Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue. Cincinnati, OH 45232 (Phone: 513-451-1777)

ESI

NET SITE HABITAT DESCRIPTION

Project #: 340 **Date:** 7/27/11 **Biologists:** Andrew Kniowski - Josiah

Project Name: Republic **Site Name/#:** 4

State: Ohio **County:** Sandusky? **USGS Quad:** Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
A	net	41 ° 14 ' 52.3 "N	82 ° 56 ' 14.0 "W	0672	340A4
B	net	41 ° 14 ' 51.5 "N	82 ° 56 ' 14.9 "W	0673	340B4
C	net	41 ° 14 ' 52.7 "N	82 ° 58 ' 15.4 "W	0674	340C4
D	net	41 ° 14 ' 55.0 "N	82 ° 56 ' 14.8 "W	0675	340D4

Distance to closest water source (meters): 400 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 rubra
Juglans nigra

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

Estimated dbh range: Lg: 70 Sm: 45 Estimated dbh range: Lg: 35 Sm: 10

Relative abundance of dominant vs. subdominant (ratio): 1/8

Estimated canopy closure: ___Closed [X] Moderate ___Open

Roost tree potential consists of: [X] Large Trees [X] Snags ___ Neither

Roost tree potential for the area is: ___High [X] Moderate ___Low

Roost potential comments: large dead snag on prop + Shag hickory?

Subcanopy clutter: ___Closed [X] Moderate ___Open

Subcanopy comprised largely of: ___Lower Branches of Canopy Trees [X] Saplings ___Shrubs

Common Subcanopy Species: Ulmus americana, Acer saccharum

Habitat Description: Small woodlot in cropland

AnaBat Habitat: N/A

Check all that apply:

[X] Mature Upland Forest
___Young Upland Forest
___Mature Lowland Forest
___Young Lowland Forest
___Recently Logged Forest
[X] Forest Edge
[X] Woodlot
___Old Field
[X] Crop/Pasture Land
___Stream/River
___Vernal Pool
___Deepwater Lake/Pond
___Other _____

Herbaceous Cover: ___ Sparse [X] Moderate ___Dense

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NET SITE HABITAT DESCRIPTION (continued)

Project #: 340	State/County: OH, Sandusky?	Site Name/#: 4	Initials: ABK

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

LEGEND	COMMENTS
Nets: ●——●	

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BAT CAPTURE DATA

Project #: 340 Date: 7/27/11

Project Name: Republic

Biologists: Andrew Kniorzysiak - Josiah Site name/#: 4

State: Ohio County: Sandusky?

GPS Unit #: 7 Camera #: 11

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
21:30	25.6	4-7	5%	
22:00	24.3	4-7	5%	
22:30	24.7	4-7	50%	
23:00	24.6	4-7	50%	
23:30	24.6	4-7	50%	light sprinkles
000	24.1	4-7	100%	
00:30	24.1	4-7	100%	
1:00	24.2	8-12	100%	
1:30	24.3	8-12	100%	
2:00	24.4	8-12	100%	
2:30	25.0	8-12	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 #
A	net	41 ° 14 ' 52.3 "N	82 ° 56 ' 14.0 "W	6	9	2135	240	0672	340A4
B	net	41 ° 14 ' 51.5 "N	82 ° 56 ' 14.9 "W	2.6	6	2125	225	0673	340B4
C	net	41 ° 14 ' 52.7 "N	82 ° 56 ' 15.4 "W	9	9	2127	230	0674	340C4
D	net	41 ° 14 ' 55.0 "N	82 ° 56 ' 14.9 "W	6	6	2130	237	0675	340D4

Net Placement/Site Description: Woodlot near cropland

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)	Comments Picture # /Guano/Hair Sample
1	C	E. fuscus	21:45	Jv	f	NR	17.7	46	m	0	
2	C	E. fuscus	21:45	Jv	m	NR	14.2	46	E	0	
3	C	E. fuscus	21:45	Ad	m	↓	15.2	45	E	0	
4	C	E. fuscus	21:45	Ad	m	↓	16.1	46	E	0	
5	C	E. fuscus	21:45	Ad	m	↓	16.2	45	E	0	
6	C	E. fuscus	21:45	Ad	m	↓	15.4	45	E	0	
7	A	L. Borealus	22:15	Ad	f	PL	12.3	42	m	0	
8	A	L. Borealus	22:15	Jv	f	NR	9.6	40	m	0	
9	C	E. fuscus	22:20	Ad	m	↓	15.6	45	E	0	

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

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BAT CAPTURE DATA (continued)

Project #: 340 Date: 7/27/11

Project Name: Site Name/#: 4 Initials: NC, ABK

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
10	C	E. fuscus	22:20	Jv	m	NR	14.7	45	m	0	
11	C	E. fuscus	22:20	Ad	f	PL	17.7	46	E	0	
12	D	E. fuscus	22:30	Jv	m	NR	13.5	44	E	0	
13	C	E. fuscus	22:35	Ad	m	L	15.2	45	E	0	
14	C	E. fuscus	22:50	Jv	f	NR	15.2	48	m	0	
15	C	E. fuscus	22:50	Ad	f	L	19.7	46	F	0	
16	C	E. fuscus	22:50	Ad	f	PL	18.4	46	F	0	
17	C	E. fuscus	22:50	Ad	m	L	18.2	47	F	0	
18	C	E. fuscus	22:50	Ad	f	PL	20.5	48	F	0	
19	D	E. fuscus	22:55	Ad	f	PL	19.4	45	f	0	
20	C	E. fuscus	23:20	Ad	f	NR	20.6	46	f	0	
21	C	E. fuscus	23:20	Ad	f	PL	21.6	47	f	0	
22	C	E. fuscus	23:20	Ad	f	PL	17.6	46	m	0	
23	C	E. fuscus	00:55	Ad	m	L	17.1	44	F	0	
24	C	E. fuscus	00:25	Jv	f	NR	15.8	46	F	0	
25	D	E. fuscus	1:10	Jv	m	NR	15	46	M	0	
26	A	E. fuscus	1:40	Jv	m	NR	14.9	46	F	0	Trans 172, 1205
27	A	M. sod	2:00	Jv	m	NR	5.9	33	m	0	
28	A	M. lucifugus	2:35	Jv	F	NR	7.7	37	E	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA

Project #: 340 Date: 7/29/11

Project Name: Republic

State: OH County: Sandusky

Biologists: A. Kaiowski, J. Kleinheinz

Site name/#: 4

GPS Unit #: 7 Camera #: 11

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		1-3	—	50%	
2130		1-3	—	10%	
2200		—	—	0	
2230		—	—	10%	
2300		—	—		
2330			—		
000			—		
030		1-3	—	0%	
100			—	5%	
130			—	5%	
200			—	5%	

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 ° 14 ' 52.3 "N	82 ° 56 ' 14.0 "W	6	9	2050	150	0672
B	net	41 ° 14 ' 51.5 "N	82 ° 56 ' 14.9 "W	2.6	6	2053	202	0673
C	net	41 ° 14 ' 52.7 "N	82 ° 56 ' 15.4 "W	9	9	2057	205	0674
D	net	41 ° 14 ' 55.0	82 56 ' 14.8	6	6	2100	220	0675

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	C	L. Borealis	21:18	Ad	F	PL	14.4	42	M	0	
2	C	E. fuscus	21:28	Ad	M	↓	14.7	46	E	0	
3	A	E. fuscus	21:40	Ad	M	↑	20.3	46	M	0	
4	C	E. fuscus	21:50	Ad	M	↓	16.5	44	M	0	
5	C	E. fuscus	22:14	Ad	M	↑	15.5	46	M	0	
6	D	E. fuscus	22:35	Ad	M	↓	15.5	45	E	0	
7	C	E. fuscus	00:55	Ad	F	PL	20.0	47	E	0	
8	C	E. fuscus	01:55	Jv	M	NR	16.5	46	E	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 = T/↓

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NET SITE HABITAT DESCRIPTION

Project #: 340 **Date:** 19-Jul-11 **Biologists:** E. Bosinger, S. Captain

Project Name: Johnstown republic **Site Name/#:** 5

State: OH **County:** Seneca **USGS Quad:** Watson

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
Net	A	41 ° 13 ' 41.8 "N	83 ° 02 ' 38.6 "W	2999	—
Net	B	41 ° 13 ' 44.5 "N	83 ° 02 ' 40.0 "W	3000	—
Net	C	41 ° 13 ' 32.1 "N	83 ° 02 ' 41.3 "W	3002	—
Net	D	41 ° 13 ' 41.4 "N	83 ° 02 ' 44.1 "W	3004	—

Distance to closest water source (meters): 0 Type of water source: Creek

Water source name: —

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: 1 meters Channel Width: 2 meters Stream Width: 4 meters

Substratum: ___Bedrock ___Boulder ___Cobble X Gravel X Sand ___Silt/Clay

Still Water Present (Y/N): X Average Water Depth: 30 m or (cm) Clarity (H,M,L): M

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)
Platanus occidentalis
Populus deltoides

Estimated dbh range: Lg: 100 Sm: 50

Subdominant Canopy Species (< 40 cm/16" dbh)
Fraxinus pennsylvanica, Ulmus americana
Tilia americana, Juglans nigra
Acer saccharinum, Aesculus glabra

Estimated dbh range: Lg: 39 Sm: 20

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

Estimated canopy closure: ___Closed ___Moderate X Open

Roost tree potential consists of: X Large Trees X Snags ___ Neither

Roost tree potential for the area is: X High ___Moderate ___Low

Roost potential comments: Many large snags w/ loose bark

Subcanopy clutter: ___Closed X Moderate ___Open

Subcanopy comprised largely of: X Lower Branches of Canopy Trees ___Saplings ___Shrubs

Common Subcanopy Species: Acer negundo

Habitat Description: Riparian through forested corridor surrounded by farmland

AnaBat Habitat: N/A

Check all that apply:

__Mature Upland Forest __Recently Logged Forest X Crop/Pasture Land __Other ____
__Young Upland Forest __Forest Edge X Stream/River
X Mature Lowland Forest __Woodlot __Vernal Pool
__Young Lowland Forest __Old Field __Deepwater Lake/Pond

Herbaceous Cover: ___ Sparse X Moderate ___Dense

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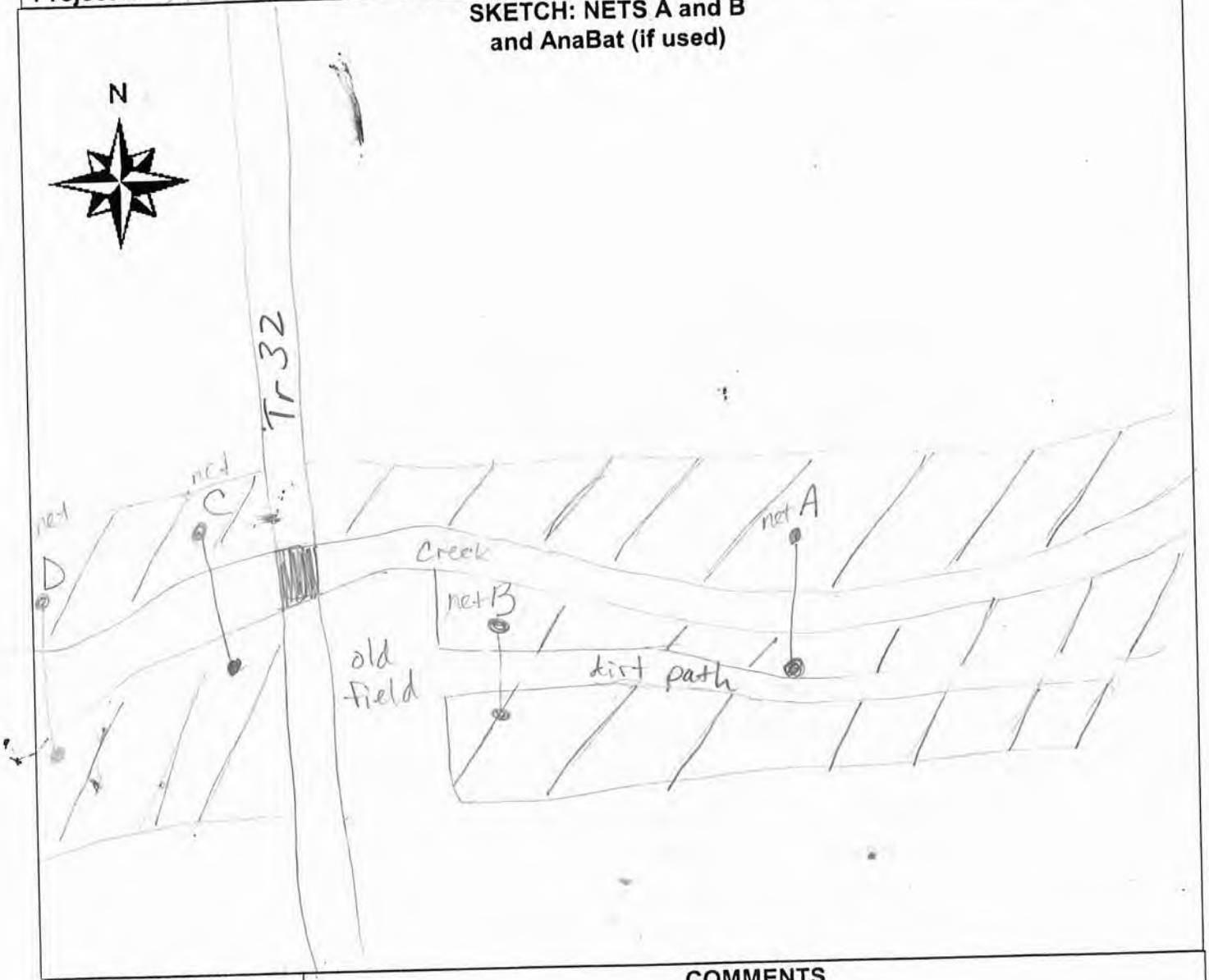
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340	State/County: OH/Seneca	Site Name/#: 5	Initials:

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



LEGEND	COMMENTS
Nets:	
Bridge	
Forest	

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BAT CAPTURE DATA

Project #: 340 Date: 17 July 2011

Project Name: Tetratech Republic

State: OH County: Seneca

Biologists: Erin Basiger; Alexa Gantt

Site name/#: 5

GPS Unit #: 9524 Camera #: Erin

MOON PHASE*

X New moon
___Waxing gibbous
___Last quarter
___Waxing crescent
___Full moon
___Waning crescent
___First quarter
___Waning gibbous

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated – see chart)*	Wind Direction: From ___ to ___	% Cloud Cover (estimated)	Comments
2100	26.8	0	—	0	
2130	26.2	0	—	0	
2200	25.8	0	—	0	
2230	25.2	0	—	0	
2300	24.7	0	—	0	
2330	24.1	0	—	0	
0000	24.1	0	—	0	
0030	24.0	1-3	E-W	0	
0100	24.0	1-3	E-W	0	
0130	24.0	1-3	E-W	0	
0200	23.9	1-3	E-W.	0	
0230	23.8				

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' 41.8"N	83° 02' 38.6"W	12	9	2035	2210	2999
B	Net	41° 13' 44.5"N	83° 02' 40.5"W	6	6	2040	0300	3000
C	Net	41° 13' 32.1"N	83° 02' 41.5"W	12	6	2045	0300	3002

Net Placement/Site Description: Both nets over stream

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	Eptesicus fuscus	2131	Ad	F	L	16.5	44	E	0	
2	D	Eptesicus fuscus	2145	Ad	M	PL	15.5	43	E	0	
3	A	Myotis lucifugus	2155	Ad	M	↑	7.5	35	E	0	3002 - 3003
4	A	Myotis lucifugus	2156	Ad	M	↑	7.0	36	E	0	
5	A	Myotis lucifugus	2157	Jv	M	NR	6.5	35	E	0	
6	A	Myotis lucifugus	2158	Ad	F	PL	9.0	36	E	0	
7	A	Myotis lucifugus	2159	Ad	F	PL	8.0	36	E	0	
8	A	Myotis lucifugus	2200	Ad	F	PL	7.0	36	E	0	
9	D	Myotis lucifugus	2232	Ad	F	PL	9.5	36	M	0	
10	D	Myotis septentrionalis	2239	Ad	M	↑	8.0	35	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 = ↑/↓

	Trap type	Latitude	Longitude	Length	Height	time ↑	time ↓	Picture #
43 D	Net	41° 13' 41.4	83° 02' 44.1"W	9	6	2050	0155	3004

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BAT CAPTURE DATA (continued)

Project #: 243 Date: 17 July 11

Project Name: Republic Wind Site Name/#: 5 Initials: EAB

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	C	Myotis lucifugus	22:40	JV	F	NR	6.0	34	M	0	
12	A	Eptesicus fuscus	22:42	Ad	M	↑	12.0	46	M	0	
13	A	Myotis lucifugus	22:48	Ad	F	PL	7.5	35	M	0	
14	A	Eptesicus fuscus	22:48	Ad	F	PL	21.0	50	M	0	3009 & 3010
15	A	Myotis lucifugus	22:48	Ad	F	PL	8.0	36	M	0	
16	A	Myotis lucifugus	23:12	Ad	M	↑	8.0	35	M	0	
17	D	Eptesicus fuscus	23:[illegible]	JV	F	NR	15.5	48	M	0	
18	D	Myotis septentrionalis	23:29	Ad	M	↑	6.5	36	M	0	3011 & 3012
19	A	Eptesicus fuscus	23:50	Ad	F	PL	21.0	46	M	0	
20	A	Myotis lucifugus	23:[illegible]	Ad	F	PL	9.0	36	M	0	
21	A	Eptesicus fuscus	23:[illegible]	Ad	F	PL	20.0	50	M	1	
22	A	Myotis lucifugus	24:15	Ad	F	PL	9.0	36	M	0	
23	A	Lasionycteris noctivagans	24:15	Ad	M	↑	16.0	44	M	0	
24	C	Lasionycteris noctivagans	24:30	JV	F	NR	10.0	44	M	0	3016 & 3017
25	A	Myotis septentrionalis	01:20	Ad	F	PL	9.0	36	M	0	
26	D	Myotis lucifugus (12)	01:26	JV	F	NR	7.0	35	M	0	
27	A	Eptesicus fuscus	01:41	Ad	F	PL	22.0	49	M	0	
28	A	Eptesicus fuscus	01:42	JV	M	NR	14.0	45	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	Sept 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA

Project #: 340 Date: 19-Jul-11

Project Name: Tetratech

State: OH County: Seneca

Biologists: E. Basiaco, S. [illegible]

Site name/#: 5

GPS Unit #: 9528 Camera #: Erin

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated – see chart)*	Wind Direction: From ___ to ___	% Cloud Cover (estimated)	Comments
2100	29.9	1-3	—	10%	
2130	29.1	0	—		
2200	27.4	0	—	10%	
2230	26.9	1-3	—	10%	
2300	26.7	1-3	—	25	
2330	26.6	1-3	—	25	
0000	26.5	1-3	—	25	
0030	26.5	1-3	—	40	
0100	25.1	1-3	—	25	
0130	25.4	4-7		25	

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	net	41 ° 13 ' 41.8 "N	83 ° 02 ' 38.6 "W	12	9	2038	0145	2999
B	net	41 ° 13 ' 44.5 "N	83 ° 02 ' 40.0 "W	6	6	2039	0150	3000
C	net	41 ° 13 ' 32.1 "N	83 ° 02 ' 41.5 "W	12	6	2045	0155	3002

Net Placement/Site Description: alt across creek

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	Myotis lucifugus	2145	Jv	F	NR	4.3	35	M	0	
2	A	Eptesicus fuscus	2145	Jv	M	↑	11.6	44	E	0	
3	A	E. fuscus	2149	Ad	M	↓	16.0	46	M	0	
		E. fuscus	2150	Jv	M	↑	16.2	45	M	0	
5	A	Myotis lucifugus	2202								bag escape
6	A	Myotis lucifugus	2212	Jv	M	↑	9.1	36	F	0	
7	A	Eptesicus fuscus	2230	Jv	M	↑	16.4	45	F	0	
8	A	Myotis lucifugus	2305	Ad	F	PL	10.5	37	M	0	
9	A	E. fuscus	2310	Ad	M	↓	17.5	45	F	0	
10	A	E. fuscus	2335	Jv	F	NR	12.7	43	M	0	

[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

D net 41°13'41.4" | 83°02'44.1" | 9 x 6 | 2049 | 0200 | Pic# 3004

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BAT CAPTURE DATA (continued)

Project #: 340 Date: 20-Jul-11

Project Name: Tetratech Site Name/#: Initials: EB/SC

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	L	M. [illegible]	2350	Jv	F	NF	8.0	37	F	0	
12	D	M. [illegible]	2355	Jv	M	↑	[illegible]	35	M	0	
13	A	E. fuscus	0002								net escape
14	A	M. lucifugus	0010	Ad	F	PL	8.4	35	F	0	
15	A	Lasiurus cinereus	0105	Jv	M	↓	20.1	51	F	0	3054-3057
16	D	E. fuscus	[illegible]	Jv	M	↓	12.5	44	E	0	
[illegible]	[illegible]	M. lucifugus	[illegible]	Ad	F	PL	13.0	36	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	Sept 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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NET SITE HABITAT DESCRIPTION

Project #: 340.02 **Date:** 19-Jul-11 **Biologists:** E. Pfeifer, S. Captain, S. Reeves

Project Name: Tetlatch Republic **Site Name/#:** Site 7

State: OH **County:** Seneca **USGS Quad:** Fireside

Camera #: Erin **Picture #s:** 3033 – 3036 **GPS Unit #:** E9529 **Waypoint #:** 3407

Latitude: 41 ° 13 ' 32.8 "N **Longitude:** 83 ° 01 ' 22.4 "W

Distance to closest water source (meters): 20m Type of water source: pond

Water source name: unnamed private pond

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)

—

—

—

Estimated dbh range: Lg: — Sm: —

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

Prunus serotina, Acer saccharum

Juglans nigra, Celtis occidentalis

Fraxinus pennsylvanica, Populus deltoides

Estimated dbh range: Lg: 35 Sm: 15

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

Estimated canopy closure: ___Closed ___Moderate X Open

Roost tree potential consists of: ___Large Trees X Snags ___Both ___ Neither

Roost tree potential for the area is: X High ___Moderate ___Low

Roost potential comments: Dead elms & other good snags

Subcanopy clutter: ___Closed X Moderate ___Open

Subcanopy comprised largely of: ___Lower Branches of Canopy Trees X Saplings ___Shrubs

Common Subcanopy Species: Ulmus rubra, Juglans nigra, Ulmus americana

Habitat Description: Young woodlot near old field and pond; ATV trails from campground nearby into woodlot

Check all that apply:

__Mature Upland Forest	__Recently Logged Forest	X Crop/Pasture Land	__Shrub/scrub Swamp
__Young Upland Forest	__Pine Plantation	__Stream/River	__Vernal Pool
__Mature Lowland Forest	X Woodlot/ForestEdge	__Emergent Wetland	X Deepwater Lake/Pond
__Young Lowland Forest	X Old Field	__Forested Swamp	__Other _____

Herbaceous Cover: ___ Sparse X Moderate ___Dense

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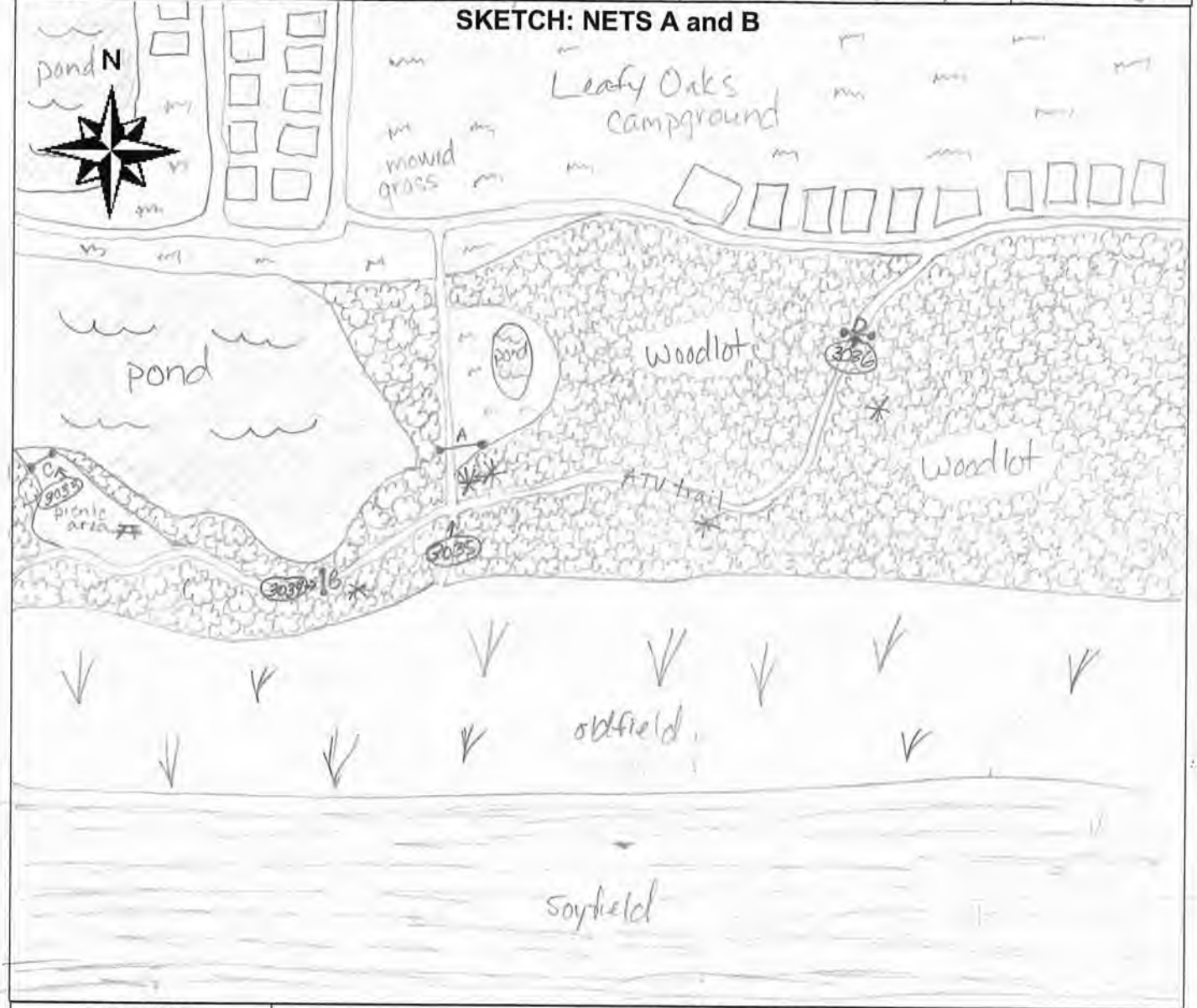
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: OH/Seneca	Site Name/#: Site 7	Initials: SR

