FEDERALLY PROTECTED BAT SURVEY REPORT

Eastern North Carolina
Northern Long-eared Bat (*Myotis septentrionalis*) Research Study
Brunswick, Columbus, Onslow, Pender, Robeson,
Rockingham, and Sampson Counties
North Carolina

Survey Phase 2: Summer 2017
TIP R-9999
WBS No. 34634.1.4

Prepared for

The North Carolina Department of Transportation
Environmental Analysis Unit
Natural Environment Section
1598 Mail Service Center
Raleigh, NC 27699-1598
(919) 707-6000

FINAL VERSION
December 2017

FEDERALLY PROTECTED BAT SURVEY REPORT

Eastern North Carolina
Northern Long-eared Bat (*Myotis septentrionalis*) Research Study
Brunswick, Columbus, Onslow, Pender, Robeson,
Rockingham, and Sampson Counties
North Carolina

Survey Phase 2: Summer 2017
TIP R-9999
WBS No. 34634.1.4

Prepared for

The North Carolina Department of Transportation
Environmental Analysis Unit
Natural Environment Section
1598 Mail Service Center
Raleigh, NC 27699-1598
(919) 707-6000

Prepared by

CALYX Engineers + Consultants
6750 Tryon Road, Cary, NC 27518
919.836.4800

Senior Biologist:
Kathryn Cunningham
kcunningham@calyxengineers.com
919.858.1854

FINAL VERSION
December 2017

Table of Contents

1.0 PROJECT DESCRIPTION 1
2.0 SPECIES INFORMATION 2
3.0 METHODS 2
3.1 Mist-net Surveys 2
3.5 Habitat Assessments 3
4.0 FINDINGS 4
4.1 Mist Net Surveys 4
4.2 Habitat Analysis 9
5.0 REFERENCES 10
FIGURES 11
APPENDICES 11

List of Tables

TABLE 1. EASTERN NC NLEB RESEARCH STUDY LOCATIONS – 2017 1
TABLE 2. MIST NET CAPTURE SUMMARY 5
TABLE 3. VEGETATION AT BLACK RIVER 9
TABLE 4. HABITAT SURVEY SCORE AT BLACK RIVER 9

List of Appendices

APPENDIX A: NCDOT MIST-NETTING AND ACOUSTIC SURVEY DATA FORMS
APPENDIX B: MIST-NET SITE PHOTOGRAPHS
APPENDIX C: REPRESENTATIVE NORTHERN LONG-EARED BAT SPECIES AND NET PHOTOGRAPHS

1.0 PROJECT DESCRIPTION

The North Carolina Department of Transportation (NCDOT) hired CALYX Engineers + Consultants, Inc. (CALYX) to assist in conducting portions of a research study of the northern long-eared bat (*Myotis septentrionalis*; NLEB) in eastern North Carolina. The objective of this summer study is to determine the distribution of NLEB in eastern North Carolina.

CALYX was tasked with identifying suitable mist-netting sites within seven assigned counties: Brunswick, Columbus, Onslow, Pender, Robeson, Rockingham, and Sampson. At a desktop level, CALYX biologists reviewed parcel boundaries, wetland and stream data, and aerial photography for state owned lands as well as parcels with conservation easements held by the state or local conservation groups. If the locations passed the initial desktop screening, the locations were reviewed in the field by qualified bat biologists to determine if any suitable netting sites were present. If so, the location was targeted for mist netting surveys. All field work was completed between May 1 and September 7, 2017. The 19 locations that were sampled are shown on Figure 1, and listed in Table 1.

Table 1. Eastern NC NLEB Research Study Locations – 2017

County	Figure	Location	Owner
Brunswick	2	Boiling Springs Lake Preserve	NC Plant Conservation Program
	3	Brunswick County Game Lands	NC Wildlife Resources Commission
	4	Columbus County Game Lands	NC Wildlife Resources Commission
	5	Juniper Creek Game Lands	NC Wildlife Resources Commission
Columbus	6	Bush Island Mitigation Site	NC Division of Mitigation Services
	5	Columbus County Game Lands	NC Wildlife Resources Commission
	5	Juniper Creek Game Lands	NC Wildlife Resources Commission
	7	Lake Waccamaw State Park	NC State Park
Onslow	8	Hammocks Beach State Park	NC State Park
	9	Hofmann Forest	NCSU College of Natural Resources
	10	Rocky Run Game Lands	NC Wildlife Resources Commission
	11	Stone Creek Game Lands	NC Wildlife Resources Commission
Pender	12	Angola Bay Game Lands	NC Wildlife Resources Commission
	13	Black River Preserve	The Nature Conservancy
	14	Holly Shelter Game Lands	NC Wildlife Resources Commission
Robeson	15	Lumber River State Park	NC State Park
Rockingham	16	Mayo River State Park	NC State Park
Sampson	17	Great Coharie	NC Division of Mitigation Services
	18	Pondberry Bay Preserve	NC Plant Conservation Program

2.0 SPECIES INFORMATION

The NLEB was officially listed by the United States Fish and Wildlife Service (USFWS) as a Threatened species in April of 2015. The listing became effective May 2, 2015. USFWS also established a final rule under the authority of section 4(d) of the Endangered Species Act that provides measures for the conservation of NLEB. The USFWS has tailored the final 4(d) rule to prohibit the take of NLEB from certain activities within areas where they are in decline. This incidental take protection applies only to known NLEB occupied maternity roost trees and known NLEB hibernacula. Effective February 16, 2016, incidental take resulting from tree removal is prohibited if it 1) occurs within a ¼ mile radius of known NLEB hibernacula; or 2) cuts or destroys known occupied maternity roost trees, or any other trees within a 150-foot radius from the known maternity tree during the pup season (June 1-July 31) (USFWS 2016a).

NLEB occurs widely across much of Canada and the southeastern United States, but is unevenly distributed and rarely found in large numbers. It is more common in the northern part of its range than in the southern portion. In North Carolina, NLEB have primarily been documented in the western portion of the state, with limited records from the Piedmont and Coastal Plain. Prior to commencing the 2017 summer netting, NLEB was listed by the USFWS as potentially occurring in twelve eastern North Carolina counties: Wake, Lee, New Hanover, Martin, Bertie, Bladen, Washington, Dare, Gates, Camden, and Currituck (USFWS 2017b).

Winter hibernacula for the NLEB in western North Carolina includes caves and mines. Hibernacula/winter roosts in central and eastern North Carolina may include other landscape features. Suitable summer habitat for the NLEB is generally characterized as forested areas with trees over 3 inches in DBH. Summer roost sites include tree cavities or crevices, the loose bark of live or dead trees, and abandoned buildings (USFWS 2016a).

3.0 METHODS

This section describes the methods used to perform surveys and habitat assessments. All survey methods followed the procedures and protocols set forth by the scope of work, including the NCDOT Standardization for NLEB Research 2016 (NCDOT 2016). This included all or part of USFWS 2017 Range-wide Indiana Bat Summer Survey Guidelines (USFWS 2017a) for the USFWS Southeast Region. Decontamination protocols followed USFWS National White Nose Syndrome Decontamination Protocol (USFWS 2016b), and North Carolina's White-nose Syndrome Surveillance and Response Plan (NCWRC 2013).

No caves, mines, abandoned structures, bridges or other potential roost sites were investigated as part of this study.

3.1 Mist-net Surveys

CALYX biologists sampled 19 locations (Table 1) using mist netting techniques. Phase 3 (USFWS 2017a) mist-netting was conducted with the goal of catching the target species, NLEB. Six nights of netting were performed within each target county, unless a NLEB was captured, in which case netting was considered complete for that county. If a NLEB was captured, any nights remaining in that county were made up at optimal sites within the project area.

The highest quality foraging/roosting habitat for NLEB within each location was targeted for this study. The CALYX biologist determined how many nets to set each night using best professional judgement at each location. Actual mist net placement varied from night to night within a location. The specific location and orientation of each net was determined in the field by the permitted biologist. Digital photographs were taken of each net site and net set placement (Appendix B).

Nets were checked for bats every ten minutes, and sometimes more frequently. Data was recorded within a digital app and printed to a data sheet template provided by NCDOT (Appendix A), including bat captures, weather, and habitat type. For each bat capture, data collection included a variety of parameters, including (but not limited to) time of capture, species, age, sex, reproductive condition, weight, and right forearm length. Per the request of NCWRC all species were banded with a uniquely-numbered, custom-fitted Porzana band on the right forearm of males and left forearm of females. Prior to release, all Myotis were photographed following techniques provided by USFWS in the 2017 Indiana bat survey guidelines (Appendix C). The natural community type for each mist net site was determined per Schafale and Weakley (1990).

Nets remained open at least five hours a night, unless the target species (NLEB) was captured. Netting surveys were immediately discontinued at the location if a NLEB was captured. Surveys were repeated if the following occurred: winds move the nets more than 50 percent of the time; and rain or fog that persists for 30 minutes or continues intermittently throughout the survey period.

3.5 Habitat Assessments

Prior to performing field surveys, a desktop-GIS assessment using the latest orthoimagery was performed to determine availability of potentially suitable summer habitat for NLEB within each location. This information was utilized to aid in scouting for mist netting sites.

The natural community types were characterized using the *Classification of the Natural Communities of North Carolina, Third Approximation* (Shafale and Weakley (2009) where mist net surveys were conducted. In addition, for each site where NLEB were captured, habitat in the survey area was scored using the following (circling one for each, 1-6) (Table4):

1) pine/hardwood/mixed/unforested
2) upland/bottomland
3) managed (thinned, burned, or pine plantation)/unmanaged
4) cutover/immature forest/mature forest
5) clutter (Classifications 1-4)
    (1) sparse/no, < 10% cover (ex: open for 40m in all directions)
    (2) low, 10–39% cover (low clutter stands typically contain <6 or >95-year-old trees, ex: microphone pointed outward from edge habitat)
    (3) medium, 40–75% cover (medium clutter stands typically contain 70–100-year-old trees, ex: at least 10-m wide travel corridor, fairly open above)
    (4) high, > 75% cover (high clutter stands typically contain 10–25-year-old trees, ex: closed canopy & travel corridor < 10-m wide)
6) natural (>50% wooded), rural (>50% agricultural land)/mixed (primary land use is not wooded or agricultural)

For each site where NLEB were captured, an assessment of forest basal area (m^2/ha) of each mist net site was conducted using a 10- factor prism and canopy cover was determined using a sighting tube at 10 random locations within a 0.05-ha circular plot around each site (Cook et al. 1995, Ford et al. 2006). This detailed habitat data was collected in the growing season when

leaves were are on the trees to provide a better idea of how much clutter is around when bats are most active.

4.0 FINDINGS

This section describes the results of mist net surveys and habitat analysis. In general, nets were placed to sample potential travel corridors such as ATV trails, utility corridors, or streams. Edge habitat was utilized when other potential travel corridors were not available.

4.1 Mist Net Surveys

Netting was conducted between May 1 and September 7, 2017 from approximately sunset to five hours after sunset, Eastern Daylight Time. Mist net surveys were performed with the goal of capturing NLEB. Net deployments were individually tailored to flight corridors within the highest quality foraging/roosting habitat available within each survey location. Configurations utilized combinations of nets sized between 2.6 and 18 meters in length, stacked between one net panel (single high), two net panels (double high), and three net panels (triple high) in height. The number of net sets and individual net placement varied from site to site, and were determined in the field each night by experienced CALYX biologists. At least two net sets were deployed each night. However, an effort was always made to deploy as many net sets as possible, given the time available and while allowing for each net to be checked every ten minutes. Each mist net site was photographed (Appendix B), and a GPS point was recorded. Figures 2-18 depict the locations of mist-net sites at each of the six sampled project locations.

Mist-netting locations and number of bats per locations are presented in Table 2. Mist net captures were documented on data sheets provided by NCDOT which were designed to capture the same information as that contained in the USFWS Sample Data Sheet for Indiana Bat Surveys (USFWS 2017a). Forty-two (42) net nights were completed at 35 sites. The survey efforts resulted in the capture of 223 bats representing eight species (and 8 unknown bats due to escaping prior to species identification). Photos and data sheets for each mist net site are provided in Appendices A and B.

Table 2. Mist Net Capture Summary

Location	Site Name	Night	Date	Community Type	CORA	EPFU	LABO	LASE	MYAU	MYSE	NYHU	PESU	UNKN	Total	Notes
Brunswick County Game Lands	Swamp	1	*5/1/2017	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	-	-	-	-	-	-	-	-	-	0	Did not open nets. Wind out.
		2	5/2/2017	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	1	3	5	1	-	-	-	4	1	15	
		3	9/7/2017	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	-	-	-	-	-	-	-	-	-	0	
	S Curve	1	5/3/2017	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	1	-	16	-	1	-	-	-	-	18	
	Gate	1	5/8/2017	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	-	-	9	1	-	-	-	-	-	10	
Boiling Springs	Road	1	5/9/2017	Pond Pine Woodland	-	-	-	1	-	-	-	-	-	1	
Juniper Creek	Fire Tower	1	5/10/2017	Mesic Pine Flatwoods	-	-	-	-	-	-	-	-	-	0	
	Road Intersection	1	6/26/2017	Coastal Plain Bottomland Hardwood (Blackwater Subtype)	-	-	3	-	1	-	-	-	1	5	
Columbus County Game Lands	Pireway Tract	1	5/16/2017	Coastal Plain Bottomland Hardwoods (Blackwater Suptype)	-	-	2	1	2	-	-	1	1	7	Acadian Flycatcher
	Dirt Road	1	5/11/2017	Wet Pine Flatwoods	-	-	3	3	-	-	-	-	-	6	

Location	Site Name	Night	Date	Community Type	CORA	EPFU	LABO	LASE	MYAU	MYSE	NYHU	PESU	UNKN	Total	Notes
Bush Island Mitigation Site	Corridor	1	5/17/2017	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	-	-	3	-	2	-	-	-	-	5	
	Intersection	1	5/18/2017	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	-	-	3	-	-	-	-	-	1	4	
Lake Waccamaw	Campsite 4	1	6/27/2017	Coastal Fringe Sandhill	-	3	1	-	6	-	1	1	-	12	
		2	9/5/2017[1]	Coastal Fringe Sandhill	-	-	-	-	-	-	-	-	-	0	
	Campsite 2	1	6/28/2017	Coastal Fringe Sandhill	1	-	-	-	1	-	-	-	-	2	Screech owl, flying squirrel
Hofmann Forest	Bridge	1	*6/5/2017	Mesic Pine Flatwoods	-	10	1	-	-	-	-	-	-	11	Rain Out
		2	6/8/2017	Mesic Pine Flatwoods	-	3	-	-	-	-	-	-	-	3	
		3	8/3/2017	Mesic Pine Flatwoods	-	9	8	-	-	-	7	-	-	24	
Hammocks Beach	Road	1	*6/5/2017	Coastal Fringe Sandhill	-	-	-	-	-	-	-	-	-	0	Rain Out
		2	8/21/2017	Coastal Fringe Sandhill	-	-	-	-	-	-	1	-	-	1	
Stone Creek	Bridge	1	6/6/2017	Mesic Pine Flatwoods	-	-	-	-	-	-	-	-	-	0	
		2	8/2/2017	Mesic Pine Flatwoods	-	-	-	-	-	-	-	-	-	0	
Rocky Run	Dirt Road	1	6/12/2017	Mesic Pine Flatwoods	-	-	-	-	-	-	-	-	-	0	
Holly Shelter	Pond	1	*6/6/2017	Coastal Plain Small Stream Swamp	-	3	2	-	-	-	2	-	-	7	Rain Out
		2	6/8/2017	Coastal Plain Small Stream Swamp	-	-	1	-	-	-	-	-	-	1	

Location	Site Name	Night	Date	Community Type	CORA	EPFU	LABO	LASE	MYAU	MYSE	NYHU	PESU	UNKN	Total	Notes
Black River Preserve	Black River	1	6/7/2017	Cypress-Gum Swamp	2	-	-	-	-	-	-	-	-	2	
	Black River	2	6/14/2017[2]	Cypress-Gum Swamp	-	-	-	-	-	1	-	-	-	1	Caught NLEB. Rain
Angola Bay	Road	1	6/13/2017	High Pocosin	-	-	1	1	-	-	-	-	-	2	
Lumber River State Park	Trails	1	*7/24/2017	Coastal Plain Levee Forest (Blackwater Subtype)	-	-	-	-	-	-	-	-	-	0	Rain Out. Did not open nets
		2	7/25/2017	Coastal Plain Levee Forest (Blackwater Subtype)	-	-	-	-	1	-	1	-	-	2	
		3	8/1/2017	Coastal Plain Levee Forest (Blackwater Subtype)	-	-	1	-	2	-	-	3	-	6	
	Wetland	1	7/26/2017	Wet Pine Flatwoods	-	-	2	-	2	-	-	-	-	4	
	Beulah Church	1	7/27/2017	Wet Pine Flatwoods	-	-	-	1	-	-	-	-	-	1	
	Road Junction	1	7/31/2017	Wet Pine Flatwoods	-	-	1	1	2	-	-	-	-	4	
	Campground	1	8/2/2017	Coastal Plain Levee Forest (Blackwater Subtype)	-	-	-	-	-	-	-	-	-	0	Eastern rattlesnake, golden silk orbweaver, wood thrush, screech owl, flying squirrel

Location	Site Name	Night	Date	Community Type	CORA	EPFU	LABO	LASE	MYAU	MYSE	NYHU	PESU	UNKN	Total	Notes
Mayo River	Power Lines	1	8/15/2017	Basic Mesic Forest (Piedmont Subtype)	-	-	-	-	-	-	-	-	1	1	Female Northern Red Cardinal
	Gate	1	8/16/2017	Basic Mesic Forest (Piedmont Subtype)	-	-	1	-	-	-	-	-	-	1	
		2	8/24/2017	Basic Mesic Forest (Piedmont Subtype)	-	-	4	-	-	-	-	-	-	4	
	Pruitt Road	1	8/17/2017	Basic Mesic Forest (Piedmont Subtype)	-	-	-	-	-	-	-	-	-	0	
	Deshazo Road	1	8/22/2017	Basic Mesic Forest (Piedmont Subtype)	-	-	-	-	-	-	-	-	-	0	
	Waterfall	1	8/23/2017	Basic Mesic Forest (Piedmont Subtype)	-	-	2	-	-	-	-	-	-	2	
Great Coharie	Gate 1	1	7/10/2017	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	-	-	2	-	-	-	-	-	-	2	Woodcock
	Gate 5	1	7/11/2017	Mesic Mixed Hardwood Forest (Coastal Plain Subtype)	-	-	2	-	-	-	-	-	-	2	
	Gate 3	1	7/12/2017	Wet Pine Flatwoods	-	-	3	-	-	-	-	-	-	3	
	Gate 2	1	7/13/2017	Mesic Pine Flatwoods	-	-	-	-	-	-	-	-	-	0	Black widow spider
Pond Berry	Turkey Farm	1	7/17/2017	Mesic Pine Flatwoods	-	2	11	1	-	-	-	-	-	14	
	Intersection	1	7/18/2017	Mesic Pine Flatwoods	-	2	33	3	-	-	2	-	-	40	Flying squirrel
				Total	**5**	**35**	**120**	**14**	**20**	**1**	**14**	**9**	**8**	**223**	

CORA = *Corynorhinus rafinesquii*, Rafinesque's Big-eared Bat; EPFU = *Eptesicus fuscus*, Big Brown Bat; LABO = *Lasiurus borealis*, Red Bat; LASE = *Lasiurus seminolus*, Seminole Bat; MYAU = *Myotis austroriparius*, Southeastern Myotis; MYSE = *Myotis septentrionalis*, Northern Long-eared Bat; NYHU = *Nycticeius humeralis*, Evening Bat; PESU = *Perimyotis subflavus*, Tricolored Bat.

* = netting not completed; rained out.
[1] = Extra night of netting left over from Pender County
[2] = Caught bat while closing nets due to rain

4.2 Habitat Analysis

Suitable summer habitat for NLEB is generally described as forested habitat, stream/riparian corridors, forest edges, and forested fence lines. A desktop-GIS assessment, using the latest orthoimagery was performed for each location prior to commencing field work. This was done to improve efficiency in the field, allowing CALYX biologists to focus their efforts on the most appropriate habitat for NLEB.

Habitat types found at each mist net site were characterized per Classification of the Natural Communities of North Carolina, Third Approximation (Schafale and Weakley 1990). The habitat type for each mist net site is in Tables 2. In total, eleven habitat types were sampled.

On June 14, 2017, one healthy adult male NLEB (band number CALYX 0220) was captured in Black River Preserve in Pender County, North Carolina, at a site referred to as Black River. (Photos of this bat are included in Appendix C). This site is located at approximately 34.463982, -78.171258, on an unnamed gravel road northeast of Morgan Road (Appendix C). Three net sets were deployed across the road and adjacent trails and one was deployed over a cypress swamp. The net set that captured the NLEB was a triple high 6m net approximately 2.5m off the ground. The NLEB was caught while closing the nets due to rain. The Community type was Cypress-Gum Swamp. An in depth vegetation sample was taken at random points at the Black River Site to get a detailed vegetation sampling (Table 3). The sketch on the datasheet for Black River can be located in Appendix A for more detail.

Table 3. Vegetation at Black River

Strata	Species Name	Common Name
Canopy	*Liquidambar styraciflua*	Sweetgum
	Quercus nigra	Water oak
	Taxodium distichum	Bald cypress
	Pinus taeda	Loblolly pine
Subcanopy	*Acer rubrum*	Red maple
	Betula nigra	River birch
	Carpinus caroliniana	Musclewood
Shrub	*Cyrilla racemiflora*	Titi
	Ilex opaca	American holly
	Persea borbonia	Red bay
	Vaccinium arboreum	Sparkleberry
Vine	*Vitis rotundifolia*	Muscadine grape
	Lonicera japonica	Japanese Honeysuckle
	Parthensocissus quinquefolia	Virginia creeper
Herb	*Microstegium vimineum*	Japanese grass
	Lespedeza bicolor	Lespedeza

Table 4. Habitat Survey Score at Black River

Category	Results
Pine/Hardwood/Mixed/Unforested	Mixed
Upland/Bottomland	Bottomland
Managed/Unmanaged	Unmanaged
Cutover/Immature Forest/Mature Forest	Mature
Clutter (Classifications 1-4)	(4) High Clutter
Natural/Agricultural	Natural

5.0 REFERENCES

Cook, J.G., Stutzman, T.W., Bowers, C.W., Brenner, K.A., Irwin, L.L., 1995. Spherical densiometers produce biased estimates of forest overstory canopy cover. Wildl. Soc. Bull. 23, 711–717.

Ford, W.M., F.O. Sheldon, J.W. Edwards, J.L. Rodrigue. 2006. *Robinia pseudoacacia* (Black Locust) as day-roosts of male *Myotis septentrionalis* (Northern Bats) on the Fernow Experimental Forest, West Virginia. Northeast. Naturalist, Number 13, pp. 15–24

North Carolina Department of Transportation (NCDOT). 2016. Standardization for NLEB Research 2016.

North Carolina Wildlife Resources Commission (NCWRC). 2013. North Carolina's White-nose Syndrome Surveillance and Response Plan. Available at: https://www.whitenosesyndrome.org/sites/default/files/resource/nc_wns_surveillance_reponse_plan_with_appendices_10dec2013.pdf

Schafale, M.P. and A.S. Weakley. 1990. Classification of the Natural Communities of North Carolina: Third Approximation. North Carolina Natural Heritage Program, Division of Parks and Recreation. Raleigh, North Carolina.

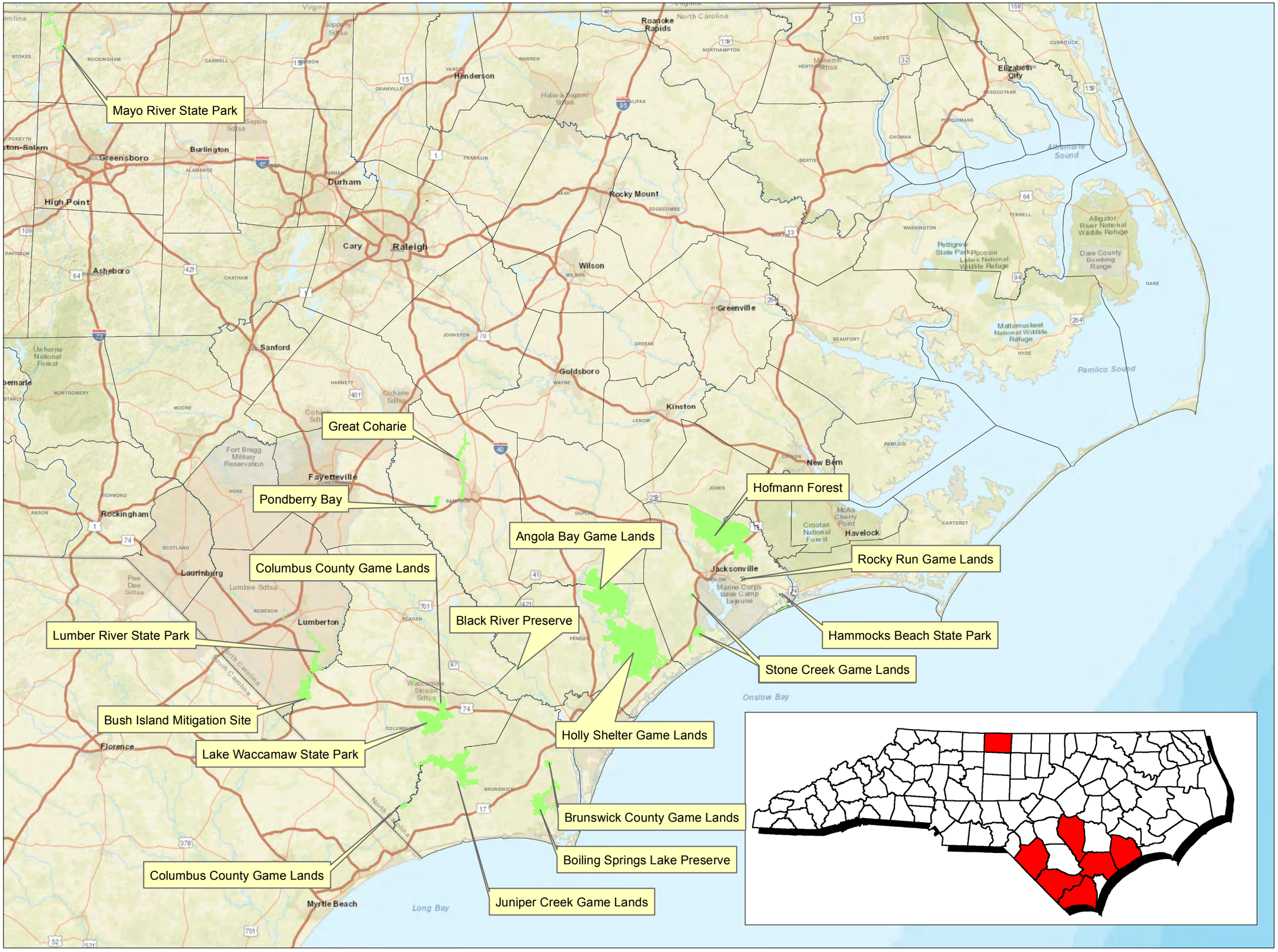
United States Fish and Wildlife Service (USFWS). 2016a. 4(d) Rule for the Northern Long-Eared Bat; Final rule. Federal Register 81 (9): 1900-1922.

United States Fish and Wildlife Service (USFWS). 2016b. National White Nose Syndrome Decontamination Protocol. https://www.whitenosesyndrome.org/sites/default/files/resource/national_wns_decon_protocol_04.12.2016.pdf

United States Fish and Wildlife Service (USFWS). 2017a. Range-wide Indiana Bat Summer Survey Guidelines. Available at: https://www.fws.gov/midwest/endangered/mammals/inba/surveys/pdf/2017INBASummerSurveyGuidelines9May2017.pdf

United States Fish and Wildlife Service (USFWS). 2017b. The Northern long-eared bat (NLEB) - What it means for your project. https://www.fws.gov/raleigh/NLEB_RFO.html (Accessed April 10, 2017).

