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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSI</td>
<td>Area of Natural and Scientific Interest</td>
</tr>
<tr>
<td>Candidate Important Wildlife Habitat</td>
<td>Potential area of wildlife habitat that may be considered important using procedures established or accepted by the Ministry of Natural Resources and Forestry.</td>
</tr>
<tr>
<td>Confirmed Important Wildlife Habitat</td>
<td>Area of important wildlife habitat verified using procedures established or accepted by the Ministry of Natural Resources and Forestry.</td>
</tr>
<tr>
<td>COSEWIC</td>
<td>Committee on the Status of Endangered Wildlife in Canada</td>
</tr>
<tr>
<td>COSSARO</td>
<td>Committee on the Status of Species at Risk in Ontario</td>
</tr>
<tr>
<td>CLI</td>
<td>Canada Land Inventory</td>
</tr>
<tr>
<td>DFO</td>
<td>Fisheries and Oceans Canada</td>
</tr>
<tr>
<td>Dripline</td>
<td>The area defined by the outermost circumference of a tree canopy.</td>
</tr>
<tr>
<td>EC-CWS</td>
<td>Environment Canada – Canadian Wildlife Service</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Study</td>
</tr>
<tr>
<td>ELC</td>
<td>Ecological Land Classification; refers to ecological units defined on the basis of bedrock, climate (temperature, precipitation), physiography (soils, slope, aspect) and corresponding vegetation.</td>
</tr>
<tr>
<td>ESA</td>
<td>Environmental Sensitive Area</td>
</tr>
<tr>
<td>Feathering of blades</td>
<td>Pitching of turbine blades out of the wind so the turbine does not capture the wind and will not produce power.</td>
</tr>
<tr>
<td>Federal SAR</td>
<td>Species listed as Endangered or Threatened under Schedule 1 of the federal <em>Species at Risk Act, 2002.</em></td>
</tr>
<tr>
<td>Frac-out</td>
<td>Escape of drilling mud into the environment as a result of a spill, tunnel collapse or the rupture of mud to the surface.</td>
</tr>
<tr>
<td>Generalized Candidate Important Wildlife Habitat</td>
<td>Potential wildlife habitats listed in Appendix D of the <em>Natural Heritage Assessment Guide for Renewable Energy Projects</em> (MNRF, 2012a), which are not required to be identified for a particular HIWEC component, but may exist within 120 m of that component and are assumed to exist.</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>HIWEC</td>
<td>Henvey Inlet Wind Energy Centre</td>
</tr>
<tr>
<td>HIWEC Location</td>
<td>The area encompassing all construction activities and HIWEC components.</td>
</tr>
<tr>
<td>Important</td>
<td>Natural feature that (1) the Ministry of Natural Resources and Forestry has identified as important, or (2) has been determined to be important using applicable evaluation criteria or procedures established or accepted by the Ministry of Natural Resources and Forestry.</td>
</tr>
<tr>
<td>IWH</td>
<td>Important Wildlife Habitats</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LIO</td>
<td>Land Information Ontario</td>
</tr>
<tr>
<td>MNRF</td>
<td>Ontario Ministry of Natural Resources and Forestry</td>
</tr>
<tr>
<td>MOECC</td>
<td>Ontario Ministry of Environment and Climate Change</td>
</tr>
<tr>
<td>Natural Feature</td>
<td>One of the following: (1) an Area of Natural and Scientific Interest (earth science or life science), (2) a wetland, (3) a wildlife habitat, (4) a woodland, (5) a provincial park, or (6) a conservation reserve.</td>
</tr>
<tr>
<td>NHIC</td>
<td>Natural Heritage Information Centre</td>
</tr>
<tr>
<td>NRVIS</td>
<td>Natural Resource Value and Information System</td>
</tr>
<tr>
<td>NTS</td>
<td>National Topographic System</td>
</tr>
<tr>
<td>OGS</td>
<td>Ontario Geological Survey</td>
</tr>
<tr>
<td>OGSR</td>
<td>Oil, Gas and Salt Resources</td>
</tr>
<tr>
<td>OPA</td>
<td>Ontario Power Authority</td>
</tr>
<tr>
<td>OWES</td>
<td>Ontario Wetland Evaluation System</td>
</tr>
<tr>
<td>PIW</td>
<td>Provincially Important Wetland</td>
</tr>
<tr>
<td>Provincial SAR</td>
<td>Species listed as Endangered or Threatened under the provincial Endangered Species Act, 2007 but not listed as Endangered or Threatened under Schedule 1 of the federal Species at Risk Act, 2002.</td>
</tr>
<tr>
<td>REA</td>
<td>Renewable Energy Approval</td>
</tr>
<tr>
<td>SAR</td>
<td>Species at Risk, including both Federal SAR (species listed as Endangered or Threatened under Schedule 1 of the federal Species at Risk Act, 2002) and Provincial SAR (species listed as Endangered or Threatened under the provincial Endangered Species Act, 2007 but not listed as Endangered or Threatened under Schedule 1 of the federal Species at Risk Act, 2002).</td>
</tr>
<tr>
<td>SARA</td>
<td>Federal Species at Risk Act, 2002</td>
</tr>
<tr>
<td>SARO</td>
<td>Species at Risk In Ontario</td>
</tr>
<tr>
<td>SOCC</td>
<td>Species of Conservation Concern, including (a) provincially rare species ranked by the Natural Heritage Information Centre (NHIC) as S1 (critically imperiled), S2 (imperiled) or S3 (vulnerable) in the province of Ontario but not listed as Endangered or Threatened under Schedule 1 of the federal Species at Risk Act, 2002 (SARA) or the provincial Endangered Species Act, 2007 (ESA); (b) species listed as Special Concern under Schedule 1 of SARA; (c) species evaluated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as Special Concern, Threatened or Endangered but not listed as Endangered or Threatened under Schedule 1 of SARA or the ESA; and (d) species listed as Special Concern under the ESA.</td>
</tr>
<tr>
<td>SWHTG</td>
<td>Significant Wildlife Habitat Technical Guide</td>
</tr>
<tr>
<td>UTM</td>
<td>Universal Transverse Mercator</td>
</tr>
</tbody>
</table>
Wetland: Land such as a swamp, marsh, bog or fen, other than land that is being used for agricultural purposes and no longer exhibits wetland characteristics, that (a) is seasonally or permanently covered by shallow water or has the water table close to or at the surface, and (b) has hydric soils and vegetation dominated by hydrophytic or water-tolerant plants.

Wildlife Habitat: Area where plants, animals and other organisms live or have the potential to live and find adequate amounts of food, water, shelter and space to sustain their population, including an area where a species concentrates at a vulnerable point in its annual or life cycle and an area that is important to a migratory or non-migratory species.

Woodland: Treed area, woodlot or forested area, other than a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees, that is located south and east of the Canadian Shield.
1. Introduction

1.1 Project Overview

Nigig Power Corporation (Nigig) received a Feed-in-Tariff (FIT) Contract from the Ontario Power Authority (OPA) in 2011 for a 300 megawatt (MW) wind energy generation centre. Henvey Inlet Wind LP (HIW), a limited partnership between Pattern Renewable Holdings Canada ULC and Nigig Power Corporation, is proposing to develop the Henvey Inlet Wind Energy Centre (HIWEC), a 300 MW facility on Henvey Inlet First Nation Reserve No. 2 (HIFN I.R. #2). AECOM Canada Ltd. (AECOM) was retained by HIW to prepare an Environmental Assessment (EA) for the proposed HIWEC. The EA was conducted in accordance with the Henvey Inlet First Nation Environmental Assessment Guidance Instrument (HIFN EA Guidance) requirements.

The HIFN EA Guidance document includes a requirement to complete a Natural Heritage Assessment (NHA) having regard to the provincial process. Under the provincial process, a proponent who proposes to engage in a renewable energy project is required to conduct a NHA, consisting of the following:

- A Records Review;
- A Site Investigation; and
- An Evaluation of Importance (EOI).

Through this process, proponents identify natural features near the proposed HIWEC location and determine if prohibitions and setbacks apply. In instances where the HIWEC location is proposed within such a setback, the proponent must prepare an Environmental Impact Study (EIS) Report to identify and assess the potential negative environmental effects that may result from the proposed HIWEC, identify appropriate mitigation measures and describe how the potential effects will be addressed through the Environmental Effects Monitoring Plan (EEMP) and Construction Plan Report.

This document is intended to address the Records Review requirements of the NHA for the HIWEC.

Throughout this NHA, the term “significant” or “significance” as per provincial requirements has been changed to “important” or “importance” as the term "significance" has specific meaning in the federal EA process which is different from the meaning in the provincial process. Therefore, the term in the provincial process has been changed to avoid confusion. The meaning of “significance” in the provincial process is carried over to the term “importance” for the purpose of the NHA. The term “significance” is not changed if it is in the title of a reference document.

1.2 Location and Study Area

The HIWEC study area includes the entirety of HIFN I.R. #2 plus a 550 m buffer extending beyond the HIFN I.R. #2 boundary. HIFN I.R. #2 is bounded on the north by the Key River, Georgian Bay to the west, Highway 69 to the east with some HIFN I.R. #2 property located on the east side of Highway 69. The southern boundary runs from Sandy Bay on the southwest corner in a northeasterly direction to Highway 69 south of Bekanon Road. The geographic location is 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 (Figure 1-1). HIFN I.R. #2 is part of the Georgian Bay Biosphere Reserve which encompasses 347,000 ha of land stretching 300 km from Port Severn to the French River and is designated as a United Nations Educational, Scientific, and Cultural Organization (UNESCO) Biosphere Reserve (Georgian Bay Biosphere, 2015). Highway 69 is a major north-south highway connecting Highway 400 north of Parry Sound with the City of Greater Sudbury at Highway 17.
Generally, the HIWEC study area has shallow soils, with many rocky outcrops forming longitudinal ridges running on a northwest to southeast axis, and is divided roughly in half by the Henvey Inlet waterbody. Numerous wetland pockets are located between the ridges and across the study area, with upland regions supporting forested areas of poplar and jack pine. Section 4 of the Final Draft EA Report provides a more detailed description of the existing environmental conditions within the study area. The study area for the HIWEC also includes lands off-Reserve that are within the area that may experience increased noise levels from the HIWEC. All HIWEC components will be located within the HIWEC study area as shown in the site plan provided as Figure 1-1.

1.2.1 Henvey Inlet Wind Energy Centre Location

The HIWEC location was identified within the HIWEC study area. The HIWEC location boundary is the outer limit of where site preparation and construction activities will occur and where permanent infrastructure will be located, including the air space occupied by Wind Turbine Generator (WTG) blades. The HIWEC location is shown on Figure 1-1.

As per HIFN EA Guidance requirements, features located within 120 m of the HIWEC location must be investigated and evaluated to determine whether they are important or provincially important, in order to ascertain whether development prohibitions apply. The area within 120 m of the HIWEC location is shown on Figure 1-1. However, the Records Review was conducted for the entire HIWEC study area in order to accommodate potential changes to the proposed HIWEC location that may occur later in the planning stages.
Figure 1-1: HIWEC Study Area
2. Methods

2.1 Natural Features

HIFN EA Guidance requires a Records Review be conducted to identify natural features associated with a renewable energy project. *Table 2-1* below outlines the records to be searched for and analyzed with respect to the HIWEC location, as set out in the HIFN EA Guidance requirements for the Records Review. The results of this search and analysis, and the determinations set out in the table below, are described in *Section 3* of this report.

<table>
<thead>
<tr>
<th>Item</th>
<th>Records to be Searched and Analyzed</th>
<th>Determination to be Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Records that relate to federal or provincial parks and conservation reserves and that are maintained by Parks Canada or the Ontario Ministry of Natural Resources.</td>
<td>Whether the HIWEC location is within 120 m of a federal or provincial park or conservation reserve.</td>
</tr>
</tbody>
</table>
| 2.   | Records that relate to natural features within 120 m of the HIWEC location that are maintained by,  
  i. HIFN;  
  ii. the Crown in right of Canada; and  
  iii. any other public body or agency the proponent considers likely to have relevant records. | Whether the HIWEC location is:  
  a) in a natural feature; or  
  b) within 120 m of a natural feature. |

The Records Review was conducted for the entire HIWEC study area in order to accommodate potential changes to the proposed HIWEC location that may occur later in the planning stages. Available secondary source information and information provided by applicable agencies were used to determine the presence of natural features in the HIWEC study area.

The following types of natural features were reviewed and analyzed in the Records Review process:

- Federal or Provincial Parks;
- Conservation Reserves;
- Wetlands;
- Woodlands;
- Important Wildlife Habitats (IWH), including habitats of Species of Conservation Concern; and
- Areas of Natural and Scientific Interest (ANIS).

Natural features were identified as requiring further consideration during the Site Investigation based on their potential to overlap or occur within 120 m of the proposed HIWEC location.

2.1.1 Species of Conservation Concern (SOCC)

Habitat for Species of Conservation Concern (SOCC) is a type of IWH requiring consideration as part of an NHA. For the purpose of this NHA, SOCC were defined as follows:

- Provincially rare species ranked by the Natural Heritage Information Centre (NHIC) as S1 (critically imperiled), S2 (imperiled) or S3 (vulnerable) in the province of Ontario but not listed as Endangered or Threatened under Schedule 1 of the federal *Species at Risk Act, 2002* (SARA) or the provincial *Endangered Species Act, 2007* (ESA);
• Species listed as Special Concern under Schedule 1 of SARA;
• Species evaluated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as Special Concern, Threatened or Endangered but not listed as Endangered or Threatened under Schedule 1 of SARA; and
• Species listed as Special Concern under the ESA.

Potential effects of the HIWEC on SOCC are addressed within this NHA.

2.2 Species at Risk (SAR)

Under the provincial NHA process, an assessment of Endangered and Threatened species (Species at Risk) and their habitats protected under the Endangered Species Act, 2007 (ESA) is undertaken separately from the NHA and addressed through a separate consultation and permitting process, if required, with the Ministry of Natural Resources and Forestry (MNRF). As such, these species are not typically addressed in a Records Review report. However, given that the HIWEC study area is located on a First Nation Reserve and on federal Crown land, this separation of, and requirement for, provincial permitting processes does not apply. However, these provincial Species at Risk are addressed in this NHA report.

For the purpose of this Records Review, an assessment of the following categories of Species at Risk (SAR) potentially occurring within the HIWEC study area was conducted using available information:

1. Federal Species at Risk
   • Species listed as Endangered or Threatened under Schedule 1 of the federal Species at Risk Act, 2002 (SARA).

2. Provincial Species at Risk
   • Species listed as Endangered or Threatened under the provincial ESA but not listed as Endangered or Threatened under Schedule 1 of SARA.

Potential effects of the HIWEC on Federal Species at Risk and Provincial Species at Risk are addressed within this NHA. Federal Species at Risk will also be addressed through a separate consultation and permitting process with Environment Canada – Canadian Wildlife Service (EC-CWS).

2.3 Background Information Sources

A Records Review was completed to identify the presence of natural features, Federal Species at Risk and Provincial Species at Risk, located within or in the immediate vicinity of the HIWEC study area using the following available secondary resources:

• Guidance Documents:
  – Significant Wildlife Habitat Technical Guide (MNRF, 2000);
  – Natural Heritage Assessment Guide for Renewable Energy Projects (MNRF, 2012a); and

• Interactive Mapping Sites:
  – MNRF Make-A-Map: Natural Heritage Areas (MNRF, 2014a);
  – MNRF NHIC Rare Species Records (MNRF, 2014b);
  – MNRF Species at Risk by Area (Parry Sound) Online Search Tool (MNRF, 2014c);
• Important Bird Areas (IBA Canada, 2013);
• Network of Protected Areas website (EC, 2014a);
• Western Hemisphere Shorebird Reserve Network website (WHSRN, 2012); and
• Ontario Provincial Parks website (Ontario Parks, 2013).

