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

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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 a bat summer habitat investigation similar to that described in *Proposed Indiana Bat Investigations: REX-West Pipeline through Seven Missouri Counties*, dated August 2006. On November 21, 2006, Rick Hansen, U.S. Fish and Wildlife Service, gave signed concurrence that the same survey approach could be applied to the Keystone Mainline project. BHE conducted the study in all of the Missouri counties traversed by the Keystone Mainline: Buchanan, Clinton, Caldwell, Carroll, Chariton, Randolph, Audrain, Montgomery, Lincoln, and St. Charles. Specifically, BHE sought to evaluate the quality of Indiana bat summer habitat at 211 wooded areas crossed by the Keystone Mainline. Of the 211 forest crossings initially identified for assessment, 126 were actually assessed in the field. Of the remaining woodlots, 57 were inaccessible, three woodlots were determined to be continuous with other woodlots and thus were combined, field inspection of one supposed woodlot confirmed absence of trees at the location, and 24 are left to be surveyed during additional field efforts in early 2007. The quality of Indiana bat summer habitat was evaluated within the portion of 126 forested tracts crossed by the 200-ft wide survey corridor, using a quantitative assessment method. Of the 126 sites assessed during the field investigation, there were 44 sites where habitat suitability was 0.6 or higher based upon criteria established in the August 2006 study plan.

## 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 work to be conducted in Missouri. *Proposed Indiana Bat Investigations: REX-West Pipeline Through Seven Missouri Counties*, dated August 2006, describes methodology for assessment of parcels located in Missouri (BHE 2006). A letter from BHE to Rick Hansen, U.S. Fish and Wildlife Service (USFWS), signed on November 21, 2006, indicates that the same survey approach and methods developed for the REX-West Pipeline Project may also be applied to the Keystone Mainline Project (Appendix A). Specifically, BHE Environmental, Inc. (BHE) evaluated the quality of Indiana bat summer habitat at 211 areas where the Keystone Mainline route crosses forested parcels. Of the 211 forest crossings initially identified for assessment, 126 were actually assessed in the field. Of those not surveyed, 30 of the woodlots were inaccessible, three woodlots were determined to be continuous with other woodlots and thus were combined, field inspection of one preliminarily identified woodlot confirmed absence of trees at the location, 27 were located on a re-route area not to be surveyed, and 24 are left to be surveyed during additional field efforts in early 2007. The quality of Indiana bat summer habitat was evaluated within the portion of the 126 forested tracts that was within the 200-ft wide survey corridor, using a quantitative assessment method. The area of wooded habitat surveyed at the 126 sites ranged from approximately one acre to 12.4 acres.

Indiana bats are assumed present during summer in all Missouri counties crossed by the Keystone Mainline route. Known summer occurrences in the ten counties are limited to captures in Clinton and Chariton counties in 1985 and 1983, respectively (Figure 1). The 1983 record from Chariton County was of a maternity roost tree. The 1985 record from Clinton County was an "other occurrence" (non-reproductive) record. Netting in these areas in recent years did not detect the presence of Indiana bats. Indiana bats have more recently been identified at the Swan Lake National Wildlife Refuge in Chariton County approximately 6 miles north of the August 2006 Keystone alignment. The nearest known confirmed winter occurrences (two hibernacula) are more than 5 miles (8 km) south of the Keystone Mainline route in Boone County. USFWS records indicate also presence of a hibernaculum in St. Louis County, approximately 15 miles (24 km) south of the Keystone Mainline (Andrew 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 Illinois is described in a separate report.

# 2.0 METHODS

## 2.1 AGENCY COORDINATION AND SAMPLE AREA SELECTION

The study plan titled *Proposed Indiana Bat Investigations: REX-West Pipeline through Seven Missouri Counties*, dated August 2006, describes methodology for assessment of parcels located in Missouri (BHE 2006). This study plan was developed to investigate the presence Indiana bat summer habitat along the proposed REX-West pipeline that is adjacent to and parallels the proposed Keystone Mainline through the western half of Missouri. A letter from BHE to Rick Hansen, U.S. Fish and Wildlife Service (USFWS), signed on November 21, 2006, indicates that the same survey approach and methods developed for the REX-West Pipeline Project could also be applied to the Keystone Mainline Project (Appendix A).

### 2.1.1 Habitat Identification

Investigations began with identification of wooded areas traversed by the route that may provide habitat for the bat. Data pertinent to this assessment were collected during field investigations completed by ENSR in 2006. ENSR & BHE identified 631 instances where the Keystone Mainline route crossed deciduous trees - these crossings range from wooded fencerows and tree lines to small woodlots and more extensive forests.

Recognizing that larger forested parcels bear greater long-term potential for suitable foraging and roosting habitat relative to smaller wooded areas, BHE identified 321 instances in which the route crossed 200 or more linear feet (61 m) of wooded areas (BHE 2006).

BHE next evaluated Indiana bat habitat at the 321 crossings based upon the existence of forested habitat near each crossing. Considering data available in recent published literature (Murray and Kurta 2004, Sparks et al. 2005, Butchkoski and Hassinger 2002), BHE evaluated the amount of forest cover within 2.2 miles (3.5 km) of the 321 crossings. Rommé et al. (1995) indicate that even with all other summer habitat attributes being ideal, wooded areas with 13 percent forest cover in the analysis area can score no higher than a 0.32 on a scale of 0.0 (no habitat value) to 1.0 (ideal habitat).

Forest cover within 2.2 miles of the 321 crossings was calculated using vegetative cover data (30-meter pixels) from the Missouri Spatial Data Information Service, Natural Resources - Landcover. These data are based on circa 2000-2004 satellite imagery, in conjunction with ancillary data from the National Wetlands Inventory and the Wetlands Restoration Program. For purposes of this analysis, forest cover was compiled from the vegetation classifications Deciduous Forest, Evergreen Forest, Mixed Forest, Deciduous Woody/Herbaceous, and Woody Dominated Wetland.

Forest cover within 2.2 miles of 211 forest crossings greater than 200 ft in length exceeds 13 percent (BHE 2006). Field studies were implemented in August, September, and December 2006 to evaluate the quality of summer habitat at these crossings. Each woodlot was assigned

a unique alpha-numeric identifier (Appendix B). Feature ID numbers adhered to one of two naming conventions.

Feature ID protocol for sites located on Keystone-only right-of-way:
(Surveys conducted in December 2006)

- FFFNNNSSCCXXX
  - FFF = Feature Type ("BAT" for bat habitat natural feature)
  - NNN= Team Number
    - BH1 - Becky Braeutigam and Drew Carson (BHE)
    - BH2 - Dave Norcross and Samantha Williams (BHE)
    - BH3 - Chad Kinney (BHE) and Laura Vrabel (SCI)
    - BH4 - Lisa Winhold and John Alexander (BHE)
  - SS = State
    - Missouri (MO)
  - CC = County Code
    - Buchanan (BC)
    - Clinton (CL)
    - Caldwell (CA)
    - Carroll (CR)
    - Chariton (CI)
    - Randolph (RA)
    - Audrain (AU)
    - Montgomery (MO)
    - Lincoln (LI)
    - St. Charles (SC)
  - XXX = Feature number (001-999 for the Keystone alignment)

*Or*

Feature ID protocol for Keystone sites co-located on shared right-of-way:
(Surveys conducted in August and September 2006)

- FFFNNCCXXX
  - FFF = Feature Type ("NAT" for natural feature)
  - NN = Team Number
    - 8A - Becky Braeutigam and John Alexander (BHE)
    - 9A - Chad Kinney and Samantha Williams (BHE)
    - 10A - Doug Kibbe and Paul Swartzinski (ENSR)
  - CC = County Code
    - Buchanan (BC)
    - Clinton (CL)
    - Caldwell (CA)
    - Carroll (CR)
    - Chariton (CI)
    - Randolph (RA)
    - Audrain (AU)
  - XXX = Feature number (001-999)

Of the 211 forest crossings initially identified for assessment, 126 were quantitatively assessed in the field. Of the remaining woodlots, 57 were inaccessible; 55 due to access denial (Appendix B), one due to a 6 ft high-tensile electric fence (NAT__CR080), and one due to high water (NAT__CI097). Three woodlots were determined to be continuous with other woodlots and thus were combined; NAT8ABC018 & NAT8ABC019 were combined into NAT8ABC018/019, NAT8ARA108 & NAT8ARA109 were combined into NAT8ARA108/109, and NAT10ARA117 & NAT10ARA118 were combined into NAT10ARA117/118. Field inspection of woodlot NAT__BC026, proved to be without trees. Twenty-four of the woodlots are left to be surveyed during additional field investigations in early 2007 (Appendix B). Where possible, woodlots that were previously inaccessible will also be surveyed in early 2007.

### 2.1.2 Habitat Assessment

Summer habitat quality was evaluated within the forested tracts using a quantitative assessment method. Rommé et al. (1995) provide perhaps the most comprehensive assessment tool available for this effort; however, this Habitat Suitability Index (HSI) model requires intensive data collection efforts more suitable to smaller project areas. Another model utilizes a subset (three) of the assessment variables from the Rommé et al. model (Farmer et al. 2002). Farmer et al. recommend evaluation of a single variable, density of suitable roost trees, as appropriate for landscape scale assessments. We utilized this approach during the field investigations. For purposes of this investigation, "potential roost trees" (PRTs) had the following characteristics:

- ≥22 cm dbh
- ≥3 m in height
- no overarching canopy
- no understory canopy within 2 m of the trunk of the tree
- ≥25% of the tree covered by exfoliating bark
- bole of tree is free of obstructing vines

A density equal to or greater than 14 roost trees per hectare (see Rommé et al. 1995) defines ideal habitat, with a calculated single variable habitat suitability index of 1.0.

## 2.2 FIELD METHODS

The density of potential roost trees was assessed quantitatively within the wooded tracts during August, September, and 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. In areas where the Keystone Mainline parallels REX-West, the width of the survey corridor was 65 feet on the co-located side, and 100 feet on the Greenfield side. In all other areas along the Keystone Mainline route, the survey corridor was 200 feet centered on the proposed centerline (Figure 2). Approximately 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). While at the sites, biologists made notes based on other attributes of the stand that may provide useful information in assessing summer habitat quality. These attributes included:

- ocular estimates of average percent canopy cover
- ocular estimates of average overstory tree dbh
- dominant overstory tree species (up to 3)
- presence of apparently suitable mist net survey sites.

## 2.3 ANALYTICAL METHODS

Field data were analyzed to calculate a habitat suitability index between 0.0 and 1.0 for each wooded tract. The USFWS has agreed that those sites with an HSI value based upon this single variable equaling or exceeding 0.6 may require surveys for the presence of Indiana bats during the maternity season (May 15 to August 15).

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.
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.

# 3.0 RESULTS

As discussed in the methods section, of the 211 woodlots initially identified for assessment, 126 woodlots were assessed in detail during the field investigation (Appendix B). Most of the woodlots assessed (65%, n=82) were of low habitat quality, with 48% (n=60) having HSI values of 0.0, and 17% (n=22) having HSI values from 0.1 to 0.5 (Appendix B). We calculated an HSI value of 0.6 or greater for 44 (35%) of the woodlots (Appendix B; Table 1).

Of the 44 woodlots with HSI values ≥0.6, 18 had HSI values of 0.6 to 0.9 and 26 had HSI values of 1.0 (Appendix B). Woodlots with HSI values of 0.6 or greater were present in eight of the ten Missouri counties crossed by the Keystone Mainline project; however, the majority of these woodlots were in Clinton (8), Caldwell (10), Carroll (12), and Randolph (6) counties. Within the counties, woodlots with HSI values ≥0.6 tended to be grouped together. Eleven (11) of the 42 woodlots with HSI values ≥0.6 were in Clinton (8) and Chariton (3) counties, where there have been documented summer occurrences of Indiana bats (see Introduction for

occurrence details). The dominant PRT species were shagbark hickory (*Carya ovata*), oaks (*Quercus* spp.), and American elm (*Ulmus americana*) (Table 1).

## 4.0 LITERATURE CITED

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# TABLES

Table 1. Plot data for the 44 wooded areas with HSI values ≥0.6 within the proposed Keystone survey corridor in Missouri.