SKETCH: NETS A and B



LEGEND	COMMENTS
Nets: ●——●	N/A
RV's: □	
Snags: *	
Mature Angle:	

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ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 19-Jul-11

Project Name: Tetratech Republic

Biologists: E Brasier, S Naptow Site name/#: Site 7

State: Ohio County: Seneca

GPS Unit #: E 9528 Camera #: EB Kodak

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2030	26.5	0	15%	—
2100	25.2	0	10%	—
2130	25.4	0	10%	—
2200	24.0	0	35%	—
2230	23.6	0	0%	—
2300	23.4	0	0%	—
2330	23.0	0	0%	—
0000	23.0	0	0%	—
0030	22.9	0	0%	—
0100	22.7	0	0%	—
0130	22.4	0	0%	—
0200	22.2	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° 13' 19.7" N	83° 01' 21.6" W	9	9.2	2045	0145	3035	050
Net	B	41° 13' 19.2" N	83° 01' 25.6" W	6	6.2	2050	0150	3034	049
Net	C	41° 13' 19.4" N	83° 01' 29.2" W	6	6.2	2055	0155	3033	048
Net	D	41° 13' 20.5" N	83° 01' 21.6" W	6	6.2	2100	0200	3036	047

Net Placement/Site Description: Nets A, B & D on ATV trail in woodlot near old field & pond. Net A across spur to road

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)	Comments Picture # /Guano/Hair Sample
1	B	Lasiurus borealis	2110	Ad	F	PL	12.5	42	E	0	3041
2	A	Eptesicus fuscus	2120	Jv	M	↑	12.2	43	E	0	3043
3	B	E. fuscus	2125	Jv	M	↑	10.9	43	E	0	N/A
4	B	Myotis septentrionalis	2125	Jv	M	↑	6.0	36	E	0	3045
5	B	M. septentrionalis	2125	Ad	F	PL	7.0	37	E	0	N/A
6	C	E. fuscus	2215	Ad	F	PL	19.9	46	M	1	Broken right wing 3046
7	A	E. fuscus	2215	Ad	M	↓	13.7	44	M	0	N/A
8	C	E. fuscus	2225	Jv	F	NR	15.8	46	E	0	N/A
9	A	E. fuscus	2225								Escaped Net

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

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BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 19 July 2011

Project Name: [illegible] Site Name/#: Site 7 Initials: EG, 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)	Comments Picture # /Guano/Hair Sample
10	D	Eptesicus fuscus	0000	Ad	M	↓	18.5	45	E	0	N/A
11	A	Myotis lucifugus	0040	Jv	M	↑	6.6	36	M	0	3047-3053
12	C	E. fuscus	0045	Ad	F	PL	23.8	47	E	0	N/A
13	E	E. fuscus	0045	Jv	F	NR	12.5	44	M	0	N/A
14	C	E. fuscus	0051	Ad	F	PL	20.4	46	F	1	spotting
15	C	E. fuscus	0050	Ad	F	PL	20.7	44	E	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 (splotching), which is often visible only with translumination
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA

Property of: Environmental Solutions & Innovations, Inc.
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Project #: 3[illegible] Date: 2 July 20[illegible]

Project Name: Republic - [illegible]

State: OH County: Seneca

Biologists: E Basinger; S Cameron

Site name/#: 7

GPS Unit #: E9528 Camera #: [illegible]

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	28.2	0	—	05	
2130	28.0	0	—	25	
2200	27.3	1-3	E-N	05	
2230	27.1	1-3	E-N	25	
2300	26.9	1-3	E-W	25	
2330	26.5	1-3	E-W	05	
0000	26.3	1-2	E-W	25	
0030	26.2	1-3	E-W	5	
0100	26.0	1-3	E-W	05	
0130	25.9	1-3	E-W	5	

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 ' 19.7 "N	83 ° 01 ' 24.6 "W	9	9	2330	0145	3035
B	NN	41 ° 13 ' 19.2 "N	83 ° 01 ' 25.6 "W	6	6	2335	0150	3034
C	NN	41 ° 13 ' 19.4 "N	83 ° 01 ' 29.2 "W	6	6	2000	0155	3033
D	NN	41 13 20.5	83 01 21.6	6	6	2045	0200	3036

Net Placement/Site Description: Note: one net only see Tab 5 through complete

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
[illegible]	B	M. [illegible]	2230	Jv	F	NR	5.5	34	E	0	
2	B	E. fuscus	2230	Ad	[illegible]	PL	20.5	45	F	0	
3	B	M. [illegible]	2230	Jv	F	NR	6.1	35	—	0	
4	A	M. [illegible]	2330	Jv	M	NR	6.5	35	M	0	
5	C	E. fuscus	2330	Ad	F	PL	19.9	45	F	0	
6	C	E. fuscus	2330	Ad	M	↓	15.6	43	M	0	
7	B	M. [illegible]	0000	Ad	F	L	7.8	36	M	0	
8	A	E. fuscus	0000	Ad	M	↓	17.0	43	F	0	
9	B	E. fuscus	[illegible]	Jv	F	NR	14.7	44	M	0	
10	B	E. fuscus	[illegible]	Ad	F	PL	21.3	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 = ↑/↓

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BAT CAPTURE DATA (continued)

Project #: [illegible] 340 **Date:** 21 July 2011

Project Name: [illegible] **Site Name/#:** **Initials:** [illegible]

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	C	E. fuscus	[illegible]	Ad	F	P	24.5	49	F	0	
12	C	Myotis lucifugus	[illegible]	Ad	F	PL	8.1	36	F	0	3057-3059
13	A	E. fuscus	[illegible]	Jv	M	NR	14.0	44	F	0	
14	A	M. lucifugus	[illegible]	Ad	F	PL	8.2	36	F	0	
15	C	M. septentrionalis	[illegible]	Ad	M	↑	6.6	35	F	0	
16	C	E. fuscus	[illegible]	Ad	F	PL	20.1	41	F	1	
17	A	E. fuscus	2030	Jv	F	NR	17.0	46	F	2	
18	C	Perimyotis subflavus	2045	Jv	F	NR	4.6	34	F	0	3062-3064
19	C	E. fuscus	2045	Jv	F	NR	14.1	47	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	Sept 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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NET SITE HABITAT DESCRIPTION

Project #: 340-01 **Date:** 29 Jul-11 **Biologists:** J. Basiger

Project Name: Republic **Site Name/#:** 8

State: OH **County:** Seneca **USGS Quad:** Watson

Camera #: Can671 **Picture #s:** 985-988 **GPS Unit #:** 465670 **Waypoint #:** ___

Latitude: 41 ° 13 ' 42.7 "N **Longitude:** 83 ° 0 ' 53.6 "W

Distance to closest water source (meters): 50 m 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)
Carya ovat
Acer rubrum
Quercus palustris

Estimated dbh range: Lg: ____ Sm: ____

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

Estimated dbh range: Lg: ____ Sm: ____

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

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: Large trees are tight bark

Subcanopy clutter: ___Closed ✓ Moderate ___Open

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

Common Subcanopy Species: _____ _____

Habitat Description: mowed yard, sloped forest down to pond and stream.

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/ForestEdge	__Emergent Wetland	✓ Deepwater Lake/Pond
__Young Lowland Forest	__Old Field	__Forested Swamp	__Other _____

Herbaceous Cover: ___ Sparse ✓ Moderate ___Dense

340.01 OH/Seneca site# 8 29-Jul-11

ESI

BAT CAPTURE DATA

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

Project #: 340.01 Date: 29-July-11

Project Name: Republic

State: OH County: Seneca

Biologists: J. Badger

Site name/#: 8

GPS Unit #: 465670 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
2100	24.6	—	—	0	
2130	24.1	—	—	0	
2200	23.7	—	—	0	
2230	23.4	—	—	0	
2300	23.2	—	—	0	
2330	22.9	—	—	0	
0000	22.5	—	—	0	
0030	22.1	—	—	0	
0100	22.2	—	—	0	
0130	21.9	—	—	0	
0200	21.9	—	—	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° 13' 42.7" N	83° 0' 53.6" W	6	6	2035	0200	985
B	N	41° 13' 43.8" N	83° 0' 53.3" W	6	6	2040	0205	988
C	N	41° 13' 44.4" N	83° 0' 52.2" W	9	9	2045	0210	986
D	N	41° 13' 46.8"	83° 0' 52.7"	12	6	2050	0215	987

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	Myotis septentrionalis	2205	Ad	F	PL	7.25	35	M	0	953
2	A	Eptesicus fuscus	2215	Ad	M	↓	17.5	46	F	0	954-955
3	B	E. fuscus	2250	Jv	F	NA	17.25	46	F	0	
4	B	E. fuscus	2250	Ad	M	↓	17.5	43	M	0	
5	D	Lasiurus borealis	0200	Ad	F	PL	16.50	41	M	0	962-967

[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 = ↓/↓

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Property of: Environmental Solutions & Innovations, Inc.
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BAT CAPTURE DATA

Project #: 348 Date: 31-Jul-11

Project Name: Republic

State: OH County: Seneca

Biologists: J. Burns, M. Sanger

Site name/#: 8

GPS Unit #: 465670 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
	27.2	—	—	0	
	26.8	—	—	0	
	25.2	—	—	0	
	[illegible]	[illegible]	—	0	
	[illegible]	[illegible]	—	0	
	23.9	[illegible]		0	
	[illegible]	[illegible]		0	
	[illegible]	[illegible]		0	
0100	23.6	—	—		
0130	23.4	—	—		
0200	23.1	—	—		

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° 13' 42.7" N	83° 0' 53.6" W	6	6	2030	0150	985
B	N	41° 13' 43.8" N	83° 0' 53.3" W	6	6	2035	0155	988
C	N	41° 13' 44.4" N	83° 0' 52.2" W	9	9	2040	0200	986
D	N	41 13 46.8	83 0 52.7	12	6	2045	205	987

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	C	Myotis septentrionalis	2130	Jv	F	NA	5.75	36	M	0	
	D	[illegible]									
	C	[illegible]	[illegible]	Jv	F	NR	7.2	37	F	0	13-0991-0999
	B	Perimyotis subflavus	[illegible]	Jv	M	↑	5.2	34	M	0	13-0989, [illegible]
	D	[illegible]		Jv	M	↑	[illegible]	46	F	0	
	D	Myotis [illegible]	0155	Jv	F	NR	[illegible]	[illegible]	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 = 1/↓

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NET SITE HABITAT DESCRIPTION

Project #: 340.02 **Date:** 17 July 2011 **Biologists:** [illegible]

Project Name: Tuhratch Republic **Site Name/#:** Site 9

State: OH **County:** Seneca **USGS Quad:** Fireside

Camera #: [illegible] **Picture #s:** 874-877 **GPS Unit #:** [illegible] **Waypoint #:** ___

Latitude: 41 ° 14 ' 0.3 "N **Longitude:** 82 ° 59 ' 49.5 "W

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

Water source name: ___

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)
Tilia americana	Carya ovata
Acer rubrum	Acer rubrum
Carya ovata	
Estimated dbh range: Lg: 55 Sm: 40	Estimated dbh range: Lg: 39 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 ___Both ___ 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: ___ ___

Habitat Description: Mature mesic woodlot

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/ForestEdge	__Emergent Wetland	__Deepwater Lake/Pond
✓ Young Lowland Forest	✓ Old Field	__Forested Swamp	✓ Other lawn/[illegible]

Herbaceous Cover: ___ Sparse ✓ Moderate ___Dense

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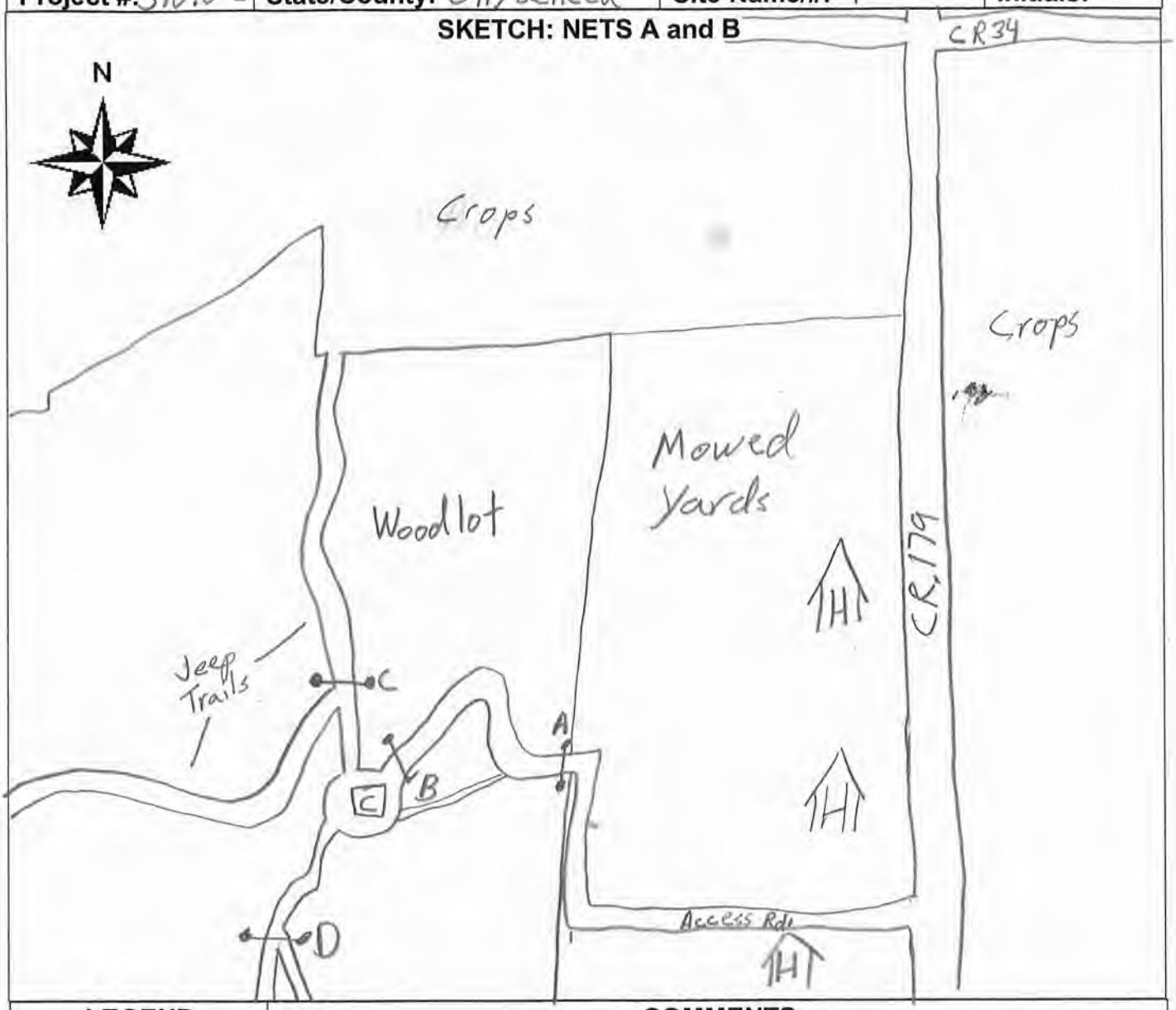
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: OH/Seneca	Site Name/#: 9	Initials:

SKETCH: NETS A and B



LEGEND	COMMENTS
Nets: ●——●	

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BAT CAPTURE DATA

Project #: 3410.02 Date: 17 July 2011

Project Name: Tetratech Republic

Biologists: V Barack, S Reeves Site name/#: Site 9

State: Ohio County: Seneca

GPS Unit #: G7406 Camera #: C6209

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2100	80.5	0	0%	—
2130	79.2	0	0%	—
2200	79.1	1-3	0%	—
2230	79.2	1-3	0%	—
2300	79.0	1-3	0%	—
2330	78.8	1-3	0%	—
0000	78.1	1-3	0%	—
0030	77.6	1-3	0%	—
0100	76.5	1-3	0%	
0130	76.7	1-3	0%	
0200	76.5	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° 14' 08.1 "N	82° 59' 49.5 "W	6	6	2100	0200	874	09A
Net	B	41° 14' 08 "N	82° 59' 53.5 "W	9	9	2055	0155	875	09B
Net	C	41° 14' 09.2 "N	82° 59' 54.2 "W	6	6	2050	0150	876	09C
Net	D	41° 14' 07 "N	82° 59' 55.3 "W	9	6	2045	0145	877	09D

Net Placement/Site Description: Nets across removed oil-road (A & B), Nets C & D across ATV/walking trails in 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)	Comments Picture # /Guano/Hair Sample
1	D	Perimyotis subflavus	2125	Ad	M	↑	5.3	32	E	0	N/A
2	D	Myotis septentrionalis	2125	Jv	M	↓	6.9	35	E	0	0217
3	D	Perimyotis subflavus	2125	Ad	M	↑	6.5	32	E	0	0216
4	C	M. septentrionalis	2125	Ad	F	PL	6.5	36	E	0	mites on wing & body
5	C	Eptesicus fuscus	2130	Ad	M	↓	17.1	45	M	0	0218
6	B	E. fuscus	2150	Ad	F	PL	15.2	44	E	1	N/A
7	A	E. fuscus	2150	Ad	F	PL	18.1	46	F	2	many healed spots (scars)
8	A	E. fuscus	2150	Ad	M	½↓	17.3	45	M	0	N/A
9	A	E. fuscus	2150	Ad	M	½↓	17.2	45	F	0	N/A

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

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BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 17 July 2011

Project Name: Tetratech Republic Site Name/#: Site 9 Initials: VB, 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)	Comments Picture # /Guano/Hair Sample
10	A	Eptesicus fuscus	2200	Ad	M	↑	18.2	45	F	0	N/A
11	A	E. fuscus	2210	Ad	F	L	18.6	45	M	0	small tear on left wing
12	A	E. fuscus	2210	Ad	F	PL	24.9	48	F	1	scarring and spots
13	A	E. fuscus	2220	Ad	F	PL	19.8	45	F	1	healed scars
14	B	E. fuscus	2220	Ad	F	L	19.0	44	M	1	manual 0220-0221
15	B	E. fuscus	2220	Ad	F	PL	17.7	47	F	0	few spots
16	B	Perimyotis subflavus	2220	Jv	F	NR	5.1	32	E	0	N/A
17	B	E. fuscus	2230	Ad	M	½↓	16.0	46	F	0	N/A
18	C	E. fuscus	2230	Jv	M	↑	15.5	45	M	0	N/A
19	C	E. fuscus	2330	Ad	F	L	19.6	46	F	0	N/A
20	C	E. fuscus	2330								Escaped Net
21	B	Myotis septentrionalis	2330	Ad	F	PL	6.8	37	E	0	N/A
22	B	E. fuscus	2330	Ad	F	L	18.1	46	F	0	N/A
23	A	E. fuscus	2335	Ad	F	PL	20.1	46	F	2	scarring & spots
24	A	E. fuscus	2335	Ad	M	½↓	15.6	44	F	0	N/A
25	A	E. fuscus	2340	Jv	F	NR	17.9	45	E	0	N/A
26	D	M. septentrionalis	0000	Jv	F	NR	7.0	37	M	0	N/A
27	B	E. fuscus	0010	Ad	F	L	20.2	47	F	1	[illegible]
28	C	M. septentrionalis	0045	Ad	F	PL	6.7	36	E	1	[illegible]
29	A	E fuscus	0200	Ad	M	↓	16.3	47	E	0	
30	A	E fuscus	0200	Ad	F	L	17.8	46	E	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA

Project #: 340.01 Date: 20 Jul 2011

Project Name: Republic

State: OH County: Seneca

Biologists: J. Bosiger, M Flynn

Site name/#: 9

GPS Unit #: 151 465670 Camera #: CAM 671

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated – see chart)*	Wind Direction: From ___ to ___	% Cloud Cover (estimated)	Comments
2100	27.5	0	—	10%	
2130	27.3	0	—	10%	
2200	27.0	0	—	10%	
2230	27.2	0	—	10%	
2300	27.3	0	—	10%	
2330	27.1	0	—	20%	
0000	27.4	0	—	30%	
0030	27.6	1-3	—	50%	
0100	27.3	1-3	—	50%	
0130	27	1-3	—	80%	

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	net	41° 14' 08.0 "N	82° 59' 49.5 "W	6'	6	2100		874 / wpt 09A
B	net	41° 14' 08.0 "N	82° 59' 53.5 "W	9	9	2100		875 / 09B
C	net	41° 14' 09.2 "N	82° 59' 54.2 "W	6	6	2100		876 / 09C
D	net	41° 14' 0.70'	82° 59' 55.31	9	9	2100		877 09D

Net Placement/Site Description: nets across consumption drive (A+B), nets C + D across trails 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)	Comments Picture # /Guano/Hair Sample
1	B	Lasiurus borealis	2115	Jv	M	↑	—	37	E	0	
2	A	Eptesicus fuscus	2120	Ad	M	↓	15.25	45	M	0	
3	A	L. borealis	2125	Ad	M	↓	9.75	37	E	0	
4	D	Myotis septentrionalis	2130	Jv	M	↑	6.0	36	E	0	
5	B	M. septentrionalis	2130	Jv	F	NR	5.75	34	E	0	
6	B	E. fuscus	2145	Jv	F	NA	13.5	45	M	0	Freq. 172239
7	B	E. fuscus	2200	Ad	M	↑	15.75	46	M	0	
8	B	E. fuscus	2210	Ad	F	PL	21.75	48	F	0	
9	B	E. fuscus	2210	Jv	M	↑	13	43	M	0	
10	B	E. fuscus	2210	Ad	F	PL	18.5	43	F	0	

[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

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BAT CAPTURE DATA (continued)

Project #: _____ Date: _____

Project Name: _____ Site Name/#: _____ 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	B	E. fuscus	22:10	Ad	M	↑	19.0	46	F	0	
12	B	E. fuscus	22:10	Jv	M	↑	13.0	42	E	0	Bat dial [illegible]
13	B	E. fuscus	22:10	Ad	M	↓	18.0	45	F	0	
14	A	E. fuscus	22:20	Ad	F	PL	18.75	50	M	0	
15	A	E. fuscus	22:20	Ad	F	PL	21.25	49	F	0	
16	A	E. fuscus	22:20	Ad	F	PL	18.0	48	M	0	Recap from night 1
17	A	E. fuscus	22:20	Ad	M	↑	18.5	47	M	0	
18	A	E. fuscus	22:30	Jv	M	↑	13.0	43	M	0	
19	B	Myotis Septentrionalis	22:40	Ad	F	PL	7.25	34	M	0	
20	A	E. fuscus	22:50	Ad	M	↑	15.5	47	F	0	
21	A	E. fuscus	22:50	Ad	M	↓	16.0	45	M	0	
22	A	E. fuscus	23:10	Ad	M	↑	19.25	44	F	0	
23	C	Perimyotis subflavus	01:10	Jv	M	↑	4.0	32	M	0	
24	B	E. fuscus	01:10	Ad	F	PL	18.75	46	F	0	
25	B	M. Septentrionalis	01:20	[illegible]	M	↑	—	—	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	Sept 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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NET SITE HABITAT DESCRIPTION

Project #: 340 **Date:** 7/19/11 **Biologists:** A. Kulowski, M. Farmer

Project Name: [illegible] **Site Name/#:** 10

State: OH **County:** Seneca **USGS Quad:** Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
A	Net	41 ° 13 ' 47.8 "N	82 ° 59 ' 41.8 "W	869	10a
B	Net	41 ° 13 ' 48.0 "N	82 ° 59 ' 42.8 "W	870	10b
C	Net	41 ° 13 ' 48.5 "N	82 ° 59 ' 44.3 "W	871	10c
D	Net	41 ° 13 ' 48.9 "N	82 ° 59 ' 46.0 "W	872	10d

Distance to closest water source (meters): Ø Type of water source: stream

Water source name: —

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: 2 meters Channel Width: 6 meters Stream Width: 4 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): M

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)
Acer saccharinum
Juglans nigra

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

Estimated dbh range: Lg: 70 Sm: 15 Estimated dbh range: Lg: 40 Sm: 10

Relative abundance of dominant vs. subdominant (ratio): 1/6

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 rubra

Habitat Description: Typical Small Ohio stream/lowland forest strip

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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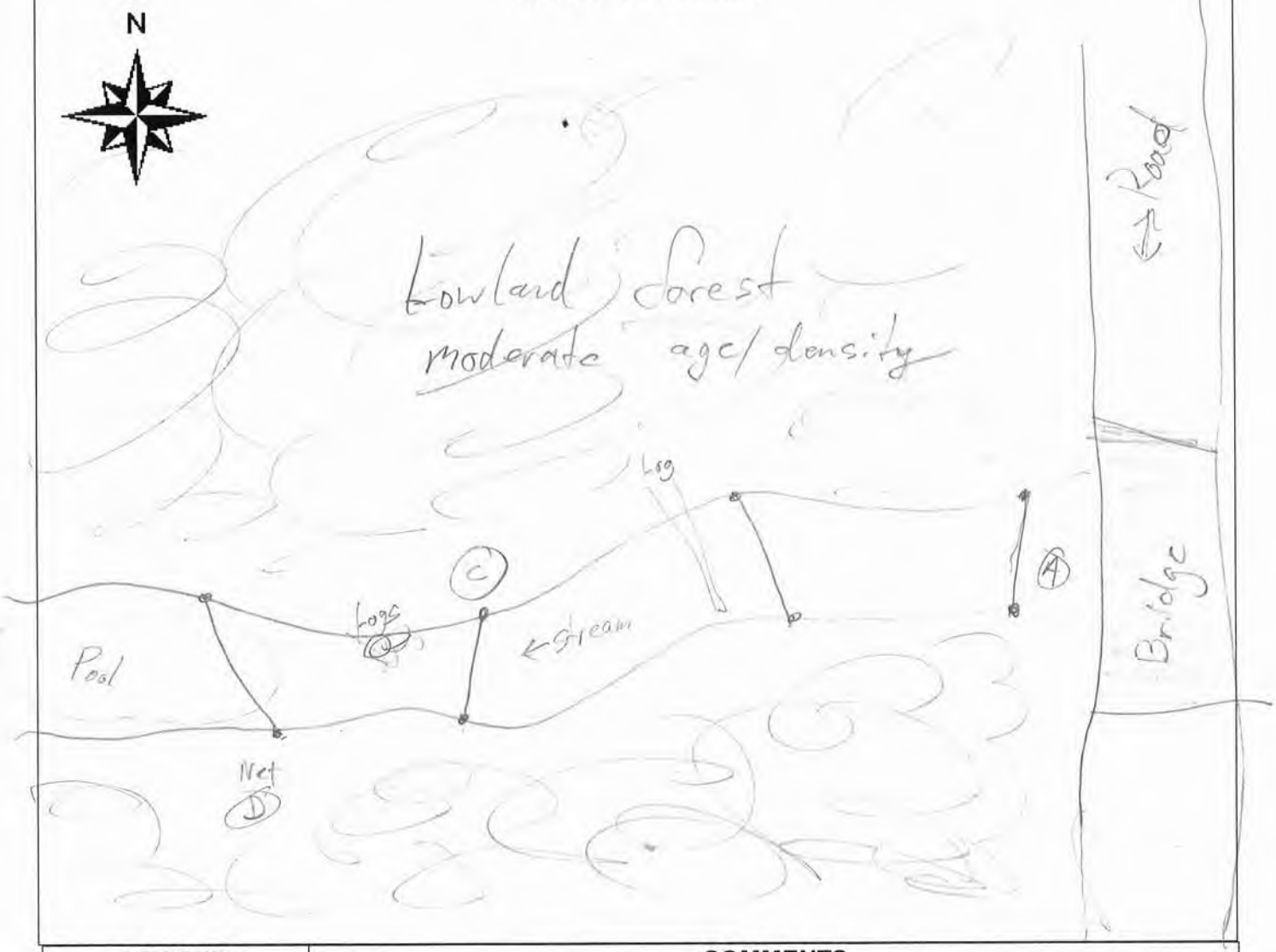
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.01	State/County: OH/Seneca	Site Name/#: 10	Initials:

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



LEGEND	COMMENTS
Nets: ●——●	

ESI

Property of: Environmental Solutions & Innovations, Inc.
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BAT CAPTURE DATA

Project #: 340.01 Date: 17 July 11

Project Name: Republic

State: OH County: Seneca

Biologists: J. Basinger & M. Flynn

Site name/#: 10

GPS Unit #: ESI465671 Camera #: car 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	26.9	—	—	0	
2130	26.5	—	—	0	
2200	26.4	—	—	0	
2230	26.2	—	—	0	
2300	26.0	—	—	10	
2330	25.9	—	—	15	
0000	25.9	—	—	0	
0030	25.7	—	—	0	
0100	25.4	—	—	0	
0130	25.1	—	—	0	
0200	24.8	—	—	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 ' 47.8 "N	82 ° 59 ' 41.8 "W	6	6	2045	0200	869
B	Net	41 ° 13 ' 48.0 "N	82 ° 59 ' 42.8 "W	6	9	2050	0205	870
C	Net	41 ° 13 ' 48.5 "N	82 ° 59 ' 44.3 "W	9	6	2055	0210	871
D	Net	41 13 48.9	82 59 46.0	9	6	2100	0215	872

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	Eptesicus fuscus	2230	Ad	M	↓	18.25	46	E	0	
2	C	"	2230	Ad	F	PL	21.5	49	M	0	
3	C	"	2230	Ad	M	↓	17.25	43	M	0	
4	C	"	2230	Ad	F	PL	21.75	46	F	0	
5	C	Lasiurus cinereus	2230	Jv	M	↓	22.75	55	M	0	pic # 843, 844
6	D	Myotis lucifugus	2230	Ad	M	↑		35	M	0	
7	D	M. lucifugus	2230	Ad	M	↑	7.5	35	M	0	pic # 850, 851
8	D	E. fuscus	2230	Ad	F	PL					
9	D	E. fuscus	2230	Ad	F	PL					
10	D	E. fuscus	2230	Ad	F	PL					

[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 = ↑/↓

Cap#	net #	spp	time	age	sex	repro	wt.	RFA	belly	wing index	comment
11	A	E. fuscus	2330	Ad	F	PL	20.5	46	F	0	
12	D	E fuscus	2330	JV	M	↑	16.5	44	M	0	
13	D	E fuscus	2330	Ad	M	↑	17	47	M	0	
14	A	M. septentrionalis	0030	JV	F	NR	6.25	35	M	0	
15	A	M. septentrionalis	0030	Ad	F	PL	7.25	34	E	0	pic# 853
16	D	E. fuscus	0030	Ad	F	PL	22.25	48	F	0	pic 854-856
17	D	E fuscus	0030	Ad	F	PL	20.25	47	F	0	
18	D	E. fuscus	0142	Ad	F	PL	19.5	44	F	0	

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ESI

BAT CAPTURE DATA

Project #: 340 Date: 7/19/11

Project Name: Republic

Biologists: A. Kaiowski, M. Farmer Site name/#: 10

State: OH County: Seneca

GPS Unit #: 465671 Camera #: 671

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2120	26	1-3	30%	
2150	24.9	0	30	
2220	24.3	0	10	
2250	23.9	0	20	
2320	23.5	0	20	
2350	23.2	0	0	
020	23.1	0	20	
050	22.7	0	0	
120	22.4	0	0	
150	22.8	0	0	
220	21.9	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 #
A	Net	41 ° 13 ' 47.8 "N	82° 59 ' 41.8 "W	6	6	2115	235	869	
B	"	41 ° 13 ' 48.0 "N	82° 59 ' 42.8 "W	6	9	2115	230	870	
C	"	41 ° 13 ' 48.5 "N	82° 59 ' 44.3 "W	9	6	2105	215	871	
D	"	41 ° 13 ' 48.9 "N	82° 59 ' 46.0 "W	9	6	2105	210	872	

Net Placement/Site Description:

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)	Comments Picture # /Guano/Hair Sample
1	D	P. sub	2130	Jv	m	NR	4.4	31	E	0	
2	D	E. fuscus	2110	Ad	f	PL	17.3	47	M	0	
3	D	E. fus	2220	Ad	f	PL	19.2	46	F	0	
4	D	P. Sub	2220	Ad	f	PL	8.5	34	F	0	
5	C	M. luc	2230	Jv	m	NR	7.9	36	M	0	
6	B	E. fus	2230	Ad	f	PL	17.5	48	M	0	
7	D	E. fus	2245	Ad	f	L	20.3	46	F	0	
8	A	M. Sep	2245	Ad	f	PL	6.5	35	M	0	
9	B	M. Sep	2320	Jv	f	NR	5.5	35	M	0	

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

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BAT CAPTURE DATA (continued)

Project #: 340 Date: 7/19/11

Project Name: Site Name/#: 10 Initials: ABK

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
0	D	P. Sub	010	Jv	M	NR	5.4	33	M	Ø	
1	D	E. fus	015	Jv	M	NR	14.0	46	E	Ø	
12	D	M. Sep	045	Jv	F	NR	5.6	35	E	Ø	
13	D	M. Sep	110	Jv	F	NR	6.2	35	M	Ø	
14	D	E. fus	205	Ad	F	L	21.3	47	M	Ø	
15	A	L. cinereus	230	Jv	M	NR	19.4	52	E	Ø	

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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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NET SITE HABITAT DESCRIPTION

Project #: 340.02 **Date:** 21 July 2011 **Biologists:** D Jeffrott, S Reeves

Project Name: Tetratech Republic **Site Name/#:** Site 11

State: Oh **County:** Seneca **USGS Quad:** Fireside

Camera #: C4834 **Picture #s:** 100-101 thru 108 **GPS Unit #:** E6896 **Waypoint #:** 028

Latitude: 41 ° 13 ' 3.7 "N **Longitude:** 83 ° 58 ' 5.4 "W

Distance to closest water source (meters): 500 m Type of water source: stream

Water source name: Albright Ditch

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

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)
Acer saccharum
Ulmus americana
Prunus serotina, Juglans nigra

Estimated dbh range: Lg: 100 Sm: 40

Subdominant Canopy Species (< 40 cm/16" dbh)
Acer saccharum
Ulmus americana

Estimated dbh range: Lg: 39 Sm: 5

Relative abundance of dominant vs. subdominant (ratio): 1:8

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: snags mostly under the canopy

Subcanopy clutter: ___ Closed ✓ Moderate ___ Open

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

Common Subcanopy Species: Acer saccharum

Habitat Description: mesic pasture woodlot near farmhouse and barn structure

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/ForestEdge	__ Emergent Wetland	__ Deepwater Lake/Pond
__ Young Lowland Forest	__ Old Field	__ Forested Swamp	__ Other _____

Herbaceous Cover: ___ Sparse ___ Moderate ✓ Dense

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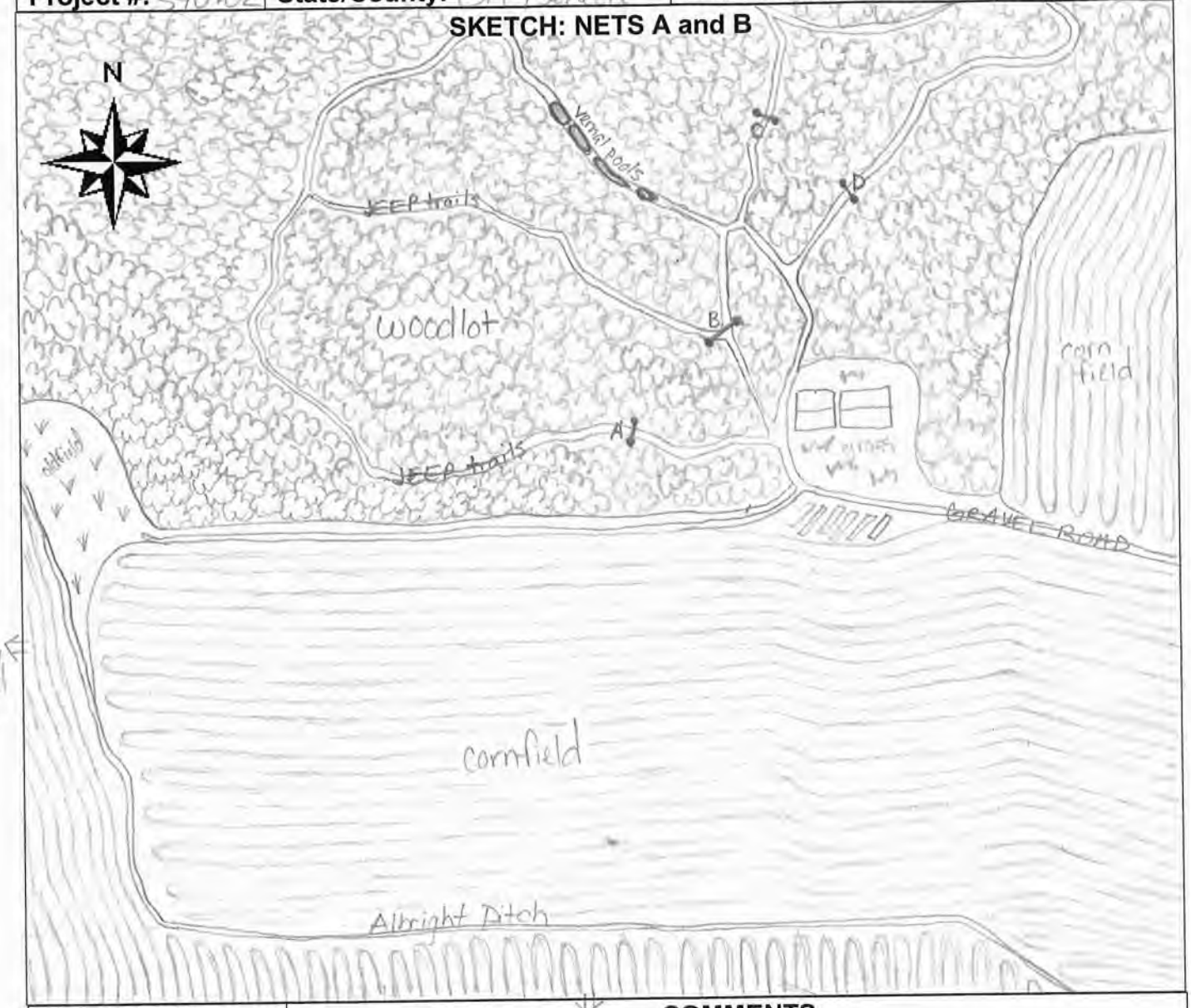
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: OH / Seneca	Site Name/#: Site 11	Initials: SR

SKETCH: NETS A and B



LEGEND	COMMENTS
Nets: ●——●	NA
Semi Trailers: ▭	
Barn: ▭	

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BAT CAPTURE DATA

Project #: 340.02 Date: 21 July 2011

Project Name: Tetrafect Republic

Biologists: D Uffrott, S Reeves Site name/#: Site 11

State: Ohio County: Seneca

GPS Unit #: F10846 Camera #: ~~D4834~~

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2100	29.6	0	70%	—
2130	29.7	0	0%	—
2200	29.6	0	0%	—
2230	29.3	0	0%	—
2300	28.6	0	0%	—
2330	27.6	0-1	0%	—
0000	27.8	0	0%	—
0030	27.6	0	0%	—
0100	27.3	0	0%	—
0130	26.9	0	0%	—
0200	26.6	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 ° 13 ' 3.7 "N	82 ° 58 ' 5.4 "W	6	6.2	2050	0150	101-106	028
Net	B	41 ° 13 ' 4.3 "N	82 ° 58 ' 2.6 "W	18	9.2	2055	0155	107	030
Net	C	41 ° 13 ' 7.0 "N	82 ° 58 ' 2.4 "W	6	6.2	2100	0200	108	029
Net	D	41 ° 13 ' 5.8 "N	82 ° 58 ' 0.8 "W	6	6.2	2105	0205	106	027

Net Placement/Site Description: Nets placed on woodlot across roads/corridors

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)	Comments Picture # /Guano/Hair Sample
1	B	Eptesicus fuscus	2140	Ad	M	↑	14.7	45	M	0	3708
2	B	E. fuscus	2140	Ad	M		16.8	46	M	0	NA
3	B	E. fuscus	2140	—	—	—	—	—	—	—	Escaped Net
4	B	Myotis septentrionalis	2145	—	—	—	—	—	—	—	Escaped Hand/Bag
5	D	E. fuscus	2155	Ad	F	L	17.4	46	M	0	NA
6	C	E. fuscus	2225	Ad	F	L	19.5	45	M	0	N/A
7	A	E. fuscus	2300	Ad	F	L	17.8	47	M	0	N/A
8	D	E. fuscus	0010	Ad	F	NR	19.7	44	M	0	N/A
9	C	M. septentrionalis	0010	JV	F	NR	5.7	34	M	0	3711

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

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BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 21 July 2011

Project Name: Tittabawassee Republic Site Name/#: Site 11 Initials: DJ, 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)	Comments Picture # /Guano/Hair Sample
10	B	Eptesicus fuscus	0150	Ad	M	↑	17.3	45	M	0	N/A
11	C	E. fuscus	0200	Ad	F	L	16.4	43	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA

Project #: 340.02 Date: 25 July 2011

Project Name: Tetratech / Republic

Biologists: D Jeffcott Site name/#: 11

State: OH County: Seneca

GPS Unit #: E 6846 Camera #: G-1

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2100	23.7	—	20%	—
2130	23.4	—	20%	—
2200	22.0	—	0	—
2230	22.5	—	0	—
2300	22.1	—	0	—
2330	22.0	—	0	—
0000	21.5	—	0	—
0030	21.2	—	0	—
0100	21.0	—	0	—
0130	21.0	—	0	—
0200	19.8	—	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	N	41° 13' 3.7 "N	82° 58' 5.4 "W	6.0	6.2	2040	0200	101-105	028
Net B	N	41° 13' 4.3 "N	82° 58' 2.6 "W	18	9.2	2045	0215	107	030
Net C	N	41° 13' 7.0 "N	82° 58' 2.4 "W	6	6.2	2055	0240	108	029
Net D	N	41° 13' 5.8 "N	82° 58' 0.8 "W	6	6.2	2100	0250	106	027

Net Placement/Site Description: Nets placed on roads through 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)	Comments Picture # /Guano/Hair Sample
1	D	Eptesicus fuscus	2145	Jv	M	↑	15.6	45.0	M	0	—
2	D	E. fuscus	2145	Ad	M	↑	15.1	45.0	M	0	—
3	A	E. fuscus	2200	—	—	—	15.3	—	M	0	escaped
4	B	E. fuscus	2215	Jv	F	NR	14.7	45.0	M	0	—
5	D	E. fuscus	2230	Jv	F	NR	19.5	44.0	M	0	—
6	D	E. fuscus	2235	Ad	F	PL	17.0	43.0	M	0	—
7	B	M. septentrionalis	2300	Jv	F	NR	6.1	35.0	M	0	—
8	B	Eptesicus fuscus	0000	Jv	F	NR	19.7	46.5	M	0	—
9	B	E. fuscus	0030	Ad	F	PL	19.4	46	M	0	—

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

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BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 25 July 2011

Project Name: Tetratech/Republic Site Name/#: 11 Initials: [illegible]

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
10	B	Eptesicus fuscus	0030	Jv	M	↑	14.7	44.0	M	0	
11	B	E. fuscus	0030	Jv	M	↑	17.7	46.0	M	0	
12	B	E. fuscus	0030	Ad	M	↑	16.0	45.0	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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NET SITE HABITAT DESCRIPTION

Project #: 340.01 **Date:** 30 July 11 **Biologists:** J. Basiger

Project Name: Republic **Site Name/#:** 12

State: OH **County:** Seneca **USGS Quad:** Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
A	N	41 ° 13 ' 11.3 "N	82 ° 56 ' 25.8 "W	978	
B	N	41 ° 13 ' 14.7 "N	82 ° 56 ' 27.7 "W	979	
C	N	41 ° 13 ' 14.5 "N	82 ° 56 ' 30.7 "W	980	
D	N	41 ° 13 ' 12.5 "N	82 ° 56 ' 30.5 "W	981	

Distance to closest water source (meters): 0 Type of water source: Vernal Pool

Water source name: —

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: .5 meters Channel Width: 9 meters Stream Width: 12 meters

Substratum: ___Bedrock ___Boulder ___Cobble ___Gravel ___Sand ✓ Silt/Clay

Still Water Present (Y/N): Y Average Water Depth: .5 m or cm Clarity (H,M,L): L

VEGETATION:

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

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

Estimated dbh range: Lg: 75 Sm: 40 Estimated dbh range: Lg: 39 Sm: 12

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: large snags and live tree w/ loose flakey bark

Subcanopy clutter: ___Closed ✓ Moderate ___Open

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

Common Subcanopy Species: ___ ___

Habitat Description: Large wood lot surrounded by crop fields

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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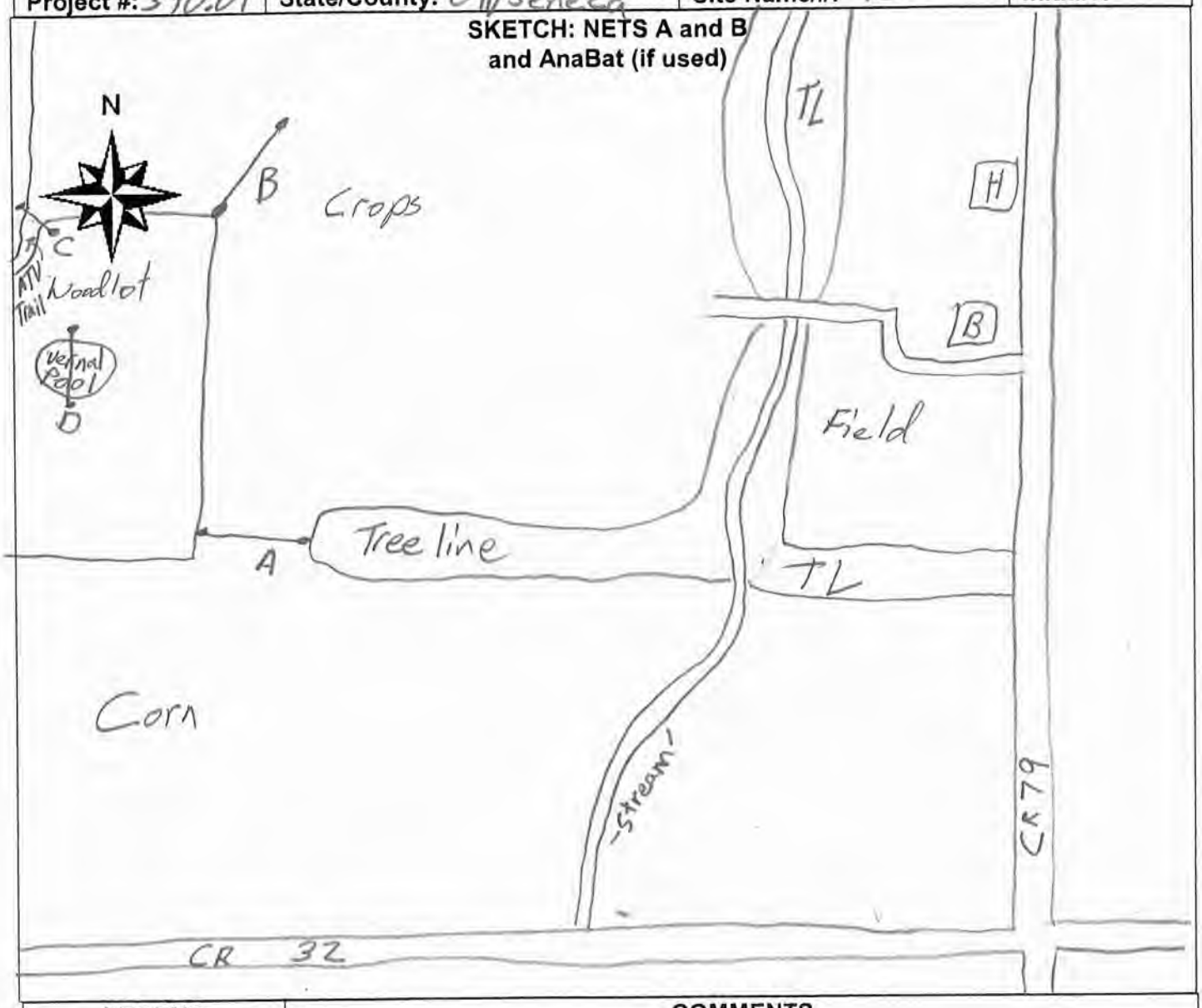
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.01	State/County: OH/Seneca	Site Name/#: 12	Initials:

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



LEGEND	COMMENTS
Nets: ●——●	

ESI

BAT CAPTURE DATA

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

Project #: 340.01 Date: 28 Jul 11

Project Name: Republic

State: OH County: Seneca

Biologists: J. Barnett

Site name/#: 12

GPS Unit #: Camera #:

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	25.9	—	—	25	
2200	25.6	—	—	25	
2230	24.9	—	—	5	
2300	24.6	—	—	5	
2330	24.5	—	—	5	
0000	24.2	—	—	5	
0030	24.1	1-3	—	—	
0100	24.0	1-3	—	—	
0130	23.6	1-3	—	—	
0200	23.4	1-3	—	—	

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 ° 13 ' 11.3 "N	82 ° 56 ' 25.8 "W	18	9	2035	200	978
B	N	41 ° 13 ' 14.7 "N	82 ° 56 ' 27.7 "W	18	9	2040	205	979
C	N	41 ° 13 ' 14.5 "N	82 ° 56 ' 30.7 "W	6	6	2045	210	980
D	N	41 13 12.5	82 ° 56 ' 30.7	9	6	2050	215	981

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	Lasiurus	borealis	22:14	JV	F	NR	11.00	41	M	0	
2	B	E	f.	22:17	JV	F	NR	16.00	43	M	0	
3	A	Lasiurus	B. borealis	22:18	AD	F	PL	14.00	39	M	0	
4	B	E.	f.	22:20	JV	F	NR	15.50	45	M	0	
5	A	E.	f.	22:22	JV	F	NR	17.00	47	M	0	
6	B	L.	b.	22:23	JV	M	↑	9.00	38	M	0	
7	D	L.	b.	22:25	AD	F	PL	14.25	42	M	0	
8	C	E.	f.	22:27	JV	M	↑	16.00	47	PL	0	
9	C	E.	f.	22:30	AD	F	PL	18.00	47	M	0	
10	A	L.	B.	23:00	JV	F	NR	9.00	41	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 = ↑/↓

		TM	Age	Sex	Repro	WT	RFA	Belly	WI	
11	E. fuscus	22:30	AD	M	↓	18.25	47	F	O	
12	E. fuscus	22:35	jV	F	NR	16.5	46	M	O	
13	E. fuscus	22:36	jV	F	NR	15.5	45	F	O	
14	E. fuscus	23:10	AD	F	PL	21.5	49	M	O	
15	E. fuscus	23:13	AD	F	PL	20.25	47	M	O	
16	E. fuscus	23:37	jV	M	↓	14.25	42	M	O	
17	E. fuscus	23:53	jV	F	NR	17.25	45	F	O	
18	E. fuscus	23:56	AD	F	PL	22.50	48	F	O	
19	Evening Bat	23:56	jV	F	NR	9.75	35	M	O	P# 922-940
20	E. fuscus	23:59	AD	F	PL	18.00	44	F	O	
21	E. fuscus	00:26	jV	M	↓	15.50	46	M	O	
22	E. fuscus	00:31	AD	M	↓	16.75	42	M	O	
23	E. fuscus	01:00	jV	F	NR	14.25	47	M	O	
24	E. fuscus	01:01	jV	F	NR	17.50	48	F	O	
25	E. fuscus	01:04	jV	F	NR	16.75	47	F	O	P# 41-43
26	Nycticeius	01:50	jV	F	NR					Escaped
27	Numeralis	02:30	AD	F	PL	20	47	F	O	
	E. fuscus	02:35	jV	F	NR	17.25	47	F	O	
	E. fuscus									

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781 Neeb Road, Cincinnati, OH 45233 (Phone: 513-451-1777)

BAT CAPTURE DATA

Project #: 340.01 Date: 30 Jul 11

Project Name: Republic

State: OH County: Seneca

Biologists: V. Basiger

Site name/#: 12

GPS Unit #: 465670 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
2100	22.9	1-3	W → E	—	
2130	22.1	1-3	W → E	—	
[illegible]	20.9	[illegible]	W → E	—	
			W → E	—	
[illegible]		—	—	—	
[illegible]		—	—	—	
[illegible]	20.1	—	—	—	
[illegible]	20.1	—	—	—	
[illegible]	19	1-3	W → E	10%	
0130	19.5	—	—	—	
0200	19.5	—	—	—	

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 ° 13 ' 11.3 "N	82 ° 56 ' 25.8 "W	18	9	2030	200	978
B	N	41 ° 13 ' 11.7 "N	82 ° 56 ' 27.7 "W	18	9	2035	205	979
C	N	41 ° 13 ' 14.5 "N	82 ° 56 ' 30.7 "W	6	6	2040	210	980
D	N	41 13 12.5	82 56 30.7	9	6	2045	215	981

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	Lasiurus borealis	2195	JV	F	NA	12	41	M	0	
2	D	L. Borealis	2200	Jv	M	[illegible]	[illegible]	40	M	0	
3	D	E. fuscus	[illegible]	Ad	F	PL	16	47	M	[illegible]	
[illegible]	D	E. fuscus	2245	Ad	F	PL	21	49	F	0	
[illegible]	A	E. fuscus	2255	JV	M	NL	[illegible]	43	F	[illegible]	
[illegible]	A	L. Borealis	2258	Ad	F	NL	[illegible]	45	F	[illegible]	
7	D	E. fuscus	2259	Ad	F	PL	16	46	E	[illegible]	
[illegible]	D	L. Borealis	2300	Ad	F	NL	10	45	E	[illegible]	
9	D	E. fuscus	2315	JV	F	NL	19.5	46	E	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 = T/L