• Wildlife Atlases:
  - Ontario Breeding Bird Atlas (OBBA) website (BSC et al., 2006);
  - Ontario Reptile and Amphibian Atlas (Ontario Nature, 2014); and

• MNRF’s mapping from Land Information Ontario (LIO; MNRF, 2014d) for:
  - Provincial Parks;
  - Conservation Reserves;
  - Provincially Important Wetlands (PIWs);
  - Areas of Natural and Scientific Interest (ANSIs);
  - Unevaluated Wetlands;
  - Wooded Areas;
  - Confirmed Important Wildlife Habitat including:
    ▪ Bat Hibernacula;
    ▪ Raptor Nesting Sites;
    ▪ Moose Aquatic Feeding Areas; and
    ▪ Deer Yard or Wintering Areas.

• Other Sources:
  - National Parks List (Parks Canada, 2014)

2.3.1 Previous Field Studies

Field studies were conducted within the HIWEC study area by LGL Limited (LGL) in 2011 and 2012, and by Stantec Consulting Ltd. (Stantec) in 2013. Available information regarding these field studies is summarized below.

The Nigig Power Corp / Henvey Inlet Wind Project Preliminary Environmental Constraints Analysis (Neegan Burnside Ltd., 2011) provides a preliminary analysis of the environmental and regulatory constraints for the HIWEC study area and two former alternative transmission lines, and summarizes the findings of ecological studies completed by LGL in 2011; however, the location of records of certain species is not always specified (i.e., whether the record came from the HIWEC study area or the two former alternative transmission lines). Given that these records are from the same geographic area as the current HIWEC study area, all species observed by LGL in 2011 as reported in the Nigig Power Corp / Henvey Inlet Wind Project Preliminary Environmental Constraints Analysis (Neegan Burnside Ltd., 2011) were considered for the purpose of this Records Review.

LGL conducted the following field studies in 2011 and 2012 for the HIWEC study area, as per their Work plan for the Nigig Power Wind Farm Project Background Ecological Studies (LGL Limited, 2011) to determine baseline conditions:

• Raptor Migration;
• Passerine Migration;
• Breeding Birds;
• Herpetological Surveys; and
• Bat Acoustic Monitoring.
In addition, Stantec conducted the following field studies in 2013 for the HIWEC study area as per their 2013 Terrestrial Survey Work Program (Stantec Consulting Ltd., 2013) to determine baseline conditions:

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

Stantec provided raw field and GIS data collected during the 2013 field season to AECOM in October 2014. WSP provided field data summaries and GIS data collected by LGL during the 2011 and 2012 field season to AECOM in May 2015. The following technical reports (hereafter collectively referred to as the “Technical Reports”) were prepared by AECOM, which summarize the data provided by Stantec and LGL:

- **Summary of 2011, 2012 and 2013 Raptor Migration Surveys – Henvey Inlet Wind Energy Centre Study Area** (AECOM, 2015a);
- **Summary of 2011, 2012 and 2013 Passerine Migration Surveys – Henvey Inlet Wind Energy Centre Study Area** (AECOM, 2015b);
- **Summary of 2013 Waterfowl Migration Surveys – Henvey Inlet Wind Energy Centre Study Area** (AECOM, 2015c);
- **Summary of 2011, 2012 and 2013 Breeding Bird Surveys – Henvey Inlet Wind Energy Centre Study Area** (AECOM, 2015d);
- **Summary of 2011, 2012 and 2013 Herpetological Surveys – Henvey Inlet Wind Energy Centre Study Area** (AECOM, 2015e);
- **Summary of 2011, 2012 and 2013 Bat Acoustic Monitoring Surveys – Henvey Inlet Wind Energy Centre Study Area** (AECOM, 2015f);
- **Summary of 2013 Ecosite Classification and Rare Flora Surveys – Henvey Inlet Wind Energy Centre Study Area** (AECOM, 2015g); and

The Technical Reports were reviewed to further supplement the Records Review. These Technical Reports are provided in Appendix A.

### 2.3.2 Agency Correspondence

Consultation with the EC-CWS has been initiated regarding the presence of IWH, Species at Risk and other relevant natural heritage information within the HWIEC study area, as well as permitting requirements under SARA. Where HIWEC activities are likely to contravene the general or critical habitat prohibition provisions under SARA, a permit under ss. 73(1) of the Act may be required to undertake the work.

Consultation with the MNRF Parry Sound District was also initiated regarding the presence of IWH, Species at Risk and other relevant natural heritage information within the HWIEC study area.
Table 2-2 provides a summary of the agency consultation undertaken during the Records Review, including a description of the data and information that was requested and received. The HIWEC study area does not fall within the jurisdiction of a conservation authority or upper or lower tier municipality; therefore, records were not requested from these agencies. Aboriginal consultation with HIFN was undertaken for the HIWEC through the EA process and is documented in the Consultation Report (AECOM, 2015i).

Table 2-2: Summary of Agency Correspondence

<table>
<thead>
<tr>
<th>Agency</th>
<th>Information Source / Method of Consultation</th>
<th>Data or Information Obtained</th>
</tr>
</thead>
</table>
| Environment Canada - Canadian Wildlife Service (EC-CWS)† | • May 5, 2015: AECOM requested natural heritage information relevant to the HIWEC study area, including Areas of Natural and Scientific Interest (ANSI), evaluated wetlands, woodland information, wildlife records and presence of IWH.  
  • May 7, 2015: EC-CWS indicated that all publicly available recovery strategies for (Federal) Species at Risk are posted on the SARA registry website and that MNRF should be contacted for the remainder of the information requested.  
  • August 4, 2015: EC-CWS provided a list of Federal Species at Risk and Species of Conservation Concern that have the potential to occur in the HIWEC study area. |                                                                                                                                                                                                                      |
| Ministry of Natural Resources and Forestry (MNRF) – Parry Sound District | • May 5, 2015: AECOM requested natural heritage information relevant to the HIWEC study area, including records of Species at Risk and their habitats, Areas of Natural and Scientific Interest (ANSIs), evaluated wetlands, woodland information, wildlife records and presence of IWH.  
  • July 7, 2015: AECOM requested known heronry locations in the vicinity of the HIWEC study area from MNRF Parry Sound District office’s Natural Heritage Information account.  
  • June 9, 2015: MNRF indicated that MNRF data for the HIWEC study area is sparse given that it is under Federal jurisdiction.  
  • June 29, 2015: MNRF provided a list of Species at Risk and Species of Conservation Concern that may occur in the HIWEC study area as well as some IWH types.  
  • July 7, 2015: MNRF indicated that a request for known heronry locations in the vicinity of the HIWEC study area should be sent to their office’s Natural Heritage Information account.  
  • July 14, 2015: The MNRF Parry Sound District office’s Natural Heritage Information account provided a map of heronries and Osprey nest in the vicinity of the HIWEC study area. |                                                                                                                                                                                                                      |

Note: 1. Please refer to the Consultation Report (AECOM, 2015i) for a complete record of correspondence with EC-CWS regarding Federal Species at Risk. As this is not a Records Review requirement, a summary of this correspondence is not repeated here.
3. Results of the Records Review

Available secondary sources were reviewed to determine whether natural features that require consideration in the Site Investigation phase of the NHA are located within the HIWEC study area. The results of the Records Review are described in Table 3-1 and are mapped on Figure 3-1. Each natural feature type in the table below is also related to its associated Valued Ecosystem Component (VEC) as identified in the HIFN EA Guidance document.

IWH is grouped into categories as per the Significant Wildlife Habitat Technical Guide (MNRF, 2000) and the Draft Significant Wildlife Habitat Ecoregion 5E Criterion Schedule (MNRF, 2012b) as follows:

- Seasonal Concentration Areas of Animals;
- Rare Vegetation Communities;
- Specialized Habitats for Wildlife;
- Habitat for Species of Conservation Concern (not including Endangered or Threatened species); and
- Animal Movement Corridors.

Table 3-1 describes the Records Review results related to Important Wildlife Habitat types within these categories. The MNRF habitat criteria and target species for each Important Wildlife Habitat type closely follow the Draft Significant Wildlife Habitat Ecoregion 5E Criterion Schedule (MNRF, 2012b) and are included in the table below.

For those IWH for which suitable habitat may be present within the HIWEC study area, background information sources were reviewed to determine whether the target species, as identified by MNRF (2012b), have been recorded in the vicinity of the HIWEC study area. Target species recorded in the vicinity of the HIWEC study area by various wildlife atlases and previous field studies are bolded in the “Characteristics of Feature” column of Table 3-1 with source referencing identified by footnotes at the bottom of the table.

Natural features either confirmed or with potential to be located within 120 m of the HIWEC location were carried forward to the Site Investigation phase of this NHA, as described in Table 3-1 below.
Figure 3-1: Records Review Results
Table 3-1: Results of Records Review

<table>
<thead>
<tr>
<th>Type of Feature</th>
<th>Valued Ecosystem Component</th>
<th>Characteristics of Feature</th>
<th>Located within HIWEC Study Area (Yes / No)</th>
<th>Located in or within 120 m of HIWEC Location (Yes / No)</th>
<th>Details</th>
<th>Carried Forward to the Site Investigation (Yes / No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal and Provincial Parks, Conservation Reserves and Protected Areas:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Parks</td>
<td>Vegetation and Ecological Communities</td>
<td>• National parks are established to protect Canada’s natural landscapes and are protected under the National Parks System Plan (Parks Canada, 2014).</td>
<td>No</td>
<td>No</td>
<td>• There are no National Parks located in or in the vicinity of the HIWEC study area (Parks Canada, 2014).</td>
<td>No</td>
</tr>
<tr>
<td>Provincial Parks</td>
<td></td>
<td>• Provincial parks and conservation reserves protect important natural and cultural features in the province and are important for outdoor education, scientific research and environmental monitoring (MNRF, 2014e). These features are regulated under the Provincial Parks and Conservation Reserves Act, 2006. Under Section 16 of this Act, generation of electricity (including renewable energy projects) is prohibited in provincial parks and conservation reserves.</td>
<td>Yes</td>
<td>No</td>
<td>• The French River Provincial Park (Waterway Class) is located within the HIWEC study area, but &gt; 120 m from the HIWEC location, along the north side of the Key River (MNRF, 2014a; refer to Figure 3-1). This park is located on the Canadian Shield and supports more than 450 plants, including rare plant species. The wetlands located at the French River’s mouth on Georgian Bay contain the largest community of Virginia Chain Fern (Woodwardia virginica) in Ontario. The Massasauga Rattlesnake (Sistrurus catenatus), a Federal Species at Risk, also occurs in this area (MNRF, 2006a).</td>
<td>No</td>
</tr>
<tr>
<td>Conservation Reserves</td>
<td></td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>• The North Georgian Bay Shoreline and Islands Conservation Reserve is located within the HIWEC study area, and within 19 m of a proposed WTG, along the south side of the HIWF I.R. #2 lands (MNRF, 2014a; refer to Figure 3-1). This conservation reserve stretches along the coastline and inland environments that support numerous wetlands and wildlife habitat, including habitats for the Massasauga Rattlesnake and Caspian Tern (Hydroprogne caspia) (MNRF, 2006b).</td>
<td>Yes</td>
</tr>
<tr>
<td>Important Bird Areas (IBA)</td>
<td></td>
<td>• An Important Bird and Area (IBA) is an area recognized as being globally important habitat for Canada’s bird populations (IBA Canada, 2013).</td>
<td>No</td>
<td>No</td>
<td>• There are no IBAs located in or in the vicinity of the HIWEC study area (IBA Canada, 2013).</td>
<td>No</td>
</tr>
<tr>
<td>Migratory Bird Sanctuaries (MBS)</td>
<td></td>
<td>• Migratory Bird Sanctuaries (MBS) provide habitat and safe refuge for migratory birds in terrestrial and marine environments (Parks Canada, 2015b). These are identified and protected under the Migratory Birds Convention Act, 1994 (BMCA).</td>
<td>No</td>
<td>No</td>
<td>• There are no MBSs located in or in the vicinity of the HIWEC study area (EC, 2014a).</td>
<td>No</td>
</tr>
<tr>
<td>National Wildlife Areas (NWA)</td>
<td></td>
<td>• National Wildlife Area (NWA) are created and managed through an ecosystem approach for the purposes of wildlife conservation, research and interpretation (Parks Canada, 2015a). These are identified and protected under the Canada Wildlife Act, 1985 (CWA).</td>
<td>No</td>
<td>No</td>
<td>• There are no NWAs located in or in the vicinity of the HIWEC study area (EC, 2014a).</td>
<td>No</td>
</tr>
<tr>
<td>Western Hemisphere Shorebird Reserve Network (WHSRN)</td>
<td></td>
<td>• The Western Hemisphere Shorebird Reserve Network (WHSRN) is an international shorebird conservation strategy that identifies sites that are either of hemispheric importance, international importance or regional importance for migrating shorebirds (WHSRN, 2015).</td>
<td>No</td>
<td>No</td>
<td>• There are no sites in the WHSRN located in or in the vicinity of the HIWEC study area (WHSRN, 2012).</td>
<td>No</td>
</tr>
<tr>
<td>Important or Provincially Important Nature Features:</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Provincially Important Northern Wetlands (PIWs)</td>
<td>Vegetation and Ecological Communities</td>
<td>• As described in the Ontario Wetland Evaluation System (OWES) northern manual (MNRF, 2014d), wetlands are lands that are seasonally or permanently flooded by shallow water as well as lands where the water table is close to the surface, where the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic or water tolerant plants. Evaluation and identification of wetlands as Provincially Important is determined through the MNRF’s OWES standardized assessment process.</td>
<td>No</td>
<td>No</td>
<td>• There are no PIWs located within the HIWEC study area (MNRF, 2014a).</td>
<td>No</td>
</tr>
<tr>
<td>Important Woodlands</td>
<td>Vegetation and Ecological Communities</td>
<td>• Woodlands are trees areas that provide environmental and economic benefits such as erosion prevention, water retention, provision of habitat for plants and wildlife, recreation and sustainable harvest of woodland products. To be important, woodlands must meet minimum standards for tree cover and other characteristics as described in the Natural Heritage Assessment Guide for Renewable Energy Projects (MNRF, 2012a).</td>
<td>Yes</td>
<td>Yes</td>
<td>• The HIWEC study area is predominately covered in wooded areas (AECOM, 2015g; MNRF, 2014a; refer to Figure 3-1).</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Table 3-1: Results of Records Review

