

Prepared for:  
**Keystone Pipeline Project**



## Assessment of Indiana Bat Summer Habitat Along the Proposed Keystone Pipeline in Illinois



PN: 0987.012-001

March 14, 2007

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

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## EXECUTIVE SUMMARY

BHE Environmental, Inc. (BHE) was contracted by ENSR Corporation (ENSR) on behalf of the Keystone Pipeline 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 Project: 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 Project. Of the 120 forest crossings initially identified for assessment, 52 were assessed during previous field efforts. An additional 14 sites were surveyed during February 2007, the results of which are presented in this report, for a total of 66 sites assessed to date. Of the remaining 54 woodlots, 47 were inaccessible due to lack of landowner permission and 7 are flooded for migratory bird habitat until spring. To the extent to which Keystone can obtain access to these sites, they will be surveyed in spring 2007.

The quality of Indiana bat summer habitat was evaluated within the portion of the 66 total forested tracts within the 200-ft wide survey corridor using a quantitative assessment method. Of the 14 sites assessed during this field investigation, there were 7 sites (50%) 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: one "Low-Quality" site (7%), five "Medium-Quality" sites (36%), and one "High-Quality" site (7%). Of the 66 total sites assessed to date during the field investigations, there were 32 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: three "Low-Quality" sites (5%), 23 "Medium-Quality" sites (35%), and eight "High-Quality" sites (12%).

## 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 Keystone Mainline 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. 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 2006a). 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 assessed during previous field efforts (BHE 2006b). An additional 14 sites were surveyed during February 2007, the results of which are presented in this report, for a total of 66 sites assessed to date. Of the remaining 54 woodlots, 47 were inaccessible due to lack of landowner permission and 7 are flooded for migratory bird habitat until spring. The quality of Indiana bat summer habitat was evaluated within the portion of the 66 total forested tracts within the 200-ft wide survey corridor using a quantitative assessment method. The area of wooded habitat surveyed at the 14 sites assessed during this field effort ranged from approximately 0.4 acres to 11.0 acres. The area of wooded habitat surveyed at the 66 total 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, or 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 contacted Joyce Collins of the Marion, Illinois Fish and Wildlife Service 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 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:

- FFFNNNSSCCXXXAA
  - FFF = Feature Type ("BAT" for bat habitat natural feature)
  - NNN= Team Number
    - Previous Field Effort (BHE 2006b)
      - 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)
    - February 2007 Field Effort
      - BH1 - Chad Kinney and Lisa Winhold (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)
  - AA = Alignment date
    - August (AU)

Of the 120 forest crossings initially identified for assessment, 14 were assessed during this field effort and 66 total have been assessed in the field to date. Forty-seven of the woodlots

were inaccessible due to access denial by the landowner(s) and seven are flooded for migratory bird habitat until spring (Appendix B). Where possible, woodlots that were previously inaccessible will be surveyed during additional field investigations in 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, as described in BHE 2006b, and during February 2007, the results of which are presented in this report. The woodlots were surveyed in their entirety (census) 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 single point within each woodlot was documented with GPS. Data regarding the presence of PRTs in each woodlot 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
- $\geq 3$  m in height
- $\geq 25\%$  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
- $\geq 50$  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 (HSI) 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.
2. For the woodlot, determine the area of the woodlot, in hectares.
3. The density of PRTs, (D) in PRT/ha, is the value 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  $\geq 14$  PRT/ha:
  - If  $D \geq 14$ , 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)	$\geq 0.60$	8 PRT $> 30$ cm or 5 PRT $> 40$ cm or 3 PRT $> 50$ cm	$\geq 30\%$
Medium (score = 2)	$\geq 0.40$ & $< 0.60$	$\geq 1$ PRT $\geq 22$ cm	$\geq 13\%$ & $< 30\%$
Low (score = 1)	$< 0.40$	$< 1$ PRT $\geq 22$ 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
$\geq 7$	High
6 or 5	Medium
$\leq 4$	Low

### 3.0 RESULTS

Of the 14 sites assessed during this field investigation, 7 sites (50%) 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: one "Low-Quality" site (7%), five "Medium-Quality" sites (36%), and one "High-Quality" site (7%) (Appendix B). Woodlot data for the six sites of medium- and high-quality are shown in Table 3.

Of the 66 total sites assessed to date during the field investigations, there were 32 sites (48%) with no 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: three "Low-Quality" sites (5%), 23 "Medium-Quality" sites (35%), and eight "High-Quality" sites (12%) (Appendix B).

