Appendix E

Summary of 2011, 2012 and 2013 Herpetological Surveys – Henvey Inlet Wind Energy Centre Study Area

Henvey Inlet Wind LP

Henvey Inlet Wind

Summary of 2011, 2012 and 2013 Herpetological Surveys – Henvey Inlet Wind Energy Centre Study Area

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AECOM: 2012-01-06

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1. Introduction

In 2011 and 2012, LGL Limited (LGL) collected field data to determine baseline conditions within the Henvey Inlet Wind Energy Centre (HIWEC) study area. The data collected by LGL included:

- Raptor Migration;
- Passerine Migration;
- Breeding Birds;
- Herpetological Surveys; and
- Bat Acoustic Monitoring.

In 2013, Stantec Consulting Ltd. (Stantec) continued field data collection within the HIWEC study area. The data collected by Stantec included:

- Raptor Migration;
- Passerine Migration;
- Waterfowl Migration;
- Breeding Birds;
- Herpetological Surveys;
- Bat Acoustic Monitoring;
- Ecosite Classification and Rare Flora;
- Herpetological Incidental Observations; and
- Other Incidental Wildlife Observations.

This report has been prepared by AECOM to summarize the 2011 to 2013 ***Herpetological Surveys*** field data for the HIWEC study area. This is based on raw field data and GIS data collected by LGL and Stantec during the 2011, 2012, and 2013 seasons. This information was provided to AECOM by Stantec in October 2014 and by WSP for the LGL data in May 2015. The following provides the work plans written by LGL and Stantec which outline data collection methods as well as AECOM's summary and analysis of the data collected, and assumptions made concerning the data.

LGL and Stantec provided AECOM with the following documents which were used to produce this report:

2011
- An Excel spreadsheet summarizing field results entitled "*2011-2012 Herpetiles summary sheet.xlsx*";
- An Excel spreadsheet summarizing field results entitled "*TAB-2015-07-07-LGL_Herp_Observations_Workbook.xlsx*"; and
- An Excel spreadsheet summarizing field results entitled "*2011-2012_Herp_Observations_Workbook.xlsx*".

2012
- An Excel spreadsheet summarizing field results entitled "*2011-2012 Herpetiles summary sheet.xlsx*";
- An Excel spreadsheet summarizing field results entitled "*TAB-2015-07-07-LGL_Herp_Observations_Workbook.xlsx*";
- An Excel spreadsheet summarizing field results entitled "*2011-2012_Herp_Observations_Workbook.xlsx*";

2013
- Scanned handwritten field notes entitled "*60824_Amphibiancall.pdf*";
- Scanned handwritten field notes entitled "*60824_Reptile.pdf*";
- An Excel spreadsheet summarizing Species at Risk (SAR) observed entitled "*Significant species observations.xlsx*"; and
- An Excel spreadsheet indicating all survey locations entitled "*All survey locations_UTM_MC_07112013.xlsx*".

Copies of the above files are provided in **Appendix A**[1].

1. *Records of Species At Risk considered to be restricted are not being made public due to the threat of poaching experienced by these species. These records will be provided under a separate cover to the Ministry of Natural Resources and Forestry (MNRF) and / or Environment Canada – Canadian Wildlife Service (EC-CWS) for permitting purposes.*

2. Methods

2.1 Work Plan

The following sections provide a description of work plan methods written by LGL and Stantec for the various ***Herpetological Surveys***. These descriptions are taken directly from LGL's *Work plan for the Nigig Power Wind Farm Project Background Ecological Studies* (LGL, 2011a) and Stantec's *Terrestrial Survey Work Program* (Stantec, 2013), respectively.

Complete copies of LGL's *Work plan for the Nigig Power Wind Farm Project Background Ecological Studies* (LGL, 2011a) and Stantec's *Terrestrial Survey Work Program* (Stantec, 2013) are provided in **Appendix B**[2].

2.1.1 2011 and 2012 Herpetological Surveys (LGL, 2011a)

Ecological Receptor	*Recommended Studies*	*Timing*
Reptiles (SAR and non-SAR)	*Incidental observations confirm species and distribution within study area.* *Focused habitat identification within construction footprint of Project elements (e.g., road alignments, laydown and tower areas).* *General habitat identification (and avoidance) by ELC delineation of wetland communities as preliminary constraints.* *Desktop review of key reptile habitat (e.g., overwintering sites, nesting and incubation areas) and seasonal biology (e.g., timings of key life history elements) to inform spatial and temporal avoidance and mitigation strategies.*	*Incidental (spring, summer and fall)*
Amphibians (SAR and non-SAR)	*Incidental observations confirm species and distribution within study area.* *Focused habitat identification within construction footprint of Project elements (e.g., watercourse and wetland crossings).* *General habitat identification (and avoidance) by ELC delineation of wetland communities as preliminary constraints.* *Desktop review of key amphibian habitat (e.g., overwintering sites, breeding areas) and seasonal biology (e.g., overwintering, emergence, breeding) to inform spatial and temporal avoidance and mitigation strategies.*	*Incidental (spring, summer and fall)*

2.1.2 2013 Herpetological Surveys (Stantec, 2013)

*"**Western Chorus Frog and Salamanders (April):***
Western Chorus Frog surveys will consist of 3-minute call counts at potential breeding habitat conducted in April, during appropriate weather conditions. This species breeds in small or shallow aquatic habitats associated with moist, open terrestrial habitat (COSEWIC, 2008c). Males call from the water and are typically active when air temperatures are above 5° C, although calls have been detected at air temperatures as low as -1° C (COSEWIC, 2008c).

Unlike many anurans, Western Chorus Frogs are generally very active throughout the day. As such, daytime survey will be used to cover larger portions of the Study Area than evening call surveys would permit.

2. *Records of Species At Risk considered to be restricted are not being made public due to the threat of poaching experienced by these species. These records will be provided under a separate cover to the Ministry of Natural Resources and Forestry (MNRF) and / or Environment Canada – Canadian Wildlife Service (EC-CWS) for permitting purposes.*

Surveys for amphibian egg masses will take place concurrent with calling surveys. These will consist of perimeter surveys of suitable breeding ponds by trained field personnel. Egg masses of different species are often characteristic based on features such as where they are laid, how many eggs are in the mass, density of the egg mass, and whether or not the eggs are encased in jelly.

Reptile Habitat and Targeted Surveys (May and June):
Reptile habitat and targeted species surveys will take place in three stages.

Preliminary surveys for reptiles will also take place throughout the migratory and breeding bird survey periods. Field biologists familiar with reptile species identification will be conducting area searches and wandering transect surveys in a variety of areas providing habitat for reptiles at both the Project Location, weekly from early April until early July, and along the Transmission Line, weekly from late May until early July. Any incidental observations of turtles, snakes or lizards, including shed skins or shells, will be recorded on survey forms and used to refine the field survey program proposed for June.

Potential snake or turtle habitat within the Study Area will also be identified during Ecosite surveys, beginning in May. The habitat assessment will involve identification of potential reptile habitat features, including:

- *Turtle overwintering habitat and snake/skink hibernacula;*
- *Nesting sites; and,*
- *Foraging habitats.*

Targeted field surveys for reptile species at risk will occur in June. Timing of these surveys will coincide with a period of high activity for reptiles (nesting and foraging), but also when air temperatures encourage basking behaviour. Surveys for snake species at risk and Five-lined Skink will consist of wandering transects through all appropriate habitat types (Table 2-1).

Additional survey effort will be directed toward areas with previous observations of these species which may indicate high quality or limited habitat. To the extent possible, surveys will be conducted on sunny days when air temperatures are a minimum of 15°C (ideally 20°C). Surveys for turtles will consist of daytime basking surveys from land or boat in suitable wetland and open water habitat (Table 2-1), and evening nesting surveys in potential upland nesting sites identified during Ecosite surveys. Basking surveys will be conducted on sunny days when air temperatures are a minimum of 15°C (ideally 20°C). Nesting surveys will take place on warm evenings (daytime air temperature >20°C), ideally before or after rainfall. All surveys will record species, number, location and behaviour of observed reptiles.

The purpose of the targeted surveys is to confirm habitat used by the various reptile species at risk within the Study Area and provide information on general abundance and distribution. Survey results will be used to produce detailed mapping of reptile habitat features which will be used to guide the siting layout process and maximize avoidance of sensitive features.

Table 2-1: General Habitat Description and Use by Reptile Species at Risk

	Common Name	***General Habitat and Use****
Turtles	*Blanding's Turtle*	*Lakes, ponds and wetlands with clear shallow water and muck bottoms. Will move between habitats within active season; aerial basking; nesting in late May to early July, in open sandy soil up to 2.5 km from primary wetland, but typically within 400 m of water; overwinter in marsh, bog or fen with >0.5 m water depth.*
	Eastern Musk Turtle (Stinkpot)	*Shallow water in rivers, lakes and ponds with slow current and soft bottom; aquatic basking, often under floating vegetation; nesting in June, in shallow soil near water, occasionally in or under leaf litter; overwinter in primary habitat with muck bottom.*

	Common Name	General Habitat and Use*
	Northern Map Turtle	*Large rivers and lakes with soft bottom; aerial basking; nesting June and July in sandy soil; overwinter in general habitat in areas with >5 m water depth.*
	Snapping Turtle	*All aquatic habitats, but rarely in moving water, prefer large water bodies associated with marsh and/or swamp; aquatic basking*
Snakes and Lizard	*Eastern Hog-nosed Snake*	*Open forest and forest edges with sandy soil in proximity to water; egg-laying in late June and July in nests excavated in sandy soil, often under cover objects; hibernation in mammal burrows.*
	Eastern Foxsnake	*Georgian Bay populations inhabit rock barrens with sparse trees and shrubs in close proximity to shorelines; basking under or near rocks or in rock crevices; egg-laying late June to July in rock crevices or decaying vegetation; communal hibernation in rock crevices near shoreline.*
	Eastern Massasauga	*Georgian Bay populations use rock barrens, wetlands and shorelines; viviparous, bearing young in late summer; communal gestation under rock cover; hibernation in rock crevices or animal burrows where water level is close to surface.*
	Eastern Ribbonsnake	*Wetland edges with low vegetation and open basking areas; often seen swimming; viviparous, bearing young in late summer; hibernation in rock crevices and mammal burrows.*
	Eastern Milksnake	*Forest edges and open meadow; bask under cover objects; egg-laying May to July in loose soil, decomposing wood or vegetation; hibernation in rock crevices and mammal burrows, often communally and with other species.*
	Five-lined Skink	*Open forest and rock barren; abundance of cover objects (rocks and woody debris) is important, longer/larger cover is preferred; nesting in shallow soil under cover objects.*

*Note: * Habitat description and use data obtained from COSEWIC assessment and status reports."*

3. Results

3.1 Study Area

3.1.1 2011 and 2012

Incidental observations were recorded for reptiles and amphibians encountered by LGL Biologists during breeding bird surveys between May 1 and July 5, 2011 (LGL, 2011b). Refer to *Summary of 2011, 2012 and 2013 Breeding Bird Surveys – Henvey Inlet Wind Energy Centre* (AECOM, 2015) for additional information related to the locations of breeding bird survey conducted in 2011 and 2012. Specific locations of the herpetological surveys were not recorded, rather the location of reptiles observed was recorded. Therefore a defined study area for this work cannot be described; however, the locations of reptile Species at Risk observed through these surveys are presented in **Figure 3-1**.

Based on correspondence with Sarah Richer (a Biologist who conducted surveys on behalf of LGL in 2011 and 2012), surveys conducted by LGL within the HIWEC study area were primarily focused in the mosaic of wetlands and treed rock barrens in the central and western areas of the HIWEC study area, with less focus placed within the more heavily forested zones in the northeast and southeast portions of the HIWEC study area. Incidental observations of reptiles and amphibians were collected concurrently with other wildlife surveys.

3.1.2 2013

3.1.2.1 Western Chorus Frog and Salamanders

Based on the data provided, Western Chorus Frog (*Pseudacris triseriata*) and salamander surveys were completed at a total of 28 stations within the HIWEC study area in 2013. Two (2) survey stations were located near the shoreline of the Key River in the northwestern section of the HIWEC study area. Three (3) were located near the north shoreline of Henvey Inlet. Six (6) were located in the southwestern section of the HIWEC study area near Georgian Bay. A total of 12 were located near the southern shore of Henvey Inlet. Three (3) were located along Bekanon Road and two (2) were located near Highway 69. Refer to **Figure 3-2** for the locations of Western Chorus Frog and salamander survey stations.

3.1.2.2 Reptile Habitat and Targeted Surveys

The reptile habitat and targeted surveys which occurred within the HIWEC study area were conducted as wandering transects and area searches. Specific locations of the surveys were not recorded, rather the location of reptiles observed was recorded. Therefore a defined study area for this work cannot be described; however, the locations of reptile Species at Risk observed through these surveys are presented in **Figure 3-3**. Furthermore, four (4) reptile habitat and targeted surveys conducted by Stantec within their transmission line study area are within the HIWEC study area. These stations were located along the Highway 69 on the eastern limit of the HIWEC study area. Locations of reptile Species at Risk observed through these surveys are also presented in **Figure 3-3**.

Figure 3-1: 2011 – 2012 Important Herpetofaunal Observations

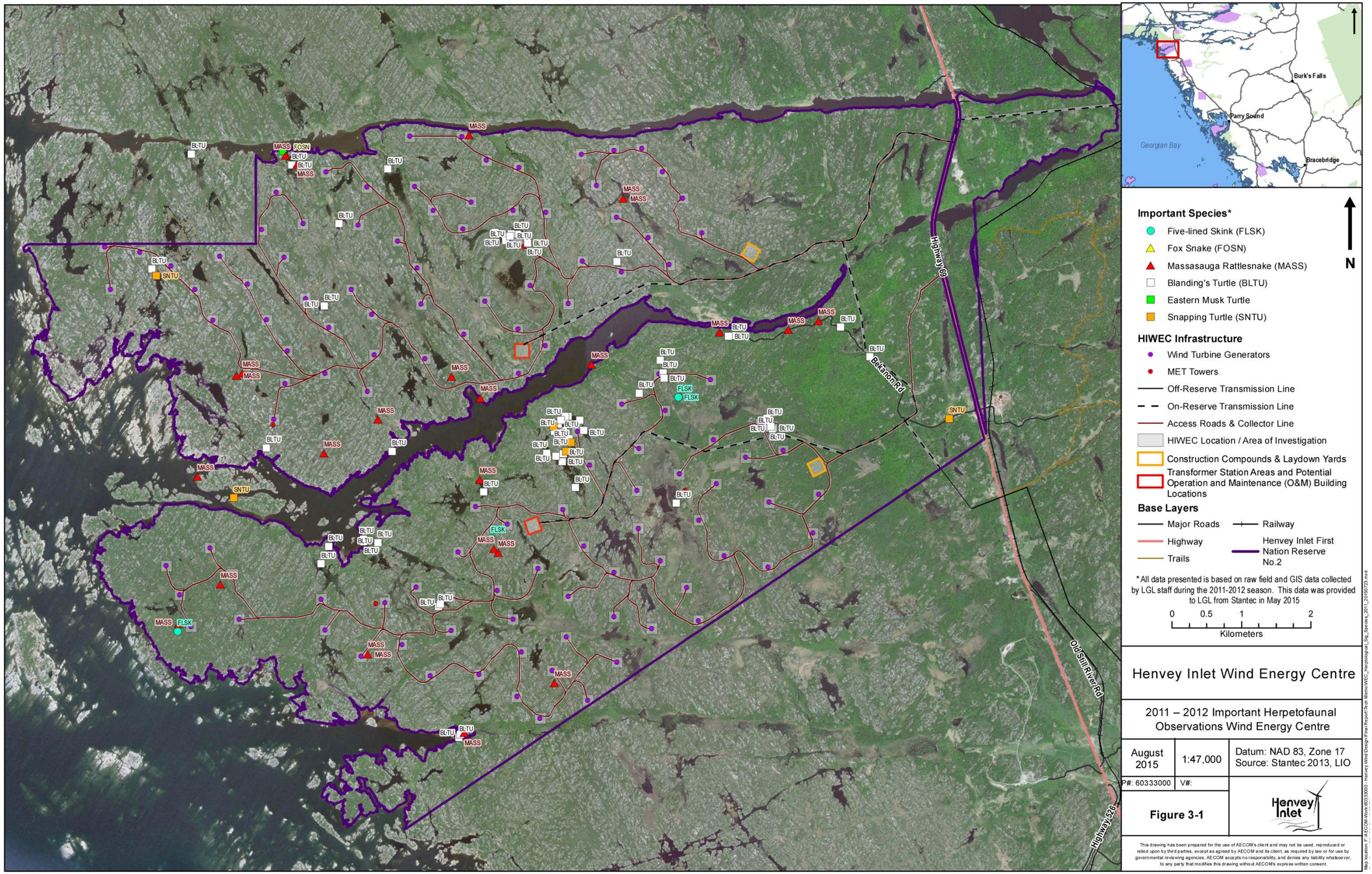
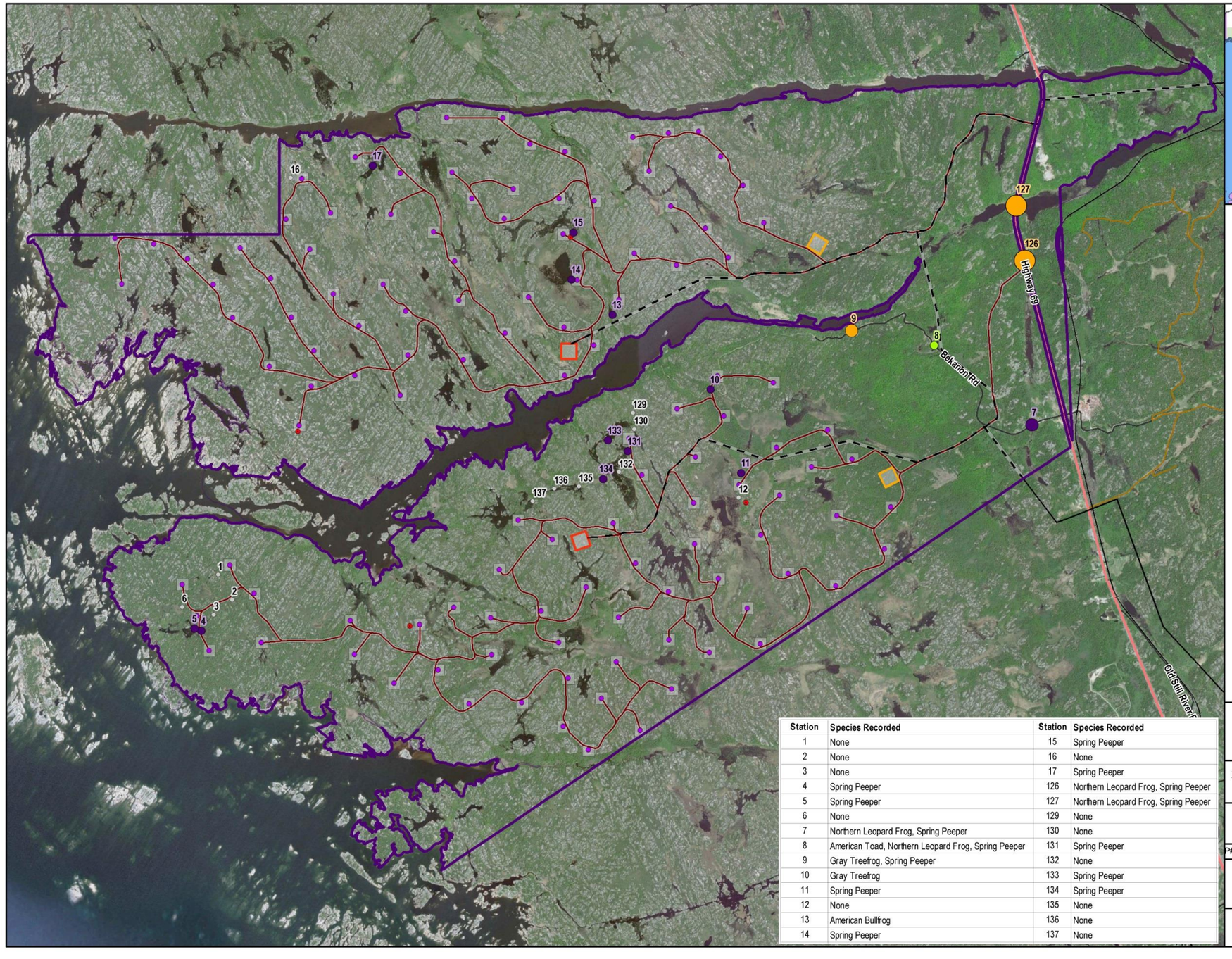


Figure 3-2: 2013 Western Chorus Frog and Salamander Surveys



Station	Species Recorded	Station	Species Recorded
1	None	15	Spring Peeper
2	None	16	None
3	None	17	Spring Peeper
4	Spring Peeper	126	Northern Leopard Frog, Spring Peeper
5	Spring Peeper	127	Northern Leopard Frog, Spring Peeper
6	None	129	None
7	Northern Leopard Frog, Spring Peeper	130	None
8	American Toad, Northern Leopard Frog, Spring Peeper	131	Spring Peeper
9	Gray Treefrog, Spring Peeper	132	None
10	Gray Treefrog	133	Spring Peeper
11	Spring Peeper	134	Spring Peeper
12	None	135	None
13	American Bullfrog	136	None
14	Spring Peeper	137	None

Henvey Inlet Wind Energy Centre

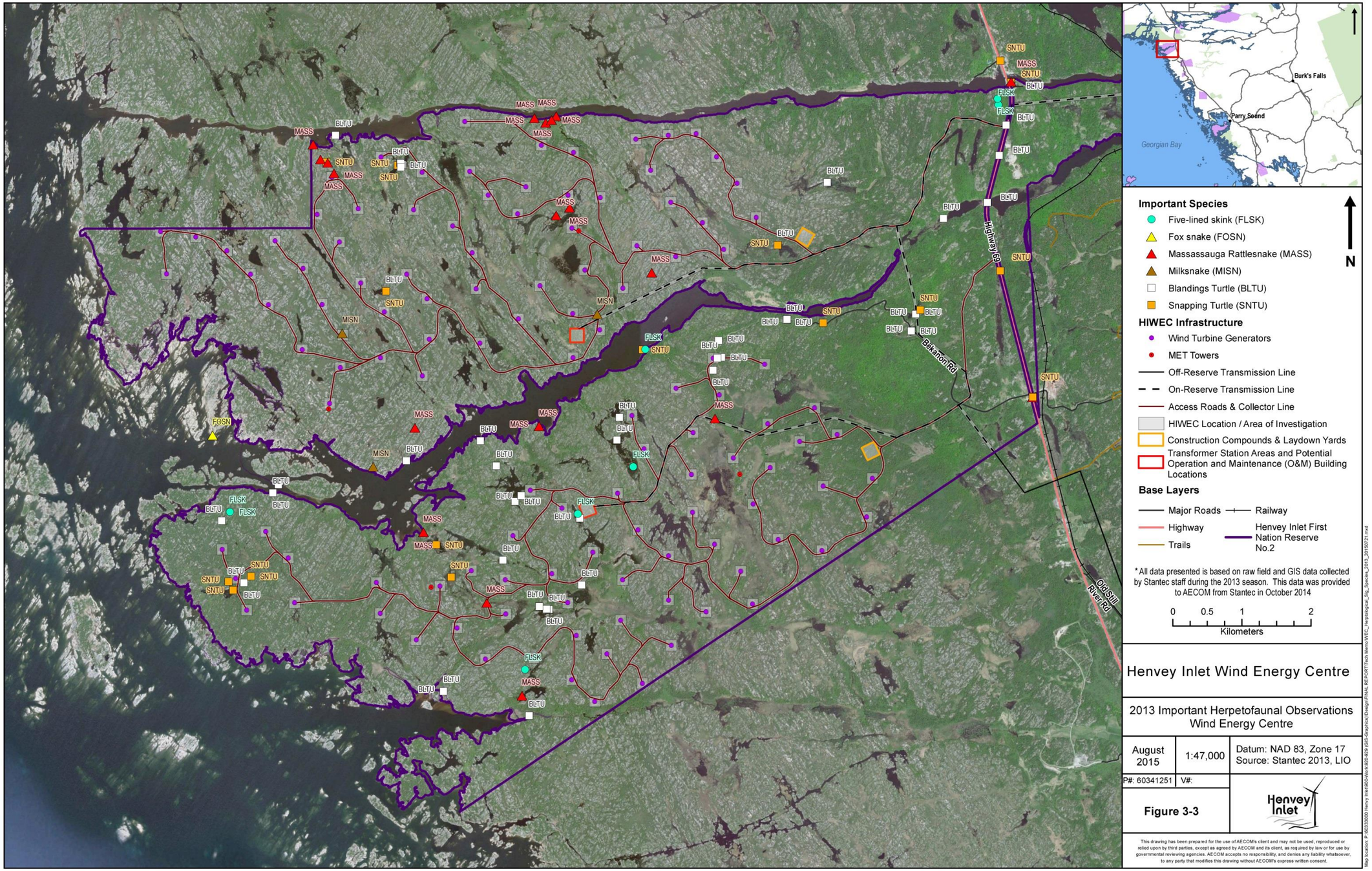
2013 Western Chorus Frog and Salamander Surveys Wind Energy Centre

August 2015	1:47,000	Datum: NAD 83, Zone 17 Source: Stantec 2013, LIO
P#: 60333000	V#:	

Figure 3-2

Map location: F:\AECOM\Work\60333000 - Henvey Wind\Design\Final Report\Tech Memo\WEC_Herpetological_Survey_20150723.mxd

Figure 3-3: 2013 Important Herpetofaunal Observations



3.2 Herpetological Survey Results

3.2.1 2011 and 2012

Locations of important reptile observations were recorded by LGL and provided to AECOM in an Excel file entitled *2011-2012 Herpetiles summary sheet.xlsx*. These observations are presented in **Appendix A**. UTM co-ordinates for observations recorded in this file were mapped by AECOM to confirm that these locations fall within the HIWEC study area. Only those observations that are located within the HIWEC study area are discussed in further detail below.

Based on the data provided, a total of 27 herpetofaunal species were recorded within the HIWEC study area in 2011 and 2012 (**Table 3-1**). These include five (5) federal Species at Risk (*i.e.*, species listed as Endangered or Threatened under Schedule 1 of the federal *Species at Risk Act*): Blanding's Turtle (*Emydoidea blandingii*), Eastern Musk Turtle (*Sternotherus odouratus*), Eastern Foxsnake (*Pantherophis gloydi*), Massasauga Rattlesnake (*Sistrurus catenatus*) and a restricted species. In addition, two (2) Species of Conservation Concern, Snapping Turtle and Five-lined Skink, were observed within the HIWEC study area in 2011 and / or 2012. The locations where these species were observed are shown on **Figure 3-1**. The locations of the restricted species observations are not being made public due to the threat of poaching experienced by this species.

Table 3-1: 2011 and 2012 Herpetofaunal Observations

Common Name	Scientific Name	Number of Individuals Observed	ESA Status[1]	SARA Status[2]	S-Rank[3]
Turtles (4 species)					
Blanding's Turtle	*Emydoidea blandingii*	74	Threatened	Threatened (Schedule 1)	S3
Eastern Musk Turtle	*Sternotherus odouratus*	1	Special Concern	Threatened (Schedule 1)	S3
Midland Painted Turtle	*Chrysemys picta marginata*	5	-	-	S4
Snapping Turtle	*Chelydra serpentina*	6	Special Concern	Special Concern (Schedule 1)	S3
Snakes and Lizards (9 species)					
Dekay's Brownsnake	*Storeria dekayi*	1	-	-	S5
Eastern Foxsnake	*Pantherophis gloydi*	1	Threatened	Endangered (Schedule 1)	S2
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	12	-	-	S5
Five-lined Skink	*Plestiodon fasciatus*	4	Special Concern	Special Concern (Schedule 1)	S3
Massasauga Rattlesnake	*Sistrurus catenatus*	21 (4 shed skins also recorded)	Threatened	Threatened (Schedule 1)	S3
Northern Watersnake	*Nerodia sipedon sipedon*	1	-	-	S5
Red-bellied Snake	*Storeria occipitomaculata*	3	-	-	S5
Ring-necked Snake	*Diadophis punctatus*	2	-	-	S4
Smooth Greensnake	*Opheodrys vernalis*	6	-	-	S4
Frogs (8 species)					
American Bullfrog	*Lithobates catesbeianus*	Not Recorded	-	-	S4
American Toad	*Anaxyrus americanus*	Not Recorded	-	-	S5
Gray Treefrog	*Hyla versicolor*	Not Recorded	-	-	S5
Green Frog	*Lithobates clamitans*	Not Recorded	-	-	S5
Mink Frog	*Lithobates septentrionalis*	Not Recorded	-	-	S5
Northern Leopard Frog	*Lithobates pipiens*	Not Recorded	-	-	S5
Spring Peeper	*Pseudacris crucifer*	Not Recorded	-	-	S5
Wood Frog	*Lithobates sylvaticus*	Not Recorded	-	-	S5

Common Name	Scientific Name	Number of Individuals Observed	ESA Status[1]	SARA Status[2]	S-Rank[3]
Salamanders and Newts (5 species)					
Spotted Salamander	*Ambystoma maculatum*	Not Recorded	-	-	S4
Blue-spotted Salamander	*Ambystoma laterale*	1	-	-	S4
Red-spotted Newt	*Notophthalmus viridescens viridescens*	1	-	-	S5
Eastern Red-backed Salamander	*Plethodon cinereus*	1	-	-	S5
Mole Salamander species	*Ambystoma* sp.	Not Recorded	-	-	-
Restricted Species (1 species)					

Notes:

1. ***ESA Status**: The Endangered Species Act 2007 (ESA) protects Species at Risk (Threatened and Endangered) at a Provincial Level.*
2. ***SARA Status:** The Species at Risk Act (SARA) protects Species at Risk (Special Concern, Threatened and Endangered) at a Federal Level. Species listed under Schedule 1 receive protection under SARA.*
3. ***S-rank:** The Natural Heritage provincial ranking system (provincial S-rank) is used by the MNRF Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. Definitions are as follows:*

S1	*Extremely rare in Ontario; usually 5 or fewer occurrences in the province or very few remaining individuals; often especially vulnerable to extirpation.*
S2	*Very rare in Ontario; usually between 5 and 20 occurrences in the province or with many individuals in fewer occurrences; often susceptible to extirpation.*
S3	*Rare to uncommon in Ontario; usually between 20 and 100 occurrences in the province; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances. Most species with an S3 rank are assigned to the watch list, unless they have a relatively high global rank.*
S4	*Common and apparently secure in Ontario; usually with more than 100 occurrences in the province.*
S5	*Very common and demonstrably secure in Ontario.*
SH	*Possibly Extirpated (Historical). Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years.*
S#S#	*A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community.*
S#?	*Rank uncertain.*

There were a total of 74 Blanding's Turtle observations throughout the HIWEC study area during the 2011 and 2012 field seasons (refer to **Figure 3-1** for locations). Based on correspondence with Sarah Richer (a Biologist who conducted surveys on behalf of LGL in 2011 and 2012), some individual turtles that were repeatedly observed in the same small water body in early May continued to be observed throughout the season into September. These individuals were observed in large and small wetlands (beaver ponds, marshes, fens, bogs and swamps), wet ditches and larger puddles along Bekanon Road, and some larger puddles amongst the treed rock barrens, as well as drier uplands. Individuals were observed travelling and foraging on upland treed rock barrens and the more densely forested habitat on the northeast and southeast portions of the HIWEC study area, including both on and adjacent to Bekanon Road. This species was also confirmed to be nesting on Bekanon Road.

The empty shell (both carapace and plastron) of one (1) Eastern Musk Turtle (*Sternotherus odouratus*) was observed within the HIWEC study area during the 2011 field season (**Figure 3-1**). Based on correspondence with Sarah Richer, it was found along the shoreline of the Key River and was estimated to be a 'winter kill' (one that did not survive hibernation) by the LGL Biologist who located it.

There were a total of six (6) Snapping Turtle observations within the HIWEC study area during the 2011 and 2012 field seasons (**Figure 3-1**). Based on correspondence with Sarah Richer, this species was also confirmed to be nesting on Bekanon Road.

One (1) adult Eastern Foxsnake was observed within the HIWEC study area during the 2011 and 2012 field seasons (**Figure 3-1**). This observation was made on the north side of Henvey Inlet, approximately 100 m inland from the Key River adjacent to a large wetland.

A total of four (4) Five-lined Skinks were observed within the HIWEC study area during the 2011 and 2012 field seasons (**Figure 3-1**). These observations were all made on the southern side of the HIWEC study area. Based on correspondence with Sarah Richer, each individual was observed in treed rock barrens with abundant cover objects adjacent to water sources.

There were a total of 21 Massasauga Rattlesnake observations (as well as four shed skins) within the HIWEC study area during the 2011 and 2012 field seasons (**Figure 3-1**). This total includes two (2) records of Massasauga Rattlesnakes observed killed by vehicles on Bekanon Road. Based on correspondence with Sarah Richer, these individuals were observed in large and small wetlands (beaver ponds, marshes, fens, bogs and swamps), and drier uplands, including the treed rock barrens and the more densely forested habitat on the northeast and southeast portions of the HIWEC study area and along Bekanon Road.

In addition, six (6) predated turtle nests were observed in the HIWEC study area. Based on correspondence with Sarah Richer, these nests were found primarily in sandy areas along the shoreline of Georgian Bay in Sandy Bay, and along the south shore of Henvey Inlet, as well as in areas with sandier soil exposed to the sun along Bekanon Road. The predated turtle eggshells observed included those with shapes indicative of Snapping Turtle and / or Northern Map Turtle, and Midland Painted Turtle and / or Blanding's Turtle.

Based on correspondence with Sarah Richer, several anecdotal reports of snakes with 'black bellies' exhibiting defensive behaviour diagnostic of the harmless Eastern Hog-nose Snake (including playing dead and flattening their neck to appear similar to a cobra) have been reported within the HIWEC study area by several band members, who locally refer to them as 'Puff Adders'. No other snake that occurs in Ontario exhibits this behaviour, which eliminates the chance that those band members are confusing the observed specimens with another snake. Biologists did not record this species during 2011 or 2012 surveys.

3.3 2013

3.3.1 Western Chorus Frog and Salamander Surveys

Locations of Western Chorus Frog and salamander survey stations were recorded by Stantec and provided to AECOM in an Excel file entitled *All survey locations_UTM_MC_07112013.xlsx*. These are presented in **Appendix A**. The UTM co-ordinates of survey stations were mapped by AECOM. Only the Western Chorus Frog and salamander survey stations that fall within the HIWEC study area are discussed in further detail below (refer to **Figure 3-2**).

Based on the data provided, some of the surveys were conducted on April 22 and 30, 2013 while the remaining surveys were conducted on May 7 and 8, 2013. The majority of amphibian surveys were conducted during the day; while some occurred at night and a small number occurred at an unspecified time. A total of 17 stations (61%) were surveyed during the day, six (6; 21%) were conducted night, and five (5; 18%) occurred at an unspecified time. **Table 3-2** provides a summary of which station received day, night or unspecified time surveys.

Salamander egg mass surveys were completed in conjunction with the Western Chorus Frog surveys; however, the results of these surveys were not indicated on the field notes provided by Stantec. On February 26, 2015, Stantec provided confirmation that these surveys were completed.

Table 3-2: Summary of Day and Night 2013 Western Chorus Frog Surveys

Survey Time	Stations	Total
Day	6, 11 to 17, 129 to 137	17
Night	1 to 5, 126	6
Unspecified	7 to 10, 127	5
Total		**28**

The results of the Western Chorus Frog and salamander surveys are summarized in **Table C-1** in **Appendix C**. This table includes the dates, survey start and end times, weather conditions and results of each survey, wherever recorded, based on the field notes provided (refer to **Appendix A**).

Based on the data provided, a total of five (5) amphibian species were recorded within the HIWEC study area during these surveys, including American Toad (*Anaxyrus americanus*), American Bullfrog (*Lithobates catesbeianus*), Gray Treefrog (*Hyla versicolor*), Northern Leopard Frog (*Lithobates pipiens*) and Spring Peeper (*Pseudacris crucifer*). Two choruses of Spring Peepers were heard calling from stations 126 and 127, respectively. No egg masses were observed.

In addition, one (1) Western Chorus Frog (*Pseudacris triseriata*), was possibly heard calling from station 127; however, Stantec was not able to confirm this species identification. The Great Lakes / St. Lawrence – Canadian Shield Population of Western Chorus Frog is listed as Threatened under Schedule 1 of the federal *Species at Risk Act*. Because this observation was not confirmed, this species has not been included in the tally of amphibians recorded above.

3.3.2 Reptile Habitat and Targeted Surveys

The field notes regarding reptile habitat and targeted surveys for the HIWEC study area as provided by Stantec in the document entitled *60824_Reptile.pdf* includes reptile observations made within both the HIWEC study area and along the proposed transmission lines. When a reptile was observed during wandering transect surveys or area searches, the following information was collected: location of observation, species, habitat description and notes. The location of surveys, start and end point of transects, and duration of surveys was not recorded in the field notes in the document entitled *60824_Reptile.pdf*. Therefore, the results of these surveys are presented as observations of reptiles within the HIWEC study area and are summarized in **Section 3.3.3** below.

Based on the data provided, no field studies targeting snake, lizard or turtle Species at Risk, or nesting and basking surveys, as described in the work plan (Stantec, 2013), were conducted within the HIWEC study area. However, four (4) reptile habitat and targeted surveys conducted by Stantec within their transmission line study area are within the HIWEC study area. Species at Risk recorded through these surveys are summarized in **Section 3.3.3** below. Please refer to the *Summary of 2013 Herpetological Surveys – Route A and Route B Transmission Line Study Areas* (AECOM, 2015b) for further details regarding survey methods and approach.

3.3.3 Important Herpetofaunal Observations

Locations of important herpetofaunal observations were recorded by Stantec and provided to AECOM in an Excel file entitled *Significant Species Observations.xlsx* and for those stations formerly on the transmission line which are now with the HIWEC study area in a pdf entitled *60824_Reptile.pdf*. UTM co-ordinates for observations recorded in the “Reptiles Henvey Inlet” and “Reptiles MTO Corridor” tabs of the Excel file entitled *Significant Species Observations.xlsx* and in *60824_Reptile.pdf* for those stations which were located within the HIWEC study area were mapped by AECOM to confirm that these locations fall within the HIWEC study area (**Figure 3-3**). Only the important herpetofaunal observations that are located within or in the vicinity of the HIWEC study area are discussed in further detail below.

Important herpetofaunal observations were recorded within or in the vicinity of the HIWEC study area between April 22 and September 23, 2013. These observations are presented in **Appendix A**. The following table (**Table 3-3**) provides a summary of the important herpetofaunal species observed within the HIWEC study area in 2013. These include four (4) Federal Species at Risk (*i.e.*, species listed as Endangered or Threatened under Schedule 1 of the federal *Species at Risk Act*): Blanding’s Turtle, Eastern Foxsnake, Massasauga Rattlesnake and a restricted

species. In addition, two (2) Species of Conservation Concern, Snapping Turtle and Five-lined Skink, were recorded in the HIWEC study area in 2013. The locations where these species were recorded are shown on **Figure 3-3**. The locations of the restricted species observations are not being made public due to the threat of poaching experienced by this species.

Table 3-3: 2013 Important Herpetofaunal Observations

Common Name	Scientific Name	Number of Individuals Observed	ESA Status[1]	SARA Status[2]	S-Rank[3]
Turtles (2 species)					
Blanding's Turtle	*Emydoidea blandingii*	82	Threatened	Threatened (Schedule 1)	S4
Snapping Turtle	*Chelydra serpentina*	20	Special Concern	Special Concern (Schedule 1)	S3
Snakes and Lizards (4 species)					
Eastern Foxsnake	*Pantherophis gloydi*	1	Threatened	Endangered (Schedule 1)	S2
Five-lined Skink	*Plestiodon fasciatus*	8	Special Concern	Special Concern (Schedule 1)	S3
Massasauga Rattlesnake	*Sistrurus catenatus*	26	Threatened	Threatened (Schedule 1)	S3
Milksnake	*Lampropeltis triangulum*	3	Special Concern	Special Concern (Schedule 1)	S3
Restricted Species (1 species)					

Notes:

1. ***ESA Status**: The Endangered Species Act 2007 (ESA) protects Species at Risk (Threatened and Endangered) at a Provincial Level.*
2. ***SARA Status:** The Species at Risk Act (SARA) protects Species at Risk (Special Concern, Threatened and Endangered) at a Federal Level. Species listed under Schedule 1 receive protection under SARA.*
3. ***S-rank:** The natural heritage provincial ranking system (provincial S-rank) is used by the MNRF Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. Definitions are as follows:*
   - *S1 Extremely rare in Ontario; usually 5 or fewer occurrences in the province or very few remaining individuals; often especially vulnerable to extirpation.*
   - *S2 Very rare in Ontario; usually between 5 and 20 occurrences in the province or with many individuals in fewer occurrences; often susceptible to extirpation.*
   - *S3 Rare to uncommon in Ontario; usually between 20 and 100 occurrences in the province; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances. Most species with an S3 rank are assigned to the watch list, unless they have a relatively high global rank.*
   - *S4 Common and apparently secure in Ontario; usually with more than 100 occurrences in the province.*
   - *S5 Very common and demonstrably secure in Ontario.*
   - *SH Possibly Extirpated (Historical). Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years.*
   - *S#S# A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community.*
   - *S#? Rank uncertain.*

There were a total of 82 Blanding's Turtle observations at 52 locations within or in the vicinity of the HIWEC study area during the 2013 field season. Of these, 45 locations (UTM co-ordinates) were provided by Stantec (**Figure 3-3**). Observations of this species were widespread but most observations were made on the south side of Henvey Inlet.

There were a total of 20 Snapping Turtle observations within the HIWEC study area during the 2013 field season (**Figure 3-3**). Observations of this species were distributed across the HIWEC study area.

A single (1) Eastern Foxsnake was observed just outside the HIWEC study area during the 2013 field season (**Figure 3-3**). This observation was made on the coast of Georgian Bay and is not located adjacent to any proposed HIWEC infrastructure.

A total of eight (8) Five-lined Skinks were observed within the HIWEC study area during the 2013 field season (**Figure 3-3**). Observations of this species were generally south of Henvey Inlet, with the exception of two locations near Highway 69 north of Henvey Inlet.

There were a total of 26 Massasauga Rattlesnake observations within the HIWEC study area during the 2013 field season (**Figure 3-3**). Observations of this species were generally distributed across the HIWEC study area, with more observations on the north side of Henvey Inlet compared to the south side.

A total of three (3) Milksnakes were observed within the HIWEC study area during the 2013 field season (**Figure 3-3**). Observations of this species were limited to the north side of Henvey Inlet.

4. Summary

LGL conducted the following herpetological surveys in 2011 and 2012 within the HIWEC study area:

- Incidental observations were recorded for reptiles and amphibians encountered during the 2011 and 2012 field seasons. Specific locations of the herpetological surveys were not recorded; therefore, a defined study area for this work cannot be described. Rather, the locations of reptiles observed were recorded.
- A total of 27 herpetofaunal species were recorded within the HIWEC study area in 2011 and 2012, including five (5) federal Species at Risk (Blanding's Turtle, Eastern Musk Turtle, Eastern Foxsnake, Massasauga Rattlesnake and a restricted species) and two (2) species of conservation concern (Snapping Turtle and Five-lined Skink).

Stantec conducted the following herpetological surveys in 2013 within the HIWEC study area:

- Western Chorus Frog and salamander surveys were completed at 28 monitoring stations established in the HIWEC study area in 2013.
- A total of five (5) amphibian species were confirmed within the HIWEC study area. None of these are Species at Risk. However, one (1) Western Chorus Frog was possibly heard, although not confirmed, at monitoring station 127.
- Incidental observations were recorded for herpetofauna encountered during the 2013 field season. Specific locations of the herpetological surveys were not recorded; therefore, a defined study area for this work cannot be described. Rather, the locations of important reptiles observed were recorded.
- Four (4) federal Species at Risk (Blanding's Turtle, Eastern Foxsnake, Massasauga Rattlesnake and a restricted species) and two (2) species of conservation concern (Snapping Turtle and Five-lined Skink) were recorded in the HIWEC study area in 2013.

5. Assumptions and Clarification

The following are assumptions and clarifications made and/or required by AECOM based on the field notes provided by Stantec in October 2014:

- Based on the field notes provided in *60824_Amphibianscall.pdf*, it was unclear if amphibian (including salamander) egg mass surveys were completed in the HIWEC study area. On February 26, 2015, Stantec provided AECOM with comments that confirmed that these surveys were undertaken and that no egg masses were observed.
- It was unclear if reptile habitat surveys, targeted surveys for reptile Species at Risk, and turtle nesting and basking surveys were completed in 2013 based on the field notes provided by Stantec in October 2014. On February 26, 2015, Stantec provided AECOM with comments that confirmed that field studies targeting snake, lizard or turtle Species at Risk, or nesting and basking surveys, were not conducted.
- Eastern Newt (*Notophthalmus viridescens viridescens*) was recorded in the Excel spreadsheet entitled *2011-2012 Herpetiles summary sheet.xlsx*. The more commonly accepted common name for this species is Red-spotted Newt therefore it is included in this report as such.

6. References

AECOM, 2015:

Summary of 2011, 2012 and 2013 Breeding Bird Surveys – Henvey Inlet Wind Energy Centre. Prepared for Henvey Inlet Wind LP. Summary of 2013 Herpetological Surveys – Route A and Route B Transmission Line Study Areas (AECOM, 2015b)

LGL Limited, 2011a:

Work plan for the Nigig Power Wind Farm Project Background Ecological Studies. Prepared for Genivar on behalf of Nigig Power Corporation, 17 p.

LGL Limited, 2011b:

Henvey Inlet Biological Survey Update July 2011 Interim Draft Report. Prepared for Genivar on behalf of Nigig Power Corporation, 17 p.

Stantec Consulting Ltd., 2013:

2013 Terrestrial Survey Work Program. Prepared for Nigig Power Corp., 25 p.

Appendix A

Field Notes and Documentation

Common Name	Scientific Name	# of Individuals	Observation Identification	Year	Month	Day
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2011	May	1
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2011	May	1
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2011	May	11
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2011	May	18
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2011	May	18
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2011	May	18
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2011	May	18
Blanding's Turtle	*Emydoidea blandingii*	1	no picture; unmistakeable domed shell & yellow neck	2011	July	13
Blanding's Turtle	*Emydoidea blandingii*	2	Picture taken	2012	April	13
Blanding's Turtle	*Emydoidea blandingii*	2	Picture taken	2012	April	13
Blanding's Turtle	*Emydoidea blandingii*	2	Picture taken	2012	April	18
Blanding's Turtle	*Emydoidea blandingii*	2	Picture taken	2012	April	18
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	April	25
Blanding's Turtle	*Emydoidea blandingii*	2	Picture taken	2012	April	25
Blanding's Turtle	*Emydoidea blandingii*	2	Picture taken	2012	April	25
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	April	25
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	June	8
Blanding's Turtle	*Emydoidea blandingii*	2	Picture taken	2012	June	13
Blanding's Turtle	*Emydoidea blandingii*	2	moved before pic could be taken; distinctive domed shell, long yellow neck	2012	June	13
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	2
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	2
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	2
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	16	Picture taken	2012	May	4
Blanding's Turtle	*Emydoidea blandingii*	2	Picture taken	2012	May	10
Blanding's Turtle	*Emydoidea blandingii*	2	no picture; unmistakeable domed shell & yellow neck	2012	May	10
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	11
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	14
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	15
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	15
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	15

Common Name	Scientific Name	# of Individuals	Observation Identification	Year	Month	Day
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	15
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	15
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	15
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	15
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	15
Blanding's Turtle	*Emydoidea blandingii*	9	Picture taken	2012	May	15
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	17
Blanding's Turtle	*Emydoidea blandingii*	6	Picture taken	2012	May	17
Blanding's Turtle	*Emydoidea blandingii*	6	Picture taken	2012	May	17
Blanding's Turtle	*Emydoidea blandingii*	6	Picture taken	2012	May	17
Blanding's Turtle	*Emydoidea blandingii*	6	Picture taken	2012	May	17
Blanding's Turtle	*Emydoidea blandingii*	6	Picture taken	2012	May	17
Blanding's Turtle	*Emydoidea blandingii*	6	Picture taken	2012	May	17
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	23
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	29
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	29
Blanding's Turtle	*Emydoidea blandingii*	1	Picture taken	2012	May	30
Eastern Foxsnake	*Pantherophis gloydi*		Picture taken	2011	June	24
Massasauga	*Sistrurus catenatus*	1	Took video, no pic; heavy body, rattle audible	2011	July	12
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	July	14
Massasauga	*Sistrurus catenatus*	2	distinctive heavy body shape, rattle present and audible	2011	June	7
Massasauga	*Sistrurus catenatus*	2	distinctive heavy body shape, rattle present and audible	2011	June	7
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	June	13
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	June	24
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	May	25
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	May	30
Massasauga	*Sistrurus catenatus*	1	moved too quickly to take pic; distinctive heavy body shape, rattle present and audible	2011	October	4
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	September	12
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	September	13
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	September	13
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	September	26
Massasauga	*Sistrurus catenatus*	1	Picture taken	2011	September	26
Massasauga	*Sistrurus catenatus*	1	Picture taken	2012	June	1
Massasauga	*Sistrurus catenatus*	1	Picture taken	2012	June	5
Massasauga	*Sistrurus catenatus*	1	Picture taken	2012	June	5
Massasauga	*Sistrurus catenatus*	1	Picture taken	2012	June	21
Massasauga	*Sistrurus catenatus*	1	distinctive heavy body shape, rattle present and audible	2012	June	28
Massasauga	*Sistrurus catenatus*	1	Picture taken	2012	May	18
Five-lined Skink	*Plestiodon fasciatus*	1	blue on its tail was distinctive	2012	June	20
Five-lined Skink	*Plestiodon fasciatus*	2	Picture taken	2011	May	25
Five-lined Skink	*Plestiodon fasciatus*	2	Picture taken	2011	May	25
Five-lined Skink	*Plestiodon fasciatus*	1	Scurried away too quickly for photo but got good look, was lizard, pale stripes on bluish-grey body	2011	July	1
Snapping Turtle	*Chelydra serpentina*	1	See picture	2012	May	4
Snapping Turtle	*Chelydra serpentina*	1	Picture taken	2011	May	30
Snapping Turtle	*Chelydra serpentina*	1	Picture taken	2012	May	11
Snapping Turtle	*Chelydra serpentina*	1	Picture taken	2012	May	11
Snapping Turtle	*Chelydra serpentina*	1	No picture; large heavy body & long tail	2012	May	17
Snapping Turtle	*Chelydra serpentina*	1	No picture; huge, unmistakable, on rock in Henvey Inlet	2012	June	9
Restricted Species	-	1	Picture taken	2011	June	23
Restricted Species	-	1	Picture taken	2012	April	12
Restricted Species	-	1	Picture taken	2012	June	6

Common Name	Scientific Name	# of Individuals	Observation Identification	Year	Month	Day
Restricted Species	-	1	Picture taken	2012	June	7
Restricted Species	-	2	Picture taken	2012	June	13
Restricted Species	-	2	Picture taken	2012	June	13
Restricted Species	-	1	Picture taken	2012	May	15
Restricted Species	-	7	Picture taken	2012	May	30
Restricted Species	-	7	Picture taken	2012	May	30
Restricted Species	-	7	Picture taken	2012	May	30
Restricted Species	-	7	Picture taken	2012	May	30
Restricted Species	-	7	Picture taken	2012	May	30
Restricted Species	-	7	Picture taken	2012	May	30
Midland Painted Turtle	*Chrysemys picta marginata*	2	Picture taken	2012	May	20
Midland Painted Turtle	*Chrysemys picta marginata*	1	no picture taken	2012	June	10
Midland Painted Turtle	*Chrysemys picta marginata*	1	Picture taken	2012	May	31
Midland Painted Turtle	*Chrysemys picta marginata*	1	Picture taken	2012	April	30
Midland Painted Turtle	*Chrysemys picta marginata*	1	no picture taken	2011	June	10
Smooth Greensnake	*Opheodrys vernalis*	1	Picture taken	2011	May	25
Smooth Greensnake	*Opheodrys vernalis*	1	Picture taken	2012	June	20
Smooth Greensnake	*Opheodrys vernalis*	1	No picture; small, entirely green; too quick for pic	2012	June	28
Smooth Greensnake	*Opheodrys vernalis*	1	Picture taken	2012	May	4
Smooth Greensnake	*Opheodrys vernalis*	1	Picture taken	2012	May	15
Smooth Greensnake	*Opheodrys vernalis*	1	Picture taken	2011	June	10
Ring-necked Snake	*Diadophis punctatus*	1	Picture taken	2011	July	1
Ring-necked Snake	*Diadophis punctatus*	1	Picture taken	2011	May	25
Red-bellied Snake	*Storeria occipitomaculata*	1	Picture taken	2011	June	20
Red-bellied Snake	*Storeria occipitomaculata*	1	Picture taken	2012	May	16
Red-bellied Snake	*Storeria occipitomaculata*	1	Picture taken	2012	May	7
Dekay's Brownsnake	*Storeria dekayi*	1	no picture taken	2011	June	5
Northern Watersnake	*Nerodia sipedon sipedon*	1	Picture taken	2012	May	24
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2012	May	14
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2012	June	11
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2011	October	18
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2011	May	23
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2012	June	14
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	no picture taken	2012	June	29
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	no picture taken	2012	June	10
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2011	May	9
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2011	June	10
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2012	May	30
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2012	June	26
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	1	Picture taken	2012	June	5
Eastern Red-backed Salamander	*Plethodon cinereus*	1	Picture taken	2012	May	14
Blue-spotted Salamander	*Ambystoma laterale*	1	Picture taken	2011	October	6
Eastern Newt	*Notophthalmus viridescens viridescens*	1	moved before pic could be taken	2012	May	4

*not all observations of the more common species were recorded, including those of Midland Painted Turtle and Eastern Gartersnake, and Mole Salamander sp (Ambystoma sp.) egg sacs
**no frog species were included on this sheet as they were too numerous; however, the following species were observed within the Henvey Inlet 2 lands:
American Toad, Green Frog, Northern Leopard Frog, American Bullfrog, Mink Frog, Wood Frog, Spring Peeper, and Gray Treefrog; anecdotal reports of Spotted Salamander were noted

Common Name	Scientific Name	Observers	Datum	UTM Zone	Easting	Northing	Road Observation
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	523801	5077144	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	532490	5078456	Alive
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	529169	5077932	Alive
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	524696	5075727	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	529512	5078223	Alive
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	529473	5078406	Alive
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	530509	5078763	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527088	5080248	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	525406	5075782	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	525406	5075782	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527560	5080093	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527560	5080093	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	522718	5081373	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	524165	5081219	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	524165	5081219	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	525549	5081158	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	526574	5072981	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	524634	5079190	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	524634	5079190	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	525192	5075832	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	525203	5075796	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	524586	5075477	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528312	5077541	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528312	5077542	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528312	5077542	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528367	5077399	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528089	5077568	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528147	5077599	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528105	5077602	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528062	5077398	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528062	5077398	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528072	5077393	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528159	5077279	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528038	5077360	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	527948	5077383	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	527998	5077481	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528001	5077491	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	528041	5077548	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	526275	5074863	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	526304	5074898	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	525609	5077099	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	531020	5077543	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	531011	5077572	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	531099	5077435	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	531067	5077431	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	531053	5077456	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	531032	5077454	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	531054	5077433	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	531087	5077422	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	531065	5077453	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	529526	5078152	Alive
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527446	5080199	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527446	5080199	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527418	5080221	

Common Name	Scientific Name	Observers	Datum	UTM Zone	Easting	Northing	Road Observation
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527418	5080221	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527319	5080230	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527319	5080230	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527250	5080181	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527243	5080130	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527307	5080193	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer & Andrew Davis	NAD83	17	522148	5079720	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527838	5077069	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527838	5077069	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	528250	5076574	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	528059	5076947	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	527968	5077026	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	528075	5077062	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	524844	5080371	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	532071	5078883	Alive
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	529706	5076349	
Blanding's Turtle	*Emydoidea blandingii*	Sarah Richer	NAD83	17	526932	5076510	
Eastern Foxsnake	*Pantherophis gloydi*	Sarah Richer	NAD83	17	524197	5081345	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	523370	5078186	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	526466	5078172	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	525261	5074177	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	525261	5074177	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	526650	5073042	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	524078	5081353	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	530332	5078808	
Massasauga	*Sistrurus catenatus*	Sarah Richer & Andrew Davis	NAD83	17	523457	5078218	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	531319	5078842	Alive
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	525405	5077548	Alive
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	527137	5075632	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	527075	5075691	
Massasauga	*Sistrurus catenatus*	Sarah Richer & Andrew Davis	NAD83	17	531753	5078970	Dead
Massasauga	*Sistrurus catenatus*	Sarah Richer & Andrew Davis	NAD83	17	528483	5078342	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	524241	5081228	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	523140	5075175	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	522531	5074611	
Massasauga	*Sistrurus catenatus*	Sarah Richer	NAD83	17	528940	5080735	Dead
Massasauga	*Sistrurus catenatus*	Sarah Richer & Andrew Davis	NAD83	17	528940	5080735	
Massasauga	*Sistrurus catenatus*	Sarah Richer & Andrew Davis	NAD83	17	524629	5077064	
Five-lined Skink	*Plestiodon fasciatus*	Sarah Richer	NAD83	17	527035	5075848	
Five-lined Skink	*Plestiodon fasciatus*	Sarah Richer	NAD83	17	529730	5077876	
Five-lined Skink	*Plestiodon fasciatus*	Sarah Richer	NAD83	17	529730	5077876	
Five-lined Skink	*Plestiodon fasciatus*	Sarah Richer	NAD83	17	522523	5074506	
Snapping Turtle	*Chelydra serpentina*	Sarah Richer & Andrew Davis	NAD83	17	527934	5077451	
Snapping Turtle	*Chelydra serpentina*	Sarah Richer & Andrew Davis	NAD83	17	533636	5077567	
Snapping Turtle	*Chelydra serpentina*	Sarah Richer & Andrew Davis	NAD83	17	528184	5077220	
Snapping Turtle	*Chelydra serpentina*	Sarah Richer & Andrew Davis	NAD83	17	528116	5077095	
Snapping Turtle	*Chelydra serpentina*	Sarah Richer	NAD83	17	522213	5079620	
Snapping Turtle	*Chelydra serpentina*	Sarah Richer	NAD83	17	523325	5076425	
Restricted Species	-	Sarah Richer & Andrew Davis	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer & Andrew Davis	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			

Common Name	Scientific Name	Observers	Datum	UTM Zone	Easting	Northing	Road Observation
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer & Andrew Davis	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made			
Restricted Species	-	Sarah Richer	NAD83	Exact location will not be made public due to threat of			
Midland Painted Turtle	*Chrysemys picta marginata*	Sarah Richer & Andrew Davis	NAD83	17	527546	5080311	
Midland Painted Turtle	*Chrysemys picta marginata*	Sarah Richer	NAD83	17	533753	5077631	Dead
Midland Painted Turtle	*Chrysemys picta marginata*	Sarah Richer	NAD83	17	529560	5078029	Alive
Midland Painted Turtle	*Chrysemys picta marginata*	Sarah Richer	NAD83	17	530605	5078765	Alive, injured;
Midland Painted Turtle	*Chrysemys picta marginata*	Sarah Richer	NAD83	17	532279	5078696	Dead
Smooth Greensnake	*Opheodrys vernalis*	Sarah Richer	NAD83	17	529740	5077876	
Smooth Greensnake	*Opheodrys vernalis*	Sarah Richer	NAD83	17	527180	5075279	
Smooth Greensnake	*Opheodrys vernalis*	Sarah Richer	NAD83	17	531292	5078829	
Smooth Greensnake	*Opheodrys vernalis*	Sarah Richer	NAD83	17	528302	5077445	
Smooth Greensnake	*Opheodrys vernalis*	Sarah Richer	NAD83	17	529448	5078034	Alive
Smooth Greensnake	*Opheodrys vernalis*	Sarah Richer & Andrew Davis	NAD83	17	528483	5078342	Dead
Ring-necked Snake	*Diadophis punctatus*	Sarah Richer	NAD83	17	522523	5074510	
Ring-necked Snake	*Diadophis punctatus*	Sarah Richer	NAD83	17	529937	5078404	
Red-bellied Snake	*Storeria occipitomaculata*	Sarah Richer & Andrew Davis	NAD83	17	531931	5078941	
Red-bellied Snake	*Storeria occipitomaculata*	Sarah Richer	NAD83	17	523365	5077759	
Red-bellied Snake	*Storeria occipitomaculata*	Sarah Richer	NAD83	17	531931	5078941	Dead
Dekay's Brownsnake	*Storeria dekayi*	Sarah Richer	NAD83	17	528545	5078282	Dead
Northern Watersnake	*Nerodia sipedon sipedon*	Sarah Richer & Andrew Davis	NAD83	17	526870	5079268	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer	NAD83	17	523073	5074979	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer	NAD83	17	525319	5074227	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer	NAD83	17	531940	5078939	Alive
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer	NAD83	17	533413	5077458	Dead
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer	NAD83	17	531874	5079025	Dead
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer	NAD83	17	532297	5078663	Dead
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer	NAD83	17	529480	5078338	Dead
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer					
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer					
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer					
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer					
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Sarah Richer					
Eastern Red-backed Salamander	*Plethodon cinereus*	Sarah Richer & Andrew Davis	NAD83	17	531599	5077870	
Blue-spotted Salamander	*Ambystoma laterale*	Sarah Richer & Andrew Davis	NAD83	17	532224	5078632	
Eastern Newt	*Notophthalmus viridescens viridescens*	Sarah Richer & Andrew Davis	NAD83	17	528264	5077467	

*not all observations of the more common species were recorded, including those of Midland Painted Tu
**no frog species were included on this sheet as they were too numerous; however, the following species
American Toad, Green Frog, Northern Leopard Frog, American Bullfrog, Mink Frog, Wood Frog, Spring P

Common Name	Scientific Name	Characteristics/notes
Blanding's Turtle	*Emydoidea blandingii*	adult male; displayed his penis
Blanding's Turtle	*Emydoidea blandingii*	adult male
Blanding's Turtle	*Emydoidea blandingii*	adult male
Blanding's Turtle	*Emydoidea blandingii*	adult female, missing front left foot, healed stump
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	potentially juvenile; smaller size than adult adjacent to it
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult male
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult female, missing piece of her front right corner of
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult

Common Name	Scientific Name	Characteristics/notes
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Eastern Foxsnake	*Pantherophis gloydi*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	possibly juvenile, small
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	smallish, maybe, juvenile?
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	very small, juvenile?
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Five-lined Skink	*Plestiodon fasciatus*	juvenile; bright blue colour on tail
Five-lined Skink	*Plestiodon fasciatus*	adult male
Five-lined Skink	*Plestiodon fasciatus*	adult female
Five-lined Skink	*Plestiodon fasciatus*	adult, unknown sex
Snapping Turtle	*Chelydra serpentina*	adult
Snapping Turtle	*Chelydra serpentina*	yearling; tiny
Snapping Turtle	*Chelydra serpentina*	adult
Snapping Turtle	*Chelydra serpentina*	adult
Snapping Turtle	*Chelydra serpentina*	adult
Snapping Turtle	*Chelydra serpentina*	adult
Restricted Species	-	adult female
Restricted Species	-	adult, likely female
Restricted Species	-	adult

Common Name	Scientific Name	Characteristics/notes
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult male
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Midland Painted Turtle	*Chrysemys picta marginata*	all sizes found throughout site, too many to report
Midland Painted Turtle	*Chrysemys picta marginata*	
Midland Painted Turtle	*Chrysemys picta marginata*	
Midland Painted Turtle	*Chrysemys picta marginata*	missing front right foot
Midland Painted Turtle	*Chrysemys picta marginata*	
Smooth Greensnake	*Opheodrys vernalis*	
Smooth Greensnake	*Opheodrys vernalis*	
Smooth Greensnake	*Opheodrys vernalis*	
Smooth Greensnake	*Opheodrys vernalis*	
Smooth Greensnake	*Opheodrys vernalis*	small, even for a green snake; last year's juvenile?
Smooth Greensnake	*Opheodrys vernalis*	discovered under our parked truck, with its body burned
Ring-necked Snake	*Diadophis punctatus*	
Ring-necked Snake	*Diadophis punctatus*	
Red-bellied Snake	*Storeria occipitomaculata*	quite fat along the length of its body; pregnant?
Red-bellied Snake	*Storeria occipitomaculata*	small, even for a redbelly; last year's juvenile?
Red-bellied Snake	*Storeria occipitomaculata*	
Dekay's Brownsnake	*Storeria dekayi*	smaller though not baby; last year's hatch?
Northern Watersnake	*Nerodia sipedon sipedon*	adult
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	adult
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	Adult; the stripe along the top of its body was more white than yellow, not used to seeing that, was quite pretty
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	headless; weasel kill?
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	
Eastern Gartersnake	*Thamnophis sirtalis sirtalis*	
Eastern Red-backed Salamander	*Plethodon cinereus*	red-backed phase
Blue-spotted Salamander	*Ambystoma laterale*	Quite small; maybe this year's morph?
Eastern Newt	*Notophthalmus viridescens viridescens*	Adult, in water at beaver dam

*not all observations of the more common species were recorded, including those of Midland Painted Tu
**no frog species were included on this sheet as they were too numerous; however, the following species
American Toad, Green Frog, Northern Leopard Frog, American Bullfrog, Mink Frog, Wood Frog, Spring F

Common Name	Scientific Name	Year	Month	Day	Observers	Datum	UTM Zone	Road Observation?
Blanding's Turtle	*Emydoidea blandingii*	2011	5	1	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2011	5	1	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	2011	5	11	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	2011	5	18	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2011	5	18	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	2011	5	18	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	2011	5	18	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2011	7	13	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	4	13	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	4	13	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	4	18	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	4	18	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	4	25	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	4	25	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	4	25	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	4	25	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	2	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	2	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	2	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	10	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	10	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	11	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	14	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	15	Sarah Richer	NAD83	17T	

Common Name	Scientific Name	Year	Month	Day	Observers	Datum	UTM Zone	Road Observation?
Blanding's Turtle	*Emydoidea blandingii*	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	17	Sarah Richer & Andrew Davis	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	23	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	29	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	2012	5	29	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	5	30	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	6	8	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	6	8	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	6	13	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	6	13	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	6	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	2012	7	1	Sarah Richer & Joe Herbert	NAD83	17T	Alive, nesting
Eastern Foxsnake	*Pantherophis gloydi*	2011	6	24	Sarah Richer	NAD83	17T	
Eastern Musk Turtle	*Sternotherus odoratus*	2011	6	15	LGL biologist Geoff Hughes	NAD83	17T	
Five-lined Skink	*Plestiodon fasciatus*	2011	5	25	Sarah Richer	NAD83	17T	
Five-lined Skink	*Plestiodon fasciatus*	2011	5	25	Sarah Richer	NAD83	17T	
Five-lined Skink	*Plestiodon fasciatus*	2011	7	1	Sarah Richer	NAD83	17T	
Five-lined Skink	*Plestiodon fasciatus*	2012	6	20	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	5	25	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	5	30	Sarah Richer & Andrew Davis	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	6	7	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	6	7	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	6	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	6	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	6	21	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	6	24	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	7	12	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	7	12	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	7	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	7	14	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	9	12	Sarah Richer	NAD83	17T	Alive
Massasauga	*Sistrurus catenatus*	2011	9	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	9	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	9	26	Sarah Richer & Andrew Davis	NAD83	17T	Dead
Massasauga	*Sistrurus catenatus*	2011	9	26	Sarah Richer & Andrew Davis	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2011	10	4	Sarah Richer	NAD83	17T	Alive
Massasauga	*Sistrurus catenatus*	2011	10	25	Sarah Richer	NAD83	17T	

Common Name	Scientific Name	Year	Month	Day	Observers	Datum	UTM Zone	Road Observation?
Massasauga	*Sistrurus catenatus*	2012	5	18	Sarah Richer & Andrew Davis	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2012	6	1	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2012	6	5	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2012	6	5	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	2012	6	21	Sarah Richer	NAD83	17T	Dead
Massasauga	*Sistrurus catenatus*	2012	6	28	Sarah Richer & Andrew Davis	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	2011	5	30	Sarah Richer & Andrew Davis	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	2012	5	4	Sarah Richer & Andrew Davis	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	2012	5	11	Sarah Richer & Andrew Davis	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	2012	5	11	Sarah Richer & Andrew Davis	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	2012	5	17	Sarah Richer	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	2012	6	9	Sarah Richer	NAD83	17T	
Restricted Species	-	2011	6	23	Sarah Richer & Andrew Davis	NAD83	-	
Restricted Species	-	2012	4	12	Sarah Richer & Andrew Davis	NAD83	-	
Restricted Species	-	2012	5	15	Sarah Richer & Andrew Davis	NAD83	-	
Restricted Species	-	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	2012	6	6	Sarah Richer	NAD83	-	
Restricted Species	-	2012	6	7	Sarah Richer	NAD83	-	
Restricted Species	-	2012	6	13	Sarah Richer	NAD83	-	
Restricted Species	-	2012	6	13	Sarah Richer	NAD83	-	
Turtle Nesting Area		2012	6	2	Sarah Richer	NAD83	17T	
Turtle Nesting Area		2012	6	2	Sarah Richer	NAD83	17T	
Turtle Nesting Area		2012	6	10	Sarah Richer	NAD83	17T	
Turtle Nesting Area		2012	6	10	Sarah Richer	NAD83	17T	
Turtle Nesting Area		2012	6	14	Sarah Richer	NAD83	17T	
Turtle Nesting Area		2012	6	15	Sarah Richer	NAD83	17T	

Common Name	Scientific Name	Characteristics/notes
Blanding's Turtle	*Emydoidea blandingii*	adult male; displayed his penis
Blanding's Turtle	*Emydoidea blandingii*	adult male
Blanding's Turtle	*Emydoidea blandingii*	adult male
Blanding's Turtle	*Emydoidea blandingii*	adult female, missing front left foot, healed stump
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	much smaller size than adult adjacent to it, approx 1/2 length
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult male
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult female, missing piece of her front right corner of plastron
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult

Common Name	Scientific Name	Characteristics/notes
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult female
Blanding's Turtle	*Emydoidea blandingii*	adult; remains, empty shell, disintegrated; still identifiable to
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult
Blanding's Turtle	*Emydoidea blandingii*	adult; remains, empty shell, disintegrated
Blanding's Turtle	*Emydoidea blandingii*	adult female
Eastern Foxsnake	*Pantherophis gloydi*	adult
Eastern Musk Turtle	*Sternotherus odoratus*	Empty shell, both carapace and plastron; location is approximate, to within 100 m; along south shoreline of Key River
Five-lined Skink	*Plestiodon fasciatus*	adult male
Five-lined Skink	*Plestiodon fasciatus*	adult female
Five-lined Skink	*Plestiodon fasciatus*	adult, unknown sex
Five-lined Skink	*Plestiodon fasciatus*	juvenile; bright blue colour on tail
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	Shed skin
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	Shed skin
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	Shed skin
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	very small; possibly juvenile or yearling
Massasauga	*Sistrurus catenatus*	very small; possibly juvenile or yearling
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	very small; possibly juvenile or yearling
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	very small; possibly juvenile or yearling
Massasauga	*Sistrurus catenatus*	Shed skin

Common Name	Scientific Name	Characteristics/notes
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Massasauga	*Sistrurus catenatus*	adult
Snapping Turtle	*Chelydra serpentina*	very small, likely yearling
Snapping Turtle	*Chelydra serpentina*	adult
Snapping Turtle	*Chelydra serpentina*	adult
Snapping Turtle	*Chelydra serpentina*	adult
Snapping Turtle	*Chelydra serpentina*	adult
Snapping Turtle	*Chelydra serpentina*	adult
Restricted Species	-	adult female
Restricted Species	-	adult, likely female
Restricted Species	-	adult male
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Restricted Species	-	adult
Turtle Nesting Area		Snapping turtle or Map Turtle eggs
Turtle Nesting Area		Snapping turtle or Map Turtle eggs
Turtle Nesting Area		predated eggs of Snapping turtle &/or Map turtle, & Painted &/or Blanding's Turtle observed
Turtle Nesting Area		predated Snapping turtle and/or Map turtle eggs observed
Turtle Nesting Area		predated Snapping Turtle nest
Turtle Nesting Area		Snapping Turtle and Painted or Blanding's Turtle

Table C-1: LGL Summary of Significant Reptile Observations (LGL, 2011-2012)

Common Name	Scientific Name	ESA Status	SARA Status	S-Rank	Year	Month	Day	Observers	Datum	UTM Zone	Road Observation?
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2011	5	1	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2011	5	1	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2011	5	11	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2011	5	18	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2011	5	18	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2011	5	18	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2011	5	18	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2011	7	13	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	4	13	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	4	13	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	4	18	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	4	18	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	4	25	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	4	25	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	4	25	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	4	25	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	2	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	2	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	2	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	10	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	10	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	11	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	14	Sarah Richer	NAD83	17T	Alive
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	17	Sarah Richer & Andrew Da	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	17	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	23	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	29	Sarah Richer	NAD83	17T	Alive

Table C-1: LGL Summary of Significant Reptile Observations (LGL, 2011-2012)

Common Name	Scientific Name	ESA Status	SARA Status	S-Rank	Year	Month	Day	Observers	Datum	UTM Zone	Road Observation?
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	29	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	5	30	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	6	8	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	6	8	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	6	13	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	6	13	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	6	15	Sarah Richer	NAD83	17T	
Blanding's Turtle	*Emydoidea blandingii*	THR	THR (Schedule 1)	S4	2012	7	1	Sarah Richer & Joe Herbe	NAD83	17T	Alive, nesting
Eastern Foxsnake	*Pantherophis gloydi*	THR	Endangered (Schedule 1)	S2	2011	6	24	Sarah Richer	NAD83	17T	
Eastern Musk Turtle	*Sternotherus odoratus*	SC	THR (Schedule 1)	S3	2011	6	15	LGL biologist Geoff Hughe	NAD83	17T	
Five-lined Skink	*Plestiodon fasciatus*	SC	Special Concern (Schedul	S3	2011	5	25	Sarah Richer	NAD83	17T	
Five-lined Skink	*Plestiodon fasciatus*	SC	Special Concern (Schedul	S3	2011	5	25	Sarah Richer	NAD83	17T	
Five-lined Skink	*Plestiodon fasciatus*	SC	Special Concern (Schedul	S3	2011	7	1	Sarah Richer	NAD83	17T	
Five-lined Skink	*Plestiodon fasciatus*	SC	Special Concern (Schedul	S3	2012	6	20	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	5	25	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	5	30	Sarah Richer & Andrew Da	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	6	7	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	6	7	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	6	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	6	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	6	21	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	6	24	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	7	12	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	7	12	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	7	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	7	14	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	9	12	Sarah Richer	NAD83	17T	Alive
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	9	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	9	13	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	9	26	Sarah Richer & Andrew Da	NAD83	17T	Dead
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	9	26	Sarah Richer & Andrew Da	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	10	4	Sarah Richer	NAD83	17T	Alive
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2011	10	25	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2012	5	18	Sarah Richer & Andrew Da	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2012	6	1	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2012	6	5	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2012	6	5	Sarah Richer	NAD83	17T	
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2012	6	21	Sarah Richer	NAD83	17T	Dead
Massasauga	*Sistrurus catenatus*	THR	THR (Schedule 1)	S3	2012	6	28	Sarah Richer & Andrew Da	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	SC	Special Concern (Schedul	S3	2011	5	30	Sarah Richer & Andrew Da	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	SC	Special Concern (Schedul	S3	2012	5	4	Sarah Richer & Andrew Da	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	SC	Special Concern (Schedul	S3	2012	5	11	Sarah Richer & Andrew Da	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	SC	Special Concern (Schedul	S3	2012	5	11	Sarah Richer & Andrew Da	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	SC	Special Concern (Schedul	S3	2012	5	17	Sarah Richer	NAD83	17T	
Snapping Turtle	*Chelydra serpentina*	SC	Special Concern (Schedul	S3	2012	6	9	Sarah Richer	NAD83	17T	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2011	6	23	Sarah Richer & Andrew Da	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	4	12	Sarah Richer & Andrew Da	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	5	15	Sarah Richer & Andrew Da	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	5	30	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	6	6	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	6	7	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	6	13	Sarah Richer	NAD83	-	
Restricted Species	-	END	Endangered (Schedule 1)	S3	2012	6	13	Sarah Richer	NAD83	-	
Turtle Nest	-	-	-	-	2012	6	2	Sarah Richer	NAD83	17T	
Turtle Nest	-	-	-	-	2012	6	2	Sarah Richer	NAD83	17T	
Turtle Nest	-	-	-	-	2012	6	10	Sarah Richer	NAD83	17T	
Turtle Nest	-	-	-	-	2012	6	10	Sarah Richer	NAD83	17T	

Table C-1: LGL Summary of Significant Reptile Observations (LGL, 2011-2012)

Common Name	Scientific Name	ESA Status	SARA Status	S-Rank	Year	Month	Day	Observers	Datum	UTM Zone	Road Observation?
Turtle Nest	-	-	-	-	2012	6	14	Sarah Richer	NAD83	17T	
Turtle Nest	-	-	-	-	2012	6	15	Sarah Richer	NAD83	17T	

Notes:

Some reptile observations could not be identified to species because of the condition of the specimen or evidence of the specimen found (i.e., hatched and/or predated e

ESA Status: The Endangered Species Act 2007 (ESA) protects Species at Risk (Threatened and Endangered) at a Provincial Level.

SARA Status: The Species at Risk Act (SARA) protects Species at Risk (Special Concern, Threatened and Endangered) at a Federal Level. Species listed under Scher

S-rank: The Natural Heritage provincial ranking system (provincial S-rank) is used by the MNRF Natural Heritage Information Centre (NHIC) to set protection priorities fo

Extremely rare in Ontario; usually 5 or fewer occurrences in the province or very few remaining individuals; often especially vulnerable to extirpation.

Very rare in Ontario; usually between 5 and 20 occurrences in the province or with many individuals in fewer occurrences; often susceptible to extirpation.

Rare to uncommon in Ontario; usually between 20 and 100 occurrences in the province; may have fewer occurrences, but with a large number of individuals in some

Common and apparently secure in Ontario; usually with more than 100 occurrences in the province.

Very common and demonstrably secure in Ontario.

Possibly Extirpated (Historical) - Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered

S#S# A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community.

Rank uncertain.

Table C-1: LGL Summary of Significant Reptile Observations (LGL, 2011-2012)

Characteristics/notes
adult male; displayed his penis
adult male
adult male
adult female, missing front left foot, healed stump
adult female
adult female
adult
adult
adult
much smaller size than adult adjacent to it, approx 1/2 length
adult
adult
adult
adult
adult
adult
adult male
adult female
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult female, missing piece of her front right corner of plastron
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult female

Table C-1: LGL Summary of Significant Reptile Observations (LGL, 2011-2012)

Characteristics/notes
adult
adult
adult female
adult; remains, empty shell, disintegrated; still identifiable to species
adult
adult
adult; remains, empty shell, disintegrated
adult female
adult
Empty shell, both carapace and plastron; location is approximate, to within 100 m;
adult male
adult female
adult, unknown sex
juvenile; bright blue colour on tail
adult
adult
adult
adult
Shed skin
adult
Shed skin
adult
Shed skin
adult
very small; possibly juvenile or yearling
very small; possibly juvenile or yearling
adult
adult
adult
very small; possibly juvenile or yearling
adult
very small; possibly juvenile or yearling
Shed skin
adult
adult
adult
adult
adult
adult
very small, likely yearling
adult
adult
adult
adult
adult
adult female
adult, likely female
adult male
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
adult
Snapping turtle or Map Turtle eggs
Snapping turtle or Map Turtle eggs
predated eggs of Snapping turtle &/or Map turtle, & Painted &/or Blanding's
predated Snapping turtle and/or Map turtle eggs observed

Table C-1: LGL Summary of Significant Reptile Observations (LGL, 2011-2012)

Characteristics/notes
predated Snapping Turtle nest
Snapping Turtle and Painted or Blanding's Turtle

gg shells).

dule 1 receive protection under SARA.
r rare species and natural communities. De

e populations; may be susceptible to large-s

Its presence may not have been verified in

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Amphibian Call Survey Observation Form

Project Number 160960824 Project Name: Vigig

Date Apr 18, 2013 Field Personnel: B. Holden B. Miller

Weather Conditions:	Temp: 14°C - 11°C	Wind: ~~0~~ 3-4 South	Cloud: 100 + some fog	PPT: RAIN	PPT in last 24 hrs: Heavy RAIN

Visit Number:	1	Sundown = 813pm	
Start Time:	0845	End Time:	2320

- **Record Start Time at Each Station**

~~17T 0579083 5021572~~

17T 0578838 5021578

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR	✓	✓
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	✓	✓
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station ~~1~~ 101 UTM:

Habitat: ~~Road~~ Shallow water Marsh

Water Present: Yes

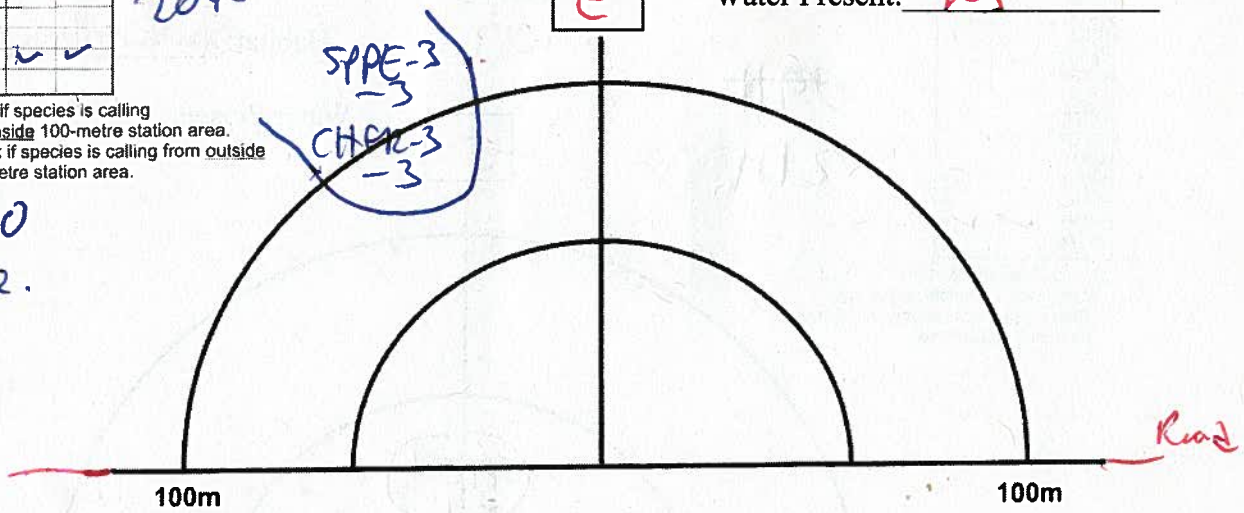
2045

E

SPPE-3 -3

CHFR-3 -3

AMRO in circle.



Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

AMWO
close by

17T 0576269 5024947

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR	✓	
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	✓	
WOFR		

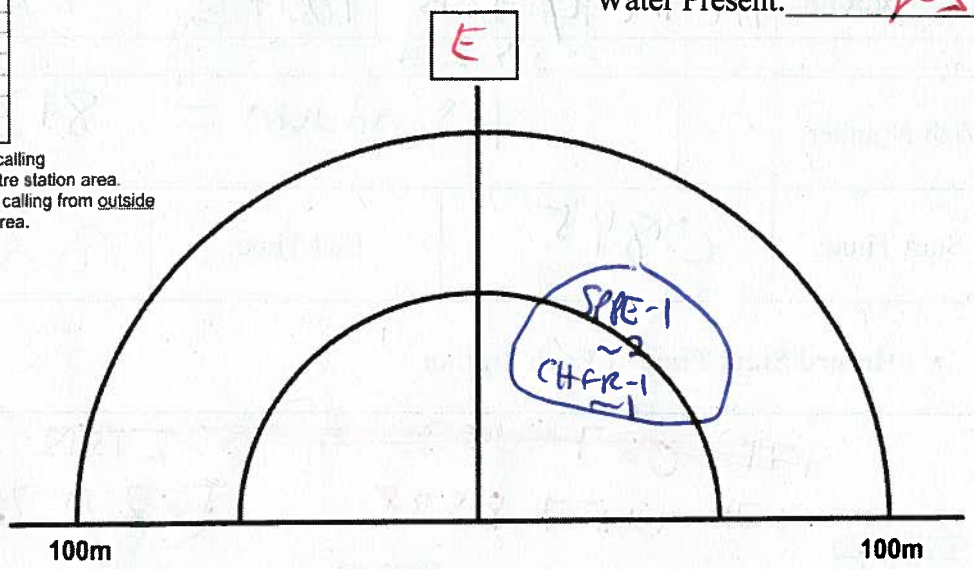
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

2056
~~0856~~ Station 102

UTM: _____

Habitat: Cattail Marsh (shallow)

Water Present: yes



17T 0574228 5026829

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	✓	✓
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

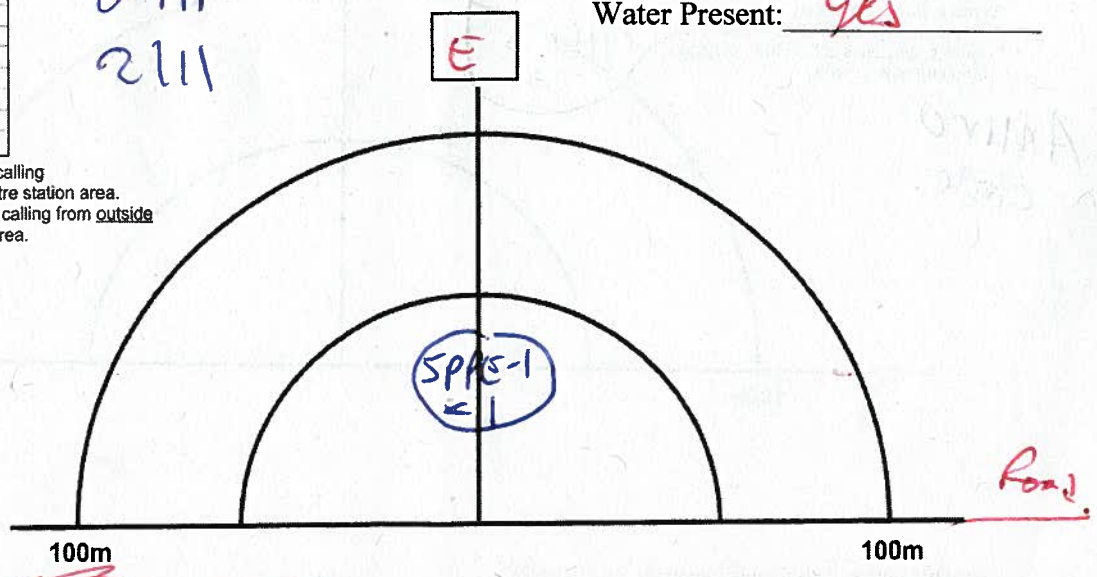
~~0911~~
2111

Station 103

UTM: _____

Habitat: Shallow Marsh / Thicket Swamp

Water Present: yes



(Field Personnel) (Project Manager)

REV: Mar, 09 Form 003

SPPE-1

17T 0573257 5029011

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		✓
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

2123 ~~@923m~~

Station 104

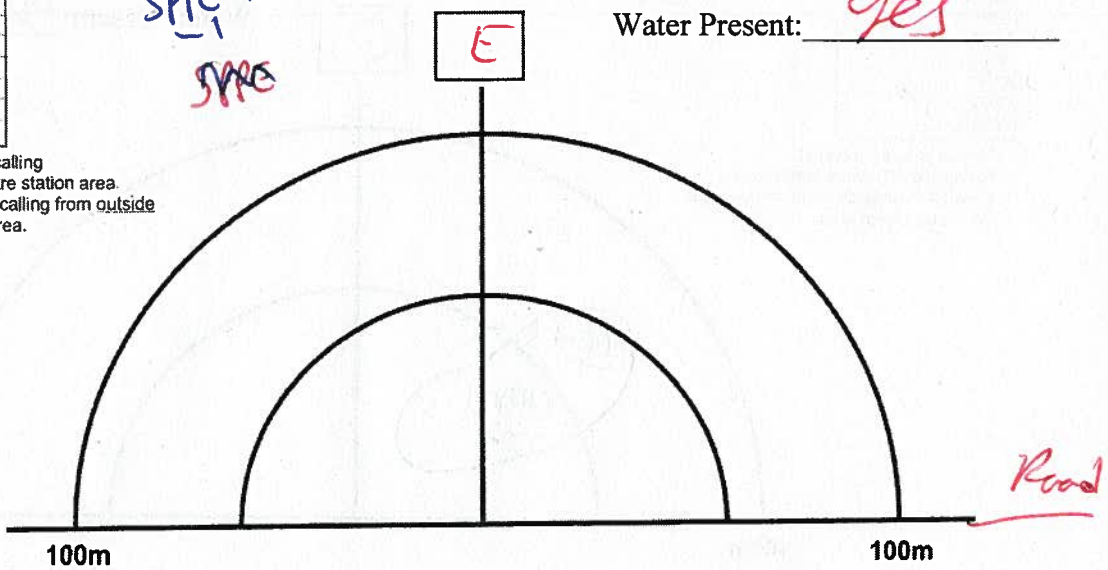
UTM: _____

Habitat: Shrub Thicket / Swamp

Water Present: yes

SPPE-1

~~SPPE~~



17T 0571873 5030945

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

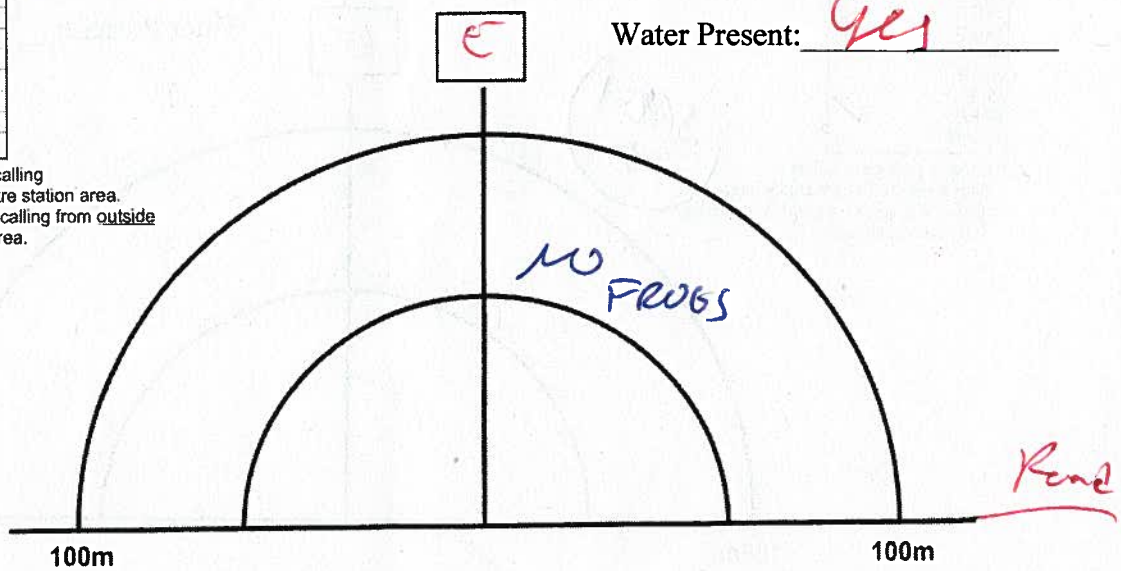
2134

Station 105

UTM: _____

Habitat: Beaver Pond

Water Present: yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

17T 0568999 5031634

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR	✓	
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	✓	
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

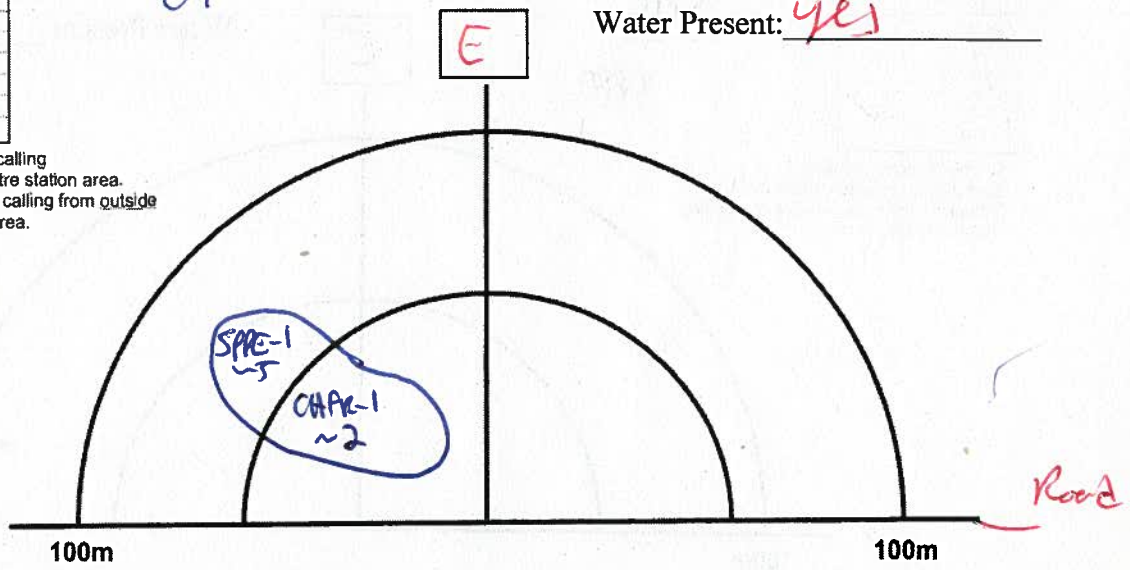
Station 106

UTM:

2145

Habitat: Creek

Water Present: yes



17T 0566364 5034039

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		✓
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

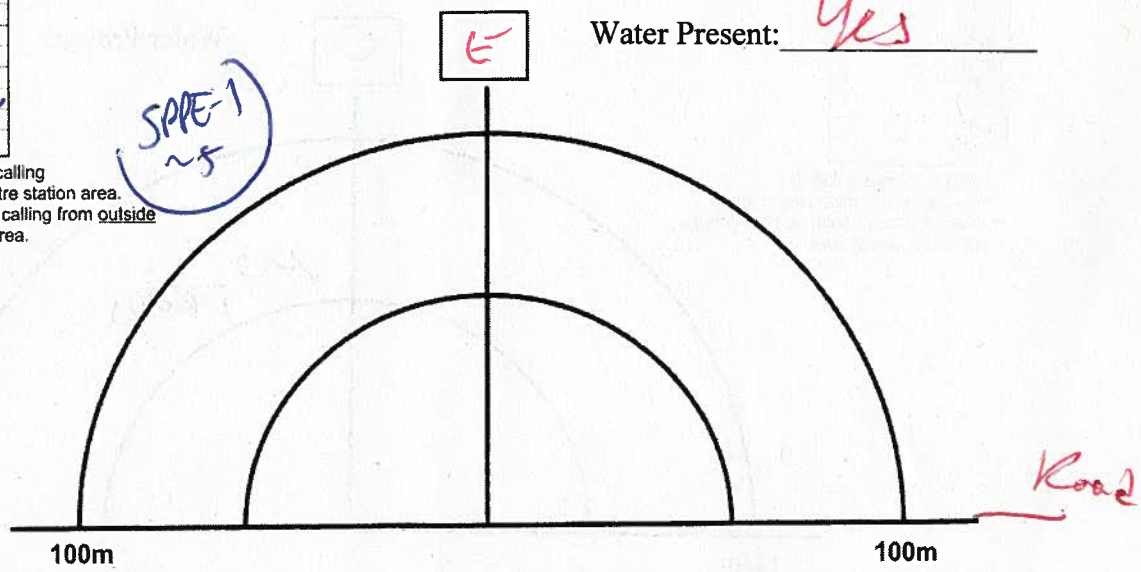
Station 107

UTM:

2158

Habitat: Marsh / Open water

Water Present: Yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

17T 0564112 5036404

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

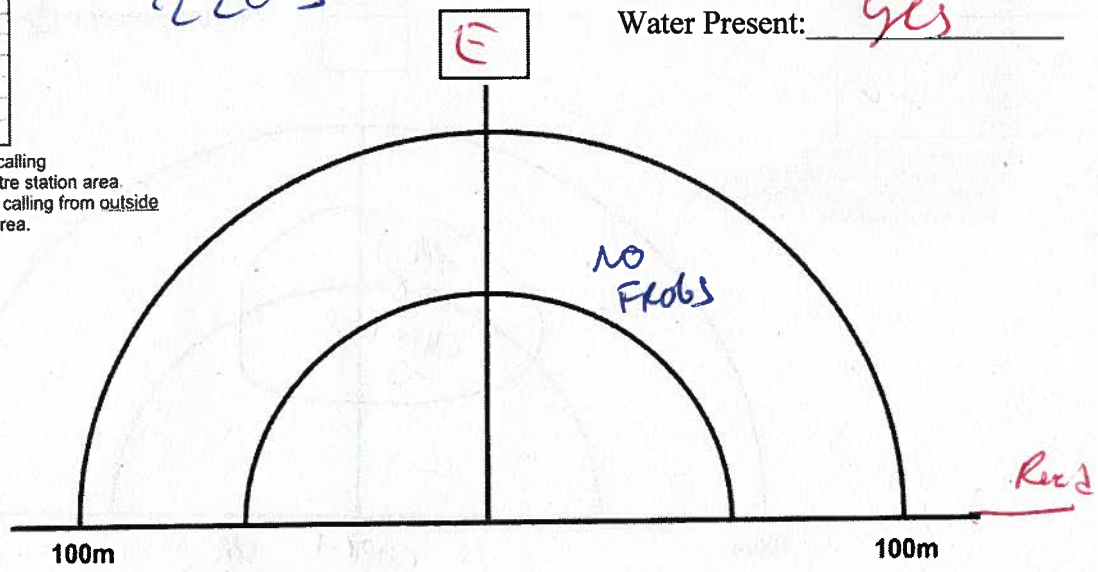
2203

Station 108

UTM: _____

Habitat: Shallow Marsh

Water Present: Yes



17T 0563158 5037287

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR	✓	
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		✓
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

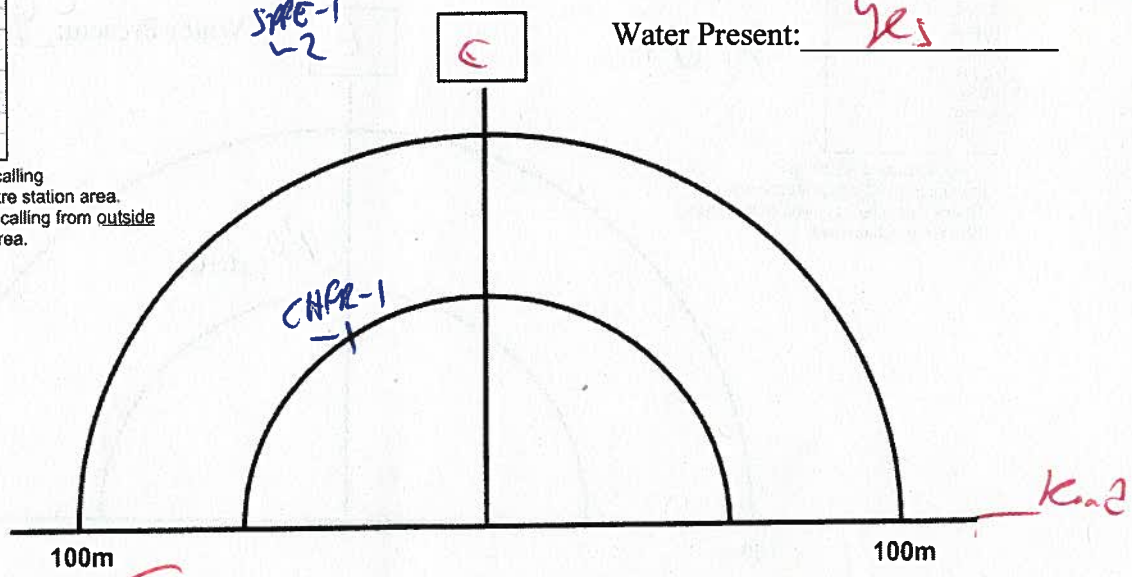
2016

Station 109

UTM: _____

Habitat: Cattail Marsh + Cattail fen (grass)

Water Present: Yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

17T 0562085 5038239

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR	✓	✓
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	✓	✓
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

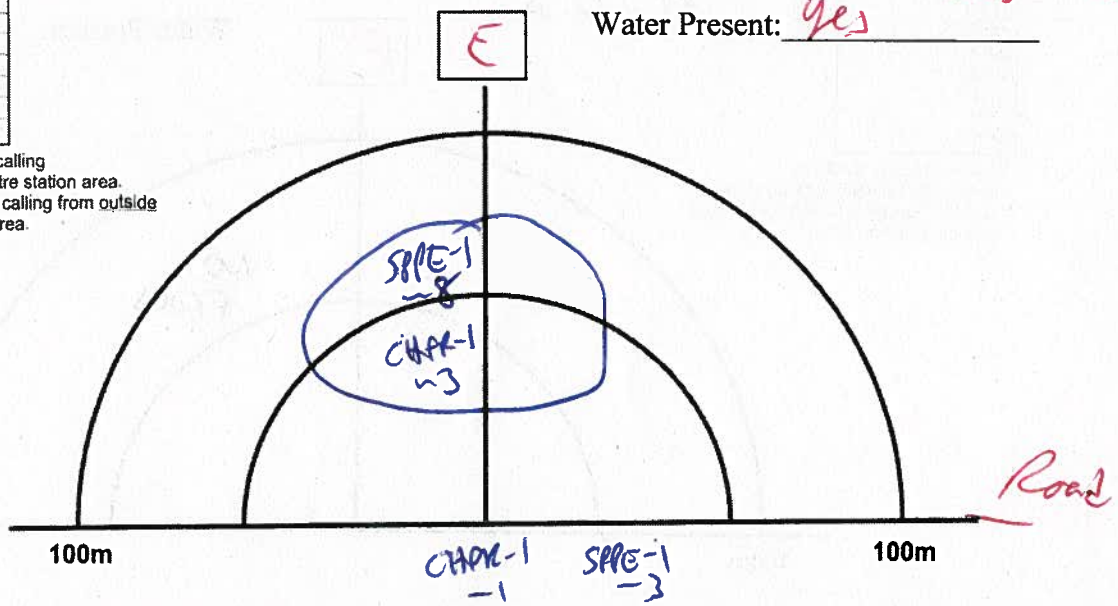
2028

Station 110

UTM: _____

Habitat: Decid Swamp + Marsh (20%) (100%

Water Present: Yes



17T 0558573 5041768

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

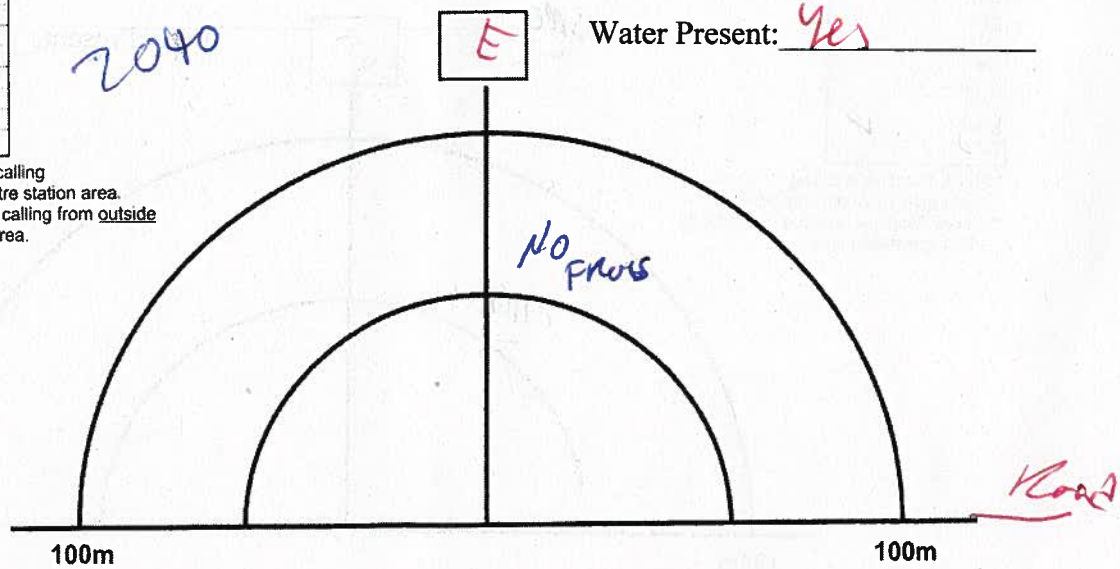
2040

Station 111

UTM: _____

Habitat: Small Cattail Shallow Marsh

Water Present: Yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

17T 0558092 5042256

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

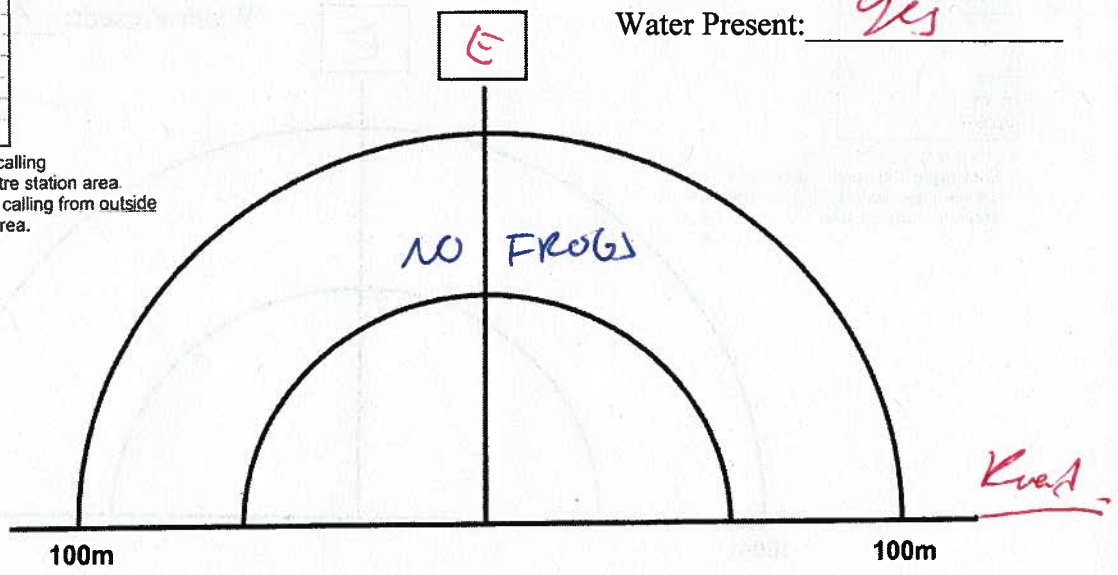
2248

Station 112

UTM: (Beaver Meadow?)

Habitat: Open Water / Marsh

Water Present: yes



17T 0556745 5043588

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	✓	
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

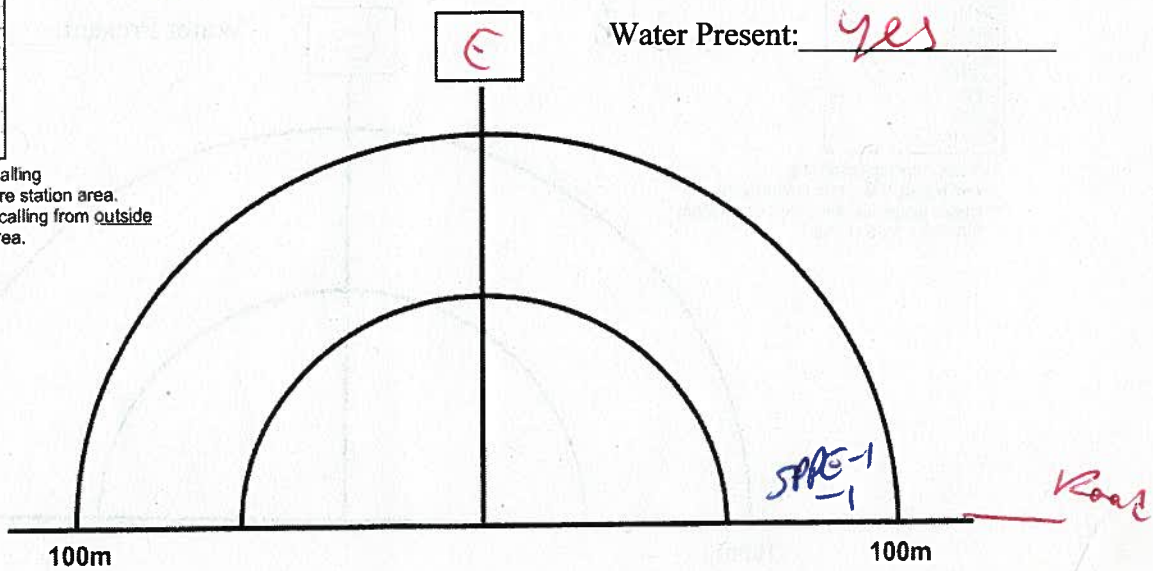
2258

Station 113

UTM:

Habitat: Open Water + Thicket Swamp

Water Present: yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

17T 0553423 5045694

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

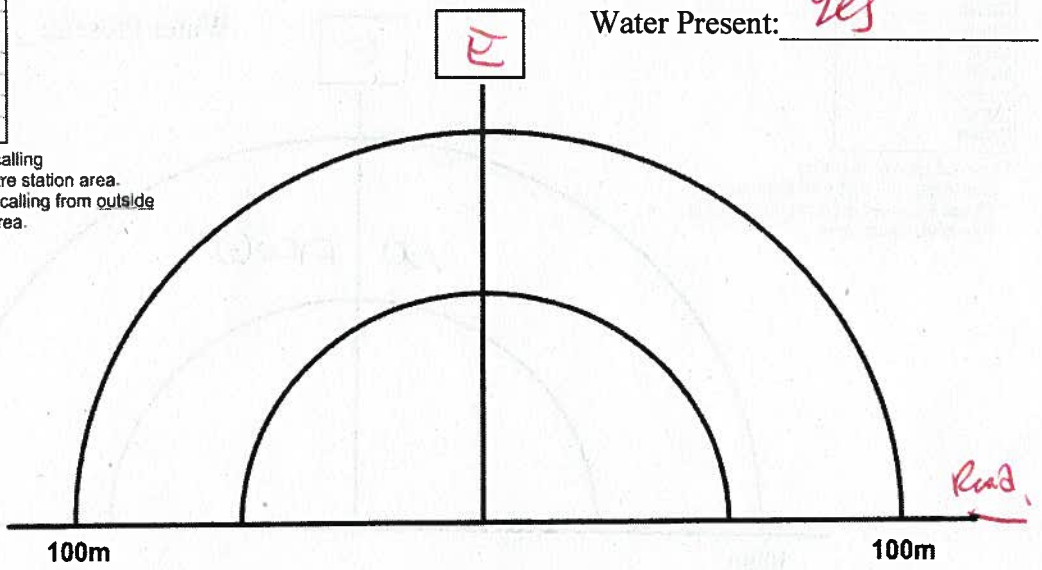
2305

Station 114

UTM: _____

Habitat: Open Water + Marsh

Water Present: yes



17T 0551936 5046452

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

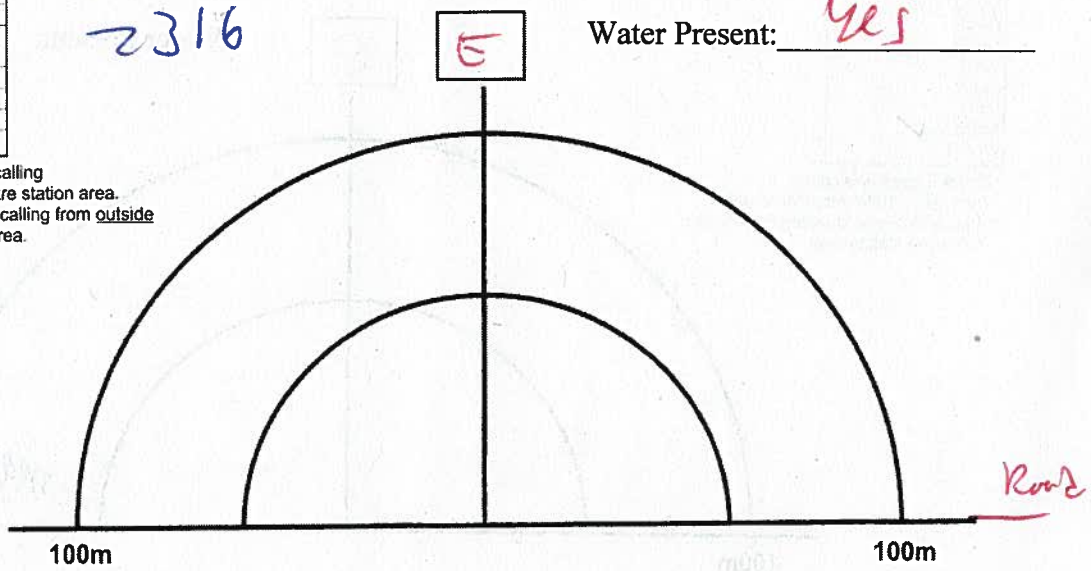
2316

Station 115

UTM: _____

Habitat: _____

Water Present: yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Amphibian Call Survey Observation Form

Project Number 160960824 Project Name: Henvey / Nigig

Date Apr. 30/13 Field Personnel: N. Burnett, S. Richer.

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	15°C	2-3 Beaufort	trace-cirrus	None.	4-5mm overnight/ morning.

Visit Number:			
Start Time:	11:10 am	End Time:	11:13 am

- **Record Start Time at Each Station**

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

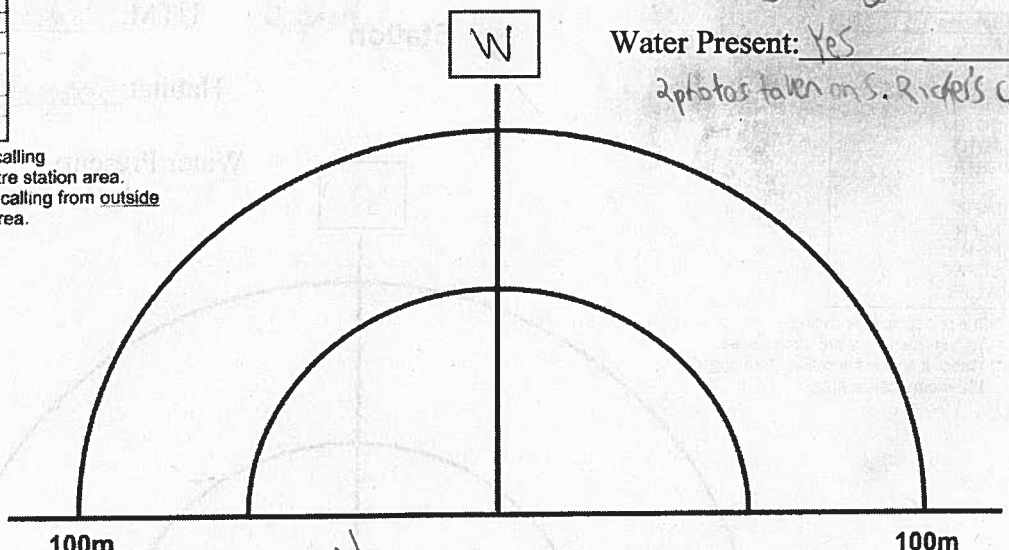
Station ~~Amp.1~~ Amp.1

UTM: 17T 522832.5075579

Habitat: Bog + Sedge. wetland.

Water Present: Yes

2 photos taken on S. Richer's camera.



None.

Quality Control: This form is complete ✓ & legible ✓.

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

Apr. 30/13
11:19am - 11:23am

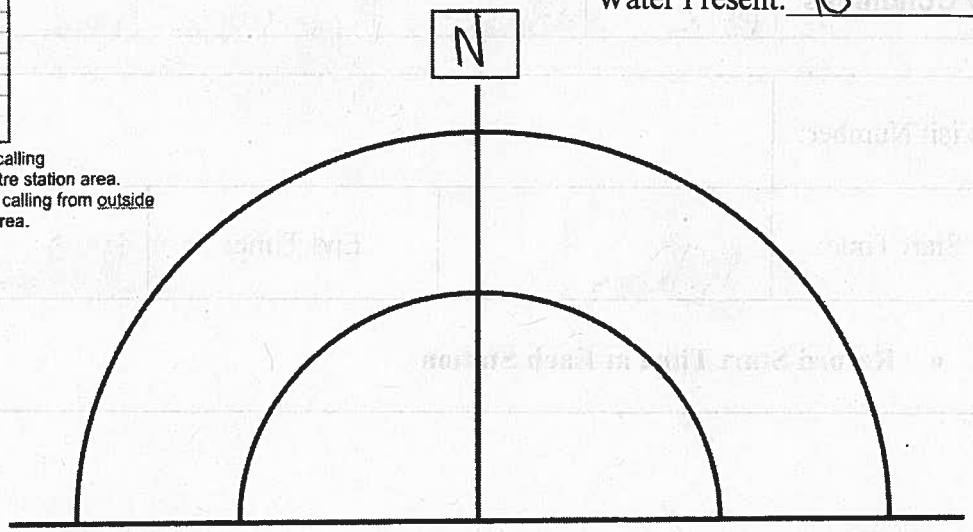
Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station Amp-2 17T UTM: 523016, 5075247

Habitat: Bog and Sedge - pond

Water Present: Yes



No e-

Apr. 30/13
11:45am - ~11:50am

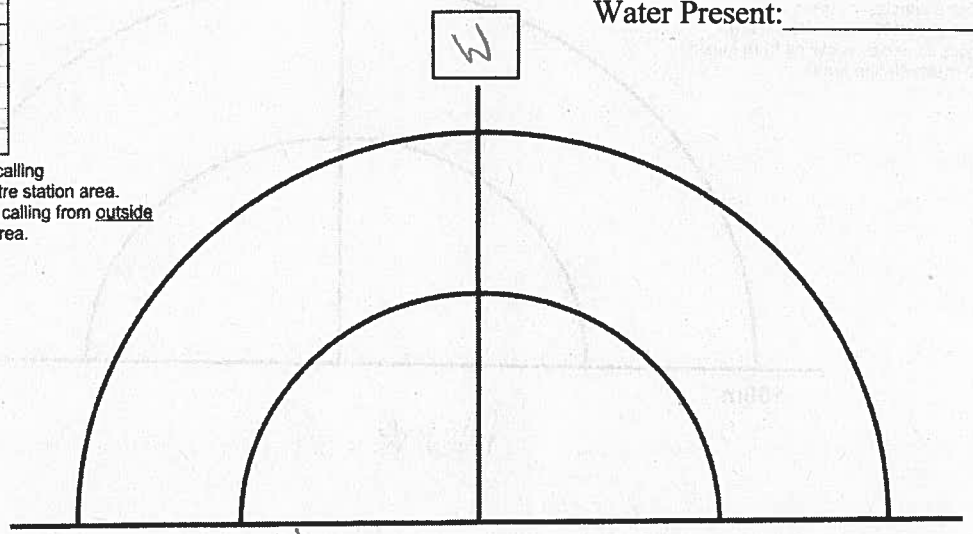
Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station Amp.3 17T UTM: 522773, 5075050

Habitat: sedge - beaver pond

Water Present:



None. Hydrologically connected to 2 and 4.

(Field Personnel) (Project Manager)

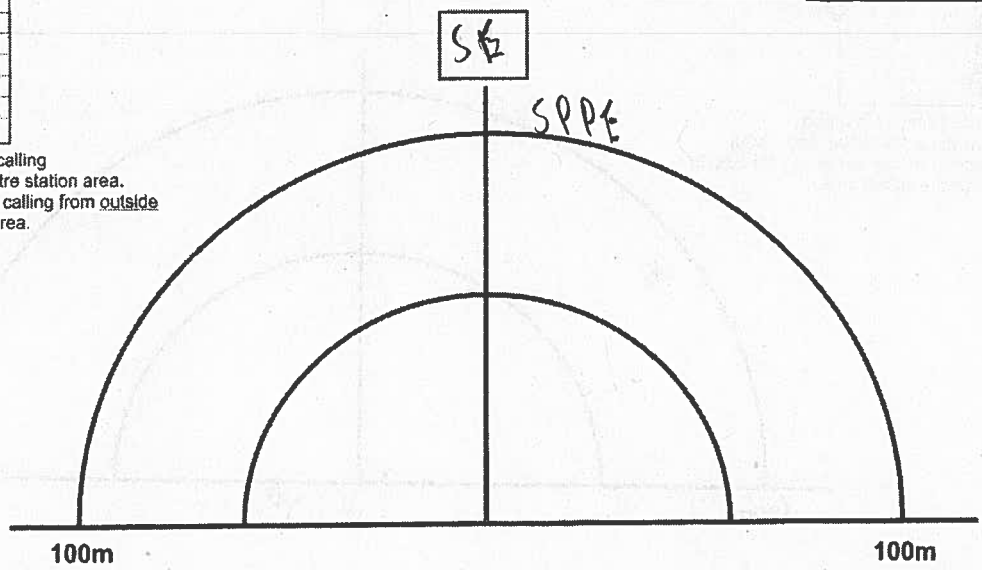
Apr. 30/13

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		~10
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station Amp-4

Start Time: 12:21 - 12:25
UTM: 522603, 5074832
Habitat: Beaver Pond.
Water Present: Yes



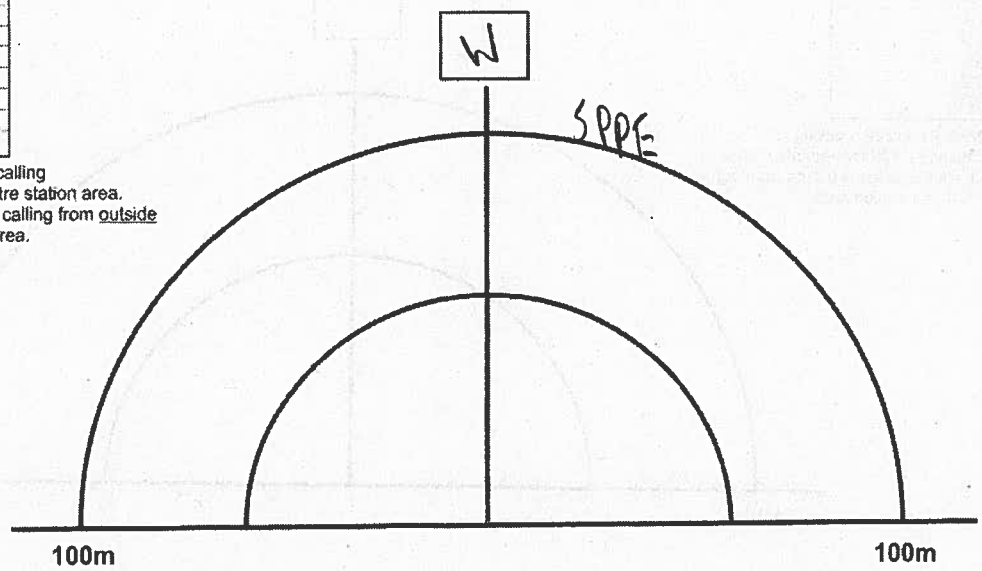
Apr. 30/13

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		~6-8
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station Amp-5

Start Time: 12:30 - 12:34
UTM: 522514, 5074861
Habitat: Beaver Pond.
Water Present: Yes



Quality Control: This form is complete (✓) & legible (✓).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

Apr. 30/13

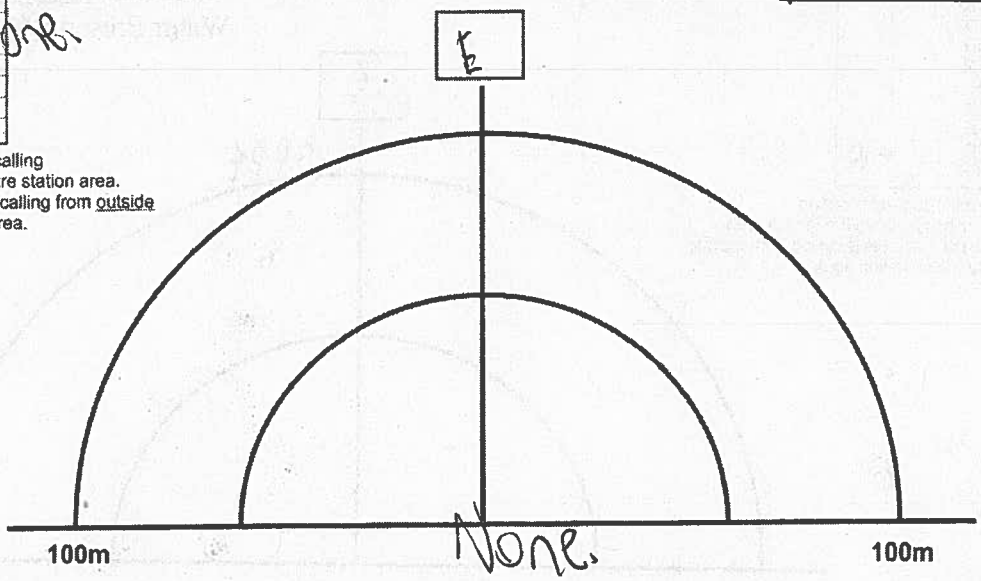
Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

None.