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NET SITE HABITAT DESCRIPTION

Project #: 340 **Date:** 7/20/11 **Biologists:** A. Kniowski, M. Farmer

Project Name: Republic **Site Name/#:** 14

State: OH **County:** Seneca **USGS Quad:** Fireside

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
A	Net	41 ° 13 ' 02.6 "N	82 ° 53 ' 37.4 "W	106-0662	34014A
B	Net	41 ° 13 ' 04.6 "N	82 ° 53 ' 41.2 "W	106-0661	34014B
C	Net	41 ° 13 ' 02.9 "N	82 ° 53 ' 43.5 "W	106-0660	34014C
D	Net	41 ° 13 ' 05.6 "N	82 ° 53 ' 44.4 "W	106-0659	34014D

Distance to closest water source (meters): 500m Type of water source: stream

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)	Subdominant Canopy Species (< 40 cm/16" dbh)
Quercus alba	Prunus serotina
Carya ovata	

Estimated dbh range: Lg: 65 Sm: 35 Estimated dbh range: Lg: 10 Sm: 15

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

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: Trees w/ loose bark

Subcanopy clutter: ___Closed ✓ Moderate ___Open

Subcanopy comprised largely of: ___Lower Branches of Canopy Trees ✓ Saplings ___Shrubs

Common Subcanopy Species: Prunus serotina

Habitat Description: Woodlot near cropland / farm

AnaBat Habitat: N/A

Check all that apply:

✓ Mature Upland Forest
___Young Upland Forest
___Mature Lowland Forest
___Young Lowland Forest
___Recently Logged Forest
✓ Forest Edge
✓ Woodlot
___Old Field
✓ Crop/Pasture Land
___Stream/River
___Vernal Pool
___Deepwater Lake/Pond
___Other _____

Herbaceous Cover: ___ Sparse ✓ Moderate ___Dense

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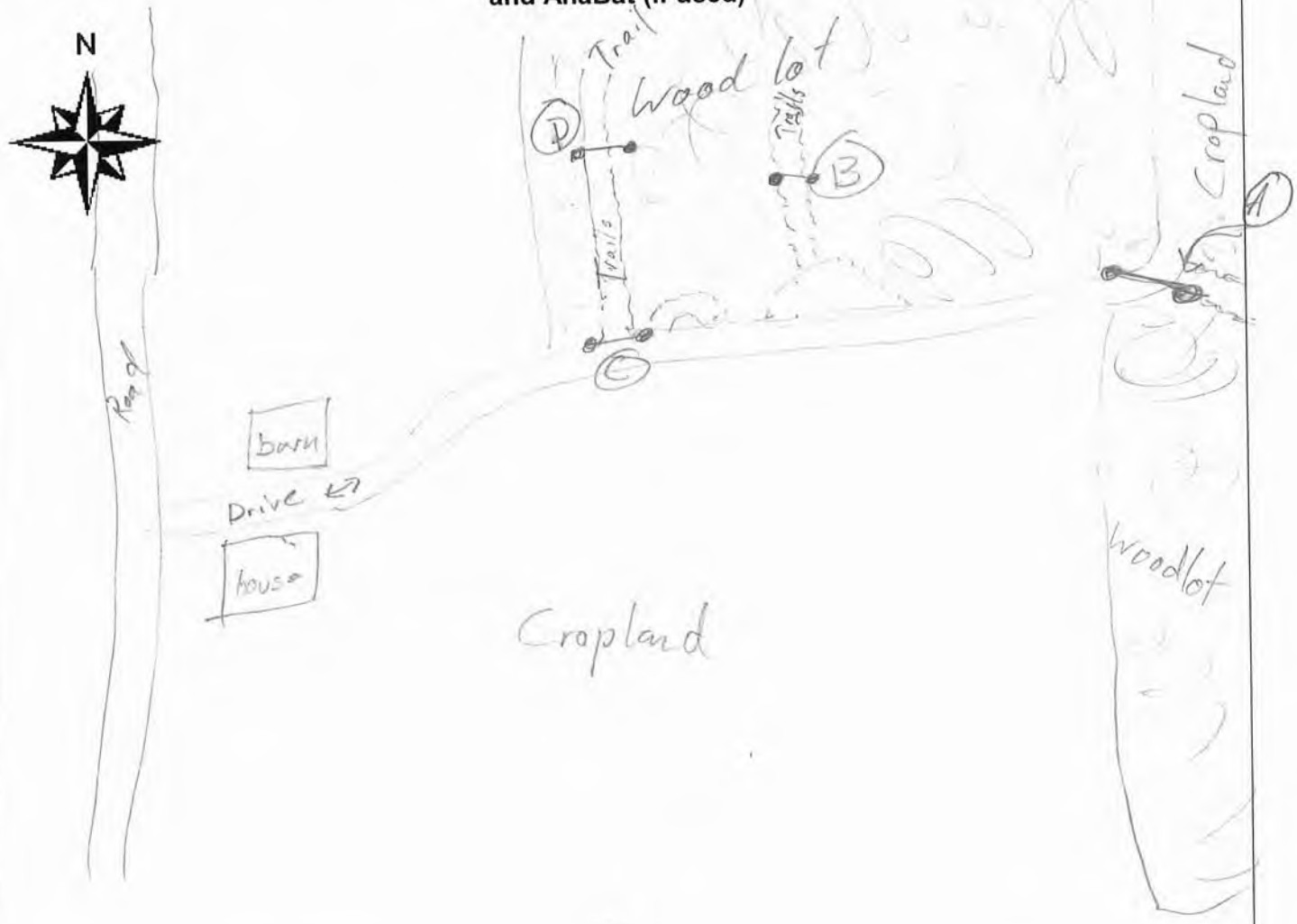
NET SITE HABITAT DESCRIPTION (continued)

Project #:	State/County:	Site Name/#:	Initials:

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



LEGEND	COMMENTS
Nets: ●——●	

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BAT CAPTURE DATA

Project #: 340 Date: 26 Jul 2011

Project Name: Republic

Biologists: A. Kwiecinski & M. Farmer Site name/#: 14

State: OH County: Seneca

GPS Unit #: 7 Camera #: 11

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2100	28.2	1-3	30%	
2130	27.5	4-8	30%	
2200	27.3	1-3	30%	
2230	27.0	1-3	0	
2300	27.1	4-6	0	
2330	27.0	4-8	0	
0000	27.3	4-8	0	wind gusts 13-18 mph
0030	27.0	8-12	0	"
0100	26.9	8-12	0	
0130	26.5	8-12	0	
0200	26.3	13-18	10%	

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
A	net	41 ° 13 ' 02.6 "N	082 ° 53 ' 37.4 "W	12	9	2105	224	106-0662	34014A
B	net	41 ° 13 ' 04.6 "N	82 ° 53 ' 41.2 "W	6	6	2145	217	106-0681	34014B
C	net	41 ° 13 ' 02.9 "N	82 ° 53 ' 43.5 "W	6	6	2100	207	106-0660	34014C
D	net	41 ° 13 ' 05.6 "N	82 ° 53 ' 44.4 "W	6	6	2100	201	106-0659	34014D

Net Placement/Site Description: All 4 nets set across ATV trails in wooded area adjacent to agricultural fields

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)	Comments Picture # /Guano/Hair Sample
1	A	E. fus	2148	JV	M	NR	16.0	46	M	Ø	
2	A	L. bor	2220	JV	M	NR	9.0	38	E	Ø	
3	A	L. bor	2220	JV	M	NR	8.5	38	E	Ø	
4	D	M. sep	2230	JV	M	NR	6.4	34	E	Ø	
5	A	E. fus	2315	Ad	M	NR	17.0	46	E	Ø	
6	A	E. fus	2315	Ad	F	L	17.5	43	M	Ø	old break on wing
7	A	E. fus	2318	JV	M	NR	15.6	44	M	Ø	
8	A	E. fus	2318	Ad	M	NR	16.0	45	M	Ø	
9	A	E. fus	2318	JV	F	NR	13.4	46	F	Ø	

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

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BAT CAPTURE DATA (continued)

Project #: 340 Date: 7/20/11

Project Name: Site Name/#: 14 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
10	A	E. fuslus	2318	JV	F	NR	16.4	46	F	Ø	
11	B	E. fuscus	2334	Ad	F	L	20.2	47	F	Ø	
12	A	E. fuscus	2340	Ad	M	↑	14.8	45	M	Ø	
13	A	E. fuscus	004	Ju	F	NR	15.4	45	F	Ø	
14	D	E. fuscus	035	AD	F	PL	23.0	50	F	Ø	
15	D	M. luc.	037	JV	M	NR	7.5	35	M	Ø	
16	A	M. Sogs	124	Ad	M	NR	7.0	36	E	Ø	

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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA

Project #: 340 Date: 7/22/11

Project Name: Republic

Biologists: A. Kniowski, M. Farmer Site name/#: 14

State: OH County: Seneca

GPS Unit #: 7 Camera #: 11

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2100		1-3	40	
2130		4-7	40	
2200		4-7	50	
2230		8-12	50	
2300		4-7	10	
2330		8-12	10	
000		8-12	15	
030		4-7	Thunder	Rain
Nets down!				
—	Rained	out		

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
A	net	41° 13' 02.6"N	82° 53' 37.4"W	12	9	2102	0000	106-0662	34014A
B	net	41° 13' 04.6"N	82° 53' 41.2"W	6	6	2107	0000	106-0661	34014B
C	net	41° 13' 02.9"N	82° 53' 43.5"W	6	6	2104	0005	106-0660	34014C
D	net	41° 13' 05.6"N	82° 53' 44.4"W	6	6	2105	0005	106-0659	34014D

Net Placement/Site Description: Nets across small trails in woodlot except A, C which are at field edge

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)	Comments Picture # /Guano/Hair Sample
1	A	Eptesicus fuscus	2205	Ad	F	PL	16.8	46	M	0	
2	D	E fuscus	2212	Ad	F	PL	18.9	49	F	Ø	
3	A	E. fuscus	2220	Ad	F	L	18.0	47	M	Ø	
4	A	L borealis	2220	Jv	M	NR	9.5	40	E	Ø	
5	B	E. fuscus	2227	Ad	F	PL	19.1	47	F	Ø	
6	A	Myotis sonorus	2240	Jv	M	NR	17.5	52	M	Ø	
7	B	E. fuscus	2249	Ad	M	↓	17.5	43	M	Ø	
8	A	E fuscus	2300	Jv	M	NR	19.3	43	M	Ø	
9	A	E fuscus	2300	Ad	F	L	21.4	47	F		

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

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BAT CAPTURE DATA (continued)

Project #: 340 Date: 7/22/11

Project Name: Site Name/#: 14 Initials: [illegible]

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
10	A	E. fuscus	2315	Jv	F	NR	15.0	46	M	Ø	
11	A	E. fuscus	2320	Jv	F	NR	17.0	49	F	Ø	
12	A	E. fuscus	2325	Jv	M	NR	15.5	44	M	Ø	Very Young
13	A	E. fuscus	2325	Ad	F	L	22.0	48	F	Ø	
14	A	E. fuscus	2325	Jv	M	NR	14.9	42	F	Ø	
15	A	E. fuscus	2350	Jv	F	NR	11.9	42	E	Ø	
16	A	E. fuscus	2350	Ad	F	L	20.6	46	M	Ø	
		Rain OUT!									

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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA

Project #: 340 Date: 24-Jul-2011

Project Name: Honey Creek wind resource area

Biologists: A. Krijowski, M. Farmer Site name/#: 14

State: OH County: Seneca

GPS Unit #: 7 Camera #: 11

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2100	24.9	1-3	100%	
2130	24.5	1-3	100 %	
2200	24.1	1-3	100%	
2230	23.6	1-3	100 %	
2300	23.4	1-3	100%	
2330	23.4	1-3	100%	
0000	23.3	1-3	100%	
0030	23.2	1-3	100%	
0100	23.2	0	100%	
0130	22.8	0	100%	
0200	23.1	0	90%	

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Length (m)	Height (m)	Time Up (xxxx h)	Time Down (xxxx h)	Picture #	Waypoint #
A	Net	41 ° 13 ' 02.6 "N	82 ° 53 ' 37.4 "W	12	9	2100	200	0662	34014A
B	Net	41 ° 13 ' 04.9 "N	82 ° 53 ' 41.2 "W	6	6	2115	230	0661	34014B
C	Net	41 ° 13 ' 02.9 "N	82 ° 53 ' 43.5 "W	6	6	2105	220	0660	34014C
D	Net	41 ° 13 ' 05.6 "N	82 ° 53 ' 44.4 "W	6	6	2106	225	0659	34014D

Net Placement/Site Description: nets accross small trails in woodlot except net A + C, which are adjacent to field edge.

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)	Comments Picture # /Guano/Hair Sample
1	A	Lasiurus borealis	2110	JV	F	NR	8.5	38	E	Ø	
2	A	E. fuscus	2203	JV	F	NR	16.2	47	F	Ø	
3	A	E. fuscus	2225	JV	F	NR	13.8	46	M	Ø	
4	A	E. fuscus	2250	JV	M	NR	15.7	46	M	Ø	
5	A	E. fuscus	2255	JV	M	NR	13.7	43	M	Ø	
6	A	Lasionycteris noctivagans	2255	JV	M	NR	18.6	51	F	Ø	
7	A	E. fuscus	2255	Ad	F	PL	15	44	M	Ø	
8	A	E. fuscus	2255	JV	M	NR	19.2	46	F	Ø	
9	A	E. fuscus	2315	JV	M	NR	11.5	43	F	Ø	

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

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BAT CAPTURE DATA (continued)

Project #: 340 Date: 7/24/14

Project Name: Site Name/#: 14 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
10	A	E. fuscus	2315	Ad	F	PL	20.4	47	F	0	
11	A	L. cinereus	2320	JV	F	NR	24.2	54	F	0	
12	A	L. cinereus	2320	JV	F	NR	23.9	56	F	0	
13	A	E. fuscus	2340	JV	F	NR	15.2	38	F	0	
14	A	E. fuscus	2340	JV	M	NR	15.8	44	F	0	
15	A	L. borealis	2340	JV	M	NR	9.3	40	M	0	
16	C	Myotis septentrionalis	0010	JV	F	NR	6.3	35	M	0	
17	C	M. septentrionalis	0010	JV	M	NR	5.8	34	E	0	
18	A	E. fuscus	0030	JV	M	NR	17	44	F	0	
19	A	E. fuscus	0030	JV	M	NR	15.5	46	F	0	
20	A	E. fuscus	0030	JV	M	NR	14.9	45	F	0	
21	A	E. fuscus	0030	Ad	F	PL	19.1	45	F	0	
22	A	* E. fuscus	0030	JV	F	NR	19.3	46	F	0	172.583 [illegible]
23	A	E. fuscus	0030	JV	[illegible]	NR	15.8	46	F	0	
24	A	E. fuscus	—	—	—	—	—	—	—	—	Escape
25	A	E. fuscus	0115	Ad	F	PL	22	45	F	0	
26	A	E. fuscus	0117	JV	M	NR	16	46	M	0	
27	A	E. fuscus	0120	JV	M	NR	16.8	45	F	0	
28	A	E. fuscus	140	Ad	F	PL	21.2	43	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

* Transition Tend

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 (splotching), which is often visible only with translumination.
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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 chiropatagium are evident.

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BAT CAPTURE DATA (continued)

Project #: 340 Date: 7/24/11

Project Name: Site Name/#: 14 Initials: ABK

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
29	A	L. cinereus	140	Ad	F	PL	29.5	59	M	0	
30	A	L. cinereus	140	Jv	F	VR	25.0	56	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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ESI

NET SITE HABITAT DESCRIPTION

Project #: 340 **Date:** 7/26/11 **Biologists:** A. Kiowski, J. Keinhenz

Project Name: Republic **Site Name/#:** 15

State: OH **County:** Seneca **USGS Quad:** Watson

Net/Trap/ or AnaBat	Net/Trap/ AnaBat Serial #	Latitude	Longitude	Picture #	Waypoint #
A	net	41° 12' 02.9 "N	83° 00' 54.7 "W	0668	340A15
B	net	41° 12' 04.1 "N	83° 00' 56.6 "W	0671	340B15
C	net	41° 12' 02.6 "N	83° 00' 57.6 "W	0669	340C15
D	net	41° 12' 03.9 "N	83° 00' 59.4 "W	0670	340D15

Distance to closest water source (meters): 15m Type of water source: creek

Water source name: —

ESTIMATED WATER SOURCE CHARACTERISTICS (IF UNDER NETS):

Bank Height: 2 meters Channel Width: 4 meters Stream Width: 3 meters

Substratum: ___Bedrock ___Boulder ___Cobble ☒ Gravel ___Sand ___Silt/Clay

Still Water Present (Y/N): N Average Water Depth: 15 m or cm Clarity (H,M,L): L

VEGETATION:

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

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

Estimated dbh range: Lg: 75 Sm: 50 Estimated dbh range: Lg: 40 Sm: 15

Relative abundance of dominant vs. subdominant (ratio): 1/6

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: Acer negundo

Habitat Description: Woodlot near creek / cropland

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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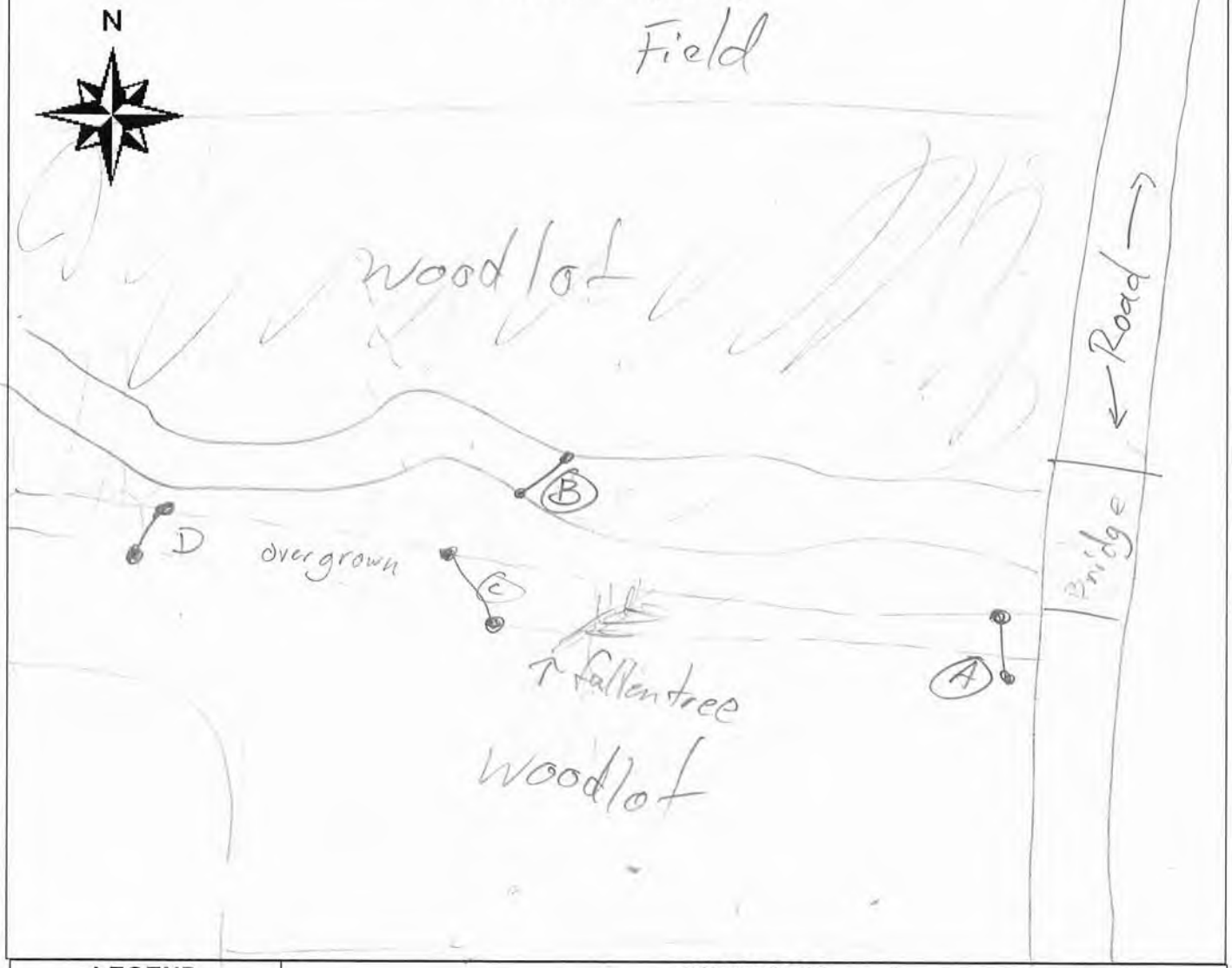
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340	State/County: Seneca, OH	Site Name/#: 15	Initials: ABK

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



LEGEND	COMMENTS
Nets: ●——●	

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ESI

BAT CAPTURE DATA

Project #: 340 Date: 7/26/11

Project Name: Republic

Biologists: A. Kniovski, J. Klenanche Site name/#: 15

State: OH County: Seneca

GPS Unit #: 7 Camera #: 11

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2030	24.1	1-3	40%	
2100	22.7	1-3	20%	
22:00	22.2	1-3	20%	
22:30	21.6	1-3	15%	
23:00	20.9	1-3	10%	
23:30	20.6	1-3	5%	
24:00	20.3	1-3	5%	
00:30	19.8	1-3	5%	
1:00	19.3	1-3	5%	
1:30	19.1	1-3	5%	
2:00	18.9	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 #
A	net	41 ° 12 ' 02.9 "N	83 ° 00 ' 54.7 "W	9	6	2050	0156	0668	340A15
B	net	41 ° 12 ' 04.1 "N	83 ° 00 ' 56.6 "W	6	6	2100	202	0671	340B15
C	net	41 ° 12 ' 02.6 "N	83 ° 00 ' 57.6 "W	9	9	2107	209	0669	340C15
D	net	41 ° 12 ' 02.7 "N	83 ° 00 ' 59.4 "W	6	6	2110	220	0670	340D15

Net Placement/Site Description: Nets placed over overgrown trail except B which is over creek

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)	Comments Picture # /Guano/Hair Sample
1	B	M. Lucifugus	21:30	Ad	M	↓	7.2	37	E	0	
2	B	M. Lucifugus	21:30	Ad	M	↓	8.7	38	E	0	
3	B	M. Lucifugus	21:30	JV	M	NR	7.4	37	E	0	
4	B	M. Lucifugus	21:30	JV	M	NR	5	36	E	0	
5	B	M. Lucifugus	21:30	JV	M	NR	6.8	36	E	0	
6	B	M. Lucifugus	21:35	Ad	M	↓	8.4	36	E	0	
7	B	M. Lucifugus	21:35	Ad	M	↓	7.3	37	E	0	
8	B	M. Lucifugus	21:35	Ad	M	↓	6.5	37	E	0	
9	B	M. Lucifugus	21:35	JV	M	NR	6.5	36	E	0	

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

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BAT CAPTURE DATA (continued)

Project #: 340 Date: 7/2/11

Project Name: Site Name/#: 15 Initials: ABK

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
10	C	M. Sep	22:20	Ad	F	PL	6.2	34	M	0	
11	D	M. Sep	22:21	Ad	F	L	6.3	34	M	0	
12	B	M. Sep	22:42	Ad	F	PL	6.6	35	F	0	
13	B	E. fuscus	22:12	Ad	F	PL	19.3	47	F	0	
14	D	M. Sep	23:10	Ad	F	PL	6.3	34	M	0	
15	A	E. fuscus	23:47	Ad	M	↓	15.2	45	F	0	
16	B	M. Sep	00:21	Ad	F	PL	6.2	36	M	0	
17	D	E. fuscus	00:40	Ad	M	↓	16.8	45	M	0	
18	D	M. Sep	1:00	Jv	F	NR	5.3	34	E	0	
19	B	M. luc.	1:50	Ad	M	↑	6.4	37	M	0	
20	D	M. Sep	1:48	Jv	F	NR	7	35	M	0	
21	C	M. Sep	2:05	Ad	F	PL	6.3	35	E	0	
22	C	M. Sep	2:05	Ad	F	PL	7.4	36	E	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 (splotching), which is often visible only with translumination.
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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 chiropatagium are evident.

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ESI

BAT CAPTURE DATA

Project #: 340 Date: 7/28/11

Project Name:

State: OH County: Seneca

Biologists: A. Kniowski, J. Kleinhenz

Site name/#: 15

GPS Unit #: 7 Camera #: 11

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
21:30	25.9	1-3	—	25%	
22:00	25.6	1-3		25%	
[illegible]	24.9	1-3	—	5%	
23:00	24.6	1-3	—	5%	
23:30	24.5		—		
0:00	24.3		—	5%	
0:30	24.1	1-3	—	5%	
1:00	[illegible]	1-3	—		
1:30	23.6	1-3	—	0%	
1:58	23.4		—		

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° 12' 02.9" N	83° 00' 54.3" W	9	6	2110	215	340A15
B	net	41° 12' 04.1" N	83° 00' 55.6" W	6	6	2105	205	340B15
C	net	41° 12' 06.5" N	83° 00' 57.1" W	9	9	2155	210	340C15
D	net	41° 12' 01.4" [illegible]	[illegible]	6	6	2115	225	340D15

Net Placement/Site Description: [illegible] over creek

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	B	M. lucifugus	21:44	Jv	M	NR	7.3	39	E	0	
2	B	M. lucifugus	21:46	Jv	F	NR	7.9	37	E	0	
3	A	M. sodalis	21:50	Ad	F	PL	6.5	36	F	0	
4	B	E. fuscus	23:15	Ad	M	↓	14.1	43	F	0	

[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

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NET SITE HABITAT DESCRIPTION

Project #: 340.07 **Date:** 20 July 2011 **Biologists:** D Sanfratt, S Reeves

Project Name: Tetratech Republic **Site Name/#:** Site 16

State: OH **County:** Seneca **USGS Quad:** Fireside

Camera #: C4834 **Picture #s:** 3727 – 3732 **GPS Unit #:** E6846 **Waypoint #:** 023

Latitude: 41 ° 12 ' 27.6 "N **Longitude:** 82 ° 57 ' 7.2 "W

Distance to closest water source (meters): 250 m Type of water source: pond

Water source name: private pond (Reed, Mary)

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

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)
Ulmus americana
Acer saccharinum

Subdominant Canopy Species (< 40 cm/16" dbh)
Fraxinus pennsylvanica
Juglans nigra, Carya ovata
Ulmus americana, Acer saccharinum

Estimated dbh range: Lg: 100cm Sm: 40cm

Estimated dbh range: Lg: 37cm Sm: 22cm

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: many snags; Carya sp., Ulmus sp., Acer sp.