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT8ABC018/019 | Plot 1 | 164 | 65 | 0 | NONE | 50 | 10 | GLEDITSIA TRIACANTHOS. JUGLANS NIGRA. ULMUS RUBRA | NONE |
| NAT8ABC018/019 | Plot 2 | 164 | 65 | 0 | NONE | 70 | 8 | ULMUS AMERICANA. QUERCUS SP. ULMUS RUBRA. | NONE |
| NAT8ABC018/019 | Plot 3 | 164 | 65 | 4 | QUERCUS ALBA (3). UNKNOWN SP. | 65 | 22 | QUERCUS ALBA. ULMUS AMERICANA. | NONE |
| NAT8ABC018/019 | Plot 4 | 164 | 65 | 0 | NONE | 45 | 12 | QUERCUS RUBRA. ULMUS RUBRA. JUGLANS NIGRA | NONE |
| NAT8ABC024 | Plot 1 | 164 | 65 | 1 | ULMUS SP. | 60 | 15 | ULMUS AMERICANA. PLATANUS OCCIDENTALIS. SALIX ALBA | STREAM CORRIDOR |
| NAT8ABC033 | Plot 1 | 164 | 65 | 5 | GLEDITSIA TRIACANTHOS (2). UNKNOWN (3) | 50 | 22 | ULMUS RUBRA. JUGLANS NIGRA. GLEDITSIA TRIACANTHOS | VERY OPEN UNDERSTORY |

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT8ABC033 | Plot 2 | 164 | 65 | 2 | TILIA AMERICANA. UNKNOWN SNAG | 65 | 20 | JUGLANS NIGRA. GLEDITSIA TRIACANTHOS. ULMUS AMERICANA | NONE |
| NAT9ACL038 | Plot 1 | ALL | ALL | 6 | ACER NEGUNDO. ACER SACCHARINUM (4). POPULUS DELTOIDES | 50 | 18 | ACER SACCHARINUM. POPULUS DELTOIDES | STREAM IN MIDDLE OF WOODLOT |
| NAT9ACL039 | Plot 1 | 164 | 65 | 0 | NONE | 40 | 16 | JUGLANS NIGRA. CARYA CORDIFORMIS. CARYA OVATA | NONE |
| NAT9ACL039 | Plot 2 | 164 | 65 | 3 | UNKNOWN DEAD TRUNK, JUGLANS NIGRA, FRAXINUS SPP. | 40 | 16 | JUGLANS NIGRA. CARYA CORDIFORMIS. CARYA OVATA | NONE |
| NAT9ACL044 | Plot 1 | 165 | 64 | 2 | ULMUS AMERICANA. TILIA AMERICANA | 45 | 18 | POPULUS DELTOIDES. TILIA AMERICANA. PLATANUS OCCIDENTALIS | STREAM WITH FLYWAY ABOVE |
| NAT9ACL045 | Plot 3 | 165 | 64 | 0 | NONE | 70 | 12 | QUERCUS IMBRICARIA | 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT9ACL046 | Plot 1 | 165 | 64 | 2 | ULMUS AMERICANA (2) | 45 | 16 | QUERCUS IMBRICARIA. QUERCUS MACROCARPA. JUGLANS NIGRA | NONE |
| NAT9ACL047 | Plot 1 | ALL | ALL | 2 | CRATEAGUS SP. JUGLANS NIGRA | 40 | 14 | JUGLANS NIGRA. GLEDITSIA TRIACANTHOS. QUERCUS MACROCARPA | RAVINE BUT MINIMAL FLYWAY |
| NAT9ACL049 | Plot 1 | 165 | 64 | 3 | UNKNOWN DEAD TREE TRUNK. GLEDITSIA TRIACANTHOS (2) | 50 | 16 | CELTIS OCCIDENTALIS. JUGLANS NIGRA | STREAM |
| NAT9ACL050 | Plot 1 | 165 | 64 | 2 | CARYA OVATA (2) | 50 | 16 | JUGLANS NIGRA. CARYA OVATA. CELTIS OCCIDENTALIS | STREAM BUT NO FLYWAY |
| NAT9ACL050 | Plot 2 | 165 | 64 | 0 | NONE | 45 | 14 | CELTIS OCCIDENTALIS. JUGLANS NIGRA. GLEDITSIA TRIACANTHOS | 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT10ACA051 | Plot 1 | 175 | 60 | 2 | ULMUS AMERICANA. QUERCUS IMBRICARIA | 70 | 10 | GLEDITSIA TRIACANTHOS. SALIX NIGRA. QUERCUS IMBRICARIA | OPEN UNDERSTORY. STREAM CORRIDOR |
| NAT10ACA052 | Plot 1 | 175 | 60 | 0 | NONE | 90 | 14 | POPULUS SP. QUERCUS ALBA. CELTIS OCCIDENTALIS | NONE |
| NAT10ACA052 | Plot 2 | 175 | 60 | 2 | QUERCUS STELLATA. CARYA OVATA | 80 | 15 | QUERCUS STELLATA. CARYA OVATA | NONE |
| NAT10ACA058 | Plot 1 | 175 | 60 | 1 | ULMUS AMERICANA | 95 | 9 | JUGLANS NIGRA. POPULUS OCCIDENTALIS. CELTIS SP. | EXISTING ROW |
| NAT10ACA059 | Plot 1 | 175 | 60 | 1 | CARYA OVATA | 90 | 12 | POPULUS SP. CELTIS SP. CARYA SP. | SOME OPEN UNDERSTORY BUT LIMITED |
| NAT10ACA060 | Plot 1 | 175 | 60 | 2 | DEAD CELTIS SP. | 70 | 7 | JUGLANS NIGRA. ACER SACCHARINUM. GLEDITSIA TRIACANTHOS | 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT10ACA061 | Plot 1 | 175 | 60 | 0 | NONE | 95 | 10 | JUGLANS NIGRA. GLEDITSIA TRIACANTHOS. MACLURA POMIFERA | NONE |
| NAT10ACA061 | Plot 2 | 175 | 60 | 2 | ULMUS AMERICANA | 95 | 8 | GLEDITSIA TRIACANTHOS. JUGLANS NIGRA | NONE |
| NAT10ACA062 | Plot 1 | 175 | 60 | 1 | DEAD ULMUS AMERICANA | 90 | 10 | ACER NEGUNDO. GLEDITSIA TRIACANTHOS. QUERCUS IMBRICARIA | SOME OPEN UNDERSTORY BUT LIMITED |
| NAT10ACA067 | Plot 1 | 175 | 60 | 1 | CARYA OVATA | 45 | 8 | CARYA OVATA. JUGLANS NIGRA. CELTIS OCCIDENTALIS. QUERCUS MUEHLENBERGII | YES |
| NAT10ACA067 | Plot 2 | 175 | 60 | 2 | ULMUS AMERICANA, UNKNOWN | 30 | 8 | QUERCUS RUBRA. CARYA CORDIFORMIS. CARYA OVATA | YES |
| NAT10ACA068 | Plot 1 | 175 | 60 | 1 | GLEDITSIA TRIACANTHOS | 90 | 10 | QUERCUS MACROCARPA. CARYA OVATA. CARYA CORDIFORMIS | LIMITED |

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT10ACA068 | Plot 2 | 175 | 60 | 1 | QUERCUS SP. | 80 | 8 | JUGLANS NIGRA. QUERCUS STELLATA. GLEDITSIA TRIACANTHOS | VERY LIMITED |
| NAT10ACA069 | Plot 1 | 175 | 60 | 1 | CARYA OVATA | 95 | 10 | CARYA OVATA. JUGLANS NIGRA | NONE |
| NAT10ACA069 | Plot 2 | 175 | 60 | 1 | CARYA OVATA | 80 | 10 | CELTIS OCCIDENTALIS. CARYA OVATA | YES |
| NAT9ACR077 | Plot 1 | 165 | 64 | 1 | ULMUS AMERICANA | 30 | 12 | PRUNIS SEROTINA. ULMUS AMERICANA. GLEDITSIA TRIACANTHOS | NONE |
| NAT9ACR078 | Plot 1 | 165 | 64 | 1 | ULMUS AMERICANA | 20 | 12 | CELTIS OCCIDENTALIS. MACLURA POMIFERA. ULMUS AMERICANA | NONE |
| NAT9ACR078 | Plot 2 | 165 | 64 | 2 | JUGLANS NIGRA. ULMUS AMERICANA. | 40 | 14 | JUGLANS NIGRA. GLEDITSIA TRIACANTHOS. CELTIS OCCIDENTALIS | GRASS PATH |
| NAT9ACR081 | Plot 1 | ALL | ALL | 4 | ULMUS AMERICANA (4) | 50 | 16 | JUGLANS NIGRA | STREAM WITH FLYWAY |

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT9ACR082 | Plot 1 | 165 | 64 | 6 | CARYA OVATA. QUERCUS ALBA (2). JUGLANS NIGRA | 60 | 18 | QUERCUS ALBA. CARYA OVATA. QUERCUS RUBRA | SOME OPEN UNDERSTORY. EXISTING ROW |
| NAT9ACR082 | Plot 2 | 165 | 64 | 4 | QUERCUS ALBA (4) | 50 | 18 | QUERCUS ALBA. JUGLANS NIGRA. | OPEN AREA SOUTH OF CENTER POINT. STREAM AT EDGE OF PLOT |
| NAT9ACR082 | Plot 3 | 165 | 64 | 4 | ULMUS AMERICANA. QUERCUS MUEHLENBERGII. CARYA OVATA (2) | 50 | 20 | QUERCUS ALBA. QUERCUS MUEHLENBERGII. CARYA OVATA | TOP OF EAST SLOPE. STREAM CORRIDOR ON WESTERN EDGE |
| NAT9ACR083 | Plot 1 | 165 | 64 | 5 | CARYA OVATA (3). UNKNOWN TRUNKS (2) | 60 | 16 | QUERCUS ALBA. QUERCUS RUBRA. CARYA OVATA | FLYWAY ON EASTERN EDGE |
| NAT9ACR083 | Plot 2 | 165 | 64 | 4 | CARYA CORDIFORMIS (2). CARYA OVATA (2) | 70 | 20 | CARYA GLABRA. CELTIS OCCIDENTALIS. CARYA OVATA | ATV TRAIL. STREAM CORRIDOR |

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT9ACR084 | Plot 1 | 165 | 64 | 7 | CARYA OVATA (4). QUERCUS ALBA (2). QUERCUS RUBRA. | 60 | 18 | QUERCUS ALBA. QUERCUS RUBRA. CARYA OVATA | OPENINGS NEAR EDGE |
| NAT9ACR084 | Plot 2 | 165 | 64 | 4 | QUERCUS ALBA (2). CARYA OVATA (2) | 60 | 18 | QUERCUS ALBA. CARYA OVATA | NONE |
| NAT9ACR084 | Plot 3 | 165 | 64 | 4 | CARYA OVATA. QUERCUS SP (2). QUERCUS ALBA | 60 | 20 | QUERCUS ALBA. CARYA OVATA | RAVINE WITH SMALL FLYWAY |
| NAT9ACR085 | Plot 1 | 165 | 64 | 3 | QUERCUS ALBA (2). ULMUS AMERICANA | 60 | 18 | QUERCUS ALBA. TILIA AMERICANA. JUGLANS NIGRA | GRASS PATH |
| NAT9ACR086 | Plot 1 | 165 | 64 | 3 | CARYA OVATA (3) | 60 | 20 | QUERCUS ALBA. CARYA OVATA. ULMUS AMERICANA | WET WEATHER STREAMBED |
| NAT9ACR086 | Plot 2 | 165 | 64 | 6 | QUERCUS RUBRA. QUERCUS ALBA. CARYA OVATA. GLEDITSIA TRIACANTHOS (3) | 50 | 18 | QUERCUS ALBA. GLEDITSIA TRIACANTHOS. CARYA OVATA | PATH ON NORTH SIDE |

