
To: EverPower
NYSDEC

From: Stantec Consulting Services Inc.
30 Park Drive
Topsham, ME 04086

File: 195600885

Date: February 11, 2014

Reference: Baron Winds Project – Habitat Assessment

INTRODUCTION

Following the work plan for pre-construction avian and bat surveys at the Baron Winds Project (Project) dated June 2013 REV September 2013¹, Stantec conducted a habitat assessment at the 36 eagle point count locations (Figure 1). This memo summarizes results of the habitat assessment and informs the New York State Department of Environmental Conservation (NYSDEC) of the presence of habitat in the Project area (as depicted in Figure 1) with potential to support listed avian species.

The New York Natural Heritage Program (NYNHP) provided a list of rare birds documented within 10 miles of the Project² on 29 May 2013. State-listed threatened bird species identified by NYNHP included Henslow's sparrow (*Ammodramus henslowii*), bald eagle (*Haliaeetus leucocephalus*), northern harrier (*Circus cyaneus*), and pied-billed grebe (*Podilymbus podiceps*). In addition, NYNHP included one protected bird, great blue heron (*Ardea herodias*).

METHODS

Stantec described and photographed the cover types and estimated percent canopy cover of forests within an approximately 800-meter radius circle (~500 acres) around each eagle survey point (Figure 1). Stantec used aerial imagery (Google Earth Pro, March 2012, imagery) and National Wetland Inventory public GIS data to characterize additional cover types present when the view of the survey circle was obstructed. If Stantec identified habitat with potential to support federally or New York State-listed avian species, more detailed notes and photographs were taken. Also, while traveling between survey points in the Project area, Stantec recorded using a handheld GPS, noted, and photographed locations of habitat with potential to support such species.

RESULTS

HABITAT TYPES

Stantec conducted the habitat assessment on 9–14 September 2013. The Project area contains a mixture of agricultural land and mixed (hardwood and softwood) forest. Table 1 describes habitat type at each eagle point count location. Cover types present include agricultural (ag), fallow field, maintained field, mixed forest, hardwood forest, softwood forest, pine plantation, and urban development. Wetlands and waterbodies in or adjacent to the Project area include stream, wetland, pond, and lake.

¹ A Draft version of this work plan (June 2013) was presented to biologists at the New York Regional Field Office of the USFWS in Cortland, NY on 18 June 2013 and to NYSDEC via conference call on 27 June 2013. EverPower and Stantec met with USFWS a second time on 3 September 2013 via conference call to discuss the proposed eagle point count locations. The work plan was revised based on a preliminary Project layout and recommendations made by USFWS and NYSDEC and was submitted to the agencies on 16 September 2013.

² Previously known as Baron Winds 1 and 2.

Table 1. Habitat and Percent Canopy at Eagle Point Count Locations at the Baron Winds Project.

Point #	Cover Types	% Canopy Cover in Forest
1	50% ag (corn). 50% hardwood forest.	80
2	90% ag and maintained field. 10% softwood forest.	50
3	50% ag (soybean). 50% mixed forest.	80
4	80% ag (corn) and fallow field. 20% lake.	NA
5	80% ag (corn and low crop) and maintained field. 20% mixed forest.	90
6	90% mixed forest. 10% fallow field.	50
7*	60% mixed forest. 20% lake. 10% maintained field. 10% urban development.	70
8	85% ag (corn). 15% hardwood forest.	70
9	85% mixed forest. 15% ag and fallow field.	90
10	60% ag (corn, soybean). 40% softwood forest.	70
11	60% mixed forest. 40% ag and fallow field.	70
12	50% ag (corn). 50% hardwood forest.	70
13	90% ag (corn). 10% hardwood forest.	70
14	60% ag (corn). 38% mixed forest. 2% pond.	90
15*	65% ag (empty). 20% mixed forest. 10% urban development. 5% wetland.	70
16	80% ag (low crop) and fallow field. 20% hardwood forest.	80
17	70% ag (corn, hay). 30% mixed forest.	70
18	90% ag (corn). 10% hardwood forest.	70
19	60% ag (recently harvested) and maintained field. 40% hardwood forest.	70
20	90% ag (corn and low crop). 10% hardwood forest.	70
21	60% mixed forest. 10% shrub. 30% fallow field.	80
22	50% mixed forest. 50% maintained and fallow field.	80
23	85% mixed forest. 10% fallow field. 5% shrub.	80
24	60% hardwood forest. 40% fallow field.	85
25	70% mixed forest. 30% fallow field.	80
26	50% maintained and fallow field. 45% forest. 5% shrub.	90
27	50% mixed forest. 50% fallow field.	70
28	85% hardwood forest. 10% fallow field. 5% shrub.	80
29	90% mixed forest. 10% ag (corn). Stream present.	90
30	95% mixed forest. 5% fallow field.	80
31	85% hardwood forest. 15% fallow field.	80
32	70% mixed forest. 30% maintained field.	90
33	50% mixed forest, pine plantation. 10% field. 40% fallow field.	40
34	60% hardwood forest. 40% ag (low crop).	70
35	60% mixed forest. 40% ag (corn).	80
36	50% ag (low crop). 50% hardwood forest.	80

