PN: 0987.010-001

December 2006

ASSESSMENT OF INDIANA BAT SUMMER HABITAT ALONG THE PROPOSED KEYSTONE PIPELINE IN ILLINOIS

Prepared for:
ENSR Corporation
1601 Prospect Parkway
Fort Collins, CO 80525

Prepared by:
BHE Environmental, Inc.
11733 Chesterdale Rd.
Cincinnati, OH 45246-4131
Phone: 513.326.1500
www.bheenvironmental.com

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EXECUTIVE SUMMARY

BHE Environmental, Inc. (BHE) was contracted by ENSR Corporation (ENSR) on behalf of the Keystone Mainline Project (Keystone) to implement investigations described in the study plan developed for work to be conducted in Illinois. The study plan titled *Proposed Indiana Bat Investigations: Keystone Pipeline Project Through Four Illinois Counties*, dated November 2006, describes methodology for assessment of Indiana bat summer habitat suitability on land parcels located in Illinois. BHE conducted the study in all of the Illinois counties traversed by the Keystone Mainline: Madison, Bond, Fayette, and Marion. Specifically, BHE sought to evaluate the quality of Indiana bat summer habitat at 120 wooded areas crossed by the Keystone Mainline. Of the 120 forest crossings initially identified for assessment, 52 were assessed in the field. The remaining 68 woodlots were inaccessible due to lack of landowner permission. The quality of Indiana bat summer habitat was evaluated within the portion of 52 forested tracts within the 200-ft wide survey corridor using a quantitative assessment method. Of the 52 sites assessed during the field investigation, there were 25 sites (48%) with no potential Indiana bat roost trees (PRTs). Based on the criteria established in the November 2006 study plan, the overall habitat suitability scores of the remaining sites were determined to be: two "Low-Quality" sites (4%), 18 "Medium-Quality" sites (35%), and seven "High-Quality" sites (13%).

1.0 INTRODUCTION

TransCanada is planning to construct and operate an approximately 1,845-mile-long interstate crude oil transmission system from an oil supply hub near Hardisty, Alberta, Canada to destinations in the Midwestern United States (U.S). The proposed Project would consist of approximately 1,078 miles of new pipeline constructed from the U.S.-Canada border in Cavalier County, North Dakota, to terminals and refineries in Wood River (Madison County) and Patoka (Marion County), Illinois. This pipeline is referred to as the Keystone Mainline. Approximately 283 miles of the Keystone Mainline would parallel the proposed Rockies Express Pipeline - West (REX-West) Project in Kansas and Missouri. TransCanada proposes to begin construction of the Keystone Mainline in early 2008, with the system in-service by the end of 2009.

This report addresses implementation of investigations described in the study plan developed for Indiana bat summer habitat suitability assessment to be conducted in Illinois. The study plan titled *Proposed Indiana Bat Investigations: Keystone Pipeline Project Through Four Illinois Counties*, dated November 2006, describes methodology for assessment of parcels located in Illinois (BHE 2006). Specifically, BHE Environmental, Inc. (BHE) evaluated the quality of Indiana bat summer habitat at 120 areas where the Keystone Mainline route crosses forested parcels. Of the 120 forest crossings initially identified for assessment, 52 were actually assessed in the field. The remaining 68 woodlots were inaccessible due to lack of landowner permission. The quality of Indiana bat summer habitat was evaluated within the portion of the 52 forested tracts that was within the 200-ft wide survey corridor using a quantitative assessment method. The area of wooded habitat surveyed at the 52 sites ranged from approximately 0.2 acres to 17.7 acres.

Indiana bats are assumed present during summer in all Illinois counties crossed by the Keystone Mainline route. Known summer occurrences in the four counties are limited to captures of non-reproductive Indiana bats in Madison and Bond counties (Figure 1). One or two maternity colonies of Indiana bats are also thought to occur in the Carlyle Lake Wildlife Management Area (Joyce Collins, pers. comm.). The nearest known winter occurrence, Brainerd Mine (Priority 3 hibernacula, 450 Indiana bats recorded in 2002), is more than 10 miles northeast of the Keystone Mainline route in Jersey County (Andy King, pers. comm.). Indiana bats are not known to occur in North Dakota, South Dakota, Nebraska, and Kansas (Figure 1); assessment of Indiana bat summer habitat quality was limited to Missouri and Illinois. Assessment of Indiana bat summer habitat quality in Missouri is described in a separate report.

2.0 METHODS

2.1 AGENCY COORDINATION

Russ Rommé of BHE Environmental, Inc. (BHE) contacted Joyce Collins of the Marion, Illinois FWS office on September 8, 2006, to discuss Endangered Species Act compliance issues specifically pertaining to the potential for the Keystone Mainline project to affect Indiana

September 14, 2006, Joyce Collins contacted Russ Rommé and provided recommendations regarding assessment of effects to Indiana bats and their habitat in Illinois. A teleconference was conducted on November 28, 2006, to discuss the content of the plan. On November 30, 2006, a revised study plan titled *Proposed Indiana Bat Investigations: Keystone Pipeline Project Through Four Illinois Counties* was delivered to Joyce Collins by Russ Rommé. Signed concurrence with the field study and habitat assessment methods described in the study plan was received by BHE on December 2, 2006 (Appendix A).

2.2 SAMPLE AREA IDENTIFICATION

Investigations began with identification of wooded areas traversed by the route that may provide habitat for the Indiana bat. BHE identified from aerial photographs 120 instances where the pipeline route crossed deciduous trees - these crossings range from wooded fencerows and tree lines to small woodlots and more extensive forests.

Each of these 120 crossings (or woodlots) was assigned a unique alpha-numeric identifier (Appendix B). Woodlot ID numbers adhered to the following protocol:

- FFFNNNSSCCXXX
  - FFF = Feature Type ("BAT" for bat habitat natural feature)
  - NNN= Team Number
    - BH1 - Becky Braeutigam and Drew Carson (BHE)
    - BH2 - Samantha Williams and Dave Norcross (BHE)
    - BH3 - Chad Kinney (BHE) and Laura Vrabel (SCI)
    - BH4 - Lisa Winhold and John Alexander (BHE)
  - SS = State
    - Illinois (IL)
  - CC = County Code
    - Madison (MA)
    - Bond (BO)
    - Fayette (FA)
    - Marion (MR)
  - XXX = Feature number (001-999 for the Keystone alignment)

Of the 120 forest crossings initially identified for assessment, 52 were assessed in the field. Sixty-eight of the woodlots were inaccessible due to access denial by the landowner(s) (Appendix B). Where possible, woodlots that were previously inaccessible will be surveyed during additional field investigations in early 2007.

2.3 FIELD METHODS

The density of potential Indiana bat roost trees (PRTs) was assessed quantitatively within the 120 wooded tracts during December 2006. The woodlots were either surveyed in their entirety (census), or plot(s) were established to sample the woodlot. Plots were placed only within the survey corridor where access permission had been granted. The survey corridor along the Keystone Mainline was 200 feet centered on the proposed centerline (Figure 2). A minimum of one 0.1 ha plot was examined per 2 acres of wooded area to be cleared. In wooded areas less than 2 acres, a minimum of one 0.1 ha plot was completed, or a census of the entire tract was completed. A single point within each plot was documented with GPS.

Data regarding the presence of PRTs in each plot were recorded on hardcopy field forms (Appendix C) and were also recorded electronically utilizing a data dictionary developed by ENSR with support from BHE (Appendix D).

For purposes of this investigation, PRTs had the following characteristics:

- dead or live
- ≥3 m in height
- ≥25% of the tree covered by exfoliating bark, split tree trunks or branches, or cavities

Biologists recorded the dbh (diameter at breast height) size class of each PRT:

- <22 cm,
- 22 to <30 cm,
- 30 to <40 cm,
- 40 to <50 cm, or
- ≥50 cm.

Additionally, biologists made notes based on other attributes of the stands that may be useful in assessing summer habitat quality. These attributes included:

- whether each PRT was dead or live,
- PRT species (if possible),
- ocular estimates of average percent canopy cover,
- ocular estimates of average overstory tree dbh,
- dominant overstory tree species (up to three), and
- presence of apparently suitable mist net survey sites.

2.4 ANALYTICAL METHODS

2.4.1 PRT Density Calculation

Field data were analyzed to calculate a habitat suitability index between 0.0 and 1.0 for each wooded tract. The HSI value is calculated from the density of PRTs in a woodlot as follows:

1. For the woodlot, determine the number of PRTs actually found in the plot(s) or census. If multiple plots were surveyed, sum the PRTs found in all plots.
2. For the woodlot, determine the area actually surveyed, in hectares. This is either the sum of the areas of all of the plot(s), or the entire area of the woodlot within the corridor, depending on the measurement made in the field.
3. The density of PRTs, (D) in PRT/ha, is the value calculated in step 1 divided by the value calculated in step 2.

3. The density of PRTs, (D) in PRT/ha, is the value calculated in step 1 divided by the value calculated in step 2.
4. The single-variable HSI is calculated by comparing the density to the ideal density of ≥14 PRT/ha:
   - If D ≥ 14, then HSI =1.0,
   - Otherwise HSI = D/14.

2.4.2 Percent Forest Cover Calculation

Forest cover within 3.5 km of the 120 crossings was calculated using vegetative cover data (30-meter pixels) from the Illinois Department of Agriculture, Illinois Gap Analysis Project Land Cover 1999-2000. These data are based on circa 1999-2000 Landsat ETM+ satellite imagery. For purposes of this analysis, forest cover was compiled from the vegetation classifications dry upland forest land, dry-mesic upland forested land, mesic upland forested land, potential canopy/savanna upland forested land, coniferous forested land, mesic floodplain forest wetland, wet-mesic floodplain forest wetland, and wet floodplain forest wetland.

2.5 HABITAT ASSESSMENT

This study combines site-specific and landscape level data to classify wooded areas crossed by the proposed Keystone Mainline as high-, medium-, or low-quality habitat. The three parameters considered were: density of PRTs, dbh of PRTs, and nearby forest cover (Table 1).

Table 1. Suitability scores for various habitat parameters.