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT9ACR086 | Plot 3 | 165 | 64 | 6 | QUERCUS ALBA (4). CARYA OVATA (2) | 50 | 16 | QUERCUS ALBA. QUERCUS RUBRA. CARYA OVATA | NONE |
| NAT9ACR087 | Plot 1 | 165 | 64 | 6 | CARYA OVATA (4). ULMUS AMERICANA (2) | 40 | 16 | CARYA OVATA | EXISTING ROW |
| NAT9ACR090 | Plot 1 | 165 | 64 | 1 | GLEDITSIA TRIACANTHOS | 70 | 16 | CARYA CORDIFORMIS. QUERCUS MACROCARPA. | NONE |
| NAT9ACR091 | Plot 1 | ALL | ALL | 4 | MACLURA POMIFERA. CARYA OVATA (3) | 60 | 16 | CARYA OVATA. GLEDITSIA TRIACANTHOS. MACLURA POMIFERA | WET WEATHER STREAMBED |
| NAT9ACR096 | Plot 1 | 165 | 64 | 0 | NONE | 60 | 16 | QUERCUS RUBRA. DIOSPYROS VIRGINIANA | ATV TRAIL |
| NAT9ACR096 | Plot 2 | 165 | 64 | 3 | ULMUS AMERICANA. ACER SACCHARINUM. CARYA ILLINOENSIS | 60 | 18 | QUERCUS RUBRA ULMUS AMERICANA | 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT9ACI098 | Plot 1 | 165 | 64 | 2 | BETULA NIGRA. QUERCUS RUBRA | 50 | 18 | QUERCUS VELUTINA. PLATANUS OCCIDENTALIS | STREAM THROUGH WOODLOT WITH SMALL FLYWAY |
| NAT9ACI100 | Plot 1 | 165 | 64 | 1 | QUERCUS RUBRA | 40 | 18 | ULMUS AMERICANA. QUERCUS ALBA. CARYA OVATA | ATV TRAIL |
| NAT9ACI100 | Plot 2 | 165 | 64 | 2 | QUERCUS ALBA. UNKNOWN DEAD TRUNK | 30 | 16 | CARYA CORDIFORMIS. | NONE |
| NAT9ACI103 | Plot 1 | 165 | 64 | 2 | ACER SACCHARINUM (2) | 80 | 8 | ACER SACCHARINUM | STREAM. ATV TRAIL |
| NAT9ACI103 | Plot 2 | 165 | 64 | 0 | NONE | 80 | 10 | ACER SACCHARINUM | NONE |
| NAT8ARA110 | Plot 1 | ALL | ALL | 25 | CARYA OVATA (20). QUERCUS ALBA (2). ULMUS SP. UNKNOWN (2) | 75 | 18 | CARYA OVATA. QUERCUS ALBA. | VERY OPEN UNDERSTORY. STREAM CORRIDOR |

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| NAT8ARA111 | Plot 1 | ALL | ALL | 29 | CARYA OVATA (24). QUERCUS SP. PLATANUS OCCIDENTALIS. QUERCUS ALBA (3) | 65 | 26 | CARYA OVATA. QUERCUS RUBRA. FRAXINUS PENNSYLVANICA | OPEN UNDERSTORY. STREAM CORRIDOR |
| NAT9ARA112 | Plot 1 | 165 | 64 | 1 | ULMUS AMERICANA | 40 | 18 | GLEDITSIA TRIACANTHOS | ATV TRAIL. STREAM CORRIDOR |
| NAT9ARA113 | Plot 1 | 165 | 64 | 7 | CARYA OVATA (6). QUERCUS ALBA | 40 | 16 | JUGLANS NIGRA. PLATANUS OCCIDENTALIS. CARYA OVATA | RAVINE. OPENINGS ALONG EXISTING ROW |
| NAT9ARA114 | Plot 1 | 165 | 64 | 3 | ULMUS AMERICANA. CARYA OVATA (2) | 50 | 16 | CARYA OVATA. QUERCUS IMBRICARIA. QUERCUS PALUSTRIS | NONE |
| NAT9ARA115 | Plot 1 | ALL | ALL | 4 | CARYA OVATA (3). DEAD ULMUS AMERICANA | 40 | 14 | CARYA OVATA. JUGLANS NIGRA. CELTIS OCCIDENTALIS | POND IN SE CORNER - MAY BE TOO DEEP TO NET |
| NAT10AAU121 | Plot 1 | 164 | 65 | 2 | QUERCUS SP. | 90 | 10 | CELTIS OCCIDENTALIS. JUGLANS NIGRA. FRAXINUS SPP. | CLEARED ROW |

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| BATBH2MOMO022 | Plot 1 | ALL | ALL | 18 | CARYA OVATA (15). GLEDITSIA TRIACANTHOS (2). ACER SACCHARINUM | 50-75 | 16 | CARYA OVATA. CELTIS OCCIDENTALIS. ACER SACCHARINUM | STREAM. FIELD EDGE |
| BATBH2MOMO023 | Plot 1 | ALL | ALL | 30 | CARYA OVATA (30) | 25-50 | 14 | CARYA OVATA. JUGLANS NIGRA. QUERCUS IMBRICARIA | PARK LIKE OPEN AREAS NEAR HOUSE |

# FIGURES

CONFIDENTIAL

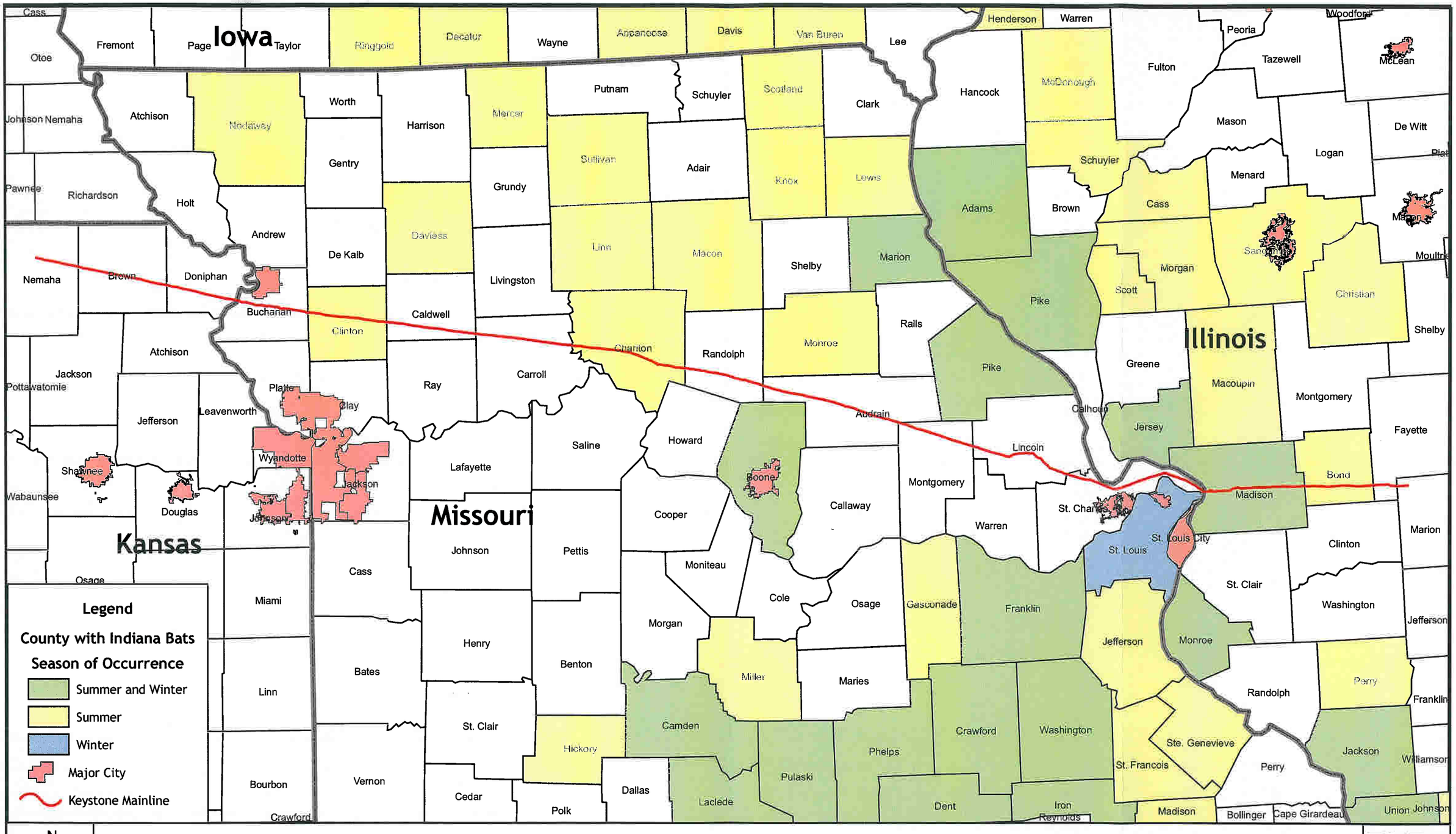


**Figure 1. Location of the Keystone Mainline Project.**

December 2006
Project No. 0987.010

Base Map: 2005 ESRI Data and Maps

BHE ENVIRONMENTAL

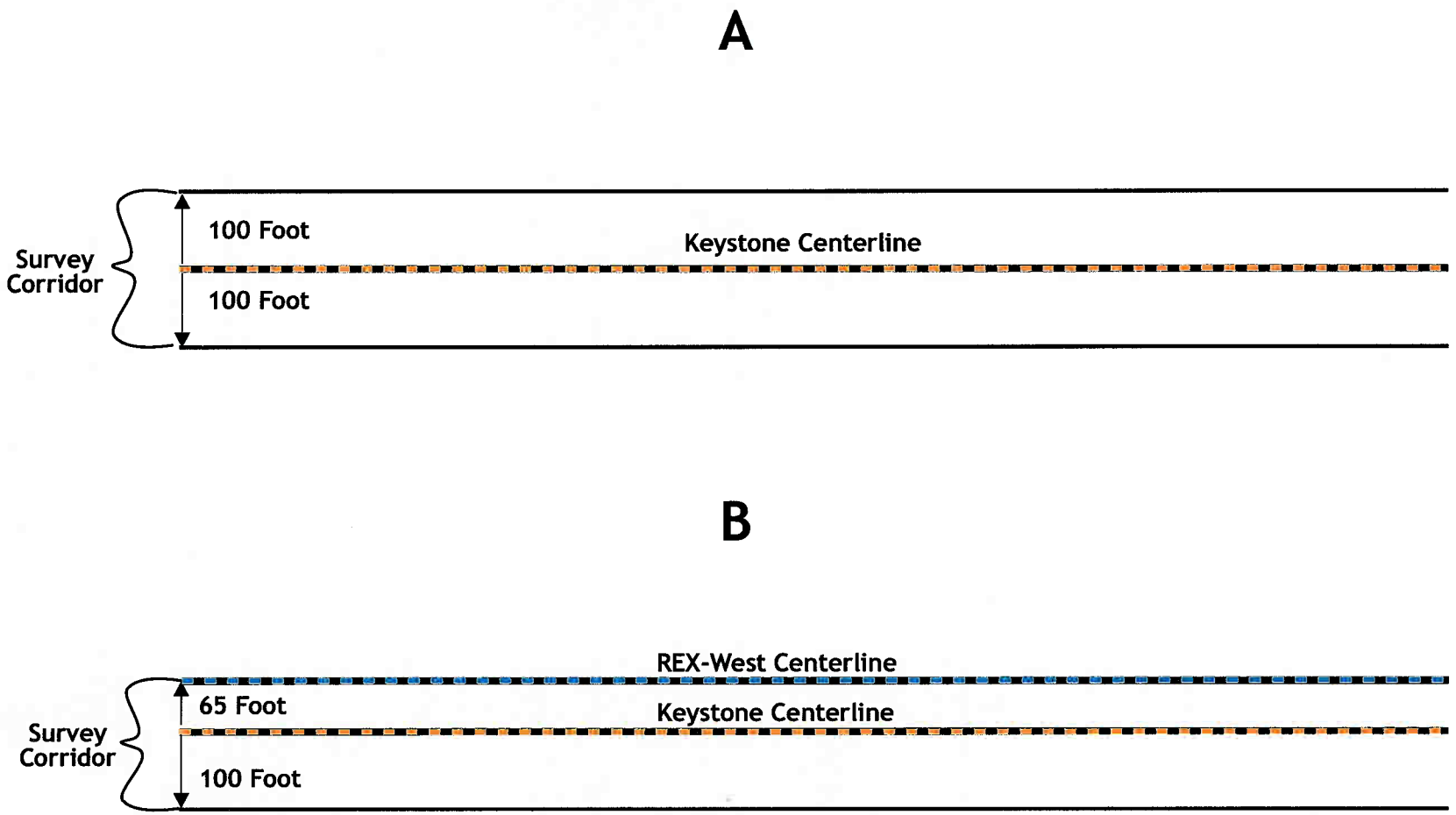


Figure 2. Diagrams of Keystone Mainline survey corridor where the pipeline is stand-alone (A) and where it is co-located with the REX-West pipeline right-of-way (B).

| Project No. 0987.010 | December 2006 | Feet 100 0 100 200 |
|---|---|---|

BHE ENVIRONMENTAL

# APPENDICES

Appendix A. USFWS Concurrence with Study Plan

BHE ENVIRONMENTAL

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

November 7, 2006

Mr. Charles M. Scott
Field Supervisor
Missouri Ecological Services Field Office
U.S. Fish & Wildlife Service
Department of the Interior
101 Park DeVille Drive, Suite A
Columbia, MO 65203-0007

**Subject: Indiana Bat Habitat Surveys for the Keystone Pipeline Project**

Dear Mr. Scott:

We wish to confirm several points regarding assessment of effects to Indiana bats and their habitat on the Keystone Pipeline right-of-way (ROW) in Missouri.

