

Appendix H

Summary of 2011, 2012 and 2013 Incidental Wildlife Observations – Henvey Inlet Wind Energy Centre Study Area

Henvey Inlet Wind LP

Henvey Inlet Wind

Summary of 2011, 2012 and 2013 Incidental Wildlife Observations – Henvey Inlet Wind Energy Centre Study Area

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September 2015

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Table of Contents

Statement of Qualifications and Limitations

	page
1. Introduction	1
2. Methods.....	2
2.1 Work Plan	2
2.1.1 Incidental Observations	2
3. Results	3
3.1 Study Area.....	3
3.2 Incidental Wildlife Observations Results	3
3.2.1 Wildlife Habitat	3
3.2.2 Incidental Wildlife Observations.....	3
3.2.2.1 Birds.....	4
3.2.2.2 Mammals	12
3.2.2.3 Herpetofauna	13
3.2.2.4 Butterflies, Dragonflies and Moths	14
3.2.2.5 Other Wildlife	16
4. Summary	18
5. Assumptions and Clarification	19
6. References	20

List of Figures

Figure 3-1: Important Wildlife Observations Wind Energy Centre	10
Figure 3-2: Important Bird Observations Transmission Line Route B.....	11

List of Tables

Table 3-1: Wildlife Habitats Recorded in 2013.....	3
Table 3-2: Summary of Incidental Wildlife Observations	4
Table 3-3: List of Bird Species Incidentally Observed	5
Table 3-4: List of Mammal Species Incidentally Observed	12
Table 3-5: List of Herpetofaunal Species Incidentally Observed	13
Table 3-6: List of Butterfly, Dragonfly and Moth Species Incidentally Observed	14
Table 3-7: List of Other Wildlife Incidentally Observed	17

Appendices

Appendix A. Stantec 2013 Field Notes and Documentation	
Appendix B. Stantec's Terrestrial Survey Work Program (Stantec, 2013)	

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 Henvey Inlet Wind Energy Centre (HIWEC) study area, and collected field data within the Route B Transmission Line 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; and
- Incidental Wildlife Observations.

This report has been prepared by AECOM to summarize the **Incidental Wildlife Observations** field data for the HIWEC study area and Route B Transmission Line study area. This is based on raw field 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.

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

- Scanned handwritten field notes entitled "60824_Incidental_WildlifeandHabitat.pdf";
- An Excel spreadsheet entitled "Significant species Observations.xlsx"; and
- A map of important wildlife observation locations entitled "160960824_SignificantObservations_Wind_20131205.pdf".

A copy of the above files is provided in **Appendix A**¹.

LGL and Stantec provided AECOM with several other scanned handwritten field note packages and / or field data summaries used to prepare other technical reports. These were also searched for incidental wildlife observations during preparation of this report.

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 (MNR) and / or Environment Canada – Canadian Wildlife Service (EC-CWS) for permitting purposes.

2. Methods

2.1 Work Plan

The following section provides a description of work plan methods written by Stantec for the **Incidental Wildlife Observations**. This description is taken directly from Stantec's *Terrestrial Survey Work Program* (Stantec, 2013).

A complete copy of Stantec's *Terrestrial Survey Work Program* (Stantec, 2013) is provided in **Appendix B²**.

2.1.1 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 behaviour. Observations made early in the field season may be used to refine the remainder of the field program."

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 (MNR) and / or Environment Canada – Canadian Wildlife Service (EC-CWS) for permitting purposes.*

3. Results

3.1 Study Area

The UTM co-ordinates of wildlife observations and wildlife habitat were not recorded for most of the observed species with the exception of important species, which included Federal Species at Risk (i.e., species listed as Threatened or Endangered under the federal *Species At Risk Act*), Provincial Species at Risk (i.e., species listed as Threatened or Endangered under the provincial *Endangered Species Act, 2007*), and species listed as Special Concern either provincially or federally. As a result, it is unclear from the field notes provided which study area (i.e., the HIWEC study area or Route B Transmission Line study area) many of the observations were recorded within. In some cases, it is also unclear during which survey type the wildlife observations were recorded.

It is possible that these observations could have been made in either the HIWEC study area or Route B Transmission Line study area. However, based on the subset of observations having UTM co-ordinates in the field notes provided, it appears that the majority of the observations are from the HIWEC study area.

Wildlife habitat was also recorded where incidental wildlife observations were identified. As stated above, UTM co-ordinates were not always recorded for the wildlife habitat observations.

3.2 Incidental Wildlife Observations Results

3.2.1 Wildlife Habitat

Three (3) types of wildlife habitats were recorded in the document entitled *60824_Incidental_WildlifeandHabitat.pdf*. These include the following as summarized in **Table 3-2**. UTM co-ordinates for these recorded wildlife habitats were not included in the field notes provided (refer to **Appendix A**).

Table 3-1: Wildlife Habitats Recorded in 2013

Type of Wildlife Habitat	Location	Page of Document (refer to Appendix A)
Mature White Pine and Red Spruce Forest	Unknown (UTM co-ordinates not provided)	6
Mature White Spruce – White Cedar Moist Woods	Unknown (UTM co-ordinates not provided)	6
Suitable Hog-nosed Snake Habitat	Unknown (UTM co-ordinates not provided)	64

3.2.2 Incidental Wildlife Observations

Stantec grouped incidental wildlife observation records into the following taxonomic categories:

- Birds;
- Mammals;
- Herpetofauna;
- Butterflies / Dragonflies; and
- Other.

This report is generally organized according to the same five (5) taxonomic categories.

When an incidental wildlife observation was made, observers identified the species to the species level, where possible. However, there are several incidences where the species could not be identified further than the family or genus level. A summary of the numbers of identified and unidentified species in each taxonomic category is provided in **Table 3-2** below. Based on the data provided, bird species were the most commonly observed taxonomic category, followed by butterflies, dragonflies and moths. Observer bias may be present in the records (i.e., one observer may be more knowledgeable in identification of birds than in insects) which may influence the number of observations for each taxonomic group.

Table 3-2: Summary of Incidental Wildlife Observations

Taxon	No. of Identified Species	No. of Unidentified Species
Birds	145	12
Mammals	15	4
Herpetofauna	30	1
Butterflies, Dragonflies and Moths	68	5
Other	0	5

3.2.2.1 Birds

Based on the field notes provided, a total of 144 bird species were incidentally observed by LGL or Stantec during the 2011, 2012 and 2013 field seasons, within either the HIWEC study area or the Route B transmission line study area (**Table 3-3**). Four (4) of these species are Federal Species at Risk: Canada Warbler (*Cardellina pusilla*), Common Nighthawk (*Chordeiles minor*), Olive-sided Flycatcher (*Contopus cooperi*), and Eastern Whip-poor-will (*Caprimulgus vociferus*). Two (2) Provincial Species at Risk, Chimney Swift (*Chaetura pelagica*) and Bobolink (*Dolichonyx oryzivorus*), were also recorded. Where recorded, the locations of these Species At Risk observations in the vicinity of the HIWEC study area are shown on **Figure 3-1**. Additionally, where recorded, the locations of these Species At Risk observations in the vicinity of the Route B Transmission Line study area are shown on **Figure 3-2**.

In addition, a total of ten (10) bird Species of Conservation Concern were recorded incidentally in 2013. These include four (4) species listed as Special Concern under the provincial *Endangered Species Act, 2007*: Bald Eagle (*Haliaeetus leucocephalus*), Black Tern (*Chlidonias niger*), Eastern Wood-pewee (*Contopus virens*) and Yellow Rail (*Coturnicops noveboracensis*). Six (6) provincially rare species, Caspian Tern (*Hydroprogne caspia*), Great Black-backed Gull (*Larus marinus*), Lapland Longspur (*Calcarius lapponicus*), Long-tailed Duck (*Clangula hyemalis*), Prairie Warbler (*Setophaga discolor*) and Ring-necked Grebe (*Podiceps grisegena*), were also recorded. Where recorded, the locations of these Species of Conservation Concern observations in the vicinity of the HIWEC study area are shown on **Figure 3-1**. Additionally, where recorded, the locations of these Species of Conservation concern observations in the vicinity of the Route B Transmission Line study area are shown on **Figure 3-2**.

Stantec provided a map called *160960824_SignificantObservations_Wind_20131205.pdf*. (refer to Appendix A), this map included the location of one (1) Great Blue Heron Heronry and two (2) Osprey stick nests in or within the vicinity of the HIWEC study area. Neither of these are Species At Risk or Species of Conservation Concern.

Table 3-3: List of Bird Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
Accipiter species	N/a	-	-			X
American Bittern	<i>Botaurus lentiginosus</i>	-	-	S4	X	X
American Black Duck	<i>Anas rubripes</i>	-	-	S4	X	X
American Coot	<i>Fulica americana</i>	-	-	S4		X
American Crow	<i>Corvus brachyrhynchos</i>	-	-	S5	X	X
American Goldfinch	<i>Carduelis tristis</i>	-	-	S5	X	
American Kestrel	<i>Falco sparverius</i>	-	-	S4	X	
American Pipit	<i>Anthus rubescens</i>	-	-	S4	X	
American Redstart	<i>Setophaga ruticilla</i>	-	-	S5	X	
American Robin	<i>Turdus migratorius</i>	-	-	S5	X	X
American Tree Sparrow	<i>Spizella arborea</i>	-	-	S4	X	X
American Wigeon	<i>Anas americana</i>	-	-	S4	X	
American Woodcock	<i>Scolopax minor</i>	-	-	S4	X	X
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Special Concern	-	S2	X	X
Bay-breasted Warbler	<i>Setophaga castanea</i>	-	-	S5	X	
Belted Kingfisher	<i>Megasceryle alcyon</i>	-	-	S4	X	X
Black-and-white Warbler	<i>Mniotilta varia</i>	-	-	S5	X	
Black-backed Woodpecker	<i>Picoides arcticus</i>	-	-	S4	X	X
Black-capped Chickadee	<i>Poecile atricapillus</i>	-	-	S5	X	X
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	-	-	S5	X	X
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	-	-	S5	X	
Black-throated Green Warbler	<i>Setophaga virens</i>	-	-	S5	X	X
Blackburnian Warbler	<i>Setophaga fusca</i>	-	-	S5	X	
Black Scoter	<i>Melanitta nigra</i>	-	-	S4	X	
Blackbird species	Unknown	-	-	-	X	
Black Tern	<i>Chlidonias niger</i>	Special Concern	-	S3		X
Blue Jay	<i>Cyanocitta cristata</i>	-	-	S5	X	X
Blue-headed Vireo	<i>Vireo solitarius</i>	-	-	S5	X	X
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened	-	S4	X	
Bohemian Waxwing	<i>Bombycilla garrulus</i>	-	-	SNA	X	
Broad-winged Hawk	<i>Buteo platypterus</i>	-	-	S5	X	X
Brown Creeper	<i>Certhia americana</i>	-	-	S5	X	X
Brown Thrasher	<i>Toxostoma rufum</i>	-	-	S4	X	
Bufflehead	<i>Bucephala albeola</i>	-	-	S4	X	X
Canada Goose	<i>Branta canadensis</i>	-	-	S5	X	X
Canada Warbler	<i>Wilsonia canadensis</i>	Special Concern	Threatened (Schedule 1)	S4	X	X
Caspian Tern	<i>Hydroprogne caspia</i>	-	-	S3	X	X