Category	PRT HSI ([PRTs/ha]/14)	PRT dbh (PRTs/ha exceeding given dbh)	Forest cover within 3.5 km
High (score = 3)	≥0.60	8 PRT >30 cm or 5 PRT >40 cm or 3 PRT >50 cm	≥30 %
Medium (score = 2)	≥0.40 & <0.60	≥1 PRT ≥22 cm	≥13% & <30%
Low (score = 1)	<0.40	<1 PRT ≥22 cm	<13%

If all PRTs in a woodlot measured less than 22 cm dbh, then the suitability was categorized as low for that parameter. If no PRTs were found within the 200-foot wide survey corridor, the woodlot was automatically designated as "No PRTs" and was eliminated from further investigation.

After the scores for each parameter have been calculated for all woodlots containing PRTs, the three scores will be added together, and the overall habitat suitability determined from Table 2.

Table 2. Overall habitat suitability determination.

Sum of three scores from Table 1	Habitat Suitability
≥7	High
6 or 5	Medium
≤4	Low

3.0 RESULTS

Of the 52 sites assessed during the field investigation, 25 sites (48%) were found to have no PRTs present, and were eliminated from further evaluation herein (Appendix B). Based on the criteria established in the November 2006 study plan, the overall habitat suitability scores of the remaining sites were determined to be: two "Low-Quality" sites (4%), 18 "Medium-Quality" sites (35%), and seven "High-Quality" sites (13%) (Appendix B). Plot data for the 25 sites of medium- and high-quality are shown in Table 3.

Table 3. Plot data for the 25 wooded areas of "Medium-" and "High-Quality" within the proposed Keystone survey corridor in Illinois.

Woodlot ID	Plot No.	Length of Plot (ft)	Width of Plot (ft)	No. of PRTs	PRT Species	Percent Canopy Cover	Average Overstory dbh (in)	Dominant Overstory Species	Presence of Apparently Suitable Mist Net Sites
BATBH1ILMA001	Plot 1	ALL	ALL	9	SALIX ALBA (9)	50-75	22	SALIX ALBA. ACER SACCHARINUM	NONE
BATBH1ILMA037	Plot 1	ALL	ALL	29	UNKNOWN DEAD (19). GLEDITSIA TRIACANTHOS (6). CARYA OVATA (4)	75-100	20	GLEDITSIA TRIACANTHOS. QUERCUS PALUSTRIS. QUERCUS IMBRICARIA	SMALL STREAMS
BATBH1ILMA038	Plot 1	ALL	ALL	1	UNKNOWN DEAD	0-25	12	QUERCUS IMBRICARIA. CELTIS OCCIDENTALIS	NONE
BATBH1ILMA056	Plot 1	ALL	ALL	4	CARYA OVATA (2). CARYA LACINIOSA. ULMUS RUBRA	75-100	16	QUERCUS RUBRA. ULMUS RUBRA	RAVINE
BATBH1ILMA058	Plot 1	ALL	ALL	11	UNKNOWN DEAD (2). CARYA OVATA (9)	75-100	14	QUERCUS RUBRA. QUERCUS ALBA. FRAXINUS PENNSYLVANICA	SMALL TRAIL THROUGH WOODLOT

Woodlot ID	Plot No.	Length of Plot (ft)	Width of Plot (ft)	No. of PRTs	PRT Species	Percent Canopy Cover	Average Overstory dbh (in)	Dominant Overstory Species	Presence of Apparently Suitable Mist Net Sites
BATBH1ILMA059	Plot 1	ALL	ALL	13	CARYA OVATA (13)	75-100	22	QUERCUS ALBA. QUERCUS RUBRA. CARYA OVATA	RAVINE
BATBH1ILMA060	Plot 1	ALL	ALL	20	CARYA OVATA (18). UNKNOWN DEAD (2)	75-100	16	FRAXINUS PENNSYLVANICA. QUERCUS ALBA. CARYA OVATA	SMALL STREAMS
BATBH1ILMA061	Plot 1	ALL	ALL	22	CARYA OVATA (22)	50-75	20	CARYA OVATA. QUERCUS ALBA	OPEN UNDERSTORY
BATBH1ILMA062	Plot 1	ALL	ALL	2	UNKNOWN DEAD (2)	75-100	18	QUERCUS IMBRICARIA. PLATANUS OCCIDENTALIS	NONE
BATBH1ILMA063	Plot 1	ALL	ALL	2	ULMUS AMERICANA. QUERCUS ALBA	50-75	10	GLEDITSIA TRIACANTHOS. QUERCUS IMBRICARIA	SMALL STREAM
BATBH4ILBO007	Plot 1	ALL	ALL	3	JUGLANS NIGRA (2). ACER SACCHARINUM	25-50	14	PLATANUS OCCIDENTALIS. POPULUS DELTOIDES. FRAXINUS PENNSYLVANICA	TRAIL BY RIVER. TREELINES

Woodlot ID	Plot No.	Length of Plot (ft)	Width of Plot (ft)	No. of PRTs	PRT Species	Percent Canopy Cover	Average Overstory dbh (in)	Dominant Overstory Species	Presence of Apparently Suitable Mist Net Sites
BATBH4ILBO011	Plot 1	ALL	ALL	2	CARYA OVATA	0-25	16	QUERCUS ALBA. CARYA OVATA	NONE
BATBH4ILBO016	Plot 1	ALL	ALL	1	QUERCUS RUBRA	0-25	12	QUERCUS RUBRA. PRUNUS SEROTINA. ACER SACCHARINUM	TREELINE
BATBH4ILBO017	Plot 1	ALL	ALL	7	CARYA OVATA (2). ULMUS AMERICANA (2). QUERCUS RUBRA (3)	0-25	12	QUERCUS RUBRA. CARYA OVATA. ULMUS AMERICANA	TREELINE
BATBH3ILBO018	Plot 1	164	65	13	CARYA OVATA (13)	50-75	16	CARYA OVATA	EXISTING ROW
BATBH3ILBO019	Plot 1	ALL	ALL	1	ULMUS AMERICANA	50-75	14	CARYA CORDIFORMES. QUERCUS PALUSTRIS	LARGE POND
BATBH3ILBO022	Plot 1	ALL	ALL	1	QUERCUS VELUTINA	25-50	12	SALIX NIGRA. PLATANUS OCCIDENTALIS	STREAM
BATBH3ILBO027	Plot 1	ALL	ALL	1	QUERCUS SP.	75-100	24	MACLURA POMIFERA. QUERCUS SP.	NONE

Woodlot ID	Plot No.	Length of Plot (ft)	Width of Plot (ft)	No. of PRTs	PRT Species	Percent Canopy Cover	Average Overstory dbh (in)	Dominant Overstory Species	Presence of Apparently Suitable Mist Net Sites
BATBH2ILFA001	Plot 1	ALL	ALL	1	QUERCUS IMBRICARIA	0-25	18	QUERCUS IMBRICARIA	NONE
BATBH2ILFA002	Plot 1	ALL	ALL	5	ACER NEGUNDO. JUGLANS NIGRA (2). GLEDITSIA TRIACANTHOS (2)	50-75	16	QUERCUS PALUSTRIS. ACER NEGUNDO. ACER SACCHARINUM	STREAM. BOAT ACCESS ROAD
BATBH2ILFA004	Plot 1	ALL	ALL	6	SALIX NIGRA (6)	75-100	12	SALIX NIGRA	WETLAND AREA ALONG LEVEE
BATBH2ILFA005	Plot 1	ALL	ALL	1	SALIX NIGRA	0-25	14	SALIX NIGRA	ALONG RIVER
BATBH2ILFA007	Plot 1	ALL	ALL	1	SALIX NIGRA	25-50	14	SALIX NIGRA	ON LEVEE
BATBH2ILFA019	Plot 1	ALL	ALL	5	BETULA NIGRA (3). SALIX NIGRA (2)	50-75	16	BETULA NIGRA. SALIX NIGRA. ACER RUBRA	EDGE OF WETLAND AREA
BATBH2ILMR002	Plot 1	ALL	ALL	5	PRUNUS SEROTINA. ULMUS AMERICANA (4)	50-75	15	MACLURA POMIFERA. CELTIS OCCIDENTALIS. QUERCUS IMBRICARIA	STREAM. OPEN AREAS IN PASTURE PORTION OF PLOT

4.0 LITERATURE CITED

BHE Environmental, Inc. (BHE). 2006. Proposed Indiana Bat Investigations: Keystone Pipeline Project Through Four Illinois Counties. Unpublished report submitted to U.S. Fish and Wildlife Service, Marion Field Office, Illinois. 6pp + attachments.

