



**NORTHLAND  
POWER**

# Glendale Solar Project Natural Heritage Records Review Report

October 5, 2011



Northland Power Inc.  
on behalf of  
Northland Power Solar  
Glendale L.P.  
Toronto, Ontario

Natural Heritage  
Records Review Report

Glendale Solar Project

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Project Report

October 5, 2011

**Northland Power Inc.**  
**Glendale Solar Project**

**Natural Heritage Records Review Report**

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## 1. Introduction

### 1.1 Project Description

Northland Power Inc. (hereinafter referred to as “Northland”) is proposing to develop a Class 3 10-megawatt (MW) ground mounted solar photovoltaic (Solar PV) facility in the Township of South Glengarry, in the United Counties of Stormont, Dundas and Glengarry.

The Study Area for the Project is located north of the city of Cornwall. The Project location is approximately 45 hectares (ha) in size, and is situated north of Rural Road 44 and west of Rural Road 20 (Figure 1.1).

### 1.2 REA Legislative Requirements

Ontario Regulation (O. Reg.) 359/09 – *Renewable Energy Approvals Under Part V.0.1 of the Act*, (herein referred to as the REA Regulation) made under the *Environmental Protection Act* identifies the Renewable Energy Approval (REA) requirements for renewable energy projects in Ontario. Per Section 4 of the REA Regulation, ground mounted solar facilities with a name plate capacity greater than 10 kilowatts (kW) are classified as Class 3 solar facilities and require a REA.

Section 25 of the REA Regulation requires proponents of Class 3 solar projects to undertake a natural heritage records review to identify whether the Project is

- i. in a provincial park or conservation reserve or within 120 m of a provincial park or conservation reserve
- ii. in a natural feature
- iii. within 50 m of an area of natural and scientific interest (earth science), or
- iv. within 120 m of a natural feature that is not an area of natural and scientific interest (earth science).

Natural Features are defined in Section 1.1 of the REA Regulation to be all or part of

- a) an area of natural and scientific interest (ANSI) (earth science)
- b) an ANSI (life science)
- c) a coastal wetland
- d) a northern wetland
- e) a southern wetland
- f) a valleyland
- g) a wildlife habitat, or
- h) a woodland.

- Subsection 3 of Section 25 of the REA Regulation requires the proponent to prepare a report “setting out a summary of the records searched and the results of the analysis” (O. Reg. 359/09). This Natural Heritage Records Review Report has been prepared to meet these requirements.

## 2. Background Information Review and Results

This Records Review Report is based on a review of published and non-published information on natural heritage features and species at risk identified on or in close proximity to the Project location. The background documents reviewed were obtained from various sources including provincial and federal government agencies.

Records covering areas within a minimum distance of 1 km from the Project location were searched. Results are discussed below in relation to the distances specified between the Project and natural features as defined in Section 25 of the REA Regulation (see Section 1.2).

The following sections document the records that were searched and analyzed and the results of the analysis, with the focus on identifying whether or not the Project was located within or adjacent to any of the natural features listed in Section 1.2. The sections are organized as identified in Column 1 of the table in Section 25 of the REA Regulation.

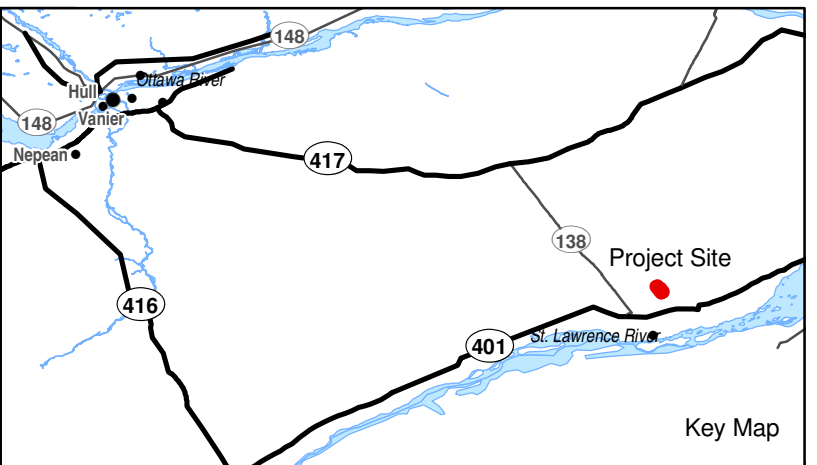
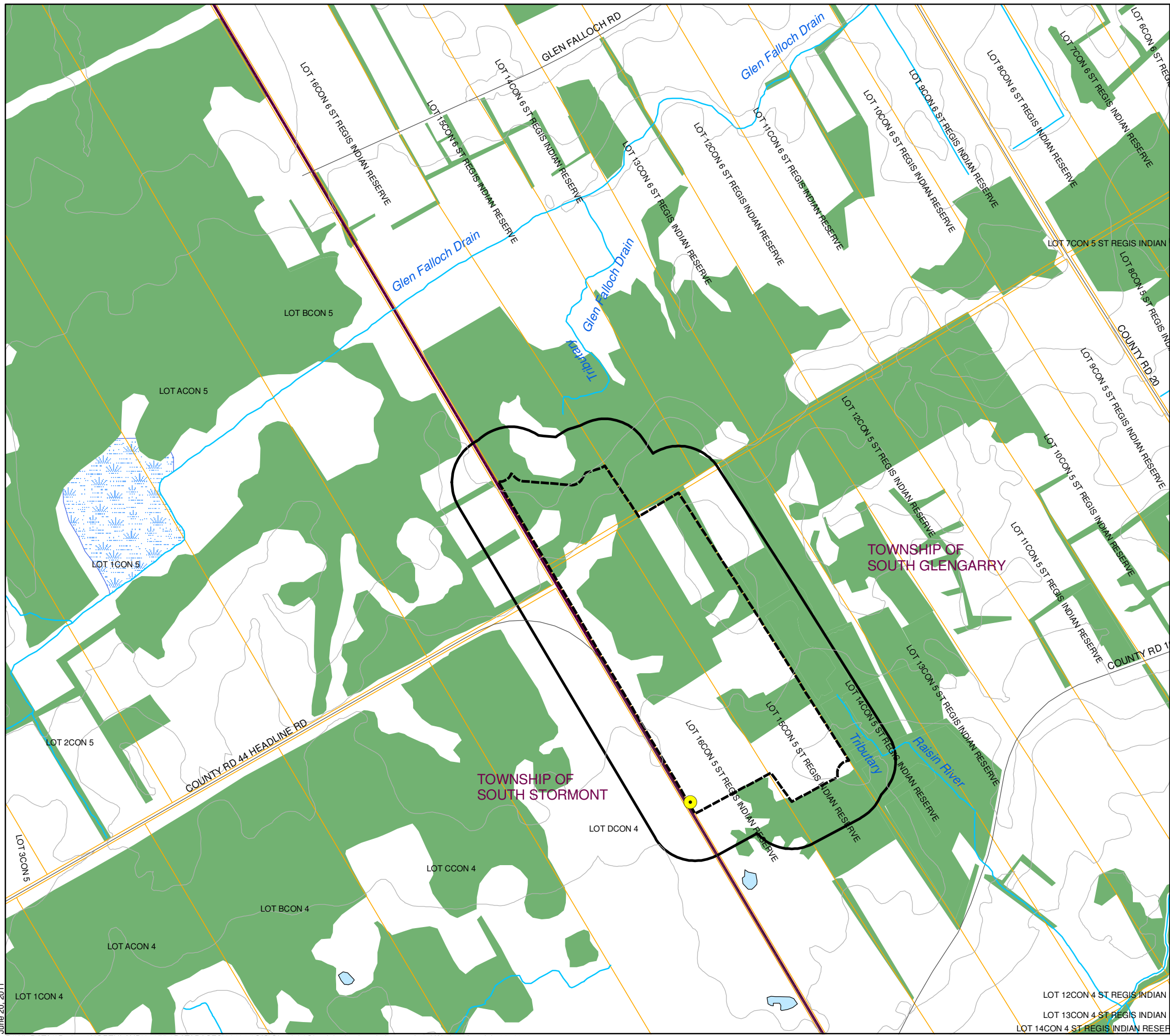
There are no planning boards, municipal planning authorities, local roads boards or local services boards with jurisdiction over the Project location. Also, the Project location is not located within the Niagara Escarpment Commission Plan Area. Therefore, records review for these governing bodies was not conducted.

### 2.1 Ministry of Natural Resources Records

The following Ministry of Natural Resources (MNR) online records were reviewed:

- Ontario Crown Lands Use Atlas Mapping (<http://crownlanduseatlas.mnr.gov.on.ca/clupa.html>)
- Ontario Base Maps and natural feature layers from Land Information Ontario (LIO) (<http://www.geographynetwork.ca/website/obm/viewer.htm>)





- Legend**
- Roads
  - Topographic Contour (5m Interval)
  - Watercourse
  - ▭ Parcels
  - ▭ Municipal Boundary
  - ▭ Waterbody
  - ▭ Unevaluated Wetland
  - ▭ Wooded Area
- Project Components**
- Connection Point With Existing Distribution Line
  - ▭ Project Location
  - ▭ 120 m from Project Location



Notes:  
 1. OBM and NRVIS data downloaded from LIQ, with permission.  
 2. Spatial referencing UTM NAD 83.