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station Amp-6

Start Time: 13:18 - 13:20
UTM: 522353, 5075151
Habitat: ~~bank~~ Grassponds
Water Present: Yes

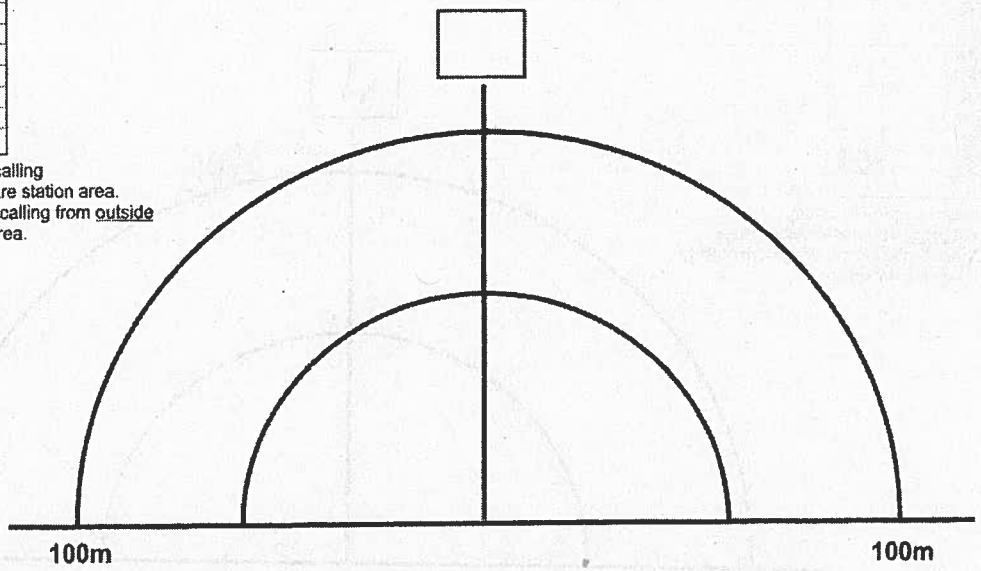


Species	In*	Out**
AMTO.		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station

Start Time: _____
UTM: _____
Habitat: _____
Water Present: _____



Quality Control: This form is complete (✓) & legible (✓).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

17T 0550224 5047575

Wed May 1/13

11:19

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR	1-1	
PIFR		
SPPE	1-4	3
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

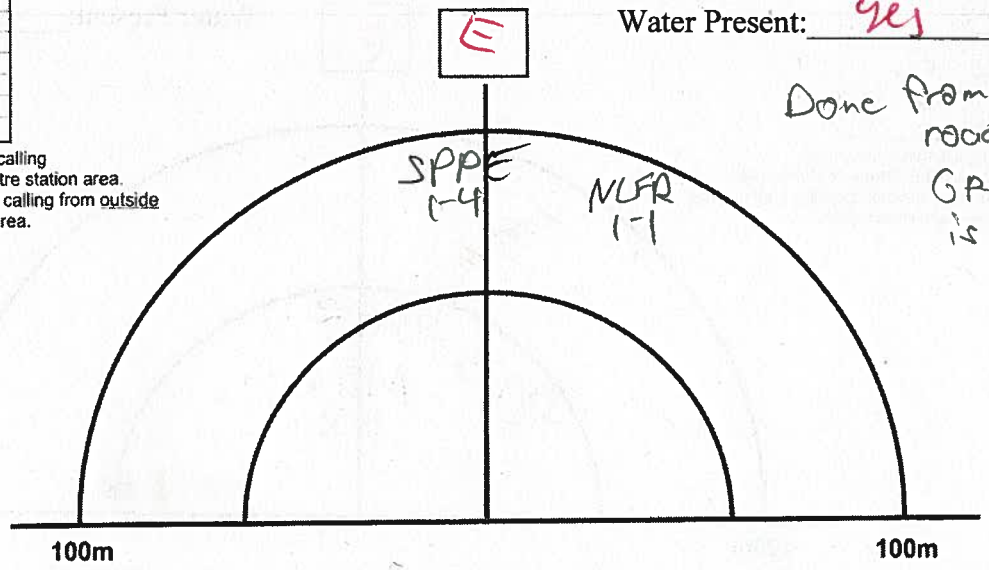
Station 116

UTM: _____

Habitat: Lake + Cattail fringe + Island

Water Present: yes

Done from roadride; GPS says point is 50-60m from road?



Road

17T

11:06

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	1-4	
WOFR	1-2	

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

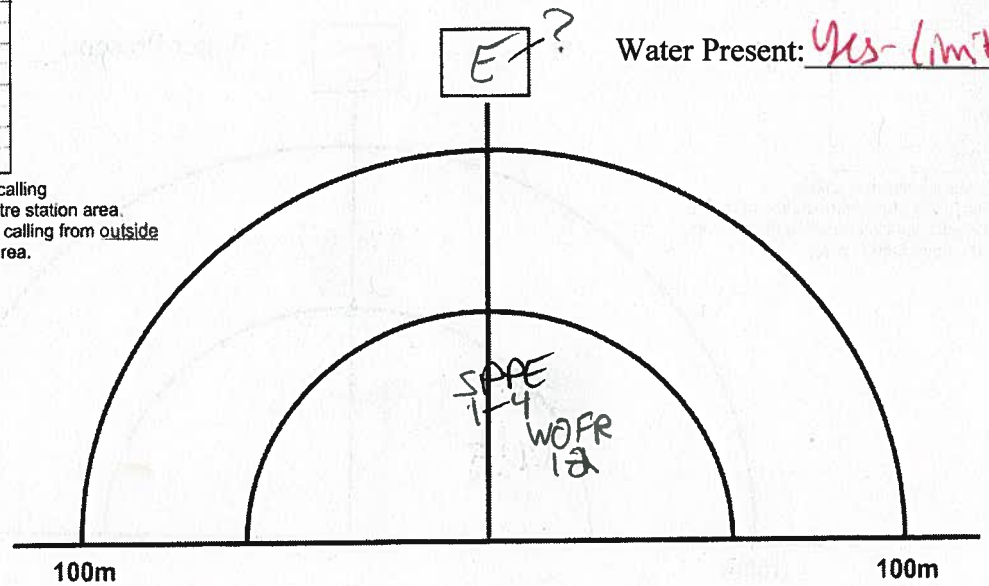
0548114
5051496

Station 117

UTM: _____

Habitat: Black Spruce Swamp

Water Present: Yes - limited



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

17T 0547552 5052462

10:59 pm

Species	In*	Out**
AMTO	3	
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR	1-3	
PIFR		
SPPE	3	
WOFR		

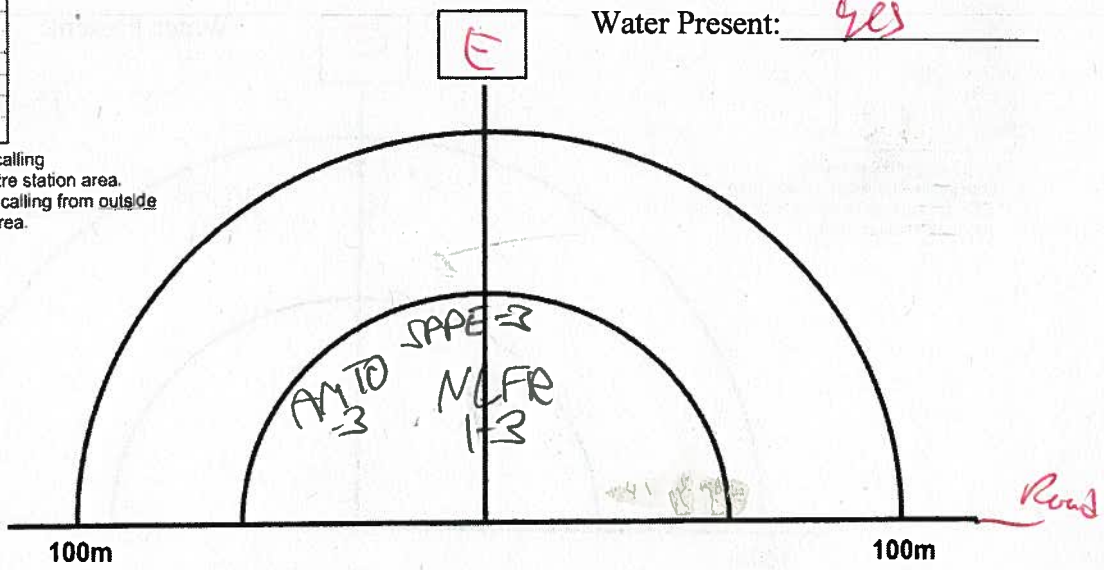
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 118

UTM: _____

Habitat: Cattail Marsh Open Water

Water Present: yes



17T 0546987

5054033

10:51 pm

Species	In*	Out**
AMTO	2-7	
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR	1-2	
PIFR		
SPPE	3	
WOFR		

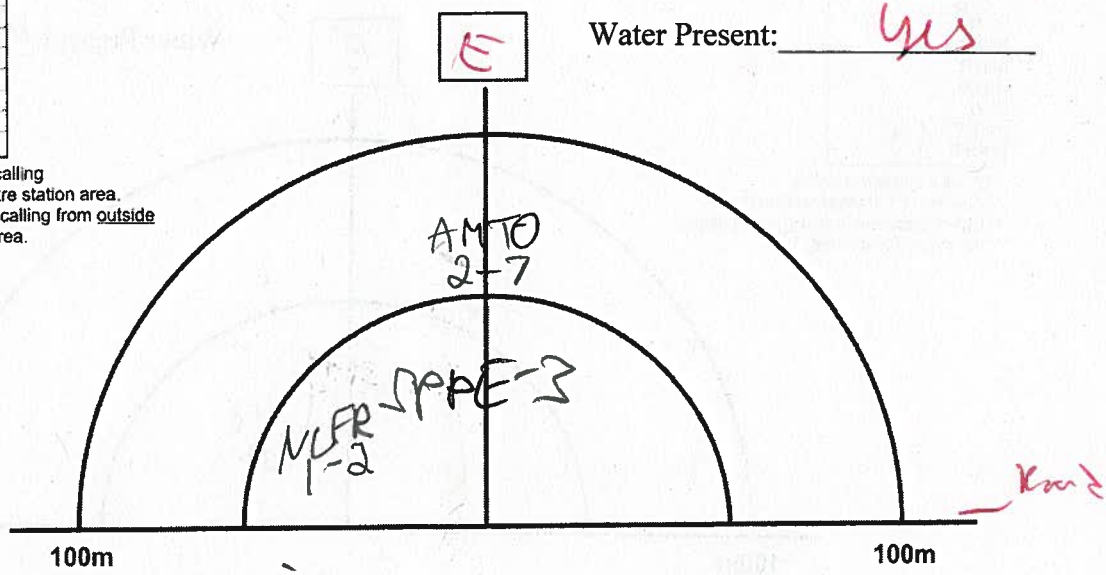
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 119

UTM: _____

Habitat: Shallow Marsh

Water Present: yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

17T 0545661 5056374

May 1/13

Species	In*	Out**
AMTO	1-4	
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	2-6	3
WOFR		

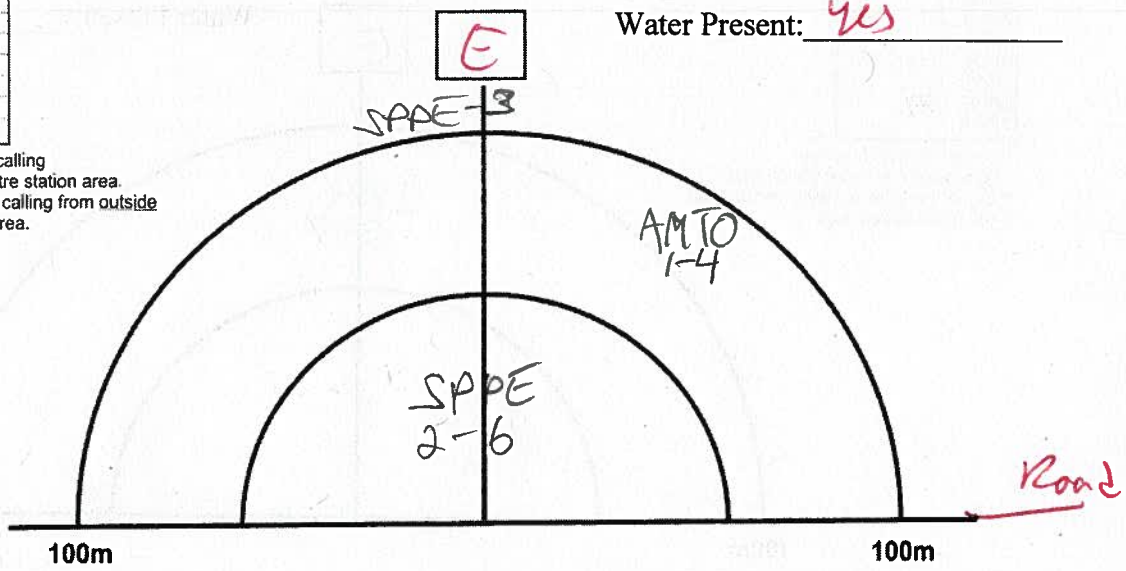
*Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 120

UTM: 10:40 pm

Habitat: Barrens 1

Water Present: yes



17T 0543502 5058624

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR	1-1	
GRFR		
MIFR		
NLFR	1-4	
PIFR		
SPPE	3	
WOFR		

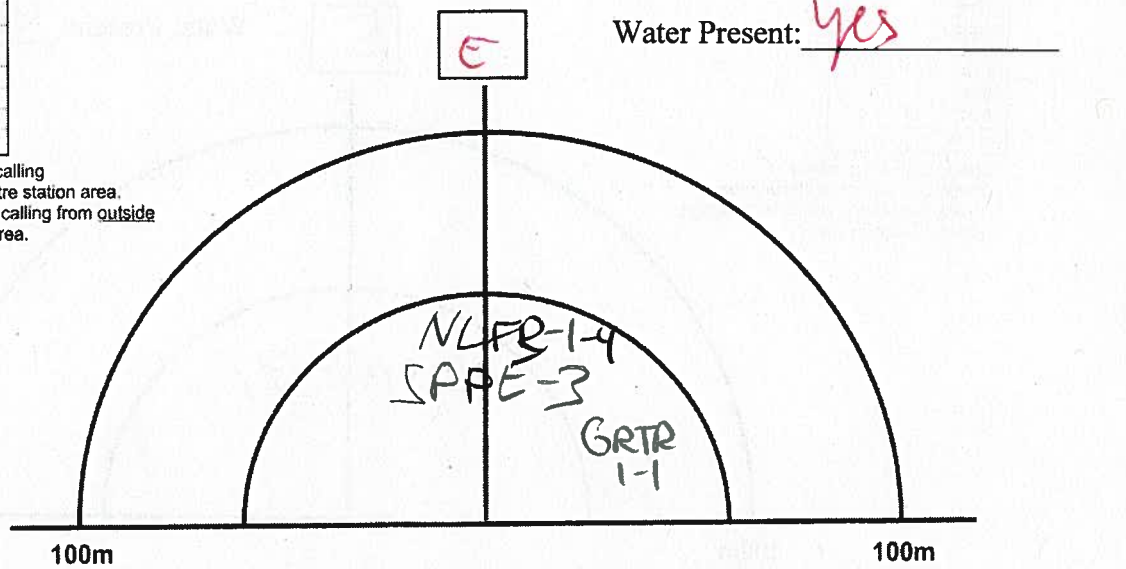
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 121

UTM: 10:31

Habitat: Creek + Shallow Marsh

Water Present: yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

17T 0541941
5061934

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR	1-1	
PIFR		
SPPE	2-7	
WOFR		

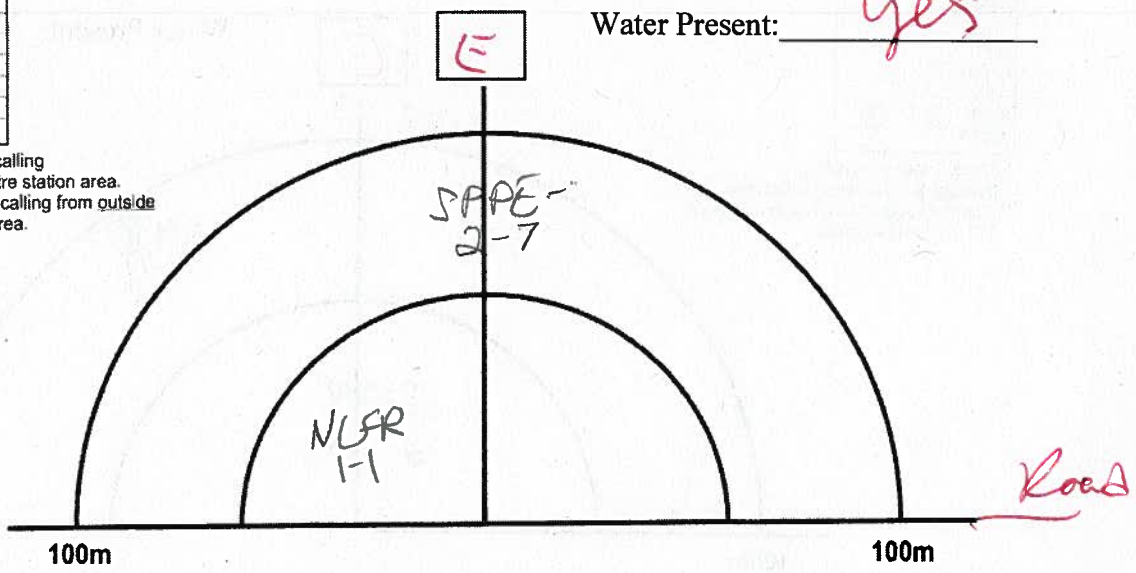
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 122

UTM: 10;19

Habitat: Sedge Meadow

Water Present: yes



17T 0541068
5063943

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	3	
WOFR		

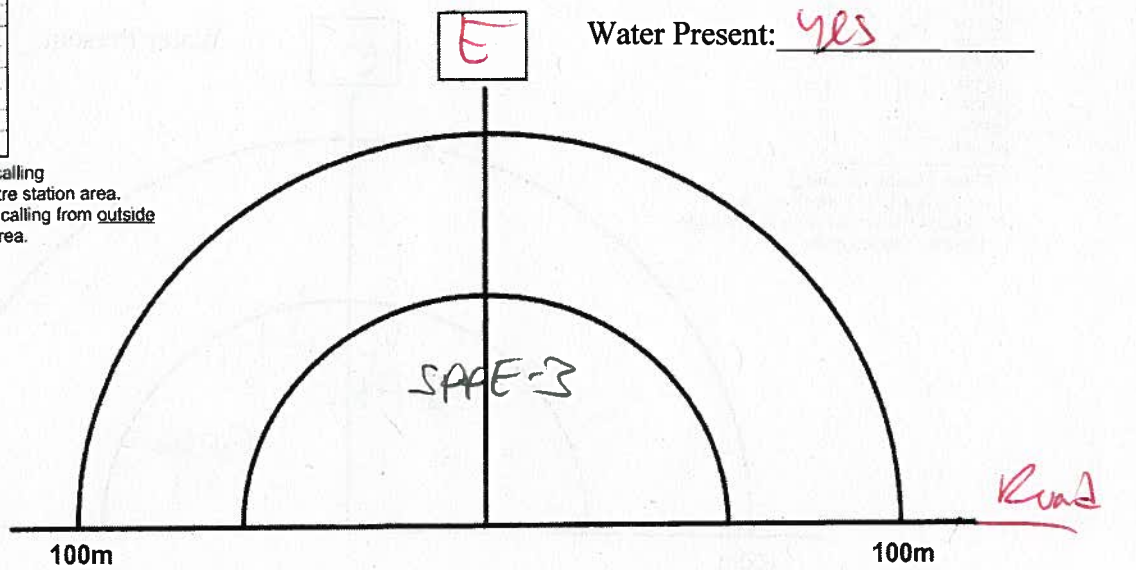
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 123

UTM: 10:12

Habitat: SPB Wetlands

Water Present: yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

17T 0539904 5066503

Wed. May 1/13

10:00pm

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR	1-2	
PIFR		
SPPE	3	
WOFR		

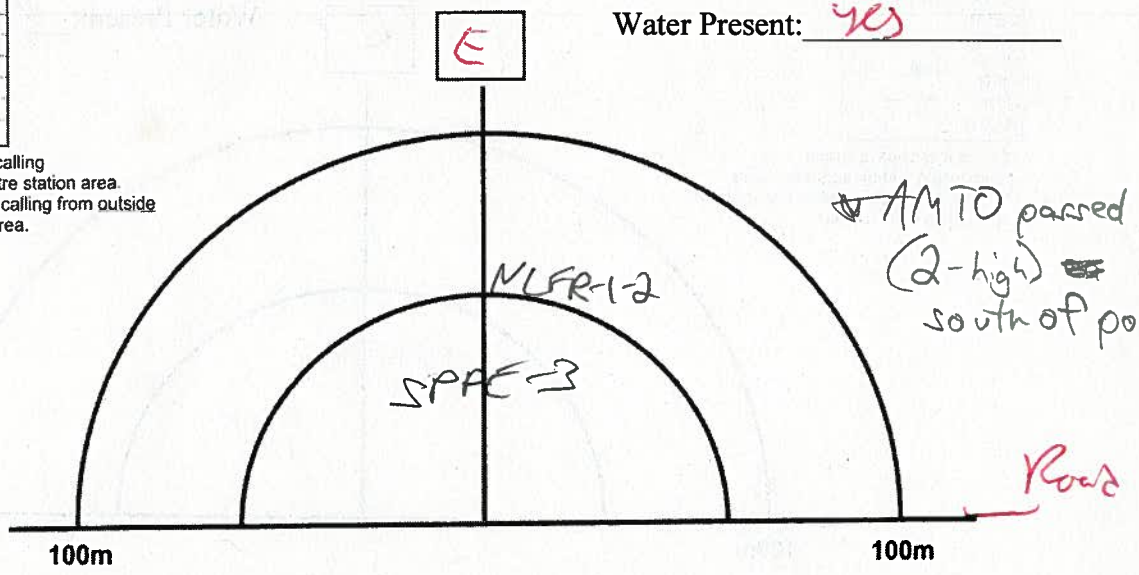
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 124

UTM: _____

Habitat: Large JPB Wetland

Water Present: yes



~~AMTO~~ passed (2-high) ~~SE~~ south of point

17T 0538852 5069556

time: 9:07pm

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR	1-1	
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	3	
WOFR		

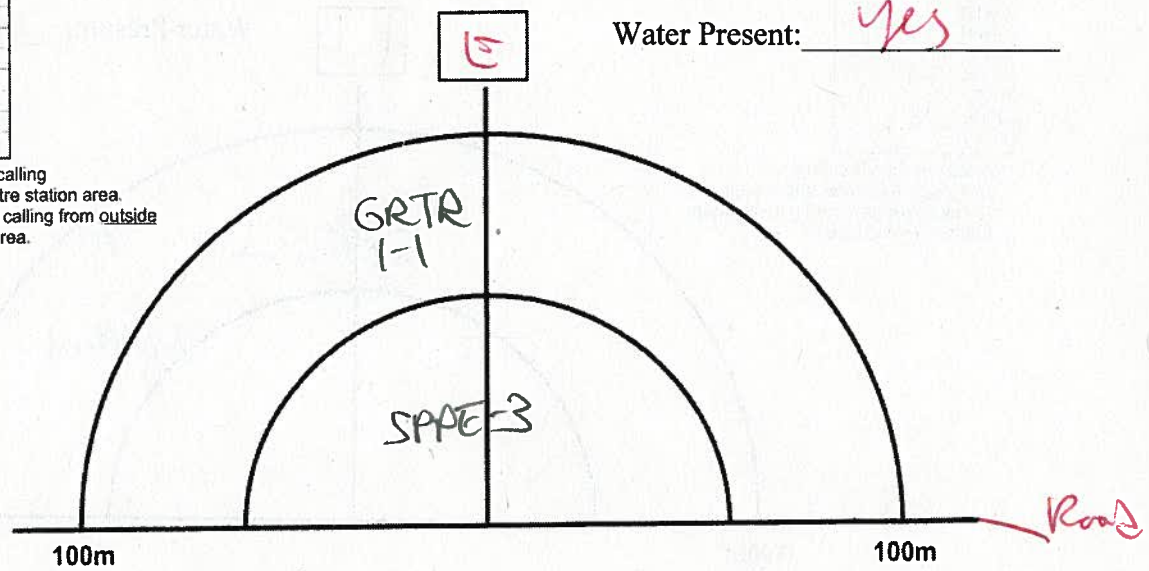
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 125

UTM: _____

Habitat: JPB Wetlands (small)

Water Present: yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

17T 0533531 5079741

Time 9:27pm

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR	1-2	
PIFR		
SPPE	3	
WOFR		

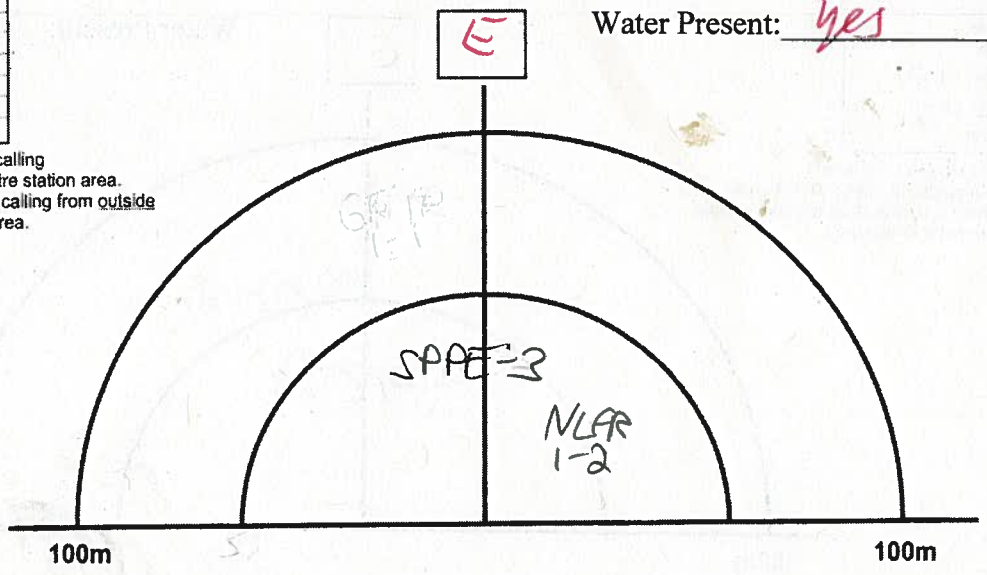
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 126

UTM: _____

Habitat: ~~Cattail~~ Marsh

Water Present: yes



17T

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR	1-1	
PIFR		
SPPE	3	
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

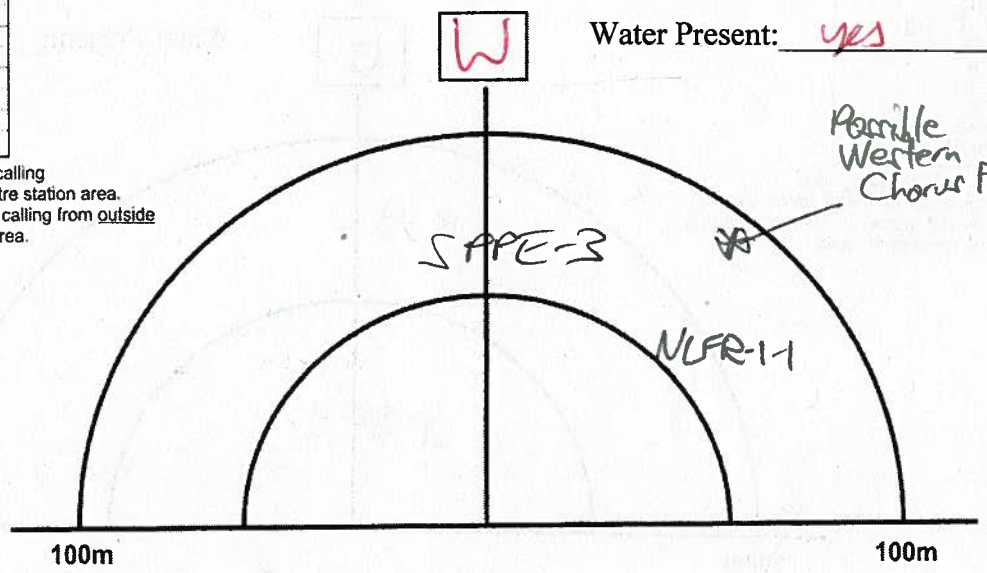
0533417
5080468

Station 127

UTM: 9:38pm

Habitat: Open water (Inlet) & Shor

Water Present: yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

Thurs May 2/2013

Temp 27
Wind Beauf 2
Cloud 25%

AMP07 **Station**

2:58pm

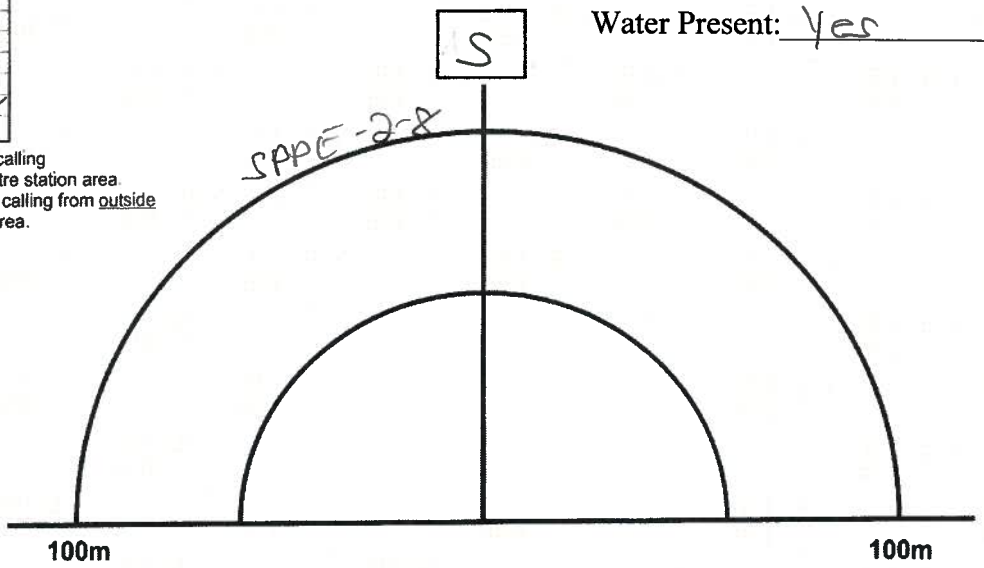
17T UTM: 533628, 5077561

Habitat: Channelized Swamp

Water Present: Yes

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		2-8
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.



AMP08 **Station**

4:12pm

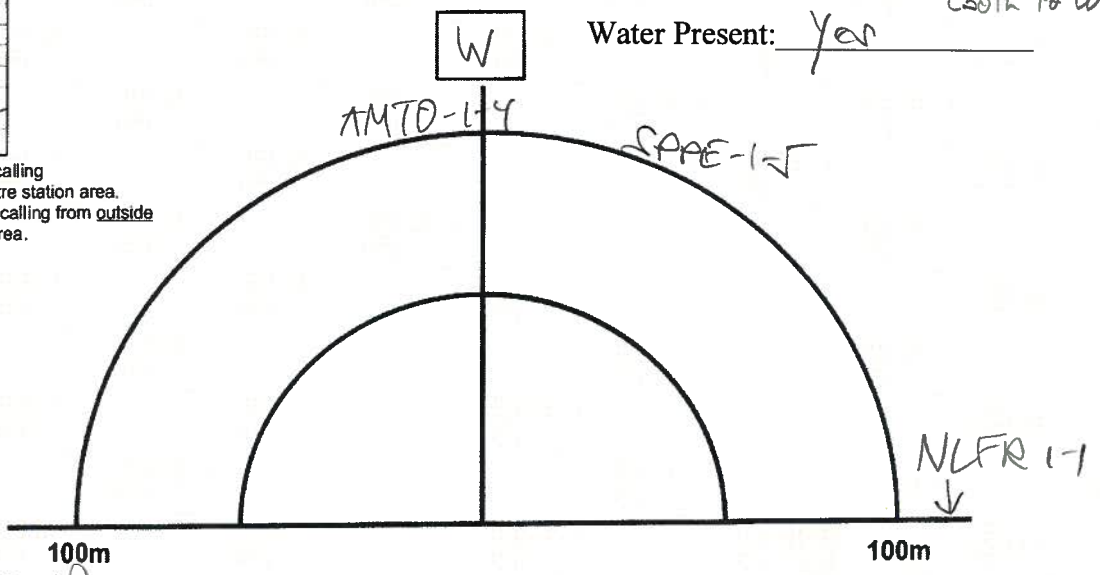
17T UTM: 532329 5078617

Habitat: Excavated/Naturalized pond (both to W+E)

Water Present: Yes

Species	In*	Out**
AMTO		1-4
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		1-1
PIFR		
SPPE		1-5
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

Thurs May 2/13

4:25pm

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR	1-1	
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	2-6	
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

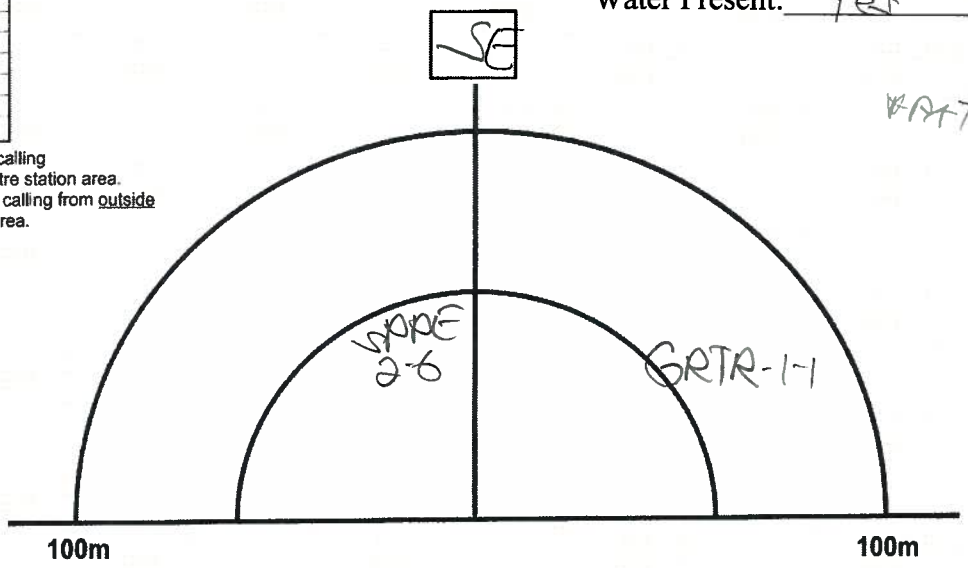
Station
AMP09

UTM: 531224 5078809

Habitat: Beaver Pond

Water Present: Yes

*ATU on log



4:47

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR	1-1	
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

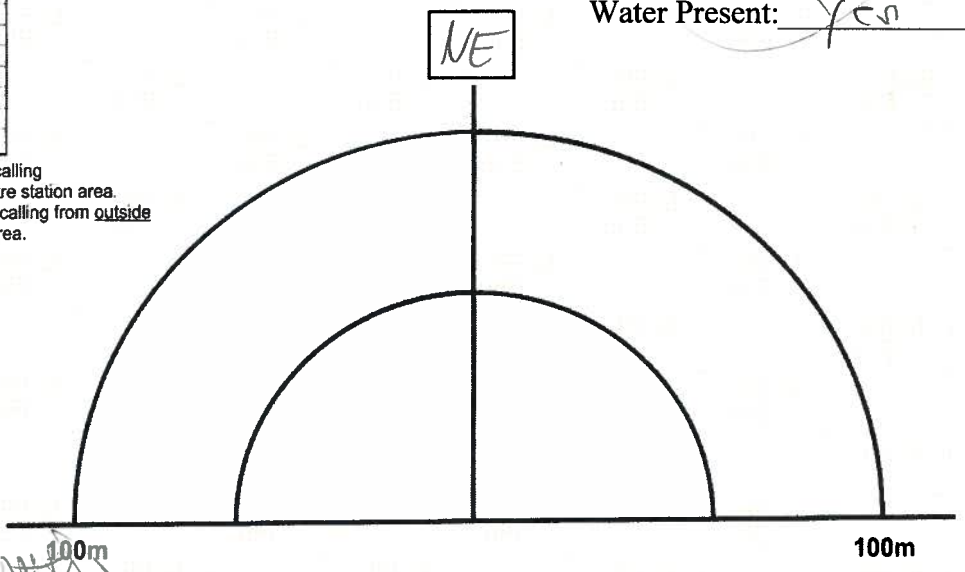
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station
AMP10

UTM: 529361 5078022

Habitat: Excavated / Naturalized Pond

Water Present: Yes



(Field Personnel) (Project Manager)

Tues May 7 2013

Sarah Richard
Brian Miller

Proj Name Henvey Inlet/Nigig

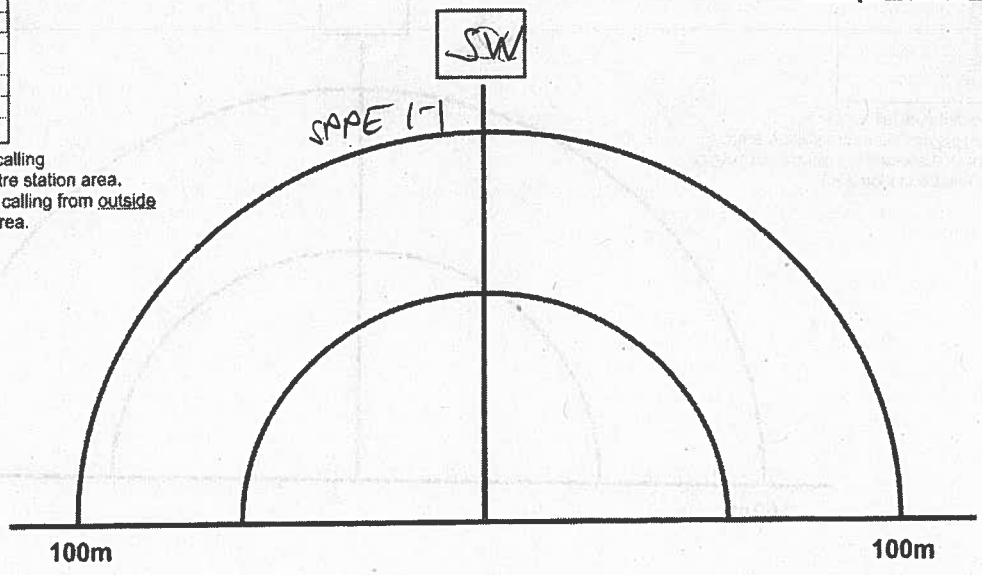
Proj # 160960824

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		1-1
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station
AMP 11

Start Time: 1:13 pm
UTM: 17T 529766 5076925
Habitat: Wet sedge meadow
Water Present: Yes

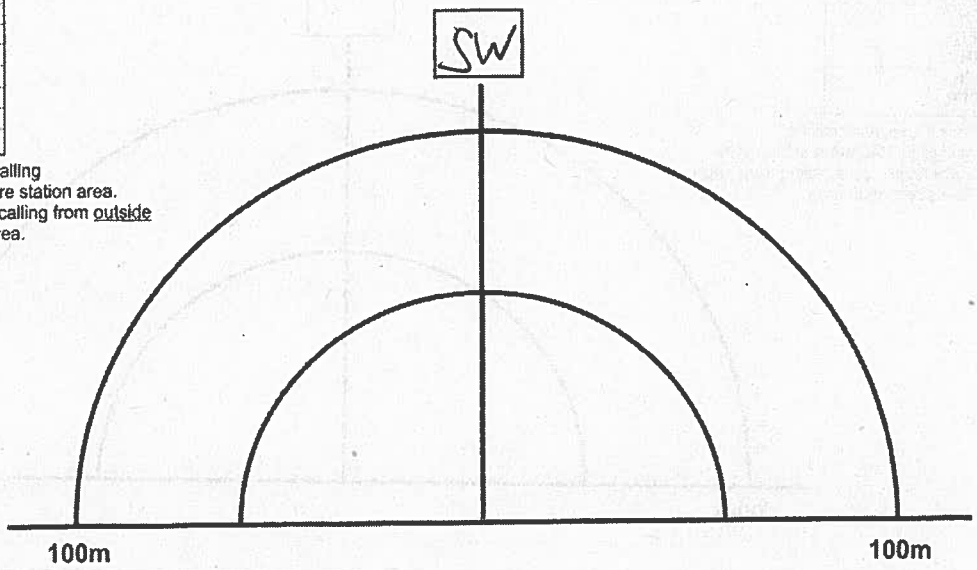


Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station
AMP 12

Start Time: 2:18 pm
UTM: 529 737; 5076603
Habitat: floating sedge mat bog/fen
Water Present: Yes



Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

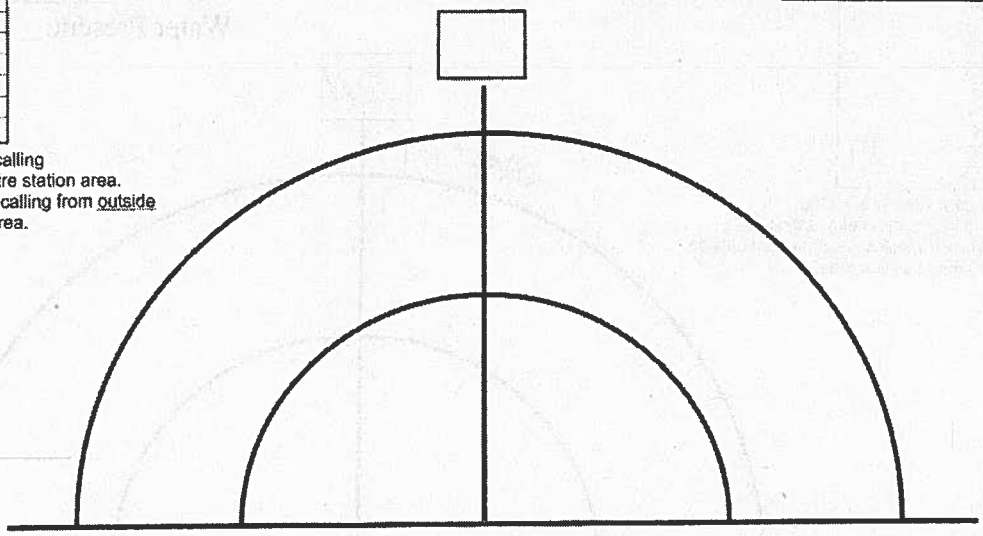
REV: Mar, 09 Form 003

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station

Start Time:_____
UTM:_____
Habitat:_____
Water Present:_____

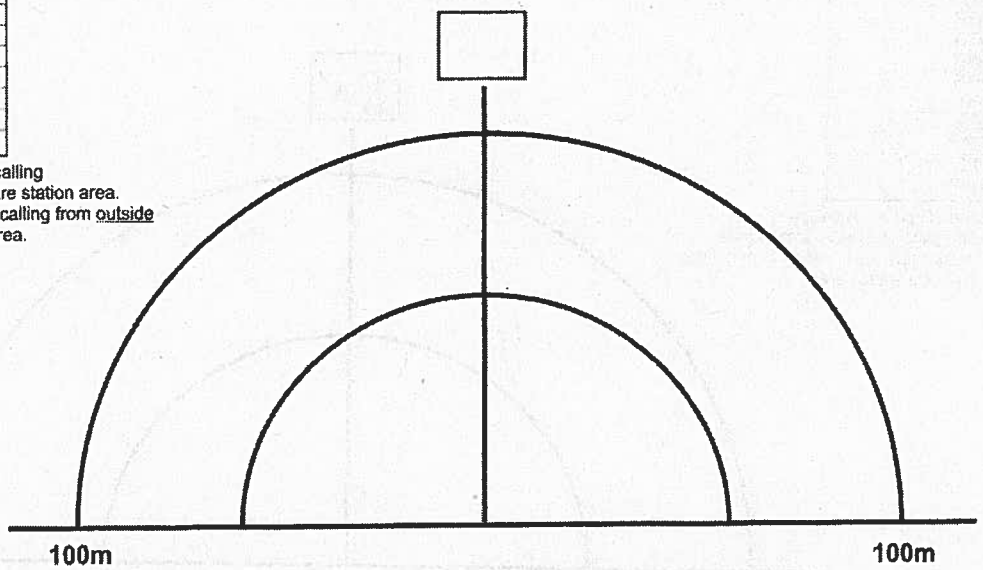


Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station

Start Time:_____
UTM:_____
Habitat:_____
Water Present:_____



Quality Control: This form is complete (__) & legible (__).

Signature: _____ Signature: _____
(Field Personnel) (Project Manager)

REV: Mar, 09 Form 003

Personnel: SRicher & RMiller
Proj Name: Nag/Henvey Inlet
Proj # 160960824

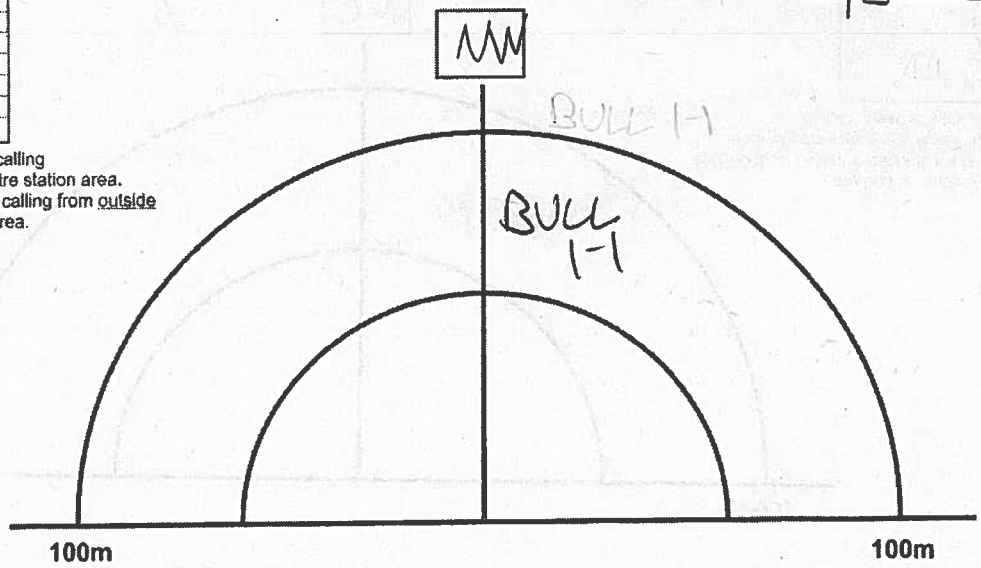
Wed May 8 2013

Species	In*	Out**
AMTO		
BCFR		
BULL	1-1	
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station AMP13

Start Time: 1:46
UTM: 528058 5079022
Habitat: Beaver Pond, Shallow Marsh
Water Present: Yes

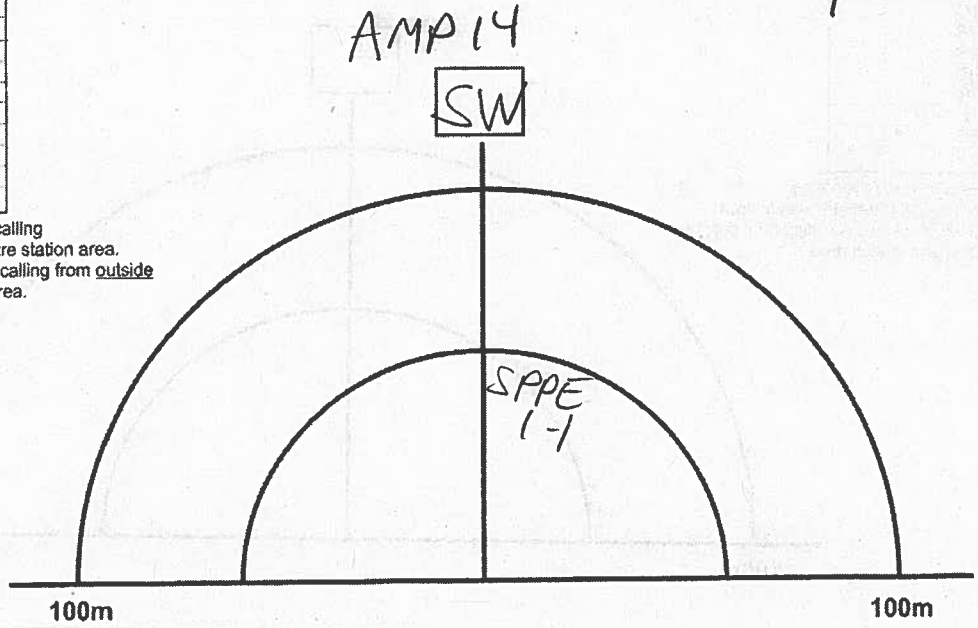


Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	1-1	
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station AMP14

Start Time: 2:44 pm
UTM: 527574 5079489
Habitat: Enormous sedge fen
Water Present: yes



Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

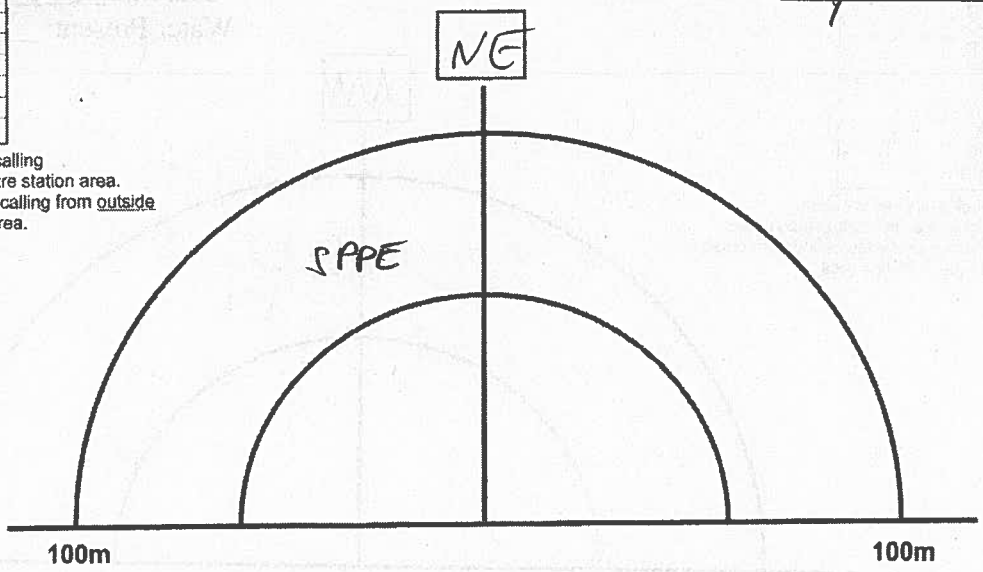
Wed May 8 2013
Personnel: Richer & Miller
Proj Name: Nigig/Henvey Inlet
Proj # 160960824

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	1-1	
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station AMP 15

Start Time: 3:56 pm
UTM: 527542 5080113
Habitat: Sedge Marsh
Water Present: Yes

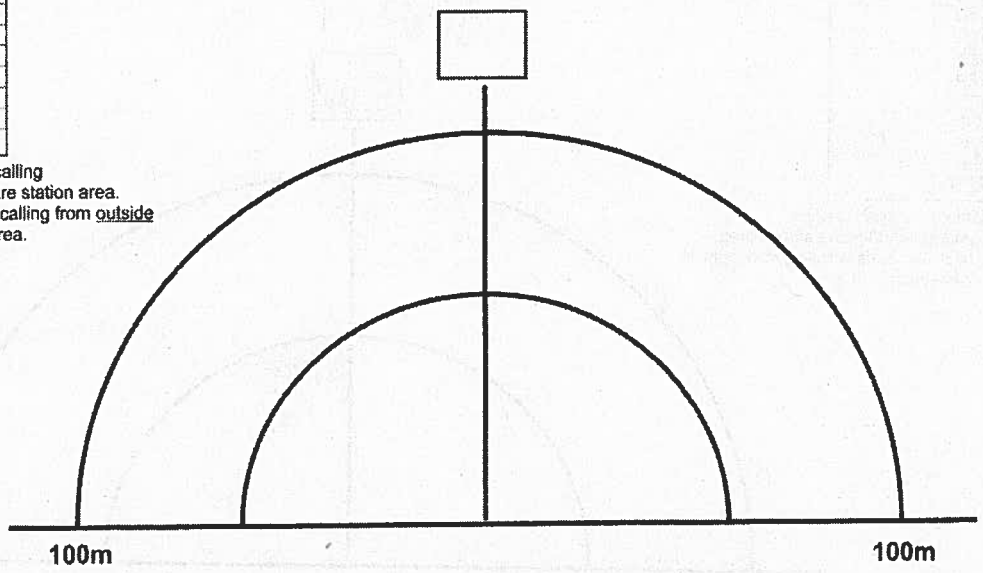


Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station

Start Time: _____
UTM: _____
Habitat: _____
Water Present: _____



Quality Control: This form is complete (__) & legible (__).
Signature: _____ (Field Personnel)
Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

Thurs May 9 2013
Personnel SRichert BMiller
Prj # 1609 60824
Prj Name: Migis/Henvey Inlet

Time: 8:20am

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

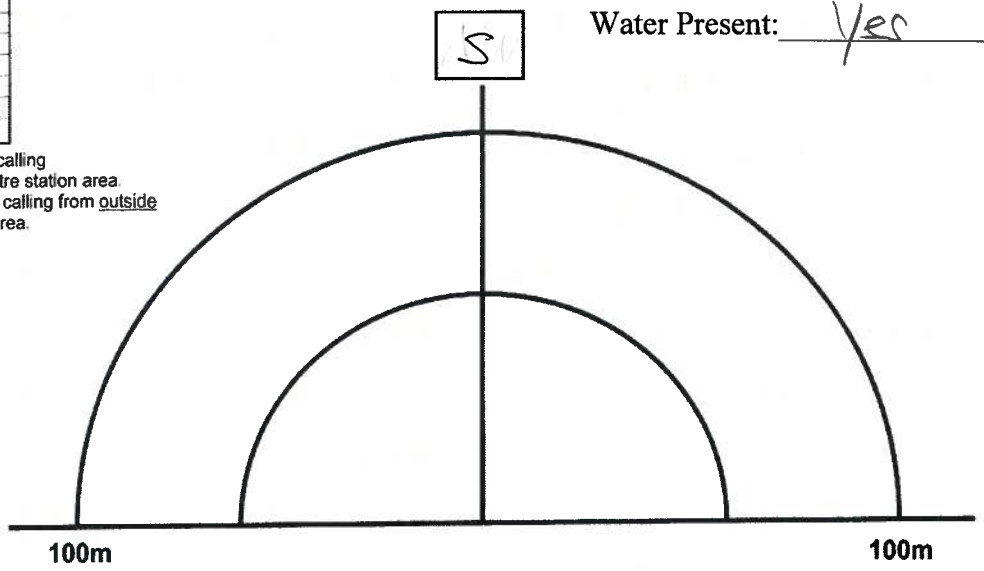
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station: AMP16

UTM: 523790 5080839

Habitat: Beaver Pond/Shallow Marsh

Water Present: Yes



Time 9:24am

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	1-2	
WOFR		

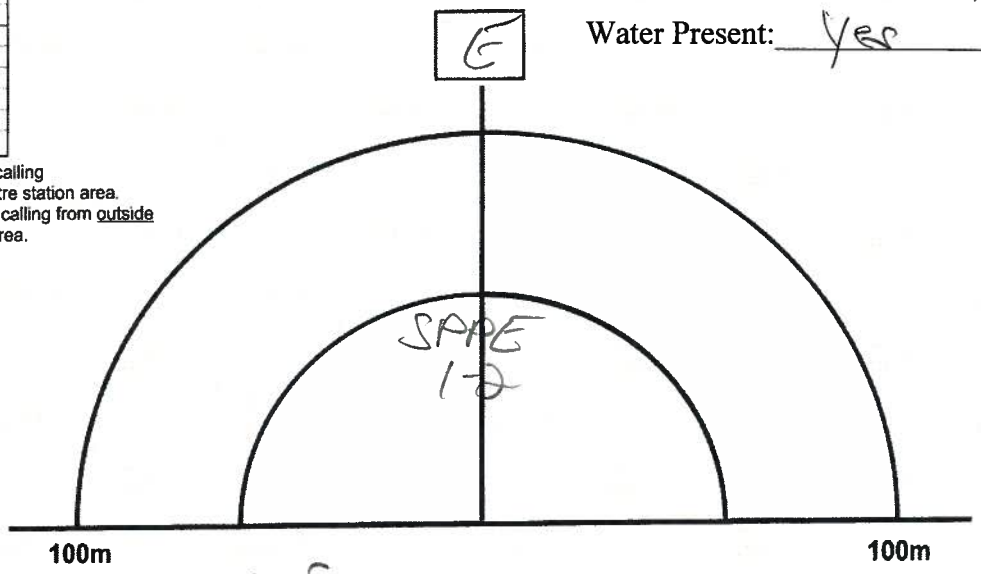
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station: AMP17

UTM: 524878 5080998

Habitat: Beaver Pond/Shallow Marsh

Water Present: Yes



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Amphibian Call Survey Observation Form

Project Number 160960824 Project Name: Nisg

Date Apr 22, 2013 Field Personnel: BH BM

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	9-15C	3-4 S	0-30%	/	/

Visit Number:	1 - CHFR Search		
Start Time:	1200	End Time:	1725

- **Record Start Time at Each Station**

17T 0578486 5077735

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

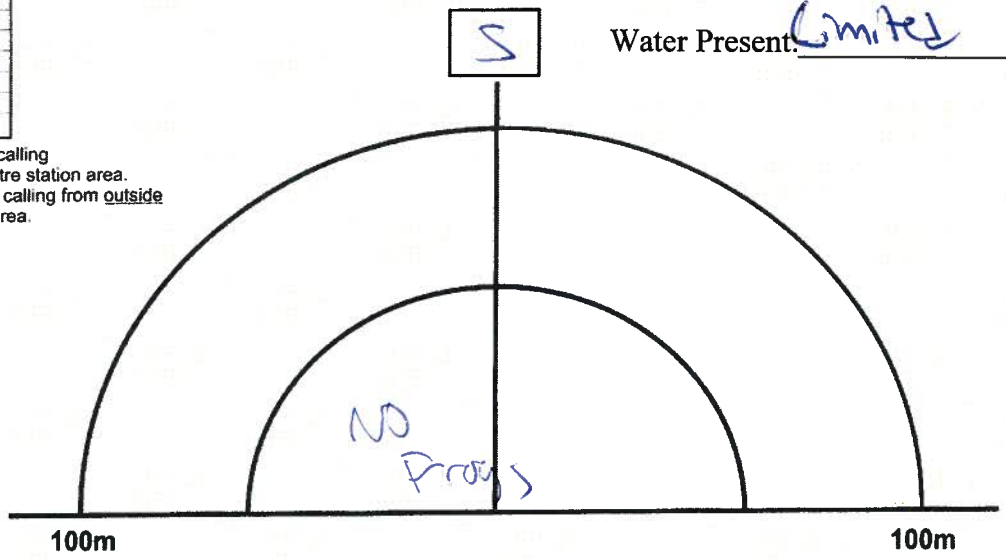
1231

Station 1238

UTM:

Habitat: Sphagnum Pools in Barrens

Water Present: Limited



Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

17T 0528332
5077726

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

1245

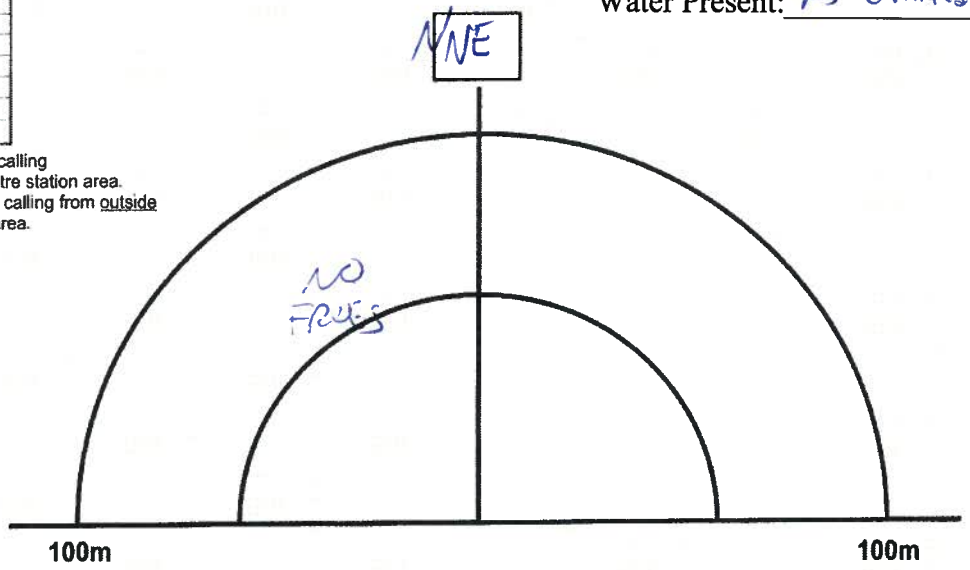
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 129

UTM:

Habitat: Sphagnum Pools in JPS

Water Present: Yes- Limited



17T 0528349 5077510

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

1302

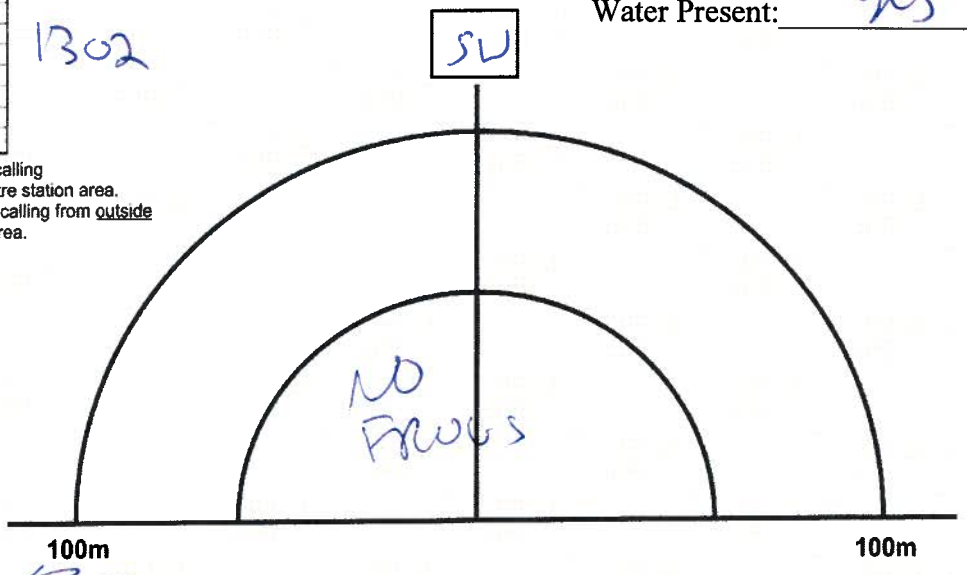
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 130

UTM:

Habitat: Beaver Ponds

Water Present: yes



(Field Personnel) (Project Manager)

REV: Mar, 09 Form 003

17T 0528262 5077215

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE	✓	
WOFR		

1347

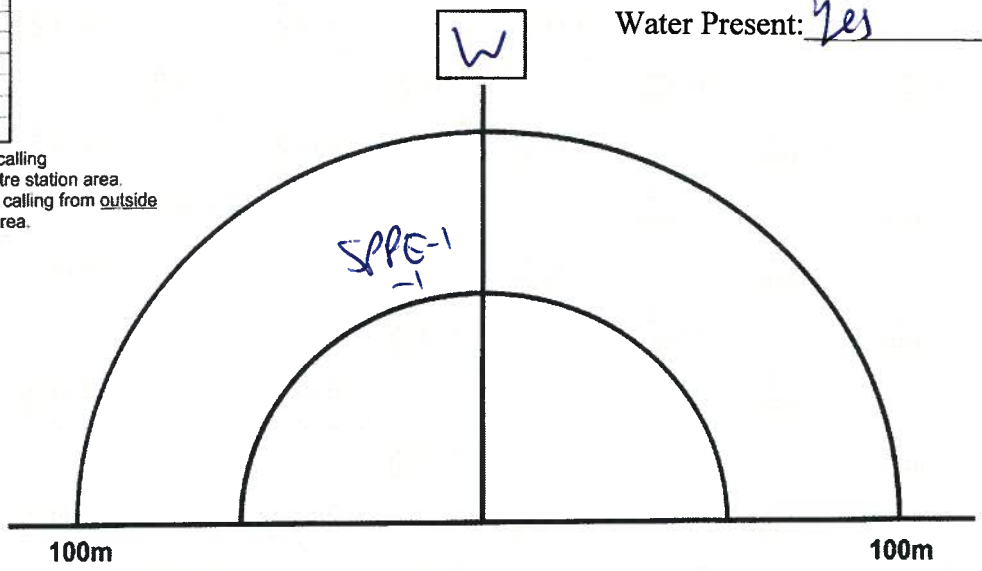
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 131

UTM: _____

Habitat: River Pond / Marsh / Pools of Water

Water Present: Yes



17T 0528149 5076939

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

1413

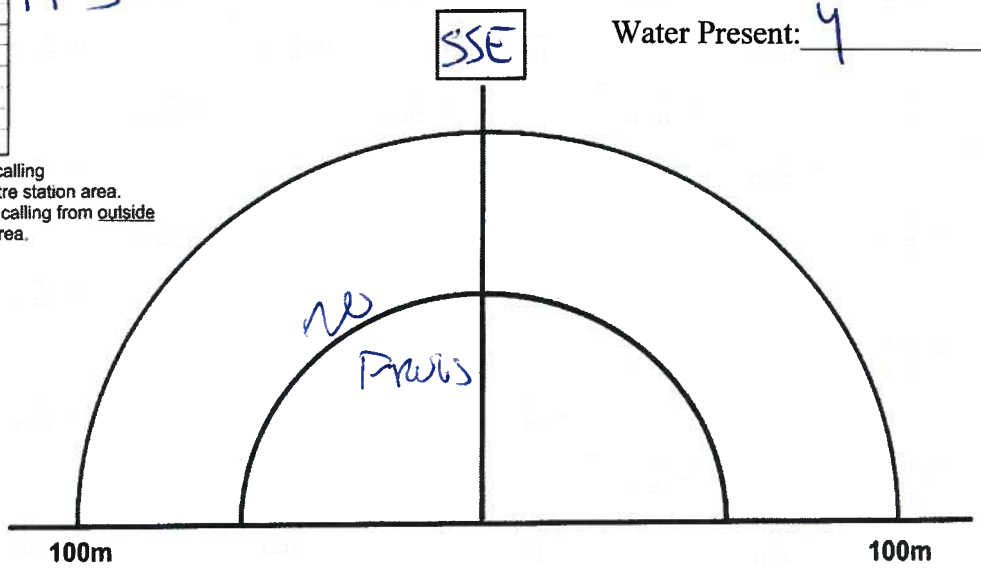
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station 132

UTM: _____

Habitat: Pond / Marsh

Water Present: Y



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

17T 0527998 5077357

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		✓
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

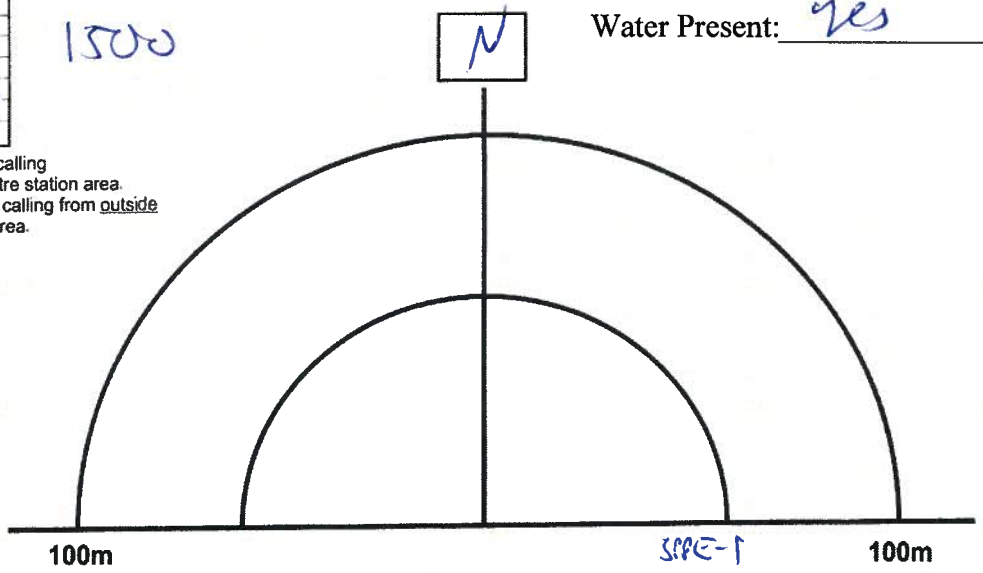
Station 133

UTM: _____

Habitat: Beaver Pnd / Meadow

Water Present: yes

1500



17T 0527931 5076848

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR	✓	
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

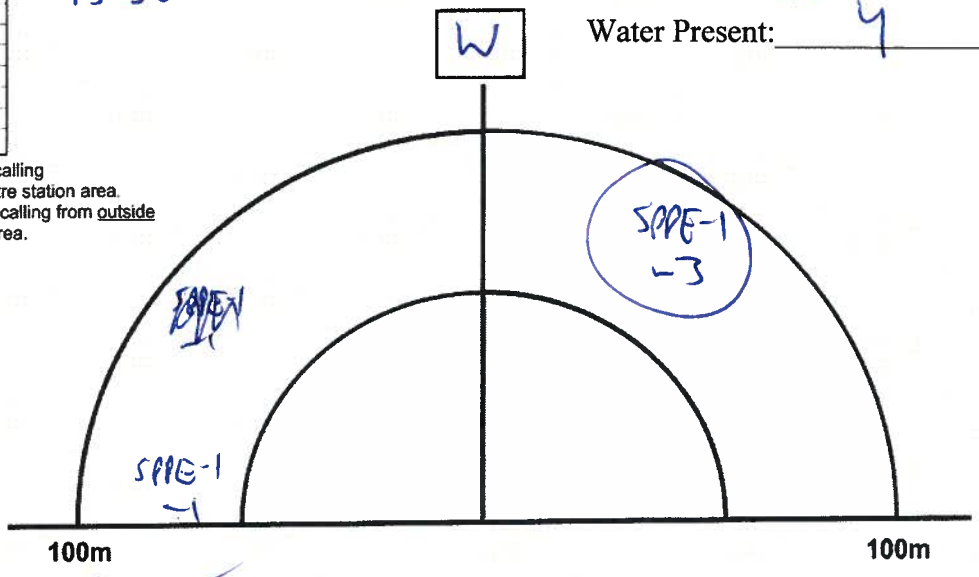
Station 134

UTM: _____

Habitat: Bog / Fen

Water Present: y

1536



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

17T 0527615 5076750

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

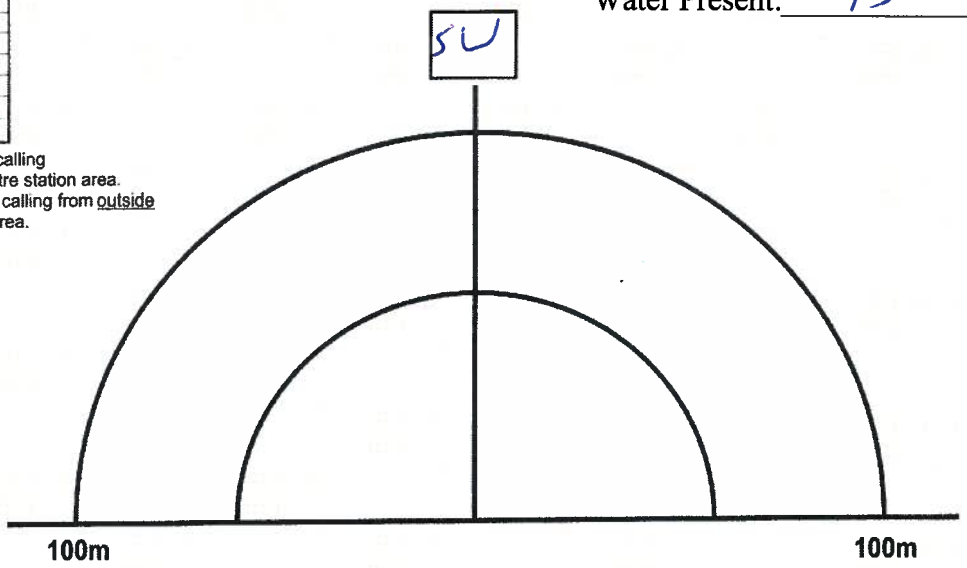
1603

Station 135

UTM: _____

Habitat: Beaver Pond

Water Present: Yes



17T 0527288 5076723

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

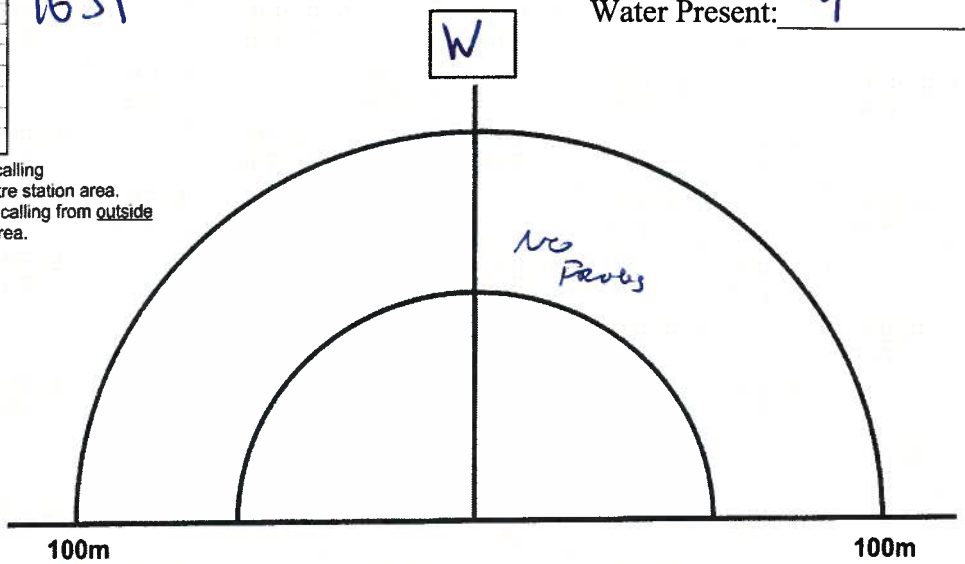
1631

Station ~~B~~136

UTM: _____

Habitat: Beaver Pond + Stream/lowland

Water Present: Y



(Field Personnel) (Project Manager)

REV: Mar, 09 Form 003

17T 0526999 5076555

Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

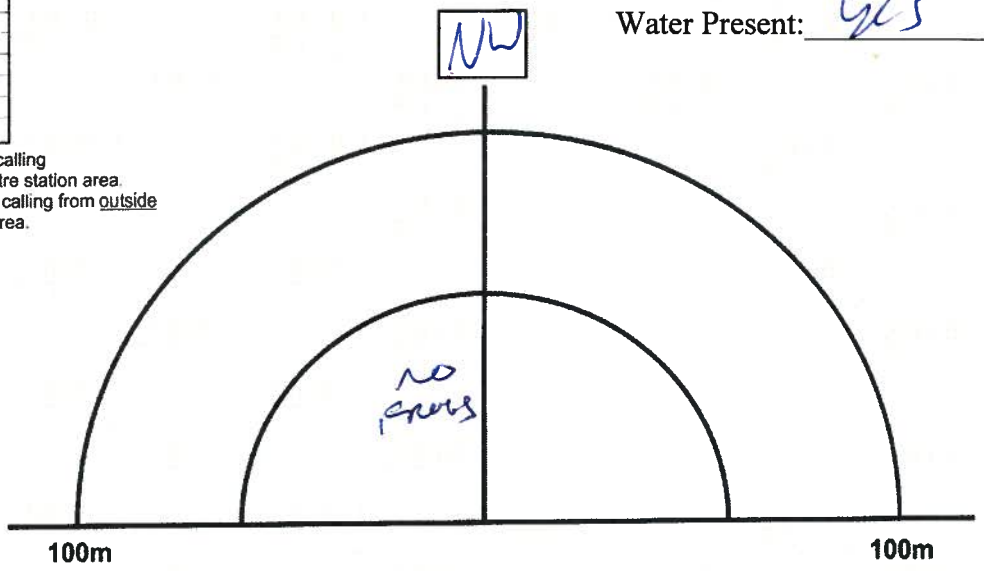
1656

Station 137

UTM: _____

Habitat: Mixed Wetlands / Pond

Water Present: yes



Species	In*	Out**
AMTO		
BCFR		
BULL		
CHFR		
CGTR		
FOTO		
GRTR		
GRFR		
MIFR		
NLFR		
PIFR		
SPPE		
WOFR		

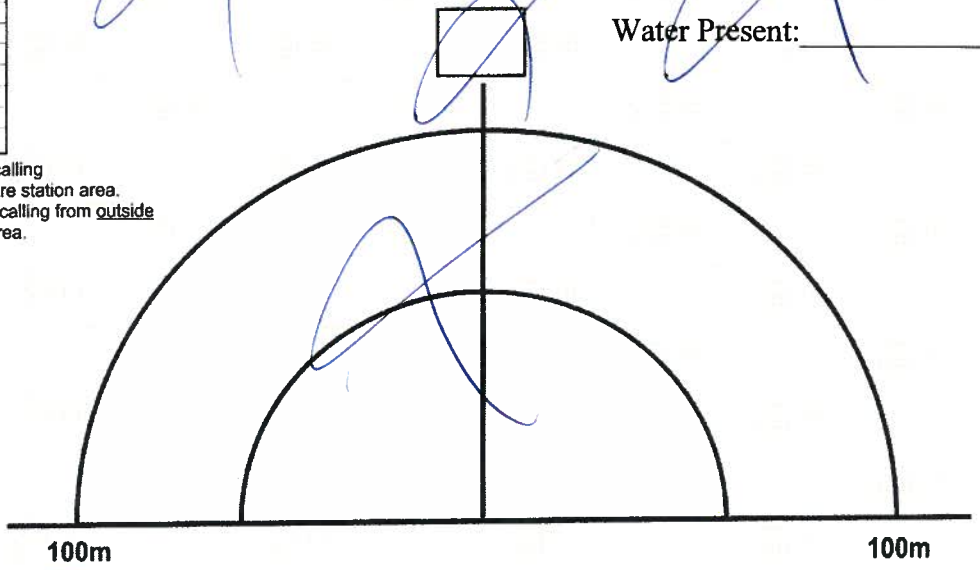
* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

Station

UTM: _____

Habitat: _____

Water Present: _____



Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: Mar, 09 Form 003

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number 160960824 Project Name: Nigig/Henvey Inlet

Date / Time: May 23 2013 Thurs Field Personnel: Pete Read & Sarah Richer

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	6°C	25+ km/hr 37 km/hr gusts	100	0 to light rain	heavy rain

LOCATION	START/ END TIME	SPECIES confirmed	HABITAT DESCRIPTION	OTHER NOTES potentials
S1	8:14 8:20	PATU roadkill	- Dinner Lake, lake with marsh perimeter	- COLO pair observed, nest with eggs confirmed approx 80-110m from road (potential BLTU
				MASN [redacted] SNTU STTU (mud) FLSK Painted Turtle roadkilled
S2	8:30 8:35	PATU (2) roadkill +SNTU	- wetland with open water - rock + forest boundary	- [redacted], BLTU, MASN,
S3	8:38 8:55	SNTU (4) roadkill BLTU "	- lake with marshy shores - rock + forest edge drains under road	BLTU, SNTU, Stinkpot, MASN #at roadside [redacted] #nesting turtle evidence
S4	9:09 9:15	SNTU	- beaver dammed lake/pond - edge marshy - forest edge	BLTU, SNTU, PAINTH, [redacted] MASN along edges
S5	9:17 9:20		beaverpond, marshy perimeter	SNTU, [redacted], BLTU
S6	9:21 9:25		some cattail marsh surrounded by mixed forest swamp	[redacted] (marginal), BLTU

Quality Control: This form is complete (✓) & legible (✓).

Signature: Peter Read (Field Personnel) Signature: _____ (Project Manager)

REV: May 07 FORM 005

LOCATION	TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
S7	9:30 9:35		Black-spruce(dead standing) leatherleaf bog	BLTU, [redacted], MASN edge potential
S8	9:41 9:47		cattail marsh w mixedwood/treed swamp/forest on east, further north along road is large wetland complex	BLTU, [redacted], SNTU, surrounding upland is MASN
S9	9:51 9:55		cattail/leatherleaf bog/fen on east side), part of larger complex	[redacted], BLTU, MASN upland
S10	10:14 10:19		lake culverted under road, more wetland habitat on east side beaver-pondy	SNTU, [redacted], MUTU, BLTU, MASN habitat in uplands around
S11	10:31 10:36	turtle sp remains (small; can't identify)	part of previous point's lake, different connection; on east side, beaver pond + big dam, marsh perimeter, upland mixedwoods	BLTU, SNTU, MUTU (?maybe) MASN habitat in uplands, [redacted]
S12	10:37 10:43	turtle bones	- portion of parallel water system small "lake", swampy edge	[redacted], BLTU,
S13	10:44 10:49		- small pond with marshy/swamp edge - forest surround	[redacted], BLTU.
S14	10:50 10:55		- creek system empties into pond/lake (marshy sides) - forested & rocky sides	[redacted], BLTU, SNTU, MUTU, MASN?
S15	11:02 11:07		channelized wetland - flows east, marshy on both sides (sedge/grasses), rocky upland on south side + mixedwood forest on north side	MASN on upland; maybe MUTU?
S16	11:10 11:17		alder swamp; steep sides from road to water; swamp opens to larger lake	BLTU, SNTU, MUTU (maybe), MapTurtle
S17	11:23		is arm of a lake, shrubby low border along Hwy on east side	BLTU, SNTU, MUTU, [redacted] MAPTurtle,
S18		SNTU juvenile jaw injury rescue	Shawanaga River, steep sandy or rocky sides	SNTU, MUTU

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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N1G 4P5
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Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number: 160960824
Project Name: Nigig/Henvey Inlet
Date / Time: May 23/2013 Thur
Field Personnel: PRead + SReicher

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	4	20 km/h	100%	light rain	heavy

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
S 19	12:52 12:56	SNTU adult roadkill	slow flowing creek, marshy on roadsides, steep but short slope on roadside, bordered	SNTU, BLTU, MASN on upland surrounding
S20	12:59 1:03		beaver pond on east side with wetland/marsh perimeter	SNTU, BLTU, [redacted]
S21	1:10 1:14		cattail marsh/shrubby borders, rocky upland surrounding	BLTU, MASN, FLSK
S22	1:25 1:28		creek/stream bordered by sedge marsh & dead tamarack/shrub bog	BLTU, [redacted], SNTU, FLSK & MASN on rocky upland
S23	1:29 1:32		beaver pond	BLTU, SNTU, FLSK & MASN on rocky upland
S24	1:39		small lake - rocky/forest edge - some cattail & shrubby edge - broad sandy area by road for turtle nesting habitat	BLTU, SNTU, [redacted], HOGNOSE? MUTH, MPTU, MASN, FLSK
S 25	2:00 2:05		small river goes under road (Sucker Creek) - shoreline on E. - bushy along sides - rocky too	SNTU, BLTU, MASN, FOSN?, MUTH?

Quality Control: This form is complete (✓) & legible (✓).
Signature: Peter Read (Field Personnel)
Signature: _____ (Project Manager)

REV: May 07 FORM 005

LOCATION	TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES potential
S 26	2:06		- several small wetlands connecting to large Moose Lake - marshy + swampy	MUTU, SNTU, [redacted], BLTU MASN.
S 27	2:19	dead SNTU	- very small marsh but great habitat cattails lily pads - bordered by forest	SNTU, [redacted], BLTU.
S 28	2:40	dead SNTU	- stream on east - marsh on west - suitable habitat	SNTU
S 29	2:45		- ~~lake~~ channel lake - forest/rocky - some edge of wetlands bushes	BLTU, SNTU, MUTU MASN
S 30	2:49	SNTU predated eggs	- marsh - grasses - beaver dam - edge of forest - culvert - high sides	[redacted], BLTU, MASN
S 31	3:01	* BLTU	- 6 mile lake - mostly rocky shores - some veg along edge.	BLTU, SNTU, MUTU, [redacted], MASN, FLSK, MAP? FOX SN?
S 32 a+b	307		- large beaver pond with standing dead trees + cattails - fairly steep forested slopes rocky too	BLTU, SNTU, MUTU, [redacted], MASN, FLSK.
S 33	322		- small cattail marsh surrounded by forest some open water (marginal	BLTU, [redacted]
S 34	324	dead unidentified turtle	- large pond, marsh, grass, forest edge rocky slopes ✓ nesting bits. - sandy banks + gravel pit	BLTU, SNTU, MUTU, [redacted], MASN, FLSK
S 35	343	dead PATU	- wetland with open water cattails forest around - beaver pond steep sides	BLTU, SNTU, [redacted], MASN, FLSK, Hog?
S 36	354		- small beaver pond marsh with grassy meadow - sides rocky + forest	[redacted], BLTU, SNTU MASN, FLSK.
S 37	357		- small grassy pond with grasses - border rocky, forest	[redacted], BLTU, SNTU. MASN, FLSK

Quality Control: This form is complete (__) & legible (✓).

Signature: Peter Read (Field Personnel) Signature: _____ (Project Manager)

REV: May 07 FORM 005

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Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number 160960824

Project Name: Nigig / Henvey Inlet

Date / Time: May 23/2013

Field Personnel: Pete Read & Sarah Richer

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	4	20	100	0	heavy rain

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
S 38	4:19	Unidentifiable turtle remains	- beaver pond, channelized, w/ grassy/sedgy areas, both sides bordered by rocky uplands with mixed woods	BLTU, [redacted]; MASN & FLSK on uplands
S 39	4:40	unidentified Turtle remains + painted (3) (dead)	- new beaver meadow & pond - forest surround	recorded BLTU on map [redacted]
S 40	4:46		- beaver pond 100 m away - creek between road & pond also ponds along road good habitat - bordered forest & rocky areas	- [redacted], BLTU coming to road
S 41	4:53	predated turtle nest	- slow meandering stream with grassy marsh along - border rocky & forest	- BLTU, [redacted], SNTU
S 42	4:59		- several marsh areas surrounded by rocky areas	BLTU, [redacted], MASN,
S 43	5:00 5:13	remains of 1 painted 4 BLTU incl 1 baby	- beaver pond & drainage - swampy/marshy - bordered by rocky & forested areas	BLTU, SNTU, [redacted], MUTH, MASN, FLSK.
S 44	5:18		- sedgy grassy marshes, cattails, meandering open water channel series of	BLTU; MASN & FLSK on either side in rocky uplands maybe SNTU, marginal [redacted]

Quality Control: This form is complete (_), & legible (_).

Signature: Peter Read (Field Personnel)

Signature: _____ (Project Manager)

May 23/2013 Herp studies South to Nobel

Species	Tally
S1	566436 5033965 (loon nest)
S2	565843 5034590
S3	565304 5035146
S4	564333 5036177
S5	564117 5036404
S6	563507 5036981
S7	563176 5037279
S8	561805 5038504
S9	561537 5038746 stretcher to 561164 5039118
S10	560246 5039952 stretcher to 559967 5040340
S11	558992 5041342
S12	558506 5041842
S13	558033 5042320
S14	557938 5042426
S15	557265 5043107 (Hwy 69 this includes both bisects two channelized marshes)
S16	556816 5043563
S17	556410 5043921
S18	555912 5044248
S19	554557 5045111
S20	553444 5045689
S21	552478 5046181
S22	551955 5046447
S23	551388 5046762
S24	550219 5047558
S25	548653 5049709
S26	547903 5051953
S27	547562 5052456
S28	547176 5053258
S29	547103 5053585
S30	546997 5053981
S31	546793 5054808
S32	546448 5055560
	+ 546242 5055759

Signature: A. Kil (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Canada N1G 4P5
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Fax: (519) 836-2493

Migratory Bird Survey Observation Form

Project Number: _____ Project Name: _____

Date: _____ Field Personnel: _____

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

Start Time: _____ **End Time:** _____

Start Point UTM: _____ **End Point UTM:** _____

Habitat: _____ **Transect:** _____

Feature #: _____

Species	Tally

Pg. ___ of ___

Quality Control: This form is complete ❑ & legible ❑.

Signature: _____ **Signature:** _____

(Field Personnel) (Project Manager)

REV: 2011-05-03 / FORM 014

May 23/2013 Herp Studies South to Nobel

Species	Tally	
S-33	544315	5057763
S-34	544092	5057948
S-35	543730	5058373
S-36	543508	5058619
S-37	543392	5058736
S-38	542785	5059949
S-39	542637	5060291
S-40	542409	5060830
S-41	541944	5061924
S-42	541726	5062438
S-43	541477	5063025
S-44	541078	5063910

Pg. 7 of 7

Signature: _____ (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: _____ (Project Manager)

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Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Migratory Bird Survey Observation Form

Project Number: _____ Project Name: _____

Date: _____ Field Personnel: _____

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

Start Time: _____ **End Time:** _____

Start Point UTM: _____ **End Point UTM:** _____

Habitat: _____ **Transect:** _____

Feature #: _____

Species	Tally

Pg. ___ of ___

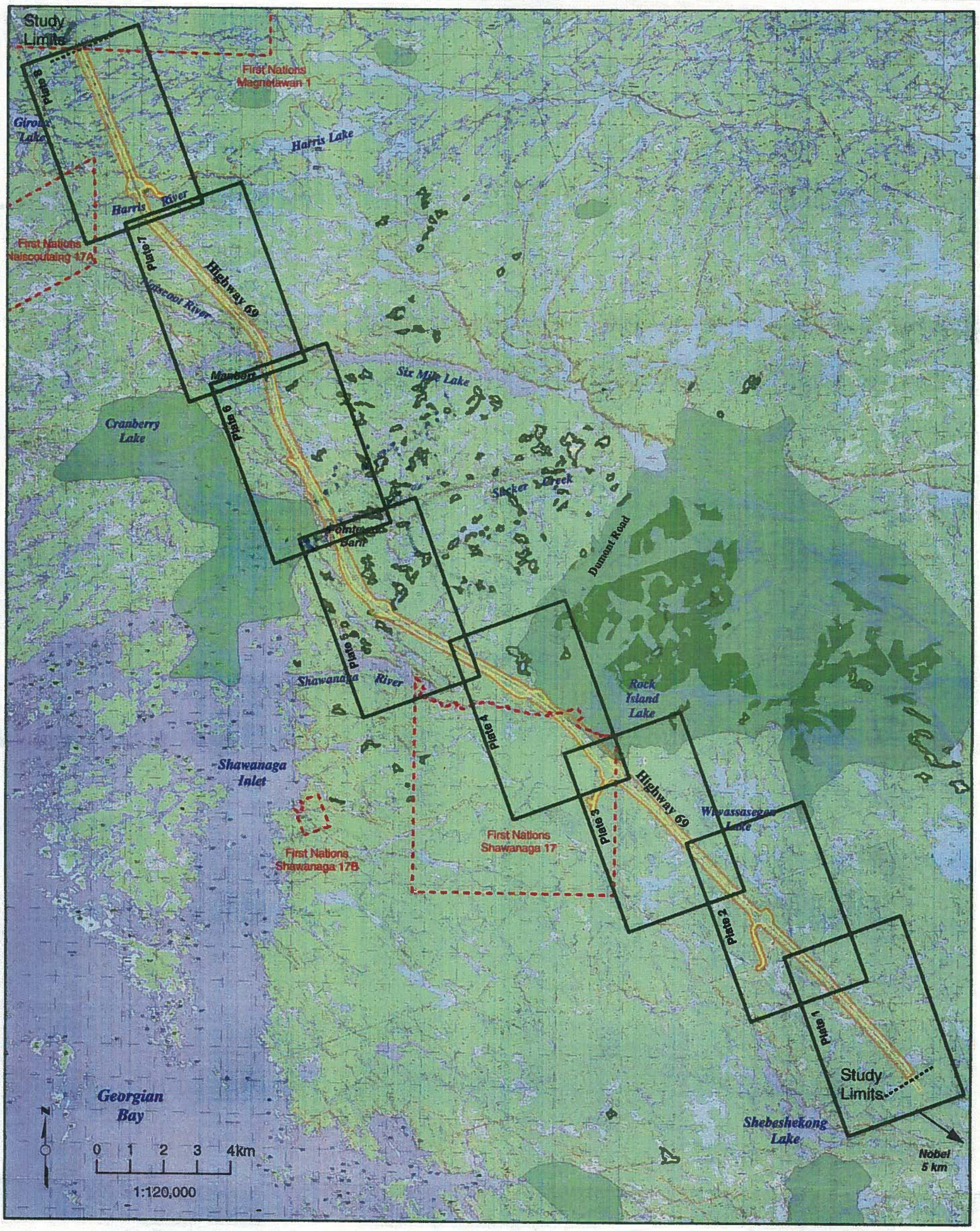
Quality Control: This form is complete ☐ & legible ☐.

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

PREVIOUS SAR (REPTILE) OBSERVATIONS IN HWY CORRIDOR

- SOUTH SECTION -



Legend for Detail Sheets

Species Observations

Species of Conservation Concern		Secure Species		Unknown Species Nests	
■	Habitat	■	Habitat	■	Unknown Heron Nest(s)
●	Sighting	●	Sighting	■	Unknown Raptor Nest(s)

Habitat observations refer to specific habitat types.

For herptiles they are hibernaculum and gestation sites.

For birds and raptors they are nesting sites.

Data Sources - MNR NRVIS, Ecoplans Limited Fieldwork 2003, 2004, 2005

Species Observations Data Sources
Data source code noted after species code (ie EMRa)

Code	Data Source
a	MNR Observations
b	Ecoplans field work
c	Reptile Awareness Program Data
d	Element Occurence species records (NHIC)

Proposed Alignment
- Centre Line
- Right of Way of Preferred Route
- Service Road
- First Nations Lands
- Study Corridor
- Aquatic feeding area (Ecoplans fieldwork)
- Aquatic feeding area (MNR NRVIS)
- Deer yard
- Core deer yard area

Species Observations Labels

Raptors of Conservation Concern

RSH Red Shouldered Hawk

Secure Raptors

CH Cooper's Hawk
NG Northern Goshawk
OSP Osprey
RTH Red Tailed Hawk
BWH Broadwinged Hawk

Secure Birds (Non-raptors)

CT Common Tern
G Gull
GBH Great Blue Heron
PW Prairie Warbler

Reptiles of Conservation Concern

MS Milk Snake
BT Blandings Turtle
FS Five Lined Skink

Insects of Conservation Concern

RST Rusty Snaketail
OD Ocellated Darner

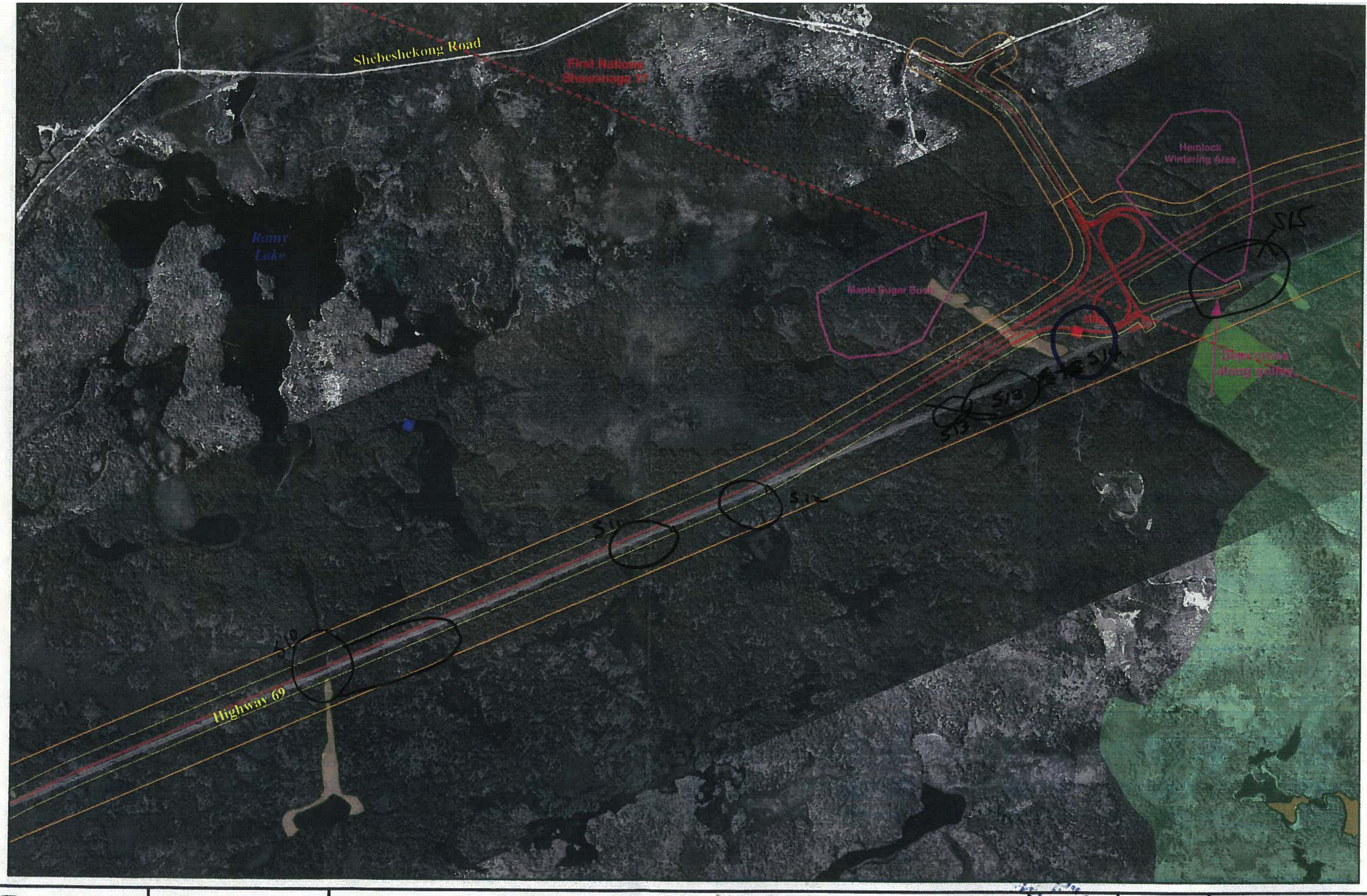
Ontario	Highway 69 Route Selection Preliminary Design Figure 6 - Wildlife Overview Map	Project No. 03 - 2667	Date: Mar 2006	ecoplans Limited

Ontario	ecoplans Limited	**Highway 69 Route Selection Preliminary Design** **Figure 7 - Wildlife - Plate 1**	Project No. 03 - 2667	Date Mar 2006	0 200 400 m 1:15,000

Ontario | ecoplans Limited

Highway 69 Route Selection Preliminary Design
Figure 7 - Wildlife - Plate 2

Project No.	Date	0 200 400 m
03 - 2667	Mar 2006	1:15,000



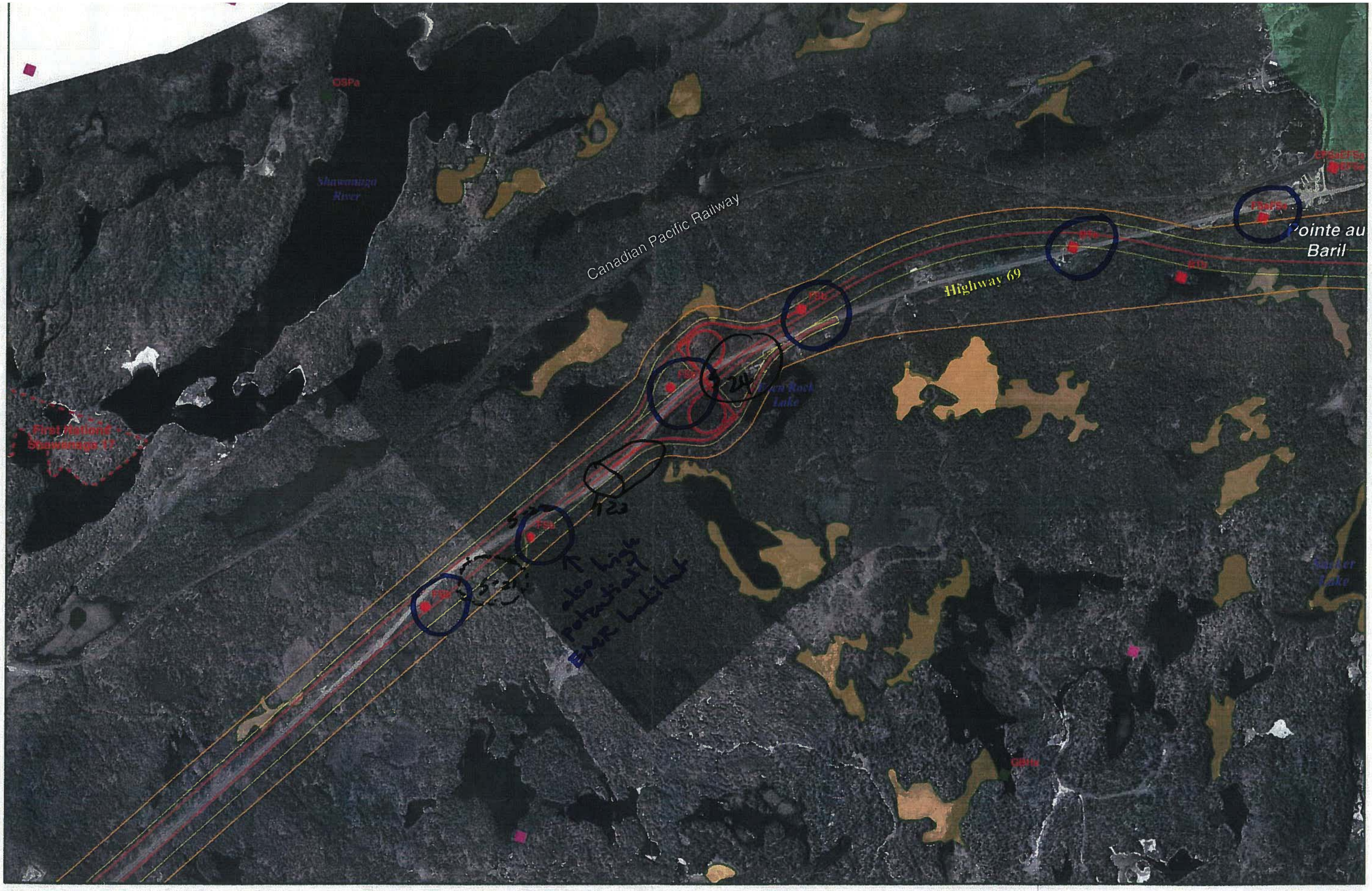
Ontario

ecoplans Limited

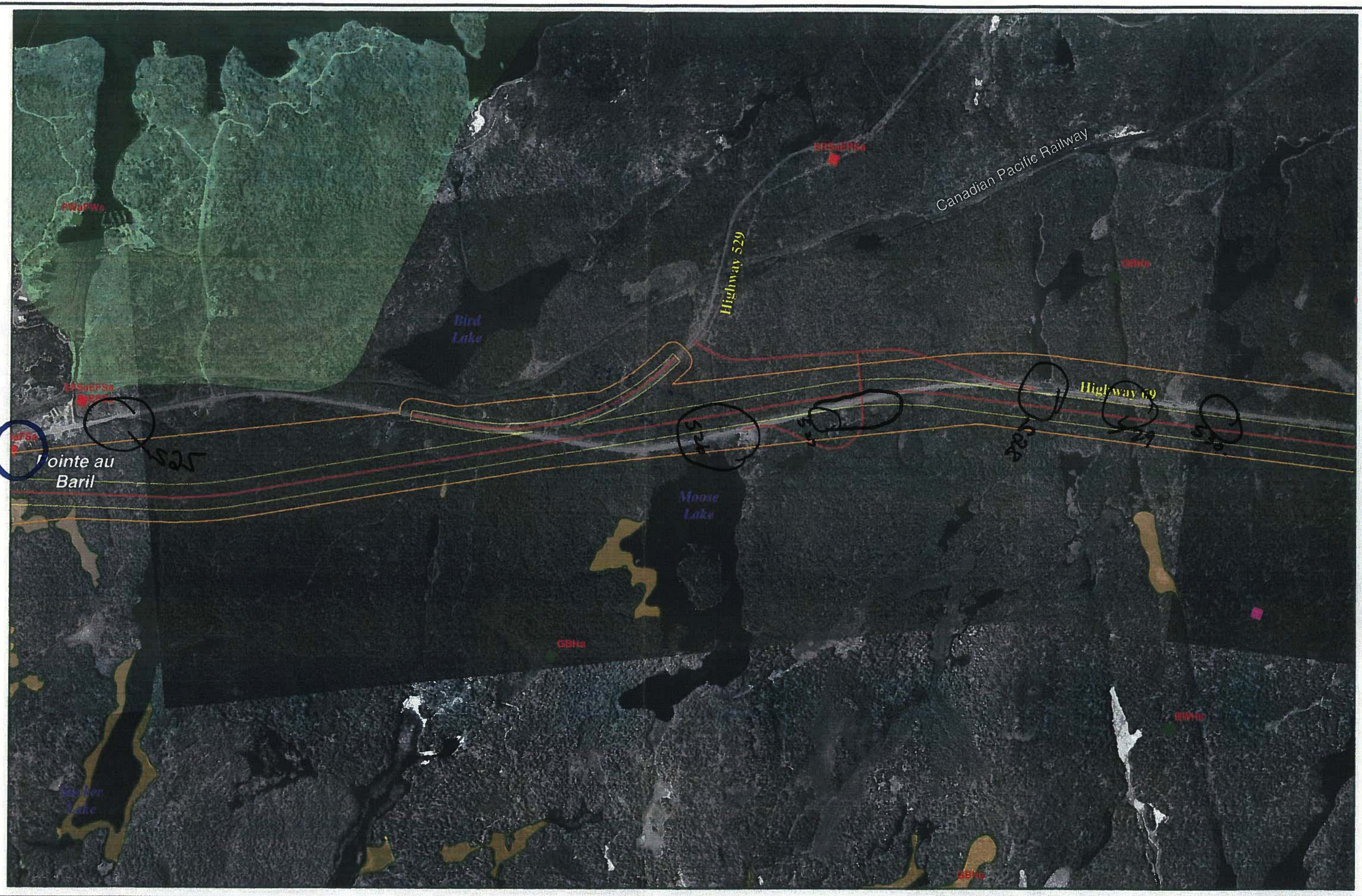
Highway 69 Route Selection Preliminary Design
Figure 7 - Wildlife - Plate 3

Project No.	Date	
03 - 2667	Mar 2006	0 200 400 m 1:15,000

Ontario	ecoplans Limited	**Highway 69 Route Selection Preliminary Design** **Figure 7 - Wildlife - Plate 4**	Project No. 03 - 2667	Date Mar 2006	0 200 400 m 1:15,000

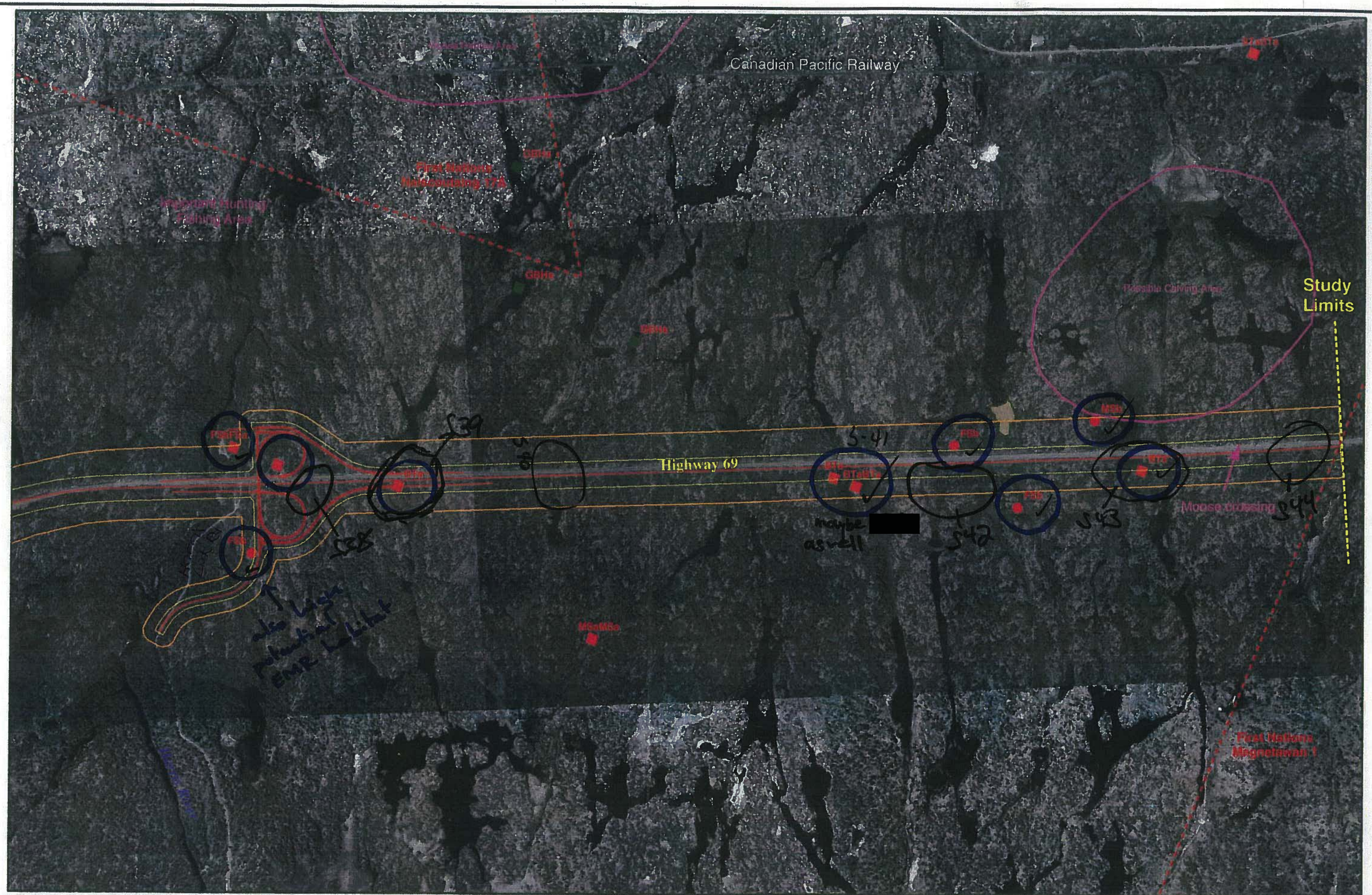


Ontario / ecoplans Limited	**Highway 69 Route Selection Preliminary Design** **Figure 7 - Wildlife - Plate 5**	Project No. 03 - 2667	Date Mar 2006	0 200 400 m 1:15,000	N

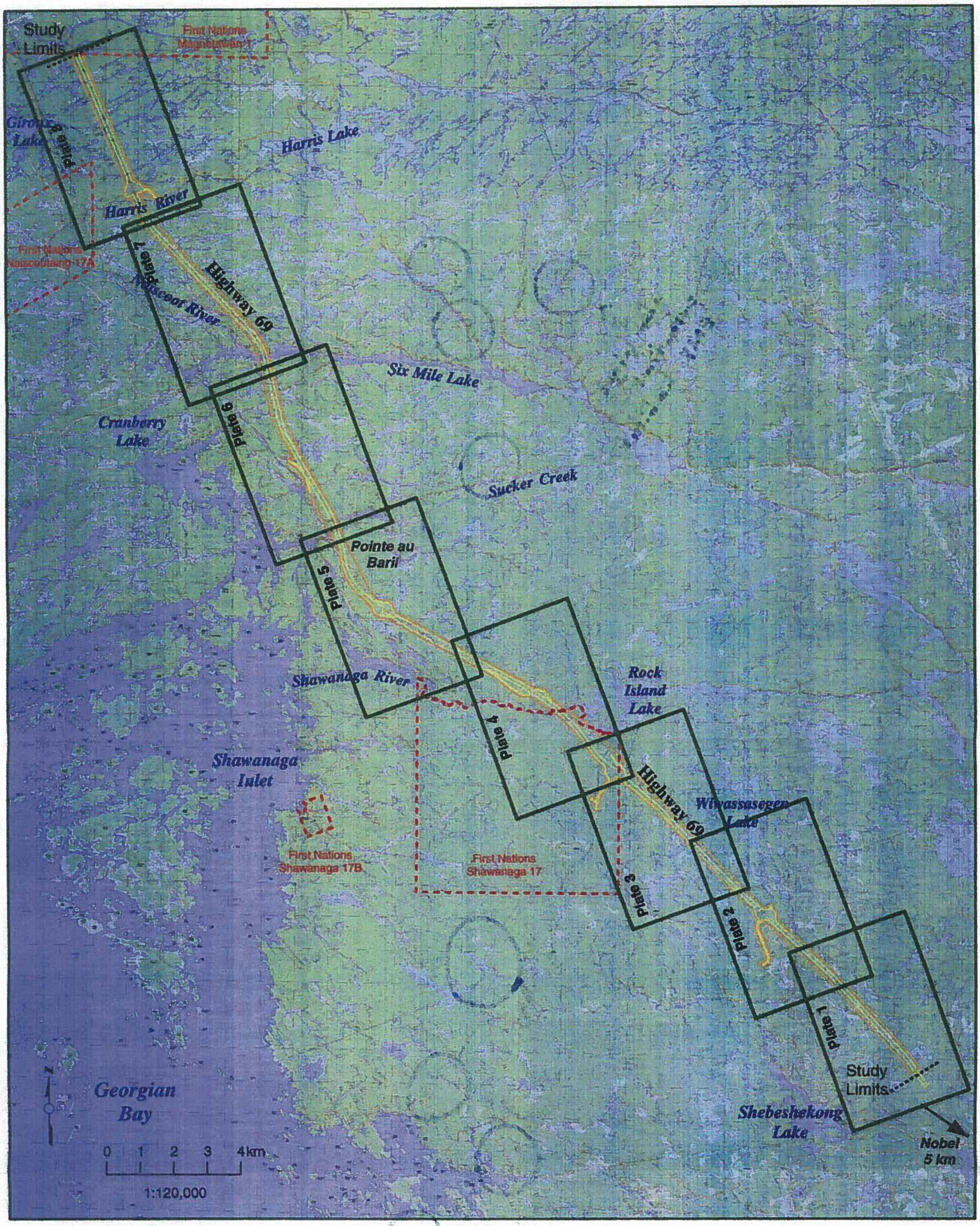


Ontario	ecoplans Limited	**Highway 69 Route Selection Preliminary Design** **Figure 7 - Wildlife - Plate 6**	Project No. 03 - 2667	Date Mar 2006	0 200 400 m 1:15,000

Ontario	ecoplans Limited	**Highway 69 Route Selection Preliminary Design** **Figure 7 - Wildlife - Plate 7**	Project No. 03 - 2667	Date Mar 2006	0 200 400 m 1:15,000



Ontario	ecoplans limited	**Highway 69 Route Selection Preliminary Design** **Figure 7 - Wildlife - Plate 8**	Project No. 03 - 2667	Date Mar 2006	0 200 400 m 1:15,000



Legend for Detail Sheets

Proposed Alignment

- Centre Line
- Right of Way of Preferred Route
- Service Road
- Study Corridor
- First Nations Lands

- Vegetation Units (Ecoplans 2003 - 2005)
- Vegetation Units with high potential for EMR nibernation habitat
- Vegetation Units with high potential for EMR gestation and/or foraging habitat
- Vegetation Units with low potential for EMR hibernation, gestation and/or foraging habitat

- 93 Area with high potential for EMR hibernation habitat
- 93 Area with high potentail for EMR gestation and/or foraging habitat
- 93 Area with low potentail for EMR hibernation, gestation and/or foraging habitat

EMR Observations

- Habitat
- Sighting

Habitat observations refer to hibernaculum and gestation sites.

Species Observations Data Sources
Data source code noted after species code (ie EMRa)

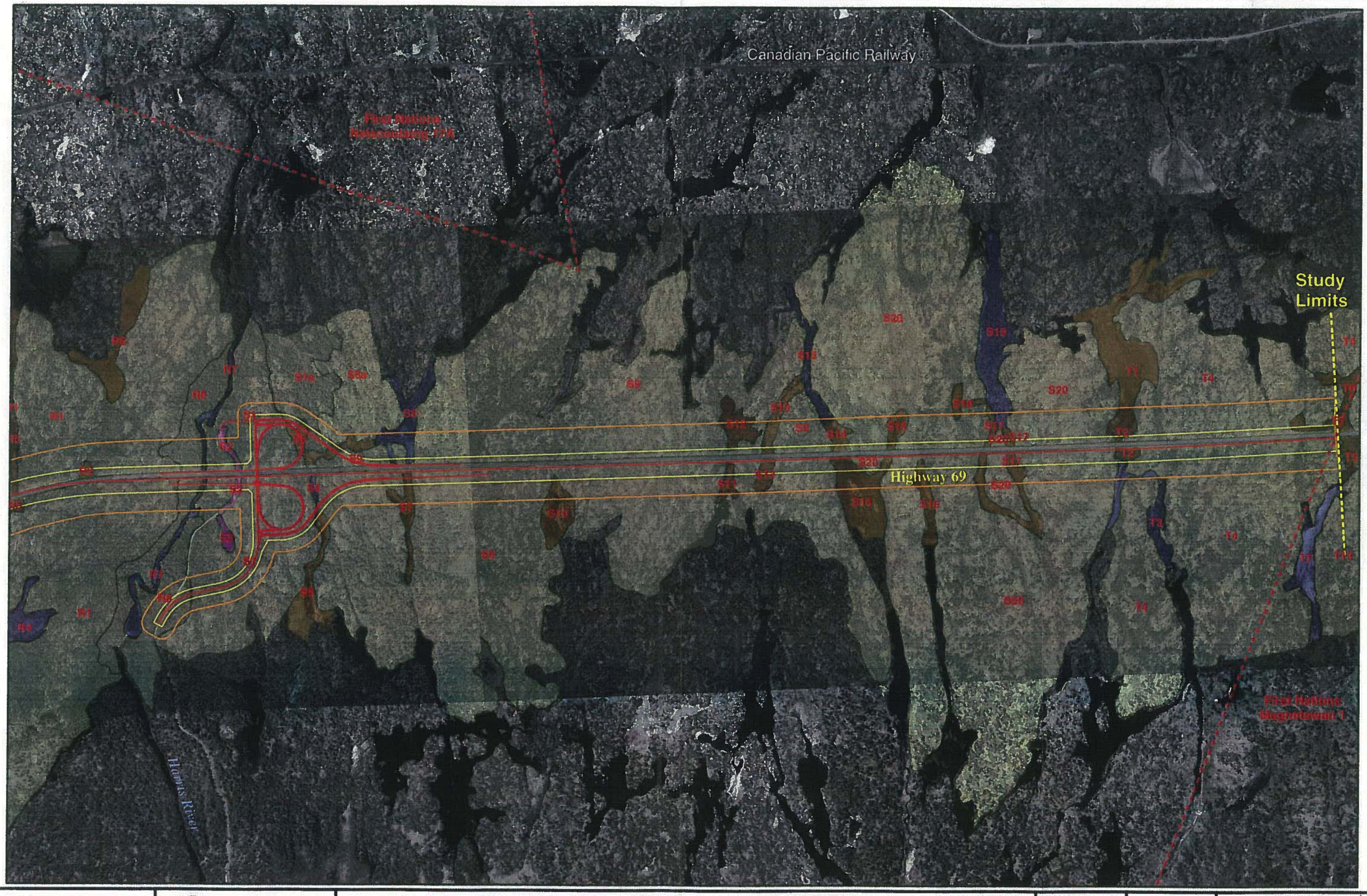
Code	Data Source
a	MNR Observations
b	Ecoplans field work (2003, 2004, 2005)
c	Reptile Awareness Program Data
d	Element Occurence species records (NHIC)

Ontario

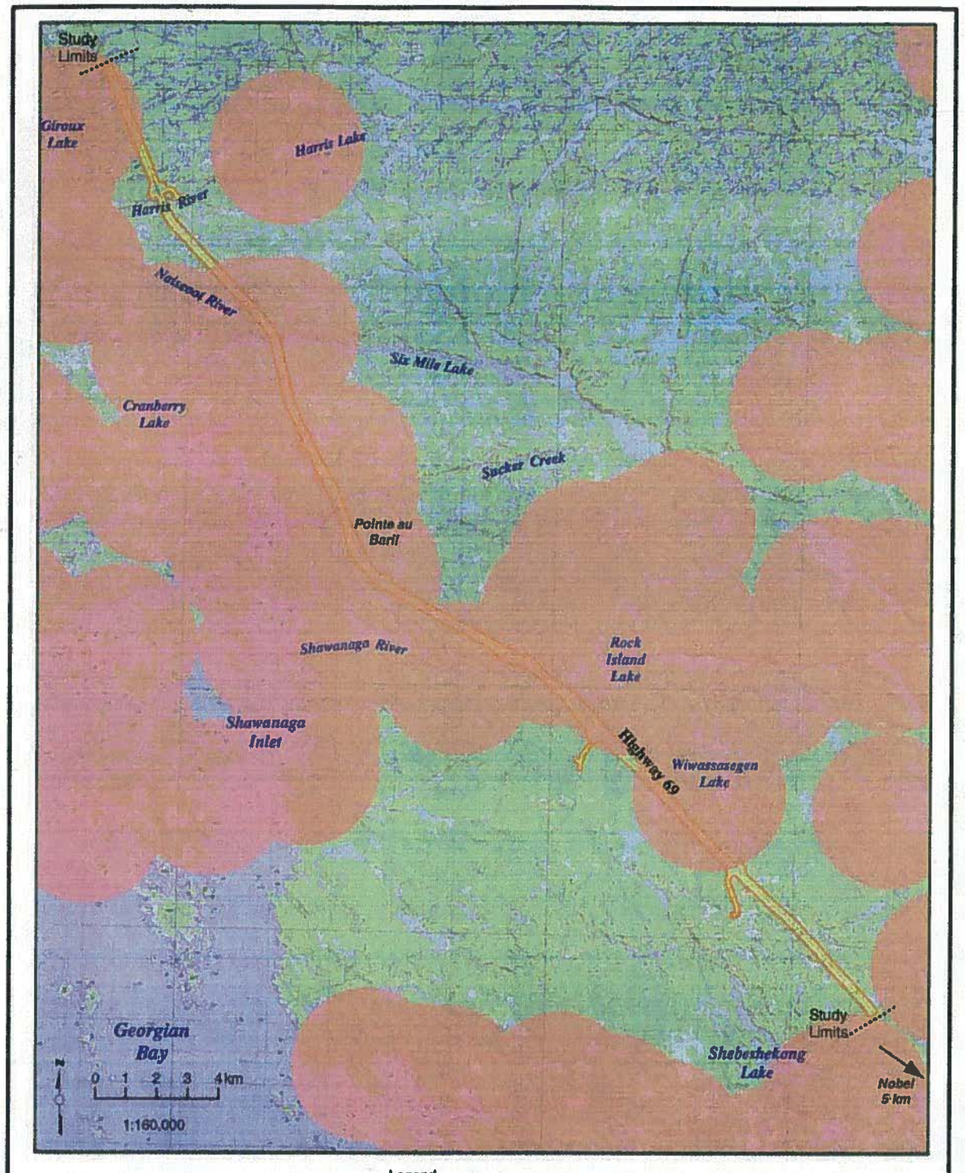
Highway 69 Route Selection Preliminary Design
Figure 8 - Eastern Massassauga Overview Map

Project No.	Date:
03 - 2667	Mar 2006

ecoplans Limited



Ontario	ecoplans Limited	**Highway 69 Route Selection Preliminary Design** **Figure 3 - Vegetation Units - Plate 8**	Project No. 03 - 2667	Date Mar 2006	0 200 400 m 1:15,000



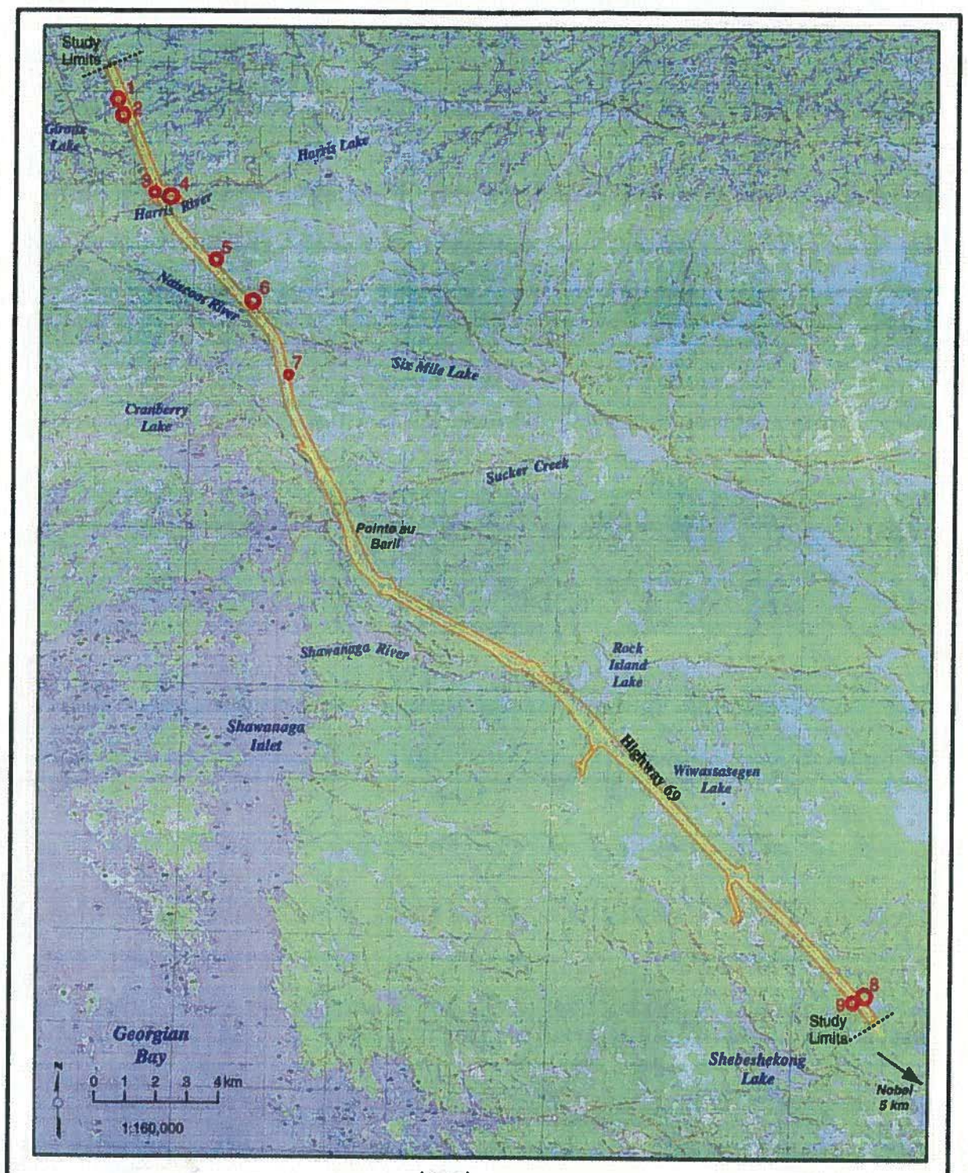
Legend

Right of Way of Preferred Route

Study Corridor

Approximate distribution of Massassauga Rattlesnakes defined as lands within 2.5 km of MNR, RAP and NHIC records of occurence

Ontario	Highway 69 Route Selection Preliminary Design Figure 4 - Approximate Distribution of Massassauga Rattlesnakes	Project No. 03 - 2667	Date: Mar 2006	ecoplans



Legend

Right of Way of Preferred Route

Study Corridor

Areas Surveyed By Ecoplans Staff August 30 - September 1, 2004

Ontario	Highway 69 Route Selection Preliminary Design Figure 5 - Areas Surveyed For Eastern Massassauga Rattlesnakes By Ecoplans Staff Aug 30 - Sep 1, 2004	Project No. 03 - 2667	Date: Mar 2006	ecoplans

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Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number 160960824 Project Name: Nigig/Henvey Inlet

Date / Time: May 22 2013 Wed Field Personnel: S Ricker & P Read

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	16°C	Beauf 1	100%	Mist & Fog, & light rain	code 3/4 some heavy rain

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES possible species
N1	1:31 1:45	–	-channel of water with wetlands -surrounded by rock	- Blanding, [redacted] - mass. snk + skink
N2	2:00 2:15	–	- lake & marsh, rock edges.	- BLTU, MASN, FLSK, [redacted]
N3	2:18 2:33	–	- marshy pond, rock barren bordered	- BLTU, MASN, FLSK, [redacted]
N4	2:40 2:45	–	- Beaver pond surrounded by rock barren, large beaver dam & beaver lodge & lots of barking rocks & logs	- BLTU, MASN, FLSK, [redacted]
N5	2:45 2:50	Turtle [redacted]	- creek channel, marsh edge, beaver dam, basking rocks & logs - rocky outcrops around	- BLTU, MASN, [redacted], FLSK
N6	2:55 3:00		- wetland with basking logs.	- BLTU, MASN, [redacted] FLSK
N7	3:02 3:07		- channel drainage - high rocky sides - beaver dam - basking logs	- BLTU, MASN, [redacted], FLSK, SNTU

Quality Control: This form is complete (✓) & legible (✓).