FIGURES

CONFIDENTIAL

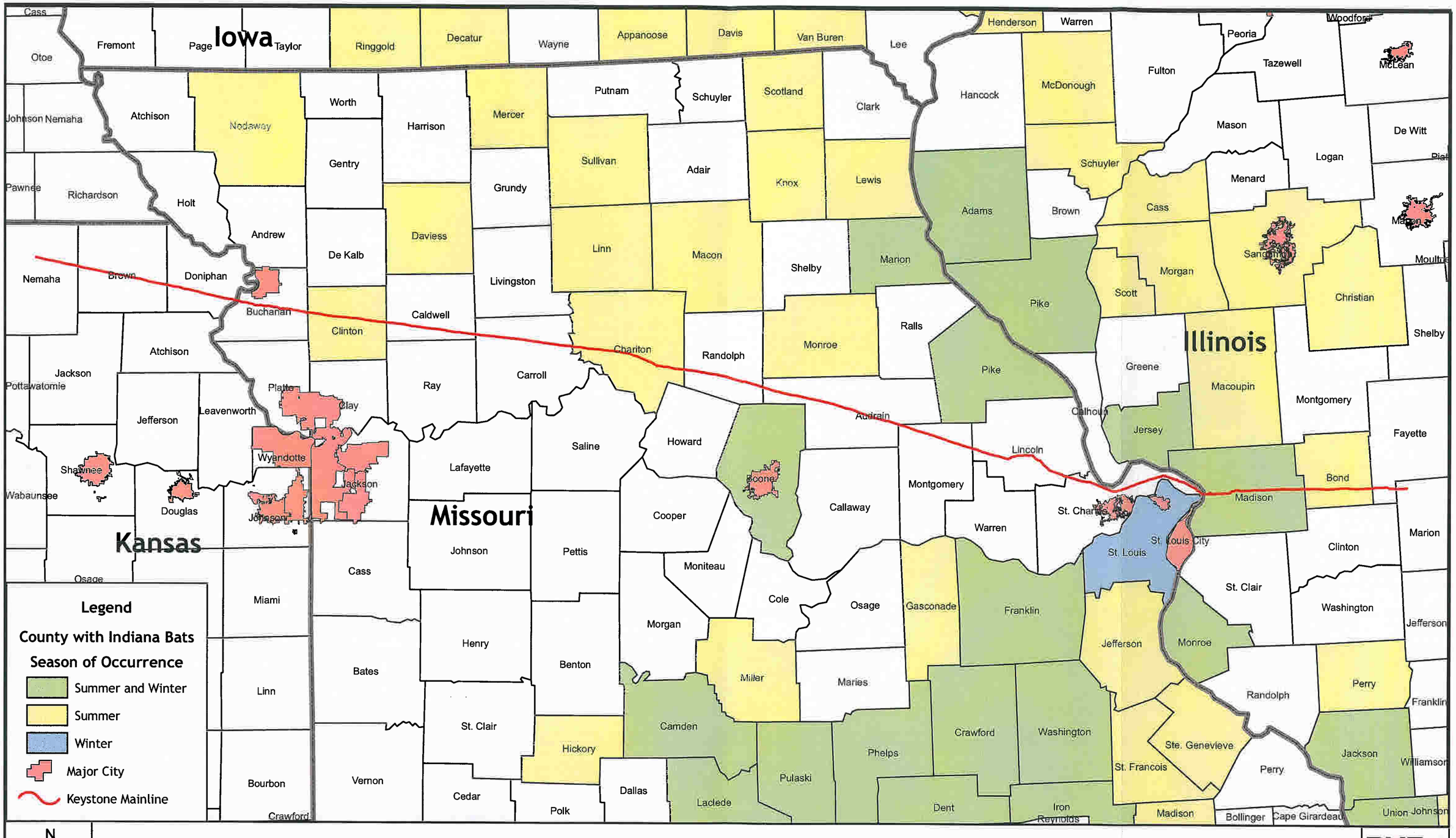

Figure 1. Location of the Keystone Mainline Project.

December 2006
Project No. 0987.010

Base Map: 2005 ESRI Data and Maps

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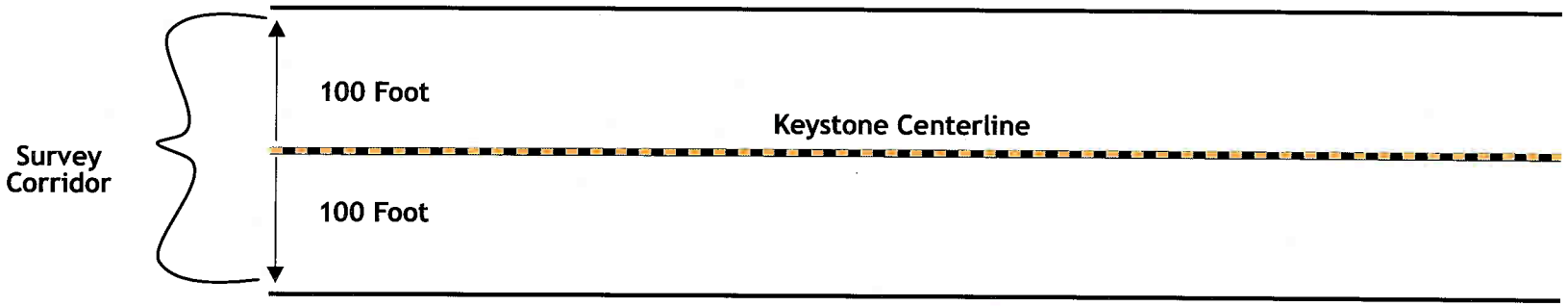

Figure 2. Diagram of Keystone Mainline survey corridor in Illinois.

Project No. 0987.010	December 2006	Feet 100 50 0 100 200

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APPENDICES

Appendix A. USFWS Concurrence with Study Plan

CONFIDENTIAL

U.S. FISH & WILDLIFE SERVICE

DEPARTMENT OF THE INTERIOR

U.S. Fish & Wildlife Service

Region 3 Great Lakes Big Rivers

United States Department of the Interior

Marion, Illinois SUBOFFICE (ES)
8588 ROUTE 148
MARION, ILLINOIS 62959

PHONE: (618)997-3344 FAX: (618)997-8961

FACSIMILE TRANSMITTAL

TO: Russ Romme FAX: 513-326-1550

FROM: Joyce Collins DATE: 12/2/06

SUBJECT: Keystone Indiana bat Assessment PAGE 1 OF 8

NOTES

BHE ENVIRONMENTAL

11733 Chesterdale Road, Cincinnati, Ohio 45246 513.326.1500 / Fax 513.326.1550

November 30, 2006

0987.008.001

Joyce Collins
Assistant Field Supervisor
U.S. Fish & Wildlife Service
Marion Ecological Services Office
8588 Route 148
Marion, IL 62959-4565

Subject: Requesting concurrence with proposed Indiana bat investigations on Keystone Pipeline Project through four Illinois counties

Dear Joyce,

May we have your concurrence with the attached study plan dated November 2006 for "Indiana bat investigations on Keystone pipeline through four Illinois counties"? We expect to initiate field work beginning in early December. This version of the plan addresses your comments on the October version, and incorporates results of our telephone conversation earlier this week.

Sincerely,
BHE ENVIRONMENTAL, INC.

Russ Rommé
Director

c: Charles Johnson (ENSR)
Sara Stribley (ENSR)
Vince Hand (BHE)

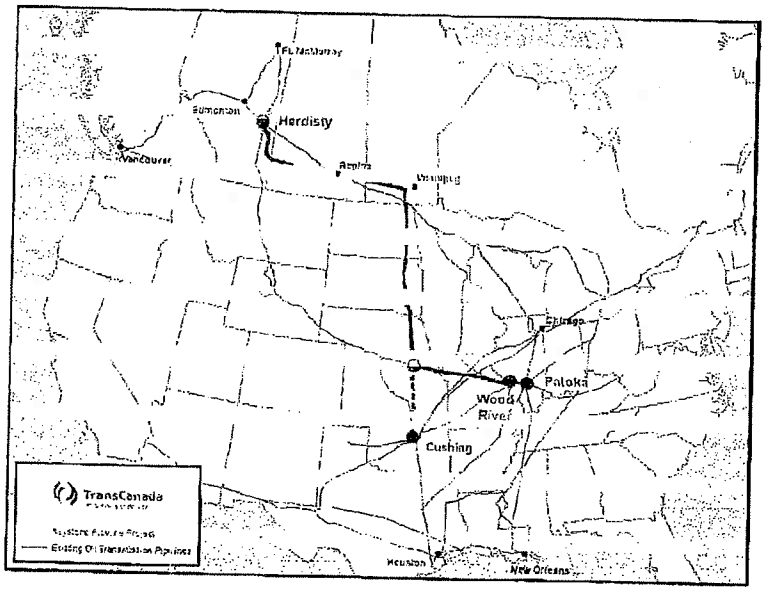
X CONCUR with edits on pages 3 & 4	Signature Joyce A Collins
	Name (print) Joyce A. Collins
____ DO NOT CONCUR	Title Assistant Field Supervisor
	Date 12/2/03

PROPOSED INDIANA BAT INVESTIGATIONS
KEYSTONE PIPELINE PROJECT THROUGH FOUR ILLINOIS COUNTIES
NOVEMBER 2006

1.0 INTRODUCTION

1.1 BACKGROUND

Keystone proposes to construct and operate an interstate crude oil transmission system from an oil supply hub near Hardisty, Alberta, in Canada to destinations in the U.S. (Figure 1). In the U.S., the Keystone Mainline will consist of 1,078 miles of new pipeline constructed from the U.S./Canadian border in Cavalier County, North Dakota, to existing terminals and refineries in Wood River (Madison County) and Patoka (Marion County), Illinois. The Keystone Mainline will consist of 1,023 miles of 30-inch pipe between the Canadian border and Wood River, Illinois and a 55-mile segment of 24-inch pipeline between Wood River and Patoka, Illinois. The Cushing Extension will consist of approximately 292 miles of 36-inch pipeline commencing in Platte County near the Nebraska-Kansas border and terminating at existing crude oil terminals in Cushing (Payne County), Oklahoma.



In Illinois, the majority of the Keystone Pipeline will be a 24-inch pipeline, and the project will be constructed within a 95-foot-wide corridor, consisting of both a temporary 45-foot-wide construction ROW and a 50-foot permanent ROW. A small segment of pipe from the Mississippi River to the Wood River terminal (less than 2 miles) will consist of 30-inch pipe and will be constructed within a 110-foot-wide corridor (temporary 60-foot-wide construction ROW and a 50-foot permanent ROW). The pipeline typically will be buried with a minimum depth of cover of four feet. The pipeline will be constructed primarily in rural Illinois areas, with more populated areas occurring around Wood River and Edwardsville. Construction is scheduled to begin in early 2008 with an in-service date for the Keystone Mainline of no later than November 2009.

The construction of the Keystone Pipeline Project is subject to environmental review pursuant to the National Environmental Policy Act (NEPA). Because the project crosses the U.S.-Canadian border, the Department of State has been designated as the lead federal agency for the NEPA process.

Occurrences of the Indiana bat have been documented in two of the four counties traversed by the route in Illinois, Madison and Bond counties (Attachment 1). This study plan outlines

an approach to investigate the potential effects of the Keystone Pipeline Project on the Indiana bat in Illinois, including a field survey and a habitat assessment.

1.2 COMMUNICATION WITH US FISH AND WILDLIFE SERVICE

Russ Rommé of BHE Environmental, Inc. contacted Joyce Collins of the Marion, Illinois FWS office on September 8, 2006 to discuss Endangered Species Act compliance issues specifically pertaining to the potential for the Keystone Pipeline Project to affect Indiana bats in Illinois. Several phone calls to Joyce Collins followed in the subsequent week. On September 14, 2006 Joyce Collins contacted Russ Rommé (BHE) and provided recommendations regarding assessment of effects to Indiana bats and their habitat in Illinois. A teleconference was conducted on November 28, 2006 to discuss the content of this plan.