Figure 1.1  
 Northland Power Inc.  
**Glendale Solar Project**  
 Natural Heritage Features

June 20, 2011

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- Ontario Wind Resource Atlas (<http://www.ontariowindatlas.ca/>)
- NHIC Biodiversity Explorer (<http://www.biodiversityexplorer.mnr.gov.on.ca/nhicWEB/main.jsp>)
- NHIC Ontario Herpetofaunal Summary Atlas (<http://nhic.mnr.gov.on.ca/MNR/nhic/herps/ohs.html>).

### 2.1.1 Results

#### ***Ontario Crown Land Use Atlas Mapping***

A review of the Crown Land Use Policy Atlas interactive map, accessed on June 9, 2010, did not indicate any Crown land within 1 km of the Project area.

#### ***MNR LIO Mapping***

Mapping data provided by LIO identified the following natural features within 1 km of the Project location:

- There is one small tributary of Glen Falloch Drain entering the Project location on the northeast side. Additionally, there is one other tributary of Glen Falloch Drain that comes within 120 m of the Project side on the north side. As well, there is a tributary of Raisin River within 120 m of the Project location on the southeast side.
- There are several woodlands on and within 120 m of the Project location.
- There are no specific wildlife habitats, such as nesting sites or deer wintering areas, identified on or within 120 m of the Project location.
- There are no ANSIs or wetlands identified on or within 120 m of the Project location.
- No provincial parks or conservation reserves were identified on or within 120 m of the Project location.

#### ***Ontario Wind Resource Atlas***

The Ontario Wind Resource Atlas did not identify any natural features on or within 120 m of the Project location.

#### ***Natural Heritage Information Centre (NHIC) Database***

The NHIC database was accessed on June 9, 2010 and a geographic search using the Biodiversity Explorer tool was completed for a 1 km radius surrounding the Project location. The Biodiversity Explorer tool provides information on rare species or plant communities, wildlife concentration areas, natural areas and invasive species occurrences.

The results of the queries determined that there are three vegetation species of conservation concern (Brainerd's Hawthorn (*Crataegus brainerdii*), Caughuawaga Hawthorn (*Crataegus suborbiculata*) and Halberd-leaved Tearthumb (*Persicaria arifolia*)) which occur in the vicinity of the Project location. There were no occurrences for rare plant communities, wildlife concentration areas or natural areas.

In addition to searching the NHIC database, a request for natural heritage information was made to the Kemptville District MNR office. Information was received on July 12, 2010 (see Appendix D). MNR confirmed the potential for Brainerd's Hawthorn, Caughuawaga Hawthorn and Halberd-leaved Tearthumb, all provincially tracked species, on and adjacent to the Project location.

**Ontario Herpetofaunal Summary Atlas**

The Ontario Herpetofaunal Summary Atlas identified several species of reptiles and amphibians whose ranges may overlap with the Project location (Table 2.1). Of these species, several species of conservation concern were identified whose ranges include the Project location. These species are as follows, and discussed further in Section 3:

- Eastern Ribbonsnake (*Thamnophis sauritus septentrionalis*).
- Northern Map Turtle (*Graptemys geographica*)
- Snapping Turtle (*Chelydra serpentina*)
- Western Chorus Frog (*Pseudacris triseriata*).

**Table 2.1 Reptiles and Amphibians Potentially Occurring within the Project Area and their Conservation Status<sup>1</sup>**

| Species   |  | Conservation Rank |              |               | At Risk Status |          |                  |
|---|--|-------------------|--------------|---------------|----------------|----------|------------------|
|   |  | Global GRANK      | Canada NRANK | Ontario SRANK | COSEWIC        | SARO/ESA | SARA             |
| Common Name   | Scientific Name                                    |                   |              |               |                |          |                  |
| <b>Salamanders</b>  |  |                   |              |               |                |          |                  |
| Mudpuppy  | <i>Necturus maculosus</i>                          | G5                | N4           | S4            | NAR            | NAR      | -                |
| Red-spotted Newt  | <i>Notophthalmus viridescens viridescens</i>       | G5                | N5           | S5            | -              | -        | -                |
| Blue-spotted Salamander Complex                             | <i>Ambystoma jeffersonianum-laterale "complex"</i> | -                 | -            | -             | -              | -        | -                |
| Northern Two-lined Salamander                               | <i>Eurycea bislineata</i>                          | G5                | N5           | S4            | -              | -        | -                |
| Eastern Red-backed Salamander                               | <i>Plethodon cinereus</i>                          | G5                | N5           | S5            | -              | -        | -                |
| <b>Frogs and Toads</b>                                      |  |                   |              |               |                |          |                  |
| American Toad   | <i>Bufo americanus</i>                             | G5                | N5           | S5            | -              | -        | -                |
| Spring Peeper   | <i>Pseudacris crucifer</i>                         | G5                | N5           | S5            | -              | -        | -                |
| Western Chorus Frog (Great Lakes / St. Lawrence population) | <i>Pseudacris triseriata</i>                       | G5TNR             | -            | S3            | THR            | NAR      | THR (Schedule 1) |
| Gray Treefrog   | <i>Hyla versicolor</i>                             | G5                | N5           | S5            | -              | -        | -                |
| American Bullfrog   | <i>Rana castebiana</i>                             | G5                | N5           | S4            | -              | -        | -                |
| Green Frog  | <i>Rana clamitans</i>                              | G5                | N5           | S5            | -              | -        | -                |
| Pickerel Frog   | <i>Rana palustris</i>                              | G5                | N5           | S4            | NAR            | NAR      | -                |
| Northern Leopard Frog                                       | <i>Rana pipiens</i>                                | G5                | N5           | S5            | NAR            | NAR      | -                |
| Wood Frog   | <i>Rana sylvatica</i>                              | G5                | N5           | S5            | -              | -        | -                |
| Mink Frog   | <i>Rana</i>  | G5                | N5           | S5            | -              | -        | -                |

| Species                |  | Conservation Rank |              |               | At Risk Status |          |   |
|------------------------|--|-------------------|--------------|---------------|----------------|----------|---|
|                        |  | Global GRANK      | Canada NRANK | Ontario SRANK | COSEWIC        | SARO/ESA | SARA                                    |
| Common Name            | Scientific Name                            |                   |              |               |                |          |   |
|                        | <i>septentrionalis</i>                     |                   |              |               |                |          |   |
| <b>Turtles</b>         |  |                   |              |               |                |          |   |
| Snapping Turtle        | <i>Chelydra serpentina</i>                 | G5                | N5           | S3            | SC             | SC       | -                                       |
| Midland Painted Turtle | <i>Chrysemys picta marginata</i>           | G5T5              | N5           | S5            | -              | -        | -                                       |
| Northern Map Turtle    | <i>Graptemys geographica</i>               | G5                | -            | S3            | SC             | SC       | SC (Schedule 1)                         |
| <b>Snakes</b>          |  |                   |              |               |                |          |   |
| Eastern Gartersnake    | <i>Thamnophis sirtalis sirtalis</i>        | G5T5              | N5           | S5            | -              | -        | -                                       |
| Eastern Ribbonsnake    | <i>Thamnophis sauritus septentrionalis</i> | G5                | -            | S3            | SC             | SC       | SC (Schedule 1, Great Lakes Population) |
| Red-bellied Snake      | <i>Storeria occipitomaculata</i>           | G5T5              | N5           | S5            | -              | -        | -                                       |

<sup>1</sup> As determined from potential climatic domain maps in McKenney et al (2007) and range maps provided in Oldham and Weller (2000).

<sup>2</sup> Accessed from NHIC, 2008b.

<sup>3</sup> NRANK = National Status (NatureServe ([www.natureserve.org](http://www.natureserve.org)), in conjunction with Conservation Data Centres, such as NHIC); N = National Rank (Canada), 2 = Imperilled, 3 = Vulnerable, 4 = Apparently Secure, 5 = Secure, E = Exotic.

<sup>4</sup> SRANK = Provincial Status (NHIC 2008b); S = Sub-national Rank (Ontario), 2 = Imperilled, 3 = Vulnerable, 4 = Apparently Secure, 5 = Secure, E = Exotic, U = Unknown.

## 2.2 Federal Government Records

Natural Resources Canada's Amphibians and Reptiles of Ontario Climate Domain Maps were reviewed.

The websites of the Canadian Wildlife Service ([www.cws-scf.ec.gc.ca](http://www.cws-scf.ec.gc.ca)) and Environment Canada ([www.ec.gc.ca](http://www.ec.gc.ca)) were also reviewed.

### 2.2.1 Results

The Natural Resources Canada's Amphibians and Reptiles of Ontario Climate Domain Maps were reviewed and compared to the results of the Ontario Herpetofaunal Summary Atlas (discussed in Section 2.1); no additional information was discovered in these federal records. A review of the Canadian Wildlife Service and Environmental Canada websites produced no further information about the Project location.

## 2.3 Conservation Authority Records

The Project location is within the jurisdiction of the Raisin Region Authority (RRCA). A formal request for natural heritage and species at risk information was sent to the RRCA. A letter was received dated June 13, 2010.