First, based on phone conversations with Rick Hansen in your office and with you on September 18, 2006, we understand that the Service is comfortable with the approach for the assessment of Indiana bat habitat developed earlier in September for the REX-West Pipeline Project in Missouri, and that approach should be repeated for the Keystone project in Missouri. The approach is summarized later in this letter.

Second, it is our understanding that Indiana bat habitat assessment need not be repeated for areas where the Keystone and REX West pipelines are parallel and adjacent (within ~200 ft). We have already completed an on-site assessment for 109 woodlots where the REX West ROW crosses woodlots in Buchanan, Clinton, Caldwell, Carroll, Chariton, Randolph, and western Audrain counties.

In areas where the two pipelines are not adjacent, either in the counties listed above, or in eastern Audrain, Montgomery, Lincoln, and St. Charles counties, we propose to follow the same approach as used on the REX-West Pipeline Project. In brief, the approach consisted of a desk-top analysis, followed by field work:

- Identify all woodlots crossed by the pipeline ROW.
- Eliminate from further assessment those woodlots crossed by less than 200 ft. of the ROW
- Eliminate from further assessment those woodlots with less than 13% forest cover within 3.5 km of the center of the woodlot crossing.
- Visit each of the remaining woodlots and determine the number of potential roost trees (PRTs) per hectare. Ratio this number to the optimum number of 14 or greater PRTs per hectare. If the ratio is 0.60 or greater, then further investigation of the site is warranted.

This habitat assessment field work for the Keystone Pipeline Project is tentatively scheduled to begin in late November. Once the field work is completed, we will consult with the Service about the findings.

If the USFWS concurs with this approach, this letter can be used to indicate your concurrence and authorization for Keystone/BHE to proceed. Please sign and return one copy of this letter to us. To expedite finalization of this approval, you may fax a signed copy of this letter to us at (513) 326-1178 or scan a signed copy and e-mail it to vhand@bheenvironmental.com. We would still appreciate receiving a signed original copy at your convenience.

BHE Environmental, Inc.

V C Hand

Vincent C. Hand, Ph.D.
Director, Natural Resources Management

| | |
|---|---|
| ✓ CONCUR | Signature Rick L Hansen |
| | Name (print) Rick L Hansen |
| _____ DO NOT CONCUR | Title Acting Field Supervisor |
| | Date 21 November 2006 |

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

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

| Woodlot ID | County (Missouri) | Enter Mile Post | Center Mile Post | Exit Mile Post | Distance Crossed (ft) | Woodlot Area (acres) | Percent Forest Cover Within 3.5 km | Number of Plots | Total Number of PRTs | Woodlot HSI | HSI ≥ 0.6 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAT9ABC001 | Buchanan | 752.50 | 752.59 | 752.67 | 898 | 4.1 | 29 | Census | 0 | 0 | No | |
| NAT9ABC002 | Buchanan | 752.68 | 752.72 | 752.76 | 422 | 1.9 | 30 | Census | 0 | 0 | No | |
| NAT9ABC003 | Buchanan | 752.82 | 752.85 | 752.88 | 317 | 1.5 | 32 | Census | 2 | 0.5 | No | |
| NAT9ABC004 | Buchanan | 752.93 | 753.19 | 753.44 | 2693 | 12.4 | 37 | 3 | 2 | 0.5 | No | |
| NAT__BC005 | Buchanan | 753.91 | 753.95 | 753.98 | 370 | 1.7 | 43 | N/A | N/A | N/A | N/A | Access Denied |
| NAT8ABC006 | Buchanan | 754.89 | 755.01 | 755.13 | 1267 | 5.8 | 41 | Census | 0 | 0 | No | |
| NAT8ABC007 | Buchanan | 755.15 | 755.22 | 755.28 | 686 | 3.2 | 40 | Census | 2 | 0.2 | No | |
| NAT8ABC008 | Buchanan | 755.30 | 755.33 | 755.36 | 317 | 1.5 | 40 | Census | 0 | 0 | No | |
| NAT8ABC009 | Buchanan | 755.37 | 755.41 | 755.45 | 422 | 1.9 | 39 | Census | 0 | 0 | No | |
| NAT8ABC010 | Buchanan | 755.48 | 755.51 | 755.54 | 317 | 1.5 | 38 | Census | 0 | 0 | No | |
| NAT8ABC011 | Buchanan | 756.23 | 756.27 | 756.30 | 370 | 1.7 | 38 | Census | 0 | 0 | No | |
| NAT8ABC012 | Buchanan | 756.36 | 756.36 | 756.43 | 370 | 1.7 | 38 | Census | 1 | 0.2 | No | |
| NAT8ABC013 | Buchanan | 756.60 | 756.69 | 756.78 | 950 | 4.4 | 38 | Census | 1 | 0.1 | No | |
| NAT8ABC014 | Buchanan | 756.93 | 757.03 | 757.12 | 1003 | 4.6 | 36 | 1 | 0 | 0 | No | |
| NAT8ABC015 | Buchanan | 757.54 | 757.59 | 757.63 | 475 | 2.2 | 32 | Census | 0 | 0 | No | |
| NAT8ABC016 | Buchanan | 757.66 | 757.68 | 757.70 | 211 | 1.0 | 31 | Census | 1 | 0.3 | No | |
| NAT8ABC017 | Buchanan | 757.75 | 757.84 | 757.93 | 950 | 4.4 | 31 | Census | 2 | 0.1 | No | |
| NAT8ABC018/019 | Buchanan | 757.96 | 758.19 | 758.41 | 2376 | 10.9 | 31 | 4 | 4 | 0.7 | Yes | NAT8ABC018 & NAT8ABC019 are continuous and were combined into a single woodlot (NAT8ABC018/019) |
| BAT__MOBC001 | Buchanan | 758.45 | 758.68 | 758.91 | 2429 | 11.2 | 29 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| NAT8ABC020 | Buchanan | 759.01 | 759.07 | 759.12 | 581 | 2.7 | 28 | Census | 0 | 0 | No | |
| NAT8ABC021 | Buchanan | 759.31 | 759.34 | 759.36 | 264 | 1.2 | 27 | Census | 0 | 0 | No | |
| NAT8ABC022 | Buchanan | 759.48 | 759.52 | 759.55 | 370 | 1.7 | 27 | 1 | 0 | 0 | No | |
| NAT8ABC023 | Buchanan | 759.62 | 759.66 | 759.70 | 422 | 1.9 | 24 | 1 | 0 | 0 | No | |
| NAT8ABC024 | Buchanan | 760.15 | 760.23 | 760.30 | 792 | 3.6 | 22 | 1 | 1 | 0.7 | Yes | |
| NAT8ABC025 | Buchanan | 760.48 | 760.60 | 760.71 | 1214 | 5.6 | 19 | 1 | 0 | 0 | No | |
| NAT__BC026 | Buchanan | 760.88 | 760.90 | 760.92 | 211 | 1.0 | 18 | N/A | N/A | N/A | N/A | No Woodlot Was Present At This Site |
| NAT8ABC027 | Buchanan | 760.99 | 761.04 | 761.09 | 528 | 2.4 | 14 | Census | 0 | 0 | No | |
| NAT8ABC028 | Buchanan | 762.99 | 763.06 | 763.13 | 739 | 3.4 | 14 | Census | 0 | 0 | No | |
| NAT8ABC029 | Buchanan | 763.62 | 763.69 | 763.75 | 686 | 3.2 | 16 | Census | 0 | 0 | No | |
| NAT8ABC030 | Buchanan | 764.50 | 764.55 | 764.59 | 475 | 2.2 | 16 | Census | 2 | 0.5 | No | |
| NAT8ABC031 | Buchanan | 764.71 | 764.74 | 764.77 | 317 | 1.5 | 18 | Census | 0 | 0 | No | |
| NAT8ABC032 | Buchanan | 764.89 | 764.98 | 765.06 | 898 | 4.1 | 18 | Census | 0 | 0 | No | |
| NAT8ABC033 | Buchanan | 765.84 | 765.90 | 765.96 | 634 | 2.9 | 15 | 2 | 7 | 1 | Yes | |

| Woodlot ID | County (Missouri) | Enter Mile Post | Center Mile Post | Exit Mile Post | Distance Crossed (ft) | Woodlot Area (acres) | Percent Forest Cover Within 3.5 km | Number of Plots | Total Number of PRTs | Woodlot HSI | HSI ≥ 0.6 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAT__CL034 | Clinton | 771.76 | 771.82 | 771.88 | 634 | 2.9 | 15 | N/A | N/A | N/A | N/A | Access Denied |
| NAT__CL035 | Clinton | 771.96 | 772.07 | 772.17 | 1109 | 5.1 | 15 | N/A | N/A | N/A | N/A | Access Denied |
| NAT9ACL036 | Clinton | 772.41 | 772.45 | 772.49 | 422 | 1.9 | 15 | Census | 0 | 0 | No | |
| NAT9ACL037 | Clinton | 772.51 | 772.58 | 772.65 | 739 | 3.4 | 15 | 1 | 0 | 0 | No | |
| NAT9ACL038 | Clinton | 772.83 | 772.87 | 772.90 | 370 | 1.7 | 15 | Census | 6 | 1 | Yes | |
| NAT9ACL039 | Clinton | 773.21 | 773.35 | 773.49 | 1478 | 6.8 | 14 | 2 | 3 | 1 | Yes | |
| NAT9ACL040 | Clinton | 785.15 | 785.19 | 785.22 | 370 | 1.7 | 14 | Census | 1 | 0.2 | No | |
| NAT9ACL041 | Clinton | 785.27 | 785.31 | 785.34 | 370 | 1.7 | 15 | 2 | 0 | 0 | No | |
| NAT9ACL042 | Clinton | 785.54 | 785.57 | 785.59 | 264 | 1.2 | 15 | 1 | 0 | 0 | No | |
| NAT9ACL043 | Clinton | 785.86 | 785.89 | 785.92 | 317 | 1.5 | 16 | 1 | 0 | 0 | No | |
| NAT9ACL044 | Clinton | 786.25 | 786.29 | 786.32 | 370 | 1.7 | 17 | 1 | 2 | 1 | Yes | |
| NAT9ACL045 | Clinton | 786.42 | 786.55 | 786.68 | 1373 | 6.3 | 17 | 3 | 0 | 0 | No | |
| NAT9ACL046 | Clinton | 786.74 | 786.80 | 786.85 | 581 | 2.7 | 16 | 1 | 2 | 1 | Yes | |
| NAT9ACL047 | Clinton | 786.97 | 787.02 | 787.06 | 475 | 2.2 | 16 | Census | 2 | 0.6 | Yes | |
| NAT9ACL048 | Clinton | 788.00 | 788.03 | 788.06 | 317 | 1.5 | 15 | Census | 0 | 0 | No | |
| NAT9ACL049 | Clinton | 788.16 | 788.20 | 788.24 | 422 | 1.9 | 16 | 1 | 3 | 1 | Yes | |
| NAT9ACL050 | Clinton | 789.55 | 789.68 | 789.80 | 1320 | 6.1 | 17 | 2 | 2 | 0.7 | Yes | |
| NAT10ACA051 | Caldwell | 791.20 | 791.22 | 791.24 | 211 | 1.0 | 18 | 1 | 2 | 1 | Yes | |
| NAT10ACA052 | Caldwell | 794.22 | 794.32 | 794.42 | 1056 | 4.8 | 21 | 2 | 2 | 0.7 | Yes | |
| NAT10ACA053 | Caldwell | 794.96 | 795.01 | 795.05 | 475 | 2.2 | 21 | 1 | 0 | 0 | No | |
| NAT10ACA054 | Caldwell | 795.40 | 795.45 | 795.50 | 528 | 2.4 | 21 | 1 | 0 | 0 | No | |
| NAT__CA055 | Caldwell | 795.50 | 795.56 | 795.62 | 634 | 2.9 | 21 | N/A | N/A | N/A | N/A | Access Denied |
| NAT__CA056 | Caldwell | 796.00 | 796.09 | 796.18 | 950 | 4.4 | 21 | N/A | N/A | N/A | N/A | Access Denied |
| NAT__CA057 | Caldwell | 796.21 | 796.24 | 796.27 | 317 | 1.5 | 21 | N/A | N/A | N/A | N/A | Access Denied |
| NAT10ACA058 | Caldwell | 796.43 | 796.46 | 796.49 | 317 | 1.5 | 22 | 1 | 1 | 0.7 | Yes | |
| NAT10ACA059 | Caldwell | 796.50 | 796.56 | 796.63 | 686 | 3.2 | 22 | 1 | 1 | 0.7 | Yes | |
| NAT10ACA060 | Caldwell | 798.18 | 798.20 | 798.22 | 211 | 1.0 | 18 | 1 | 2 | 1 | Yes | |
| NAT10ACA061 | Caldwell | 798.79 | 798.89 | 798.98 | 1003 | 4.6 | 14 | 2 | 2 | 0.7 | Yes | |
| NAT10ACA062 | Caldwell | 799.07 | 799.10 | 799.13 | 317 | 1.5 | 15 | 1 | 1 | 0.7 | Yes | |
| NAT10ACA063 | Caldwell | 801.19 | 801.23 | 801.26 | 370 | 1.7 | 15 | Census | 0 | 0 | No | |
| NAT10ACA064 | Caldwell | 801.55 | 801.59 | 801.62 | 370 | 1.7 | 15 | Census | 1 | 0.2 | No | |
| NAT10ACA065 | Caldwell | 801.63 | 801.67 | 801.71 | 422 | 1.9 | 15 | 1 | 0 | 0 | No | |
| NAT10ACA066 | Caldwell | 802.26 | 802.30 | 802.34 | 422 | 1.9 | 15 | 1 | 0 | 0 | No | |
| NAT10ACA067 | Caldwell | 807.64 | 807.74 | 807.83 | 1003 | 4.6 | 19 | 2 | 3 | 1 | Yes | |
| NAT10ACA068 | Caldwell | 807.85 | 807.91 | 807.97 | 634 | 2.9 | 20 | 2 | 2 | 0.7 | Yes | |
| NAT10ACA069 | Caldwell | 808.13 | 808.26 | 808.39 | 1373 | 6.3 | 21 | 2 | 2 | 0.7 | Yes | |
| NAT10ACA070 | Caldwell | 808.49 | 808.63 | 808.76 | 1426 | 6.5 | 22 | 3 | 2 | 0.5 | No | |