2.0 APPROACH

2.1 TECHNICAL BACKGROUND

Rommé et al. (1995) showed how number of potential Indiana bat roost trees (PRTs) per unit area affected habitat quality. Optimal habitat includes at least fourteen PRTs per hectare, and the quality of habitat declines linearly as the number of PRTs declines. The ratio of actual trees per hectare (T) to the optimal value of at least fourteen PRTs per hectare, gives a measure of habitat quality on a zero to one scale. If T>14, the ratio is still one. Farmer et al. (2002) go so far as to recommend evaluation of a single variable, density of suitable roost trees, as appropriate for landscape scale assessments. Based on previous literature, those two studies define PRTs as having dbh ≥9 inches (≥ 22 cm).

Recent published literature indicates that linear distances between roosts and foraging areas for females range from approximately 0.5 to 8.4 km (0.8 to 5.2 miles), and average approximately 3.5 km (2.2 miles) (Murray and Kurta 2004, Sparks et al. 2005, Butchkoski and Hassinger 2002). Rommé et al. (1995) indicate that even with all other summer habitat attributes being ideal, sufficient nearby wooded area is a critical factor for suitable habitat. Wooded areas with 13 percent forest cover in the analysis area can rate no higher than 0.32 on a scale of 0.0 (no habitat value) to 1.0 (ideal habitat). For a suitability rating of 1.0 for this habitat parameter, there must be a minimum of 30% forested cover within 3.5 km.

Given this background, the study plan below combines site-specific and landscape-level data to classify wooded areas crossed by the pipeline ROW as high-, medium-, or low-quality habitat.

2.2 FIELD SURVEY

Biologists will assess the portion of all forested/wooded stands (woodlot) within a 200-foot wide survey corridor (100 feet either side of the pipeline centerline) crossed by the proposed pipeline right-of-way for the presence of PRTs. For purposes of this evaluation, PRTs will be dead or live trees, at least three meters tall, with at least 25% peeling or exfoliating bark, split tree trunks or branches, or cavities.

The biologists will record whether the tree is dead or living, the tree species (if possible), and dbh size class (<22 cm, 22 to <30 cm, 30 to <40 cm, 40 to <50 cm, ≥50 cm), if practical.

2.3 HABITAT ASSESSMENT

Upon completion of the field survey effort, Keystone will derive an assessment of habitat quality based on field parameters and a review of aerial photographs to determine forested cover within 3.5 kilometers of each site.

In addition to density, PRTs must meet minimum size criteria for the area represented by the sample site to qualify as high quality habitat, namely:

- at least eight PRTs per hectare greater than 30 cm dbh, or
- at least five PRTs per hectare greater than 40 cm dbh, or
- at least three PRTs per hectare greater than 50 cm dbh.

If all PRTs in a woodlot measure less than 20 cm dbh, then the suitability will be categorized as low for that parameter. Thus there will be three parameters considered: density of PRTs, dbh of PRTs, and nearby forest cover (Table 1).

Table 1. Suitability scores for various habitat parameters.

Category	PRT density (number/ha)/14	PRT dbh (trees/ha exceeding given dbh)	Forest cover within 3.5 km
High (score = 3)	≥ 0.60	8 PRT > 30 cm or 5 PRT > 40 cm or 3 PRT > 50 cm	≥ 30 %
Medium (score = 2)	≥ 0.40 & < 0.60	≥ 1 PRT ≥ 20 cm	≥ 13% & < 30%
Low (score = 1)	< 0.40	< 1 PRT ≥ 20 cm	< 13%

If no PRTs are found within the 200 -foot wide survey corridor within a woodlot, we will conclude that project activities at that location may affect but are not likely to adversely affect Indiana bats. Otherwise, the three scores will be added together, and the overall habitat suitability determined from Table 2.

Table 2. Overall habitat suitability determination.

Sum of three scores from Table 1.	Habitat Suitability
≥ 7	High
6 or 5	Medium
≤ 4	Low

3.0 SCHEDULE

We expect to begin field work to assess habitat quality in early December, 2006.

4.0 FOLLOW-UP ACTIONS

Keystone will provide the Service with a summary of the field data collected and the overall habitat suitability evaluation for each woodlot (High, Medium, Low, no PRTs). We propose follow on field investigations (e.g., mist net surveys) only at sites with medium or high quality habitat scores as defined in Section 2.3 (Table 2), above. ~~If mist net survey results are negative at any site, we will conclude that proposed construction activities at the site that~~

Based on the data collected in the field survey, and the classification in the habitat Assessment Keystone will work with the FWS to determine Appropriate subsequent Activities. Jon Allen 12/2/06

~~remove suitable Indiana bat habitat may affect, but are not likely to adversely affect Indiana bats.~~ We understand the Section 7 finding needs to be made for the project as a whole rather than for each particular crossing of wooded habitat.

In our telephone conversation on November 28, 2006, we agreed there was limited value in the collection of additional data describing habitat quality (beyond that described in Section 2.3, above) at sites with low quality habitat or at sites with no PRTs.

We further agreed that for those sites with no PRTs or sites with low quality roosting habitat, we would conduct a semi-quantitative, desktop assessment of Indiana bat habitat quality near each site. This analysis would quantify the percent forest cover within 3.5 km of each site, and would verify the absence of any Indiana bat occurrence records in the area. These data will be sufficient to characterize the effects to Indiana bats at the site.

We also agreed that at sites with no PRTs, or at sites with low habitat quality, project activities are not likely to adversely affect Indiana bats because effects would be insignificant or discountable (in the absence of any unusual circumstances such as proximity to a known occurrence).

5.0 LITERATURE CITED

Butchkoski, C. and J. Hassinger. 2002. Ecology of a maternity colony roosting in a building. Pp. 13-142 *in* A. Kurta and J. Kennedy (eds.), The Indiana Bat: Biology and Management of an Endangered Species. Bat Conservation International, Austin, Texas.

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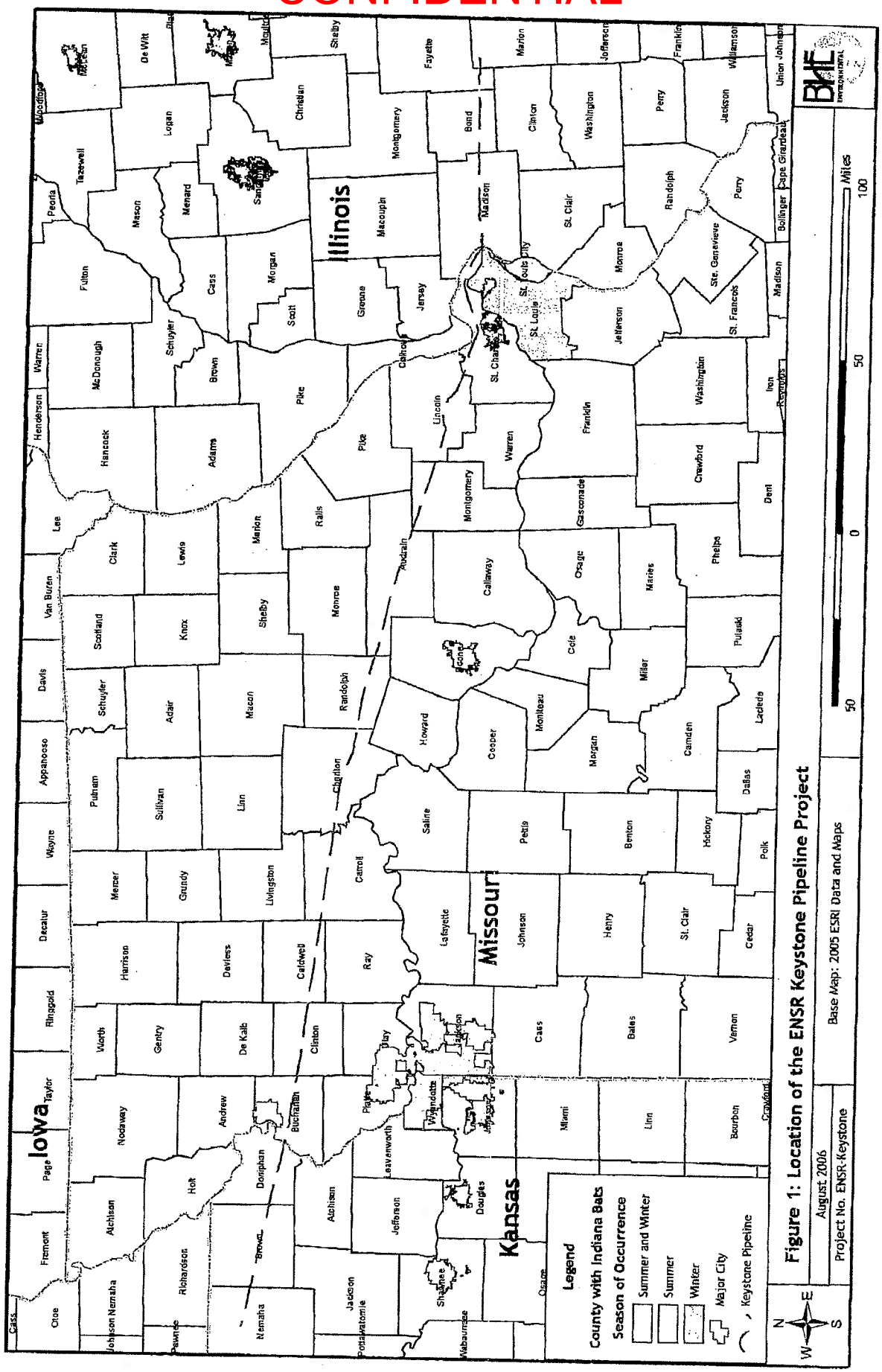
Attachment 1. Indiana Bat Seasonal Occurrence near the Proposed Keystone Pipeline Project Corridor in Illinois



Appendix B. Wooded areas identified for field investigation within the proposed Keystone survey corridor in Illinois.

Appendix B. Wooded areas identified for field investigation within the proposed Keystone survey corridor in Illinois. Rows in gray represent woodlots that were not assessed in the field (see Comments column for details).