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

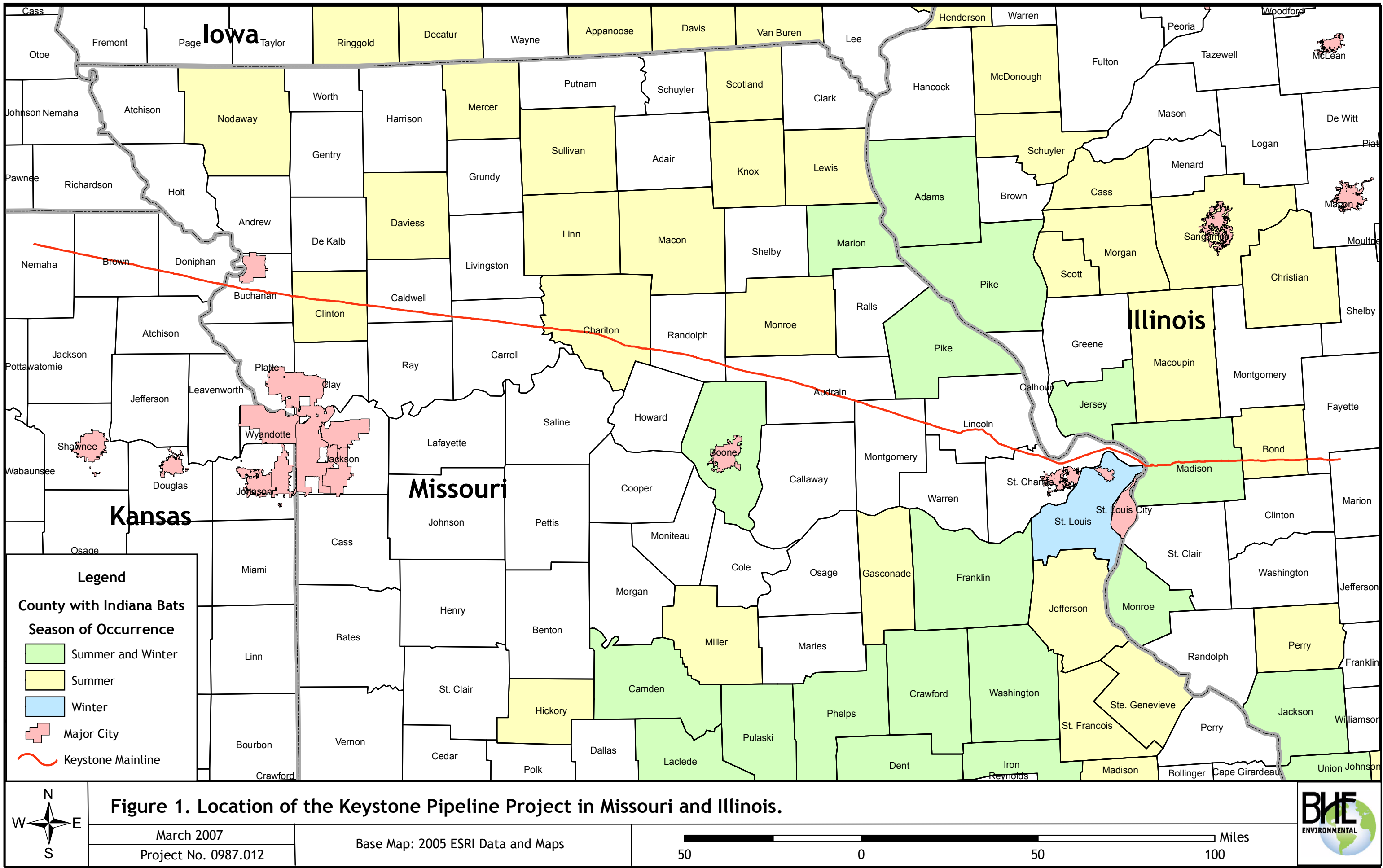
Woodlot ID	Plot No.	Length of Plot (ft)	Width of Plot (ft)	No. of PRTs	PRT Species	Percent Canopy Cover	Average Overstory dbh (in)	Dominant Overstory Species	Presence of Apparently Suitable Mist Net Sites
BATBH1ILMA048AU	Plot 1	ALL	ALL	2	<i>Celtis occidentalis</i> ; <i>Salix niger</i> .	0-25	4	<i>Celtis occidentalis</i> ; <i>Salix niger</i> .	NONE
BATBH1ILMA051AU	Plot 1	ALL	ALL	1	<i>Quercus imbricaria</i> .	0-25	8	<i>Celtis occidentalis</i> ; <i>Quercus imbricaria</i> .	NONE
BATBH1ILBO004AU	Plot 1	ALL	ALL	14	<i>Carya ovata</i> (9); <i>Ulmus americana</i> ; <i>Acer negundo</i> (2); <i>Quercus rubra</i> ; <i>Quercus alba</i> .	50-75	12	<i>Quercus alba</i> ; <i>Carya ovata</i> ; <i>Acer negundo</i> .	Existing ROW. Stream.
BATBH1ILBO005AU	Plot 1	ALL	ALL	3	<i>Ulmus americana</i> (2); <i>Acer negundo</i> .	25-50	12	<i>Acer negundo</i> ; <i>Platanus occidentalis</i> ; <i>Celtis occidentalis</i> .	Field. Existing ROW.
BATBH1ILFA016AU	Plot 1	ALL	ALL	2	<i>Acer</i> sp.; <i>Acer saccharinum</i> .	0-25	7	<i>Acer saccharinum</i> ; <i>Acer negundo</i> .	NONE
BATBH1ILFA017AU	Plot 1	ALL	ALL	2	<i>Acer saccharinum</i> .	0-25	16	<i>Acer saccharinum</i> ; <i>Populus deltoides</i> .	Stream.