| Woodlot ID | County (Missouri) | Enter Mile Post | Center Mile Post | Exit Mile Post | Distance Crossed (ft) | Woodlot Area (acres) | Percent Forest Cover Within 3.5 km | Number of Plots | Total Number of PRTs | Woodlot HSI | HSI ≥ 0.6 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAT10ACA071 | Caldwell | 808.79 | 808.84 | 808.88 | 475 | 2.2 | 22 | Census | 0 | 0 | No | |
| NAT10ACA072 | Caldwell | 809.68 | 809.72 | 809.75 | 370 | 1.7 | 21 | 1 | 0 | 0 | No | |
| NAT10ACA073 | Caldwell | 809.89 | 809.94 | 809.99 | 528 | 2.4 | 20 | 1 | 0 | 0 | No | |
| NAT10ACA074 | Caldwell | 810.01 | 810.05 | 810.09 | 422 | 1.9 | 20 | 1 | 0 | 0 | No | |
| NAT10ACA075 | Caldwell | 810.14 | 810.21 | 810.27 | 686 | 3.2 | 19 | 2 | 0 | 0 | No | |
| NAT10ACA076 | Caldwell | 812.11 | 812.18 | 812.25 | 739 | 3.4 | 16 | 1 | 0 | 0 | No | |
| NAT9ACR077 | Carroll | 815.37 | 815.45 | 815.52 | 792 | 3.6 | 23 | 1 | 1 | 0.7 | Yes | |
| NAT9ACR078 | Carroll | 815.79 | 815.94 | 816.08 | 1531 | 7.0 | 21 | 2 | 3 | 1 | Yes | |
| NAT9ACR079 | Carroll | 816.27 | 816.38 | 816.48 | 1109 | 5.1 | 19 | 1 | 0 | 0 | No | |
| NAT__CR080 | Carroll | 816.59 | 816.63 | 816.66 | 370 | 1.7 | 18 | N/A | N/A | N/A | N/A | No Access - 6ft High-Tensile Electric Fence |
| NAT9ACR081 | Carroll | 820.46 | 820.49 | 820.52 | 317 | 1.5 | 27 | Census | 4 | 1 | Yes | |
| NAT9ACR082 | Carroll | 821.57 | 821.72 | 821.87 | 1584 | 7.3 | 40 | 3 | 14 | 1 | Yes | |
| NAT9ACR083 | Carroll | 822.02 | 822.11 | 822.20 | 950 | 4.4 | 41 | 2 | 9 | 1 | Yes | |
| NAT9ACR084 | Carroll | 822.64 | 822.79 | 822.94 | 1584 | 7.3 | 41 | 3 | 15 | 1 | Yes | |
| NAT9ACR085 | Carroll | 823.07 | 823.12 | 823.16 | 475 | 2.2 | 40 | 1 | 3 | 1 | Yes | |
| NAT9ACR086 | Carroll | 823.24 | 823.42 | 823.60 | 1901 | 8.7 | 40 | 3 | 15 | 1 | Yes | |
| NAT9ACR087 | Carroll | 824.72 | 824.79 | 824.86 | 739 | 3.4 | 33 | 1 | 6 | 1 | Yes | |
| NAT9ACR088 | Carroll | 825.26 | 825.34 | 825.42 | 845 | 3.9 | 28 | 1 | 0 | 0 | No | |
| NAT9ACR089 | Carroll | 825.47 | 825.50 | 825.52 | 264 | 1.2 | 27 | 1 | 0 | 0 | No | |
| NAT9ACR090 | Carroll | 825.90 | 825.97 | 826.03 | 686 | 3.2 | 25 | 1 | 1 | 0.7 | Yes | |
| NAT9ACR091 | Carroll | 826.03 | 826.07 | 826.10 | 370 | 1.7 | 24 | Census | 4 | 0.9 | Yes | |
| NAT9ACR092 | Carroll | 826.23 | 826.31 | 826.39 | 845 | 3.9 | 23 | 1 | 0 | 0 | No | |
| NAT9ACR093 | Carroll | 827.04 | 827.09 | 827.13 | 475 | 2.2 | 22 | 1 | 0 | 0 | No | |
| NAT9ACR094 | Carroll | 827.84 | 827.89 | 827.94 | 528 | 2.4 | 17 | 1 | 0 | 0 | No | |
| NAT9ACR095 | Carroll | 828.44 | 828.51 | 828.57 | 686 | 3.2 | 14 | 1 | 0 | 0 | No | |
| NAT9ACR096 | Carroll | 840.26 | 840.36 | 840.45 | 1003 | 4.6 | 14 | 2 | 3 | 1 | Yes | |
| NAT__CI097 | Chariton | 840.65 | 840.74 | 840.82 | 898 | 4.1 | 14 | N/A | N/A | N/A | N/A | No Access - High Water |
| NAT9ACI098 | Chariton | 848.77 | 848.87 | 848.96 | 1003 | 4.6 | 19 | 1 | 2 | 1 | Yes | |
| NAT9ACI099 | Chariton | 849.10 | 849.20 | 849.30 | 1056 | 4.8 | 19 | 2 | 0 | 0 | No | |
| NAT9ACI100 | Chariton | 849.39 | 849.61 | 849.82 | 2270 | 10.4 | 19 | 2 | 3 | 1 | Yes | |
| NAT9ACI101 | Chariton | 852.10 | 852.18 | 852.26 | 845 | 3.9 | 23 | Census | 3 | 0.3 | No | |
| NAT9ACI102 | Chariton | 871.39 | 871.42 | 871.44 | 264 | 1.2 | 14 | 1 | 0 | 0 | No | |
| NAT9ACI103 | Chariton | 871.53 | 871.57 | 871.61 | 422 | 1.9 | 14 | 2 | 2 | 0.7 | Yes | |
| NAT8ARA104 | Randolph | 874.39 | 874.43 | 874.47 | 422 | 1.9 | 14 | Census | 0 | 0 | No | |
| NAT8ARA105 | Randolph | 874.61 | 874.70 | 874.79 | 950 | 4.4 | 14 | Census | 3 | 0.4 | No | |
| NAT8ARA106 | Randolph | 874.88 | 875.01 | 875.13 | 1320 | 6.1 | 15 | Census | 1 | 0 | No | |
| NAT8ARA107 | Randolph | 876.17 | 876.20 | 876.22 | 264 | 1.2 | 22 | Census | 1 | 0.3 | No | |

| Woodlot ID | County (Missouri) | Enter Mile Post | Center Mile Post | Exit Mile Post | Distance Crossed (ft) | Woodlot Area (acres) | Percent Forest Cover Within 3.5 km | Number of Plots | Total Number of PRTs | Woodlot HSI | HSI ≥ 0.6 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NAT8ARA108/109 | Randolph | 876.34 | 876.44 | 876.54 | 1056 | 4.8 | 22 | Census | 0 | 0 | No | NAT8ARA108 & NAT8ARA109 are continuous and were combined into a single woodlot (NAT8ARA108/109) |
| NAT8ARA110 | Randolph | 876.98 | 877.08 | 877.17 | 1003 | 4.6 | 24 | Census | 25 | 1 | Yes | |
| NAT8ARA111 | Randolph | 877.69 | 877.74 | 877.79 | 528 | 2.4 | 27 | Census | 29 | 1 | Yes | |
| NAT9ARA112 | Randolph | 879.46 | 879.51 | 879.55 | 475 | 2.2 | 37 | 1 | 1 | 0.7 | Yes | |
| NAT9ARA113 | Randolph | 879.65 | 879.72 | 879.79 | 739 | 3.4 | 37 | 1 | 7 | 1 | Yes | |
| NAT9ARA114 | Randolph | 880.15 | 880.23 | 880.30 | 792 | 3.6 | 37 | 1 | 3 | 1 | Yes | |
| NAT9ARA115 | Randolph | 880.44 | 880.48 | 880.51 | 370 | 1.7 | 38 | Census | 4 | 0.8 | Yes | |
| NAT9ARA116 | Randolph | 881.25 | 881.35 | 881.45 | 1056 | 4.8 | 36 | 1 | 0 | 0 | No | |
| NAT10ARA117/118 | Randolph | 882.46 | 882.69 | 882.92 | 2429 | 11.2 | 30 | 5 | 1 | 0.1 | No | NAT10ARA117 & NAT10ARA118 are continuous and were combined into a single woodlot (NAT10ARA117/118) |
| NAT10ARA119 | Randolph | 883.04 | 883.20 | 883.36 | 1690 | 7.8 | 24 | 4 | 3 | 0.5 | No | |
| NAT10AAU120 | Audrain | 914.74 | 914.78 | 914.81 | 370 | 1.7 | 14 | Census | 0 | 0 | No | |
| NAT10AAU121 | Audrain | 915.11 | 915.17 | 915.22 | 581 | 2.7 | 14 | 1 | 2 | 1 | Yes | |
| BAT___MOMO001 | Montgomery | 940.75 | 940.77 | 940.79 | 211 | 1.0 | 13 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOMO002 | Montgomery | 940.90 | 940.93 | 940.95 | 264 | 1.2 | 14 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOMO003 | Montgomery | 942.02 | 942.07 | 942.11 | 475 | 2.2 | 18 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO004 | Montgomery | 942.17 | 942.46 | 942.74 | 3010 | 13.8 | 19 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO005 | Montgomery | 942.83 | 943.23 | 943.62 | 4171 | 19.2 | 19 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO006 | Montgomery | 943.70 | 943.77 | 943.84 | 739 | 3.4 | 18 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO007 | Montgomery | 943.90 | 943.96 | 944.02 | 634 | 2.9 | 18 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO008 | Montgomery | 944.03 | 944.10 | 944.16 | 686 | 3.2 | 18 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO009 | Montgomery | 944.24 | 944.28 | 944.32 | 422 | 1.9 | 17 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO010 | Montgomery | 944.33 | 944.35 | 944.37 | 211 | 1.0 | 17 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOMO011 | Montgomery | 945.78 | 945.87 | 945.97 | 1003 | 4.6 | 20 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO012 | Montgomery | 946.55 | 946.60 | 946.65 | 528 | 2.4 | 23 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO013 | Montgomery | 946.94 | 946.96 | 946.99 | 290 | 1.3 | 24 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO014 | Montgomery | 947.01 | 947.41 | 947.81 | 4198 | 19.3 | 25 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOMO015 | Montgomery | 947.86 | 947.89 | 947.92 | 290 | 1.3 | 25 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO016 | Montgomery | 947.97 | 948.15 | 948.33 | 1927 | 8.8 | 25 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO017 | Montgomery | 948.38 | 948.40 | 948.43 | 264 | 1.2 | 26 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO018 | Montgomery | 948.56 | 948.69 | 948.82 | 1373 | 6.3 | 27 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO019 | Montgomery | 949.29 | 949.37 | 949.45 | 845 | 3.9 | 27 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BATBH2MOMO020 | Montgomery | 949.99 | 950.09 | 950.20 | 1135 | 5.2 | 25 | Census | 0 | 0 | No | |
| BATBH2MOMO021 | Montgomery | 950.51 | 950.58 | 950.64 | 686 | 3.2 | 23 | Census | 2 | 0.1 | No | |

