



BAT CAPTURE DATA

Project #: 340.02 Date: 24 July 2011
 Project Name: Tetratich / Nardix Republic
 Biologists: D. Jeffcott, J. Reeves Site name/ID: Site 1b
 State: OH County: Seneca
 GPS Unit #: E6846 Camera #: C4834

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated - see chart)*	% Cloud	Comments
2100	24.0	0	80%	—
2130	22.8	0	50%	—
2200	22.1	0	—	—
2230	22.1	0	—	—
2300	22.1	0	—	—
2330	21.9	0	—	—
0000	21.7	0	100%	—
0030	21.9	0	80%	—
0100	21.8	1-3	100%	—
0130	21.7	0	100%	—
0200	22.2	0	100%	—

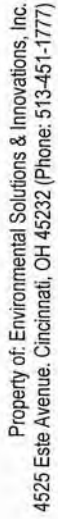
Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
Net	A	41° 12' 27.6" N	82° 57' 7.2" W	12m	9.2m	2015	0205	3727	023
Net	B	41° 12' 26.5" N	82° 57' 7.2" W	12m	9.2m	2025	0200	3728	024
Net	C	41° 12' 25.2" N	82° 57' 10.3" W	6m	6.2m	2035	0150	3730	025
Net	D	41° 12' 27.2" N	82° 57' 10.8" W	6m	6.2m	2045	0145	3731-32	026

Net Placement/Site Description:

Nets are in an old runway, Nets are in a free controlled woodland with peripheral woods after rain

Capt #	Net/ Trap	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
1	C	Myotis sodalis	2120	Ad	F	PL	7.0	37.0	E	0	3788-3799	
2	B	Eptesicus fuscus	2205	Ad	M	↑	16.3	44.5	M	0	N/A	
3	B	E. fuscus	2205	Jv	M	↑	13.4	44.0	M	0	N/A	
4	B	E. fuscus	2215	Ad	M	↑	19.8	45.5	M	0	N/A	
5	A	E. fuscus	2230	Jv	M	↑	14.7	44.0	M	0	N/A	
6	C	E. fuscus	0000	Ad	F	L	24.0	45.5	F	0	w/ transmitter 172.1168	
7	D	Myotis septentrionalis	0000	Ad	M	↑	6.2	35.0	M	0	N/A	
8	B	E. fuscus	2345	Jv	M	↑	13.9	42.5	M	0	N/A	
9	B	Myotis lucifugus	0015	Jv	M	↑	7.1	34	M	0	3820-3827	

¹ Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓ * Refer to table on the back



Project #: 340.02 Date: 24 July 2011

Project #: 340.02 Date: 24 July 2011

Project Name: Tetrahedral Republic Site Name#: Site 110 Initials: DJ, SR

Initials: DJ, SR

[illegible]

Wind Speed (mph)	Description	Visible Condition	Score	Description
0	Calm	Smoke rises vertically	0	No damage. Fewer than 5 small scar spots are present on the membranes.
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes	1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind		
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag		
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved	2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water		
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty		
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind	3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiropatagium are evident.



NET SITE HABITAT DESCRIPTION

Project #: 340.02 Date: 13 July 2011 Biologists: E. B. Siger, S. Reeves
Project Name: Tetradich Republic Site Name/#: Site 20
State: OH County: Seneca USGS Quad: Fire side
Camera #: EBKodak Picture #s: 2983-2986 GPS Unit #: E9528 Waypoint #: 34020
Latitude: 41 ° 11 ' 04.5 "N Longitude: 83 ° 00 ' 26.3 "W
Distance to closest water source (meters): 0m Type of water source: stream
Water source name: unnamed stream

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: 5.2 meters Channel Width: 2.5 meters Stream Width: 0 meters
Substratum: Bedrock Boulder Cobble Gravel ☒ Sand Silt/Clay
Still Water Present (Y/N): N Average Water Depth: 0 m or cm Clarity (H,M,L): N/A

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)	Subdominant Canopy Species (< 40 cm/16" dbh)
<u>Populus deltoides</u>	<u>Prunus serotina</u>
<u>—</u>	<u>Juglans nigra</u>
<u>—</u>	<u>Acer saccharinum</u>

Estimated dbh range: Lg: 60 Sm: 40 Estimated dbh range: Lg: 40 Sm: 10

Relative abundance of dominant vs. subdominant (ratio): 1:75

Estimated canopy closure: ☒ Closed ☐ Moderate ☐ Open
Roost tree potential consists of: ☐ Large Trees ☐ Snags ☒ Both ☐ Neither
Roost tree potential for the area is: ☐ High ☒ Moderate ☐ Low
Roost potential comments: 4-5 snags present

Subcanopy clutter: ☒ Closed ☐ Moderate ☐ Open
Subcanopy comprised largely of: ☐ Lower Branches of Canopy Trees ☒ Saplings ☒ Shrubs

Common Subcanopy Species: Fraxinus americana Pyrus coronaria
Juglans nigra

Habitat Description: Mature woodlot with snags present and stream in corridor

Check all that apply:

<input type="checkbox"/> Mature Upland Forest	<input type="checkbox"/> Recently Logged Forest	<input checked="" type="checkbox"/> Crop/Pasture Land	<input type="checkbox"/> Shrub/scrub Swamp
<input type="checkbox"/> Young Upland Forest	<input type="checkbox"/> Pine Plantation	<input checked="" type="checkbox"/> Stream/River	<input type="checkbox"/> Vernal Pool
<input type="checkbox"/> Mature Lowland Forest	<input checked="" type="checkbox"/> Woodlot/Forest Edge	<input type="checkbox"/> Emergent Wetland	<input type="checkbox"/> Deepwater Lake/Pond
<input type="checkbox"/> Young Lowland Forest	<input checked="" type="checkbox"/> Old Field	<input type="checkbox"/> Forested Swamp	<input type="checkbox"/> Other <u> </u>

Herbaceous Cover: ☐ Sparse ☐ Moderate ☒ Dense



Property of: Environmental Solutions & Innovations, Inc.
781 Neeb Road, Cincinnati, OH 45233 (Phone: 513-451-1777)

NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: OH/Seneca	Site Name/#: Site 20	Initials: SR
SKETCH: NETS A and B			
LEGEND		COMMENTS	
Nets: ● — ●		NOTE: Net B could not be placed over stream as intended due to clustered overhanging canopy and steep sloped bank	
Picture Angle: ###			



Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue, Cincinnati, OH 45232 (Phone: 513.451-1777)

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated - see chart)*	% Cloud Cover (estimated)	Comments
2100	24.2	0	20%	—
2130	20.4	0	25%	—
2200	19.3	0	20%	—
2230	18.1	0	0%	—
2300	17.7	0	0%	—
2330	17.2	0	0%	—
0000	16.8	1-3	0%	—
0030	16.6	1-3	0%	—
0100	16.3	0	0%	—
0130	16.1	0	0%	—
0200	15.8	0	0%	—

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
Net	A	41° 11' 62.2"N	93° 00' 22.4"W	6	6.2	2045	0145	2983	35
Net	B	41° 11' 62.7"N	93° 00' 23.9"W	18	9.2	2050	0150	2986	36
Net	C	41° 11' 64.6"N	93° 00' 20.8"W	6	6.2	2055	0155	2984	37
Net	D	41° 11' 64.3"N	93° 00' 24.9"W	9	9.2	2100	0200	2985	38

Net Placement/Site Description: Not A over dry stream bed. Not B across wide corridor, Nets C & D on ATV trails in woodlot

[illegible]

[†] Reproductive Condition: Female = NR/PG/LPL; Male = ↑/↓



BAT CAPTURE DATA

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated - see chart)*	% Cloud Cover (estimated)	Comments
21:50	22.7	0	0	
22:24	23.4	0	0	
22:52	23.0	8-12	0	
24:09	23.3	8-12	0	
01:04	23.1	8-12	0	
01:45	22.1	8-12	0	

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
NET	A	41° 11' 07.2" N	83° 00' 22.4" W	6	6.2	7045	0145	2983	35
NET	B	41° 11' 02.7" N	83° 00' 23.9" W	18	9.2	7050	0150	2986	36
NET	C	41° 11' 04.6" N	83° 00' 20.8" W	6	6.2	7055	0155	2984	37
NET	D	41° 11' 04.3" N	83° 00' 24.9" W	9	9.2	7100	0200	2985	38

Net Placement/Site Description: Net A across dry stream, Net B across grassy road, Nets C and D across ATV tracks

Capt #	Net/Trap	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
1	B	Eptesicus fuscus	24:32	JV	F	NR	11	45	E	0	—	
2	B	Eptesicus fuscus	21:52	JV	F	NR	9	44	E	0	—	
3	B	Eptesicus fuscus	22:09	JV	F	NR	13.5	48	E	0	—	
4	B	Eptesicus fuscus	22:24	Ad	F	L	18.5	46	M	0	—	
5	B	Eptesicus fuscus	22:24	JV	M	NR	12.5	45	M	0	2990	
6	B	Eptesicus fuscus	22:24	JV	F	NR	12	46	M	0	—	
7	B	Eptesicus fuscus	22:24	JV	M	NR	17.5	43	M	0	—	
8	B	Eptesicus fuscus	23:11	JV	M	NR	13.5	45	M	0	—	
9	B	Lasius cinereus	23:11	JV	F	NR	22.5	52	M	0	2991-2997	

Reproductive Condition: Female = NR PG/LPL; Male = $\uparrow \downarrow$ * Refer to table on the back



BAT CAPTURE DATA (continued)

Project #:	340,02	Date:	16 July 2011									
Project Name:	Tetrahedral Republic											
Site Name/ID:	Site 20											
Initials:	ELB											
Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. 2	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
10	B	Eptesicus fuscus	23:36	Jv	M	NR	12.5	45	M	0	—	
11	B	Eptesicus fuscus	23:36	Jv	M	NR	13.0	42	M	1	—	
12	B	Eptesicus fuscus	23:36	Jv	M	NR	11.0	46	E	0	—	
13	B	Eptesicus fuscus	23:36	Jv	M	NR	14.0	45	M	0	—	
14	C	Eptesicus fuscus	23:36	Ad	M	✓	18	46	F	0	—	

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle, ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees; generally impedes progress

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptagium are evident.



NET SITE HABITAT DESCRIPTION

Project #: 340.01 Date: 14 Jul 2011

Biologists: J. Basiger & M. Flynn

Project Name: Republic

Site Name/#: 21

State: OH County: Seneca

USGS Quad: Watson

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
net	A	41° 10' 42.9"N	83° 0' 13.9"W	814	21A
net	B	41° 10' 42.1"N	83° 0' 15.0"W	813	21B
net	C	41° 10' 44.3"N	83° 0' 16.6"W	815	21C
net	D	41° 10' 45.3"N	83° 0' 17.7"W	818	21D

Distance to closest water source (meters): 0

Type of water source: Stream

Water source name: unknown

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: 1 meters Channel Width: 6 meters Stream Width: 2 meters

Substratum: Bedrock Boulder Cobble Gravel Sand Silt/Clay

Still Water Present (Y/N): Y Average Water Depth: 0.5 m or cm Clarity (H/M/L): M

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)

Acer neugundo
Acer rubrum
Acer saccharum

Subdominant Canopy Species (< 40 cm/16" dbh)

Acer neugundo
Acer rubrum
Acer saccharum

Estimated dbh range: Lg: 70 Sm: 40

Estimated dbh range: Lg: 39 Sm: 5

Relative abundance of dominant vs. subdominant (ratio): 1:100

Estimated canopy closure: Closed Moderate Open

Roost tree potential consists of: Large Trees Snags Neither

Roost tree potential for the area is: High Moderate Low

Roost potential comments: most large trees have tight bark, no snags

Subcanopy clutter: Closed Moderate Open

Subcanopy comprised largely of: Lower Branches of Canopy Trees Saplings Shrubs

Common Subcanopy Species: Acer rubrum
Acer saccharum

Habitat Description: large woodlot containing sm. stream surrounded by open croplands

AnaBat Habitat:

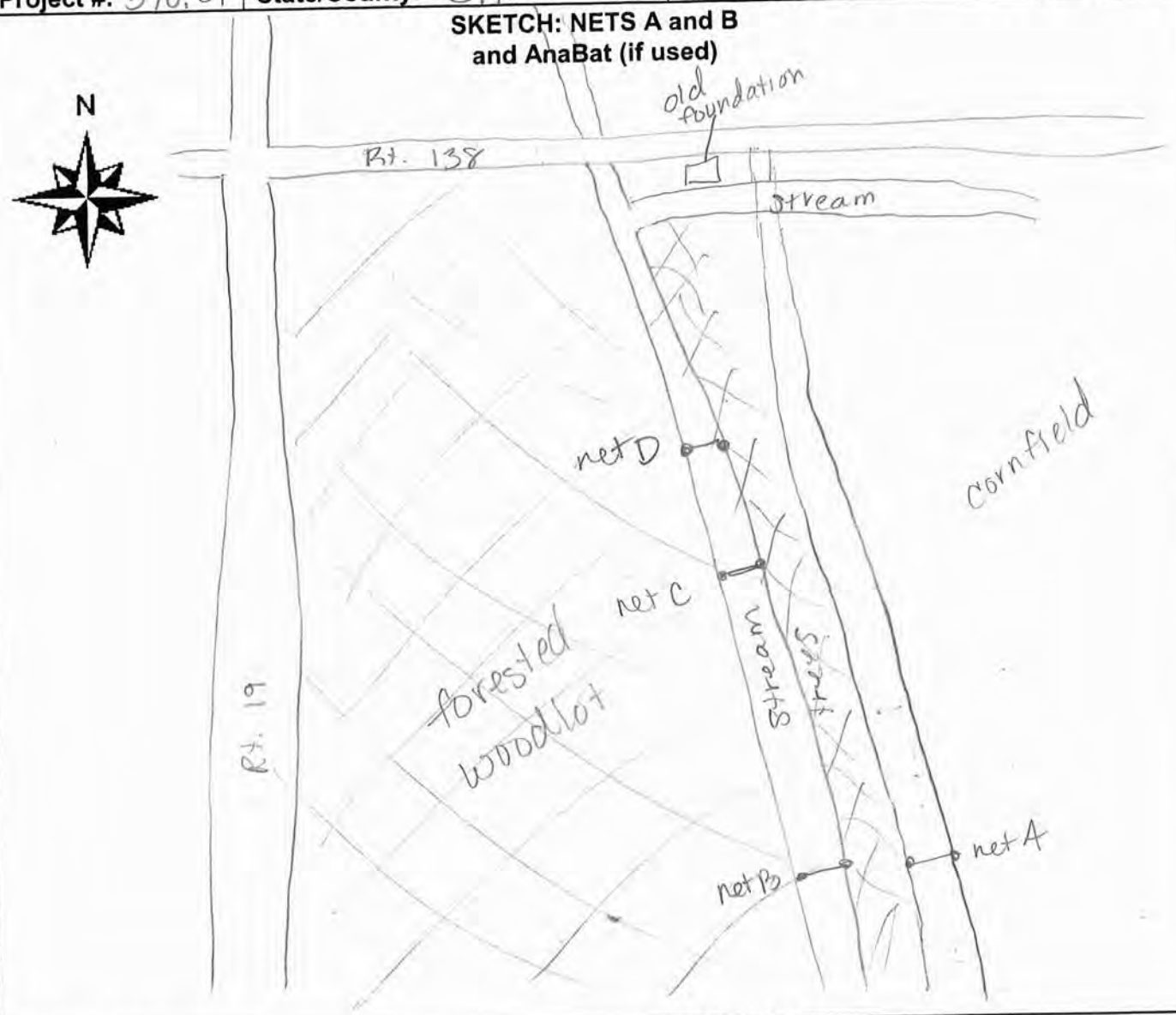
Check all that apply:

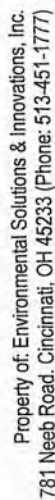
Mature Upland Forest Recently Logged Forest Crop/Pasture Land Other
Young Upland Forest Forest Edge Stream/River
Mature Lowland Forest Woodlot Vernal Pool
Young Lowland Forest Old Field Deepwater Lake/Pond

Herbaceous Cover: Sparse Moderate Dense



NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.01	State/County: OH	Site Name/#: 21	Initials: MF
<p>SKETCH: NETS A and B and AnaBat (if used)</p>  <p>Legend: Nets: ● — ●</p> <p>Comments:</p> <hr/> <hr/> <hr/> <hr/> <hr/>			



WEATHER DATA

MOON PHASE*

First quarter _____
Waning gibbous _____

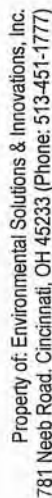
_____ Waning crescent

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
1	A	<i>Eptesicus fuscus</i>	2150	Ad	F	L	19.25	44	M	0		
2	C	<i>Pipilo lucifugus</i>	2215	Ad	M	↑	17	38	M	0		
3	C	<i>Myotis septentrionalis</i>	2215	Ad	F	L	5.3	32	M	0		
4	D	<i>E. fuscus</i>	2225	Ad	M	↑	15	45	M	0		
5	D	<i>E. fuscus</i>	2240	Ad	M	↑	12.5	43	E	0		Net escape
6	D	<i>E. fuscus</i>	2245									Net escape
7	D	<i>E. fuscus</i>	2250									Net escape
8	A	<i>E. fuscus</i>	2300	Ad	M	↑	17	14	F	0		
9	A	<i>E. fuscus</i>	2305	Jv	F	NR	12.25	46	M	0		
10	A	<i>Lasius cinereus</i>	2300	Jv	F	NR	19.75	53	M	0		

I M = Monofilament ON = Old Nylon. NN = New Nylon. HT = Harp Trap; A = Anabat

* Refer to table on the back



Project #:

Date: 12 July 11

Project Name:

Site Name/#:

12

Initials:

[illegible]

Beaufort Wind Scale

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-45	Fresh Gale	Breaks twigs off trees; generally impedes progress

2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
Mar 15	Apr 21	Apr 28	May 5
Apr 14	May 20	May 27	Jun 4
May 13	Jun 18	Jun 26	Jul 4
Jun 12	Jul 18	Jul 25	Aug 2
Jul 11	Aug 16	Aug 24	Sep 1
Aug 9	Sep 15	Sep 23	Sep 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptacatium are evident.