Woodlot ID	County (Illinois)	Enter Mile Post	Center Mile Post	Exit Mile Post	Distance Crossed (ft)	Woodlot Area (acres)	Number of Plots	Total Number of PRTs	PRT/ha	Woodlot HSI	PRT Density Score	Number of PRTs with dbh <22 cm	Number of PRTs with dbh 22-30 cm	Number of PRTs with dbh 30-40 cm	Number of PRTs with dbh 40-50 cm	Number of PRTs with dbh >50 cm	PRTs/ha with dbh <22 cm	PRTs/ha with dbh 22-30 cm	PRTs/ha with dbh 30-40 cm	PRTs/ha with dbh 40-50 cm	PRTs/ha with dbh >50 cm	PRT dbh Score	Percent Forest Cover Within 3.5 km	Percent Forest Cover Score	Sum of Scores	Overall Habitat Suitability	Comments
BATBH1ILMA001	Madison	1021.67	1021.69	1021.71	211	1.0	Census	9	22.93	1.00	3	0	0	4	2	3	0.0	0.0	10.2	5.1	7.6	3	3	1	7	High	
BATBH1ILMA002	Madison	1021.92	1022.00	1022.08	845	3.9	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	4	1	N/A	No PRTs	
BAT__ILMA003	Madison	1022.13	1022.22	1022.30	898	4.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	N/A	N/A	N/A	Access Denied
BAT__ILMA004	Madison	1023.67	1023.76	1023.84	898	4.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	N/A	N/A	N/A	Access Denied
BAT__ILMA005	Madison	1023.98	1024.02	1024.05	370	1.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6	N/A	N/A	N/A	Access Denied
BAT__ILMA006	Madison	1024.38	1024.46	1024.54	845	3.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	N/A	N/A	N/A	Access Denied
BAT__ILMA007	Madison	1024.56	1024.63	1024.69	686	3.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	N/A	N/A	N/A	Access Denied
BAT__ILMA008	Madison	1025.55	1025.56	1025.59	211	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	Access Denied
BAT__ILMA009	Madison	1025.58	1025.59	1025.59	53	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	Access Denied
BAT__ILMA010	Madison	1025.80	1025.81	1025.82	106	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A	Access Denied
BAT__ILMA011	Madison	1025.82	1025.88	1025.93	581	2.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A	Access Denied
BAT__ILMA012	Madison	1026.15	1026.21	1026.27	634	2.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A	Access Denied
BAT__ILMA013	Madison	1026.73	1026.74	1026.75	106	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	Access Denied
BAT__ILMA014	Madison	1026.98	1027.10	1027.21	1214	5.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	N/A	N/A	N/A	Access Denied
BAT__ILMA015	Madison	1027.23	1027.32	1027.41	950	4.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	N/A	N/A	N/A	Access Denied
BAT__ILMA016	Madison	1027.96	1027.97	1027.98	106	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	N/A	N/A	N/A	Access Denied
BAT__ILMA017	Madison	1028.02	1028.04	1028.05	158	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	N/A	N/A	N/A	Access Denied
BAT__ILMA018	Madison	1028.06	1028.09	1028.12	317	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32	N/A	N/A	N/A	Access Denied
BAT__ILMA019	Madison	1028.20	1028.28	1028.36	845	3.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32	N/A	N/A	N/A	Access Denied
BAT__ILMA020	Madison	1028.38	1028.58	1028.77	2059	9.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32	N/A	N/A	N/A	Access Denied
BAT__ILMA021	Madison	1028.90	1029.04	1029.18	1478	6.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	N/A	N/A	N/A	Access Denied
BAT__ILMA022	Madison	1029.18	1029.34	1029.49	1637	7.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	N/A	N/A	N/A	Access Denied
BAT__ILMA023	Madison	1029.86	1029.87	1029.88	106	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36	N/A	N/A	N/A	Access Denied
BAT__ILMA024	Madison	1029.93	1029.99	1030.04	581	2.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36	N/A	N/A	N/A	Access Denied
BAT__ILMA025	Madison	1030.05	1030.14	1030.23	950	4.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	37	N/A	N/A	N/A	Access Denied
BAT__ILMA026	Madison	1030.48	1030.52	1030.56	422	1.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	37	N/A	N/A	N/A	Access Denied
BAT__ILMA027	Madison	1030.57	1030.58	1030.59	106	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	37	N/A	N/A	N/A	Access Denied
BAT__ILMA028	Madison	1030.68	1030.70	1030.72	211	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	37	N/A	N/A	N/A	Access Denied
BAT__ILMA029	Madison	1030.76	1030.88	1031.00	1267	5.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36	N/A	N/A	N/A	Access Denied
BAT__ILMA030	Madison	1031.04	1031.12	1031.19	792	3.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	N/A	N/A	N/A	Access Denied
BAT__ILMA031	Madison	1031.21	1031.27	1031.32	581	2.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	34	N/A	N/A	N/A	Access Denied
BAT__ILMA032	Madison	1031.34	1031.37	1031.39	264	1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33	N/A	N/A	N/A	Access Denied
BAT__ILMA033	Madison	1031.48	1031.49	1031.50	106	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32	N/A	N/A	N/A	Access Denied
BAT__ILMA034	Madison	1031.52	1031.99	1032.45	4910	22.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	N/A	N/A	N/A	Access Denied
BAT__ILMA035	Madison	1032.46	1032.55	1032.63	898	4.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25	N/A	N/A	N/A	Access Denied
BAT__ILMA036	Madison	1032.66	1032.74	1032.81	792	3.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24	N/A	N/A	N/A	Access Denied
BATBH1ILMA037	Madison	1032.82	1033.02	1033.22	2112	9.7	Census	29	7.39	0.53	2	15	10	2	2	0	3.8	2.5	0.5	0.5	0.0	2	22	2	6	Medium	
BATBH1ILMA038	Madison	1033.59	1033.66	1033.72	686	3.2	Census	1	0.78	0.06	1	0	0	1	0	0	0.0	0.0	0.8	0.0	0.0	2	17	2	5	Medium	
BAT__ILMA039	Madison	1034.24	1034.28	1034.31	370	1.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A	Access Denied
BAT__ILMA040	Madison	1034.65	1034.66	1034.66	53	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	Access Denied
BAT__ILMA041	Madison	1034.67	1034.70	1034.72	264	1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	Access Denied
BAT__ILMA042	Madison	1036.52	1036.74	1036.96	2323	10.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	N/A	N/A	N/A	Access Denied
BAT__ILMA043	Madison	1037.01	1037.04	1037.06	264	1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14	N/A	N/A	N/A	Access Denied