| Woodlot ID | County (Missouri) | Enter Mile Post | Center Mile Post | Exit Mile Post | Distance Crossed (ft) | Woodlot Area (acres) | Percent Forest Cover Within 3.5 km | Number of Plots | Total Number of PRTs | Woodlot HSI | HSI ≥ 0.6 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BATBH2MOMO022 | Montgomery | 950.89 | 950.99 | 951.09 | 1056 | 4.8 | 22 | Census | 18 | 0.7 | Yes | |
| BATBH2MOMO023 | Montgomery | 951.24 | 951.32 | 951.39 | 792 | 3.6 | 22 | Census | 30 | 1 | Yes | |
| BAT___MOMO024 | Montgomery | 951.49 | 951.54 | 951.60 | 607 | 2.8 | 24 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOMO025 | Montgomery | 951.62 | 951.72 | 951.83 | 1109 | 5.1 | 25 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOMO026 | Montgomery | 951.88 | 951.91 | 951.94 | 317 | 1.5 | 27 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO027 | Montgomery | 952.29 | 952.54 | 952.79 | 2640 | 12.1 | 34 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOMO028 | Montgomery | 953.12 | 953.46 | 953.79 | 3538 | 16.2 | 43 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOMO029 | Montgomery | 953.81 | 953.83 | 953.85 | 211 | 1.0 | 45 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI001 | Lincoln | 954.00 | 954.69 | 955.37 | 7234 | 33.2 | 51 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI002 | Lincoln | 955.40 | 955.73 | 956.06 | 3485 | 16.0 | 55 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI003 | Lincoln | 956.10 | 956.12 | 956.14 | 211 | 1.0 | 54 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI004 | Lincoln | 956.18 | 956.24 | 956.30 | 634 | 2.9 | 53 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI005 | Lincoln | 956.44 | 956.60 | 956.76 | 1690 | 7.8 | 54 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI006 | Lincoln | 956.82 | 956.75 | 956.93 | 581 | 2.7 | 54 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI007 | Lincoln | 957.01 | 957.33 | 957.65 | 3379 | 15.5 | 54 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOLI008 | Lincoln | 957.89 | 958.22 | 958.55 | 3485 | 16.0 | 57 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOLI009 | Lincoln | 958.55 | 958.65 | 958.75 | 1056 | 4.8 | 56 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOLI010 | Lincoln | 958.75 | 958.81 | 958.87 | 634 | 2.9 | 56 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOLI011 | Lincoln | 958.88 | 959.44 | 960.00 | 5914 | 27.2 | 54 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOLI012 | Lincoln | 960.02 | 960.04 | 960.06 | 211 | 1.0 | 55 | N/A | N/A | N/A | N/A | To Be Surveyed in Early 2007 |
| BAT___MOLI013 | Lincoln | 960.08 | 960.26 | 960.44 | 1901 | 8.7 | 55 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI014 | Lincoln | 960.49 | 960.67 | 960.85 | 1901 | 8.7 | 55 | N/A | N/A | N/A | N/A | Access Denied |
| BATBH1MOLI015 | Lincoln | 960.88 | 961.00 | 961.11 | 1214 | 5.6 | 54 | Census | 13 | 0.4 | No | |
| BAT___MOLI016 | Lincoln | 961.30 | 961.32 | 961.34 | 211 | 1.0 | 53 | N/A | N/A | N/A | N/A | Access Denied |
| BATBH1MOLI017 | Lincoln | 961.34 | 961.36 | 961.38 | 211 | 1.0 | 53 | Census | 0 | 0 | No | |
| BATBH1MOLI018 | Lincoln | 961.45 | 961.51 | 961.57 | 634 | 2.9 | 52 | Census | 1 | 0.1 | No | |
| BAT___MOLI019 | Lincoln | 961.57 | 961.72 | 961.86 | 1531 | 7.0 | 50 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI020 | Lincoln | 961.86 | 962.49 | 963.12 | 6653 | 30.5 | 45 | N/A | N/A | N/A | N/A | Access Denied |
| BATBH2MOLI021 | Lincoln | 963.13 | 963.18 | 963.22 | 475 | 2.2 | 41 | Census | 1 | 0.1 | No | |
| BATBH2MOLI022 | Lincoln | 963.27 | 963.40 | 963.53 | 1373 | 6.3 | 40 | Census | 9 | 0.3 | No | |
| BATBH2MOLI023 | Lincoln | 963.62 | 963.68 | 963.73 | 581 | 2.7 | 38 | Census | 1 | 0.1 | No | |
| BAT___MOLI024 | Lincoln | 963.76 | 963.80 | 963.85 | 475 | 2.2 | 37 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI025 | Lincoln | 963.99 | 964.37 | 964.75 | 4039 | 18.5 | 33 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI026 | Lincoln | 964.79 | 964.92 | 965.05 | 1373 | 6.3 | 31 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI027 | Lincoln | 965.48 | 965.54 | 965.61 | 713 | 3.3 | 33 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI028 | Lincoln | 965.68 | 965.80 | 965.93 | 1320 | 6.1 | 34 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI029 | Lincoln | 965.97 | 965.99 | 966.01 | 211 | 1.0 | 34 | N/A | N/A | N/A | N/A | Access Denied |

| Woodlot ID | County (Missouri) | Enter Mile Post | Center Mile Post | Exit Mile Post | Distance Crossed (ft) | Woodlot Area (acres) | Percent Forest Cover Within 3.5 km | Number of Plots | Total Number of PRTs | Woodlot HSI | HSI ≥ 0.6 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BAT___MOLI030 | Lincoln | 966.09 | 966.11 | 966.13 | 211 | 1.0 | 34 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI031 | Lincoln | 966.29 | 966.37 | 966.44 | 792 | 3.6 | 33 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI032 | Lincoln | 966.66 | 966.72 | 966.78 | 634 | 2.9 | 33 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI033 | Lincoln | 966.90 | 966.92 | 966.94 | 211 | 1.0 | 32 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI034 | Lincoln | 966.98 | 967.13 | 967.29 | 1637 | 7.5 | 32 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI035 | Lincoln | 967.30 | 967.47 | 967.64 | 1795 | 8.2 | 29 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI036 | Lincoln | 967.66 | 967.95 | 968.23 | 3010 | 13.8 | 26 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI037 | Lincoln | 968.30 | 968.35 | 968.39 | 475 | 2.2 | 25 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI038 | Lincoln | 968.47 | 968.66 | 968.84 | 1954 | 9.0 | 24 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI039 | Lincoln | 969.02 | 969.13 | 969.24 | 1162 | 5.3 | 22 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI040 | Lincoln | 969.24 | 969.31 | 969.38 | 739 | 3.4 | 21 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI041 | Lincoln | 969.42 | 969.48 | 969.54 | 634 | 2.9 | 20 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI042 | Lincoln | 969.58 | 969.68 | 969.77 | 1003 | 4.6 | 18 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI043 | Lincoln | 970.08 | 970.18 | 970.28 | 1056 | 4.8 | 19 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI044 | Lincoln | 970.39 | 970.49 | 970.59 | 1056 | 4.8 | 21 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI045 | Lincoln | 971.06 | 971.09 | 971.11 | 264 | 1.2 | 24 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI046 | Lincoln | 971.12 | 971.22 | 971.32 | 1056 | 4.8 | 25 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI047 | Lincoln | 971.52 | 971.68 | 971.84 | 1690 | 7.8 | 27 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI048 | Lincoln | 971.88 | 971.94 | 971.99 | 581 | 2.7 | 28 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI049 | Lincoln | 972.09 | 972.12 | 972.14 | 264 | 1.2 | 27 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI050 | Lincoln | 972.19 | 972.23 | 972.27 | 422 | 1.9 | 26 | N/A | N/A | N/A | N/A | Access Denied |
| BATBH3MOLI051 | Lincoln | 972.64 | 972.67 | 972.69 | 264 | 1.2 | 26 | Census | 0 | 0 | No | |
| BATBH3MOLI052 | Lincoln | 972.81 | 972.83 | 972.86 | 264 | 1.2 | 25 | Census | 0 | 0 | No | |
| BATBH3MOLI053 | Lincoln | 973.57 | 973.68 | 973.70 | 686 | 3.2 | 22 | Census | 0 | 0 | No | |
| BATBH4MOLI054 | Lincoln | 974.09 | 974.16 | 974.22 | 686 | 3.2 | 19 | Census | 0 | 0 | No | |
| BATBH4MOLI055 | Lincoln | 974.33 | 974.35 | 974.37 | 211 | 1.0 | 18 | Census | 0 | 0 | No | |
| BAT___MOLI056 | Lincoln | 976.65 | 976.69 | 976.72 | 370 | 1.7 | 15 | N/A | N/A | N/A | N/A | Access Denied |
| BATBH4MOLI057 | Lincoln | 976.79 | 976.83 | 976.87 | 422 | 1.9 | 16 | Census | 0 | 0 | No | |
| BAT___MOLI058 | Lincoln | 976.91 | 977.02 | 977.14 | 1241 | 5.7 | 16 | N/A | N/A | N/A | N/A | Access Denied |
| BAT___MOLI059 | Lincoln | 977.15 | 977.22 | 977.28 | 686 | 3.2 | 16 | N/A | N/A | N/A | N/A | Access Denied |
| BATBH4MOLI060 | Lincoln | 977.84 | 974.87 | 977.90 | 317 | 1.5 | 14 | Census | 0 | 0 | No | |

# Appendix C. Field Data Sheets

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC001 Plot No.: 1

Date: 8-29-06 Start Time: 10:20

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

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

No. of PRTs: 0

PRT species:

n/a

Percent Canopy Cover: 60% Estimated Average Overstory dbh (in): 17

Dominant Overstory Tree Species (list up to 3):

Ulnus Americanus
Salix nigra
Populus deltoides

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ABC00Ø2 Plot No.: 1

Date: 8-29-06 Start Time: 11:40

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

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

No. of PRTs: Ø

PRT species:

N/a

Percent Canopy Cover: 65% Estimated Average Overstory dbh (in): 16

Dominant Overstory Tree Species (list up to 3):

Carya ovata
Carya cordiformis
Juglans nigra

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ABCϕϕ3 Plot No.: 1

Date: 8-29-06 Start Time: 12:05

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

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

No. of PRTs: 2

PRT species:

Quercus alba

Ulnus americanus

Percent Canopy Cover: 45% Estimated Average Overstory dbh (in): 16

Dominant Overstory Tree Species (list up to 3):

[redacted] Juglans nigra

Ulnus americana

Tilia americana

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

stream ravine in center of woodlot

Comments (include access comments):

Ravine opens into ag. ROW

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ABC004 Plot No.: 1

Date: 8-29-06 Start Time: 13:40

Length of East/West Plot Edge (ft): 164

Length of North/South Plot Edge (ft): 65.5

No. of PRTs: 1

PRT species:

Ulnus americana

Percent Canopy Cover: 30% Estimated Average Overstory dbh (in): 10

Dominant Overstory Tree Species (list up to 3):

[redacted] Gleditsia triacanthos

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

(ATV trail does not seem suitable)

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ABC004 Plot No.: 2

Date: 8-29-06 Start Time: 13:55

Length of East/West Plot Edge (ft): 164

Length of North/South Plot Edge (ft): 65.5

No. of PRTs: ϕ

PRT species:

n/a

Percent Canopy Cover: 10% Estimated Average Overstory dbh (in): 10

Dominant Overstory Tree Species (list up to 3):

~~Platanus~~ Platanus occidentalis

Populus trembuloties

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

none

Comments (include access comments):

early sucessional

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ABCØØ4 Plot No.: 3

Date: 8-29-06 Start Time: 14:10

Length of East/West Plot Edge (ft): 164

Length of North/South Plot Edge (ft): 65.5

No. of PRTs: 1

PRT species:

Ulnus americana

Percent Canopy Cover: 40% Estimated Average Overstory dbh (in): 12

Dominant Overstory Tree Species (list up to 3):

Quercus macrocarpa
Juglans nigra
Gleditsia tricanthos

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC006 Plot No.: 1

Date: 8-30-06 Start Time: 9:08

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

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

No. of PRTs: 0

PRT species:

n/a

Percent Canopy Cover: 70% Estimated Average Overstory dbh (in): 18

Dominant Overstory Tree Species (list up to 3):

Ulnus americana

Quercus macrocarpa

Fagus grandifolia

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

small stream corridor

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC007 Plot No.: 1

Date: 8-30-06 Start Time: 9:34

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

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

No. of PRTs: 2

PRT species:

Ulnus sp.