## 4.0 LITERATURE CITED

BHE Environmental, Inc. (BHE). 2006a. 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.

BHE Environmental, Inc. (BHE). 2006b. Assessment of Indiana Bat Summer Habitat Along the Proposed Keystone Pipeline in Illinois. Unpublished report prepared for ENSR Corporation, Fort Collins, Colorado. 14pp + attachments.

## FIGURES



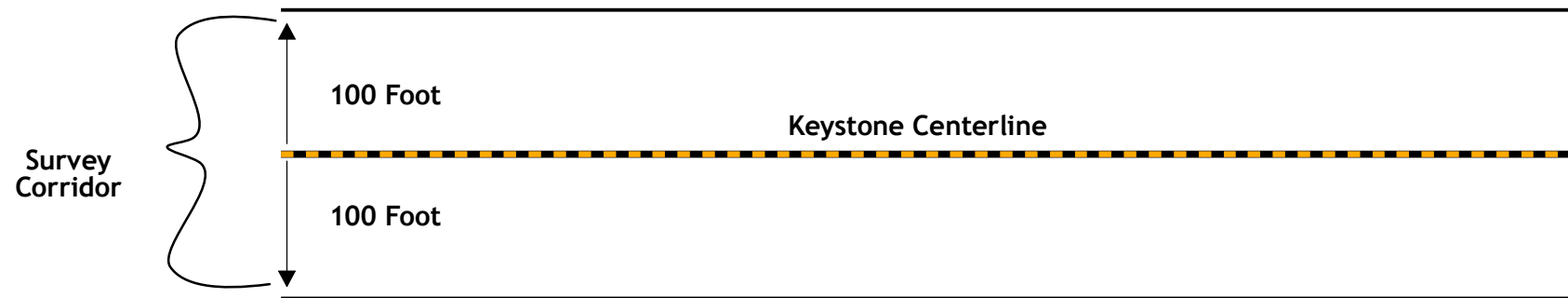
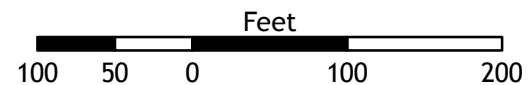


Figure 2. Diagram of Keystone Pipeline Project survey corridor in Illinois.

Project No. 0987.012

March 2007



## APPENDICES



## Appendix A. USFWS Concurrence with Study Plan



U.S. Fish &amp; Wildlife Service



## United States Department of the Interior

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8588 ROUTE 148  
MARION, ILLINOIS 62959

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### FACSIMILE TRANSMITTAL

TO: Russ Romme FAX: 513-326-1550  
FROM: Joyce Collins DATE: 12/2/06  
SUBJECT: Keystone Indiana PAGE 1 OF 8  
DATA Assessment

NOTES





0987.008.001

November 30, 2006

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)

<input checked="" type="checkbox"/> <b>CONCUR</b> with edits on PAGES 3 & 4	Signature
<input type="checkbox"/> <b>DO NOT CONCUR</b>	Name (print) Joyce A. Collins
	Title Assistant Field Supervisor
	Date 12/2/03