Signature: Pete Read (Field Personnel) Signature: _____ (Project Manager)

LOCATION	TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES possible species
N 8	3:10 3:15		- channel with marsh - opens to open water - rocky edges	BLTU, MASN, [redacted]
N 9	3:17 3:20		- channel with beaver dams open ponds - rocky edges	BLTU MASN [redacted]
N 10	3:23 3-26		~~bass~~ ponds back from road marshy areas	BLTU MASN [redacted]
Plate 3 N 11	4:30 4:35	*BLTU SNTU MASN confirmed	- pond along tracks with marsh - creek at corner.	MASN, BLTU, [redacted] SNTU, Hognose
Plate 4 N 12	4:39 4:44	~~NOSN~~ northern watersnake RK	- channel → wetlands alongside - bordered with woods. * BLTU + SNTU confirmed	BLTU, SNTU, [redacted] MASN,
N 13	4:46 4:50		- inlet - forest & rocky edges. ← * confirmed for BLTU & SNTU	BLTU, SNTU, [redacted] MASN, FOSN?, Hognose
N 14	4:50 4:58	*BLTU, MASN, SNTU confirmed	- Key River Hwy 69; mosaic of river, mixed woods, open grassy slopes, rocky outcrop areas, and watery ditches on east side of Hwy, on North side of Bridge	Foxsnake found at Key River in 2011 + Stinkpot
N 15	5:00 5:05	* SNTU BLTU confirmed	- open lake - forest & rock - marshy edges	[redacted], MASN, Stinkpot
N 16	5:07 5:12	* BLTU, SNTU	Grundy lake - forest surrounded - marshy edges	MASN, Stinkpot, Hognose
N 17	5:12 5:17		- cattail marsh	BLTU, MASN, SNTU

Quality Control: This form is complete ( ) & legible ( ).

Signature: Peter Read (Field Personnel) Signature: _____ (Project Manager)

May 22 2013

Prj # 160960524 Nigig/Henvey

Pete Read a Sricher

Other Bird Species

Please record any flock behavior (i.e. gulls, crows, blackbirds), raptors or any significant species.

Species	No. of Individuals	Location (e.g. in water puddle, agr. field near puddle, mowed lawn, etc.)	Behaviour (i.e. height/direction of flight, feeding, etc.)
N1		541081 5063903	
N2		540854 5064405	
N3		540458 5065275	
N4		540197 5065851	
N5		539998 5066300	
N6		539949 5066404	
N7		539727 5066895	
N8		539554 5067274	
N9		539428 5067560	
N10		539173 5068429	
plate 3 N11		534069 5077649	
N12		533605 5079472	
N13		533420 5080458	
N14		533762 5082199	
N15		533187 5083643	
N16		532322 5086400	
N17		532350 5087384	

page 3 of 3

Quality Control: This form is complete ☐ & legible ☐.

Signature: [signature] (Field Personnel)

Signature: ______ (Project Manager)

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Waterfowl Migration Observation Form

Project Number: _____ Project Name: _____

Date: _____ Field Personnel: _____

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):

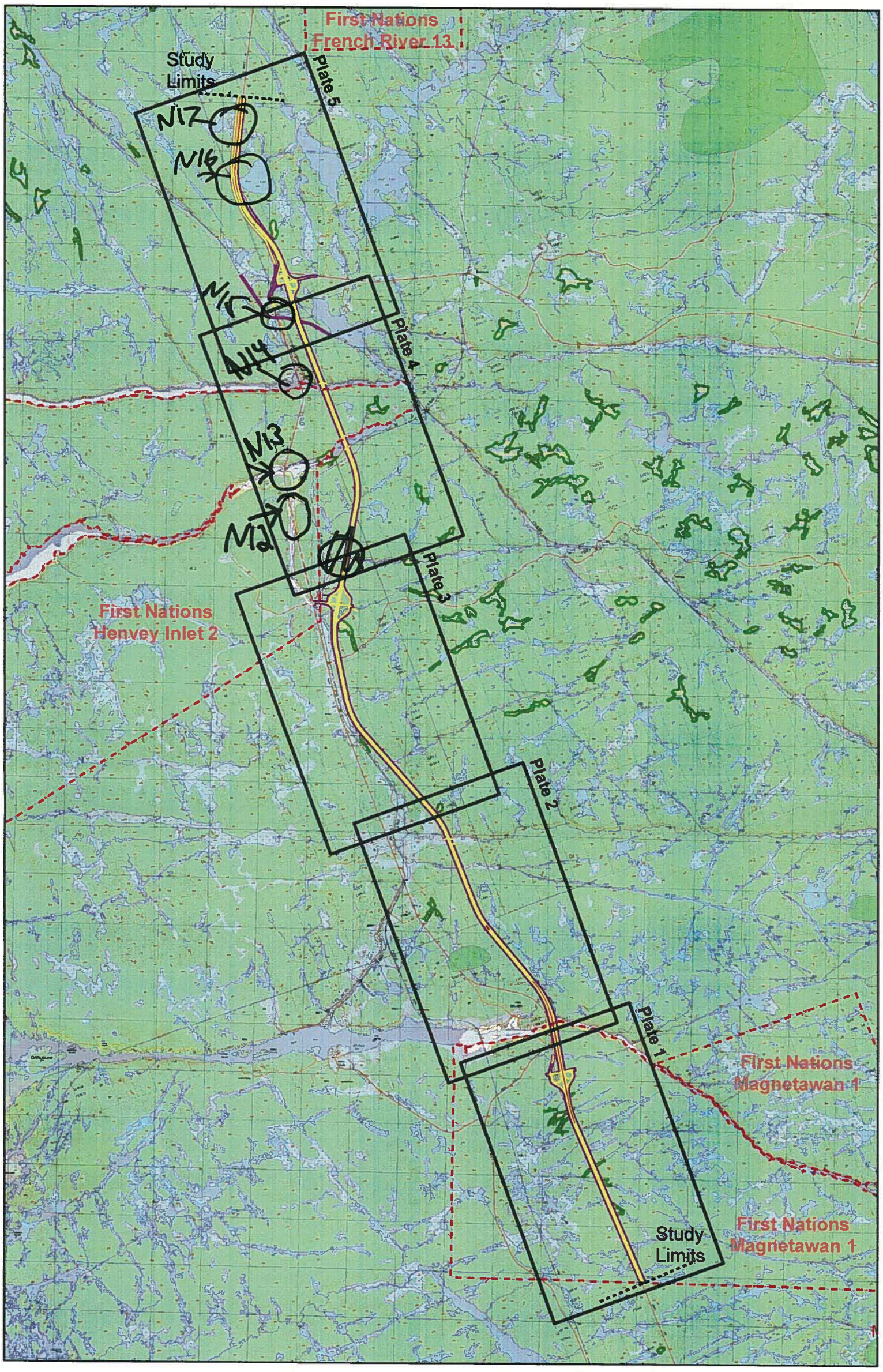
Flock No.	Time	Species	No. of Individuals	Location (e.g. in water, agr. field near puddle, mowed lawn, etc.)	Behaviour (i.e. height/direction of flight, feeding, etc.)

Quality Control: This form is complete ❑ & legible ❑.

Signature: _____
(Field Personnel)

Signature: _____
(Project Manager)

PREVIOUS SAR (REPTILE) OBSERVATIONS IN HWY CORRIDOR
- NORTH SECTION -



Legend for Detail Sheets

Species Observations

Species of Conservation Concern		Secure Species	
■	Habitat	■	Habitat
●	Sighting	●	Sighting

Habitat observations refer to specific habitat types.

For snakes they are gestation sites.
For turtles and birds they are nesting sites.

Species Observations Data Sources
Data source code noted after species code (ie EMRa)

Code	Data Source
a	MNR Observations
b	Ecoplans field work 2003, 2004, 2005
c	Reptile Awareness Program Data
d	Element Occurence species records (NHIC)

Labels

Secure Raptors

NG Northern Goshawk
OSP Osprey

Secure Birds (Non-raptors)

SHC Sandhill Crane

Insects of Conservation Concern

PSP Pepper and Salt Skipper

Reptiles of Conservation Concern

EMR Eastern Massasauga Rattlesnake
EHS Eastern Hognose Snake
ST Spotted Turtle
BT Blandings Turtle
FS Five Lined Skink
MS Milk Snake
SP Stinkpot

Unknown

UTS Unknown Turtle Species

Other Areas Assessed for Potential as EMR Habitat

- ▲ Assessed - Low or moderate habitat potential
- ▲ Assessed - High potential as EMR foraging and/or gestation habitat
- ▲ Assessed - High potential as EMR hibernation habitat

Snake Habitat Potential - Local Knowledge (Revised)

- + EMR Observed
- + EMR Never Observed
- + EHS Occasionally Observed

- First Nations Lands
- Moose aquatic feeding area (Ecoplans fieldwork)
- Moose aquatic feeding area (MNR NRVIS)
- Deer yard
- Core deer yard area
- Observation from PIC
- Vegetation Unit with high potential for EMR hibernation habitat

Ontario	Highway 69 Route Selection Preliminary Design Figure 6 - Wildlife Overview Map	Project No. 03 - 2667	Date: Aug 2007	ecoplans Limited

PREVIOUS OBSERVATIONS

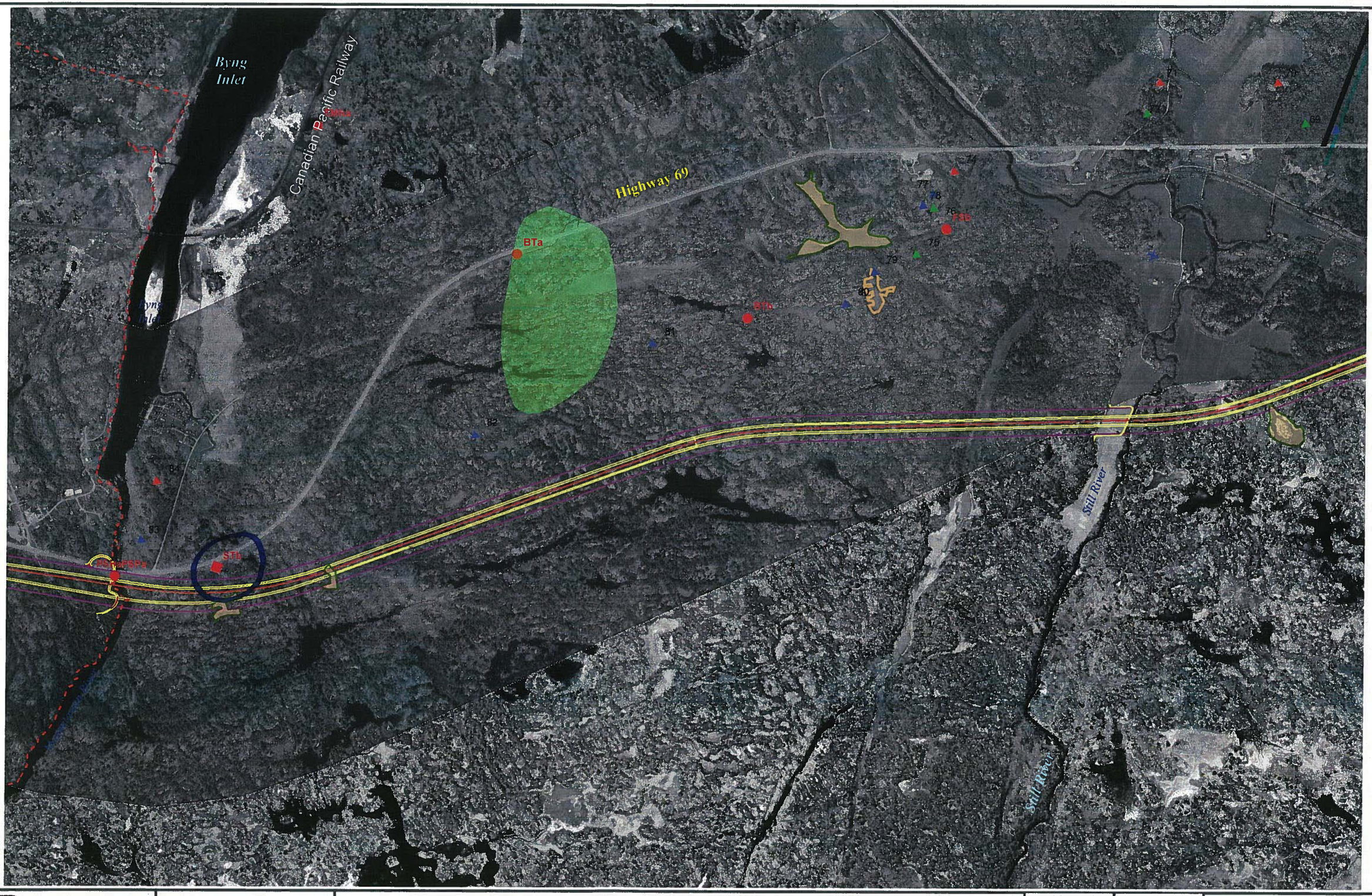
Canadian Pacific Railway

Study Limits

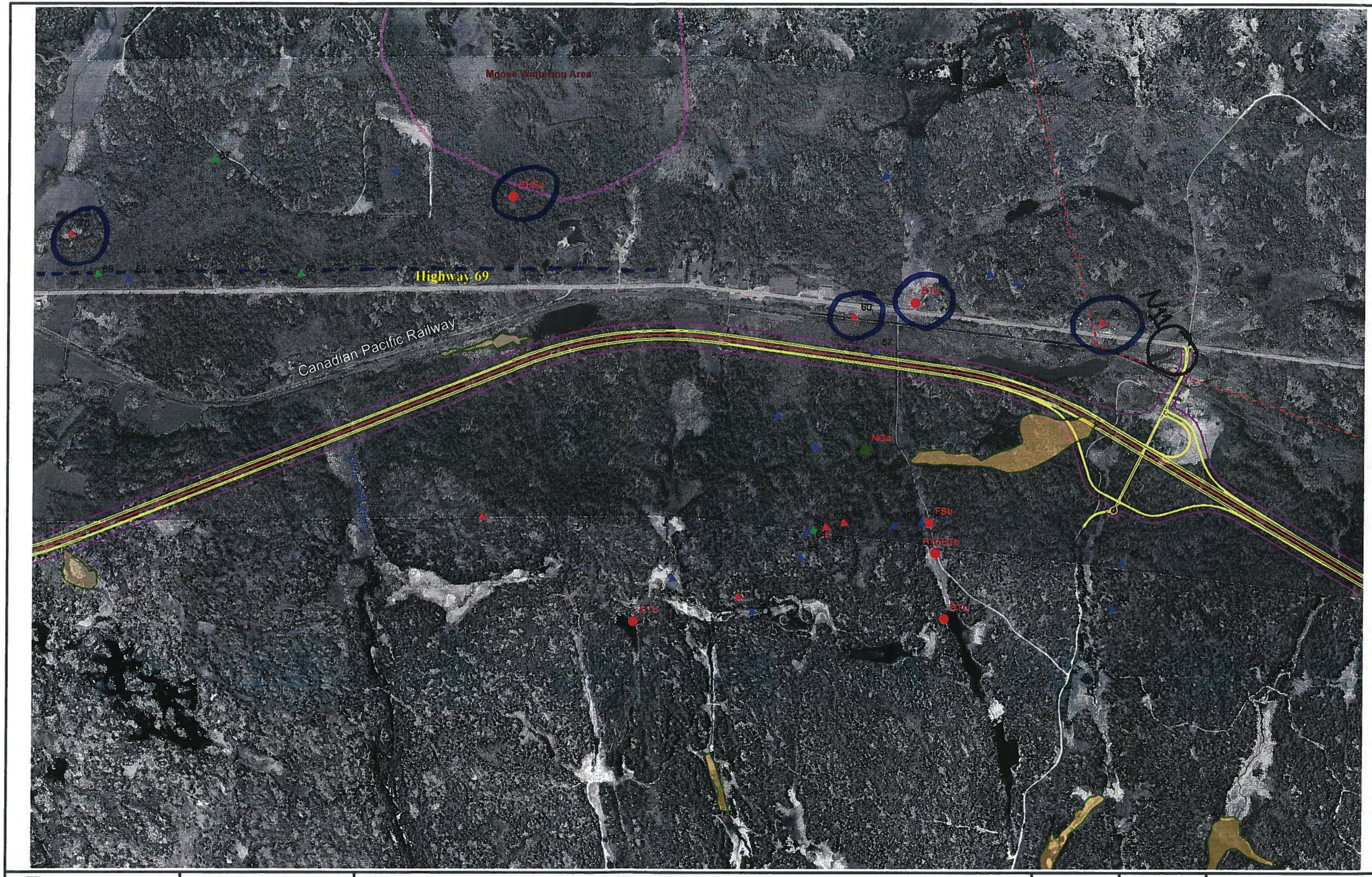
Highway 69

Magnetawan River

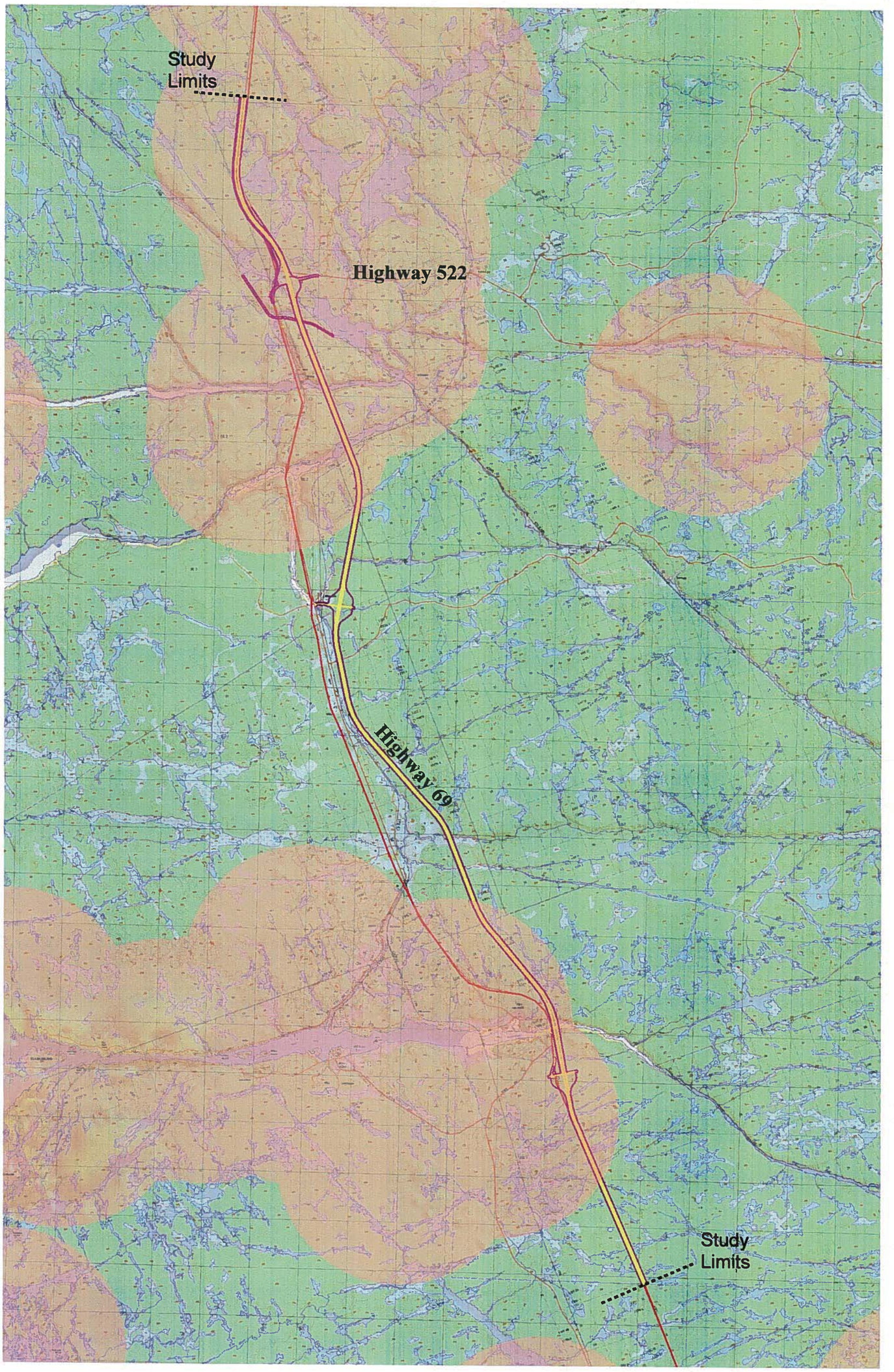
Ontario	ecoplans Limited	Highway 69 Route Selection Preliminary Design - North Section Figure 7 - Wildlife Assessment Plate 1	Project No. 03 - 2667	Date Aug 2007	0 100 200 m 1:15,000



Ontario	ecoplans Limited	**Highway 69 Route Selection Preliminary Design - North Section** **Figure 7 - Wildlife Assessment** **Plate 2**	Project No. 03 - 2667	Date Aug 2007	0 100 200 m 1:15,000



Ontario / ecoplans Limited	**Highway 69 Route Selection Preliminary Design - North Section** **Figure 7 - Wildlife Assessment**	**Plate 3**	Project No. 03 - 2667	Date Aug 2007	0 100 200 m 1:15,000



Legend

- Centre Line Existing Highway 69
- Edge of Pavement Proposed Highway 69
- Proposed Right of Way
- Approximate distribution of Eastern Massasauga Rattlesnakes defined as lands within 2.5 km of MNR records of occurence

0 1 2 3km

1:80,000

N

Ontario

Highway 69 Route Selection Preliminary Design
Figure 4 - Approximate Distribution of Eastern Massasauga Rattlesnakes

Project No.	Date:
03 - 2667	Aug 2007

ecoplans Limited

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number: 160960824

Project Name: Nigig /Henvey

Date / Time: May 24 2013

Field Personnel: J Richer PRead

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	12-16	2-3	<50%	0	light to heavy

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION: Beaver Pond	Cattail Marsh	Gravel Quarry	River	Waterway	Treed [illegible]	Rocky upland forest / Lake/Pond	Bank	Nest	OTHER NOTES: BLTU	MAKN	SNTU	[redacted]	MNTU	Foxs	HOG	MAPT	FLNT Milksnake
1	2:42		✓	✓	✓				P	✓		✓			[redacted]					
2				✓	✓		✓		P & L	✓		✓	✓	✓	[redacted]	✓				
3								✓	L			✓	✓	✓	[redacted]	✓	✓		✓	✓
4					✓				P	✓		✓	✓	✓	[redacted]					
5				✓		✓		✓				✓	✓	✓	[redacted]					
6								✓	L			✓	✓	✓	[redacted]	✓	✓		✓	✓
7						✓	✓					✓			[redacted]					✓?

Quality Control: This form is complete ( ) & legible (✓).

Signature: Peter Read (Field Personnel)   Signature: ______ (Project Manager)

Page 1 of 2

REV: May 07 FORM 005

LOCATION	TIME	SPECIES	Beaver pond	cattail	grass	waterway	Pond Lake	Beaver Nest	rock forest edge	BL	MASS	SN	[redacted]	MW	Fox	Hog	mop	FLSK
8	4:00		✓	✓	✓				✓✓ RF	✓	✓	✓	[redacted]					
9	4:17					✓	P	✓	F	✓		✓	[redacted]					
10	4:24				✓	✓			F	✓		✓	[redacted]		milk			

Quality Control: This form is complete (✓) & legible (__).

Signature: D-R-J (Field Personnel) Signature: ______ (Project Manager)

Page 2 of 2

W:\active\160960770\drawing\MXD\Terrestrial\FieldWork\160960770_FieldMap_Tiled_PhotoMosaic_20130401.mxd
Revised: 2013-04-01 By: awhite

Spectacle Lake

Dinner Lake

Highway 69

Highway 400

Bird Creek

10

Nobel Road

Ramp

Shabeshakong Road

Highway 559 West

Simmes Lake

0 250 500 m

1:16,000

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

April 2013
Project No.

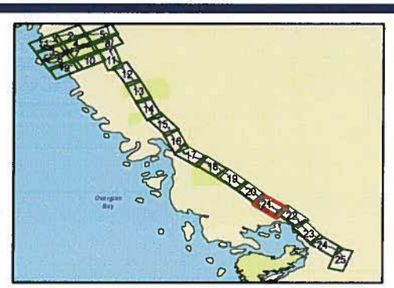
Stantec

Legend

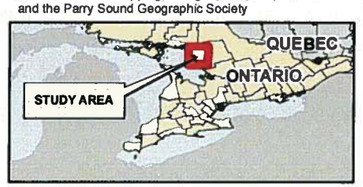
Potential Transmission Line
- Proposed Route
- North Substation
- Route Marker

Existing Features
- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.



Notes
1. Coordinate System:NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.
3. Imagery Sources:Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, GIS User Community, and the Parry Sound Geographic Society



Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
21

DRAFT

Title
Proposed Route - Photo Mosaic

W:\active\60960770\drawing\MXD\Terrestrial\FieldWork\160960770_FieldMap_Tiled_PhotoMosaic_20130401.mxd
Revised: 2013-04-01 By: awhite

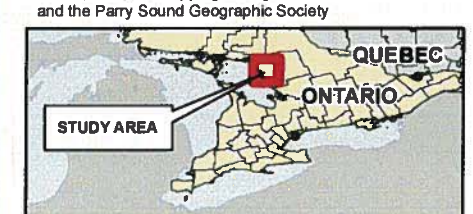
April 2013
Project No.

Legend

Potential Transmission Line
- Proposed Route
- North Substation
- Route Marker

Existing Features
- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.



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Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
22

DRAFT

Title
Proposed Route - Photo Mosaic

Stantec

W:\active\60960770\drawing\MXD\Terrestrial\FieldWork\160960770_FieldMap_Tiled_PhotoMosaic_20130401.mxd
Revised: 2013-04-01 By: awhite

April 2013
Project No.

Stantec

Legend

Potential Transmission Line

- Proposed Route
- ● North Substation
- ● Route Marker

Existing Features

- ● City or Town
- 🟩 Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- ▭ First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.

Notes

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Client/Project

NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
23

DRAFT

Title

Proposed Route - Photo Mosaic

W:\active\60980770\drawing\MXD\TerrestrialFieldWork\60980770_FieldMap_Tiled_PhotoMosaic_20130401.mxd
Revised: 2013-04-01 By: awhite

Mill Lake
Winch Lake
Lovell Lake
McGowan Lake
Richmond Lake
Oaster Lake

McDougall Road
Mill Pond Road
Louise Street
Highway 400
Highway 518
Hunter Drive
Oastler Park Drive
Pine Drive
Bowes Street
Cedar Street
Ramp

0 250 500 m
1:18,000

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

April 2013
Project No.

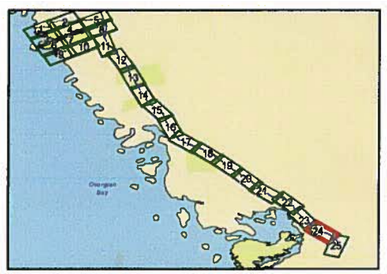
Stantec

Legend

Potential Transmission Line
- Proposed Route
- North Substation
- Route Marker

Existing Features
- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.



Notes
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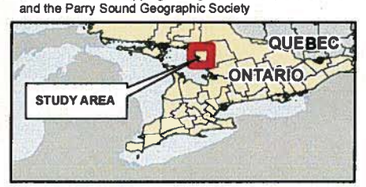
3. Imagery Sources:Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, GIS User Community, and the Parry Sound Geographic Society



Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
24

DRAFT

Title
Proposed Route - Photo Mosaic

W:\active\60980770\drawing\MXD\Terrestrial\FieldWork\160980770_FieldMap_Tiled_PhotoMosaic_20130401.mxd
Revised: 2013-04-01 By: mwhite

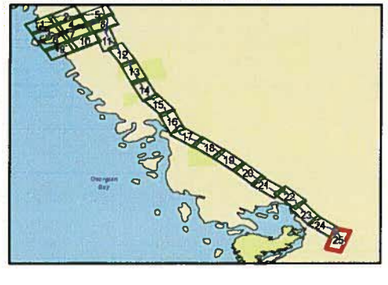
April 2013
Project No.

Legend

Potential Transmission Line
- Proposed Route
- North Substation
- Route Marker

Existing Features
- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.



Notes
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2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.
3. Imagery Sources:Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, GIS User Community, and the Parry Sound Geographic Society

Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
25

DRAFT

Title
Proposed Route - Photo Mosaic

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

Reptile

Project Number 160960824 Project Name: Wigg

Date: June 4, 2013 Field Personnel: A. Taylor / M. Cameron

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	17	3	50	—	—

Species	Time	Evidence	UTM/location	Description and comments
BLTE	16:30	H	17T 525572 5075439	- flying / foraging over marsh
HOMEσ	16:35	H	525677 5075425	- in marsh

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

5:45 am - 6:30 pm

Project Number: 160960824 Project Name: Nigig

Date: Jun 4, 13 Field Personnel: B Holden

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	4°C - 16°C	1-2-3-4	5-10	✓	✓

Description of area searched (map attached): Area "A" - PC 20f -

Features found: 1TT

Species	Time	Evidence	UTM	Description and comments
GBHE - nests	0622	Roosting	0526328 5078519	Several nests in Beaver Pond to the W. of UTM's
EAWP	0807	SM	0525934 5079390	SM on far side of Beaver Pond (E. of UTM).
CAWA ♂	1146	SM	0524603 5086730	Singing in suitable habitat

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May, 08 FORM 33

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

Project Number: 160960824 Project Name: Nagog

Date: June 5, 2013 Field Personnel: A. Taylor / M. Conneen

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10-17°C	3	50%	—	—

Species	Time	Evidence	UTM/location	Description and comments
WOTH	9:20	S	17T 527850 5074187	- Fem
PRWA♂	16:40	S	525816 5075460	- Displaying over large area - Likely unpaired male
COMI	16:55	S	525422 5075424	- displaying

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May, 08 FORM 33

Stantec
Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

Project Number 160960824 Project Name: Nagog

Date: June 6, 2013 Field Personnel: A. Taylor / McCamon

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10-15°C	3	80	—	—

Species	Time	Evidence	UTM/location	Description and comments
EAWP	6:05	S	525853 5076584	-poplar woodlot
WOTH	6:33	S	526285 5076403	
BWHA	6:55	S	526328 5076374	-calling over wetland
WOTH	7:10	S	526250 5076545	
WOTH	8:39	S	527005 5076800	
CONI	9:20	H	527271 5076646	-flushed from rock barren
BWHA	15:05	S	526048 5076339	-Poplar forest -no nest observed
CONI	21:35	S	528011 5077074	-calling -poplar forest/ rock barren

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

Stantec

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

Project Number 160960824

Project Name: Mgiy

Date: Jun 6/13

Field Personnel: BH

Weather Conditions:	Temp: 8-18°	Wind: 3-E	Cloud: 100-10	PPT: –	PPT in last 24 hrs: –

Description of area searched (map attached):

Features found:

17T

Species	Time	Evidence	UTM	Description and comments
CAWA	0830	SM	0529895 5078530	
CAWA	0940	SM	0529822 5078608	
CAWA	1010	SM	0529511 5078475	
CAWA	1135	SM	0528616 5078303	

Quality Control: This ~~form is complete (__)~~ & legible (__).

Signature: __________ (Field Personnel)   Signature: __________ (Project Manager)

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

Project Number 160960824 Project Name: Nigog

Date: June 7, 2013 Field Personnel: R. Taylor / M. Cameron

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10-17°C	2	50%		

Species	Time	Evidence	UTM/location	Description and comments
WOTH	6:30	S	528464 5077137	
WOTH	8:05	S	528790 5076553	
Stroh nest			529050 5075730	- in open marsh - UNOccupied
OSPY	12:30	S	529038 5075845	
WOTH	13:05	S	529713 5076698	

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May, 08 FORM 33

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

Project Number 160960824 Project Name: Nigig

Date: Jan 7, 13 Field Personnel: B. Mather

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	9-14c	3-E	100-60-80	—	—

Description of area searched (map attached): Mix of Area B/A

Features found: 17T

Species	Time	Evidence	UTM	Description and comments
CAWA	0744	SM	0528209 5078949	
CAWA	0840	SM	0527935 5080068	200m W. of this UTM
CAWA	0937	SM	0527097 5081001	
CAWA	1324	SM	0527818 5078710	

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May, 08 FORM 33

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Significant Observation Form

5:30 am - 2pm

Project Number 160960824 Project Name: Nig13

Date: Jan 8, 13 Field Personnel: B. Holden

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	8-18°C	1-2 E	100-90-100	/	

Description of area searched (map attached): Area "B"

Features found: 17

Species	Time	Evidence	UTM	Description and comments
CAWA	0550	SM	0529192 5079411	
CAWA	1111	SM	0527905 5080490	150m SE of UTM
Bear Den	1245pm	Hair, etc	0528639 5079345	Winter Den - Large.
Unknown Den	1pm	Den	0528677 5079296	Perhaps too small for Black Bear? - very deep.

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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Significant Observation Form

Project Number 160960824 Project Name: Nigig/Henvey Inlet

Date: See below Field Personnel: SReicher

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Description of area searched (map attached):

Features found:

Species	Time	Evidence	(17T) UTM	Description and comments
Snapping Turtle	11:47am Apr 30 2013	OB photo taken	522773 5075058	adult, submerged in shallow water, inland marsh/pond
Blanding's Turtle	12:10 pm Apr 30 2013	photo taken OB	522671 5074966	adult, on land, approx 1m from water
Snapping Turtle	1:11 pm Apr 30/2013	photo taken OB	522443 5074984	adult, basking on log in large beaver pond
Blanding's Turtle	1:50pm Apr 30/2013	OB moved before pic was taken	522347 5075863	adult, in very small inland pool (size of a small house or shed)
Five-lined Skink	Apr 30 2013 2:00pm	OB photo taken	522468 5075992	adult female, basking
Blanding's Turtle	8:22am May 1 2013	OB photo taken	525556 5073401	adult, basking, inland small wetland
Blanding's Turtle nest	found May 2 7:00 am	OB, photo taken	529532 5078465	disturbed, on Beckanon Rd, sandy area; eggshells empty, still in ground - hatched?!
Blanding's Turtle	May 2 2013 3:30pm	OB, photo taken	532316 5078607	adult, basking
Blanding's Turtle	May 2 2013 4:46pm	OB, photo not taken	529450 5078037	adult, basking, moved before I could get a pic
[redacted]	May 3 2013 9:36am	OB, photo taken	[redacted]	male, basking, potentially beginning to travel overland
2 Snapping Turtles	May 3 2013 11:30am	OB, photo taken	523861 5081045	2 mating at water's surface
Smooth Green Snake	May 3 2013 11:18am	OB, photo taken	523819 5080864	crawled up into a juniper bush
[redacted]	May 3 am 2013 11:36	OB photo taken	[redacted]	adult female, basking
Blanding's Turtle	May 7, 2013 3:30 pm	OB, photo taken	529576 5078224	adult, basking on road Beckanon
Blanding's Turtle	May 8 2013 8:35am	OB, photo taken	523089 5076266	adult, swimming in shallow water nearshore
Massasauga Rattlesnake	10:31am May 9 2013	OB, photo taken	527183 5081709	in tall dry grassy floodplain area; very dull + dusty looking

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

Species	Time	Evidence	UTM	Description and comments
Smooth Green Snake	1:08pm May 9 2013	OB, photo taken, dead	529498 5077982	dead on Beckanon Road
MASN Massasauga Rattlesnake	12:13pm May 14 2013	OB, photo taken	525263 5075698	coiled, resting; it is quite cool, approx 7°C, came across it accidentally
Massasauga Rattlesnake	May 15 2013 12:06pm	OB, [redacted] photo taken	526936 5077230	juvenile, [redacted] basking
BLTU Blanding's Turtle	May 15 2013 1:25	CA, OB, photo taken	532379 5078851	juvenile or sub adult; dead, some flesh (head, feet) still p
SNTU Snapping Turtle	May 16 2013 9:00am	OB, photo not taken	524895 5080998	adult, basking on log
MASN	May 16 2013 10:06am	OB, picture	527032 5081612	adult, alder thicket a grassy floodplain area
MASN	May 16 2013 10:26am	OB, picture	526870 5081680	adult, grassy floodplain
MASN	May 24 2013 10:47am	OB, picture	525143 5077208	adult, basking in lichen/rock/mossy barrens
BLTU	May 24 2012 11:25am	OB, no picture	525017 5076721	adult, moved from mainland into inlet, too fast to take a pic
SNTU	May 24 2013 4:33pm	OB, no picture	566913 5033340	adult, rescued off of highway + released into nearby wetland
BLTU	May 25 2013 8:41am	OB, photo taken	524965 5081001	adult, basking in pond with other BLTUs
MASN	May 30 2013 8:57am	OB, no photo	523790 5080884	moved too quick for photo; yearling, very tiny
MASN	May 30 2013 9:14am	OB, photo	523777 5081083	adult, the fattest I've ever seen; maybe gravid female?
2 BLTUs	May 30 2013 10:55am	OB, photo taken	524943 5081008	adults (two) basking on same log
BLTU	May 30 2013, 10:58	OB, no photo	524955 5081008	adult, basking on grassy [redacted] hummock/tuft
2 BLTUs	May 30 2013 10:59	OB, no photo	524929 5081034	adults, basking on a log
2 BLTUs	May 30 2013 11:07	OB, no photo	524936 5081023	adults, basking far away on log, distinctive shell shape
BLTU	[redacted] May 30 2012, 11:37am	OB, no photo	523994 5081431	adult, moving from mainland into the Key River too quick for pic
BLTU	June 4 pm 2013 3:07	OB, too far for photo	532783 5080227	adult basking on log in large wetland-pit
BLTU	June 5 2013 12:15pm	OB, photo taken	523169 5076383	basking on rock island at edge of water/inlet

Quality Control: This form is complete (__) & legible (__).

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Signature: _____ (Project Manager)

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Significant Observation Form

Project Number 160960824 Project Name: Nigig/Henvey Inlet

Date: See below Field Personnel: SRicher

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Description of area searched (map attached):

Features found:

Species	Time	Evidence	UTM	Description and comments
Five-lined Skink	June 5 2013 1:14pm	OB too quick to photograph	528472 5078338	Adult male at rocky landing, end of Beckanon Road
BLTU Blanding's Turtle	June 6 2013 11:06am	OB, camera not working	531103 5080750	12 in total, barking throughout wetland, OB w Brian Miller, at point X9 on Henvey 2 IR
OSFL Olive-sided flycatcher	June 6 2013 12:02pm	heard singing repeatedly	530742 5080570	heard singing "quick three beers" -OB with Brian Miller
BLTU (7)	June 6 2013 1:16pm	OB, camera not working	530385 5079844	all adults, barking throughout wetland -OB with Brian Miller
SNTU Snapping Turtle	June 6 2013 1:16pm	OB, camera not working	530385 5079844	one, barking at same wetland as above 7 Blanding's -OB with Brian Miller
CONI Common Nighthawk	June 7 2013 8:52am	OB flying off the ground	523241 5079024	-OB with Brian Miller -adult spooked from assumed on-ground roosting spot, no nest found
CONI	June 7 2013 11:48	OB flying off the ground	523238 5078846	-OB with Brian Miller -adult spooked from ground on our approach, no nest found
BLTU	June 7, 2013 2:21pm	OB, photographed by Beckanon Road	529514 5078211	-adult in small roadside puddle/ditch along Beckanon Road

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Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May, 08 FORM 33

Species	Time	Evidence	UTM	Description and comments
Smooth Green Snake	June 7 2013 2:48	OBs photographed	532343 5078712	-OB with Brian Miller basking on Groundhog's Corner Road by where it intersects with Beckanon
MASN	June 15 2013 7:37am	OBs photographed	526691 5073341	adult in grassy forested wetland; nearly stepped on it, rattled, didn't strike
EAWP Eastern Wood Pewee	June 16 2013 1:00pm	heard singing repeatedly	522285 5076496	on Cash Island, by 2013 Hawk watch point 3 (dock with cottage)
MASN	June 17 2013 11:56am	OBs photographed	529478 5077343	in ~~dead~~ Mixed woods, hid under log; tapped on log, no rattle heard
SNTU	June 18 2013 11:35am	predated egg-nests, shells several;	532449 5078909	at least 4 of them were predated today, approx minimum 7-10 nests, both Painted & Snapping
EAWP	June 18 2013 11:53am	heard singing repeatedly	532753 5079493	near breeding bird point count Z2
OSFL pair	June 20 2013 7:45am	heard singing a "pip-pip-pip", agitated pair	530563 5079619	same wetland where 1 SNTU & 7 BLTU were obs on June 6 2013
Smooth Green Snake	June 22 2013 3:02pm	OBs photographed	530798 5078697	-OB with Brandon Holden -basking on Beckanon Road
Snapping Turtle -SNTU	June 22 2013 4:20pm	OBs photographed	531043 5078720	-possibly nesting on Beckanon Road, vs passing in vehicle interrupted it -OB with Brandon Holden
Red shouldered Hawk	June 4 2013 9:32am	observed soaring	532506 5076804	-OB with Brian Miller

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

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Significant Observation Form

Project Number 160960824 Project Name: Nigig/Henvey Inlet

Date: See below Field Personnel: SRicher

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Description of area searched (map attached):

Features found:

Species	Time	Evidence	UTM	Description and comments
CONI Common Nighthawk	May 29 2013 9:28pm	obs flying off of ground on our approach	530742 5078733	ORS with Katherine St James
EWPW Eastern whippoor will	May 29 2013 9:54pm	obs flying off of ground on our approach	528977 5078051	obs flying off of ground, off of Beckanon Road
EWPW	May 29 2013 6:04am	obs flying off of ground	522282 5078689	pair (2) flew off ground together, off of Beckanon Rd
Red-bellied Snake killed	May 14 2013 1:56pm	obs, photographed	528846 5078150	roadkilled on Beckanon Rd
Eastern Spotted Newt Red eft stage	May 22 2013 7:41am	photographed	529573 5078235	on Beckanon Rd -obs w Pete Read
Eastern Spotted Newt Red eft stage	May 22 2013 7:57am	photographed	529473 5078422	on Beckanon Rd -obs w Pete Read
Eastern Spotted Newt Red eft stage	May 22 2013 8:00am	photographed	529500 5078447	on Beckanon Rd -obs w Pete Read
Eastern Spotted Newt Red eft stage	May 22 2013 8:03am	photographed	529505 5078267	on Beckanon Rd -obs w Pete Read

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May, 08 FORM 33

Species	Time	Evidence	UTM	Description and comments
Eastern Spotted Newt Red eft stage	May 22 2013 7:15am	photographed	529474 5078017	on Beckanon Road - obs w Pete Read
Eastern Spotted Newt Red eft stage	May 22 2013 7:50am	photographed	529502 5078290	Road killed on Beckanon Road - obs w Pete Read

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

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Significant Observation Form

Project Number 160960824 Project Name: Nig is/Henvey

Date: ~~Sept~~ Sept 6 2013 Field Personnel: Richard McStraw

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	9-20	4	100	—	—

Description of area searched (map attached):

Features found:

Species	Time	Evidence	UTM	Description and comments
MASN	9:03am	Photo	523879 5081036	
MASN	11:28am	Photo	527117 5081654	

Quality Control: This form is complete (__) & legible (__).

Signature: _____ Signature: _____

(Field Personnel) (Project Manager)

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Significant Observation Form

Project Number 160960324 Project Name: Nigig/Henvey Inlet

Date: Oct 2 2013 → Oct 4 2013 Field Personnel: SRichera JBall

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Description of area searched (map attached):

Features found:

Species	Time	Evidence	UTM	Description and comments
Bald Eagle	12:30 pm Oct 2 2013	observed by Sarah Richera & Janice Ball	528322 5078012	Adult, both below and at blade height, flying west/SW
Red-bellied Snake roadkilled	Oct 2 2013 8:55am	roadkilled on Beckanon, obs by SRichera JBall	529512 5078230	not a fresh kill, perhaps less than a week old
Bald Eagle (two)	12:40 pm Oct 3 2013	obs by Sarah Richera Janice Ball	526670 5077248	Two adults, both perched in top third of a White Pine tree on south edge of inlet, one male & one female
Trail camera ?	Oct 4 2013 Friday	obs by Sarah Richera Janice Ball	525605 5073300	also observed Sept 25 2013 (last week) by SRichera Carolyn Paterson. In Sandy Bay...

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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Significant Observation Form

Project Number 160960824 Project Name: Nigig / Henvey Inlet

Date: Sept 11-14 2013 Field Personnel: SRicher

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Description of area searched (map attached):

Features found:

Species	Time	Evidence	UTM 17T NAD83	Description and comments
Bald Eagle (adult)	Wed Sept. 11 2013	observed by SRicher & CPaterson	520317 5076136	Adult; soaring
Bald Eagle (immature)	Wed Sept. 11 2013	observed by SRicher & CPaterson	524365 5076080	2nd year bird, soaring around Milton's Bay
Bald Eagle (immature)	Wed Sept. 11 2013	observed by SRicher & CPaterson	526214 5077542	2nd year bird, perched on north shore of inlet; different bird than previous imm. BAEA
Blanding's Turtle (remains)	Thurs Sept. 12 2013	photo of remains	526090 5077019	carapace empty; plastron broken into 2 pieces approx 10m away
Bald Eagle (adult)	Fri Sept. 13 2013	observed by SRicher & CPaterson	528352 5078180	soaring East along Inlet above Beckanon landing
Bald Eagle (adult)	Sat. Sept 14 2013	observed by SRicher + CPaterson	521032 5081722	soaring overhead, steadily east/southeast at Key River ~ 11:30
Bald Eagle (adult)	Sat. Sept 14th 2013	observed by SRicher & CPaterson	525978 5077077	soaring overhead by Hawkwatch 2 station, ~12:00pm

different individuals

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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Significant Observation Form

Project Number 160960824 Project Name: Nigig/Henvey Inlet

Date: Sept 17-19 2013 Field Personnel: S Richer & B Miller

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Description of area searched (map attached):

Features found:

Species	Time	Evidence	UTM	Description and comments
Bald Eagle	4:00pm Sept 17 2013	observed by S Richer & B Miller, photo	527290 5077954	4th year bird, perched on north side of inlet

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Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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Significant Observation Form

Project Number 160960824 Project Name: Nigig / Henvey Inlet

Date: Sept 23-26 2013 Field Personnel: S Ritcher

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Description of area searched (map attached):

Features found:

Species	Time	Evidence	UTM	Description and comments
Massasauga snake	10:59 am	a shed snake skin;	523667 5081298	photo taken; length, shape, scale keels, pattern
Garter snake	1:55 pm.	photo taken, living specimen	531926 5078963	crossing road, going E/NE (in area where garter snakes have been frequently observed in the fall in past years

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

Significant Observation Form

Stantec Consulting Ltd
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Tel: (519) 836-6050
Fax: (519) 836-2493

Project Number: 160990824 **Project Name:** Nigig/Henvey Inlet
Date: See below **Field Personnel:** Sarah Richer

Great Blue Heron Heronry GBHE 2013-07-01 6:36 AM photograph 542574 5060848 5 nests with young

Species	Species code	Date obs (year-mm-dd)	Time	Evidence	NAD83 Easting	NAD83 Northing	Description & Comments
Painted Turtle roadkilled	PATU	2013-06-21	2:43 PM	photograph	534051	5077695	roadkill
Northern Watersnake roadkill	NWAT	2013-05-22	3:52 PM	photograph	533605	5079472	roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-05-23	6:21 AM	photograph	547561	5052455	juvenile roadkill
Snapping Turtle roadkill	SNTU	2013-05-23	6:34 AM	photograph	547166	5053320	roadkill
Predated turtle nests		2013-05-23	7:01 AM	photograph	546938	5054154	Snapping Turtle eggs & other species
Unknown turtle species roadkill	Unknown	2013-05-23	7:43 AM	photograph	544003	5058089	roadkill
Unknown turtle species roadkill	Unknown	2013-05-23	7:49 AM	photograph	543719	5058371	roadkill
Painted Turtle bones	PATU	2013-05-23	7:54 AM	photograph	543667	5058448	bones
Common Loon Nest	COLO	2013-05-23	8:25 AM	photograph	566435	5033965	Pair, adult at nest
Unknown turtle species roadkill	Unknown	2013-05-23	8:27 AM	photograph	542828	5059846	roadkill
Unknown turtle species roadkill	Unknown	2013-05-23	8:31 AM	photograph	542787	5059897	roadkill
Painted Turtle roadkill	PATU	2013-05-23	8:38 AM	photograph	542634	5060296	roadkill
Unknown turtle species roadkill	Unknown	2013-05-23	8:42 AM	photograph	542669	5060225	roadkill
Predated turtle nests		2013-05-23	8:58 AM	photograph	541947	5061927	Snapping Turtle eggs & other species
Blanding's Turtle roadkill	BLTU	2013-05-23	9:09 AM	photograph	541470	5063041	roadkill
Blanding's Turtle baby roadkill	BLTU	2013-05-23	9:10 AM	photograph	541458	5063070	baby roadkill
Painted Turtle roadkill	PATU	2013-05-23	9:12 AM	photograph	541453	5063082	roadkill
Blanding's Turtle roadkill	BLTU	2013-05-23	9:14 AM	photograph	541439	5063066	roadkill

Species	Species code	Date obs (year-mm-dd)	Time	Evidence	NAD83 Easting	NAD83 Northing	Description & Comments
Blanding's Turtle roadkill	BLTU	2013-05-23	9:16 AM	photograph	541460	5063023	roadkill
Painted Turtle roadkilled	PATU	2013-05-23	12:34 PM	photograph	566009	5034412	roadkill
Painted Turtle roadkill	PATU	2013-05-23	12:41 PM	photograph	565513	5034936	roadkill
Snapping Turtle roadkill	SNTU	2013-05-23	12:44 PM	photograph	565257	5035204	roadkill
Blanding's Turtle female roadkill	BLTU	2013-05-23	12:48 PM	photograph	565257	5035189	female roadkill
Snapping Turtle baby rescued	SNTU	2013-05-23	12:50 PM	photograph	565253	5035193	baby
Snapping Turtle roadkill	SNTU	2013-05-23	12:56 PM	photograph	565249	5035222	roadkill
Snapping Turtle roadkill	SNTU	2013-05-23	12:58 PM	photograph	565276	5035203	roadkill
Snapping Turtle roadkill	SNTU	2013-05-23	1:15 PM	photograph	564321	5036198	roadkill
Unknown turtle species roadkill	Unknown	2013-05-23	2:40 PM	photograph	558515	5041829	roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-05-23	4:11 PM	photograph	555962	5044211	juvenile roadkill
Snapping Turtle roadkill	SNTU	2013-05-23	4:55 PM	photograph	554428	5045162	roadkill
Bullfrogs - two roadkill	BULL	2013-05-23	1:41 PM	photograph	562322	5038039	roadkill
Snapping Turtle roadkill	SNTU	2013-05-24	8:33 AM	photograph	566913	5033341	roadkill
Painted Turtle roadkill	PATU	2013-05-24	8:47 AM	photograph	565069	5035385	by roadkill frog
Painted Turtle - two	PATU	2013-05-24	5:08 PM	photograph	558085	5042267	basking on log by highway
Painted Turtle - two	PATU	2013-05-24	5:37 PM	photograph	551335	5046805	basking on log by highway
Painted Turtle roadkill	PATU	2013-05-25	7:51 AM	photograph	571552	5031183	roadkill
Painted Turtle roadkill	PATU	2013-05-30	5:21 PM	photograph	532949	5085122	Severely injured, barely alive; euthanized
Painted Turtle roadkill	PATU	2013-06-04	7:40 AM	photograph	533603	5082508	Severely injured, barely alive; euthanized
Snapping Turtle juvenile roadkill	SNTU	2013-06-09	8:37 AM	photograph	563350	5037120	juvenile roadkill
Snapping Turtle roadkill	SNTU	2013-06-09	8:49 AM	photograph	554605	5045088	roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-06-09	8:57 AM	photograph	552204	5046325	juvenile roadkill

Daniel Ried

Species	Species code	Date obs (year-mm-dd)	Time	Evidence	NAD83 Easting	NAD83 Northing	Description & Comments
Snapping Turtle roadkill	SNTU	2013-06-09	9:03 AM	photograph	548781	5049515	roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-06-09	9:17 AM	photograph	541713	5062471	juvenile roadkill
Painted Turtle roadkill	PATU	2013-06-09	9:24 AM	photograph	540267	5065700	roadkill
Blanding's Turtle juvenile roadkill	BLTU	2013-06-09	9:29 AM	photograph	539962	5066371	juvenile roadkill
Painted Turtle - two roadkill	PATU	2013-06-09	9:32 AM	photograph	539736	5066879	roadkill
Painted Turtle roadkill	PATU	2013-06-09	9:43 AM	photograph	534430	5076247	roadkill
Snapping Turtle nesting	SNTU	2013-06-10	10:40 AM	photograph	538815	5069576	on road shoulder
Blanding's Turtle bones	BLTU	2013-06-10	1:01 PM	photograph	540875	5064366	bones
Unknown turtle species roadkill	Unknown	2013-06-10	1:01 PM	photograph	540875	5064366	roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-06-10	1:17 PM	photograph	541415	5063130	juvenile roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-06-10	3:15 PM	photograph	538407	5069771	juvenile roadkill
Painted Turtle practice nest	PATU	2013-06-12	6:53 AM	photograph	547521	5052520	Spooked when I parked
Painted Turtle roadkill	PATU	2013-06-12	11:59 AM	photograph	550464	5047283	roadkill
Painted Turtle roadkill	PATU	2013-06-12	2:04 PM	photograph	559644	5040671	roadkill
Painted Turtle roadkill	PATU	2013-06-12	2:42 PM	photograph	557922	5042434	roadkill
Blanding's Turtle juvenile roadkill	BLTU	2013-06-12	3:39 PM	photograph	539969	5066327	juvenile roadkill
[redacted]		2013-06-12	3:42 PM	photograph	[redacted]		Unknown sex, too damaged
Snapping Turtle roadkill	SNTU	2013-06-13	2:39 PM	photograph	556296	5043978	roadkill
Painted Turtle roadkill	PATU	2013-06-13	3:40 PM	photograph	533580	5079509	roadkill
Blanding's Turtle adult female roadkill	BLTU	2013-06-13	3:51 PM	photograph	533589	5081140	adult female roadkill
Snapping Turtle roadkill	SNTU	2013-06-13	4:06 PM	photograph	532604	5090178	roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-06-14	8:59 AM	photograph	550426	5047310	juvenile roadkill
[redacted]		2013-06-14	10:27 AM	photograph	[redacted]		adult male roadkill
Snapping Turtle baby roadkill	SNTU	2013-06-14	4:53 PM	photograph	551654	5046565	baby roadkill

Species	Species code	Date obs (year-mm-dd)	Time	Evidence	NAD83 Easting	NAD83 Northing	Description & Comments
Blanding's Turtle female with eggs roadkill	BLTU	2013-06-18	4:22 PM	photograph	533687	5081580	1 egg in remains; likely purposely hit
Predated turtle nests		2013-06-30	11:04 AM	photograph	534765	5075263	Snapping Turtle eggs & other species
Blanding's Turtle roadkill	BLTU	2013-06-30	1:08 PM	photograph	540281	5065697	roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-06-30	2:19 PM	photograph	533603	5082505	juvenile roadkill
Snapping Turtle roadkill	SNTU	2013-06-30	2:32 PM	photograph	533420	5093083	Likely purposely killed
Blanding's Turtle roadkill	BLTU	2013-07-01	2:38 PM	photograph	541453	5063087	roadkill
Massasauga snake	MASN	2013-07-02	1:46 PM	photograph	559561	5040794	Adult, healthy
Painted Turtle roadkill	PATU	2013-07-03	1:12 PM	photograph	571641	5031181	roadkill
Blanding's Turtle female roadkill	BLTU	2013-07-03	1:15 PM	photograph	571691	5031142	adult female roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-07-03	4:08 PM	photograph	533088	5091677	juvenile roadkill
Five-lined Skink	FLSK	2013-07-04	5:20 PM	photograph	540599	5065047	adult
Blanding's Turtle juvenile roadkill	BLTU	2013-07-23	9:34 AM	photograph	532600	5090302	juvenile roadkill
Snapping Turtle roadkill	SNTU	2013-07-23	9:38 AM	photograph	532600	5090293	roadkill
Painted Turtle roadkill	PATU	2013-07-23	9:40 AM	photograph	532585	5090214	roadkill
Snapping Turtle roadkill	SNTU	2013-07-23	9:46 AM	photograph	532605	5090219	roadkill
Painted Turtle juvenile roadkill	PATU	2013-07-24	9:29 AM	photograph	559341	5040976	juvenile roadkill
Painted Turtle roadkill	PATU	2013-07-24	9:36 AM	photograph	559992	5040293	roadkill
Snapping Turtle juvenile roadkill	SNTU	2013-07-24	10:23 AM	photograph	563139	5037291	juvenile roadkill
Blanding's Turtle juvenile roadkill	BLTU	2013-07-24	3:41 PM	photograph	541474	5062984	juvenile roadkill
Painted Turtle roadkill	PATU	2013-07-24	3:47 PM	photograph	541448	5063100	roadkill
Painted Turtle roadkill	PATU	2013-07-24	4:24 PM	photograph	542113	5061489	roadkill

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

Project Number 160960824 Project Name: Nigig/Henvey Inlet

Date: October 8-11 2013 Field Personnel: S Richer & C Paterson

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:

Description of area searched (map attached):

Features found:

The 8 Bald Eagles recorded below do not include those observed during the hawk watch

Species	Time	Evidence	UTM	Description and comments
Bald Eagle	7:50am Oct 8 2013	observed by Sarah Richer & Carolyn Paterson	521312 5076396	flying at & below blade height, southeast, adult
Bald Eagle	10:00 Oct 8 2013	observed by Sarah Richer & Carolyn Paterson	525157 5078735	perched in White Pine on north shore briefly, then flew west, 4th year bird
Bald Eagle	7:40am Oct 10 2013	"	524574 5076114	3rd year bird, perched in Milltonk Bay after being observed flying at & below blade height
Bald Eagle	11:15 Oct 10 2013	"	526628 5081767	2nd year bird, flying west along inlet below blade height
Monarch (one individual)	10:53am Oct 11 2013	obs by Sarah Richer	522612 5077011	flying south; winds today ~5-10km/hr from NE

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May, 08 FORM 33

During Breeding Bird Surveys

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Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

Project Number 160960824 Project Name: Henvey

Date: June 25, 2013 Field Personnel: A. Taylor & M. Cameron

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	17-23°C	0	60%	/	/

Species	Time	Evidence	UTM/location	Description and comments
WOTH	8:15	S	525846 5074763	
MASS	9:30		526179 5074681	~2' long
Northern watersnake	9:45		526287 5074687	~6" long
N. watersnake	11:50		526367 5074730	~1.5' long
SNTW x2	15:10		525666 5075046	

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May, 08 FORM 33

Breeding Birds Survey

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Significant Observation Form

Project Number 160960824 Project Name: Henvey

Date: June 24, 2013 Field Personnel: A. Taylor / M. Cameron

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	20°C	3	10%	/	showers

Species	Time	Evidence	UTM/location	Description and comments
WOTH	6:05	S	528268 5077534	
Spotted Salamander	7:26	-egg mass ↳ empty	528025 5077065	
WOTH	8:10	S	528675 5076647	
WOTH	9:10	S	529243 5076250	
BLTU x2	7:40		528062 5077029	Mating Pair

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

Stantec

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Guelph, Ontario, Canada
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Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

545am - 630pm

Project Number: 160960824 Project Name: Nigig

Date / Time: Jun 4/13 Field Personnel: B. Holden

Weather Conditions:	Temp: 4°-16°	Wind: 1-2-3-4	Cloud: 5-10%	PPT: /	PPT in last 24 hrs: /

17T LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
0524938 5080971	1050am	Blandings Turtle	Fairly open Beaver pond	VERY large for species...
0524723 5079179	210pm	Painted Turtles	Bog? Ponds... - Several Individuals in this area...	in the 2 ponds
	215	Snapping Turtle	- Same (2nd) larger pond @ above UTM's	
0524692 5078574	245	Milk snake	- Rock Barrens beside small bog pond	~ 1m. ~ 15cm
0524723 5079174	213 pm	Blandings Turtle	- Bog / Fen Ponds.	Confirmed later via photo.

