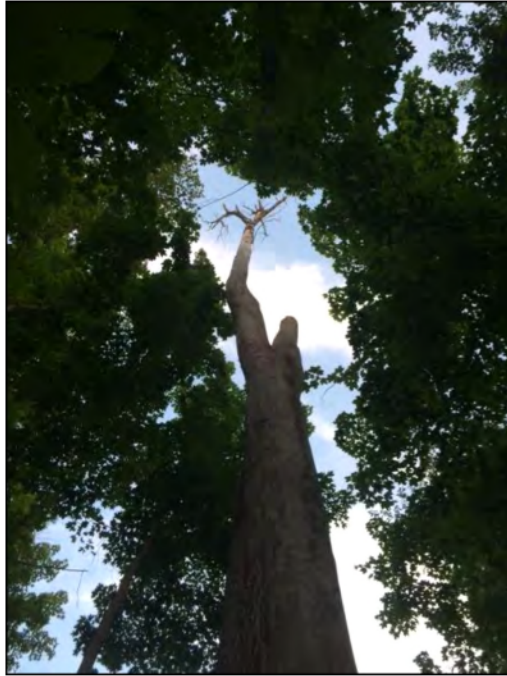
RT 314



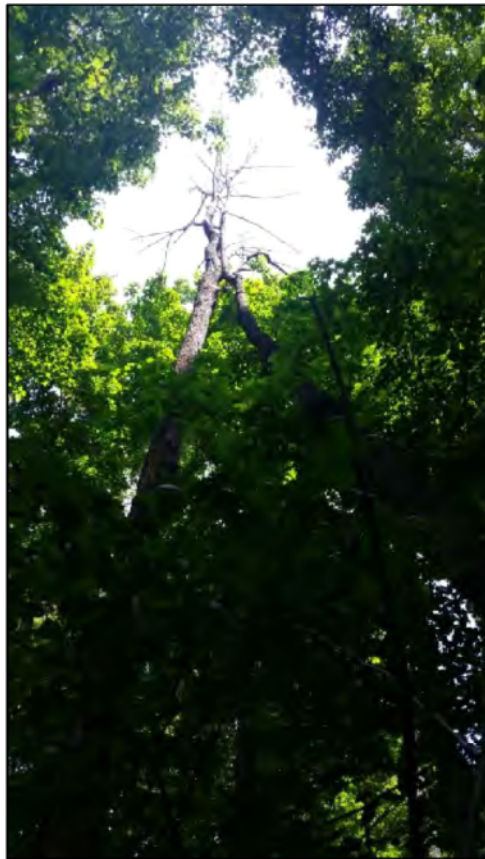
RT 368



RT 369



RT 370



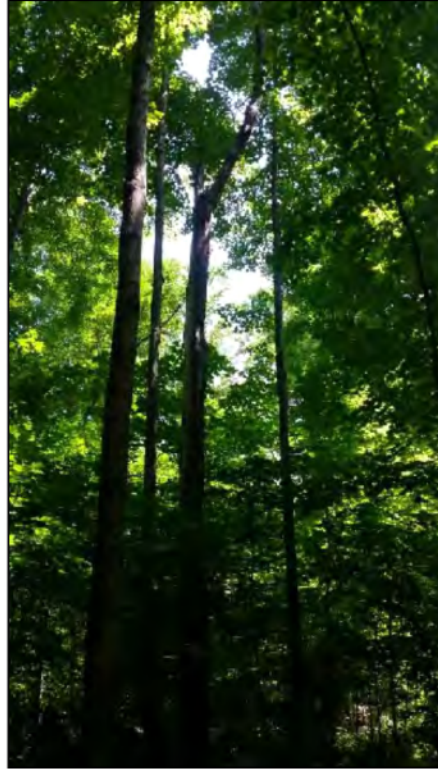
RT 371



RT 372



RT 373



RT 395



RT 396



RT 983



RT 984



RT 985



RT 986



RT 987



RT 988

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/26/2018 3:29:23 PM

in

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

Summary: Application Exhibit R Part 11 of 11 electronically filed by Teresa Orahod on behalf of Dylan F. Borchers