FIGURES



Legend

Study Locations

FIGURE 1a

NCDOT
Eastern North Carolina
Northern Long-eared Bat
(Myotis septentrionalis)
Research Study Summer 2017

Brunswick, Columbus, Onslow, Pender, Rockingham, Robeson, and Sampson Counties, NC

Map Date:10/19/2017

N

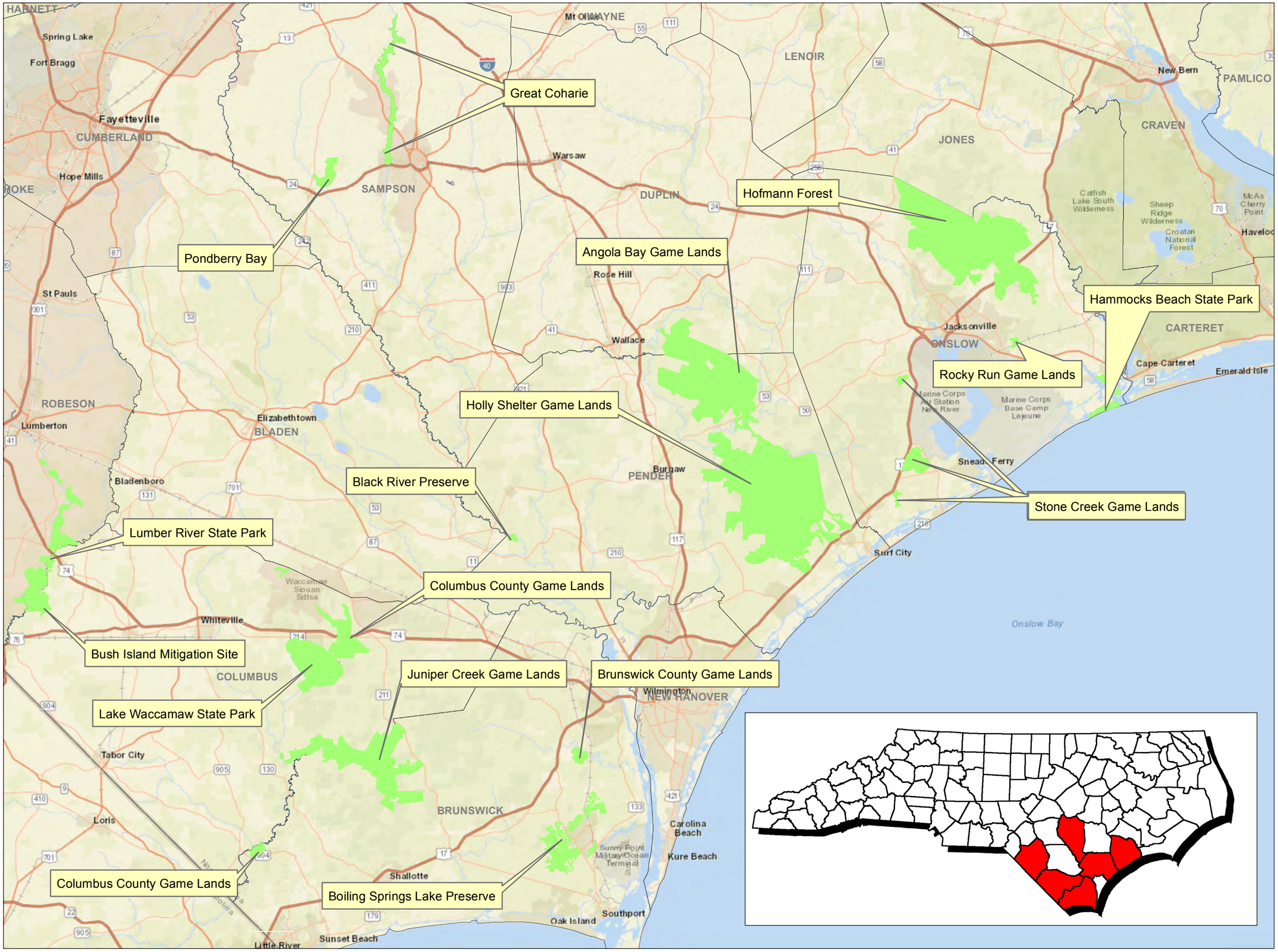
GRAPHIC SCALE

0 15 30

Miles

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:
County Data: NC One Map
Aerial Mapping: ESRI Imagery



Legend

Study Locations

FIGURE 1b

NCDOT
Eastern North Carolina
Northern Long-eared Bat
(Myotis septentrionalis)
Research Study Summer 2017

Brunswick, Columbus, Onslow, Pender, Robeson, and Sampson Counties, NC

Map Date:10/19/2017

N

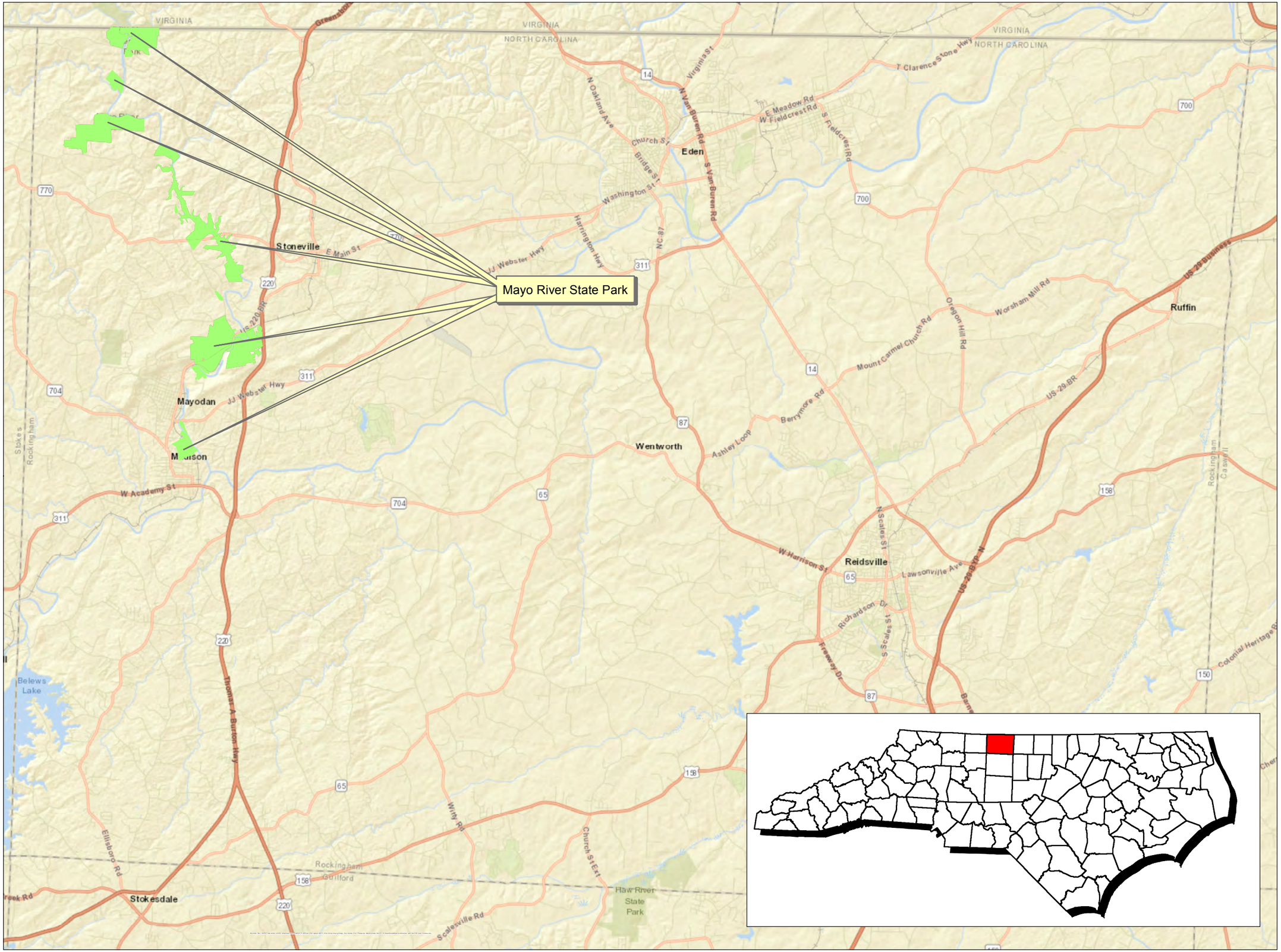
GRAPHIC SCALE

0 5 10

Miles

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:
County Data: NC One Map
Aerial Mapping: ESRI Imagery



Legend

Study Locations

FIGURE

1c

NCDOT
Eastern North Carolina
Northern Long-eared Bat
(Myotis septentrionalis)
Research Study Summer 2017

Rockingham County, NC

Map Date:10/19/2017

N

GRAPHIC SCALE

0 2 4

Miles

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:
County Data: NC One Map
Aerial Mapping: ESRI Imagery

Legend

Net Site

Boiling Springs Boundary

FIGURE 2

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Boiling Springs
5/9/2017
Brunswick County, NC

Map Date:10/17/2017

GRAPHIC SCALE

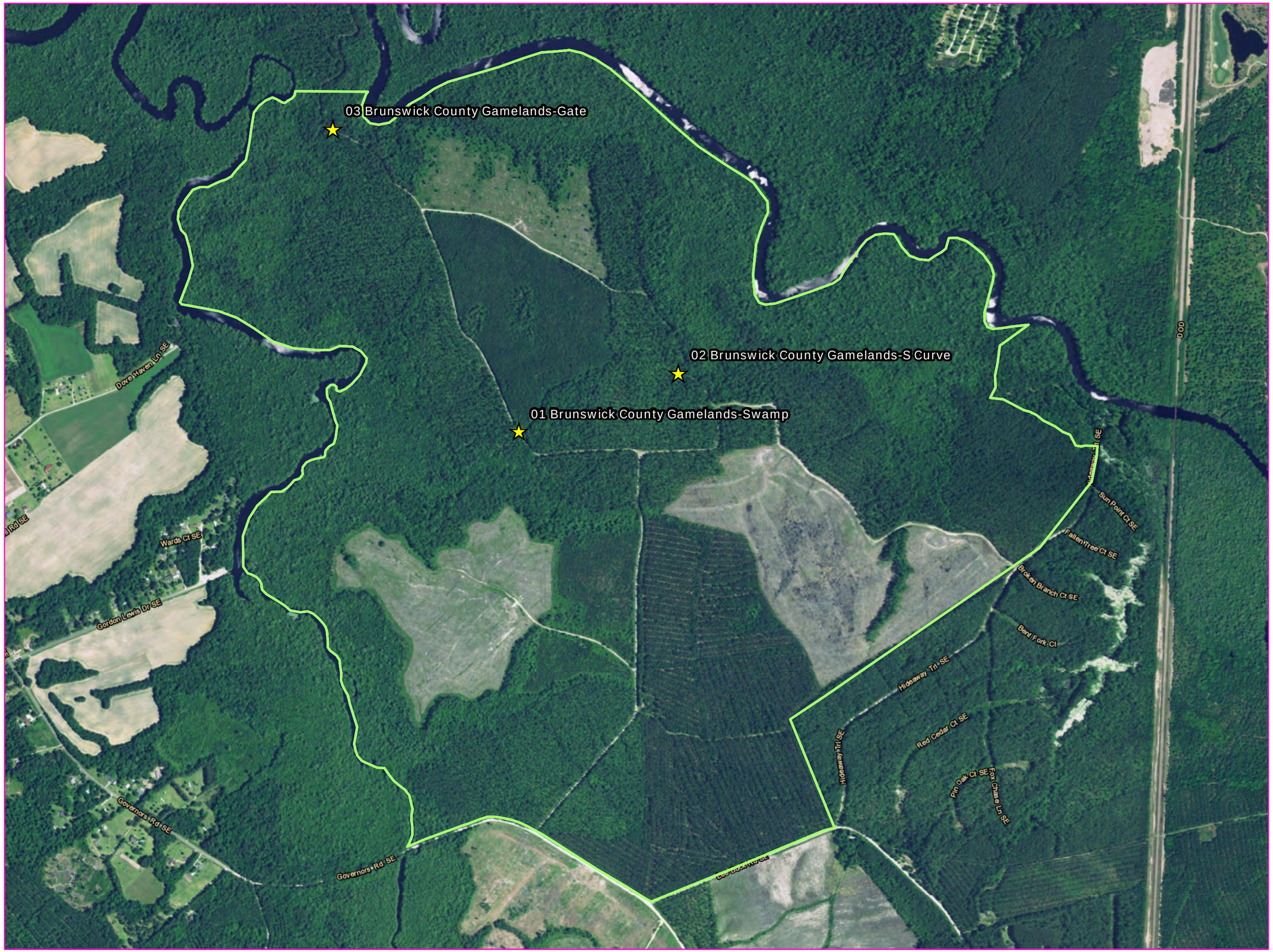
0 50 100 150 200

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Sites

Brunswick County Game Lands

FIGURE 3

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Brunswick County Game Lands
5/2/2017 (01)
5/3/2017 (02)
58/2017 (03)
9/7/2017 (01)
Brunswick County, NC

Map Date:10/17/2017

GRAPHIC SCALE

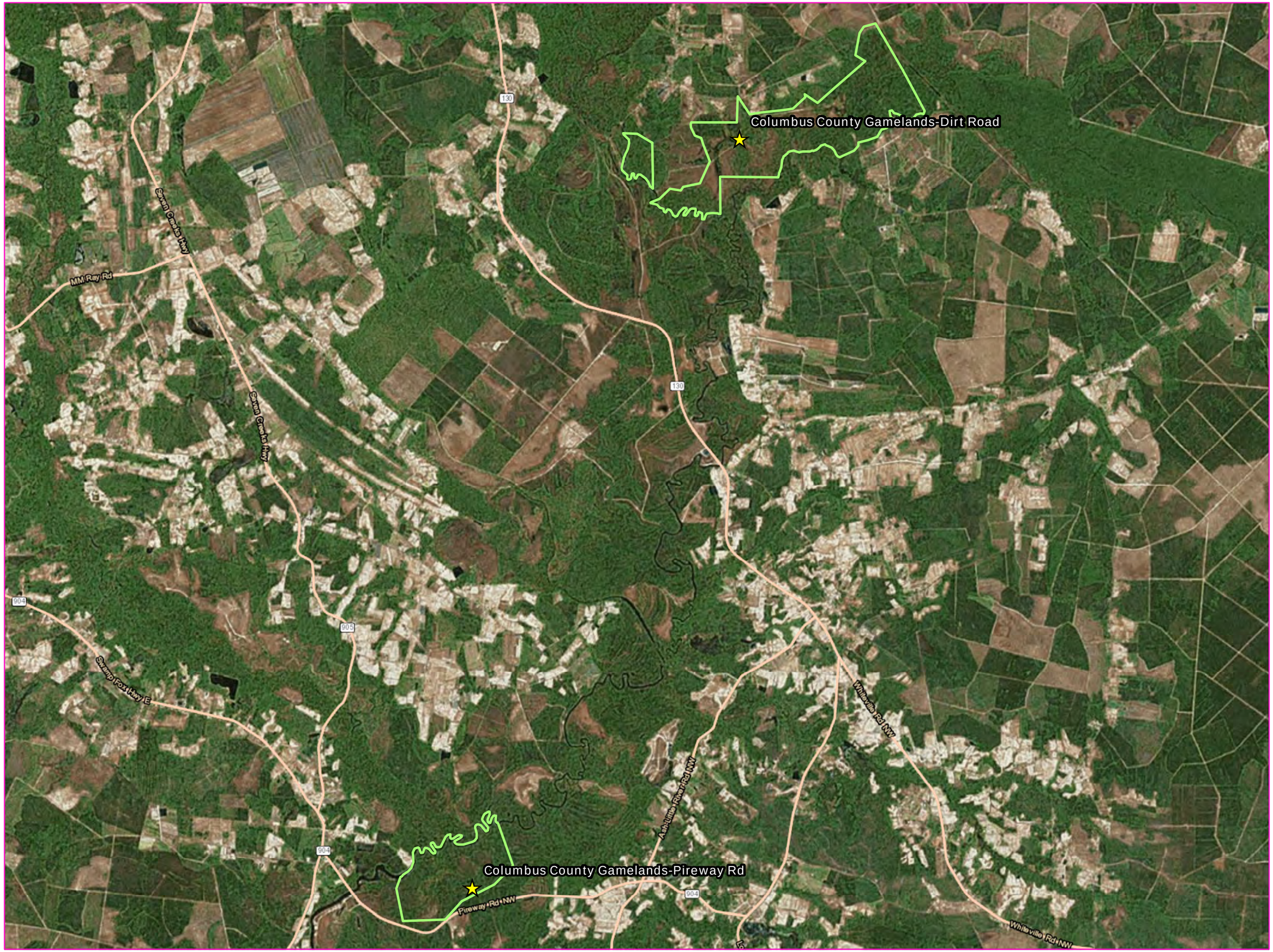
0 500 1,000 1,500 2,000

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Sites

Columbus County Gamelands

FIGURE

4a

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Columbus County Game Lands Overview
Brunswick & Columbus County, NC

Map Date:10/17/2017

GRAPHIC SCALE

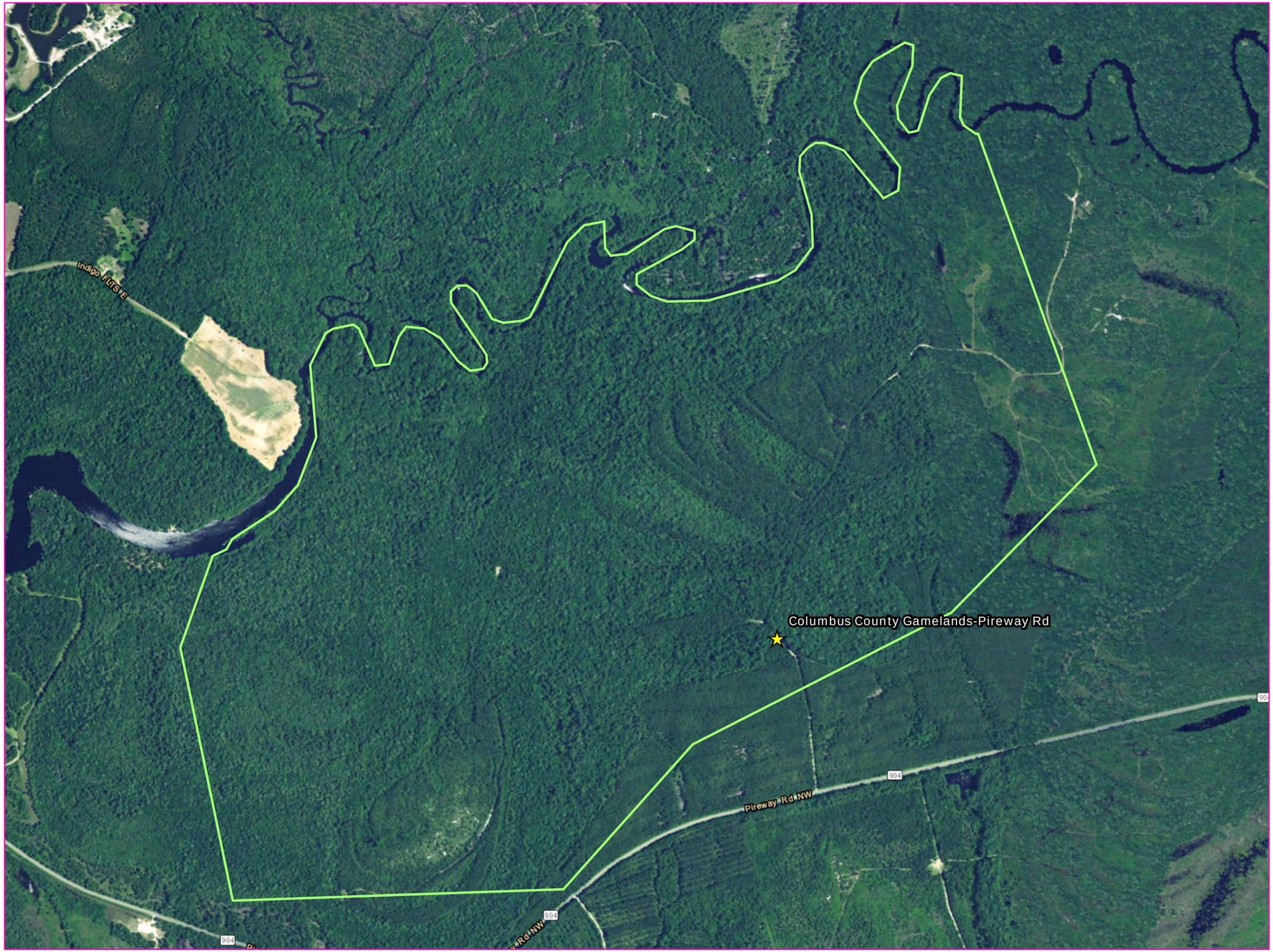
0 0.5 1 1.5 2

Miles

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Site

Columbus County Gamelands

FIGURE

4b

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Columbus County Game Lands
5/16/2017
Brunswick County, NC

Map Date:10/17/2017

GRAPHIC SCALE

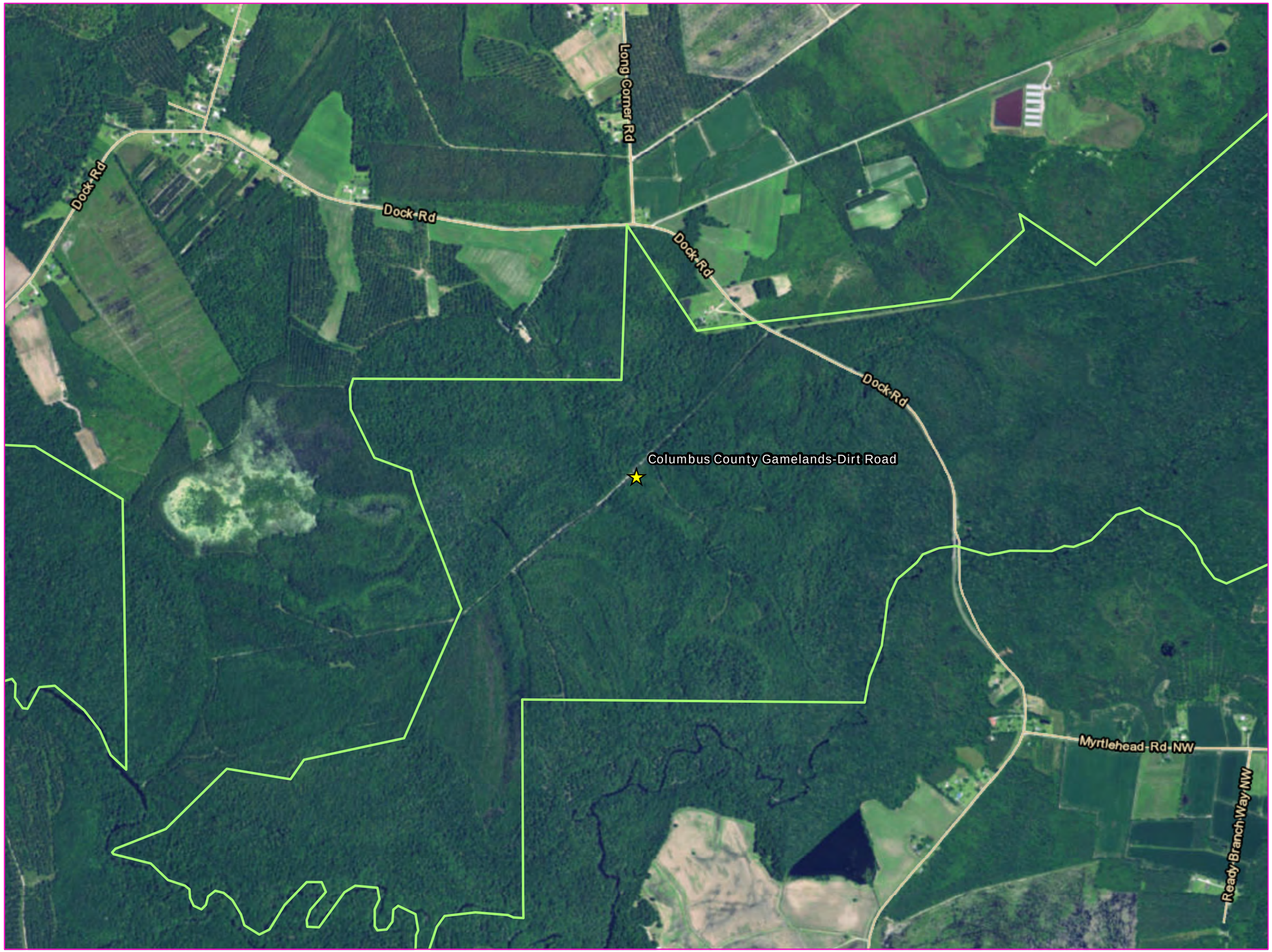
0 400 800 1,200 1,600

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Site

Columbus County Gamelands

FIGURE 4c

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Columbus County Game Lands
5/11/2017
Columbus County, NC

Map Date: 10/17/2017

GRAPHIC SCALE
0 400 800 1,200 1,600
Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Sites

Juniper Creek Gamelands

FIGURE

5a

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Juniper Creek Game Lands
Overview
Brunswick & Columbus County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

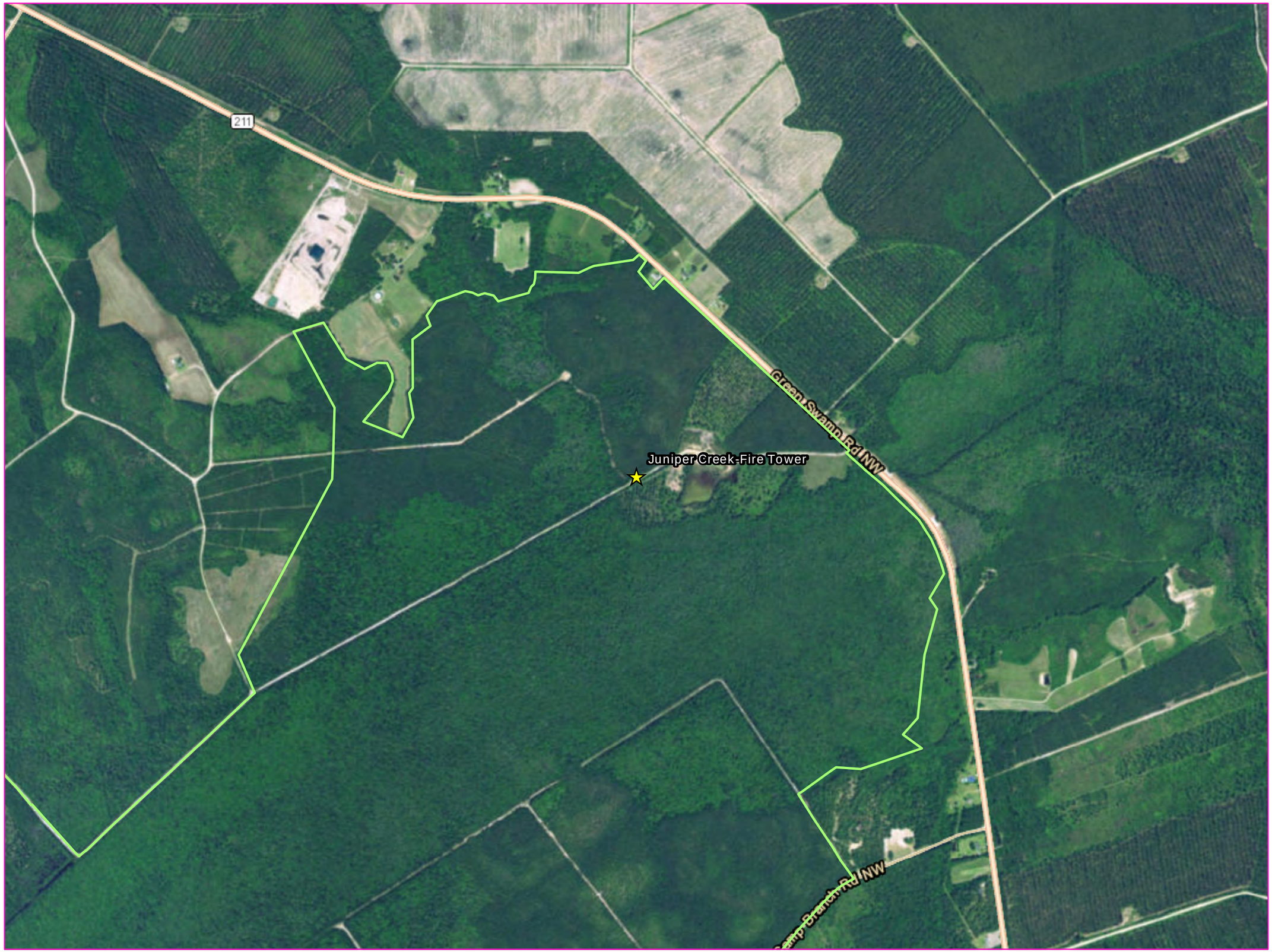
0 0.5 1 1.5 2

Miles

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Site

Juniper Creek Gamelands

FIGURE

5b

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Juniper Creek Game Lands
5/10/2017
Brunswick County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

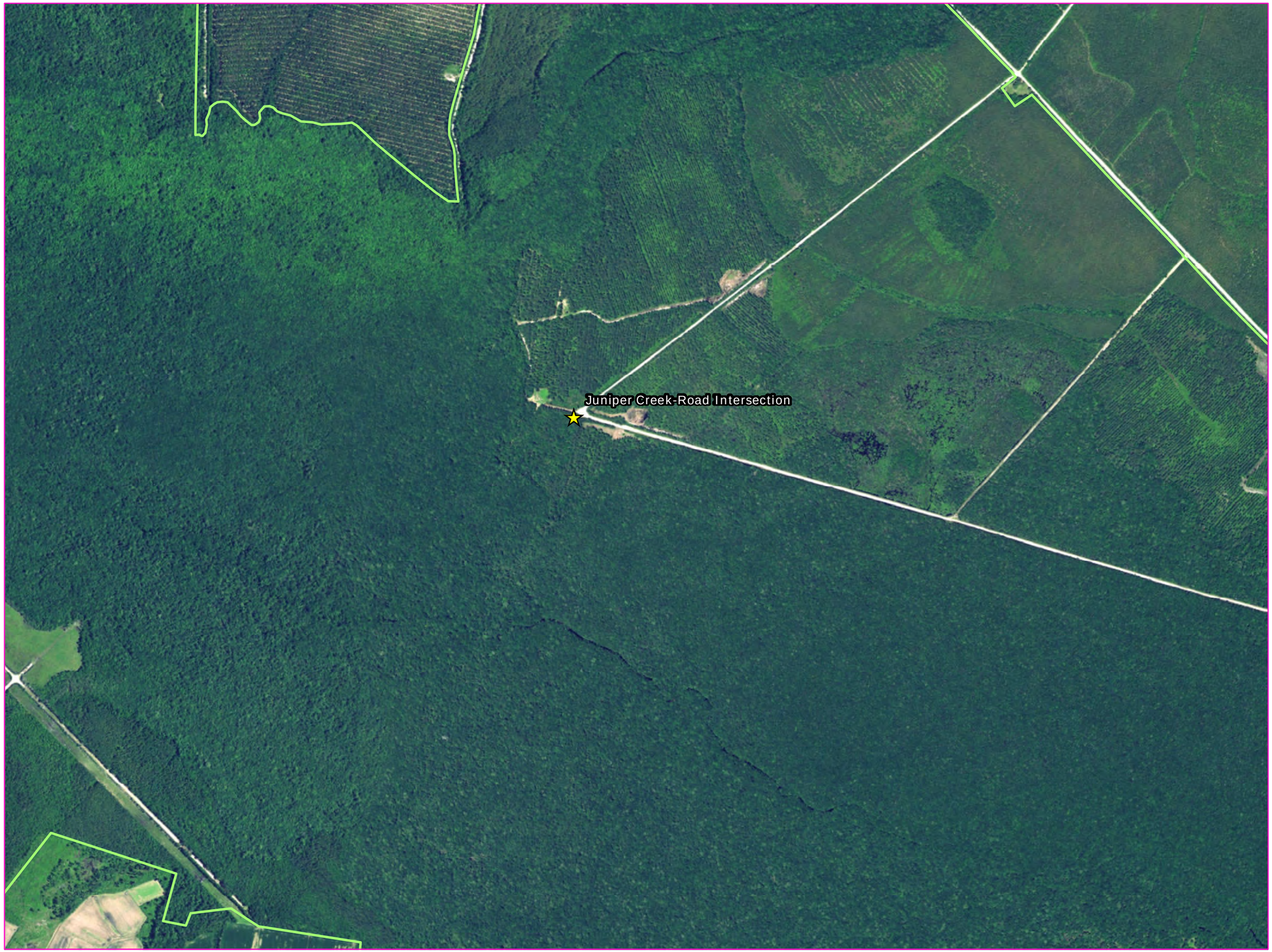
0 500 1,000 1,500 2,000

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Site

Juniper Creek Gamelands

FIGURE

5c

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Juniper Creek Game Lands
6/26/2017
Columbus County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