### 2.3.1 Results

The information received from the RRCA noted that wooded areas are present on the Project location and that these stands are likely to be soft maple-cedar-white ash, cedar-poplar-soft maple, poplar, hard maple-white ash-basswood and hard-maple-white ash-American beech (Appendix B).

## 2.4 Municipal Records - Township of South Glengarry

The Project location is located within the lower tier municipality of the Township of South Glengarry. A review of the official website for the Township of South Glengarry (<http://southglengarry.com/>) was undertaken to review any further natural heritage information.

### 2.4.1 Results

A review of the official website did not result in any further information regarding natural heritage features.

## 2.5 Municipal Records - United Counties of Stormont, Dundas and Glengarry

A review of the Official plan for the United Counties of Stormont, Dundas and Glengarry was undertaken to determine any further natural heritage information. A search of the official website (<http://sdgcounties.ca/>) for any further natural heritage information was also undertaken. The United Counties of Stormont, Dundas and Glengarry also provided Hatch Ltd. with a map of significant woodlands at a meeting on July 22, 2010.

### 2.5.1 Results

A review of the Project location in Schedule B6 – Constraints Plan of the Official Plan for the United Counties of Stormont, Dundas and Glengarry did not indicate the presence of woodlands, extractive resource land, areas of natural and scientific interest or locally significant wetlands. It did indicate that the Project location has organic soils. No additional information regarding natural heritage information was found. Schedule B6 – Constraints Plan also shows the presence of the Trans-Canada Pipeline (gas) just north of the Project location. The Trans-Canada Pipeline (oil) was identified further north of the Project location.

The map provided by the Counties of Stormont, Dundas and Glengarry identifies the presence of three significant woodlands on and within 120 m of the Project location (Appendix C).

## 2.6 Other Records

In addition to the information sources previously discussed, the following documents were reviewed:

- Ontario Breeding Bird Atlas (Bird Studies Canada *et al.*, 2006).
- Atlas of the Mammals of Ontario (Dobbyn, 1994).
- Important Bird Areas of Canada website (<http://www.ibacanada.ca/mapviewer.jsp?lang=en>).

### 2.6.1 Results

#### 2.6.1.1 Ontario Breeding Bird Atlas

The Ontario Breeding Bird Atlas on-line database was accessed on June 9, 2010 to determine which breeding bird species have been recorded within the vicinity of the Project location. The database is

organized by region and each region is divided into 10 x 10-km blocks which are given a map square number. The Project location is located within map square 18WQ29. The square coverage summary sheet was downloaded and the results are provided in Appendix A. Of the species that were recorded, several species of conservation concern were identified whose ranges overlap that of the Project location. These species are as follows, and discussed in Section 3:

- Black Tern (*Chlidonias niger*).
- Canada Warbler (*Wilsonia canadensis*).
- Common Nighthawk (*Chordeiles minor*)
- American Kestrel (*Falco sparverius*)
- Black-billed Cuckoo (*Coccyzus erythrophthalmus*)
- Belted Kingfisher (*Ceryle alcyon*)
- Northern Flicker (*Colaptes auratus*)
- Eastern Wood-Pewee (*Contopus virens*)
- Eastern Kingbird (*Tyrannus tyrannus*)
- Bank Swallow (*Riparia riparia*)
- Brown Thrasher (*Toxostoma rufum*)
- Eastern Towhee (*Pipilo erythrophthalmus*)
- Field Sparrow (*Spizella pusilla*)
- Vesper Sparrow (*Pooecetes gramineus*)
- Savannah Sparrow (*Passerculus sandwichensis*)
- Eastern Meadowlark (*Sturnella magna*)
- Baltimore Oriole (*Icterus galbula*)

Beyond species of conservation concern, several area-sensitive species were identified. Habitat for area-sensitive species is a type of candidate significant wildlife habitat. Area sensitive species are discussed further below:

- American Bittern – Associated with marshes, wet meadows, swamps, bogs, and marshy borders of waterbodies.
- Northern Harrier – Commonly found in open country with herbaceous or low woody vegetation for nesting. Often found coursing low over agricultural fields and wetlands. Prefers areas > 30 ha for nesting.
- Red-shouldered Hawk – Found in moist mature hardwood forests with greater than 80% canopy closure. Requires a minimum of 10 ha of continuous forest for nesting in interior, preferring to nest in woodlands > 100 ha in size.

- Broad-winged Hawk – Nests in dense extensive forests, preferably more than 100 ha in size, with nesting occurring near water or forest edges.
- Upland Sandpiper – Found in open pastures, fields, forest clearings with little to no shrubs or trees. Requires tracts of grassland between 25 and 50 ha.
- Hairy Woodpecker – Associated with mixed or deciduous forests and forest edges. Requires a number of tall trees and snags
- Pileated Woodpecker – Associated with extensive tracts, commonly 40-250 ha, of mature deciduous or mixed forest with water and large cavity trees for nesting.
- Least Flycatcher – Associated with open deciduous woodland or forest edges, open shrubland, clearings or overgrown pasture of > 100 ha.
- Red-breasted Nuthatch – A cavity nester found in coniferous and mixedwood forests, being most abundant in mature woods. Nests in interior and requires at least 10 ha of forest.
- White-breasted Nuthatch – Commonly found in mature deciduous woodlands. Needs at least 10 ha of continuous forest.
- Brown Creeper – Associated with mature dense woodlands, particularly in wet areas with large dead trees. Generally requires a minimum of 30 ha of woodland.
- Veery – Commonly associated with cool, moist mixed and deciduous young or disturbed forest with bushy undergrowth and ferns. Requires at least 10 ha of forest.
- Magnolia Warbler – Primarily found in mixed and coniferous forests, requiring dense shrubs. Appears to require about 30 ha in southern Ontario.
- Blackburnian Warbler – An interior forest species, requiring mature deciduous or mixed wood forests, commonly with lichen covered spruce or chestnut trees. Requires about 50 ha of forest.
- Black-and-white Warbler - Breeds at edges of large continuous stands of mature or old second growth deciduous or mixed forest, cedar swamps or bogs, riparian habitat. Requires in excess of 100 ha of continuous forest.
- American Redstart – Associated with deciduous or mixed woods with closed canopy of either tall shrubs or dense young trees or mature trees. Requires greater than 100 ha of forest habitat.
- Ovenbird – Commonly found in undisturbed, open mature deciduous or mixed forest with closed canopy, little ground vegetation, and abundance of fallen leaves, logs or rocks. Requires at least 70 ha of continuous forest.
- Scarlet Tanager – Associated with upland, undisturbed, mature deciduous or mixed forests, requiring at least 20 ha of forest.

#### 2.6.1.2 *Atlas of the Mammals of Ontario*

The Atlas of the Mammals of Ontario (Dobbyn, 1994) identified several species of mammals whose ranges may overlap with the Project location. The list of these species is provided in Table 2.2. None of these species are considered to be species of conservation concern.