BAT CAPTURE DATA

Project #: 346.01 Date: 14 Jul 2011
 Project Name: Republic
 State: OH County: Seneca
 Biologists: J. Basiger + M. Flynn
 Site name#: 21
 GPS Unit #: ESI Camera #: can 671

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☒ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2100	20.9	—	—	50%	
2130	19.6	—	—	40%	
2200	18.8	—	—	40%	
2230	18.6	—	—	40%	
2300	17.8	—	—	40%	
2330	18.0	—	—	90%	
0000	18.6	—	—	80%	
0030	16.9	—	—	80%	
0100	16.4	—	—		
0130	16.0	—	—		
0200	15.7	—	—		

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	net	41° 10' 42.9" N	83° 0' 13.9" W	18	9	2035	200	814
B	net	41° 10' 42.1" N	83° 0' 15.0" W	6	6	2040	205	813
C	net	41° 10' 44.3" N	83° 0' 16.6" W	6	6	2045	210	815
D	net	41° 10' 45.3" N	83° 0' 17.7" W	6	6	2050	215	818

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
1	C	<i>Lasiorus borealis</i>	2130	Ad	F	L	12.5	45	M	0	820	
2	D	<i>Eptesicus fuscus</i>	2230	Jv	M	✓	17.75	46	M	0		
3	D	<i>E. fuscus</i>	2300	Ad	F	PL	17	47	M	0		
4	D	<i>E. fuscus</i>	0000	Ad	F	PL	18.25	47	M	0		existing injury (R) wing fx
5	D	<i>E. fuscus</i>	0000	Ad	F	PL	20.75	47	F	0		

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓



NET SITE HABITAT DESCRIPTION

Project #: 340.02 Date: 14 July 2011 Biologists: E Basiger, S Reeves
Project Name: Tetratich Republic Site Name/#: Site 22
State: OH County: Seneca USGS Quad: Fireside
Camera #: E0Kodak Picture #s: 2968 - 2972 GPS Unit #: E9528 Waypoint #: 34022
Latitude: 41° 11' 18.3" N Longitude: 82° 59' 16.7" W
Distance to closest water source (meters): 450 m Type of water source: pond
Water source name: private pond (to East)

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: N/A meters Channel Width: N/A meters Stream Width: N/A meters
Substratum: N/A Bedrock Boulder Cobble Gravel Sand Silt/Clay
Still Water Present (Y/N): N/A Average Water Depth: N/A m or cm Clarity (H,M,L): N/A

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh) Subdominant Canopy Species (< 40 cm/16" dbh)
Acer rubrum, Acer saccharum Quercus palustris, Tilia americana
Quercus palustris, Quercus alba Fraxinus pennsylvanica
Tilia americana, Fagus grandifolia Ulmus rubra, Acer saccharum
Estimated dbh range: Lg: 80cm Sm: 40cm Estimated dbh range: Lg: 39cm Sm: 15cm
Relative abundance of dominant vs. subdominant (ratio): 1:30

Estimated canopy closure: ☒ Closed ☐ Moderate ☐ Open
Roost tree potential consists of: ☐ Large Trees ☐ Snags ☒ Both ☐ Neither
Roost tree potential for the area is: ☐ High ☒ Moderate ☐ Low

Roost potential comments: a few snags though cluttered by canopy

Subcanopy clutter: ☐ Closed ☒ Moderate ☐ Open
Subcanopy comprised largely of: ☒ Lower Branches of Canopy Trees ☐ Saplings ☐ Shrubs

Common Subcanopy Species: Quercus palustris Acer rubrum
Sassafras albidum

Habitat Description: Mature mesic woodlot adjacent to cornfields
with 9m corridor connecting fields

Check all that apply:

☐ Mature Upland Forest ☐ Recently Logged Forest ☒ Crop/Pasture Land ☐ Shrub/scrub Swamp
☐ Young Upland Forest ☐ Pine Plantation ☐ Stream/River ☐ Vernal Pool
☐ Mature Lowland Forest ☒ Woodlot/Forest Edge ☐ Emergent Wetland ☐ Deepwater Lake/Pond
☐ Young Lowland Forest ☒ Old Field ☐ Forested Swamp ☐ Other
Herbaceous Cover: ☐ Sparse ☒ Moderate ☐ Dense



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NET SITE HABITAT DESCRIPTION (continued)

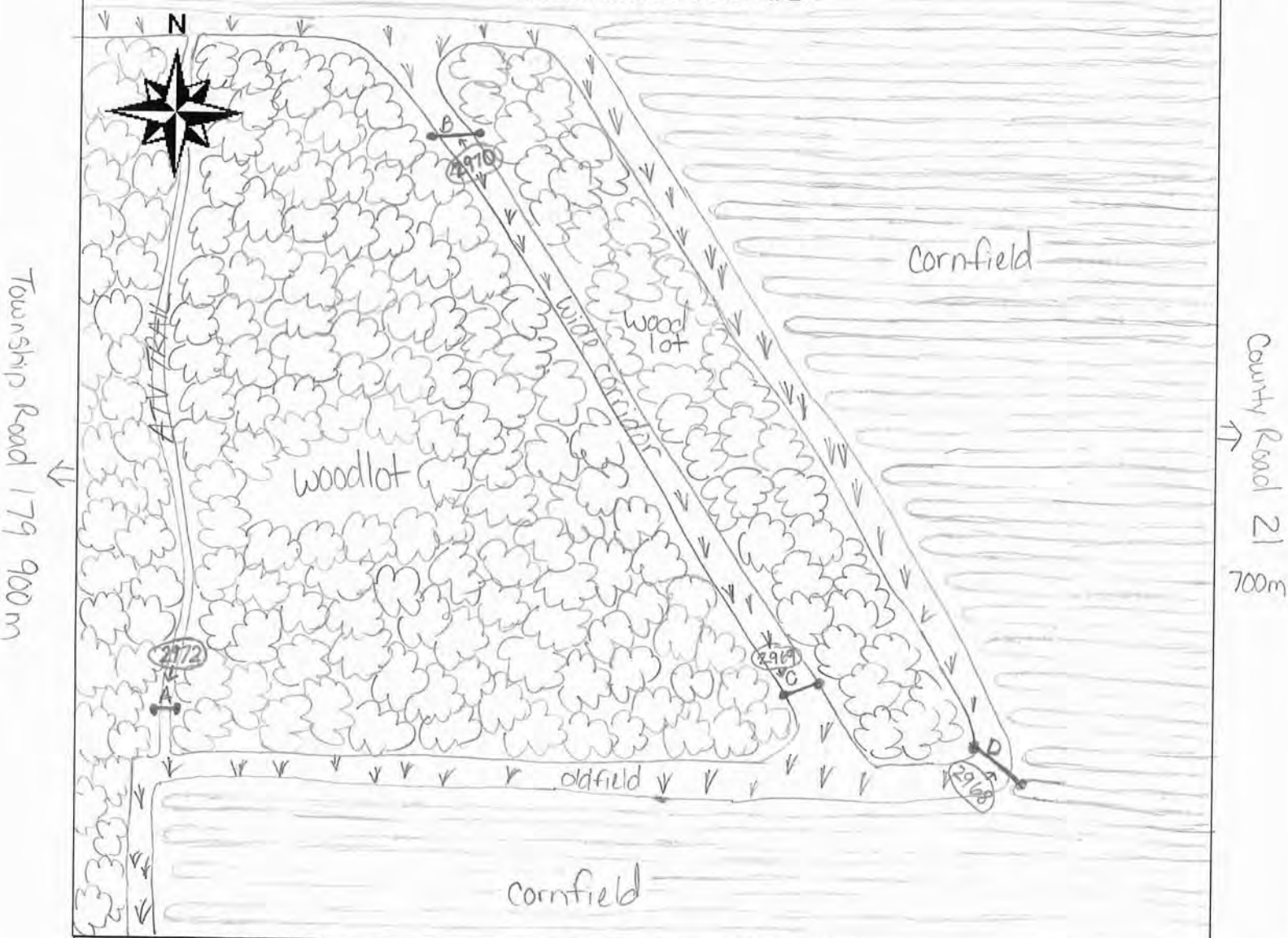
Project #: 340.02

State/County: OH/Seneca

Site Name/ #: Site 22

Initials: SR

SKETCH: NETS A and B



LEGEND

COMMENTS

Nets: ● — ●

Photo Angle: ###

N/A



BAT CAPTURE DATA

Project #: 340.02 Date: 12 July 2011
 Project Name: Tetratedh Republic
 Biologists: E. Basinger, S. Reeves Site name#: Site 22
 State: Ohio County: Seneca
 GPS Unit #: E9528 Camera #: EBKodak

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated - see chart)*	% Cloud Cover (estimated)	Comments
2100	26.1	0	40%	—
2130	24.3	0	40%	—
2200	23.0	1-3	50%	—
2230	21.0	1-3	30%	—
2300	20.5	1-3	60%	—
2330	19.9	0	80%	hazy sky
0000	20.7	0	60%	hazy fog
0030	20.9	0	80%	—
0100	21.3	1-3	50%	—
0130	21.1	1-3	50%	—
0200	20.2	4-7	50%	—
0230	20.2	1-3	50%	—

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
Net A	A	41° 11' 27.4" N	82° 59' 08.7" W	6	6.2	2045	0145	2972	034
Net B	B	41° 11' 36.5" N	82° 59' 07.9" W	9	6.2	2050	0150	2970	033
Net C	C	41° 11' 27.8" N	82° 59' 05.6" W	9	9.0	2055	0155	2969	032
Net D	D	41° 11' 27.1" N	82° 59' 04.3" W	18	9.2	2100	0200	2968	031

Net Placement/Site Description: Nets A, B, C in Woodlot corridors, Net D adjacent Woodlot over cornfield

Capt #	Net/Trap	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # Guano/Hair Sample	Comments
1	C	<i>Eptesicus fuscus</i>	2120	Ad	F	PL	17.5	45	E	0	2949	
2	C	<i>E. fuscus</i>	2150	Ad	M	V	16.0	46	E	0	N/A	
3	C	<i>E. fuscus</i>	2150	Ad	F	PL	18.5	46	M	0	N/A	
4	D	<i>E. fuscus</i>	2200	Ad	F	PL	19.5	45	M	0	N/A	
5	C	<i>Lasius borealis</i>	2210	Jv	F	NR	8.0	36	E	0	2953	
6	C	<i>E. fuscus</i>	2210	Ad	M	↑	18.5	48	M	0	N/A	
7	C	<i>E. fuscus</i>	2210	Ad	F	PL	17.25	47	M	1	Some spotting present	
8	B	<i>E. fuscus</i>	2230	Ad	M	↑	16.3	47	M	0	N/A	
9	B	<i>E. fuscus</i>	2230	Ad	M	↑	14.8	45	E	0	N/A	

¹ Reproductive Condition: Female = NR PG L/PL; Male = ↑ ↓ * Refer to table on the back



BAT CAPTURE DATA (continued)

Project #: 340

Date: 12 July 2012

Project Name: Tetratich Republic

Site Name/ID: Site 22

Initials: EB, SR

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. 2	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # (Guano/Hair Sample)	Comments
10	B	Eptesicus fuscus	2230	Ad	F	PL	20.0	49	M	0	N/A	
11	C	E. fuscus	2230	Jv	M	NR	13.1	44	M	0	N/A	
12	C	E. fuscus	2235	Ad	M	↑	18.8	46	M	0	N/A	
13	C	E. fuscus	2235	Ad	M	↑	17.2	48	M	0	N/A	
14	D	E. fuscus	2250	Ad	M	↓	20.0	48	F	0	N/A	
15	D	E. fuscus	2250	Ad	M	↓	17.1	46	M	0	N/A	
16	B	E. fuscus	2310	Ad	F	PL	21.0	46	M	1	N/A	left wing scar
17	C	Myotis septentrionalis	2315	Ad	M	↑	6.1	34	M	0	2957	
18	A	M. septentrionalis	2330	Ad	F	PL	6.5	36	M	0	2962	
19	A	M. septentrionalis	2330	Ad	F	PL	7.1	36	M	0	N/A	
20	C	E. fuscus	2340	Ad	F	PL	21.2	46	F	0	N/A	
21	B	E. fuscus	0050	Ad	F	NR	18.5	46	M	0	N/A	
22	B	E. fuscus	0050	Ad	F	PL	20.2	46	F	0	N/A	
23	A	M. septentrionalis	0110	Ad	F	PL	6.6	35	M	0	N/A	

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face, leaves rustle, ordinary wind vane moved by wind
8-12	Genie Breeze	Wind felt on face, leaves rustle, ordinary wind vane moved by wind
13-18	Moderate Breeze	Leaves and small twigs in constant motion, wind extends light flag
19-24	Fresh Breeze	Raises dust and loose paper, small branches are moved
25-31	Strong Breeze	Small trees in leaf begin to sway, crested wavelets on inland water
32-38	Moderate Gale	Large branches in motion, telephone wires whistle, umbrellas used with difficulty
39-46	Fresh Gale	Whole trees in motion, inconvenience in walking against wind
		Breaks twigs off trees, generally impedes progress

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptagium are evident.



BAT CAPTURE DATA

Project #: 340 Date: 14 July 2011
 Project Name: Tetatach Republic
 Biologists: E. Pasinger, S. Reeves Site name#: Site 22
 State: Ohio County: Seneca
 GPS Unit #: E9528 Camera #: EB Kodak

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated - see chart)*	% Cloud Cover (estimated)	Comments
2100	19.1	1-3	10%	
2130	18.0	1-3	20%	
2200	14.2	0	10%	
2230	15.5	0	15%	
2300	14.3	0	15%	
2330	14.0	0	15%	
0000	14.9	0	40%	
0030	15.5	0	55%	
0100	13.9	0	50%	
0130	14.5	0	50%	
0200	14.8	0	40%	

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
Net	A	41° 11' 27.4" N	82° 59' 08.7" W	6	16.2	2045	0145	2972	034
Net	B	41° 11' 30.5" N	82° 59' 07.9" W	9	16.2	2050	0150	2970	033
Net	C	41° 11' 27.8" N	82° 59' 05.6" W	9	9.0	2055	0155	2969	032
Net	D	41° 11' 27.1" N	82° 59' 04.3" W	18	9.2	2100	0200	2968	031

Net Placement/Site Description: Net in mangrove woodlot corridor, NWS Key in wide open mangrove corridor, Net D into field

Capt #	Net/Trap	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. 2	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
1	C	<i>Eptesicus fuscus</i>	2120	Ad	F	PL	18.8	47	E	0	N/A	
2	A	<i>Myotis septentrionalis</i>	2140	Ad	F	PL	16.3	34	E	1	near in left wing	
3	D	<i>E. fuscus</i>	2140	Ad	M	↓	14.6	47	E	0	N/A	
4	D	<i>E. fuscus</i>	2145	Ad	F	PL	17.6	45	M	0	N/A	
5	C	<i>E. fuscus</i>	2155	Ad	F	PL	17.0	46	M	0	N/A	
6	B	<i>E. fuscus</i>	2200	Ad	F	PL	16.8	46	M	0	N/A	
7	C	<i>E. fuscus</i>	2200	Ad	F	↓					recapture	
8	B	<i>E. fuscus</i>	2200	Ad	M	↓	17.0		M		N/A	
9	B	<i>E. fuscus</i>	2200								Escaped Bag	

1 Reproductive Condition: Female = NR PG/L/PL; Male = ↑ ↓ * Refer to table on the back



BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 14 July 2011

Project Name: Tetratich		Site Name#: Site 22		Initials: E.A. SR								
Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
10	C	Eptesicus fuscus	2220	Ad	F	L	15.5	46	M	0	N/A	
11	C	E. fuscus	2220	Ad	F	L	17.9	45	F	1	healed scar-tissue	
12	D	E. fuscus	2230	Ad	F	—	—	—	—	—	recapture	
13	C	Myotis septentrionalis	2240	Jv	F	NR	6.0	36	M	0	N/A	
14	B	Lasiorus borealis	2250	Ad	F	PL	13.0	44	E	0	N/A	
15	B	E. fuscus	2250	Ad	F	PL	18.7	48	M	0	N/A	
16	B	M. septentrionalis	2256	Jv	F	NR	5.8	35	M	0	N/A	
17	B	E. fuscus	2250	Ad	F	PL	17.8	36	M	0	N/A	
18	C	E. fuscus	2310	Ad	M	↓	17.2	46	M	0	N/A	
19	C	E. fuscus	2310	Ad	M	↓	16.4	47	M	0	N/A	
20	C	Lasiorus borealis	2340	Jv	F	NR	9.5	42	M	0	N/A	
21	C	L. borealis	2350	Ad	F	PL	13.9	41	M	0	N/A	

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face, leaves rustle, ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion, wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper, small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway, crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion, telephone wires whistle, umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion, inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees, generally impedes progress

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiropatagium are evident.



NET SITE HABITAT DESCRIPTION

Project #: 340.01 Date: 16 July 01 Biologists: J. Basiger - M. Flynn
Project Name: Republic Site Name/#: 23
State: OH County: Seneca USGS Quad: Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
<u>net</u>	<u>A</u>	<u>41° 10' 26.2" N</u>	<u>82° 57' 48.4" W</u>	<u>846</u>	<u>23A</u>
<u>net</u>	<u>B</u>	<u>41° 10' 27.5" N</u>	<u>82° 57' 52.5" W</u>	<u>839</u>	<u>23B</u>
<u>net</u>	<u>C</u>	<u>41° 10' 29.2" N</u>	<u>82° 57' 52.4" W</u>	<u>838</u>	<u>23C</u>
<u>net</u>	<u>D</u>	<u>41° 10' 30.7" N</u>	<u>82° 57' 53.8" W</u>	<u>837</u>	<u>23D</u>

Distance to closest water source (meters): 10m Type of water source: stream
Water source name: unknown

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: _____ meters Channel Width: _____ meters Stream Width: _____ meters
Substratum: _____ Bedrock _____ Boulder _____ Cobble _____ Gravel _____ Sand _____ Silt/Clay
Still Water Present (Y/N): _____ Average Water Depth: _____ m or cm Clarity (H,M,L): _____

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh) Subdominant Canopy Species (< 40 cm/16" dbh)
Acer saccharum Acer saccharum
Carya ovata Pinus strobus
Quercus alba Acer rubrum

Estimated dbh range: Lg: 120 Sm: 40 Estimated dbh range: Lg: 39 Sm: 7

Relative abundance of dominant vs. subdominant (ratio): 1:75

Estimated canopy closure: ☒ Closed ☐ Moderate ☐ Open
Roost tree potential consists of: ☒ Large Trees ☒ Snags ☐ Neither
Roost tree potential for the area is: ☐ High ☐ Moderate ☒ Low

Roost potential comments: snags have light bark, most large trees have light bark

Subcanopy clutter: ☒ Closed ☐ Moderate ☐ Open
Subcanopy comprised largely of: ☒ Lower Branches of Canopy Trees ☒ Saplings ☐ Shrubs

Common Subcanopy Species: Acer saccharum
Acer rubrum

Habitat Description: large woodlot surrounded by agriculture
AnaBat Habitat: N/A

Check all that apply:

☐ Mature Upland Forest ☐ Recently Logged Forest ☒ Crop/Pasture Land ☐ Other _____
☐ Young Upland Forest ☒ Forest Edge ☒ Stream/River _____
☐ Mature Lowland Forest ☒ Woodlot ☐ Vernal Pool _____
☒ Young Lowland Forest ☐ Old Field ☐ Deepwater Lake/Pond _____

Herbaceous Cover: ☐ Sparse ☐ Moderate ☒ Dense



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NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.01	State/County: OH/Seneca	Site Name/#: 23	Initials: MF
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SKETCH: NETS A and B and AnaBat (if used)	
<p>The sketch map depicts a study area with a large 'woodlot' in the upper left. A 'stream' flows from the bottom left towards the center. To the right of the stream is a 'field'. A 'trucker ditch' runs vertically through the field. 'net A' is located on the eastern edge of the field, near the stream. 'net B' is located in the woodlot, near a 'barn' (represented by a square). 'net C' is located in the woodlot, to the west of net B. An 'access rd' is shown running vertically through the field. The map is bounded by 'R+ 38' at the bottom and 'Rd 183' on the right. A north arrow is in the top left corner.</p>	
LEGEND	COMMENTS
Nets: ● — ●	



BAT CAPTURE DATA

Project #: 340.01 Date: 13 July 11
 Project Name: Republic
 State: OH County: _____
 Biologists: J. Basger M. Flynn
 Site name#: 23
 GPS Unit #: 881465671 Camera #: can 671