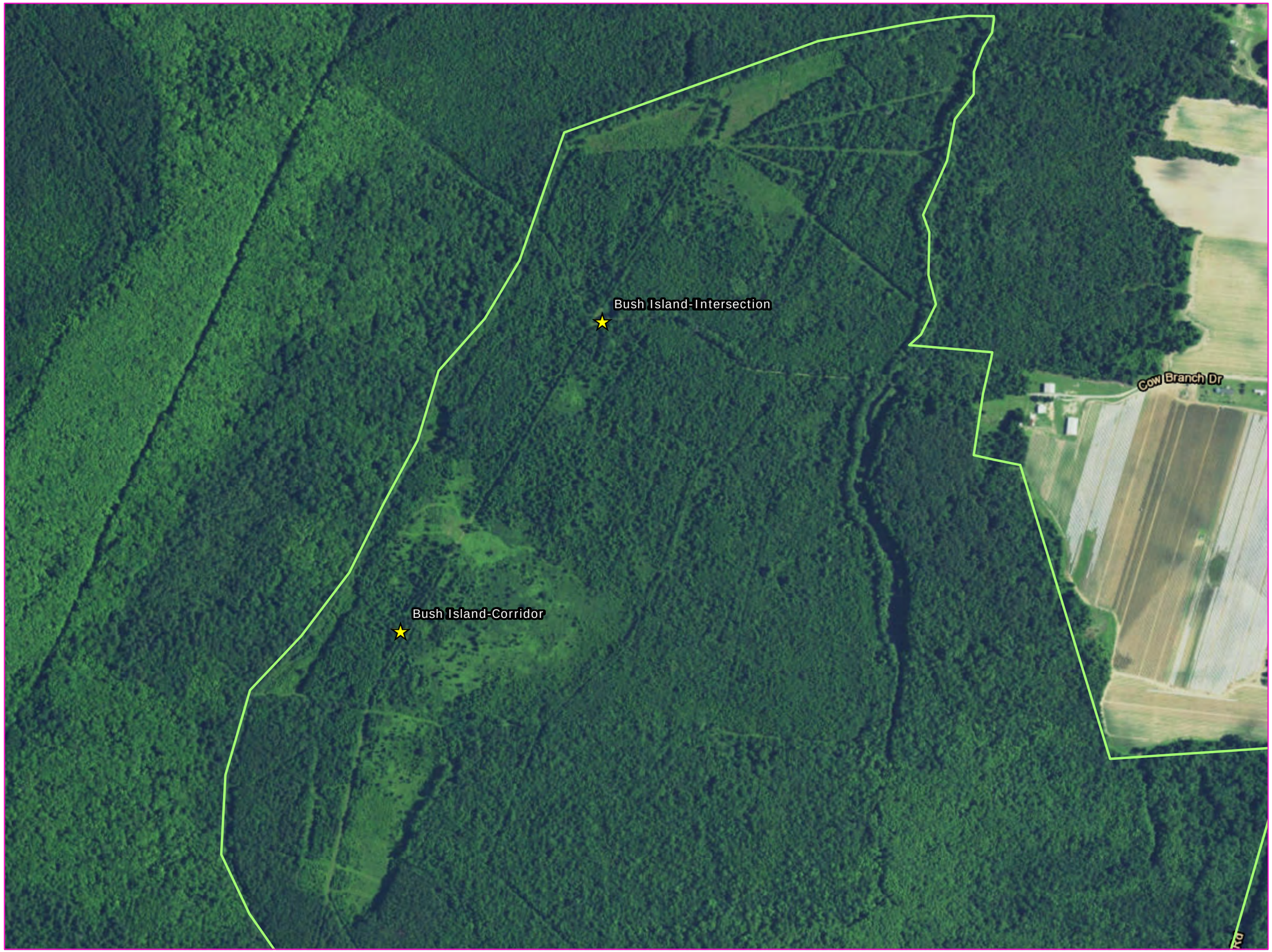
0 500 1,000 1,500 2,000

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Sites

Bush Island Mitigation Site

FIGURE

6

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Bush Island Mitigation Site
5/17/2017
5/18/2017
Columbus County, NC

Map Date:10/17/2017

GRAPHIC SCALE

0 300 600 900 1,200

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Sites

FIGURE

7

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Lake Waccamaw State Park
6/27/2017
6/28/2017
9/5/2017
Columbus County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

0 200 400 600 800

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Site

Hammocks Beach Boundary

FIGURE

8

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Hammocks Beach State Park
6/5/2017
8/21/2017
Onslow County, NC

Map Date:10/17/2017

GRAPHIC SCALE

0 300 600 900 1,200

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Site

Hofmann Forest

FIGURE 9

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Hofmann Forest
6/5/2017
6/8/2017
8/3/2017
Onslow County, NC

Map Date:10/17/2017

GRAPHIC SCALE

0 500 1,000 1,500 2,000

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Site

Rocky Run Gamelands Boundary

FIGURE

10

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Rocky Run Game Lands
6/12/2017
Onslow County

Map Date: 10/17/2017

GRAPHIC SCALE

0 200 400 600 800

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Site

Stones Creek Boundary

FIGURE 11

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Stones Creek Game Lands
6/6/2017
8/2/2017
Onslow County, NC

Map Date:10/17/2017

GRAPHIC SCALE

0 400 800 1,200 1,600

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Site

FIGURE
12

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Angola Bay Game Lands
6/13/2017
Pender County, NC

Map Date: 10/17/2017

GRAPHIC SCALE
0 500 1,000 1,500 2,000
Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Site

Black River Preserve Boundary

FIGURE

13a

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Black River Preserve
Overview
NLEB Site
6/7/2017
6/14/2017
Pender County, NC

Map Date:10/17/2017

GRAPHIC SCALE

0 200 400 600 800

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Site

Black River Preserve Boundary

FIGURE

13b

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Black River Preserve
Close Up
NLEB Site
6/7/2017
6/14/2017
Pender County, NC

Map Date:10/17/2017

GRAPHIC SCALE

0 20 40 60 80

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Nets

Black River Preserve Boundary

FIGURE

13c

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Black River Preserve
Net Locations
NLEB Site
6/14/2017
Pender County

Map Date:10/17/2017

GRAPHIC SCALE

0 15 30 45 60

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

SymbolID

0

FIGURE

14

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Holly Shelter Game Land
6/6/2017
6/8/2017
Pender County, NC

Map Date:10/17/2017

GRAPHIC SCALE

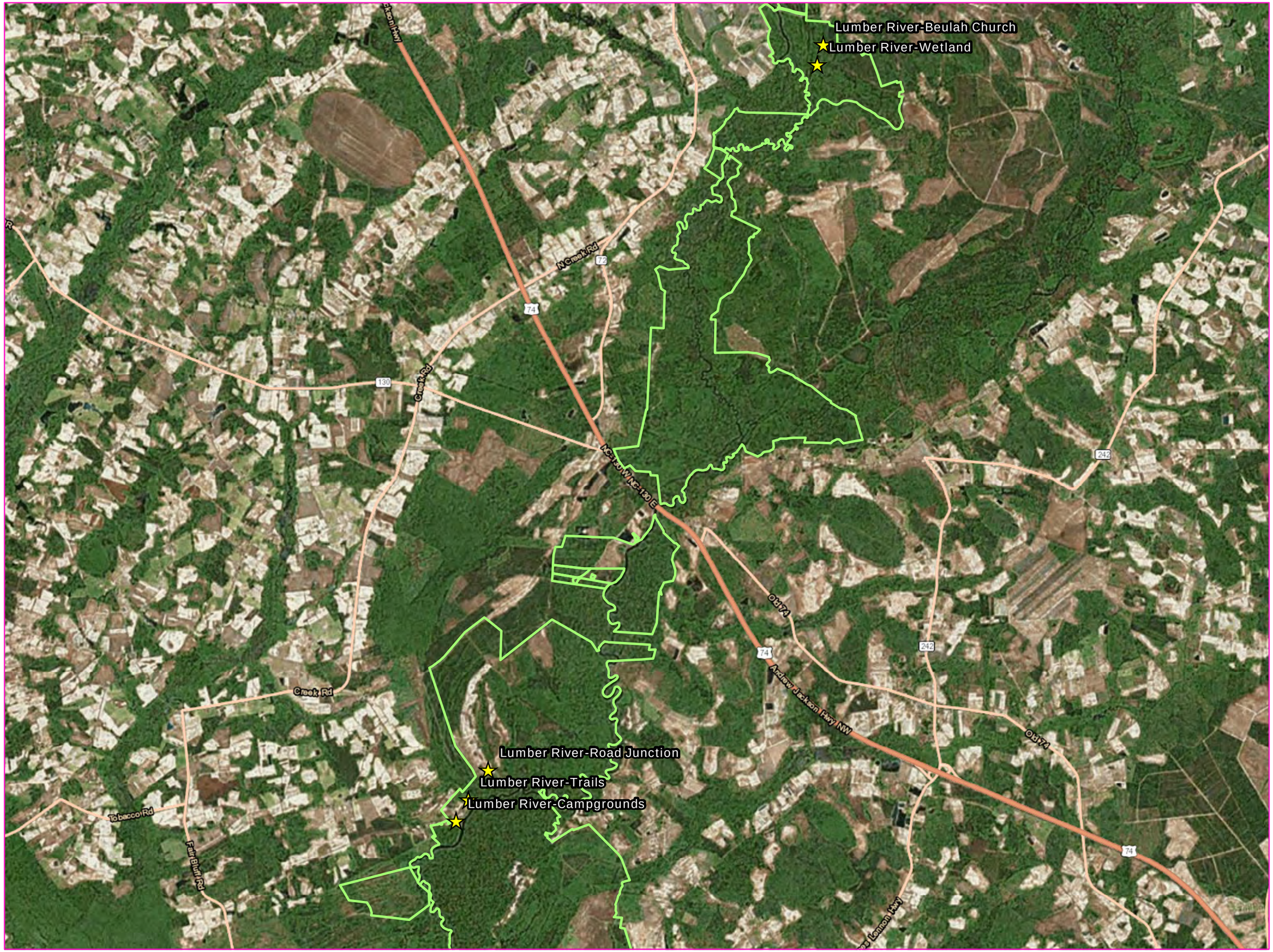
0 100 200 300 400

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Sites

Lumber River Boundary

FIGURE

15a

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Lumber River State Park
Overview
Robeson County, NC

Map Date:10/17/2017

GRAPHIC SCALE

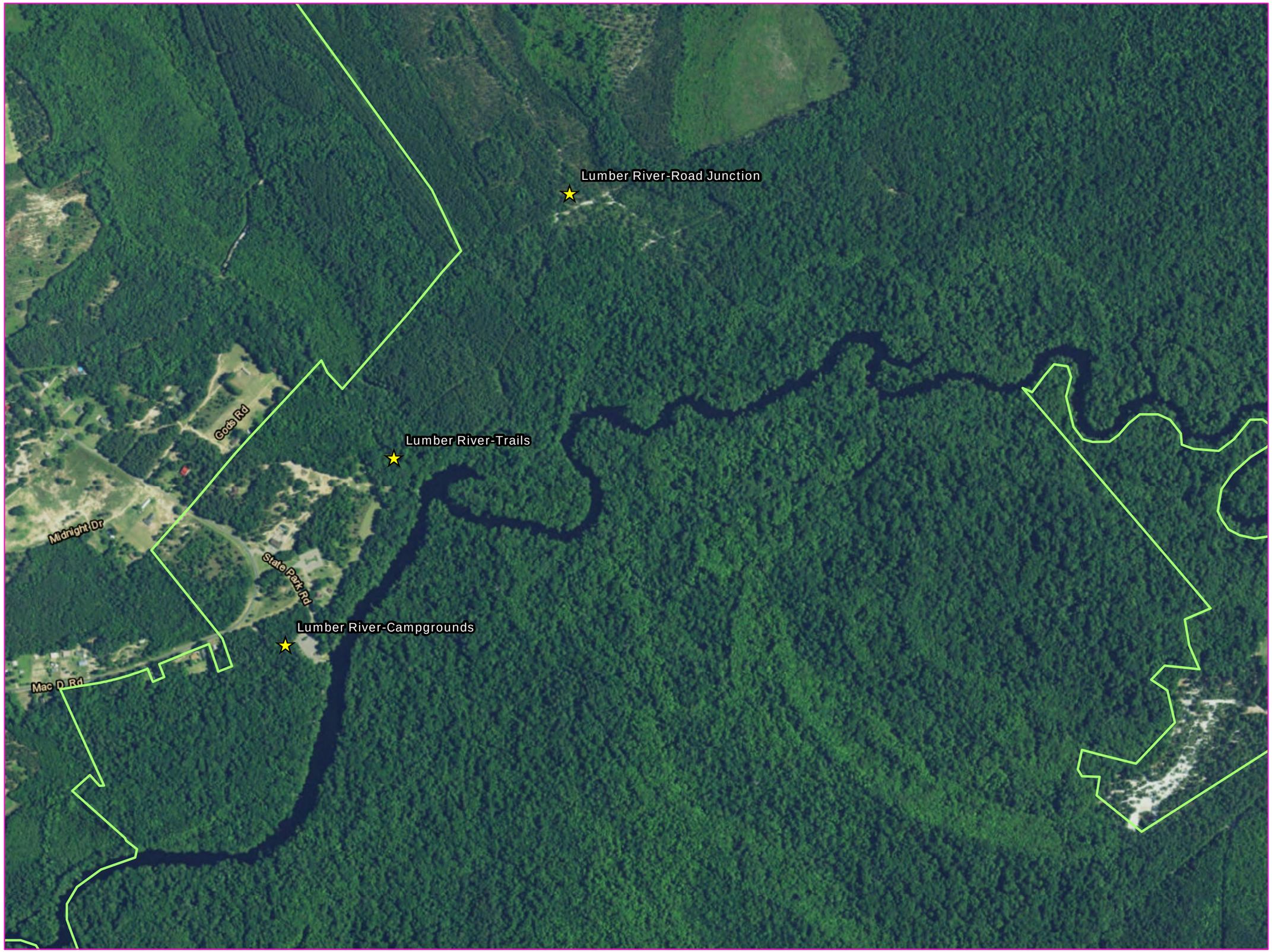
0 0.5 1 1.5 2

Miles

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Sites

Lumber River Boundary

FIGURE

15b

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Lumber River State Park
7/25/2017
7/31/2017
8/1/2017
8/2/2017
Robeson County, NC

Map Date:10/17/2017

GRAPHIC SCALE

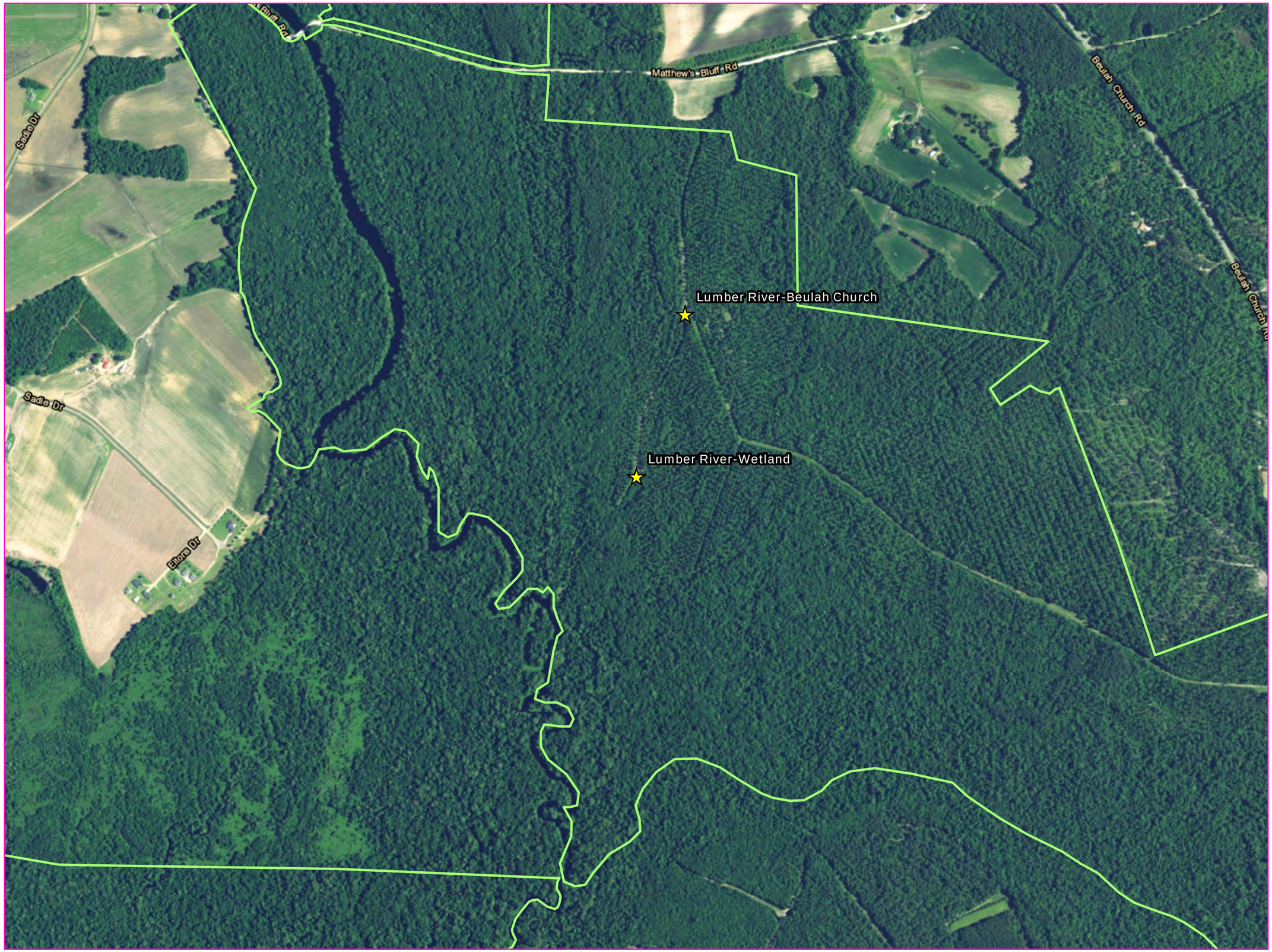
0 300 600 900 1,200

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Sites

Lumber River Boundary

FIGURE

15c

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Lumber River State Park
7/26/2017
7/27/2017
Robeson County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

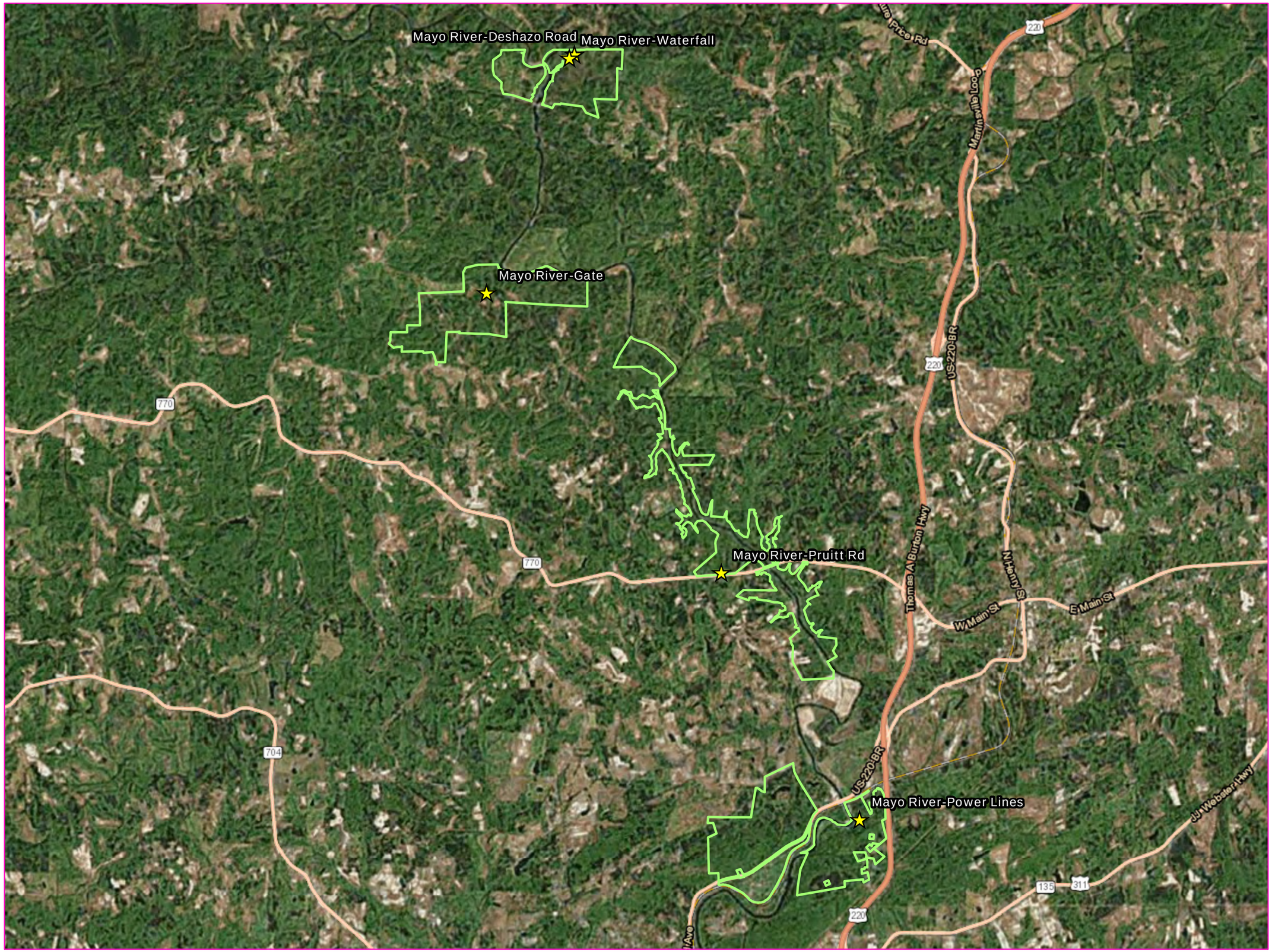
0 300 600 900 1,200

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Site

Mayo River Boundary

FIGURE

16a

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Mayo River State Park
Overview
Rockingham County, NC

Map Date:10/17/2017

GRAPHIC SCALE

0.5 0 0.5 1 1.5

Miles

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Sites

Mayo River Boundary

FIGURE

16b

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Mayo River State Park
8/15/2017
Rockingham County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

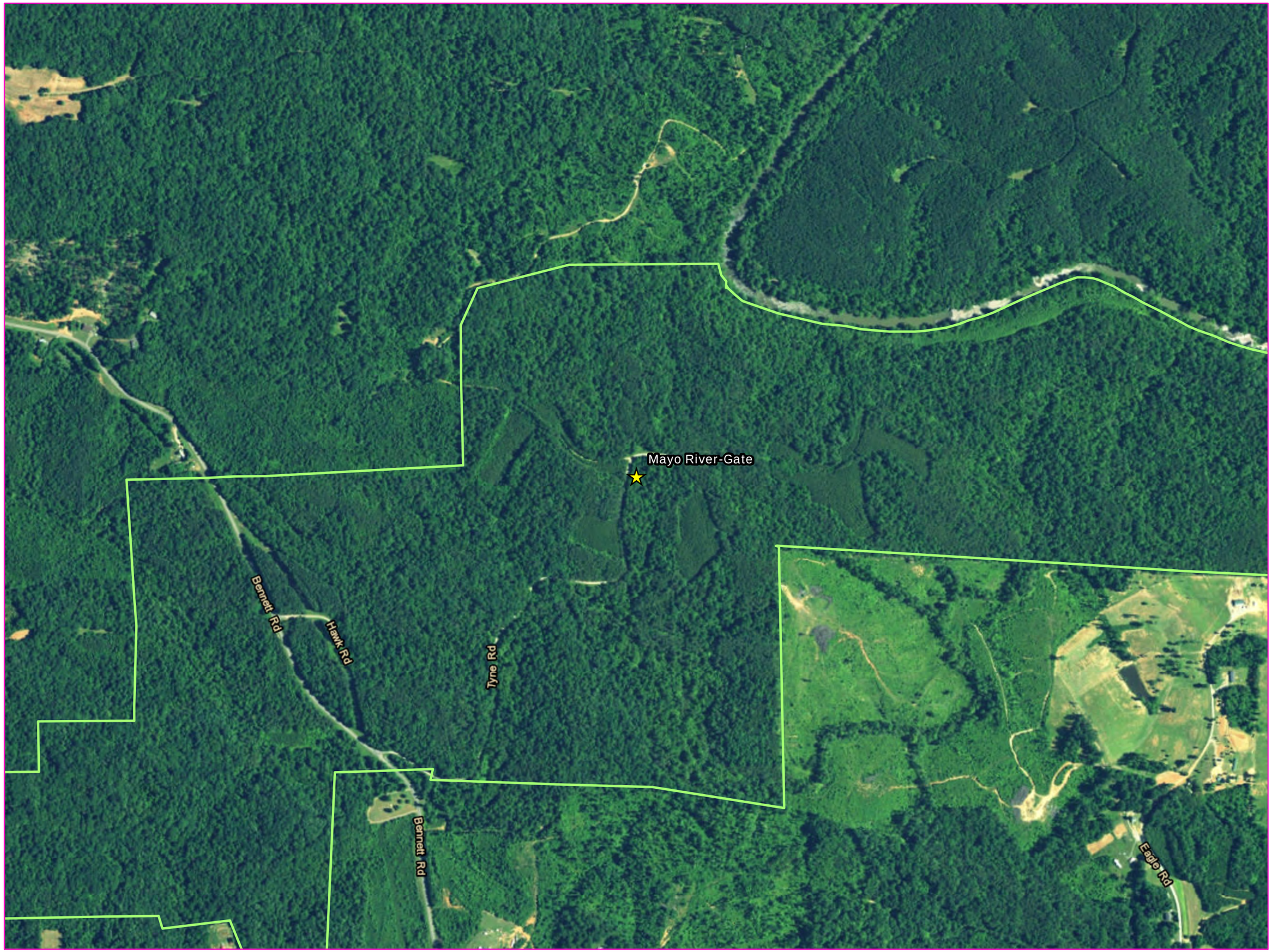
300 0 300 600 900

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Site

Mayo River Boundary

FIGURE

16c

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Mayo River State Park
8/16/2017
8/24/2017
Rockingham County, NC

Map Date:10/17/2017

GRAPHIC SCALE

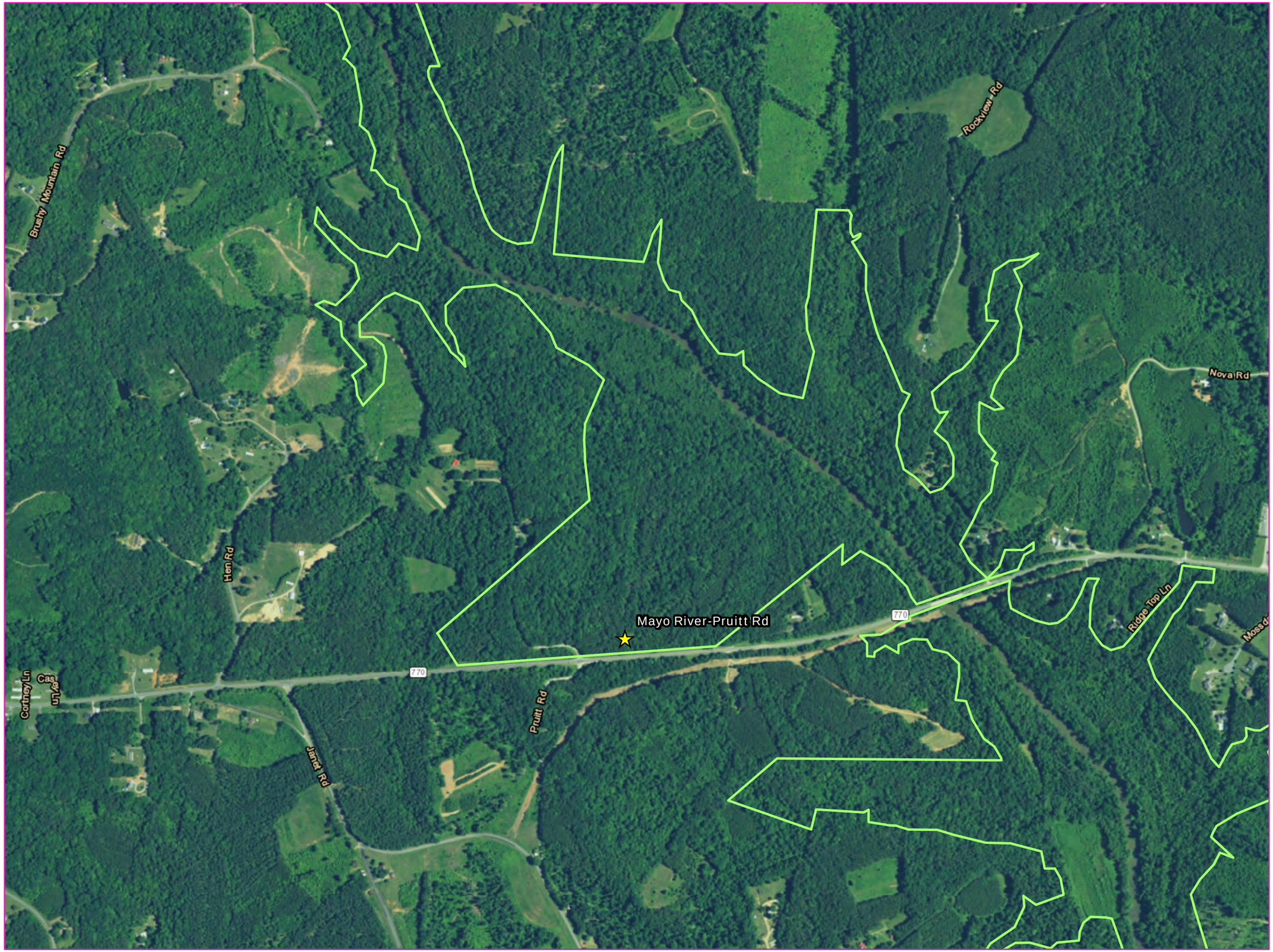
300 0 300 600 900

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Site

Mayo River Boundary

FIGURE

16d

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Mayo River State Park
8/17/2017
Rockingham County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

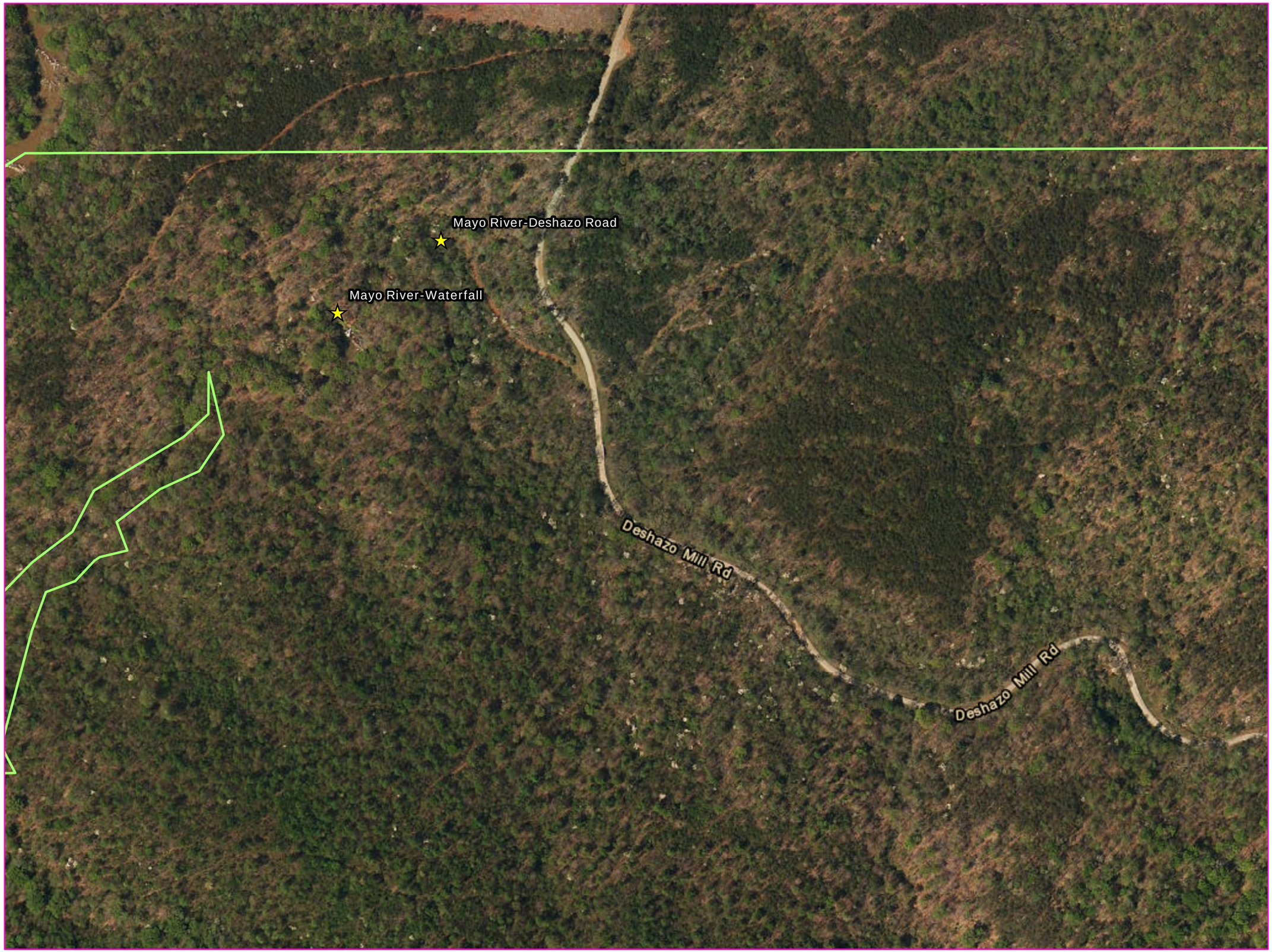
300 0 300 600 900

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Sites

Mayo River Boundary

FIGURE

16e

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Mayo River State Park
8/22/2017
8/23/2017
Rockingham County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