<table>
<thead>
<tr>
<th>Type of Feature</th>
<th>Valued Ecosystem Component</th>
<th>Characteristics of Feature</th>
<th>Located within HIWEC Study Area (Yes / No)</th>
<th>Located in or within 120 m of HIWEC Location (Yes / No)</th>
<th>Details</th>
<th>Carried Forward to the Site Investigation (Yes / No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterfowl Stopover and Staging Areas</td>
<td>Wildlife and Wetland Habitat</td>
<td>Evidence of annual spring flooding from melt water or runoff in fields.</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Waterfowl Stopover and Staging Areas</td>
<td>Wildlife and Wetland Habitat</td>
<td>Where at least 5 ha of standing water is present including ponds, marshes, lakes, bays, coastal inlets and watercourses during migration; Sewage treatment ponds and stormwater ponds do not qualify as IWH; Important sites generally have better habitat quality (e.g., optimal vegetation composition, ratio of open water to emergent vegetation, extensive shoreline, abundant food, and nocturnal roosting cover); and Larger wetlands are more important (size). Target species: Canada Goose, Cackling Goose, Snow Goose, American Black Duck, Northern Pintail, Northern Shoveler, American Wigeon and Gadwall.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>The HIWEC study area is bounded by the Key River to the north, Georgian Bay to the west, Sandy Bay in the southwest and Henvey Inlet that runs through the middle of the HIWEC study area. There are many small lakes, beaver ponds and unevaluated wetlands located within the HIWEC study area. All of these areas including the shoreline of Georgian Bay, Key River and Henvey Inlet have potential to support aquatic waterfowl stopover and staging areas. According to the OBBA (BSC, et al. 2006), there are breeding records for six (6) waterfowl species in the vicinity of the HIWEC study area, of which four (4) are target species for this IWH type. A total of 22 waterfowl species were recorded within the HIWEC study area in 2011, 2012 and 2013, of which 18 are target species for this IWH type (AECOM, 2015b, 2015c, 2015d and 2015h). The MNRF has documented waterfowl stop-over areas, travel routes and nesting areas along Henvey Inlet (Neegan Burnside Ltd., 2011). These are considered to be historical records. Collectively, 18 target species for this IWH type have been recorded within the HIWEC study area.</td>
<td>Yes</td>
</tr>
<tr>
<td>Shorebird Migratory Stopover Area</td>
<td>Wildlife and Wetland Habitat</td>
<td>Shorelines of lakes, rivers and wetlands, including beach areas, bars, seasonally flooded shoreline, mudflats, rock groynes, and other forms of armour rock lakeshore. Target species: Greater Yellowlegs, Lesser Yellowlegs, Marbled Godwit, Hudsonian Godwit, Black-bellied Plover, American Golden Plover, Semipalmated Plover, Solitary Sandpiper, Spotted Sandpiper, Semipalmated Sandpiper, Pectoral Sandpiper, White-rumped Sandpiper, Baird’s Sandpiper, Least Sandpiper, Purple Sandpiper, Stilt Sandpiper, Short-billed Dowitcher, Red-necked Phalarope, Whimbrel, Ruddy Turnstone, Sanderling and Dunlin.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>The HIWEC study area is dominated by rock barrens and forested communities and bounded by shorelines of Georgian Bay, Sandy Bay, Key River and Henvey Inlet. Additionally, there are numerous unevaluated wetlands present. According to the OBBA (BSC, et al., 2006), there are breeding records for two (2) shorebird species in the vicinity of the HIWEC study area, of which one (1) is a target species for this IWH type. A total of nine (9) shorebird species were recorded within the HIWEC study area in 2011, 2012 and 2013, of which four (4) are target species for this IWH type (AECOM, 2015b, 2015d and 2015h). In total, four (4) target species for this IWH type have been recorded within the HIWEC study area.</td>
<td>Yes</td>
</tr>
<tr>
<td>Raptor Wintering Area</td>
<td>Wildlife and Wetland Habitat</td>
<td>Combination of forest and upland communities must be &gt;20 ha in size; Sites that are less disturbed by agricultural activities are more important; and Sites with better habitat quality (e.g., abundant prey and perches; a tendency toward less snow accumulation due to exposure to strong prevailing winds) are probably more important. Target species: Rough-legged Hawk, Long-eared Owl, Boreal Owl, Northern Saw-whet Owl and Short-eared Owl.</td>
<td>No</td>
<td>No</td>
<td>No Provincially Important Earth Science ANSIs located within the HIWEC study area (MNRF, 2014a).</td>
<td>No</td>
</tr>
<tr>
<td>Type of Feature</td>
<td>Valued Ecosystem Component</td>
<td>Characteristics of Feature</td>
<td>Located within HIWEC Study Area (Yes / No)</td>
<td>Located in or within 120 m of HIWEC Location (Yes / No)</td>
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</tr>
<tr>
<td>Bat Hibernacula</td>
<td>Wildlife and Wildlife Habitat</td>
<td>- All caves, abandoned mine shafts, underground foundations and / or karst (buildings are not to be considered IWH); - Target species: Big Brown Bat³, Little Brown Bat³, Northern Myotis³ and Eastern Small-footed Myotis³.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>- There is an abandoned mine located within the HIWEC study area (Figure 3-1). Additionally, caves may occur within the HIWEC study area. - According to the Atlas of the Mammals of Ontario (Dobbyn, 1994), there are five (5) bat species recorded in the vicinity of the HIWEC study area, of which four (4) are identified as target species for this IWH type. - Acoustic monitoring was conducted by LGL and Stantec in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015f). Based on AECOM’s analysis of the 2011 and 2012 bat acoustic monitoring data provided by LGL, a total of eight (8) bat species, of which five (5) are identified as target species for this IWH, were recorded in the HIWEC study area. NRSI analyzed Stantec’s 2013 bat acoustic monitoring data that was collected using the zero cross method, which makes identification to the species level not always possible. However, the recorded data includes evidence that all eight (8) of the species identified in 2011 and 2012 were potentially present in 2013 as well. - Collectively, all five (5) target species for this IWH type have been recorded within the HIWEC study area.</td>
<td>Yes</td>
</tr>
<tr>
<td>Bat Maternity Colonies</td>
<td>Wildlife and Wildlife Habitat</td>
<td>- Found in tree cavities and vegetation; - Mature deciduous or mixed forest stands with ≥10 large cavity trees (with at least 25 cm in diameter at breast height) per hectare; and - Maternity roosts are not found in caves and mines in Ontario. - Target species: Big Brown Bat³, Little Brown Bat³, Silver-haired Bat¹ and Northern Myotis³.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>- There are mixed and coniferous forest stands located in the HIWEC study area (AECOM, 2015g), which may contain suitable bat cavity trees. - According to the Atlas of the Mammals of Ontario (Dobbyn, 1994), there are five (5) bat species recorded in the vicinity of the HIWEC study area, of which three (3) are identified as target species for this IWH type. - Acoustic monitoring was conducted by LGL and Stantec in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015f). Based on AECOM’s analysis of the 2011 and 2012 bat acoustic monitoring data provided by LGL, a total of eight (8) bat species, of which four (4) are identified as target species for this IWH, were recorded in the HIWEC study area. NRSI analyzed Stantec’s 2013 bat acoustic monitoring data that was collected using the zero cross method, which makes identification to the species level not always possible. However, the recorded data includes evidence that all eight (8) of the species identified in 2011 and 2012 were potentially present in 2013 as well. - Collectively, all four (4) target species for this IWH type have been recorded within the HIWEC study area.</td>
<td>Yes</td>
</tr>
<tr>
<td>Bat Migratory Stopover Area</td>
<td>Wildlife and Wildlife Habitat</td>
<td>- Location and characteristics of stopover habitats are generally unknown.</td>
<td>No</td>
<td>No</td>
<td>- Criteria and habitat areas for this type of IWH are still being determined by the MNRF and are not currently defined in the Significant Wildlife Habitat Technical Guide (MNRF, 2000). In the absence of MNRF criteria for identifying bat migratory stopover areas, these features do not require further consideration as part of the NHA.</td>
<td>No</td>
</tr>
<tr>
<td>Turtle Wintering Areas</td>
<td>Wildlife and Wildlife Habitat</td>
<td>- Open water areas such as deeper rivers or streams and lakes with current can be used as over-wintering habitat (Northern Map Turtle); - Overwintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate dissolved oxygen; and - Water has to be deep enough not to freeze to the bottom and have soft mud substrates. - Target species: Midland Painted Turtle⁴, Northern Map Turtle⁴ and Snapping Turtle⁴.⁵</td>
<td>Possibly</td>
<td>Possibly</td>
<td>- There are many fens, bogs, marshes, small lakes and beaver ponds located in the HIWEC study area that may provide suitable turtle overwintering habitats (AECOM, 2015g). - According to the Ontario Reptile and Amphibian Atlas (Ontario Nature, 2014), there are five (5) turtle species recorded in the vicinity of the HIWEC study area, of which three (3) are identified as target species for this IWH type. - Four (4) turtle species were observed in the HIWEC study area in 2011, 2012 and 2013, of which two (2) are identified as target species for this IWH type (AECOM, 2015e; Neegan Burnside Ltd., 2011). In addition, predated eggs of Northern Map Turtle, also a target species for this IWH type, may have been observed in 2011 or 2012 but were not confirmed (AECOM, 2015e). - Two (2) of the target species for this IWH type were identified as potentially occurring within the HIWEC study area by MNRF Parry Sound District (MNRF, personal communication, June 29, 2015). - Collectively, all three (3) of the targeted species for this IWH type have been recorded within the HIWEC study area.</td>
<td>Yes</td>
</tr>
</tbody>
</table>
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<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reptile Hibernacula</td>
<td>Wildlife and Wildlife Habitat</td>
<td>- Areas of broken and fissured rock, rock piles or slopes, stone fences, crumbling foundations, and old wells that extend below the frost line are Candidate IWH; and Wetlands can also be important over-wintering habitat in conifer or shrub swamps with sphagnum moss or sedge hummock ground cover. Target species: Eastern Gartersnake, Northern Watersnake, Red-bellied Snake, Deyk's Brownsnake, Smooth Green snake, Ring-necked Snake, Milksnake, Eastern Ribbonsnake, and Five-lined Skink.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>There are numerous unevaluated wetlands in the HIWEC study area, including conifer and shrub swamps which can provide overwintering habitat for reptile species. Additionally, the HIWEC study area is covered by rock barrens (AECOM, 2015g). According to the Ontario Reptile and Amphibian Atlas (Ontario Nature, 2014), there are 11 snake species and one (1) lizard species recorded in the vicinity of the HIWEC study area, of which nine (9) are identified as target species for this IWH type. A total of nine (9) snake species, of which seven (7) are target species, and the one (1) lizard target species were recorded in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015e; Neegan Burnside Ltd., 2011). Two (2) of the target species for this IWH type were identified as potentially occurring within the HIWEC study area by MNRF Parry Sound District (MNRF, personal communication, June 29, 2015). All nine (9) of the target species for this IWH type have been observed within the HIWEC study.</td>
</tr>
<tr>
<td>Colonia–ly Nesting Bird Breeding Habitat (Bank and Cliff)</td>
<td>Wildlife and Wildlife Habitat</td>
<td>- Eroding banks, sandy hills, borrow pits, steep slopes, sand piles and rock faces that are undisturbed or naturally eroding; and Important habitats are not located in licensed aggregate pits, man-made structures (bridges or buildings), or recently (within 2 years) disturbed soils areas. Target species: BankSwallow, Cliff Swallow and Northern Rough-winged Swallow.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>There are probably no sand banks large enough to support a nesting swallow colony in the HIWEC study area. There is potential for a few rock cliffs to occur in the HIWEC study area. Some of these may possibly provide suitable habitat for Cliff Swallows (Petrochelidon pyrrhonota). According to the OBBA (BSC et al., 2006), there are records of breeding Cliff Swallows and Northern Rough-winged Swallow (Stelgidopteryx serripennis) in the vicinity of the HIWEC study area; both are identified as target species for this IWH type. No bank or cliff colonially-nesting bird species were recorded in the HIWEC study area in 2011, 2012 or 2013 (AECOM, 2015a, 2015b, 2015c, 2015d and 2015h). One (1) of the target species for this IWH type, Bank Swallow (Riparia riparia), was identified as potentially occurring within the HIWEC study area by MNRF Parry Sound District (MNRF, personal communication, June 29, 2015). Collectively, all three (3) target species for this IWH type have been recorded within the vicinity of the HIWEC study area.</td>
</tr>
<tr>
<td>Colonia–ly Nesting Bird Breeding Habitat (Trees / Shrubs)</td>
<td>Wildlife and Wildlife Habitat</td>
<td>- Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and occasionally emergent wetland bird species may also be used. Important sites generally have better habitat quality (e.g., optimal vegetation structure, abundant food); and Size of habitat and level of disturbance are also important. Target species: Great Blue Heron and Black-crowned Night Heron.</td>
<td>Yes</td>
<td>Possibly</td>
<td>There are numerous unevaluated wetlands located within the HIWEC study area, which may provide habitat for colonially nesting bird species (AECOM, 2015g). According to the OBBA (BSC et al., 2006), there is a confirmed record for Great Blue Heron (Ardea herodias) in the vicinity of the HIWEC study area. One (1) Great Blue Heron Heronry was recorded in the HIWEC study area in 2013 by Stantec (AECOM, 2015h; refer to Figure 3-1). A total of 12 potential or active Great Blue Heron nests were identified in the HIWEC study area in 2011, of which two (2) nests were confirmed to be occupied by Great Blue Herons in 2011 (Neegan Burnside Ltd., 2011; AECOM, 2015d). MNRF has records of three (3) Great Blue Heronries in the HIWEC study area (MNRF, personal communication, July 14, 2015; refer to Figure 3-1). One (1) of the target species for this IWH type has been observed within the HIWEC study area.</td>
</tr>
<tr>
<td>Colonia–ly Nesting Bird Breeding Habitat (Ground)</td>
<td>Wildlife and Wildlife Habitat</td>
<td>- Any [rocky] island or peninsula (natural or artificial) within open water, marshy areas, lake or large river (two-lined on a 1:50,000 National Topographic System (NTS) map); Brewer's Blackbird colonies are found in open fields or pastures with scattered trees or shrubs, loosely on the ground or in low bushes in close proximity to streams and irrigation ditches within the area. Important sites generally have better habitat quality (e.g., optimal vegetation composition, abundant food); and Size of habitat and level of disturbance are also important. Target species: Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern and Brewer’s Blackbird.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>Suitable habitats may occur on the shorelines of Georgian Bay, Key River, Henvey Inlet and Sandy Bay within the HIWEC study area (AECOM, 2015g). According to the OBBA (BSC et al., 2006), there are records for two (2) colonially ground-nesting bird species in the vicinity of the HIWEC study area, both of which are identified as target species for this IWH type. Five (5) colonially ground-nesting bird species, all of which are target species for this IWH type, were recorded in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015a, 2015b, 2015d and 2015h). The Northern Georgian Bay Shoreline and Islands Conservation Reserve provides habitat for Caspian Terns (Hydroprogne caspia) (Neegan Burnside Ltd., 2011). Collectively, five (5) of the target species for this IWH type have been observed within the HIWEC study area.</td>
</tr>
</tbody>
</table>
### Table 3-1: Results of Records Review