**Table 2.2 Mammals Potentially Occurring within the Project Area and their Conservation Status**

| Species                     |                                | Conservation Rank <sup>1</sup> |                           |                            | At Risk Status |      |      |
|-----------------------------|--------------------------------|--------------------------------|---------------------------|----------------------------|----------------|------|------|
|                             |                                | Global GRANK                   | Canada NRANK <sup>2</sup> | Ontario SRANK <sup>3</sup> | COSEWIC        | SARO | SARA |
| Common Name                 | Scientific Name                |                                |                           |                            |                |      |      |
| <b>Opossums</b>             |                                |                                |                           |                            |                |      |      |
| Virginia Opossum            | <i>Didelphis virginiana</i>    | G5                             | N4                        | S4                         | -              | -    | -    |
| <b>Shrews and Moles</b>     |                                |                                |                           |                            |                |      |      |
| Common Shrew                | <i>Sorex cinereus</i>          | G5                             | N5                        | S5                         | -              | -    | -    |
| Pygmy Shrew                 | <i>Sorex hoyi</i>              | G5                             | N5                        | S4                         | -              | -    | -    |
| Northern Short-tailed Shrew | <i>Blarina brevicauda</i>      | G5                             | N5                        | S5                         | -              | -    | -    |
| Star-nosed Mole             | <i>Condylura cristata</i>      | G5                             | N5                        | S5                         | -              | -    | -    |
| <b>Bats</b>                 |                                |                                |                           |                            |                |      |      |
| Little Brown Bat            | <i>Myotis lucifuga</i>         | G5                             | N5                        | S5                         | -              | -    | -    |
| Northern Long-eared Bat     | <i>Myotis septentrionalis</i>  | G4                             | N4                        | S3?                        | -              | -    | -    |
| Big Brown Bat               | <i>Epstesicus fuscus</i>       | G5                             | N5                        | S5                         | -              | -    | -    |
| <b>Rabbits and Hares</b>    |                                |                                |                           |                            |                |      |      |
| Eastern Cottontail          | <i>Sylvilagus floridanus</i>   | G5                             | N5                        | S5                         | -              | -    | -    |
| Snowshoe Hare               | <i>Lepus americanus</i>        | G5                             |                           | S5                         | -              | -    | -    |
| <b>Rodents</b>              |                                |                                |                           |                            |                |      |      |
| Eastern Chipmunk            | <i>Tamias striatus</i>         | G5                             | N5                        | S5                         | -              | -    | -    |
| Woodchuck                   | <i>Marmota monax</i>           | G5                             | N5                        | S5                         | -              | -    | -    |
| Gray Squirrel               | <i>Sciurus carolinensis</i>    | G5                             | N5                        | S5                         | -              | -    | -    |
| Red Squirrel                | <i>Tamiasciurus hudsonicus</i> | G5                             | N5                        | S5                         | -              | -    | -    |
| Northern Flying Squirrel    | <i>Glaucomys sabrinus</i>      | G5                             |                           | S5                         | -              | -    | -    |
| Beaver                      | <i>Castor canadensis</i>       | G5                             | N5                        | S5                         | -              | -    | -    |
| White-footed Mouse          | <i>Peromyscus leucopus</i>     | G5                             | N5                        | S5                         | -              | -    | -    |
| Deer Mouse                  | <i>Peromyscus maniculatus</i>  | G5                             | N5                        | S5                         | -              | -    | -    |
| Southern Red-backed Vole    | <i>Clethrionomys gapperi</i>   | G5                             | N5                        | S5                         | -              | -    | -    |
| Meadow Vole                 | <i>Microtus pennsylvanicus</i> | G5                             | N5                        | S5                         | -              | -    | -    |
| Muskrat                     | <i>Ondatra zibethicus</i>      | G5                             | N5                        | S5                         | -              | -    | -    |
| Norway Rat                  | <i>Rattus norvegicus</i>       | G5                             | NE                        | SE                         | -              | -    | -    |
| House Mouse                 | <i>Mus musculus</i>            | G5                             | NE                        | SE                         | -              | -    | -    |
| Meadow Jumping Mouse        | <i>Zapus hudsonius</i>         | G5                             | N5                        | S5                         | -              | -    | -    |
| Woodland Jumping Mouse      | <i>Napaeozapus insignis</i>    | G5                             | N5                        | S5                         | -              | -    | -    |
| Porcupine                   | <i>Erethizon dorsatum</i>      | G5                             | N5                        | S5                         | -              | -    | -    |
| <b>Carnivores</b>           |                                |                                |                           |                            |                |      |      |
| Coyote                      | <i>Canis latrans</i>           | G5                             | N5                        | S5                         | -              | -    | -    |
| Red Fox                     | <i>Vulpes vulpes</i>           | G5                             | N5                        | S5                         | -              | -    | -    |
| Black Bear                  | <i>Ursus americanus</i>        | G5                             | N5                        | S5                         | -              | -    | -    |

| Species           |                               | Conservation Rank <sup>1</sup> |                           |                            | At Risk Status |      |      |
|-------------------|-------------------------------|--------------------------------|---------------------------|----------------------------|----------------|------|------|
|                   |                               | Global GRANK                   | Canada NRANK <sup>2</sup> | Ontario SRANK <sup>3</sup> | COSEWIC        | SARO | SARA |
| Common Name       | Scientific Name               |                                |                           |                            |                |      |      |
| Raccoon           | <i>Procyon lotor</i>          | G5                             | N5                        | S5                         | -              | -    | -    |
| Fishers           | <i>Martes pennanti</i>        | G5                             | N5                        | S5                         | -              | -    | -    |
| Ermine            | <i>Mustela erminea</i>        | G5                             | N5                        | S5                         | -              | -    | -    |
| Mink              | <i>Mustela vison</i>          | G5                             | N5                        | S4                         | -              | -    | -    |
| Striped Skunk     | <i>Mephitis mephitis</i>      | G5                             | N5                        | S5                         | -              | -    | -    |
| River Otter       | <i>Lontra canadensis</i>      | G5                             | N5                        | S5                         | -              | -    | -    |
| Canada Lynx       | <i>Lynx canadensis</i>        | G5                             | N4                        | S5                         | -              | -    | -    |
| <b>Ungulates</b>  |                               |                                |                           |                            |                |      |      |
| White-tailed Deer | <i>Odocoileus virginianus</i> | G5                             | N5                        | S5                         | -              | -    | -    |
| Moose             | <i>Alces alces</i>            | G5                             | N5                        | S5                         | -              | -    | -    |

<sup>1</sup> GRANK = Accessed from NHIC, 2008b.

<sup>2</sup> NRANK = National Status (NatureServe ([www.natureserve.org](http://www.natureserve.org)), in conjunction with Conservation Data Centres, such as NHIC); N = National Rank (Canada), 2 = Imperilled, 3 = Vulnerable, 4 = Apparently Secure, 5 = Secure, E = Exotic.

<sup>3</sup> SRANK = Provincial Status (NHIC 2008b); S = Sub-national Rank (Ontario), 2 = Imperilled, 3 = Vulnerable, 4 = Apparently Secure, 5 = Secure, E = Exotic, U = Unknown.

### 2.6.1.3 Important Bird Areas of Canada

A review of the Important Bird Areas of Canada on line interactive mapping on June 9, 2010, did not show any important bird areas in or near the Project location.

## 3. Species of Conservation Concern

As identified above in Section 2, several species of conservation concern may potentially occur on the Project location. These species are addressed below.

### 3.1.1 Birds

- **Black Tern** – Listed as being of Special Concern on ESA. Black Terns nest in colonies on shallow marshes. No nesting colonies are known to occur on or within 120 m of the Project location, and no wetlands which may provide suitable habitat are known to be available.
- **American Kestrel** – Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). American Kestrel are commonly found in open grasslands, forest edges, and clearings. Suitable habitat may be found on or within 120 m of the Project location. They are a cavity-nester, and the availability of nestboxes/suitable nesting cavities can be a limiting factor.
- **Black-billed Cuckoo** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Black-billed cuckoo commonly occur within early successional habitats such as shrubby old fields, hedgerows, and woodland edges. Suitable habitat may be found on or within 120 m of the Project location.
- **Belted Kingfisher** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Belted Kingfishers nest within a burrow dug into a usually high, vertical bank. Foraging occurs along clear, calm waters. There are watercourses present within the region that

- may support Kingfisher populations, though there are no potential nesting habitats known to occur on or within 120 m of the Project location.
- **Northern Flicker** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Northern Flicker are found in openings and edges of deciduous and mixed forest stands. Foraging commonly occurs within agricultural fields. Suitable habitat is likely found on and within 120 m of the Project location.
  - **Common Nighthawk** – Listed as being of Special Concern on ESA. Common Nighthawk are commonly observed foraging on the wing for insects over clearings, fields, ponds, and other open areas. Preferred nesting sites are bare ground in open areas or gravel rooftops in urban environments (Poulin *et al.*, 1996). Suitable habitat for Common Nighthawk may be found on or within 120 m of the Project location, and they have been observed during OBBA surveys within the 10 x 10-km survey square that overlaps the Project location (Bird Studies Canada *et al.*, 2006).
  - **Eastern Wood-Pewee** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Eastern Wood Pewee breed in deciduous and mixed woods, commonly near forest edges. Suitable habitat may be found within the woodlands on and within 120 m of the Project location.
  - **Eastern Kingbird** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Eastern Kingbird are commonly observed within hedgerows around open grasslands. Suitable habitat may be found within the hedgerow communities on or within 120 m of the Project location.
  - **Bank Swallow** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Bank Swallow's nest colonially in banks along shorelines and in artificial sites such as sand and gravel pits. There is no potential nesting sites known to occur on or within 120 m of the Project location.
  - **Brown Thrasher** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Brown Thrasher s are commonly recorded in early successional habitats and hedgerows, with nesting occurring in thick tangles of shrub communities. Suitable habitat may be found within the hedgerow communities on or within 120 m of the Project location.
  - **Canada Warbler** – Listed as being of Special Concern on ESA. The Canada Warbler breeds in a range of deciduous and coniferous, usually wet forest types, all with a well developed dense shrub layer. Suitable habitat may be found within the woodlands on and within 120 m of the Project location, though they have not been observed within the 10 x 10-km Ontario Breeding Bird Atlas (OBBA) survey square which overlaps the Project location (Bird Studies Canada *et al.*, 2006).
  - **Eastern Towhee** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Eastern Towhees are habitat generalists, breeding in edge and early successional habitats, or wooded areas with a well-developed understorey. Suitable habitat may be found within the woodland communities on or within 120 m of the Project location.

- **Field Sparrow** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). The Field Sparrow's commonly breed within early successional habitats, woodland edges, and brushy hedgerows. Nests are commonly located close to a shrub or small tree. There are no known areas of suitable habitat present on or within 120 m of the Project location.
- **Vesper Sparrow** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Vesper Sparrow preferentially breed within dry, short-grass areas with scattered shrubs and small trees. There are no known areas of suitable habitat present on or within 120 m of the Project location.
- **Savannah Sparrow** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Savannah Sparrow in Southern Ontario commonly breed within grassy meadows and hayfields, as well as along roadside right-of-ways. Suitable habitat may be found on the agricultural fields on or within 120 m of the Project location.
- **Eastern Meadowlark** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). A grassland species, Eastern Meadowlarks nest within pastures, agricultural fields, old fields and meadows, including early successional habitats. Suitable habitat may be found on the agricultural fields on or within 120 m of the Project location.
- **Baltimore Oriole** - Described as being in decline in the province of Ontario (Ontario Partners in Flight, 2006). Baltimore Orioles commonly breed within woodland edges, wooded riparian areas, hedgerows with tall trees, and open forests. Suitable habitat may be found within the woodlands or hedgerow communities on or within 120 m of the Project location.