Table 3-3: List of Bird Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	-	-	S5	X	
Chimney Swift	<i>Chaetura pelagica</i>	Threatened	-	S4	X	X
Chipping Sparrow	<i>Spizella passerina</i>	-	-	S5	X	
Common Goldeneye	<i>Bucephala clangula</i>	-	-	S5	X	X
Common Grackle	<i>Quiscalus quiscula</i>	-	-	S5	X	X
Common Loon	<i>Gavia immer</i>	-	-	S5	X	X
Common Merganser	<i>Mergus merganser</i>	-	-	S5	X	X
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern	Threatened (Schedule 1)	S4		X
Common Raven	<i>Chordeiles minor</i>	-	-	S5	X	X
Common Redpoll	<i>Carduelis flammea</i>	-	-	S4		X
Common Snipe	<i>Gallinago gallinago</i>	-	-	S5		X
Common Tern	<i>Sterna hirundo</i>	-	-	S5	X	X
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	S5	X	X
Cooper's Hawk	<i>Accipiter cooperi</i>	-	-	S4	X	X
Dark-eyed Junco	<i>Junco hyemalis</i>	-	-	S5	X	X
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	-	-	S5	X	X
Downy Woodpecker	<i>Picoides pubescens</i>	-	-	S5	X	X
Duck species	Unknown	-	-	-	X	X
Eastern Kingbird	<i>Tyrannus tyrannus</i>	-	-	S4	X	
Eastern Phoebe	<i>Sayornis phoebe</i>	-	-	S5	X	X
Eastern Whip-poor-will	<i>Caprimulgus vociferus</i>	Threatened	Threatened (Schedule 1)	S4	X	X
Eastern Wood-pewee	<i>Contopus virens</i>	Special Concern	-	S4	X	X
European Starling	<i>Sturnus vulgaris</i>	-	-	SNA	X	
Fox Sparrow	<i>Passerella iliaca</i>	-	-	S4		X
Golden-crowned Kinglet	<i>Regulus satrapa</i>	-	-	S5	X	
Gray Catbird	<i>Dumetella carolinensis</i>	-	-	S4	X	
Great Black-backed Gull	<i>Larus marinus</i>	-	-	S2	X	
Great Blue Heron	<i>Ardea herodias</i>	-	-	S4	X	X
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	-	-	S4	X	
Great Gray Owl	<i>Strix nebulosa</i>	-	-	S4		X
Greater Yellowlegs	<i>Tringa melanoleuca</i>	-	-	S4	X	X
Green-winged Teal	<i>Anas crecca</i>	-	-	S4		X
Gull species	Unknown	-	-	-	X	
Hairy Woodpecker	<i>Picoides villosus</i>	-	-	S5	X	X
Hermit Thrush	<i>Catharus guttatus</i>	-	-	S5	X	X
Herring Gull	<i>Larus argentatus</i>	-	-	S5	X	X
Hooded Merganser	<i>Lophodytes cucullatus</i>	-	-	S5	X	X

Table 3-3: List of Bird Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
Horned Lark	<i>Eremophila alpestris</i>	-	-	S5	X	X
Killdeer	<i>Charadrius vociferus</i>	-	-	S5	X	X
Lapland Longspur	<i>Calcarius lapponicus</i>	-	-	S3	X	
Least Flycatcher	<i>Empidonax minimus</i>	-	-	S4	X	
Lesser Scaup	<i>Aythya affinis</i>	-	-	S4	X	
Lesser Yellowlegs	<i>Tringa flavipes</i>	-	-	S4		X
Lincoln's Sparrow	<i>Melospiza lincolni</i>	-	-	S5	X	
Long-tailed Duck	<i>Clangula hyemalis</i>	-	-	S3	X	X
Magnolia Warbler	<i>Setophaga magnolia</i>	-	-	S5	X	
Mallard	<i>Anas platyrhynchos</i>	-	-	S5	X	X
Merlin	<i>Falco columbarius</i>	-	-	S5	X	X
Mourning Warbler	<i>Geothlypis philadelphia</i>	-	-	S4		X
Nashville Warbler	<i>Oreothlypis ruficapilla</i>	-	-	S5	X	
Northern Flicker	<i>Colaptes auratus</i>	-	-	S4	X	X
Northern Goshawk	<i>Accipiter gentilis atricapillus</i>	-	-	S4	X	X
Northern Harrier	<i>Circus cyaneus</i>	-	-	S4	X	X
Northern Parula	<i>Parula americana</i>	-	-	S4	X	
Northern Shrike	<i>Lanius excubitor</i>	-	-	S4	X	X
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern	Threatened (Schedule 1)	S4		X
Orange-crowned Warbler	<i>Oreothlypis celata</i>	-	-	S4	X	
Osprey	<i>Pandion haliaetus</i>	-	-	S5	X	X
Ovenbird	<i>Seiurus aurocapillus</i>	-	-	S4	X	X
Owl species	Unknown	-	-	-	X	X
Palm Warbler	<i>Dendroica palmarum</i>	-	-	S5	X	
Passerine species	Unknown	-	-	-	X	
Pectoral Sandpiper	<i>Calidris melanotos</i>	-	-	SH	X	
Pileated Woodpecker	<i>Dryocopus pileatus</i>	-	-	S5	X	X
Pine Siskin	<i>Carduelis pinus</i>	-	-	S4	X	
Pine Warbler	<i>Setophaga pinus</i>	-	-	S5	X	X
Plover species	Unknown	-	-	-	X	
Prairie Warbler	<i>Setophaga discolor</i>	-	-	S3		X
Purple Finch	<i>Carpodacus purpureus</i>	-	-	S4	X	X
Red-breasted Merganser	<i>Mergus serrator</i>	-	-	S4	X	
Red-breasted Nuthatch	<i>Sitta canadensis</i>	-	-	S5	X	
Redhead	<i>Aythya americana</i>	-	-	S5	X	
Red-necked Grebe	<i>Podiceps grisegena</i>	-	-	S3B, S4N		X
Red-tailed Hawk	<i>Buteo jamaicensis</i>	-	-	S4	X	X

Table 3-3: List of Bird Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
Red-shouldered Hawk	<i>Buteo lineatus</i>	-	-	S4		X
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	-	-	S4	X	
Ring-billed Gull	<i>Larus delawarensis</i>	-	-	S5	X	X
Ring-necked Duck	<i>Aythya collaris</i>	-	-	S5	X	X
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	-	-	S4	X	
Rock Pigeon	<i>Columba livia</i>	-	-	SNA		X
Ruby-crowned Kinglet	<i>Regulus calendula</i>	-	-	S4	X	X
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	-	-	S5	X	X
Ruffed Grouse	<i>Bonasa umbellus</i>	-	-	S4	X	X
Sandhill Crane	<i>Grus canadensis</i>	-	-	S5	X	X
Sandpiper species	Unknown	-	-	-	X	X
Scarlet Tanager	<i>Piranga olivacea</i>	-	-	S4		X
Scaup species	Unknown	-	-	-	X	X
Sedge Wren	<i>Cistothorus platensis</i>	-	-	S4		X
Sharp-shinned Hawk	<i>Accipiter striatus</i>	-	-	S5	X	X
Shorebird species	Unknown	-	-	-	X	
Slate-coloured Junco or Dark eyed Junco	<i>Junco hyemalis</i>	-	-	S5	X	
Snow Bunting	<i>Plectrophenax nivalis</i>	-	-	SNA	X	X
Snow Goose	<i>Chen caerulescens</i>	-	-	S5		X
Song Sparrow	<i>Melospiza melodia</i>	-	-	S5	X	X
Spotted Sandpiper	<i>Actitis macularius</i>	-	-	S5	X	X
Spruce Grouse	<i>Falcapennis canadensis</i>	-	-	S5	X	X
Surf Scoter	<i>Melanitta perspicillata</i>	-	-	S4	X	
Swainson's Thrush	<i>Catharus ustulatus</i>	-	-	S4	X	X
Three-toed Woodpecker	<i>Picoides tridactylus</i>	-	-	S4	X	
Tree Swallow	<i>Tachycineta bicolor</i>	-	-	S4	X	X
Trumpeter Swan	<i>Cygnus buccinator</i>	-	-	S4		X
Tundra Swan	<i>Cygnus columbianus</i>	-	-	S4	X	
Turkey Vulture	<i>Cathartes aura</i>	-	-	S5	X	X
Upland Sandpiper	<i>Bartramia longicauda</i>	-	-	S4		X
Veery	<i>Catharus fuscescens</i>	-	-	S4	X	X
Vesper Sparrow	<i>Poocetes gramineus</i>	-	-	S4	X	X
Virginia Rail	<i>Rallus limicola</i>	-	-	S5	X	X
Warbler species	Unknown	-	-	-	X	
Waxwing species	Unknown	-	-	-	X	
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	-	-	S4	X	
White-throated Sparrow	<i>Zonotrichia albicollis</i>	-	-	S5	X	X

Table 3-3: List of Bird Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
White Winged Scoter	<i>Melanitta fusca</i>			S4	X	X
Wilson's Snipe	<i>Gallinago delicata</i>	-	-	S5	X	X
Winter Wren	<i>Troglodytes troglodytes</i>	-	-	S5	X	
Wood Duck	<i>Aix sponsa</i>	-	-	S5	X	X
Wood Thrush	<i>Hylocichla mustelina</i>	-	-	S4		X
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	-	-	S5	X	X
Yellow Rail	<i>Coturnicops noveboracensis</i>	Special Concern	-	S4		X
Yellow-rumped Warbler	<i>Setophaga coronata</i>	-	-	S5	X	X

- Notes:
- 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.
 - 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.