<table>
<thead>
<tr>
<th>Type of Feature</th>
<th>Valued Ecosystem Component</th>
<th>Characteristics of Feature</th>
<th>Located within HIWEC Study Area (Yes / No)</th>
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<th>Carried Forward to the Site Investigation (Yes / No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deer Yarding Areas</td>
<td>Wildlife and Wildlife Habitat</td>
<td>• Forests and swamps at least 100 ha in size; • Deer yards provide cover for deer on the onset of winter snow and cold; Deer move to deer yards as a behavioural response in early winter and generally when snow depths reach 20 cm; and • Deer yards are composed of two (2) areas referred to Stratum I, which is the core of the deer yard, and Stratum II, which covers the entire deer yard areas.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• Deer yards are determined and mapped by the MNRF. There are no deer yarding areas as identified by the MNRF within or in close proximity to the HIWEC study area. However, because the MNRF does not have jurisdiction over the HiFN I.R. #2, the presence of deer yards cannot be ruled out. The presence of this IWH type will be investigated during the Site Investigation.</td>
<td>Yes</td>
</tr>
<tr>
<td>Rare Vegetation Communities</td>
<td></td>
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</tr>
<tr>
<td>Beach / Bar / Sand Dunes</td>
<td>Vegetation and Ecological Communities</td>
<td>• Any identified beach, beach ridge, or sand dune; • Vegetation can be patchy and barren to tree cover &lt; 60%; • Presence of unstable sand; and • Presence of the following indicator species: Marram Grass (Ammophila breviligulata) and Beach Pea (Lathyrus japonicas).</td>
<td>Yes</td>
<td>No</td>
<td>• Open Beach / Bar communities were identified by Stantec in 2013 within the HIWEC study area but these are located more than 120m from the HIWEC location (AECOM, 2015g). No plant species characteristic to this IWH were recorded in the HIWEC study area in 2013 (AECOM, 2015g).</td>
<td>No</td>
</tr>
<tr>
<td>Shallow Atlantic Coastal Marsh</td>
<td>Vegetation and Ecological Communities</td>
<td>• Shallow marsh on shallow mineral (sand) or mineral organic (sandy peat) shoreline, inland lakes and beaver ponds; and • Presence of Virginia Meadow beauty (Rhexia virginica) and other associated species: • Brownish beaksedge (Rhychnospora capitellata)3; • Bog Yellow-eyed Grass (Syrta difformis)3; • Eaton’s rosette grass (Panicum spectreum); • Virginia Marsh-St. John’s Wort (Triadenum virginicum); • Carey’s Smartweed (Polygonum carpell); and • Bayonet Rush (Juncus militaris).</td>
<td>Yes</td>
<td>Possibly</td>
<td>• Shallow Atlantic coastal marshes may occur within the HIWEC study area. Two (2) plant species characteristic to this IWH type were recorded in the HIWEC study area in 2013 (AECOM, 2015g).</td>
<td>Yes</td>
</tr>
<tr>
<td>Cliffs and Talus Slopes</td>
<td>Vegetation and Ecological Communities</td>
<td>• Any cliff or talus slope; and • A talus slope is rock rubble at the base of a cliff made up of coarse rocky debris. • Characteristic flora for cliffs and talus slopes include: • Lichen, such as Rock Tripe (Umbilicaria spp.); • Rock Polyody (Polysorum virginanum); • Brittle Bladder-fern (Cystopteris fragilis); • Oblong Woodsia (Woodsia ilvensis)3; • Fragile rockbrake (Cryptogramma stelleri); • Alpine Woodsia (Woodsia alpina); • White Mountain Saxifrage (Saxifraga paniculata); • Fragrant Cliff Fern (Dyopteris fragrans); and • Laurent’s Cliff Fern (Woodsia scopulina ssp. laurentiana).</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• The HIWEC study area is dominated by rock barrens (AECOM, 2015g). Cliffs may also occur within the HIWEC study area. • One (1) plant species characteristic to this IWH type was recorded in the HIWEC study area in 2013 (AECOM, 2015g).</td>
<td>Yes</td>
</tr>
<tr>
<td>Precambrian Rock Barren</td>
<td>Vegetation and Ecological Communities</td>
<td>• Any rock barren area &gt; 1 ha; and • Extensive areas of exposed granitic bedrock that are sparsely vegetated (i.e., tree cover &lt; 60%); • Characteristic flora for rock barrens include: • Lichens and masses (Polynomial sp.); • Sparse grasslands of Poverty Grass (Danthonia spicata)3 or Wavy-hair Grass (Deschampsia flexuosa); • Low shrubs of Common Juniper (Juniperus communis)3, Lowbush Blueberry (Vaccinium angustifolium)3 or Sweet Fern (Comptonia peregrina)3; • Stunted open grown trees of White Oak (Quercus alba), Red Oak (Quercus rubra)3 or White Pine (Pinus strobus)3; and • Also characterized by Brittle Saxifraga (Saxifraga virginiensis)3, Case’s Ladies ‘-tresses (Spiranthes casei), Early Saxifrage (Saxifraga virginiensis)3, Black Huckleberry (Gaylussacia baccata)3, Pink Corydalis (Corydalis sempervirens)3, or Bastard Toadflax (Comandra umbellata)3.</td>
<td>Yes</td>
<td>Yes</td>
<td>• The HIWEC study area is located on the Canadian Shield and the landscape is dominated by Precambrian rock barrens (AECOM, 2015g). • A total of 11 plant species characteristic to this IWH type were recorded in the HIWEC study area in 2013 (AECOM, 2015g).</td>
<td>Yes</td>
</tr>
</tbody>
</table>
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<thead>
<tr>
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<tbody>
<tr>
<td>Sand Barren</td>
<td>Vegetation and Ecological Communities</td>
<td>Typically exposed sand habitats, generally sparsely vegetated and caused by lack of moisture, periodic fires, and erosion. Sand barrens have little or no soil, and the underlying rock protrudes through the surface. Usually located within other types of natural habitat, such as forest or savannah; Sites must not be dominated by non-indigenous species; Vegetation cover varies from patchy and barren to continuous meadow, thicket-like, or more closed and treed. Tree cover always &lt; 60%; and Characteristic flora for sand barrens include: Reindeer Lichens (Cladina spp.); Houghton’s Sedge (Carex houghtoniana); Fernald’s Sedge (Carex memphits-fernaldii); Sweetfern (Comptonia peregrina); Northern Dewberry (Rubus flagellaris); Rock spike-moss (Selaginella rupestris); Alpine Dog Violet (Viola labradorica); Coastal Jointweed (Polygonella articulata); and Procumbine Grass (Stipa spartea).</td>
<td>Yes</td>
<td>Possibly</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Alvar</td>
<td>Vegetation and Ecological Communities</td>
<td>Typically a level, mostly unstructured calcareous bedrock feature with a mosaic of rock pavements and bedrock overburied by a thin veneer of soil; Sites must be at least 0.5 ha in size; and Sites must not be dominated by non-indigenous species.</td>
<td>No</td>
<td>No</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Old-growth Forest</td>
<td>Vegetation and Ecological Communities</td>
<td>Typically relatively undisturbed, structurally complex and contain a wide variety of trees and shrubs in various age classes; Most important sites will contain numerous trees which are at least 140 years old. Stands containing younger trees (e.g., 100 years or older) are important where older trees no longer exist; Stands containing predominantly long-lived species are probably more important than stands consisting primarily of short-lived species (e.g., Trembling Aspen, Birch); and Stands &gt; 30 ha in size or with at least 10 ha of interior forest habitat (&gt;100 m from forest edge) are considered IWH.</td>
<td>Possibly</td>
<td>Possibly</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Bog</td>
<td>Vegetation and Ecological Communities</td>
<td>Any size bog; Nutrient poor, acid peatlands dominated by peat mosses (Sphagnum sp.), ericaceous shrubs and sedges; and Water table is at or near the surface in spring and lower remainder of the year.</td>
<td>Yes</td>
<td>Possibly</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Savannah</td>
<td>Vegetation and Ecological Communities</td>
<td>Tallgrass prairie habitat with tree cover between 25% and 60%. Site conditions must be restored or natural (e.g., not railway right-of-ways); and Sites must not be dominated by non-indigenous species.</td>
<td>No</td>
<td>No</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Tail-grass Prairie</td>
<td>Vegetation and Ecological Communities</td>
<td>Sites with ground cover dominated by prairie grasses and &lt; 25% tree cover; Site conditions must be restored or natural (e.g., not railway right-of-ways); and Sites must not be dominated by non-indigenous species.</td>
<td>No</td>
<td>No</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Rare Forests (Red Spruce and White Oak)</td>
<td>Vegetation and Ecological Communities</td>
<td>Any forest stand with composition ≥ 10% of Red Spruce or White Oak regardless of stand size.</td>
<td>Possibly</td>
<td>Possibly</td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
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</thead>
<tbody>
<tr>
<td><strong>Specialized Habitats for Wildlife</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Waterfowl Nesting Area</strong></td>
<td>Wildlife and Wildlife Habitat</td>
<td>• All upland habitats located adjacent to (within 120 m of) individual wetlands or a complex of smaller wetlands that are at least 2 ha in size;</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• There are several unevauluated wetlands located within the HIWEC study area which may provide habitat for waterfowl nesting (AECOM, 2015g).</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Wildlife and Wildlife Habitat</td>
<td>• Larger sites of suitable habitat are more important;</td>
<td></td>
<td></td>
<td>• According to the OBBA (BSC, et al. 2006), there are records for six (6) of the target waterfowl species for this IWH type breeding in the vicinity of the HIWEC study area.</td>
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<td></td>
<td></td>
<td>• Important sites generally have better habitat quality (e.g., optimal vegetation structure, stable water levels, abundant cover); and</td>
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<td>• A total of 22 waterfowl species were recorded in the HIWEC study area in 2011, 2012 and 2013, of which 12 are target species for this IWH type (AECOM, 2015b, 2015c, 2015d and 2015g).</td>
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<td>• Sites with little disturbance (e.g., from agricultural activities such as hay cultivation or cattle grazing) are more important.</td>
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<td>• Collectively, 12 target species for this IWH type have been observed within the HIWEC study area.</td>
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<tr>
<td></td>
<td></td>
<td>• Target species: American Black Duck 1,3, Northern Pintail, Northern Shoveler, Godwit, Blue-winged Teal 1, Green-winged Teal 1, Wood Duck 1, Hooded Merganser 1, Common Merganser 1, Red-breasted Merganser 1, Mallard 1, Canada Goose 1, American Widgeon 1, Bufflehead 1 and Common Goldeneye 1.</td>
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<tr>
<td><strong>Bald Eagle and Osprey Nesting, Foraging and Perching Habitat</strong></td>
<td>Wildlife and Wildlife Habitat</td>
<td>• Nests associated with riparian areas of rivers, lakes, ponds, wetlands, forested shorelines and islands; and</td>
<td>Yes</td>
<td>Possible</td>
<td>• The HIWEC study area includes wooded areas and is bordered by the Key River, Georgian Bay, Henvey Inlet and Sandy Bay (MNRF, 2014a).</td>
<td>Yes</td>
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<td></td>
<td></td>
<td>• Nests located on man-made objects are not IWH.</td>
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<td></td>
<td>• According to the OBBA (BSC, et al. 2006), there are records of confirmed breeding for both Osprey (Pandion haliaetus) and Bald Eagle (Haliaeetus leucocephalus) in the vicinity of the HIWEC study area.</td>
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<td></td>
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<td>• Target species: Osprey 2,3 and Bald Eagle 2,3.</td>
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<td>• Both species were also recorded in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015a, 2015b, 2015d and 2015g). Two (2) stick nests, likely that of Ospreys, were also recorded in the HIWEC study area 2013 (AECOM, 2015h; refer to Figure 3-1).</td>
<td></td>
</tr>
<tr>
<td><strong>Woodland Raptor Nesting Habitat</strong></td>
<td>Wildlife and Wildlife Habitat</td>
<td>• All natural or conifer plantation woodland / forest stands;</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• The HIWEC study area includes wooded areas MNRF, 2014a), which may support woodland raptor nesting habitat.</td>
<td>Yes</td>
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<td>• Stick nests can be found in a variety of intermediate-aged to mature coniferous, deciduous or mixed forests within tops or crotches of trees; and</td>
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<td>• According to the OBBA (BSC, et al. 2006), there are records for 11 raptor species in the vicinity of the HIWEC study area, of which five (5) are identified as target species for this IWH type.</td>
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<td></td>
<td></td>
<td>• Merlin (Falco columbarius) or Cooper’s Hawks (Accipiter cooperi) nest along forest edges, sometimes on peninsulas or small off-shore islands.</td>
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<td></td>
<td>• A total of 14 raptor species, including eight (8) of the target species for this IWH type, were recorded in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015a, 2015b, 2015d and 2015g).</td>
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<tr>
<td></td>
<td></td>
<td>• Barred Owls and sometimes Great Horned Owls and Merlin can nest in tree cavities.</td>
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<td></td>
<td>• There are several raptor nesting sites mapped by the MNRF located in the vicinity but outside of the HIWEC study area (refer to Figure 3-1).</td>
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<tr>
<td></td>
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<td>• Target species: Red-tailed Hawk 1,3, Great Horned Owl, Broad-winged Hawk 2,3, Sharp-shinned Hawk 2,3, Merlin 2, Barred Owl 2, Red-shouldered Hawk 2, Cooper’s Hawk 1. and Northern Goshawk 2,3.</td>
<td></td>
<td></td>
<td>• Collectively, eight (8) of the target species for this IWH type have been recorded within the HIWEC study area.</td>
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</tr>
<tr>
<td><strong>Turtle and Lizard Nesting Areas</strong></td>
<td>Wildlife and Wildlife Habitat</td>
<td>• For turtles, exposed mineral soil (sand or gravel) areas adjacent (~ 100 m from) or marshes, bogs, fens or cultural meadow;</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• There are numerous fens, bogs and marshes located in the HIWEC study area that may provide suitable turtle nesting habitats, as well as rock barrens for lizard nesting areas (AECOM, 2015g).</td>
<td>Yes</td>
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<tr>
<td></td>
<td></td>
<td>• Areas of sand and / or gravel that turtles are able to dig in that are located in open, sunny areas, including sand and gravel beaches adjacent to marshes, lakes, and rivers;</td>
<td></td>
<td></td>
<td>• According to the Ontario Raptile and Amphibian Atlas (Ontario Nature, 2014), three (3) of the target turtle species for this IWH and one (1) lizard species have been recorded in the vicinity of the HIWEC study area.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Nesting areas on the sides of road embankments, railway embankments and active aggregate operations are not IWH; and</td>
<td></td>
<td></td>
<td>• Four (4) turtle species, of which two (2) are identified as target species for this IWH type, and one (1) lizard species were observed in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015a; Neegan Burnside Ltd., 2011). In addition, predated eggs of Northern Map Turtle, also a target species for this IWH type, may have been potentially observed in 2011 or 2012 but the species was not confirmed (AECOM, 2015e).</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>• For lizards, all rock barren was considered suitable nesting habitat.</td>
<td></td>
<td></td>
<td>• Three (3) of the target species for this IWH type were identified as potentially occurring within the HIWEC study area by MNRF Parry Sound District (MNRF, personal communication, June 29, 2015).</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>• Target species: Midland Painted Turtle 1,2, Northern MapTurtle 1,2, Snapping Turtle 3 and Common Five-lined Skink 3 and 4.</td>
<td></td>
<td></td>
<td>• All four (4) of the target species for this IWH type have been recorded in the HIWEC study area.</td>
<td></td>
</tr>
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<tr>
<td>Seeps and Springs</td>
<td>Wildlife and Wetland Habitat</td>
<td>Seeps and springs are areas where groundwater comes to the surface. Often they are found within headwater areas within forested habitats; and Any forested Ecosystem (with &lt; 25% meadow / field / pasture) within the headwater areas of a stream could have seeps or springs.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• Seeps and springs may occur in association with unevaluated wetlands or watercourses within the HIWEC study area.</td>
<td>Yes</td>
</tr>
<tr>
<td>Aquatic Feeding Habitat</td>
<td>Wildlife and Wildlife Habitat</td>
<td>Habitat may be found in all mixed or conifer forests adjacent to water (within 120 m). Wetlands and isolated embayments in rivers or lakes with an abundance of submerged aquatic vegetation such as pond weeds, water milfoil and yellow water lily. Target species: 1. Moose 2. White-tailed Deer 3. Spotted Salamander 4. Northern Two-lined Salamander 5. Four-toed Salamander 6. American Toad 7. Grey Treefrog 8. Western Chorus Frog 9. Northern Leopard Frog 10. Pickerel Frog 11. Green Frog 12. Mink 13. Bullfrog</td>
<td>Yes</td>
<td>Possibly</td>
<td>• Aquatic feeding habitats may occur in association with unevaluated wetlands, rivers, lakes and beaver ponds in the HIWEC study area. According to the Atlas of the Mammals of Ontario (Dobbyn, 1994), there are Moose (Alces alces) and White-tailed Deer (Odocoileus virginianus) recorded in the vicinity of the HIWEC study area. Evidence of Moose and White-tailed Deer was recorded in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015h). There are several Aquatic Feeding Areas mapped by MNRF located in the vicinity and two (2) are located within the HIWEC study area (refer to Figure 3-1). Both of the target species for this IWH type have been recorded in the HIWEC study area.</td>
<td>Yes</td>
</tr>
<tr>
<td>Mineral Licks</td>
<td>Wildlife and Wildlife Habitat</td>
<td>Habitat may be found in all forested areas in upwelling groundwater and the soil around these seepage areas. Target species: 1. Moose 2. White-tailed Deer</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• Mineral licks may occur in association with seeps and springs located in wooded areas in the HIWEC study area. There is evidence of Moose and White-tailed Deer in the HIWEC study area (AECOM, 2015h; Dobbyn, 1994). Evidence of Moose and White-tailed Deer was recorded in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015h). Both of the target species for this IWH type have been recorded in the HIWEC study area.</td>
<td>Yes</td>
</tr>
<tr>
<td>Denning Sites for Mink, Otter, Marten, Fisher and Eastern Wolf</td>
<td>Wildlife and Wildlife Habitat</td>
<td>Dens may be found in all forested areas; Denning sites are often in cavities in large trees or under large downed woody debris for Martens (Martes americana) and Fishers (Martes pennanti); Denning sites for Mink (Neovison vison) include old muskrat lodges; Denning sites for Eastern Wolf (Canis lycaon) are excavated in the ground; and Denning sites for River Otter (Lontra canadensis) include downed woody debris, old beaver lodges, log jams and crevices in rock piles. Target species: 1. Mink 2. River Otter 3. Marten 4. Fisher 5. Grey Wolf 6. Eastern Wolf</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• Denning sites may occur within wooded areas in the HIWEC study area. According to the Atlas of the Mammals of Ontario (Dobbyn, 1994), five (5) of the target species for this IWH type have been recorded in the vicinity of the HIWEC study area. Two (2) of the target species for this IWH type, River Otter and possibly Eastern Wolf, were recorded in the HIWEC study area in 2013 (AECOM, 2015h). Despite records of tracks and howling of Eastern Wolf made in 2013 field notes as provided to AECOM from Startec, the presence of Eastern Wolf is considered to be unconfirmed within the HIWEC study area. Evidence given that genetic sampling is required to confidently identify this species and differentiate from known hybrids with Grey Wolf (Canis lupus) and Coyote (Canis latrans). There are also two (2) records of weasels that could not be identified to the species level in 2013 (AECOM, 2015h). Mink and Otter are known to occupy beaver ponds and use abandoned lodges and bank dens in the HIWEC study area (Neegan Burnside Ltd., 2011). All six (6) of the target species for this IWH type have been recorded in the vicinity of the HIWEC study area.</td>
<td>Yes</td>
</tr>
<tr>
<td>Amphibian Breeding Habitat (Woodland and Wetland)</td>
<td>Wildlife and Wildlife Habitat</td>
<td>Woodland (no minimum size) with a wetland, lake or pond, including breeding pools that may be permanent, seasonal or ephemeral; Wetlands and vernal pools &gt; 500 m² (about 25 m diameter), supporting high species diversity and larger sites of suitable habitat are important; Some smaller wetlands or vernal pools may also be important breeding pools for amphibians; Vernal pools or ponds that contain water until mid-July in most years are more likely to be important; Vernal pools or ponds with presence of shrubs and logs around the edges are more important because of increased structure for calling, foraging, escape and concealment from predators; and Bullfrogs require permanent water bodies with abundant emergent vegetation. Target species: 1. Eastern Newt 2. Blue-spotted Salamander 3. Spotted Salamander 4. Four-toed Salamander 5. Northern Two-lined Salamander 6. Spring Peeper 7. Wood Frog 8. American Toad 9. Grey Treefrog 10. Western Chorus Frog 11. Northern Leopard Frog 12. Pickerel Frog 13. Green Frog 14. Mink 15. Bullfrog</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• Amphibian breeding habitats (woodland and wetland) may occur in association with unevaluated wetlands, vernal pools, lakes or ponds within wooded areas in the HIWEC study area. According to the Ontario Reptile and Amphibian Atlas (Ontario Nature, 2014), there are 13 amphibian species recorded in the vicinity of the HIWEC study area, of which 11 are identified as target species for this IWH type. A total of five (5) amphibian species were recorded in the HIWEC study area in 2013, all of which are identified as target species for this IWH type (AECOM, 2015e). In addition, Western Chorus Frog was possibly heard calling but was not confirmed (AECOM, 2015e). A total of 13 amphibian species were recorded in the HIWEC study area in 2011 and 2012 (AECOM 2015e; Neegan Burnside Ltd., 2011), of which 11 are identified as target species for this IWH type. In addition, Western Chorus Frog was possibly recorded as incidental wildlife but not confirmed by LGL (AECOM, 2015h). Collectively, 14 of the target species for this IWH type have been observed in the HIWEC study area.</td>
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</table>
| Mast Producing Areas   | Wildlife and Wildlife Habitat | - Mature forests ≥0.5 ha in size and containing numerous large Beech and / or Red Oak trees.  
- Targeted species: Black Bear, White-tailed Deer, Wild Turkey and Ruffed Grouse. | Possibly                                    | Possibly                         | • Mature forests may occur within the wooded areas in the HIWEC study area (AECOM, 2015g).  
• According to the OBBA (BSC et al., 2006), and Atlas of the Mammals of Ontario (Dobyn, 1994), all four (4) of the target species for this IWH type have been recorded in the vicinity of the HIWEC study area.  
• Black Bear, White-tailed Deer and Ruffed Grouse (Bonasa umbellus) were recorded with the HIWEC study area in 2013 (AECOM, 2015h).  
• All four (4) of the target species for this IWH type have been recorded in the vicinity of the HIWEC study area. | Yes                                                      |
| Habitat for Species of Conservation Concern (SOCC) | |                                                                                             |                                            |                                                          |                                                                                                                                                                                                        |                                                        |
| Marsh Bird Breeding Habitat | Wildlife and Wildlife Habitat | - Wetland habitats (meadow marshes, shallow marshes and shallow aquatic communities), including individual wetlands or complexes of smaller wetlands that are at least 20 ha in size.  
- Wetland habitats containing shallow water and emergent aquatic vegetation;  
- For Green Heron, habitat consists of deciduous or mixed swamps that are ≥0.5 ha in size and located adjacent to wetland habitat identified in the point above; and  
- For Green Heron, habitat is usually at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees.  
- Target species: American Bittern, Sora, Red-necked Grebe, Pied-billed Grebe, Redhead, Ring-necked Duck, Lesser Scaup, Ruddy Duck, Common Moorhen, American Coot, Wilson’s Phalarope, Common Loon, Sandhill Crane, Green Heron, Sedge Wren, Marsh Wren, Trumpeter Swan, Yellow Rail and Black Tern. | Possibly                                    | Possibly                         | • Unevaluated wetlands within the HIWEC study area may provide suitable marsh bird breeding habitat (AECOM, 2015g).  
• According to the OBBA (BSC et al., 2006), there are records for six (6) marsh breeding bird species in the vicinity of the HIWEC study area, all of which are identified as target species for this IWH type.  
• A total of 12 marsh breeding bird species, all of which are identified as target species for this IWH type, were recorded in the HIWEC study area in 2011, 2012 and 2013 (AECOM, 2015b, 2015c, 2015d and 2015h).  
• Collectively, 14 of the target species for this IWH type have been recorded in the vicinity of the HIWEC study area. | Yes                                                      |
| Open Country Bird Breeding Habitat | Wildlife and Wildlife Habitat | - Grassland areas (includes natural and cultural fields and meadows) >30 ha in size, excluding Class 1 and 2 agricultural lands and lands actively used for farming (i.e., no row-cropping, intensive hay or livestock pasturing in the last 5 years).  
- Target species: Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, Northern Harrier, Savannah Sparrow and Short-eared Owl. | No                                         | No                              | • There are no cultural meadows or grassland areas in the HIWEC study area that meet the size criterion to support this type of IWH (AECOM, 2015g). | No                                                      |
| Shrub / Early Successional Bird Breeding Habitat | Wildlife and Wildlife Habitat | - Shrublands or successional fields >10 ha in size, excluding Class 1 or 2 agricultural lands and lands actively used for farming (i.e., no row-cropping, intensive hay or livestock pasturing in the last 5 years).  
- Target species: Willow Flycatcher, Brown Thrasher, Blue-winged Warbler, Tennessee Warbler, Prairie Warbler, Eastern Towhee, Clay-colored Sparrow, Field Sparrow and Golden-winged Warbler. | No                                         | No                              | • There are no cultural meadows, grassland areas or agricultural fields in the HIWEC study area large enough to support this type of IWH (AECOM, 2015g). | No                                                      |
| Habitat for Species of Conservation Concern (SOCC) | | Refer to Table 3-2 in Section 3.1 for a detailed list of the SOCC identified through the Records Review. |                                            |                                                          |                                                                                                                                                                                                        |                                                        |