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2100	20.9	—	—	0	
2130	20.1	—	—	0	
2200	18.7	—	—	10%	
2230	18.2	—	—	10%	
2300	17.8	—	—	10%	
2330	17.7	—	—	10%	
0000	16.9	—	—	0	
0030	16.0	—	—	0	
0100	16.1	—	—	0	
0130	15.9	—	—	0	
0200	15.6	—	—	0	

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	N	41° 10' 26.2" N	82° 57' 49.4" W	18	9	2100	0200	840
B	N	41° 10' 27.5" N	82° 57' 50.5" W	6	6	2055	0155	839
C	N	41° 10' 29.2" N	82° 57' 52.4" W	9	6	2050	0155	838
D	N	41° 10' 30.7" N	82° 57' 53.9" W	6	6	2045	0150	837

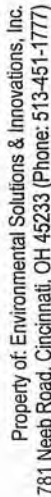
Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
1	A	<i>E. fuscus</i>	2200	Ad	F	L	19	48	M	0		
2	B	<i>Myotis septentrionalis</i>	2205	Ad	F	L	6.25	34	F	0		
3	D	<i>M. septentrionalis</i>	2240	Ad	M	↑	6.5	33	M	0		807, 809, 812
4	D	<i>E. fuscus</i>	2240	Ad	M	↑	16.5	44	M	0		
5	D	<i>E. fuscus</i>	2240	Ad	M	↓	16.5	47	M	0		
6	D	<i>E. fuscus</i>	2310	Ad	M	↑	18.75	44	F	0		
7	D	<i>E. fuscus</i>	2310	Ad	M	↑	15.25	45	M	0		

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓



WEATHER DATA

MOON PHASE*

First quarter
Waning gibbous

Net Placement/Site Description:

! M = Monofilament ON = Old Nylon NN = New Nylon HT = Harp Trap: A = Anabat

* Refer to table on the back



NET SITE HABITAT DESCRIPTION

Project #: 340.02 Date: 15 July 2011 Biologists: F. Basinger, S. Reaves
Project Name: Tetratech Republic Site Name/ #: Site 24
State: OH County: Seneca USGS Quad: Fireside
Camera #: FBKodak Picture #s: 3018-3623 GPS Unit #: E9528 Waypoint #: 34028
Latitude: 41° 09' 56.5" N Longitude: 82° 56' 51.9" W
Distance to closest water source (meters): 400m Type of water source: ditch
Water source name: unnamed ditch / ephemeral stream

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: N/A meters Channel Width: N/A meters Stream Width: N/A meters
Substratum: N/A Bedrock Boulder Cobble Gravel Sand Silt/Clay
Still Water Present (Y/N): N/A Average Water Depth: N/A m or cm Clarity (H,M,L): N/A

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh) Subdominant Canopy Species (< 40 cm/16" dbh)
Quercus palustris Carya amara
Quercus alba Acer rubrum
Fraxinus pennsylvanica Acer saccharum

Estimated dbh range: Lg: 90cm Sm: 40cm Estimated dbh range: Lg: 30cm Sm: 25cm

Relative abundance of dominant vs. subdominant (ratio): 1:10

Estimated canopy closure: Closed Moderate Open
Roost tree potential consists of: Large Trees Snags Both Neither
Roost tree potential for the area is: High Moderate Low

Roost potential comments: birds very small

Subcanopy clutter: Closed Moderate Open
Subcanopy comprised largely of: Lower Branches of Canopy Trees Saplings Shrubs

Common Subcanopy Species: Carpinus caroliniana
Croton sp.

Habitat Description: Mature mesic woodlot with few shrubs and open subcanopy near agricultural fields

Check all that apply:

 Mature Upland Forest Recently Logged Forest Crop/Pasture Land Shrub/scrub Swamp
 Young Upland Forest Pine Plantation Stream/River Vernal Pool
 Mature Lowland Forest Woodlot/Forest Edge Emergent Wetland Deepwater Lake/Pond
 Young Lowland Forest Old Field Forested Swamp Other
Herbaceous Cover: Sparse Moderate Dense



Property of: Environmental Solutions & Innovations, Inc.
781 Neeb Road, Cincinnati, OH 45233 (Phone: 513-451-1777)

NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: OH/Seneca	Site Name/#: Site 24	Initials: SR
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SKETCH: NETS A and B	
LEGEND	COMMENTS
Nets: ● — ●	N/A
Photo Angle: ##### ↓	



BAT CAPTURE DATA

Project #: 340-02 Date: 15 July 2011
 Project Name: Tetratich Republic
 Biologists: E. Casper, S. Reeves Site name/ID: Site 24
 State: Ohio County: Seneca
 GPS Unit #: E9528 Camera #: EB Kodak

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated - see chart)*	% Cloud Cover (estimated)	Comments
2100	24.5	1-3	0%	—
2130	22.9	1-3	0%	—
2200	22.4	1-3	0%	—
2230	21.6	0	0%	—
2300	21.4	0	0%	—
2330	21.4	0	0%	—
0000	21.2	0	0%	—
0030	20.9	0	0%	—
0100	21.0	0	0%	—
0130	20.8	0	0%	—
0200	20.6	0	0%	—

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
Net	A	41° 10' 6.8" N	82° 56' 50.4" W	6	6.2	2045	0145	3018	039
Net	B	41° 10' 4.6" N	82° 56' 49.8" W	6	6.2	2050	0150	3020	040
Net	C	41° 10' 4.1" N	82° 56' 47.6" W	9	9.2	2055	0155	3022	041
Net	D	41° 10' 1.9" N	82° 56' 48.8" W	18	9.2	2100	0200	3023	042

Net Placement/Site Description: Nets A, B, & C over ATV trail in woodlot, Net D out into soyfield

Capt #	Net/Trap	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. 2	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
1	B	Myotis septentrionalis	2145	Ad	M	↑	6.0	36	E	0	2973 - 2978	
2	C	Eptesicus fuscus	2200	Ad	F	PL	18.2	46	E	0	N/A	
3	C	E. fuscus	2206	Ad	F	PL	19.0	49	F	1	2980-2981, few spots	
4	D	E. fuscus	2210	Jv	M	↑	9.9	40	M	0	N/A	
5	D	E. fuscus	2210	Jv	M	↑	11.9	45	M	1	Spotting	
6	D	E. fuscus	2210	Jv	M	↑	11.2	43	M	0	N/A	
7	D	E. fuscus	2210	Ad	F	PL	18.0	48	M	0	2982	
8	D	E. fuscus	2210	Ad	M	↓	17.3	43	M	0	N/A	
9	C	M. septentrionalis	2250	Ad	F	PL	17.0	36	M	0	N/A	

* Reproductive Condition: Female = NR PG L PL; Male = ↑ ↓ * Refer to table on the back



BAT CAPTURE DATA (continued)

Project #: 340-02

Date: 15 July 2011

Project Name: Tetratich Republic

Site Name: Site 24

Initials: EB, SR

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
10	D	Eptesicus fuscus	2250	Ad	F	PL	—	—	F	—	Escaped hand	
11	D	E. fuscus	2250	Jv	F	NR	13.8	45	M	1	Spotting	
12	D	E. fuscus	2255	Jv	F	NR	11.0	44	M	1	Spotting	
13	B	Myotis septentrionalis	2300	Ad	F	PL	7.1	30	M	0	N/A	
14	B	E. fuscus	2300	Ad	F	PL	23.2	45	F	0	N/A	
15	C	E. fuscus	2325	Ad	M	↑	17.2	44	M	0	N/A	
16	C	E. fuscus	2325	Ad	F	PL	20.2	45	F	0	one pin hole	
17	D	E. fuscus	2330	Jv	F	NR	14.9	46	M	1	parasites on wings	
18	C	E. fuscus	2335	Ad	F	L	22.0	47	F	1	wing scar on rear	
19	C	E. fuscus	0000	Ad	M	↑	16.0	45	F	0	N/A	
20	C	E. fuscus	0000	Ad	F	PL	19.5	47	M	1	Spotting	
21	C	E. fuscus	0005	Jv	M	↑	14.5	46	M	0	parasites on wings	
22	D	E. fuscus	0035	Ad	F	PL	24.1	49	F	0	N/A	
23	D	E. fuscus	0035	Ad	F	PL	20.3	48	M	0	mites on wings	
24	D	E. fuscus	0035	Jv	F	NR	14.9	49	M	0	N/A	
25	C	E. fuscus	0110	Ad	F	PL	19.3	49	M	0	N/A	
26	C	E. fuscus	0110	Ad	F	PL	24.2	46	F	0	Escaped Net	
27	C	E. fuscus	0155	Ad	F	PL	24.2	46	F	0	N/A	

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind left on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees; generally impedes progress

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptagium are evident.



BAT CAPTURE DATA

Project #: 340.02 Date: 18 July 2011
 Project Name: Tetrotech Republic
 Biologists: EB, S, Captain Site name#: Site 24
 State: Ohio County: Seneca
 GPS Unit #: E9528 Camera #: EB Kodak

1727810001
 1727810002

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated - see chart)*	% Cloud Cover (estimated)	Comments
2100	24.5	1-3	0%	---
2130	23.7	4-7	0%	---
2200	23.7	4-7	10%	---
2230	23.8	4-7	20%	---
2300	24.0	4-7	60%	---
2330	24.2	8-10	100%	---
0000	24.4	4-7	100%	---
0030	24.6	8-10	100%	---
0100	24.9	8-10	75%	---
0130	24.8	4-7	75%	---
0200	24.8	4-7	50%	---

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
Net	A	41° 10' 10.8" N	82° 56' 50.4" W	6	6.2	2045	0145	3018	039
Net	B	41° 10' 4.6" N	82° 56' 49.8" W	6	6.2	2050	0150	3020	040
Net	C	41° 10' 4.1" N	82° 56' 47.6" W	9	9.2	2055	0155	3022	041
Net	D	41° 10' 1.9" N	82° 56' 48.8" W	18	9.2	2100	0200	3023	042

Net Placement/Site Description: Nets A, B, & C across ATV trail in woodlot, Net D out in soyfield from woodlot

Capt #	Net/Trap	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. 2	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # Guano/Hair Sample	Comments
1	B	<i>Myotis septentrionalis</i>	2140	Ad	F	PL	6.2	35	M	0	N/A	
2	B	<i>M. septentrionalis</i>	2140	Jv	M	↑	6.2	35	M	0	N/A	
3	C	<i>Eptesicus fuscus</i>	2150	Jv	F	NR	15.8	48	M	1	few spots	172.780
4	A	<i>E. fuscus</i>	2220	Ad	F	PL	17.4	47	F	0	N/A	
5	C	<i>E. fuscus</i>	2225	Ad	M	↓	---	---	---	---	Recapture	
6	C	<i>E. fuscus</i>	2225	Ad	F	PL	16.3	45	M	0	N/A	
7	C	<i>E. fuscus</i>	2225	Jv	M	↑	15.8	46	M	0	N/A	
8	D	<i>E. fuscus</i>	2234	Jv	M	↑	14.5	46	M	0	N/A	
9	D	<i>E. fuscus</i>	2237	Ad	F	PL	19.7	47	F	0	N/A	

* Reproductive Condition: Female = NR PG L PL, Male = ↑ ↓ * Refer to table on the back



BAT CAPTURE DATA (continued)

Project #:	3410.02	Date:	18 July 2011									
Project Name:	Tototek Republic	Site Name#:	Site 24									
Initials:	EB, SC, SR											
Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. 2	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
10	B	Eptesicus fuscus	2239	Jv	M	↑	12.5	43	F	0	N/A	
11	D	E. fuscus	2245	Jv	F	NR	13.3	45	E	0	N/A	
12	A	E. fuscus	2320	Jv	F	NR	15.6	46	M	0	N/A	
13	A	E. fuscus	2325	Ad	M	↑	18.5	45	F	0	N/A	
14	A	E. fuscus	2325	Jv	M	↑	13.9	43	M	0	N/A	
15	C	E. fuscus	2325	Ad	F	PL	19.8	44	F	1	Spotting on wing	
16	C	E. fuscus	2325	Jv	M	↑	15.1	45	F	0	N/A	
17	C	Lasius borealis	2339	Ad	F	PL	15.1	41	M	0	3026-27	
18	A	E. fuscus	2352	Jv	M	↑	16.3	46	M	0	N/A	
19	B	Myotis septentrionalis	2355	Ad	F	PL	7.0	35	M	0	Callus on each wing	
20	C	E. fuscus	0002	Jv	M	↑	14.6	45	M	0	N/A	
21	B	E. fuscus	0030	Ad	F	PL	19.9	44	F	0	Hair sample on left wing	
22	C	E. fuscus	0030	Ad	F	PL	22.2	48	F	0	N/A	
23	C	M. septentrionalis	0030	Ad	M	↓	5.8	45	M	0	N/A	
24	C	E. fuscus	0045	Jv	F	NR	13.7	44	F	0	N/A	
25	C	Lasius cinereus	0045	Jv	F	NR	22.5	54	M	0	3028-3031	

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face, leaves rustle, ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion, wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper, small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway, crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion, telephone wires whistle, umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion, inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees, generally impedes progress

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes
1	Light damage. Less than 50% of light membrane is depigmented (spotting), which is often visible only with transillumination
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptagium are evident



NET SITE HABITAT DESCRIPTION

Project #: 340

Date: 16-Jul-11

Biologists: J. Basiger

Project Name: Republic

Site Name/#: 26

State: OH

County: Seneca

USGS Quad: Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
<u>A</u>	<u>N</u>	<u>41° 10' 32.4"N</u>	<u>82° 55' 54.5"W</u>	<u>857</u>	
<u>B</u>	<u>N</u>	<u>41° 10' 31.3"N</u>	<u>82° 55' 54.9"W</u>	<u>858</u>	
<u>C</u>	<u>N</u>	<u>41° 10' 29.6"N</u>	<u>82° 55' 57.1"W</u>	<u>859</u>	
<u>D</u>	<u>N</u>	<u>41° 10' "N</u>	<u>82° 55' 53.7"W</u>	<u>9150</u>	

Distance to closest water source (meters): 50

Type of water source: Stream

Water source name: _____

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS): N/A

Bank Height: _____ meters Channel Width: _____ meters Stream Width: _____ meters

Substratum: ___Bedrock ___Boulder ___Cobble ___Gravel ___Sand ___Silt/Clay

Still Water Present (Y/N): _____ Average Water Depth: _____ m or cm Clarity (H,M,L): _____

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)

Quercus alba

Acer rubrum

Subdominant Canopy Species (< 40 cm/16" dbh)

Acer rubrum

Acer saccharum

Fraxinus pennsylvanica

Estimated dbh range: Lg: 65 Sm: 40

Estimated dbh range: Lg: 39 Sm: 10

Relative abundance of dominant vs. subdominant (ratio): 1:35

Estimated canopy closure: ✓Closed _____Moderate _____Open

Roost tree potential consists of: ✓Large Trees ✓Snags _____Neither

Roost tree potential for the area is: _____High _____Moderate ✓Low

Roost potential comments: Tight bark

Subcanopy clutter: _____Closed ✓Moderate _____Open

Subcanopy comprised largely of: ✓Lower Branches of Canopy Trees ✓Saplings _____Shrubs

Common Subcanopy Species: _____

Habitat Description: Large Woodlot surrounded by crop land

AnaBat Habitat: N/A

Check all that apply:

___Mature Upland Forest

___Recently Logged Forest

✓Crop/Pasture Land

___Other _____

___Young Upland Forest

✓Forest Edge

✓Stream/River

✓Mature Lowland Forest

✓Woodlot

___Vernal Pool

___Young Lowland Forest

___Old Field

___Deepwater Lake/Pond

Herbaceous Cover: ___Sparse ___Moderate ___Dense



NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: OH/Seneca	Site Name/#: 26	Initials:
SKETCH: NETS A and B and AnaBat (if used)			
LEGEND		COMMENTS	
Nets: ● — ●		<hr/> <hr/> <hr/> <hr/> <hr/>	



BAT CAPTURE DATA

Project #: 340.01 Date: 15 Jul 2011
Project Name: Republic
State: OH County: Seneca
Biologists: J. Basiger + M. Flynn
Site name#: 210
GPS Unit #: ES145670 Camera #: cen 671

MOON PHASE*

☐ New moon ☐ First quarter
☐ Waxing gibbous ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2150	23.6	1-3		60%	
2130	23	0		60%	
2200					
2230					
2300					
2330					
0000	21.7	0		40%	
0030					
0100					
0130		0		100%	
0200	21				

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	net	41° 10' 32.4" N	82° 55' 54.5" W	9	9	2030	155	857
B	net	41° 10' 31.3" N	82° 55' 54.9" W	6	6	2035	200	858
C	net	41° 10' 29.6" N	82° 55' 52.1" W	9	6	2040	205	859
D	net	41° 10'	82° 55' 53.7	6	6	2045	210	860

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
1	B	Eptesicus fuscus	2130	Ad	F	PL	17	45	E	0	825	
2	C	Myotis septentrionalis	2130	Ad	F	PL	6.75	37	E	0	*826, 829	✓
3	A	E. fuscus	2200	Ad	F	PL	21	50	F	0		
4	A	E. fuscus	2230	Jv	F	NK	14.25	44	M	0		
5	A	E. fuscus	2230	Jv	M	↑	10.75	46	M	0		
6	B	E. fuscus	2230	Ad	F	PL	24.5	48	F	0		
7	D	E. fuscus	2230	Ad	F	PL	24.75	47	M	0		
8	C	E. fuscus	2230	Jv	M	↑	12.25	45	M	0		
9	C	E. fuscus	2230	Ad	F	PL	19	47	M	0		
10	C	E. fuscus	2230	Ad	M	↓	17.5	46	M	0	*	

¹ M = Monofiliament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

² Reproductive Condition: Female = NR/P/G/L/PL; Male = ↑/↓

* Refer to table on the back



BAT CAPTURE DATA (continued)

Project #: 340.01 Date: 15 Jul 2011

Project Name: Republic Site Name#: 260

Initials:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. 2	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
11	C	E. fuscus	2230	Ad	F	PL	18.5	44	M	0		
12	C	E. fuscus	2230	JV	M	↑	15.75	44	M	0		
13	C	E. fuscus	2230	Ad	M	↓	18.5	44	F	0	*	
14	C	E. fuscus	2230	Ad	F	PL	17.5	44	M	0		
15	C	E. fuscus	2230	Ad	M	↓	16.25	47	M	0	*	
16	C	E. fuscus	2230	Ad	M	↓	18	44	F	0	*	
17	C	E. fuscus	2230	Ad	F	PL	18	48	E	0		
18	D	E. fuscus	2300	JV	F	NR	14	47	M	0		
19	A	E. fuscus	2300	JV	F	NR	12.75	43	M	0		
20	B	E. fuscus	2300	Ad	F	PL	24	48	F	0		
21	C	E. fuscus	2300	Ad	F	PL	18.75	45	F	0	*	
22	C	E. fuscus	2300	Ad	M	↓	17	45	F	0		
23	C	E. fuscus	2300	Ad	F	PL	20.0	44	F	0		
24	C	E. fuscus	2300	Ad	F	PL	21	410	F	0		
25	C	E. fuscus	2300	Ad	F	PL	22	45	F	0		
26	D	E. fuscus	2300	Ad	M	↑	18.25	43	F	0	*	
27	D	E. fuscus	2300	Ad	F	PL	24.25	47	F	0	172.740	
28	B	E. fuscus	2345	Ad	M	↓	17.25	44	F	0	*	
29	B	E. fuscus	2345	Ad	M	↑	16.5	46	F	0		

Beaufort Wind Scale

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees; generally impedes progress

2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
Mar 15	Apr 21	Apr 28	May 5
Apr 14	May 20	May 27	Jun 4
May 13	Jun 18	Jun 26	Jul 4
Jun 12	Jul 18	Jul 25	Aug 2
Jul 11	Aug 16	Aug 24	Sep 1
Aug 9	Sep 15	Sep 23	Sep 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiropatagium are evident.