### 3.1.2 *Reptiles and Amphibians.*

- **Five-lined Skink** – Listed as being of Special Concern on ESA. The habitat of the Five-lined Skink varies from region to region and includes rocky outcrops, dunes, fields, and deciduous forests. Since the Five-lined Skink is prone to dehydration, its habitat must include a permanent water body. Suitable habitat may be found on or within 120 m of the Project location.
- **Milksnake** – Listed as being of Special Concern on ESA. This species lives in open woodlands, fields and farm buildings (McKenney et al, 2007). Habitat of this type is available on and within 120 m of the Project location.
- **Eastern Ribbonsnake** – Listed as being of Special Concern on ESA. The Eastern Ribbonsnake is commonly found in wet areas, including weedy shorelines. Suitable habitat may be found within the watercourses on and within 120 m of the Project location.
- **Northern Map Turtle** – Listed as being of Special Concern on ESA. Suitable habitat may be found within the watercourses on and within 120 m of the Project location.
- **Snapping Turtle** – Listed as being of Special Concern on ESA. Suitable habitat may be found within the watercourses on and within 120 m of the Project location..
- **Western Chorus Frog** – Listed as being of Special Concern on ESA, The western chorus frog is commonly found in humid prairie, moist woods or meadows, with reproduction occurring in

vernal pools within woodlands. Such habitat may be found on or within 120 m of the Project location.

### 3.1.3 Mammals

- Northern Long-eared Bat – Hibernates during winter in mines or caves. During summer, roosts/maternity colonies in houses, and in hollow trees or under loose bark. There are no known mines, caves or houses present on or within 120 m of the Project location. Hollow trees may be found within the woodlands on or within 120 m of the Project location.

### 3.1.4 Vegetation

- **Brainerd's Hawthorn** – An imperilled species (S2 ranking) within the province. Brainerd's Hawthorn are primarily natives to Quebec within Canada, and may be found within old fields, poorly managed pastures, fencelines and roadsides. Suitable habitat may be found on or within 120 m of the Project location.
- **Caughuawaga Hawthorn** – A critically imperilled species (S1 ranking) within the province. Similar to Brainerd's Hawthorn, Caughuawaga Hawthorn may be found within old fields, poorly managed pastures, fencelines and roadsides. Suitable habitat may be found on or within 120 m of the Project location.
- **Halberd-leaved Tearthumb** – A vulnerable species (S3 ranking) within the province. Halberd-leaved Tearthumb is found in (i) wet, muck soil under alders at margins of pear bogs, (ii) wet, shaded ground along streams, ponds, swamps and lakes, (iii) rich thickets and marshy borders, and (iv) wet depressions and seepage areas in mature hardwood forests. Suitable habitat may be found on or within 120 m of the Project location.

## 4. Summary of Results

Table 4.1 summarizes the results of the records review according to the features identified in Section 1.3. A map depicting the identified natural features on and in proximity to the site is provided in Figure 1.1.

**Table 4.1 Summary of Records Review Determinations**

| Determination to be Made  | Yes/No | Description   |
|---|--------|---|
| Is the Project in or within 120 m of a provincial park or conservation reserve? | No     | The nearest such features are located more than 120 m away from the Project location.   |
| Is the Project in a natural feature?  | Yes    | There are woodlands identified on the Project location. Habitat for species of conservation concern may be found on the Project location. There are no Life Science ANSIs, wetlands or valleylands identified within 120 m of the Project location. |
| Is the Project within 50 m of an ANSI (earth science)?                          | No     | The nearest earth science ANSI is located several kilometres from the Project location.   |

| Determination to be Made  | Yes/No | Description  |
|---|--------|--|
| Is the Project within 120 m of a natural feature that is not an ANSI (earth science)? | Yes    | There are woodlands identified within 120 m of the Project location. Habitat for species of conservation concern may be found on the Project location. There are no Life Science ANSIs, wetlands or valleylands identified within 120 m of the Project location. |

As per Section 26 of the REA Regulation, a site investigation will be required to confirm the features identified during this records review. The site investigation will i) identify if any corrections to the information presented herein are required, ii) determine whether any additional natural features exist on or adjacent to the Project location, iii) confirm the boundaries of the natural features within 120 m of the Project, and iv) determine the distance from the Project to the natural feature boundary.

## 5. References

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- McKenney, D., M. Oldham, J. Bogart, and B. Mackey. 2007. Amphibians and Reptiles of Ontario. Natural Resources Canada. Available on-line at <http://cfs.nrcan.gc.ca/subsite/glfc-amphibians>. Accessed May 3, 2010; Last Updated Nov 30, 2007.
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# Appendix A

## Ontario Breeding Bird Atlas Results



**Square Summary (18WQ29)**

| #species (1st atlas) |      |      |       | #species (2nd atlas) |      |      |       | #hours |     | #pc done |       |
|----------------------|------|------|-------|----------------------|------|------|-------|--------|-----|----------|-------|
| poss                 | prob | conf | total | poss                 | prob | conf | total | 1st    | 2nd | road     | offrd |
| 39                   | 21   | 31   | 91    | 25                   | 30   | 32   | 87    | 73     | 34  | 20       | 5     |

**Region summary (#23: Cornwall)**

| #squares | #sq with data |     | #species |     | #pc done | target #pc |
|----------|---------------|-----|----------|-----|----------|------------|
|          | 1st           | 2nd | 1st      | 2nd |          |            |
| 39       | 39            | 39  | 162      | 172 | 886      | 487        |

Target number of point counts in this square: 20 road side, 5 off road (1 in treed wetlands, 3 in deciduous forest, 1 in mixed forest). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat.

| SPECIES                  | Code |     | %   |     | SPECIES                   | Code |     | %   |     | SPECIES                  | Code |     | %   |     |
|--------------------------|------|-----|-----|-----|---------------------------|------|-----|-----|-----|--------------------------|------|-----|-----|-----|
|                          | 1st  | 2nd | 1st | 2nd |                           | 1st  | 2nd | 1st | 2nd |                          | 1st  | 2nd | 1st | 2nd |
| Canada Goose             |      | H   | 43  | 87  | Turkey Vulture            |      |     | 38  | 76  | Black Tern † §           |      |     | 25  | 20  |
| Wood Duck                | H    |     | 69  | 76  | Osprey                    |      |     | 10  | 15  | Common Tern §            |      |     | 23  | 15  |
| Gadwall                  |      |     | 25  | 17  | Northern Harrier          | NY   | H   | 92  | 92  | Mourning Dove            | NY   | AE  | 100 | 100 |
| American Wigeon          |      |     | 30  | 23  | Sharp-shinned Hawk        |      |     | 20  | 43  | Yellow-billed Cuckoo ‡   |      |     | 30  | 0   |
| American Black Duck      | H    |     | 69  | 33  | Cooper's Hawk             |      |     | 15  | 35  | Black/Yell-billed Cuckoo |      | S   | 0   | 38  |
| Mallard                  | FY   | H   | 94  | 100 | Northern Goshawk ‡        |      |     | 5   | 10  | Black-billed Cuckoo      | S    |     | 71  | 51  |
| Blue-winged Teal         | P    |     | 58  | 41  | Red-should Hawk †         | S    |     | 25  | 12  | Eastern Screech-Owl      |      | T   | 20  | 33  |
| Northern Shoveler        |      |     | 20  | 23  | Broad-winged Hawk         | H    |     | 41  | 61  | Great Horned Owl         | H    |     | 74  | 64  |
| Northern Pintail         |      |     | 38  | 23  | Red-tailed Hawk           | P    | P   | 76  | 89  | Northern Hawk Owl ‡      |      |     | 0   | 2   |
| Green-winged Teal        |      |     | 0   | 25  | American Kestrel          | D    | P   | 92  | 94  | Barred Owl               |      |     | 7   | 25  |
| Redhead †                |      |     | 2   | 7   | Merlin                    |      |     | 0   | 23  | Long-eared Owl           |      |     | 15  | 7   |
| Ring-necked Duck ‡       |      |     | 0   | 2   | Peregrine Falcon †        |      |     | 0   | 2   | Short-eared Owl †        |      |     | 10  | 12  |
| Lesser Scaup ‡           |      |     | 0   | 0   | Yellow Rail †             |      |     | 2   | 0   | North Saw-whet Owl       |      |     | 28  | 10  |
| Common Goldeneye ‡       |      |     | 0   | 5   | Virginia Rail             |      | P   | 25  | 38  | Common Nighthawk ‡       | H    |     | 43  | 10  |
| Hooded Merganser ‡       |      |     | 5   | 7   | Sora                      |      |     | 35  | 28  | Whip-poor-will           |      |     | 23  | 20  |
| Common Merganser         |      |     | 7   | 10  | Common Moorhen            |      |     | 23  | 23  | Chimney Swift            | P    | P   | 76  | 69  |
| Ruddy Duck †             |      |     | 5   | 7   | American Coot             |      |     | 20  | 10  | Ruby-thr Hummingbird     | P    | D   | 79  | 100 |
| Gray Partridge           | FY   |     | 48  | 58  | Coot/Moorhen              |      |     | 0   | 2   | Belted Kingfisher        | H    | H   | 94  | 84  |
| Ring-necked Pheasant     |      |     | 25  | 5   | Sandhill Crane ‡          |      |     | 0   | 7   | Red-headed Woodpecker †  |      |     | 10  | 5   |
| Ruffed Grouse            |      | NY  | 74  | 92  | Killdeer                  | FY   | T   | 100 | 100 | Yellow-bellied Sapsucker | S    | T   | 64  | 87  |
| Wild Turkey              |      | H   | 0   | 66  | Rock Dove                 | AE   | H   | 84  | 100 | Downy Woodpecker         | FY   | FY  | 97  | 100 |
| Common Loon              |      |     | 23  | 15  | Spotted Sandpiper         | FY   | P   | 89  | 92  | Hairy Woodpecker         | NU   | FY  | 92  | 94  |
| Pied-billed Grebe        |      |     | 20  | 35  | Upland Sandpiper          | FY   |     | 89  | 66  | Northern Flicker         | AE   | A   | 100 | 100 |
| Double-crest Cormorant § |      |     | 15  | 17  | Common Snipe              | T    | T   | 92  | 89  | Pileated Woodpecker      |      | D   | 33  | 82  |
| American Bittern         | S    | H   | 69  | 58  | American Woodcock         | H    | T   | 66  | 79  | Eastern Wood-Pewee       | S    | CF  | 94  | 100 |
| Least Bittern †          |      |     | 7   | 10  | Wilson's Phalarope †      |      |     | 10  | 7   | Alder Flycatcher         | S    | S   | 74  | 94  |
| Great Blue Heron §       | H    |     | 74  | 71  | Ring-billed Gull §        |      |     | 7   | 17  | Willow Flycatcher        | P    | S   | 46  | 64  |
| Green Heron §            | H    | H   | 69  | 61  | Herring Gull §            |      |     | 23  | 10  | Least Flycatcher         | S    | CF  | 94  | 92  |
| Black-crown N.-Heron † § |      |     | 2   | 5   | Great Black-backed Gull † |      |     | 0   | 5   | Eastern Phoebe           | T    | D   | 92  | 97  |