Woodlot ID	County (Illinois)	Enter Mile Post	Center Mile Post	Exit Mile Post	Distance Crossed (ft)	Woodlot Area (acres)	Number of Plots	Total Number of PRTs	PRT/ha	Woodlot HSI	PRT Density Score	Number of PRTs with dbh <22 cm	Number of PRTs with dbh 22-30 cm	Number of PRTs with dbh 30-40 cm	Number of PRTs with dbh 40-50 cm	Number of PRTs with dbh >50 cm	PRTs/ha with dbh <22 cm	PRTs/ha with dbh 22-30 cm	PRTs/ha with dbh 30-40 cm	PRTs/ha with dbh 40-50 cm	PRTs/ha with dbh >50 cm	PRT dbh Score	Percent Forest Cover Within 3.5 km	Percent Forest Cover Score	Sum of Scores	Overall Habitat Suitability	Comments
BATBH3ILMA044	Madison	1037.32	1037.48	1037.64	1690	7.8	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	13	2	N/A	No PRTs	
BATBH3ILMA045	Madison	1037.64	1037.65	1037.66	106	0.5	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	11	1	N/A	No PRTs	
BATBH3ILMA046	Madison	1037.75	1037.83	1037.91	106	0.5	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	12	1	N/A	No PRTs	
BATBH3ILMA047	Madison	1038.43	1038.44	1038.45	845	3.9	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	12	1	N/A	No PRTs	
BAT__ILMA048	Madison	1040.24	1040.25	1040.27	158	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	N/A	N/A	N/A	Access Denied
BAT__ILMA049	Madison	1040.61	1040.68	1040.74	686	3.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12	N/A	N/A	N/A	Access Denied
BAT__ILMA050	Madison	1040.93	1041.06	1041.18	1320	6.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12	N/A	N/A	N/A	Access Denied
BAT__ILMA051	Madison	1041.22	1041.24	1041.25	158	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	N/A	N/A	N/A	Access Denied
BAT__ILMA052	Madison	1042.44	1042.50	1042.56	634	2.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	N/A	N/A	N/A	Access Denied
BAT__ILMA053	Madison	1042.57	1042.85	1043.13	2957	13.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14	N/A	N/A	N/A	Access Denied
BAT__ILMA054	Madison	1043.15	1043.24	1043.33	950	4.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12	N/A	N/A	N/A	Access Denied
BAT__ILMA055	Madison	1043.36	1043.39	1043.43	370	1.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12	N/A	N/A	N/A	Access Denied
BATBH1ILMA056	Madison	1045.43	1045.47	1045.51	422	1.9	Census	4	5.10	0.36	1	0	2	1	0	2	0.0	2.5	1.3	0.0	2.5	2	15	2	5	Medium	
BATBH1ILMA057	Madison	1045.62	1045.68	1045.73	581	2.7	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	16	2	N/A	No PRTs	
BATBH1ILMA058	Madison	1045.82	1045.93	1046.04	1162	5.3	Census	11	5.10	0.36	1	0	6	4	1	0	0.0	2.8	1.9	0.5	0.0	2	17	2	5	Medium	
BATBH1ILMA059	Madison	1045.93	1046.14	1046.19	1399	6.4	Census	13	5.00	0.36	1	0	2	6	5	5	0.0	0.8	2.3	1.9	1.9	2	17	2	5	Medium	
BATBH1ILMA060	Madison	1046.20	1046.28	1046.35	792	3.6	Census	20	13.59	0.97	3	0	5	9	6	0	0.0	3.4	6.1	4.1	0.0	3	17	2	8	High	
BATBH1ILMA061	Madison	1046.61	1046.67	1046.73	634	2.9	Census	22	18.69	1.00	3	0	0	14	8	0	0.0	0.0	11.9	6.8	0.0	3	17	2	8	High	
BATBH1ILMA062	Madison	1046.99	1047.12	1047.24	1320	6.1	Census	2	0.82	0.06	1	0	0	0	0	2	0.0	0.0	0.0	0.0	0.8	2	15	2	5	Medium	
BATBH1ILMA063	Madison	1048.99	1049.01	1049.02	158	0.7	Census	2	6.80	0.49	2	0	0	2	0	0	0.0	0.0	6.8	0.0	0.0	2	3	1	5	Medium	
BAT__ILBO001	Bond	1050.88	1050.90	1050.91	158	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	N/A	N/A	N/A	Access Denied
BATBH4ILBO002	Bond	1052.25	1052.27	1052.98	3854	17.7	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	15	2	N/A	No PRTs	
BATBH4ILBO003	Bond	1052.29	1052.31	1052.32	158	0.7	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	15	2	N/A	No PRTs	
BAT__ILBO004	Bond	1053.18	1053.35	1053.51	1742	8.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22	N/A	N/A	N/A	Access Denied
BAT__ILBO005	Bond	1053.91	1053.96	1054.00	475	2.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25	N/A	N/A	N/A	Access Denied
BATBH4ILBO006	Bond	1054.18	1054.21	1054.24	317	1.5	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	25	2	N/A	No PRTs	
BATBH4ILBO007	Bond	1055.21	1055.42	1055.63	2218	10.2	Census	3	0.73	0.05	1	0	0	2	0	1	0.0	0.0	0.5	0.0	0.2	2	25	2	5	Medium	
BAT__ILBO008	Bond	1056.04	1056.18	1056.31	1426	6.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16	N/A	N/A	N/A	Access Denied
BATBH4ILBO009	Bond	1056.54	1056.60	1056.66	634	2.9	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	12	1	N/A	No PRTs	
BATBH4ILBO010	Bond	1056.73	1056.83	1056.92	1003	4.6	Census	2	1.07	0.08	1	0	1	1	0	0	0.0	0.5	0.5	0.0	0.0	2	11	1	4	Low	
BATBH4ILBO011	Bond	1058.59	1058.66	1058.73	739	3.4	Census	2	1.46	0.10	1	0	0	2	0	0	0.0	0.0	1.5	0.0	0.0	2	14	2	5	Medium	
BAT__ILBO012	Bond	1058.78	1058.80	1058.81	158	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	N/A	N/A	N/A	Access Denied
BAT__ILBO013	Bond	1058.91	1058.91	1058.92	53	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	N/A	N/A	N/A	Access Denied
BAT__ILBO014	Bond	1059.10	1059.36	1059.62	2746	12.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17	N/A	N/A	N/A	Access Denied
BATBH4ILBO015	Bond	1059.88	1059.89	1059.89	53	0.2	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	19	2	N/A	No PRTs	
BATBH4ILBO016	Bond	1059.95	1060.04	1060.13	950	4.4	Census	1	0.57	0.04	1	0	0	1	0	0	0.0	0.0	0.6	0.0	0.0	2	19	2	5	Medium	
BATBH4ILBO017	Bond	1060.14	1060.27	1060.40	1373	6.3	Census	7	2.74	0.20	1	1	3	0	1	2	0.4	1.2	0.0	0.4	0.8	2	19	2	5	Medium	
BATBH3ILBO018	Bond	1060.65	1060.78	1060.91	1373	6.3	1	13	131.27	1.00	3	5	8	0	0	0	2.0	3.1	0.0	0.0	0.0	2	18	2	7	High	
BATBH3ILBO019	Bond	1060.94	1060.98	1061.05	581	2.7	Census	1	0.93	0.07	1	0	0	0	1	0	0.0	0.0	0.0	0.9	0.0	2	17	2	5	Medium	
BATBH3ILBO020	Bond	1061.01	1061.03	1061.05	211	1.0	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	16	2	N/A	No PRTs	
BATBH3ILBO021	Bond	1061.35	1061.39	1061.43	422	1.9	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	14	2	N/A	No PRTs	
BATBH3ILBO022	Bond	1061.52	1061.53	1061.55	185	0.8	Census	1	2.91	0.21	1	0	1	0	0	0	0.0	2.9	0.0	0.0	0.0	2	13	2	5	Medium	
BATBH3ILBO023	Bond	1061.92	1062.01	1062.10	950	4.4	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	9	1	N/A	No PRTs	
BATBH3ILBO024	Bond	1062.19	1062.29	1062.39	1056	4.8	Census	1	0.51	0.04	1	0	0	0	1	0	0.0	0.0	0.0	0.5	0.0	2	7	1	4	Low	
BATBH3ILBO025	Bond	1064.18	1064.19	1064.20	106	0.5	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	2	1	N/A	No PRTs	

Woodlot ID	County (Illinois)	Enter Mile Post	Center Mile Post	Exit Mile Post	Distance Crossed (ft)	Woodlot Area (acres)	Number of Plots	Total Number of PRTs	PRT/ha	Woodlot HSI	PRT Density Score	Number of PRTs with dbh <22 cm	Number of PRTs with dbh 22-30 cm	Number of PRTs with dbh 30-40 cm	Number of PRTs with dbh 40-50 cm	Number of PRTs with dbh >50 cm	PRTs/ha with dbh <22 cm	PRTs/ha with dbh 22-30 cm	PRTs/ha with dbh 30-40 cm	PRTs/ha with dbh 40-50 cm	PRTs/ha with dbh >50 cm	PRT dbh Score	Percent Forest Cover Within 3.5 km	Percent Forest Cover Score	Sum of Scores	Overall Habitat Suitability	Comments
BAT__ILBO026	Bond	1064.44	1064.57	1064.70	1373	6.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	Access Denied
BATBH3ILBO027	Bond	1065.95	1065.96	1065.96	53	0.2	Census	1	10.19	0.73	3	0	0	0	0	1	0.0	0.0	0.0	0.0	10.2	3	3	1	7	High	
BATBH3ILBO028	Bond	1066.71	1066.83	1066.96	1320	6.1	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	4	1	N/A	No PRTs	
BATBH3ILBO029	Bond	1067.02	1067.15	1067.28	1373	6.3	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	5	1	N/A	No PRTs	
BATBH3ILBO030	Bond	1067.32	1067.40	1067.47	792	3.6	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	8	1	N/A	No PRTs	
BATBH2ILFA001	Fayette	1068.67	1068.68	1068.69	79	0.4	Census	1	6.80	0.49	2	0	0	0	1	0	0.0	0.0	0.0	6.8	0.0	3	16	2	7	High	
BATBH2ILFA002	Fayette	1069.31	1069.49	1069.67	1901	8.7	Census	5	1.42	0.10	1	0	0	1	4	0	0.0	0.0	0.3	1.1	0.0	2	19	2	5	Medium	
BATBH2ILFA003	Fayette	1069.91	1069.98	1070.04	686	3.2	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	21	2	N/A	No PRTs	
BATBH2ILFA004	Fayette	1070.04	1070.14	1070.24	1056	4.8	Census	6	3.06	0.22	1	0	0	1	5	0	0.0	0.0	0.5	2.5	0.0	2	22	2	5	Medium	
BATBH2ILFA005	Fayette	1070.27	1070.29	1070.31	211	1.0	Census	1	2.55	0.18	1	0	0	0	1	0	0.0	0.0	0.0	2.5	0.0	2	22	2	5	Medium	
BATBH2ILFA006	Fayette	1070.33	1070.38	1070.42	475	2.2	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	22	2	N/A	No PRTs	
BATBH2ILFA007	Fayette	1070.44	1070.48	1070.51	370	1.7	Census	1	1.46	0.10	1	0	0	0	1	0	0.0	0.0	0.0	1.5	0.0	2	22	2	5	Medium	
BAT__ILFA008	Fayette	1070.61	1070.70	1070.78	898	4.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22	N/A	N/A	N/A	Access Denied
BAT__ILFA009	Fayette	1070.83	1070.85	1070.86	158	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22	N/A	N/A	N/A	Access Denied
BAT__ILFA010	Fayette	1070.92	1070.96	1071.00	422	1.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	N/A	N/A	N/A	Access Denied
BAT__ILFA011	Fayette	1071.02	1071.03	1071.04	106	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	N/A	N/A	N/A	Access Denied
BAT__ILFA012	Fayette	1071.11	1071.21	1071.30	1003	4.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24	N/A	N/A	N/A	Access Denied
BAT__ILFA013	Fayette	1071.50	1071.53	1071.56	317	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25	N/A	N/A	N/A	Access Denied
BAT__ILFA014	Fayette	1071.67	1071.74	1071.81	739	3.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25	N/A	N/A	N/A	Access Denied
BAT__ILFA015	Fayette	1071.90	1071.90	1071.91	79	0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24	N/A	N/A	N/A	Access Denied
BAT__ILFA016	Fayette	1072.05	1072.09	1072.12	370	1.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24	N/A	N/A	N/A	Access Denied
BAT__ILFA017	Fayette	1072.17	1072.18	1072.19	106	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	N/A	N/A	N/A	Access Denied
BAT__ILFA018	Fayette	1072.24	1072.27	1072.30	2402	11.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	N/A	N/A	N/A	Access Denied
BATBH2ILFA019	Fayette	1072.30	1072.50	1072.69	211	1.0	Census	5	12.74	0.91	3	0	0	0	5	0	0.0	0.0	0.0	12.7	0.0	3	21	2	8	High	
BAT__ILFA020	Fayette	1073.40	1073.41	1073.42	106	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	N/A	N/A	N/A	Access Denied
BAT__ILFA021	Fayette	1073.66	1073.68	1073.69	158	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12	N/A	N/A	N/A	Access Denied
BATBH2ILFA022	Fayette	1074.69	1074.70	1074.71	106	0.5	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	7	1	N/A	No PRTs	
BATBH2ILMR001	Marion	1075.21	1075.22	1075.23	106	0.5	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	8	1	N/A	No PRTs	
BATBH2ILMR002	Marion	1076.90	1077.01	1077.12	1162	5.3	Census	5	2.32	0.17	1	0	1	1	2	1	0.0	0.5	0.5	0.9	0.5	2	14	2	5	Medium	
BATBH2ILMR003	Marion	1077.29	1077.34	1077.38	475	2.2	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	15	2	N/A	No PRTs	
BATBH2ILMR004	Marion	1077.70	1077.71	1077.74	185	0.8	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	17	2	N/A	No PRTs	
BATBH2ILMR005	Marion	1077.73	1077.73	1077.74	53	0.2	Census	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	N/A	17	2	N/A	No PRTs	

Appendix C. Field Data Sheets

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMAØØ1 Plot No.: 1

Date: 12-6-06 Start Time: 9:10

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	Salix alba alive (x4)	Salix alba alive (x2)	Salix alba alive (x3)

Total No. of PRTs: 9

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 22

Salix alba
Acer saccharinum

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

tree line in agricultural field

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMA00Q2 Plot No.: 1

Date: 12-6-06 Start Time: 9:30

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% (25-50%) 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 10

Salix alba

Morus alba

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

Feature is the edge of a larger woodlot & 2 small patches of trees

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMA037 Plot No.: 1

Date: 12-6-06 Start Time: 11:50

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
Unknown dead (~~LHT LHT~~ II = 12)	Gleditsia triacanthos dead (IIII = 4)	Carya ovata alive (II = 2)	Unknown dead (II = 2)	n/a
Gleditsia triacanthos dead (II = 2)	Unknown dead (~~LHT~~ = 5)			
Carya ovata	Carya ovata alive			

Total No. of PRTs: 29

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 20

Gleditsia triacanthos
Quercus palustris
Quercus imbricaria

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

small streams

Comments (include access comments):

none

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMAØ38 Plot No.: 1

Date: 12-6-06 Start Time: 12:30

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	Unknown dead	n/a	n/a

Total No. of PRTs: 1

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 12

Quercus imbricaria

Celtis occidentalis

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

tree line along agricultural field

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ICMA044 Plot No.: 1

Date: 6 December 2006 Start Time: 1020

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14" *

Quercus palustris

Celtis occidentalis

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

001W
002E

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATB13ILMA045 Plot No.: 1

Date: 6 December 2006 Start Time: 1000

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 10"

Celtis occidentalis

Fraxinus pennsylvanica

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILMA0046 Plot No.: 1

Date: 6 December 2006 Start Time: 0920

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: Ø

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 18"

Quercus imbricaria
Acer saccharum
Platanus occidentalis

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

001 NWA

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILMA047 Plot No.: 1

Date: 6 December 2006 Start Time: 0830

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14"

Platanus occidentalis

Quercus imbricaria

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

001E

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMA0056 Plot No.: 1

Date: 12-5-06 Start Time: 1:30 pm

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	Carya ovata alive (x2)	Carya laciniosa alive	n/a	Ulmus rubra alive

Total No. of PRTs: 4

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 16

Quercus rubra
Ulmus rubra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

Ravine

Comments (include access comments):

friendly dogs (2)

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BAT BH1 IL MA 057 Plot No.: 1

Date: 12-5-06 Start Time: 1:15 pm

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: Ø

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 12

Quercus alba

Fraxinus pennsylvanica

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

- Woodlot is actually 2 smaller woodlots separated by a small corn field
- Friendly dogs (2)

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMA058 Plot No.: 1

Date: 12-5-06 Start Time: 12:50

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	Unknown dead Carya ovata alive (x5)	Carya ovata alive (x4)	Unknown dead	n/a

Total No. of PRTs: 11

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14

Quercus rubra
Quercus alba
Fraxinus pennsylvanica

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

small trail through woodlot

Comments (include access comments):

friendly dogs (2)

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMA059 Plot No.: 1

Date: 12-5-06 Start Time: 11:40

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	Carya ovata alive (x2)	Carya ovata alive (x6)	Carya ovata alive (x5)	n/a

Total No. of PRTs: 13

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 22

Quercus alba Carya Ovata

Quercus rubra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

Ravine

Comments (include access comments):

none

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMAØ6Ø Plot No.: 1

Date: 12-5-06 Start Time: 11:10

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	Carya ovata alive (x4) Unknown dead	Carya ovata alive (x8) Unknown dead	Carya ovata alive (x6)	n/a

Total No. of PRTs: 20

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 16

Fraxinus pennsylvanica

Quercus alba

Carya ovata

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

Small streams

Comments (include access comments):

none

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMA061 Plot No.: 1

Date: 12-5-06 Start Time: 10:30

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	Carya ovata alive (x14)	Carya ovata alive (x8)	n/a

Total No. of PRTs: 22

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 20

Carya ovata

Quercus alba

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

open understory

Comments (include access comments):

none

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMA062 Plot No.: 1

Date: 12-5-06 Start Time: 10:00

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	unknown dead (x2)

Total No. of PRTs: 2

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 18

Quercus imbricaria

Platanus occidentalis

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

woodlot is tree line in agricultural field

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMA063 Plot No.: 1

Date: 12-5-06 Start Time: 8:30

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	Ulmus americana alive Quercus alba dead	n/a	n/a

Total No. of PRTs: 2

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 10

Gleditsia triacanthos

Quercus imbricaria

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

small stream

Comments (include access comments):

none

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Surveyors: Lisa Winhold
John Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH4IL B0002 Plot No.: 1

Date: 6 Dec 2006 Start Time: 0845

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	N/A	N/A	N/A	N/A

Total No. of PRTs: 0

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 5 (12cm)

Prunus serotina

Populus deltoides

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

tree line

Comments (include access comments):

area ~~[illegible]~~ overgrown by vines

no easy access; farmlane along treeline to north that extends to State Ave.

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Surveyors: Lisa Winhold
John Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH4ILBOØØ3 Plot No.: 1

Date: 6 Dec 2006 Start Time: 0915

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	N/A	N/A	N/A	N/A

Total No. of PRTs: 0

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 12 (30 cm)

Prunus serotina

Celtis occidentalis

Quercus ~~rubra~~ imbricaria

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

treeline

Comments (include access comments):

area overgrown by vines

no easy access; farmlane along treeline to north that extends to State Ave.

Can cross ~~creek~~ drain at ROW (higher ground)

CONFIDENTIAL surveyors: Lisa Winhold
John Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH4ILBOØØ6 Plot No.: 1
Date: 6 Dec 2006 Start Time: 1000
Length of East/West Plot Edge (ft): all
Length of North/South Plot Edge (ft): all
Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	N/A	N/A	N/A	N/A

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% (25-50%) 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 16 (40 cm)
Quercus alba
Quercus macrocarpa
Quercus rubra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):
treeline

Comments (include access comments):
can park at road at southern end of treeline & walk along treeline
no road leading to site
deep drain along north point of treeline
exit pt. recorded ~10m south of centerline due to ditch

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Surveyors: Winhold + Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BAT BH 4 IL BO 0007 Plot No.: 1

Date: 5 Dec 2006 Start Time: 1330

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	N/A	J. nigra (decd) J. nigra (dying)	N/A	A. saccharinum (dead)

Total No. of PRTs: 3

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14

Platanus occidentalis
Populus deltoides
Fraxinus pennsylvanica

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):
river ~ 60-75' wide + deep (boat needed) → Shoal Creek
trails by river netable + ~ 9 m wide
treelines

Comments (include access comments):
PRT's = low quality (little loose bark, shaded)
drive = dirt but covers most of site (little walking distance)

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Surveyors: Winhold & Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH4IL80009 Plot No.: 1

Date: 5 Dec 2006 Start Time: 1230

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	N/A	N/A	N/A	N/A

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 12

Carya ovata
Celtis occidentalis
Sassafras albidum

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):
treeline

Comments (include access comments):
woodlot is fenced off

Surveyors: Winhold + Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BAT BH 4 IL BO Ø1Ø Plot No.: 1

Date: 5 Dec 2006 Start Time: 1210

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	U. americana (dead)	U. americana (dead)	N/A	N/A

Total No. of PRTs: 2

Percent Canopy Cover (circle one): 0-25% (25-50%) 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 12

Celtis occidentalis
Fraxinus pennsylvanica
Ulmus americana

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):
stream wide enough for 6 m ~~net~~ or 9 m net, but may be over grown in places
treeline

Comments (include access comments):
med quality PRT's - 1 has low % bark remaining + 1 has grape vine up side that may create too much clutter.
old farm lane leads right up to east end of pipeline
steep bank on stream

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Surveyors: Winhold + Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BAT BH 4 IL BO Ø11 Plot No.: 1

Date: 5 Dec 2006 Start Time: 1115

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	N/A	C. ovata (live) C. ovata (live)	N/A	N/A

Total No. of PRTs: 2

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 16

Quercus alba

Carya Ovata

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

open stand in mowed area, near pond edge

across street from house

no ditch, so can park in pipeline area (at corner)

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Surveyors: Winhold + Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH4ILB0015 Plot No.: 1

Date: 5 Dec. 2006 Start Time: 1020

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	N/A	N/A	N/A	N/A

Total No. of PRTs: 0

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 20

Celtis occidentalis
Pinus serotina
Ailanthus altissima

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

1 large hackberry (C. occidentalis) surrounded by many saplings of P. serotina + farm lane across street for parking

Surveyors: Winhold + Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BAT BH4IL BO Ø1Ø6 Plot No.: 1

Date: 5 Dec 2006 Start Time: 0940

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	N/A	Quercus rubra (dead)	N/A	N/A

Total No. of PRTs: 1

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 12

Quercus rubra

Prunus serotina

~~Quercus velutina~~

Acer saccharinum

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

~~none~~ treeline at ~~center~~ west end where treeline goes south

Comments (include access comments):

PRT = low quality

parking across street w/ BO Ø17

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surveyors: Winhold + Alexander

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH41LBOØ17 Plot No.: 1

Date: 5 Dec 2006 Start Time: 0852

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

<22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
C. ovata (live)	C. ovata (live) U. americana (dead) U. americana (dead)	N/A	Q. rubra (dead)	Q. rubra (dying) Q. rubra (dying)

Total No. of PRTs: 7

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 12

Quercus rubra
Carya ovata
Ulmus americana

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

treeline - can net ⊥ to trees

Comments (include access comments):