Figure 3-1: Important Wildlife Observations Wind Energy Centre

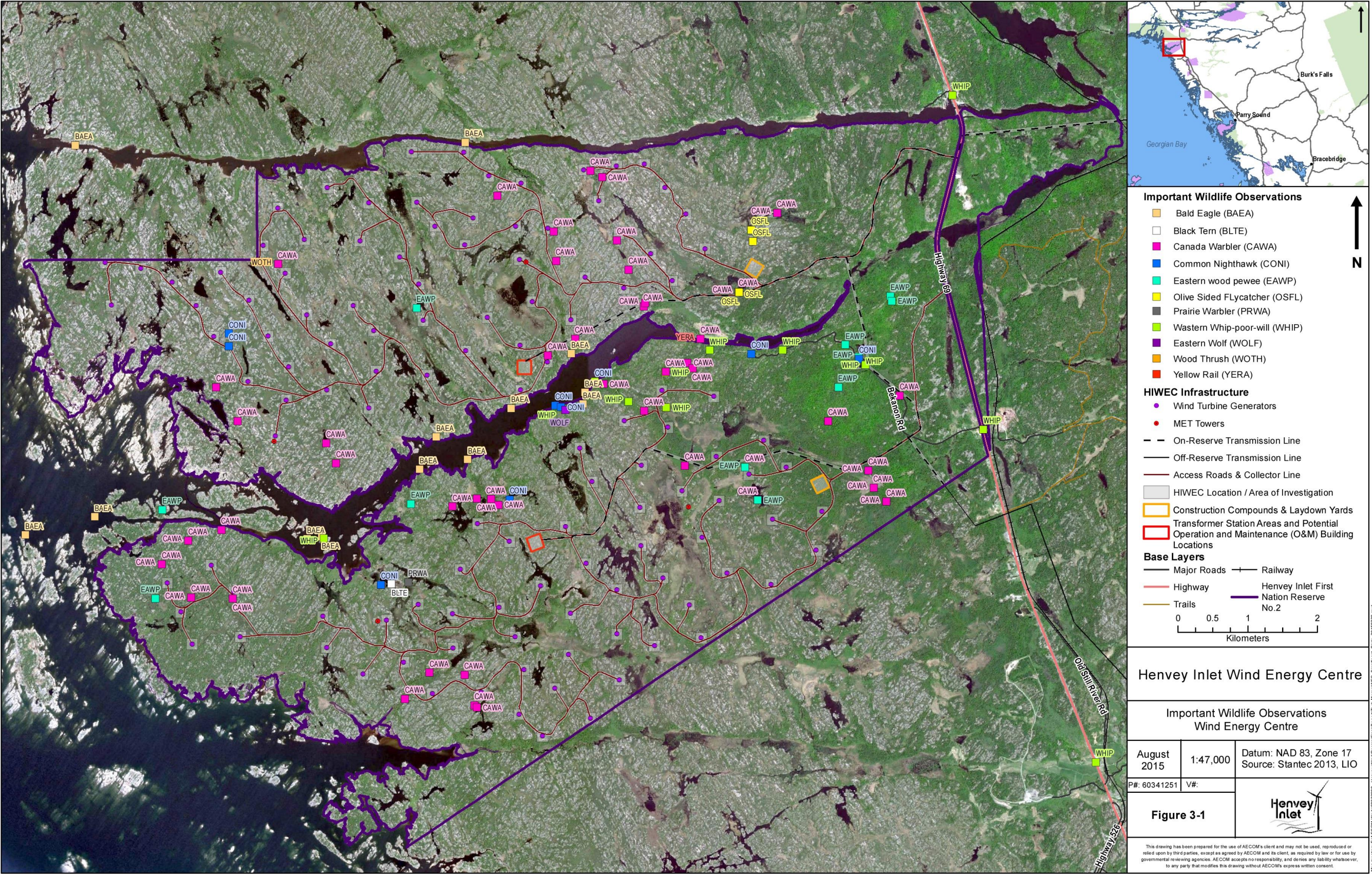
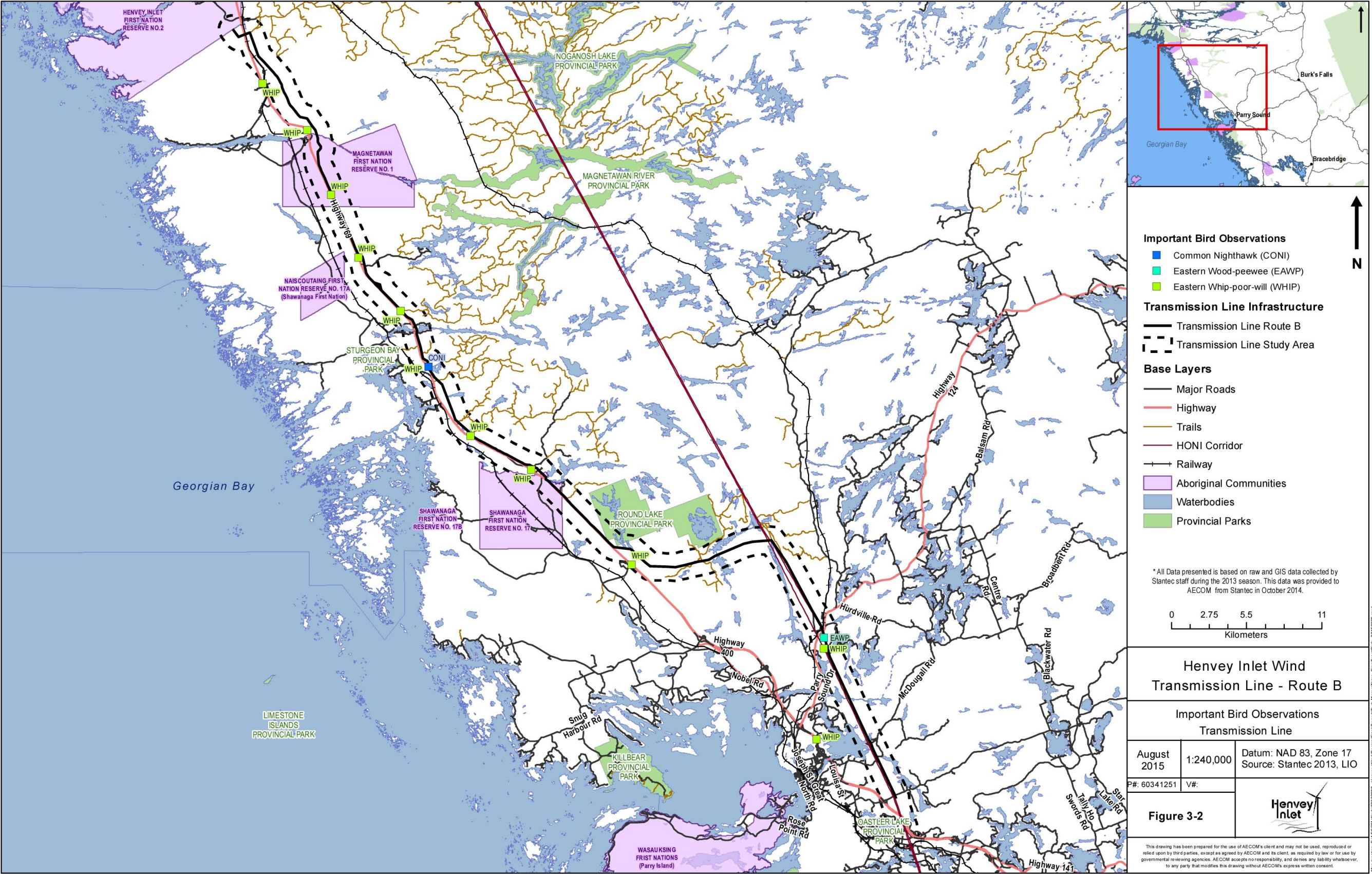


Figure 3-2: Important Bird Observations Transmission Line Route B



3.2.2.2 Mammals

Based on the field notes provided, a total of 15 mammal species, as well as four (4) mammals not identified to the species level, were incidentally observed by LGL or Stantec during the 2011, 2012 or 2013 field seasons, within either the HIWEC study area or the Route B transmission line study area (**Table 3-4**). None of these are Species at Risk; however, one (1) Species of Conservation Concern was recorded. Eastern Wolf (*Canis lupus lycaon*) is listed as Special Concern under both the provincial *Endangered Species Act, 2007* and the Federal *Species At Risk Act*. Where recorded, the locations of these Species of Conservation Concern observations in the vicinity of the HIWEC study area are shown on **Figure 3-1**.

Table 3-4: List of Mammal Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
American Black Bear	<i>Ursus americanus</i>	-	-	S5		X
Beaver	<i>Castor canadensis</i>	-	-	S5		X
Eastern Chipmunk	<i>Tamias striatus</i>	-	-	S5		X
Eastern Wolf	<i>Canis lupus lycaon</i>	Special Concern	Special Concern (Schedule 1)	S4		X
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	-	-	S5		X
Long-tailed Weasel	<i>Mustela frenata</i>	-	-	S4		X
Mole species	Unknown	-	-	-		X
Moose	<i>Alces americanus</i>	-	-	S5		X
Muskrat	<i>Ondatra zibethicus</i>	-	-	S5		X
Mustelid species	Unknown	-	-	-		X
Myotis species	Unknown	-	-	-		X
River Otter	<i>Lontra canadensis</i>	-	-	S5		X
Northern Raccoon	<i>Procyon lotor</i>	-	-	S5		X
Porcupine	<i>Erethizon dorsatum</i>	-	-	S5		X
Red Fox	<i>Vulpes vulpes</i>	-	-	S5		X
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	-	-	S5		X
Snowshoe Hare	<i>Lepus americanus</i>	-	-	S5		X
Weasel species	Unknown	-	-	-		X
White-tailed Deer	<i>Odocoileus virginianus</i>	-	-	S5		X

- 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.
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.

3.2.2.3 Herpetofauna

Based on the field notes provided, a total of 30 herpetofaunal species, as well as one (1) salamander not identified to the species level, were incidentally observed by LGL or Stantec during the 2011, 2012 and 2013 field seasons, within either the HIWEC study area or the Route B transmission line study area (**Table 3-5**). These include three (3) Federal Species at Risk, Blanding's Turtle (*Emydoidea blandingii*), Massasauga Rattlesnake (*Sistrurus catenatus* pop. 1) and a restricted species. Blanding's Turtle and Massasauga Rattlesnake are both listed as Threatened under the federal *Species at Risk Act*. In addition, two (2) Species of Conservation Concern were recorded. Five-lined Skink (*Plestiodon fasciatus* pop. 2) and Eastern Milksnake (*Lampropeltis triangulum*) are both listed as Special Concern under both the provincial *Endangered Species Act, 2007* and the federal *Species At Risk Act*. Records of these Species at Risk and Species of Conservation Concern are further discussed and mapped in the following technical reports:

- *Summary of 2011, 2012 and 2013 Herpetological Surveys – Henvey Inlet Wind Energy Centre Study Area (AECOM, 2015a)*; and
- *Summary of 2013 Herpetological Surveys – Route B Transmission Line Study Area (AECOM, 2015b)*.

Table 3-5: List of Herpetofaunal Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
American Bullfrog	<i>Lithobates catesbeianus</i>	-	-	S4	X	X
American Toad	<i>Anaxyrus americanus</i>	-	-	S5	X	X
Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened	Threatened (Schedule 1)	S3	X	X
Blue-spotted Salamander	<i>Ambystoma laterale</i>	-	-	S4	X	
Dekay's Brownsnake	<i>Storeria dekayi</i>	-	-	S5	X	X
Eastern Foxsnake	<i>Pantherophis gloydi</i>	Threatened	Endangered (Schedule 1)	S2	X	X
Eastern Gartersnake	<i>Thamnophis sirtalis sirtalis</i>	-	-	S5	X	X
Eastern Milksnake	<i>Lampropeltis triangulum</i>	Special Concern	Special Concern (Schedule 1)	S3		X
Eastern Musk Turtle	<i>Sternotherus odouratus</i>	Special Concern	Special Concern (Schedule 1)	S3	X	
Red-spotted Newt	<i>Notophthalmus viridescens viridescens</i>	-	-	S5	X	
Eastern Red-backed Salamander	<i>Plethodon cinereus</i>	-	-	S5	X	X
Five-lined Skink	<i>Plestiodon fasciatus</i> pop. 2	Special Concern	Special Concern (Schedule 1)	S3	X	X
Gray Treefrog	<i>Hyla versicolor</i>	-	-	S5	X	X
Green Frog	<i>Lithobates clamitans</i>	-	-	S5	X	X
Massasauga Rattlesnake	<i>Sistrurus catenatus</i> pop. 1	Threatened	Threatened (Schedule 1)	S3	X	X
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	-	-	S4	X	X
Mink Frog	<i>Lithobates septentrionalis</i>	-	-	S5	X	X
Northern Leopard Frog	<i>Lithobates pipiens</i>	-	-	S5	X	X
Northern Map Turtle	<i>Graptemys geographica</i>	Special Concern	Special Concern (Schedule 1)	S3	X	
Northern Watersnake	<i>Nerodia sipedon sipedon</i>	-	-	S5	X	X
Pickerel Frog	<i>Lithobates palustris</i>	-	-	S4	X	
Red-bellied Snake	<i>Storeria occipitomaculata</i>	-	-	S5	X	X

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
Restricted Species						
Ring-necked Snake	<i>Diadophis punctatus</i>	-	-	S4	X	
Salamander species	Unknown	-	-	-		X
Smooth Greensnake	<i>Opheodrys vernalis</i>	-	-	S4	X	X
Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern	Special Concern (Schedule 1)	S3	X	X
Spotted Salamander	<i>Ambystoma maculatum</i>	-	-	S4	X	X
Spring Peeper	<i>Pseudacris crucifer</i>	-	-	S5	X	X
Western Chorus Frog	<i>Pseudacris triseriata</i> pop. 1	-	Threatened (Schedule 1)	S3	X	
Wood Frog	<i>Lithobates sylvaticus</i>	-	-	S5	X	X

- Notes: 1. **ESA Status:** The Endangered Species Act 2007 (ESA) protects Species at Risk (Threatened and Endangered) at a provincial level.
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- 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.