Subcanopy clutter: ___Closed ___Moderate ✓ Open

Subcanopy comprised largely of: ✓ Lower Branches of Canopy Trees ___Saplings ___Shrubs

Common Subcanopy Species: Juglans nigra, Ulmus americana, Carya ovata

Habitat Description: Mature woodlot near soybean field with some understory near 2 ponds

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/ForestEdge	__Emergent Wetland	✓ Deepwater Lake/Pond
__Young Lowland Forest	✓ Old Field	__Forested Swamp	__Other _____

Herbaceous Cover: ✓ Sparse ___Moderate ___Dense

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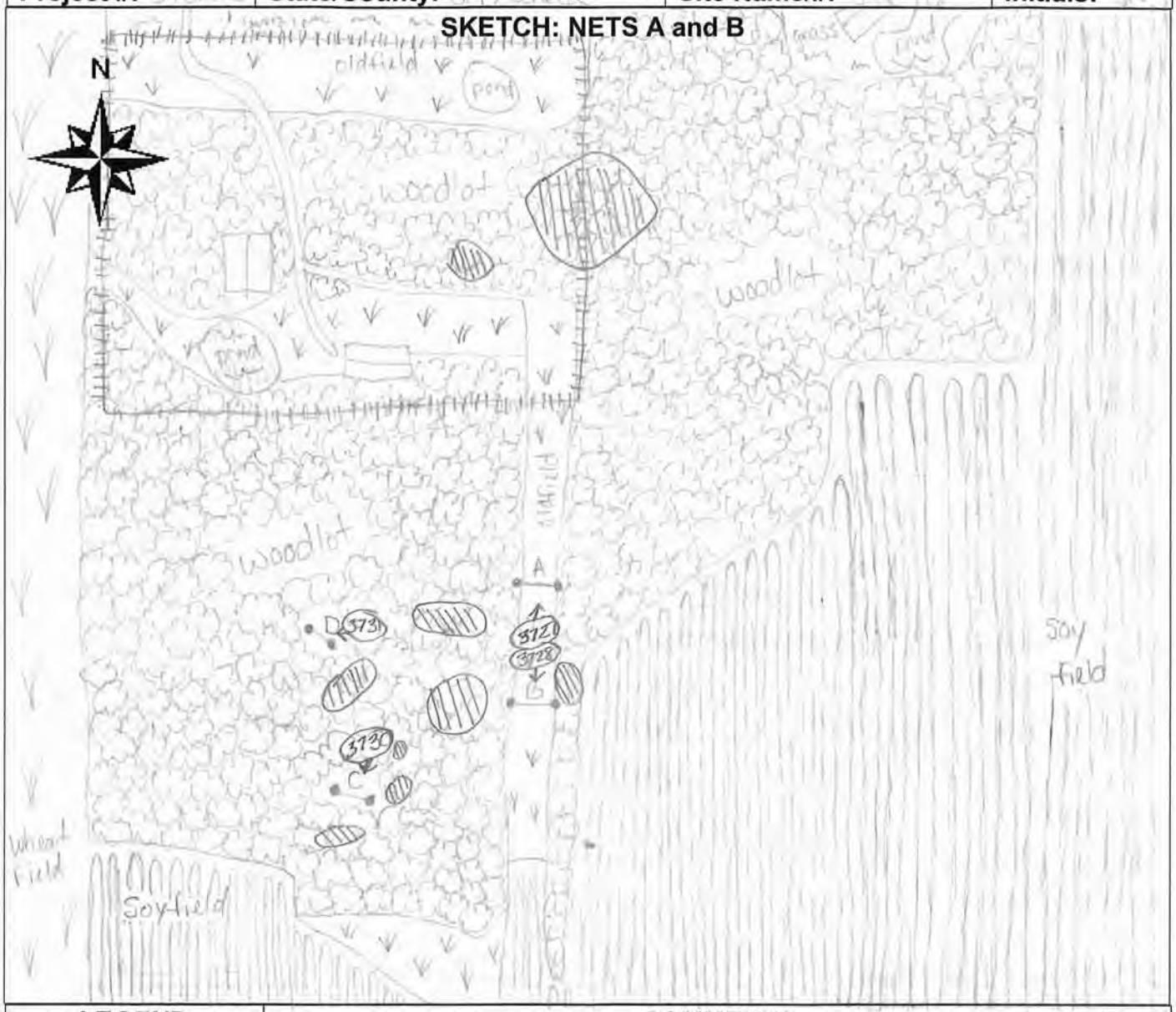
NET SITE HABITAT DESCRIPTION (continued)

Project #: 310.02	State/County: OH / Seneca	Site Name/#: Site 16	Initials: SR

SKETCH: NETS A and B



LEGEND	COMMENTS
Nets: ●——● Fence: House: Wet Area: Photo Angles:	woodlot has ephemeral wet areas (4-5) and is burned every 5-10 yrs. for brush control; last burn 2+ yrs; Many snag in varying stages of death

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ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 20 July 2011

Project Name: Tetratech Republic

Biologists: D Jeffrey, S Reeves Site name/#: Site 16

State: Ohio County: Seneca

GPS Unit #: E6846 Camera #: C 4834

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2100	28.2	1-3	30%	—
2130	27.5	0	30%	—
2200	27.3	1-3	30%	—
2230	27.0	0	0%	—
2300	27.1	0	0%	—
2330	27.0	1-3	0%	—
0000	27.3	4-7	0%	—
0030	27.0	4-7	0%	—
0100	26.9	8-12	0%	—
0130	26.5	8-12	0%	—
0200	26.3	8-12	10%	—

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 ' 07.2 "W	12	9.2	2050	0150	3727	023
Net	B	41 ° 12 ' 26.5 "N	82 ° 57 ' 07.2 "W	12	9.2	2055	0155	3728	024
Net	C	41 ° 12 ' 25.2 "N	82 ° 57 ' 10.3 "W	6	6.2	2100	0200	3730	025
Net	D	41 ° 12 ' 27.2 "N	82 ° 57 ' 16.8 "W	6	6.2	2105	0205	3731-32	026

Net Placement/Site Description: Nets A & B in old landing strip bounded on two sides by woods. Nets C & D in open wooded field (fire-control)

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)	Comments Picture # /Guano/Hair Sample
1	C	Eptesicus fuscus	2200	Ad	F	PL	18.1	44	M	0	N/A
2	C	E. fuscus	2200	Ad	F	PL	19.9	49	M	0	N/A
3	C	E. fuscus	2200	Jv	M	↑	14.4	44	M	0	N/A
4	B	E. fuscus	2215	Jv	M	↑	11.8	42	M	0	small hole in left wing
5	B	E. fuscus	2215	Jv	F	NR	10.3	40	M	0	N/A
6	B	E. fuscus	2215	Ad	M	↑	18.8	45.5	M	0	N/A
7	B	E. fuscus	2215	Ad	F	PL	21.4	46	M	0	N/A
8	A	E. fuscus	2220	Ad	F	PL	16.7	43	M	0	N/A
9	B	E. fuscus	2240	Jv	F	NR	14.9	45	M	0	N/A

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

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BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 20 July 2011

Project Name: Tetratech Republic Site Name/#: Site 16 Initials: DL, 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)	Comments Picture # /Guano/Hair Sample
10	B	Eptesicus fuscus	2245	Ad	F	PL	22.6	43	M	0	N/A
11	C	E. fuscus	2245	Ad	F	L	20.5	46	M	0	N/A
12	B	E. fuscus	2300	Jv	M	↑	13.5	44.5	M	0	N/A
13	C	E. fuscus	2320	Ad	M	↑	22.4	46.5	M	0	N/A
14	C	E. fuscus	2320	Ad	M	↑	16.7	41.5	M	0	N/A
15	C	E. fuscus	2320	Ad	F	PL	20.2	45	M	0	N/A
16	C	E. fuscus	2320	Ad	M	↑	16.6	44	F	0	N/A
17	A	E. fuscus	2330	Jv	M	↑	13.5	43	M	0	N/A
18	A	E. fuscus	2340	Ad	M	↓	16.0	44	M	0	N/A
19	B	E. fuscus	2350	Jv	F	NR	14.8	43.5	M	0	N/A
20	A	E. fuscus	0015	Ad	M	↑	21.8	48	M	0	N/A
21	C	E. fuscus	0030	Ad	F	PL	20.0	45.5	M	0	hole in right wing, 3707
22	D	Myotis septentrionalis	0030	Ad	M	↑	6.4	35	M	0	N/A
23	B	E. fuscus	0045	Ad	F	PL	20.9	44.5	M	0	N/A
24	C	E. fuscus	0115	Jv	M	↑	14.0	41	M	0	N/A
25	A	[illegible]	[illegible]	Ad	M	↑	[illegible]	34.5	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

Cards [illegible]

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ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 22 July 2011

Project Name: Tetratech Republic

Biologists: D. Jeffries [illegible] Site name/#: [illegible]

State: Ohio County: Seneca

GPS Unit #: E 6844 Camera #: C 4834

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	Comments
2100	24.3	0	30%	—
2130	23.1	0	30%	—
2200	22.9	0	30%	—
2230	23.3	1-3	40%	—
2300	23.2	4-7	60%	—
2330	23.1	4-7	60%	thunder
0000	23.2	1-3	60%	thunder
0030	RAIN OUT			
0100				
0130				
0200				

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	12	9.2	2050	0150	3727	023
Net	B	41 ° 12 ' 26.5 "N	82 ° 57 ' 7.2 "W	12	9.2	2055	0155	3728	024
Net	C	41 ° 12 ' 25.2 "N	82 ° 57 ' 10.3 "W	6	6.2	2100	0200	3730	025
Net	D	41 ° 12 ' 27.2 "N	82 ° 57 ' 10.8 "W	6	6.2	2105	0205	3731-2	026

Net Placement/Site Description: Nets A & B in old landing strip within woodlot, Nets C & D in open area in 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)	Comments Picture # /Guano/Hair Sample
1	B	Eptesicus fuscus	2125	Jv	M	↑	11.2	44	M	0	N/A
2	A	E. fuscus	2130	—	—	—	—	—	—	—	Escaped/Net
3	B	E. fuscus	2135	Ad	F	L	18.9	46	M	0	N/A
4	A	Lasionycteris noctivagans	2150	Ad	F	NR	13.5	40	M	0	3735
* 5	A	E. fuscus	2200	Ad	F	L	19.1	45.5	M	0	N/A
6	C	E. fuscus	2200	Ad	M	↑	19.1	46	M	0	N/A
7	B	E. fuscus	2220	Jv	M	↑	12.3	43	M	0	N/A
8	B	E. fuscus	2220	Jv	M	↑	14.0	44	M	0	N/A
9	A	E. fuscus	2220	Ad	M	↑	18.5	46	M	0	Recaptured from 20 July 2011

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

* Transmitter bat (172.118)

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BAT CAPTURE DATA (continued)

Project #: Z40.02 Date: 22 July 2011

Project Name: Tetratech Republic Site Name/#: Site 16 Initials: DJ, 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)	Comments Picture # /Guano/Hair Sample
10	B	Eptesicus fuscus	2300	Ad	M	↓	17.5	45	M	0	N/A
11	B	E. fuscus	2330	JV	F	NR	12.4	43	M	0	N/A
12	B	E. fuscus	2350								Escaped Net
13	A	E. fuscus	2320	JV	M	↑	13.7	44	M	0	
14	A	E. fuscus	2320	JV	M						Recapture
15	A	E. fuscus	2320	Ad	F	L					Recapture

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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 24 July 2011
Project Name: Tetratech / Nordix Republic
Biologists: D Jeffcott, S. Reeves Site name/#: Site 1b
State: OH County: Seneca
GPS Unit #: E108416 Camera #: C4834

WEATHER DATA

Time (xxxx h)	Temp (°C)	Wind Speed (estimated – see chart)*	% Cloud Cover (estimated)	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 ' 22.2 "N	82 ° 57 ' 10.8 "W	6m	6.2m	2045	0145	3731-32	026

Net Placement/Site Description: Nets A & B on old runway, Nets B & C in fire controlled corridor with ephemeral pools 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)	Comments Picture # /Guano/Hair Sample
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	36	M	0	3820 - 3827

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

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BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 24 July 2011

Project Name: Tetratech Republic Site Name/#: Site 16 Initials: DJ, 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)	Comments Picture # /Guano/Hair Sample
10	B	Myotis lucifugus	0015	Jv	M	↑	6.6	35	M	0	N/A
11	C	Eptesicus fuscus	0025	Ad	M	↓	20.8	47.0	F	0	N/A
12	C	E. fuscus	0120	Ad	F	PL	21.3	47.0	F	0	N/A
13	C	E. fuscus	0120	Ad	M	↑	16.4	46.0	M	0	N/A
14	C	E. fuscus	0120	Jv	M	↑	15.2	43.5	M	0	N/A
15	A	E. fuscus	0125	Jv	M	↑	14.2	43.0	M	0	N/A
16	B	E. fuscus	0140	Jv	F	NR	16.8	45.0	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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NET SITE HABITAT DESCRIPTION

Project #: 340.02 **Date:** 13 July 2011 **Biologists:** E Brogan, S Reeves

Project Name: Tetratech Republic **Site Name/#:** Site 20

State: OH **County:** Seneca **USGS Quad:** Fireside

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): 0 m 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)

Populus deltoides

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

Prunus serotina

Juglans nigra

Acer saccharinum

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: Lindera benzoin, Ilex verticillata, Juglans nigra

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

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/ForestEdge	__Emergent Wetland	__Deepwater Lake/Pond
__Young Lowland Forest	✓ Old Field	__Forested Swamp	__Other _____

Herbaceous Cover: ___ Sparse ___Moderate ✓ Dense

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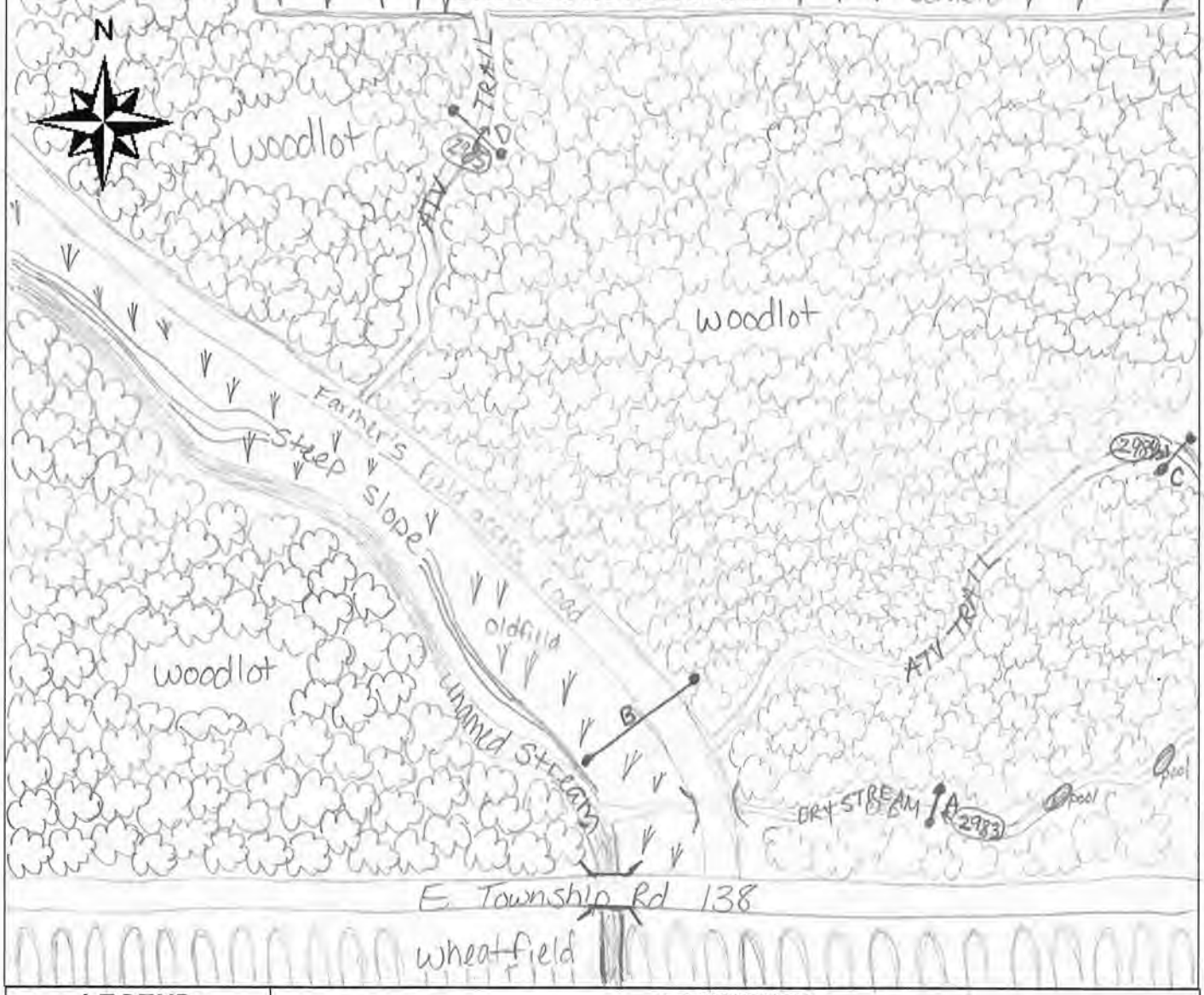
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: OH/Seneca	Site Name/#: Site 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: #####	

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ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 13 July 2011

Project Name: Tetratech Republic

Biologists: E Basiger, S Reeves Site name/#: Site 20

State: Ohio County: Seneca

GPS Unit #: E9528 Camera #: SR Kodak

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%	—
0150	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	83° 00' 22.4"W	6	6.2	2045	0145	2983	35
Net	B	41° 11' 02.7"N	83° 00' 23.9"W	18	9.2	2050	0150	[illegible]	36
Net	C	41° 11' 54.0"N	83° 00' 20.8"W	6	6.2	2055	0155	2984	37
Net	D	41° 11' 04.3"N	83° 00' [illegible]"W	9	9.2	2100	0200	2985	38

Net Placement/Site Description: Net A over dry stream bed, Net B across wide corridor, Nets C & D on ATV trails in 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)	Comments Picture # /Guano/Hair Sample
1	C	Myotis septentrionalis	2150	Ad	M	↓	6.5	35	E	0	3456
2	B	Lasiurus borealis	0140	Ad	M	↓	11.9	41	M	C	3476

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

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ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 16 July 2011

Project Name: Tetratech Republic

Biologists: E Basinger, A [illegible] Site name/#: Site 20

State: Ohio County: Seneca

GPS Unit #: E 9528 Camera #: [illegible]

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	
22:35	23.6	8-12	0	
24:00	23.3	8-12	0	
01:00	[illegible]	8-12	0	
[illegible]	[illegible]	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 ' 02.0 "N	83 ° 00 ' 22.4 "W	6	6.2	2045	0145	2983	35
NET	B	41 ° 11 ' 02.7 "N	83 ° 00 ' 23.9 "W	18	9.2	2050	0150	2986	36
NET	C	41 ° 11 ' 04.0 "N	83 ° 00 ' 20.8 "W	6	6.2	2055	0155	2989	37
NET	D	41 ° 11 ' 04.3 "N	83 ° 00 ' 24.9 "W	9	9.2	2100	0200	2985	38

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

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)	Comments Picture # /Guano/Hair Sample
1	B	Eptesicus fuscus	24:32	Jv	F	NR	11	45	E	0	—
2	B	Eptesicus fuscus	21:32	Jv	F	NR	9	44	E	0	—
3	B	Eptesicus fuscus	22:09	Jv	F	NR	13.5	42	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	12.5	43	M	0	—
8	B	Eptesicus fuscus	23:11	Jv	M	NR	13.5	45	M	0	—
9	B	lasiurus cinereus	23:11	Jv	F	NR	22.5	52	M	0	2992-2997

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

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BAT CAPTURE DATA (continued)

Project #: 340.07 Date: 16 July 2011

Project Name: Tetra Tech Republic Site Name/#: 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)	Comments Picture # /Guano/Hair Sample
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	42	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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ESI

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): ___

VEGETATION:

Dominant Canopy Species (> 40 cm/16" dbh)
- Acer negundo
- Acer rubrum
- Acer saccharum

Estimated dbh range: Lg: 70 Sm: 40

Subdominant Canopy Species (< 40 cm/16" dbh)
- Acer negundo
- Acer rubrum
- Acer saccharum

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

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NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.01	State/County: OH	Site Name/#: 21	Initials: MF

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

LEGEND	COMMENTS
Nets: ●——●	

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ESI

BAT CAPTURE DATA

Project #: 340.01 Date: 12 July 11

Project Name: Republic

State: OH County: Seneca

Biologists: J. Boeger, M. Flynn

Site name/#: Z1

GPS Unit #: ESI 425670 Camera #: 670

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated – see chart)*	Wind Direction: From ___ to ___	% Cloud Cover (estimated)	Comments
2100	21.9	—	—	10%	
2130	20.5	≤		25%	
2200	22.0	—	—	50%	
2230	21.2	—	—	90%	
2300	21.8	—	—	80%	
2330	21.6	—	—	80%	
0000	21.7	—	—	80%	

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	M	41 ° 10 ' 42.9 "N	83 ° 0 ' 13.9 "W	18	9	2050	205	814
B	M	41 ° 10 ' 42.1 "N	83 ° 0 ' 15.6 "W	9	6	2045	210	813
C	M	41 ° 10 ' 44.3 "N	83 ° 0 ' 16.6 "W	6	6	2040	215	815
D	M	41 10 45.3	83 0 17.7	6	6	2035	220	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)	Comments Picture # /Guano/Hair Sample
1	A	Eptesicus fuscus	2150	Ad	F	L	19.25	44	M	0	
2	C	Myotis lucifugus	2215	Ad	M	↑	[illegible]	38	M	0	
3	C	Myotis septentrionalis	2201	Ad	F	L	[illegible]	32	M	[illegible]	
4	D	E. fuscus	[illegible]	Ad	M	↑	13	45	M	3	
5	A	E. fuscus		Ad	M	↑	[illegible]	43	E	0	
6	D	E. fuscus		—	—	—	—	—	—	—	Net escape
7	D	E. fuscus		—	—	—	—	—	—	—	Net escape
8	A	E. fuscus	2300	Ad	M	↑	[illegible]	[illegible]	F	0	
9	A	E. fuscus	2300	Ad	F	PR	12.75	[illegible]	M	0	
10	A	Lasionycteris noctivagans	2300	Jv	F	NR	10.75	33	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 = ↑/↓

ESI

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BAT CAPTURE DATA (continued)

Project #: _____ Date: 12 July 11

Project Name: _____ Site Name/#: 21 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	E. fuscus	330	Ad	F	L	7	49	M	0	
12	A	E. fuscus	330	Jv	M	N	6	40	M	0	
13	A	E. fuscus	000	Jv	M	N	5.5	40	M	0	
14		E. fuscus	0000	Jv	M	N	15.0	42	M	0	
[illegible]		E. fuscus	0000	Jv	M	N	18.5	[illegible]	F	0	
[illegible]		E. fuscus	[illegible]	Ad	F	L	18.5	44	F	0	
[illegible]		M. septentrionalis	[illegible]	Ad	F	L	5	34	E	0	
18	D	E. fuscus	[illegible]	Ad	M	N	12.0	41	E		
19	D	M. lucifugus	0000	Ad	F	L	9.0	36	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	Sept 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

ESI

BAT CAPTURE DATA

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

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 465670 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)	Comments Picture # /Guano/Hair Sample
1	C	Lasiurus borealis	2130	Ad	F	L	12.5	45	M	0	820
2	D	Eptesicus fuscus	2230	Jv	M	↓	17.75	46	M	0	
3	D	E. fuscus	2300	Ad	F	PL	17	47	M	0	
4	D	E fuscus	0000	Ad	F	PL	18.25	47	M	0	existing injury (R) wing fx
5	D	E. fuscus	0000	Ad	F	PL	20.75	47	F	0	

[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

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

NET SITE HABITAT DESCRIPTION

Project #: 340.02 **Date:** 14 July 2011 **Biologists:** E Basiger, S Reeves

Project Name: Tetratech Republic **Site Name/#:** Site 22

State: OH **County:** Seneca **USGS Quad:** Fireside

Camera #: EOKodak **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)
Acer rubrum, Acer saccharum
Quercus palustris, Quercus alba
Tilia americana, Fagus grandifolia

Estimated dbh range: Lg: 80cm Sm: 40cm

Subdominant Canopy Species (< 40 cm/16" dbh)
Quercus palustris, Tilia americana
Fraxinus pennsylvanica
Ulmus rubra, Acer saccharum

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/ForestEdge	__ Emergent Wetland	__ Deepwater Lake/Pond
__ Young Lowland Forest	☑ Old Field	__ Forested Swamp	__ Other _____