Quality Control: This form is complete (__) & legible (__).

Signature: [signature] (Field Personnel) Signature: ______ (Project Manager)

Page 1 of ____

REV: May 07 FORM 005

Henvey Inlet 2

Sandy Bay

Potvin Point

Black Bay

Georgian Bay

0 250 500 m

1:16,000

April 2013
Project No.

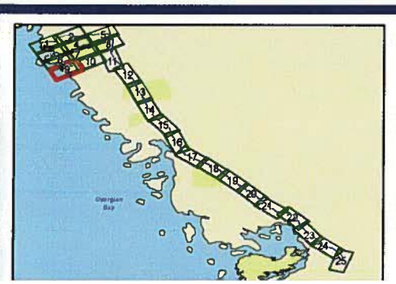
Stantec

Legend

Potential Transmission Line
- Proposed Route
- North Substation
- Route Marker

Existing Features
- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.



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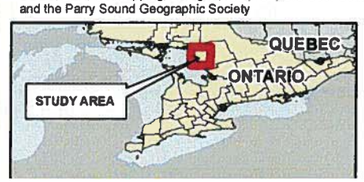

Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
9

DRAFT

Title
Proposed Route - Photo Mosaic

Data
Entered.
Reptiles.

Nigig
160960624
B. Holden
Jun 4, 2013

Zang

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number 1609 60 824 Project Name: Nigig

Date / Time: June 4, 2013 Field Personnel: A. Taylor / M. Cameron

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	17	3	50	/	/

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
17T 528432 5078333	12:30	SNTU	- Inlet	- basking near surface

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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Reptile Survey Observation Form

Project Number 160960824 Project Name: Nrg ng

Date / Time: June 5, 2013 Field Personnel: A. Taylor / M. Cameron

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10-17°C	3	50%	—	—

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
17T 527554 5074934	9:40	BLTU	-marsh	-basking on stump
527079 5074581	13:20	BLTU	-marsh	-basking on log -very large adult
527045 5074586	13:25	BLTU	"	-basking on log -large adult
526939 5074627	13:31	BLTU	"	-basking on log -medium size adult
526416 5075293	16:35	BLTU	"	-basking on log in 2 PATU-below
"	16:35	PATU	"	"
525450 5075515	17:10	SNTU	"	-basking in water -large ~16cm long

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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Reptile Survey Observation Form

Project Number: 160960824 Project Name: Magog

Date / Time: June 6, 2013 Field Personnel: A. Taylor / M. Cameron

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10-15°C	3	80	—	—

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
526319 5076654	8:00	BLTU x2	- marsh	- basking on log
527527 5075897	11:35	BLTU x 6 PATU x 8	- marsh	- basking on logs and in marsh
526591 5076142	13:30	BLTU x 4 PATU x 11	- marsh	- basking.

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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Fax: (519) 836-2493

Reptile Survey Observation Form

6am – 6pm

Project Number 160960824 Project Name: Nipig

Date / Time: Jun 6, 13 Field Personnel: SH

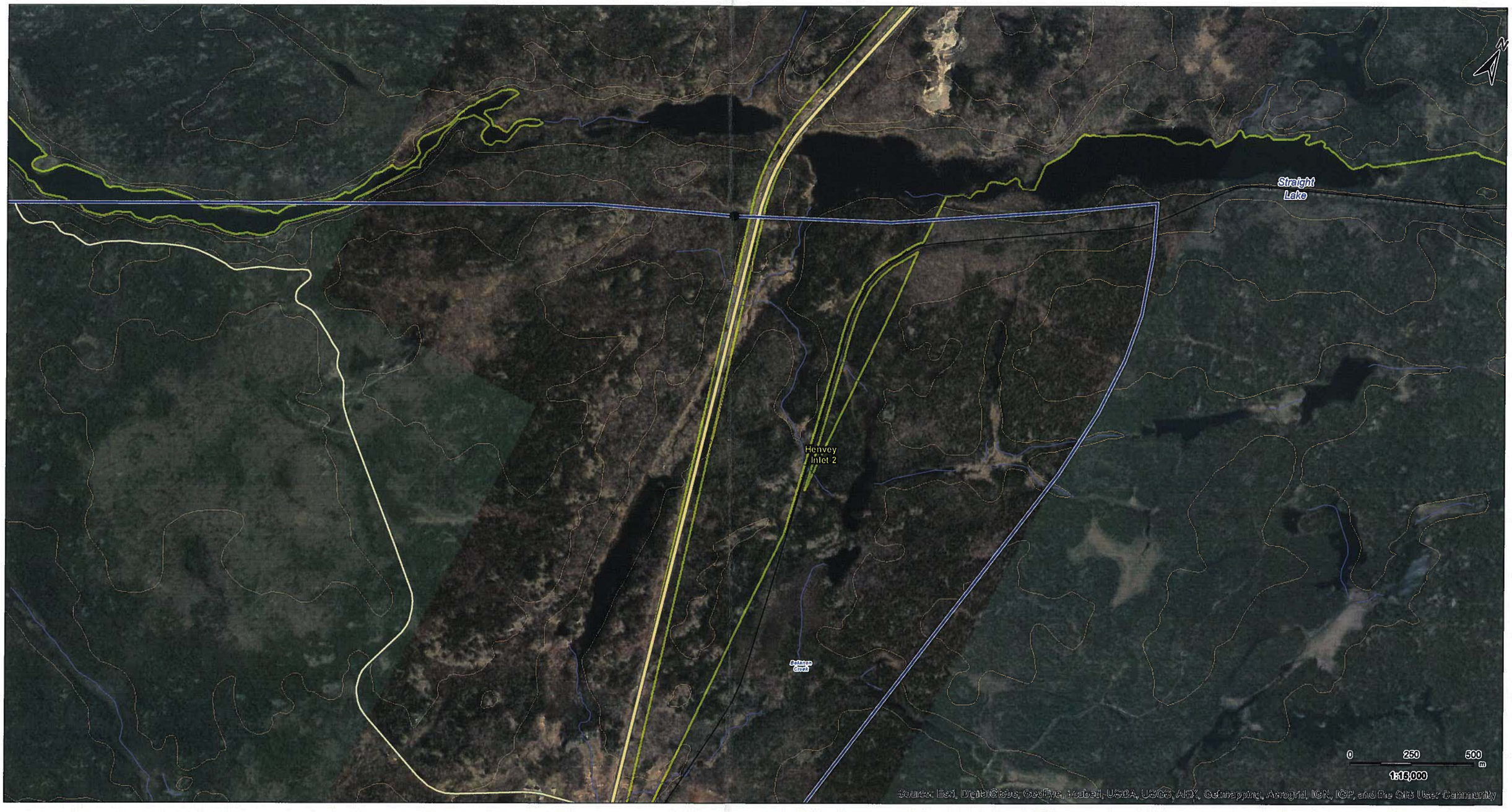
Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	8-18C	3 E	Occ 10%	/	/

LOCATION 17T	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
0533576 5081870	0630	Five-lined Skink	Rock outcrop	Juv.
0533564 5081958	0636	Five-lined Skink	Rock Outcrop	Adult - missing tail
0529888 5078613	0825	N. Red Belly Snake	Rock Outcrop	~20cm
Lakestone/Inlet	1630	N. Watersnake	Across from Flowerpot Bay	in water only
Lakestone/ Inlet	1740	N. Water snake	- Joel's Cabin	Large (coloured)

habitat

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)



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Revised: 2013-04-01 By: awhite

April 2013
Project No.

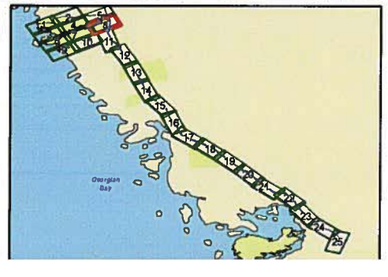
Stantec

Legend

Potential Transmission Line
- Proposed Route
- North Substation
- Route Marker

Existing Features
- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.



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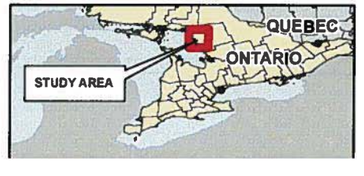

Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
8

DRAFT

Title
Proposed Route - Photo Mosaic

Short

Nigig
160960824
B. Holden
Jan 6, 2013

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number 160960824

Project Name: Nagog

Date / Time: June 7, 2013

Field Personnel: A. Taylor / M. Cameron

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	10-17°C	2	50%	—	✓

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
528569 5076631	7:11	Skink	- Rock berm	
528897 5076644	9:10	Skink	- " "	
[redacted]	10:00	[redacted]	- basking in water in bog	

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

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70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number: 160960824 Project Name: Nipigon

Date / Time: Jun 7, 13 Field Personnel: B. Holden

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	4-19°C	3 E	100-60%	/	/

LOCATION 177	START/ END TIME	SPECIES	HABITAT DESCRIPTION (Rocky)	OTHER NOTES
0527182 5080275	1020	Massasauga Rattlesnake	Rocky shore near wetland. [~30-40cm?	In base of Juniper
Large wetland mid-site		Painted Turtles	4 - Wetland	
0527775 5078847	1310	Milksnake	Rock Outcrop	~15cm

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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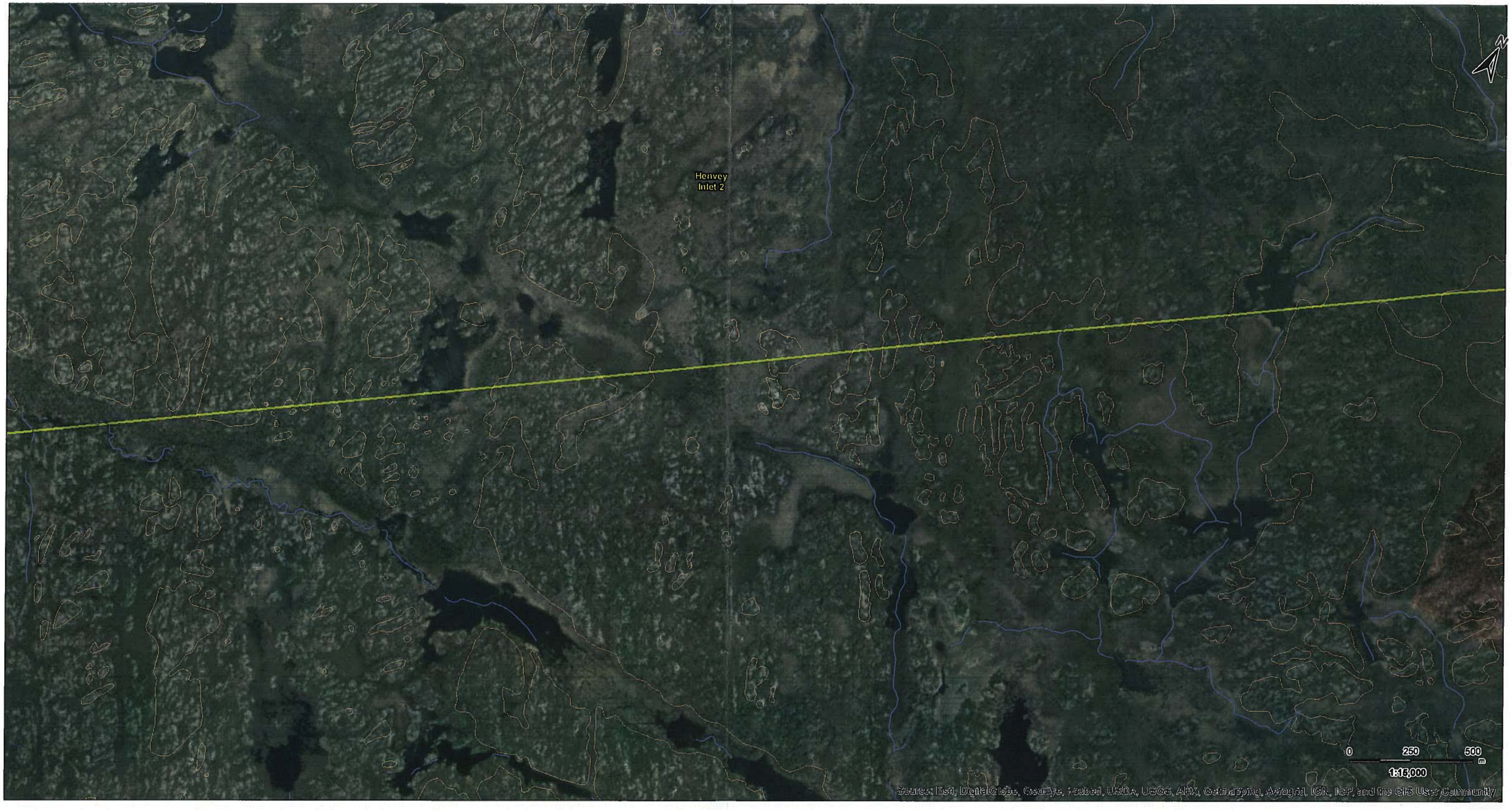

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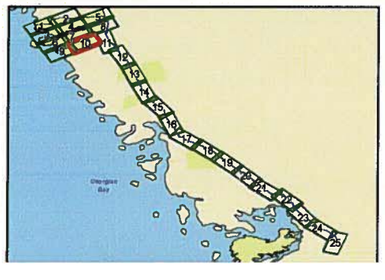
April 2013
Project No.

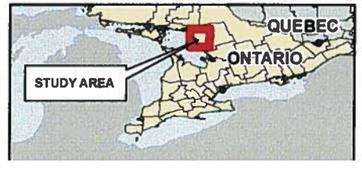
Legend

Potential Transmission Line
- Proposed Route
- North Substation
- Route Marker

Existing Features
- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.





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Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
10

DRAFT

Title
Proposed Route - Photo Mosaic

Nigig
160960824
B. Holden
Jun 7, 2013

20

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

530am - 2pm

Project Number: 160960824 Project Name: Nigig

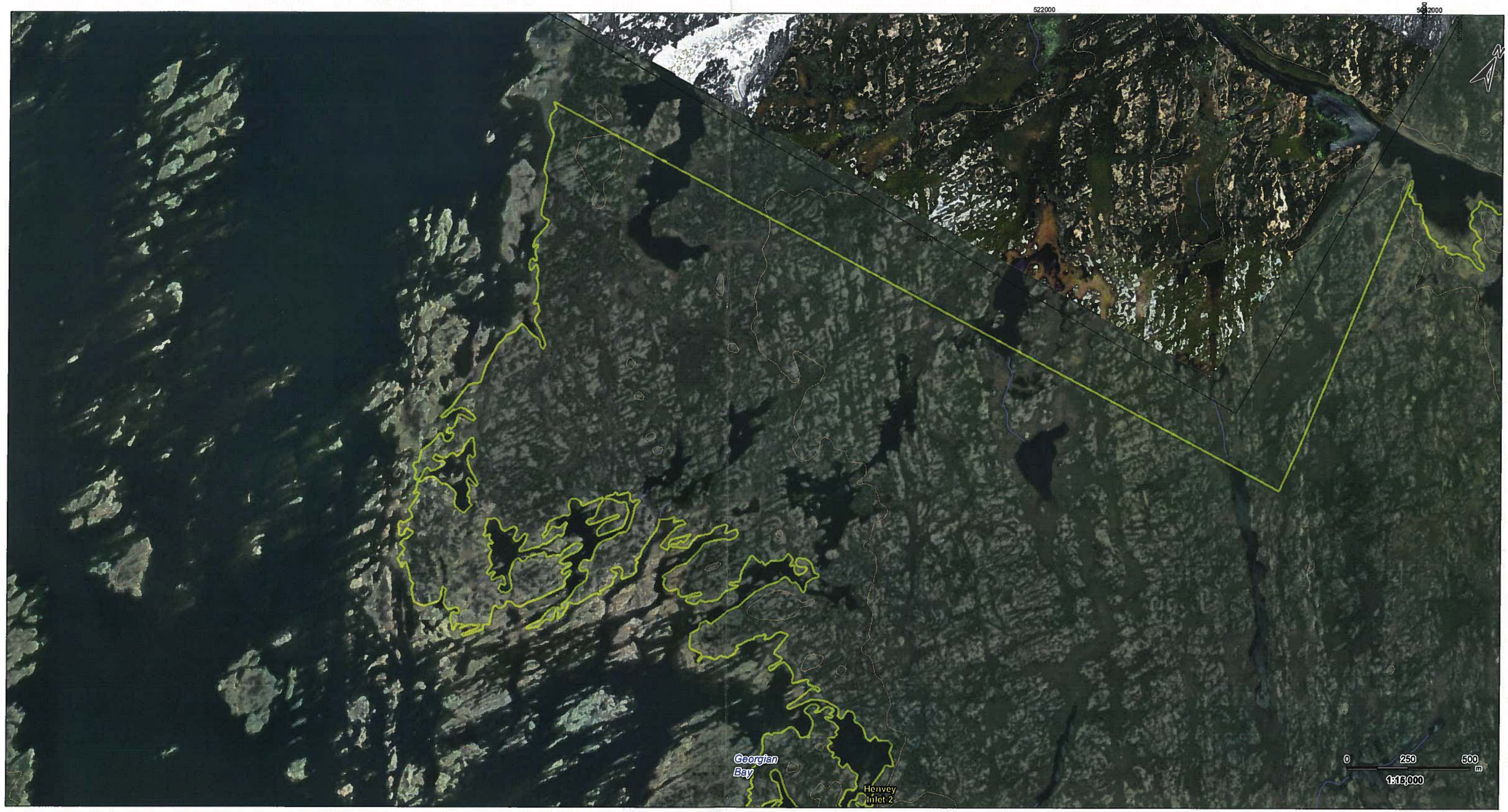
Date / Time: Jan 8, 13 Field Personnel: B. Holden

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	8-18°C	1-2 E	100-90-100	✓	✓

ITT LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
0528565 5079450		Massassauga Rattlesnake	Jack Pine Barrens in Rock outcrop	~45-60 cm Large rattle
0530524 5078771	150 pm	Blanding's Turtle	Man-made wet area (pond) along Bekanon Rd.	Large but not fully grown

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)



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Revised: 2013-04-01 By: ewhite

April 2013
Project No.

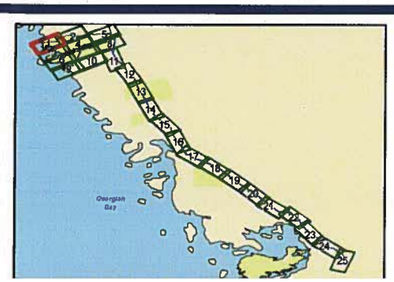
Stantec

Legend

Potential Transmission Line
- Proposed Route
- North Substation
- Route Marker

Existing Features
- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.



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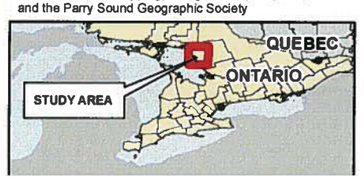

Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
1

DRAFT

Title
Proposed Route - Photo Mosaic

Nigg
1609600824
B. Holden
Jun 8, 2013

TCT

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number 160960824

Project Name: Nigig

Date / Time: Jun 18 13

Field Personnel: B. Holden

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	13-18	2-3	50	/	/

1TT LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
0529438 5078065	1015	Smooth Green Snake	Near Road edge	small (~20cm)

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: May 07 FORM 005

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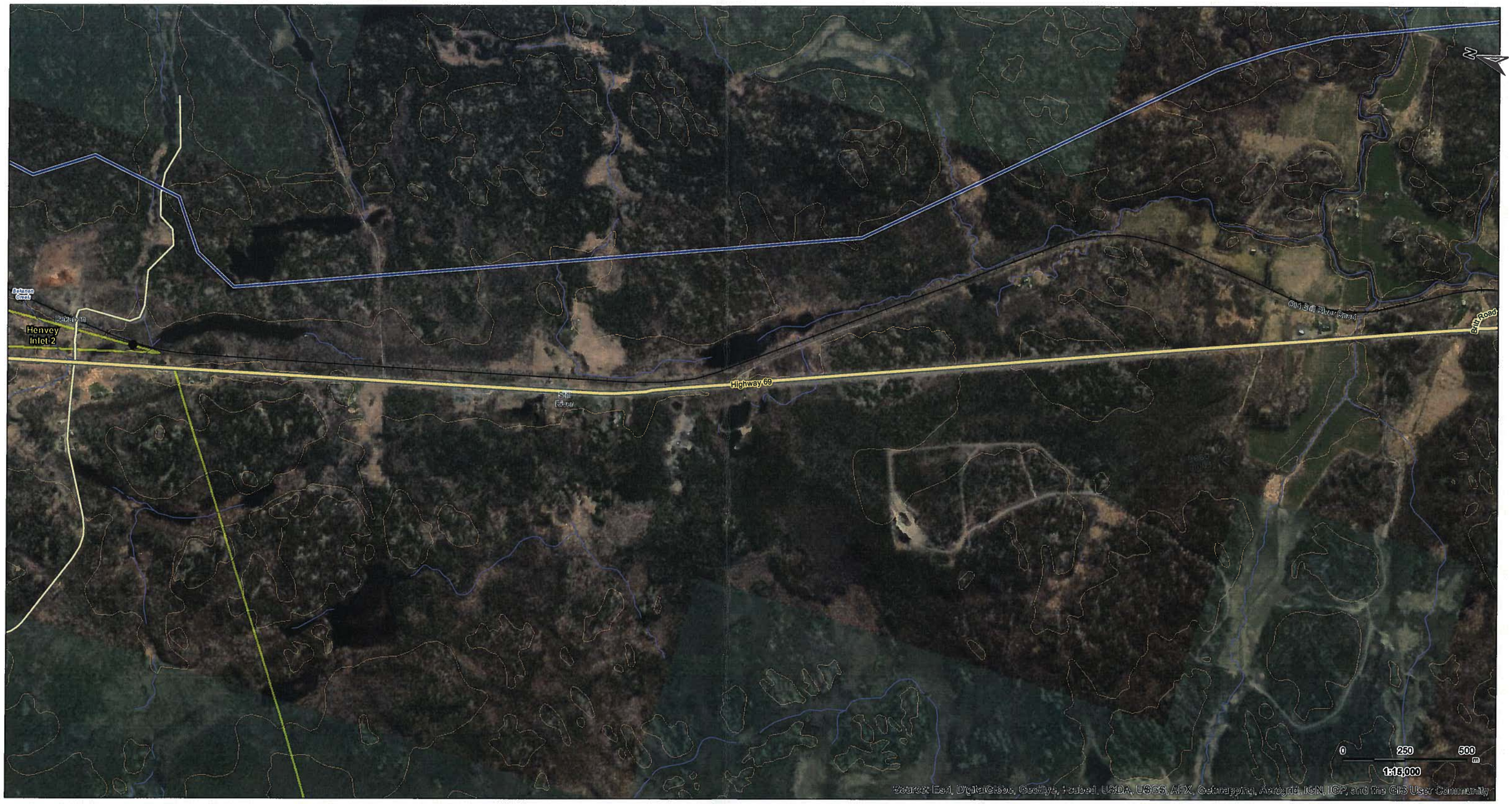


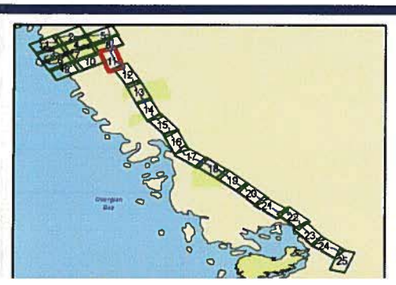
April 2013
Project No.

Legend

Potential Transmission Line
- Proposed Route
- North Substation
- Route Marker

Existing Features
- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- First Nations Reserve

*Location of transmission line within the highway corridor is unknown at this time.



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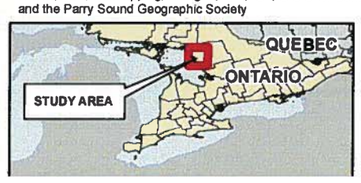

Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
11

DRAFT

Title
Proposed Route - Photo Mosaic

Jun 18, 13

Jun 18, 2013
B. Holden
Nigig
Breeding Bird
Rend 2

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Reptile Survey Observation Form

Project Number: 160960824

Project Name: Mig

Date / Time: Jun 20, 2013

Field Personnel: B. Holden

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	8-18°C	1-3 W	10-30	✓	✓

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
~ 11km N of Joes cottage	1050	Massasauga Rattlesnake	Base of Juniper along rock outcrop.	Did not rattle. Photos.
				Large. ~ 9 for 8 rattle

Quality Control: This form is complete (✓) & legible (✓).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

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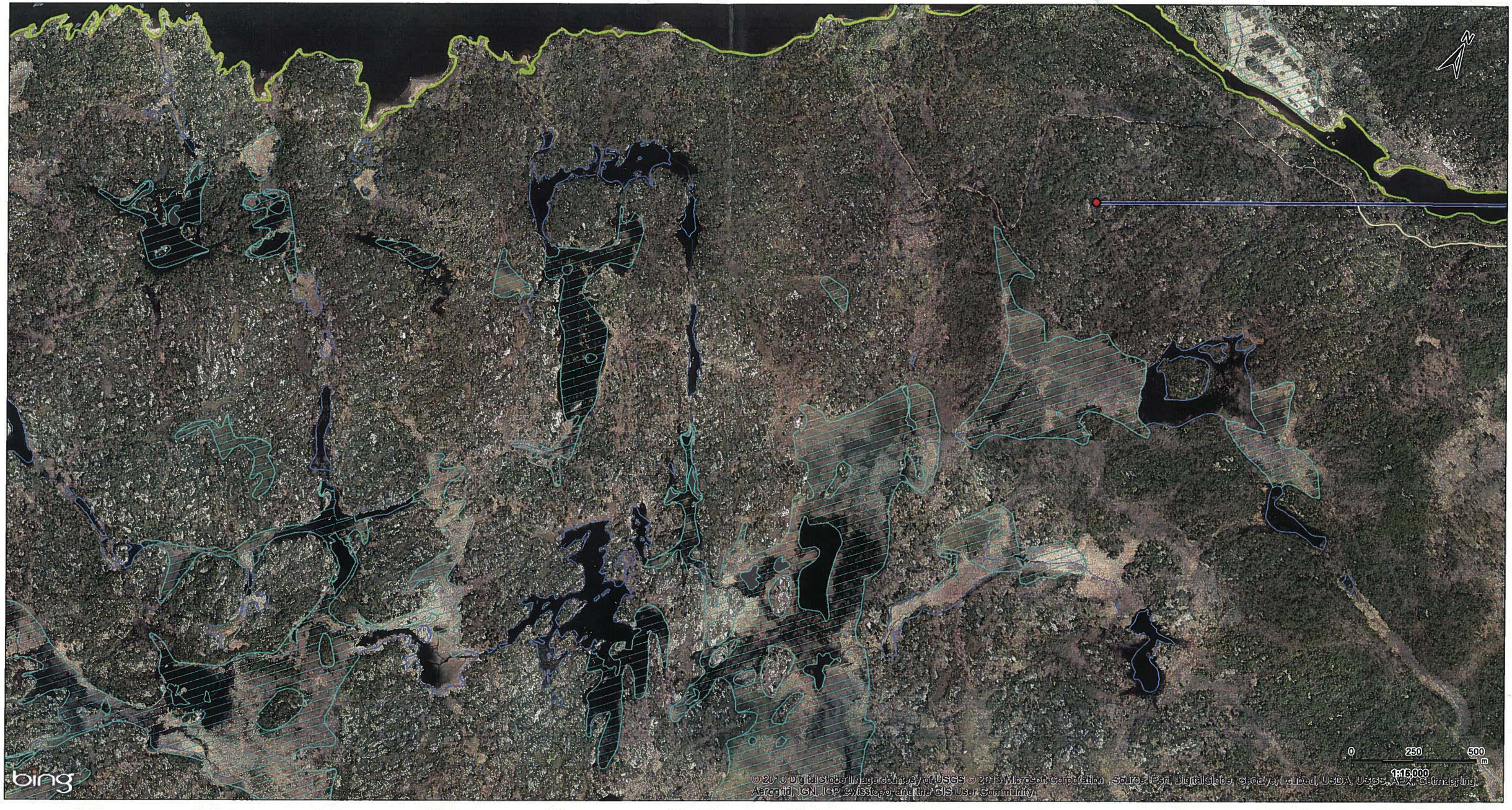
Revised: 2013-06-11 By: carobertson



June 2013
Project No.

Stantec

Legend

- Proposed Transmission Line
- North Substation
- Route Marker

Existing Features

- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- Municipal Boundary - Upper
- Municipal Boundary - Lower

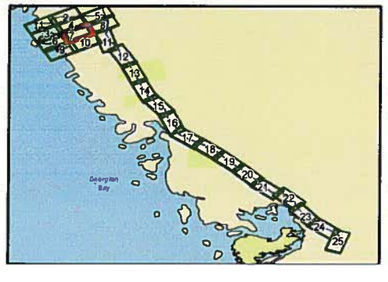
ANSI

- ANSI, Earth Science
- ANSI, Life Science
- Candidate ANSI, Earth Science
- Candidate ANSI, Life Science
- Aggregate Site
- Significant Ecological Area

Wintering Area

- Deer Wintering Area (Stratum 2)
- Deer Yard (Stratum 1)
- Moose Late Wintering Area
- Wetland, Provincially Significant
- Wetland, Locally Significant
- Wetland, Unevaluated
- Waterbody
- First Nations Reserve
- Conservation Reserve
- Forest Reserve
- Provincial Park

*Location of transmission line within the highway corridor is unknown at this time.



Notes

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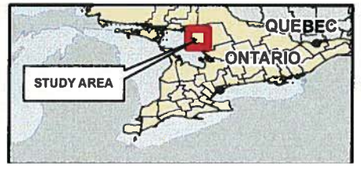
3. Imagery Sources:Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, GIS User Community, and the Parry Sound Geographic Society



Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
7

DRAFT

Title
Proposed Route - Field Map

20

Jun 20, 13
BH
Nigig
BBS - Rnd 2

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

0600
1600

Reptile Survey Observation Form

Project Number 160960824 Project Name: Nisku

Date / Time: Jun 24, 13 Field Personnel: D. Holden

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	18-25	3 SW	0-20		RAIN

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
			NO SAR	
			recorded	

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

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Revised: 2013-06-11 By: carobertson

Stantec

Legend

- Proposed Transmission Line
- North Substation
- Route Marker

Existing Features

- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- Municipal Boundary - Upper
- Municipal Boundary - Lower

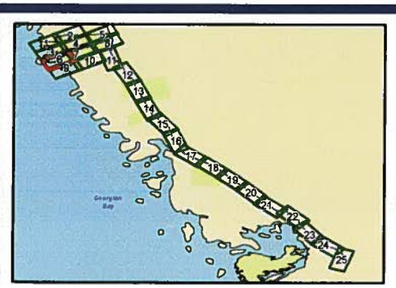
ANSI

- ANSI, Earth Science
- ANSI, Life Science
- Candidate ANSI, Earth Science
- Candidate ANSI, Life Science
- Aggregate Site
- Significant Ecological Area

Wintering Area

- Deer Wintering Area (Stratum 2)
- Deer Yard (Stratum 1)
- Moose Late Wintering Area
- Wetland, Provincially Significant
- Wetland, Locally Significant
- Wetland, Unevaluated
- Waterbody
- First Nations Reserve
- Conservation Reserve
- Forest Reserve
- Provincial Park

*Location of transmission line within the highway corridor is unknown at this time.



Notes

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June 2013
Project No.

Client/Project

NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
6

DRAFT

Title

Proposed Route - Field Map

24

Jan 24, 13

Night

BH

BBS Rnd 2

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

0530- level

Reptile Survey Observation Form

Project Number 160960824

Project Name: Nisi4

Date / Time: Jun 25, 13

Field Personnel: B Holden

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	19-24	0-2 W	50-75	—	X

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
			NO SAR recorded.	

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

REV: May 07 FORM 005

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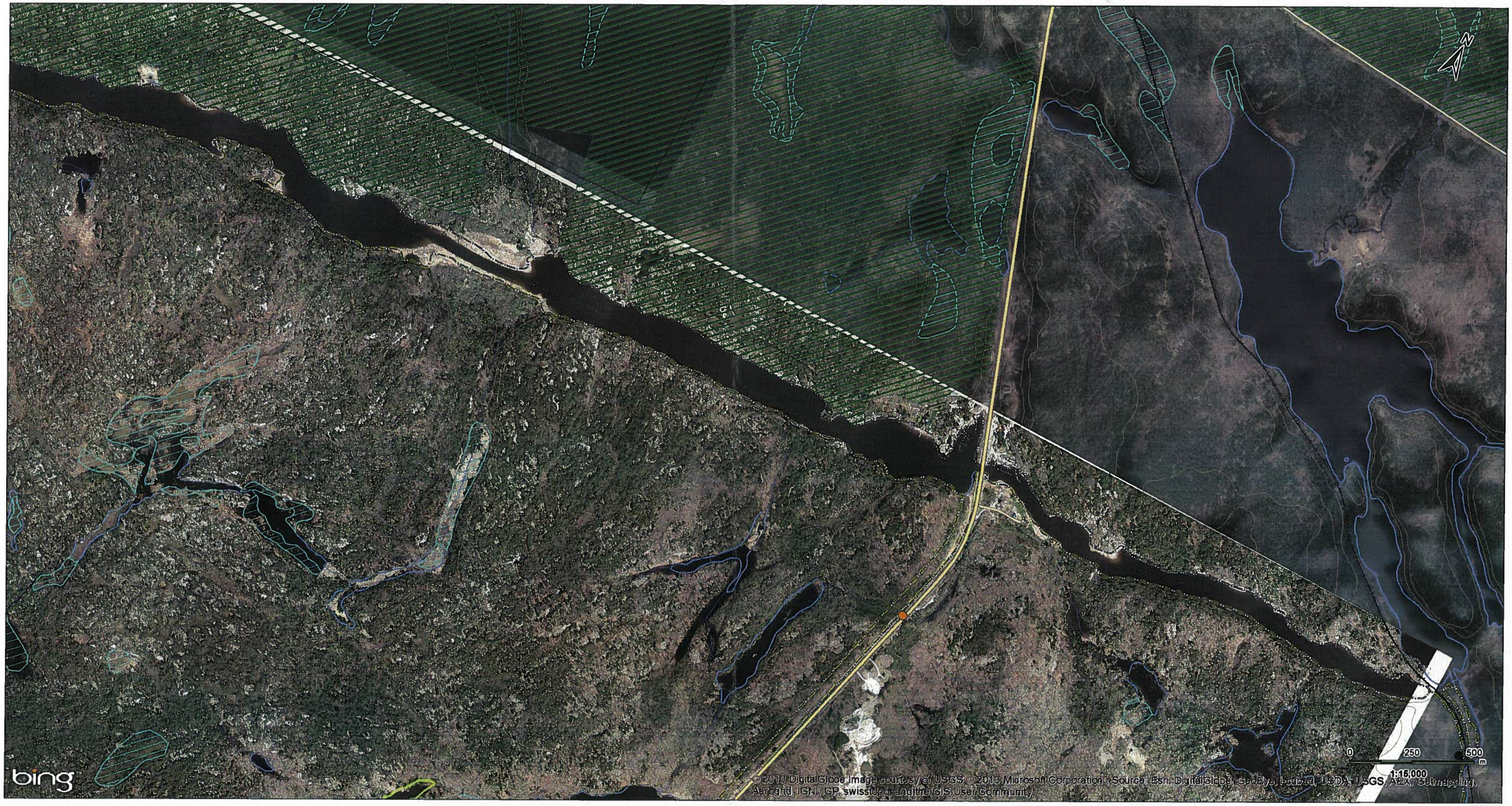
Revised: 2013-06-11 By: carobertson



Stantec

Legend

- Proposed Transmission Line
- North Substation
- Route Marker

Existing Features

- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- Municipal Boundary - Upper
- Municipal Boundary - Lower

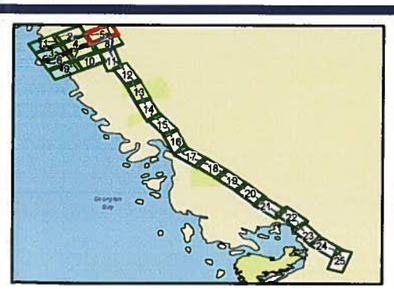
ANSI

- ANSI, Earth Science
- ANSI, Life Science
- Candidate ANSI, Earth Science
- Candidate ANSI, Life Science
- Aggregate Site
- Significant Ecological Area

Wintering Area

- Deer Wintering Area (Stratum 2)
- Deer Yard (Stratum 1)
- Moose Late Wintering Area
- Wetland, Provincially Significant
- Wetland, Locally Significant
- Wetland, Unevaluated
- Waterbody
- First Nations Reserve
- Conservation Reserve
- Forest Reserve
- Provincial Park

*Location of transmission line within the highway corridor is unknown at this time.



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June 2013
Project No.

Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
5

DRAFT

Title
Proposed Route - Field Map

25

Nigig
BH
Jun 25, 13
BBS Rand 2

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

0540 - 1630 & 1700 - 2030

Reptile Survey Observation Form

Project Number: 160960824

Project Name: Nipigon

Date / Time: Jun 26/13

Field Personnel: BH, MC, AT

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	19-27°C	3-5 W	100%	/	/

IT LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
0524537 5076645		Milksnake	Near shore half under rock	Along the lake Rattle
0526734 5073715		Five-lined skink	Rock Barrens	Juvenile
0522218 5077102	2pm	Fox snake	off shore island (chain of islands), in rock crevice ~ 1m from water	3ft+ length

Quality Control: This form is complete (✓) & legible (✓).

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

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Revised: 2013-06-11 By: carobertson

June 2013
Project No.

Stantec

Legend

- Proposed Transmission Line
- North Substation
- Route Marker

Existing Features

- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
- Contours(5m)
- Watercourse
- Municipal Boundary - Upper
- Municipal Boundary - Lower

ANSI

- ANSI, Earth Science
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- Aggregate Site
- Significant Ecological Area

Wintering Area

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- Wetland, Provincially Significant
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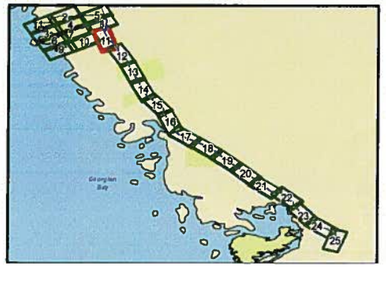
- Waterbody
- First Nations Reserve
- Conservation Reserve
- Forest Reserve
- Provincial Park

*Location of transmission line within the highway corridor is unknown at this time.



Notes

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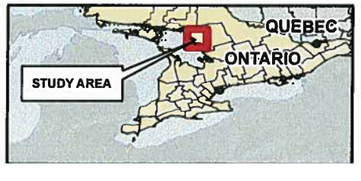

Client/Project

NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
11

DRAFT

Title

Proposed Route - Field Map

26

Jun 26, 13
BH, MC, ART
Migiy
Breeding Bird
Rand 2

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

0530- level

Reptile Survey Observation Form

Project Number 160960824 Project Name: Nisi4

Date / Time: Jun 25, 13 Field Personnel: B Holden

Weather Conditions:	Temp:	Wind:	Cloud:	PPT:	PPT in last 24 hrs:
	19-24	0-2 W	50-75	—	X

LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
			NO SAR recorded.	

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May 07 FORM 005

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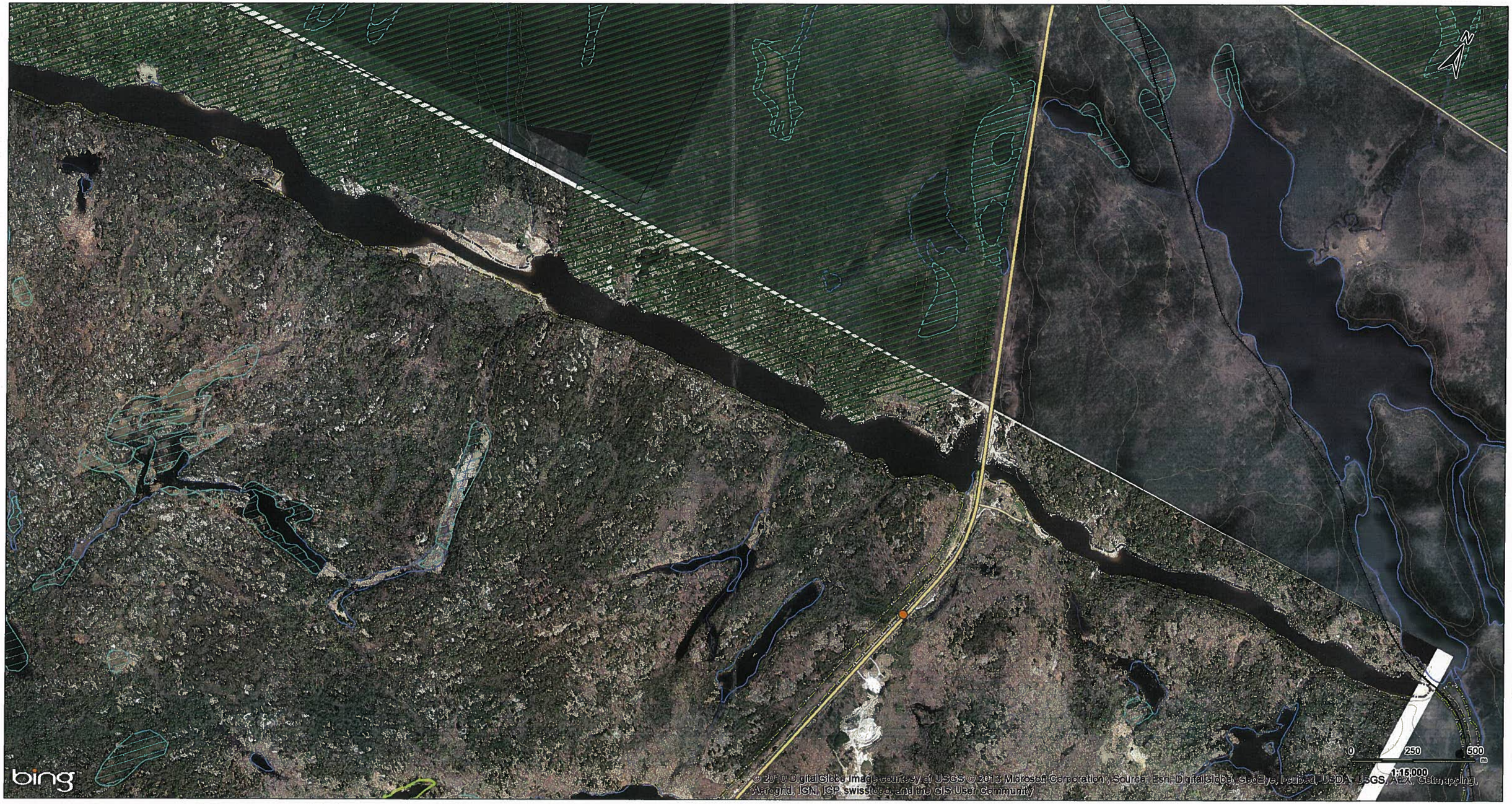

June 2013
Project No.

Stantec

Legend

- Proposed Transmission Line
- North Substation
- Route Marker

Existing Features

- City or Town
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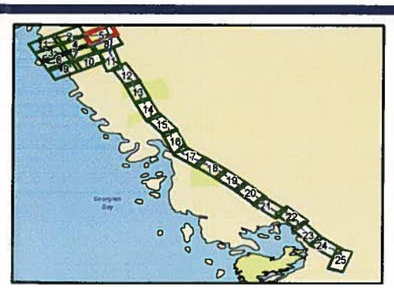
*Location of transmission line within the highway corridor is unknown at this time.



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Client/Project

NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
5

DRAFT

Title

Proposed Route - Field Map

25

Nigig
BH
Jn 25, 13
BBS Rand 2

Stantec Consulting Ltd.
70-1 Southgate Drive
Guelph, Ontario, Canada
N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

CS30 -1630

Reptile Survey Observation Form

Project Number 160960824 Project Name: [illegible]

Date / Time: Jun 27, 13 Field Personnel: [illegible]

Weather Conditions:	Temp: 17-25	Wind: 0-3	Cloud: 90-100	PPT: —	PPT in last 24 hrs: —

TT LOCATION	START/ END TIME	SPECIES	HABITAT DESCRIPTION	OTHER NOTES
10m west of ↓	0830	Ringneck Snake	Rock Berms Near Beaverpond	small ~ 15-20cm
0527497 5075963	1002	Five-lined Skink	Rock Berms near Beaverpond	Juv 1♀
		N. Ribbon Snake		
		Blandings Turtle	GPS Cost - Large Beaver pond small lake in care of BBS route	

Quality Control: This form is complete (__) & legible (__).

Signature: _____ (Field Personnel) Signature: _____ (Project Manager)

REV: May 07 FORM 005

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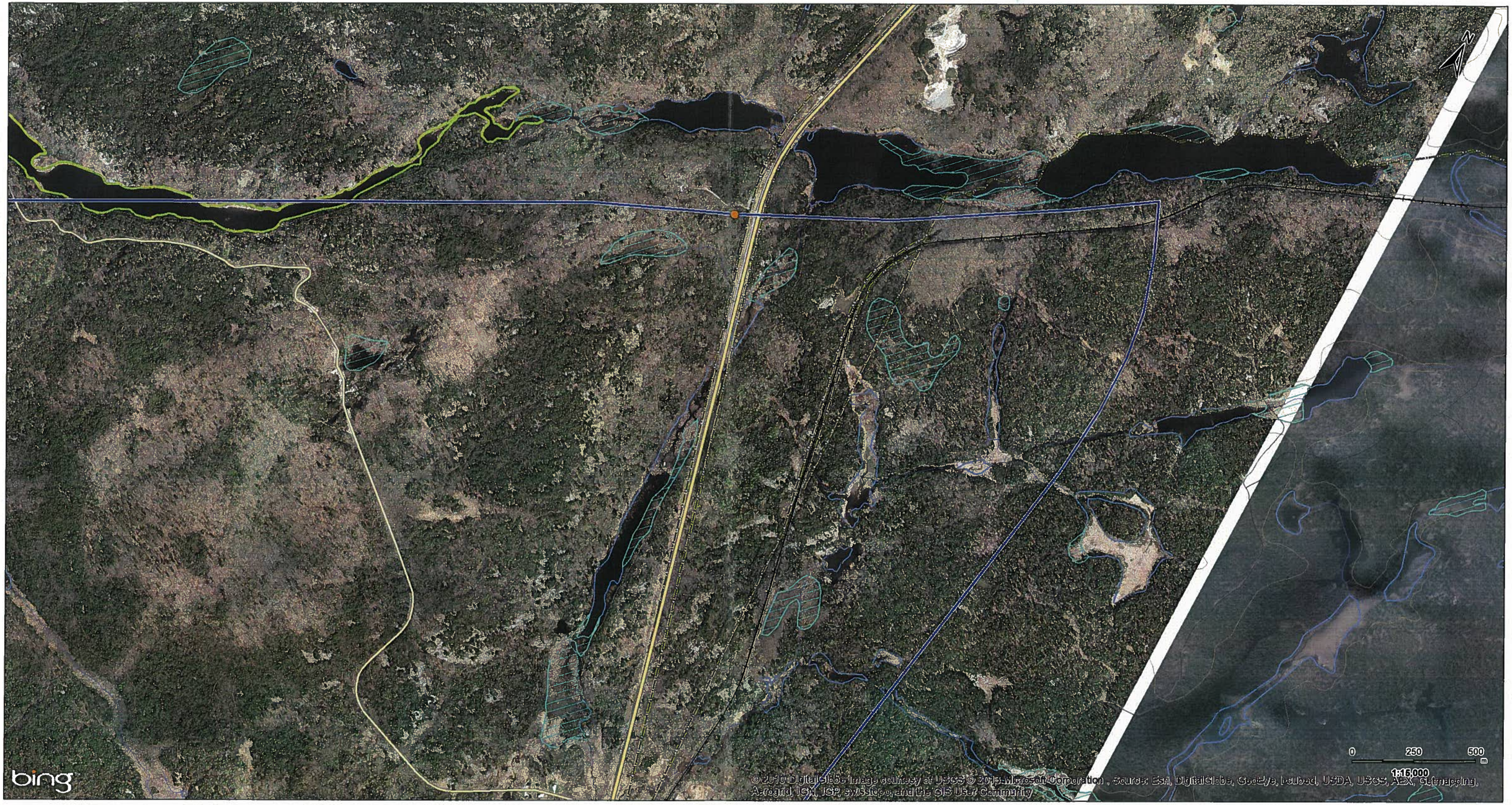
Revised: 2013-06-11 By: carobertson



June 2013
Project No.

Stantec

Legend

- Proposed Transmission Line
- North Substation
- Route Marker

Existing Features

- City or Town
- Hydro Station
- Existing Transmission Line
- Highway
- Major Road
- Local Road
- Railway
- Trail
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- Watercourse
- Municipal Boundary - Upper
- Municipal Boundary - Lower

ANSI

- ANSI, Earth Science
- ANSI, Life Science
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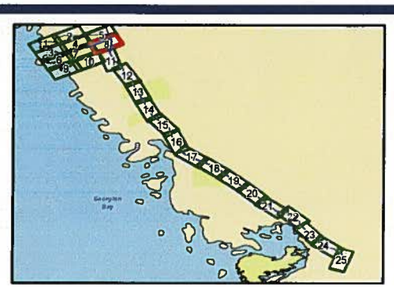
- Conservation Reserve
- Forest Reserve
- Provincial Park

*Location of transmission line within the highway corridor is unknown at this time.



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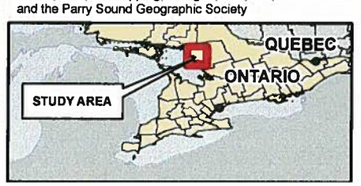

Client/Project

NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
8

DRAFT

Title

Proposed Route - Field Map

27

Nijig
BH
BBS Rnd 2
Jan 27, 13

		Area A				First Visit	Second Visit
		Point Counts					
	Code	*Site*	*Zone*	*Easting*	*Northing*		
1	A1	PC201	17T	526702	5078127	4-Jun-13	24-Jun-13
2	A2	PC203	17T	526173	5078766	4-Jun-13	24-Jun-13
3	A3	PC204	17T	526055	5079242	4-Jun-13	24-Jun-13
4	A4	PC206	17T	525618	5079954	4-Jun-13	24-Jun-13
5	A5	PC207	17T	525194	5080508	4-Jun-13	24-Jun-13
6	A6	Marsh 1	17T	525860	5079203	4-Jun-13	24-Jun-13
7	A7	V1	17T	524660	5076679	16-Jun-13	26-Jun-13
8	A8	V2	17T	524778	5077164	16-Jun-13	26-Jun-13
9	A9	V3	17T	524635	5077455	16-Jun-13	26-Jun-13
10	A10	W01	17T	523585	5077154	7-Jun-13	21-Jun-13
11	A11	W02	17T	523365	5077772	7-Jun-13	21-Jun-13
12	A12	W03	17T	523059	5078254	7-Jun-13	21-Jun-13
13	A13	W04	17T	523133	5078765	7-Jun-13	21-Jun-13
14	A14	W05	17T	523320	5079223	7-Jun-13	21-Jun-13
15	A15	W06	17T	523693	5079796	7-Jun-13	21-Jun-13
		Area B					
		Point Counts					
		Site	***Zone***	***Easting***	***Northing***		
16	B1	PC216	17T	528618	5079111	7-Jun-13	20-Jun-13
17	B2	PC217	17T	528666	5079514	7-Jun-13	20-Jun-13
18	B3	PC218	17T	528361	5079267	7-Jun-13	20-Jun-13
19	B4	PC222	17T	528063	5079633	7-Jun-13	20-Jun-13
20	B5	PC233	17T	527935	5080068	7-Jun-13	20-Jun-13
21	B6	PC224	17T	527602	5080573	7-Jun-13	20-Jun-13
22	B7	PC225	17T	527283	5081020	7-Jun-13	20-Jun-13
23	B8	PC226	17T	527388	5080346	7-Jun-13	20-Jun-13
24	B9	PC232	17T	529216	5079462	8-Jun-13	25-Jun-13
25	B10	PC233	17T	528979	5079939	8-Jun-13	25-Jun-13
26	B11	PC234	17T	528937	5080074	8-Jun-13	25-Jun-13
27	B12	PC235	17T	528809	5080360	8-Jun-13	25-Jun-13
28	B13	PC236	17T	528682	5080494	8-Jun-13	25-Jun-13
29	B14	PC237	17T	528532	5080879	8-Jun-13	25-Jun-13
30	B15	PC238	17T	528438	5081043	8-Jun-13	25-Jun-13
31	B16	PC239	17T	528256	5081418	8-Jun-13	25-Jun-13
		Area C					
		Point Counts					
		Site	***Zone***	***Easting***	***Northing***		
32	C1	PC209 (forest)	17T	533565	5081897	6-Jun-13	18-Jun-13
33	C2	X1	17T	530013	5078948	6-Jun-13	20-Jun-13
34	C3	X2	17T	530558	5079625	6-Jun-13	20-Jun-13
35	C4	X3	17T	530764	5080346	6-Jun-13	20-Jun-13
36	C5	X4	17T	531110	5080754	6-Jun-13	20-Jun-13
		Area D					
		Point Counts					
		Site	***Zone***	***Easting***	***Northing***		
37	D1	PC210	17T	533332	5079992	6-Jun-13	18-Jun-13
38	D2	PC211	17T	532871	5078133	6-Jun-13	18-Jun-13
39	D3	PC212	17T	532092	5078861	6-Jun-13	18-Jun-13
40	D4	PC214	17T	529757	5078310	6-Jun-13	18-Jun-13
41	D5	D1 (?) T01	17T	529201	5077915	17-Jun-13	28-Jun-13
42	D6	D2 (?) T02	17T	529411	5077454	17-Jun-13	28-Jun-13
43	D7	D3 (?) T03	17T	529783	5077131	17-Jun-13	28-Jun-13
44	D8	D4 (?) T04	17T	529758	5076540	17-Jun-13	28-Jun-13

45	D9	D5 (?) T05	17T	530275	5076494	17-Jun-13	28-Jun-13
46	D10	D6 (?) T06	17T	530830	5076637	17-Jun-13	28-Jun-13
47	D11	D7 (?) T07	17T	530650	5077108	17-Jun-13	28-Jun-13
48	D12	Z1	17T	532946	5080021	4-Jun-13	18-Jun-13
49	D13	Z2	17T	532736	5079563	4-Jun-13	18-Jun-13
50	D14	Z3	17T	532482	5079124	4-Jun-13	18-Jun-13
51	D15	Z4	17T	532289	5078660	4-Jun-13	18-Jun-13
52	D16	Z5	17T	531989	5078254	4-Jun-13	18-Jun-13
53	D17	Z6	17T	531846	5077768	4-Jun-13	18-Jun-13
54	D18	Z7	17T	531934	5077271	4-Jun-13	18-Jun-13
55	D19	Z8	17T	532418	5077061	4-Jun-13	18-Jun-13
56	D20	Z9	17T	532493	5076815	4-Jun-13	18-Jun-13
57	D21	Z10	17T	532678	5076615	4-Jun-13	18-Jun-13
		Area E					
		Point Counts					
		Site	***Zone***	***Easting***	***Northing***		
58	E1	PC10 (swd-ash)	17T	524945	5075396	5-Jun-13	25-Jun-13
59	E2	PC11 (marsh/fom)	17T	525437	5075483	5-Jun-13	25-Jun-13
60	E3	PC12 (swt/fom)	17T	526475	5075295	5-Jun-13	25-Jun-13
61	E4	PC8 (jack pine/red maple)	17T	526691	5075204	5-Jun-13	
62	E5	PC9 (pine)	17T	527088	5075214	5-Jun-13	
63	E6	PC7 (mas/oa/swc)	17T	527537	5074800	5-Jun-13	
64	E7	PC15(fom/poplar,spruce)	17T	525853	5076584	6-Jun-13	27-Jun-13
65	E8	PC13 (jack pine)	17T	526185	5076403	6-Jun-13	27-Jun-13
66	E9	PC14 (swt)	17T	526451	5076545	6-Jun-13	27-Jun-13
67	E10	PC16 (lowland spruce forest)	17T	527005	5076650	6-Jun-13	27-Jun-13
68	E11	PC17 (pine barren)	17T	527537	5076352	6-Jun-13	27-Jun-13
69	E12	PC18 (pine barren)	17T	527765	5075981	6-Jun-13	27-Jun-13
70	E13	PC1 (fom-pin/maple/oak)	17T	528208	5077811	7-Jun-13	24-Jun-13
71	E14	PC2 (bog)	17T	529355	5075881	7-Jun-13	24-Jun-13
72	E15	PC5 (pine barren)	17T	528224	5077357	7-Jun-13	24-Jun-13
73	E16	PC6 (pine barren)	17T	528325	5076931	7-Jun-13	24-Jun-13
74	E17	PC3 (pine barren)	17T	528789	5076454	7-Jun-13	24-Jun-13
75	E18	PC4 (bog)	17T	529180	5076307	7-Jun-13	24-Jun-13
76	E19	U1	17T	526702	5073100	15-Jun-13	26-Jun-13
77	E20	U2	17T	526797	5073664	15-Jun-13	26-Jun-13
78	E21	U3	17T	526621	5074132	15-Jun-13	26-Jun-13
79	E22	U4	17T	526118	5074163	15-Jun-13	26-Jun-13
80	E23	U5	17T	525769	5073789	15-Jun-13	26-Jun-13
		Area F					
		Point Counts					
		Site	***Zone***	***Easting***	***Northing***		
81	F1	Y1	17T	523131	5076211	5-Jun-13	19-Jun-13
82	F2	Y2	17T	522657	5076058	5-Jun-13	19-Jun-13
83	F3	Y3	17T	522275	5075719	5-Jun-13	19-Jun-13
84	F4	Y4	17T	522185	5075226	5-Jun-13	19-Jun-13
85	F5	Y5	17T	522697	5075239	5-Jun-13	19-Jun-13
86	F6	Y6	17T	523055	5074843	5-Jun-13	19-Jun-13
87	F7	Y7	17T	523375	5074421	5-Jun-13	19-Jun-13
88	F8	Y8	17T	523625	5074854	5-Jun-13	19-Jun-13
89	F9	Y9	17T	523294	5075229	5-Jun-13	19-Jun-13
		Area MTO					
		Point Counts					
		Site	***Zone***	***Easting***	***Northing***		
	TL01	TL01	17T	533352	5083133	10-Jun-13	30-Jun-13
	TL02	TL02	17T	533608	5080784	10-Jun-13	30-Jun-13