3.2.2.4 Butterflies, Dragonflies and Moths

Based on the field notes provided, a total of 68 butterfly, dragonfly and moth species, as well as four (4) butterflies and dragonflies not identified to the species level, were incidentally observed by LGL or Stantec during the 2011, 2012 or 2013 field seasons, within either the HIWEC study area or the Route B transmission line study area (Table 3-6). None of these are Species at Risk; however, four (4) Species of Conservation Concern were recorded. Monarch (*Danaus plexippus*) is listed as Special Concern under both the provincial *Endangered Species Act, 2007* and the federal *Species At Risk Act*. Horned Clubtail (*Arigomphus cornutus*), Mottled Darner (*Aeshna clepsydra*) and Pine Imperial Moth (*Eacles imperialis pini*) are rare in the province of Ontario.

Table 3-6: List of Butterfly, Dragonfly and Moth Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
American Copper	<i>Lycaena phlaeas</i>	-	-	S5		X
American Emerald	<i>Cordulia shurtleffii</i>	-	-	S5		X
American Lady	<i>Vanessa virginiensis</i>	-	-	S5		X
Aphrodite Fritillary	<i>Speyeria aphrodite</i>	-	-	S5		X
Arctic Skipper	<i>Carterocephalus palaemon</i>	-	-	S5		X
Aurora Damsel	<i>Chromagrion conditum</i>	-	-	S5		X
Black-shouldered Spinyleg	<i>Dromogomphus spinosus</i>	-	-	S5		X

Table 3-6: List of Butterfly, Dragonfly and Moth Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
Black-tipped Darner	<i>Aeshna tuberculifera</i>	-	-	S4		X
Cabbage White	<i>Pieris rapae</i>	-	-	SNA		X
Canada Darner	<i>Aeshna canadensis</i>	-	-	S5		X
Chalk-fronted Corporal	<i>Ladona julia</i>	-	-	S5		X
Comma species	Unknown	-	-	-		X
Common Baskettail	<i>Epithea cynosura</i>	-	-	S5		X
Common Buckeye	<i>Junonia coenia</i>	-	-	SNA		X
Common Green Darner	<i>Anax junius</i>	-	-	S5		X
Common Roadside Skipper	<i>Amblyscirtes vialis</i>	-	-	S4		X
Common Whitetail	<i>Plathemis lydia</i>	-	-	S5		X
Compton Tortoiseshell	<i>Nymphalis l-album</i>	-	-	S5		X
Coral Hairstreak	<i>Satyrus titus</i>	-	-	S5		X
Crossline Skipper	<i>Polites origenes</i>	-	-	S4		X
Damselfly species	Unknown	-	-	-		X
Dragonhunter	<i>Hagenius brevistylus</i>	-	-	S5		X
Dreamy Duskywing	<i>Erynnis icelus</i>	-	-	S5		X
Dusky Clubtail	<i>Gomphus spicatus</i>	-	-	S5		X
Eastern Comma	<i>Polygonia comma</i>	-	-	S5		X
Eastern Pine Elfin	<i>Callophrys niphon</i>	-	-	S5		X
Eastern Tent Caterpillar Moth	<i>Malacosoma americanum</i>	-	-	S5		X
Eastern Tiger Swallowtail	<i>Papilio glaucus</i>	-	-	S5		X
Ebony Jewelwing	<i>Calopteryx maculata</i>	-	-	S5		X
Elegant Spreadwing	<i>Lestes inaequalis</i>	-	-	S4		X
Elfin Skimmer	<i>Nannothemis bella</i>	-	-	S4		X
Emerald Dragonfly species	Unknown	-	-	-		X
Four-spotted Skimmer	<i>Libellula quadrimaculata</i>	-	-	S5		X
Frosted Whiteface	<i>Leucorrhinia frigida</i>	-	-	S5		X
Green Comma	<i>Polygonia faunus</i>	-	-	S4		X
Harvester	<i>Feniseca tarquinius</i>	-	-	S4		X
Henry's Elfin	<i>Callophrys henrici</i>	-	-	S4		X
Hobomok Skipper	<i>Poanes hobomok</i>	-	-	S5		X
Horned Clubtail	<i>Arigomphus cornutus</i>	-	-	S3		X
Hudsonian Whiteface	<i>Leucorrhinia hudsonica</i>	-	-	S5		X
Illinois River Cruiser	<i>Macromia illinoensis</i>	-	-	S4		X
Indian Skipper	<i>Hesperia sassacus</i>	-	-	S4		X
Isabella Tiger Moth	<i>Pyrrharctia isabella</i>	-	-	S5		X
Juvenal's Duskywing	<i>Erynnis juvenalis</i>	-	-	S5		X
Leonard's Skipper	<i>Hesperia leonardus</i>	-	-	S4		X
Long Dash Skipper	<i>Polites mystic</i>	-	-	S5		X
Luna Moth	<i>Actias luna</i>	-	-	S4		X
Monarch	<i>Danaus plexippus</i>	Special Concern	Special Concern (Schedule 1)	S2N, S4B		X
Mottled Darner	<i>Aeshna clepsydra</i>	-	-	S3		X
Mourning Cloak	<i>Nymphalis antiopa</i>	-	-	S5		X
Northern/Vernal Bluet	unknown	-	-	-		X

Table 3-6: List of Butterfly, Dragonfly and Moth Species Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
Northern Crescent	<i>Phyciodes cocyta</i>	-	-	S5		X
Northern Pearly-Eye	<i>Enodia anthedon</i>	-	-	S5		X
Pine Imperial Moth	<i>Eacles imperialis pini</i>	-	-	S3?		X
Powdered Dancer	<i>Argia moesta</i>	-	-	S5		X
Prince Baskettail	<i>Epithea princeps</i>	-	-	S5		X
Racket-tailed Emerald	<i>Dorocordulia libera</i>	-	-	S5		X
Red-spotted Purple	<i>Limenitis arthemis astyanax</i>	-	-	S5		X
Sedge Sprite	<i>Nehalennia irene</i>	-	-	S5		X
Shadow Darner	<i>Aeshna umbrosa</i>	-	-	S5		X
Silvery Blue	<i>Glaucopsyche lygdamus</i>	-	-	S5		X
Somatochlora species	Unknown	-	-	-		X
Sphagnum sprite	<i>Nehalennia gracilis</i>	-	-	S4		X
Spotted Slender Spreadwing	Unknown	-	-	-		X
Spring Azure	<i>Celastrina ladon</i>	-	-	SU		X
Stream Cruiser	<i>Didymops transversa</i>	-	-	S4		X
Summer Azure	<i>Celastrina neglecta</i>	-	-	S5		X
Sweetflag Spreadwing	<i>Lestes forcipatus</i>	-	-	S4		X
Twelve-spotted Skimmer	<i>Libellula pulchella</i>	-	-	S5		X
Two-spotted Skipper	<i>Euphyes bimacula</i>	-	-	S4		X
Variable Darner	<i>Aeshna interrupta</i>	-	-	S5		X
Viceroy	<i>Limenitis archippus</i>	-	-	S5		X

- 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.
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 - 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.

3.2.2.5 Other Wildlife

Based on the field notes provided, a total of four (4) other wildlife categories not identified to the species level were incidentally observed by LGL or Stantec during the 2011, 2012 and 2013 field seasons, within either the HIWEC study area or the Route B transmission line study area (**Table 3-7**). None of these are Species at Risk or Species of Conservation Concern.

Table 3-7: List of Other Wildlife Incidentally Observed

Common Name	Scientific Name	ESA Status ¹	SARA Status ²	S-rank ³	Observed by LGL	Observed by Stantec
Antlion	Unknown <i>Myrmeleontidae</i> species	-	-	-		X
Bumblebees	Unknown <i>Bombus</i> species	-	-	-		X
Bee Fly Species	Unknown	-	-	-		X
Firefly Species	Unknown	-	-	-		X

- 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.
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.

4. Summary

Stantec recorded incidental wildlife observations during the 2013 field season within either the HIWEC study area or Route B Transmission Line study area. These included:

- A total of 106 bird species, including four (4) Federal Species at Risk (Canada Warbler, Common Nighthawk, Olive-sided Flycatcher and Eastern Whip-poor-will) and eight (8) Species of Conservation Concern (Bald Eagle, Black Tern, Eastern Wood-pewee, Yellow Rail, Caspian Tern, Long-tailed Duck, Prairie Warbler and Red-necked Grebe).
- A total of 16 mammal species, including one (1) Species of Conservation Concern (Eastern Wolf).
- A total of 23 herpetofaunal species, including three (3) Federal Species at Risk (Blanding's Turtle, Eastern Foxsnake and Massasauga Rattlesnake) and three (3) Species of Conservation Concern (Five-lined Skink, Snapping Turtle and Eastern Milksnake).
- A total of 68 butterfly, dragonfly and moth species, including four (4) Species of Conservation Concern (Monarch, Horned Clubtail, Mottled Darner and Pine Imperial Moth).