### Animal Movement Corridors

<table>
<thead>
<tr>
<th>Type of Feature</th>
<th>Valued Ecosystem Component</th>
<th>Characteristics of Feature</th>
<th>Located within HIWEC Study Area (Yes / No)</th>
<th>Located in or within 120 m of HIWEC Location (Yes / No)</th>
<th>Details</th>
<th>Carried Forward to the Site Investigation (Yes / No)</th>
</tr>
</thead>
</table>
| Amphibian Corridors    | Wildlife and Wildlife Habitat | • Corridors will be determined based on identifying Important Amphibian Breeding Habitat (Woodland and Wetland);  
• Corridors should consist of native vegetation with no gaps such as roads, fields, waterways or waterbodies; and  
• Corridors should be at least 200 m wide with gaps < 20 m and, if following riparian area, with at least 15 m of vegetation on both sides of the waterway. | Possibly                                    | Possibly                         | • Amphibian corridors may occur in association with riparian or naturally vegetated areas in the HIWEC study area.  
• Refer to Amphibian Breeding Habitats (Woodland and Wetland) in this table for the amphibian species recorded in the HIWEC study area. | Yes                                                      |
| Cervid Movement Corridors | Wildlife and Wildlife Habitat | • Corridors will be determined based on identifying Important Deer Yarding Areas, Aquatic Feeding Habitats and / or Mineral Licks;  
• Corridors should consist of native vegetation and should be unbroken by roads and residential areas;  
• Corridors should be at least 200 m wide with gaps < 20 m and, if following riparian area, with at least 15 m of vegetation on both sides of the waterway; and  
• Shorter corridors are more important than longer corridors. | Possibly                                    | Possibly                         | • Cervid movement corridors may occur in association with Deer Yarding Areas, Aquatic Feeding Habitats or Mineral Licks in the HIWEC study area. | Yes                                                      |
## Table 3-1: Results of Records Review

<table>
<thead>
<tr>
<th>Type of Feature</th>
<th>Valued Ecosystem Component</th>
<th>Characteristics of Feature</th>
<th>Located within HIWEC Study Area (Yes / No)</th>
<th>Located in or within 120 m of HIWEC Location (Yes / No)</th>
<th>Details</th>
<th>Carried Forward to the Site Investigation (Yes / No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furbearer Movement Corridors</td>
<td>Wildlife and Wildlife Habitat</td>
<td>• All forested Ecosites adjacent to or within shoreline habitats; and&lt;br&gt; • Only denning sites for Mink and Otter are to be considered for an animal movement corridor.</td>
<td>Possibly</td>
<td>Possibly</td>
<td>• Furbearer movement corridors may occur in association with shoreline habitats along lakes, ponds and watercourses in the HIWEC study area.&lt;br&gt; • Refer to the Denning Sites for Mink, Otter, Marten, Fisher and Eastern Wolf in this table for the mammal species recorded in the HIWEC study area.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Notes:**
1. Target species are included for each IWH as presented in the Draft Significant Wildlife Habitat Ecoregion 5E Criterion Schedule (MNRF, 2012b). Bolded species names represent species for which there are records in the vicinity of the HIWEC study area based on various secondary sources.
2. Species was recorded in the Ontario Breeding Bird Atlas (BSC et al., 2006) in the vicinity of the HIWEC study area.
3. Species were recorded by LGL or Stantec in the HIWEC study area during 2011, 2012 or 2013 field studies as summarized in the Technical Reports prepared by AECOM (refer to Appendix A).
4. Species was recorded in the Atlas of the Mammals of Ontario (Dobbyn, 1994) in the vicinity of the HIWEC study area.
5. Species was recorded was recorded in the Ontario Reptile and Amphibian Atlas (Ontario Nature, 2014) in the vicinity of the HIWEC study area.
6. Species was recorded by LGL in 2011 as reported in the Nigig Power Corp / Henvey Inlet Wind Project Preliminary Environmental Constraints Analysis (Neegan Burnside Ltd., 2011) in the HIWEC study area.
7. Species was identified by MNRF Parry Sound District as potentially occurring in the vicinity of the HIWEC study area (personal communication, June 29, 2015).
8. Species was identified by EC-CWS as potentially occurring in the vicinity of the HIWEC study area (personal communication, August 4, 2015).
3.1 **Species of Conservation Concern (SOCC)**

For the purpose of this Records Review, SOCC include the following:

- Provincially rare species ranked by the Natural Heritage Information Centre (NHIC) as S1 (critically imperiled), S2 (imperiled) or S3 (vulnerable) in the province of Ontario but not listed as Endangered or Threatened under Schedule 1 of SARA or the ESA;
- Species listed as Special Concern under Schedule 1 of SARA;
- Species evaluated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as Special Concern, Threatened or Endangered but not listed as Endangered or Threatened under Schedule 1 of SARA or the ESA; and
- Species listed as Special Concern under the ESA.

Table 3-2 lists the SOCC that were identified through the Records Review as occurring or having the potential to occur within the HIWEC study area. This table was compiled using results from searches of the NHIC database (MNRF, 2014b), various wildlife atlases, and observation records from LGL and Stantec during the 2011, 2012 and 2013 field seasons within the HIWEC study area, as well as agency correspondence.