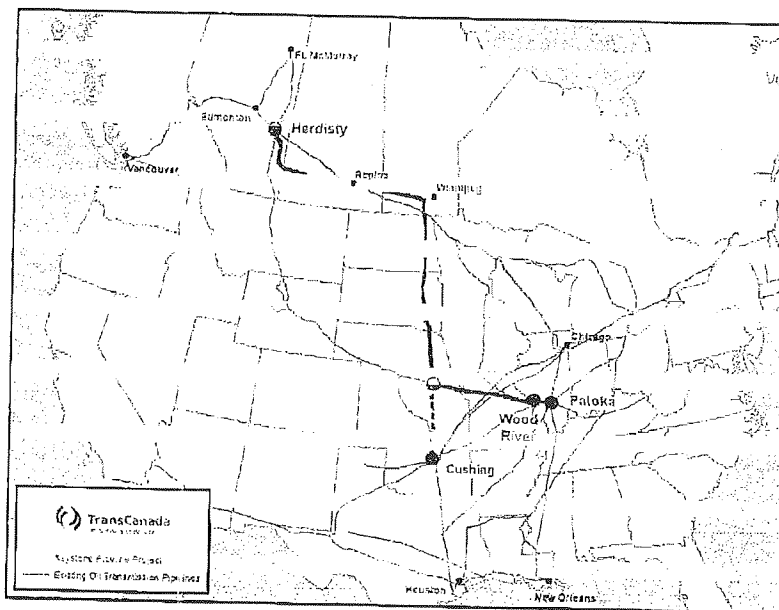
**PROPOSED INDIANA BAT INVESTIGATIONS  
KEYSTONE PIPELINE PROJECT THROUGH FOUR ILLINOIS COUNTIES  
NOVEMBER 2006**

## 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  $\geq 9$  inches ( $\geq 22$  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,  $\geq 50$  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)	$\geq 0.60$	8 PRT > 30 cm or 5 PRT > 40 cm or 3 PRT > 50 cm	$\geq 30\%$
Medium (score = 2)	$\geq 0.40$ & $< 0.60$	$\geq 1$ PRT $\geq 20$ cm	$\geq 13\%$ & $< 30\%$
Low (score = 1)	$< 0.40$	$< 1$ PRT $\geq 20$ 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
$\geq 7$	High
6 or 5	Medium
$\leq 4$	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 ~~remove suitable Indiana bat habitat may affect, but are not likely to adversely affect Indiana~~ subsequent activities. 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. *Jan 12/2/06*

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.

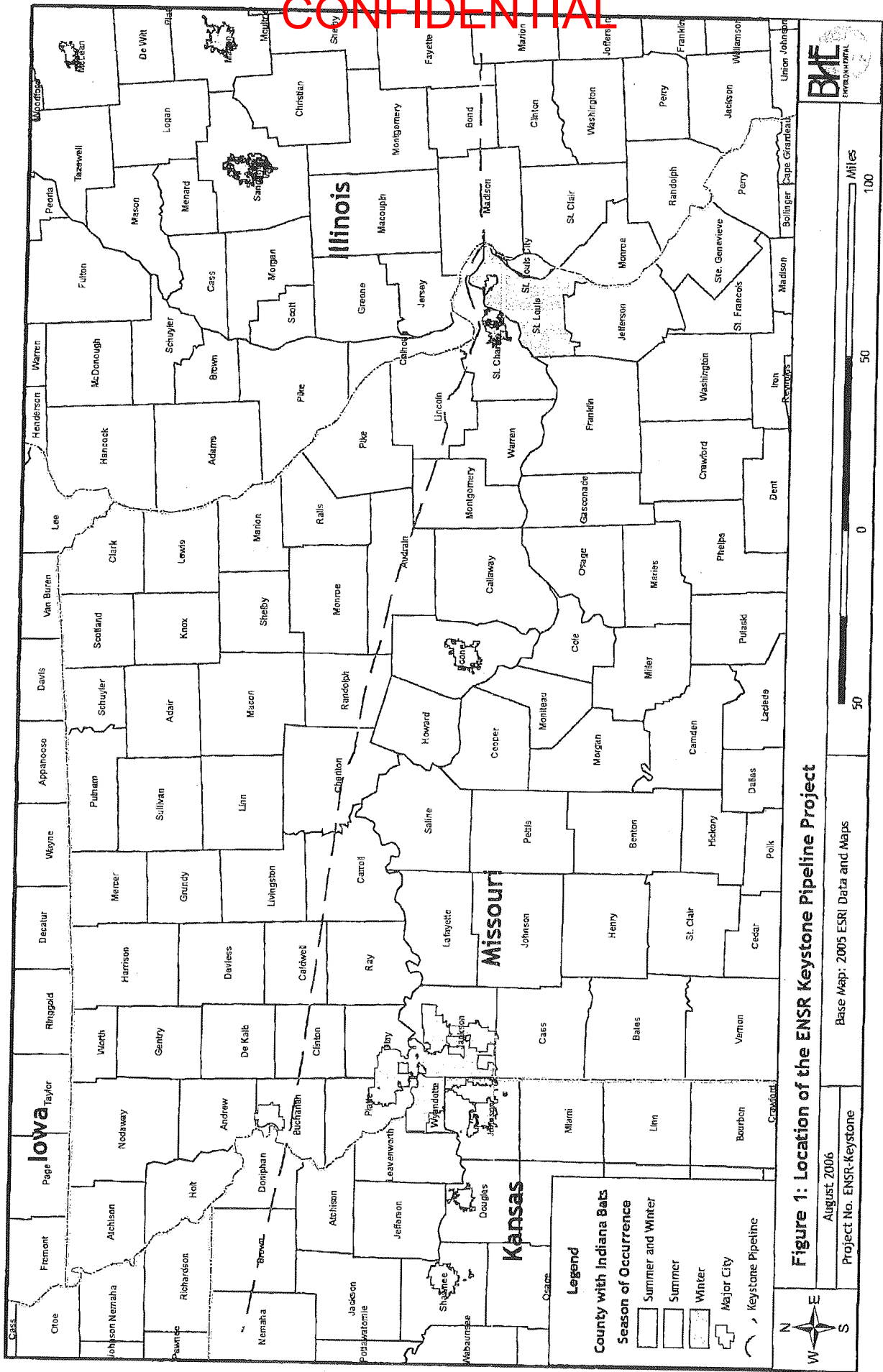
We also agreed that at sites with no PRTs, or at sites with low habitat quality, project activities are not likely to adversely affect Indiana bats because effects would be insignificant or discountable (in the absence of any unusual circumstances such as proximity to a known occurrence).