*Outside Project area.

HABITAT FOR LISTED SPECIES

Stantec did not identify habitat within the Project area with potential to support federally listed avian species, State-listed species bald eagle, and protected bird great blue heron (Table 2). NYSDEC is not aware of any bald eagle nests on Loon Lake, a 162-acre pond adjacent to the northeastern Project area boundary.

Table 2. Potential for Breeding Habitat for Listed Species at the Baron Winds Project.

Species	Preferred Breeding Habitat	Preferred Breeding Habitat Present in General Project Area?	Proposed Turbine Locations within Potential Breeding Habitat?
bald eagle	large water bodies with fish	N	N
pied-billed grebe	marshes with dense stands of emergent vegetation near open water	Y	N
great blue heron	wooded freshwater swamps or water bodies with islands	N	N
northern harrier	wet, undisturbed areas surrounded by extensive open habitat	Y	N
Henslow's sparrow	fallow fields and wet meadows	Y	Y

Pied-billed Grebe

Nesting habitat for pied-billed grebe in New York is most abundant in marshes with dense stands of emergent vegetation near open water. Most of the known nest locations in the State are in the St. Lawrence River Valley (NYSDEC 2013a).

Mud Lake and its associated wetland is a freshwater emergent wetland in the Project area that could potentially support nesting pied-billed grebe³ (Figure 1). Wet areas beyond the marsh are limited. There are no proposed turbine locations in this marsh.

Northern Harrier

Northern harrier require extensive open habitat (i.e., In Illinois, 55 hectares [135 acres]; Walk and Warner 1999 as cited in Smith et al. 2011). Breeding habitat includes open wetlands, freshwater marshes, wet, lightly grazed pastures, fallow grasslands, meadows and cultivated fields (Smith et al. 2011). Nest sites often occur in wet, undisturbed areas (Simmons and Smith 1985; Grant et al. 1991 as cited in Smith et al. 2011) with patches of dense, often tall, vegetation (Simmons and Smith 1985; Sutherland 1987 as cited in Smith et al. 2011). Northern harrier forage in open areas, often with tall vegetation (Preston 1990).

Mud Lake and its associated wetland could potentially support nesting northern harrier (Figure 1). Otherwise, breeding habitat would be limited to the large fallow and cultivated fields.

The Project area contains potential foraging habitat for northern harrier. During eagle point count surveys and September migratory stopover surveys⁴ at the Project in August, September, and October 2013, Stantec recorded 18 observations of northern harrier at point count locations 1 (n=1), 2 (n=2), 3 (n=1), 5 (n=3), 8 (n=3), 10 (n=3), 17 (n=1), 18 (n=2), 19 (n=1), and 20 (n=1) (Figure 1; Appendix A photos 1–10). Six of 18

³ Note that Stantec has not surveyed this area from the ground.

⁴ For details regarding the eagle point count and September migratory stopover surveys, please see the work plan dated June 2013 REV September 2013.

observations (33%) occurred at Points 5 and 8, which are within 1 mile of Mud Lake. Northern harriers generally were observed soaring or gliding over fallow and cultivated fields; 2 observations were actively foraging.

Henslow's Sparrow

In New York, Henslow's sparrow occurs in a variety of habitats, most generally in fallow fields and wet meadows with tall grass and herbaceous vegetation with dense litter. Henslow's sparrow also will use lightly grazed areas. Habitat includes grass fields, weedy hayfields, pastures without shrubs, wet meadows, and hillsides with sedges (NYSDEC 2013b). Henslow's sparrow breed in relatively large fields ≥ 30 hectares (74 acres) (Zimmerman 1988; Mazur 1996 as cited in Herkert 2003).