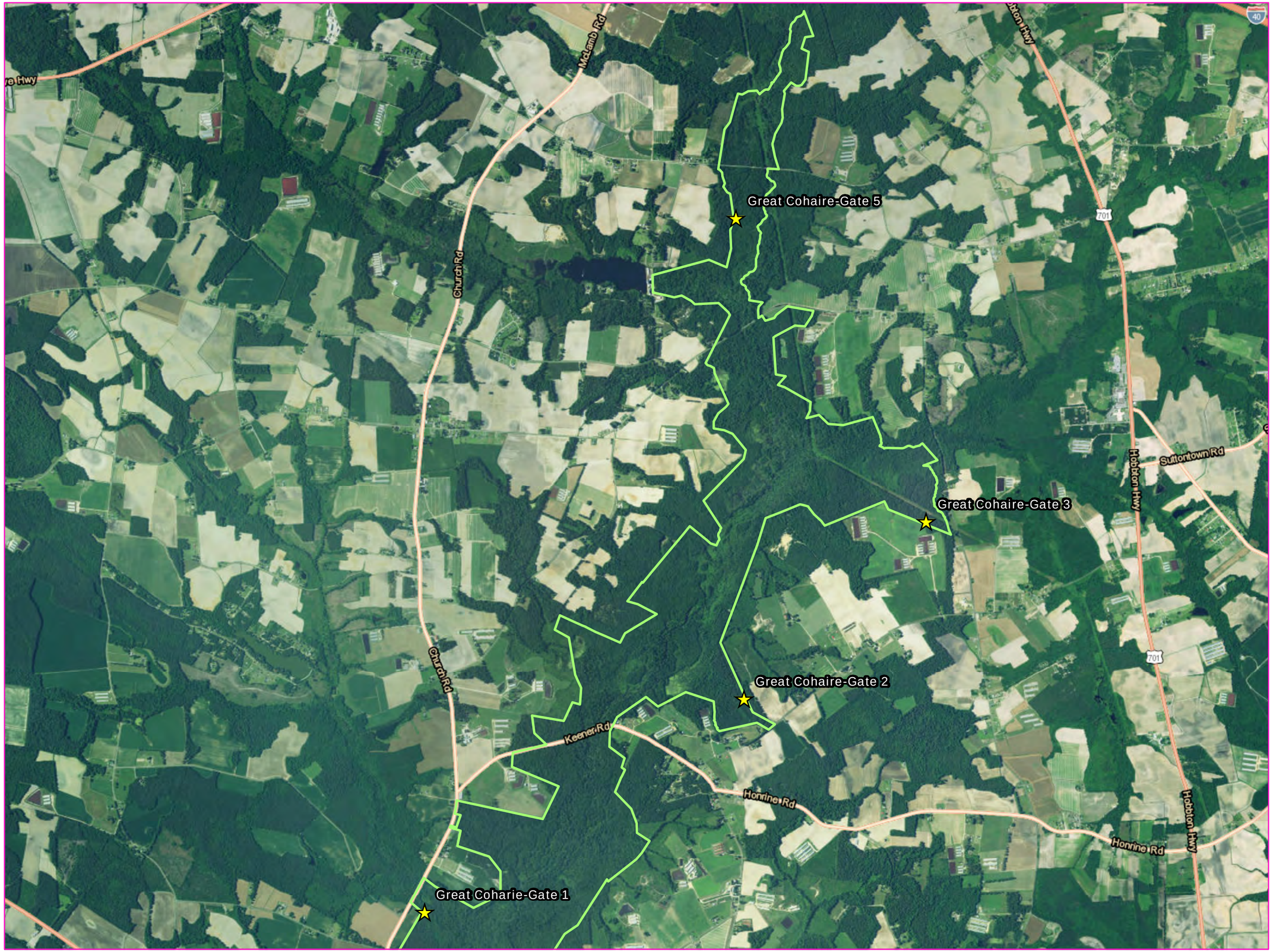
100 0 100 200 300

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D



Legend

Net Sites

Great Cohaire Boundary

FIGURE

17a

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Great Cohaire
Overview
Sampson County, NC

Map Date:10/17/2017

GRAPHIC SCALE

0.25 0 0.25 0.5 0.75

Miles

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Sites

Great Cohaire Boundary

FIGURE

17b

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Great Cohaire
7/10/2017
7/13/2017
Sampson County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

500 0 500 1,000 1,500

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Sites

Great Cohaire Boundary

FIGURE

17c

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Great Cohaire
7/11/2017
7/12/2017
Sampson County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

500 0 500 1,000 1,500

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

Legend

Net Sites

Pondberry Bay

FIGURE

18

NCDOT
Eastern North Carolina
Northern Long-eared Bat

Research Study Summer 2017

Pondberry Bay
7/17/2017
7/18/2017
Sampson County, NC

Map Date: 10/17/2017

GRAPHIC SCALE

100 0 100 200 300

Feet

This Exhibit is for planning purposes only and information shown hereon does not meet The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600). The Exhibit was compiled from available information obtained from the sources listed below. Streams and Wetlands: All features located in the field were recorded using a mapping grade Trimble GeoXT or GeoXH GPS receiver with supposed sub-meter accuracy.

Sources:

Aerial Photography: ESRI Imagery Prime World 2D

APPENDICES

Appendix A

NCDOT Mist-netting and Acoustic Survey Data Forms

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Brunswick	**Site#:**	1	**Night#:**	1	**Site Name:** Brunswick County Gamelands-Swamp	**Date:** 05-02-17
Latitude: 34.150676		Longitude: -78.058811						Datum: NAD83 / Elevation: 20	ID By: Heather Wallace
Observers: Kathryn Cunningham , Ed Corey								Start Time: 20:15	End Time: 01:15

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:15	66° F		0	22:30	°F			01:10	57° F	0	0

Moon Effect: 1st-Qtr	Start:	**Land Use:** Urban / Agriculture / (Forest) / Water / Wetland / Barren *(describe)*:
	Stop:	41

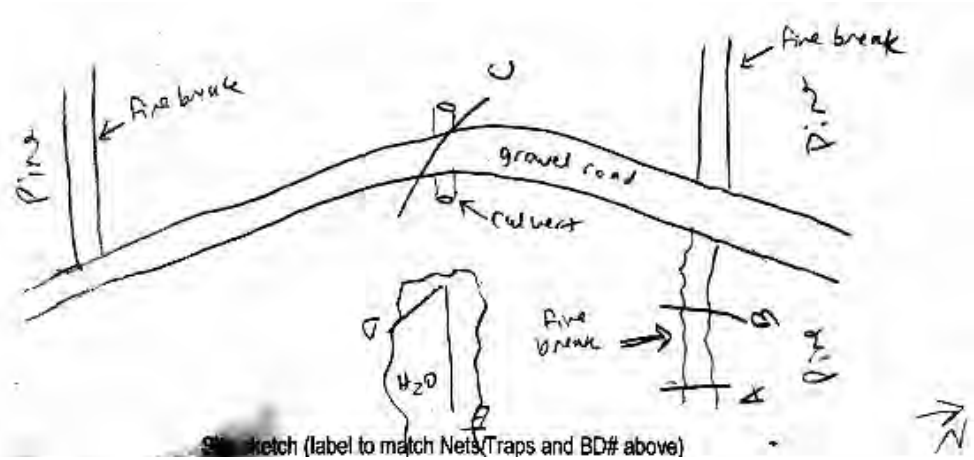
NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-6m	**C:** 1x3H-12m	**D:** 1x1H-6m	**E:** 1x1H-9m	**F:**
Pool size WxL	N/A	N/A	N/A	25m x 6m	25m x 6m	
Swoop WxL	N/A	N/A	N/A	9m x 6m	9m x 6m	
Photo? or #	Y	Y	Y	N	N	

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Bottomland hardwood with managed pine on edges. Dominant veg: water oak, white oak, Nyssa biflora, sweetgum, dogwood, netted chain fern, sensitive fern, royal fern, Virginia creeper, trumpet creeper

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Brunswick Site# 1 Night# 1 Site Name: Brunswick County Gamelands-Swamp Date: 05-02-17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	20:40	PESU	M	A	NR	34	-	6.5	C	3	CALYX 0119 / 0	
2	20:40	EPFU	M	A	NR	48	-	14.5	C	3	CALYX 0518 / 0	
3	21:00	EPFU	F	A	L	45	-	14.5	C	3		
4	21:00	PESU	U	U	U	-	-	-	C			EFN
5	21:00	PESU	U	U	U	-	-	-	C	3	-	EFN
6	21:00	LABO	F	U	U	-	-	-	C	3	-	EFN
7	21:00	UNKN	U	U	U	-	-	-	C	4	-	EFN
8	21:15	LABO	F	A	L	43	-	13	C	3	CALYX 0120 / 0	Multiple holes in right wing
9	21:30	LASE	F	A	NR	42	-	13.5	C	4.5	CALYX 0121 / 0	
10	23:00	EPFU	F	A	NR	48	-	21.5	C	5	CALYX 0520 / 0	
11	23:15	PESU	U	U	U	-	-	-	C	4	-	EFN
12	23:55	LABO	F	U	U	-	-	-	C	3	-	EFN
13	00:30	LABO	F	A	NR	43	-	12.5	C	2	CALYX 0122 / 0	
14	00:30	CORA	F	A	NR	43	-	9	C	1	CALYX 0123 / 0	
15	00:55	LABO	F	A	NR	43	-	14.5	C	4	CALYX 0124 / 0	
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Brunswick	**Site#:**	2	**Night#:**	1	**Site Name:** Brunswick County Gamelands-S Curve	**Date:** 5/3/17
Latitude: 34.152732		Longitude: -78.053409						Datum: NAD83 / Elevation: 30	ID By: Heather Wallace
Observers: Kathryn Cunningham , Ed Corey								Start Time: 20:15	End Time: 01:15

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:45	69° F	0	0	22:30	64° F	0	0	01:15	58° F	0	0

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

NETS/TRAPS:	**A:** 1x3H-12m	**B:** 1x3H-18m	**C:** 1x3H-12m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

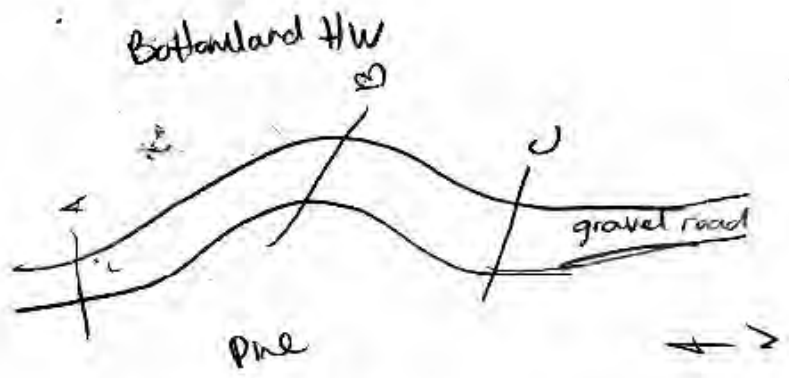
Managed pine and bottomland hardwood ecotone. Loblolly,

water oak, sweetgum, tulip poplar, flowering dogwood, Smilax

laurifolia, Virginia creeper, Lespedeza, beautyberry, peppervine

S. glauca, O. sensibilis, V. rotundifolia, Persea borbonia

Remarks:



Site sketch (label to match Nets/Traps and BD# above)
Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Brunswick Site# 2 Night# 1 Site Name: Brunswick County Gamelands-S curve Date: 5/3/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	20:10	LABO	F	A	NR	39	-	10	C	4	CALYX 0125 / 0	
2	20:20	LABO	F	U	U	-	-	-	B	5	-	EFN
3	20:20	LABO	M	A	NR	40	-	8	B	3	CALYX 0126 / 0	
4	20:25	LABO	U	U	U	-	-	-	A	3	-	EFN
5	20:25	LABO	F	A	NR	40	-	12	A	3	CALYX 0127 / 0	
6	20:25	LABO	F	A	NR	42	-	12.5	A	4	CALYX 0128 / 0	
7	20:35	LABO	F	A	NR	42	-	12	A	6	CALYX 0129 / 0	
8	20:50	LABO	F	A	NR	45	-	14.5	C	3	CALYX 0130 / 0	
9	21:00	CORA	F	A	NR	42	-	7.5	B	6	CALYX 0131 / 0	Tissue sample A68NC
10	21:35	LABO	F	A	NR	38	-	10	A	2	CALYX 0132 / 0	
11	21:42	LABO	F	A	L	39	-	10.5	C	3	CALYX 0133 / 0	
12	23:05	MYAU	M	A	NR	37	-	6.5	B	3	CALYX 0134 / 0	Tissue sample A69NC
13	23:30	LABO	F	A	NR	40	-	12	C	3	CALYX 0127 / 0	Recapture
14	23:35	LABO	F	U	U	-	-	-	B	4	-	EFN
15	00:05	LABO	M	A	NR	44	-	11	C	3	CALYX 0135 / 0	
16	00:35	LABO	F	A	P	41	-	13	C	3	CALYX 0136 / 0	
17	00:45	LABO	F	A	NR	44	-	13	A	5	CALYX 0137 / 0	
18	01:00	LABO	M	A	NR	44	-	11	A	6.5	CALYX 0135 / 0	Recapture
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Brunswick	**Site#:**	3	**Night#:**	1	**Site Name:** Brunswick County Gamelands-Gate	**Date:** 5/8/17

Latitude: 34.159141	Longitude: -78.065103	Datum: NAD83	Elevation: 5	ID By: Kathryn Cunningham
Observers: Jennifer Harrod		Start Time: 20:00		End Time: 01:00

Conditions:	Time 20:00	Temp 64° F	Wind 0	Clouds 0	Time 00:00	Temp 62° F	Wind 0	Clouds 0	Time 01:00	Temp 57° F	Wind 0	Clouds 0

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43 51

NETS/TRAPS:	**A:** 1x3H-18m	**B:** 1x2H-6m	**C:** 1x2H-9m	**D:**	**E:**	**F:**
Pool size WxL	N/A	4' x 6'	N/A			
Swoop WxL	N/A	4' x 6'	N/A			
Photo? or #	Y	Y	Y			

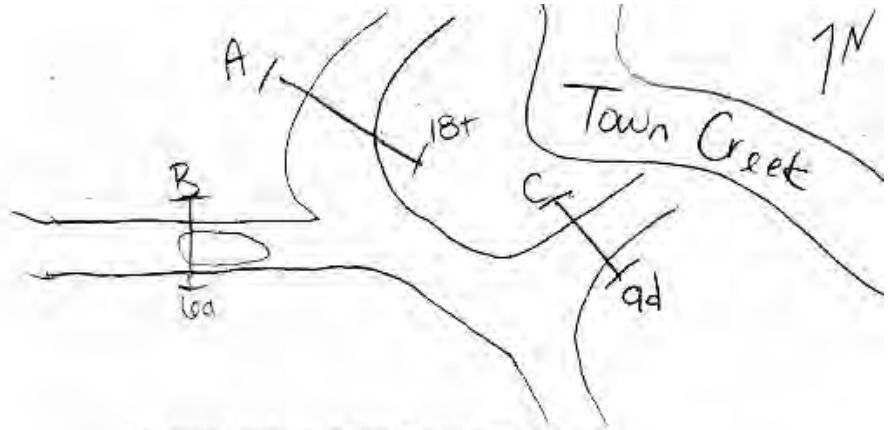
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Bottomland hardwoods. Water oak, white oak, Nyssa biflora,

sweet gum, dogwood, Virginia creeper, Trumpet creeper

Remarks: No bands this night



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Brunswick Site# 3 Night# 1 Site Name: Brunswick County Gamelands-Gate Date: 5/8/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	20:15	LABO	F	U	U	-	-	-	C	2.5	-	EFN
2	20:30	LABO	F	U	U	-	-	-	A	3.5	-	EFN
3	21:15	LABO	F	A	NR	42.5	-	12.5	B	3.5	---- / 0	
4	21:10	LASE	F	A	NR	46	-	13	A	4	---- / 0	
5	21:45	LABO	F	A	NR	42	-	14	A	3.5	---- / 0	
6	22:30	LABO	F	U	U	-	-	-	C	3	-	EFN
7	23:05	LABO	F	A	NR	40	-	21	C	2.5	---- / 0	
8	00:05	LABO	F	A	NR	42	-	14	A	4.5	---- / 0	
9	00:55	LABO	F	A	NR	41	-	12	B	3	---- / 0	
10	00:55	LABO	F	A	NR	42	-	15	A	4.5	---- / 0	
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Brunswick	**Site#:**	1	**Night#:**	1	**Site Name:** Boiling Springs-Road	**Date:** 5/9/17
Latitude: 34.061499		Longitude: -78.026657						Datum: NAD83 / Elevation: 60	ID By: Kathryn Cunningham
Observers: Jennifer Harrod								Start Time: 20:05	End Time: 01:05

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:33	66° F	0	75	23:35	64° F	0	25	01:00	60° F	0	25

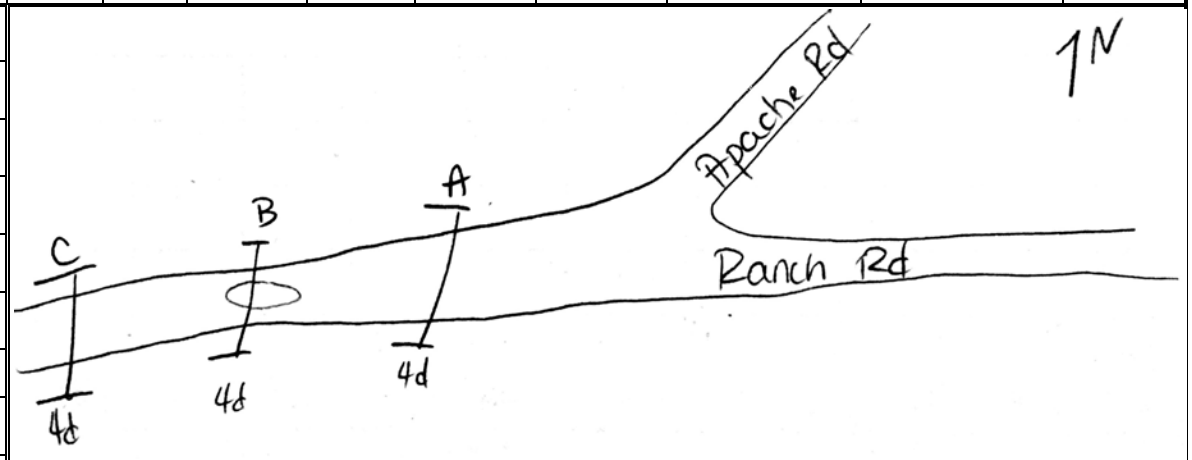
Moon Effect: Wax-Gib	Start: 19:07 Stop: 5:47	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*: 41

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1x2H-4m	**D:**	**E:**	**F:**
Pool size WxL	N/A	2m x 4m	N/A			
Swoop WxL	N/A	2m x 4m	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Brunswick Site# 1 Night# 1 Site Name: Boiling Springs-Road Date: 5/9/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:22	LASE	F	A	U	-	-	11	A	1.5	---- / 0	Escaped while processing
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Brunswick	**Site#:**	1	**Night#:**	1	**Site Name:** Juniper Creek - Fire Tower	**Date:** 05/10/17
Latitude: 34.191087		Longitude: -78.365588						Datum: NAD83 / Elevation: 55	ID By: Kathryn Cunningham
Observers: Jennifer Harrod								Start Time: 20:00	End Time: 01:00

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:00	72° F	0	0	23:00	72° F	0	0	01:00	73 °F	0	0

Moon Effect: Full	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

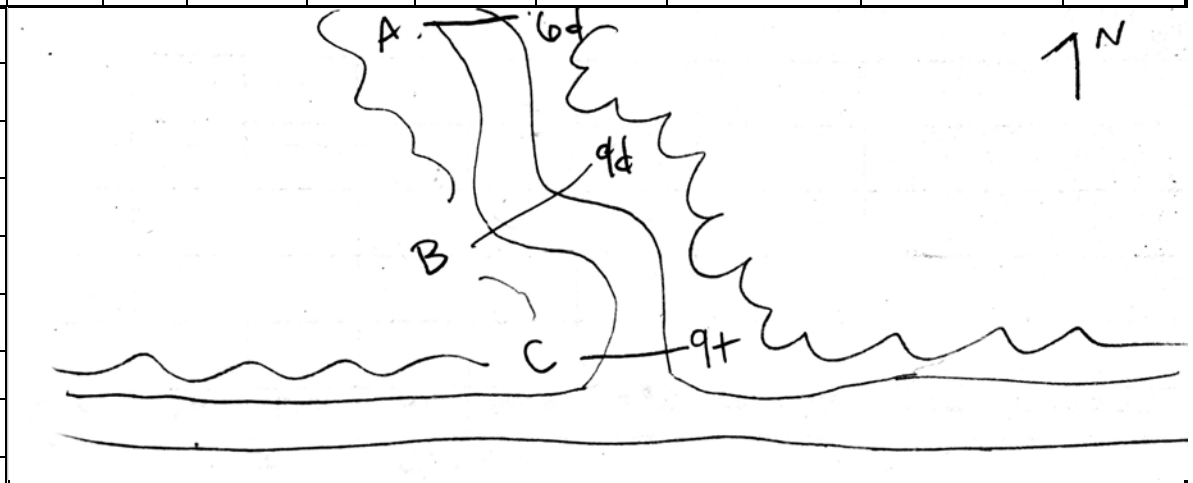
NETS/TRAPS:	**A:** 1x2H-6m	**B:** 1x2H-9m	**C:** 1x3H-9m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Pinus taeda, red cedar

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Brunswick Site# 1 Night# 1 Site Name: Juniper Creek - Fire Tower Date: 5/10/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Columbus	**Site#:**	1	**Night#:**	1	**Site Name:** Columbus County Gamelands-Dirt Road	**Date:** 5/11/17
Latitude: 34.156289		Longitude: -78.543572						Datum: NAD83 / Elevation: 31	ID By: Kathryn Cunningham
Observers: Jennifer Harrod , Gary Jordan								Start Time: 20:10	End Time: 01:10

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	76° F	0	0	23:30	69° F	0	25	01:00	65° F	0	25

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / (Forest) / Water / Wetland / Barren *(describe)*:
	Stop:	42

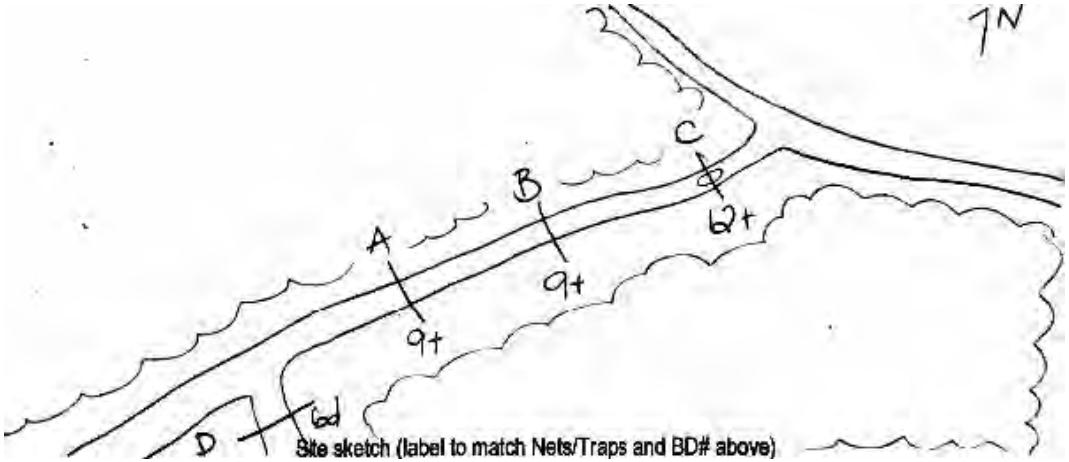
NETS/TRAPS:	**A:** 1x3H-9m	**B:** 1x3H-9m	**C:** 1x3H-12m	**D:** 1x2H-6m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

loblolly pine

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Columbus Site# 1 Night# 1 Site Name: Columbus County Gamelands-Dirt Road Date: 5/11/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:53	LASE	F	A	NR	41	-	13.5	C	4.5	CALYX 0201 / 0	
2	21:53	LABO	U	U	U	-	-	-	C	5	-	EFN
3	21:53	LABO	U	U	U	-	-	-	C	3	-	EFN
4	21:42	LABO	M	A	NR	38	-	9.5	B	1.5	CALYX 0202 / 0	A bit of scarring on both wings
5	22:05	LASE	F	A	NR	41	-	13.5	B	2.5	CALYX 0203 / 0	
6	21:45	LASE	F	A	NR	44	-	17.5	C	2	CALYX 0204 / 0	
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Brunswick	**Site#:**	2	**Night#:**	1	**Site Name:** Columbus County Gamelands-Pireway	**Date:** 5/16/17

Latitude: 34.015782	Longitude: -78.604093	Datum: NAD83	Elevation: 5	ID By: Kathryn Cunningham
Observers: Jennifer Harrod , Dominique DiLandro		Start Time: 20:00	End Time: 01:00

Conditions:	Time 21:00	Temp 75 °F	Wind 0	Clouds 0	Time 23:00	Temp 75° F	Wind 0	Clouds 0	Time 01:00	Temp 73° F	Wind 0	Clouds 0

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / (Forest) / Water / Wetland / Barren *(describe)*:
	Stop:	43

NETS/TRAPS:	**A:** 1x3H-9m	**B:** 1x3H-9m	**C:** 1x2H-6m	**D:** 1x2H-9m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	6' x 15'		
Swoop WxL	N/A	N/A	N/A	6' x 15'		
Photo? or #	Y	Y	Y	Y		

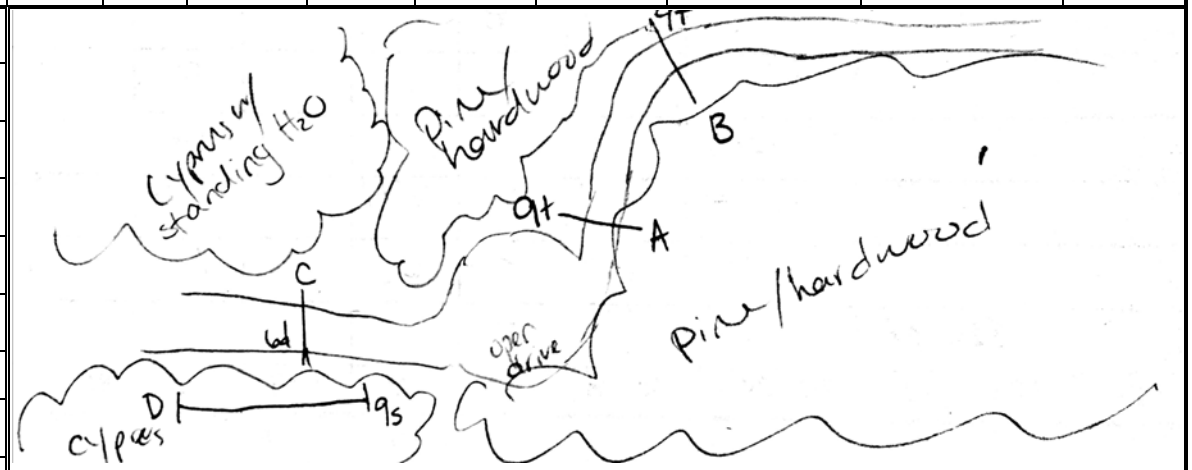
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Pinus taeda, Acer rubrum, cypress

Remarks:

Feral hogs



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Brunswick Site# 2 Night# 1 Site Name: Columbus County Gamelands-Pireway Date: 5/16/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:14	MYAU	M	A	S	34	-	16.5	A	4.5	CALYX 0205 / 0	Photos taken
2	21:44	LASE	M	A	NR	39	-	8.5	C	2.5	CALYX 0206 / 0	
3	22:18	LABO	F	A	NR	40.5	-	14.5	B	1.5	CALYX 0207 / 0	
4	23:15	LABO	F	A	NR	40	-	14.5	A	2.5	CALYX 0208 / 0	
5	23:15	PESU	M	A	NR	35	-	8.5	A	4.5	CALYX 0209 / 0	
6	22:18	UNKN	U	U	U	-	-	-	B	4	-	EFN
7	00:29	MYAU	M	A	NR	35	-	7.5	A	3	CALYX 0210 / 0	Escaped before photos
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Columbus	**Site#:**	1	**Night#:**	1	**Site Name:** Bush Island-Corridor	**Date:** 5/17/17
Latitude: 34.366580		Longitude: -78.978908						Datum: NAD83 / Elevation: 71	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Jennifer Harrod								Start Time: 19:55	End Time: 00:55

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:00	76° F	0	0	23:30	72° F	0	0	01:00	70° F	0	0

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

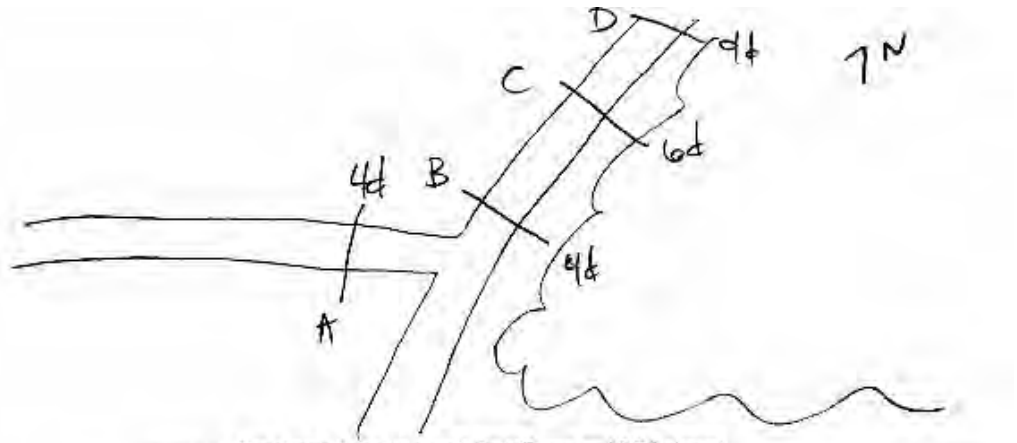
NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1x2H-6m	**D:** 1x2H-9m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Loblolly pine, sweet gum, red maple, Virginia creeper