LGL recorded incidental wildlife observations during the 2011 and 2012 field seasons within the HIWEC study area or Route B Transmission Line study area. These included:

- A total of 133 bird species, including two (2) Federal Species at Risk (Canada Warbler and Eastern Whip-poor will) and two (2) Species of Conservation Concern (Bald Eagle and Eastern Wood-pewee)
- A total of 28 herpetofaunal species, including three (3) Federal Species at Risk (Blanding's Turtle, Eastern Foxsnake, Massasauga Rattlesnake and Western Chorus Frog and four (4) Species of Conservation Concern (Eastern Musk Turtle, Five-lined Skink, Northern Map Turtle and Snapping Turtle)

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:

- It is assumed that the majority of the wildlife observation records are from the HIWEC study area based on the UTM co-ordinates that were recorded on the field notes.
- The bird species code “MYWA” recorded on field sheets was assumed to be Myrtle Warbler (*Setophaga coronata*). However, the currently accepted name for this species is Yellow-rumped Warbler (*Dendroica coronata*). Therefore records of Myrtle Warbler are shown as Yellow-rumped Warbler herein. Stantec provided comments to AECOM on February 26, 2015 that confirmed this assumption.
- The bird species code “WYWA” was interpreted to be Wilson’s Warbler (*Wilsonia pusilla*). Stantec provided comments to AECOM on February 26, 2015 that indicated that the code WYWA was unknown, therefore the species unknown.
- Stantec recorded “*Myotis* sp.” on the field notes provided. Stantec provided comments to AECOM on February 26, 2015 that confirmed that this observation could be of any Ontario *Myotis* species.
- Stantec recorded “Northern Vernal Bluet” on the field notes provided but there is no known species having this common name. Stantec provided comments to AECOM on February 26, 2015 that confirmed that this observation was of a Northern / Vernal Bluet complex.
- Stantec recorded “Spotted Slender Spreadwing” on the field notes provided but there is no known species having this common name. This record may have been either Spotted Spreadwing (*Lestes congener*) or Slender Spreadwing (*Lestes rectangularis*). The species for this record is treated as unknown herein as it is unclear which of these two (2) species the observer meant to record. Stantec provided comments to AECOM on February 26, 2015 that confirmed that either species may have been observed.

6. References

AECOM, 2015a:

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

AECOM, 2015b:

Summary of 2013 Herpetological Surveys – Route B Transmission Line Study Area. Prepared for Henvey
Inlet Wind LP.

Stantec Consulting Ltd., 2013:

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

Appendix A

Stantec 2013 Field Notes and Documentation

**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 16010824Project Name: NBDate / Time: Apr 9, 13Field Personnel: RA NB

Weather Conditions:	Temp: <u>4°C</u>	Wind: <u>2-3 W</u>	Cloud: <u>low</u>	PPT: <u>/</u>	PPT in last 24 hrs: <u>Rain</u>
----------------------------	------------------	--------------------	-------------------	---------------	---------------------------------

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO	River Otter near Station 1 (a) 9:45am River Otter 1-at Station 2 at 3pm Muskrat - Bone fragments found.	 Tracks = Moose - E. Wolf -	Parapile Discovered	Den

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

Signature: _____

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

REV: May, 07 Form 006



Stantec

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

1 dam -
**Wildlife Habitat and Incidental Wildlife
Observation Form**

Project Number 160960824

Project Name: Nigiz

Date / Time: Apr 16, 13

Field Personnel: BH BM

Weather Conditions:

Temp:

5C-7

Wind:

1-4 W

Cloud:

100-40

PPT:

/

PPT in last 24 hrs:

RAIN

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO FOBP - VO YBSA - VO NOFL - VO KILL - VO ATSP - FE HETH - OB				

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

Signature: _____

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

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**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: NigigDate / Time: Apr 17, 2013Field Personnel: B. Holden B. Miller

Weather Conditions:

Temp:

0-9°C

Wind:

4-ESE

Cloud:

0-35

PPT:

/

PPT in last 24 hrs:

/

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

10-4pm

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> Several SACK feeding along Inlet. <u>MYWA.</u>	<u>River Otter-OB</u> <u>Mease -Scat</u>		<u>Mourning Dove-OB</u> <u>Cemma sp. -OB</u>	

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

Signature: [Signature]

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

REV: May, 07 Form 006

**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number: <u>160960824</u>	Project Name: <u>Nigin</u>
Date / Time: <u>Apr 22, 13</u>	Field Personnel: <u>BA BM</u>
Weather Conditions: <u>Temp: 14°C</u>	Wind: <u>3-4S</u>
Cloud: <u>0-20%</u>	PPT: <u>/</u>
	PPT in last 24 hrs: <u>/</u>

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

um -337 Mature Red/White Pine + Red Spruce
338 - Mature white spruce - white cedar Moist woods

OBSCENE
LATE WINTER
MEUSE

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO PUFI-OB BEKI-OB GUTE-OB WAPU-OB RMPV-OB BPER-OB	WT Deer-4-OB Mouse-TK Am. Beaver-OP	BLANDING'S TURTLE-17 0528097 5077355 Large Adult. Photos	Mourning Cloak-OB Compton's Tortoise? -OB	

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

Signature: _____

(Field Personnel)


Signature: _____

(Project Manager)

Page 1 of 1

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7am - 5pm

 <p>Stantec</p>		Stantec Consulting Ltd. 70 Southgate Drive Guelph, Ontario, Canada N1G 4P5 Tel: (519) 836-6050 Fax: (519) 836-2493	Wildlife Habitat and Incidental Wildlife Observation Form			
Project Number: <u>160960824</u>		Project Name: <u>Nigig</u>				
Date / Time: <u>Apr 23, 13</u>		Field Personnel: <u>BH</u> <u>BM</u>				
Weather Conditions:	Temp: <u>7°C</u>	Wind:	Cloud: <u>25-</u>	PPT:	PPT in last 24 hrs: <u>/</u>	

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> WPWA - OB SACR - OB HOLA - OB CATE - OB	Am. Beaver - 2 CRB. along Honey Inlet.	Large Suspected BULLFROG seen on shore of the Inlet.	Marmoset Chalk -OB	

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

Signature: _____
 (Field Personnel)

Signature: _____
 (Project Manager)

Page _____ of _____

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**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Henvey/NigigDate / Time: Apr 30/13Field Personnel: N. Burnett, S. Richer**Weather Conditions:**

Temp:

19°C

Wind:

3-6eak east

Cloud:

100% - 15%

PPT:

none

PPT in last 24 hrs:

4-5mm**Wildlife Habitat**

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> upland sandpiper - south shore of inlet ~ 50m E of Joe's cabin.	mole tunnels on road - Bear ~ 2-3 years old on island 3/4's of the way out the inlet	Blundings turtle - 522671, adult 5074966 snapping turtle - 522773, 5075058 snapping turtle - 522514, 5074861 also at above station ~ 10 painted turtles. 5-lined skink - adult ♀ - 522468, 5075992	missing part of rear right foot and part of tail	

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

Signature: NB

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig Henvey InletDate / Time: Wed May 1st 2013Field Personnel: Nathan Burne & Sarah Richer**Weather Conditions:**

Temp:

18

Wind:

Beauf 3-4

Cloud:

15-80%

PPT:

0

PPT in last 24 hrs:

0throughout day**Wildlife Habitat**

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> COLO - OB, VO GBHE - TK Long-tailed Duck - 2, 1m, 1A, OB COME - 1 OB, male COCO - OB, 1 BTMW - 1, VO EAPH - nesting on cabin at Hawk	Moose female on Beckton Road (OB) Beaver - in (OB) main channel of Henvey Inlet Red squirrel - OB Beckton Road Otter, 2, OB	Blanding's Turtle - OB (adult) 525556 (17T) 5073401 (M083) Red-backed Salamander Transect 13, OB NLFR - VO SPAE - VO WOFR - VO? approx 5 times in a 5 minute period Green Frog - OB Gray Tree Frog 1 - VO Eastern Gartersnake OB (1)	Mourning Cloak 3, OB Eastern Pine Elf - 1, OB Spring Azure (4) - OB	Bumble bees Trout lilies for the 1st time this season are in bloom today

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

Signature: [Signature]
(Field Personnel)

Signature: [Signature]
(Project Manager)

Page 1 of 1

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Blanding's Turtle
1 OB - 530509 5078763

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N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig Henvey InletDate / Time: Thurs May 2 2013Field Personnel: Sarah Richer / Nathan Burnett

Weather Conditions:	Temp: <u>20</u>	Wind: <u>Beauf 2-3</u>	Cloud: <u>10</u>	PPT: <u>0</u>	PPT in last 24 hrs: <u>0</u>
---------------------	-----------------	------------------------	------------------	---------------	------------------------------

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> RVGR - 1, OB, Flowerpot bay COME - 0, OB Broad-winged Hawk at washout along Beckton Rd.	Muntelid sp - TK (2); Beckton Porcupine, adult OB - Beckton Rd Bear - TK Raccoon - TK Wolf - TK	NLFR - VO SPPE - VO Blanding's Turtle 532316 5078607 - OB Blanding's Turtle nest; possibly remains of successful one that hatched on Beckton Rd 529532 5078465	Spring Azure, Mourning Cloak	Spring Pearties

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

Signature: [Signature]

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

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**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 1609 60824Project Name: Nigig Henvey InletDate / Time: May 3/13 FridayField Personnel: NB, SR

Weather Conditions:	Temp: <u>20°C</u>	Wind: <u>3-4 knots</u>	Cloud: <u>Trace-cirrus</u>	PPT: <u>None</u>	PPT in last 24 hrs: <u>trace last eve.</u>
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Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> GAYE - 4 OB LEYE - 2, OB OCAP - 1, OB Key River COLO - 3 OB 2 @ Henvey Inlet 1 @ Key River Sandhill Crane at key 70 Bufflehead on the Key River	Beaver - 3 OB 1 on Henvey Inlet 2 inland from Key River Bear by Beckman Landing on road; kind of fat for this time of year - OB Otter - SC Raccoon - TK	Blainings Turtle, same spot (roadside pond) as observed earlier this week May 1 2013 530509 5078763 Snapping Turtles - 2 OB, mating 523861 5081045 <div style="background-color: black; width: 150px; height: 100px; margin: 10px 0;"></div> Smooth Green Snake 523819 5080864	Mourning Cloak several OB Spring Azure, several OB Eastern Pine Elf A	Pitcher Plants!

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

Signature: [Signature]

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

REV: May, 07 Form 006

**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 106960824Project Name: Nigig/Henvey InletDate / Time: Tues May 7 2013Field Personnel: Sarah Richer & B. Miller

Weather Conditions:	Temp: <u>23</u>	Wind: <u>Beauf 0-1</u>	Cloud: <u>Trace-0</u>	PPT: <u>None</u>	PPT in last 24 hrs: <u>None</u>
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Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> Wilson's snipe pair Broad-winged Hawk along Beckton Road Sandhill Crane in large marsh by MET Tower 3 trail	Wolf tracks on Beckton Rd; TK Wolf pack howling to the west of abandoned truck, + 1 single wolf howling to east of abandoned truck came from south side of inlet Black bear along MET tower 4 trail	Blanding's Turtle - female, 529516 adult 5078224 American Toad tadpoles, + 1 inch long American Toad adults Salamander sp egg casings, at least 2 different species	Mourning Cloak Spring Azure Henry's Elfin Unknown Emerald sp (Dragonfly)	Trailing Arbutus blooms Ant lion pits Blackflies. biting crop.