At the Project, Stantec identified potential Henslow's sparrow habitat in 7 locations (Table 3; Appendix A Photos 11–17). These areas are fallow fields with dense cover forbs or grass species with relatively tall vegetation, some standing dead herbaceous vegetation for perching, sparse or no woody vegetation, with an area \geq approximately 70 acres.

Table 3. Habitat Characteristics of Potential Henslow's Sparrow Habitat at the Baron Winds Project.

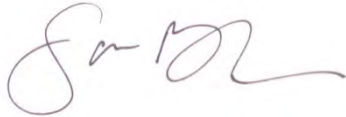
Point #	Habitat (dominant species)	Dominated by Grasses with Scattered Forbs	Vegetation 2–4 ft in Height	Standing Dead Herbaceous Vegetation	Sparse or No Woody Vegetation	Large Field (≥ 70 acres)
11	fallow field with forbs (Canada goldenrod [<i>Solidago canadensis</i>])		x	x	x	x
16	fallow field with forbs (Canada goldenrod)		x	x	x	x
22	fallow field with forbs (Canada goldenrod), grasses (reed canary grass [<i>Phalaris arundinacea</i>])		x	x	x	x
24	fallow field with grasses (Timothy grass [<i>Phleum pratense</i>]), forbs (Canada goldenrod)	x	x	x	x	x
27	fallow field with grasses (reed canary grass), forbs (Queen Anne's Lace [<i>Daucus carota</i>])	x	x	x	x	x
33	fallow field with forbs (Canada goldenrod), grasses (red fescue [<i>Festuca rubra</i>])		x	x	x	x
N of 18*	fallow field with grasses (red fescue), forbs (Canada goldenrod)	x	x	x	x	x

* -77.5152, 42.38463

Of the locations surveyed, 3 fields (Points 24, 27, and N of 18; Figure 1) are dominated by grass species and have the other components consistent with Henslow's sparrow habitat in New York. Based on known characteristics of Henslow's sparrow breeding habitat in New York, these areas have the most potential to support the species. No Henslow's sparrow were seen or heard during late summer and fall field surveys conducted at the Project.

As detailed in the work plan, at the Project Stantec will continue conducting eagle point count surveys every 3 weeks until August 2014 and will conduct breeding bird surveys in spring 2014; data collected during these surveys will supplement results of this habitat assessment. Please let us know if you have any questions.

Respectfully,



Sarah Boucher, Project Manager
sarah.boucher@stantec.com

References:

- Herkert, J.R. 2003. Effects of management practices on grassland birds: Henslow's Sparrow. Northern Prairie Wildlife Research Center, Jamestown, ND. Northern Prairie Wildlife Research Center Online. <http://www.npwr.usgs.gov/resource/literatr/grasbird/hesp/hesp.htm> (Version 12DEC2003). Accessed November 2013.
- NYSDEC 2013a. Pied-billed Grebe Fact Sheet. <http://www.dec.ny.gov/animals/85203.html>. Accessed November 2013.
- NYSDEC 2013b. Henslow's Sparrow Fact Sheet. <http://www.dec.ny.gov/animals/59554.html>. Accessed November 2013.
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- Simmons, R. and P. C. Smith. 1985. Do northern harriers (*Circus cyaneus*) choose nest sites adaptively? *Canadian Journal of Zoology* 63: 494-498.
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- Zimmerman, J. L. 1988. Breeding season habitat selection by the Henslow's sparrow (*Ammodramus henslowii*) in Kansas. *Wilson Bulletin* 100(1): 17-24.