Quercus alba

Percent Canopy Cover: 65 Estimated Average Overstory dbh (in): 14

Dominant Overstory Tree Species (list up to 3):

Ulnus americana

Platanus occidentalis

Juniperus virginiana

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

small trails

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØØ8 Plot No.: 1

Date: 8-30-06 Start Time: 9:58

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 90 Estimated Average Overstory dbh (in): 15

Dominant Overstory Tree Species (list up to 3):

Quercus rubra
Ulmus americana
Quercus macrocarpa

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

plot pt. taken ~20 ft N of plot center

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT 8ABCØØ9 Plot No.: 1

Date: 8-30-06 Start Time: 10:10

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 70 Estimated Average Overstory dbh (in): 14

Dominant Overstory Tree Species (list up to 3):

Ulmus americana
Populus deltoides
Quercus muehlenbergii

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

none

Comments (include access comments):

deep ravine near center of woodlot

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ1Ø Plot No.: 1

Date: 8-30-06 Start Time: 10:30

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 50 Estimated Average Overstory dbh (in): 12

Dominant Overstory Tree Species (list up to 3):

Ulnus americana

Juglans nigra

Platanus occidentalis

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

open understory

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ11 Plot No.: 1

Date: 8-31-06 Start Time: 8:50

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 85 Estimated Average Overstory dbh (in): 18

Dominant Overstory Tree Species (list up to 3):

Ulmus americana

Juglans nigra

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

open understory

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ12 Plot No.: 1

Date: 8-31-06 Start Time: 9:15

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

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

No. of PRTs: 1

PRT species:

Quercus alba

Percent Canopy Cover: 75 Estimated Average Overstory dbh (in): 20

Dominant Overstory Tree Species (list up to 3):

Quercus alba
Ulmus americana
Populus deltoides

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

horse trail

Comments (include access comments):

within horse pasture

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ13 Plot No.: 1

Date: 8-31-06 Start Time: 9:40

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

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

No. of PRTs: 1

PRT species:

Morus alba

~~unknown sp. (snag)~~ BB

Percent Canopy Cover: 75 Estimated Average Overstory dbh (in): 16

Dominant Overstory Tree Species (list up to 3):

Juglans nigra
Morus alba
Quercus macrocarpa

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

Cow path

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC014 Plot No.: 1

Date: 8-31-06 Start Time: 11:15

Length of East/West Plot Edge (ft): 164

Length of North/South Plot Edge (ft): 65.5

No. of PRTs: Ø

PRT species:

N/a

Percent Canopy Cover: 65% Estimated Average Overstory dbh (in): 15

Dominant Overstory Tree Species (list up to 3):

Juglans nigra
Platanus occidentalis
Populus deltoides

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

none

Comments (include access comments): - electric fence around woodlot west of Road - ONE

*deep ravine on east side of unknown Road - unpassable
*field on north side of ROW (east of Road) is all bramble & unpassable w/o machette
- Road would be better access for BCØ11-BCØ14

*could not survey woodlot east of Road, appears to be very dense with Ulmus americana, Populus deltoides, & Juglans nigra dominant ~dbh = 18, canopy cover ≈ 85%, no visible PRTs from Road

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC015 Plot No.: 1

Date: 8-30-06 Start Time: 11:57

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

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

No. of PRTs: 0

PRT species: n/a

Percent Canopy Cover: 30 Estimated Average Overstory dbh (in): 10

Dominant Overstory Tree Species (list up to 3):

Ulmus americana
Platanus occidentalis
Quercus alba

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC016 Plot No.: 1

Date: 8-30-06 Start Time: 11:42

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

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

No. of PRTs: 1

PRT species:

Quercus sp.

Percent Canopy Cover: 75 Estimated Average Overstory dbh (in): 15

Dominant Overstory Tree Species (list up to 3):

Quercus stellata
Fraxinus pennsylvanica
Quercus alba

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

none

Comments (include access comments):

large opening in canopy in ~center of plot

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ17 Plot No.: 1

Date: 8-30-06 Start Time: 12:41

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

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

No. of PRTs: 2

PRT species:

Populus deltoides

Quercus alba

Percent Canopy Cover: 55 Estimated Average Overstory dbh (in): 18

Dominant Overstory Tree Species (list up to 3):

Juglans nigra

Quercus alba

Tilia americana

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

ponds (2), small stream

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ19 Plot No.: 1

Date: 8-31-06 Start Time: 2:25

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 50 Estimated Average Overstory dbh (in): 10

Dominant Overstory Tree Species (list up to 3):

Gleditsia triacanthos
Juglans nigra
Ulmus Rubra

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

BCØ18 & BCØ19 are continuous & were combined into woodlot NAT8ABCØ19

-plot center point is 30 ft north of true plot center

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ19 Plot No.: 2

Date: 8-31-06 Start Time: 2:50

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 70% Estimated Average Overstory dbh (in): 8

Dominant Overstory Tree Species (list up to 3):

Ulmus americana

Quercus sp.

Ulmus rubra

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NATSABC019 Plot No.: 3

Date: 8-31-06 Start Time: ~~8:~~ BB 15:00

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: 4

PRT species:

Quercus alba (x3)

Unknown sp.

Percent Canopy Cover: 65% Estimated Average Overstory dbh (in): 22

Dominant Overstory Tree Species (list up to 3):

Quercus alba

Ulmus americana

Understory Density (circle): Clear Moderate (Dense) (~~Very Dense~~ BB)

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

none

Comments (include access comments):

Cluster of 3 PRTs at northern edge of plot/woodlot
1 PRT ~20ft south of others

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ19 Plot No.: 4

Date: 8-31-06 Start Time: 15:15

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 45% Estimated Average Overstory dbh (in): 12

Dominant Overstory Tree Species (list up to 3):

Juglans nigra

Ulmus Rubra

Quercus Rubra

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ2Ø Plot No.: 1

Date: 9-1-06 Start Time: 10:15

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 70% Estimated Average Overstory dbh (in): 17

Dominant Overstory Tree Species (list up to 3):

Ulmus rubra
Ulmus americana
Quercus rubra

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

small stream corridor

Comments (include access comments):

- deep ravine through center of woodlot

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC021 Plot No.: 1

Date: 9-1-06 Start Time: 9:45

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 60% Estimated Average Overstory dbh (in): 12

Dominant Overstory Tree Species (list up to 3):

Juglans nigra
Ulmus rubra
Quercus rubra

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

- deep ravine through center of woodlot - not passable
- plot center point taken from ~40ft west of actual center

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ22 Plot No.: 1

Date: 9-1-06 Start Time: 9:05

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 75% Estimated Average Overstory dbh (in): 15

Dominant Overstory Tree Species (list up to 3):

Platanus occidentalis
Juglans nigra
Ulmus rubra

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

open stream corridor

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC023 Plot No.: 1

Date: 9-1-06 Start Time: 11:30

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: 0

PRT species:

n/a

Percent Canopy Cover: 25 Estimated Average Overstory dbh (in): 8

Dominant Overstory Tree Species (list up to 3):

Platanus occidentalis
Quercus rubra
Gleditsia triacanthos

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC024 Plot No.: 1

Date: 9-1-06 Start Time: 16:25

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: _____

PRT species:

Ulmus sp.

Percent Canopy Cover: 60% Estimated Average Overstory dbh (in): 15

Dominant Overstory Tree Species (list up to 3):

Ulmus americana

Platanus occidentalis

Salix alba

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

stream corridor

Comments (include access comments):

- understory is not passable in most places

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ25 Plot No.: 1

Date: 9-1-06 Start Time: 17:00

Length of East/West Plot Edge (ft): 164

Length of North/South Plot Edge (ft): 165

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 45 Estimated Average Overstory dbh (in): 12

Dominant Overstory Tree Species (list up to 3):

Acer saccharinum
Salix alba
Ulmus rubra

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

stream corridor

Comments (include access comments):

- no access except by stream - understory not passable

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ27 Plot No.: 1

Date: 9-2-06 Start Time: 15:05

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 60% Estimated Average Overstory dbh (in): 20

Dominant Overstory Tree Species (list up to 3):

Gleditsia ~~triach~~ BB triacanthos

Juglans nigra

Quercus rubra

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

some open understory

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ28 Plot No.: 1

Date: 9-2-06 Start Time: 16:20

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 50 Estimated Average Overstory dbh (in): 12

Dominant Overstory Tree Species (list up to 3):

Quercus stellata

Gleditsia triacanthos

Ulmus rubra

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

some areas of open understory

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABC029 Plot No.: 1

Date: 9-2-06 Start Time: 10:25

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

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

No. of PRTs: 0

PRT species:

n/a

Percent Canopy Cover: 35 Estimated Average Overstory dbh (in): 12

Dominant Overstory Tree Species (list up to 3):

Gleditsia triacanthos
Juglans nigra
Ulmus americana

Understory Density (circle): (Clear) Moderate Dense Very Dense

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

open understory

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NATBABC030 Plot No.: 1

Date: 9-2-06 Start Time: 9:30

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

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

No. of PRTs: 2

PRT species:

Quercus prinus
Ulmus americana

Percent Canopy Cover: 70 Estimated Average Overstory dbh (in): 24

Dominant Overstory Tree Species (list up to 3):

Ulmus americana
Juglans nigra
Tilia americana

Understory Density (circle): (Clear) Moderate Dense Very Dense

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

open understory, small stream corridor

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ31 Plot No.: 1

Date: 9-2-06 Start Time: 9:00

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 20 Estimated Average Overstory dbh (in): 15

Dominant Overstory Tree Species (list up to 3):

Gleditsia triacanthos

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

none

Comments (include access comments):

<30 trees total in woodlot, all honey locust

*more of a tree line than a woodlot

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ32 Plot No.: 1

Date: 9-3-06 Start Time: 9:00

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

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

No. of PRTs: Ø

PRT species:

nla

Percent Canopy Cover: 80 Estimated Average Overstory dbh (in): 24

Dominant Overstory Tree Species (list up to 3):

Ulmus ~~americana~~ BB Rubra

Juglans nigra

Quercus imbricaria

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

stream corridor

Comments (include access comments):

-deep ravine through center of woodlot

# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ33 Plot No.: 1

Date: 9-2-06 Start Time: 12:20

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: 5

PRT species:

Gleditsia triacanthos (x2)

Unknown snag (x3

Percent Canopy Cover: 65 Estimated Average Overstory dbh (in): 22

Dominant Overstory Tree Species (list up to 3):

Juglans nigra

Gleditsia triacanthos

Ulmus Rubra

Understory Density (circle): (Clear) Moderate Dense Very Dense

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

very open understory

Comments (include access comments):

- deep stream corridor separates plot 1 & plot 2

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT8ABCØ33 Plot No.: 2

Date: 9-2-06 Start Time: 12:50

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: 2

PRT species:

Tilia americana

unknown snag

Percent Canopy Cover: 65% Estimated Average Overstory dbh (in): 20

Dominant Overstory Tree Species (list up to 3):