BAT CAPTURE DATA (continued)

Project #: 346.01 Date: 15 Jul 2011

Project Name: Republic		Site Name#: 2C		Initials:		Wing Index* (0-3)		Picture # /Guano/Hair Sample	
Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)
30	C	E. fuscus	0615	Ad	F	PL	22	44	F
31	B	E. fuscus	0100	Jv	M	↑	20.25	47	F
32	B	E. fuscus	0100	Ad	F	PL	22	47	F
33	D	M. septentrionalis	0100	Ad	F	L	6	34	M
34	D	M. septentrionalis	0100	Jv	F	NA	5.25	36	F
35	D	M. septentrionalis	0100	Ad	F	PL	6.75	34	M
36	D	E. fuscus	0100	Ad	F	PL	20.25	45	F
37	D	E. fuscus	0100	Ad	F	PL	17.5	45	F
38	D	E. fuscus	0100	Jv	M	↑	15	47	M
39	B	E. fuscus	0130	Ad	F	PL	21.5	47	F
40	B	E. fuscus	0130	Ad	F	PL	21.25	49	F
41	B	E. fuscus	0200	Ad	F	PL	24	45	M
42	D	E. fuscus	0200	Ad	F	PL	-	-	F
43	C	E. fuscus	0200	Ad	F	PL	21.75	51	F
44	C	M. septentrionalis	0200	Jv	F	NR	6	35	E
45	C	E. fuscus	0200	Ad	F	PL	21.5	47	M

Beaufort Wind Scale

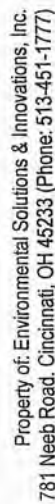
Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees; generally impedes progress

2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
Mar 15	Apr 21	Apr 28	May 5
Apr 14	May 20	May 27	Jun 4
May 13	Jun 18	Jun 26	Jul 4
Jun 12	Jul 18	Jul 25	Aug 2
Jul 11	Aug 16	Aug 24	Sep 1
Aug 9	Sep 15	Sep 23	Sep 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
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3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptagium are evident.



WEATHER DATA

Date: 18 July 2011

neca

Meagan Flynn, Alexia Cantt

10

Camera #: 66467

___ New moon
 ___ Waxing gibbous
 ___ Last quarter
 ___ Waning crescent
 ___ Full moon
 ___ Waxing crescent
 ___ Waning gibbous
 ___ First quarter

X First quarter
 _____ Waning gibbous

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Comments Picture # /Guano/Hair Sample
1	C	Lasiurus borealis	2130	Jv	F	NR	8.25	38	E	0	865
2	A	Eptesicus fuscus	2200	Ad	F	PL	21.0	45	M	0	
3	A	Eptesicus fuscus	2200	Ad	M	J	17.5	46	M	0	
4	A	Eptesicus fuscus	2200	Ad	F	PL	18.5	46	M	1	
5	C	Eptesicus fuscus	2230	Jv	F	NR	15.5	44	M	0	
6	C	Eptesicus fuscus	2230	Jv	M	↑	12.0	45	M	0	
7	B	Eptesicus fuscus	2227	Jv	F	NR	15.0	46	M	0	
8	A	Eptesicus fuscus	2235	Ad	F	PL	22.0	49	F	0	
9	A	Lasiurus borealis	2225	Jv	F	N	10.0	42	M	0	
10	D	Eptesicus fuscus	2220	Ad	M	J	16.5	45	F	0	

' M = Monofilament; ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓

1. $2x^2 + 3x - 1$

Page 1 of 1

6



BAT CAPTURE DATA (continued)

Project #:

Date:

Project Name:

Site Name/ID:

Initials:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
11	A	Eptesicus fuscus	2225	JV	F	NR	18.0	44	F	0		
12	D	Myotis septentrionalis	2230	JV	M	NR	5.0	32	M	0		
13	A	Eptesicus fuscus	2307	Ad	M	↑	16.0	41	M	0		
14	D	Eptesicus fuscus	2310	JV	F	NR	20.0	49	F	0		
15	C	Eptesicus fuscus	2310	Ad	F	PL	20.5	47	F	0		
16	C	Eptesicus fuscus	2316	Ad	M	↓	18.0	48	F	0		
17	C	Eptesicus fuscus	2310	Ad	F	PL	20.5	47	F	0		
18	C	Eptesicus fuscus	2348	Ad	F	PL	21.5	49	F	0		
19	C	Eptesicus fuscus	2340	JV	M	↑	16.5	47	F	0		
20	C	Eptesicus fuscus	2350	JV	M	↑	13.0	44	F	0		
21	A	Eptesicus fuscus	2425	JV	M	↑	15.0	44	F	0		
22	A	Eptesicus fuscus	2425	JV	M	↑	15.0	49	F	0		
23	A	Eptesicus fuscus	2425	JV	F	NR	15.0	47	F	0		
24	b	Eptesicus fuscus	2430	Ad	F	PL	21.5	47	F	0		
25	C	Eptesicus fuscus	2435	JV	M	NR	15.5	44	M	0		

Beaufort Wind Scale

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees; generally impedes progress

2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
Mar 15	Apr 21	Apr 28	May 5
Apr 14	May 20	May 27	Jun 4
May 13	Jun 18	Jun 26	Jul 4
Jun 12	Jul 18	Jul 25	Aug 2
Jul 11	Aug 16	Aug 24	Sep 1
Aug 9	Sep 15	Sep 23	Sep 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptagium are evident.



NET SITE HABITAT DESCRIPTION

Project #: 340-02 Date: 16 July 2011 Biologists: V. Brack, S. Reeves
Project Name: Tetratech Republic Site Name/ #: Site 27
State: OH County: Seneca USGS Quad: Fireside
Camera #: 6-1 Picture #s: 0190-0218 GPS Unit #: G7406 Waypoint #: 340
Latitude: 41° 09' 27.1" N Longitude: 82° 59' 20.5" W
Distance to closest water source (meters): 5m Type of water source: pond
Water source name: unnamed private pond

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: N/A meters Channel Width: N/A meters Stream Width: N/A meters
Substratum: N/A Bedrock Boulder Cobble Gravel Sand Silt/Clay
Still Water Present (Y/N): N/A Average Water Depth: N/A m or cm Clarity (H,M,L): N/A

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)	Subdominant Canopy Species (< 40 cm/16" dbh)
<u>Quercus bicolor</u>	<u>Fraxinus pennsylvanica</u>
<u>Fraxinus pennsylvanica</u>	<u>Quercus prinus</u>
<u>Quercus palustris</u>	<u>Acer saccharinum</u>

Estimated dbh range: Lg: 120cm Sm: 40cm Estimated dbh range: Lg: 31cm Sm: 18cm

Relative abundance of dominant vs. subdominant (ratio): 1:25

Estimated canopy closure: ☒ Closed ☐ Moderate ☐ Open

Roost tree potential consists of: ☐ Large Trees ☐ Snags ☒ Both ☐ Neither

Roost tree potential for the area is: ☐ High ☒ Moderate ☐ Low

Roost potential comments: high side of moderate, leaning toward High

Subcanopy clutter: ☐ Closed ☐ Moderate ☐ Open

Subcanopy comprised largely of: ☐ Lower Branches of Canopy Trees ☐ Saplings ☐ Shrubs

Common Subcanopy Species: Acer saccharinum Fraxinus pennsylvanica

Habitat Description: Mature woodlot with 2 ponds & cabins in center, agriculture nearby

Check all that apply:

<input type="checkbox"/> Mature Upland Forest	<input type="checkbox"/> Recently Logged Forest	<input checked="" type="checkbox"/> Crop/Pasture Land	<input type="checkbox"/> Shrub/scrub Swamp
<input type="checkbox"/> Young Upland Forest	<input type="checkbox"/> Pine Plantation	<input type="checkbox"/> Stream/River	<input type="checkbox"/> Vernal Pool
<input type="checkbox"/> Mature Lowland Forest	<input checked="" type="checkbox"/> Woodlot/Forest Edge	<input type="checkbox"/> Emergent Wetland	<input checked="" type="checkbox"/> Deepwater Lake/Pond
<input type="checkbox"/> Young Lowland Forest	<input type="checkbox"/> Old Field	<input type="checkbox"/> Forested Swamp	<input checked="" type="checkbox"/> Other <u>grass/lowland</u>

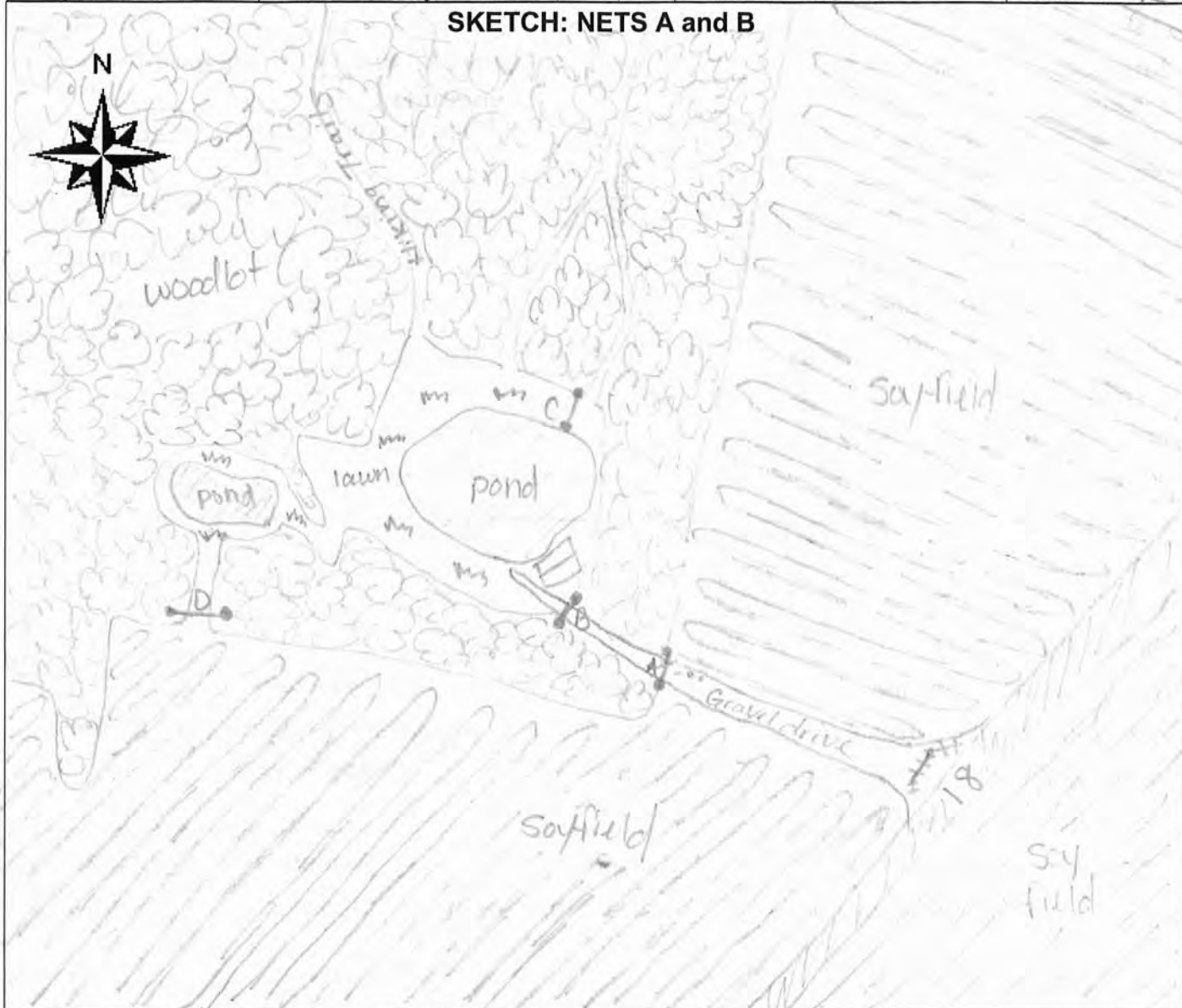
Herbaceous Cover: ☐ Sparse ☐ Moderate ☒ Dense



NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: Seneca / OH	Site Name/ #: Site 27	Initials: SR
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SKETCH: NETS A and B



LEGEND

Nets: ● — ●

Fence: + + + +

Cabin: ☐

COMMENTS



BAT CAPTURE DATA

Project #: 340.02 Date: 16 July 2011
Project Name: Tetratich Republic
Biologists: VBrack, SLevis Site name#: Site 27
State: Ohio County: Summa
GPS Unit #: G7406 Camera #: C6209

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated - see chart)*	% Cloud Cover (estimated)	Comments
2100	23.9	0	0%	
2130	22.9	0	0%	
2200	22.7	0	0%	
2230	21.7	0	0%	
2300	21.5	1-3	0%	
0000	21.8	1-3	0%	
0030	21.6	1-3	0%	
0100	21.4	1-3	0%	
0130	21.2	1-3	0%	
0200	21.4	1-3	0%	

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
Net	A	41° 09' 27.1" N	82° 59' 30.5" W	6	6.2	2045	0145	0190	021
Net	B	41° 09' 27.6" N	82° 59' 32.2" W	6	6.2	2050	0150	0191	022
Net	C	41° 09' 30.1" N	82° 59' 32.1" W	9	6.2	2055	0155	0203	023
Net	D	41° 09' 32.0" N	82° 59' 32.1" W	12	9.2	2100	0200	0218	024

Net Placement/Site Description: Nets A, B, C across road with closed canopy in woodland, Net D across open area

Capt #	Net/Trap	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
1	D	<i>Lasiorus borealis</i>	2120	Jv	F	NR	10.0	41	E	0	109-0209	
2	D	<i>L. borealis</i>	2120	Jv	F	NR	8.7	40	E	0	N/A	
3	D	<i>Eptesicus fuscus</i>	2150	Ad	F	PL	18.1	46	F	1	0210-0211	
4	D	<i>E. fuscus</i>	2150	Ad	F	PL	16.8	43	E	2	0212 (healed scars)	
5	D	<i>E. fuscus</i>	2210	Ad	M	1/2 ↓	15.5	44	M	1	scarring all edge	
6	D	<i>E. fuscus</i>	2210								Escaped Net	
7	D	<i>E. fuscus</i>	2210								Escaped Net	
8	D	<i>E. fuscus</i>	2235	A	F	PL	19.9	45	F	1		
9	D	<i>E. fuscus</i>	2235	Ad	M	↓	17.8	46	F	0		

¹ Reproductive Condition. Female = NR PG LPL; Male = ↑ ↓ * Refer to table on the back



BAT CAPTURE DATA (continued)

Project #:	Tetra Tech Republic		Date:	16 July 11								
Project Name:	340.02		Site Name#:	C6209								
Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. 2	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
10	D	E. fuscus	2235	Jv	M	↑	15.0	46	M	0	—	—
11	D	L. borealis	—	—	—	—	—	—	—	—	—	Escaped
12	C	E. fuscus	2315	Ad	M	1/2 ↓	17.5	45	F	1	—	—
13	D	M. septentrionalis	2320	Jv	F	↑	7.0	36	E	0	0213/0214	—
14	A	M. septentrionalis	2340	A	M	↑	7.2	36	F	0	—	—
15	D	E. fuscus	2350	Jv	M	↑	15.1	35	M	0	—	—

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle, ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees; generally impedes progress

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptagium are evident.



BAT CAPTURE DATA

Project #: 340.02 Date: 26 July 2011
 Project Name: Tetratech/Republic
 Biologists: D. Jeffcott Site name/ID: Site 27
 State: OH County: Seneca
 GPS Unit #: 67406 Camera #: 6-1

WEATHER DATA

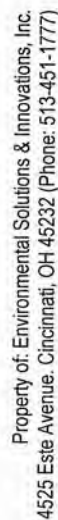
Time (xxxx h)	Temp (°C)	Wind Speed (estimated - see chart)*	% Cloud Cover (estimated)	Comments
2100	21.9	—	10%	—
2130	22.1	—	10%	—
2200	22.1	—	10%	—
2230	21.8	—	0	—
2300	21.4	—	0	—
2330	19.7	—	0	—
0000	19.3	—	0	—
0030	19.3	—	0	—
0100	19.3	—	0	—
0130	18.9	—	0	—
0200	18.7	—	0	—

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
Net A	A	41° 09' 27.1" N	82° 59' 20.5" W	6	6.2	2045	0200	100-0190	021
Net B	B	41° 09' 27.6" N	82° 59' 22.2" W	6	6.2	2050	0205	0191	022
Net C	C	41° 09' 30.1" N	82° 59' 22.1" W	9	6.2	2055	0210	100-0203	023
Net D	D	41° 09' 28.0" N	82° 59' 27.1" W	12	9.2	2100	0215	0218	024

Net Placement/Site Description: Net 5 A, B on small corridor / road leading back to pond. Net C moved perpendicular to woodlot and pond.
Net D across opening from field to pond

Capt #	Net/ Trap	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # (Guano/Hair Sample)	Comments
1	D	<i>Lasiurus borealis</i>	2120	JV	M	↑	8.8	38.0	E	0	—	—
2	D	<i>Eptesicus fuscus</i>	2145	JV	F	NR	15.3	46.0	M	0	—	—
3	D	<i>Lasiurus borealis</i>	2145	—	—	—	—	—	—	—	—	—
4	B	<i>Eptesicus fuscus</i>	2155	JV	F	NR	16.2	44.0	M	0	—	Escaped Net
5	D	<i>Lasiurus borealis</i>	2215	—	—	—	—	—	—	—	—	Escaped Net
6	D	<i>Lasiurus borealis</i>	2215	—	—	—	—	—	—	—	—	Escaped Net
7	D	<i>Eptesicus fuscus</i>	2215	JV	M	↑	16.9	44.0	M	0	—	—
8	D	<i>Eptesicus fuscus</i>	2215	JV	M	↑	12.9	45.0	M	0	—	—
9	D	<i>Eptesicus fuscus</i>	2215	JV	F	NR	16.0	47.0	M	0	—	—

¹ Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓ * Refer to table on the back



BAT CAPTURE DATA (continued)

Initials:

[illegible]

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Roofs blow off trees; generally, immediate destruction

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chironotagium are evident.