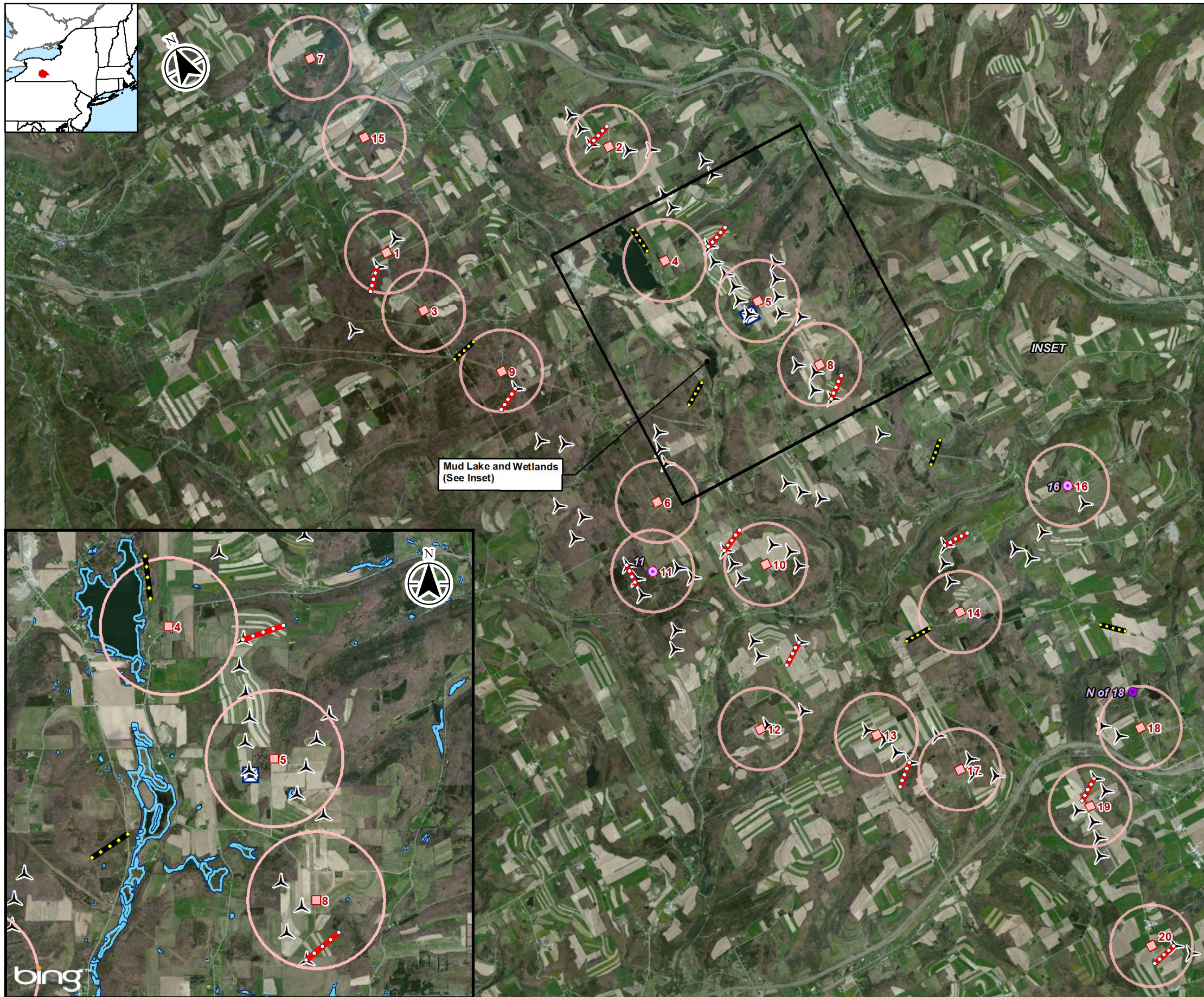
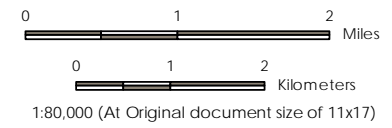


Figure No.
1A
 Title
Habitat Survey Locations

Client/Project
 EverPower Wind Holdings, Inc.
 Baron Winds Project

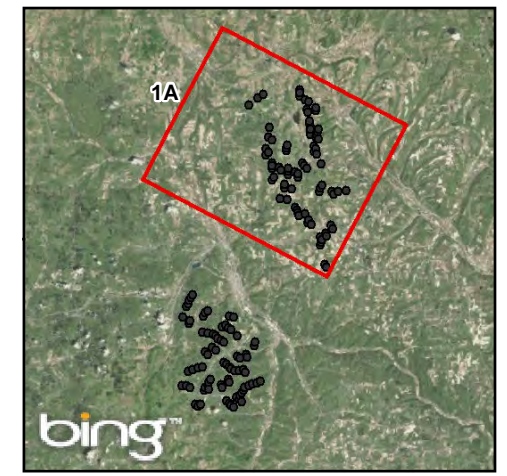
Project Location: Steuben County, New York
 Prepared by EMK on 2013-11-05