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Columbus Site# 1 Night# 1 Site Name: Bush Island-Corridor Date: 5/17/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:47	MYAU	F	A	L	38	-	7.5	B	2	CALYX 0211 / 0	Photos & Mites on bat
2	21:55	LABO	F	U	U	-	-	-	D	2.5	-	EFN
3	22:04	MYAU	U	U	U	-	-	-	B	2	-	EFN
4	23:31	LABO	F	U	U	-	-	-	C	2	-	EFN
5	00:25	LABO	F	A	NR	42	-	15.5	B	3	CALYX 0212 / 0	Pin prick holes in both wings
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Columbus	**Site#:**	2	**Night#:**	1	**Site Name:** Bush Island Mitigation-Intersection	**Date:** 5/18/17
Latitude: 34.371775		Longitude: -78.974813						Datum: NAD83 / Elevation: 71	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Jennifer Harrod								Start Time: 19:55	End Time: 00:55

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	77° F	0	0	23:00	73° F	0	0	01:00	70° F	0	0

Moon Effect: Last-Qtr	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*: 43
	Stop:	

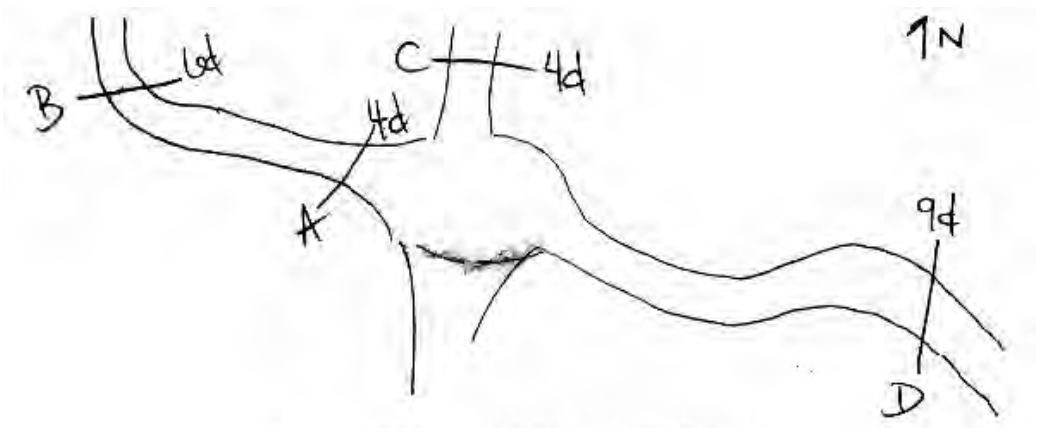
NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-6m	**C:** 1x2H-4m	**D:** 1x2H-9m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	N		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Red maple, sweetgum, loblolly pine

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Columbus Site# 2 Night# 1 Site Name: Bush Island Mitigation-Intersection Date: 5/18/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:48	LABO	M	A	NR	39	-	9.5	D	1.5	CALYX 0213 / 0	
2	21:48	LABO	F	A	P	42	-	18.5	D	3	CALYX 0214 / 0	Holes in left wing
3	21:48	LABO	F	A	NR	41	-	16.5	D	1.5	CALYX 0215 / 0	
4	22:28	UNKN	U	U	U	-	-	-	D	1.5		EFN
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Onslow	**Site#:**	1	**Night#:**	1	**Site Name:** Hammocks Beach - Entrance	**Date:** 06/05/17
Latitude: 34.672272		Longitude: -77.141652						Datum: NAD83 / Elevation: 50	ID By: Heather Wallace
Observers: Jennifer Harrod , Ed Corey								Start Time: 20:30	End Time: 22:30

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	78° F	5	50	22:30	74° F	5	75	-	-	-	-

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*: 43
	Stop:	

NETS/TRAPS:	**A:** 1x2H-12m	**B:** 1x2H-12m	**C:**	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A				
Swoop WxL	N/A	N/A				
Photo? or #	Y	Y				

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

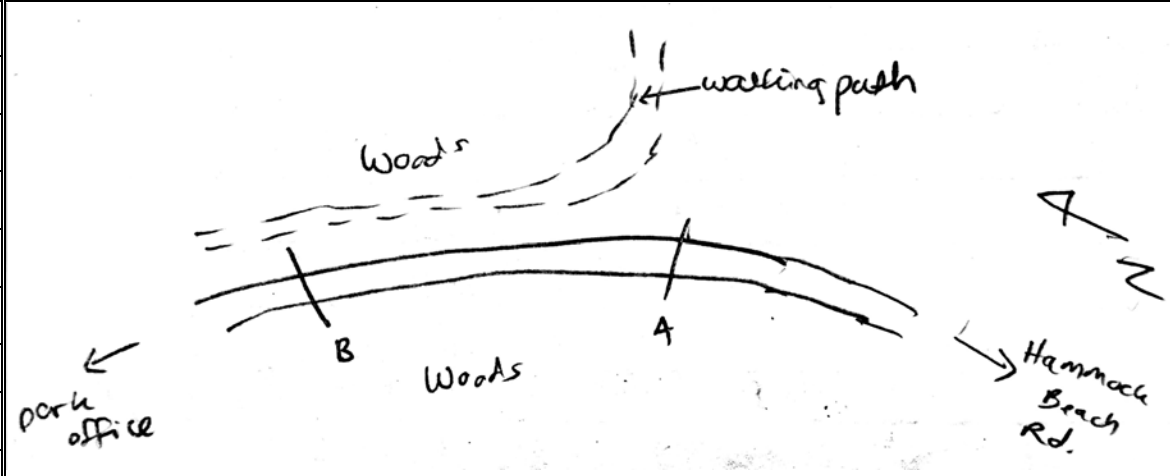
Live oak, wax myrtle, loblolly pine, water oak,

Smilax rotundifolia

Remarks:

High winds between 10-15 mph, with 25 mph gusts

Rain at 22:30



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Onslow Site# 1 Night# 1 Site Name: Hammocks Beach - Entrance Date: 06/05/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Onslow	**Site#:**	1	**Night#:**	1	**Site Name:** Hofmann-Bridge	**Date:** 6/5/17
Latitude: 34.90611		Longitude: -77.474325						Datum: NAD83 / Elevation: 50	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Blake Ellett								Start Time: 20:15	End Time: 23:15

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:15	76° F	1	75	23:00	76° F	2	100	-	-	-	-

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43 61

NETS/TRAPS:	**A:** 1x3H-9m	**B:** 1x3H-6m	**C:** 1x2H-9m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

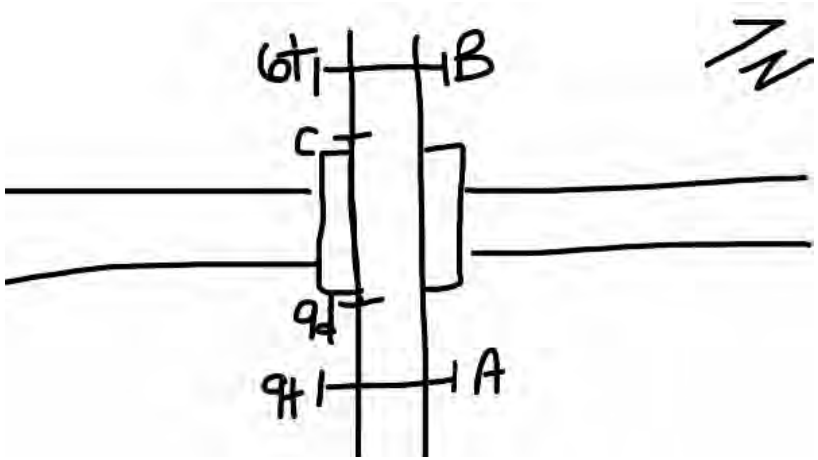
Bottomland Hardwood: Pinus taeda, sweet gum, tulip poplar,

water oak, sycamore, sweetgum, American holly

swamp chestnut oak, red maple

Remarks:

Closed nets at 23:15. Ended night at 23:55 due to rain



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Onslow Site# 1 Night# 1 Site Name: Hofmann-Bridge Date: 6/5/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:48	EPFU	M	A	NR	36	-	13	C	3	CALYX 0601 / 0	
2	21:32	EPFU	M	A	S	33	-	9.5	B	3	CALYX 0602 / 0	Small mites on right wing
3	21:42	LABO	M	A	NR	39	-	11	A	3.5	CALYX 0216 / 0	
4	21:32	EPFU	F	A	L	45	-	18	B	4.5	CALYX 0603 / 0	
5	21:47	EPFU	F	A	L	46	-	19	B	3.5	CALYX 0604 / 0	
6	21:35	EPFU	U	U	U	-	-	-	C	2.5	-	EFN
7	21:30	EPFU	U	U	U	-	-	-	A	3	-	EFN
8	22:30	EPFU	M	A	NR	45	-	14	A	2.5	CALYX 0605 / 0	
9	22:27	EPFU	F	A	P	45	-	19	A	3	CALYX 0606 / 0	
10	23:15	EPFU	F	A	NR	38	-	12.5	B	4	CALYX 0607 / 0	
11	23:15	EPFU	F	A	NR	46	-	19	B	6	CALYX 0608 / 0	
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Pender	**Site#:**	2	**Night#:**	1	**Site Name:** Holly Shelter Game Land-Pond	**Date:** 6/6/17
Latitude: 34.430998		Longitude: -77.718656						Datum: NAD83 / Elevation: 36	ID By: Heather Wallace
Observers: Ed Corey , Jennifer Harrod								Start Time: 20:30	End Time:

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	74	0	100	23:05	74	0	100	23:50	73	0	100

Moon Effect: Wax-Gib — Start: — Stop:

Land Use: Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
21 42/43 61

NETS/TRAPS:	**A:** 1x2H-18m	**B:** 1x1H-18m	**C:** 1x2H-6m	**D:** 1x3H-9m	**E:**	**F:**
Pool size WxL	60' x 60'	60' x 60'	N/A	N/A		
Swoop WxL	60' x 60'	60' x 60'	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

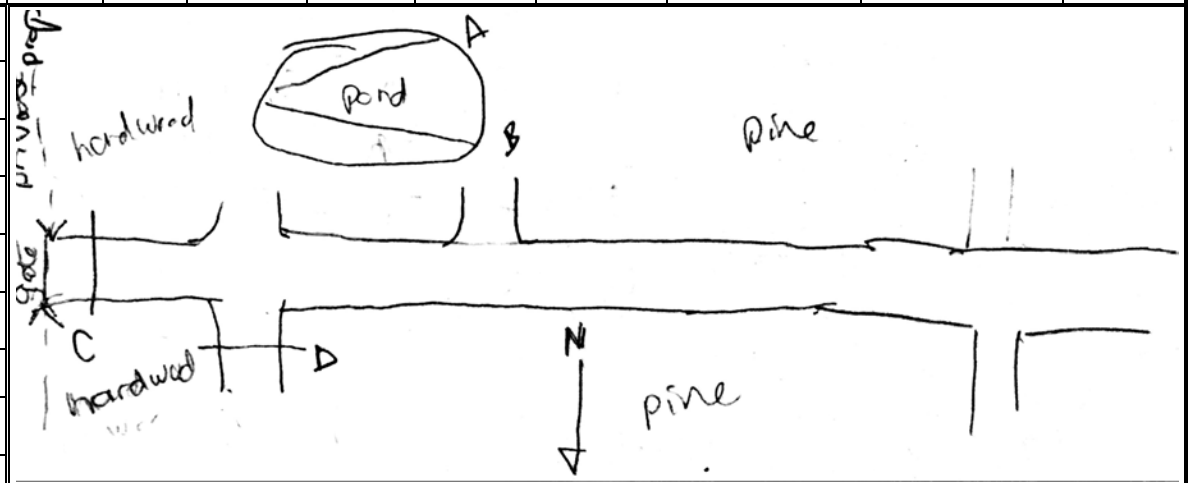
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Ecotone of pine Savannah and coastal plain small stream swamp (blackwater subtype)

Remarks:

Slight drizzle 20:50-21:00; Rained out by midnight.



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Pender Site# 2 Night# 1 Site Name: Holly Shelter Game Land-Pond Date: 6/6/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:20	EPFU	F	A	L	48	-	23	A	1	CALYX 0521 / 0	
2	21:20	LABO	F	A	L	41	-	15	A	2	CALYX 0138 / 0	
3	21:25	NYHU	F	A	L	35	-	12	A	1	CALYX 0139 / 0	
4	21:50	LABO	M	A	NR	39	-	11	C	2	CALYX 0140 / 0	
5	21:55	EPFU	F	A	NR	47	-	24.5	A	1	CALYX 0522 / 0	
6	23:00	NYHU	F	A	L	35	-	12.5	B	0.5	CALYX 0141 / 0	
7	23:40	EPFU	F	A	L	46	-	29	C	3	CALYX 0523 / 0	
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Onslow	**Site#:**	1	**Night#:**	1	**Site Name:** Stone Creek-Bridge	**Date:** 6/6/17

Latitude: 34.563864	Longitude: 77.472075	Datum: NAD83	Elevation: 20	ID By: Kathryn Cunningham
Observers: Blake Ellett , Dominique DiLandro		Start Time: 20:15		End Time: 01:15

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	78° F	1	100	23:30	76° F	0	75	01:00	72° F	0	75

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43 61

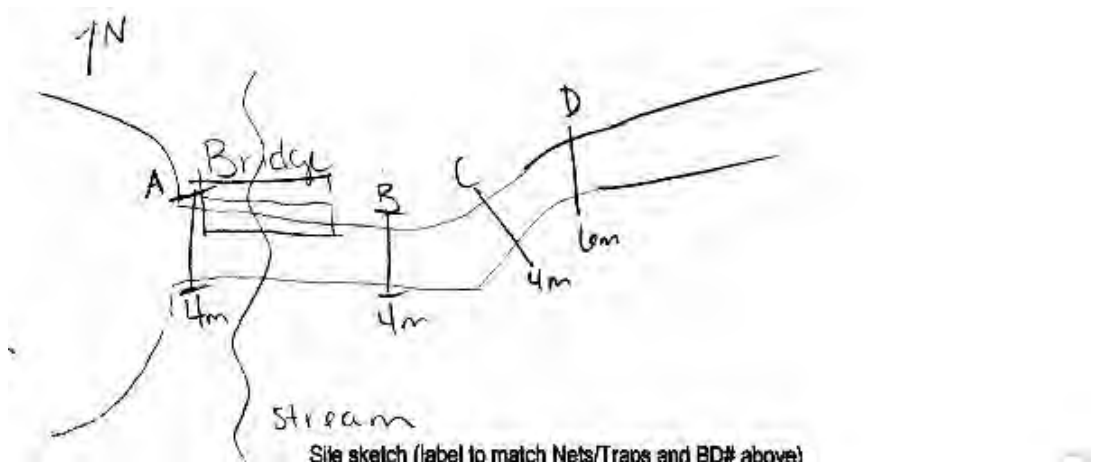
NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1x2H-4m	**D:** 1x2H-6m	**E:**	**F:**
Pool size WxL	4m x 4m	N/A	N/A	N/A		
Swoop WxL	4m x 4m	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Mixed forest. Pinus taeda, Quercus niegra. Some Sassafras albidum in understory.

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Onslow Site# 1 Night# 1 Site Name: Stone Creek-Bridge Date: 6/6/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Pender	**Site#:**	1	**Night#:**	1	**Site Name:** Black River Preserve	**Date:** 6/7/17
Latitude: 34.463975		Longitude: -78.171137						Datum: NAD83 / Elevation: 10	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Blake Ellett								Start Time: 20:00	End Time: 01:00

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	67 °F	0	100	23:00	64 °F	0	100	01:00	62 °F	1	100

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

NETS/TRAPS:	**A:** 1x2H-6m	**B:** 1x3H-6m	**C:** 1x2H-4m	**D:** 1x2H-4m	**E:**	**F:**
Pool size WxL	5m X 20m	N/A	N/A	N/A		
Swoop WxL	5m x 20m	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Mixed pine and hardwood. Swamp cypress, nyssa slyvatica

Quercus nigra, wax myrtle, Pinus taeda

Remarks:

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Pender Site# 1 Night# 1 Site Name: Black River Preserve Date: 6/7/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	23:35	CORA	U	U	U	-	-	-	A	1.5	-	EFN
2	23:45	CORA	F	A	L	41	-	8.5	A	1.5	CALYX 0217 / 0	Recaptured at 00:05
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Pender	**Site#:**	2	**Night#:**	2	**Site Name:** Holly Shelter Game Land-Pond	**Date:** 6/8/17
Latitude: 34.430998		Longitude: -77.718656						Datum: NAD83 / Elevation: 36	ID By: Heather Wallace
Observers: Ed Corey , Jennifer Harrod								Start Time: 20:15	End Time: 01:15

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:15	66 °F	0	100	22:54	64 °F	0	50	01:15	63 °F	0	20

Moon Effect: Full — Start: 23:30 — Stop: 01:15

Land Use: Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
21 42/43 61

NETS/TRAPS:	**A:** 1x2H-18m	**B:** 1x1H-18m	**C:** 1x2H-6m	**D:** 1x3H-9m	**E:**	**F:**
Pool size WxL	60' x 60'	60' x 60'	N/A	N/A		
Swoop WxL	60' x 60'	60' x 60'	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

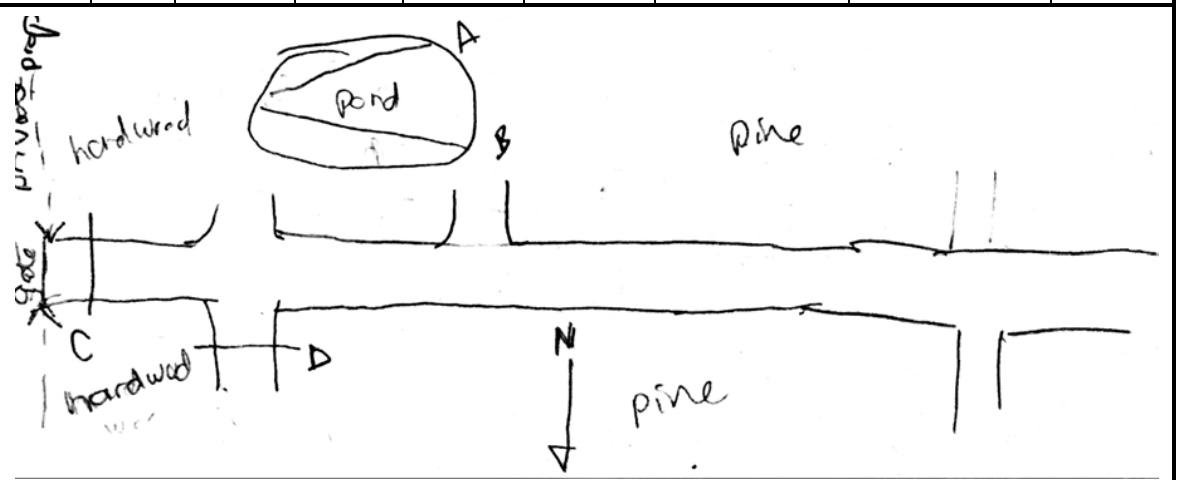
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Ecotone of pine Savannah and coastal plain small stream swamp (blackwater subtype)

Remarks:

Clouds cleared and moon shone on B and part of D



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Pender Site# 2 Night# 2 Site Name: Holly Shelter Game Land-Pond Date: 6/8/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:50	LABO	M	A	NR	40	-	12.5	B	1	CALYX 0143 / 0	
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Onslow	**Site#:**	1	**Night#:**	2	**Site Name:** Hofmann-Bridge	**Date:** 6/8/17
Latitude: 34.90611		Longitude: -77.474325						Datum: NAD83 / Elevation: 50	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Blake Ellett								Start Time: 20:10	End Time: 01:10

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	67° F	0	0	23:00	64° F	0	0	01:30	62° F	0	0

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43 61

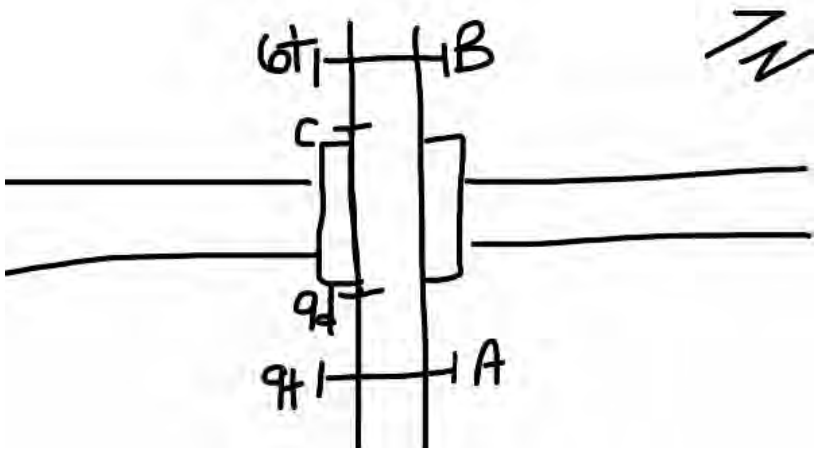
NETS/TRAPS:	**A:** 1x3H-9m	**B:** 1x3H-6m	**C:** 1x2H-9m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Bottomland hardwood with mixed pine, loblolly pine, swamp chestnut oak, red maple, water oak, sycamore, sweetgum, American holly

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Onslow Site# 1 Night# 2 Site Name: Hofmann-Bridge Date: 6/8/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:15	EPFU	M	A	NR	36	-	10	B	1.5	CALYX 0609 / 0	
2	21:45	EPFU	F	A	L	36	-	9	B	1.5	CALYX 0610 / 0	
3	21:45	EPFU	F	A	L	36	-	10.5	B	3.5	NCSM 0041 / 0	Recapture
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Onslow	**Site#:**	1	**Night#:**	1	**Site Name:** Rocky Run	**Date:** 6/12/17

Latitude: 34.735411	Longitude: -77.302249	Datum: NAD83	Elevation: 34	ID By: Kathryn Cunningham
Observers: Jennifer Harrod , Dominique DiLandro		Start Time: 20:05	End Time: 01:05

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:45	75° F	0	75	23:45	69° F	0	75	01:45	67° F	0	50

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*: 43
	Stop:	

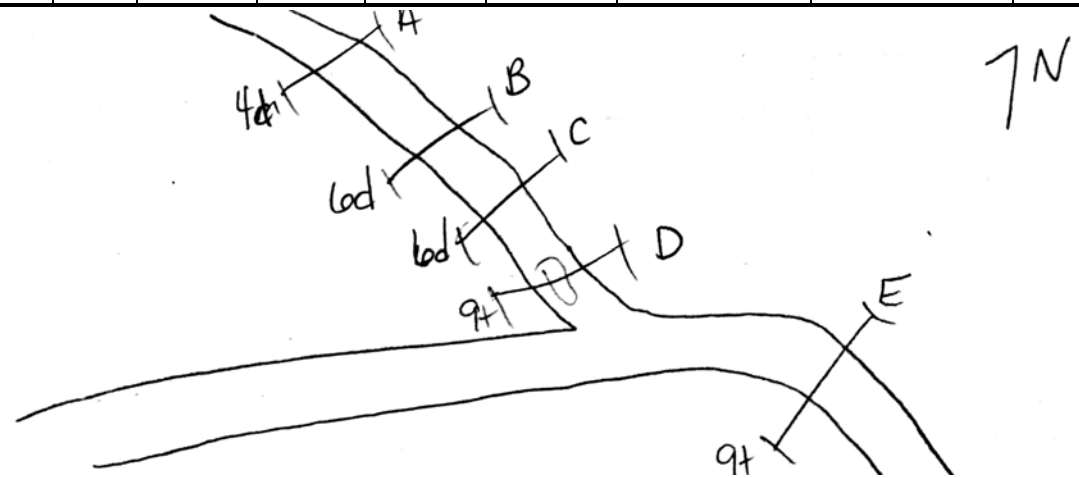
NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-6m	**C:** 1x2H-6m	**D:** 1x3H-9m	**E:** 1x3H-9m	**F:**
Pool size WxL	N/A	N/A	N/A	6' x 12'	N/A	
Swoop WxL	N/A	N/A	N/A	5' X 10'	N/A	
Photo? or #	Y	Y	Y	Y	Y	

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Liquidambar styraciflua, Quercus nigra, Quercus alba, Vitis rotundifolia, Pinus taeda

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Onslow Site# 1 Night# 1 Site Name: Rocky Run Date: 6/12/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Pender	**Site#:**	1	**Night#:**	1	**Site Name:** Angola Bay	**Date:** 6/13/17
Latitude: 34.664820		Longitude: -77.863911						Datum: NAD83 / Elevation: 22	ID By: Kathryn Cunningham
Observers: Jennifer Harrod , Dominique DiLandro								Start Time: 20:15	End Time: 01:30

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:15	76° F	0	0	23:00	73° F	0	0	01:00	71° F	0	0

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / (Forest) / Water / Wetland / Barren *(describe)*:
	Stop:	43

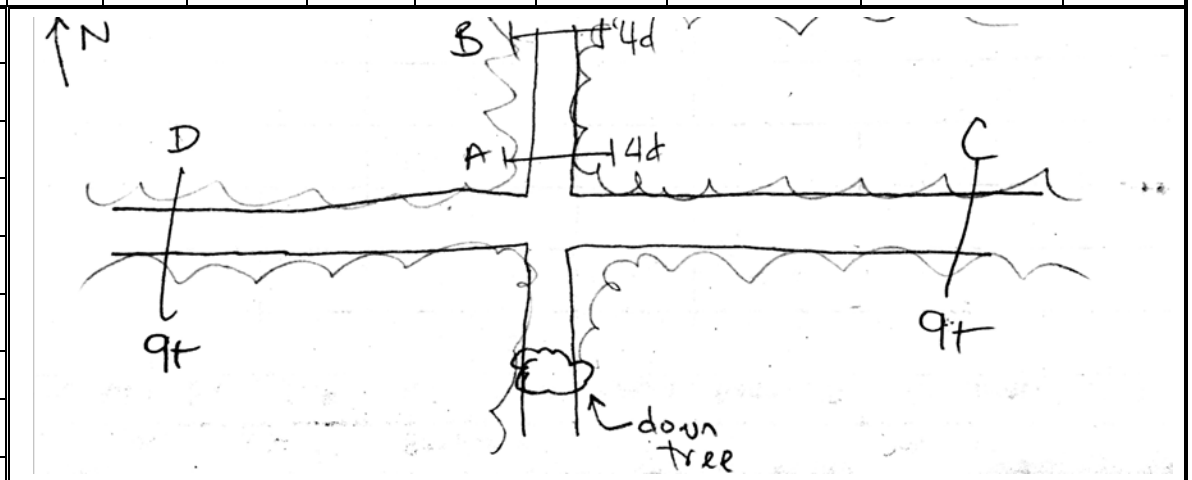
NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1x3H-9m	**D:** 1x3H-9m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Acer rubrum, bay magnolia, Pinus taeda, Smilax sp., bay sp., clethra

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Pender Site# 1 Night# 1 Site Name: Angola Bay Date: 6/13/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:51	LABO	F	A	L	38	-	12.5	B	1.5	CALYX 0218 / 0	
2	01:22	LASE	F	A	L	44	-	12	B	2.5	CALYX 0219 / 0	
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Pender	**Site#:**	1	**Night#:**	2	**Site Name:** Black River Preserve	**Date:** 6/14/17
Latitude: 34.463975		Longitude: -78.171137						Datum: NAD83 / Elevation: 10	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Jennifer Harrod								Start Time: 20:15	End Time: 21:30

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	72 ° F	0	100	21:30	71° F	0	100	-	-	-	-

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / (Forest) / Water / Wetland / Barren *(describe)*: 43
	Stop:	

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1x3H-6m	**D:** 1x2H-6m	**E:**	**F:**
Pool size WxL	N/A	N/A	2m x 4m	N/A		
Swoop WxL	N/A	N/A	2m x 4m	N/A		
Photo? or #	Y	Y	Y	Y		

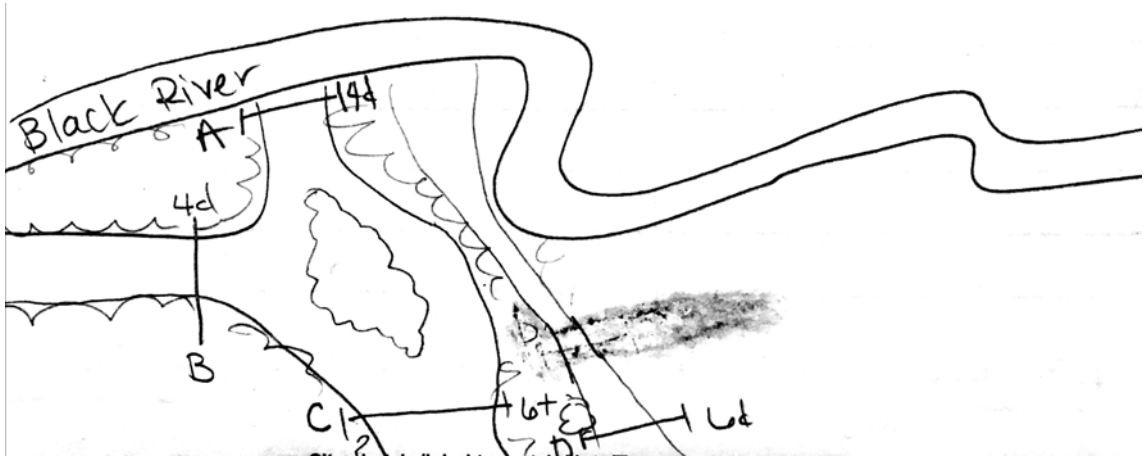
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Mixed pine and hardwood. Swamp cypress, nyssa slyvatica

Quercus nigra, wax myrtle, Pinus taeda, holly

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Pender Site# 1 Night# 2 Site Name: Black River Preserve Date: 6/14/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:30	MYSE	M	A	NR	35	-	8	C	2.5	CALYX 0220 / 0	
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Columbus	**Site#:**	2	**Night#:**	1	**Site Name:** Juniper Creek-Road Intersection	**Date:** 6/26/17

Latitude: 34.160138	Longitude: -78.466791	Datum: NAD83	Elevation: 38	ID By: Kathryn Cunningham
Observers: Jennifer Harrod , Dominique DiLandro		Start Time: 20:30	End Time: 01:30

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:00	73° F	0	0	23:30	68° F	0	0	01:00	65° F	0	0

Moon Effect: Wax-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43 51

NETS/TRAPS:	**A:** 1x3H-6m	**B:** 1x2H-6m	**C:** 1x2H-4m	**D:**	**E:**	**F:**
Pool size WxL	8' x 15'	N/A	N/A			
Swoop WxL	8' x 15'	N/A	N/A			
Photo? or #	N	Y	Y			