Herbaceous Cover: ___ Sparse ☑ Moderate ___ Dense

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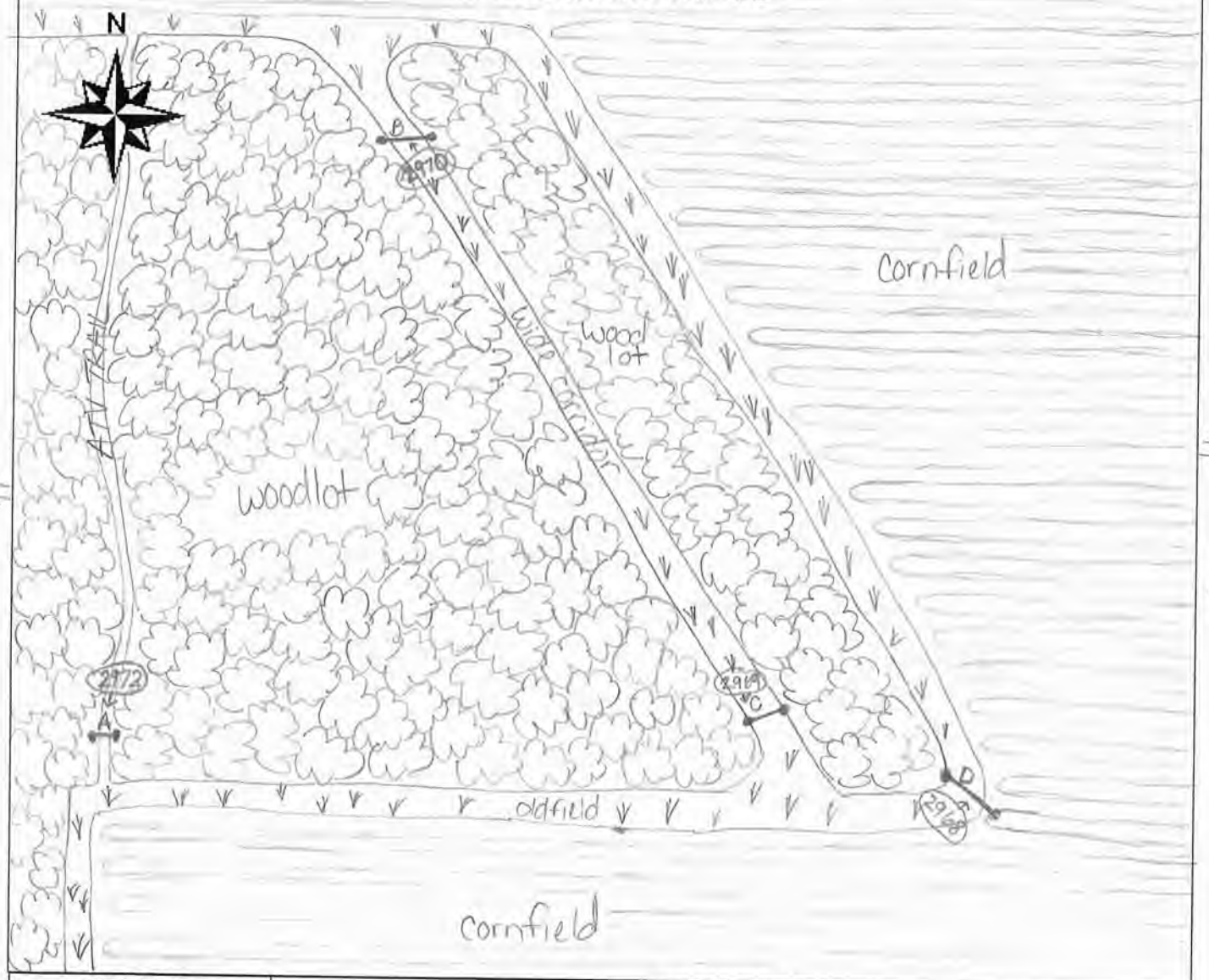
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: OH/Seneca	Site Name/#: Site 22	Initials: SR

SKETCH: NETS A and B



LEGEND	COMMENTS
Nets: ●——●	N/A
Photo Angle: ####	

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ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 12 July 2011

Project Name: Tetrahedra Republic

Biologists: E. Basinger, 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	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%	
0000	20.7	0	60%	hazy sky hazy too
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	41 ° 11 ' 27.4 "N	82 ° 59 ' 08.7 "W	6	6.2	2045	0145	2972	034
Net	B	41 ° 11 ' 30.5 "N	82 ° 59 ' 07.9 "W	9	6.2	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: 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)	Comments Picture # /Guano/Hair Sample
1	C	Eptesicus fuscus	2120	Ad	F	PL	17.5	45	E	0	2949
2	C	E. fuscus	2150	Ad	M	↓	16.0	46	E	0	N/A
3	C	E. fuscus	2150	Ad	F	PL	18.5	46	M	0	N/A
4	D	E. fuscus	2200	Ad	F	PL	19.5	45	M	0	N/A
5	C	Lasiurus borealis	2210	Jv	F	NR	8.0	36	E	0	2953
6	C	E. fuscus	2210	Ad	M	↑	18.5	48	M	0	N/A
7	C	E. fuscus	2210	Ad	F	PL	17.25	47	M	1	Some spotting present
8	B	E. fuscus	2230	Ad	M	↑	16.3	47	M	0	N/A
9	B	E. fuscus	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

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ESI

BAT CAPTURE DATA (continued)

Project #: 340 Date: 12 July 2012

Project Name: Tetratech Republic Site Name/#: 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)	Comments Picture # /Guano/Hair Sample
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	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	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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ESI

BAT CAPTURE DATA

Project #: 340. Date: 14 July 2011
Project Name: Tetratech Republic
Biologists: E. Bosmer, S. Graves 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	16.2	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 ' 58.7 "W	6	6.2	2045	0145	2972	034
Net	B	41 ° 11 ' 30.5 "N	82 ° 59 ' 57.9 "W	9	6.2	2050	0150	2970	033
Net	C	41 ° 11 ' 27.8 "N	82 ° 59 ' 55.6 "W	9	9.0	2055	0155	2969	032
Net	D	41 ° 11 ' 27.1 "N	82 ° 59 ' 54.3 "W	18	9.2	2100	0200	2968	031

Net Placement/Site Description: Net in mowed woodlot corridor. Nets A & B in wide open mowed 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)	Comments Picture # /Guano/Hair Sample
1	C	Eptesicus fuscus	2120	Ad	F	DL	18.8	47	E	0	N/A
2	A	Myotis septentrionalis	2140	Ad	F	PL	6.3	34	E	1	tear in left wing
3	D	E. fuscus	2140	Ad	M	↓	14.6	47	E	0	N/A
4	D	E. fuscus	2145	Ad	F	PL	17.6	45	M	0	N/A
5	C	E. fuscus	2155	Ad	F	PL	17.0	46	M	0	N/A
6	B	E. fuscus	2200	Ad	F	DL	16.8	46	M	0	N/A
7	C	E. fuscus	2200	Ad	F	—	—	—	—	—	recapture
8	B	E. fuscus	2200	Ad	M	↓	17.0		M		N/A
9	B	E. fuscus	2200	—	—	—	—	—	—	—	Escaped Bag

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

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ESI

BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 14 July 2011

Project Name: Tetratech Site Name/#: Site 22 Initials: FR, 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)	Comments Picture # /Guano/Hair Sample
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	Lasiurus 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	2250	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	Lasiurus 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
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39-46	Fresh Gale	Breaks twigs off trees, generally impedes progress

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 chiropatagium are evident.

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ESI

NET SITE HABITAT DESCRIPTION

Project #: 340.01 **Date:** 16 July 11 **Biologists:** J. Basiger - N. 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 #
N1	A	41° 10' 26.2 "N	82° 57' 48.4 "W	840	23A
N2	B	41° 10' 27.5 "N	82° 57' 52.5 "W	839	23B
N3	C	41° 10' 29.2 "N	82° 57' 38.4 "W	838	23C
N4	D	41° 10' 30.7 "N	82° 57' 53.8 "W	837	23D

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)

Acer saccharinum
Carya ovata
Quercus alba

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

Acer saccharum
Fraxinus americana
Ulmus rubra

Estimated dbh range: Lg: 120 Sm: 20

Estimated dbh range: Lg: 39 Sm: 4

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: [illegible]

Subcanopy clutter: ✓Closed ___Moderate ___Open

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

Common Subcanopy Species: Acer saccharum, Acer saccharinum

Habitat Description: [illegible]

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

Property of: Environmental Solutions & Innovations, Inc.
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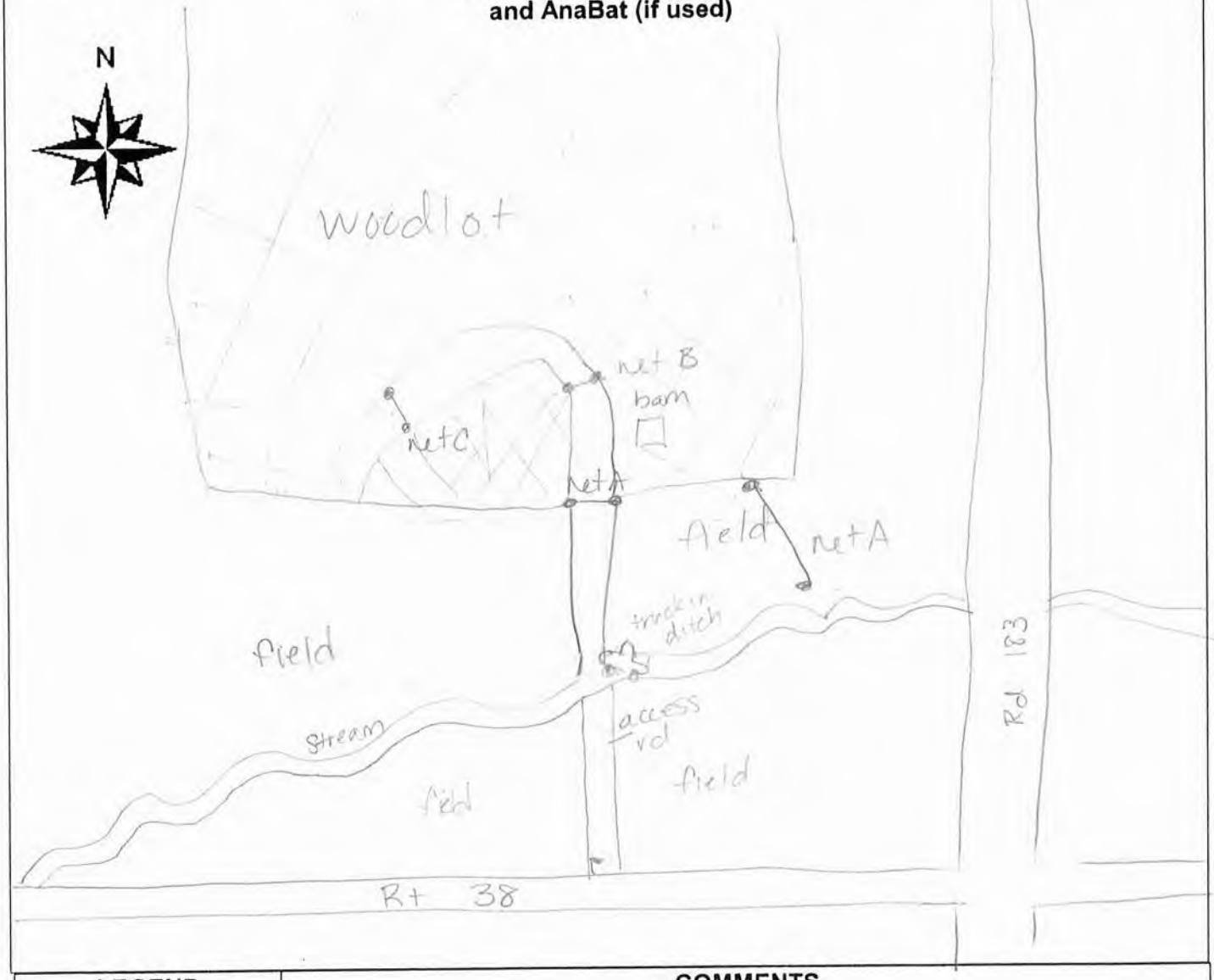
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.01	State/County: OH/Seneca	Site Name/#: 23	Initials: MF

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



LEGEND	COMMENTS
Nets: ●——●	

ESI

BAT CAPTURE DATA

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

Project #: 340.01 Date: 13 July 11

Project Name: Republic

State: OH County:

Biologists: J. Basger M. Flynn

Site name/#: 23

GPS Unit #: ESI 469671 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	
0035	16.4			0	
[illegible]	[illegible]			0	
[illegible]	15.9			0	
[illegible]	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' [illegible] "N	82° 57' 44.4 "W	18	9	2100	0260	840
B	N	41° 10' [illegible] "N	82° 57' 52.5 "W	6	6	2055	0155	839
C	N	41° 10' 39.5 "N	82° 57' 53.4 "W	9	6	2050	0155	838
D	N	41 10 [illegible]	82 57 53.4	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)	Comments Picture # /Guano/Hair Sample
1	A	Eptesicus fuscus	2200	Ad	F	L	19	48	M	0	
2	B	Myotis septentrionalis	2205	Ad	F	L	6.25	34	E	0	807, 809, 812
3	D	M. septentrionalis	2240	Ad	M	↑	6.5	33	M	0	
4	D	E. fuscus	2240	Ad	M	↑	16.5	44	M	0	
5	D	E. fuscus	2240	Ad	M	↓	16.5	47	M	0	
6	D	E. fuscus	2310	Ad	M	↑	18.75	44	F	0	
7	D	E. fuscus	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 = ↑/↓

Property of: Environmental Solutions & Innovations, Inc.
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BAT CAPTURE DATA

Project #: 340.01 Date: 16 July 11

Project Name: Republic

State: OH County: Seneca

Biologists: J. Basley, M. Flynn

Site name/#: 23

GPS Unit #: ESI [illegible] Camera #: Canon ESI

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	26.7	—	—	0	
2130	26.5	—	—	0	
2200	25.0	1-3	E → W	0	
2230	25.5	1-3	E → W	0	
2300	25.5	1-3	SE → NW	0	

Net/Trap/Anabat #	Net/Trap Type[1]	Latitude	Longitude	Length (m)	Height (m)	Time Up (0000 h)	Time Down (0000 h)	Picture #
A	M	41° 10' 36.2" N	82° 57' 49.4" W	18	9	2100		840
B	M	41° 10' [illegible] "N	82° 57' 52.5" W	6	6	2035		839
C	M	41° 10' [illegible] "N	82° 57' 53.4" W	9	6	2050		838
D	M	41 10 [illegible]	82 57 53.4	6	6	2045		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)	Comments Picture # /Guano/Hair Sample
1	A	Eptesicus fuscus	2200	Ad	F	PL	18	47	M	0	Recap from first night
2	A	E. fuscus	2200	Ad	M	↓	15.75	44	M	0	*
3	C	Myotis septentrionalis	2220	Ad	M	↓	5.5	35	M	0	*
4	D	M. septentrionalis	2220	Ad	M	↓	6.5	33	E	0	*
5	D	E. fuscus	2220	Ad	M	↑	17.5	45	M	0	*
6	D	E. fuscus	2220	Ad	M	↓	19.25	45	E	0	*
7	A	E. fuscus	2300	Ad	F	PL	18.75	47	M	0	
8	A	Lasiurus borealis	2300	Jv	F	NA	9.5	41	M	0	pic 841
9	A	E. fuscus	2300	Ad	F	PL	16.75	48	F	0	
10	D	M. septentrionalis	2330	Ad	F	PL	5.5	33	M	0	

[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

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

NET SITE HABITAT DESCRIPTION

Project #: 340.02 **Date:** 15 July 2011 **Biologists:** F. Bosiger, S. Reeves

Project Name: Tetratech Republic **Site Name/#:** Site 24

State: OH **County:** Seneca **USGS Quad:** Fireside

Camera #: Bkdnk **Picture #s:** 3518 – 3523 **GPS Unit #:** E9528 **Waypoint #:** 3038

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)
- Quercus palustris
- Quercus alba
- Fraxinus pennsylvanica

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

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

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: snags very small

Subcanopy clutter: ___Closed ___Moderate ✓ Open

Subcanopy comprised largely of: ✓ Lower Branches of Canopy Trees ___Saplings ___Shrubs

Common Subcanopy Species: Carpinus caroliniana, Crataegus 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/ForestEdge	__Emergent Wetland	__Deepwater Lake/Pond
__Young Lowland Forest	__Old Field	__Forested Swamp	__Other _____

Herbaceous Cover: ___ Sparse ✓ Moderate ___Dense

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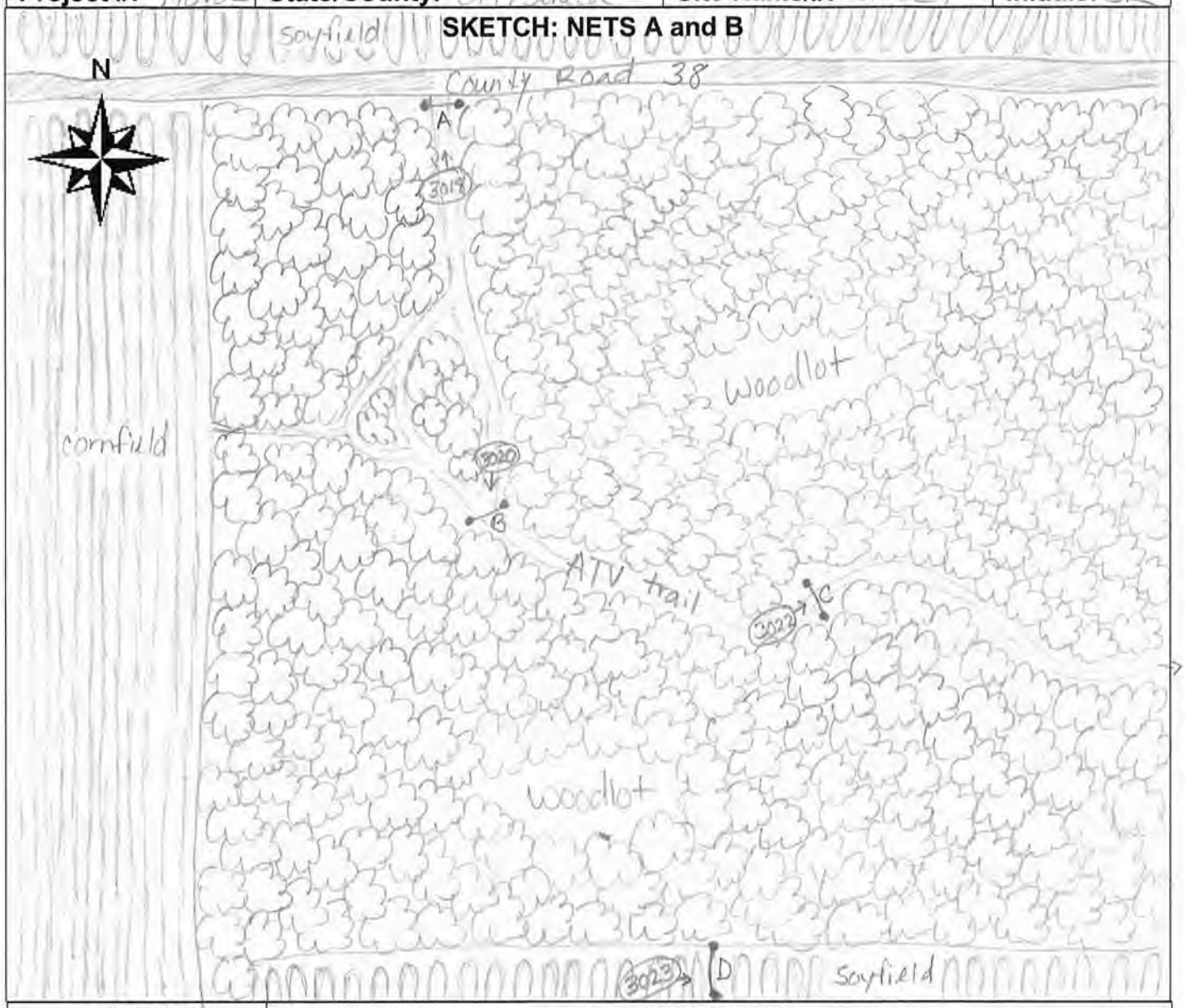
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.02	State/County: OH / Seneca	Site Name/#: Site 24	Initials: SR

SKETCH: NETS A and B



LEGEND	COMMENTS
Nets: ●——●	N/A
Photo Angle: #####	

Property of: Environmental Solutions & Innovations, Inc.
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ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 15 July 2011

Project Name: Tetratech Republic

Biologists: E. Bosner, S. Reeves Site name/#: Site 24

State: Ohio County: Seneca

GPS Unit #: E 9528 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 soybeans

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)	Comments Picture # /Guano/Hair Sample
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	2200	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

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

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BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 15 July 2011

Project Name: Tetratech Republic Site Name/#: Site 24 Initials: EG, 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)	Comments Picture # /Guano/Hair Sample
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	36	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 tiny 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, no tear
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 (mites) on wings
22	D	E. fuscus	0035	Ad	F	PL	21.1	49	F	0	N/A
23	D	E. fuscus	[illegible]	Ad	F	PL	20.3	48	M	0	mites on wings
24	D	E. fuscus	[illegible]	Jv	F	NR	14.9	49	M	0	N/A
25	D	E. fuscus	0110	Ad	F	PL	19.3	49	M	0	N/A
26	C	E. fuscus	0110								Escaped Net
27	C	E. fuscus	[illegible]	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 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 18 July 2011

Project Name: Tetratech Republic

Biologists: E Kasper, S. Captain Site name/#: 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	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' 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 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)	Comments Picture # /Guano/Hair Sample
1	B	Myotis septentrionalis	2140	Ad	F	PL	6.2	35	M	0	N/A
2	B	M. septentrionalis	2140	Jv	M	↑	6.2	35	M	0	N/A
3	C	Eptesicus fuscus	2150	Jv	F	NR	15.8	48	M	1	few spots 172.780
4	A	E. fuscus	2220	Ad	F	PL	17.4	47	F	0	N/A
5	C	E. fuscus	2225	Ad	M	↓	—	—	—	—	Recapture
6	C	E. fuscus	2225	Ad	F	PL	16.3	45	M	0	N/A
7	C	E. fuscus	2225	Jv	M	↑	15.8	46	M	0	N/A
8	D	E. fuscus	2234	Jv	M	↑	14.5	46	M	0	N/A
9	C	E. fuscus	2237	Ad	F	PL	19.7	47	F	0	N/A

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

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BAT CAPTURE DATA (continued)

Project #: 36[illegible]02 Date: 18 July 2011

Project Name: Tetratech 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)	Comments Picture # /Guano/Hair Sample
10	B	Eptesicus fuscus	2339	Jv	M	↑	12.5	43	F	0	N/A
11	D	E. fuscus	2345	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	E	E. fuscus	2325	Ad	M	↑	13.5	45	F	0	N/A
14	A	E. fuscus	2329	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	Lasiurus borealis	2331	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	Collar on escaping
20	C	E. fuscus	2362	Jv	M	↑	14.6	45	M	0	N/A
21	B	E. fuscus	0020	Ad	F	[illegible]	19.9	44	F	0	tear [illegible]
22	C	E. fuscus	0020	Ad	F	PL	22.2	48	F	0	N/A
23	E	M. septentrionalis	0020	Ad	M	↓	5.8	45	M	0	N/A
24	A	E. fuscus	0045	Jv	F	NR	13.7	44	F	0	N/A
25	C	Lasiurus 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 flight membrane is depigmented (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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ESI

NET SITE HABITAT DESCRIPTION

Project #: 340 **Date:** 18-Jul-11 **Biologists:** D. Cosiano

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 #
A	N	41° 10' 32.1 "N	82° 55' 54.5 "W	857	
B	N	41° 10' 31.3 "N	82° 55' 54.7 "W	858	
C	N	41° 10' 29.6 "N	82° 55' 57.1 "W	859	
D	N	41° 10' "N	82° 55' 55.7 "W	[illegible]	

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): 1:3.5

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

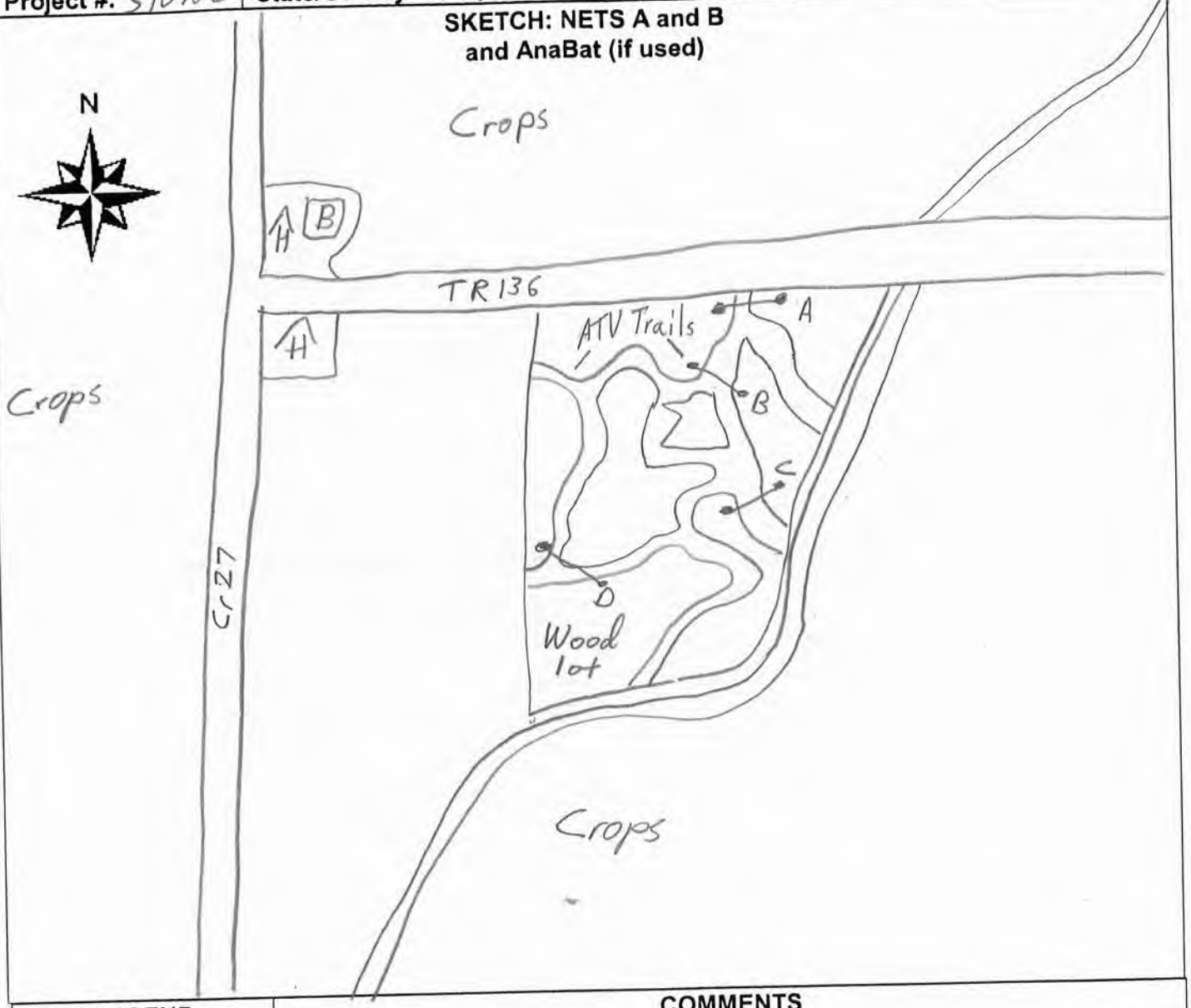
Herbaceous Cover: ___ Sparse ___Moderate ___Dense

Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue. Cincinnati, OH 45232 (Phone: 513-451-1777)

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: ●——●	

ESI

BAT CAPTURE DATA

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

Project #: 340.01 Date: 15 Jul 2011

Project Name: Republic

State: OH County: Seneca

Biologists: J. Basiger + M. Flynn

Site name/#: 26

GPS Unit #: 31465670 Camera #: cam 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
2150	23.6	1-3	—	60%	
2130	23	0	—	60%	
2200					
2230					
2300					
2330					
0000	21.7	0	—	40%	
0030					
0100					
0130					
0200	21	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	net	41 ° 10 ' 32.4 "N	82° 55 ' 54.5 "W	9	9	2050	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 ' 57.1 "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)	Comments Picture # /Guano/Hair Sample
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. fusus	2200	Ad	F	PL	21	50	F	0	
4	A	E. fuscus	2230	Jv	F	NR	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 = 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 = ↑/↓