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- Legend**
- Eagle Point Count Location and September Migration Stopover Survey Location
 - Habitat Survey Area
 - Proposed Breeding Bird Survey Location
 - ◆ Proposed Breeding Bird Survey Control Location
 - Proposed Breeding Bird Survey Transect
 - Proposed Breeding Bird Survey Control Transect
 - ✈ Proposed Turbine
 - ⊠ MET Tower
 - ⊠ NWI (See Inset)
 - Henslow's Sparrow (HESP) Habitat
 - HESP potential
 - HESP most potential

KEY MAP



Notes
 Basemap © Harris Corp, Earthstar Geographics LLC State of Michigan



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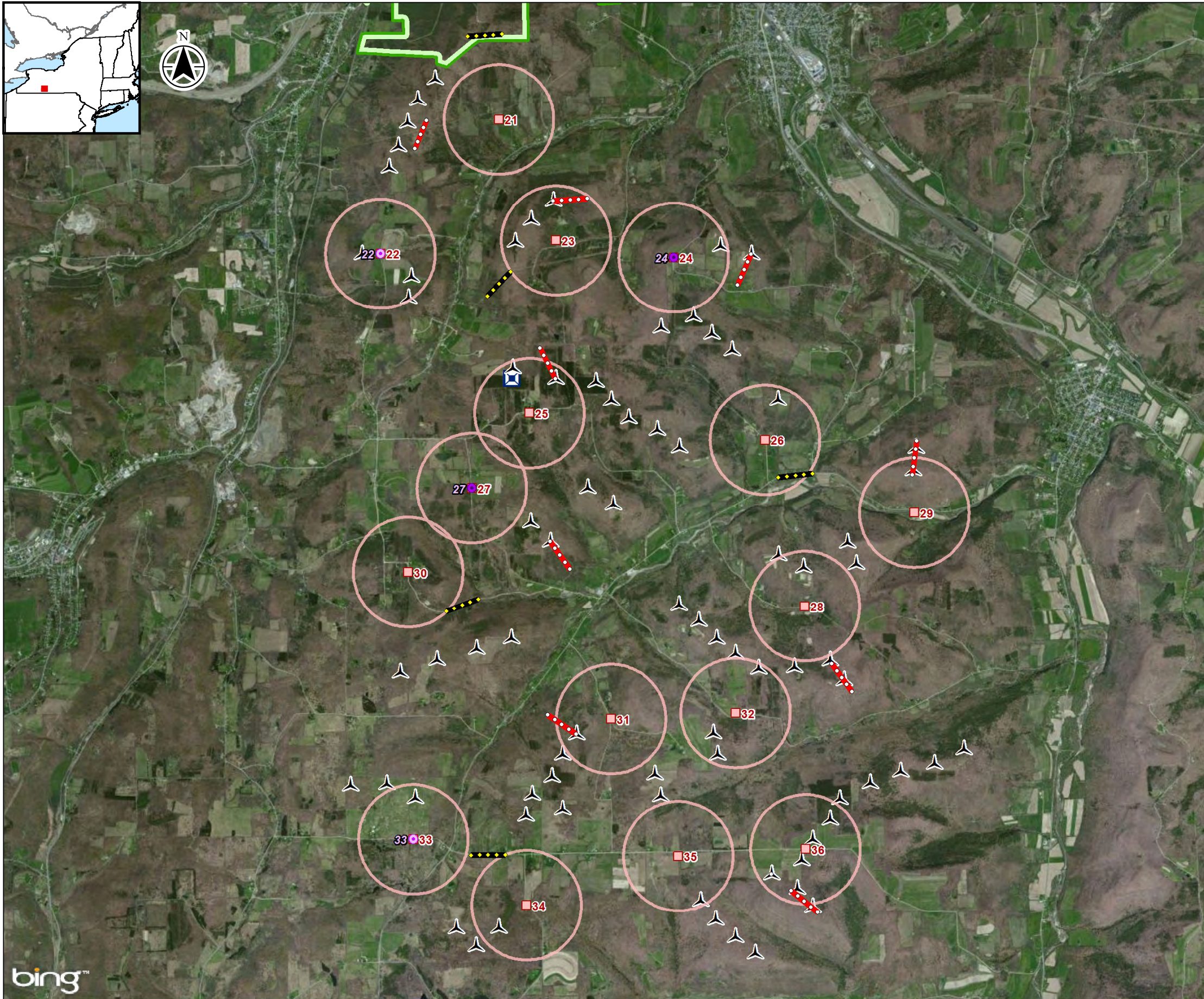
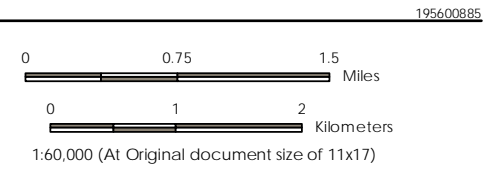