Gleditsia triacanthos

Juglans nigra

Ulmus americana

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

- plot center point taken ~30 ft north of actual plot center

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACLØ36 Plot No.: 1

Date: 30 August 2006 Start Time: Ø83Ø

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

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 25% Estimated Average Overstory dbh (in): 12"

Dominant Overstory Tree Species (list up to 3):

Quercus muehlenbergii
Celtis occidentalis
Quercus rubra

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL037 Plot No.: 1

Date: 30 August 2006 Start Time: 0850

Length of East/West Plot Edge (ft): 164'

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

No. of PRTs: 0

PRT species:

n/a

Percent Canopy Cover: 30% Estimated Average Overstory dbh (in): 10"

Dominant Overstory Tree Species (list up to 3):

Quercus imbricaria

Fraxinus ~~sp.~~ americana

Ulmus americana

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

primarily early successional growth

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9A CLØ38 Plot No.: 1

Date: 30 August 2006 Start Time: Ø95Ø

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

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

No. of PRTs: 6

PRT species:

Acer negundo

Populus deltoides

Acer saccharinum (4) SW

Percent Canopy Cover: 50% Estimated Average Overstory dbh (in): 18"

Dominant Overstory Tree Species (list up to 3):

Acer saccharinum

Populus deltoides

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

stream running through middle of woodlot, flyway above stream present

probable best access to net stream, on the Western edge

Comments (include access comments):

(log start with GPS unit 2:57 pm) GPS comment nat. feature and plotted point

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL039 Plot No.: 1

Date: 30 August 2006 Start Time: 1115

Length of East/West Plot Edge (ft): 164'

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 20% Estimated Average Overstory dbh (in): 16"

Dominant Overstory Tree Species (list up to 3):

~~Quercus rubra~~ sw Robinia pseudoacacia

Juglans nigra

Tilia americana

Understory Density (circle): (Clear) Moderate Dense Very Dense

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL039 Plot No.: 2

Date: 30 August 2006 Start Time: 1125

Length of East/West Plot Edge (ft): 164'

Length of North/South Plot Edge (ft): 66'

No. of PRTs: 3

PRT species:
unknown dead trunk
Juglans nigra
Fraxinus sp.

Percent Canopy Cover: 40% Estimated Average Overstory dbh (in): 16"

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

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

none

Comments (include access comments):
GPS: last 2 PRT (Juglans nigra & Fraxinus sp.)
NOT recorded into GPS unit

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9A CL040 Plot No.: 1

Date: 30 August 2006 Start Time: 1300

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

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

No. of PRTs: 1

PRT species:
Carya ovata

Percent Canopy Cover: 50% Estimated Average Overstory dbh (in): 15"

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

Understory Density (circle): Clear Moderate Dense (Very Dense)

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):
ravine present in woodlot; however very overgrown and flyway is minimal

Comments (include access comments):
underbrush is heavily choked w/ briars & poison ivy

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: CAT9ACLØ41 Plot No.: 1

Date: 30 August 2006 Start Time: 1400

Length of East/West Plot Edge (ft): 110

Length of North/South Plot Edge (ft): 64

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 20% Estimated Average Overstory dbh (in): 14"

Dominant Overstory Tree Species (list up to 3):

Acer rubra

Platanus occidentalis sw

Acer imbricaria

Understory Density (circle): Clear Moderate Dense Very Dense

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

none

Comments (include access comments):

Road 284 runs through the wooded working area south of pipeline, wooded lot bottlenecks as it moves to the south

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: LAT9A CC041 Plot No.: 2

Date: 30 August 2006 Start Time: 1420

Length of East/West Plot Edge (ft): 164

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

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 50% Estimated Average Overstory dbh (in): 14"

Dominant Overstory Tree Species (list up to 3):

Quercus rubra
Carya ovata

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

none

Comments (include access comments):

wooded area to the north of the existing pipeline that is included in the ROW area

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: LAT9A CL042 Plot No.: 1

Date: 30 August 2006 Start Time: 1500

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

Length of North/South Plot Edge (ft): 64'

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 55% Estimated Average Overstory dbh (in): 15"

Dominant Overstory Tree Species (list up to 3):

Tilia americana
Juglans nigra
Celtis occidentalis

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

Stream running through woodlot w/open flyway present, collects into pool just north of existing pipeline

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACLØ43 Plot No.: 1

Date: 30 August 2006 Start Time: 1530

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

Length of North/South Plot Edge (ft): 64'

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 50% Estimated Average Overstory dbh (in): 14"

Dominant Overstory Tree Species (list up to 3):

Gleditsia triacanthos

Juglans nigra

Maclura pomifera

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL044 Plot No.: 1

Date: 30 August 2006 Start Time: 1620

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

Length of North/South Plot Edge (ft): 641'

No. of PRTs: 2

PRT species:

Tilia americana

Ulmus americana

Percent Canopy Cover: 45% Estimated Average Overstory dbh (in): 18"

Dominant Overstory Tree Species (list up to 3):

Populus deltoides

Tilia americana

Platanus occidentalis

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

Stream, w/ flyway above it, through the woodlot

Comments (include access comments):

Can use the Collier dairy farm, but is still ~ 1,500' to the woodlot down the pipeline Row

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL045 Plot No.: 1

Date: 30 August 2006 Start Time: 1650

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

Length of North/South Plot Edge (ft): 641'

No. of PRTs: Ø

PRT species:

n/a

Percent Canopy Cover: 30% Estimated Average Overstory dbh (in): 14"

Dominant Overstory Tree Species (list up to 3):

Quercus imbricaria

Juglans nigra

Ulmus americana

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL045 Plot No.: 2

Date: 30 August 2006 Start Time: 1715

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

Length of North/South Plot Edge (ft): 64'

No. of PRTs: 0

PRT species:

n/a

Percent Canopy Cover: 60% Estimated Average Overstory dbh (in): 15"

Dominant Overstory Tree Species (list up to 3):

Quercus imbricaria

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL0456 Plot No.: 3

Date: 30 August 2006 Start Time: 1730

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

Length of North/South Plot Edge (ft): 64

No. of PRTs: 0

PRT species:

n/a

Percent Canopy Cover: 70% Estimated Average Overstory dbh (in): 12"

Dominant Overstory Tree Species (list up to 3):

Quercus imbricaria

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL0046 Plot No.: 1

Date: 30 August 2006 Start Time: 1745

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

Length of North/South Plot Edge (ft): 64

No. of PRTs: 2

PRT species:

Ulmus americana (2)

Percent Canopy Cover: 45% Estimated Average Overstory dbh (in): 16"

Dominant Overstory Tree Species (list up to 3):

Quercus imbricaria

Juglans nigra

Quercus macrocarpa

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

none

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL047 Plot No.: 1

Date: 31 August 2006 Start Time: 0950

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

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

No. of PRTs: 2

PRT species:

Crataegus sp.

Juglans nigra snag

Percent Canopy Cover: 40% Estimated Average Overstory dbh (in): 14"

Dominant Overstory Tree Species (list up to 3):

Juglans nigra

Gleditsia triacanthos

Quercus macrocarpa

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

ravine present along edge of woodlot, however minimal flyway

Comments (include access comments):

no road access, either use Collier dairy farm or 280th; walk through pasture and hay field

(GPS data; Juglans nigra PRT not in GPS unit)

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9AC0048 Plot No.: 1

Date: 31 August 2006 Start Time: 1135

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

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

No. of PRTs: 0

PRT species:

n/a

Percent Canopy Cover: 30% Estimated Average Overstory dbh (in): 18"

Dominant Overstory Tree Species (list up to 3):

Juglans nigra
Gleditsia triacanthos
Acer saccharinum

Understory Density (circle): Clear (Moderate) Dense Very Dense

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

ravine through-woodlot is over-grown

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL0049 Plot No.: 1

Date: 31 August 2006 Start Time: 1155

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

Length of North/South Plot Edge (ft): 64

No. of PRTs: 3

PRT species:
unknown dead tree trunk
Gleditsia triacanthos ← excellent roost tree
Gleditsia triacanthos (dead)

Percent Canopy Cover: 50% Estimated Average Overstory dbh (in): 16"

Dominant Overstory Tree Species (list up to 3):
Celtis occidentalis
Juglans nigra

Understory Density (circle): Clear (Moderate) Dense Very Dense

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):
Stream wraps through woodlots

Comments (include access comments):
no road access, access from HW 69 ROW, long walk through soy bean fields

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT9ACL050 Plot No.: 1

Date: 31 August 2006 Start Time: 1340

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

Length of North/South Plot Edge (ft): 69

No. of PRTs: 2

PRT species:

Carya ovata (2)

Percent Canopy Cover: 50% Estimated Average Overstory dbh (in): 16"

Dominant Overstory Tree Species (list up to 3):

Juglans nigra

Carya ovata

Celtis occidentalis SW

Understory Density (circle): Clear Moderate Dense Very Dense

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

Stream running through woodlot; no flyway present

Comments (include access comments):

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: MAT9ACL050 Plot No.: 2

Date: 31 August 2006 Start Time: 1400

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

Length of North/South Plot Edge (ft): 64'

No. of PRTs: 0

PRT species:

n/a

Percent Canopy Cover: 45% SW Estimated Average Overstory dbh (in): 14"

Dominant Overstory Tree Species (list up to 3):

Celtis occidentalis
Juglans nigra
Gleditsia triacanthos

Understory Density (circle): Clear Moderate (Dense) Very Dense

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

none

Comments (include access comments):

edge of plot includes open area

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT 10ACA 051 Plot No.: 1

Date: Aug 30, 2006 Start Time: _____

Length of East/West Plot Edge (ft): 120

Length of North/South Plot Edge (ft): 60

No. of PRTs: 2

PRT species: Dead American Elm - Ulmus americana
Dead Shingle Oak - Quercus imbricaria

Percent Canopy Cover: 70 Estimated Average Overstory dbh (in): 10

Dominant Overstory Tree Species (list up to 3):
Honey Locust
Black Willow Salix nigra
Shingle Oak - Quercus imbricaria

Understory Density (circle): Clear (Moderate) Dense Very Dense

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):
Yes - relatively open understory -
also placing net along stream course would be possible

Comments (include access comments):
PRT on edge of ROW near existing pipeline
Woodlot is a riparian border of small intermittent stream
Wt Deer seen
Lot of Nettles

Observer D. Kibbe GPS Steve Graber

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT 10A CA052 Plot No.: 1 (east end)

Date: 8/30/2006 Start Time: 10:20

Length of East/West Plot Edge (ft): ~~150~~ 175

Length of North/South Plot Edge (ft): 60

No. of PRTs: 0

PRT species: NA

Percent Canopy Cover: 90 Estimated Average Overstory dbh (in): 14

Dominant Overstory Tree Species (list up to 3):

Cottonwood -
Hackberry
White Oak Quercus alba

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

None

Comments (include access comments):

includes intermittent stream
garlic mustard groundcover

D. Kibbe S. Graber

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT 10A CA052 Plot No.: 2 (woodedge)

Date: Aug 30, 2006 Start Time: _____

Length of East/West Plot Edge (ft): 175

Length of North/South Plot Edge (ft): 60

No. of PRTs: 2

PRT species:
Shagbark hickory Carya ovata
Post oak - Quercus stellata

Percent Canopy Cover: 80 Estimated Average Overstory dbh (in): 15

Dominant Overstory Tree Species (list up to 3):
Post Oak
Shagbark

Understory Density (circle): Clear Moderate (Dense) Very Dense

Presence of Apparently Suitable Mist Net Sites (streams, trails, etc.):
None -

Comments (include access comments):
another potential PRT - split tree stump on edge of field between two plots

D. Kibbe S. Gardner

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# BHE/ENSR REX-West Bat Habitat Survey Field Form
## Potential Roost Tree Identification

Woodlot (Feature) ID: NAT 10A CA 053 Plot No.: 1

Date: Aug 30, 2006 Start Time: _____

Length of East/West Plot Edge (ft): 175

Length of North/South Plot Edge (ft): 60

No. of PRTs: 0

PRT species: None

Percent Canopy Cover: 90 Estimated Average Overstory dbh (in): 10

Dominant Overstory Tree Species (list up to 3):

White Oak Q alba
Post Oak Q stellata
Red Oak Q rubra
Shagbark Hickory

Understory Density (circle): Clear Moderate Dense (Very Dense)

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

None

Comments (include access comments):

5m. Stream on west side of woods

D. Kibbe S. Graber GPS