## 5.0 LITERATURE CITED

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- Rommé, R., K. Tyrell, and V. Brack. 1995. Literature Summary and Habitat Suitability Index Model, Components of Summer Habitat for the Indiana Bat. Federal Aid Project E-1-7, No. 8. Indiana Department of Natural Resources, Bloomington.
- Sparks, D., C. Ritzi, J. Duchamp, and J. Whitaker. 2005. Foraging habitat of the Indiana bat (*Myotis sodalis*) at an urban-rural interface. *Journal of Mammalogy* 86(4):713-718.

**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 during the February 2007 field effort (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	Already surveyed
BATBH1ILMA002	Madison	1021.92	1022.00	1022.08	845	3.9	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	4	1	N/A	No PRTs	Already surveyed
BATBH_ILMA003AU	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
BATBH1ILMA004AU	Madison	1023.67	1023.76	1023.84	898	4.1	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	5	1	N/A	No PRTs	
BATBH1ILMA005AU	Madison	1023.98	1024.02	1024.05	370	1.7	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	6	1	N/A	No PRTs	
BATBH_ILMA006AU	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
BATBH_ILMA007AU	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
BATBH_ILMA008AU	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
BATBH_ILMA009AU	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
BATBH_ILMA010AU	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
BATBH_ILMA011AU	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
BATBH_ILMA012AU	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
BATBH_ILMA013AU	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
BATBH_ILMA014AU	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
BATBH_ILMA015AU	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
BATBH_ILMA016AU	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
BATBH_ILMA017AU	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
BATBH_ILMA018AU	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
BATBH_ILMA019AU	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
BATBH_ILMA020AU	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
BATBH_ILMA021AU	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
BATBH_ILMA022AU	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
BATBH_ILMA023AU	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
BATBH_ILMA024AU	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
BATBH_ILMA025AU	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
BATBH_ILMA026AU	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
BATBH_ILMA027AU	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
BATBH_ILMA028AU	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
BATBH_ILMA029AU	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
BATBH_ILMA030AU	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
BATBH_ILMA031AU	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
BATBH_ILMA032AU	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
BATBH_ILMA033AU	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
BATBH_ILMA034AU	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
BATBH_ILMA035AU	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
BATBH_ILMA036AU	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	Already surveyed
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	Already surveyed
BATBH_ILMA039AU	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
BATBH_ILMA040AU	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
BATBH_ILMA041AU	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
BATBH_ILMA042AU	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
BATBH_ILMA043AU	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
BATBH3ILMA044	Madison	1037.32	1037.48	1037.64	1690	7.8	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	13	2	N/A	No PRTs	Already surveyed
BATBH3ILMA045	Madison	1037.64	1037.65	1037.66	106	0.5	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	11	1	N/A	No PRTs	Already surveyed
BATBH3ILMA046	Madison	1037.75	1037.83	1037.91	106	0.5	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	12	1	N/A	No PRTs	Already surveyed
BATBH3ILMA047	Madison	1038.43	1038.44	1038.45	845	3.9	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	12	1	N/A	No PRTs	Already surveyed
BATBH1ILMA048AU	Madison	1040.24	1040.25	1040.27	158	0.7	Census	2	6.80	0.49	2	1	1	0	0	0	3.4	3.4	0.0	0.0	0.0	2	8	1	5	Medium	
BATBH1ILMA049AU	Madison	1040.61	1040.68	1040.74	686	3.2	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	12	1	N/A	No PRTs	
BATBH1ILMA050AU	Madison	1040.93	1041.06	1041.18	1320	6.1	Census	3	1.22	0.09	1	0	0	0	3	0	0.0	0.0	0.0	1.2	0.0	2	12	1	4	Low	