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BAT CAPTURE DATA (continued)

Project #: 340.01 Date: 15 Jul 2011

Project Name: Republic Site Name/#: 26 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	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	46	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	E	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	Sept 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA (continued)

Project #: 346.01 Date: 15 JUL 2011

Project Name: Republic Site Name/#: 2C 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
30	C	E fuscus	0015	Ad	F	PL	22	44	F	0	
31	B	E fuscus	0100	JV	M	↑	20.25	47	F	0	
32	B	E fuscus	0100	Ad	F	NL	22	47	F	0	
33	D	M. Septentrionalis	0100	Ad	F	L	6	34	M	0	
34	D	M. Septentrionalis	0100	Jv	F	NA	5.25	36	E	0	
35	D	M. Septentrionalis	0100	Ad	F	PL	6.75	34	M	0	
36	D	E. fuscus	0100	Ad	F	PL	20.25	45	F	0	
37	D	E. fuscus	0100	Ad	F	PL	17.5	45	F	0	
38	D	E fuscus	0100	JV	M	↑	15	47	M	0	
39	B	E fuscus	0130	Ad	F	PL	21.5	47	F	0	
40	B	E fuscus	0130	Ad	F	PL	21.25	49	F	0	
41	B	E fuscus	0200	Ad	F	NL	24	45	M	0	
42	D	E fuscus	0200	Ad	F	PL	—	—	F	—	escape
43	C	E fuscus	0200	Ad	F	PL	21.75	51	F	0	
44	C	M. septentrionalis	0200	JV	F	NR	6	35	E	0	
45	C	E fuscus	0200	Ad	F	PL	21.5	47	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
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2010 Lunar Phases

New Moon	First Quarter	Full Moon	Last Quarter
Feb 13	Mar 23	Mar 29	Apr 6
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Property of: Environmental Solutions & Innovations, Inc.
781 Neeb Road. Cincinnati, OH 45233 (Phone: 513-451-1777)

BAT CAPTURE DATA

Project #: 340.01 Date: 18 July 2011

Project Name: Republic

State: OH County: Seneca

Biologists: Jack Basiger, Megan Flynn, Alexa Lantz

Site name/#: 26

GPS Unit #: 15) 465670 Camera #: Canon 60D

MOON PHASE*

___New moon ___Waxing crescent X 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
2240	23.9	1-3	N→S	0	
2323	24.3	1-3	N→S	0	
0100	25.1	4-7	W→E	70	
0300	25.1				

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	2100	0155	857 ✓
B	Net	41° 10' 31.5"N	82° 55' 54.9"W	6	9	2045	200	858 ✓
C	Net	41° 10' 29.6"N	82° 55' 54.0"W	9	6	2050	205	859 ✓

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	C	Lasiurus borealis	2130	Jv	F	NR	8.25	38	E	0	865
2	A	Eptiscus fuscus	2200	Ad	F	PL	21.0	45	M	0	
3	A	Eptiscus fuscus	2200	Ad	M	↓	17.5	46	M	0	
4	A	Eptiscus fuscus	2200	Ad	F	PL	18.5	46	M	1	
5	C	Eptiscus fuscus	2230	Jv	F	NR	15.5	44	M	0	
6	C	Eptiscus fuscus	2230	Jv	M	↑	12.0	45	M	0	
7	B	Eptiscus fuscus	2227	Jv	F	NR	15.0	46	M	0	
8	A	Eptiscus 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	Eptiscus fuscus	2230	Ad	M	↓	19.5	45	F	0	

[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

NET #	TRAP TYPE	Lat	Long	Length	Height	Time ↑	Time ↓	Picture #
D	Net	41° 10' 32.1"N	82° 55' 53.7"W	6	6	2055	210	860 ✓

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

BAT CAPTURE DATA (continued)

Project #:_____ Date:_____

Project Name:_____ Site Name/#:_____ 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	Eptiscus 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	Eptiscus fuscus	2307	Ad	M	↑	16.0	41	M	0	
14	D	Eptiscus fuscus	2310	Jv	F	NR	20.0	49	F	0	
15	C	Eptiscus fuscus	2310	Ad	F	PL	20.5	47	F	0	
16	C	Eptiscus fuscus	2310	Ad	M	↓	18.0	48	F	0	
17	C	Eptiscus fuscus	2310	Ad	F	PL	20.5	47	F	0	
18	C	Eptiscus fuscus	2348	Ad	F	PL	22.5	49	F	0	
19	C	Eptiscus fuscus	2348	Jv	M	↑	16.5	47	F	0	
20	C	Eptiscus fuscus	2350	Jv	M	↑	13.0	44	F	0	
21	A	Eptiscus fuscus	2425	Jv	M	↑	15.0	44	F	0	
22	A	Eptiscus fuscus	2425	Jv	M	↑	15.0	49	F	0	
23	A	Eptiscus fuscus	2425	Jv	F	NR	15.0	47	F	0	
24	D	Eptiscus fuscus	2430	Ad	F	PL	21.5	47	F	0	
25	C	Eptiscus 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	Sept 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

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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 chiropatagium are evident.

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

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)

Quercus bicolor
Fraxinus pennsylvanica
Quercus palustris

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

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

Fraxinus pennsylvanica
Quercus palustris
Acer saccharinum

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

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

Estimated canopy closure: X Closed ___Moderate ___Open

Roost tree potential consists of: ___Large Trees ___Snags X Both ___ Neither

Roost tree potential for the area is: ___High X 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 & nature preserve, agriculture nearby

Check all that apply:

__Mature Upland Forest	__Recently Logged Forest	X Crop/Pasture Land	__Shrub/scrub Swamp
__Young Upland Forest	__Pine Plantation	__Stream/River	__Vernal Pool
__Mature Lowland Forest	X Woodlot/ForestEdge	__Emergent Wetland	X Deepwater Lake/Pond
__Young Lowland Forest	__Old Field	__Forested Swamp	X Other grassland

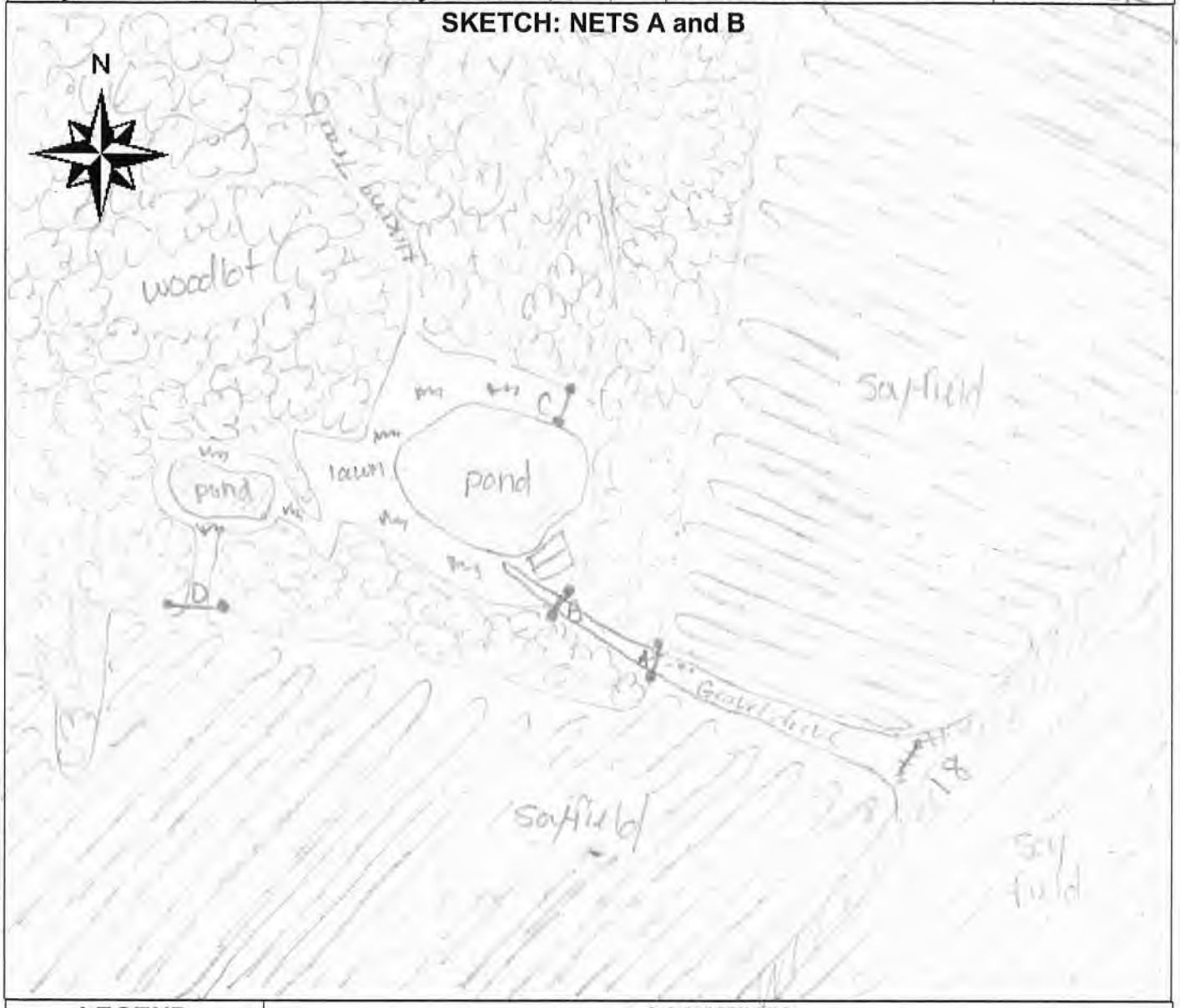
Herbaceous Cover: ___ Sparse ___Moderate X Dense

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: Seneca / OH	Site Name/#: Site 27	Initials: SR

SKETCH: NETS A and B



LEGEND	COMMENTS
Nets: ●——●	
Fence: ++++	
Cabin:	

Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue. Cincinnati, OH 45232 (Phone: 513-451-1777)

ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 16 July 2011

Project Name: Tetratech Republic

Biologists: V Brack S Irvins Site name/#: Site 27

State: Ohio County: Seneca

GPS Unit #: G74036 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	—	1–3	0%	—
2330	22.5	1–3	0%	—
0000	21.8	1–3		—
0030	21.6	1–3		—
0100	21.4	1–3		—
0130	21.2	1–3		—
0200	21.4	1–3		—

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 ' 30.1 "N	82 ° 59 ' 20.5 "W	6	6.2	2045	0145	0190	021
Net	B	41 ° 09 ' 27.6 "N	82 ° [illegible] ' 22.2 "W	6	6.2	2050	0150	0191	022
Net	C	41 ° 09 ' 30.1 "N	82 ° [illegible] ' [illegible] "W	9	6.2	2055	0155	0203	023
Net	D	41 ° 09 ' 28.0 "N	[illegible] ° [illegible] ' [illegible] "W	12	9.2	2100	0200	0218	024

Net Placement/Site Description: Nets A, B, & C across road with dried marsh in woodlot, Net D across [illegible]

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)	Comments Picture # /Guano/Hair Sample
1	D	Lasiurus borealis	2120	Jv	F	NR	10.0	41	E	0	109–0209
2	D	L. borealis	2120	Jv	F	NR	8.7	40	E	0	N/A
3	D	Eptesicus fuscus	2150	Ad	F	PL	18.1	46	F	1	0210–0211
4	D	E. fuscus	2150	Ad	F	PL	16.8	43	E	2	0212 (healed scars)
5	D	E. fuscus	2210	Ad	M	½↓	15.5	44	M	1	Starting [illegible]
6	D	E. fuscus	2210	—	—	—	—	—	—	—	Escaped Net
7	D	E. fuscus	2210	—	—	—	—	—	—	—	Escaped Net
8	D	E. fuscus	2235	A	F	PL	19.9	45	F	1	—
9	D	E. fuscus	2235	Ad	M	↓	17.8	46	F	0	—

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

Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue. Cincinnati, OH 45232 (Phone: 513-451-1777)

ESI

BAT CAPTURE DATA (continued)

Project #: Texas Tech Republic Date: 10 July 11

Project Name: 340.02 Site Name/#: C6209 Initials: VB / 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)	Comments Picture # /Guano/Hair Sample
10	D	E. fuscus	2235	JV	M	↑	15.0	46	M	0	—
11	D	L. borealis									Escaped
12	C	E. fuscus	2315	A2	M	½↓	7.5	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue. Cincinnati, OH 45232 (Phone: 513-451-1777)

ESI

BAT CAPTURE DATA

Project #: 340.02 Date: 26 July 2011
Project Name: Tetratech / Republic
Biologists: D. Jeffcott Site name/#: Site 27
State: OH County: Seneca
GPS Unit #: 67406 Camera #: G-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	41 ° 09 ' 27.1 "N	82 ° 59 ' 20.5 "W	6	6.2	2045	0200	100-0190	021
Net	B	41 ° 09 ' 27.6 "N	82 ° 59 ' 22.2 "W	6	6.2	2050	0205	0191	022
Net	C	41 ° 09 ' 30.1 "N	82 ° 59 ' 22.1 "W	9	6.2	2055	0210	100-0203	023
Net	D	41 ° 09 ' 28.0 "N	82 ° 59 ' 27.1 "W	12	9.2	2100	0215	0218	024

Net Placement/Site Description: Nets 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)	Comments Picture # /Guano/Hair Sample
1	D	Lasiurus borealis	2120	JV	M	↑	8.8	38.0	E	0	—
2	D	Eptesicus fuscus	2145	JV	F	NR	15.3	46.0	M	0	—
3	D	Lasiurus borealis	2145	—	—	—	—	—	—	→	escaped Net
4	B	Eptesicus fuscus	2155	JV	F	NR	16.2	44.0	M	0	—
5	D	Lasiurus borealis	2215	—	—	—	—	—	—	—	Escaped Net
6	D	Lasiurus borealis	2215	—	—	—	—	—	—	—	Escaped Net
7	D	Eptesicus fuscus	2215	JV	M	↑	16.9	44.0	M	0	—
8	D	Eptesicus fuscus	2215	JV	M	↑	12.9	45.0	M	0	—
9	D	Eptesicus fuscus	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

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BAT CAPTURE DATA (continued)

Project #: 340.02 Date: 26 July 2011

Project Name: Tessratech / Republic Site Name/#: Site 27 Initials: DJ

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
10	D	Myotis septentrionalis	2215	Jv	M	↑	6.3	32.5	M	0	
11	D	Myotis lucifugus	2215	Ad	F	NR	8.5	36.0	M	0	100-0286
12	D	Myotis lucifugus	2315	Jv	M	↑	7.5	36.0	M	0	
13	D	Eptesic fuscus	0000	Jv	F	NR	16.1	46.0	M	0	
14	D	E. fuscus	0000	Jv	M	↑	14.5	45.0	M	0	
15	D	E. fuscus	0000	Ad	F	PL	20.1	45.0	M	0	
16	D	E. fuscus	0000	Jv	M	↑	15.0	41.5	M	0	
17	D	Myotis septentrionalis	0000	Jv	M	↑	6.9	34.0	M	0	
18	B	Eptesicus fuscus	0030	Jv	F	NR	15.9	44.0	M	0	
19	D	E. fuscus	0150	Ad	F	PL	20.2	48.0	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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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ESI

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 #
A	N	41 ° 09 ' 12.1 "N	82 ° 55 ' 33.6 "W	910	30-A
B	N	41 ° 09 ' 11.6 "N	82 ° 55 ' 34.6 "W	909	30-B
C	N	41 ° 09 ' 10.6 "N	82 ° 55 ' 34.0 "W	909	30-C
D	N	41 ° 09 ' 09.2 "N	82 ° 55 ' 33.3 "W	906	30-D

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 woodlots 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

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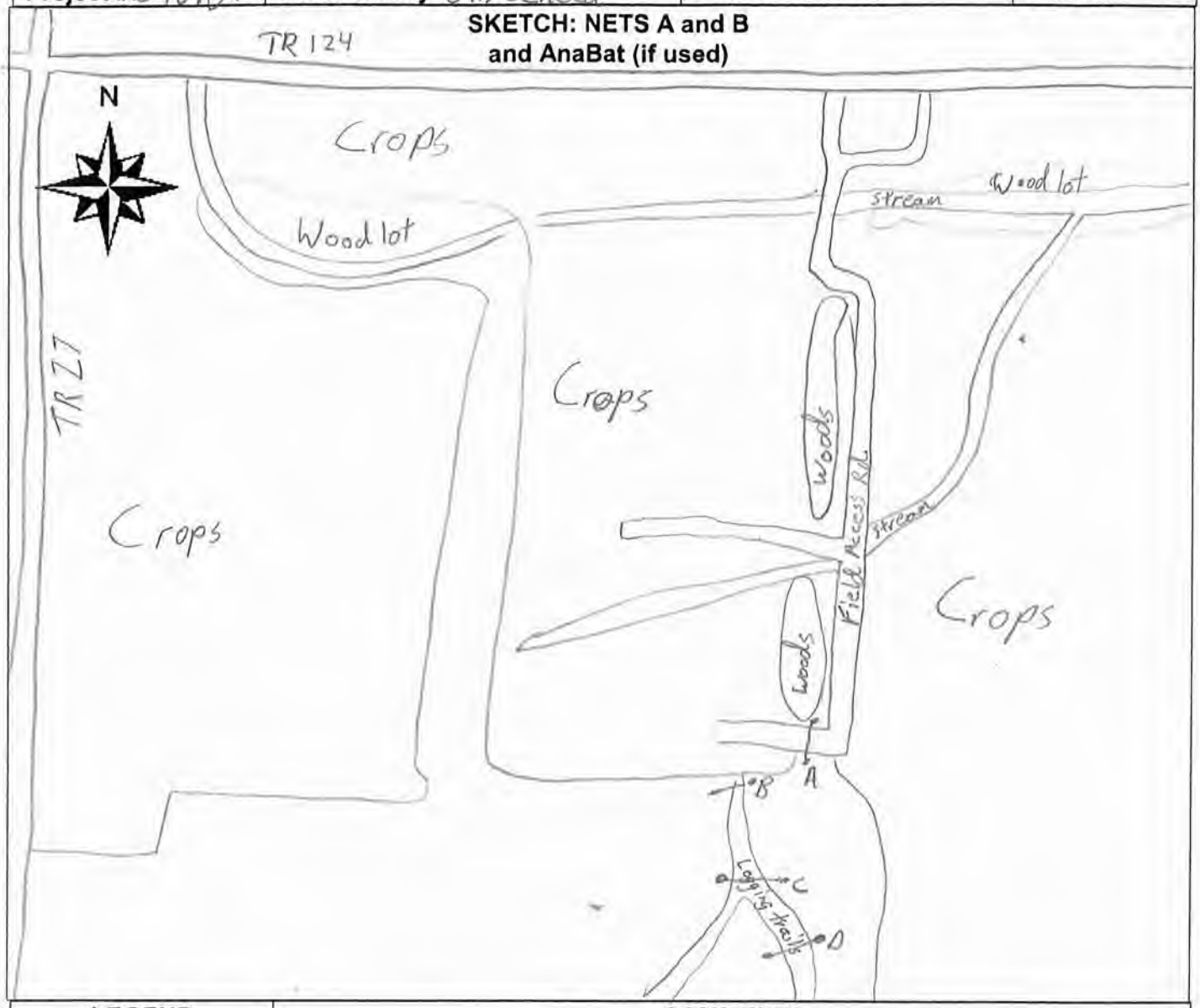
NET SITE HABITAT DESCRIPTION (continued)

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

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



LEGEND	COMMENTS
Nets: ●——●	

ESI

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BAT CAPTURE DATA

Project #: 340.01 Date: 22 July 11

Project Name: Republic

State: OH County: Seneca

Biologists: J. Basiger

Site name/#: 30

GPS Unit #: ESI 4 456670 Camera #: can 67

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		40	
2130	24.3	1-3		50	
2200	24.1	1-3		50	
2230	24.1	1-3		50	
2300	24.0	1-3		50	
2330	24.0	1-3		70	
0000	24.0	1-3		100	
0030	23.9	1-3		100	
		Rain Out			

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	82 55 33.3	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	O	Lasiurus borealis	2125	Jv	F	NA	12.0	40	E	0	
2	A	Eptesicus fuscus	2145	Jv	M	↓	15.25	44	M	1	
3	A	E. fuscus	2145	Ad	M	↓	19.25	46	M	0	
4	A	E. fuscus	2145	Ad	F	PL	19	44	M	0	
5	A	E. fuscus	2145	Ad	F	PL	20.5	47	M	0	
6	A	E. fuscus	2250	Ad	F	PL	19.75	46	M	0	
7	A	E. fuscus	2250	Jv	M	↑	17	45	M	0	
8	A	E. fuscus	2250	Jv	M	↑	15.25	[illegible]	M	0	
9	D	E. fuscus	2250	Ad	F	PL	18.25	47	M	0	
10	B	E. fuscus	2250	Ad	F	PL	20	46	M	0	

[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

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BAT CAPTURE DATA (continued)

Project #: 340.01 Date: 22 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)	Comments Picture # /Guano/Hair Sample
11	D	E. fuscus	2230	Ad	F	PL	21.5	49	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	2300	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	45	M	0	
18	A	Lasionycteris noctivagans	2300	JV	F	NR	22.75	53	F	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	[illegible]	JV	F	NR	15	45	M	0	
27	A	E. fuscus	[illegible]	JV	F	NR	15	43	M	0	
28	A	E. fuscus	[illegible]	Ad	M	↓	18.5	42	M	0	
29	A	E. fuscus	[illegible]	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	Sept 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA (continued)

Project #: 340.01 Date: 22 Jul 2021

Project Name: Republic 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
30	A	E fuscus	2340	JV	M	V	18.25	48	M	0	
31	A	E fuscus	2340	JV	F	NR	19.25	47	F	0	
32	C	Myotis septentrionalis	0000	JV	F	NR	7	36	E	0	
33	D	N. [illegible]	[illegible]	Ad	F	PL	7.5	36	M	0	
34	A	E fuscus	[illegible]	JV	F	NR	15.5	42	M	0	
35	A	E fuscus	0015	Ad	F	PL	23.25	47	M	0	
36	A	M. septentrionalis	0015	JV	M	[illegible]	5.25	33	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
31	Strong Breeze	Large branches in motion; telephone wires whistle; umbrellas used with difficulty
	Moderate Gale	Whole trees in motion; inconvenience in walking against wind
	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	Sept 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

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ESI

BAT CAPTURE DATA

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

Project #: 340.01 **Date:** 24 Jul 11

Project Name: Republic

State: OH **County:** Seneca

Biologists: J. Basiger, M. Flynn

Site name/#: 30

GPS Unit #: [illegible] **Camera #:** [illegible]

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%	
2130	24.3	0	–	40%	
2200	23.8	0	–	40%	
2230	23.1	0	–	40%	
2300	23.1	0			
2330	22.9	0			
0000	22.7	0			
0030	22.4	0			
0100	22.2	0			
0130	22.1	0		100%	
0200	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	NN	41 ° 09 ' 12.1 "N	42 ° 55 ' 33.6 "W	12	9	2040	0200	910
B	NN	41 ° 09 ' 11.6 "N	42 ° 55 ' 34.6 "W	6	6	2045	0205	909
C	NN	41 ° 09 ' 10.6 "N	42 ° 55 ' 34.0 "W	9	6	2050	0210	908
D	NN	41 09 09.2	42 55 33.3	6	6	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)	Comments Picture # /Guano/Hair Sample
1	A	Lasiurus borealis	2200	JV	F	NA	11.25	31	E	0	
2	A	Eptesicus fuscus	2200	JV	F	NA	15.75	49	M	0	172.500 ultrasonic 16.1
3	A	E. fuscus	2220	Ad	F	PL	20	47	F	0	
4	A	E. fuscus	2220	JV	M	↑	17.25	45	M	0	
5	A	E. fuscus	2220	Ad	M	↑	17	45	F	0	
6	A	L. borealis	2220	Ad	M	↓	14	49	E	0	
7	A	L. cinereus	2220	JV	F	NA	24	53	F	0	
8	D	E. fuscus	2245	JV	F	NA	16.25	47	M	0	
9	A	E. fuscus	2245	JV	M	↑	16.25	45	M	0	
10	D	Myotis lucifugus	2300	JV	F	NA	6	37	M	0	

[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

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BAT CAPTURE DATA (continued)

Project #:_____ Date:_____

Project Name:_____ Site Name/#:_____ 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	L. cinereus	2300	JV	M	↑	24	52	M	0	
12	A	E. fuscus	0000	Ad	F	PL	20	43	F	0	
13	A	E. fuscus	0000	Ad	F	PL	19.5	46	M	0	
14	A	E. fuscus	0000	Ad	F	PL	17.75	48	F	0	
15	A	E. fuscus	0100	JV	M	↓	16.5	46	F	0	
16	A	E. fuscus	0120	Ad	M	↑	18.25	50	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
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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	Sept 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

ESI

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

BAT CAPTURE DATA

Project #: 340.01 Date: 26 Jul 11

Project Name: Republic

State: OH County: Seneca

Biologists: V. Basiger J. Kleinhenz

Site name/#: 30

GPS Unit #: ESI 465670 Camera #: canon 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	23.3	—	—	50	
2130	22.5	—	—	50	
2200	21.7			0	
2230	21.1			0	
2300	20.3			0	
2330	19.9			0	
0000	19.9			50	
0030	19.8			25	
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	82 55 33.3	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	Eptesicus fuscus	2130	AD	M	↓	15.25	45	E	0	
2	A	E. fuscus	2130	JV	F	NA	14.75	46	M	0	
3	A	E. fuscus	2200	AD	M	↓	14.50	47	E	0	
4	A	E. fuscus	2200	AD	F	PL	19.50	50	M	0	
5	A	E. fuscus	2202	AD	F	PL	16.00	43	E	0	
6	A	E. fuscus	2203	AD	F	PL	20.00	49	E	1	
7	D	E. fuscus	2203	JV	F	NA	17.75	47	E	0	
8	D	E. fuscus	2230	AD	M	↓	16.50	45	M	0	
9	A		2230	AD	M	↓	19.50	41	F	0	
10	A		2230	AD	M	↓	17.00	42	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 = ↑/↓

ESI

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

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)	Comments Picture # /Guano/Hair Sample
11	A		23:30	JV	M	↑	15.00	45	M	0	
12	A		23:00	AD	M	↓	16.50	46	M	0	
13	A		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	16.25	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	A		23:10	JV	F	NA	18.00	50	E	0	
19	A		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	16.25	45	M	0	
23	A		23:30	JV	F	NA	13.00	46	M	0	
24	A		23:30	AD	F	PL	20.00	43	M	0	
25	A		23:30	JV	F	NA	14.75	44	M	0	
26	A	Lasiurus borealis	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	Sept 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 (splotching), which is often visible only with translumination.
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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 chiropatagium are evident.