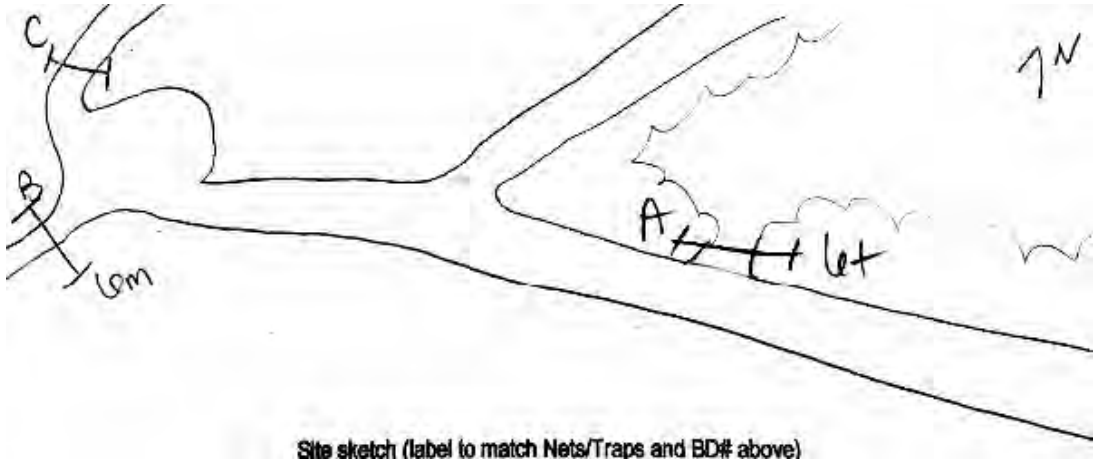
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Prescribed fire with pine and hardwoods. Shortleaf pine,

loblolly pine, red maple, ti ti, red bay

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Columbus Site# 2 Night# 1 Site Name: Juniper Creek-Road Intersection Date: 6/26/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	20:45	LABO	F	A	L	39	-	10	B	2.5	CALYX 0221 / 0	Cyst on tail
2	20:45	UNKN	U	U	U	-	-	-	B	2.5	-	EFN
3	21:40	MYAU	M	J	NR	36	-	6.5	A	2	CALYX 0222 / 0	Photos. Tick on left wing
4	22:35	LABO	F	A	L	39	-	14	C	2	CALYX 0223 / 0	Holes in right wing
5	23:45	LABO	F	A	L	40	-	12	C	2	CALYX 0224 / 0	Small cut on both wing joints
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Columbus	**Site#:**	1	**Night#:**	1	**Site Name:** Lake Waccamaw-Campsite 4	**Date:** 6/27/17
Latitude: 34.257738		Longitude: -78.487150						Datum: NAD83 / Elevation: 42	ID By: Kathryn Cunningham
Observers: Dominique DiLandro								Start Time: 20:25	End Time: 01:25

Conditions:	Time 21:00	Temp 76° F	Wind 0	Clouds 25	Time 23:00	Temp 72° F	Wind 0	Clouds 25	Time 01:00	Temp 71° F	Wind 0	Clouds 25

Moon Effect: Wax-Cres
Start:
Stop:

Land Use: Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
43 52

NETS/TRAPS:	**A:** 1x3H-6m	**B:** 1x2H-4m	**C:** 1x2H-4m	**D:** 1x3H-18m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

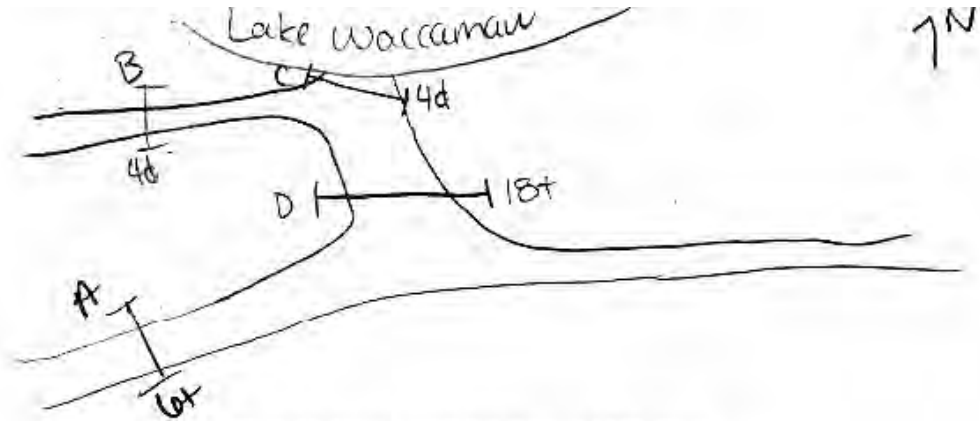
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Mixed forest. Red maple, tulip poplar, short leaf pine,

loblolly pine, sweetgum

Remarks:



Site sketch (label to match Nets/Traps and BD# above)
Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Columbus Site# 1 Night# 1 Site Name: Lake Waccamaw-Campsite 4 Date: 6/27/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	22:00	MYAU	F	J	NR	35	-	4	D	2.5	CALYX 0225 / 0	No Photos
2	22:00	MYAU	M	A	S	37	-	4.5	D	3	CALYX 0226 / 0	Photos
3	22:15	PESU	U	U	U	-	-	-	B	1.5	-	EFN
4	22:30	MYAU	M	J	NR	35	-	4.5	D	7	CALYX 0227 / 0	Photos
5	22:45	EPFU	F	J	NR	47	-	12	A	3	CALYX 0611 / 0	
6	00:15	EPFU	M	J	NR	46	-	12	D	6.5	CALYX 0612 / 0	
7	01:15	NYHU	M	A	NR	35	-	9	A	5.5	CALYX 0252 / 0	
8	01:15	LABO	F	A	L	40	-	12.5	D	4	CALYX 0251 / 0	
9	01:20	MYAU	F	J	NR	38	-	6	C	1.5	CALYX 0228 / 0	Photos
10	01:30	MYAU	M	J	NR	36	-	6	D	5	CALYX 0253 / 0	
11	01:30	EPFU	U	U	U	-	-	-	C	1.5	-	EFN
12	01:30	MYAU	F	J	NR	36	-	6	D	4.5	CALYX 0254 / 0	Photos
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Columbus	**Site#:**	2	**Night#:**	1	**Site Name:** Lake Waccamaw-Campsite 2	**Date:** 6/28/17
Latitude: 34.258775		Longitude: -78.483766						Datum: NAD83 / Elevation: 44	ID By: Kathryn Cunningham
Observers: Ed Corey , Dominique DiLandro								Start Time: 20:45	End Time: 01:45

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:00	70° F	0	0	23:30	68° F	0	0	01:00	66° F	0	0

Moon Effect: Wax-Cres	Start:	**Land Use:** Urban / Agriculture / Forest (41) / Water (52) / Wetland / Barren *(describe)*:
	Stop:	

NETS/TRAPS:	**A:** 1x2H-6m	**B:** 1x2H-4m	**C:** 1x2H-12m	**D:** 1x3H-9m	**E:** 1x2H-6m	**F:** 1x3H-18m
Pool size WxL	N/A	N/A	N/A	N/A	N/A	N/A
Swoop WxL	N/A	N/A	N/A	N/A	N/A	N/A
Photo? or #	Y	Y	Y	Y	Y	N

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

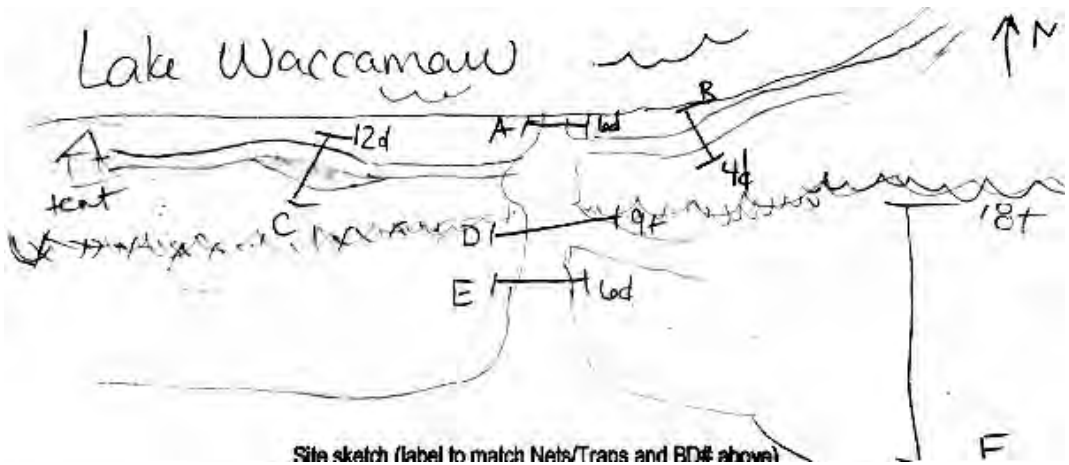
Site Description:

Water oak, sand laurel oak, loblolly pine (possibly slash pine)

Coastal fringe sandhill

Remarks:

Eastern screech owl in Net F



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Columbus Site# 2 Night# 1 Site Name: Lake Waccamaw-Campsite 2 Date: 6/28/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	12:30	MYAU	F	J	NR	38	-	6	C	3	CALYX 0255 / 0	Photos
2	01:30	CORA	F	A	L	43	-	9	C	1.5	CALYX 0256 / 0	Pinhole in lower part of right wing
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Sampson	**Site#:**	1	**Night#:**	1	**Site Name:** Great Coharie-Gate 1	**Date:** 7/10/17
Latitude: 35.136127		Longitude: -78.397875						Datum: NAD83 / Elevation: 145	ID By: Kathryn Cunningham
Observers: Dominique DiLandro								Start Time: 20:15	End Time: 01:15

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	81° F	0	100	23:00	73° F	0	100	01:00	71° F	0	100

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	41

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1-2H-4m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

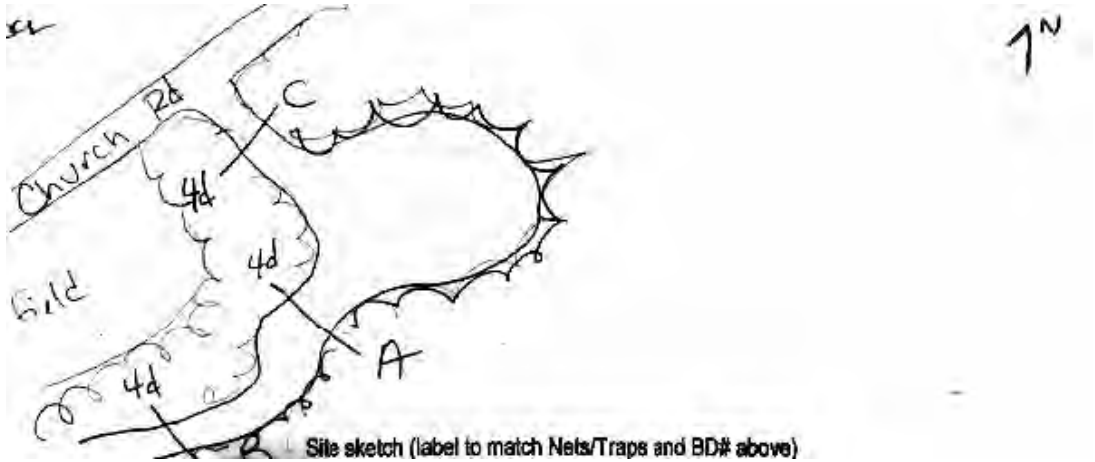
Site Description:

Wooded trails with open field. Red maple, tulip poplar,

water oak, sweetgum

Remarks:

Woodcock in net A



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Sampson Site# 1 Night# 1 Site Name: Great Coharie-Gate 1 Date: 7/10/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	20:50	LABO	F	J	NR	42.1	-	9	A	3.5	CALYX 0271 / 0	
2	21:50	LABO	M	J	NR	39.6	-	10.5	C	4	CALYX 0272 / 0	
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Sampson	**Site#:**	2	**Night#:**	1	**Site Name:** Great Cohaire-Gate 5	**Date:** 7/11/17
Latitude: 35.192177		Longitude: -78.367075						Datum: NAD83 / Elevation: 145	ID By: Kathryn Cunningham
Observers: Dominique DiLandro								Start Time: 20:20	End Time: 01:20

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	81° F	0	0	23:00	77° F	0	0	01:00	76° F	0	0

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

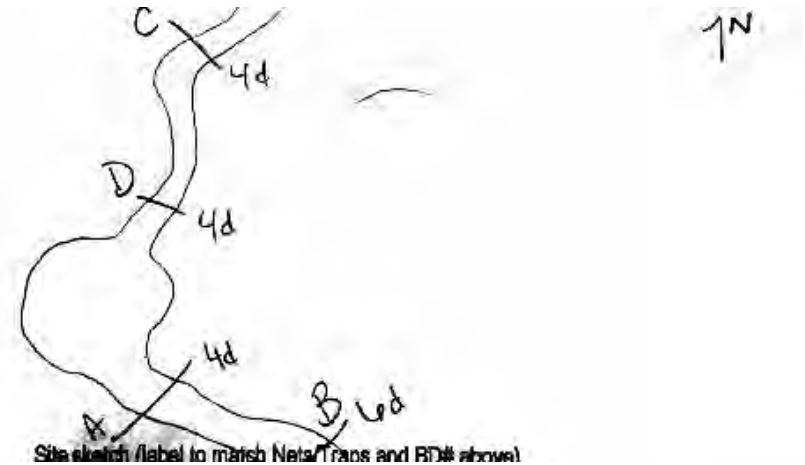
NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-6m	**C:** 1x2H-4m	**D:** 1x2H-4m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Mixed hardwood/pine stand. Tulip poplar, sourwood, water oak, chestnut oak, loblolly pine, magnolia, sweetgum

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Sampson Site# 2 Night# 1 Site Name: Great Cohaire-Gate 5 Date: 7/11/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	23:15	LABO	F	U	U	-	-	-	C	2.5	-	EFN
2	01:15	LABO	M	J	NR	40.2	-	9.5	B	3.5	CALYX 0273 / 0	
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Sampson	**Site#:**	3	**Night#:**	1	**Site Name:** Great Coharie-Gate 3	**Date:** 7/12/17

Latitude: 35.167672	Longitude: -78.348286	Datum: NAD83	Elevation: 175	ID By: Kathryn Cunningham
Observers: Dominique DiLandro		Start Time: 20:35	End Time: 01:35

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	83° F	0	0	23:00	80° F	0	0	01:00	78° F	0	0

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

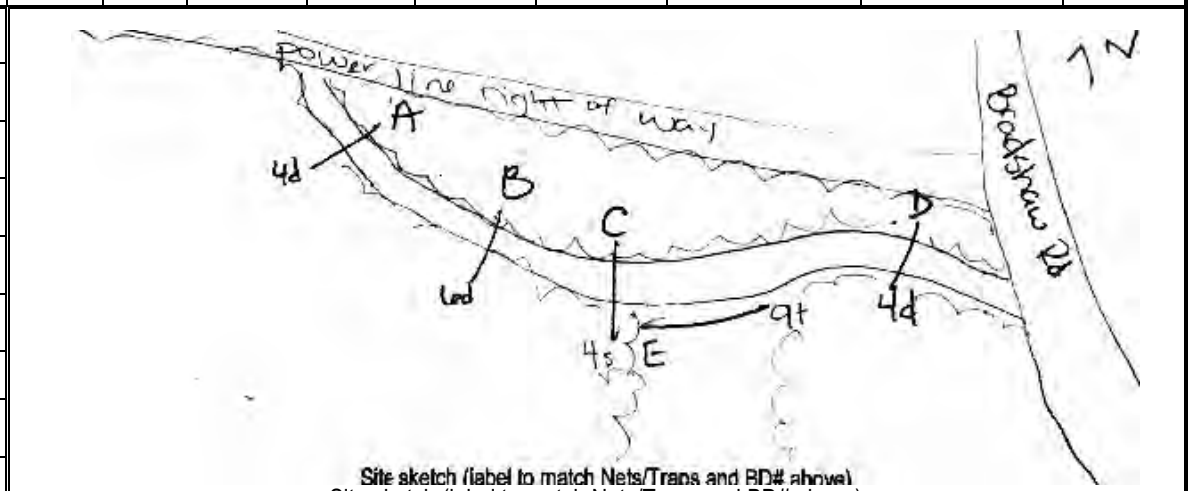
NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-6m	**C:** 1x1H-4m	**D:** 1x2H-4m	**E:** 1x3H-9m	**F:**
Pool size WxL	N/A	N/A	N/A	N/A	N/A	
Swoop WxL	N/A	N/A	N/A	N/A	N/A	
Photo? or #	Y	Y	Y	Y	Y	

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

American holly, water oak, loblolly pine, sweetgum, red maple

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Sampson Site# 3 Night# 1 Site Name: Great Coharie-Gate 3 Date: 7/12/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	20:50	LABO	M	J	NR	37.1	-	7.5	E	4	CALYX 0274 / 0	
2	22:45	LABO	F	J	NR	40.8	-	9.5	E	4.5	CALYX 0275 / 0	
3	00:25	LABO	M	J	NR	36.6	-	8	E	4	CALYX 0276 / 0	
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Sampson	**Site#:**	4	**Night#:**	1	**Site Name:** Great Cohaire-Gate 2	**Date:** 7/13/17
Latitude: 35.1533694		Longitude: -78.366288						Datum: NAD83 / Elevation: 167	ID By: Kathryn Cunningham
Observers: Dominique DiLandro								Start Time: 20:20	End Time: 01:20

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:00	88° F	0	0	23:00	81° F	0	0	01:00	78° F	0	0

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1x2H-4m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

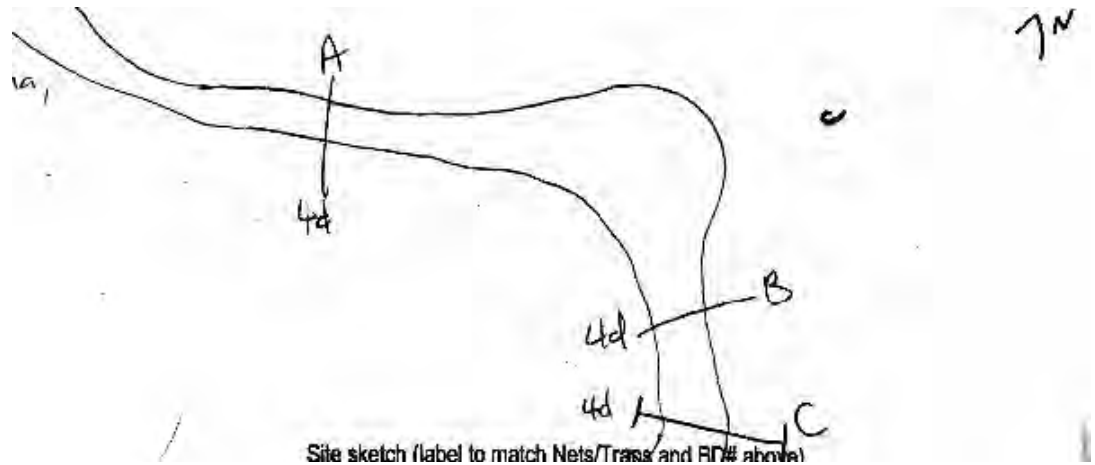
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Red maple, sweet gum, tulip poplar, loblolly pine, chestnut oak, water oak

Remarks:

Black widow spider



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Sampson Site# 4 Night# 1 Site Name: Great Cohaire-Gate 2 Date: 7/13/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Sampson	**Site#:**	1	**Night#:**	1	**Site Name:** Pondberry-Turkey Farm	**Date:** 7/17/17

Latitude: 34.994230	Longitude: -78.481773	Datum: NAD83	Elevation: 165	ID By: Kathryn Cunningham
Observers: Dominique DiLandro		Start Time: 20:20	End Time: 01:20

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:15	77° F	0	50	00:00	75° F	0	25	01:00	73° F	0	25

Moon Effect: Wan-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	21 43

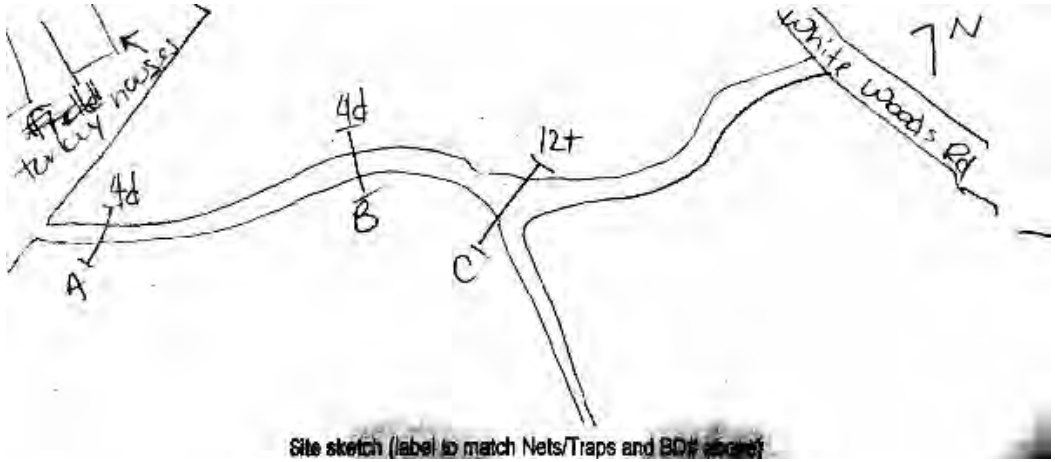
NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1x3H-12m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Longleaf pine, sassafras, persimmon, water oak, loblolly pine, turkey foot oak

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Sampson Site# 1 Night# 1 Site Name: Pondberry-Turkey Farm Date: 7/17/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	22:05	LABO	M	J	NR	40.1	-	9.5	C	3	CALYX 0277 / 0	
2	22:05	LABO	M	J	NR	38.6	-	9	C	2.5	CALYX 0278 / 0	Pinprick hole on left wing
3	22:15	LABO	F	J	NR	38	-	9	C	5.5	CALYX 0279 / 0	
4	22:35	LASE	F	J	NR	41	-	9	C	3.5	CALYX 0280 / 0	Hole in right wing
5	22:45	LABO	F	A	NR	43	-	11.5	B	3	CALYX 0281 / 0	
6	22:50	LABO	M	J	NR	38	-	8.5	C	5	CALYX 0282 / 0	
7	22:50	LABO	F	J	NR	41	-	11	C	3	CALYX 0283 / 0	
8	23:30	LABO	M	J	NR	37.5	-	8	C	7	CALYX 0284 / 0	
9	23:35	LABO	M	J	NR	40	-	9	C	6	CALYX 0285 / 0	
10	23:45	LABO	M	J	NR	39	-	8.5	C	3.5	CALYX 0286 / 0	Small holes in left wing
11	00:20	LABO	F	J	NR	41	-	11.5	C	4	CALYX 0287 / 0	
12	00:20	LABO	F	J	NR	43	-	12.5	C	3.5	CALYX 0288 / 0	
13	01:05	EPFU	M	J	NR	47	-	13	C	3	CALYX 0613 / 0	
14	01:15	EPFU	M	A	NR	42	-	14.5	C	4.5	CALYX 0614 / 0	
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Sampson	**Site#:**	2	**Night#:**	1	**Site Name:** Pondberry-Intersection	**Date:** 7/18/17
Latitude: 34.991687		Longitude: -78.478430						Datum: NAD83 / Elevation: 166	ID By: Kathryn Cunningham
Observers: Dominique DiLandro								Start Time: 20:15	End Time: 01:15

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:45	77° F	0	0	23:00	75° F	0	0	01:15	73° F	0	0

Moon Effect: Wan-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	21 42

NETS/TRAPS:	**A:** 1x3H-12m	**B:** 1x2H-6m	**C:** 1x3H-18m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

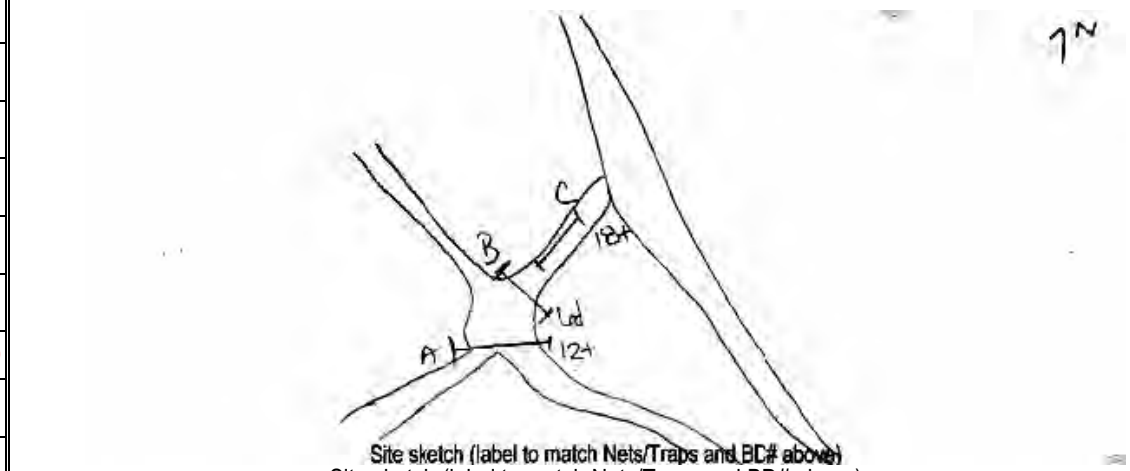
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Longleaf pine, red maple, sassafrass, sweetgum.

Remarks:

Managed longleaf pine. Very open. Caught last 4 bats (in net C) after closed other nets. Too many bugs in the net prevented us from closing net C all the way.



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Sampson Site# 2 Night# 1 Site Name: Pondberry-Intersection Date: 7/18/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:30	LASE	M	J	NR	40.5	-	10	A	1.5	CALYX 0289 / 0	Pin hole in right wing
2	21:30	LABO	F	J	NR	41	-	10	A	4	CALYX 0290 / 0	Small holes in both wings
3	21:40	LABO	M	J	NR	38.5	-	9.5	A	1.5	CALYX 0291 / 0	
4	21:40	LABO	F	U	U	-	-	-	A	4.5	-	EFN
5	21:45	LABO	F	A	PL	44	-	15	A	6.5	CALYX 0292 / 0	
6	21:45	LABO	M	J	NR	40	-	9	B	1.5	CALYX 0293 / 0	
7	22:15	LABO	F	J	NR	40	-	11	A	1.5	CALYX 0294 / 0	
8	22:15	LABO	M	J	NR	42	-	10.5	A	3	CALYX 0295 / 0	
9	22:15	NYHU	F	J	NR	36	-	11	A	5	CALYX 0296 / 0	Mites all over
10	22:15	LABO	F	A	PL	44.5	-	16.5	A	6.5	CALYX 0297 / 0	Pin holes in both wings
11	22:20	LASE	M	J	NR	40	-	11.5	A	6	CALYX 0299 / 0	
12	22:25	LABO	M	J	NR	38	-	9	C	4.5	CALYX 0300 / 0	
13	22:30	LABO	M	J	NR	39	-	9	A	1.5	CALYX 0301 / 0	
14	22:30	LABO	F	J	NR	39	-	11	A	3	CALYX 0302 / 0	
15	22:30	LABO	F	J	NR	42	-	10.5	A	4.5	CALYX 0303 / 0	
16	22:30	LASE	M	J	NR	41.5	-	9	A	4.5	CALYX 0304 / 0	
17	22:40	LABO	F	J	NR	39	-	9.5	A	5	CALYX 0305 / 0	
18	22:40	LABO	F	J	NR	-	-	8.5	C	1.5	-	Injured right wing-Didn't band Put on tree and it crawled up
19	22:45	LABO	F	J	NR	40	-	11	C	6.5	CALYX 0306 / 0	
20	23:50	LABO	M	J	NR	40	-	10.5	C	2.5	CALYX 0307 / 0	Hole in right wing Pin holes in left wing

Bat Survey Data Form

Project: Eastern Research County: Sampson Site# 2 Night# 1 Site Name: Pondberry-Intersection Date: 7/18/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
21	23:50	LABO	F	J	NR	41	-	10	C	1	CALYX 0308 / 0	
22	23:45	LABO	M	J	NR	40	-	8.5	A	3.5	CALYX 0309 / 0	
23	23:30	NYHU	M	A	NR	34	-	9	A	2	CALYX 0310 / 0	
24	23:40	LABO	F	J	NR	39	-	9.5	B	4.5	CALYX 0311 / 0	
25	00:15	LABO	F	U	U	-	-	-	A	2	-	EFN
26	00:15	LABO	F	J	NR	41	-	8.5	A	5	CALYX 0312 / 0	
27	00:15	LABO	F	A	PL	43	-	14	A	5.5	CALYX 0313 / 0	
28	00:15	LABO	M	J	NR	38	-	9.5	A	1	CALYX 0314 / 0	
29	00:45	LABO	M	J	NR	36	-	6.5	C	2.5	CALYX 0315 / 0	
30	00:45	LABO	M	J	NR	40	-	8.5	A	5.5	CALYX 0316 / 0	
31	00:45	LABO	M	J	NR	42	-	10	B	1.5	CALYX 0317 / 0	
32	00:45	LABO	M	J	NR	41	-	8	A	1.5	CALYX 0318 / 0	Pin hole in left wing Mites all over
33	00:45	LABO	F	J	NR	42	-	10	A	6	CALYX 0319 / 0	Pin holes in left wing
34	01:15	LABO	F	J	NR	41	-	9.5	A	4.5	CALYX 0320 / 0	
35	01:15	LABO	F	J	NR	41	-	9	A	2	CALYX 0321 / 0	
36	01:15	LABO	F	J	NR	40	-	10.5	A	3	CALYX 0322 / 0	
37	01:30	LABO	F	J	NR	39	-	9	C	3.5	CALYX 0323 / 0	
38	01:30	EPFU	U	U	U	-	-	-	C	3	-	EFN
39	01:30	EPFU	F	A	NR	45	-	16.5	C	1.5	CALYX 0615 / 0	
40	01:45	LABO	F	J	NR	42	-	9.5	C	1.5	CALYX 0324 / 0	

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Robeson	**Site#:**	1	**Night#:**	1	**Site Name:** Lumber River-Trails	**Date:** 7/24/17

Latitude: 34.391818	Longitude: -78.999353	Datum: NAD83	Elevation: 76	ID By: Kathryn Cunningham
Observers: Blake Ellett		Start Time: 20:15	End Time: 21:15

Conditions:	Time 20:30	Temp 82° F	Wind 5	Clouds 100	Time -	Temp -	Wind -	Clouds -	Time -	Temp -	Wind -	Clouds -

Moon Effect: Wax-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	41 51

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1x2H-2.6m	**D:** 1x2H-2.6m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

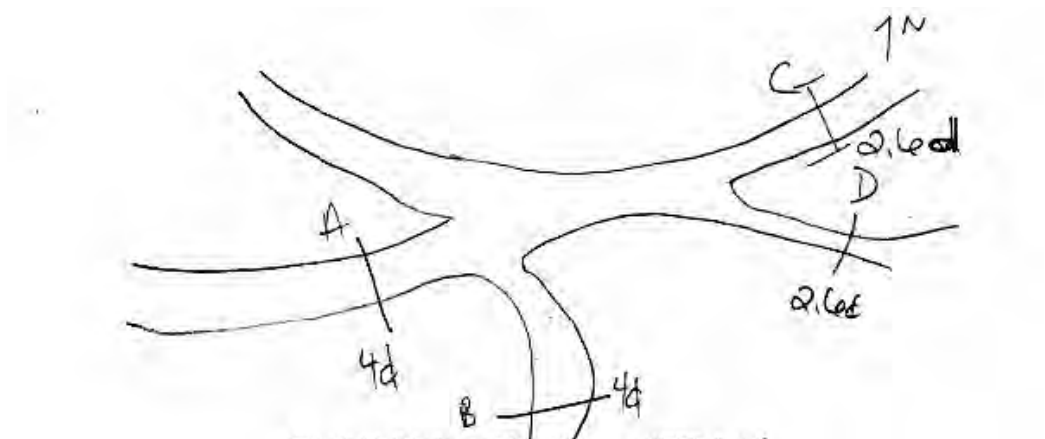
Site Description:

Water oak, red mulberry, chestnut oak, white oak, walnut,

red maple, red cedar, northern red oak, American holly

Remarks:

Rain out. Never opened nets.