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
BATBH1ILMA051AU	Madison	1041.22	1041.24	1041.25	158	0.7	Census	1	3.40	0.24	1	0	0	0	1	0	0.0	0.0	0.0	3.4	0.0	2	13	2	5	Medium	
BATBH1ILMA052AU	Madison	1042.44	1042.50	1042.56	634	2.9	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	13	2	N/A	No PRTs	
BATBH_ILMA053AU	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
BATBH_ILMA054AU	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
BATBH_ILMA055AU	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	Already surveyed
BATBH1ILMA057	Madison	1045.62	1045.68	1045.73	581	2.7	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	16	2	N/A	No PRTs	Already surveyed
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	Already surveyed
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	Already surveyed
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	Already surveyed
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	Already surveyed
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	Already surveyed
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	Already surveyed
BATBH2ILBO001AU	Bond	1050.88	1050.90	1050.91	158	0.7	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	4	1	N/A	No PRTs	
BATBH4ILBO002	Bond	1052.25	1052.27	1052.98	3854	17.7	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	15	2	N/A	No PRTs	Already surveyed
BATBH4ILBO003	Bond	1052.29	1052.31	1052.32	158	0.7	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	15	2	N/A	No PRTs	Already surveyed
BATBH1ILBO004AU	Bond	1053.18	1053.35	1053.51	1742	8.0	Census	14	4.32	0.31	1	5	4	4	1	0	1.5	1.2	1.2	0.3	0.0	2	22	2	5	Medium	
BATBH1ILBO005AU	Bond	1053.91	1053.96	1054.00	475	2.2	Census	3	3.40	0.24	1	0	1	0	1	1	0.0	1.1	0.0	1.1	1.1	2	25	2	5	Medium	
BATBH4ILBO006	Bond	1054.18	1054.21	1054.24	317	1.5	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	25	2	N/A	No PRTs	Already surveyed
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	Already surveyed
BATBH_ILBO008AU	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	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	12	1	N/A	No PRTs	Already surveyed
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	Already surveyed
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	Already surveyed
BATBH_ILBO012AU	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
BATBH_ILBO013AU	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
BATBH_ILBO014AU	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	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	19	2	N/A	No PRTs	Already surveyed
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	Already surveyed
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	Already surveyed
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	Already surveyed
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	Already surveyed
BATBH3ILBO020	Bond	1061.01	1061.03	1061.05	211	1.0	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	16	2	N/A	No PRTs	Already surveyed
BATBH3ILBO021	Bond	1061.35	1061.39	1061.43	422	1.9	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	14	2	N/A	No PRTs	Already surveyed
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	Already surveyed
BATBH3ILBO023	Bond	1061.92	1062.01	1062.10	950	4.4	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	9	1	N/A	No PRTs	Already surveyed
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	Already surveyed
BATBH3ILBO025	Bond	1064.18	1064.19	1064.20	106	0.5	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	2	1	N/A	No PRTs	Already surveyed
BATBH_ILBO026AU	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	Already surveyed
BATBH3ILBO028	Bond	1066.71	1066.83	1066.96	1320	6.1	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	4	1	N/A	No PRTs	Already surveyed
BATBH3ILBO029	Bond	1067.02	1067.15	1067.28	1373	6.3	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	5	1	N/A	No PRTs	Already surveyed
BATBH3ILBO030	Bond	1067.32	1067.40	1067.47	792	3.6	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	8	1	N/A	No PRTs	Already surveyed
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	Already surveyed
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	Already surveyed
BATBH2ILFA003	Fayette	1069.91	1069.98	1070.04	686	3.2	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	21	2	N/A	No PRTs	Already surveyed
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	Already surveyed
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	Already surveyed
BATBH2ILFA006	Fayette	1070.33	1070.38	1070.42	475	2.2	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	22	2	N/A	No PRTs	Already surveyed
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	Already surveyed
BATBH_ILFA008AU	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	Flooded for migratory bird habitat until spring
BATBH_ILFA009AU	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	Flooded for migratory bird habitat until spring

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
BATBH_ILFA010AU	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	Flooded for migratory bird habitat until spring
BATBH_ILFA011AU	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	Flooded for migratory bird habitat until spring
BATBH_ILFA012AU	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	Flooded for migratory bird habitat until spring
BATBH_ILFA013AU	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	Flooded for migratory bird habitat until spring
BATBH_ILFA014AU	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	Flooded for migratory bird habitat until spring
BATBH1ILFA015AU	Fayette	1071.90	1071.90	1071.91	79	0.4	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	24	2	N/A	No PRTs	
BATBH1ILFA016AU	Fayette	1072.05	1072.09	1072.12	370	1.7	Census	2	2.91	0.21	1	1	0	0	0	1	1.5	0.0	0.0	0.0	1.5	2	24	2	5	Medium	
BATBH1ILFA017AU	Fayette	1072.17	1072.18	1072.19	106	0.5	Census	2	10.19	0.73	3	0	0	1	1	0	0.0	0.0	5.1	5.1	0.0	3	23	2	8	High	
BATBH1ILFA018AU	Fayette	1072.24	1072.27	1072.30	2402	11.0	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	23	2	N/A	No PRTs	
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	Already surveyed
BATBH_ILFA020AU	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
BATBH_ILFA021AU	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	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	7	1	N/A	No PRTs	Already surveyed
BATBH2ILMR001	Marion	1075.21	1075.22	1075.23	106	0.5	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	8	1	N/A	No PRTs	Already surveyed
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	Already surveyed
BATBH2ILMR003	Marion	1077.29	1077.34	1077.38	475	2.2	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	15	2	N/A	No PRTs	Already surveyed
BATBH2ILMR004	Marion	1077.70	1077.71	1077.74	185	0.8	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	17	2	N/A	No PRTs	Already surveyed
BATBH2ILMR005	Marion	1077.73	1077.73	1077.74	53	0.2	Census	0	0.00	0.00	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	N/A	17	2	N/A	No PRTs	Already surveyed

## Appendix C. Field Data Sheets



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

CONFIDENTIAL

Woodlot (Feature) ID: BATBH1ILMA004AV

Plot No.: 1

Date: 2-4-07

Start Time: 1240

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): 6

Hackberry (*Celtis occidentalis*)  
Black willow (*Salix nigra*)  
Cottonwood (*Populus deltoides*)

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

no

Comments (include access comments):

near private drive to tank farm (Robbins Rd)

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

CONFIDENTIAL

Woodlot (Feature) ID: BATBHI ILMA005 AU Plot No.: 1

Date: 2-4-07 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): 1

Staghorn Sumac (*Rhus typhina*)

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

no

Comments (include access comments):

no trees! just shrubs



# BHE/ENSR Bat Habitat Survey Field Form

## Potential Roost Tree Identification

CONFIDENTIAL

Woodlot (Feature) ID: BATBH1ILMA048AU

Plot No.: 1

Date: 2-4-07

Start Time: 850

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
<i>Celtis occidentalis</i> (dead)	<i>Salix niger</i> (alive) - broken top	N/A	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): 4

Hackberry (*Celtis occidentalis*)  
black willow (*Salix niger*)

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

no

Comments (include access comments):

- RR grade + treeline south of site are cleared + level  
- trees, concrete, dirt etc piled in middle of RR at site

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

**CONFIDENTIAL**

Woodlot (Feature) ID: BATBHILMA049AU

Plot No.: 1

Date: 2-4-07

Start Time: 930

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): 4

Shingle oak  
 Pin oak  
 Hackberry  
 (Quercus imbricaria)  
 (Quercus palustris)  
 (Celtis occidentalis)

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

none

Comments (include access comments):

north border of yard (huge, new, brick house)

# BHE/ENSR Bat Habitat Survey Field Form

## Potential Roost Tree Identification

CONFIDENTIAL

Woodlot (Feature) ID: BATBH1ILMA050AU

Plot No.: 1

Date: 2-4-07

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	Populus deltoides (alive) - dead branch Unidentifiable snag Ulmus americana (dead)	N/A

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): 8

Populus deltoides (Cottonwood)  
 Celtis occidentalis (Hackberry)

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

across existing low  
 across creek (6-9 m wide)

Comments (include access comments):

all good PRTs have been bulldozed + piled at south edge of stand.



# BHE/ENSR Bat Habitat Survey Field Form

## Potential Roost Tree Identification

CONFIDENTIAL

Woodlot (Feature) ID: BATBHILMA 051 AU Plot No.: 1  
 Date: 2-4-07 Start Time: 1040

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	<i>Quercus imbricaria</i> (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): 8

*Hackberry*  
*Shingle oak*

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

no

Comments (include access comments):

none

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

**CONFIDENTIAL**

Woodlot (Feature) ID: BATBH1ILMA052 AU

Plot No.: 1

Date: 2-3-07 Start Time: 1550

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

Honey Locust (*Gleditsia triacanthos*)  
 Shingle Oak (*Quercus imbricaria*)  
 Hackberry (*Celtis occidentalis*)

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

across existing ROW

Comments (include access comments):

dense honey suckle throughout.  
(*Lonicera mackii*)

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

CONFIDENTIAL

Woodlot (Feature) ID: BATBH1ILB0001AU

Plot No.: 1

Date: 2-3-07 Start Time: 1345

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

Black cherry (*Prunus serotina*)  
Osage orange (*Maclura pomifera*)  
Hackberry (*Celtis occidentalis*)

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

no

Comments (include access comments):

only 3 trees in plot



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

**CONFIDENTIAL**

Woodlot (Feature) ID: BATBH1 ILBO004 AU

Plot No.: 1

Date: 2-3-07

Start Time: 1100

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
<i>Carya ovata</i> (alive) <i>Carya ovata</i> (alive) <i>Carya ovata</i> (alive) <i>Carya ovata</i> (alive) <i>Carya ovata</i> (alive)	<i>Carya ovata</i> (alive) <i>Carya ovata</i> (alive) <i>Ulmus americana</i> (dead) <i>Acer negundo</i> (dead)	<i>Carya ovata</i> (alive) <i>Quercus rubra</i> (dead) <i>Quercus alba</i> (alive) - dead branches <i>Carya ovata</i> (alive)	<i>Acer negundo</i> (alive) - dead branches	N/A

Total No. of PRTs: 14

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

White oak (*Quercus alba*)  
~~Red oak~~  
 Shagbark (*Carya ovata*)  
 Acer negundo (Box elder)

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

across existing corridor  
 across stream (≤6m)

Comments (include access comments):

driveway comes close to west end  
 bridge crosses stream → has big steel supports (could probably support vehicle)

# BHE/ENSR Bat Habitat Survey Field Form

## Potential Roost Tree Identification

CONFIDENTIAL

Woodlot (Feature) ID: BATBHILB0005 AU

Plot No.: 1

Date: 2-3-07 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	<i>Ulmus americana</i> (dead)	N/A	<i>Acer negundo</i> (alive) -dead branches	<i>Ulmus americana</i> (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): 12

Box elder (*Acer negundo*)  
Sycamore (*Platanus occidentalis*)  
Hackberry (*Celtis occidentalis*)

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

across field  
across existing pipeline ROW

Comments (include access comments):

road/drive at junction of 2 fields



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

CONFIDENTIAL

Woodlot (Feature) ID: BATBH11LFAD15AU

Plot No.: 1

Date: 2-2-07 Start Time: 1600

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

Black willow (Salix nigra)

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

no

Comments (include access comments):

flooded  
center pt ≈ 40' east of GPS pt  
enter/exit pts ≈ 5' east + west of center  
can drive on levee to site

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

**CONFIDENTIAL**

Woodlot (Feature) ID: BATBH1ILFA016AU

Plot No.: 1

Date: 2-2-07

Start Time: 1530

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
Maple (Acer sp.)	N/A	N/A	N/A	Silver maple (alive) (Acer saccharinum)

Total No. of PRTs: 2 (same as BATBH1ILFA003NO)

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): 7

Silver maple (Acer saccharinum)  
Box elder (Acer negundo)

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

no

Comments (include access comments):

can drive on levee to site

\* photo label in image (white board) says "NO" not "AU"

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

CONFIDENTIAL

Woodlot (Feature) ID: BATBH1ILFA0107 AU Plot No.: 1  
Date: 2-2-07 Start Time: 1140

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	Silver maple (alive)	Silver maple (alive)	N/A

Total No. of PRTs: 2 (same as BATBH1ILFA009 NO)

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  
Silver maple (Acer saccharinum)  
Cottonwood (Populus deltoides)

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

across stream

Comments (include access comments):

farmlane near BATBH1ILFA010 NO + BATBH1ILFA  
is closest access if permission is granted to drive  
on it.



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

CONFIDENTIAL

Woodlot (Feature) ID: BATBH1ILFA018AU

Plot No.: 1

Date: 2-2-07

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): 1  
Silver maple (Acer saccharinum)

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

1 to treeline

Comments (include access comments):

Farlane parallels treeline to the west

## Appendix D. Field GPS Data and Site Photographs

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