[next page >>](#)



## Ontario Breeding Bird Atlas - Summary Sheet for Square 18WQ29 (page 2 of 3)

| SPECIES                 | Code |     | %   |     |
|-------------------------|------|-----|-----|-----|
|                         | 1st  | 2nd | 1st | 2nd |
| Gr Crested Flycatcher   | CF   | T   | 97  | 97  |
| Eastern Kingbird        | A    | D   | 100 | 100 |
| Loggerhead Shrike †     | H    |     | 2   | 2   |
| Yellow-throated Vireo † |      |     | 12  | 7   |
| Blue-headed Vireo       |      |     | 0   | 20  |
| Warbling Vireo          | S    | D   | 82  | 100 |
| Red-eyed Vireo          | S    | CF  | 87  | 100 |
| Gray Jay †              |      |     | 2   | 0   |
| Blue Jay                | P    | FY  | 94  | 100 |
| American Crow           | AE   | S   | 100 | 100 |
| Common Raven            |      |     | 0   | 56  |
| Horned Lark             |      | S   | 76  | 79  |
| Purple Martin           | P    |     | 74  | 38  |
| Tree Swallow            | NY   | H   | 100 | 100 |
| North Rgh-wing Swallow  | P    | CF  | 61  | 48  |
| Bank Swallow §          | AE   | H   | 82  | 69  |
| Cliff Swallow §         |      | H   | 76  | 79  |
| Barn Swallow            | NY   | FY  | 100 | 100 |
| Black-capped Chickadee  | NY   | FY  | 94  | 100 |
| Red-breast Nuthatch     |      | S   | 25  | 61  |
| White-breast Nuthatch   | AE   | S   | 87  | 100 |
| Brown Creeper           | H    |     | 38  | 25  |
| House Wren              | T    | FY  | 94  | 100 |
| Winter Wren             |      |     | 12  | 30  |
| Sedge Wren              |      |     | 20  | 23  |
| Marsh Wren              | T    | S   | 33  | 35  |
| Golden-crown Kinglet    |      | T   | 10  | 20  |
| Ruby-crown Kinglet †    |      |     | 5   | 0   |
| Blue-gr Gnatcatcher †   |      |     | 2   | 2   |

| SPECIES                 | Code |     | %   |     |
|-------------------------|------|-----|-----|-----|
|                         | 1st  | 2nd | 1st | 2nd |
| Eastern Bluebird        |      |     | 46  | 66  |
| Veery                   | S    | A   | 87  | 100 |
| Swainson's Thrush †     |      |     | 5   | 10  |
| Hermit Thrush           |      |     | 28  | 53  |
| Wood Thrush             | S    | T   | 89  | 92  |
| American Robin          | NY   | CF  | 100 | 100 |
| Gray Catbird            | S    | T   | 97  | 100 |
| Northern Mockingbird †  |      |     | 0   | 15  |
| Brown Thrasher          | S    | CF  | 94  | 89  |
| European Starling       | NE   | CF  | 100 | 100 |
| Cedar Waxwing           | NU   | NB  | 94  | 100 |
| Tennessee Warbler †     |      |     | 2   | 0   |
| Nashville Warbler       | S    | S   | 56  | 74  |
| Yellow Warbler          | P    | CF  | 97  | 100 |
| Chestn-sided Warbler    | S    | FY  | 84  | 87  |
| Magnolia Warbler        | S    | T   | 35  | 48  |
| Black-thr Blue Warbler  |      |     | 7   | 23  |
| Yellow-rumped Warbler   |      | T   | 33  | 64  |
| Black-thr Green Warbler | S    | S   | 15  | 56  |
| Blackburnian Warbler    |      | S   | 28  | 17  |
| Pine Warbler            |      |     | 10  | 20  |
| Palm Warbler †          |      |     | 0   | 5   |
| Black-white Warbler     | S    | S   | 66  | 89  |
| American Redstart       | P    | A   | 79  | 82  |
| Ovenbird                | S    | T   | 87  | 94  |
| North Waterthrush       | S    | CF  | 46  | 56  |
| Mourning Warbler        | S    |     | 69  | 61  |
| Common Yellowthroat     | A    | NE  | 97  | 100 |
| Wilson's Warbler †      |      |     | 5   | 0   |

| SPECIES                  | Code |     | %   |     |
|--------------------------|------|-----|-----|-----|
|                          | 1st  | 2nd | 1st | 2nd |
| Canada Warbler           |      |     | 33  | 28  |
| Scarlet Tanager          | S    | S   | 69  | 82  |
| Eastern Towhee           | S    |     | 30  | 15  |
| Chipping Sparrow         | FY   | NY  | 94  | 100 |
| Clay-colored Sparrow     |      |     | 17  | 33  |
| Field Sparrow            | S    |     | 58  | 35  |
| Vesper Sparrow           | H    | S   | 61  | 53  |
| Savannah Sparrow         | S    | CF  | 94  | 97  |
| Grasshopper Sparrow      |      |     | 10  | 20  |
| Henslow's Sparrow †      |      |     | 2   | 2   |
| Song Sparrow             | NY   | CF  | 100 | 100 |
| Lincoln's Sparrow        |      |     | 7   | 5   |
| Swamp Sparrow            | FY   | FY  | 89  | 97  |
| White-throat Sparrow     | T    | CF  | 94  | 97  |
| Dark-eyed Junco †        |      |     | 5   | 5   |
| Northern Cardinal        | H    | P   | 35  | 87  |
| Rose-breast Grosbeak     | A    | FY  | 94  | 100 |
| Indigo Bunting           | AE   | A   | 74  | 87  |
| Bobolink                 | V    | T   | 100 | 94  |
| Red-wing Blackbird       | NY   | CF  | 100 | 100 |
| Eastern Meadowlark       | CF   | FY  | 100 | 97  |
| Rusty Blackbird †        |      |     | 5   | 0   |
| Common Grackle           | NY   | CF  | 100 | 100 |
| Brown-head Cowbird       | NE   | D   | 100 | 100 |
| Baltimore Oriole         | N    | CF  | 97  | 100 |
| Purple Finch             | S    | CF  | 58  | 76  |
| House Finch              |      |     | 7   | 82  |
| White-winged Crossbill † |      |     | 2   | 5   |
| Pine Siskin †            |      |     | 5   | 10  |

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## Ontario Breeding Bird Atlas - Summary Sheet for Square 18WQ29 (page 3 of 3)

| SPECIES            | Code      |           | %   |     |
|--------------------|-----------|-----------|-----|-----|
|                    | 1st       | 2nd       | 1st | 2nd |
| American Goldfinch | <u>AE</u> | <u>P</u>  | 100 | 100 |
| Evening Grosbeak   |           |           | 30  | 12  |
| House Sparrow      | <u>AE</u> | <u>FY</u> | 100 | 100 |