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Robeson Site# 1 Night# 1 Site Name: Lumber River-Trails Date: 7/24/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Robeson	**Site#:**	1	**Night#:**	2	**Site Name:** Lumber River-Trails	**Date:** 7/25/17

Latitude: 34.391818	Longitude: -78.999353	Datum: NAD83	Elevation: 76	ID By: Kathryn Cunningham
Observers: Blake Ellett		Start Time: 20:15	End Time: 01:15

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:15	82° F	0	0	23:00	77° F	0	0	01:00	75 °F	0	0

Moon Effect: Wax-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	41 51

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-4m	**C:** 1x2H-2.6m	**D:** 1x2H-2.6m	**E:** 1x3H-9m	**F:** 1x2H-4m
Pool size WxL	N/A	N/A	N/A	N/A	8' x 12'	N/A
Swoop WxL	N/A	N/A	N/A	N/A	8' x 12'	N/A
Photo? or #	Y	Y	Y	Y	Y	Y

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

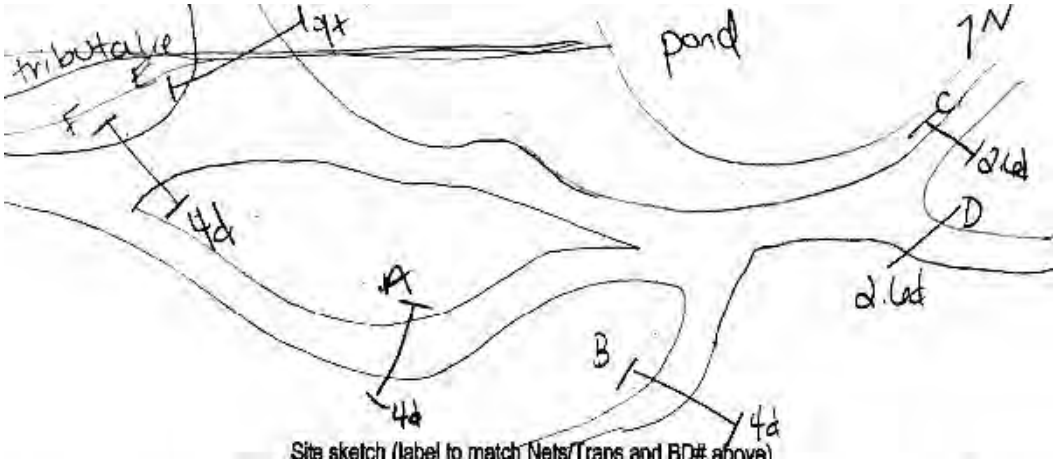
Site Description:

Water oak, red mulberry, chestnut oak, white oak, walnut,

red maple, red cedar, northern red oak, American holly

Remarks:

Lots of owls nearby (Barred and Eastern screech owl)



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Robeson Site# 1 Night# 2 Site Name: Lumber River-Trails Date: 7/25/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:30	MYAU	F	J	NR	37	-	9	C	1.5	CALYX 0325 / 0	Mites on her in net but crawled off. Photos. Very yellow!
2	21:30	NYHU	M	A	NR	32	-	10	C	4	CALYX 0326 / 0	No mites
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Robeson	**Site#:**	2	**Night#:**	1	**Site Name:** Lumber River-Wetland	**Date:** 7/26/17

Latitude: 34.519541	Longitude: -78.925814	Datum: NAD83	Elevation: 95	ID By: Kathryn Cunningham
Observers: Blake Ellett		Start Time: 20:15	End Time: 01:15

Conditions:	Time 21:00	Temp 78° F	Wind 0	Clouds 0	Time 23:00	Temp 74° F	Wind 0	Clouds 0	Time 01:00	Temp 70° F	Wind 0	Clouds 0

Moon Effect: Wax-Cres
Start:
Stop:

Land Use: Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
41 61

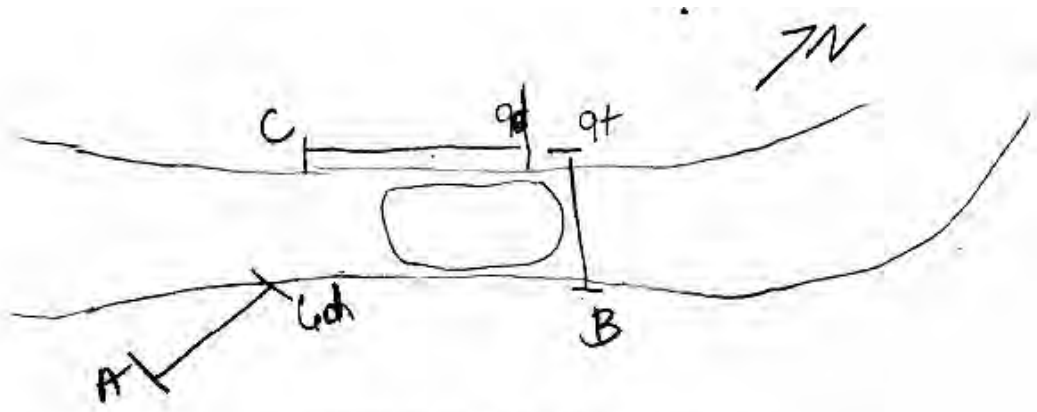
NETS/TRAPS:	**A:** 1x2H-6m	**B:** 1x3H-9m	**C:** 1x2H-9m	**D:**	**E:**	**F:**
Pool size WxL	N/A	20' x 30'	N/A			
Swoop WxL	N/A	20' x 30'	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Red maple, water oak, sweetgum

Remarks:



Site sketch (label to match Nets/Traps and BD# above)
Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Robeson Site# 2 Night# 1 Site Name: Lumber River-Wetland Date: 7/26/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	20:50	LABO	M	A	NR	37	-	8.5	B	3.5	CALYX 0327 / 0	
2	22:50	MYAU	M	A	NR	33	-	5.5	B	5	CALYX 0328 / 0	Photos
3	00:45	MYAU	M	A	NR	33	-	5.5	B	5	CALYX 0329 / 0	Photos
4	01:15	LABO	U	U	U	-	-	-	B	4.5	-	EFN
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Robeson	**Site#:**	3	**Night#:**	1	**Site Name:** Lumber River-Beulah Church	**Date:** 7/27/17

Latitude: 34.523026	Longitude: -78.924547	Datum: NAD83	Elevation: 95	ID By: Kathryn Cunningham
Observers: Blake Ellett		Start Time: 20:15	End Time: 01:15

Conditions:	Time 21:00	Temp 77° F	Wind 0	Clouds 0	Time 23:30	Temp 72° F	Wind 0	Clouds 0	Time 01:00	Temp 69° F	Wind 0	Clouds 0

Moon Effect: Wax-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

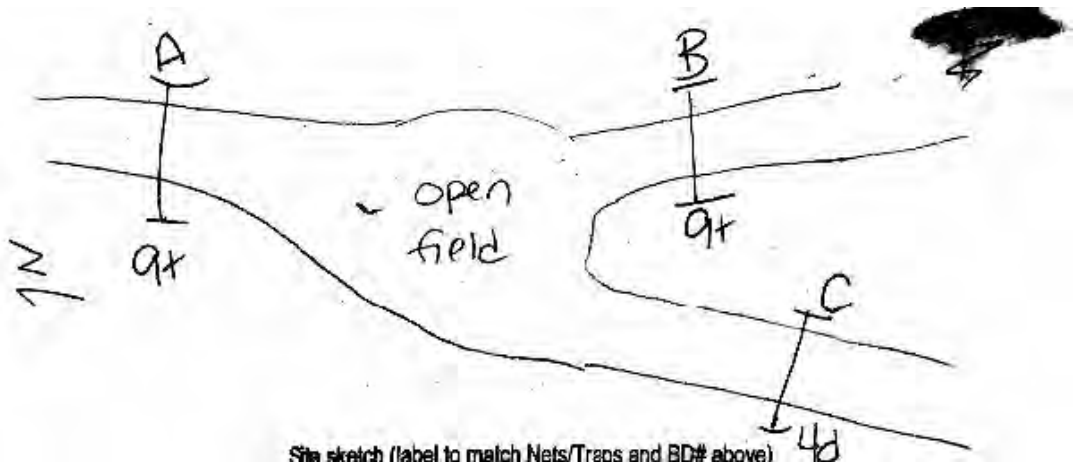
NETS/TRAPS:	**A:** 1x3H-9m	**B:** 1x3H-9m	**C:** 1x2H-4m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Loblolly pine, sweetgum, red maple, winged sumac, water oak

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Robeson Site# 3 Night# 1 Site Name: Lumber River-Beulah Church Date: 7/27/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	23:40	LASE	M	A	TD	39	-	10	C	2.5	CALYX 1330 / 0	
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Robeson	**Site#:**	4	**Night#:**	1	**Site Name:** Lumber River-Road Junction	**Date:** 7/31/17

Latitude: 34.396990	Longitude: -78.995187	Datum: NAD83	Elevation: 80	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Jennifer Harrod		Start Time: 20:30	End Time: 01:30

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:15	75 °F	0	0	23:00	72 °F	0	0	01:00	69 °F	0	0

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-6m	**C:** 1x2H-6m	**D:** 1x2H-4m	**E:** 1x3H-12m	**F:**
Pool size WxL	N/A	N/A	N/A	N/A	N/A	
Swoop WxL	N/A	N/A	N/A	N/A	N/A	
Photo? or #	Y	Y	Y	Y	Y	

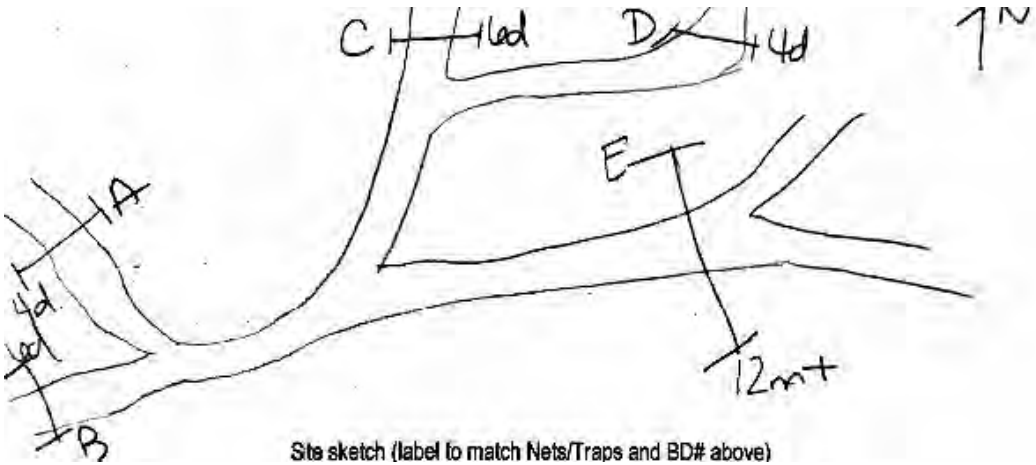
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Water oak, sweetgum, red maple, loblolly pine, sassafras,

wax myrtle, turkey oak

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Robeson Site# 4 Night# 1 Site Name: Lumber River-Road Junction Date: 7/31/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:45	MYAU	M	A	NR	37	-	6	B	1.5	CALYX 0331 / 0	Photos
2	22:15	LABO	M	A	TD	39	-	9.5	B	2.5	CALYX 0333 / 0	Pin holes in left wing Scrape on left knuckle
3	00:15	MYAU	F	A	NR	39	-	8	C	3.5	CALYX 0334 / 0	
4	01:30	LASE	M	A	TD	37	-	12	B	3	CALYX 0336 / 0	
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Robeson	**Site#:**	1	**Night#:**	3	**Site Name:** Lumber River-Trails	**Date:** 8/1/17

Latitude: 34.391818	Longitude: -78.999353	Datum: NAD83	Elevation: 76	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Jennifer Harrod		Start Time: 20:30	End Time: 01:30

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:00	80 °F	0	0	23:00	72 °F	0	0	01:00	68 °F	0	0

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	41 51

NETS/TRAPS:	**A:** 1x3H-9m	**B:** 1x2H-4m	**C:** 1x2H-12m	**D:** 1x2H-4m	**E:** 1x2H-6m	**F:**
Pool size WxL	N/A	N/A	N/A	N/A	N/A	
Swoop WxL	N/A	N/A	N/A	N/A	N/A	
Photo? or #	Y	Y	Y	Y	Y	

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

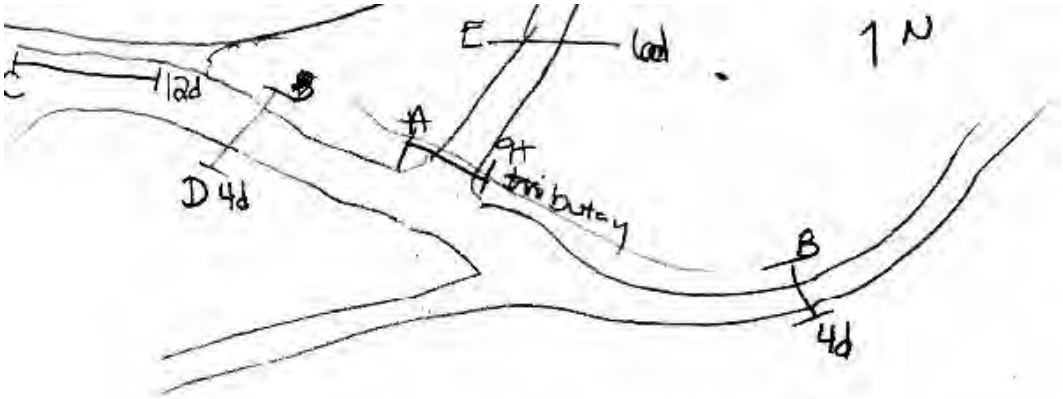
Site Description:

Northern red oak, red maple, water oak, American holly,

giant cane, sweetgum, chestnut oak, river birch

Remarks:

Owls in area calling (Eastern screech owl and Barred owl)



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Robeson Site# 1 Night# 3 Site Name: Lumber River-Trails Date: 8/1/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:35	MYAU	F	J	NR	37	-	8.5	E	2	CALYX 0337 / 0	Photos
2	23:15	MYAU	M	A	NR	35	-	6.5	C	2	NCSM 0023 / 0	Photos - Recapture
3	23:50	PESU	M	A	TD	34.5	-	5.5	E	1.5	CALYX 0338 / 0	
4	00:45	PESU	M	A	NR	33	-	5.5	E	0.5	CALYX 0339 / 0	
5	00:50	PESU	M	J	NR	32	-	5	A	2	CALYX 0340 / 0	
6	01:50	LABO	F	A	NR	41	-	14	A	5.5	CALYX 0341 / 0	
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Onslow	**Site#:**	1	**Night#:**	2	**Site Name:** Stone Creek	**Date:** 8/2/17

Latitude: 34.563864	Longitude: -77.472075	Datum: NAD83	Elevation: 20	ID By: Heather Wallace
Observers: Ed Corey , Blake Ellett		Start Time: 20:15	End Time: 01:15

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:15	85 °F	0	0	23:00	74 °F	0	25	01:15	73 °F	0	25

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43 61

NETS/TRAPS:	**A:** 1x2Hx4m	**B:** 1x2H-9m	**C:** 1x2H-4m	**D:**	**E:**	**F:**
Pool size WxL	4m x 6m	N/A	N/A			
Swoop WxL	4m x 6m	N/A	N/A			
Photo? or #	Y	Y	Y			

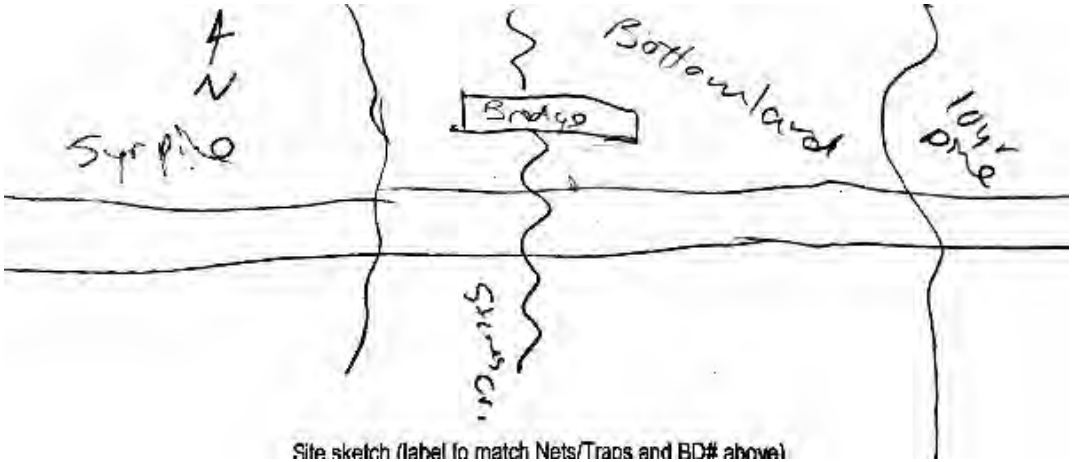
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Thin strip of Bottomland hardwood through managed pine forest. Swamp bay, wax myrtle, giant cane, S. rotundifolia, S. laurifolia, Baccharis, Clethra, titi

Remarks:

Coastal plain-Small stream swamp



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Onslow Site# 1 Night# 2 Site Name: Stone Creek Date: 8/2/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Robeson	**Site#:**	5	**Night#:**	1	**Site Name:** Lumber River-Campgrounds	**Date:** 8/2/17

Latitude: 34.388153	Longitude: -79.001924	Datum: NAD83	Elevation: 93	ID By: Kathryn Cunningham
Observers: Jennifer Harrod , Dominique DiLandro		Start Time: 20:20	End Time: 01:20

Conditions:	Time 21:30	Temp 76 °F	Wind 0	Clouds 25	Time 23:30	Temp 73 °F	Wind 0	Clouds 50	Time 01:00	Temp 71 °F	Wind 0	Clouds 50

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	41 51

NETS/TRAPS:	**A:** 1x2H-6m	**B:** 1x2H-9m	**C:** 1x2H-4m	**D:** 1x2H-2.6m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

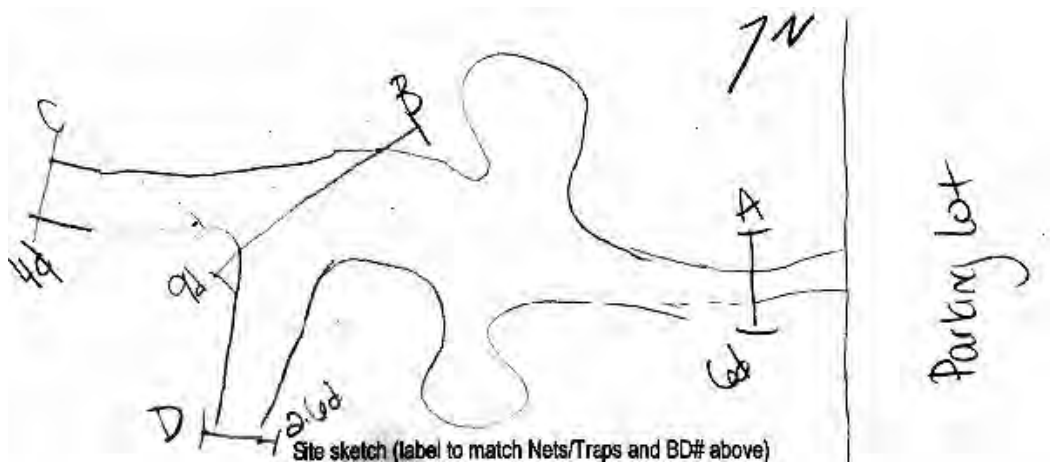
Site Description:

Water oak, sweetgum, laurel oak, black cherry, American holly,

swamp blackgum, sweet bay

Remarks:

Timber rattlesnake, wood thrush, screech owl, flying squirrel



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Robeson Site# 5 Night# 1 Site Name: Lumber River-Campgrounds Date: 8/2/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Onslow	**Site#:**	1	**Night#:**	3	**Site Name:** Hofmann-Bridge	**Date:** 8/3/17

Latitude: 34.906111	Longitude: -77.474325	Datum: NAD83	Elevation: 50	ID By: Heather Wallace
Observers: Ed Corey		Start Time: 20:10	End Time: 01:10

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:10	80 °F	1	50	23:00	75 °F	0	50	01:10	75 °F	0	75

Moon Effect: Wax-Gib	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43 61

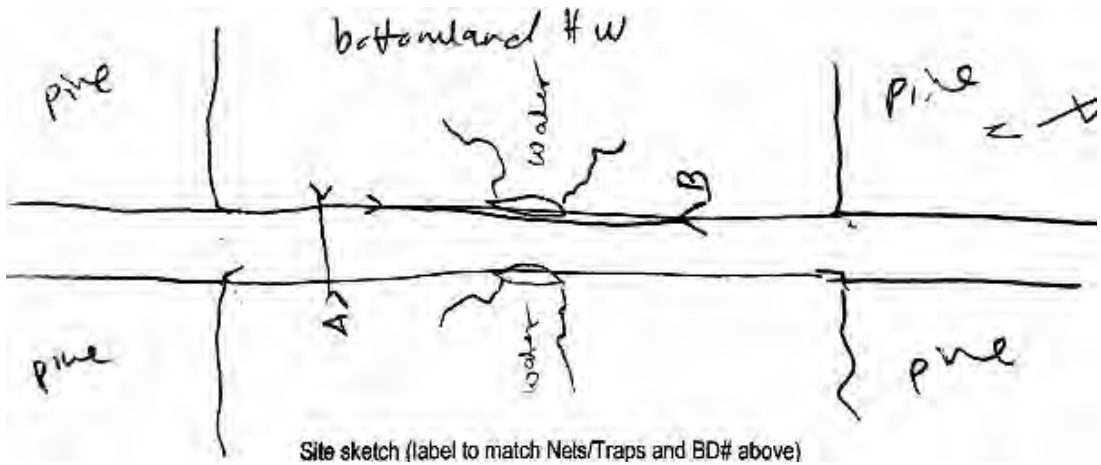
NETS/TRAPS:	**A:** 1x3H-12m	**B:** 1x3H-18m	**C:**	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A				
Swoop WxL	N/A	N/A				
Photo? or #	Y	Y				

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Bottomland hardwood through managed loblolly pine; swamp chestnut oak, red maple, sweetgum, water oak, sycamore, titi, S. rotundifolia, clethra, Arundinaria, sweet bay, American holly, swamp bay, sourwood

Remarks:



Site sketch (label to match Nets/Traps and BD# above)
Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Onslow Site# 1 Night# 3 Site Name: Hofmann-Bridge Date: 8/3/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	20:15	LABO	M	J	NR	37	-	8	A	3	CALYX 0461 / 0	
2	21:00	NYHU	M	A	NR	34	-	8	A	2	CALYX 0462 / 0	
3	21:05	EPFU	F	A	PL	49	-	16.5	A	3	CALYX 0525 / 0	
4	21:20	NYHU	F	J	NR	36	-	8.5	A	2.5	CALYX 0463 / 0	
5	21:25	NYHU	F	A	NR	38	-	12	A	3	CALYX 0464 / 0	
6	21:35	NYHU	F	A	NR	37	-	11.5	A	3	CALYX 0465 / 0	
7	21:35	NYHU	M	A	NR	33	-	12.5	A	4	CALYX 0466 / 0	
8	21:45	LABO	F	J	NR	39	-	11	A	2.5	CALYX 0467 / 0	
9	21:45	EPFU	F	A	PL	49	-	17	A	4	CALYX 0526 / 0	
10	21:55	NYHU	M	J	NR	32	-	10.5	A	5	CALYX 0468 / 0	
11	21:40	LABO	U	U	U	-	-	-	B	5	-	EFN
12	21:55	EPFU	U	U	U	-	-	-	A	3	-	EFN
13	22:15	LABO	F	A	PL	46	-	12	A	3	CALYX 0469 / 0	
14	22:15	LABO	F	J	NR	43	-	12.5	A	3.5	CALYX 0470 / 0	
15	22:40	LABO	F	J	NR	38	-	9	A	2	CALYX 0471 / 0	
16	22:55	LABO	F	J	NR	41	-	10.5	B	1.5	CALYX 0472 / 0	
17	23:05	EPFU	F	A	PL	47	-	19.5	A	4.5	CALYX 0527 / 0	
18	23:10	LABO	U	U	U	-	-	-	A	1.5	-	EFN
19	23:10	EPFU	F	A	PL	47	-	15	A	5	CALYX 0528 / 0	
20	23:10	EPFU	F	A	PL	45	-	16	A	3.5	CALYX 0529 / 0	

Bat Survey Data Form

Project: Eastern Research County: Onslow Site# 1 Night# 3 Site Name: Hofmann-Bridge Date: 8/3/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
21	23:25	NYHU	M	A	NR	35	-	10	A	5.5	CALYX 0473 / 0	Old broken wing bone
22	00:05	EPFU	F	A	NR	47	-	16	A	2	CALYX 0531 / 0	
23	00:05	EPFU	F	A	PL	47	-	17	A	3	CALYX 0532 / 0	
24	00:10	EPFU	F	A	PL	45	-	15	A	4	CALYX 0530 / 0	
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Rockingham	**Site#:**	1	**Night#:**	1	**Site Name:** Mayo River-Power Lines	**Date:** 8/15/17

Latitude: 36.436147	Longitude: -79.935021	Datum: NAD83	Elevation: 667	ID By: Kathryn Cunningham
Observers: Dominique DiLandro		Start Time: 20:00	End Time: 01:00

Conditions:	Time 20:40	Temp 76 °F	Wind 0	Clouds 25	Time 23:45	Temp 72 °F	Wind 0	Clouds 0	Time 01:00	Temp 71 °F	Wind 0	Clouds 25

Moon Effect: Wan-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	41

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x3H-9m	**C:** 1x3H-12m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

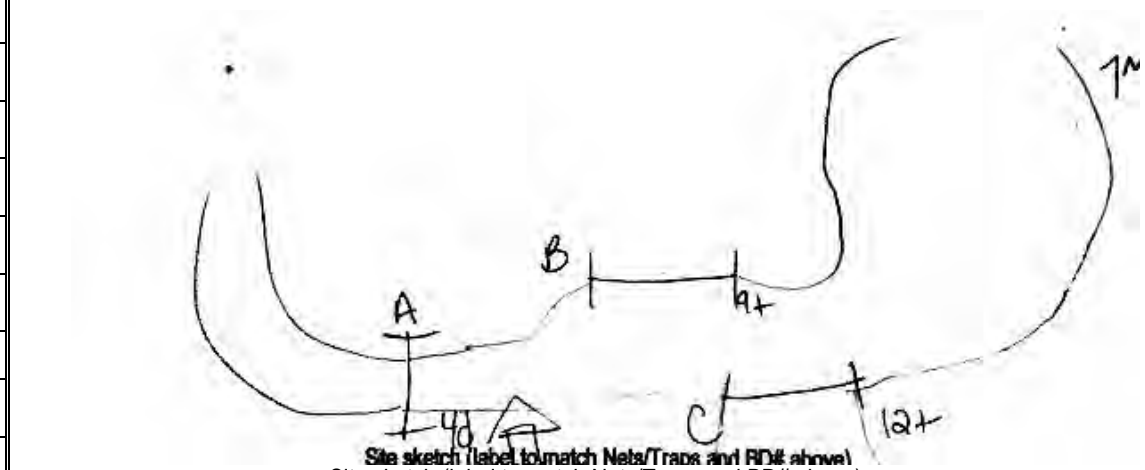
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Tulip poplar, sweetgum, black walnut, box elder, muscadine grape, sycamore, northern red oak, red maple, black locust, honey locust

Remarks:

Female red cardinal in net C



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Rockingham Site# 1 Night# 1 Site Name: Mayo River-Power Lines Date: 8/15/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	01:00	UNKN	U	U	U	-	-	-	C	1.5	-	EFN- While taking down nets
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Rockingham	**Site#:**	2	**Night#:**	1	**Site Name:** Mayo River-Gate	**Date:** 8/16/17

Latitude: 36.508983	Longitude: -79.999068	Datum: NAD83	Elevation: 843	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Jennifer Harrod		Start Time: 20:10	End Time: 13:10

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	77 °F	0	50	23:00	74 °F	0	75	01:00	71 °F	0	75

Moon Effect: Wan-Cres	Start:	**Land Use:** Urban / Agriculture / (Forest) / Water / Wetland / Barren *(describe)*:
	Stop:	41

NETS/TRAPS:	**A:** 1x2H-6m	**B:** 1x2H-6m	**C:** 1x2H-9m	**D:** 1x2H-4m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

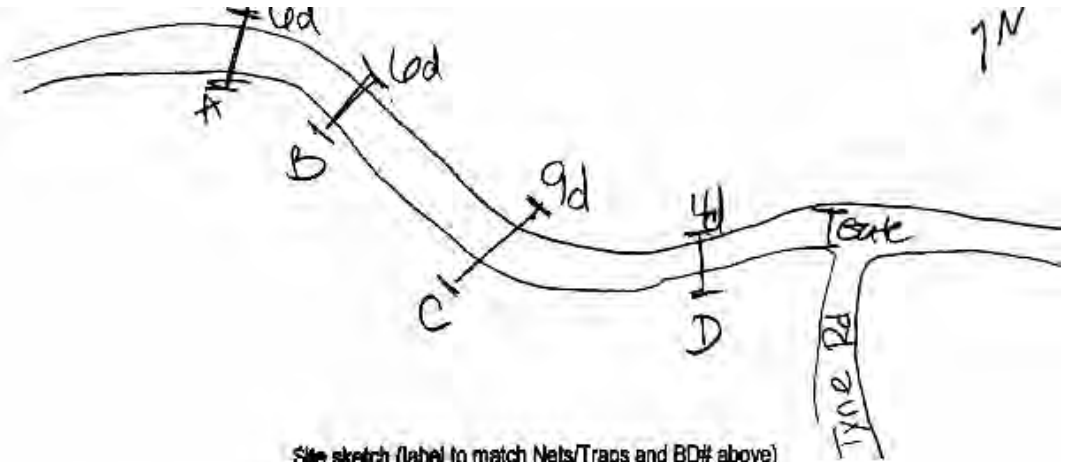
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Black locust, tulip poplar, red maple, sourwood, black cherry,

Virginia pine, black walnut

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Rockingham Site# 2 Night# 1 Site Name: Mayo River-Gate Date: 8/16/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	23:55	LABO	F	J	NR	40	-	12.5	D	1	CALYX 0342 / 0	
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Rockingham	**Site#:**	3	**Night#:**	1	**Site Name:** Mayo River-Pruitt Road	**Date:** 8/17/17
Latitude: 36.470277		Longitude: -79.958745						Datum: NAD83 / Elevation: 805	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Jennifer Harrod								Start Time: 19:55	End Time: 00:55

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:00	79 °F	0	0	23:00	77 °F	0	50	00:15	73 °F	0	0

Moon Effect: Wan-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	41

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-2.6m	**C:** 1x2H-6m	**D:** 1x2H-4m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