NET SITE HABITAT DESCRIPTION

Project #: 340.01

Date: 26-Jul-11

Biologists: J. Basiger

Project Name: Republic

Site Name/#: 30

State: OH County: Seneca

USGS Quad: Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
<u>A</u>	<u>N</u>	<u>41° 09' 12.1" N</u>	<u>82° 55' 33.6" W</u>	<u>910</u>	<u>30-A</u>
<u>B</u>	<u>N</u>	<u>41° 09' 11.6" N</u>	<u>82° 55' 34.6" W</u>	<u>909</u>	<u>30-B</u>
<u>C</u>	<u>N</u>	<u>41° 09' 10.6" N</u>	<u>82° 55' 34.0" W</u>	<u>908</u>	<u>30-C</u>
<u>D</u>	<u>N</u>	<u>41° 09' 09.2" N</u>	<u>82° 55' 33.3" W</u>	<u>906</u>	<u>30-D</u>

Distance to closest water source (meters): 300

Type of water source: stream

Water source name: UN

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS): N/A

Bank Height: _____ meters Channel Width: _____ meters Stream Width: _____ meters

Substratum: _____ Bedrock _____ Boulder _____ Cobble _____ Gravel _____ Sand _____ Silt/Clay

Still Water Present (Y/N): _____ Average Water Depth: _____ m or cm Clarity (H,M,L): _____

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)

Quercus rubra

Acer rubrum

Carya ovata

Subdominant Canopy Species (< 40 cm/16" dbh)

Acer rubrum

Tilia americana

Quercus rubra

Estimated dbh range: Lg: _____ Sm: _____

Estimated dbh range: Lg: _____ Sm: _____

Relative abundance of dominant vs. subdominant (ratio): _____

Estimated canopy closure: ☒ Closed ☐ Moderate ☐ Open

Roost tree potential consists of: ☒ Large Trees ☐ Snags ☐ Neither

Roost tree potential for the area is: ☐ High ☒ Moderate ☐ Low

Roost potential comments: Large Carya ovata

Subcanopy clutter: ☐ Closed ☒ Moderate ☐ Open

Subcanopy comprised largely of: ☐ Lower Branches of Canopy Trees ☒ Saplings ☒ Shrubs

Common Subcanopy Species: Acer rubrum

Habitat Description: Large wood lots with crop fields on 3 sides

AnaBat Habitat: N/A

Check all that apply:

☐ Mature Upland Forest

☐ Recently Logged Forest

☒ Crop/Pasture Land

☐ Other _____

☐ Young Upland Forest

☒ Forest Edge

☐ Stream/River

☐ Mature Lowland Forest

☐ Woodlot

☐ Vernal Pool

☒ Young Lowland Forest

☐ Old Field

☐ Deepwater Lake/Pond

Herbaceous Cover: ☐ Sparse ☒ Moderate

☐ Dense



NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.01	State/County: OH/Seneca	Site Name/#: 30	Initials:
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TR 124

SKETCH: NETS A and B
and AnaBat (if used)

TR 27

LEGEND

Nets: ● — ●

COMMENTS



Property of: Environmental Solutions & Innovations, Inc.
781 Neeb Road, Cincinnati, OH 45233 (Phone: 513-451-1777)

Project #: 340.01 Date: 22 July 11
Project Name: Republic
State: OH County: Seneca
Biologists: J. Basiger
Site name#: 30
GPS Unit #: 851405670 Camera #: 000671

MOON PHASE*

___ New moon
 ___ Waxing gibbous
 ___ Last quarter
 ___ Waning crescent
 ___ Full moon
 ___ Waxing crescent
 ___ First quarter
 ___ Waning gibbous

Net Placement/Site Description:

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	N	41° 09' 12.1" N	82° 55' 33.6" W	12	9	2045	0025	910
B	N	41° 09' 11.6" N	82° 55' 34.6" W	6	6	2050	0035	909
C	N	41° 09' 10.6" N	82° 55' 34.0" W	9	6	2055	0030	908
D	N	41° 09' 09.2" N	82° 55' 33.3" W	6	6	2100	0030	906

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Comments Picture # /Guano/Hair Sample
1	D	<i>Lasiurus borealis</i>	2125	Jv	F	NA	12.0	40	E _{low}	0	
2	A	<i>Eptesicus fuscus</i>	2145	Jv	M	✓	15.25	44	M	1	
3	A	<i>E. fuscus</i>	2145	Ad	M	✓	19.25	46	M	0	
4	A	<i>E. fuscus</i>	2145	Ad	F	PL	19	44	M	0	
5	A	<i>E. fuscus</i>	2145	Ad	F	PL	20.5	47	M	0	
6	A	<i>E. fuscus</i>	2230	Ad	F	PL	19.75	46	M	0	
7	A	<i>E. fuscus</i>	2230	Jv	M	✓	17	45	M	0	
8	A	<i>E. fuscus</i>	2230	Jv	M	✓	15.25	44	M	0	
9	D	<i>E. fuscus</i>	2250	Ad	F	PL	18.25	47	M	0	
10	B	<i>E. fuscus</i>	2250	Ad	F	PL	20	46	M	0	

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

* Refer to table on the back



BAT CAPTURE DATA (continued)

Project #: 340.01

Date: 22 Jun 11

Project Name:

Site Name/ID: 30

Initials:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. 2	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Comments	Picture # /Guano/Hair Sample
11	D	E. fuscus	2230	Ad	F	PL	21.5	48	F	1		
12	D	E. fuscus	2230	Ad	F	PL	20.75	44	M	0		
13	D	E. fuscus	2230	JV	M	↑	16.25	42	M	0		
14	D	E. fuscus	2230	JV	F	NR	15.25	45	M	0		
15	A	E. fuscus	2300	Ad	M	↑	17.5	41	F	0		
16	A	L. borealis	2300	JV	F	NR	13	40	M	0		
17	A	E. fuscus	2300	JV	F	NR	17.25	43	M	0		
18	A	Lasiurus blythii	2300	JV	F	NR	23.75	53	E	0		
19	A	E. fuscus	2300	Ad	F	PL	24.5	50	F	0		
20	D	E. fuscus	2300	Ad	F	PL	18	46	M	0		
21	D	E. fuscus	2300	JV	F	NR	18.5	49	F	0		
22	A	E. fuscus	2300	Ad	F	PL	21.75	49	F	0		
23	A	E. fuscus	2300	Ad	M	↓	-	47	M	0		
24	A	E. fuscus	2300	Ad	M	↓	-	47	M	0		
25	A	E. fuscus	2300	JV	F	NR	-	47	F	0		
26	A	E. fuscus	2300	JV	F	NR	15.5	45	M	0		
27	A	E. fuscus	2300	JV	F	NR	15	43	M	0		
28	A	E. fuscus	2300	Ad	M	↓	18.5	42	M	0		
29	A	E. fuscus	2300	JV	F	NR	16.5	44	M	0		

Beaufort Wind Scale

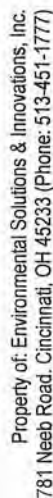
Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees; generally impedes progress

2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
Mar 15	Apr 21	Apr 28	May 5
Apr 14	May 20	May 27	Jun 4
May 13	Jun 18	Jun 26	Jul 4
Jun 12	Jul 18	Jul 25	Aug 2
Jul 11	Aug 16	Aug 24	Sep 1
Aug 9	Sep 15	Sep 23	Sep 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptagium are evident.



Date: 22 Jul 2011

Project #: 340.01

Date: 22 Jul 2011

Project Name: Repulse Site Name/#: _____

Site Name/#: 30

Initials: _____

[illegible]

Beaufort Wind Scale

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vanes moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Strong Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Very Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-39	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
40-47	Fresh Gale	Breaks twigs off trees; generally impedes progress

2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
Mar 15	Apr 21	Apr 28	May 5
Apr 14	May 20	May 27	Jun 4
May 13	Jun 18	Jun 26	Jul 4
Jun 12	Jul 18	Jul 25	Aug 2
Jul 11	Aug 16	Aug 24	Sep 1
Aug 9	Sep 15	Sep 23	Sep 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

Score	Description
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3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptatium are evident.



BAT CAPTURE DATA

Property of: Environmental Solutions & Innovations, Inc.
781 Neeb Road, Cincinnati, OH 45233 (Phone: 513-451-1777)

Project #: 346.01 Date: 24 Jul 11
Project Name: Republic
State: OH County: Seneca
Biologists: J. Basiger, M. Flynn
Site name#: 30
GPS Unit #: 851465670 Camera #: can 671

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2100	25.1	0		40%	
2200	24.3	0		40%	
2300	23.8	0		40%	
2400	23.1	0		40%	
2500	22.9	0			
0000	22.7	0			
0100	22.4	0			
0200	22.2	0			
0300	22.1	0		100%	
0400	22.2	0		100%	

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	Nat	41° 09' 12.1" N	82° 55' 33.6" W	12	9	2040	0200	910
A	Nat	41° 09' 11.6" N	82° 55' 34.6" W	6	6	2045	0205	909
A	Nat	41° 09' 10.6" N	82° 55' 34.0" W	9	6	2050	0210	908
A	Nat	41° 09' 09.2" N	82° 55' 33.3" W	16	12	2055	0215	906

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
1	A	<i>Lasiurus borealis</i>	2200	JV	F	NA	11.25	31	E	0		
2	A	<i>Eptesicus fuscus</i>	2200	JV	F	NA	15.75	49	M	0	172,500	bat + 2400 SWI = 16
3	A	<i>E. fuscus</i>	2220	Ad	F	PL	20	47	F	0		
4	A	<i>E. fuscus</i>	2220	JV	M	↑	17.25	45	M	0		
5	A	<i>E. fuscus</i>	2220	Ad	M	↑	17	45	F	0		
6	A	<i>L. borealis</i>	2220	Ad	M	↓	14	49	F	0		
7	A	<i>L. cinereus</i>	2220	JV	F	NA	24	53	F	0		
8	D	<i>E. fuscus</i>	2245	Jv	F	NA	16.25	47	M	0		
9	A	<i>E. fuscus</i>	2245	Jv	M	↑	16.25	45	M	0		
10	D	<i>M. lucifugus</i>	2300	JV	F	NA	6	37	M	0		

* M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap, A = Anabat

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓

* Refer to table on the back



Project #:

Date: _____

Project Name:

Site Name/#:

Initials:

Beaufort Wind Scale

2010 Lunar Phases

Wing Index Key

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotching), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotching). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptaculum are evident.



BAT CAPTURE DATA

Project #: 340.01 Date: 26 Jul 11
Project Name: Republic
State: OH County: Seneca
Biologists: V. Basinger, J. Kleinhenz
Site name#: 30
GPS Unit #: ES1465670 Camera #: can 671

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2120	23.3	—	—	50	
2130	22.5	—	—	50	
2200	21.7	—	—	0	
2230	21.1	—	—	0	
2300	20.3	—	—	0	
2330	19.9	—	—	50	
0000	19.9	—	—	25	
0030	19.8	—	—	0	
0100	19.5	—	—	0	
0130	19.4	—	—	0	
0200	19.1	—	—	0	

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A		41° 09' 12.1" N	82° 55' 33.6" W	12	9	2040	0150	910
B		41° 09' 11.6" N	82° 55' 34.6" W	6	6	2045	0155	909
C		41° 09' 10.6" N	82° 55' 34.0" W	9	6	2050	0200	908
D		41° 09' 09.2" N	82° 55' 33.3" W	6	6	2055	0205	906

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Comments Picture # / Guano/Hair Sample
1	A	<i>Eptesicus fuscus</i>	2130	AP	M	↓	15.25	45	E	0	
2	A	<i>E. fuscus</i>	2130	JV	F	NA	14.75	46	M	0	
3	A	<i>E. fuscus</i>	2200	AD	M	↓	14.50	47	E	0	
4	A	<i>E. fuscus</i>	2200	AP	F	PL	19.50	50	M	0	
5	A	<i>E. fuscus</i>	2202	AD	F	PL	16.00	43	E	0	
6	A	<i>E. fuscus</i>	2203	AD	F	PL	20.00	49	E	1	
7	A	<i>E. fuscus</i>	2203	JV	F	NA	17.75	47	E	0	
8	D	<i>E. fuscus</i>	2230	AD	M	↓	16.50	45	M	0	
9	A		2230	AD	M	↓	14.50	41	F	0	
10	A		2236	AD	M	↓	17.00	46	M	0	

¹ M = Monofiliament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap, A = Anabat

² Reproductive Condition: Female = NR/PG/L/PL, Male = ↑/↓

* Refer to table on the back



BAT CAPTURE DATA (continued)

Project #: 340.01 Date: 26 Jul 11

Project Name: 30 Site Name: 30

Initials:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Comments	Picture # /Guano/Hair Sample
11	A		23:00	JV	M	+	15.00	45	M	0		
12	D		23:00	AD	M	+	16.50	46	M	0		
13	F		23:00	JV	F	NA	16.50	46	M	0		
14	A		23:05	AD	M	+	15.75	43	M	0		
15	A		23:05	JV	F	NA	16.75	45	M	0		
16	A		23:06	JV	M	+	12.75	41	M	0		
17	A		23:10	AD	M	+	15.00	42	M	0		
18	D		23:10	JV	F	NA	18.00	50	F	0		
19	D		23:10	AD	F	PL	19.25	44	M	0		
20	A		23:11	AD	M	+	15.50	47	M	0		
21	A		23:30	AD	F	PL	21.00	49	M	0		
22	A		23:30	AD	F	PL	18.25	45	M	0		
23	A		23:30	JV	F	NA	13.00	46	M	0		
24	A		23:30	AD	F	PL	20.00	46	M	0		
25	A		23:30	JV	F	NA	14.75	44	M	0		
26	A	Lasius brunneus	23:30	JV	F	NA	9.00	40	E	0		
27	A		23:30	AD	F	PL	21.50	48	F	0		
28	A		23:30	AD	F	PL	18.00	45	M	0		
29	A		23:30	AD	M	+	16.50	46	E	0		

Beaufort Wind Scale

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees; generally impedes progress

2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
Mar 15	Apr 21	Apr 28	May 5
Apr 14	May 20	May 27	Jun 4
May 13	Jun 18	Jun 26	Jul 4
Jun 12	Jul 18	Jul 25	Aug 2
Jul 11	Aug 16	Aug 24	Sep 1
Aug 9	Sep 15	Sep 23	Sep 30
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Wing Index Key

Score	Description
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BAT CAPTURE DATA (continued)

Project #: 340,01 Date: 26 Jul-11

Project Name: _____

Site Name#: 30

Initials: _____

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
30	A		23:35	AD	F	NA	22.00	48	F	0		
31	A		23:36	JV	M	+	16.00	44	F	0		
32	A		23:36	AD	M	+	17.00	47	F	0		
33	A		23:38	AD	M	+	17.00	46	M	0		
34	A		23:39	JV	M	+	17.50	46	M	0		
35	A		23:40	JV	F	NA	16.25	41	M	0		
36												
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												

Beaufort Wind Scale

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
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2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
Mar 15	Apr 21	Apr 28	May 5
Apr 14	May 20	May 27	Jun 4
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NET SITE HABITAT DESCRIPTION

Project #: 340.01 Date: 27 Jul 11 Biologists: J. Bosiger
Project Name: Republic Site Name/ #: 31
State: OH County: Seneca USGS Quad: Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
<u>A</u>	<u>N</u>	<u>41° 09' 13.8" N</u>	<u>82° 59' 23.8" W</u>	<u>905</u>	
<u>B</u>	<u>N</u>	<u>41° 09' 13.2" N</u>	<u>82° 59' 21.7" W</u>	<u>902</u>	
<u>C</u>	<u>N</u>	<u>41° 09' 11.9" N</u>	<u>82° 59' 21.2" W</u>	<u>903</u>	
<u>D</u>	<u>N</u>	<u>41° 09' 12.8" N</u>	<u>82° 59' 19.6" W</u>	<u>904</u>	

Distance to closest water source (meters): 500 Type of water source: Pond
Water source name: N/A

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS): N/A

Bank Height: _____ meters Channel Width: _____ meters Stream Width: _____ meters
Substratum: _____ Bedrock _____ Boulder _____ Cobble _____ Gravel _____ Sand _____ Silt/Clay
Still Water Present (Y/N): _____ Average Water Depth: _____ m or cm Clarity (H,M,L): _____

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh) Subdominant Canopy Species (< 40 cm/16" dbh)
Carya ovata Carya ovata
Acer rubrum Acer rubrum

Estimated dbh range: Lg: 60 Sm: 40 Estimated dbh range: Lg: 39 Sm: 10

Relative abundance of dominant vs. subdominant (ratio): _____

Estimated canopy closure: ☒ Closed _____ Moderate _____ Open
Roost tree potential consists of: ☒ Large Trees _____ Snags _____ Neither
Roost tree potential for the area is: _____ High ☒ Moderate _____ Low

Roost potential comments: Large number of Carya ovata

Subcanopy clutter: ☒ Closed _____ Moderate _____ Open
Subcanopy comprised largely of: ☒ Lower Branches of Canopy Trees ☒ Saplings _____ Shrubs

Common Subcanopy Species: Acer rubrum
Fagus grandifolia

Habitat Description: Large woodlot with fields on 3 sides
AnaBat Habitat: N/A

Check all that apply:

☐ Mature Upland Forest ☐ Recently Logged Forest ☒ Crop/Pasture Land _____ Other _____
☐ Young Upland Forest ☒ Forest Edge _____ Stream/River _____
☐ Mature Lowland Forest ☒ Woodlot _____ Vernal Pool _____
☒ Young Lowland Forest ☐ Old Field _____ Deepwater Lake/Pond _____

Herbaceous Cover: _____ Sparse ☒ Moderate _____ Dense



NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.01	State/County: OH/Seneca	Site Name/#: 31	Initials:
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SKETCH: NETS A and B and AnaBat (if used)

LEGEND

Nets: ● — ●

House = House

COMMENTS



BAT CAPTURE DATA

Project #: 340.01 Date: 25 July 11
Project Name: Republic
State: OH County: Seneca
Biologists: J. Basiger
Site name/ID: 31
GPS Unit #: 451 465670 Camera #: can 671

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	N	41° 09' 13.8" N	82° 59' 23.6" W	6	6	2045	0150	905 ✓
B	N	41° 09' 13.2" N	82° 59' 21.7" W	9	9	2050	0155	902 ✓
C	N	41° 09' 11.4" N	82° 59' 21.2" W	6	6	2055	0205	903 ✓
D	N	41° 09' 12.6" N	82° 59' 19.6" W	9	6	2100	0210	904 ✓

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
1	C	<i>Eptesicus fuscus</i>	2130	Ad	F	PL	16.25	44	F	0		
2	B	<i>E. fuscus</i>	2210	Jv	F	NA	16.5	47	M	0		
3	A	<i>E. fuscus</i>	2215	Jv	M	↑	15.5	46	M	0		
4	A	<i>E. fuscus</i>	2215	Jv	M	↑	14.25	45	M	0		
5	B	<i>E. fuscus</i>	2310	Ad	M	V	17.5	41	M	0		
6	C	<i>E. fuscus</i>	0050	Ad	M	↑	16.25	45	M	0		
7	C	<i>E. fuscus</i>	0130	Jv	M	↑	15.00	44	M	0		
8	B	<i>Lasiurus borealis</i>	0130	Jv	F	NA	10	44	M	0		

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓



MOON PHASE*

_____ New moon
 _____ Waxing gibbous
 _____ Last quarter
 _____ Waning crescent
 _____ Full moon
 _____ Waxing crescent
 _____ Waning gibbous
 _____ First quarter

Property of: Environmental Solutions & Innovations, Inc.
781 Neeb Road, Cincinnati, OH 45233 (Phone: 513-451-1777)