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

Signature: [Signature]
(Field Personnel)

Signature: _____
(Project Manager)

Page 1 of 1

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig / Henvey InletDate / Time: May 8 2013 WedField Personnel: J. Richer & B. Miller

Weather Conditions:	Temp: <u>21°C</u>	Wind: <u>East 0-1</u>	Cloud: <u>0</u>	PPT: <u>None</u>	PPT in last 24 hrs: <u>None</u>
----------------------------	-------------------	-----------------------	-----------------	------------------	---------------------------------

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> COLO - pair on inlet by Joe's cabin Bald Eagle - OB adult flying W over Hawkwatch 3	Beaver OB Red squirrel OB Chipmunk VO Raccoon TK Otter TK	Blinding's Turtle - 523089 5076266 2 Northern Watermats 1 adult, 1 quite small adult NLFR - OB GULL - OB GRFR - OB GRTR - VO	Emerald Dragonfly sp. Common Green Darner Henry's EIPM	

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

Signature: [Signature]

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

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**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig/ Henvey InletDate / Time: May 9 2013 ThursField Personnel: S Richer & B Miller**Weather Conditions:**

Temp:

22

Wind:

Beauf 0

Cloud:

0

PPT:

0

PPT in last 24 hrs:

0**Wildlife Habitat**

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> BAE4-adult circling near Hawkwatch 3	Black bear adult on Beckanon Road, near landing @ inlet	Massasauga Snake adult 17T 527183 5081709 Salamander egg casings! Road killed Smooth Green Snake on Beckanon Rd 17T 529498 5077982 Baby painted turtle in one of ponds by end of Trans 1	Mourning Cloak Spring Azure Woolly Bear Caterpillar (overwinter as larva)	

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

Signature: _____

(Field Personnel)

Signature: _____

(Project Manager)

Page _____ of _____

REV: May, 07 Form 006

**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig/Heavey InletDate / Time: May 14 2013 TuesField Personnel: S Richer & B Miller

Weather Conditions:	Temp: <u>9-10</u>	Wind: <u>Bea f 2</u>	Cloud: <u>100</u>	PPT: <u>None</u>	PPT in last 24 hrs: <u>None</u>
---------------------	-------------------	----------------------	-------------------	------------------	---------------------------------

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> 2 SACR foraging in inlet at beginning of Transect 3 1st female warbler observed today - a MYWA BAEA-adult, soaring/circling over Flash's cabin area	Red fox-adult OB at end of Transect 11 Beaver in small treed swamp area near end of Transect 3 Bear-SC all over Transect 3	Red-bellied Snake, Roadkilled on Beckman 17T 508846 5078150 Massasauga Snake, adult 17T 525263 5025698 (Milton's Bay)	Several nests of early instar Eastern Tent Caterpillar	Blooming as of May 14 2013: Raspberry Blueberry Black huckleberry Trailing arbutus Leatherleaf Several Violets Dutchman's Grease Dwarf Raspberry Kidney leaf Buttercup Red Elderberry

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

Signature: Israel R. L.
(Field Personnel)

Signature: _____
(Project Manager)

Page 1 of 1

REV: May, 07 Form 006

**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig/ Henvey InletDate / Time: May 15 (Wed) 2013Field Personnel: S Richer & G Miller

Weather Conditions:	Temp: <u>15°C</u> <u>7 at start</u>	Wind: <u>3-4</u> <u>at start</u>	Cloud: <u>100%</u> <u>at start</u> <u>end</u>	PPT: <u>None</u>	PPT in last 24 hrs: <u>None</u>
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Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Possible Moose winter yard, in area of
17T 527149
5077047

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> Bald Eagle - OB (adult) soaring around Milton's Bay area COW pair in inlet Scarlet Tanager - VO, singing near Becharon Landing 1st BTRW of the season today	Otters - 3, all same size more or less feeding in water by Transect 13 start point	Massasauga Snake, yearling? 17T 526936 5077230 Garter snake Painted Turtles & the remains of a subadult Blanding's Turtle as well as turtle nesting habitat 17T 532381 5078849	Cabbage White butterfly - OB	Black Morels (mushrooms) Earthstar mushrooms

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

Signature: David R. L.
(Field Personnel)

Signature: _____
(Project Manager)

Page 1 of 1

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**Stantec**

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig/Hevey InletDate / Time: Thurs May 16 2013Field Personnel: S Richer / G Miller

Weather Conditions:	Temp: range <u>6°C</u>	Wind: <u>Beauf 2-3</u>	Cloud: <u>all day</u> range 100%-0%	PPT: <u>None</u>	PPT in last 24 hrs: <u>None</u>
---------------------	---------------------------	---------------------------	--	---------------------	------------------------------------

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> Caspian Tern (2), foraging on Key River	White-tailed Deer, end of Migration Transect 15	Snapping Turtle, pond at end of Migration Transect 15	The season's first damselfly	a boat in the inlet, 3 fishermen;
SACR-1, Key River (OB)	Beaver, swimming in inlet	17T 524895 5080998	Spring Azures	small craft, maybe 15 ft long?
Broad-winged Hawk at Beckman Landing;		Painted Turtle CA - just the plastron in a pile of pine needles beside a beaver pond	An enormous dragonfly, too fast to 10; size says some kind of Darner maybe?	Unknown occupants
a Broad-winged Hawk carrying a snake at Key River		2 Massasauga snakes (adults) 17T 526870 5081680 17T 527032 5081612		

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

Signature: Daniel M. L.

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

REV: May, 07 Form 006



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

54 Jan - 630pm
**Wildlife Habitat and Incidental Wildlife
Observation Form**

Project Number 160460829

Project Name: Nizy

Date / Time: Jun 4, 13

Field Personnel: B. Holden

Weather Conditions:

Temp:

4°C - 16°C

Wind:

1-2-3-4

Cloud:

5-10

PPT:

—

PPT in last 24 hrs:

✓

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

ROCKY

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Amphibians Herps	Butterflies / Dragonflies	Other Other
<u>l.e. AMROAZO</u> <u>HONG</u> <u>WOU</u> <u>WKA</u> <u>OSPR</u> <u>GGW</u> Feather <u>fund.</u>	<u>Bear - FE</u> <u>Moose - SC</u> <u>B. Bear - SC</u>	<u>Green Frog - VO</u> <u>Mink Frog - VO</u>	<u>American Lady</u> <u>Can. Tiger</u> <u>Swallowtail</u> <u>Spring Azure</u> <u>Mourning Cloak</u> <u>C. Roadside Skipper</u> <u>Arctic Skipper</u> <u>Silvery Blue</u> <u>Harvester</u>	<u>C.F. Corporal</u> <u>Hudsonian Whiteface</u> <u>Ousty clubtail</u> <u>Am. Emerald</u> <u>Frosted? Whiteface</u> <u>Four-spotted Skimmer</u> <u>Common Green Darter</u> <u>Rocket-tailed Emerald</u> <u>Stream Cruiser</u> <u>Common Baskettail</u>

Appeared freshly
molted - secondary.

See Reptile survey form for reptiles.

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

Signature: [Signature]

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of _____

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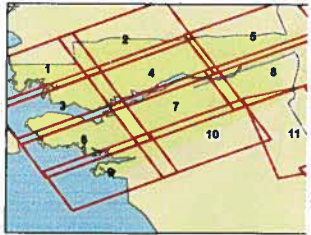
Very
or the
after
dam
reading
insisted

species

Slender Snapping

Northern Vernal
Bluet?

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



Notes

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





Wildlife Habitat and Incidental Wildlife Observation Form

Field Personnel: BA

PPT in last 24 hrs:

REV: May, 07 Form 006

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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Ninig Henvey InletDate / Time: June 6 2013Field Personnel: J. Richer**Weather Conditions:**

Temp:

12
-20

Wind:

15-12

Cloud:

100

PPT:

None

PPT in last 24 hrs:

None

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO	Long-tailed weasel (Creighton Rd) OB	Northern Watersnake -OB	Harvester -OB 12-spotted -OB Skimmer 4-spotted -OB Skimmer Common White-tail -OB Chalk-fronted Corporal -OB Viceroy -OB Eastern Common -OB Spring Azure -OB Mourning Cloak -OB Tiger Swallowtail -OB	Luna -OB moth Bee fly sp -OB Wasp -OB

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

Signature: [Signature]
(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

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

5:45 am - 3 pm
**Wildlife Habitat and Incidental Wildlife
Observation Form**

Project Number 160960824

Project Name: Nigig

Date / Time: Jan 7, 13

Field Personnel: B. Holden

Weather Conditions:	Temp: <u>8-19°C</u>	Wind: <u>3 E</u>	Cloud: <u>100-60-80</u>	PPT: <u>/</u>	PPT in last 24 hrs: <u>/</u>
----------------------------	---------------------	------------------	-------------------------	---------------	------------------------------

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

New for site only

Birds	Observed Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO <u>SACR- Flightless young</u>	<u>River otters - OB</u> - in inlet <u>- Black Bear</u> - Belknap Rd 3 Hwy 64 <u>Black Bear</u> - OB #2 on site <u>White-tailed Deer - OB</u>	<u>AMTO</u> <u>GRAR</u> <u>MIFR</u>	<u>Sphagnum Sprite</u> <u>Indian Skipper</u>	

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

Signature: _____

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

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5:30am - 2pm
**Wildlife Habitat and Incidental Wildlife
Observation Form**

Project Number

160960824

Project Name:

Nigiz

Date / Time:

Sun 8, 13

Field Personnel:

P. Holden

Weather Conditions:

Temp:

8-18°C

Wind:

1-2 E

Cloud:

100-90-100

PPT:

/

PPT in last 24 hrs:

/

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO	Moose - cow + 2 calves	Bullfrog Greenfrog Spring Reeper	No New Species	
	WT Deer (Buck)			

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

Signature: _____

(Field Personnel)

Signature: _____

(Project Manager)

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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number

160960824

Project Name:

Nizig

Date / Time:

Jun 20, 2013

Field Personnel:

B. Holden

Weather Conditions:

Temp:

6-16°C

Wind:

1-3 W

Cloud:

10-30

PPT:

/

PPT in last 24 hrs:

/

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> CATE	LT Deer - OB Red Fox - OB ♀ on Belknap rd.	Leopard Mink Green Bull ↓ 1-2 species	<i>New species</i> White Admiral Black-shouldered Spiny leg Sedge Sprite	

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

Signature:

(Field Personnel)

Signature:

(Project Manager)

Page 1 of 1

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Form 006

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

0575 - 1600
**Wildlife Habitat and Incidental Wildlife
Observation Form**

Project Number 160960824

Project Name: Nizig

Date / Time: Jun 24, 13

Field Personnel: B. Holden

Weather Conditions:	Temp: <u>18-25</u>	Wind: <u>3 SW</u>	Cloud: <u>0-20</u>	PPT: <u>/</u>	PPT in last 24 hrs: <u>Rain</u>
----------------------------	--------------------	-------------------	--------------------	---------------	---------------------------------

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO	Snowshoe Hare -OB Moose -OB		Prince Baskettail Northern Parula Swift River Creeper	

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

Signature: _____

Signature: _____

(Field Personnel)

(Project Manager)

Page 1 of 1

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0530-1600
**Wildlife Habitat and Incidental Wildlife
Observation Form**

Project Number: <u>160960824</u>		Project Name: <u>M34</u>	
Date / Time: <u>Jun 25, 13</u>		Field Personnel: <u>B. Holden</u>	
Weather Conditions:	Temp: <u>19-24</u>	Wind: <u>0-2</u>	Cloud: <u>50-75</u>
			PPT: <u>/</u>
			PPT in last 24 hrs: <u>/</u>

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

CAWA-SM-17T 0528979 5081459
 CAWA-SM-17T 0528809 5080300 75m ENE of vrm.
 CAWA-SM-17T 0528430 5081360
 CAWA-SM-17T 0528597 5081266

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Only new species recorded for tracks, birds, & herps)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO see CAWA info above	Red Fox-OB Red Squirrel-OB W.T. Deer -2 ♂-OB		Elfin Skimmer Horned Clubtail Elephant Spreadingwing	