Q. rubra = low quality PRT

Farm field entrance @ west end for parking
at west end = a white wood sign says

Campground cumberland presbyterian church established 1826 sunday school 9:30 church 10:30 →

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILB0018 Plot No.: 1

Date: 5 December 2006 Start Time: 1630

Length of East/West Plot Edge (ft): 165

Length of North/South Plot Edge (ft): 65

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
5 Carya ovata (alive)	8 Carya ovata (alive)	n/a	n/a	n/a

Total No. of PRTs: 13

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Carya ovata

Estimated Average Overstory dbh (in): 16"

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.): no openings to forest or streams, existing ROW present could be netted

Comments (include access comments):

001 W
PRT (2)

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILB0019 Plot No.: 1

Date: 5 December 2006 Start Time: 1615

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	Ulmus americana (dead)	n/a

Total No. of PRTs: 1

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14"

Carya cordiformes

Quercus palustris

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

~~n/a~~ large pond if necessary

Comments (include access comments):

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILRDØ20 Plot No.: 1

Date: 5 December 2006 Start Time: 1545

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: Ø

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 10"

Fraxinus pennsylvanica
Ulmus americana

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

Very small wooded area along pond

001w

BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3IL80021 Plot No.: 1

Date: 5 December 2006 Start Time: 1500

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: Ø

Percent Canopy Cover (circle one): 0-25% (25-50%) 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14"

fraxinus pennsylvanica

Ulmus americana

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

0015

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILBO023 Plot No.: 1

Date: 5 December 2006 Start Time: 1400

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	Quercus velutina dead	n/a	n/a	n/a

Total No. of PRTs: 1

Percent Canopy Cover (circle one): 0-25% (25-50%) 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 12"

Salix nigra

Platanus occidentalis

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

~~none~~ stream margin "woodlot"

Comments (include access comments):

very small wooded area

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3IL8D023 Plot No.: 1

Date: 5 December 2004 Start Time: 1330

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 8"

Ulmus americana

Salix nigra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

mainly wetland, forested area outside of survey corridor

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILBOØ21 Plot No.: 1

Date: 5 December 2006 Start Time: 1300

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	unknown dead trunk	n/a

Total No. of PRTs: 1

Percent Canopy Cover (circle one): 0-25% (25-50%) 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 16"

Ulmus americana
Celtis occidentalis
Quercus velutina

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILB0025 Plot No.: 1

Date: 5 December 2006 Start Time: 1200

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% (25-50%) 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14"

Salix nigra

Fraxinus pennsylvanica

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3IL80627 Plot No.: 1

Date: 5 December 2006 Start Time: 1120

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	Quercus sp. alive

Total No. of PRTs: 1

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 24"

Maclura pomifera

* Quercus sp.

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

center point taken @ PRT

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILB0028 Plot No.: 1

Date: 5 December 2006 Start Time: 0945

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 10"

Celtis occidentalis

Ulmus americana

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3ILBO029 Plot No.: 1

Date: 5 December 2006 Start Time: 0955

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14"

Quercus palustris Acer saccharum

Ulmus rubra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH3IL80030 Plot No.: 1

Date: 5 December 2006 Start Time: 0950

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14"

Celtis occidentalis Carya sp.

Juglans nigra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

n/a

Comments (include access comments):

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BAT BH2 ILFA001 Plot No.: 1

Date: 12-5-06 Start Time: 4:00

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Lat: 38°46'15.763N

Long: 69°15'5.088W

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	Quercus Imbricaria (dead)	n/a

Total No. of PRTs: 1

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 18

Quercus imbricaria

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

none

Comments (include access comments):

6 large Trees in wood lot it is 10 ft wide

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH2ILFA002 Plot No.: 1

Date: 12-05-06 Start Time: 3:00pm

Length of East/West Plot Edge (ft): All

Length of North/South Plot Edge (ft): All

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	Acer negundo	2 Juglans nigra 2 Gleditsia triacanthos	n/a

Total No. of PRTs: 5

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (70) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 16

Quercus Palustris
Acer negundo
Acer saccharinum

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

stream in middle of plot

Boat access road

Comments (include access comments):

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH2ILFA003 Plot No.: 1

Date: 12-06-06 Start Time: 9:00am 9:25

Length of East/West Plot Edge (ft): All

Length of North/South Plot Edge (ft): All

Lat: 38° 48' 16.660" N

Long: 89° 13' 42.484" W

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
None	None	None	None	None

Total No. of PRTs: 0

understory clear

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 6

Salix nigra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

Wetland None

Comments (include access comments):

Wetland with small willows Centerline offset 150ft 180° off Levee

Nearly all open

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

check in Pathfinder

Woodlot (Feature) ID: BATBHZILFA004 Plot No.: 1

Date: 12-06-06 Start Time: 9:25

Length of East/West Plot Edge (ft): All

Length of North/South Plot Edge (ft): All

Lat: 38° 48' 15.459" N
Long: 89° 13' 29.091" W

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
Na	Na	1 Salix nigra alive	5 Salix nigra alive	Na

Total No. of PRTs: 6

understory very dense

Percent Canopy Cover (circle one): 0-25% 25-50% 50-75% (75-100%)

Dominant Overstory Tree Species (list up to 3): Salix Nigra

Estimated Average Overstory dbh (in): 12

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

Wetland in middle of plot/ along Levee

Comments (include access comments):

very dense Button Bush

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH2ILFA005 Plot No.: 1

Date: 12-06-06 Start Time: 10:45

Lat: 38°48'15.740"N
Long: 89°13'17.749"W

Length of East/West Plot Edge (ft): All

Length of North/South Plot Edge (ft): All

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
			Salix nigra 3 branches alive	

Total No. of PRTs: 1

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 14

Salix Nigra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

along river

Comments (include access comments):

Salix is only large tree 3

Woodlot very small

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH2ILFA006 Plot No.: 1

Date: 12-06-06 Start Time: 11:45

Length of East/West Plot Edge (ft): All

Length of North/South Plot Edge (ft): All

Lat: 38°48'15.205"N

Long: 89°13'13.263"W

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
NA	NA	NA	NA	NA

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

understory dense

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 8

Salix nigra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

NONE

Comments (include access comments):

Small Salix next to river

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BAT BH2ILFA007 Plot No.: 1

Date: 12-06-06 Start Time: 1210S

Length of East/West Plot Edge (ft): All

Length of North/South Plot Edge (ft): All

Lat 38°48' 15.039 N
Long 89°13' 5.659 W

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
			Salix nigra alive	

Total No. of PRTs: 1

Understory = Mid.

Percent Canopy Cover (circle one): 0-25% (25-50%) 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Salix nigra

Estimated Average Overstory dbh (in): 14

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

On Levee

Comments (include access comments):

Flooded and could not travers
offset points in gps

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BaTBH2IL FA019 Plot No.: 1

Date: 12-05-06 Start Time: 12:25 1:45 out

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Lat: 38° 48' 5.297" N
Long: 89° 11' 0.667 W

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	Betula nigra Betula nigra Salix nigra Salix nigra Betula nigra	n/a

Total No. of PRTs: 5

Understory mod

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 16

Betula nigra
Salix nigra
Acer rubra

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):
Edge of wetland in the ~~east~~ western portion

Comments (include access comments):

Wood lot seperated by scrubby area
Large trees next to wetland in the western Portion of the plot
Many small trees in the East

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH2ILFA022 Plot No.: 1

Date: 12-05-06 Start Time: 11:50 12:15

Length of East/West Plot Edge (ft): 911

Length of North/South Plot Edge (ft): 911

Lat 38° 47' 28.076" N
Long 89° 8' 34.047 W

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
None	None	None	None	None

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

understory moderate

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 16

Quercus Palustris
Fraxinus Pennsylvanica
Celtis Occidentalis

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

None

Comments (include access comments):

Narrow strip of trees between Ag fields

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH2ILMR001 Plot No.: 1

Date: 12-5-06 Start Time: 11:15 11:45

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Lat/ 38° 47' 23.5030" N
Long/ 89° 8' 0.611" W

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
NA	NA	NA	NA	NA

Total No. of PRTs: 0

understory

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Quercus imbricaria

Estimated Average Overstory dbh (in): 12

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

None

Comments (include access comments):

strip of trees 20ft wide

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH2ILMR002 Plot No.: 1

Date: 12-5-06 Start Time: 9:15 10:30ish

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Lat 38°47'15.537"N
Long 89°6'4.679"W

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
N/A	Prunis serotina (dead)	Ulmus americana (dead)	Ulmus americana (dead) Ulmus americana (dead)	Ulmus americana (dead)

Total No. of PRTs: 5

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 15

Maclura pomifera
Celtis occidentalis
Quercus imbricaria

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

Stream in center of plot
Pastured portion of plot has open areas

Comments (include access comments):

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMR003 Plot No.: 1

Date: 12-4-06 Start Time: 11:00

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): 0-25% 25-50% (50-75%) 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 15

Pinus Rigida

Acer saccharinum

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

open understory

Comments (include access comments):

Residential back yard

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1_ILMR004 Plot No.: 1

Date: 12-4-06 Start Time: 10:45

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: 0

Percent Canopy Cover (circle one): (0-25%) 25-50% 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 5

Tilia americana

Celtis occidentalis

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

small stream

Comments (include access comments):

few trees along ditch/stream

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BHE/ENSR Bat Habitat Survey Field Form
Potential Roost Tree Identification

Woodlot (Feature) ID: BATBH1ILMR005 Plot No.: 1

Date: 12-4-06 Start Time: 10:30

Length of East/West Plot Edge (ft): all

Length of North/South Plot Edge (ft): all

Within each DBH size class list PRT species and indicate dead/alive

>22 cm	22-30 cm	30-40 cm	40-50 cm	≥50 cm
n/a	n/a	n/a	n/a	n/a

Total No. of PRTs: Ø

Percent Canopy Cover (circle one): 0-25% (25-50%) 50-75% 75-100%

Dominant Overstory Tree Species (list up to 3): Estimated Average Overstory dbh (in): 12

Quercus imbricaria

Celtis occidentalis

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):

small stream

Comments (include access comments):

none

Appendix D. Field GPS Data and Site Photographs

The GPS-collected field data and site photographs are included on an attached CD-ROM.