WEATHER DATA

WEATHER DATA					
Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From ___ to ___	% Cloud Cover (estimated)	Comments
2100	26.1	—	—	100	
2200	25.9	—	—	100	
2300	25.8	—	—	100	
2400	25.5	—	—	100	
2500	25.1	—	—	100	
2600	24.8	1-3	NW-SE	100	
2700	24.1	1-3	W-E	100	
2800	24.4	1-3	W-E	100	
2900	25.3	1-3	NW-SE	100	
3000	25.7	1-3	NW-SE	100	
3100	25.6	4-7	W-E	100	

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	N	41° 09' 13.4" N	42° 59' 23.5" W	6	6	2040	0145	903 ✓
B	N	41° 09' 13.2" N	42° 59' 21.7" W	9	9	2045	0150	902 ✓
C	N	41° 09' 11.4" N	42° 59' 21.2" W	9	6	2050	0155	903 ✓
P		41° 09' 12.4" N	42° 59' 19.6" W	6	6	2055	0155	904 ✓

Net Placement/Site Description:

[illegible]

ⁱ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓

* Refer to table on the back



NET SITE HABITAT DESCRIPTION

Project #: 340 Date: 28 July 2011 Biologists: E. Basiger ; A. Kleinhenz
Project Name: Republic - Wind Site Name/ #: 32
State: OH County: Seneca USGS Quad: Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
A	NTU	41° 13' 02.3 "N	82° 54' 29.7 "W	3096	340A32
B	NTU	41° 13' 04.5 "N	82° 54' 29.8 "W	3100	340B32
C	NTU	41° 13' 05.9 "N	82° 54' 29.4 "W	3099	340C32
D	NTU	41° 13' 05.1 "N	82° 54' 27.7 "W	3098	340D32

Distance to closest water source (meters): 300 Type of water source: stream
Water source name: _____

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS): N/A

Bank Height: _____ meters Channel Width: _____ meters Stream Width: _____ meters
Substratum: _____ Bedrock _____ Boulder _____ Cobble _____ Gravel _____ Sand _____ Silt/Clay
Still Water Present (Y/N): _____ Average Water Depth: _____ m or cm Clarity (H,M,L): _____

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh) Quercus elba Subdominant Canopy Species (< 40 cm/16" dbh) Prunus serotina
Quercus rubra

Estimated dbh range: Lg: 75 Sm: 50 Estimated dbh range: Lg: 40 Sm: 10

Relative abundance of dominant vs. subdominant (ratio): 1/7

Estimated canopy closure: ☒ Closed _____ Moderate _____ Open
Roost tree potential consists of: ☒ Large Trees ☒ Snags _____ Neither
Roost tree potential for the area is: _____ High _____ Moderate ☒ Low

Roost potential comments: Tight bark

Subcanopy clutter: _____ Closed ☒ Moderate _____ Open
Subcanopy comprised largely of: _____ Lower Branches of Canopy Trees ☒ Saplings _____ Shrubs

Common Subcanopy Species: Ulmus americana
Acer saccharum

Habitat Description: Woodlot

AnaBat Habitat: N/A

Check all that apply:

☒ Mature Upland Forest _____ Recently Logged Forest ☒ Crop/Pasture Land _____ Other _____
_____ Young Upland Forest ☒ Forest Edge _____ Stream/River _____
_____ Mature Lowland Forest ☒ Woodlot _____ Vernal Pool _____
_____ Young Lowland Forest _____ Old Field _____ Deepwater Lake/Pond _____

Herbaceous Cover: _____ Sparse ☒ Moderate _____ Dense



NET SITE HABITAT DESCRIPTION (continued)

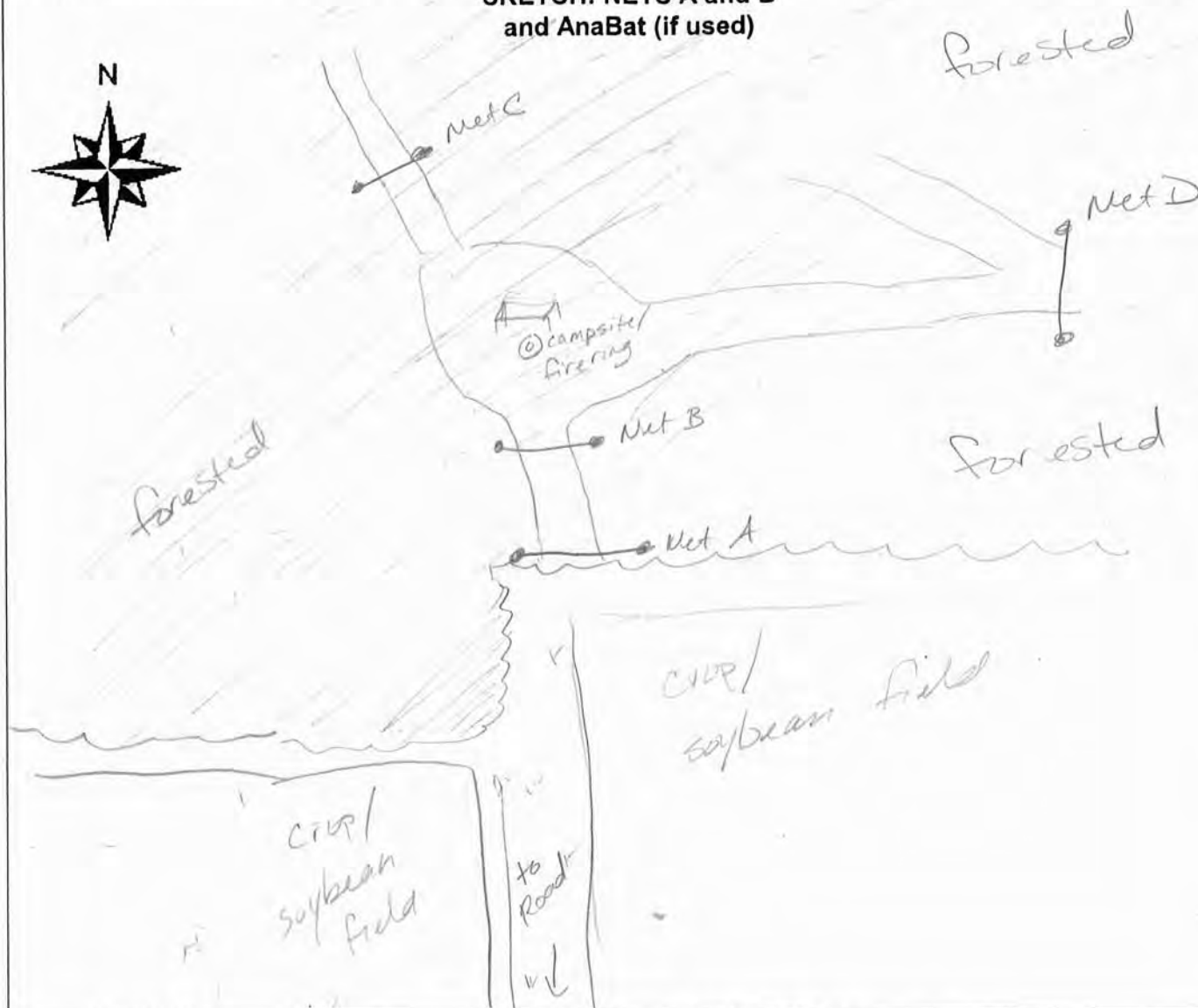
Project #: 340

State/County: OH/Seneca

Site Name/#: 32

Initials: SCB

SKETCH: NETS A and B and AnaBat (if used)



LEGEND

Nets: ● — ●

COMMENTS



BAT CAPTURE DATA

Property of: Environmental Solutions & Innovations, Inc.
781 Neer Road, Cincinnati, OH 45233 (Phone: 513-451-1777)

Project #: 340 Date: 28 July 2011
Project Name: Republic - Wind
State: OH County: Seneca
Biologists: E. Basiger, A. Kleinhenz
Site name#: 32
GPS Unit #: 7 Camera #: SLN

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA					
Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From ___ to ___	% Cloud Cover (estimated)	Comments
2130	24.8°C	1-3	SW - NE	—	WU % 100% N
2200	26.0°C	1-3	SW - NE	—	
2230	25.4°C	1-3	SW - NE	—	
2300	25.4°C	1-3	N - S	—	
2330	25.3°C	1-3	SW - NE	—	
2400	25.1°C	1-3	SW - NE	—	
2430	25.1°C	1-3	SW - NE	—	
2500	25.0°C	1-3	SW - NE	—	
2130	24.9°C	1-3	SW - NE	—	

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	NN	41° 13' 02.3" N	82° 54' 29.7" W	12	7	2030	0145	3096
B	NN	41° 13' 04.5" N	82° 54' 29.8" W	9	6	2035	0150	3100
C	NN	41° 13' 05.9" N	82° 54' 29.4" W	8	6	2040	0155	3099
D	NN	41° 13' 05.1" N	82° 54' 27.7" W	9	6	2045	0200	3098

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
1	A	Loxiurus Brevilis	2123	Jv	M	NR	8.5g	47mm	E	0	3101-3104	
2	A	Eptesicus Fuscus	2130	Jv	F	NR	16.0g	48mm	E	1	3105 & 3106	
3	A	Eptesicus Fuscus	2242	Jv	F	NR	21.5g	49mm	F	1		
4	A	Eptesicus Fuscus	2244	Jv	M	NR	14.0g	45mm	M	0		
5	A	Eptesicus Fuscus	2246	Jv	F	NR	16.0g	47mm	F	0		
6	A	Eptesicus Fuscus	2249	Jv	M	NR	15.5g	48mm	M	1		
7	A	Eptesicus Fuscus	2338	Jv	M	NR	15.5g	49mm	M	1		
8	A	Eptesicus Fuscus	2341	Jv	F	NR	11.0g	42mm	M	0		
9	A	Eptesicus Fuscus	2344	Jv	M	NR	15.5g	46mm	F	0		
10	A	Eptesicus Fuscus	2414	Jv	F	NR	19.0g	49mm	F	0		

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap, A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR(PG)/PL; Male = ?/?



BAT CAPTURE DATA (continued)

Project #:

Date:

Project Name:

Site Name/ID:

Initials:

Capt #	Net #	Species	Time	Age (AdJv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (FIM/E)	Wing Index* (0-3)	Comments
11	A	Lasius borealis	2416	Jv	F	NR	11.0g	39mm	M	0	
12	C	Myotis septentrionalis	2416	Ad	F	PL	7.0g	36mm	E	0	3122-3125
13	C	Myotis septentrionalis	2423	Jv	M	NR	5.5g	35mm	M	0	
14	A	Eptesicus fuscus	2454	Jv	F	NR	16.0g	45mm	M	0	
15	B	Eptesicus fuscus	2457	Jv	M	NR	16.5g	46mm	M	0	
16	B	Eptesicus fuscus	2458	Jv	M	NR	15.5g	45mm	M	1	Not a bit of hair
17	D	Eptesicus fuscus	0001	Jv	M	NR	15.5g	45mm	M	0	
18	D	Eptesicus fuscus	0004	Ad	F	PL	24.0g	49mm	F	0	
19	D	Eptesicus fuscus	0008	Jv	M	NR	16.0g	48mm	M	0	
20	D	Eptesicus fuscus	0009	Jv	M	NR	17.0g	48mm	F	0	
21	C	Eptesicus fuscus	0025	Jv	F	NR	18.5g	47mm	F	0	
22	D	Eptesicus fuscus	0027	Jv	M	NR	4.0g	46mm	M	0	
23	D	Lasius borealis	0057	Jv	F	NR	14.5g	44mm	M	0	
24	A	Lasius borealis	0116	Jv	F	NR	6.0g	41mm	E	0	
25	A	Eptesicus fuscus	0118	Jv	M	NR	15.0g	46mm	M	0	

Beaufort Wind Scale

Wind Speed (mph)	Description	Visible Condition
0	Calm	Smoke rises vertically
1-3	Light Air	Direction of wind shown by smoke but not by wind vanes
4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary wind vane moved by wind
8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved
19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets on inland water
25-31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
32-38	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
39-46	Fresh Gale	Breaks twigs off trees; generally impedes progress

2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
Mar 15	Apr 21	Apr 28	May 5
Apr 14	May 20	May 27	Jun 4
May 13	Jun 18	Jun 26	Jul 4
Jun 12	Jul 18	Jul 25	Aug 2
Jul 11	Aug 16	Aug 24	Sep 1
Aug 9	Sep 15	Sep 23	Sep 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

Score	Description
0	No damage. Fewer than 5 small scar spots are present on the membranes.
1	Light damage. Less than 50% of flight membrane is depigmented (spotting), which is often visible only with transillumination.
2	Moderate damage. Greater than 50% of wing membrane covered with scar tissue (spotting). Scarring is visible without transillumination. Membrane exhibits some necrotic tissue and possibly few small holes (<0.5 cm diameter). Forearm skin may be flaking and discolored along the majority of the forearm.
3	Heavy damage. Deteriorated wing membrane and necrotic tissue. Isolated holes >0.5 cm are present in membranes. Necrotic or receding plagiopatagium and/or chiroptagium are evident.



BAT CAPTURE DATA

Project #: 340.01 Date: 7/30/11
 Project Name: _____
 State: OH County: Seneca
 Biologists: A. Kniewski
 Site name/ID: 32
 GPS Unit #: 7 Camera #: 8711

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2130	23.3	1-3		30%	
2200	22.6	0		30	
2230	22.7	0		20	
2300	22.0	0		20	
2330	21.7	0		20	
0000	21.2	0		15	
0300	21.5	0		15	
1000	21.3	0		0	
1300	21.2	0		0	
2000	21.0	0		0	

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	net	41° 13' 02.3" N	82° 54' 29.7" W	12	9	2110	215	3096
B	net	41° 13' 04.5" N	82° 54' 29.8" W	9	6	2107	211	3100
C	net	41° 13' 05.9" N	82° 54' 29.4" W	6	6	2100	200	3099
D	net	41° 13' 05.1" N	82° 54' 27.7" W	9	6	2105	207	3098

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
	B	<i>L. borealis</i>	2120		M		9.6	40	E	0		Escaped
1	B	<i>L. borealis</i>	2120	Jv	F	MR	16.2	46	E	0		
2	D	<i>E. fuscus</i>	2130	A	M	↑	10.5	41	E	0		
3	B	<i>L. borealis</i>	2138	Jv	F	NR	17.7	46	E	0		
4	B	<i>E. fuscus</i>	2155	A	M	↓	20.7	46	M	0		
5	B	<i>E. fuscus</i>	2207	A	F	PL	20.6	48	M	0		
6	A	<i>E. fuscus</i>	2210	A	F	PL	9.1	41	M	0		
7	A	<i>L. borealis</i>	2210	Jv	F	NR	19.8	46	F	0		
8	A	<i>E. fuscus</i>	2210	A	F	PL	17.4	46	M	0		
9	C	<i>E. fuscus</i>	2215	A	F	PL						

¹ M = Monofiliament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap, A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR/PG/LPL; Male = ↑/↓



Project #: 340

Date: 7/30/11

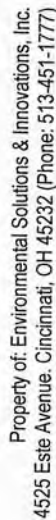
Project Name:

Site Name#:

32

Initials: ABK

Capt.#	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro.	Wt (g)	RFA (mm)	Belly (F/M/E)	Guanol Hair Sample	Comments/Picture #
10	C	E. fuscus	2215	Ju	M	NR	14.6	45	M		
11	B	L. borealis	2235	A	M	↓	10.6	42	M		
12	A	E. fuscus	2235	Ju	M	NR	15.4	44	F		
13	A	E. fuscus	2235	A	F	PL	19.0	45	M		
14	A	E. fuscus	2235	Ju	F	NR	16.5	45	F		
15	A	E. fuscus	2235	A	F	PL	21.3	47	F		
16	A	E. fuscus	2235	Ju	M	NR	15.2	45	F		
17	A	E. fuscus	2235	Ju	F	NR	16.9	45	F		
18	B	E. fuscus	2310	Ju	F	NR	16.3	46	M		
19	B	E. fuscus	2310	Ju	F	NR	15.8	46	F		
20	B	E. fuscus	2310	A	F	PL	19.3	45	F		
21	A	E. fuscus	2315	Ju	F	NR	17.3	46	E		
22	A	E. fuscus	2315	A	M	↓	16.3	45	F		
23	D	L. borealis	2317	Ju	M	NR	8.8	41	M		
24	D	E. fuscus	2345	A	M	↓	17.4	44	F		
25	A	E. fuscus	2355	Ju	M	NR	16.1	46	F		
26	C	E. fuscus	005	A	M	↑	17.0	46	E		
27	C	E. fuscus	005	J	M	NR	14.5	47	F		
28	A	E. fuscus	010	J	M	NR	14.3	46	E		
29	A	E. fuscus	020	J	F	NR	16.3	45	F		
30	A	E. fuscus	020	J	M	NR	15	45	E		
31	A	E. fuscus	020	J	M	NR	17.2	47	F		
32	A	L. borealis	035	J	F	NR	16.1	40	F		
33	A	E. fuscus	040	A	C	↓	15.4	44	M		
34	A	E. fuscus	040	J	C	NR	17.4	44	F		
35	B	L. borealis	040	J	F	NR	14.4	39	F		
36	D	L. borealis	40	J	F	NR	16.9	39	F		
37	A	L. borealis	1:00	J	F	NR	11	41	M		
38	C	M. seg	1:15	J	F	NR	6	34	M		



Initials:

Page 3 of 3



NET SITE HABITAT DESCRIPTION

Project #: 340

Date: 22 July 2011

Biologists: E. Basiger; S. Caplan

Project Name: Republic - Wind

Site Name/ #: 33

State: OH

County: Seneca

USGS Quad: Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
<u>A</u>	<u>NN</u>	<u>41° 16' 41.2"N</u>	<u>82° 57' 19.2"W</u>	<u>3096</u>	<u>51</u>
<u>B</u>	<u>NN</u>	<u>41° 16' 46.3"N</u>	<u>82° 57' 15.6"W</u>	<u>3100</u>	<u>52</u>
<u>C</u>	<u>NN</u>	<u>41° 16' 40.9"N</u>	<u>82° 57' 13.0"W</u>	<u>3099</u>	<u>53</u>
<u>D</u>	<u>NN</u>	<u>41° 16' 38.2"N</u>	<u>82° 57' 17.1"W</u>	<u>3098</u>	<u>54</u>

Distance to closest water source (meters): 0

Type of water source: ephemeral stream

Water source name: N/A

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS): 0

Bank Height: 1/2 meters Channel Width: 1 meters Stream Width: 1/2 meters

Substratum: Bedrock Boulder ☒ Cobble ☒ Gravel ☒ Sand Silt/Clay

Still Water Present (Y/N): Y Average Water Depth: 10 m or cm Clarity (H,M,L): L

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)

Acer saccharum

Quercus alba

Juglans nigra

Subdominant Canopy Species (< 40 cm/16" dbh)

Acer saccharum; Carya cordiformis

Prunus serotina

Tilia americana

Estimated dbh range: Lg: 150 Sm: 40

Estimated dbh range: Lg: 39 Sm: 10

Relative abundance of dominant vs. subdominant (ratio): 1:75

Estimated canopy closure:

☒ Closed

Moderate

Open

Roost tree potential consists of:

☒ Large Trees

☒ Snags

Neither

Roost tree potential for the area is:

High

☒ Moderate

Low

Roost potential comments: lots of large Acer and Quercus trees with dead limbs

Subcanopy clutter:

Closed

☒ Moderate

Open

Subcanopy comprised largely of:

Lower Branches of
Canopy Trees

☒ Saplings

Shrubs

Common Subcanopy Species:

Asimina triloba

Acer saccharum

Ostrya virginiana

Habitat Description: mature Upland Forest with Dominant Acer

AnaBat Habitat: N/A

Check all that apply:

☒ Mature Upland Forest

Recently Logged Forest

Crop/Pasture Land

Other

Young Upland Forest

Forest Edge

Stream/River

Mature Lowland Forest

Woodlot

☒ Vernal Pool

Young Lowland Forest

Old Field

Deepwater Lake/Pond

Herbaceous Cover: Sparse

☒ Moderate

Dense



NET SITE HABITAT DESCRIPTION (continued)

Project #: 340	State/County: OH/Seneca	Site Name/#: 33	Initials: ELB
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**SKETCH: NETS A and B
and AnaBat (if used)**

LEGEND	COMMENTS
Nets: ● — ●	



BAT CAPTURE DATA

Project #: 346 Date: 22 July 2011
 Project Name: Republic - Wind
 State: OH County: Seneca
 Biologists: E. Basiger, S. Caplain
 Site name #: 33
 GPS Unit #: 9508 Camera #: Eric

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2100	24.5	1-3	E → W	40%	rained earlier
2130	24.3	1-3	E → W	50%	
2200	24.1	1-3	E → W	50%	
2230	24.1	1-3	E → W	50%	
2300	24.0	1-3	E → W	50%	Thunder in distance
2330	24.0	1-3	E → W	70%	
0000	24.0	1-3	E → W	100%	" Rain = 0000
0030	23.9	1-3	E → W	100%	Rain
0100					
0130					
0200					

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	NN	41° 10' 41.2" N	82° 59' 19.2" W	9	9	2030	2000	3096
B	NN	41° 10' 40.3" N	82° 59' 15.6" W	6	6	2035	2000	3100
C	NN	41° 10' 40.9" N	82° 59' 13.0" W	9	6	2040	2010	3099
D	NN	41° 10' 39.2" N	82° 59' 17.1" W	6	6	2045	2010	3098

Net Placement/Site Description:

Nets placed over trails through wooded lot

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # /Guano/Hair Sample	Comments
1	D	Myotis septentrionalis	2120	Ad	M	↓	5.9	33	E	0	3080-3082	
2	A	Lasius cinereus	2120	Ad	F	NR	20.8	51	E	0	3083-3084	
3	A	Eptesicus fuscus	2200	Ad	M	↓	17.1	45	E	0	3085-3087	
4	A	Ep. fuscus	2200	Ad	F	PL	20.2	44	M	0		
5	A	Ep. fuscus	2235	Jv	M	↑	15.1	45	E	0		
6	A	Lasius borealis	2330	Jv	F	NR	9.3	38	E	0	3088-3089	
7	A	Ep. fuscus	2300	Ad	M	↓	17.5	44	M	1		
8	A	Ep. fuscus	2300	Ad	M	↓	16.2	45	M	0		
9	A	Ep. fuscus	2330									

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap, A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR/PG/LPL; Male = ↑/↓



Property of: Environmental Solutions & Innovations, Inc.
781 Need Road, Cincinnati, OH 45233 (Phone: 513-451-1777)

Project #: 340 Date: 23 July 2011
Project Name: Republic-Wind
State: OH County: Seneca
Biologists: E. Baigún, S. Capatzen
Site name/#: 33⁰
GPS Unit #: 9528 Camera #: 500

MOON PHASE*

___ New moon
 ___ Waxing gibbous
 ___ Last quarter
 ___ Waning crescent
 ___ Full moon
 ___ Waxing crescent
 ___ First quarter
 ___ Waning gibbous

MOON PHASE*

___ Waxing crescent ___ First quarter

___ Full moon ___ Waning gibbous

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	NW	41° 16' , 48.2 "N	82° 59' , 19.2 "W	9	4	—	—	3096
B	NW	41° 10' , 40.3 "N	82° 59' , 15.6 "W	6	6	—	—	3100
C	NW	41° 10' , 40.9 "N	82° 59' , 13.0 "W	9	6	—	—	3099

Net Placement/Site Description:

[illegible]

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓

* Refer to table on the back



BAT CAPTURE DATA

Project #: 340 Date: 24 July 2011
 Project Name: Republic-Wind
 State: 04 County: Saratoga
 Biologists: E. Baigún, S. Capitan
 Site name#: 33
 GPS Unit #: 9538 Camera #: Erin

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2100	25.9	1-3	E-W	100%	—
2130	24.9	1-3	E-W	100%	—
2200	24.3	1-3	SE-NW	75%	—
2230	24.0	1-3	W-E	25%	—
2300	23.8	1-3	W-E	10%	—
2330	23.7	1-3	W-E	30%	—
0000	23.0	1-3	W-E	50%	—
0030	22.4	1-3	W-E	75%	—
0100	23.1	1-3	W-E	80%	—
0130	23.1	1-3	W-E	20%	—

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	AN	41° 10' 41.8" N	82° 59' 19.2" W	7	7	2030	0140	3090
B	AN	41° 10' 40.3" N	82° 59' 15.6" W	6	6	2035	0145	3100
C	AN	41° 10' 40.9" N	82° 59' 13.0" W	9	6	2040	0150	3099
D	AN	41° 10' 39.2" N	82° 59' 17.1" W	6	6	2045	0155	3098

Net Placement/Site Description:

Net 3 built on trails; A, B, C, D

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
1	A	<i>Eptesicus fuscus</i>	2100	Ad	F	PL	18.1	47	E	0		
2	B	<i>Eptesicus fuscus</i>	2140	Ad	F	PL	19.5	46	M	0		
3	A	<i>E. fuscus</i>	2300	Ad	F	PL	26.0	46	F	0		
4	A	<i>E. fuscus</i>	2300	Jv	M	NR	22.0	45	M	0		
5	A	<i>E. fuscus</i>	2300	Jv	M	NR	19.5	44	F	0		
6	A	<i>E. fuscus</i>	2316	Ad	M	↓	18.0	45	F	0		
7	C	<i>E. fuscus</i>	2305	Jv	F	NR	18.0	44	M	0		

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap, A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓



BAT CAPTURE DATA

Project #: 340 Date: 26 July 2011
 Project Name: Republic - Wind
 State: OH County: Seneca
 Biologists: E. Basinger, Abby Kleinholz
 Site name/ID: 33
 GPS Unit #: 9528 Camera #: Eriq

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2100	24.3°C	1-3	N-E	2%	
2130	23.9°C	1-3	N-E	2%	
2200	23.6°C	1-3	N-S	1%	
2230	22.9°C	1-3	N-S	1%	
2300	21.8°C	1-3	N-S	0%	
2330	21.5°C	1-3	N-E	1%	
0000	21.8°C	1-3	N-S	1%	
0030	21.4°C	1-3	N-S	1%	
0100	20.8°C	1-3	N-S	0%	
0130	20.5°C	1-3	N-S	0%	
0200					

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	NN	41° 10' 41.2" N	82° 59' 19.2" W	9	4	2036	0145	3096
B	NN	41° 10' 40.7" N	82° 59' 15.0" W	6	6	2035	0150	3100
C	NN	41° 10' 40.9" N	82° 59' 13.0" W	9	6	2040	0155	3099
D	NN	41° 10' 39.2" N	82° 59' 17.1" W	6	6	2045	0200	3098

Net Placement/Site Description:

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
1	A	Eptesicus fuscus	2204	Ad	M	↓	17.9	46 mm	M	0		
2	A	Eptesicus fuscus	2237	Ad	F	PL	20.9	47 mm	M	1		
3	A	Eptesicus fuscus	2237	Ad	F	PL	19.5g	48 mm	M	0		
4	A	Eptesicus fuscus	2304	Ad	M	↓	17.9	45 mm	M	0		

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓



NET SITE HABITAT DESCRIPTION

Project #: 340 Date: 25 July 2011 Biologists: E. Basiger

Project Name: Republic-Wind Site Name/ #: 34

State: OH County: Seneca USGS Quad: Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
A	Net	41° 09' 38.4 "N	82° 57' 42.9 "W	975	55
B	Net	41° 09' 40.1 "N	82° 57' 43.3 "W	974	56
C	Net	41° 09' 40.2 "N	82° 57' 38.1 "W	976	57
D	Net	41° 09' 38.7 "N	82° 57' 36.7 "W	977	58

Distance to closest water source (meters): 150 Type of water source: Pond

Water source name: _____

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: _____ meters Channel Width: _____ meters Stream Width: _____ meters

Substratum: _____ Bedrock _____ Boulder _____ Cobble _____ Gravel _____ Sand _____ Silt/Clay

Still Water Present (Y/N): _____ Average Water Depth: _____ m or cm Clarity (H,M,L): _____

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)

Quercus alba
Quercus rubra
Carya ovata

Subdominant Canopy Species (< 40 cm/16" dbh)

Carya ovata
Tilia americana
Ulmus americana

Estimated dbh range: Lg: 70 Sm: 40

Estimated dbh range: Lg: 40 Sm: 10

Relative abundance of dominant vs. subdominant (ratio): 1:50

Estimated canopy closure: ☒ Closed ☐ Moderate ☐ Open

Roost tree potential consists of: ☒ Large Trees ☒ Snags ☐ Neither

Roost tree potential for the area is: ☐ High ☒ Moderate ☐ Low

Roost potential comments: dead trees and few large snags

Subcanopy clutter: ☐ Closed ☒ Moderate ☐ Open

Subcanopy comprised largely of: ☐ Lower Branches of Canopy Trees ☒ Saplings ☐ Shrubs

Common Subcanopy Species: Ulmus americana Acer saccharum
Acer rubrum

Habitat Description: Older woodlot surrounded by farm fields

AnaBat Habitat: _____

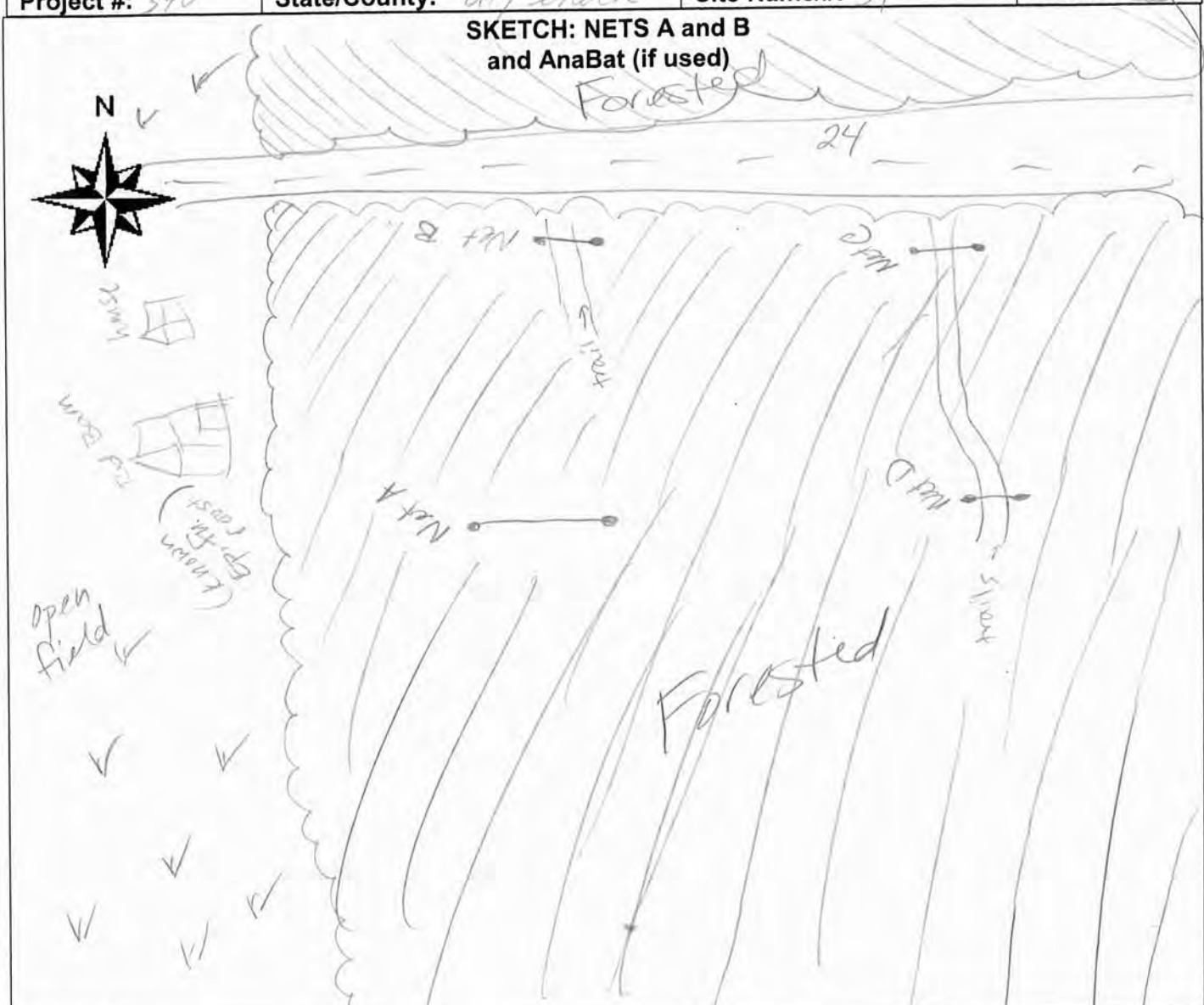
Check all that apply:

☒ Mature Upland Forest ☐ Recently Logged Forest ☐ Crop/Pasture Land ☐ Other _____
☒ Young Upland Forest ☐ Forest Edge ☐ Stream/River _____
☐ Mature Lowland Forest ☐ Woodlot ☐ Vernal Pool _____
☐ Young Lowland Forest ☐ Old Field ☐ Deepwater Lake/Pond _____

Herbaceous Cover: ☐ Sparse ☒ Moderate ☐ Dense



NET SITE HABITAT DESCRIPTION (continued)

Project #: 340	State/County: OH/Seneca	Site Name/ #: 34	Initials: ELS
<p>SKETCH: NETS A and B and AnaBat (if used)</p> 			
LEGEND Nets: ● — ●	COMMENTS 		



BAT CAPTURE DATA

Project #: 340 Date: 25 July 2011
 Project Name: Republic - Wind
 State: GA County: Seneca
 Biologists: E. Baizer
 Site name/ID: 340
 GPS Unit #: 9528 Camera #: Can671

MOON PHASE*

☐ New moon ☐ Waxing crescent ☐ First quarter
☐ Waxing gibbous ☐ Full moon ☐ Waning gibbous
☐ Last quarter ☐ Waning crescent

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated - see chart)*	Wind Direction: From to	% Cloud Cover (estimated)	Comments
2130	26.0	1-3	W-E	25%	
2200	23.9	1-3	W-E	10%	
2230	23.4	1-3	S-N	10%	
2300	23.1	1-3	S-N	0%	
2330	22.8	1-3	SW-NE	0%	
0000	22.6	1-3	SW-NE	0%	
0030	22.4	1-3	SW-NE	0%	
0100	22.0	1-3	SW-NE	0%	
0130	21.8	1-3	SW-NE	0%	
0200	21.7	1-3	SW-NE	0%	

Net/Trap/Anabat #	Net/Trap Type ¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	NN	41° 09' 38.4" N	82° 57' 42.9" W	12	19	2030	2145	975
B	NN	41° 09' 40.1" N	82° 57' 43.3" W	9	10	2035	2150	974
C	NN	41° 09' 40.2" N	82° 57' 38.1" W	9	10	2040	2200	976
D	NN	41° 09' 38.7" N	82° 57' 36.7" W	6	6	2045	2210	977

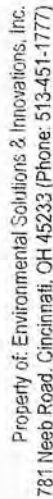
Net Placement/Site Description: 115 m x 115 m in woods

Capt #	Net #	Species	Time	Age (Ad/Jv)	Sex (M/F)	Repro. ²	Wt (g)	RFA (mm)	Belly (F/M/E)	Wing Index* (0-3)	Picture # / Guano/Hair Sample	Comments
1	C	Lasurus borealis	2115	Jv.	M	NR	8.0	39	E	0	3090	
2	C	Lasurus borealis	2120	Ad	F	PL	15.0	41	M	0		
3	B	Eptesicus fuscus	2130	Ad	M	↓	17.0	46	M	0	3092	
4	D	Myotis septentrionalis	2145	Ad	M	↓	7.0	37	M	0	3093-3095	
5	C	M. septentrionalis	2235	Ad	—	—	6.0	—	M	0	escaped	
6	D	M. septentrionalis	2240	Ad	M	↑	7.0	36	M	0		
7	C	M. septentrionalis	2300	Ad	F	PL	6.5	37	M	0		
8	C	E. fuscus	2302	Jv	M	NR	12.0	43	M	0		

¹ M = Monofilament, ON = Old Nylon, NN = New Nylon, HT = Harp Trap; A = Anabat

* Refer to table on the back

² Reproductive Condition: Female = NR/PG/L/PL; Male = ↑/↓



WEATHER DATA

GPS Unit #: 9628 Camera #: Carb 11

MOON PHASE*

___ New moon
 ___ Waxing gibbous
 ___ Last quarter
 ___ Waning crescent
 ___ Full moon
 ___ Waxing crescent
 ___ Waning gibbous
 ___ First quarter

Net/Trap/Anabat #	Net/Trap Type¹	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	11N	65° 09' 38.5" N	82° 57' 42.9" W	12	9	2030	0145	975
B	11N	61° 09' 42.1" N	82° 57' 48.3" W	6	6	2035	0156	974
C	11N	61° 09' 41.2" N	82° 57' 38.1" W	9	6	2040	0155	976
D	11N	61° 09' 38.7" N	82° 57' 36.7" W	6	6	2045	0200	977

Net Placement/Site Description:

[illegible]

M = Monofilament QN = Old Nylon NN = New Nylon HT = Haro Trap; A = Anabul

* Refer to table on the back



BAT TRANSMITTER DATA

Project #: 340.02 Date: 24 July 2011 Biologists: D. Jeffcott, S. Reeves
Project Name: Tetrach Republic Site Name/#: Site 16
State: OH County: Seneca Camera #: C4834
Picture #: 3788-99, 3803-07
Bat Species: Myotis sodalis Capture Time: 2120

Age Ad or Jv	Sex M or F	Reproductive Condition F=(NR/PG/L/PL; M=↑/↓	Wt (g)	RFA (mm)
<u>Ad</u>	<u>F</u>	<u>PL</u>	<u>7.0</u>	<u>37.0</u>

Transmitter weight = 0.2 grams Frequency number: 172.219
Transmitter + bat total weight = 7.4 grams Band/color number: Silver/ODNR/12063

FINAL CHECK:

- 1) Transmitter attachment (Y/N): Y
- 2) Signal receiving (frequency): 172.2181
- 3) Band attachment (Y/N): Y
- 4) Condition of animal: Excellent
- 5) Description of release: onto snag; crawled up quickly

RELEASE TIME: 2220 TOTAL HOLD TIME: 60 minutes

RELEASE LOCATION: Site 16, capture location

COMMENTS:

released onto snag after failed take-off
0126 - transmitter reading to west
0200 - transmitter gave no reading
0305 - transmitter reading to NNE