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

Signature: [Signature]
(Field Personnel)

Signature: _____
(Project Manager)

Page 1 of _____

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5:30am - 8pm
**Wildlife Habitat and Incidental Wildlife
Observation Form**

Project Number: 160960824	Project Name: M3ry
Date / Time: Sun 26, 13	Field Personnel: BH, MC, AT
Weather Conditions: 19-27°C	Temp: 19-27°C
Wind: 3-SW	Cloud: 10%
PPT: ✓	PPT in last 24 hrs: ✓

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

CAWA - SM - Soe's Cabin - 8:30pm - UTM-17T

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO OBWO Poss. Rckl SHAM memA	WT Deer-OB Red Squirrel-OB	N. Watersnake - Sandy Bay 2 Painted Turtles on coastal islands. - Northern	Swift Hawk Crows White Admiral Long Dash Skipper Orange Seawing Summer Azure Long Dash Skipper Two-spotted Skipper	

Watersnake

- Soe's Cabin

Arauc Damsel
Canada Damsel

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

Signature: [Signature]

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: MizigDate / Time: Jun 27, 13Field Personnel: B. Ho 12m**Weather Conditions:**

Temp:

17-25

Wind:

0-3

Cloud:

90-100

PPT:

/

PPT in last 24 hrs:

/

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

CAWA-SM- 17T 0526801 5076662
CAWA-SM- 17T 0527108 5076571

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO	Black Bear - OB WT Deer - HH OBS	Garter snake - OB		

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

Signature: [Signature]

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

REV: May, 07 Form 006

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Passerine Week #1

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: NisigDate / Time: Aug 22-24 2013Field Personnel: B. Holden B. Miller**Weather Conditions:**

Temp:

Wind:

Cloud:

PPT:

PPT in last 24 hrs:

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Spring Baskettail - very late occurrence

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> BAEA-1-Ad. flying along S. shore of Heavy Inlet.	Black Bear +3 1 on Inlet 2 on Belknap Rd.	N. Redbelly snake @ Boat launch 5 Garter snakes @ Boat launch 1 on Belknap Rd. N. Water snake - on Inlet.	Spotted, slender spreadwings Sweetflag spreadwings Pondweed Darter Green Comma Leonard's Skipper	<i>Darters</i> Other Canada - Variable - Shadon - Black-tipped.

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

Signature: _____

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

REV: May, 07 Form 006

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Palmer Lake 2
**Wildlife Habitat and Incidental Wildlife
Observation Form**

Project Number 160960824Project Name: NigigDate / Time: Aug 26-28 2013Field Personnel: P. Alden B. Miller**Weather Conditions:**

Temp:

23

Wind:

34

Cloud:

100

PPT:

Rain

PPT in last 24 hrs:

Rain**Wildlife Habitat**

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> CATE - saw on Inlet Islands HOME	Black Bear - OB - Heavy hkt N. shore Black Bear ♀ + 2 cubs - Sandy Bay River Otter S. (family) shore of Inlet near Flash's Cabin	Blanding's Turtle - 1 TT Five-lined Skink TT N. Watersnake 2 - Sandy Bay Gartersnake Pike Barmes	Monarch - 1111 Samatoka larva Emerald sp. on Belknap Rd.	

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

Signature: [Signature]

(Field Personnel)

Signature: _____

(Project Manager)

Page 1 of 1

REV: May, 07 Form 006

HONI corridor

Not in Project Location

mcameron

160950269_Fig_1_Blandings_Turtle_Habitat_Ov
04/12/13 10:42 AM

XEROX®

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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 60960824Project Name: Niag - HONI corridorDate / Time: Aug 5, 2013Field Personnel: B. Holden, M. Cameron**Weather Conditions:**Temp: 23°CWind: 3Cloud: 10%PPT: ØPPT in last 24 hrs: Ø

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO POFI, MERLON -VO		Five-lined skink OB moved from open under cover (stump) - pale colouration but still blue on tail 0564188 5055210	Coral Hairstreak Aphrodite Fritillary Black-tipped Darter Variable Darter American Copper	
		Five-lined skink - Juvenile (small) Obs. in open on bone rock. 0564143 5055355		

Probable Blanding's turtle nest, predated
on access road. Shell fragments; but little
shell, and size and number (~7-10) suggest
Blanding's. UTM

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

Signature: _____
(Field Personnel)Signature: n 4 cm length
(Project Manager)

Page _____ of _____

REV: May, 07 Form 006

**Stantec** 17T

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

Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig - HONIDate / Time: Aug 6, 2013Field Personnel: B. Holden M. Cameron**Weather Conditions:**

Temp:

Wind:

Cloud:

PPT:

PPT in last 24 hrs: ☒

Wildlife Habitat

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO EWPW - ♂ flushed from NE. edge of T-Line. 563092 5057253	Myotis sp. under flat rock in open rock barrens 0562319, 5058702	Predated turtle nest. Eggs brittle; ~3cm length. 5-7, but very weathered. Nest in loose soil and dead grass at edge of rock outcropping; ~100m from water. Same UTM as EWPW Five-lined skink juvenile; 5-6cm 0562389 5058507		

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

Signature: _____
(Field Personnel)

Signature: _____
(Project Manager)

Page 1 of _____

REV: May, 07 Form 006

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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number _____

Project Name: Nigig - HONI corridorDate / Time: Aug 8th ThursdayField Personnel: B. Holden, M. Cameron**Weather Conditions:**

Temp:

23°C

Wind:

0

Cloud:

50%

PPT:

Ø

PPT in last 24 hrs:

yes**Wildlife Habitat**

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> 2 x OSFL in marsh / fen Brandon took photo 05655219, 5052335		probably Milk snake skin; approx. 36" 0566290, 5051148 <hr/> smooth green snake	mottled darter	

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

Signature: _____

(Field Personnel)

Signature: _____

(Project Manager)

Page ____ of ____

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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig - HONI corridorDate / Time: Aug 9, 2013Field Personnel: B. Holden, M. Cameron**Weather Conditions:**

Temp:

23°C

Wind:

Cloud:

0%

PPT:

Ø

PPT in last 24 hrs:

Ø**Wildlife Habitat**

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

lots of sandy soil - blowvents - and ponds - suitable bog-nosed Shrikelet

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
<i>i.e. AMRO/VO</i> AMRO/VO EWPE at Seguin Charles		Snapping turtle in road puddle w 30cm dia. carapace 0577310, 5030573	Buckeye Cross-lined skipper Mottled darner	

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

Signature: _____
(Field Personnel)

Signature: _____
(Project Manager)

Page _____ of _____

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Wildlife Habitat and Incidental Wildlife Observation Form

Project Number 160960824Project Name: Nigig - HONI corridorDate / Time: Aug 10, 2013Field Personnel: B. Holden, M. Cameron**Weather Conditions:**

Temp:

20°C

Wind:

1

Cloud:

10%

PPT:

Ø

PPT in last 24 hrs:

trace**Wildlife Habitat**

List specific microhabitats present (snags, logs, hibernacula, vernal pools etc.) and what community they were encountered in (use ELC code where applicable).

Incidental Species Observations

List species and type of observation:

(TK = track, SC = scat, VO = vocalization, OB = observed, DP = distinctive parts, FE = feeding evidence, CA = carcass, FY = eggs, nest, HO = house/den, SI = other sign)

Birds	Mammals	Herps	Butterflies / Dragonflies	Other
i.e. AMRO/VO whip-poor-will flushed; open rock barrens 0576825, 5031518		spotted salamander under flattened log brown snake on open rock, in lichen smooth green snake under rock; very cold, damp 0576682, 5031814		
EWPE in woods to west of corridor 0576838 5032282				

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

Signature: _____

(Field Personnel)

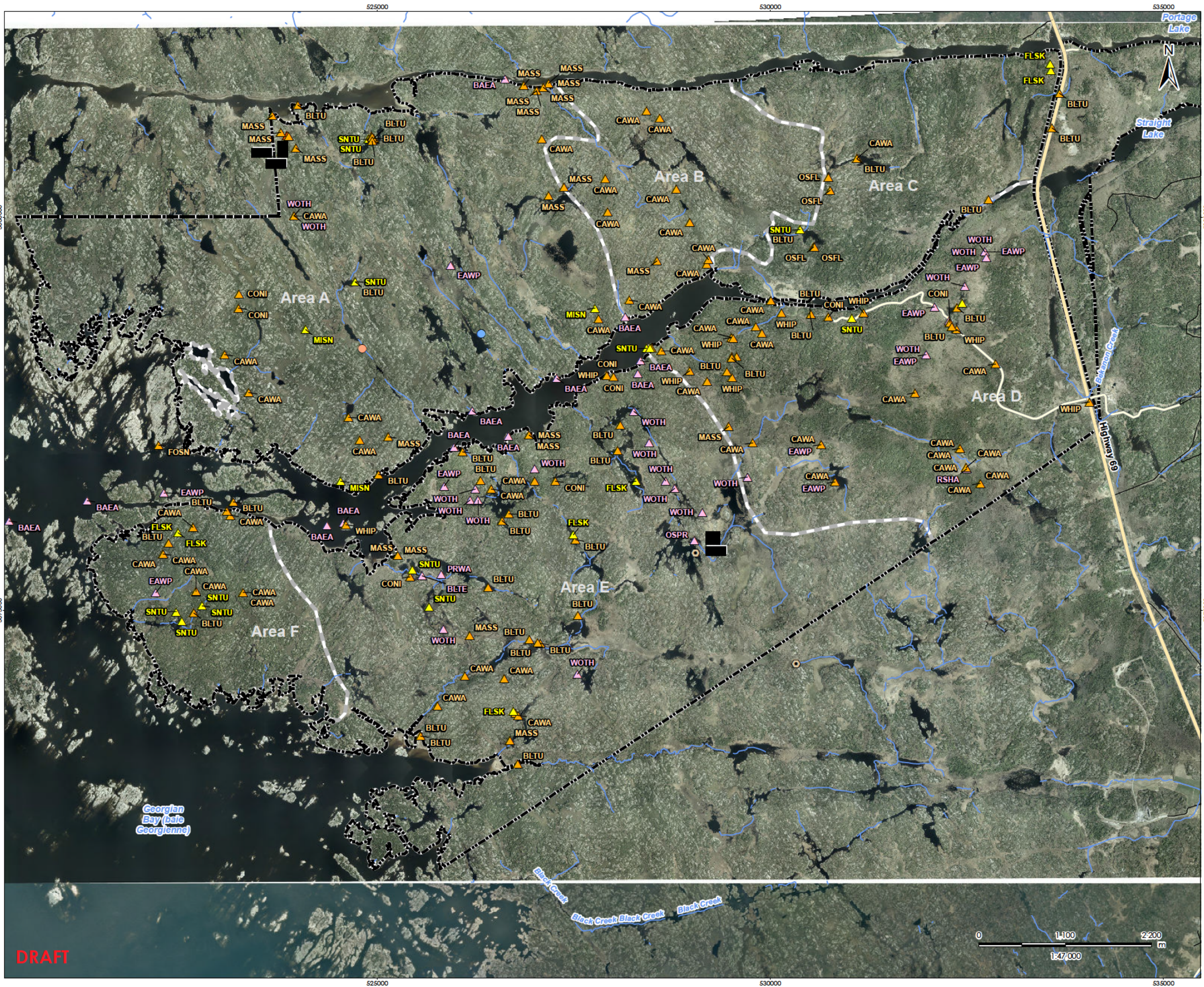
Signature: _____













(Project Manager)