This list includes all species found during the Ontario Breeding Bird Atlas (1st atlas: 1981-1985, 2nd atlas: 2001-2005) in the region #23 (Cornwall). Underlined species are those that you should try to add to this square. They have not yet been reported during the 2nd atlas, but were found during the 1st atlas in this square or have been reported in more than 50% of the squares in this region during the 2nd atlas so far. In the species table, "BE 2nd" and "BE 1st" are the codes for the highest breeding evidence for that species in square 18WQ29 during the 2nd and 1st atlas respectively. The % columns give the percentage of squares in that region where that species was reported during the 2nd and 1st atlas (this gives an idea of the expected chance of finding that species in region #23). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), ‡ (regionally rare), or † (provincially rare). Current as of 29/07/2010. An up-to-date version of this sheet is available from <http://www.birdsontario.org/atlas/summaryform.jsp?squareID=18WQ29>

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**Appendix B**  
**Raisin Region Conservation**  
**Authority Records**



# RAISIN REGION CONSERVATION AUTHORITY

P.O. Box 429, 18045 County Rd. 2, Cornwall, Ontario K6H 5T2 Tel.: 613 938-3611 Fax: 613 938-3221

June 13, 2010

Caleb Coughlin  
Hatch Ltd.  
4345 Queen Street  
PO Box 1001  
Niagara Falls ON L2E 6W1

**Subject: Property Inquiry – Glendale Solar Project  
Lot 16 Concession 6  
Township of South Glengarry (former Township of Charlottenburgh)  
RRCA File: GC-004-10**

Dear Mr. Coughlin,

Staff at the Raisin Region Conservation Authority (RRCA) have evaluated the Natural Heritage and Natural Hazard features on the subject property. The following is a description of features.

- According to information at our office:
  - The northern portion of the project site contains organic soils.
  - Wooded areas are also on the subject property. According to the Ministry of Natural Resources Forest Inventory data at our office the stands are soft maple-cedar-white ash, cedar-poplar-soft maple, poplar, hard maple-white ash-basswood, and hard maple-white ash-American beech. The subject property is within the Raisin River Subwatershed, where approximately 42% of the subwatershed is forest cover.
  - A small portion of fish habitat exists on the northern portion of the identified project site. The watercourse is drainage to the Glen Falloch Drain and is classified as Class C<sub>1</sub> warm watercourse, with potential baitfish habitat.
  - No Provincially or Locally Significant Wetlands are identified in the subject area.
  - There is no delineated floodplain affecting the subject property.
- According to Land Use Schedule A6 within the Official Plan for the United Counties of Stormont, Dundas and Glengarry, the subject property is designated as Rural District.
- Constraints Plan, Schedule B6 within the Official Plan indicates that Organic Soils exist on a portion of the northern-most parcel. Significant Woodlands are also indicated on the southern parcels. Organic Soils are considered Environmental Protection lands on the Constraint Overlay; whereas, Significant Woodlands are considered Natural Heritage Features.
- The 2005 Provincial Policy Statement (PPS) stipulates that development and site alteration is not permitted in significant woodlands or adjacent lands unless it has been demonstrated that

Member of



Conservation  
ONTARIO  
Natural Champions

there will be no negative impacts on the natural features or their ecological functions. However, Section 2.1.7 within the 2005 Provincial Policy Statement (PPS) also states that nothing within the Natural Heritage section of the PPS is intended to limit the ability of existing agricultural uses to continue.

- The Official Plan for the United Counties of Stormont, Dundas and Glengarry defines organic soils as those generally found in water saturated environments/wetlands where the soils is not exposed to the air for a sufficient time to permit the breakdown of vegetative material. As a result, the soils do not contain sufficient strength to support a building or structure and are generally considered hazard lands.

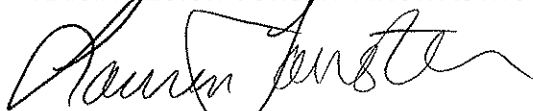
Development is not recommended within organic soil areas and development may be refused. In some circumstances further studies may be required to determine the suitability of the soil for development. In order for development to be permitted, the applicant must provide sound evidence (by means a geotechnical engineer) that the hazard can be overcome using proper engineering techniques.

- According to the Township of South Glengarry Zoning By-law (North Charlottenburgh), the subject property is zoned Rural.
- The Township of South Glengarry By-law (3.39 (7)) stipules that site alteration or development shall not be permitted within 30 metres of an area identified as fish habitat unless it has been demonstrate that there will be no negative impacts on the natural features or ecological function of the area. No new development or site alteration shall be permitted within 15 metres of fish habitat.
- With respect to the erosion hazard, the minimum setback from a watercourse, including municipal drains, is 15 meters for any development.
- The RRCA has a Regulation controlling Development, Interference with Wetlands and Alterations to Shorelines and Watercourses (Ontario Regulation 175/06), made pursuant to Section 28 of the Conservation Authorities Act. The subject property is not within the regulated area with respect to development and site alterations. Alterations to watercourses are however regulated throughout our jurisdiction. Any in-water or shoreline work may require an O.Reg. 175/06 permit from our office. In addition, any in-water work may necessitate a fishery review in accordance with our Level II Agreement with the Department of Fisheries and Oceans (DFO).

I trust that this meets your needs at this time. If you have any questions, please contact the undersigned at (613) 938-3611 or [l.forrester@rrca.on.ca](mailto:l.forrester@rrca.on.ca).

Yours truly,

**RAISIN REGION CONSERVATION AUTHORITY**



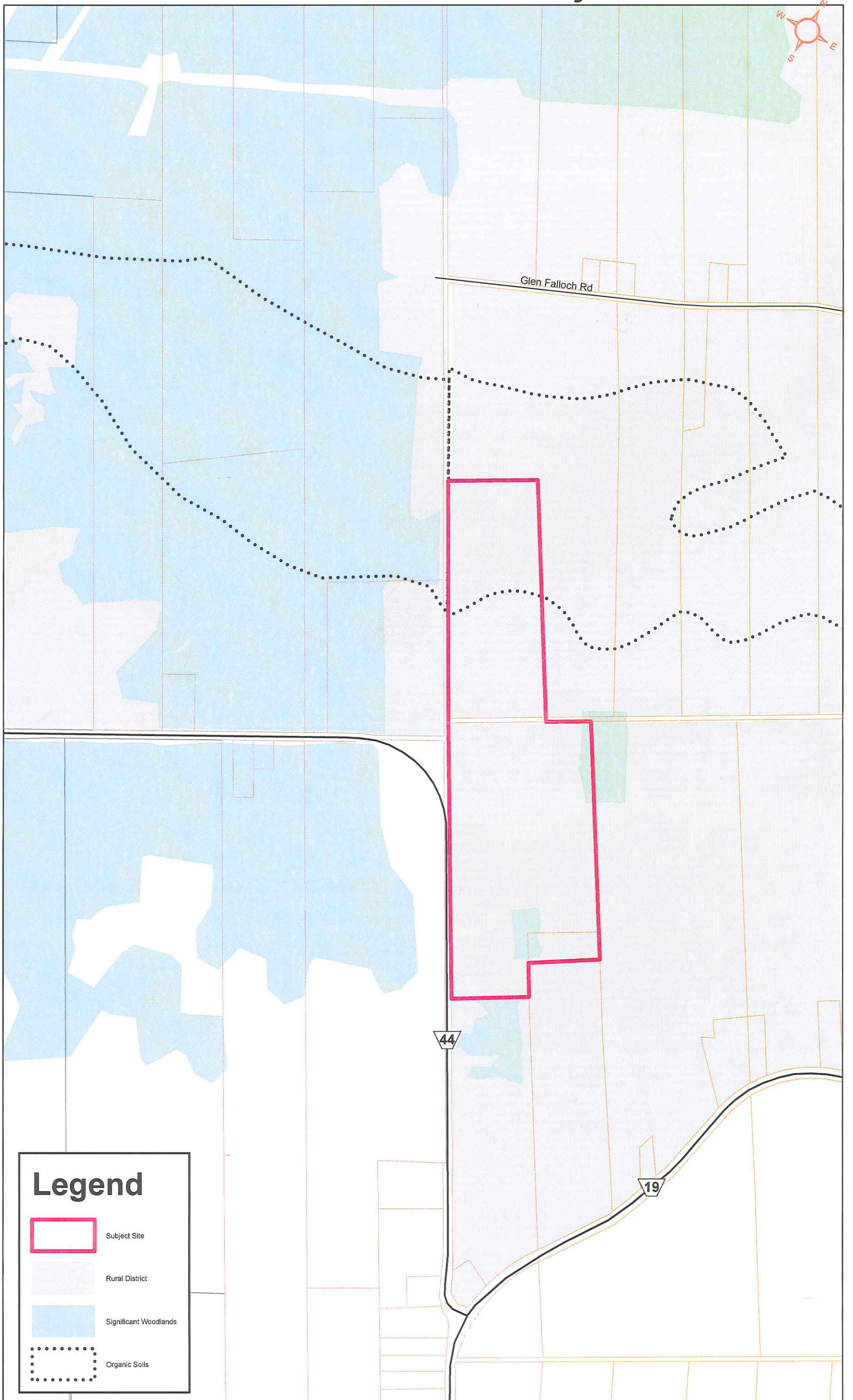
Lauren Forrester, M.Sc.