TL03	TL03	17T	533598	5079442	10-Jun-13	30-Jun-13
TL04	TL04	17T	534022	5078237	10-Jun-13	30-Jun-13
TL05	TL05	17T	534484	5076512	10-Jun-13	30-Jun-13
TL06	TL06	17T	534777	5075251	10-Jun-13	30-Jun-13
TL07	TL07	17T	535302	5074024	10-Jun-13	30-Jun-13
TL08	TL08	17T	535857	5072690	10-Jun-13	30-Jun-13
TL09	TL09	17T	536392	5071361	10-Jun-13	30-Jun-13
TL10	TL10	17T	537424	5070118	10-Jun-13	30-Jun-13
TL11	TL11	17T	538725	5069753	10-Jun-13	30-Jun-13
TL12	TL12	17T	539262	5068545	10-Jun-13	30-Jun-13
TL13	TL13	17T	539804	5066946	10-Jun-13	30-Jun-13
TL14	TL14	17T	540363	5065728	10-Jun-13	30-Jun-13
TL15	TL15	17T	540917	5064486	10-Jun-13	30-Jun-13
TL16	TL16	17T	541501	5063176	10-Jun-13	1-Jul-13
TL17	TL17	17T	541923	5061938	10-Jun-13	1-Jul-13
TL18	TL18	17T	542520	5060781	10-Jun-13	1-Jul-13
TL19	TL19	17T	543198	5059275	12-Jun-13	1-Jul-13
TL20	TL20	17T	544066	5058149	12-Jun-13	1-Jul-13
TL21	TL21	17T	544941	5057268	12-Jun-13	1-Jul-13
TL22	TL22	17T	545943	5056213	12-Jun-13	1-Jul-13
TL23	TL23	17T	546861	5054959	12-Jun-13	1-Jul-13
TL24	TL24	17T	547179	5053667	12-Jun-13	1-Jul-13
TL25	TL25	17T	547588	5052527	12-Jun-13	1-Jul-13
TL26	TL26	17T	548249	5051310	12-Jun-13	1-Jul-13
TL27	TL27	17T	548537	5050090	12-Jun-13	1-Jul-13
TL28	TL28	17T	549682	5048337	12-Jun-13	2-Jul-13
TL29	TL29	17T	550511	5047371	12-Jun-13	2-Jul-13
TL30	TL30	17T	551720	5046617	12-Jun-13	2-Jul-13
TL31	TL31	17T	552831	5046119	12-Jun-13	2-Jul-13
TL32	TL32	17T	554042	5045491	12-Jun-13	2-Jul-13
TL33	TL33	17T	555293	5044758	12-Jun-13	2-Jul-13
TL34	TL34	17T	556389	5043937	12-Jun-13	2-Jul-13
TL35	TL35	17T	557486	5043000	12-Jun-13	2-Jul-13
TL36	TL36	17T	558569	5041932	12-Jun-13	2-Jul-13
TL37	TL37	17T	559620	5040841	12-Jun-13	2-Jul-13
TL38	TL38	17T	560672	5039756	13-Jun-13	2-Jul-13
TL39	TL39	17T	561721	5038694	13-Jun-13	3-Jul-13
TL40	TL40	17T	562680	5037847	13-Jun-13	3-Jul-13
TL41	TL41	17T	563686	5036949	13-Jun-13	3-Jul-13
TL42	TL42	17T	564664	5035972	13-Jun-13	3-Jul-13
TL43	TL43	17T	565706	5034882	13-Jun-13	3-Jul-13
TL44	TL44	17T	566384	5034183	13-Jun-13	3-Jul-13
TL45	TL45	17T	573208	5029393	13-Jun-13	3-Jul-13
TL46	TL46	17T	572989	5029419	13-Jun-13	3-Jul-13
TL47	TL47	17T	568664	5031923	13-Jun-13	3-Jul-13
TL48	TL48	17T	564173	5036499	13-Jun-13	3-Jul-13
TL49	TL49	17T	561024	5039420	13-Jun-13	3-Jul-13
TL50	TL50	17T	558024	5042490	13-Jun-13	3-Jul-13
TL51	TL51	17T	540651	5065085	13-Jun-13	4-Jul-13
TL52	TL52	17T	572659	5030346	14-Jun-13	4-Jul-13
TL53	TL53	17T	578307	5022423	14-Jun-13	4-Jul-13
TL54	TL54	17T	581614	5020363	14-Jun-13	4-Jul-13
TL55	TL55	17T	581561	5020624	14-Jun-13	4-Jul-13
TL56	TL56	17T	582693	5018280	14-Jun-13	4-Jul-13
TL57	TL57	17T	582226	5019032	14-Jun-13	4-Jul-13
TL58	TL58	17T	582508	5016960	14-Jun-13	4-Jul-13
TL59	TL59	17T	583330	5016881	14-Jun-13	4-Jul-13
TL60	TL60	17T	582287	5018595	14-Jun-13	4-Jul-13

Date	Time	Easting	Northing	Type of Survey	Observation	4-LTR CODE	SARA Status	# of individuals	Habitat	Other Notes
8-May-13					Bald Eagle	BAEA	NAR	1		
9-May-13					Bald Eagle	BAEA	NAR	1		
14-May-13					Bald Eagle	BAEA	NAR	1		
16-May-13	21:28	528490	5078335	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	3	sandy beach surrounded by inlet, and pine barrens	
16-May-13	21:49	529506	5078467	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	4	poplar, birch, pine woodlands	
16-May-13	22:12	532374	5078576	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	3	sandy pine barrens	
28-May-13	21:21	547835	5052136	Crepuscular Survey	Common Nighthawk	CONI	THR	1	forest	
29-May-13	6:04	532282	5078689		Eastern Wood Pewee	EAWP	SC-NS	1		
29-May-13	21:28	530743	5078733		Common Nighthawk	CONI	THR	1		
29-May-13	21:39	528490	5078335	Crepuscular Survey	Common Nighthawk	CONI	THR	3	forest	
29-May-13	21:39	528490	5078335	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	6	forest	
29-May-13	21:54	528977	5078051		Eastern Whip-poor-will	WHIP	THR	1		
29-May-13	21:56	529520	5077966	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1	forest/swamp/marsh/bog/ rock/pine barren	
29-May-13	22:09	530146	5078785	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1	forest	
29-May-13	22:21	531193	5078785	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1	forest/swamp/beaver pond	
29-May-13	22:45	532289	5078663	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	2	forest	
29-May-13	22:48	532289	5078663	Crepuscular Survey	Common Nighthawk	CONI	THR	1	Forest	
4-Jun-13	5:22	523946	5080021	point count	Wood thrush	WOTH	THR-NS	1		only THR in NS?
4-Jun-13	5:50	532736	5079563	point count	Eastern wood pewee	EAWP	estricted Specie	1	-	
4-Jun-13	5:50	532736	5079563	point count	Wood thrush	WOTH	THR-NS	1		
4-Jun-13	6:16	532482	5079124	point count	Wood thrush	WOTH	estricted Specie	1	-	
4-Jun-13	6:22	526328	5078519		Great Blue Heron Heronry					Nesting colony in the beaver pond to the west of UTM, several nests observed
4-Jun-13	7:03	531989	5078254	point count	eastern wood pewee	EAWP	SC-NS	1		
4-Jun-13	8:07	525934	5079390		Eastern Wood Pewee	EAWP	estricted Specie	1	-	
4-Jun-13	8:57	532418	5077061	point count	Canada Warbler	CAWA	estricted Specie	1	-	
4-Jun-13	9:32	532506	5076804		Red Shouldered Hawk	RSHA	NAR	1		
4-Jun-13	9:43	532493	5076815	point count	Canada Warbler	CAWA	THR	1		
4-Jun-13	10:06	532678	5076615	point count	Canada Warbler	CAWA	THR	3		
4-Jun-13	11:46	524603	5086730		Canada Warbler	CAWA	THR	1		
4-Jun-13		see map			Great Gray Owl	GGOW	NAR	1		Freshly molted feather in crack of rocks
4-Jun-13	16:30	525572	5075439	area Search	Black tern	BLTE	NAR	1		H, flying/foraging over marsh
4-Jun-13	16:35	5255677	5075425		Hooded Merganser	HOME		1		male, H, in marsh
5-Jun-13	16:40	525816	5075460		Prairie Warbler	PRWA	NAR	2	rock barren/wetland	displaying over large area, likely unpaired male
5-Jun-13	6:25	522657	5076058	point count	Canada Warbler	CAWA	THR	2		
5-Jun-13	7:00	522275	5075719	point count	Canada Warbler	CAWA	THR	1		
5-Jun-13	8:10	522697	5075239	point count	Canada Warbler	CAWA	THR	2		
5-Jun-13	9:20	527550	5074187		Wood Thrush	WOTH	THR-NS	1	Forest	
5-Jun-13	10:17	523294	5075229	point count	Canada Warbler	CAWA	THR	3		
5-Jun-13	16:55	525422	5075424		Common Nighthawk	CONI	THR	1		
5-Jun-13	22:00	527926	5077992	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	7	Rock barren / forest	
5-Jun-13	22:05	524605	5076092	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	11	Rock barren / forest	
5-Jun-13		527926	5077992	Crepuscular Survey	Common Nighthawk	CONI	THR	1	Rock barren / forest	
6-Jun-13	6:05	530013	5078948		Canada Warbler	CAWA	THR	2		
6-Jun-13	6:05	525853	5076584		Eastern Wood Pewee	EAWP	SC-NS	1		
6-Jun-13	6:30	526185	5076403	point count	Wood thrush	WOTH	THR-NS	1		
6-Jun-13	6:35	526285	5076403		Wood Thrush	WOTH	THR-NS	1		
6-Jun-13	7:08	526451	5076545	point count	Canada Warbler	CAWA	THR	1		
6-Jun-13	7:10	526250	5076545		Wood Thrush	WOTH	THR-NS	1		
6-Jun-13	7:25	530558	5079625		Canada Warbler	CAWA	THR	1		
6-Jun-13	8:07	532092	5078861	point count	Eastern wood pewee	EAWP	SC-NS	1		
6-Jun-13	8:24	527005	5076650	point count	Canada Warbler	CAWA	THR	1		
6-Jun-13	8:30	529895	5078530		Canada Warbler	CAWA	THR	1		
6-Jun-13	8:39	527005	5076800		Wood Thrush	WOTH	THR-NS	1		
6-Jun-13	8:43	530764	5080346	Point Count	Olive-sided flycatcher	OSFL	THR	1		
6-Jun-13	9:20	527271	5076646		Common Nighthawk	CONI	THR	1		
6-Jun-13	9:30	531110	5080754	point count	Canada Warbler	CAWA	THR	1		
6-Jun-13	9:40	529822	5078608		Canada Warbler	CAWA	THR	1		
6-Jun-13	10:10	529511	5078475		Canada Warbler	CAWA	THR	1		

Date	Time	Easting	Northing	Type of Survey	Observation	4-LTR CODE	SARA Status	# of individuals	Habitat	Other Notes
6-Jun-13	11:35	528616	5078303		Canada Warbler	CAWA	THR	1		
6-Jun-13	12:02	530742	5080510		Olive-sided flycatcher	OSFL	THR	1		
6-Jun-13	21:35	528011	5077974		Common Nighthawk	CONI	THR	1		
7-Jun-13	6:30	528464	5077137		Wood Thrush	WOTH	THR-NS	1		
7-Jun-13	7:15	523365	5077772		canada Warbler	CAWA	THR	1		
7-Jun-13	7:44	528209	5078949		Canada Warbler	CAWA	THR	1		
7-Jun-13	7:54	523059	5078254		Canada Warbler	CAWA	THR	2		
7-Jun-13	8:05	528790	5076553		Wood Thrush	WOTH	THR-NS	1		
7-Jun-13	8:40	527935	5080068		Canada Warbler	CAWA	THR	1		
7-Jun-13	8:52	523241	5079024		Common Nighthawk	CONI	THR	1		
7-Jun-13	9:37	527097	5081001		Canada Warbler	CAWA	THR	1		
7-Jun-13	11:48	523238	5078846		Common Nighthawk	CONI	THR	1		
7-Jun-13	12:00	529050	5075730		Stick Nest	OSPR			open marsh	Osprey using the area, potentially an Osprey nest, though use unknown.
7-Jun-13	12:30	529038	5075895		Osprey	OSPR				
7-Jun-13	13:05	529713	5076698		Wood Thrush	WOTH	THR-NS	1		
7-Jun-13	13:24	527818	5078710		Canada Warbler	CAWA	THR	1		
8-Jun-13	5:50	529192	5079411		Canada Warbler	CAWA	THR	1		
8-Jun-13	11:11	527905	5080490		Canada Warbler	CAWA	THR	1		
8-Jun-13		529216	5079462		Canada Warbler	CAWA	THR	1		
15-Jun-13	7:00	area E		area Search	Caspian Tern	CATE	NAR	11		habitat
15-Jun-13	8:00	526765	5073697	point count	Canada Warbler	CAWA	estricted Specie	1	-	
15-Jun-13	8:00	526797	5073664	point count	Canada Warbler	CAWA	THR	1		
15-Jun-13	8:48	526621	5074132	point count	Canada warbler	CAWA	THR	1	tamarack sedge fen	
15-Jun-13	9:35	526118	5074163	point count	Canada Warbler	CAWA	THR	1	marsh meadow/conifer forest	
15-Jun-13	10:19	525769	5073789	Point count	Canada Warbler	CAWA	THR	2	forest	
16-Jun-13	9:47	524778	5077164	point count	Canada warbler	CAWA	THR	3		
16-Jun-13	10:13	524635	5077455	Point count	Canada Warbler	CAWA	THR	1		
16-Jun-13	13:00	522285	5076496		Eastern Wood Pewee	EAWP	SC-NS	1		
17-Jun-13	5:45	529201	5077915	point count	Canada Warbler	CAWA	THR	3		
17-Jun-13	6:10	532871	5078133	point count	Canada Warbler	CAWA	THR	1		
17-Jun-13	6:36	529783	5077131	point count	Canada Warbler	CAWA	THR	2		
17-Jun-13	8:22	503275	5076494	point count	Canada Warbler	CAWA	THR	1		
17-Jun-13	9:07	530830	5076637	point count	Canada Warbler	CAWA	THR	2		
17-Jun-13	10:15	530650	5077108	point count	Canada Warbler	CAWA	THR	1		
17-Jun-13	21:50	533626	5082442	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	2		
17-Jun-13	22:01	534069	5077650	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1		
17-Jun-13	22:12	535685	5072881	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1		
17-Jun-13	22:20	538955	5069441	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1		
17-Jun-13	22:30	540718	5064706	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1		
17-Jun-13	22:40	542710	5060124	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	2	forest and rock barrens	
17-Jun-13	22:50	545810	5056216	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1	Rock barren / forest	
17-Jun-13	23:01	547835	5052136	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1		
17-Jun-13	23:11	550947	5047088	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1	Forest	
17-Jun-13	23:22	555384	5044617	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1	Forest	
18-Jun-13	5:54	523946	5080021	point count	Canada Warbler	CAWA	THR	1		
18-Jun-13	5:54	523946	5080021	point count	Wood Thrush	WOTH	THR-NS	1		
18-Jun-13	6:15	532736	5079563	point count	Wood Thrush	WOTH	THR-NS	1		
18-Jun-13	7:16	531989	5078254	point count	Wood Thrush	WOTH	THR-NS	1		
18-Jun-13	7:39	531846	5077768	point count	Canada Warbler	CAWA	THR	1		
18-Jun-13	8:48	532418	5077061	point count	Canada Warbler	CAWA	THR	1		
18-Jun-13	9:07	532493	5076815	point count	Canada Warbler	CAWA	THR	1		
18-Jun-13	9:26	532678	5076615	point count	Canada Warbler	CAWA	THR	2		
18-Jun-13	11:53	532753	5079493		Eastern Wood Pewee	EAWP	SC-NS	1		
18-Jun-13	22:20	576285	5024876	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	1	forest	
18-Jun-13	22:29	562745	5037659	Crepuscular Survey	Eastern Whip-poor-will	WHIP	THR	2	Forest	
19-Jun-13	6:30	523131	5076211	Point Count	Canada Warbler	CAWA	THR	1		
19-Jun-13	6:30	Area F		area Search	Caspian Tern	CATE		2		habitat
19-Jun-13	6:51	522657	5076058	Point Count	Canada Warbler	CAWA	THR	1		
19-Jun-13	7:22	522275	5075719	Point count	Canada Warbler	CAWA	THR	1		

Date	Time	Easting	Northing	Type of Survey	Observation	4-LTR CODE	SARA Status	# of individuals	Habitat	Other Notes
19-Jun-13	7:56	522185	5075226	point count	Eastern wood pewee	EAWP	SC-NS	1		
19-Jun-13	8:29	522697	5075239	Point count	Canada Warbler	CAWA	THR	1		
19-Jun-13	10:27	523294	5075229	Point count	Canada Warbler	CAWA	THR	1		
20-Jun-13	6:00	Area B		area search	Eastern wood-pewee	EAWP	SC-NS	1		singing male
20-Jun-13	6:15	530010	5078948	point count	yellow rail	_YERA	SC	1	meadow marsh	Unverified
20-Jun-13	7:29	530558	5079625	point count	Canada warbler	CAWA	THR	1		
20-Jun-13	7:29	530558	5079625	Point count	Olive-sided flycatcher	OSFL	THR	1		
20-Jun-13	7:45	530563	5079619		Olive-sided flycatcher	OSFL	THR	1		
20-Jun-13	9:03	531110	5080754	Point count	Canada Warbler	CAWA	THR	3	marsh	
20-Jun-13	9:03	531110	508754	point count	Olive-sided flycatcher	OSFL	THR	1	marsh/forest	
21-Jun-13	6:30	Area A		area search	Canada warbler	CAWA	THR	2		singing male
24-Jun-13	5:45	area E		Area Search	Wood Thrush	WOTH	THR-NS	1		
24-Jun-13	6:05	528268	5077534	Breeding Bird PC	Wood Thrush	WOTH	THR-NS	1		
24-Jun-13	8:10	528675	5076647	Breeding Bird PC	Wood Thrush	WOTH	THR-NS	1		
24-Jun-13	9:30	529143	5076250	Breeding Bird PC	Wood Thrush	WOTH	THR-NS	1		
25-Jun-13	5:40	Area E	Area Search		Wood Thrush	WOTH	THR-NS	1		
25-Jun-13	5:50	Area B		Area Search	Common Nighthawk	CONI	THR	1		observed
25-Jun-13	8:15	525846	5074763	Breeding Bird PC	Wood Thrush	WOTH	THR-NS	1		
25-Jun-13		528430	5081360	Breeding Bird PC	Canada Warbler	CAWA	THR	1		
25-Jun-13		528597	5081266	Breeding Bird PC	Canada Warbler	CAWA	THR	1		
25-Jun-13		528809	5080360	Breeding Bird PC	Canada Warbler	CAWA	THR	1		
25-Jun-13		528979	5079939	Breeding Bird PC	Canada Warbler	CAWA	THR	1		
26-Jun-13	5:30	Area A		Area Search	Caspian Tern	CATE				observed
26-Jun-13	8:30				Canada Warbler	CAWA	THR	1		
27-Jun-13	5:45	Area E		Area Search	Canada Warbler	CAWA	THR	1		singing male
28-Jun-13	5:55	Area A		Area Search	Wood thrush	WOTH	THR-NS	1		singing male
28-Jun-13	9:26	530830	5076637	point count	Eastern wood pewee	EAWP	SC-NS	1		
28-Jun-13	9:50	530650	5077108	point count	Eastern wood pewee	EAWP	SC-NS	1		
7-Jul-13	6:30	542574	5060848		Great Blue Heron Heronry	GTBH				Five nests with young. MTO corridor
6-Aug-13		563092	5057253		Eastern Wood Pewee	EAWP	SC-NS	1		
8-Aug-13		565521	5052335		Olive-sided flycatcher	OSFL	THR	2		
9-Aug-13					Eastern Wood Pewee	EAWP	SC-NS	1		
10-Aug-13					Eastern Whip-poor-will	WHIP	THR	1		
11-Sep-13		520317	5076136		Bald Eagle	BAEA	NAR	1		
11-Sep-13		524365	5076080		Bald Eagle	BAEA	NAR	1		
11-Sep-13		526214	5077542		Bald Eagle	BAEA	NAR	1		
13-Sep-13		528352	5078180		Bald Eagle	BAEA	NAR	1		
14-Sep-13		521032	5081722		Bald Eagle	BAEA	NAR	1		
14-Sep-13		525978	5077077		Bald Eagle	BAEA	NAR	1		
17-Sep-13	16:00	527290	5077954		Bald Eagle	BAEA	NAR	1		
2-Oct-13	12:30	528322	5078012		Bald Eagle	BAEA	NAR	1		
2-Oct-13	12:40	526670	5077218		Bald Eagle	BAEA	NAR	2		Pair, one male and one female perched together both adults
8-Oct-13	7:50	521312	5076396		Bald Eagle	BAEA	NAR	1		
8-Oct-13	10:00	528157	5078735		Bald Eagle	BAEA	NAR	1		
10-Oct-13	7:40	524574	5076114		Bald Eagle	BAEA	NAR	1		
10-Oct-13	11:15	526628	5081767		Bald Eagle	BAEA	NAR	1		
15-May-03					Bald Eagle	BAEA	NAR	1		
10-Aug-03					Eastern Wood Pewee	EAWP	SC-NS	1		

Obs #	Location/Utm					Type of Survey	Observation	SARA Status	4-LTR CODE	# of individuals	Habitat	Other Notes	Weather				
	Date	Time	Zone	Easting	Northing								Temp	Wind	Cloud	precipitation	last 24 hrs?
	22-Apr-13		17T	528097	5077355		Blandings Turtle	THR	BLTU			large adult	10-14	4-Mar	0-20	None	None
	30-Apr-13	11:47	17T	522773	5075058		Snapping Turtle	SC	SNTU		inland marsh/pond	adult submerged					
	30-Apr-13	12:10	17T	522671	5074966		Blandings Turtle	THR	BLTU		on land about a metre from water	adult					
	30-Apr-13	13:11	17T	522446	5074984		Snapping Turtle	SC	SNTU		Large beaver pond	basking on log					
	30-Apr-13	13:50	17T	522347	5075863		Blandings Turtle	THR	BLTU		small inland pool						
	30-Apr-13	14:00	17T	522468	5075992		Five-lined skink	SC	FLSK			adult female basking					
	30-Apr-13		17T	522671	5074966		Blandings Turtle	THR	BLTU				19	3	15	None	Rain
	30-Apr-13		17T	522468	5075992		Five-lined skink	SC	FLSK				19	3	15	None	Rain
	30-Apr-13		17T	522773	5075058		Snapping Turtle	SC	SNTU				19	3	15	None	Rain
	30-Apr-13		17T	522514	5074861		Snapping Turtle	SC	SNTU				19	3	15	None	Rain
	1-May-13	8:22	17T	525556	5073401		Blandings Turtle	THR	BLTU		small inland wetland	adult basking					
	1-May-13		17T	525556	5073401		Blandings Turtle	THR	BLTU				18	3-4	15-80	None	None
	1-May-13		17T	530509	5078763		Blandings Turtle	THR	BLTU				18	3-4	15-80	None	None
	2-May-13	15:30	17T	532316	5078607		Blandings Turtle	THR	BLTU			adult basking					
	2-May-13	16:40	17T	529450	5078037		Blandings Turtle	THR	BLTU			adult basking					
	2-May-13		17T	532316	5078607		Blandings Turtle	THR	BLTU				20	2-3	10	None	None
	2-May-13		17T	529532	5078465		Blandings Turtle	THR	BLTU		beckanon road	nest remains	20	2-3	10	None	None
	3-May-13	9:36	17T	Exact location will not be made public due to threat of poaching			Restricted Species	-	-			-					
	3-May-13	11:30	17T	523861	5081045		Snapping Turtle	SC	SNTU		pond/marsh	pair of turtles mating at surface					
	3-May-13	11:36	17T	Exact location will not be made public due to threat of poaching			Restricted Species	-	-			-					
	3-May-13		17T	530509	5078763		Blandings Turtle	THR	BLTU		pond	same pond as observation May 1	20	3-4	5	None	Light rain
	3-May-13		17T	523861	5081045		Snapping Turtle	SC	SNTU	2		mating	20	3-4	5	None	Light rain
	3-May-13		17T	Exact location will not be made public due to threat of poaching			Restricted Species	-	-			-	20	3-4	5	None	Light rain
	3-May-13		17T	Exact location will not be made public due to threat of poaching			Restricted Species	-	-			-	20	3-4	5	None	Light rain
	7-May-13	15:30	17T	529576	5078224		Blandings Turtle	THR	BLTU			adult basking on road					
	7-May-13		17T	529516	5078224		Blandings Turtle	THR	BLTU				23	0-1	0	None	None
	8-May-13	8:35	17T	523089	5076266		Blandings Turtle	THR	BLTU			adult swimming in shallows near shore					
	8-May-13		17T	523089	5076266		Blandings Turtle	THR	BLTU				21	0-1	0	None	None
	9-May-13	10:31	17T	527183	5081709		Massassauga Rattlesnake	THR	MASS		tall dry grassy floodplain area	dull and dusty looking snake					
	9-May-13		17T	527183	5081709		Massassauga Rattlesnake	THR	MASS				22	0	0	None	None
	14-May-13	12:13	17T	525263	5075698		Massassauga Rattlesnake	THR	MASS			coiled up and resting (temp 7C)					
	14-May-13		17T	525263	5075698		Massassauga Rattlesnake	THR	MASS		Milton's Bay		9-10	2	100	None	None
	15-May-13	12:06	17T	526936	5077230		Massassauga Rattlesnake	THR	MASS			Juvenile basking					
	15-May-13	13:35	17T	532379	5078851		Blandings Turtle	THR	BLTU			dead, juvenile or sub-adult					
	15-May-13		17T	532381	5078849		Blandings Turtle	THR	BLTU			remains of subadult	7-15	2-4	0-100	None	None
	15-May-13		17T	526936	5077230		Massassauga Rattlesnake	THR	MASS			yearling	7-15	2-4	0-100	None	None
	16-May-13	9:00	17T	524895	5080998		Snapping Turtle	SC	SNTU			adult basking on a log					
	16-May-13	10:06	17T	527032	5081612		Massassauga Rattlesnake	THR	MASS		grassy floodplain	basking on a log					
	16-May-13	10:26	17T	526870	5081680		Massassauga Rattlesnake	THR	MASS		grassy floodplain	adult					
	16-May-13		17T	526870	5081680		Massassauga Rattlesnake	THR	MASS			adults	6	2-3	0-100	None	None
	16-May-13		17T	527032	5081612		Massassauga Rattlesnake	THR	MASS			adults	6	2-3	0-100	None	None
	16-May-13		17T	524895	5080998		Snapping Turtle	SC	SNTU		end of migration transect 15		6	2-3	0-100	None	None
	24-May-13	10:47	17T	525143	5077208		Massassauga Rattlesnake	THR	MASS		rock barrens	adult basking in lichen/rock/moss					
	24-May-13	11:25	17T	525017	5076731		Blandings Turtle	THR	BLTU		shore and water in inlet	adult					
	24-May-13	16:33	17T	566913	5033340		Snapping Turtle	SC	SNTU		highway/wetland	on highway, moved to wetland					
	25-May-13	8:41	17T	524965	5081001		Blandings Turtle	THR	BLTU		pond/marsh	adult basking with other turtles					
	30-May-13	8:57	17T	523970	5080884		Massassauga Rattlesnake	THR	MASS			yearling, very tiny and quick					
	30-May-13	9:14	17T	523777	5081083		Massassauga Rattlesnake	THR	MASS			adult, very fat, possibly gravid female?					
	30-May-13	10:55	17T	524943	5081008		Blandings Turtle	THR	BLTU	2		adults basking on log					
	30-May-13	10:58	17T	524955	5081008		Blandings Turtle	THR	BLTU	1	grassy area	adult basking on grassy hummock					
	30-May-13	10:59	17T	524929	5081034		Blandings Turtle	THR	BLTU	2		adult basking on a log					
	30-May-13	11:07	17T	524936	5081023		Blandings Turtle	THR	BLTU	2		adults basking on log					
	30-May-13	11:37	17T	523994	5081431		Blandings Turtle	THR	BLTU		mainland to Key River	adult moving from land to water					
	4-Jun-13	10:50	17T	524938	5080971	Reptile Survey	Blandings Turtle	THR	BLTU	1	Fairly open beaver pond	Very large for species	4 -16	1 to 4	5-10%	none	none
	4-Jun-13	12:30		528432	5078333	Reptile Survey	Snapping Turtle	SC	SNTU	1	inlet	basking near surface	17	3	50%	none	none
	4-Jun-13	14:13	17T	524723	5079179	Reptile Survey	Blandings Turtle	THR	BLTU	1	Bog/fen ponds		4 -16	1 to 4	5-10%	none	none
	4-Jun-13	14:15	17T	524723	5079179	Reptile Survey	Snapping Turtle	SC	SNTU	1	second larger pond		4 -16	1 to 4	5-10%	none	none
	4-Jun-13	14:45	17T	524092	5078574	Reptile Survey	Milksnake	SC	MISN	1	rock barrens beside small bog/pond	Juvenile, about 15 cm long	4 -16	1 to 4	5-10%	none	none
	4-Jun-13	15:07	17T	532783	5080227		Blandings Turtle	THR	BLTU		wetland	adult, basking on log					
	5-Jun-13	9:40	17T	527554	5074934	Reptile Survey	Blandings Turtle	THR	BLTU	1	Marsh	basking on stump	10 - 17	3	50	none	none
	5-Jun-13	12:15	17T	523169	5076383		Blandings Turtle	THR	BLTU		water/inlet	adult, basking on a rock at waters edge					
	5-Jun-13	13:14	17T	528472	5078338		Five-lined skink	SC	FLSK		landing, end of Beckanon Road	Adult male on rocks					

Obs #	Date	Location/Utm Time	Zone	Easting	Northing	Type of Survey	Observation	SARA Status	4-LTR CODE	# of individuals	Habitat	Other Notes	Weather Temp	Wind	Cloud	precipitation	last 24 hrs?
	5-Jun-13	13:20	17T	527079	5074581	Reptile Survey	Blandings Turtle	THR	BLTU	1	Marsh	basking on log, very large adult	10 - 17	3	50	none	none
	5-Jun-13	13:25	17T	527045	5074586	Reptile Survey	Blandings Turtle	THR	BLTU	1	Marsh	basking on log, large adult	10 - 17	3	50	none	none
	5-Jun-13	13:31	17T	526939	5074627	Reptile Survey	Blandings Turtle	THR	BLTU	1	Marsh	basking on log, medium sized adule	10 - 17	3	50	none	none
	5-Jun-13	16:35	17T	526416	5075293	Reptile Survey	Blandings Turtle	THR	BLTU	1	Marsh	basking on log with 2 painted turtles	10 - 17	3	50	none	none
	5-Jun-13	17:10	17T	525450	5075515	Reptile Survey	Snapping Turtle	SC	SNTU	1	Marsh	basking in water, large about 16cm long	10 - 17	3	50	none	none
	6-Jun-13	6:30	17T	533576	5081870	Reptile Survey	Five-lined skink	SC	FLSK	1	Rock outcrop	juvenile	8 -18	3	10-100	none	none
	6-Jun-13	6:36	17T	533564	5081958	Reptile Survey	Five-lined skink	SC	FLSK	1	Rock outcrop	adult, missing tail	8 -18	3	10-100	none	none
	6-Jun-13	8:00	17T	526319	5076654	Reptile Survey	Blandings Turtle	THR	BLTU	2	Marsh	basking on log	10 - 15	3	80	none	none
	6-Jun-13	11:06	17T	531103	5080750		Blandings Turtle	THR	BLTU	12	wetland	many basking throughout wetland,					
	6-Jun-13	11:35	17T	527527	5075897	Reptile Survey	Blandings Turtle	THR	BLTU	6	Marsh	basking on logs in marsh	10 - 15	3	80	none	none
	6-Jun-13	13:16	17T	530385	5079844		Blandings Turtle	THR	BLTU	7	wetland	adults basking					
	6-Jun-13	13:16	17T	530385	5079844		Snapping Turtle	SC	SNTU	1	wetland	adult basking					
	6-Jun-13	13:30	17T	526591	5076142	Reptile Survey	Blandings Turtle	THR	BLTU	4	Marsh	basking	10 - 15	3	80	none	none
	7-Jun-13	7:11	17T	528569	5676631	Reptile Survey	Five-lined skink	SC	FLSK	1	Rock barren		10-17	2	50	none	none
	7-Jun-13	9:10	17T	528297	5076644	Reptile Survey	Five-lined skink	SC	FLSK	1	Rock barren		10-17	2	50	none	none
	7-Jun-13	10:00	17T	Exact location will not be made			Restricted Species	-	-		-	-	10-17	2	50	none	none
	7-Jun-13	10:20	17T	527182	5080275	Reptile Survey	Massassauga Rattlesnake	THR	MASS	1	Rocky shore near wetland	base of a juniper	9 - 19	3	60-100	none	none
	7-Jun-13	13:10	17T	527775	5078847	Reptile Survey	Milksnake	SC	MISN	1	Rock outcrop	about 15 cm long	9 - 19	3	60-100	none	none
	7-Jun-13	14:21	17T	529514	5078211		Blandings Turtle	THR	BLTU		roadside ditch beckanon road	adult					
	8-Jun-13	13:50	17T	530524	5078771	Reptile Survey	Blandings Turtle	THR	BLTU		man-made wet area (pond) along Bekman Road	large but not fully grown	8 - 18	1-2	90-100	none	none
	8-Jun-13		17T	528565	5079450	Reptile Survey	Massassauga Rattlesnake	THR	MASS		Jack pine barren, in rock outcrop	about 45-50cm with a large rattle	8 - 18	1-2	90-100	none	none
	15-Jun-13	7:37	17T	526691	5073341		Massassauga Rattlesnake	THR	MASS		forested wetland	adult, rattled, didn't strike					
	17-Jun-13	11:56	17T	529478	5077343		Massassauga Rattlesnake	THR	MASS		mixed woods	hid under log, tapped on log, no rattle heard					
	18-Jun-13	11:35	17T	532449	5078909		Snapping Turtle	SC	SNTU			7-10 predated nests, both painted and snapping					
	20-Jun-13	10:50	17T	527379	5080387	Reptile Survey	Massassauga Rattlesnake	THR	MASS		N of Joes Cabin, base of Juniper along rock outcrop	photos taken, large rattle (8 or 9) did not rattle; MC added UTM based on last known location during BB survey (B8 at 10:15am)	8-18	1-3	30-Oct	none	none
	22-Jun-13	16:20	17T	531043	5078720		Snapping Turtle	SC	SNTU		Beckanon Road	Possibly nesting at road edge					
	24-Jun-13	7:40	17T	528062	5077029	Breeding Birds	Blandings Turtle	THR	BLTU	2		mating pair	20	3	10	None	Showers
	25-Jun-13	9:30		526179	5074681	Breeding Birds	Massassauga Rattlesnake	THR	MASS	1		about 2 ft long	17-23	0	60	None	None
	25-Jun-13	15:10		525666	5075046	Breeding Birds	Snapping Turtle	SC	SNTU	2			17-23	0	60	None	None
	26-Jun-13	14:00	17T	522218	5077102	Reptile Survey	Fox snake	THR	FOSN		off shore island (chain of islands) in rock crevice about 1m from water	about 3 ft long	19-27	3	10	none	none
	26-Jun-13		17T	526734	5073715	Reptile Survey	Five-lined skink	SC	FLSK		rock barrens	juvenile	19-27	3	10	none	none
	26-Jun-13		17T	524537	5076645	Reptile Survey	Milksnake	SC	MISN		near shore half under rock	pretending to be a rattle snake	19-27	3	10	none	none
	27-Jun-13	10:02	17T	527497	5075963	Reptile Survey	Five-lined skink	SC	FLSK		rock barrens near beaverpond	juvenile about 14cm	17-25	0-3	90-100	none	none
	27-Jun-13		17T	526679	5076227	Reptile Survey	Blandings Turtle	THR	BLTU		Large beaverpond (small lake in core of BBS route)	GPS lost; UTM estimated by MC based on description in field notes	17-25	0-3	90-100	none	none
	5-Aug-13		17T				Blandings Turtle	THR	BLTU			predated nest, size and number suggest blandings	23	3	10	None	None
	5-Aug-13		17T	564188	5055210		Five-lined skink	SC	FLSK		open to under cover	pale colouration, but still blue on tail	23	3	10	None	None
	5-Aug-13		17T	564143	5055355		Five-lined skink	SC	FLSK		bare rocks	juvenile	23	3	10	None	None
	8-Aug-13		17T	566290	5051148		Milksnake	SC	MISN			probable milksnake, skin found, ~36 inches	23	0	50	None	Rain
	9-Aug-13		17T	577310	5030573		Snapping Turtle	SC	SNTU		road puddle	about 30cm diameter carapace	23	0	0	None	None
	23-Aug-13		17T	526791	5073049	Fall Passerine	Blandings Turtle	THR	BLTU		Sandy Bay passerine transect		23-25	2	30	None	None
	6-Sep-13	9:03	17T	523879	5081036		Massassauga Rattlesnake	THR	MASS				9-20	4	100	None	None
	6-Sep-13	11:28	17T	527117	5081654		Massassauga Rattlesnake	THR	MASS				9-20	4	100	None	None
	6-Sep-13			527117	5081654	Fall Passerine	Massassauga Rattlesnake	THR	MASS				18	4	80-100	None	None
	12-Sep-13		17T	526090	5077019		Blandings Turtle	THR	BLTU			predated					
	23-Sep-13	10:59	17T	523667	5081298		Massassauga Rattlesnake	THR	MASS			shed snake skin					
	6-Aug-03		17T	562389	5058507		Five-lined skink	SC	FLSK			Juvenil, 5-6cm long					
	6-Sep-03			523879	5081036	Fall Passerine	Massassauga Rattlesnake	THR	MASS				1	3	75	None	None

		Location/Utm										
Date	**Time**	**Zone**	**Easting**	**Northing**	**Type of Survey**	**Observation**		**# of individuals**	**Habitat**	**Other Notes**	**SARA Status**	**4-letter Code**
9-Jul	N/A	17T	529555	5078479	Breeding birds	Pine Imperial Moth	Eacles imperialis pini	1		found dead on road near truck	S3?	PIMO
							Restricted Species		-			
							Restricted Species		-			
							Restricted Species		-			
							Restricted Species		-			
							Restricted Species		-			

Date	Time	Location/Utm Easting	Northing	Type of Survey	Observation	# of individuals	Habitat	Other Notes	SARA Status	4-letter Code
23-May-13	9:09	541470	5063041		Blanding's Turtle	1		roadkill, photographed	THR	BLTU
23-May-13	9:10	541458	5063070		Blanding's Turtle	1		juvenile, roadkill, photographed	THR	BLTU
23-May-13	9:14	541439	5063066		Blanding's Turtle	1		roadkill, photographed	THR	BLTU
23-May-13	9:16	541460	5063023		Blanding's Turtle	1		roadkill, photographed	THR	BLTU
23-May-13	12:48	565257	5035189		Blanding's Turtle	1		female, roadkill, photographed	THR	BLTU
9-Jun-13	9:29	539962	5066371		Blanding's Turtle	1		juvenile, roadkill, photographed	THR	BLTU
10-Jun-13	13:01	540875	5064366		Blanding's Turtle	1		bones	THR	BLTU
12-Jun-13	15:39	539969	5066327		Blanding's Turtle	1		juvenile, roadkill, photographed	THR	BLTU
13-Jun-13	15:51	533589	5081140		Blanding's Turtle	1		female, roadkill, photographed	THR	BLTU
18-Jun-13	16:22	533687	5081580		Blanding's Turtle	1		female with eggs, roadkill, photographed, likely purposely hit	THR	BLTU
30-Jun-13	13:08	540281	5065697		Blanding's Turtle	1		roadkill, photographed	THR	BLTU
1-Jul-13	14:38	541453	5063087		Blanding's Turtle	1		roadkill, photographed	THR	BLTU
3-Jul-13	13:15	571691	5031142		Blanding's Turtle	1		female, roadkill, photographed	THR	BLTU
23-Jul-13	9:34	532600	5090302		Blanding's Turtle	1		juvenile, roadkill, photographed	THR	BLTU
24-Jul-13	15:41	541474	5062984		Blanding's Turtle	1		juvenile, roadkill, photographed	THR	BLTU
4-Jul-13	17:20	540599	5065047		Five- lined skink	1		adult	SC	FLSK
2-Jul-13	13:46	559561	5040797		Massasauga Rattlesnake	1		healthy adult	THR	MASS
23-May-13	6:21	Exact location will not be made public due to threat of poaching			Restricted Species	-	-	-	SC	SNTU
23-May-13	6:34	547166	5053320		Snapping Turtle	1		roadkill, photographed	SC	SNTU
23-May-13	12:44	Exact location will not be made public due to threat of poaching			Restricted Species	-	-	-	SC	SNTU
23-May-13	12:50	565253	5035193		Snapping Turtle	1		baby, photographed	SC	SNTU
23-May-13	12:56	565249	5035222		Snapping Turtle	1		roadkill, photographed	SC	SNTU
23-May-13	12:58	Exact location will not be made public due to threat of poaching			Restricted Species	-	-	-	SC	SNTU
23-May-13	13:15	Exact location will not be made public due to threat of poaching			Restricted Species	-	-	-	SC	SNTU
23-May-13	16:11	555962	5044211		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
23-May-13	16:55	554428	5045162		Snapping Turtle	1		roadkill, photographed	SC	SNTU
24-May-13	8:33	566913	5033341		Snapping Turtle	1		roadkill, photographed	SC	SNTU
9-Jun-13	8:37	563350	5037120		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
9-Jun-13	8:49	554605	5045088		Snapping Turtle	1		roadkill, photographed	SC	SNTU
9-Jun-13	8:57	552204	5046325		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
9-Jun-13	9:03	548781	5049515		Snapping Turtle	1		roadkill, photographed	SC	SNTU
9-Jun-13	9:17	541713	5062471		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
10-Jun-13	10:40	538815	5069576		Snapping Turtle	1		nesting on road shoulder, photographed	SC	SNTU
10-Jun-13	13:17	541415	5063130		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
10-Jun-13	15:15	538407	5069771		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
13-Jun-13	14:39	556296	5043978		Snapping Turtle	1		roadkill, photographed	SC	SNTU
13-Jun-13	16:06	532604	5090178		Snapping Turtle	1		roadkill, photographed	SC	SNTU
14-Jun-13	8:59	550426	5047310		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
14-Jun-13	16:53	551654	5046565		Snapping Turtle	1		baby, roadkill, photographed	SC	SNTU
30-Jun-13	14:19	533603	5082505		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
30-Jun-13	14:32	533420	5093083		Snapping Turtle	1		roadkill, photographed	SC	SNTU
3-Jul-13	16:08	533088	5091677		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
23-Jul-13	9:38	532600	5090293		Snapping Turtle	1		roadkill, photographed	SC	SNTU
23-Jul-13	9:46	532605	5090219		Snapping Turtle	1		roadkill, photographed	SC	SNTU
24-Jul-13	10:23	563139	5037291		Snapping Turtle	1		juvenile, roadkill, photographed	SC	SNTU
12-Jun-13	15:42	Exact location will not be made public due to threat of poaching			Restricted Species	-		-	END	-
14-Jun-13	10:27	Exact location will not be made public due to threat of poaching			Restricted Species	-		-	END	-
23-May-13	7:01	546938	5054154		turtle nest			predated turtle nests, SNTU and others	SC	SNTU
23-May-13	8:58	541947	5061927		turtle nest			predated turtle nests, SNTU and others	SC	SNTU
30-Jun-13	11:04	534765	5075263		turtle nest	1		predated turtle nests, SNTU and others	SC	SNTU
					Restricted Species	-	-	-		

Appendix B

Work Plans

WORK PLAN FOR THE NIGIG POWER WIND FARM PROJECT BACKGROUND ECOLOGICAL STUDIES

HENVEY INLET FIRST NATION
PICKEREL RIVER, ONTARIO

prepared for

GENIVAR

on behalf of

NIGIG POWER CORPORATION

by

LGL LIMITED
environmental research associates

JULY 2011

LGL PROJECT TA8027

WORKPLAN FOR THE NIGIG POWER WIND FARM PROJECT BACKGROUND ECOLOGICAL STUDIES

HENVEY INLET FIRST NATION
PICKEREL RIVER, ONTARIO

prepared by:

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JULY 2011
LGL PROJECT TA8027

TABLE OF CONTENTS

1.0 INTRODUCTION

In 2011, the Nigig Power Corporation received approval under Ontario's Feed-In- Tariff (FIT) Program to construct a Wind Power Project at Henvey Inlet on Georgian Bay in the province of Ontario (Figure 1). With a total proposed rating of 300MW, the Nigig Power Wind Farm Project is the largest wind power project FIT contract awarded in Ontario. The expected Commercial Operation Date (COD) is February 2014. The Project study area encompasses the Reserve Lands of approximately 80 square kilometres (Figure 2). The major components of the Project, including all of the Project's wind turbines, are proposed to be located on Henvey Inlet First Nation Reserve No. 2 (Reserve No. 2). A transmission line that is part of the Project will be located off of Reserve No. 2 and a transformer station may be located off reserve in order to enable an interconnection with the Hydro One Transmission System. Vehicular access is limited to the unpaved Bekanon Road, which leads to a boat ramp in the eastern end of the Inlet. The remainder of the study area is accessible only by boat during the open water season and, to some extent, by snowmobile during the winter.

The study area consists of rocky outcrops that form shallow, longitudinal ridges, oriented in a northwest to the southeast direction. Intervening pockets of wetlands, alder thickets, poplar and jack pine stands make up the balance of the site. Topographic relief decreases from the east to west direction with elevations ranging from a high of 216m at the eastern portions near Highway 69 to a low of 168m at the western shoreline at Georgian Bay.

2.0 WORK PLAN OVERVIEW

The background ecological studies were developed to address pathways of effect between the Project and the natural heritage resources that are known to occur in the study area and surrounding region. The study area is large and, given its location on the Georgian Bay shore, it may include migratory routes of birds and bats. Interaction with migratory species is considered to be of primary importance, as it has the potential to profoundly affect Project design, extent and operational strategies to effectively mitigate harm. As such, the background ecological studies include considerable focus on migratory studies.

On the ground, development of the Project will involve watercourse and wetland crossings, and the construction of access roads, overhead electrical collector lines and turbines that may displace some terrestrial habitat. There is considerable scope for identification and avoidance of sensitive habitats and implementation of effective and proven mitigation strategies where limited intrusion is unavoidable. The baseline ecological studies include elements of desktop and on-site evaluation that are tailored to the various wildlife groups based on their habitats and habits.

The documented effects of wind power projects have been largely focused on impacts to migrating and resident birds and bats. Accordingly, wind farms should be located, designed and managed so that there are no significant adverse impacts on seasonal migrants, including those species that are of acknowledged national and international importance, or their habitats. In terms of the location of the project study area, the major physiographic features include the Georgian Bay coastline and Henvey Inlet, which may be used to some degree as migratory pathways by birds and bats. Of secondary concern are the terrestrial and aquatic flora and fauna, which are affected largely by the location of specific Project components in and around their habitats. The following potential effects have been documented in literature with respect to development of wind farms:

- Collision with the moving turbine blades, with the turbine tower or associated infrastructure such as overhead power lines, or the wake behind the rotors causing injury, leading to direct mortality to migrating birds and bats;
- Disturbance or displacement from around the turbines or exclusion from the whole wind farm. Reduced reproductive success or reduced survival may result if birds are displaced from preferred habitat and are unable to find suitable alternatives;
- Barriers to movement disrupting ecological links between feeding, wintering, breeding and moulting areas and extended flights around wind clusters; and,
- Change to or loss of habitat due to wind turbines and associated infrastructure.

As part of effective planning, there is a need to identify migratory pathways and patterns in terms of level of activity across the study area throughout the migratory seasons. This information may be used to identify sensitive areas, seasons and weather conditions that can be used to guide design of the Project extent and operation. In addition, migratory stopover, breeding bird and acoustic bat surveys are being used to understand distribution of birds and bats that use on-site habitats and may therefore be affected by the Project.

With respect to birds and bats, the following guidance documents have influenced and guided the ongoing evaluation of the ecological baseline:

- Ontario Ministry of Natural Resources (2010) Birds and Bird Habitats: Guidelines for Wind Power Projects;
- Ontario Ministry of Natural Resources (2010) Bats and Bat Habitats: Guidelines for Wind Power Projects;
- Environment Canada and Canadian Wildlife Service (2007) Recommended Protocols for Monitoring Wind Impacts of Wind Turbines on Birds; and,
- Environment Canada and Canadian Wildlife Service (2007) Wind Turbines and Birds, A Guidance Document for Environmental Assessment.

It should be noted that the Province has no regulatory jurisdiction over the Henvey Inlet Reserve #2 lands and therefore the above noted MNR documents are being used for reference only.

With respect to resident plants and wildlife, and their habitats, specific approaches have been developed in relation to the known factors of habitat association, life history parameters and Project interactions. Existing ecological information, ranging from large-scale forest resource inventories to studies of specific reptile SAR, is available for the region surrounding the Study Area. This includes data collected in the Highway 400 corridor and within the several large parks on Georgian Bay. Much can be inferred from this information regarding the occurrence, distribution, habitats and habits of wildlife species in the Study Area. This will form the basis of effective mitigation strategies to reduce the interaction of plants and wildlife with the Project.

Table 1, below, summarizes the ecological receptors, pathways of effect and corresponding study approaches recommended, and currently underway, for the Nigig Power Wind Farm Project.

Table 1: Summary of Ecological Receptors, Pathways of Effect and Ecological Baseline Studies for the Nigig Power Wind Farm Project

Ecological Receptor	Effects Pathways	Recommended Studies	Timing
Birds and Bats (SAR and non-SAR birds) (non-SAR bats only)	Collision with turbines (migratory and resident/seasonal). Habitat loss (migratory stopover and resident/seasonal).	Visual/IR-assisted studies of spring and fall bird/bat migration across the study area, using Henvey Inlet as an east-west transect. Migratory stopover surveys include boat-based and aerial surveys of waterfowl, hawk-watch stations and terrestrial routes for other species. Breeding bird surveys using point-count survey protocol at sites distributed throughout the study area (spring and summer). Aerial surveys to investigate possible colonial waterbird, heron and raptor nesting sites. Acoustic detection of resident bats using automated Wildlife Acoustics SM2BAT detectors at sites distributed throughout the study area (spring/summer).	Migration (May 2011; Aug-Oct 2011; Mar-May 2012) Breeding birds (Jun-Jul 2011; May-Jun 2012) Bat Acoustic (Jun-Jul 2011; Jun-Jul 2012, if warranted following review of 2011 data)

Ecological Receptor	Effects Pathways	Recommended Studies	Timing
Game/furbearers (non-SAR only)	Habitat loss. Road effects (disturbance, hunting, predation, roadkill).	Incidental observations confirm species and distribution within study area. Traditional knowledge and cultural value of wildlife species and their habitats. Aerial observations (moose/deer winter yards, wildlife trails). Desktop and field confirmation of key wildlife habitat (e.g., wetland, stands of mature trees, etc.) and seasonal biology.	Incidental (year round) Traditional (summer/fall/winter 2011) Aerial (winter 2011)
Reptiles (SAR and non-SAR)	Direct mortality during site preparation. Habitat loss. Road effects during operation (disturbance, roadkill).	Incidental observations confirm species and distribution within study area. Focused habitat identification within construction footprint of Project elements (e.g., road alignments, laydown and tower areas). General habitat identification (and avoidance) by ELC delineation of wetland communities as preliminary constraints. Desktop review of key reptile habitat (e.g., overwintering sites, nesting and incubation areas) and seasonal biology (e.g., timings of key life history elements) to inform spatial and temporal avoidance and mitigation strategies.	Incidental (spring, summer and fall) Mitigation methods will be developed and focused habitat ID and implementation of avoidance/mitigation will occur during design, pre-construction and construction phases.
Amphibians (SAR and non-SAR)	Direct mortality during site preparation (watercourse & wetland crossings). Habitat loss. Sedimentation and erosion effects on aquatic and wetland habitats of amphibians. Road effects during operation (roadkill).	Incidental observations confirm species and distribution within study area. Focused habitat identification within construction footprint of Project elements (e.g., watercourse and wetland crossings). General habitat identification (and avoidance) by ELC delineation of wetland communities as preliminary constraints. Desktop review of key amphibian habitat (e.g., overwintering sites, breeding areas) and seasonal biology (e.g., overwintering, emergence, breeding) to inform spatial and temporal avoidance and mitigation strategies.	Incidental (spring, summer and fall) Mitigation methods will be developed and focused habitat ID and implementation of avoidance/mitigation will occur during design, pre-construction and construction phases.

Ecological Receptor	Effects Pathways	Recommended Studies	Timing
Fish (non-SAR only)	Harmful alteration, disruption, destruction (HADD) of fish habitat at watercourse crossings (minor tributaries only). Sedimentation and erosion during construction and operations.	Focused fish habitat and fish community assessments within construction footprints (e.g., at watercourse crossings). Includes descriptions of physical habitat features (channel form, depth, flow, substrates, migration barriers, etc.), aquatic and riparian plant communities and fish community. Data to support selection of appropriate temporal, spatial and physical mitigation measures to minimize effects on fish habitat.	Incidental (spring, summer, fall) Focused assessment of watercourse crossings will be undertaken at design/permitting stage to support application to DFO for Fisheries Act Authorization if HADD to occur
Plants (SAR and non-SAR)	Direct loss/mortality of vegetation in cleared areas. Loss of vegetation communities during construction. Native plants may be used in traditional native medicine.	Desktop delineation of vegetation communities (aerial image interpretation; Forest Resource Inventory mapping). Supports assessment of effects on plants and basis for wildlife habitat assessment. Identification of wetlands and SAR plants as preliminary constraints. Focused assessment, including confirmation of significant species, within construction footprints. Traditional knowledge and cultural value of wild plant species and their habitats. Aerial and ground-based confirmation of valued vegetation communities (e.g., large stands of white pine, wetlands).	Field observations and confirmation of SAR, etc. (spring, summer, fall) Traditional (summer, fall 2011) Focused vegetation assessments may be required at design and pre-construction phases to confirm SAR or significant plants or plant communities

3.0 ECOLOGICAL STUDY APPROACH

The ecological baseline study approach has been designed to determine site sensitivity to the Project through a broad landscape-scale analysis using known ecological data and life history information, supplemented by new data collected within the study area. Sensitive areas will be identified as preliminary constraints on the basis of such criteria as habitat features, vegetation community, wildlife distribution and migratory patterns. Areas of lower sensitivity will emerge as preliminary opportunities for Project footprint, including access roads, transmission lines and turbine sites. Fine tuning of the layout and configuration will involve focused wildlife habitat identification and avoidance, particularly for Species-at-Risk and plants and wildlife that have traditional cultural significance. These approaches allow for the parallel collection of seasonally dependent ecological information about the site, as well as allow for the design and development of the Wind Power Project within the FIT Program timelines. Consultation with the Responsible Authority is a key component of the work plan and will be initiated early in the process to facilitate and incorporate meaningful feedback.

3.1 PRELIMINARY INFORMATION ACQUISITION AND DESKTOP REVIEW

Initial tasks of the baseline ecological studies were focused on compiling, reviewing and manipulating aerial and satellite imagery and forest/ecological mapping available for the study area. Due to the isolation of the site and lack of established transportation routes within the study area, much of the data available for use in this study include studies that were initiated by HIFN to serve their needs and remote sensing information. Work plan components for preliminary information acquisition include:

- Identification of regional natural heritage features;
- Assessment of landscape component features;
- Forest Resource Inventory Mapping and Ecological Lands Mapping;
- Database query on all known records of birds, bats, and SAR from local band, other studies conducted in the vicinity of the project site, local agency, naturalist and Bird Studies Canada, and other expert records; and
- A literature review of relevant plant and wildlife species studies, conservation objectives and issues related to the pathways of effect identified for the Project.

Assessment of landscape components utilized the following satellite imagery sources:

- FRI aerial photo ortho-images;
- Geoeye-1 new satellite images (0.5 m pixel);
- IKONOS archived satellite images (1 m pixel);
- FRI classification mapping;
- FRI Colour Infrared images; and,
- FRI DEM.

The imagery listed above was used to identify and map discrete units of habitat and cover, and these are among the primary constraints to the wind farm layout. Raw satellite imagery (Figure 2) and Forest Resource Inventory (FRI) mapping (Figure 3) and its associated layers are used to obtain other information regarding the topography and terrain associated with the site and was used to classify data into Ecological Lands Classification (ELC) Units. The ELC is used to delineate areas of landscape for sensitivity analysis based on vegetation community types and habitat associations for wildlife species and communities.

At present, the focus of the ELC-based analysis is identification and delineation of wetland units throughout the study area. The ELC analysis has been based on satellite and air photo images, supplemented by ground-truth surveys by the project botanist through reconnaissance of the study area by fixed wing aircraft, boat and pedestrian surveys. This has provided a preliminary constraint layer for the study area, as there are numerous ecological, engineering and economic justifications for avoiding intrusion of Project elements into wetlands. Specifically, minimizing intrusion into and crossing of wetland areas is a key mitigation strategy to limit Project effects on sensitive plant communities, potential SAR plants, fish and fish habitat, key amphibian habitats including breeding, nursery and overwintering areas, key reptile habitats including overwintering sites of SAR turtles and snakes and important breeding and feeding habitat for many other wildlife species.

3.2 FIELD INVESTIGATIONS

Screening level information will be obtained for the identification of major constraint areas, such as hibernaculae of bats and reptiles, major flyway corridors, waterfowl congregation areas, major wetlands, and areas of high quality vegetation communities (unique habitats such as fens, bogs, seepage zones, sand barrens, alvars) which have the potential for rare plants; and forested areas with high affinity for breeding birds and other wildlife. Once the major constraint areas are identified, it is anticipated that the information can be used to plan project components away from these zones. As constraints and Project design are considered in an iterative fashion, focused confirmation of plant and wildlife habitat, species and community characteristics will be undertaken on a site-specific basis within the project study area to support avoidance, mitigation and restoration strategies.

Because of the timeline associated with this project, preliminary field work collection was recommended to ensure that seasonally dependent data is collected in a timely manner to allow for fine tuning of the wind turbine layout. Biological fieldwork commenced in late April 2011 through reconnaissance investigations of the site and field observations of spring migratory birds, breeding birds, and bats. Incidental observations for other species and habitat features were also collected at that time.

3.2.1 Avian Surveys

Avian surveys have been targeted for migratory and breeding birds, as detailed in the following sections. The sections are separated by breeding bird consideration and field approach, and the migratory birds and field approach.

3.2.1.1 Breeding Bird Survey Considerations

- **Waterfowl –** breeding waterfowl are not expected to be abundant, however could be present in wetlands or small lakes and ponds.
- **Raptors –** breeding raptors may be at increased risk of collision with turbines because they tend to fly high and traverse the area repeatedly on a daily basis.
- **Colonial Waterbirds –** nesting colonies of species such as Double-crested Cormorant, Great Blue Heron, Black-crowned Night-Heron, gulls and terns may be present in the study area, and if so could be a concern depending on their location relative to the Project.
- **Passerines –** although not expected to be at great risk of mortality from turbines, habitat of breeding passerines could be affected by the Project. At this point, field studies have focused on covering the study area well and covering representative habitats to obtain a landscape-level understanding of breeding bird community and distribution.

3.2.1.2 Field Study Approach to Breeding Birds

- **Waterfow**l – incidental observations were made by field staff while in the study area during the 2011 breeding bird season.
- **Raptors** – An aerial survey was flown on June 9th to search for large nests (herons, hawks and eagles). Territories for more secretive species may be detected during breeding bird point counts (see below) or incidentally.
- **Colonial Waterbirds** – Aerial survey conducted to discover nesting colonies of Great Blue Heron. Gull and tern colonies will be investigated by a coastal survey conducted by boat, as well as observations from the air.
- **Passerine**s – Point counts and incidental observations will be used as the effective means for developing a species list for the site. Point counts followed EC guidelines, and will be used for the purpose of contributing to existing knowledge of the use of the site by birds during the breeding season, and to facilitate comparisons with the post-construction breeding bird community. Surveys were undertaken twice during the breeding season. Points were placed in representative habitats and distributed across the landscape to capture any habitat gradient which may be present across the study area.

Monitored Species / Behaviour	Sampling Method	Timing and Frequency
Waterfowl	Incidental observations from ground and aerial surveys	Throughout breeding season
Raptors	Aerial survey for large stick nests (Bald Eagle, Osprey), incidental observations.	Breeding season
Colonial Waterbirds	Aerial survey for heron nests, boat-based surveys of outer islands for other species	Breeding season
Passerines	A series of point counts established across the study area	Each point surveyed twice between May 30 and July 7, at least 10 days apart

3.2.1.3 Migratory Bird Considerations

- **Waterfowl** – migrating waterfowl may use Henvey Inlet or inlets to the north or south as stopover areas and this potential needs to be verified by field observations. Of particular concern would be overland flights by migratory waterfowl between Henvey Inlet and inlets to the north or south.
- **Raptors** – migrating raptors typically follow shorelines of Great Lakes. Field investigations will need to determine the magnitude of raptor migration through the site and where it is concentrated.
- **Passerines (nocturnal migrants**) – the majority of passerines migrate at night, at altitudes from close to ground level to well over 1 km. They are at risk of collision with towers and with the turbines, with an increased risk by lighting on the towers. Field investigations will need to determine the magnitude and altitude of nocturnal migrants across the study area. Nocturnal passerine migration generally occurs along a broad front, and flight altitude is largely determined by weather, however local features such as ridges or valleys may concentrate the number of migrants exposed to risk. Fortunately, the study area is characterized by relatively low relief.
- **Passerines (stopover sites)** – migration is energetically demanding for passerines and they require stopover habitat to feed and rest before continuing with migration. Habitat destruction in stopover areas is thought to be a primary cause of decline in migratory birds. This may not be as much of a concern for this project since the habitat in the surrounding area is fairly intact and the Project footprint would disturb only a small percentage of available natural habitat within the study area. However, shorelines can concentrate migrants so field investigations need to determine whether some areas are particularly important stopover sites.

3.2.1.4 Proposed Field Study Approach to Migratory Birds

- **Waterfow**l – visual monitoring, including passive IR camera techniques, and aerial observation surveys using fixed wing aircraft will be used to determine the magnitude and extent of waterfowl migration. These techniques will be employed at the site during the Fall Migration period in 2011 and Spring Migration in 2012.
- **Raptors** – raptor observation posts have been established in three locations along the Inlet. Regular visual watches during spring and fall migration are a straightforward method to determine magnitude of use and species involved. Diurnally migrating passerines such as Blue Jays and blackbirds will also be observed by this method.
- **Passerines (nocturnal migrants)** – visual and passive IR surveys will be used to monitor the movement of passerines during the Fall Migration period in 2011 and Spring Migration in 2012. The survey will utilize a number of locations situated along an east-west transect, accessible by boat along Henvey Inlet.