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Property of: Environmental Solutions & Innovations, Inc.
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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)	Comments Picture # /Guano/Hair Sample
30	A		23:35	AD	F	NA	22.00	48	F	0	
31	A		23:36	JV	M	↓	15.00	44	F	0	
32	A		23:36	AD	M	↓	15.00	47	F	0	
33	A		23:38	AD	M	↓	17.00	48	M	0	
34	A		23:39	JV	M	↓	13.50	43	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
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8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag
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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	Sept 30
Sep 8	Oct 14	Oct 22	Oct 30
Oct 7	Nov 13	Nov 21	Nov 28

Wing Index Key

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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 chiropatagium are evident.

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4525 Este Avenue. Cincinnati, OH 45232 (Phone: 513-451-1777)

ESI

NET SITE HABITAT DESCRIPTION

Project #: 340.01 **Date:** 27 Jul 11 **Biologists:** J. Basiger

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 #
A	N	41° 09' 13.8" N	82° 59' 23.8" W	905	
B	N	41° 09' 13.2" N	82° 59' 21.7" W	902	
C	N	41° 09' 11.9" N	82° 59' 21.2" W	903	
D	N	41° 09' 12.8" N	82° 59' 19.6" W	904	

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)
Carya ovata
Acer rubrum

Estimated dbh range: Lg: 60 Sm: 40

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

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

Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue. Cincinnati, OH 45232 (Phone: 513-451-1777)

NET SITE HABITAT DESCRIPTION (continued)

Project #: 340.01	State/County: OH/Seneca	Site Name/#: 31	Initials:

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

LEGEND	COMMENTS
Nets: ●——●	
H = House	

ESI

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

BAT CAPTURE DATA

Project #: 340.01 Date: 25 July 11

Project Name: Republic

State: OH County: Seneca

Biologists: J. Basiger

Site name/#: 31

GPS Unit #: 751 465670 Camera #: Can 671

WEATHER DATA

Time (0000 h)	Temp (°C)	Wind Speed (estimated – see chart)*	Wind Direction: From ___ to ___	% Cloud Cover (estimated)	Comments
2100	24.9	—	—	0%	
2130	24.1	—	—	0%	
2200	23.1	—	—	0%	
2230	22.9	—	—	0%	
2300	22.7	—	—	0%	
2330	22.3	—	—	0%	
0000	21.7	—	—	0%	
0030					
0100					
0130					
0200	21.4				

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 ' 23.8 "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	82 59 19.6	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)	Comments Picture # /Guano/Hair Sample
1	C	Eptesicus fuscus	2130	Ad	F	PL	16.25	44	E	0	
2	B	E. fuscus	2210	Jv	F	NA	16.5	47	M	0	
3	A	E. fuscus	2215	Jv	M	↑	15.5	46	M	0	
4	A	E. fuscus	2215	Jv	M	↑	14.25	45	M	0	
5	B	E. fuscus	2310	Ad	M	↓	17.5	41	M	0	
6	C	E. fuscus	0050	Ad	M	↑	16.25	45	M	0	
7	C	E. fuscus	0130	Jv	M	↑	15.00	44	M	0	
8	B	Lasiurus borealis	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 = ↑/↓

ESI

BAT CAPTURE DATA

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

Project #: 340.01 Date: 27-Jul-11
Project Name: Republic
State: OH County: Seneca
Biologists: J. Basiger
Site name/#: 31
GPS Unit #: ESI [illegible] Camera #: [illegible]

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	26.1	—	—	100	
2130	25.9	—	—	100	
2200	25.8	—	—	100	
2230	25.5	—	—	100	
2300	25.1	—	—	100	
2330	24.8	1-3	NW-SE	100	
0000	24.1	1-3	W-E	100	
0030	24.4	1-3	W-E	100	
0100	25.3	1-3	NW-SE	100	
0130	25.7	1-3	NW-SE	100	
0200	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	[illegible] ° 59 ' [illegible] "W	6	6	2040	0145	905 ✓
B	N	41 ° 09 ' 13.0 "N	[illegible] ° 59 ' 31.7 "W	9	9	2045	0150	902 ✓
C	N	41 ° 09 ' 11.4 "N	[illegible] ° 59 ' 31.2 "W	9	6	2050	0155	903 ✓
D		41 09 12.6	[illegible] 59 19.6	6	6	2055	0155	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)	Comments Picture # /Guano/Hair Sample
		NO BATS									

[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 = ↑/↓

Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue, Cincinnati, OH 45232 (Phone: 513-451-1777)

ESI

NET SITE HABITAT DESCRIPTION

Project #: 340 **Date:** 28 July 2011 **Biologists:** E. Basiger & A. Klernhenz

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	NN	41 ° 13 ' 02.3 "N	82 ° 54 ' 29.7 "W	3096	340A32
B	NN	41 ° 13 ' 04.5 "N	82 ° 54 ' 29.8 "W	3100	340B32
C	NN	41 ° 13 ' 05.5 "N	82 ° 54 ' 29.4 "W	3099	340C32
D	NN	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 alba
Quercus rubra

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

Estimated dbh range: Lg: 35 Sm: 5

Estimated dbh range: Lg: ___ Sm: ___

Relative abundance of dominant vs. subdominant (ratio): 1/2

Estimated canopy closure: X Closed ___Moderate ___Open

Roost tree potential consists of: X Large Trees X Snags ___ Neither

Roost tree potential for the area is: ___High ___Moderate X Low

Roost potential comments: Tight bark

Subcanopy clutter: ___Closed X Moderate ___Open

Subcanopy comprised largely of: ___Lower Branches of Canopy Trees X Saplings ___Shrubs

Common Subcanopy Species: Ulmus americana
Acer saccharum

Habitat Description: Lowland

AnaBat Habitat: N/A

Check all that apply:

X Mature Upland Forest ___Recently Logged Forest X Crop/Pasture Land ___Other _____
___Young Upland Forest X Forest Edge ___Stream/River
___Mature Lowland Forest X Woodlot ___Vernal Pool
___Young Lowland Forest ___Old Field ___Deepwater Lake/Pond

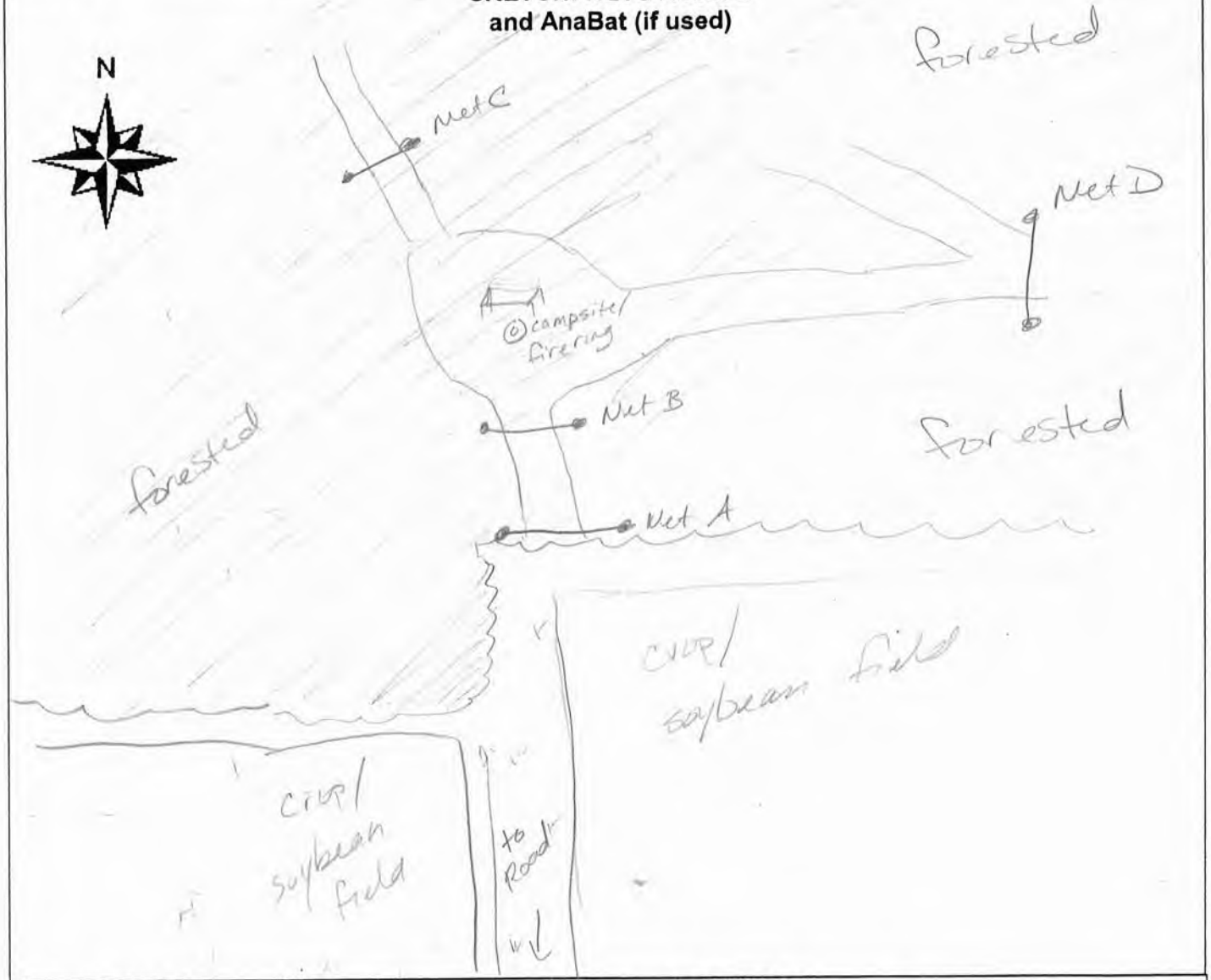
Herbaceous Cover: ___ Sparse X Moderate ___Dense

Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue. Cincinnati, OH 45232 (Phone: 513-451-1777)

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	COMMENTS
Nets: ●——●	

ESI

BAT CAPTURE DATA

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

Project #: 340 Date: 28 July 2011

Project Name: Republic-Wind

State: OH County: Seneca

Biologists: E. Bosser; A. Kleinhenz

Site name/#: 32

GPS Unit #: 7 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
2130	24.8°C	1-3	SW - NE	—	100%
2200	25.0°C	1-3	SW - NE	—	
2230	25.4°C	1-3	SW - NE	—	
2300	25.4°C	1-3	N -		
2330	25.3°C	1-3	SW - NE		
2400	25.1°C	1-3	SW - NE		
[illegible]	[illegible]	1-3	SW - NE		
[illegible]	25.0°C	1-3	SW - NE		
0120	24.5°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	9	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	6	6	2040	0155	3099
D	NN	41 13 05.1	82 54 23.7	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)	Comments Picture # /Guano/Hair Sample
1	A	Lasiurus Borealis	2123	Jv	M	NR	8.5g	47mm	F	0	3101-3104
2	A	Eptesicus Fuscus	2130	Jv	F	NR	16.0g	48mm	E	1	3105 & 3106
3	A	Eptesicus fuscus	2232	Jv	F	NR	21.5g	49mm	F	1	
4	A	Eptesicus fuscus	2242	Jv	M	NR	14.5g	45mm	M	0	
[illegible]	A	Eptesicus fuscus	[illegible]	Jv	F	NR	18.0g	47mm	F	0	
[illegible]	A	Eptesicus fuscus	2244	Jv	M	NR	15.5g	48mm	M	1	
7	A	Eptesicus fuscus	2358	Jv	M	NR	15.5g	47mm	M	1	
8	A	Eptesicus fuscus	2401	Jv	F	NR	11.0g	50mm	M	3	
9	A	Eptesicus fuscus	2444	Jv	M	NR	15.5g	46mm	F	0	
10	A	Eptesicus fuscus	2514	Jv	F	NR	14.4g	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/L/PL; Male = ↑/↓

ESI (15)

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

BAT CAPTURE DATA (continued)

Project #:_____ Date:_____

Project Name:_____ Site Name/#:_____ 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	Lasiurus Borealis	2416	Jv	F	NR	11.0g	39mm	M	0	
12	C	Myotis Septentrionalis	2419	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 lot 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	45mm	M	0	
20	D	Eptesicus Fuscus	0009	Jv	M	NR	17.0g	49mm	F	0	
21	C	Eptesicus Fuscus	0025	Jv	F	NR	18.5g	47mm	F	0	
22	D	Eptesicus Fuscus	0027	Jv	M	NR	14.0g	46mm	M	0	
23	D	Lasiurus Cinereus	0057	Jv	F	NR	14.5g	44mm	M	0	
24	A	Lasiurus Borealis	0115	Jv	F	NR	6.0g	41mm	E	0	
25	A	Eptesicus fuscus	0114	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	Sept 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 (splotching), which is often visible only with translumination.
2	**Moderate damage.** Greater than 50% of wing membrane covered with scar tissue (splotching). Scarring is visible without translumination. 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.

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BAT CAPTURE DATA

Project #: 340.01 Date: 7/30/11

Project Name:

State: OH County: Seneca

Biologists: A. Kniowski

Site name/#: 32

GPS Unit #: 7 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
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	
000	21.2	0		15	
030	21.5	0		15	
100	21.3	0		0	
130	21.2	0		0	
200	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	82 54 ' 27.7	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)	Comments Picture # /Guano/Hair Sample
	B	L. borealis	2120		M						Escaped
1	B	L. borealis	2120	Jv	F	NR	9.6	40	E	Ø	
2	D	E. fuscus	2130	A	M	↓	16.2	46	E	Ø	
3	B	L. borealis	2138	Jv	F	NR	10.5	41	E	Ø	
4	B	E. fuscus	2155	A	M	↓	17.7	46	E	Ø	
5	B	E. fuscus	2207	A	F	PL	20.7	46	M	Ø	
6	A	E. fuscus	2210	A	F	DL	20.6	48	M	Ø	
7	A	L. borealis	2210	Jv	F	NR	9.1	41	M	Ø	
8	A	E. fuscus	2210	A	F	DL	19.9	46	F	Ø	
9	C	E. fuscus	2215	A	F	PL	17.4	46	M	Ø	

[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

ESI

Property of: Environmental Solutions & Innovations, Inc.
4525 Este Avenue. Cincinnati, OH 45232 (Phone: 513-451-1777)

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)	Guano/ Hair Sample	Comments/Picture #
10	C	E. fuscus	2215	Jv	M	NR	14.5	45	M		
11	B	L. borealis	2235	A	M	V	10.6	42	M		
12	A	E. fuscus	2235	Jv	M	NR	15.4	44	F		
13	A	E. fuscus	2235	A	F	PL	19.0	45	M		
14	A	E. fuscus	2235	Jv	F	NR	16.5	45	F		trans
15	A	E. fuscus	2235	A	F	PL	21.3	47	F		
16	A	E. fuscus	2235	Jv	M	NR	15.2	45	F		
17	A	E. fuscus	2235	Jv	F	NR	16.9	45	F		
18	B	E. fuscus	2310	Jv	F	NR	16.3	46	M		
19	B	E. fuscus	2310	Jv.	F	NR	15.8	46	F		
20	B	E. fuscus	2310	A	F	PL	19.3	45	F		
21	A	E. fuscus	2315	Jv.	F	NR	17.3	46	F		
22	A	E. fuscus	2315	A	M	V	16.3	45	F		
23	D	L. Borealis	2317	Jv	M	NR	8.8	41	M		
24	D	E. fuscus	2345	A	M	V	17.4	44	F		
25	A	E. fuscus	2355	Jv	M	NR	16.1	46	F		
26	C	E. fuscus	005	A	M	V	17.0	46	F		
27	C	E. fuscus	005	J	M	NR	19.5	47	F		
28	A	E. fuscus	010	J	M	NR	19.3	46	F		
29	A	E. fuscus	010	J	F	NR	16.3	45	F		
30	A	E. fuscus	020	J	M	NR	15.	45	F		
31	A	E. fuscus	020	J	M	NR	17.2	47	F		
32	A	L. borealis	035	J	F	NR	10.1	40	F		
33	A	E. fuscus	0:40	Ad	F	V	15.4	44	M		
34	A	E. fuscus	0:40	J	M	NR	17.4	44	F		
35	B	L. bor	0:40	J	F	NR	10.4	39	F		
36	D	L. Bor	40	J	F	NR	10.9	39	F		
37	B	L. bor	1:00	Jv	F	NR	11	41	M		
38	C	M. Sex	1:15	Jv	F	NR	6	34	M		

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Property of: Environmental Solutions & Innovations, Inc.
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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)	Guano/ Hair Sample	Comments/Picture #
39	A	L. borealis	210	Jv	m	NR	9.1	38	M		

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NET SITE HABITAT DESCRIPTION

Project #: 340 **Date:** 22 July 2011 **Biologists:** E. Baniger; S. Captain

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 #
A	NN	41 ° 16 ' 41.2 "N	82 ° 57 ' 19.2 "W	3076	51
B	NN	41 ° 16 ' 40.3 "N	82 ° 57 ' 1.6 "W	3100	52
C	NN	41 ° 16 ' 40.7 "N	82 ° 57 ' 13.0 "W	3099	53
D	NN	41 ° 16 ' 38.2 "N	82 ° 57 ' 17.1 "W	3098	54

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: ½ meters Channel Width: 1 meters Stream Width: ½ 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 ovata
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: X Closed ___Moderate ___Open

Roost tree potential consists of: X Large Trees X Snags ___ Neither

Roost tree potential for the area is: ___High X Moderate ___Low

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

Subcanopy clutter: ___Closed X Moderate ___Open

Subcanopy comprised largely of: ___Lower Branches of Canopy Trees X 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:

X 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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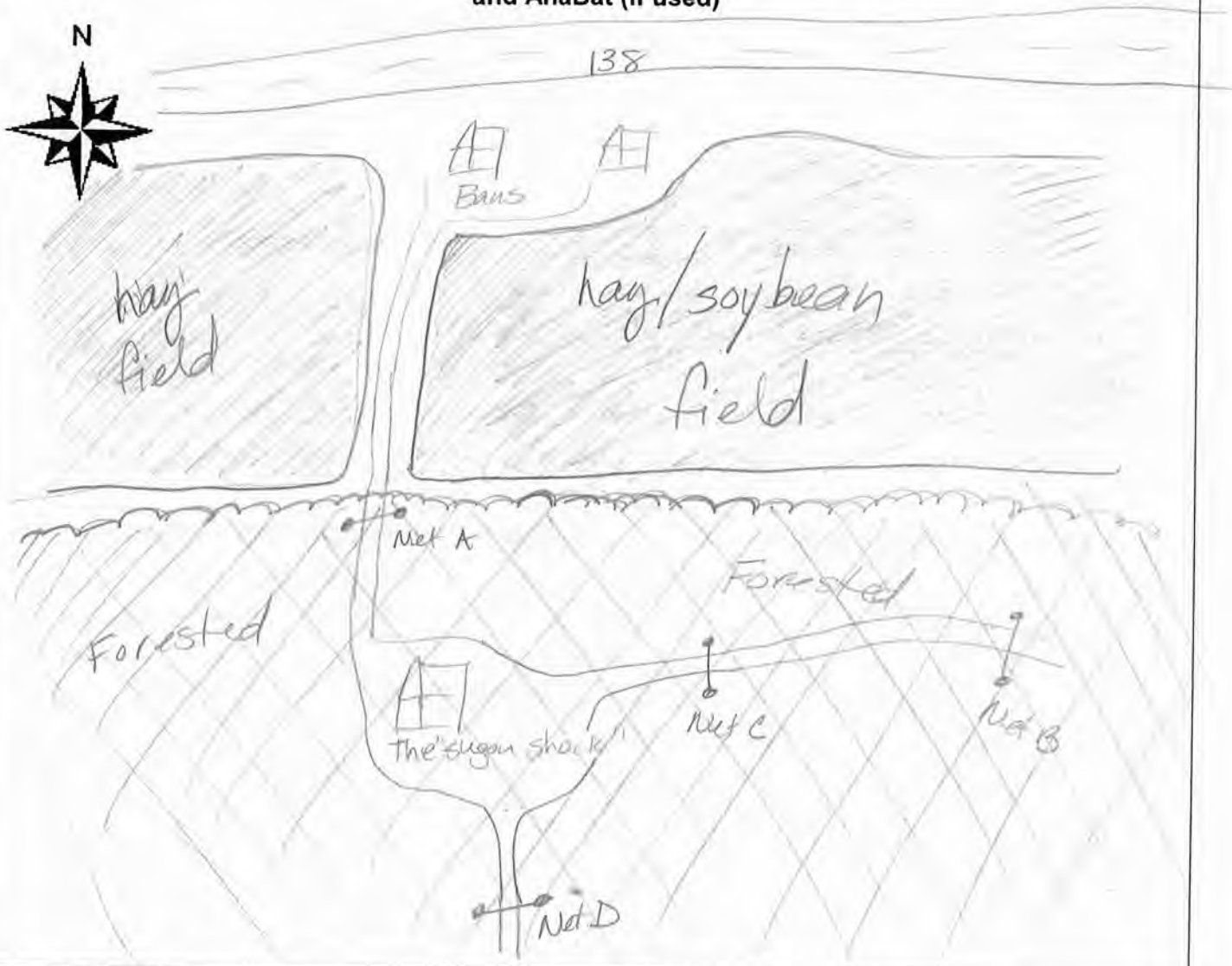
NET SITE HABITAT DESCRIPTION (continued)

Project #: 340	State/County: OH/Seneca	Site Name/#: 33	Initials: ELB

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



LEGEND	COMMENTS
Nets: ●——●	

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Property of: Environmental Solutions & Innovations, Inc.
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BAT CAPTURE DATA

Project #: 340 Date: 22 July 2011

Project Name: Republic - Wind

State: OH County: Seneca

Biologists: E. Bosiger; S. Captain

Site name/#: 33

GPS Unit #: 952E Camera #: Erin

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%	thunderstorm in distance
2330	24.0	1-3	E → W	70%	
0000	24.0	1-3	E → W	100%	Rain = [illegible]
0030	23.9	1-3	E → W	100%	Rain
0100					
0130		RAIN		OUT	
0200					

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	NN	41° 10' 41.2" N	82° 59' 19.2" W	9	9	2030	0005	3096
B	NN	41° 10' 40.3" N	82° 59' 15.6" W	6	6	2035	[illegible]	3100
C	NN	41° 10' 40.9" N	82° 59' 13.0" W	9	6	2040	[illegible]	3099
D	NN	41° 10' 39.2	82° 59' 17.1	6	6	2045	0010	3098

Net Placement/Site Description: Note placed over hole through wood 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)	Comments Picture # /Guano/Hair Sample
1	D	Myotis septentrionalis	2120	Ad	M	↓	5.9	33	E	0	3080-3082
2	A	Lasiurus cinereus	2120	Ad	F	NR	20.8	51	E	0	3083 3084
3	A	Eptesicus fuscus	2300	Ad	M	↓	17.1	45	E	0	3085-3087
4	A	Ep. fuscus	2300	Ad	F	PL	20.2	44	M	0	
5	A	Ep. fuscus	2306	Jv	M	↑	15.1	45	E	0	
6	A	Lasiurus borealis	2330	Jv	F	NR	9.3	38	E	0	3095-3096
7	A	Ep. fuscus	2306	Ad	M	↓	15.5	44	M	1	
8	A	Ep. fuscus	2350	Ad	M	↓	16.2	45	M	0	
9	A	Ep. fuscus	[illegible]								[illegible]

[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 = ↑/↓

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BAT CAPTURE DATA

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

Project #: 340 Date: 23 July 2011

Project Name: Republic-Wind

State: OH County: Seneca

Biologists: E Bazzoni, S. Lapolem

Site name/#: 33

GPS Unit #: 9528 Camera #: Em

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

RAIN OUT

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 ° 16 ' 45.2 "N	82 ° 59 ' 14.2 "W	9	9	—	—	3096
B	NN	41 ° 16 ' 43.3 "N	82 ° 59 ' 15.6 "W	6	4	—	—	3100
C	NN	41 ° 16 ' 40.9 "N	82 ° 59 ' 12.0 "W	9	6	—	—	3099
D	NN	41 16 39.2	82 59 13.1	6	10			3098

Net Placement/Site Description: [illegible]

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

NO BATS

[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 = ↑/↓

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

BAT CAPTURE DATA

Project #: 340 Date: 24 July 2011

Project Name: Republic-Wind

State: OH County: Seneca

Biologists: E. Bunger, S. Capton

Site name/#: 33

GPS Unit #: 9528 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	"	30%	
0000	23.6	1-3	"	50%	—
0030	23.4	1-3	"	75%	
0100	23.1	1-3	"	80	
0130	23.1	1-3	"	70%	

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' 44.8"N	82° 59' 19.2"W	9	9	2030	0140	3096
B	ON	41° 10' 44.5"N	82° 59' 15.6"W	6	6	2035	0145	3100
C	NN	41° 10' 42.7"N	82° 59' 13.0"W	9	6	2040	0150	3099
D	NN	41° 10' 39.2"N	82° 59' 17.1"W	6	6	2045	0157	3098

Net Placement/Site Description: Nets [illegible]

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	Eptesicus fuscus	2100	Ad	F	PL	18.1	47	E	0	
2	B	Eptesicus fuscus	2110	Ad	F	PL	19.5	46	M	0	
3	A	L. borealis	2345	Ad	F	PL	20.0	46	F	0	
4	C	L. borealis	[illegible]	Jv	M	NR	22.0	45	M	0	
5	B	L. borealis	[illegible]	Jv	M	NR	19.5	44	F	0	
6	D	L. borealis	2316	Ad	M	↓	18.0	45	F	0	
7	C	L. borealis	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 = ↑/↓

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

BAT CAPTURE DATA

Project #: 340 Date: 26 July 2011

Project Name: Republic - Wind

State: OH County: Seneca

Biologists: E. Baiger, Andy Klein

Site name/#: 33

GPS Unit #: 7528 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	24.3°C	1-3	W-E	2%	—
2130	23.9°C	1-3	W-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	W-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	°C				

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 ' 42 "W	9	9	2030	0145	3096
B	NN	41 ° 10 ' 41.7 "N	82 ° 59 ' 15.5 "W	6	6	2035	0150	3100
C	NN	41 ° 10 ' 40.7 "N	82 ° 59 ' 13.0 "W	9	6	2040	0155	3099
D	NN	41 10 37.7	82 59 17	6	6	2045	0200	3098

Net Placement/Site Description: Nets [illegible] from [illegible] throughout [illegible]

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	Eptesicus fuscus	2204	Ad	M	↓	17.9	46 mm	M	0	
2	A	Eptesicus fuscus	2237	Ad	F	PL	20.5	47 mm	M	1	
3	A	Eptesicus fuscus	2237	Ad	F	PL	19.5 g	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 = ↑/↓

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in

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

Summary: Application Exhibit J Appendix E - Part 4 of 12 electronically filed by Teresa Orahood on behalf of Sally W. Bloomfield