Watershed Planner & Regulations Officer

# Appendix C

## Township Woodland Locations

# Glendale Solar Project



### Legend

|   |                       |
|---|-----------------------|
|  | Subject Site          |
|  | Rural District        |
|  | Significant Woodlands |
|  | Organic Soils         |

## **Appendix D**

### **Ministry of Natural Resources Information Request Response**





**Ministry of Natural Resources**

Kemptville District  
P.O. Box 2002  
10 Campus Drive  
Kemptville, ON K0G 1J0

Tel.: (613) 258-8470  
Fax.: (613) 258-3920

**Ministère des Richesses naturelles**

District de Kemptville  
CP 2002  
10 Campus Drive  
Kemptville, ON K0G 1J0

Tél.: (613) 258-8470  
Télééc.: (613) 258-3920

July 8, 2010

Hatch  
4342 Queen Street, Suite 500  
Niagara Falls, ON  
L2E 7J7

Attention: Sean Male

**RE: Information Request – Solar Development – Northland Power  
Our File No.:**

2010\_NCR-896 – (Lot 2, C 3, North Crosby)  
2010\_CHA-897 – (Lot 15 & 16, C 5&6, Charlottenburgh)  
2010\_NCR-898 – (Lot 1, C 1, North Crosby)  
2010\_BUR-899 – (Lot 13, C 9, Burgess)  
2010\_SCR-900 – (Lot 25, C 2, South Crosby)

Dear Mr. Male,

The Ministry of Natural Resources (MNR) Kemptville District has carried out a review of the area in order to identify any potential natural resource and natural heritage values in the area of the identified sites. The MNR must clearly indicate that this is an initial records review and does not form part of the MNR review and confirmation process.

**Site A – 2010\_NCR-896**

A review of our records indicates that there are some wooded areas on site, indicating that Butternut (Endangered Tree Species) could be present, as well as some woodlands within 120 meters of the site. Consideration for the evaluation of Woodlands Significance is recommended by the MNR. There are two watercourses identified within 120m of the site suggesting potential fish habitat. MNR's review of the information obtained from the Natural Heritage Information Centre (NHIC) and a search of internal SAR records, the MNR can advise that there is potential for Butternut (Endangered) on and adjacent to the site, as well as records for both Early Hairstreak (S2) and Prairie Warbler (S3B) both of which are provincially tracked rare species. While species of special concern and provincially rare tracked species are not protected by the Endangered Species Act, under the PPS, information pertaining to their location and habitat requirements should be considered when evaluating the significant wildlife habitat of the project site and immediate area.

**Site B – 2010\_CHA-897**

This site is a fairly wooded site as is the surrounding adjacent area. The MNR must underline the need to address woodland significance of this site. Furthermore, consideration for fish and fish habitat should be carried out due to the watercourse located on and adjacent to the site. Based on the site characteristics, the potential for Butternut is high; as well MNR NHIC and internal SAR records indicate that the provincially tracked rare species of Halbered-leaved Tearthumb (S3), Brainerd's Hawthorn (S2) and Caughuawaga Hawthorn (S1) are all located in the immediate area. While species of special concern and provincially rare tracked species are not protected by the Endangered Species Act, under the PPS, information pertaining to their location and habitat requirements should be considered when evaluating the significant wildlife habitat of the project site and immediate area.

**Site C – 2010\_NCR-898**

There are three unevaluated wetland pockets located within 120m of the site as is a Large Mouth Bass spawning area, located on Big Rideau River. There are a number of small watercourses also in proximity to the site. Thus considerations for fish and fish habitat, as well as assessing wetland significance must be taken into account when carrying out the Natural Heritage Assessment. Within 120m of the site, there are also some substantial woodlands, which should be assessed for significance and subsequently the potential for Butternut (Endangered) is highly likely on this site. MNR has reviewed NHIC and internal records and has element occurrence information pertaining to the Prairie Warbler (S3B), a provincially tracked rare species.

#### **Site D – 2010\_BUR-899**

There are substantial woodlands located throughout this property, not to mention a number of hedgerows, which suggests that Butternut may be located on site. Furthermore, the MNR advises that the consideration for woodland significance would be prudent, in addition to those woodlands on the adjacent lands. There are also a number of pockets, on site and within 120m of the site that are noted as unevaluated wetlands. As such, works proposed within 120m of these sites must carry out evaluation of the feature significance and may further require an EIS. There are also a number of watercourses that pass through the site, and thus consideration for wildlife and more specifically fish and fish habitat must also be noted. Lastly, MNR's NHIC records show no additional species at risk information.

#### **Site E – 2010\_SCR-900**

There are woodlands immediately adjacent to the site which could be potentially significant woodlands and thus consideration for woodland evaluation is encouraged. Furthermore, the MNR notes that with these adjacent woodlands as well as the hedgerows located on site, there is the potential for Butternut to be present on site. There are also watercourses that run adjacent to the site, and thus consideration for fish and fish habitat is also recommended. MNR's NHIC records show that Prairie Warbler (S3B – provincially tracked rare species) is located in the immediate area.

Although this data represents the MNR's best current available information, it is important to note that a lack of information for a site does not mean that additional features and values are not present. As such, the MNR continues to strongly encourage detailed site assessments for all features and values. Furthermore, the same applies for Species at Risk occurrences; MNR does not have records of all occurrences and as such if MNR does not have the information it does not mean that there are no Species at Risk (SAR) at the location. MNR must note further, that there may not be any records currently held for newly listed Endangered and Threatened species and therefore for both above mentioned reasons, the MNR continues to encourage ecological site assessments to determine the potential for other SAR occurrences. When a SAR does occur on a proposed site, it is recommended that the proponent contact the MNR for technical advice and to discuss what activities can occur without contravention of the Act. If an activity is proposed that will contravene the Act (such as Section 9 or 10), the proponent must contact the MNR to discuss the potential for application of certain permits (Section 17) or agreement (Regulation 242/08). For specific questions regarding the Endangered Species Act (2007) or species at risk, please contact Species at Risk Biologist, Paula Norlock at [paula.norlock@ontario.ca](mailto:paula.norlock@ontario.ca). Not only is the ecological site assessment vital for assessing those Species at Risk on and adjacent to the site, however, it can also serve as the foundation for evaluating Significant Habitat of Endangered and Threatened species within the identified study area.

As many of the sites do have watercourses associated with them, if works pertaining to such watercourses are required (e.g. watercrossing for access road, etc.) in water works timing windows as well as permitting may be required from the Ministry of Natural Resources and/or the local Conservation Authority in this regard. For information pertaining to work permits, please contact Deborah Nizman, MNR Lands Technician, at [Deborah.Nizman@ontario.ca](mailto:Deborah.Nizman@ontario.ca).

During the records review stage, the proponent should be collecting all available wildlife and wildlife habitat related information for the proposed project location, including information on bird and bat species, candidate and confirmed Significant Wildlife Habitat (SWH) (including bird and bat SWH) and other related data. To do this we recommend proponents begin by classifying all lands at or within 120 metres of the project site using ELC system to community series (using aerial photography and other information sources) and then identifying candidate SWH using the definitions in the Significant Wildlife Habitat Technical Guide and the draft criteria for Ecoregion 6E (link in Appendix B.5 of the new Natural Heritage Reference Manual, 2010).

A 120 metre setback applies to any confirmed SWH. For unevaluated or candidate habitats, the proponent may consider those habitats as significant and apply the setback. If the proponent proposes to develop within the candidate habitat or setback, the significance of the habitat must be evaluated (using the SWHTG and ecoregional criteria listed above). If the habitat is confirmed significant, and the proposal still calls for development within the habitat or the setback, an EIS is required. This same rationale also applies to other natural features including Significant Woodlands, and Significant Valleylands.

For the purposes of the required Natural Heritage Assessment report, the MNR recommends the following sources of direction and information as areas by which to begin the desktop portion of your review:

- Natural Heritage Reference Manual (2010) – the newly published NHRM is a key document for understanding the importance of and the criteria for evaluating the various Natural Heritage Values on the landscape (including Significant Woodlands). This document can be accessed via:  
<http://www.mnr.gov.on.ca/en/Business/LUEPS/Publication/249081.html>
- Significant Wildlife Habitat Technical Guide (1999) – this document provides further technical direction and information as it relates to Significant Wildlife Habitat:  
[http://www.mnr.gov.on.ca/en/Business/FW/Publication/MNR\\_E001285P.html](http://www.mnr.gov.on.ca/en/Business/FW/Publication/MNR_E001285P.html)
- Ontario Wetland Evaluation System:  
[http://www.mnr.gov.on.ca/en/Business/Biodiversity/2ColumnSubPage/STEL02\\_176756.html](http://www.mnr.gov.on.ca/en/Business/Biodiversity/2ColumnSubPage/STEL02_176756.html)

If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Laura Melvin". The signature is written in a cursive, flowing style.

Laura Melvin  
A/ District Planner  
Resource Management Planner  
[laura.melvin@ontario.ca](mailto:laura.melvin@ontario.ca)