- **Passerines (stopover sites)** – regular stopover counts will be undertaken along a series of transects which will be surveyed weekly during the migration period. All birds encountered will be recorded (species & number).

Monitored Species / Behaviour	Sampling Method	Timing and Frequency
Waterfowl	Fixed wing aerial surveys of the study area and the immediately surrounding region	3 aerial surveys of region spaced throughout the migration period
Raptors and Diurnal Migrants	Standardized watches from 3 sites along the inlet.	September & October; 3 to 4 days per week
Nocturnal Migrants	Thermal infrared camera will be used to observe nocturnal migrants. A number of acoustic monitoring units will be spaced along the inlet to record night migrating birds.	IR – 2 weeks in September Acoustic – September to October
Stopover sites (passerines)	A series of transects will be set up across the study area and surveyed weekly for migrants	Mid August to October; 2 to 3 times per week

3.2.2 Bat Surveys

A screening level survey will be implemented in 2011 to determine the level of use of the site by bats, to identify significant habitat, and important habitat features or high use areas in the project area. Acoustic monitors were deployed in June and July 2011. The results of the 2011 acoustic monitoring will be reviewed to determine if additional monitoring is warranted perhaps in a more focused assessment based on initial data analysis and emerging Project layout.

3.2.2.1 Acoustic Monitoring of Bats

GENIVAR and LGL have initiated preliminary acoustic monitoring in June and July 2011 to attempt to identify the relative levels of bat activity across the study area during the late spring and early summer. These surveys are not focused on any anticipated turbine layout, but were intended to achieve broad geographical coverage of the study area, utilizing the established breeding bird routes for logistical efficiency. This preliminary data will contribute to a landscape-level understanding of bat distribution throughout the study area. The work plan includes:

- Deployment of 10 automatic acoustic monitors (Wildlife Acoustics SM2BAT units) at sites throughout the study area;
- Deployment and retrieval along or adjacent to existing breeding bird study routes for logistical efficiency;
- Shifting monitors to a number of locations to increase coverage; and,
- Incidental observations of bats during field surveys.

3.2.2.2 Bat Migration Monitoring

Bat migration will be investigated concurrently with bird migration with the use of visual observations augmented by the use of passive IR camera. The fall migratory study period from August to October is intended to capture peak bat activity in August.

3.2.3 Wildlife Habitat, Fish Habitat, and Species-at-Risk

Unlike other wind farm projects where the majority of wind turbine components will be situated in remnant agricultural lands, the Nigig Power Wind Farm Project will be situated in relatively undisturbed lands. Accordingly, it can be assumed that the ultimate wind farm location will be within an area already occupied by native flora and fauna, including several SAR. Blanding's Turtle, Five-lined Skink, Fox Snake, Hognose Snake and Massasauga Rattlesnake have been confirmed in the study area. At least one SAR plant species may occur within wetlands in the study area, although it cannot be confirmed until August or September.

Early indications are that wildlife SAR may be broadly distributed throughout the study area, occupying specific suitable habitats within the mosaic of upland and wetland that characterizes the local terrain. Baseline ecological investigations may benefit from incidental and focused confirmation of species presence; however detailed identification of specific habitats and occurrences is likely to be focused during an iterative detailed design and "tweaking" of the Project layout. This approach is proposed to address fish habitat and wildlife habitat for plants, amphibians, reptiles, birds and mammals, as detailed avoidance and mitigation strategies are developed using known species-specific life history and habitat associations. Avoidance of critical habitats to the extent possible will be a key strategy, in combination with identification and use of timing windows to avoid harm to sensitive seasonal life stages (e.g., nests) or during vulnerable periods (e.g., hibernation, gestation). Where sensitive habitats may be disturbed, focused mitigation may include relocation of individual specimens and associated habitat elements such as cover items (e.g., rocks and logs) outside of the work area. Mitigation/avoidance strategies throughout the Project phases will shift from early identification of broad preliminary constraints at a landscape level to the site-by-site implementation of mitigation plans during design, assessment and construction of access roads, watercourse crossings, turbines and transmission infrastructure. It is anticipated that ongoing consultation with CWS will occur throughout the project in relation to these species.

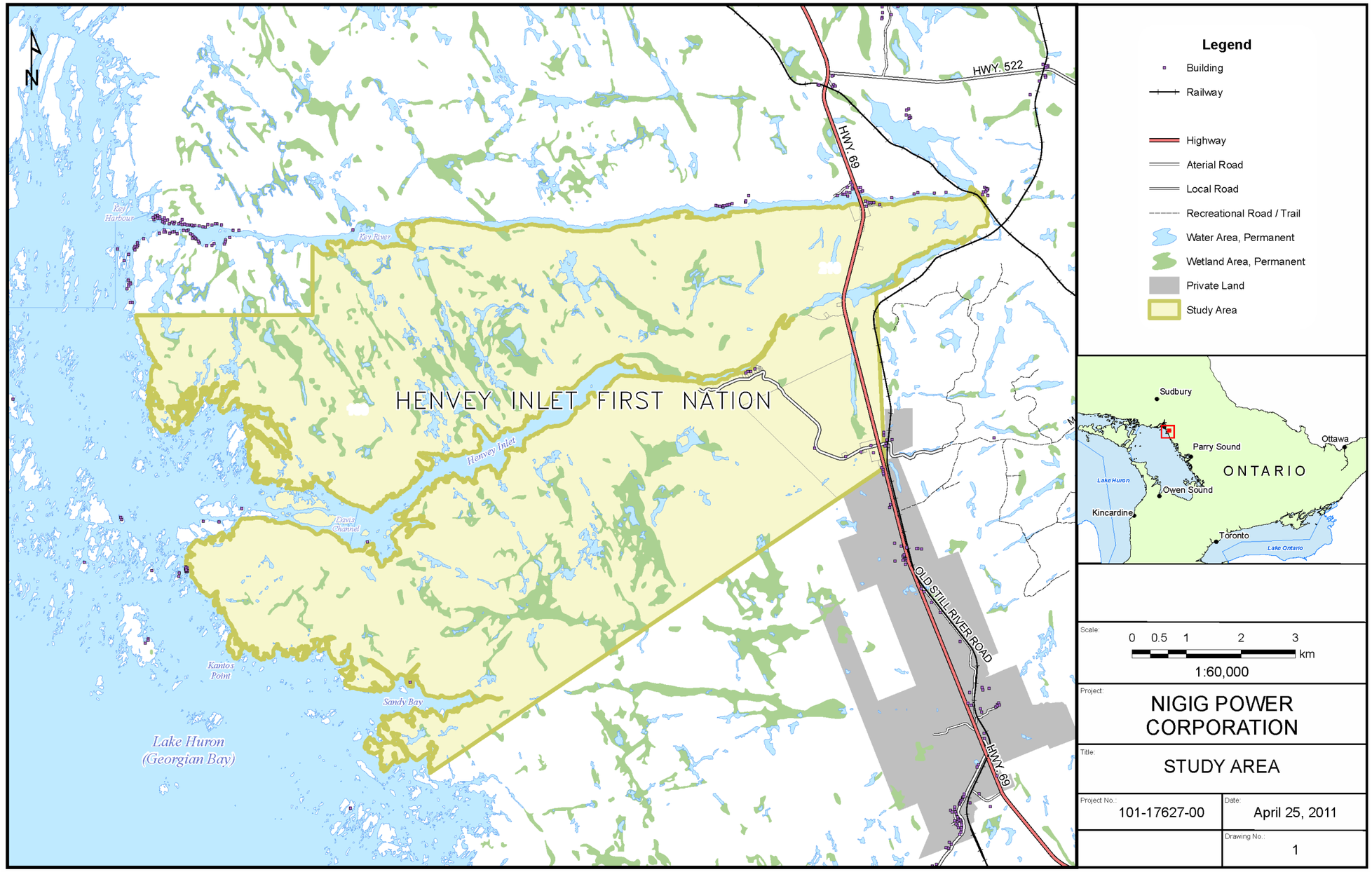
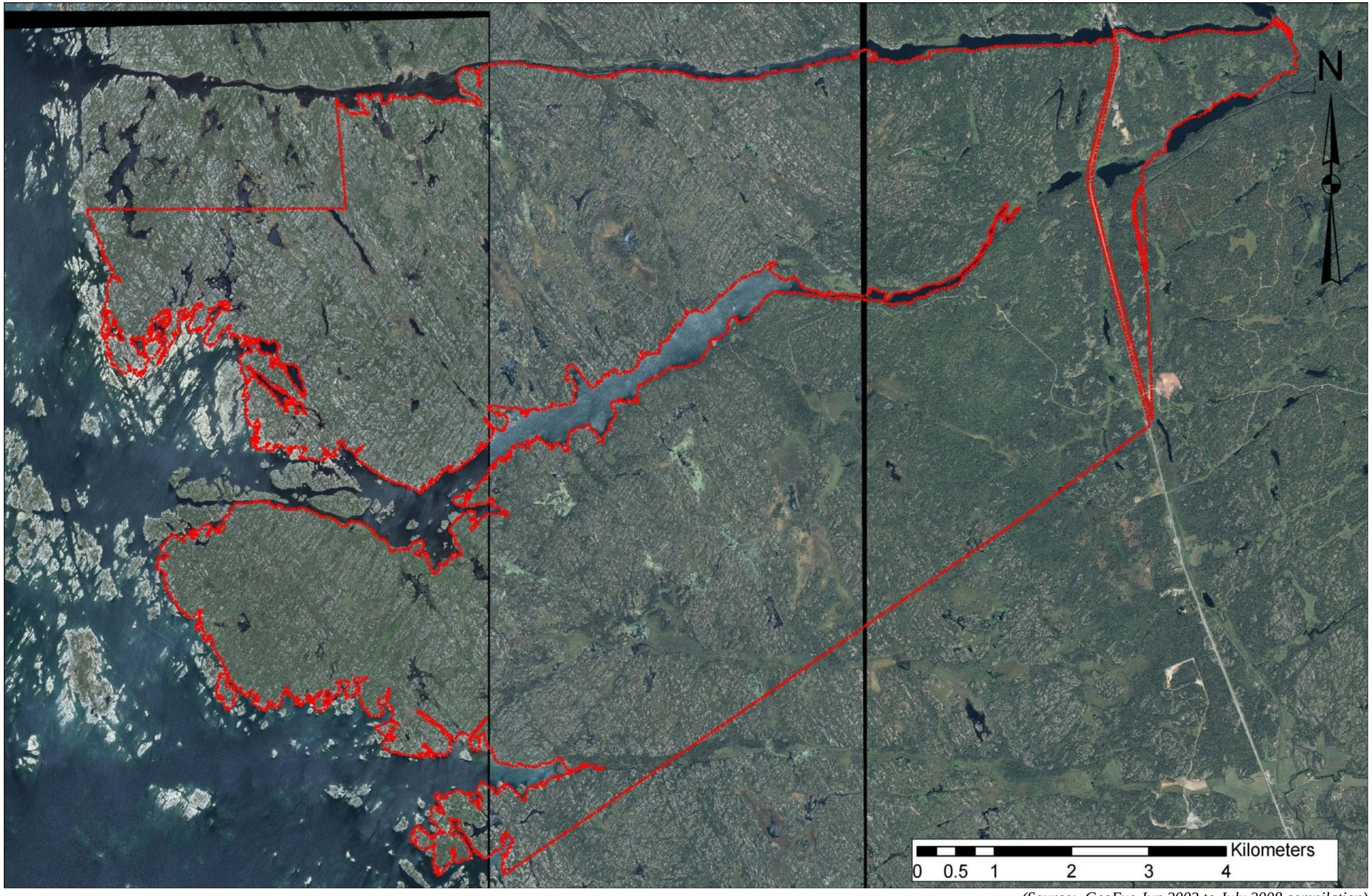
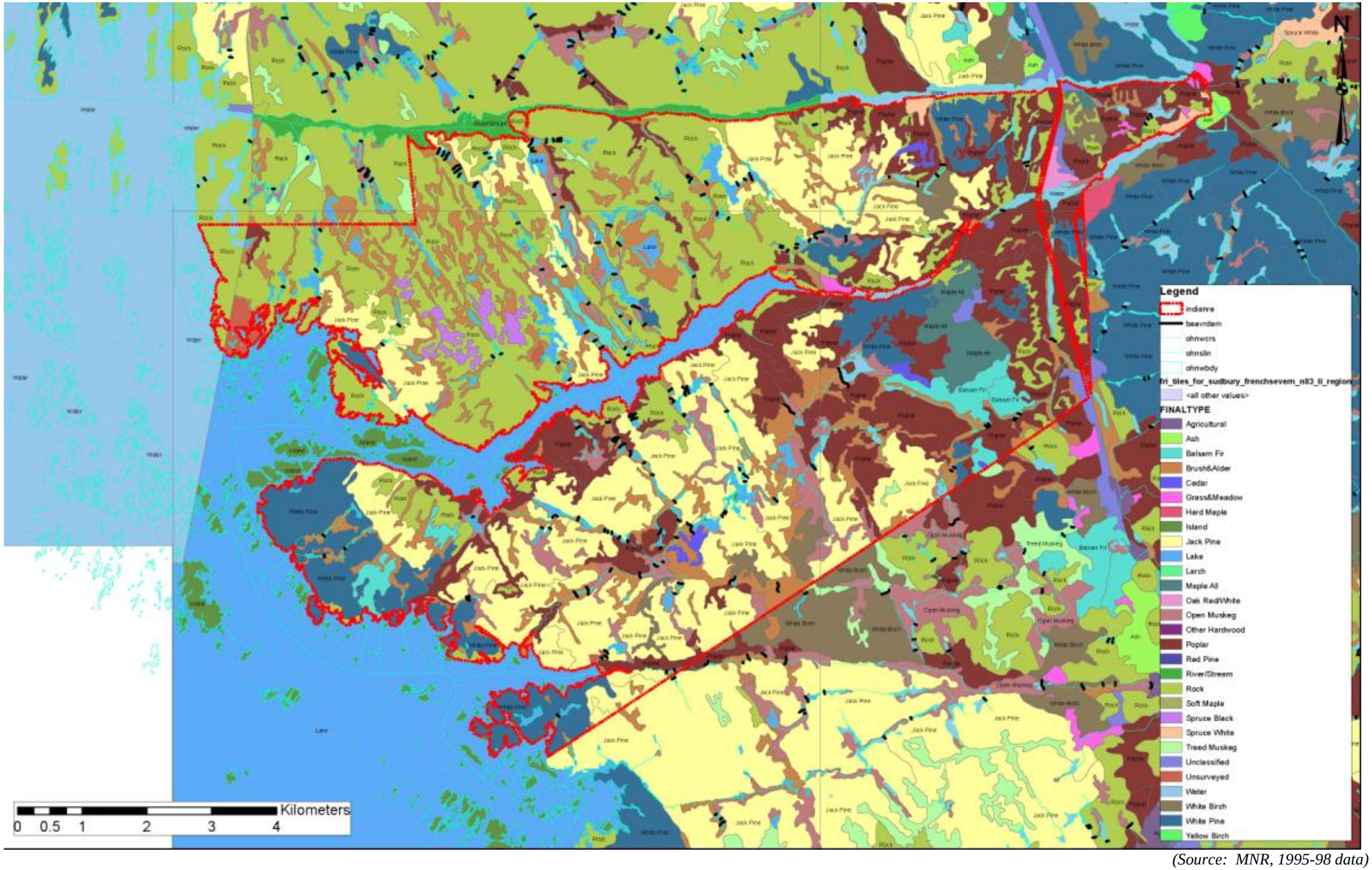


Figure 1 Location of Nigig Power Wind Farm Project Study Area



(Source: GeoEye Jun 2003 to July 2008 compilation)

Figure 2 Satellite Imagery of the Nigig Power Wind Farm Project Area (Project Study Area shown in red)



(Source: MNR, 1995-98 data)

Figure 3 Forest Resource Inventory of the Nigig Power Wind Farm Project Area (Project Study Area shown in red)

2013 TERRESTRIAL SURVEY
WORK PROGRAM

File No. 160960770
March 2013

Prepared for:

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Henvey Inlet Wind Project

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Appendix A

1.0 Terrestrial Field Program

Stantec Consulting Ltd. ("Stantec") is providing this work plan to Environment Canada for the terrestrial field investigations for the 300 MW, Feed-In Tariff ("FIT") Contracted, Henvey Inlet Wind Project (the "Project"). The key Project elements include:

i) *On-Reserve Facilities:* up to 120 wind turbines, a transformer station, operations and maintenance building, access roads, collector lines, and ancillary facilities on Henvey Inlet First Nation Lands (Reserve No. 2); and

ii) *Off-Reserve Facilities:* approximately 90 km of 230 kV, double circuit overhead transmission line from Reserve No. 2 to the Town of Parry Sound, Ontario where the project will interconnect with the provincial electricity grid at Hydro One Networks Inc.'s ("Hydro One") existing Parry Sound Transformer Station. The transmission line, as presently proposed, would be located within the current and future rights-of-way held by the Ontario Ministry of Transportation for King's Highway 69/400.

Save the Project's transmission line and interconnection works at the Parry Sound Transformer Station, all Project infrastructure will be located on Henvey Inlet First Nation Reserve Lands (Reserve No. 2). Preliminary siting of the wind turbines, collector lines, operations and maintenance building, transformer station, and access roads are in progress and are taking into account important cultural and environmental features as they are identified through field surveys, traditional ecological knowledge studies, and engagement efforts with the Henvey Inlet First Nation community.

For the transmission line, as proposed to be located within the current and future rights-of-way held by the Ontario Ministry of Transportation for King's Highway 69/400, the natural heritage field investigations for the majority of the transmission corridor fall under the requirements of Ontario Regulation 116/01 of Ontario's *Environmental Assessment Act* and will therefore be subject to review and approval by the Ministry of the Environment. However, portions of the highway corridor traverses roughly 35 ha of the Magnetewan First Nation Reserve (No. 1) and about 11 ha of the Shawanaga First Nation Reserve (No. 17), lands which are under federal jurisdiction.

Throughout this document, the wind project component on the Reserve Lands will be referred to as the Project Location and the transmission line corridor will be referred to as the Transmission Line. Collectively, these areas will be referred to as the Study Area for the purpose of the terrestrial survey work program.

The Project Location and Transmission Line alignment are shown on **Figure 1**.The purpose of the natural environment field program is to collect data relevant to vegetation communities (ecosites), wetlands, wildlife habitat, and Species at Risk. The objective of this work plan is to seek Environment Canada's agreement with the study methodologies and protocols set out herein for terrestrial investigations of the Project during the late winter, spring, summer and fall of 2013.

2.0 Field Program Overview

The Project Location is within the Henvey Inlet First Nation Reserve along the eastern shore of Georgian Bay, south of French River Provincial Park and directly north of North Georgian Bay Shoreline and Islands Conservation Reserve. Generally, the Project Location has shallow soils, with many rocky outcrops forming longitudinal ridges running on a northwest to southeast axis, and is divided roughly in half by Henvey Inlet. Numerous wetland pockets are located between the ridges and across the Project Location, with upland areas supporting forested areas of poplar and jack pine.

The characteristics of terrestrial habitat and areas of potential significance or sensitivity will first be identified as part of the early-on consultation with Henvey Inlet First Nations and relevant agencies, as well as a review of the available natural heritage information. Information gained through the consultation process and desktop review will be supplemented by general aerial and ground-level (by foot or boat) surveys of the Study Area to fine-tune the field program and assist in siting monitoring stations. Wildlife and vegetation surveys will begin in March, when raptors begin their spring migration and will continue into November, when the final fall migratory waterfowl are expected to move through the Study Area.

2.1 ECOSITE CLASSIFICATION AND WETLANDS

Ecosite classification forms the backbone of wildlife habitat assessment. For the Project, the Ecosites of Ontario classification system (Banton *et al.*, 2009) will be used as it includes forest and non-forest communities as well as wetlands.

A wetland is land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity which are adapted to a wet environment (The Federal Policy on Wetland Conservation (“FPWC”), Environment Canada, 1991). The protection and conservation of wetlands on federal lands is mandated by the FPWC. Mitigation of adverse environmental effects on wetlands is guided by the FPCW goal of achieving ‘no net loss of wetland functions’. The no net loss principal can be achieved by using a hierarchical sequence of mitigation alternatives: avoidance, minimization, and compensation. Wetlands on federal lands can be described using The Canadian Wetland Classification System (National Wetlands Working Group, Second Edition, 1997).

Provincially, the Ontario Wetland Evaluation System (Ministry of Natural Resources, 2002), is used to map and score wetlands based on biological productivity and diversity, human use, hydrologic functions, and unique characteristics such as geographical rarity. It is anticipated that no wetlands have been evaluated using the OWES on the Henvey Inlet First Nation Reserve Lands.

2.2 WILDLIFE HABITAT

Wildlife habitat is defined as an area where plants, animals and other organisms live, including areas where species concentrate at a vulnerable point in their life cycle and that are important to migratory and non-migratory species. The work program has been designed to capture those wildlife species and their habitats which may occur in the Study Area and may be influenced by the Project.

2.3 ENDANGERED, THREATENED AND SPECIAL CONCERN SPECIES

A desktop review of the MNR Natural Heritage Information Centre (NHIC) database, as well as provincial atlases for breeding birds, mammals, reptiles and amphibians, was conducted to identify species of conservation concern in the vicinity of the Study Area. Twenty-seven terrestrial species listed as endangered, threatened or special concern at the provincial and federal level have the potential to occur within the Study Area (**Table 1**). Several of these species were recorded within the Project Location during previous terrestrial field investigations by LGL Limited. Site investigations in the proposed 2013 terrestrial work program will assess the presence and identify preferred habitat of these species.

Table 1: Endangered, threatened and special concern terrestrial wildlife species potentially present within the Study Area

Type	Common Name	Scientific Name	S - Rank	COSSARO	COSEWIC
Reptile	Stinkpot / Eastern Musk Turtle	*Sternotherus odoratus*	S3	THR	THR
Reptile	Blanding's Turtle	*Emydoidea blandingii*	S3	THR	THR
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Reptile	Snapping Turtle	*Chelydra serpentina*	S3	SC	SC
Reptile	Northern Map Turtle	*Graptemys geographica*	S3	SC	SC
Reptile	Eastern Hog-nosed Snake	*Heterodon platirhinos*	S3	THR	THR
Reptile	Eastern Foxsnake (Georgian Bay)	*Pantherophis gloydi*	S3	THR	END
Reptile	Eastern Massasauga (Great Lakes/ St Lawrence)	*Sistrurus catenatus catenatus*	S3	THR	THR
Reptile	Eastern Ribbonsnake	*Thamnophis sauritus*	S3	SC	SC
Reptile	Milksnake	*Lampropeltis triangulum*	S3	SC	SC
Reptile	Five-lined Skink (Southern Shield population)	*Plestiodon fasciatus*	S3	SC	SC
Bird	Least Bittern	*Ixobrychus exilis*	S4B	THR	THR
Bird	Eastern Whip-poor-will	*Antrostomus vociferus*	S4B	THR	THR
Bird	Chimney Swift	*Chaetura pelagica*	S4B, S4N	THR	THR
Bird	Barn Swallow	*Hirundo rustica*	S4B	THR	THR (NS)
Bird	Bobolink	*Dolichonyx oryzivorus*	S4B	THR	THR (NS)
Bird	Eastern Meadowlark	*Sturnella magna*	S4B	THR	THR (NS)
Bird	Bald Eagle	*Haliaeetus leucocephalus*	S4B,S2N	SC	SC
Bird	Common Nighthawk	*Chordeiles minor*	S4B	SC	THR
Bird	Olive-sided Flycatcher	*Contopus borealis*	S4B	SC	THR
Bird	Eastern Wood-Pewee	*Contopus virens*	S4B	-	SC (NS)
Bird	Wood Thrush	*Hylocichla mustelina*	S4B	-	THR (NS)

Table 1: Endangered, threatened and special concern terrestrial wildlife species potentially present within the Study Area

Type	Common Name	Scientific Name	S - Rank	COSSARO	COSEWIC
Bird	Golden-winged Warbler	*Vermivora chrysoptera*	S4B	SC	THR
Bird	Canada Warbler	*Wilsonia canadensis*	S4B	SC	THR
Mammal	Little Brown Myotis	*Myotis lucifugus*	S5	END	END (NS)
Mammal	Northern Myotis	*Myotis septentrionalis*	S3?	END	END (NS)
Mammal	Tri-coloured Bat	*Perimyotis subflavus*	S3?	-	END (NS)

COSSARO: Committee on the Status of Species at Risk in Ontario
COSEWIC: Committee on the Status of Endangered Species in Canada
S2 – Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
S3: Vulnerable—Vulnerable in the province, relatively few populations (often 80 or fewer)
S4: Apparently Secure—Uncommon but not rare
S5: Secure—Common, widespread, and abundant in the province
S#B: Breeding status rank
S#N – Non-breeding status rank
S? – Rank Uncertain
NAR: Not At Risk
END: Endangered
THR: Threatened
SC: Special Concern
N/A: not applicable
NS: Not on Species at Risk Act Schedule

3.0 Proposed Field Work Program

Due to the known presence of Species at Risk, the project is considered to have "Very High" site sensitivity and would be ranked as "Category 4" by Environment Canada's "Wind Turbines and Birds: A Guidance Document for Environmental Assessment" (2007a). Projects in this category usually require comprehensive baseline surveys; a requirement that has been considered in the development of this work program.

The survey protocols are consistent with Environment Canada's "Recommended Protocols for Monitoring Impacts on Wind Turbines on Birds" (Environment Canada, 2007b) and on Environment Canada's comments on LGL Limited's 2011 workplan for the Project. Recommended protocols for species at risk are based on Stantec's technical expertise and on experience with the Ministry of Natural Resources species-specific surveys requirements.

Detailed protocols of each survey type are outlined below. The suite of surveys proposed along the Transmission Line differs slightly than those within the Project Location, due to differences in potential environmental effects. For example, migratory bird surveys are not proposed along the Transmission Line. **Table 4** provides a summary of all proposed surveys, including a breakdown of which surveys are to be conducted within the Project Location and those to be conducted along the Transmission Line.

3.1 GENERAL RECONNAISSANCE (EARLY APRIL)

Given the limited access in and around the Project Location and the relatively rugged topography and abundance of wetlands in the Study Area, multi-purpose broad-scale surveys will be completed to obtain an overall understanding of the landscape, and to put the detailed field study locations in context.

An aerial survey by helicopter will be conducted in early April to observe the landscape without leaf cover and at a time of pronounced hydrological activity (i.e. spring melt). Leaf-off conditions will also allow a search for habitat features such as stick nests and wetland types. A reconnaissance survey of the Project Location by boat and foot will be undertaken in early April, guided by local members of the Henvey Inlet First Nations. The purpose of the reconnaissance survey will be to gain a better understanding of site access and points of interest, including locations of rare species, based in local knowledge.

3.2 SPRING MIGRATORY BIRD SURVEYS

3.2.1 Spring raptor migration (Ten surveys, early March to end of April):

Monitoring will consist of ten surveys throughout the spring migration period (March to end of April) to record presence of diurnal migrant raptors. Surveys will be comprised of six-hour point counts starting at 9:00 am, conducted by two observers stationed at two appropriate vantage

points within the Project Location. When site access allows, surveys stations will be situated in the east and west portions of the Project Location. However, during times of year when site access is limited (i.e. late winter, early spring) alternative locations may be used with efforts to maximize spatial coverage.

All raptors observed during the surveys will be recorded and mapped. Behaviour of the raptors will be noted with emphasis on flight height and determining which individuals were actively migrating as opposed to staging (e.g. hunting, perching, etc.). For actively migrating raptors, flight paths will be mapped.

3.2.2 Spring passerine migration (Eight surveys, early April to late May):

Natural habitat located in close proximity to the Georgian Bay shoreline provides stopover habitat for migrating passerine birds. Eight weekly surveys are proposed in April and May. Monitoring will consist of ten, 500m long transects distributed throughout the Project Location. Transects will be placed in different habitat types (i.e. woodland, rock barren and wetland). Given the variable nature of vegetation communities within the Project Location, it is likely most 500m transects will include more than one habitat type. A description of the habitat along each of the 10 transects will be recorded.

Surveys will be conducted in the morning, between dawn and approximately 10:00 am. A tally of all species observed will be recorded on each transect. These surveys will include characterizing the abundance and diversity of passerines within the Project Location.

3.2.3 Spring waterfowl migration (Four surveys, April to late May):

Spring monitoring for migrating waterfowl will be focused along Henvey Inlet and will consist of four bi-weekly surveys undertaken by boat in April and May. Surveys will include waterfowl counts to record species and number of individuals observed along the inlet, as well as characteristics of the wetlands to support migrating waterfowl (e.g. size, vegetation, permanence, etc.).

The use of scattered wetlands and ponds throughout the Project Location by staging waterfowl will be assessed through the spring passerine surveys.

3.3 BREEDING BIRD SURVEYS

3.3.1 Daytime breeding birds (Two surveys, late May to early July):

Two rounds of breeding bird surveys will be conducted in each major habitat type with the Study Area (woodland, rock barren and wetland). Surveys will consist of ten-minute point counts, in conjunction with area searches (wandering transects) between point count locations. The area searches will allow for collection a comprehensive species list, whereas point counts will provide information on species density.

Surveys would take place starting 30 minutes before sunrise and continue until approximately 10:00 am. As per Environment Canada guidance, a minimum of 20 point counts will be sited in each major habitat type. However, given the variability of habitat types that occur within the Study Area, it is anticipated that many point counts may cover more than one habitat type.

In marsh habitat, play-back call surveys for marsh breeding birds will be conducted following the ten-minute point count, to assist in detection or more secretive marsh bird species, specifically, the threatened Least Bittern.

Location of all species at risk observations will be geo-referenced using a hand-held GPS unit, mapped and compared to ecosite classification to develop habitat mapping for each species.

3.3.2 Crepuscular breeding birds (Two surveys, May and June):

Eastern Whip-poor-will surveys will be conducted in suitable open habitat within forested areas. Surveys will be conducted in May and June and will consist of six-minute point counts at stations spaced within the Project Location and Transmission Line corridor. Due to the remote location of much of the Study Area, survey locations may be selected with consideration to access and surveyor safety.

Surveys will begin approximately 30 minutes after sunset within appropriate weather conditions (not in high winds, persistent rain or an overcast sky) and will, if possible, coincide with the full moon. All individuals heard will be recorded, with an estimated direction and distance from the observer.

3.3.3 Owls (One survey, April):

Given the difficulty in detecting owl species, the use of playback calls to elect a response will be used. A single survey in April is proposed, and will include various stations throughout the Project Location. Due to the remote location of much of the Study Area, survey locations may be selected based on facility of access and surveyor safety.

Surveys will begin approximately 30 minutes after dark and will consist of 10 minute point counts incorporating playback and periods of silent listening. All individual heard will be recorded, with an estimated direction and distance from the observer.

3.3.4 Raptor and colonial nesting birds (Two surveys, April and June):

Searches for large stick nests or “nest bowls” in trees, typically exhibiting a DBH (diameter at breast height) of >50 cm, will be conducted during the aerial reconnaissance prior to leaf-out. Searches will target trees along watercourses, with special attention afforded to large white pines, and swamps along large bodies of water, as well as other appropriate habitat within the Study Area. If present, nests will be surveyed for activity concurrent with breeding bird point counts and area searches in June.

3.4 AMPHIBIAN AND REPTILE SURVEYS

3.4.1 Western Chorus Frog and Salamanders (April):

Western Chorus Frog surveys will consist of 3-minute call counts at potential breeding habitat conducted in April, during appropriate weather conditions. This species breeds in small or shallow aquatic habitats associated with moist, open terrestrial habitat (COSEWIC, 2008c). Males call from the water and are typically active when air temperatures are above 5°C, although calls have been detected at air temperatures as low as -1°C (COSEWIC, 2008c).

Unlike many anurans, Western Chorus Frogs are generally very active throughout the day. As such, daytime survey will be used to cover larger portions of the Study Area than evening call surveys would permit.

Surveys for amphibian egg masses will take place concurrent with calling surveys. These will consist of perimeter surveys of suitable breeding ponds by trained field personnel. Egg masses of different species are often characteristic based on features such as where they are laid, how many eggs are in the mass, density of the egg mass, and whether or not the eggs are encased in jelly.

3.5 REPTILE HABITAT AND TARGETED SURVEYS (MAY AND JUNE):

Reptile habitat and targeted species surveys will take place in three stages.

Preliminary surveys for reptiles will also take place throughout the migratory and breeding bird survey periods. Field biologists familiar with reptile species identification will be conducting area searches and wandering transect surveys in a variety of areas providing habitat for reptiles at both the Project Location, weekly from early April until early July, and along the Transmission Line, weekly from late May until early July. Any incidental observations of turtles, snakes or lizards, including shed skins or shells, will be recorded on survey forms and used to refine the field survey program proposed for June.

Potential snake or turtle habitat within the Study Area will also be identified during Ecosite surveys, beginning in May. The habitat assessment will involve identification of potential reptile habitat features, including:

- Turtle overwintering habitat and snake/skink hibernacula;
- Nesting sites; and,
- Foraging habitats.

Targeted field surveys for reptile species at risk will occur in June. Timing of these surveys will coincide with a period of high activity for reptiles (nesting and foraging), but also when air temperatures encourage basking behavior. Surveys for snake species at risk and Five-lined Skink will consist of wandering transects through all appropriate habitat types (**Table 2**).

Additional survey effort will be directed toward areas with previous observations of these species which may indicate high quality or limited habitat. To the extent possible, surveys will be conducted on sunny days when air temperatures are a minimum of 15°C (ideally 20°C). Surveys for turtles will consist of daytime basking surveys from land or boat in suitable wetland and open water habitat (**Table 2**), and evening nesting surveys in potential upland nesting sites identified during Ecosite surveys. Basking surveys will be conducted on sunny days when air temperatures are a minimum of 15°C (ideally 20°C). Nesting surveys will take place on warm evenings (daytime air temperature >20°C), ideally before or after rainfall. All surveys will record species, number, location and behaviour of observed reptiles.

The purpose of the targeted surveys is to confirm habitat used by the various reptile species at risk within the Study Area and provide information on general abundance and distribution. Survey results will be used to produce detailed mapping of reptile habitat features which will be used to guide the siting layout process and maximize avoidance of sensitive features.

Table 2: General Habitat Description and Use by Reptile Species at Risk

Common Name	General Habitat and Use*
Turtles	
[redacted]	[redacted]
Blanding's Turtle	Lakes, ponds and wetlands with clear shallow water and muck bottoms. Will move between habitats within active season; aerial basking; nesting in late May to early July, in open sandy soil up to 2.5km from primary wetland, but typically within 400m of water; overwinter in marsh, bog or fen with >0.5m water depth.
Stinkpot	Shallow water in rivers, lakes and ponds with slow current and soft bottom; aquatic basking, often under floating vegetation; nesting in June, in shallow soil near water, occasionally in or under leaf litter; overwinter in primary habitat with muck bottom.
Northern Map Turtle	Large rivers and lakes with soft bottom; aerial basking; nesting June and July in sandy soil; overwinter in general habitat in areas with >5m water depth.
Snapping Turtle	All aquatic habitats, but rarely in moving water, prefer large water bodies associated with marsh and/or swamp; aquatic basking
Snakes and Lizard	
Eastern Hog-nosed Snake	Open forest and forest edges with sandy soil in proximity to water; egg-laying in late June and July in nests excavated in sandy soil, often under cover objects; hibernation in mammal burrows.
Eastern Foxsnake	Georgian Bay populations inhabit rock barrens with sparse trees and shrubs in close proximity to shoreline; basking under or near rocks or in rock crevices; egg-laying late June to July in rock crevices or decaying vegetation; communal hibernation in rock crevices near shoreline.
Eastern Massasauga	Georgian Bay populations use rock barrens, wetlands and shorelines; viviparous, bearing young in late summer; communal gestation under rock cover; hibernation in rock crevices or animal burrows where water level is close to surface.
Eastern Ribbonsnake	Wetland edges with low vegetation and open basking areas; often seen swimming; viviparous, bearing young in late summer; hibernation in rock crevices and mammal burrows.

Table 2: General Habitat Description and Use by Reptile Species at Risk

Common Name	General Habitat and Use*
Milksnake	Forest edges and open meadow; bask under cover objects; egg-laying May to July in loose soil, decomposing wood or vegetation; hibernation in rock crevices and mammal burrows, often communally and with other species.
Five-lined Skink	Open forest and rock barren; abundance of cover objects (rocks and woody debris) is important, longer/larger cover is preferred; nesting in shallow soil under cover objects.

* Habitat description and use data obtained from COSEWIC assessment and status reports.

3.6 BAT SURVEYS (TWO SURVEYS, JUNE):

Bat surveys will be conducted in conjunction with Whip-poor-will surveys. A portable, hand-held broad band acoustic monitor will be used to detect bat calls. Recorded bat calls will be analysed to guild or species, where possible, following completion of the field program. The goal of the bat surveys will be to determine the presence and relative abundance of bat species at risk.

3.7 ECOSITE, WETLAND AND VEGETATION SURVEYS

3.7.1 Ecosite Classification, including Wetlands (May to July):

Vegetation communities within the Study Area will be delineated on aerial photographs and confirmed during field investigations. Community characterizations will be based on the Ecosites of Ontario system (Banton et al., 2009) and will be identified to the Vegetation Type unit level.

The Ecosites of Ontario classification system includes wetlands. Searches for wetlands not previously identified within the Study Area will be conducted as part of the Ecosite surveys. If encountered, previously unidentified wetlands will be recorded through field notes, photographs and geo-referenced using handheld GPS units.

3.7.2 Rare flora (May to July):

Searches for rare plants and habitat supporting these plants will be conducted concurrent with Ecosite surveys, where possible, but may also require spring assessments for ephemeral species or mid-summer assessments for species where identification is dependent on the flowering period of the species. If encountered, rare plants or habitat will be recorded through field notes, photographs and geo-referenced using handheld GPS units.

A review of the MNR Natural Heritage Information Centre (NHIC) database (NHIC, 2012) indicates that two provincially rare vegetation communities are known to occur within the Study Area:

- Atlantic Coastal Plain Shallow Marsh Type; and,
- Buttonbush Organic Thicket Swamp Type

The following rare plant species (**Table 3**) may also be encountered in the Study Area:

Table 3: Rare Plant Species and Flowering Period

Common Name	Scientific Name	Flowering Period
Flowering Plants		
St. Lawrence Grape Fern	*Botrychium rugulosum*	Mid-Spring
Thread-like Naiad	*Najas gracillima*	Summer to Fall, seeds important to ID so survey at end of period
Large Round-leaved Orchid	*Plantathera macrophylla*	June to August
Snailseed Pondweed	*Potamogeton bicupulatus*	Early Summer to Fall, seeds important to ID so survey at end of period
Alga Pondweed	*Potamogeton confervoides*	Summer, seeds important to ID so survey at end of period
Twin-stemmed Bladderwort	*Utricularia geminiscapa*	July to August
Liverworts		
Liverwort sp.		Unknown, best period for general identification is June-August

3.8 FALL MIGRATORY BIRD SURVEYS

3.8.1 Fall passerine migration (Eight surveys, end of August to mid October)

Natural habitat located in close proximity to shorelines provides stopover habitat for migrating birds. Eight weekly surveys are proposed between the end of August and mid October. Monitoring will consist of ten, 500 m long transects distributed throughout the Project Location. The same transects will be used as in the Spring Passerine Migration surveys.

Survey will be conducted in the morning, between dawn and approximately 10:00 am. A tally of all species observed will be recorded on each transect. These surveys will include characterizing the abundance and diversity of passerines within the Project Location.

3.8.2 Fall waterfowl migration (Six surveys, September to October):

Fall monitoring for migrating waterfowl will be focused along Henvey Inlet and will consist of four bi-weekly surveys undertaken by boat in September through October. Surveys will include waterfowl counts to record species and number of individuals observed along the inlet, as well as characteristics of the wetlands to support migrating waterfowl (e.g. size, vegetation, permanence, etc.).

The use of scattered wetlands and ponds throughout the Project Location by staging waterfowl will be assessed through the Fall Passerine surveys.

3.8.3 Fall raptor migration (Ten surveys, September to October):

Monitoring will consist of ten surveys throughout the fall migration period (September to October) to record presence of diurnal migrant raptors. Surveys will be comprised of six-hour point counts starting at 9:00 am, conducted by two observers stationed at two appropriate vantage points within the Project Location. When site access allows, surveys stations will be situated in the east and west portions of the Project Location.

All raptors observed during the survey will be recorded and mapped. Behaviour of the raptors will be noted with emphasis on flight height and determining which individuals were actively migrating as opposed to staging (e.g. hunting, perching, etc.). For actively migrating raptors, flight paths will be mapped.

3.9 INCIDENTAL OBSERVATIONS

In addition to targeted wildlife surveys described above, all incidental observations of terrestrial wildlife or other significant sightings made during surveys throughout the 2013 field season will be recorded. Notes will be taken on the species, number of individuals, locations and behavior. Observations made early in the field season may be used to refine the remainder of the field program.

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Table 4: Summary of Natural Environment Field Program

Study	Mode	Frequency	Timing	Study Area
General Reconnaissance				
Aerial survey	Helicopter	Once	early April, prior to leaf-out	PL
Ground survey	Foot / boat survey with Henvey Inlet First Nations	Once	early April	PL
Bird Surveys				
Spring Migration				
Passerines	Ten, 500m long transects	Once per week, each transect (8 surveys)	Early April to late May	PL
Waterfowl Stopover and Staging	Henvey Inlet	Once every other week (4 surveys)	April to Late May	PL
Raptors	2 stations	Ten surveys	Early March to end April	PL
Breeding Birds				
Point Counts	Minimum of 20 stations in each major habitat type	Two rounds of surveys	Late May to early July	PL, TL
Area Searches	Wandering transect between point count stations	Two rounds of surveys	Late May to early July	PL, TL
Play-back call surveys	Stations in suitable habitat	Owls – once Marsh Birds – Two rounds of surveys	Owls – April Marsh Birds – May to July	PL, TL
Crepuscular surveys	In suitable Whip-poor-will habitat	Two round of surveys	May - June	PL, TL
Raptor and Colonial Bird Nests	Visual survey for raptor and colonial nesting bird nests	Twice – once to locate, once to confirm use	Concurrent with aerial reconnaissance, then with point counts to confirm use	PL, TL
Fall Migration				
Passerines	Ten, 500m long transects	Once per week, each transect (8 surveys)	End August to mid-October	PL
Waterfowl Stopover and Staging	Henvey Inlet only	Once every other week (4 surveys)	September to October	PL
Raptors	2 stations	Ten surveys	September to October	PL

Table 4: Summary of Natural Environment Field Program

Study	Mode	Frequency	Timing	Study Area
Bat Surveys				
Ultrasonic Recording Units	Handheld units	Twice	June, in conjunction with crepuscular surveys	PL, TL
Reptile Surveys				
General Habitat Survey	Habitat Assessment	Once	Concurrent with Ecosite and vegetation surveys	PL, TL
SAR Surveys	Targeted surveys for turtle, snake and lizard species at risk	Once	June	PL, TL
Amphibian Surveys				
Western Chorus Frog Call Counts	Daytime call surveys, including audio recordings	Once	April	PL, TL
Salamander Egg Mass	Daytime surveys in wetlands	Once	April, concurrent with frog call counts	PL, TL
FEC / Botanical Surveys				
Ecosite classification, including wetlands	Ground surveys	Once	May to July	PL, TL
Rare Plants – Spring Ephemerals	Ground surveys	Once	May and June	PL, TL
Rare Plants – Summer Botanical	Ground surveys	Once	July	PL, TL

PL – Project Location.

TL – Transmission Line.

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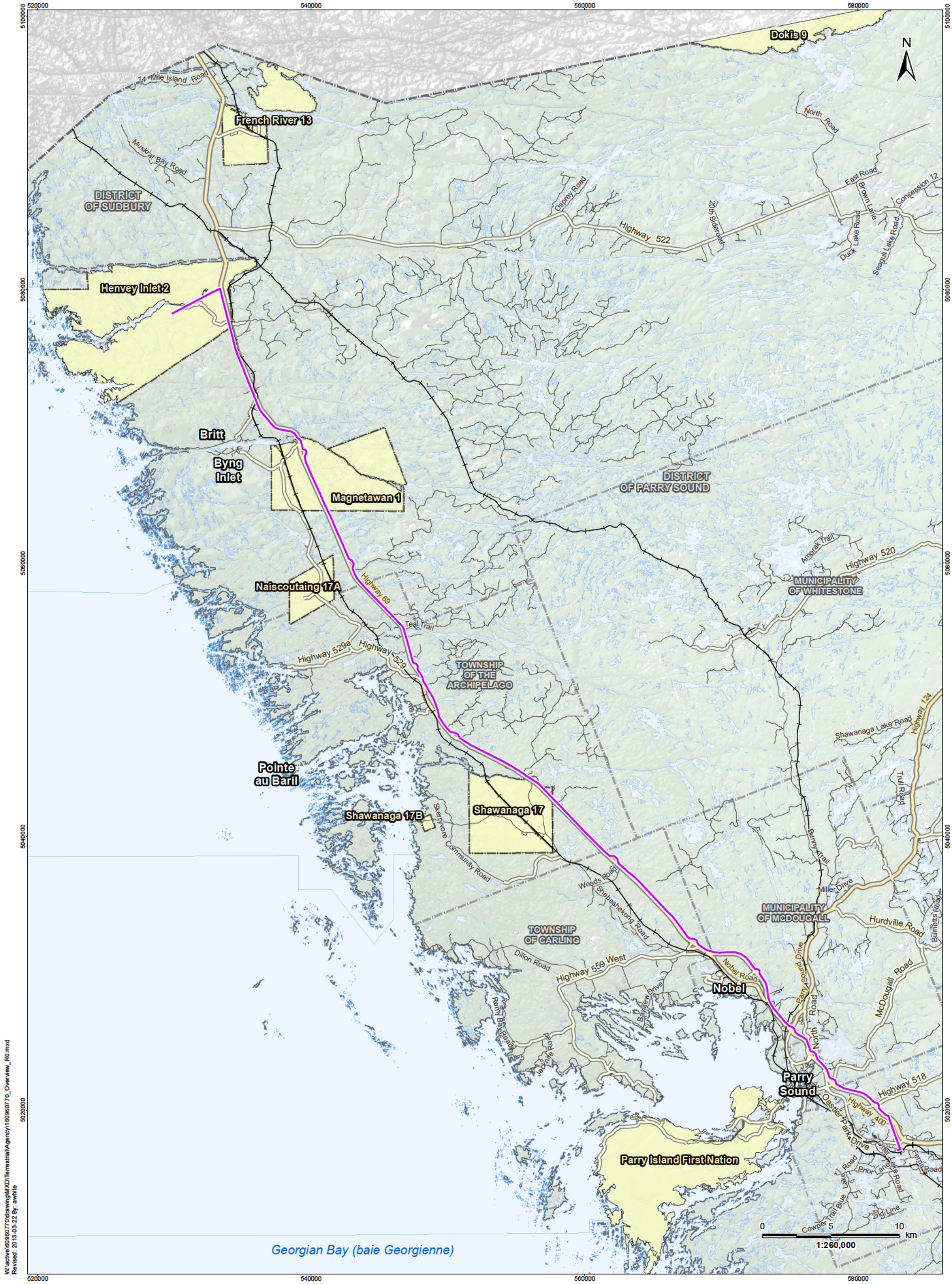
Appendix A

Figures



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Revised: 2013-03-22 By: awhite

March 2013
160960770

Stantec

Legend

- Proposed Transmission Line
- Railway
- Watercourse

Existing Features

- Highway
- Major Road
- Local Road
- First Nation Reserve
- Upper Tier Boundary
- Lower Tier Boundary
- Waterbody

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.

*Precise location of transmission line within highway corridor to be determined

Client/Project
NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
1

DRAFT

Title
Study Area Overview

Appendix C

Results of 2011, 2012 and 2013 Field Studies

Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

					Station	**1**				**2**				**3**					
					Habitat	Bog and Sedge Wetland				Bog and Sedge Pond				Sedge Beaver Pond					
					Water Present	Yes				Yes				Yes					
					Temperature (°C)	15				15				15					
					Wind	0:00				2 - 3				2 - 3					
					Cloud (%)	T core-cirrus clouds				Same as Station 1				Same as Station 1					
					Precipitation	None				None				None					
					Precipitation (24h)	4 - 5 mm				4 - 5 mm				4-5 mm					
					Sundown	Not Recorded				Not Recorded				Not Recorded					
					Start Time	23:10				23:19				23:45					
					End Time	23:13				23:23				23:50					
					Visit Number	Not Recorded				Not Recorded				Not Recorded					
					Survey Date	30-Apr-13				30-Apr-13				30-Apr-13					
Code	**Common Name**	**Scientific Name**	**ESA Status[1]**	**SARA Status[2]**	**S-rank[3]**	**Call Code**	**# of Calls IN**	**Call Code**	**# of Calls OUT**	**Call Code**	**# of Calls IN**	**Call Code**	**# of Calls OUT**	**Call Code**	**# of Calls IN**	**Call Code**	**# of Calls OUT**		
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5	No amphibians heard calling				No amphibians heard calling				No amphibians heard calling					
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4														
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3														
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5														
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5														
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5														

Note: Data were transcribed as recorded on the field notes provided by Stantec Consulting Ltd. (Stantec) to AECOM in October 2014.

Legend

1 ESA Status: The Endangered Species Act 2007 (ESA) protects Species at Risk (Threatened and Endangered) at a Provincial Level:
NAR - Not at Risk

2 SARA Status: The Species at Risk Act (SARA) protects Species at Risk (Special Concern, Threatened and Endangered) at a Federal Level. Species listed under Schedule 1 receive protection under SARA:
NAR - Not at Risk
THR - Threatened, A species likely to become endangered if nothing is done to reverse the factors leadings to its extirpation and extinction

3 S-rank: The natural Heritage provincial ranking system (provincial S-rank) is used by the MNRF Natural Heritage Information Centre (NHIC) to set protection priorities for rare species. Definitions are as follows:
S3 - Rare to uncommon in Ontario; usually between 20 and 100 occurrences in Ontario; may be susceptible to large-scale disturbances. Most species with an S3 rank are assigned to the watch list, unless they have a relatively high global rank.
S4 - Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5 - Very common and demonstrably secure in Ontario

Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

Station	4				5				6			
Habitat	Beaver Pond				Beaver Pond				Dam and Beaver Pond			
Water Present	Yes				Yes				Yes			
Temperature (^{o}C)	15				15				15			
Wind	2 - 3				2 - 3				2 - 3			
Cloud (%)	Same as Station 1				Same as Station 1				Same as Station 1			
Precipitation	None				None				None			
Precipitation (24h)	4 - 5 mm				4 - 5 mm				4 - 5 mm			
Sundown	Not Recorded				Not Recorded				Not Recorded			
Start Time	0:21				0:30				13:18			
End Time	0:25				0:34				13:20			
Visit Number	Not Recorded				Not Recorded				Not Recorded			
Survey Date	30-Apr-13				30-Apr-13				30-Apr-13			

Code	Common Name	Scientific Name	ESA Status[1]	SARA Status[2]	S-rank[3]	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5									No amphibians heard calling			
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4												
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3												
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5												
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5												
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5			Not recorded	10			Not recorded	6-8				

Note: Data were transcribed as recorded on the field notes provided by Stantec Consulting Ltd. (Stantec) to AECOM in October

Legend

1 ESA Status: The Endangered Species Act 2007 (ESA) protects Species at Risk (Threatened and Endangered) at a Provir
NAR - Not at Risk

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NAR - Not at Risk
THR - Threatened, A species likely to become endangered if nothing is done to reverse the factors leadings to its extirpati

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S3 - Rare to uncommon in Ontario; usually between 20 and 100 occurrences in Ontario; may be susceptible to large-scale
a relatively high global rank.
S4 - Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5 - Very common and demonstrably secure in Ontario

Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

Station	126				127				7			
Habitat	Marsh				Open Water (Inlet) and Shore				Channelized Swamp			
Water Present	Yes				Yes				Yes			
Temperature (^{o}C)	Not Recorded				Not Recorded				27			
Wind	Not Recorded				Not Recorded				2			
Cloud (%)	Not Recorded				Not Recorded				25			
Precipitation	Not Recorded				Not Recorded				Not Recorded			
Precipitation (24h)	Not Recorded				Not Recorded				Not Recorded			
Sundown	Not Recorded				Not Recorded				Not Recorded			
Start Time	21:27				Not Recorded				Not Recorded			
End Time	Not Recorded				Not Recorded				Not Recorded			
Visit Number	Not Recorded				Not Recorded				Not Recorded			
Survey Date	Not Recorded				Not Recorded				2-May-13			

Code	Common Name	Scientific Name	ESA Status[1]	SARA Status[2]	S-rank[3]	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5												
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4												
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3					Possibly heard calling							
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5												
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5	1	2			1	1						
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5	3				3						2	8

Note: Data were transcribed as recorded on the field notes provided by Stantec Consulting Ltd. (Stantec) to AECOM in October

Legend

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S5 - Very common and demonstrably secure in Ontario

Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

					Station	**8**				**9**				**10**			
					Habitat	Excavated & Naturalized Ponds (both to W & E)				Beaver Pond				Excavated and Naturalized Ponds			
					Water Present	Yes				Yes				Yes			
					Temperature (°C)	27				27				27			
					Wind	2				2				2			
					Cloud (%)	25				25				25			
					Precipitation	Not Recorded				Not Recorded				Not Recorded			
					Precipitation (24h)	Not Recorded				Not Recorded				Not Recorded			
					Sundown	Not Recorded				Not Recorded				Not Recorded			
					Start Time	Not Recorded				Not Recorded				Not Recorded			
					End Time	Not Recorded				Not Recorded				Not Recorded			
					Visit Number	Not Recorded				Not Recorded				Not Recorded			
					Survey Date	2-May-13				2-May-13				2-May-13			
Code	**Common Name**	**Scientific Name**	**ESA Status[1]**	**SARA Status[2]**	**S-rank[3]**	**Call Code**	**# of Calls IN**	**Call Code**	**# of Calls OUT**	**Call Code**	**# of Calls IN**	**Call Code**	**# of Calls OUT**	**Call Code**	**# of Calls IN**	**Call Code**	**# of Calls OUT**
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5			1	4								
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4												
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3												
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5					1	1			1	1		
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5			1	1								
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5			1	5	2	6						

Note: Data were transcribed as recorded on the field notes provided by Stantec Consulting Ltd. (Stantec) to AECOM in October

Legend

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S5 - Very common and demonstrably secure in Ontario

Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

Station	11				12				13			
Habitat	Wet Sedge Meadow				Floating Sedge Mat Bog / Fen				Beaver Pond / Shallow Marsh			
Water Present	Yes				Yes				Yes			
Temperature (°C)	Not Recorded				Not Recorded				Not Recorded			
Wind	Not Recorded				Not Recorded				Not Recorded			
Cloud (%)	Not Recorded				Not Recorded				Not Recorded			
Precipitation	Not Recorded				Not Recorded				Not Recorded			
Precipitation (24h)	Not Recorded				Not Recorded				Not Recorded			
Sundown	Not Recorded				Not Recorded				Not Recorded			
Start Time	13:13				14:18				13:46			
End Time	Not Recorded				Not Recorded				Not Recorded			
Visit Number	Not Recorded				Not Recorded				Not Recorded			
Survey Date	7-May-13				7-May-13				8-May-13			

Code	Common Name	Scientific Name	ESA Status[1]	SARA Status[2]	S-rank[3]	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5												
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4									1	1		
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3												
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5												
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5												
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5			1	1								

No amphibians heard calling

Note: Data were transcribed as recorded on the field notes provided by Stantec Consulting Ltd. (Stantec) to AECOM in October

Legend

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Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

					Station	**14**				**15**				**16**					
					Habitat	Enormous Sedge Fen				Sedge Marsh				Beaver Pond / Shallow Marsh					
					Water Present	Yes				Yes				Yes					
					Temperature (°C)	Not Recorded				Not Recorded				Not Recorded					
					Wind	Not Recorded				Not Recorded				Not Recorded					
					Cloud (%)	Not Recorded				Not Recorded				Not Recorded					
					Precipitation	Not Recorded				Not Recorded				Not Recorded					
					Precipitation (24h)	Not Recorded				Not Recorded				Not Recorded					
					Sundown	Not Recorded				Not Recorded				Not Recorded					
					Start Time	14:44				15:56				8:20					
					End Time	Not Recorded				Not Recorded				Not Recorded					
					Visit Number	Not Recorded				Not Recorded				Not Recorded					
					Survey Date	8-May-13				8-May-13				8-May-13					
Code	**Common Name**	**Scientific Name**	**ESA Status[1]**	**SARA Status[2]**	**S-rank[3]**	**Call Code**	**# of Calls IN**	**Call Code**	**# of Calls OUT**	**Call Code**	**# of Calls IN**	**Call Code**	**# of Calls OUT**	**Call Code**	**# of Calls IN**	**Call Code**	**# of Calls OUT**		
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5									No amphibians heard calling					
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4														
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3														
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5														
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5														
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5	1	1			1	1								

Note: Data were transcribed as recorded on the field notes provided by Stantec Consulting Ltd. (Stantec) to AECOM in October

Legend

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S5 - Very common and demonstrably secure in Ontario

Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

Station	17				129				130			
Habitat	Beaver Pond / Shallow Marsh				Sphagnum Pools in JPB				Beaver Ponds			
Water Present	Yes				Yes - Limited				Yes			
Temperature (°C)	Not Recorded				9 - 15				9 - 15			
Wind	Not Recorded				3 - 4				3 - 4			
Cloud (%)	Not Recorded				0 - 30				0 - 30			
Precipitation	Not Recorded				None				None			
Precipitation (24h)	Not Recorded				None				None			
Sundown	Not Recorded				Not Recorded				Not Recorded			
Start Time	9:24				12:00				12:00			
End Time	Not Recorded				17:25				17:25			
Visit Number	Not Recorded				1				1			
Survey Date	8-May-13				22-Apr-13				22-Apr-13			

Code	Common Name	Scientific Name	ESA Status[1]	SARA Status[2]	S-rank[3]	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5												
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4												
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3												
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5												
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5												
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5	1	2										

No amphibians heard calling

No amphibians heard calling

Note: Data were transcribed as recorded on the field notes provided by Stantec Consulting Ltd. (Stantec) to AECOM in October

Legend

1 ESA Status: The Endangered Species Act 2007 (ESA) protects Species at Risk (Threatened and Endangered) at a Provir
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S5 - Very common and demonstrably secure in Ontario

Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

Station	131				132				133			
Habitat	Beaver Pond / Marsh / Pools of Water				Pond / Marsh				Beaver Pond / Meadow			
Water Present	Yes				Yes				Yes			
Temperature (°C)	9 - 15				9 - 15				9 - 15			
Wind	3-4				3 - 4				3 - 4			
Cloud (%)	0 - 30				0 - 30				0 - 30			
Precipitation	None				None				None			
Precipitation (24h)	None				None				None			
Sundown	Not Recorded				Not Recorded				Not Recorded			
Start Time	12:00				12:00				12:00			
End Time	17:25				17:25				17:25			
Visit Number	1				1				1			
Survey Date	22-Apr-13				22-Apr-13				22-Apr-13			

Code	Common Name	Scientific Name	ESA Status[1]	SARA Status[2]	S-rank[3]	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5												
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4												
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3												
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5												
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5												
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5	1	1									1	1

No amphibians heard calling

Note: Data were transcribed as recorded on the field notes provided by Stantec Consulting Ltd. (Stantec) to AECOM in October

Legend

1 ESA Status: The Endangered Species Act 2007 (ESA) protects Species at Risk (Threatened and Endangered) at a Provir
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Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

Station	134				135				136			
Habitat	Bog / Fen				Beaver Pond				Beaver Pond & Stream / lowland			
Water Present	Yes				Yes				Yes			
Temperature (°C)	9 - 15				9 - 15				9 - 15			
Wind	3 - 4				3 - 4				3 - 4			
Cloud (%)	0 - 30				0 - 30				0 - 30			
Precipitation	None				None				None			
Precipitation (24h)	None				None				None			
Sundown	Not Recorded				Not Recorded				Not Recorded			
Start Time	12:00				12:00				12:00			
End Time	17:25				17:25				17:25			
Visit Number	1				1				1			
Survey Date	22-Apr-13				22-Apr-13				22-Apr-13			

Code	Common Name	Scientific Name	ESA Status[1]	SARA Status[2]	S-rank[3]	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT	Call Code	# of Calls IN	Call Code	# of Calls OUT
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5												
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4												
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3												
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5												
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5												
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5	1	4										

No amphibians heard calling

No amphibians heard calling

Note: Data were transcribed as recorded on the field notes provided by Stantec Consulting Ltd. (Stantec) to AECOM in October

Legend

1 ESA Status: The Endangered Species Act 2007 (ESA) protects Species at Risk (Threatened and Endangered) at a Provir
NAR - Not at Risk

2 SARA Status: The Species at Risk Act (SARA) protects Species at Risk (Special Concern, Threatened and Endangered)
NAR - Not at Risk
THR - Threatened, A species likely to become endangered if nothing is done to reverse the factors leadings to its extirpati

3 S-rank: The natural Heritage provincial ranking system (provincial S-rank) is used by the MNRF Natural Heritage Informati
S3 - Rare to uncommon in Ontario; usually between 20 and 100 occurrences in Ontario; may be susceptible to large-scale
a relatively high global rank.
S4 - Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5 - Very common and demonstrably secure in Ontario

Table C-1: Western Chorus Frog Survey Results - HIWEC Study Area

Station	**137**
Habitat	Mixed Wetlands / Pond
Water Present	Yes
Temperature (°C)	9 - 15
Wind	3 - 4
Cloud (%)	0 - 30
Precipitation	None
Precipitation (24h)	None
Sundown	Not Recorded
Start Time	12:00
End Time	17:25
Visit Number	1
Survey Date	22-Apr-13

Code	Common Name	Scientific Name	ESA Status[1]	SARA Status[2]	S-rank[3]	Call Code	# of Calls IN	Call Code	# of Calls OUT
AMTO	American Toad	*Anaxyrus americanus*	-	-	S5	No amphibians heard calling			
BULL	American Bullfrog	*Lithobates catesbeianus*	-	-	S4				
CHFR	Western Chorus Frog	*Pseudacris triseriata pop. 1*	NAR	THR	S3				
GRTR	Gray Treefrog	*Hyla versicolor*	-	-	S5				
NLFR	Northern Leopard Frog	*Lithobates pipiens*	NAR	NAR	S5				
SPPE	Spring Peeper	*Pseudacris crucifer*	-	-	S5				

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