Page _____ of _____

REV: May, 07 Form 006

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Revised: 2013-12-06 By: choney



- Legend**
-  Federal Lands Study Area (Wind)
 -  Highway
 -  Major Road
 -  Local Road
 -  Field Survey Areas
- Significant Species Observations**
-  Great Blue Heron Heronry (GTBH)
 -  Great Gray Owl Feather (GGOW)
 -  Osprey Stick Nest (OSPR)
 -  Other Significant Species Observation
- Species At Risk Observation**
- 
 -  Threatened (THR)
 -  Special Concern (SC)

- Notes**
- Coordinate System: NAD 1983 UTM Zone 17N
 - Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario 2013.
 - Orthoimagery © Blue Earth 2013 © West Parry Sound Geography Network 2013
Imagery Date 2013 2004
- December 2013
160960824

Client/Project

NIGIG POWER CORP.
HENVEY INLET WIND PROJECT

Figure No.
3-A

DRAFT

Title

**Significant Observations-
Wind**

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	restricted 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		

Location/Utm													Weather				
Obs #	Date	Time	Zone	Easting	Northing	Type of Survey	Observation	SARA Status	4-LTR CODE	# of individuals	Habitat	Other Notes	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					
	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

Location/Utm												Weather					
Obs #	Date	Time	Zone	Easting	Northing	Type of Survey	Observation	SARA Status	4-LTR CODE	# of individuals	Habitat	Other Notes	Temp	Wind	Cloud	precipitation	last 24 hrs?
	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					Type of Survey	Observation		# of individuals	Habitat	Other Notes	SARA Status	4-letter Code
Date	Time	Zone	Easting	Northing								
9-Jul	N/A	17T	529555	5078479	Breeding birds	Pine Imperial Moth	Eacles imperialis pini	1		found dead on road near truck	S3?	PIMO

Location/Utm				Type of Survey	Observation	# of Individuals	Habitat	Other Notes	SARA Status	4-letter Code
Date	Time	Easting	Northing							
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

Appendix B

Stantec's Terrestrial Survey Work Program (Stantec, 2013)



**2013 TERRESTRIAL SURVEY
WORK PROGRAM**

File No. 160960770
March 2013

Prepared for:

Nigig Power Corp.
Henvey Inlet Wind Project

Prepared by:

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph ON N1G 4P5

Table of Contents

1.0 TERRESTRIAL FIELD PROGRAM	1.1
2.0 FIELD PROGRAM OVERVIEW	2.1
2.1 ECOSITE CLASSIFICATION AND WETLANDS	2.1
2.2 WILDLIFE HABITAT	2.2
2.3 ENDANGERED, THREATENED AND SPECIAL CONCERN SPECIES	2.2

3.0 PROPOSED FIELD WORK PROGRAM	3.1
3.1 GENERAL RECONNAISSANCE.....	3.1
3.2 SPRING MIGRATORY BIRD SURVEYS	3.1
3.3 BREEDING BIRD SURVEYS	3.2
3.4 AMPHIBIAN AND REPTILE SURVEYS	3.4
3.5 REPTILE HABITAT AND TARGETED SURVEYS.....	3.4
3.6 BAT SURVEYS.....	3.6
3.7 ECOSITE, WETLAND AND VEGETATION SURVEYS	3.6
3.8 FALL MIGRATORY BIRD SURVEYS.....	3.7
3.9 INCIDENTAL OBSERVATIONS.....	3.8

4.0 REFERENCES AND INFORMATION SOURCES.....	4.1
--	------------

List of Tables

Table 1: Endangered, threatened and special concern terrestrial wildlife species potentially present within the Study Area	2.2
Table 2: General Habitat Description and Use by Reptile Species at Risk.....	3.5
Table 3: Rare Plant Species and Flowering Period.....	3.7
Table 4: Summary of Natural Environment Field Program	3.9

List of Figures

Appendix A

Figure 1: Study Area for the proposed Nigig Power Corp. Henvey Inlet Wind Project and Transmission Corridor	
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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 Magnetawan 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.

2013 TERRESTRIAL SURVEY**WORK PROGRAM**

Terrestrial Field Program

March 2013

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 FPWC 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.

2013 TERRESTRIAL SURVEY

WORK PROGRAM

Field Program Overview

March 2013

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

2013 TERRESTRIAL SURVEY

WORK PROGRAM

Field Program Overview

March 2013

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	<i>Vermivora chrysoptera</i>	S4B	SC	THR
Bird	Canada Warbler	<i>Wilsonia canadensis</i>	S4B	SC	THR
Mammal	Little Brown Myotis	<i>Myotis lucifugus</i>	S5	END	END (NS)
Mammal	Northern Myotis	<i>Myotis septentrionalis</i>	S3?	END	END (NS)
Mammal	Tri-coloured Bat	<i>Perimyotis subflavus</i>	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

2013 TERRESTRIAL SURVEY**WORK PROGRAM**

Proposed Field Work Program

March 2013

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.

2013 TERRESTRIAL SURVEY**WORK PROGRAM**

Proposed Field Work Program

March 2013

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 of 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 elicit 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**).

2013 TERRESTRIAL SURVEY

WORK PROGRAM

Proposed Field Work Program

March 2013

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	
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.

2013 TERRESTRIAL SURVEY**WORK PROGRAM**

Proposed Field Work Program

March 2013

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

2013 TERRESTRIAL SURVEY**WORK PROGRAM**

Proposed Field Work Program

March 2013

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	<i>Botrychium rugulosum</i>	Mid-Spring
Thread-like Naiad	<i>Najas gracillima</i>	Summer to Fall, seeds important to ID so survey at end of period
Large Round-leaved Orchid	<i>Plantathera macrophylla</i>	June to August
Snailseed Pondweed	<i>Potamogeton bicupulatus</i>	Early Summer to Fall, seeds important to ID so survey at end of period
Alga Pondweed	<i>Potamogeton confervoides</i>	Summer, seeds important to ID so survey at end of period
Twin-stemmed Bladderwort	<i>Utricularia geminiscapa</i>	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.

2013 TERRESTRIAL SURVEY**WORK PROGRAM**

Proposed Field Work Program

March 2013

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.

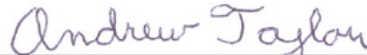
All raptors observed during the survey will be recorded and mapped. Behaviour of the raptors will be noted with emphasis on flight height and determining which individuals were actively migrating as opposed to staging (e.g. hunting, perching, etc.). For actively migrating raptors, flight paths will be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

STANTEC CONSULTING LTD.

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2013 TERRESTRIAL SURVEY

WORK PROGRAM

Proposed Field Work Program

March 2013

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

2013 TERRESTRIAL SURVEY

WORK PROGRAM

Proposed Field Work Program

March 2013

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.

4.0 References and Information Sources

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2013 TERRESTRIAL SURVEY

WORK PROGRAM

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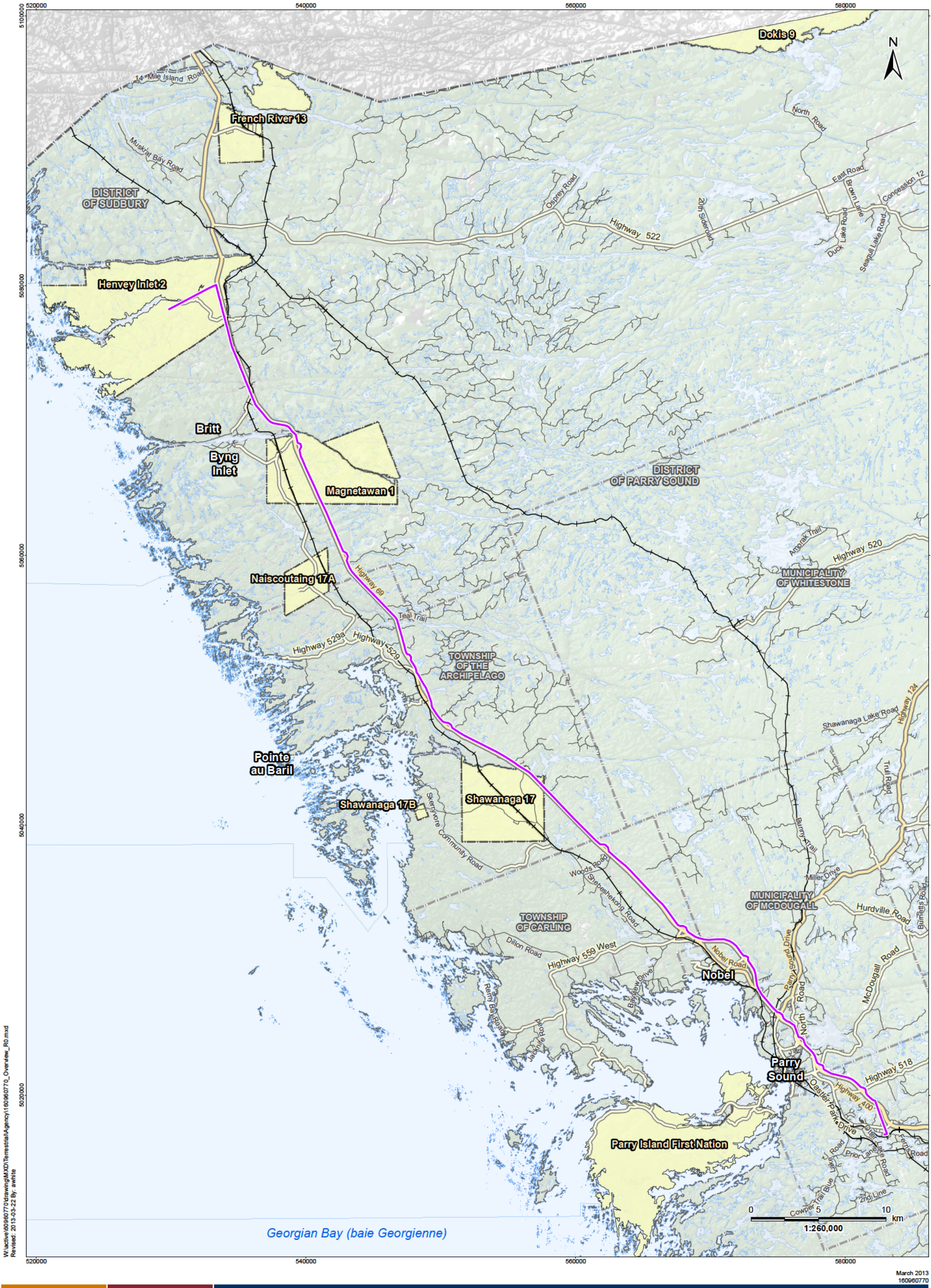
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Appendix A











Figures



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Revised: 2013-03-22 By: awhite



Legend

	Proposed Transmission Line		Railway
Existing Features			Watercourse
	Highway		First Nation Reserve
	Major Road		Upper Tier Boundary
	Local Road		Lower Tier Boundary
			Waterbody

Notes

- Coordinate System: NAD 1983 UTM Zone 17N
- 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

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HENVEY INLET WIND PROJECT

Figure No.
1

Title
Study Area Overview

DRAFT

March 2013
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