In total, 23 SOCC have been recorded within the HIWEC study area and / or surrounding area. Long-tailed Duck (*Clangula hyemalis*), Lapland Longspur (*Calcarius lapponicus*), Great Black-backed Gull (*Larus marinus*), Rusty Blackbird (*Euphagus carolinus*) and Red-necked Grebe (*Podiceps grisegena*) are considered to be migrant species as their breeding ranges are not located in the vicinity of the HIWEC study area (Cadman *et al.*, 2007). With the exception of these five (5) species, all of the remaining species have the potential of occurring in the HIWEC study area and were carried forward to the Site Investigation.
### Table 3-2: Species of Conservation Concern (SOCC)

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>S- rank</th>
<th>ESA Status</th>
<th>COSEWIC Status</th>
<th>SARA Status</th>
<th>Preferred Habitat</th>
<th>Source</th>
<th>Observed in 2013 (Yes / No)</th>
<th>Observed in 2011 and / or 2012 (Yes / No)</th>
<th>Carried Forward to Site Investigation (Yes / No)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bird Species (13)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bald Eagle</td>
<td>Haliaeetus leucocephalus</td>
<td>S2</td>
<td>SC</td>
<td>NAR</td>
<td>NAR</td>
<td>Species nests in a variety of habitats and forest types, almost always near a major lake or river where they do most of their hunting. They usually nest in large trees such as pine and poplar.</td>
<td>OBBIA, MNRF (Parry Sound)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Black Tern</td>
<td>Chlidonias niger</td>
<td>S3</td>
<td>SC</td>
<td>NAR</td>
<td>NAR</td>
<td>Found in wetlands, coastal or inland marshes; large cattail marshes, marshy edges of rivers, lakes or ponds, wet open fens, wet meadows; returns to same area to nest each year in loose colonies; must have shallow (0.05 to 1 m deep) water and areas of open water near nests; requires marshes &gt; 20 ha in size; feeds over adjacent grasslands for insects; also feeds on fish, crayfish and frogs.</td>
<td>N / A</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Caspian Tern</td>
<td>Sterna caspia</td>
<td>S3</td>
<td>NAR</td>
<td>NAR</td>
<td>NAR</td>
<td>Prefers open habitat near large lakes or rivers, beaches, shorelines, rocky or sandy beaches, offshore islands; negatively affected by elevated water levels during nesting season; feeds on fish; often found in association with Ring billed Gulls (Larus delawarensis).</td>
<td>N / A</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Eastern Wood-pewee</td>
<td>Contopus virens</td>
<td>S4</td>
<td>SC</td>
<td>SC</td>
<td>No Status (No Schedule)</td>
<td>Prefers open, deciduous or mixed forest ≥3 ha in size; with little understory; forest clearings, edges; farmland, woodlots, parks.</td>
<td>OBBIA, MNRF (Parry Sound), EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Great Black-backed Gull</td>
<td>Larus marinus</td>
<td>S2 -</td>
<td>- -</td>
<td>-</td>
<td>-</td>
<td>Breeds in arctic tundra in meadows, grassy tussocks, and scrubland (Hussey and Montgomerie, 2002).</td>
<td>N / A</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Lapland Longspur</td>
<td>Calcarius lapponicus</td>
<td>S3</td>
<td>- - -</td>
<td>-</td>
<td>-</td>
<td>Breeds on open, deciduous or mixed forest ≥3 ha in size; with little understory; forest clearings, edges; farm woodlots, parks.</td>
<td>N / A</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Long-tailed Duck</td>
<td>Clangula hyemalis</td>
<td>S3 -</td>
<td>- -</td>
<td>-</td>
<td>-</td>
<td>Breeds in ponds, streams and arctic wetlands (Robertson and Savard, 2002).</td>
<td>N / A</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Peregrine Falcon</td>
<td>Falco peregrinus</td>
<td>S3</td>
<td>SC</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Prefers rock cliffs, cliffs, especially situated near water; tall buildings in urban centres and cliffs ranging from 50 to 200 m in height (COSEWIC, 2007a).</td>
<td>MNRF (Parry Sound)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Prairie Warbler</td>
<td>Setophaga discolor</td>
<td>S3</td>
<td>NAR</td>
<td>NAR</td>
<td>NAR</td>
<td>Prefers open freshwater lakes with a fringe of aquatic emergent vegetation; marshes, impoundments or sewage lagoons with &gt; 4 ha of open water; protected marshy areas or bays in larger lakes; nest greatly affected by wave action of boats and other human disturbances.</td>
<td>OBBIA</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Red-necked Grebe</td>
<td>Podiceps grisegena</td>
<td>S3</td>
<td>- - -</td>
<td>-</td>
<td>-</td>
<td>Nest in colonies; must have shallow (0.5 to 1 m deep) water in lakes or ponds, wet open fens, wet meadows; returns to same area to nest each year in loose colonies.</td>
<td>OBBIA, EC-CWS</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Rusty Blackbird</td>
<td>Euphagus carolinus</td>
<td>S4</td>
<td>NAR</td>
<td>SC</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Prefers openings in coniferous woodlands bordering bodies of water; tree-bordered marshes, beaver ponds, muskegs, bogs, fens or wooded swamps; stream borders with alder, willow; wooded islands on lakes.</td>
<td>OBBIA, EC-CWS</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Wood Thrush</td>
<td>Hylocichla mustelina</td>
<td>S4</td>
<td>SC</td>
<td>THR</td>
<td>No Status (No Schedule)</td>
<td>Found in Carolinian and Great Lakes – St. Lawrence forest zones; prefers undisturbed moist mature deciduous or mixed forest &gt;3 ha in size with deciduous sapling growth; hardwood forest edges; must have some trees higher than 12 m.</td>
<td>OBBIA, MNRF (Parry Sound), EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Yellow Rail</td>
<td>Coturnicops noveboracensis</td>
<td>S4</td>
<td>SC</td>
<td>SC</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Prefers large, freshwater or brackish grass and sedge marshes with dense vegetation including bulrushes, horsetails and grasses.</td>
<td>OBBIA, EC-CWS</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Insect Species (4)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Horned Cicubal</td>
<td>Arionopus comutus</td>
<td>S3</td>
<td>- - -</td>
<td>-</td>
<td>-</td>
<td>Found in permanent slow streams, rivers, lakes and ponds with vegetated edges. Also uses open meadows and woodlands as foraging and roosting habitat (Montana Natural Heritage Program, Date Unknown).</td>
<td>N / A</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Monarch</td>
<td>Danaus plexippus</td>
<td>S2</td>
<td>SC</td>
<td>SC</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Found in meadows and open areas that contain an abundance of Common Milkweed (Asclepias syriaca), its host food plant.</td>
<td>EC-CWS</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Mottled Darter</td>
<td>Aeshna clesysdra</td>
<td>S3</td>
<td>- - -</td>
<td>-</td>
<td>-</td>
<td>Found in marshes, bogs, ponds, lakes and bays. Prefers wetlands with water lilies and clear water. Forming habitat includes open woodlands and clearings (Pennsylvania Natural Heritage Program, Date Unknown).</td>
<td>N / A</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Pine Imperial Moth</td>
<td>Eacles imperialis pini</td>
<td>S3?</td>
<td>- - -</td>
<td>-</td>
<td>-</td>
<td>Found in coniferous or mixed forests dominated by Red Pine (Pinus resinosa) or White Pine (NatureServe, 2015).</td>
<td>N / A</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Mammal Species (1)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Wolf</td>
<td>Canis lupus lycaon</td>
<td>S4</td>
<td>SC</td>
<td>THR</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Prefers deciduous and mixed forests in its southern range, and mixed and coniferous forests further north. Wolf packs require a home range of approximately 500 km².</td>
<td>EC-CWS</td>
<td>Not confirmed</td>
<td>No</td>
</tr>
<tr>
<td><strong>Reptile Species (5)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Five-lined Skink (Southern Skink population)</td>
<td>Plestiodon fasciatus pop. 2</td>
<td>S3</td>
<td>SC</td>
<td>SC</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Found primarily in rock barrens in this area but also in moderately dense or open deciduous or mixed woodlands with logs and slash piles; damp spots under logs, leaf litter or sawdust; open talus slopes; lays and protects eggs under rocks, logs; forages in open woodlands, in sandy areas, along shores of lakes and islands; hibernates under rock piles, in rock crevices, under logs and in stumps.</td>
<td>ORAA, MNRF (Parry Sound), EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 3-2: Species of Conservation Concern (SOCC)

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>S-rank</th>
<th>ESA Status</th>
<th>COSEWIC Status</th>
<th>SARA Status</th>
<th>Preferred Habitat</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Ribbonsnake</td>
<td>Thamnophis sauritus</td>
<td>S3</td>
<td>SC</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Found in sunny grassy areas with low density vegetation near bodies of shallow permanent quiet water; wet meadows, grassy marshes or sphagnum bogs; borders of ponds, lakes or streams.</td>
<td>ORRA, MNRF (Parry Sound)</td>
</tr>
<tr>
<td>Milksnake</td>
<td>Lampropeltis triangulum</td>
<td>SC</td>
<td>SC</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Prefers large bodies of water with soft bottoms, and aquatic vegetation; basks on logs or rocks or on beaches and grassy edges of streams; uses soft soil or clean dry sand for nest sites; may nest at some distance from water; home range size is larger for females (about 70 ha) than males (about 30 ha) and includes hibernation, basking, nesting and foraging areas.</td>
<td>ORRA, MNRF (Parry Sound)</td>
</tr>
<tr>
<td>Northern Map Turtle</td>
<td>Graptemys geographica</td>
<td>S3</td>
<td>SC</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Prefers permanent, semi-permanent fresh water; marshes; swamps; rivers; home range size is larger for females (about 70 ha) than males (about 30 ha) and includes hibernation, basking, nesting and foraging areas.</td>
<td>ORRA, MNRF (Parry Sound)</td>
</tr>
<tr>
<td>Snapping Turtle</td>
<td>Chelydra serpentina</td>
<td>S3</td>
<td>SC</td>
<td>SC</td>
<td>(Schedule 1)</td>
<td>Prefers large bodies of water with soft bottoms, and aquatic vegetation; basks on logs or rocks or on beaches and grassy edges of streams; uses soft soil or clean dry sand for nest sites; may nest at some distance from water; home range size is larger for females (about 70 ha) than males (about 30 ha) and includes hibernation, basking, nesting and foraging areas.</td>
<td>ORRA, MNRF (Parry Sound)</td>
</tr>
</tbody>
</table>

1 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 five (5) or fewer occurrences in the province or very few remaining individuals; especially vulnerable to extirpation.
   S2 Very rare in Ontario, usually between five (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.
   S6 Possibly Extirpated (Historical). Species or community occurred historically in the nation or province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years.
   S7 Rank uncertain.

2 ESA Status: The Endangered Species Act 2007 (ESA) protects species listed as Threatened or Endangered on the Species at Risk in Ontario (SARO) list on provincial and private land. The Minister lists species on the SARO list based on recommendations from the Committee on the Status of Species at Risk in Ontario (COSEWIC), which evaluates the conservation status of species occurring in Ontario. The following are the categories at all risk:
   END (Endangered) – a species facing imminent extirpation or extinction in Ontario.
   THREATENED (Threatened) – any native species that, because of the rank of the species, is at risk of becoming extirpated throughout all or a large portion of its Ontario range if the limiting factors are not reversed.
   S3 (Special Concern) – a species that may become threatened or endangered due to a combination of biological characteristics and identified threats.
   NAR (Not at Risk) – A species that has been evaluated and found to be not at risk.

3 COSEWIC Status: The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) evaluates a federal status ranking for all species that it assesses. Rankings include the following:
   END (Endangered) – A species facing imminent extirpation or extinction throughout its range.
   THREATENED (Threatened) – A species likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
   S3 (Special Concern) – A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events, but does not include an endangered, threatened or species.
   NAR (Not at Risk) – A species that has been evaluated and found to be not at risk.

4 SARA Status: The Species at Risk Act (SARA) protects Species at Risk designated as Endangered, Threatened and Extirpated listed under Schedule 1, including their habitats on federal land. Schedule 1 of SARA is the official list of wildlife species at risk in Canada and includes species listed as Extirpated, Endangered, and of Special Concern. Once a species is listed on Schedule 1, they receive protection and recovery measures that are required to be developed and implemented under SARA. Species that are designated at risk by COSEWIC before SARA need to be reassessed based on the new criteria of the Act before they can be listed under Schedule 1. These species that are waiting to be listed under Schedule 1 do not receive official protection until the species has been assessed for the first time under Schedule 1. The following are the categories at all risk:
   END (Endangered) – A species facing imminent extirpation or extinction throughout its range.
   THREATENED (Threatened) – A species likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
   NAR (Not at Risk) – A species that has been evaluated and found to be not at risk.

5 Preferred Habitat: Habitat descriptions for species were taken from Appendix G of the Significant Wildlife Habitat Technical Guide (MNRF, 2000), unless indicated otherwise.


12 IWA – Not applicable.

1 Species was recorded by Stantec in the HIWEC study area during the 2013 field season as summarized in the Technical Reports prepared by AECOM (refer to Appendix A).

2 Species was recorded by LGL within or in the vicinity of the HIWEC study area in 2011 or 2012, as reported in the Ngg Power Corp./Henvey Inlet Wind Project Preliminary Environmental Constraints Analysis (Neegan Burnside Ltd., 2011) or the Technical Reports prepared by AECOM (refer to Appendix A).
3.2 Species at Risk

3.2.1 Federal Species at Risk

Species listed as Endangered and Threatened under Schedule 1 of SARA are protected and may require permits and / or authorization administered by EC-CWS if the proposed HIWEC negatively affects the species or its habitat. Permit requirements, if any, will be determined in consultation with EC-CWS. There is no provincial requirement or guidance for completing an NHA on Federal Species at Risk, however these species are included in the NHA to ensure that potential effects of the HIWEC and mitigation measures, if required, are appropriately addressed through the HIWEC EA.

Table 3-3 lists the Federal Species at Risk that were identified through the Records Review as occurring or having the potential to occur within the HIWEC study area. This table was compiled using results from searches of the NHIC database (MNRF, 2014b), various wildlife atlases, and observation records from LGL and Stantec during the 2011, 2012 and 2013 field seasons within the HIWEC study area, as well as agency correspondence.

In total, 17 Federal Species at Risk, including four (4) Endangered species, 12 Threatened species, and one (1) restricted species1, have been recorded in the HIWEC study area or its vicinity. Of these, 15 species were recorded either by LGL or Stantec, in 2011, 2012 or 2013. In addition, although no records of Least Bittern (*Ixobrychus exilis*; listed under Schedule 1 of SARA as Threatened) were identified within the HIWEC study area through the Records Review, given its geographic range it is possible that this species and its habitat could be present within the HIWEC study area. Therefore, Least Bittern was included in Table 3-3 and has been considered for further assessment during the Site Investigation.

Although Branched Bartonia is only known from ten (10) sites in Ontario within the Muskoka and Parry Sound Districts, which are located more than 50 km away from the HIWEC study area, MNRF Parry Sound District (personal communication, August 4, 2015) and EC-CWS (personal communication, June 29, 2015) indicated that there is potential for this species to occur within the HIWEC study area.

All of 18 of these Federal Species at Risk were carried forward to the Site Investigation, during which the presence of these species and their habitats within 120 m of the proposed HIWEC location will be investigated.