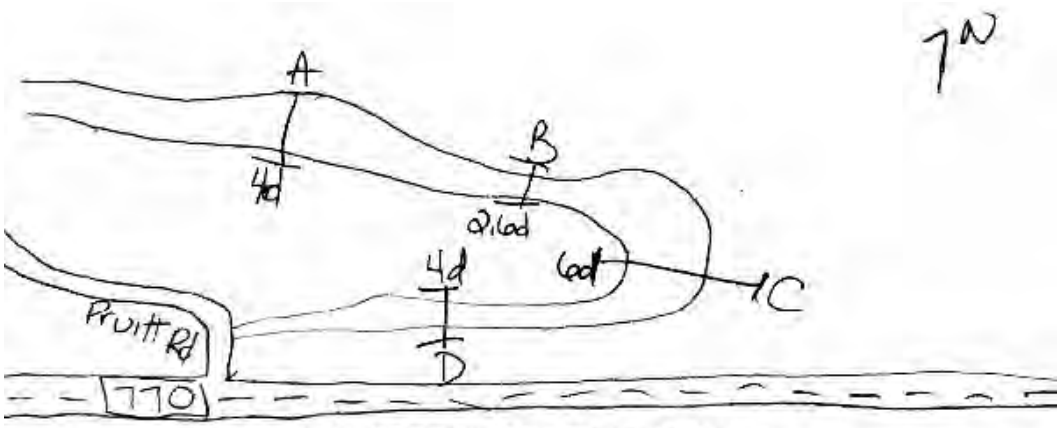
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Chestnut oak, red maple, American beech, white oak,

southern red oak, tulip poplar, sourwood

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Rockingham Site# 3 Night# 1 Site Name: Mayo River-Pruitt Road Date: 8/17/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Onslow	**Site#:**	1	**Night#:**	2	**Site Name:** Hammocks Beach-Main Road	**Date:** 8/21/17
Latitude: 34.672272		Longitude: -77.141652						Datum: NAD83 / Elevation: 50	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Ed Corey , Mack Des Champs								Start Time: 20:10	End Time: 01:10

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:10	81 °F	0	0	23:15	79 °F	0	0	01:00	74 °F	0	0

Moon Effect: New	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	43

NETS/TRAPS:	**A:** 1x3H-9m	**B:** 1x2H-9m	**C:** 1x2H-9M	**D:** 1x2H-9m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

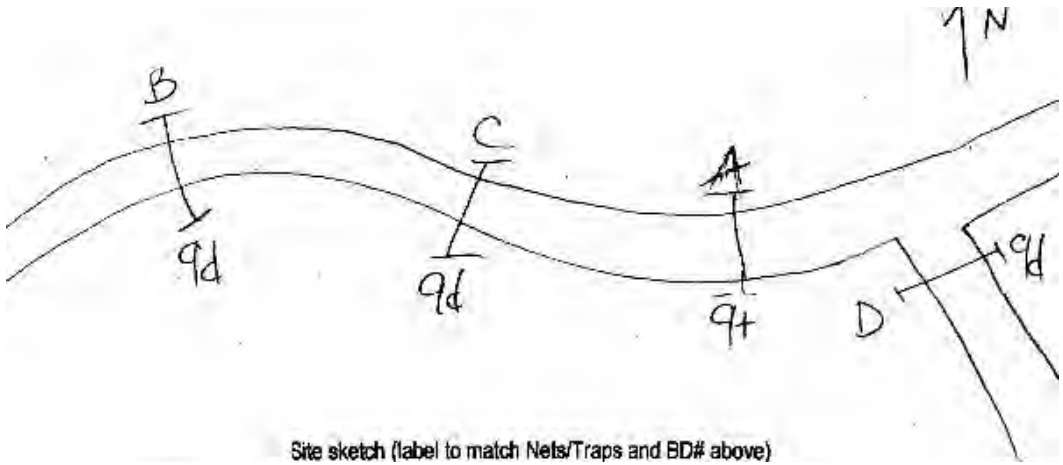
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Water oak, live oak, loblolly pine, wax myrtle, Smilax rotundifolia

Remarks:

Eclipse at approximately 14:45



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Onslow Site# 1 Night# 2 Site Name: Hammocks Beach-Main Road Date: 8/21/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	20:55	NYHU	F	A	PL	35	-	8.5	D	2	CALYX 0350 / 0	
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Rockingham	**Site#:**	4	**Night#:**	1	**Site Name:** Mayo River-Deshazo Road	**Date:** 8/22/17
Latitude: 36.541835		Longitude: -79.983987						Datum: NAD83 / Elevation: 742	ID By: Kathryn Cunningham
Observers: Mack Des Champs								Start Time: 20:00	End Time: 01:00

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	21:00	77 °F	0	0	23:00	74 °F	0	0	01:00	72 °F	0	0

Moon Effect: Wax-Cres	Start:	**Land Use:** Urban / Agriculture / (Forest) / Water / Wetland / Barren *(describe)*:
	Stop:	41

NETS/TRAPS:	**A:** 1x2H-4m	**B:** 1x2H-6m	**C:** 1x2H-4m	**D:** 1x2H-2.6m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

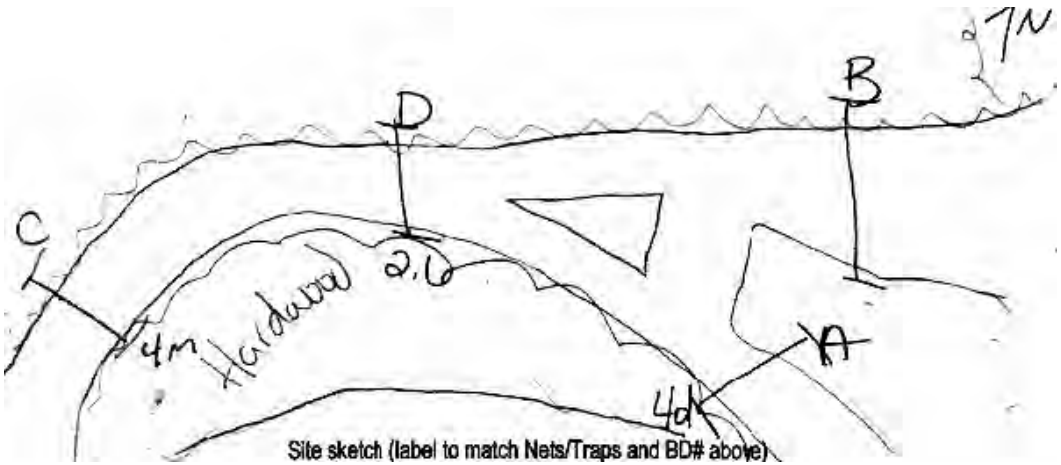
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

American beech, red maple, northern red oak, white oak,

sycamore, box elder, tulip poplar, red bud, dogwood

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Rockingham Site# 4 Night# 1 Site Name: Mayo River-Deshazo Road Date: 8/22/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Rockingham	**Site#:**	5	**Night#:**	1	**Site Name:** Mayo River-Waterfall	**Date:** 8/23/17

Latitude: 36.541326	Longitude: -79.984889	Datum: NAD83	Elevation: 756	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Mack Des Champs		Start Time: 19:55	End Time: 12:55

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:00	75 °F	0	0	23:00	73 °F	0	0	01:00	73 °F	0	0

Moon Effect: Wax-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	41 51

NETS/TRAPS:	**A:** 1x2H-12m	**B:** 1x2H-6m	**C:** 1x2H-9m	**D:**	**E:**	**F:**
Pool size WxL	100' x 20'	12' x 10'	21' x 150'			
Swoop WxL	90' x 15'	11' x 5'	21' x 150'			
Photo? or #	Y	Y	Y			

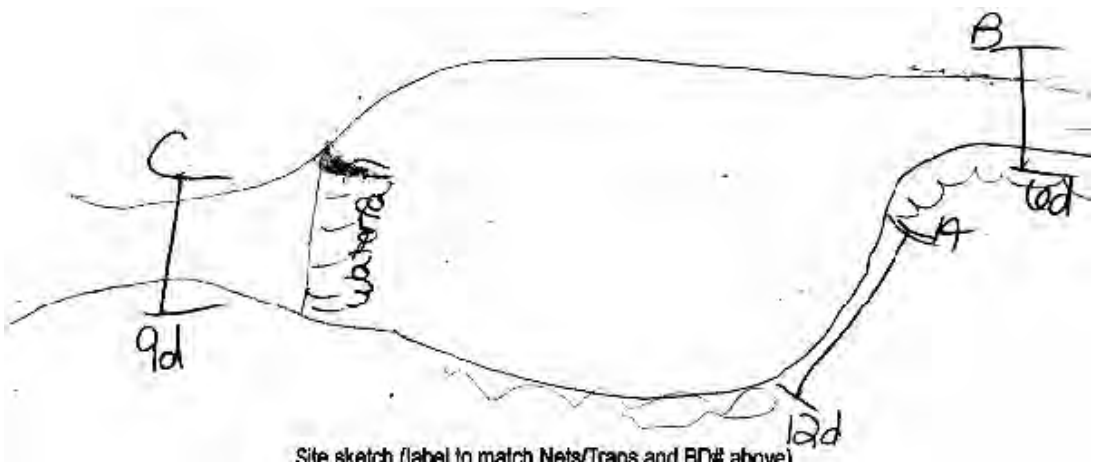
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

American beech, red maple, white oak, musclewood,

sycamore, redbud

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Rockingham Site# 5 Night# 1 Site Name: Mayo River-Waterfall Date: 8/23/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	23:00	LABO	M	A	NR	36	-	9	A	4	CALYX 0343 / 0	
2	00:25	LABO	M	A	TD	38	-	11	C	3.5	CALYX 0344 / 0	
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Rockingham	**Site#:**	2	**Night#:**	2	**Site Name:** Mayo River-Gate	**Date:** 8/24/17

Latitude: 36.508983	Longitude: -79.999068	Datum: NAD83	Elevation: 843	ID By: Kathryn Cunningham

Observers: Dominique DiLandro , Mack Des Champs	Start Time: 19:55	End Time: 00:45

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:00	72 °F	0	0	23:00	68 °F	0	0	01:00	64 °F	0	0

Moon Effect: Wax-Cres	Start:	**Land Use:** Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
	Stop:	41

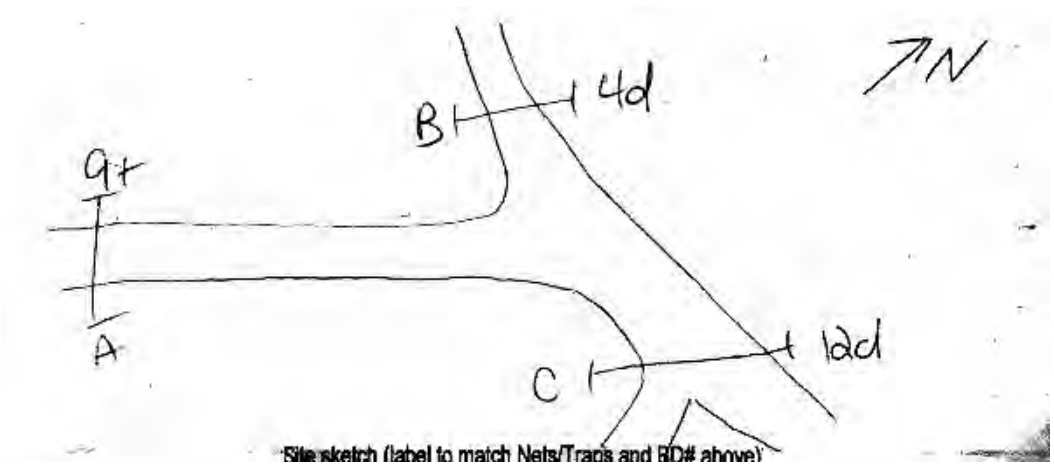
NETS/TRAPS:	**A:** 1x3H-9m	**B:** 1x2H-4m	**C:** 1x2H-12m	**D:**	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A			
Swoop WxL	N/A	N/A	N/A			
Photo? or #	Y	Y	Y			

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Red maple, tulip poplar, redbud, black walnut, mimosa

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Rockingham Site# 2 Night# 2 Site Name: Mayo River-Gate Date: 8/24/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1	21:05	LABO	M	A	TD	39	-	5.5	C	3	CALYX 0345 / 0	2 small holes in left wing
2	21:05	LABO	F	A	NR	43	-	6.5	C	3.5	CALYX 0346 / 0	
3	00:10	LABO	F	A	NR	41	-	12	C	1.5	CALYX 0347 / 0	Scrape on left wrist
4	00:40	LABO	F	A	NR	41	-	11.5	B	2.5	CALYX 0348 / 0	Mite at right wing
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Columbus	**Site#:**	1	**Night#:**	2	**Site Name:** Lake Waccamaw-Campsite 4	**Date:** 9/5/17
Latitude: 34.257377		Longitude: -78.486282						Datum: NAD83 / Elevation: 42	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Mack Des Champs								Start Time: 19:45	End Time: 00:45

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:30	79 °F	0	0	22:30	77 °F	0	0	00:30	77 °F	0	50

Moon Effect: Wax-Gib
Start:
Stop:

Land Use: Urban / Agriculture / Forest / Water / Wetland / Barren *(describe)*:
43 52

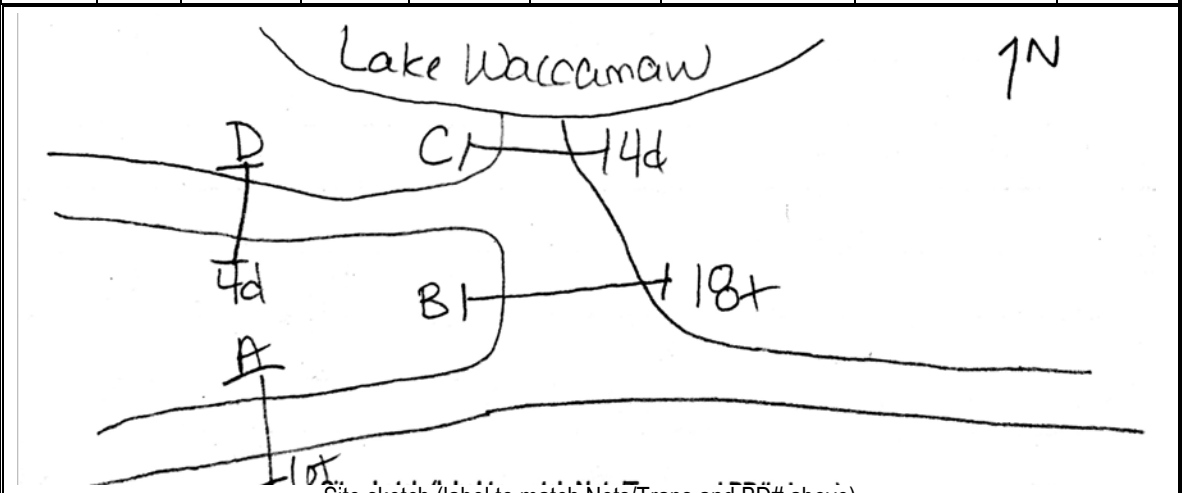
NETS/TRAPS:	**A:** 1x3H-6m	**B:** 1x3H-18m	**C:** 1x2H-4m	**D:** 1x2H-4m	**E:**	**F:**
Pool size WxL	N/A	N/A	N/A	N/A		
Swoop WxL	N/A	N/A	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Red maple, tulip poplar, shortleaf pine, water oak

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Columbus Site# 1 Night# 2 Site Name: Lake Waccamaw-Campsite 4 Date: 9/5/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

NCDOT Mist-Netting & Acoustic Survey Data Form

Project:	Eastern Research	**County:**	Brunswick	**Site#:**	1	**Night#:**	3	**Site Name:** Brunswick County Gamelands-Swamp	**Date:** 9/7/17
Latitude: 34.150704		Longitude: -78.05881						Datum: NAD83 / Elevation: 12	ID By: Kathryn Cunningham
Observers: Dominique DiLandro , Mack Des Champs								Start Time: 19:45	End Time: 00:45

Conditions:	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds	Time	Temp	Wind	Clouds
	20:00	69 °F	0	0	22:30	67 °F	0	0	00:30	61 °F	0	0

Moon Effect: Wan-Gib	Start:	**Land Use:** Urban / Agriculture / (Forest) / Water / Wetland / Barren *(describe)*:
	Stop:	43

NETS/TRAPS:	**A:** 1x3H-9m	**B:** 1x1H-9m	**C:** 1x3H-6m	**D:** 1x3H-12m	**E:**	**F:**
Pool size WxL	N/A	30' x 200'	N/A	N/A		
Swoop WxL	N/A	30' x 200'	N/A	N/A		
Photo? or #	Y	Y	Y	Y		

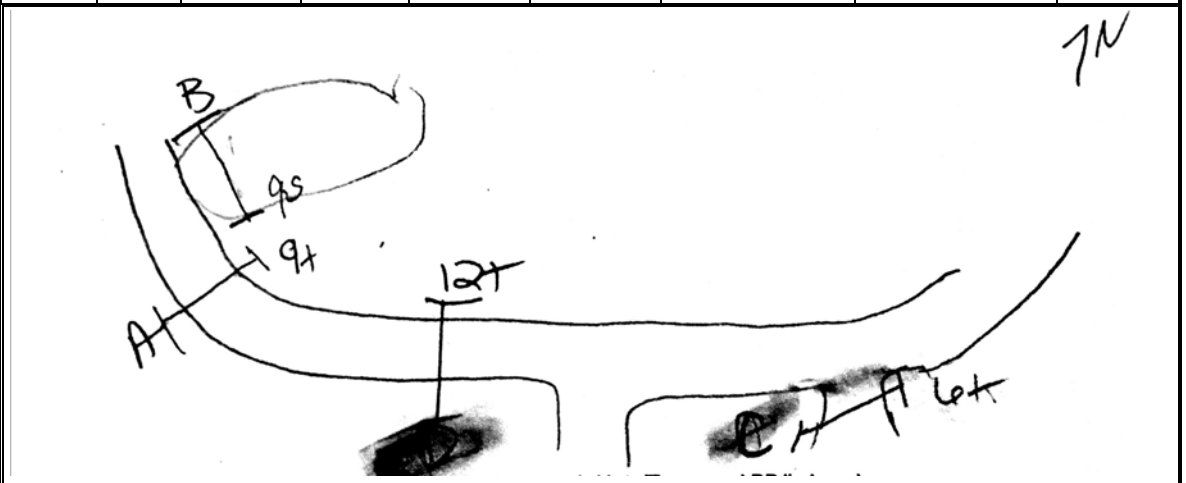
BD#	Latitude	Longitude	Mic	Ht	clutter	gain	trigger	interval	Start time	Stop Time	Photo?

Site Description:

Water oak, post oak, white oak, chestnut oak, sweetgum,

tulip poplar, loblolly pine, red maple, titi

Remarks:



Site sketch (label to match Nets/Traps and BD# above)

Bat Survey Data Form

Project: Eastern Research County: Brunswick Site# 1 Night# 3 Site Name: Brunswick County Gamelands-Swamp Date: 9/7/17

	TIME	SPECIES	Sex	Age	P / L / PL / NR	FA	EAR	WT	Net #	Height	Band / WS	Comment / Photo #
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

Appendix B

Mist Net Site Photographs

Brunswick County - Brunswick County Gamelands-Swamp - 05-02-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Brunswick County - Brunswick County Gamelands-S Curve - 05-03-17

Photo 1 - Site 2, Night 1, Net A

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Brunswick County - Brunswick County Gamelands-Gate - 05-08-17

Photo 1 - Site 3, Night 1, Net A

Photo 2 - Site 3, Night 1, Net B

Photo 3 - Site 3, Night 1, Net C

Brunswick County - Boiling Springs-Road - 05-09-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Brunswick County - Juniper Creek-Fire Tower - 05-10-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Columbus County - Columbus County Gamelands-Dirt Road - 05-11-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Columbus County - Columbus County Gamelands-Swamp- 05-16-17

Photo 1 - Site 2, Night 1, Net A

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Photo 4 - Site 2, Night 1, Net D

Columbus County - Bush Island-Corridor - 05-17-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Columbus County - Bush Island-Intersection - 05-18-17

Photo 1 - Site 2, Night 1, Net A

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Onslow County - Hofmann-Bridge - 06-05-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Onslow County - Hofmann-Bridge - 06-05-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Pender County - Holly Shelter-Pond - 06-06-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Onslow County - Stone Creek-Bridge - 6-6-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Pender County - Black River Preserve - 06-07-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Onslow County - Hofmann-Bridge - 06-08-17

Photo 1 - Site 1, Night 2, Net A

Photo 2 - Site 1, Night 2, Net B

Photo 3 - Site 1, Night 2, Net C

Pender County - Holly Shelter-Pond - 06-08-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Onslow County - Rocky Run - 06-12-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Photo 5 - Site 1, Night 1, Net E

Onslow County - Angola Bay - 06-13-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Pender County - Black River Preserve - 06-14-17

Photo 1 - Site 1, Night 2, Net A

Photo 2 - Site 1, Night 2, Net B

Photo 3 - Site 1, Night 2, Net C

Photo 4 - Site 1, Night 2, Net D

Columbus County - Juniper Creek-Road Intersection - 06-26-17

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Columbus County - Lake Waccamaw-Campsite 4 - 06-27-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Columbus County - Lake Waccamaw-Campsite 2 - 06-28-17

Photo 1 - Site 2, Night 1, Net A

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Photo 4 - Site 2, Night 1, Net D

Photo 5 - Site 2, Night 1, Net E

Sampson County - Great Coharie-Gate 1 - 07-10-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Sampson County - Great Cohaire Gate 5 - 07-11-17

Photo 1 - Site 2, Night 1, Net A

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Photo 4 - Site 2, Night 1, Net D

Sampson County - Great Coharie-Gate 3 - 07-12-17

Photo 1 - Site 3, Night 1, Net A

Photo 2 - Site 3, Night 1, Net B

Photo 3 - Site 3, Night 1, Net C

Photo 4 - Site 3, Night 1, Net D

Photo 5 - Site 3, Night 1, Net E

Sampson County - Great Cohaire-Gate 2 - 07-13-17

Photo 1 - Site 4, Night 1, Net A

Photo 2 - Site 4, Night 1, Net B

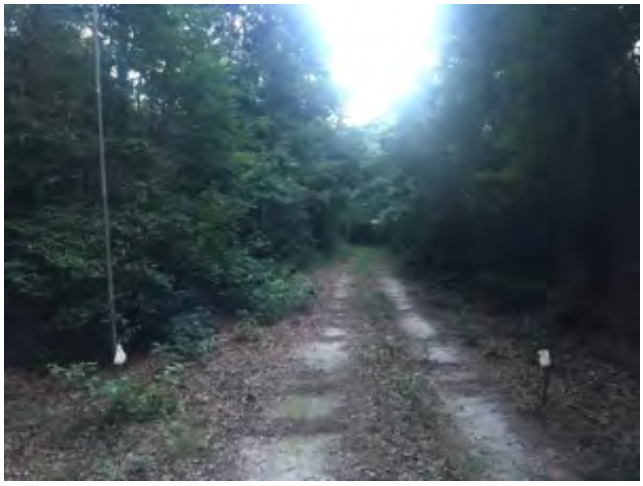


Photo 3 - Site 4, Night 1, Net C

Sampson County - Pondberry-Turkey Farm - 07-17-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

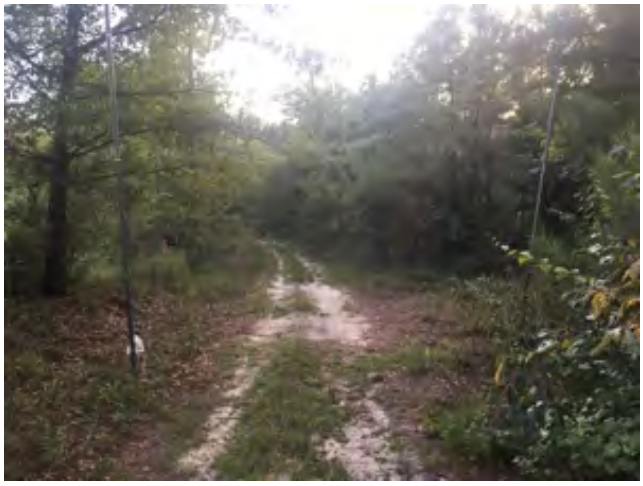


Photo 3 - Site 1, Night 1, Net C

Sampson County - Pondberry-Intersection - 07-18-17

Photo 1 - Site 2, Night 1, Net A

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Robeson County - Lumber River-Trails - 07-24-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Photo 4 - Site 1, Night 1, Net D

Robeson County - Lumber River-Trails - 07-25-17

Photo 1 - Site 1, Night 2, Net A

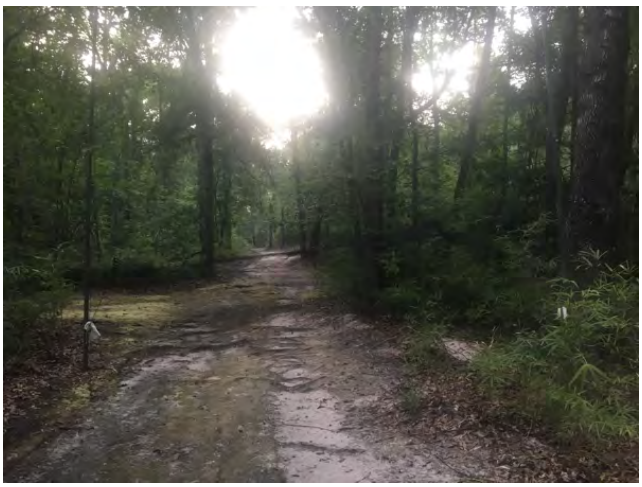
Photo 2 - Site 1, Night 2, Net B

Photo 3 - Site 1, Night 2, Net C

Photo 4 - Site 1, Night 2, Net D

Photo 5 - Site 1, Night 2, Net E

Photo 6 - Site 1, Night 2, Net F



Robeson County - Lumber River-Wetland - 07-26-17

Photo 1 - Site 2, Night 1, Net A

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Robeson County - Lumber River-Beulah Church - 07-27-17

Photo 1 - Site 3, Night 1, Net A

Photo 2 - Site 3, Night 1, Net B

Photo 3 - Site 3, Night 1, Net C

Robeson County - Lumber River-Road Junction - 07-31-17

Photo 1 - Site 4, Night 1, Net A

Photo 2 - Site 4, Night 1, Net B

Photo 3 - Site 4, Night 1, Net C

Photo 4 - Site 4, Night 1, Net D

Photo 5 - Site 4, Night 1, Net E

Robeson County - Lumber River-Trails - 08-01-17

Photo 1 - Site 1, Night 3, Net A

Photo 2 - Site 1, Night 3, Net B

Photo 3 - Site 1, Night 3, Net C

Photo 4 - Site 1, Night 3, Net D

Photo 5 - Site 1, Night 3, Net E

Robeson County - Lumber River-Campgrounds - 08-02-17

Photo 1 - Site 5, Night 1, Net A

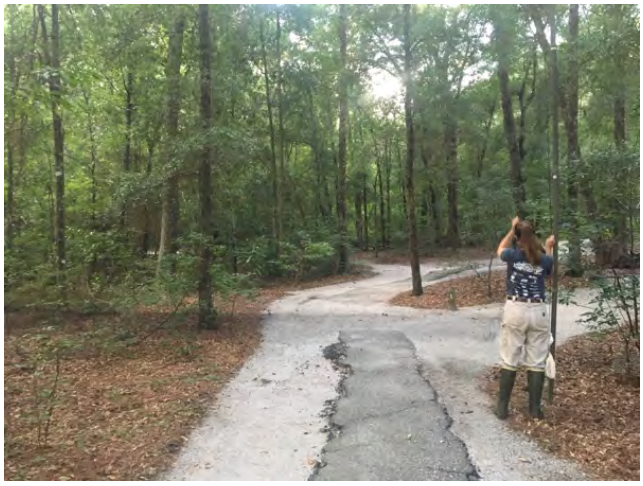


Photo 2 - Site 5, Night 1, Net B

Photo 3 - Site 5, Night 1, Net C

Photo 4 - Site 5, Night 1, Net D

Robeson County - Lumber River-Campgrounds - 08-02-17

Photo 1 - Site 5, Night 1, Net A

Photo 2 - Site 5, Night 1, Net B

Photo 3 - Site 5, Night 1, Net C

Onslow County - Hofmann Forest-Bridge - 08-03-17

Photo 1 - Site 1, Night 3, Net A

Photo 2 - Site 1, Night 3, Net B

Rockingham County - Mayo River-Power Lines - 08-15-17

Photo 1 - Site 1, Night 1, Net A

Photo 2 - Site 1, Night 1, Net B

Photo 3 - Site 1, Night 1, Net C

Rockingham County - Mayo River-Gate - 08-16-17

Photo 1 - Site 2, Night 1, Net A

Photo 2 - Site 2, Night 1, Net B

Photo 3 - Site 2, Night 1, Net C

Photo 4 - Site 2, Night 1, Net D

Rockingham County - Mayo River-Pruitt Road - 08-17-17

Photo 1 - Site 3, Night 1, Net A

Photo 2 - Site 3, Night 1, Net B

Photo 3 - Site 3, Night 1, Net C

Photo 4 - Site 3, Night 1, Net D

Onslow County - Hammocks Beach-Main Road - 08-21-17

Photo 1 - Site , Night 2, Net A

Photo 2 - Site , Night 2, Net B

Photo 3 - Site , Night 2, Net C

Photo 4 - Site , Night 2, Net D

Rockingham County - Mayo River-Deshazo Road - 08-22-17

Photo 1 - Site 4, Night 1, Net A

Photo 2 - Site 4, Night 1, Net B

Photo 3 - Site 4, Night 1, Net C

Photo 4 - Site 4, Night 1, Net D

Rockingham County - Mayo River-Waterfall - 08-23-17

Photo 1 - Site 5, Night 1, Net A

Photo 2 - Site 5, Night 1, Net B

Photo 3 - Site 5, Night 1, Net C

Rockingham County - Mayo River-Gate - 08-24-17

Photo 1 - Site 2, Night 2, Net A

Photo 2 - Site 2, Night 2, Net B

Photo 3 - Site 2, Night 2, Net C

Columbus County - Lake Waccamaw-Campsite 4 - 09-05-17

Photo 1 - Site 1, Night 2, Net A

Photo 2 - Site 1, Night 2, Net B

Photo 3 - Site 1, Night 2, Net C

Photo 4 - Site 1, Night 2, Net D

Columbus County - Lake Waccamaw-Campsite 4 - 09-05-17

Photo 1 - Site 1, Night 2, Net A

Photo 2 - Site 1, Night 2, Net B

Photo 3 - Site 1, Night 2, Net C

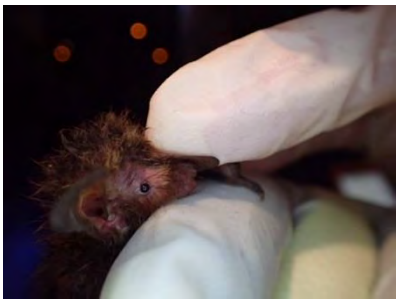
Photo 4 - Site 1, Night 2, Net D

Appendix C

Representative Captured Species Photographs

Healthy adult non-reproductive male northern long-eared bat (Myotis septentrionalis) captured at Black River Preserve on 6/14/20. Band: CALYX0220

Lacking fur around eyes



Ears extend beyond nose

Slightly keeled calcar

Toe hairs

6m triple high net at Black River Preserve