Figure No.
1B
 Title
Habitat Survey Locations

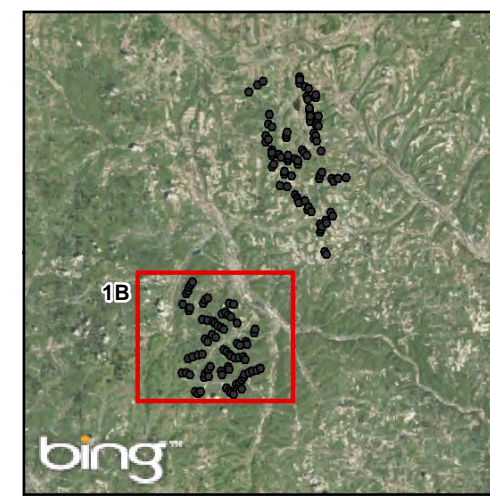
Client/Project
 EverPower Wind Holdings, Inc.
 Baron Winds Project

Project Location: Steuben County, New York
 Prepared by EMK on 2013-11-05



- Legend
- Eagle Point Count Location and September Migration Stopover Survey Location
 - Habitat Survey Area
 - Proposed Breeding Bird Survey Location
 - ◇ Proposed Breeding Bird Survey Control Location
 - Proposed Breeding Bird Survey Transect
 - Proposed Breeding Bird Survey Control Transect
 - ▲ Proposed Turbine
 - MET Tower
 - Canacadea State Forest
 - Henslow's Sparrow (HESP) Habitat
 - HESP potential
 - HESP most potential

KEY MAP



Basemap © Harris Corp, Earthstar Geographics LLC State of Michigan
 Notes



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APPENDIX A**PHOTOS 1-17**



Photo 1. Habitat at Point 1.



Photo 4. Habitat at Point 5.



Photo 2. Habitat at Point 2.



Photo 5. Habitat at Point 8.



Photo 3. Habitat at Point 3.

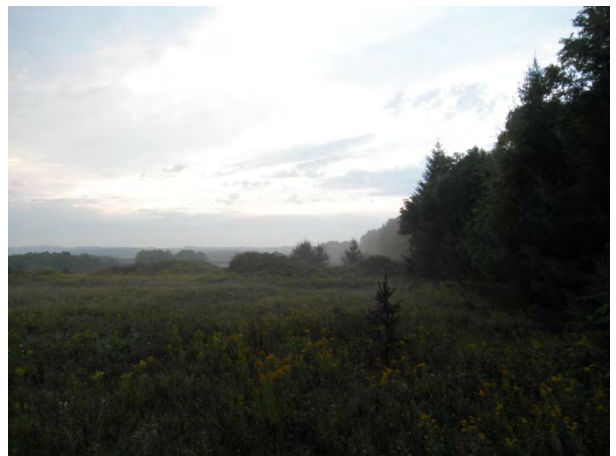


Photo 6. Habitat at Point 10.



Photo 7. Habitat at Point 17.



Photo 10. Habitat at Point 20.



Photo 8. Habitat at Point 18.



Photo 11. Habitat at Point 11.



Photo 9. Habitat at Point 19.



Photo 12. Habitat at Point 16.



Photo 13. Habitat at Point 22.



Photo 16. Habitat at Point 33.



Photo 14. Habitat at Point 24.



Photo 17. Habitat N of Point 18.



Photo 15. Habitat at Point 27.