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1. Records of Species At Risk considered to be restricted are not being made public due to the threat of poaching experienced by these species. These records will be provided under a separate cover to the Ministry of Natural Resources and Forestry (MNRF) and / or Environment Canada – Canadian Wildlife Service (EC-CWS) for permitting purposes.
### Table 3-3: Federal Species at Risk

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>S- rank</th>
<th>ESA Status</th>
<th>COSEWIC Status</th>
<th>SARA Status</th>
<th>Preferred Habitat</th>
<th>Source</th>
<th>Observed in 2013 (Yes/No)</th>
<th>Observed in 2011 and/or 2012 (Yes/No)</th>
<th>Carried Forward to Site Investigation (Yes/No)</th>
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</thead>
<tbody>
<tr>
<td><strong>Amphibian Species (1)</strong></td>
<td></td>
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<tr>
<td>Western Chorus Frog</td>
<td>Pseudacris triseriata</td>
<td>S3</td>
<td>NAR</td>
<td>THR (Schedule 1)</td>
<td>THR</td>
<td>Found in roadside ditches or temporary ponds in fields; swamps or wet meadows; woodland or open country with cover and moisture; small ponds and temporary pools.</td>
<td>ORAA, EC-CWS</td>
<td>Yes</td>
<td>Possibly but not confirmed</td>
<td>Yes</td>
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<tr>
<td><strong>Bird Species (7)</strong></td>
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<tr>
<td>Canada Warbler</td>
<td>Cardellina canadensis</td>
<td>S4</td>
<td>SC</td>
<td>THR (Schedule 1)</td>
<td>THR</td>
<td>This species breeds in moist mixed woods or deciduous forests with a dense, complex understory (shrubs, downed trees, hummocks or ferns) near standing water or streams (EC, 2015a). Canada Warbler is an interior forest species that requires at least 30 ha of habitat which includes forested swamps, shrub thicket swamps, riparian woodland and moist forests.</td>
<td>OBBA, MNRF (Parry Sound), EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Chimney Swift</td>
<td>Chaetura pelagica</td>
<td>S4</td>
<td>THR</td>
<td>THR (Schedule 1)</td>
<td>THR</td>
<td>This species is commonly found in urban areas near buildings; nests in hollow trees, crevices of rock cliffs, and chimneys. This species feeds over open water. Large hollow trees (&gt;60 cm DBH) such as White Pine, and Yellow Birch are used as nesting / roosting trees by the species (MNRF, 2013; COSEWIC, 2007b).</td>
<td>EC-CWS</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Common Nighthawk</td>
<td>Chordeiles minor</td>
<td>S4</td>
<td>SC</td>
<td>THR (Schedule 1)</td>
<td>THR</td>
<td>This species breeds and forages in a wide range of habitats, including sandy areas (e.g., dunes and beaches), open forests (e.g., burns and clearcuts in mixed wood and coniferous stands), grasslands, wetlands (e.g., marshes, lakeshores and riverbanks), rock bars and cultivated / landscaped areas (EC, 2015b).</td>
<td>OBBA, EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Eastern Whip-poor-will</td>
<td>Antrostomus vociferus</td>
<td>S4</td>
<td>THR</td>
<td>THR (Schedule 1)</td>
<td>THR</td>
<td>The preferred habitats for this species are summarized below as described in the Recovery Strategy for the Eastern Whip-poor-will (Antrostomus vociferus) in Canada (EC, 2015c): Nesting habitat: Well-drained soils (sand or sandy-loam), sparse to dense tree cover, and sparse to moderate shrub and herbaceous cover. Include most types of forest (deciduous, mixed, or coniferous), forests at early successional stages, forest edges, rock or sand bars with scattered trees, savannahs, old burns; Prefers open forest to closed canopy; and Adjacent to open habitats required for foraging. Foraging habitat: Include areas of low tree cover and an availability of foraging perches (e.g., sparse forests, prairies, shrub wetlands, regenerating clearcuts, rock and sand outcrops, agricultural fields); and Foraging usually takes place within 500 m of nest.</td>
<td>OBBA, MNRF (Parry Sound), EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Golden-winged Warbler</td>
<td>Vermivora chrysoptera</td>
<td>S4</td>
<td>SC</td>
<td>THR (Schedule 1)</td>
<td>THR</td>
<td>Prefers a mosaic of mature and disturbed habitat in close proximity to each other. The Golden-winged Warbler typically nests and forages within early successional habitats created by natural disturbance and those that contain herbaceous elements (e.g., grasses and forbs) woody shrubs / saplings, and scattered canopy trees (EC, 2014b). It requires nesting and foraging habitat patches within a primarily deciduous or mixed forested landscape; must be a shared edge between forests and open / shrub habitat. It nests in loose colonies that can contain up to ten (10) pairs of breeding birds. Nesting habitat for this species tends to be associated with open or disturbed habitat (10 to 30 years into succession) such as hydro / utility right-of-ways, field edges, recently logged areas and beaver marshes with patches of herbs and low shrubs for nesting located adjacent to forested edges that are used for perching and foraging. This species also uses habitats that exhibit characteristics of early succession, e.g., alder (Alnus spp.) swamps, Tamarack ( Larix laricina) bogs, open Jack Pine (Pinus banksiana), beaver meadows and shrubby stream borders (EC, 2014).</td>
<td>OBBA, MNRF (Parry Sound), EC-CWS</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Least Bittern</td>
<td>Ixobrychus exilis</td>
<td>S4</td>
<td>THR</td>
<td>THR (Schedule 1)</td>
<td>THR</td>
<td>N / A</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Olive-sided Flycatcher</td>
<td>Contopus cooperi</td>
<td>S4</td>
<td>SC</td>
<td>THR (Schedule 1)</td>
<td>THR</td>
<td>Prefers natural forest edges and openings. This species will use forests that have been logged or burned, if there are ample tall snags and trees to use for foraging perches. This species breeds and forages in open coniferous or mixed-coniferous forests often near water or wetlands with the presence of tall snags from which the species relies for prey; prefers mature conifer stands in a mosaic of wet areas and clearings created by natural disturbance (e.g., recent burns) (EC, 2015d). In Ontario, Olive-sided Flycatchers commonly nest in conifers such as White and Black Spruce, Jack Pine and Balsam Fir.</td>
<td>OBBA, MNRF (Parry Sound), EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 3-3: Federal Species at Risk

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>S-rank</th>
<th>ESA Status</th>
<th>COSEWIC Status</th>
<th>SARA Status</th>
<th>Preferred Habitat</th>
<th>Source</th>
<th>Observed in 2013 (Yes/No)</th>
<th>Observed in 2011 and / or 2012 (Yes/No)</th>
<th>Carried Forward to Site Investigation (Yes/No)</th>
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</thead>
<tbody>
<tr>
<td><strong>Mammal Species (3)</strong></td>
<td></td>
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<tr>
<td>Little Brown Bat</td>
<td>Myotis lucifugus</td>
<td>S4</td>
<td>END</td>
<td>END (Schedule 1)</td>
<td>Uses caves, quarries, tunnels, hollow trees or buildings for roosting; winters in humid caves; maturity sites can be found in dark warm areas such as attics and barns, as well as cavity trees; feeds primarily over wetlands, forests and forest edges (COSEWIC, 2013).</td>
<td>OMA, MNRF (Parry Sound), EC-CWS</td>
<td>Possibly but not confirmed</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Northern Myotis</td>
<td>Myotis septentrionalis</td>
<td>S4</td>
<td>END</td>
<td>END (Schedule 1)</td>
<td>Typically overwinters in mines or caves; in the spring, females leave winter hibernacula to give birth and raise pups in maternity colonies which may contain hundreds of females; maternity sites of this species are rarely found in houses or other manmade structures, as the species prefers to roost in large cavity trees, typically ranging from 25 to 44 cm diameter at breast height (COSEWIC, 2013).</td>
<td>OMA, MNRF (Parry Sound), EC-CWS</td>
<td>Possibly but not confirmed</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Tri-coloured Bat</td>
<td>Perimyotis subflavus</td>
<td>S3?</td>
<td>END</td>
<td>END (Schedule 1)</td>
<td>Typically overwinters in the deepest part of caves where temperature and humidity levels are the most stable; maternity sites are typically found in cavity trees, and females may return to the same area and use the same few trees per year (COSEWIC, 2013).</td>
<td>EC-CWS</td>
<td>Possibly but not confirmed</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Plant Species (1)</strong></td>
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<tr>
<td>Branched Bartonia</td>
<td>Bartonia paniculata ssp. paniculata</td>
<td>S1</td>
<td>THR</td>
<td>THR (Schedule 1)</td>
<td>Grows in sphagnum bogs (COSEWIC, 2003).</td>
<td>MNRF (Parry Sound), EC-CWS</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td><strong>Reptile Species (3)</strong></td>
<td></td>
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<tr>
<td>Blanding’s Turtle</td>
<td>Emydoidea blandingii</td>
<td>S3</td>
<td>THR</td>
<td>THR (Schedule 1)</td>
<td>The preferred habitats for this species are summarized below as described in the Recovery Strategy for the Blanding’s Turtle (Emydoidea blandingii), Nova Scotia Population, in Canada (Parks Canada, 2012):</td>
<td>ORRA, MNRF (Parry Sound), NHIC, EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Eastern Foxsnake (Georgian Bay population)</td>
<td>Pantherophis gloydi pop. f</td>
<td>S3</td>
<td>THR</td>
<td>END (Schedule 1)</td>
<td>Found in shrub swamps and marshes; deciduous forest containing openings with shrubs and saplings; prefer woodland-marsh edges for hunting and breeding. The Georgian Bay population only occurs within 1 km of Georgian Bay (including inlets) and will move through any habitats near this shoreline (COSEWIC, 2008).</td>
<td>ORRA, MNRF (Parry Sound), EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Eastern Hog-nosed Snake</td>
<td>Heterodon platirhinos</td>
<td>S3</td>
<td>THR</td>
<td>THR (Schedule 1)</td>
<td>Found in sandy upland fields, pastures, savannahs, sandy beaches; dry open oaks-pine-maple forest with sandy soils; prefer forest areas &gt; 5 ha in size (MNRF, 2000). This species prefers forested areas and wetlands and is more likely found in areas with a diverse habitat mosaic (Seburn, 2008). Physical characteristics of preferred habitat include well-drained soil, a loose or sandy soil, open vegetation cover, proximity to water and climatic conditions of the eastern deciduous forest (Seburn, 2008 and COSEWIC, 2007c).</td>
<td>ORRA, MNRF (Parry Sound), EC-CWS</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
Table 3-3: Federal Species at Risk

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>S- rank²</th>
<th>ESA Status³</th>
<th>COSEWIC Status²</th>
<th>SARA Status⁴</th>
<th>Preferred Habitat⁵</th>
<th>Source⁶</th>
<th>Observed in 2013⁷ (Yes/No)</th>
<th>Observed in 2011 or / and or 2012⁸ (Yes/No)</th>
<th>Carried Forward to Site Investigation (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Musk Turtle</td>
<td>Sternotherus odoratus</td>
<td>S3</td>
<td>SC</td>
<td>SC⁵</td>
<td>THR (Schedule 1)</td>
<td>Prefers shallow moving water of lakes, streams, marshes and ponds; hibernate in underwater mud, in banks or in muskrat lodges; eggs are laid in debris or under stumps or fallen logs at water’s edge; often share nest sites; sometimes congregate at hibernation sites (MNRF, 2000). This species prefers shallow water with depths &lt;2 m with abundant floating and submerged vegetation. Nest sites are located 3 to 11 m from the shoreline and are laid in shallow excavations in sand, base of dune grasses, decaying vegetation matter, and sometimes in the walls of Muskrat or Beaver lodges (COSEWIC, 2012).</td>
<td>ORAA, MNRF (Parry Sound), NHIC, EC-CWS</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Massasauga Rattlesnake (Great Lakes / St. Lawrence population)</td>
<td>Sistrurus catenatus pop. ²</td>
<td>S3</td>
<td>THR</td>
<td>Non-Active</td>
<td>THR (Schedule 1)</td>
<td>The preferred habitats for this species are summarized below in the Recovery Strategy for the Massasauga (Sistrurus catenatus) in Canada (Parks Canada Agency, 2013): • Hibernation sites: ▪ Hibernation may occur in small groups; ▪ Habitat includes conifer or shrub swamps and swales, poor fens, or water saturated soils formed in rock barren depressions characterized by sparse tree cover or shrubs with sphagnum moss or sedge hummocks; and ▪ Site needs to provide insulated and moist subterranean spaces below the frost line (e.g., burrows created by other animals, rock crevices, root systems, and sphagnum hummocks). • Foraging and mating sites (May to October) • Prefer areas with low canopy cover (e.g., forest openings, old burn areas, rock barrens, marshes, fens and swamps, fields and grasslands) with surrounding vegetative cover (low lying shrubs, grass); and • Avoids dense forests, open water, and areas lacking ground cover. • Gestation and basking sites • Includes a feature that provides relatively warm refuge during cool weather (e.g., large flat and thin rock with crevices, rock piles, old tree stump, earth mounds, brush or debris pile).</td>
<td>ORAA, ORRA, MNRF (Parry Sound), NHIC, EC-CWS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Restricted Species (1)

| One (1) species | - | - | - | - | - | - | - | Yes | Yes | Yes |

¹ 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 five (5) or fewer occurrences in the province or very few remaining individuals; often especially vulnerable to extirpation.
- S2: Very rare in Ontario; usually between five (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.
- S6: Possibly Extirpated (Historical); Species or community occurred historically in the nation or province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years.
- SFR: A numeric range rank (e.g., S235) is used to indicate any range of uncertainty about the status of the species or community.
- SR: Rank uncertain.

² ESA Status: The Endangered Species Act 2007 (ESA) protects species listed as Threatened and Endangered on the Species at Risk in Ontario (SARO) list on provincial and private land. The Minister lists species on the SARO list based on recommendations from the Committee on the Status of Species at Risk in Ontario (COSSARO), which evaluates the conservation status of species occurring in Ontario. The following are the categories of risk:
- END (Endangered) – A species facing imminent extinction or extinction in Ontario.
- THREATENED (Threatened) – Any native species that, on the basis of the best available scientific evidence, is at risk of becoming endangered throughout all or a large portion of its Ontario range if the limiting factors are not reversed.
- Sensitive (Special Concern) – A species that may become threatened or endangered due to a combination of biological characteristics and identified threats.
- NAR (Not at Risk) – A species that has been evaluated and found to be not at risk.

³ COSEWIC Status: The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) evaluates a federal status ranking for all species that it assesses. Rankings include the following:
- END (Endangered) – A species facing imminent extension or extinction throughout its range.
- THREATENED (Threatened) – A species likely to become endangered if nothing is done to reverse the factors leading to its extinction or extinction
- Sensitive (Special Concern) – A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events, but does not include an extirpated, endangered or threatened species.
- NAR (Not at Risk) – A species that has been evaluated and found to be not at risk.
The Species at Risk Act (SARA) protects Species at Risk designated as Endangered, Threatened and Extirpated listed under Schedule 1, including their habitats on federal land. Schedule 1 of SARA is the official list of wildlife species at risk in Canada and includes species listed as Endangered, Threatened and of Special Concern. Once a species is listed on Schedule 1, they receive protection and recovery measures that are required to be developed and implemented under SARA. Species that were designated at risk by COSEWIC before SARA need to be reassessed based on the new criteria of the Act before they can be listed under Schedule 1. These species that are waiting to be listed under Schedule 1 do not receive official protection under SARA. Once the species on other schedules (2 and 3) have been reassessed, the other schedules are eliminated and the species is either listed under Schedule 1 or is not listed under the Act.

The following are definitions of the SARA status rankings assigned to each species in the table above:

**END (Schedule 1)** – These species are listed as Endangered under Schedule 1 of SARA and receive species and habitat protection under SARA, as well as recovery strategies and action plans.

**THR (Schedule 1)** – These species are listed as Threatened under Schedule 1 of SARA and receive species and habitat protection under SARA, as well as recovery strategies and action plans.

**SC (Schedule 1)** – These species are listed as Special Concern under Schedule 1 of SARA and receive management initiatives under SARA to prevent them from becoming endangered and threatened.

**No Status (No Schedule)** – These species are evaluated and designated by COSEWIC but are not listed under Schedule 1 and therefore do not receive protection under SARA.

**NAR (Not at Risk)** – These species have either been assessed by COSEWIC as Not at Risk or there is not enough data to assess the status ranking of the species and therefore these are not listed on Schedule 1 nor do they receive protection under SARA.

**Not Applicable (N/A)** – These species have either been assessed by COSEWIC as Not at Risk or there is not enough data to assess the status ranking of the species and therefore these are not listed on Schedule 1 nor do they receive protection under SARA.


**Preferred Habitat:** Habitat descriptions for species were taken from Appendix G of the Significant Wildlife Habitat Technical Guide (MNRF, 2000), unless indicated otherwise.