ROOST TREE DATA

Project #: 340.02 Date: 25 July 2011 Biologists: P. Jeffcott, S. Captain
Project Name: Tetatech / Republic State: OH County: Seneca
GPS Unit #: A5 Waypoint: 216-1 Camera #: 4834 Picture #: 104-3933, 3934
Latitude: 41° 13' 07.5"N Longitude: 82° 56' 38.0"W
Bat Species: Myotis sodalis Sex(M/F): F Age(Ad/Jv): Ad Repro.: PL
Capture Date: 24 July 2011 Capture Site: Site 16
Frequency: 172.2181 Roost Name/#: I bat #1

ROOST TREE DATA

Roost tree species: Carya ovata dbh: 25 cm
Estimated height from ground to roost: 10 (meters) Tree height 22 (meters)
Exfoliating bark (%): 30% Distance from capture site: 1 km m or (km) (circle one)
Tree health: ☒ Live ☐ Dead ☐ Partial
Observed roost potential: ☒ Exfoliating Bark ☐ Cracks/crevasses ☐ Hollow ☐ Unknown
Bat vocalizations: ☐ Yes ☒ No
Guano on ground/foliage: ☐ Yes ☒ No
Is guano fresh (if present)?: ☐ Yes ☒ No
Guano volume (if present): _____

DESCRIPTION OF SURROUNDING HABITAT

Dominant Canopy Species (> 40 cm/16" dbh) Carya ovata
Subdominant Canopy Species (< 40 cm/16" dbh) Carya ovata

Estimated dbh range (cm): Lg: _____ Sm: 40 cm Estimated dbh range (cm): Lg: 39 cm Sm: 5 cm

Estimated canopy closure at roost: 40 %

Slope: ☐ Steep ☐ Moderate ☐ Slight ☒ None Slope aspect: _____

Subcanopy Clutter: ☐ Closed ☐ Moderate ☒ Open

Distance to nearest water source: 1 km m or (km) (circle one) Distance to nearest flight corridor: 40 meters

Habitat Description: Woodlot with some large trees mainly shagbark hickory, fragmented areas of open

Check all that apply: Subcanopy, with very dense vegetation

☐ Mature Upland Forest ☐ Recently Logged Forest ☐ Crop/Pasture Land ☐ Shrub/scrub Swamp
☐ Young Upland Forest ☐ Pine Plantation ☐ Stream/River ☐ Vernal Pool
☐ Mature Lowland Forest ☒ Woodlot/Forest Edge ☐ Emergent Wetland ☐ Deepwater Lake/Pond
☒ Young Lowland Forest ☐ Old Field ☐ Forested Swamp ☐ Other _____

Comments: Evidence of logging, landowner allows some wood to be taken off property



ROOST TREE DATA (continued)

Page 2 of 2

State/County: OH / Seneca

Project Name/ #: Tetratich

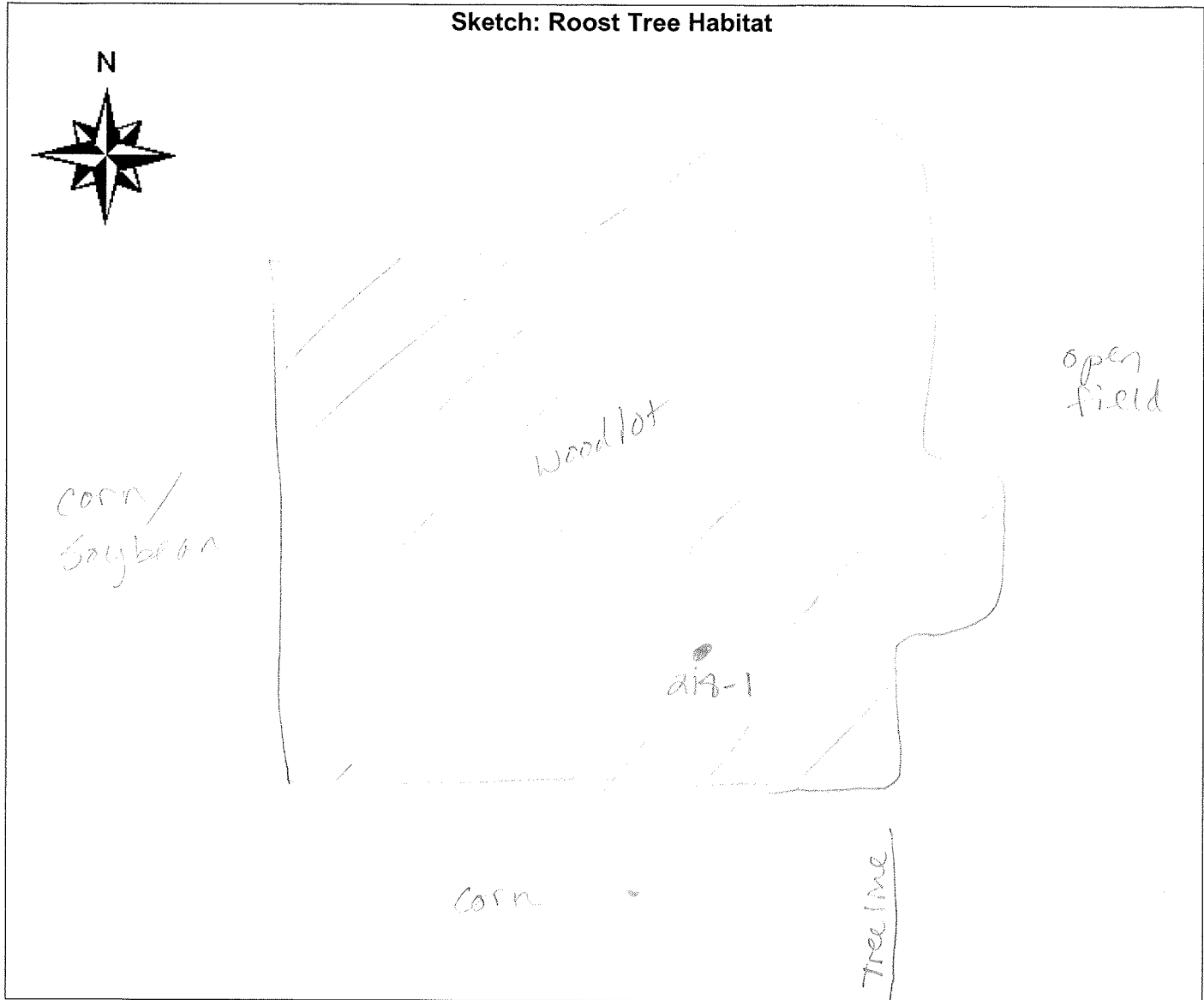
Date: 25-Jul-11

Frequency: 172.218

Roost Name/ #: 218-1

Initials: SC

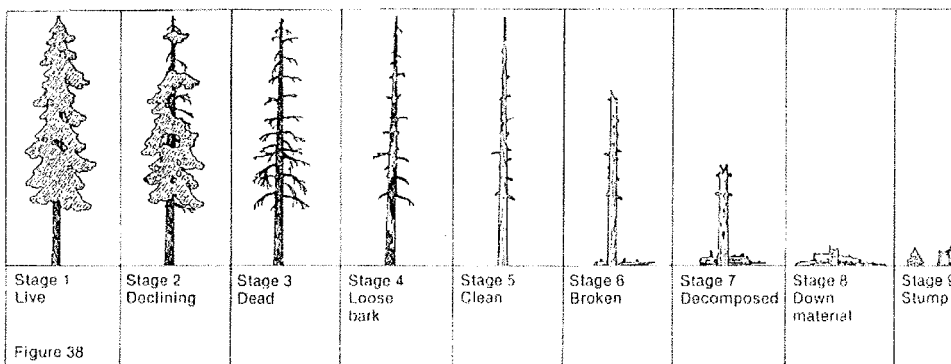
Sketch: Roost Tree Habitat



Comments: _____

Sketch: Roost Tree

Stages of Decay:





ROOST TREE EMERGENCE DATA

Project #: 340 Date: 26-Jul-11 Biologists: M. Farmer

Project Name: Republic State: OH County: Seneca

GPS Unit #: _____ Waypoint: OH-1

Latitude: 41 ° 11 ' 07.5 "N Longitude: 82 ° 56 ' 35.0 "W

Roost Name/#: 1

Radio-tagged bat present in tree: Yes _____ No X

Complete the following information only if a radio-tagged bat is present in the roost

Bat species: M. sodalis Sex(M/F): F Age(Ad/Jv): Ad Repro.: PL

Capture date: 24-Jul-11 Capture site: 16 Frequency: 170.218

NOTE: Tallies of bat exits should be made at 2-minute intervals. Use the back lighting of the setting sun to help distinguish bats as silhouettes against the sky as they exit the roost. Please ensure that you are close enough to the roost to observe all exiting bats, but not close enough to influence emergence (do not stand directly beneath the roost and do not make unnecessary noise and/or conversation, and minimize use of lights).

Arrival time: 2045 Departure time: _____ Total Bats: 4

Emergence Time	Number of Bats	Emergence Aspect
<u>2112</u>	<u>2</u>	
<u>2116</u>	<u>1</u>	
<u>2118</u>	<u>1</u>	

Describe emergence: Did bats emerge simultaneously, fly off in the same direction, loiter, circle, disperse, etc. What time did the transmitted bat(s) emerge? What direction did the transmitted bat fly?

Could not determine point of exit. Bats
foraged for approx 20 m vicinity of roost tree.



ROOST TREE EMERGENCE DATA

Project #: 340.01 Date: 27 Jul 11 Biologists: M. Flynn

Project Name: Republic State: OH County: Seneca

GPS Unit #: A5 Waypoint: _____

Latitude: 41° 13' 07.5" N Longitude: 82° 56' 38.0" W

Roost Name/#: 218-1

Radio-tagged bat present in tree: Yes _____ No X

Complete the following information only if a radio-tagged bat is present in the roost

Bat species: Myotis sodalis Sex(M/F): F Age(Ad/Jv): Ad Repro.: PL

Capture date: 24-Jul-11 Capture site: 16 Frequency: 172.218

NOTE: Tallies of bat exits should be made at 2-minute intervals. Use the back lighting of the setting sun to help distinguish bats as silhouettes against the sky as they exit the roost. Please ensure that you are close enough to the roost to observe all exiting bats, but not close enough to influence emergence (do not stand directly beneath the roost and do not make unnecessary noise and/or conversation, and minimize use of lights).

Arrival time: 21:00 Departure time: 21:45 Total Bats: 4

Emergence Time	Number of Bats	Emergence Aspect
9:10	3	circling around
9:12	—	roost tree
9:14	1	

Describe emergence: Did bats emerge simultaneously, fly off in the same direction, loiter, circle, disperse, etc. What time did the transmitted bat(s) emerge? What direction did the transmitted bat fly?

3 bats emerged simultaneously btwn 9:10-9:12. All bats circled
roost tree for 10-15 mins before dispersing.



ROOST TREE EMERGENCE DATA

Project #: 346.01 Date: 29 Jul 11 Biologists: R. Flynn

Project Name: Republic State: OH County: Seneca

GPS Unit #: 350 465671 Waypoint: _____

Latitude: 41° 13' 07.5" N Longitude: 82° 56' 36.0" W

Roost Name/#: # 218-1

Radio-tagged bat present in tree: Yes _____ No ☒

Complete the following information only if a radio-tagged bat is present in the roost

Bat species: M. sodalis Sex(M/F): F Age(Ad/Jv): Ad Repro.: _____

Capture date: 29 Jul 11 Capture site: 16 Frequency: 172.218

NOTE: Tallies of bat exits should be made at 2-minute intervals. Use the back lighting of the setting sun to help distinguish bats as silhouettes against the sky as they exit the roost. Please ensure that you are close enough to the roost to observe all exiting bats, but not close enough to influence emergence (do not stand directly beneath the roost and do not make unnecessary noise and/or conversation, and minimize use of lights).

Arrival time: 20:50 Departure time: 21:35 Total Bats: 1

Emergence Time	Number of Bats	Emergence Aspect
<u>21:11</u>	<u>1</u>	<u>circling</u>

Describe emergence: Did bats emerge simultaneously, fly off in the same direction, loiter, circle, disperse, etc. What time did the transmitted bat(s) emerge? What direction did the transmitted bat fly?

1 bat emerged, circled roost tree for approximately 10 mins before
dispensing.



ROOST TREE DATA

Project #: 540 Date: 26-Jul-11 Biologists: S. Captain
Project Name: Tetatech State: OH County: Seneca
GPS Unit #: A5 Waypoint: 218-2 Camera #: 4834 Picture #: 104-3831, 104-3832
Latitude: 41° 13' 06.1"N Longitude: 82° 56' 44.6"W
Bat Species: M. sodalis Sex(M/F): F Age(Ad/Jv): Ad Repro.: PL
Capture Date: 24-Jul-11 Capture Site: 16
Frequency: 172.218 Roost Name/#: 218-2

ROOST TREE DATA

Roost tree species: Carya ovata dbh: 30 cm
Estimated height from ground to roost: 30 (meters) Tree height 40 (meters)
Exfoliating bark (%): 40 Distance from capture site: 1 m or km (circle one)
Tree health: ☒ Live ☐ Dead ☐ Partial
Observed roost potential: ☒ Exfoliating Bark ☐ Cracks/crevasses ☐ Hollow ☐ Unknown
Bat vocalizations: ☐ Yes ☒ No
Guano on ground/foliage: ☐ Yes ☒ No
Is guano fresh (if present)?: ☐ Yes ☒ No
Guano volume (if present): _____

DESCRIPTION OF SURROUNDING HABITAT

Dominant Canopy Species (> 40 cm/16" dbh)

Subdominant Canopy Species (< 40 cm/16" dbh)

Carya ovata Quercus rubra
Populus deltoides
Acer saccharum

Estimated dbh range (cm): Lg: _____ Sm: _____

Estimated dbh range (cm): Lg: 30 Sm: 10

Estimated canopy closure at roost: 5 %

Slope: ☐ Steep ☐ Moderate ☐ Slight ☒ None Slope aspect: _____

Subcanopy Clutter: ☐ Closed ☒ Moderate ☐ Open

Distance to nearest water source: 400 (m) or km (circle one) Distance to nearest flight corridor: 50 meters

Habitat Description: _____

Check all that apply:

<input type="checkbox"/> Mature Upland Forest	<input type="checkbox"/> Recently Logged Forest	<input checked="" type="checkbox"/> Crop/Pasture Land	<input type="checkbox"/> Shrub/scrub Swamp
<input type="checkbox"/> Young Upland Forest	<input type="checkbox"/> Pine Plantation	<input type="checkbox"/> Stream/River	<input type="checkbox"/> Vernal Pool
<input type="checkbox"/> Mature Lowland Forest	<input checked="" type="checkbox"/> Woodlot/Forest Edge	<input type="checkbox"/> Emergent Wetland	<input type="checkbox"/> Deepwater Lake/Pond
<input type="checkbox"/> Young Lowland Forest	<input type="checkbox"/> Old Field	<input type="checkbox"/> Forested Swamp	<input type="checkbox"/> Other _____

Comments: _____



ROOST TREE DATA (continued)

Page ____ of ____

State/County: OH / Seneca

Project Name/ #: Tetrattech

Date: 26-July-11

Frequency: 172.218

Roost Name/ #: 218-2

Initials: SC

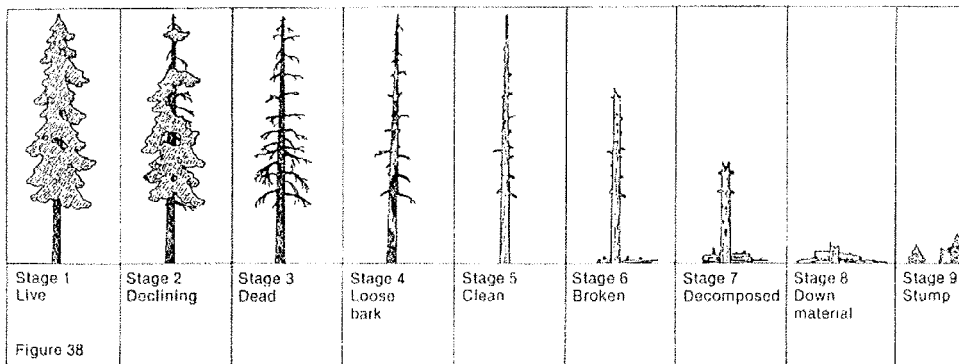
Sketch: Roost Tree Habitat



Comments: _____

Sketch: Roost Tree

Stages of Decay:





ROOST TREE EMERGENCE DATA

Project #: 340 Date: 26-Jul-11 Biologists: S. Captain

Project Name: Tetratich State: OH County: Seneca

GPS Unit #: A5 Waypoint: 218-2

Latitude: 41 ° 13 ' 06.1 "N Longitude: 82 ° 56 ' 44.6 "W

Roost Name/#: 218-2

Radio-tagged bat present in tree: Yes ☒ No ☐

Complete the following information only if a radio-tagged bat is present in the roost

Bat species: m. sodalis Sex(M/F): F Age(Ad/Jv): Ad Repro.: PL

Capture date: 24-Jul-11 Capture site: 16 Frequency: 172.218

NOTE: Tallies of bat exits should be made at 2-minute intervals. Use the back lighting of the setting sun to help distinguish bats as silhouettes against the sky as they exit the roost. Please ensure that you are close enough to the roost to observe all exiting bats, but not close enough to influence emergence (do not stand directly beneath the roost and do not make unnecessary noise and/or conversation, and minimize use of lights).

Arrival time: 2030 Departure time: 2125 Total Bats: 0

Emergence Time	Number of Bats	Emergence Aspect
<u>2056</u>	<u>0</u>	

Describe emergence: Did bats emerge simultaneously, fly off in the same direction, loiter, circle, disperse, etc. What time did the transmitter bat(s) emerge? What direction did the transmitter bat fly?

Couldn't see well to the E/NE so she could have exited from there.



ROOST TREE EMERGENCE DATA

Project #: 340 Date: 27 Jul 2011 Biologists: M Farmer

Project Name: Republic State: OH County: Seneca

GPS Unit #: _____ Waypoint: _____

Latitude: 41° 13' 06.1" N Longitude: 82° 56' 33.5" W

Roost Name/#: 2

Radio-tagged bat present in tree: Yes _____ No X

Complete the following information only if a radio-tagged bat is present in the roost

Bat species: _____ Sex(M/F): _____ Age(Ad/Jv): _____ Repro.: _____

Capture date: _____ Capture site: _____ Frequency: _____

NOTE: Tallies of bat exits should be made at 2-minute intervals. Use the back lighting of the setting sun to help distinguish bats as silhouettes against the sky as they exit the roost. Please ensure that you are close enough to the roost to observe all exiting bats, but not close enough to influence emergence (do not stand directly beneath the roost and do not make unnecessary noise and/or conversation, and minimize use of lights).

Arrival time: 2100 Departure time: 2140 Total Bats: 0

Emergence Time	Number of Bats	Emergence Aspect

Describe emergence: Did bats emerge simultaneously, fly off in the same direction, loiter, circle, disperse, etc. What time did the transmitted bat(s) emerge? What direction did the transmitted bat fly?

Bats were seen foraging the area, did not see individuals dropping from roost tree.

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12/26/2018 1:01:36 PM

in

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Summary: Application Exhibit J Part 10 of 33 electronically filed by Teresa Orahoud on behalf of Dylan F. Borchers