**Source:**
- Environment Canada – Canadian Wildlife Service (EC-CWS), personal communication. August 4, 2015
- IVA – Not applicable.

**5** Species was recorded by Stantec in the HIWEC study area during the 2013 field season as summarized in the Technical Reports prepared by AECOM (refer to Appendix A).

**6** Species was recorded by LGL within or in the vicinity of the HIWEC study area in 2011 or 2012 as reported in the Nigig Power Corp / Henvey Inlet Wind Project Preliminary Environmental Constraints Analysis (Neegan Burnside Ltd., 2011) or the Technical Reports prepared by AECOM (refer to Appendix A).

**7** Eastern Musk Turtle has been recently down listed from Threatened to Special Concern by COSEWIC but this change has not yet been updated under Schedule 1 of SARA. Therefore this species designation as Threatened under Schedule 1 of SARA may change in the future.
### 3.2.2 Provincial Species at Risk

Species listed as Endangered or Threatened under the ESA but not listed under Schedule 1 of SARA are treated as Provincial Species at Risk for the purpose of this Records Review. There is no provincial requirement or guidance for completing an NHA on Provincial Species at Risk, however these species are included in the NHA to ensure that potential effects of the HIWEC and mitigation measures, if required, are appropriately addressed through the HIWEC EA.

Table 3-4 lists the Provincial Species at Risk that were identified as occurring or having the potential to occur within the HIWEC study area. This table was compiled using results from searches of the NHIC database (MNRF, 2014b), various wildlife atlases, and observation records from LGL and Stantec during the 2011 and 2013 field seasons within the HIWEC study area, as well as agency correspondence.

In total, five (5) Provincial Species at Risk, including four (4) Threatened species and one (1) Endangered species, have been recorded in the HIWEC study area and within its vicinity. Habitat descriptions for these species as described in Appendix G of the Significant Wildlife Habitat Technical Guide (MNRF, 2000) are provided in Table 3-4.

Bobolink (*Dolichonyx oryzivorus*) and Eastern Meadowlark (*Sturnella magna*), both designated as Threatened under the ESA, are considered unlikely to occur in the HIWEC study area, which does not contain any large open grassy fields, meadows or agricultural lands that could support suitable breeding habitat for these species (AECOM, 2015g; MNRF, 2014c). Barn Swallow (*Hirundo rustica*) was observed by LGL in 2011 in the vicinity of the HIWEC study area. This species nests in man-made structures such as barns, other buildings, houses, bridges and road culverts (COSEWIC, 2011). With the exception of a small residential section located immediately west of Highway 69 on Bekanon Road, a few private cottages located on the north side of Henvey Inlet and a few cabins, the majority of the HIWEC study area is undeveloped. However, this species can also nest on cliffs which may be present within the HIWEC study area. Bank Swallow (*Riparia riparia*) was indicated by the MNRF Parry Sound District to potentially occur in the HIWEC study area. This species prefers to nest in steep river banks composed of sand, clay or gravel, cliffs and also gravel pits (MNRF, 2000). Since this species can also nest on cliffs, Bank Swallow may be present within the HWIEC study area. Golden Eagle (*Aquila chrysaetos*) was observed by Stantec in 2013 in the HIWEC study area (AECOM, 2015a). However, the species was likely just flying over, which does not indicate evidence of breeding in the area. Furthermore, the HIWEC study area is located outside of the breeding range for this species (Cadman, *et al.* 2007) and therefore the individual that was observed was likely a non-breeding migrant. For these reasons, only Barn Swallow and Bank Swallow were carried forward to the Site Investigation. The remaining three (3) species are unlikely to occur in the HIWEC study area and were not carried forward to the Site Investigation.
### Table 3-4: Provincial Species at Risk

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>S-S Rank</th>
<th>ESA Status</th>
<th>COSEWIC Status</th>
<th>SARA Status</th>
<th>Preferred Habitat</th>
<th>Source</th>
<th>Observed in 2013</th>
<th>Observed in 2011 and/or 2012</th>
<th>Carried Forward to Site Investigation</th>
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<tbody>
<tr>
<td>Bank Swallow</td>
<td>Riparia riparia</td>
<td>S4</td>
<td>THR</td>
<td>THR</td>
<td>No Status</td>
<td>Prefers sand, clay or gravel river banks or steep riverbank cliffs; lakeshore bluffs of easily crumbled sand or gravel; gravel pits, road-cuts, grassland or cultivated fields that are close to water.</td>
<td>MNRF (Parry Sound)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Barn Swallow</td>
<td>Hirundo rustica</td>
<td>S4</td>
<td>THR</td>
<td>THR</td>
<td>No Status</td>
<td>Prefers farmlands or rural areas; cliffs, caves, rock niches; buildings or other man-made structures for nesting; forages widely over open country near bodies of water.</td>
<td>OBBA, MNRF (Parry Sound)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Bobolink</td>
<td>Dolichonyx oryzivorus</td>
<td>S4</td>
<td>THR</td>
<td>THR</td>
<td>No Status</td>
<td>Prefers large, open expansible grasslands with dense ground cover; hayfields, meadows or fallow fields; marshes; requires tracts of grassland &gt; 50 ha in size.</td>
<td>OBBA, MNRF (Parry Sound)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Eastern Meadowlark</td>
<td>Stelura magna</td>
<td>S4</td>
<td>THR</td>
<td>THR</td>
<td>No Status</td>
<td>Prefers open, grassy meadows, farmland, pastures, hayfields or grasslands with elevated singing perches; cultivated land and weedy areas with trees; old orchards with adjacent, open grassy areas &gt; 10 ha in size.</td>
<td>OBBA, MNRF (Parry Sound)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Golden Eagle</td>
<td>Aquila chrysaetos</td>
<td>S2 END</td>
<td>NAR</td>
<td>NAR</td>
<td>No Status</td>
<td>Prefers wild, and plateaux, deeply cut by streams and canyons or sparsely treed slopes and rock crags.</td>
<td>N / A</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

*S-rank: The natural heritage provincial ranking system (provincial S-rank) is used by the MNRF Natural Heritage Information Centre (NHC) to set protection priorities for rare species and natural communities. Definitions are as follows: S1: Extremely rare in Ontario; usually five (5) or fewer occurrences in the province or very few remaining individuals, often especially vulnerable to extirpation. S2: Very rare in Ontario; usually between five (5) and 20 occurrences in the province or with many individuals in fewer occurrences; often susceptible to extirpation. S3: Rare in uncommon in Ontario; usually between 20 and 100 occurrences in the province; may have fewer occurrences in individual populations; in some cases, 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 range. 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 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??: Rank uncertain.

**ESA Status:** The Endangered Species Act 2007 (ESA) protects species listed as Threatened and Endangered on the Species at Risk in Ontario (SARA) List on provincial and private land. The Minister lists species on the SARA list based on recommendations from the Committee on the Status of Species at Risk in Ontario (COSSARO), which evaluates the conservation status of species occurring in Ontario. The following are the categories of at risk: END (Endangered) – A species facing imminent extinction or extirpation in Ontario. THR (Threatened) – Any species that has been evaluated and found to be not at risk. SC (Special Concern) – A species facing threatened or extirpation due to a combination of biological characteristics and identified threats. NAR (Not at Risk) – A species that has been evaluated and found to be not at risk.

**COSEWIC Status:** The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) evaluates a federal status ranking for all species that it assesses. Rankings include the following: END (Endangered) – A species facing imminent extinction or extirpation throughout its range. THR (Threatened) – A species likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction. SC (Special Concern) – A species of special concern because of characteristics that make it particularly sensitive to human activities or changes in its environment, but does not include an imperiled, endangered, threatened or threatened species. NAR (Not at Risk) – A species that has been evaluated and found to be not at risk.

**SARA Status:** The Species at Risk Act (SARA) protects Species at Risk designated as Endangered, Threatened and Extirpated listed under Schedule 1, including their habitats on federal land. Schedule 1 of SARA is the official list of wildlife species at risk in Canada and includes species listed as Endangered, Threatened and of Special Concern. Once a species is listed on Schedule 1, they receive protection and recovery measures that are required to be developed and implemented under SARA. Species that were designated at risk by COSEWIC before SARA need to be reassessed based on the new criteria of SARA to ensure that they are not listed under Schedule 1. These species are the ones that are waiting to be listed under SARA. If a species does not receive official protection under SARA, then the species is either reassessed or further evaluated. If the new criteria of SARA are not met, the species is either reassessed or further evaluated. The following are the definitions for the SARA status rankings assigned to each species in the table above: END (Schedule 1) – These species are listed as Endangered under Schedule 1 of SARA and receive species and habitat protection under SARA, as well as recovery strategies and action plans. THR (Schedule 1) – These species are listed as Threatened under Schedule 1 of SARA and receive species and habitat protection under SARA, as well as recovery strategies and action plans. SC (Schedule 1) – These species are listed as Special Concern under Schedule 1 of SARA and receive management initiatives under SARA to prevent them from becoming endangered and threatened. No Status (No Schedule) – These species are evaluated and designated by COSEWIC but are not listed under Schedule 1 and therefore do not receive protection under SARA. NAR (Not at Risk) – These species have not been reassessed by COSEWIC as not at Risk or there is not enough data to assess the status ranking of the species and therefore these are not listed under Schedule 1 nor do they receive protection under SARA. Not Applicable (N/A) – These species have either been assessed by COSEWIC as Not at Risk or there is not enough data to assess the status ranking of the species and therefore these are not listed under Schedule 1 nor do they receive protection under SARA.

**Preferred Habitat:** Habitat descriptions for species were taken from Appendix G of the Significant Wetland Habitat Technical Guide (MNRF, 2003), unless indicated otherwise.

**Source:** Environment Canada – Canadian Wildlife Service (EC-CWS), personal communication. August 4, 2015.


Ontario Breeding Bird Atlas (OBBA) – Bird Studies Canada (BSC); Environment Canada’s National Atlas (EC, EWS), Ontario, Ontario Field Ornithologists (OCF) and Ontario Ministry of Natural Resources and Forestry (MNRF), 2006.


*Species were recorded by Stelnic in the HMWE study area during the 2013 field season as summarized in the Technical Reports prepared by AECOM (refer to Appendix A).

*Species were recorded by L. Call in the vicinity of the HMWE study area in 2011 or 2012 as reported in the HWE Power Corp./Henvey Inlet Wind Project Preliminary Environmental Constraints Analysis (Neegan Burmeister Ltd, 2011) or the Technical Reports prepared by AECOM (refer to Appendix A).
3.3 Summary of Key Findings of the Records Review

Table 3-5 summarizes the natural features identified through the Records Review as occurring or potentially occurring within 120 m of the HIWEC location; these are the features that were carried forward to the Site Investigation. Site investigations will be conducted to confirm the presence, boundaries and characteristics of these features, as well as to determine whether any additional natural features are present within 120 m of the HIWEC location.

Table 3-5: Summary of Natural Features within the HIWEC Study Area Identified Through the Records Review

<table>
<thead>
<tr>
<th>Feature</th>
<th>Results of Records Review</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provincial and Federal Parks</strong></td>
<td>• There are no Federal or Provincial Parks located within 120 m of the HIWEC location.</td>
</tr>
<tr>
<td><strong>Conservation Reserves</strong></td>
<td>• The North Georgian Bay Shoreline and Islands Conservation Reserve is located within the HIWEC study area and within 120 m of the HIWEC location.</td>
</tr>
</tbody>
</table>
| **Provincially Important Wetlands**          | **Provincially Important Wetlands (PIW):**  
  • No PIWs are located within the HIWEC study area or within 120 m of the HIWEC location.  
  **Unevaluated Wetlands:**  
  • Unevaluated wetlands are present within the HIWEC study area and may be present within 120 m of the HIWEC location.  
  • The presence, boundaries and characteristics of these features will be determined during the Site Investigation. |
| **Important Woodlands**                      | • Wooded areas are present throughout the HIWEC study area.                                                                                                                                                                 |
| **Important ANSIs (Life and Earth Science)** | • No Life Science or Earth Science ANSIs are present within the HIWEC study area or within 120 m of the HIWEC location.                                                                                                      |
| **Important Wildlife Habitat**               | • Several types of IWH have been identified as potentially occurring within the HIWEC study area and may occur within 120 m of the HIWEC location.  
  • The presence, boundaries and characteristics of these features will be confirmed during the Site Investigation.                                                                                             |
| **Federal Species at Risk**                  | • In total, 18 Federal Species at Risk, including a restricted species, have the potential to occur within 120 m of the HIWEC location.  
  • Permits and / or authorizations from EC-CWS may be required if the HIWEC location is proposed within the habitat of an identified Federal Species at Risk.  
  • The presence of these 19 species and their habitats will be investigated during the Site Investigation.                                                                                                         |
| **Provincial Species at Risk**               | • In total, two (2) Provincial Species at Risk have the potential to occur within 120 m of the HIWEC location.  
  • The presence of these two (2) species and their habitats will be investigated during the Site Investigation.                                                                                                   |
4. References

AECOM, 2015a:

AECOM, 2015b:

AECOM, 2015c:

AECOM, 2015d:

AECOM, 2015e:

AECOM, 2015f:

AECOM, 2015g:

AECOM, 2015h:

AECOM, 2015i:


Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 2007a:


Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 2007b:


Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 2007c:


Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 2008:


Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 2009:


Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 2011:


Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 2012:


Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 2013:


Dobbyn, J.S., 1994:


Environment Canada (EC), 2014a:


Environment Canada (EC), 2014b:


Environment Canada (EC), 2015a:

Environment Canada (EC), 2015b:

Environment Canada (EC), 2015c:

Environment Canada (EC), 2015d:

Government of Canada, 2009:

Hussel, D.J.T. and R. Montgomerie, 2002:

Important Bird Areas (IBA) Canada, 2013:

LGL Limited, 2011:

Montana Natural Heritage Program, Date Unknown:

Nature Conservancy Canada (NCC), Date Unknown:

NatureServe, 2015:

Neegan Burnside Ltd., 2011:

Ontario Ministry of Natural Resources (MNRF), 2014f:

Ontario Ministry of Natural Resources and Forestry (MNRF), 2000:
Ontario Ministry of Natural Resources and Forestry (MNRF), 2006a:

Ontario Ministry of Natural Resources and Forestry (MNRF), 2006b:

Ontario Ministry of Natural Resources and Forestry (MNRF), 2012a:

Ontario Ministry of Natural Resources and Forestry (MNRF), 2012b:
Draft Significant Wildlife Habitat Ecoregion 5E Criterion Schedule. February 2012. 46 p.

Ontario Ministry of Natural Resources and Forestry (MNRF), 2013:

Ontario Ministry of Natural Resources and Forestry (MNRF), 2014a:

Ontario Ministry of Natural Resources and Forestry (MNRF), 2014b:

Ontario Ministry of Natural Resources and Forestry (MNRF), 2014c:

Ontario Ministry of Natural Resources and Forestry (MNRF), 2014d:

Ontario Ministry of Natural Resources and Forestry (MNRF), 2014e:

Ontario Nature, 2014:

Ontario Parks, 2013:

Parks Canada Agency, 2013:
Parks Canada, 2012:

Parks Canada, 2014:

Parks Canada, 2015a:

Parks Canada, 2015b:

Pennsylvania Natural Heritage Program, Date Unknown:

Robertson, G. J. and J-P. L. Savard, 2002:

Rodger, L., 1998:

Seburn, D., 2008:

Stantec Consulting Ltd., 2013:

Western Hemisphere Shorebird Reserve Network (WHSRN), 2012:

Western Hemisphere Shorebird Reserve Network (WHSRN), 2015: