



**NORTHLAND
POWER**

Burk's Falls East Solar Project Natural Heritage Records Review Report

August 15, 2011



Northland Power Inc.
on behalf of
Northland Power Solar
Burk's Falls East
Toronto, Ontario

Natural Heritage
Records Review Report

Burk's Falls East Solar Project

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Project Report

August 15, 2011

**Northland Power Inc.
Burk's Falls East Solar Project**

Natural Heritage Records Review Report

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1. Introduction

1.1 Project Description

Northland Power Solar Burk's Falls East L.P. (hereinafter referred to as "Northland") is proposing to develop a 10-megawatt (MW) solar photovoltaic project titled Burk's Falls East Solar Project (hereinafter referred to as the "Project"). The Project will be located on approximately 40 hectares (ha) of land.

The Study Area for the Burk's Falls East Solar Project is located at 827 Chetwynd Road, southeast of Burk's Falls, within Armour Township, a single-tier municipality (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

1. in a provincial park or conservation reserve or within 120 m of a provincial park or conservation reserve
2. in a natural feature
3. within 50 m of an area of natural and scientific interest (earth science), or
4. 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.

In respect of woodlands and valleylands, Section 1 (1) of O. Reg. 359/09 requires that these features be located south and east of the Canadian Shield as shown in Figure 1.1 in the Provincial Policy

Statement issued under section 3 of the *Planning Act*. This figure shows that the proposed Project is located on the Canadian Shield, and therefore valleylands and woodlands as defined by O. Reg. 359/09 cannot be identified on the Project location.

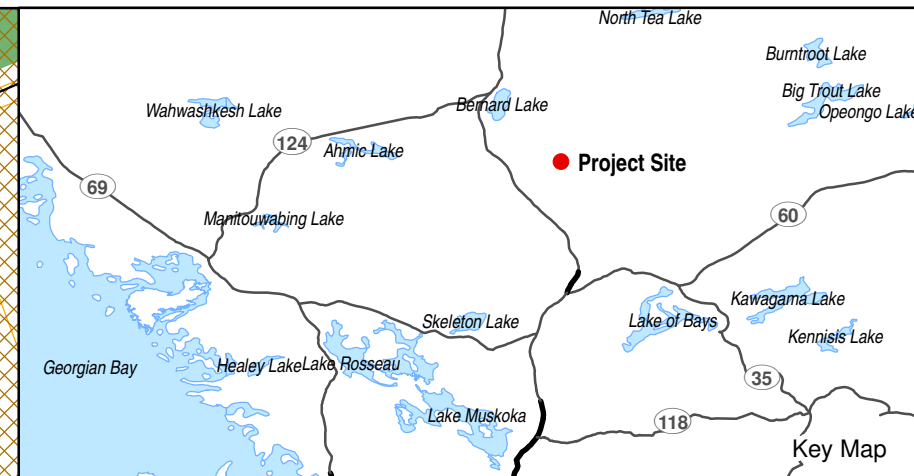
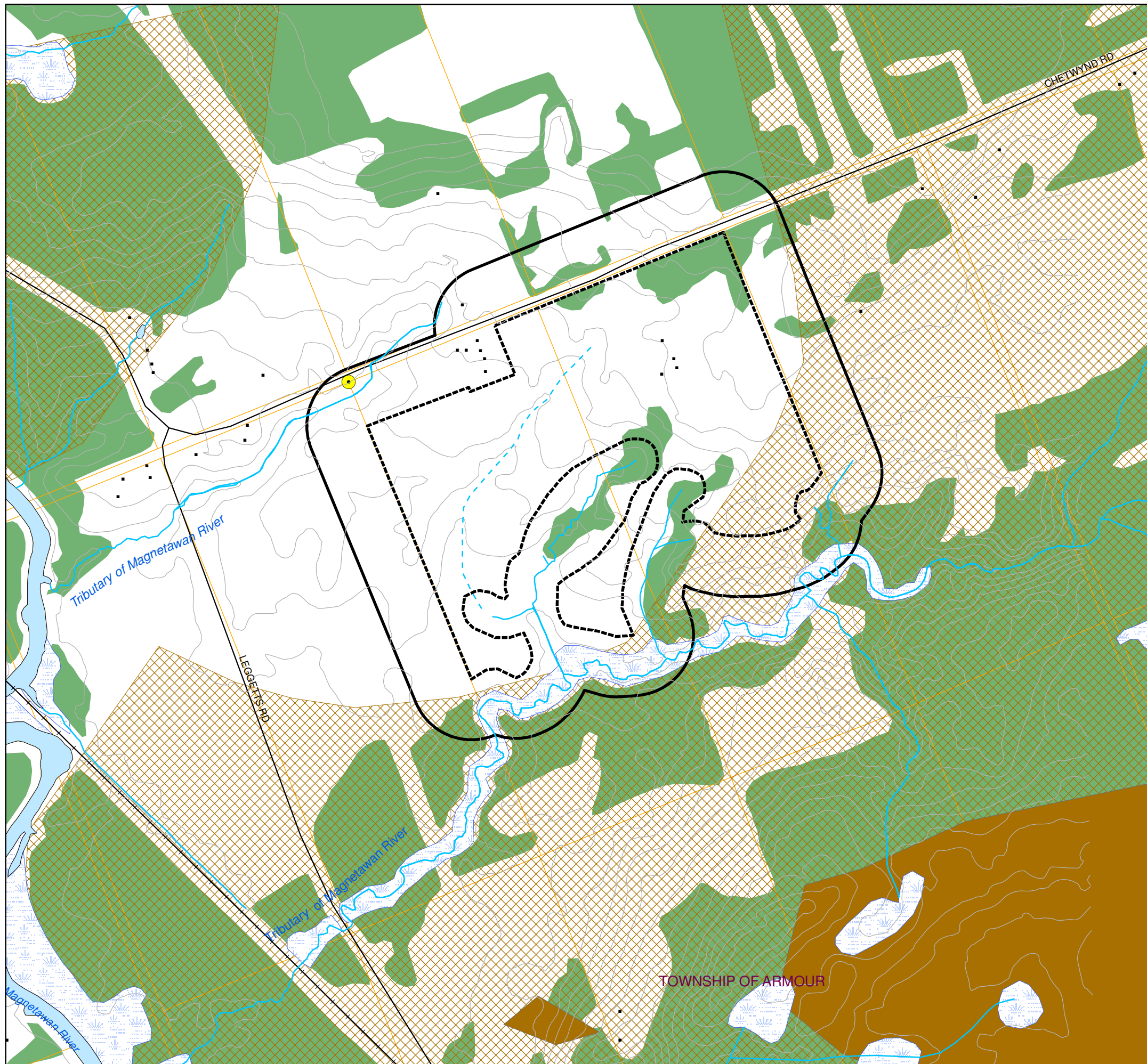
Subsection 3 of Section 25 of the REA Regulation requires the proponent to prepare a report "setting out a summary of the records searched and the results of the analysis" (O. Reg. 359/09). This Natural Heritage Records Review Report has been prepared to meet these requirements.

1.3 MNR Approval and Permitting Requirements

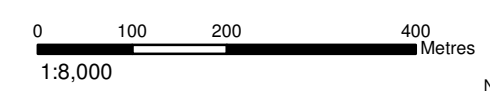
Beyond the REA legislative requirements identified in Section 1.2, additional information on site conditions must be identified in order to determine if MNR approvals and permits separate from the REA are required. Consideration of the following features is needed in order to make this determination:

- Presence of natural hazard lands – Hazardous lands are defined in Section 28 (25) of the Conservation Authorities Act as "land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock". If Project components are to be located in these areas, approval must be obtained from the local Conservation Authority/MNR.
- Presence of petroleum resource operations – Approval is required if Project components are to be located within 75 m of a petroleum resource operation.
- Crown owned forest resources – If Project components are located in an area of Crown owned forest resources, then authorization must be obtained from MNR prior to clearing of timber on that land.
- Presence of endangered and threatened species and their habitat – Protected under the *Endangered Species Act*. If these species or their habitat are documented on or near the Project location a permit may be required to permit construction and/or operations of the Project.

Other requirements may be needed under the *Fish and Wildlife Conservation Act, 1997*, the *Public Lands Act*, and the *Lakes and Rivers Improvement Act*. Information relating to these requirements is not identified within this report.



- Legend**
- Building
 - Connection Point With Existing Distribution Line
 - - - Grassed Waterway
 - Watercourse
 - Roads
 - Rail
 - Topographic Contour (5m interval)
 - ▭ Project Location
 - ▭ 120 m from Project Location
 - ▭ Parcels
 - ▭ Waterbody
 - ▭ Wetland
 - ▭ Wooded Area
 - ▭ Deer Wintering Area (Stratum 1)
 - ▭ Deer Wintering Area (Stratum 2)



Notes:
 1. OBM and NRVIS data downloaded from LIO, with permission.
 2. Spatial referencing UTM NAD 83, July 2010.

Figure 1.1
 Northland Power Inc.
Burk's Falls East Solar Energy Project
Natural Heritage Features

Back of Figure

2. Background Information Review and Results

This Records Review Report is based on a review of published and unpublished information on natural heritage features and species at risk identified on or within 120 m of the Project location. The background documents reviewed were obtained from the municipality, local planning staff, local conservation authority, and 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 conservation 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.

Municipal planning authorities are discussed in relation to the relevant upper and lower tier municipality.

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>)
- 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>).

In addition, a meeting between representatives of MNR Parry Sound District, Hatch, and Northland was held on May 28, 2010, at which time information relating to natural heritage features was requested from MNR Parry Sound District.

2.1.1 Results

Ontario Crown Land Use Atlas Mapping

A review of the Crown Land Use Policy Atlas interactive map, accessed on May 17, 2010, indicated the presence of a Winter Deer Range near the Project location. It indicates that the Project area is in private land.

MNR LIO Mapping

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

- There are watercourses located on and within 1 km of the Project location.
- A wetland borders the tributary of the Magnetewan River, which is within 120 m of the Project location.
- Four woodlands occur on the Project location.
- Four woodlands occur within 120 m of the Project location.
- There are deer wintering areas identified on or within 1 km of the Project location.
- There are no ANSIs or valleylands in the vicinity of the Project location.
- No provincial parks or conservation reserves were identified on or within 120 m of the Project location.

Natural Heritage Information Centre (NHIC) Database

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

The results of the queries determined that there was an occurrence of [Peregrine Falcon (*Falco peregrinus*)] within 1 km of the Project location. There were no records of plant communities or wildlife concentration areas within 1 km of the Project location.

In addition to searching the NHIC database, a request for natural heritage and species at risk information was requested from the Parry Sound District MNR office. As of August 3, 2010 this information has not been received.

Information Provided by MNR Parry Sound District

During the meeting on May 28, 2010, MNR provided the following input into the records review:

- There is a wetland identified within 120 m of the Project location.
- There are no records of species at risk for this area.
- It is unlikely that either Hog-nosed Snakes (*Heterodon platirhinos*) or Blanding's Turtle (*Emydoidea blandingi*), both Species at Risk, would be of concern on this site.
- There is a strong likelihood that Bobolink (*Dolichonyx oryzivorus*), a Species at Risk, will occur on the Project location.

Following the meeting, a map identifying Stratum 2 Deer Wintering habitat on and within 120 m of the Project location, as identified by MNR through aerial surveys conducted in March 2010, was provided to Hatch (MNR, 2010). Stratum 2 Deer winter habitat is habitat used in the early winter, or occasionally all winter during mild winters when snow cover is light, fluffy, and less than 30 cm.

Ontario Herpetofaunal Summary Atlas

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

- Eastern Musk Turtle (*Sternotherus odoratus*)
- Blanding's Turtle
- Milksnake (*Lampropeltis triangulum*)
- Eastern Hog-nosed Snake
- Five-lined Skink (*Eumeces fasciatus*)
- Western Chorus Frog (*Pseudacris triseriata*)
- Northern Map Turtle (*Graptemys geographica*).

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) and Environment Canada (www.ec.gc.ca) were also reviewed.

2.2.1 Results

The Natural Resources Canada's Amphibians and Reptiles of Ontario Climate Domain Maps was reviewed and compared with the results of the Ontario Herpetofaunal Summary Atlas (discussed in Section 2.1); no additional information was discovered in the federal records.

A review of the Canadian Wildlife Service and Environment Canada websites produced no further information about the Project location.

2.3 Southeast Parry Sound District Planning Board

A review of the internet sites related to the Southeast Parry Sound District Planning Board was performed and the office was contacted for any information about the Project location.

2.3.1 Results

No references to natural heritage information related to the Project location were found on websites associated with the Southeast Parry Sound District Planning Board. The Southeast Parry Sound District Planning Board does not maintain records relating to natural features.

Table 2.1 Reptiles and Amphibians Potentially Occurring within the Project Area and their Conservation Status¹

Species		Conservation Rank ²			At Risk Status		
		Global GRANK	Canada NRANK ⁴	Ontario SRANK ³	COSEWIC	SARO	SARA
Common Name	Scientific Name						
Salamanders							
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>	-	-	-	-	-	-
Jefferson / Blue-spotted Salamander polyploids	<i>Ambystoma jeffersonianum - laterale polyploids</i>	-	-	-	-	-	-
Yellow-spotted Salamander	<i>Ambystoma maculatum</i>	G5	N5	S4	-	-	-
Northern Two-lined Salamander	<i>Eurycea bislineata</i>	G5	N5	S4	-	-	-
Eastern Red-backed Salamander	<i>Plethodon cinereus</i>	G5	N5	S5	-	-	-
Eastern Newt	<i>Notophthalmus viridescens</i>	G5T5	N5	S5	-	-	-
Frogs and Toads							
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	-	-	-
Wood Frog	<i>Rana sylvatica</i>	G5	N5				
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	-
Mink Frog	<i>Rana septentrionalis</i>	G5	N5	S5	-	-	-
Wood Frog	<i>Rana sylvatica</i>	G5	N5	S5	-	-	-
Turtles							
Snapping Turtle	<i>Chelydra serpentina</i>	G5	N5	S3	SC	SC	-
Eastern Musk Turtle	<i>Sternotherus odoratus</i>	G5	-	S3	THR	THR	THR (Schedule 1)
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	G5T5	N5	S5	-	-	-

Species		Conservation Rank ²			At Risk Status		
		Global GRANK	Canada NRANK ⁴	Ontario SRANK ³	COSEWIC	SARO	SARA
Common Name	Scientific Name						
Northern Map Turtle	<i>Graptemys geographica</i>	G5	-	S3	SC	SC	SC (Schedule 1)
Blanding's Turtle	<i>Emydoidea blandingi</i>	G4	N4	S3	THR	THR	THR (Schedule 1)
Lizards							
Five-Lined Skink	<i>Eumeces fasciatus</i>	G5T4	N4	S3	SC	SC	SC (Schedule 1)
Snakes							
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)
Northern Watersnake	<i>Nerodia sipedon sipedon</i>	G5T5	N5	S5	NAR	NAR	
Red-bellied Snake	<i>Storeria occipitomaculata</i>	G5T5	N5	S5	-	-	-
Dekay's Brownsnake	<i>Storeria dekayi</i>	G5	N5	S5	NAR	NAR	-
Smooth Green Snake	<i>Opheodrys vernalis</i>	G5	N5	S4	-	-	-
Northern Ring-necked Snake	<i>Diadophis punctatus edwardsii</i>	G5	N5	S4	-	-	-
Eastern Hog-nose Snake	<i>Heterodon platirhinos</i>	G5	N5	S3	THR	THR	THR (Schedule 1)
Milksnake	<i>Lampropeltis triangulum</i>	G5	N5	S3	SC	SC	SC (Schedule 1)

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

² Accessed from NHIC, 2008b

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

⁴ NRANK = National Status (NatureServe (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

2.4 Municipal Records

The Project location is located within the Armour Township, a single-tiered municipality. A review of the official township website (<http://www.armourtownship.ca/>) was undertaken. Information relating to natural features was requested during a meeting with the clerk of the township on July 9, 2010.

2.4.1 Results

The review of the Armour Township website did not result in any further natural heritage information about the Project location. No records relating to natural features were available from the township.

2.5 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>).
- Ontario Oil, Gas and Salt Resources – Petroleum Well Mapping (<http://maps.ogsrlibrary.com/>).

2.5.1 Results

2.5.1.1 Ontario Breeding Bird Atlas

The Ontario Breeding Bird Atlas on-line database was accessed on May 17, 2010 to determine which breeding bird species have been recorded within the vicinity of the Project location. The database is organized by regions and each region is divided into 10-km² blocks which are given a map square number. The Project location is located within map square 17PL34. The square coverage summary sheet was downloaded and the results are provided in Appendix A. Of the species that were recorded, there were seven species of conservation concern/species at risk identified whose ranges include the Project location:

- Common Nighthawk (*Chordeiles minor*)
- Whip-poor-will (*Caprimulgus vociferus*)
- Chimney Swift (*Chaetura pelagica*)
- Olive-sided Flycatcher (*Contopus cooperi*)
- Golden-winged Warbler (*Vermivora chrysoptera*)
- Canada Warbler (*Wilsonia canadensis*)
- Bobolink (*Dolichonyx oryzivorus*).

2.5.1.2 Atlas of the Mammals of Ontario

The Atlas of the Mammals of Ontario (Dobbyn, 1994) identified several species of mammals whose ranges may include 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 or species at risk.

2.5.1.3 Important Bird Areas of Canada

A review of the Project area indicates that the Project is not near or within any important bird areas of Canada.

2.5.1.4 Ontario Oil, Gas and Salt Resources – Petroleum Well Mapping

A review of the Oil, Gas & Salt Resources Library resulted in no references to the Project area.

Table 2.2 Mammals Potentially Occurring within the Project Area and their Conservation Status¹

Species		Conservation Rank ²			At Risk Status		
		Global GRANK	Canada NRANK ⁴	Ontario SRANK ³	COSEWIC	SARO	SARA
Common Name	Scientific Name						
Shrews and Moles							
Common Shrew	<i>Sorex cinereus</i>	G5	N5	S5	-	-	-
Northern Short-tailed Shrew	<i>Blarina brevicauda</i>	G5	N5	S5	-	-	-
Smoky Shrew	<i>Sorex fumeus</i>	G5	N5	S5	-	-	-
Hairy-tailed Mole	<i>Parascalops breweri</i>	G5	N4	S4	-	-	-
Star-nosed Mole	<i>Condylura cristata</i>	G5	N5	S5	-	-	-
Bats							
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	G4	N4	S3?	-	-	-
Little Brown Bat	<i>Myotis lucifuga</i>	G5	N5	S5	-	-	-
Big Brown Bat	<i>Epstesicus fuscus</i>	G5	N5	S5	-	-	-
Hoary Bat	<i>Lasiurus cinereus</i>	G5	N5	S4	-	-	-
Rabbits and Hares							
Eastern Cottontail	<i>Sylvilagus floridanus</i>	G5	N5	S5	-	-	-
Snowshoe Hare	<i>Lepus americanus</i>	G5	-	S5	-	-	-
European Hare	<i>Lepus europeus</i>	G5	NE	SE	-	-	-
Rodents							
Least Chipmunk	<i>Tamias minimus</i>	G5	N5	S5	-	-	-
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	-	-	-
Southern Bog Lemming	<i>Synaptomys cooperi</i>	G5	N5	S4	-	-	-
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	-	-	-

Species		Conservation Rank ²			At Risk Status		
		Global GRANK	Canada NRANK ⁴	Ontario SRANK ³	COSEWIC	SARO	SARA
Common Name	Scientific Name						
Woodland Jumping Mouse	<i>Napaeozapus insignis</i>	G5	N5	S5	-	-	-
Porcupine	<i>Erethizon dorsatum</i>	G5	-	S5	-	-	-
Carnivores							
Coyote	<i>Canis latrans</i>	G5	N5	S5	-	-	-
Gray Wolf	<i>Canis lupus</i>	G4	N4	S4	-	-	-
Red Fox	<i>Vulpes vulpes</i>	G5	N5	S5	-	-	-
Black Bear	<i>Ursus americanus</i>	G5	N5	S5	-	-	-
Raccoon	<i>Procyon lotor</i>	G5	N5	S5	-	-	-
Marten	<i>Martes americana</i>	G5	N5	S5	-	-	-
Fisher	<i>Martes pennanti</i>	G5	N5	S5	-	-	-
Ermine	<i>Mustela erminea</i>	G5	N5	S5	-	-	-
Long-tailed Weasel	<i>Mustela frenata</i>	G5	N5	S4	-	-	-
Least Weasel	<i>Mustela nivalis</i>	G5	N5	SU	-	-	-
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	N5	S5	-	-	-
Ungulates							
White-tailed Deer	<i>Odocoileus virginianus</i>	G5	N5	S5	-	-	-
Moose	<i>Alces alces</i>	G5	N5	S5	-	-	-

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

² Accessed from NHIC, 2008b.

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

⁴ NRANK = National Status (NatureServe (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.

3. Species of Conservation Concern/Species at Risk

As identified above in Section 2, several species of conservation concern/species at risk may potentially occur on the Project location. These species and their likelihood of occurrence on the Project location are addressed below.

3.1.1 Birds

The following bird Species at Risk were identified during the records review:

- **Peregrine Falcon** – Listed as being of special concern on SARA and threatened on the ESA. The Peregrine Falcon can be found throughout Canada in urban and rural areas. It typically nests about 50 m to 200 m off the ground in cliff ledges or crevices, though they are also known to nest on building ledges (Government of Canada, 2009a). Discussion with MNR Parry Sound District, and the absence of suitable nesting sites on the Project location, have determined that these species are not expected to occur.

- **Whip-poor-will** – Listed as threatened under ESA and COSEWIC. Whip-poor-wills nest in a mix of open and forested areas. This type of habitat may be available within the woodlands adjacent to the Project location, but not on the Project location.
- **Chimney Swift** – Listed as threatened under SARA and ESA. This species can be found in cave walls, hollow trees as well as man-made structures, such as chimneys. Suitable nesting habitat is not found within the Project location, and therefore Chimney Swifts are not expected to occur on the Project location.
- **Bobolink** – Listed as threatened under ESA. Bobolink are commonly observed on pasturelands and hayfields. Suitable habitat may be available on the agricultural lands of and near the Project location.

The following bird Species of Conservation Concern were identified during the records review:

- **Common Nighthawk** – Listed as being of special concern on the ESA and threatened on SARA. 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 within the agricultural lands 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.
- **Olive-sided Flycatcher** – Listed as threatened on SARA and special concern on the ESA. This species is found in natural or man-made open areas containing tall live trees or snags for perching (Government of Canada, 2009b). Habitat of this type is available within the local area, though not found on the Project location itself. No Olive-sided Flycatchers have been observed during OBBA surveys within the 10 x 10-km survey square that overlaps the property (Bird Studies Canada et al., 2006).
- **Canada Warbler** – Canada Warbler are listed as being of special concern under SARA and threatened under ESA, and are known to occur in the 10 x 10-km Ontario Breeding Bird Atlas survey square which overlaps the Project location. Suitable habitat for Canada Warbler may be found within the woodlands within 120 m of the Project location.
- **Golden-winged Warbler** – Golden-winged Warbler are listed as being of special concern under SARA and threatened under ESA, and are known to occur in the 10 x 10-km Ontario Breeding Bird Atlas survey square which overlaps the Project location. Suitable early successional habitat for Golden-winged Warbler may be found on or within 120 m of the Project location.

3.1.2 *Reptiles and Amphibians*

The following reptile and amphibian Species at Risk were identified during the records review:

- **Eastern Hog-nosed Snake** – Listed as threatened under SARA and ESA. The Eastern Hog-nosed Snake favours open vegetative cover, such as open woods, brushland, forest edge and disturbed sites with sandy soils (Government of Canada, 2009c). Suitable habitat may be found on the Project location, however as previously discussed in Section 2.1.1, the MNR considers the probability of occurrence to be low.

- **Blanding's Turtle and Eastern Musk Turtle** – Listed as threatened under SARA and ESA. These species may be found associated with the watercourses on the Project location.

The following reptile and amphibian Species of Conservation Concern were identified during the records review:

- **Milksnake** – Listed as being of special concern under SARA and 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.
- **Northern Ribbonsnake** – Listed as being of special concern under SARA and ESA. The Northern Ribbonsnake is commonly found in wet areas, including weedy shorelines. Habitat of this type may be available along the shoreline of the watercourse. Ribbonsnake are not expected to occur away from the shoreline of the watercourse.
- **Northern Map Turtle and Snapping Turtle** – Northern Map Turtle are listed as being of special concern under SARA and ESA, while Snapping Turtle are listed as being of special concern under ESA alone. These species may be found associated with the watercourses on the Project location.
- **Five-lined Skink** – Listed as being of special concern under SARA and ESA. The Five-lined Skink prefers rocky outcrops where there is access to sunlight within fields or mixed deciduous forest and coniferous forests (Government of Canada, 2009d). Suitable habitat may be found within the woodlands within 120 m of the Project location.
- **Western Chorus Frog** – Listed as threatened under SARA, 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 within the woodlands 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.

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.

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	A deer wintering area, a type of wildlife habitat, is present on 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.
Is the Project within 120 m of a natural feature that is not an ANSI (earth science)?	Yes	Wetlands and deer wintering area, a type of wildlife habitat, are present on and within 120 m of the Project location.

5. References

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Appendix A

Ontario Breeding Bird Atlas Results



Square Summary (17PL25)

#species (1st atlas)				#species (2nd atlas)			#hours		#pc done		
poss	prob	conf	total	poss	prob	conf	total	1st	2nd	road	offrd
33	36	36	105	60	26	34	120	23	34	19	6

Region summary (#28: Parry Sound)

#squares	#sq with data		#species		#pc done	target #pc
	1st	2nd	1st	2nd		
85	85	85	169	182	1292	531

Target number of point counts in this square: 19 road side, 6 off road (2 in deciduous forest, 4 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		%	
	1st	2nd	1st	2nd
Canada Goose		NE	1	74
Trumpeter Swan †			0	1
Wood Duck	T	FY	58	80
Gadwall			1	2
American Wigeon ‡			0	1
American Black Duck	T	FY	58	51
Mallard	FY	FY	75	85
Blue-winged Teal	T	H	23	9
Northern Shoveler	FY	H	1	4
Northern Pintail			1	1
Green-winged Teal			0	10
Ring-necked Duck			11	25
Bufflehead †			0	0
Common Goldeneye ‡			0	2
Hooded Merganser			37	49
Common Merganser		FY	63	70
Red-breast Merganser			10	10
Ruffed Grouse		FY	72	87
Spruce Grouse			5	15
Wild Turkey ‡			0	11
Common Loon	A	T	91	95
Pied-billed Grebe			10	20
Double-crest Cormorant §			10	17
American Bittern		H	49	58
Least Bittern †			0	0
Great Blue Heron §	H	H	96	90
Green Heron §	H	H	10	11
Black-crown N.-Heron † §			1	2
Turkey Vulture	H	H	55	88

SPECIES	Code		%	
	1st	2nd	1st	2nd
Osprey			35	42
Bald Eagle †			1	4
Northern Harrier	H	H	38	32
Sharp-shinned Hawk		H	27	41
Cooper's Hawk		H	9	18
Northern Goshawk			12	23
Red-should Hawk †		H	27	41
Broad-winged Hawk	CF	H	85	89
Red-tailed Hawk	H	H	50	48
American Kestrel	CF	AE	54	44
Merlin		T	1	48
Yellow Rail †			0	0
Virginia Rail			17	16
Sora	T		5	14
Common Moorhen			0	0
American Coot			0	0
Sandhill Crane			1	37
Killdeer	FY	H	81	57
Rock Dove	H	H	34	47
Spotted Sandpiper	FY	H	75	68
Solitary Sandpiper			0	1
Upland Sandpiper			3	8
Common Snipe	T	T	57	48
American Woodcock		D	50	52
Wilson's Phalarope †			0	0
Little Gull †			1	0
Ring-billed Gull §			7	17
Herring Gull §	H	AE	83	88
Great Black-backed Gull †			0	1

SPECIES	Code		%	
	1st	2nd	1st	2nd
Caspian Tern †			4	1
Black Tern † §			1	1
Common Tern §			14	16
Mourning Dove	P	P	30	69
Yellow-billed Cuckoo			2	3
Black/Yell-billed Cuckoo			0	14
Black-billed Cuckoo		T	31	64
Eastern Screech-Owl ‡			0	0
Great Horned Owl			10	23
Northern Hawk Owl ‡			0	0
Barred Owl	P	T	45	58
Long-eared Owl ‡			0	2
Short-eared Owl †			0	1
Boreal Owl ‡			0	3
North Saw-whet Owl	H	H	47	28
Common Nighthawk	T	T	45	27
Whip-poor-will			42	25
Chimney Swift	T	H	74	28
Ruby-thr Hummingbird	H	FY	91	92
Belted Kingfisher	NU	NU	83	84
Red-headed Woodpecker †			3	2
Red-bell Woodpecker ‡			0	0
Yellow-bellied Sapsucker	FY	NY	89	90
Downy Woodpecker	H	CF	78	88
Hairy Woodpecker	P	H	87	92
Black-backed Woodpecker	H		25	29
Northern Flicker	NU	FY	95	94
Pileated Woodpecker		H	74	89
Olive-sided Flycatcher	S		62	51

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Ontario Breeding Bird Atlas - Summary Sheet for Square 17PL25 (page 2 of 3)

SPECIES	Code		%		SPECIES	Code		%		SPECIES	Code		%	
	1st	2nd	1st	2nd		1st	2nd	1st	2nd		1st	2nd	1st	2nd
Eastern Wood-Pewee	S	S	87	70	House Wren	S	S	23	48	Black-thr Green Warbler	S	S	88	95
Yellow-bellied Flycatcher			25	38	Winter Wren	S	S	81	91	Blackburnian Warbler	CF	S	90	90
Alder Flycatcher	A	S	74	87	Sedge Wren			21	14	Pine Warbler	S	S	36	80
Willow Flycatcher		S	1	7	Marsh Wren			3	9	Prairie Warbler †			4	7
Least Flycatcher	S	S	88	84	Golden-crown Kinglet	P	S	57	72	Bay-breasted Warbler			5	12
Eastern Phoebe	A	S	83	94	Ruby-crown Kinglet	S	T	65	52	Cerulean Warbler †			0	0
Gr Crested Flycatcher	P	H	91	94	Eastern Bluebird		AE	30	44	Black-white Warbler	S	P	94	98
Eastern Kingbird	CF	H	97	83	Veery	A	S	94	92	American Redstart	A	S	95	98
Yellow-throated Vireo			5	7	Swainson's Thrush		T	64	67	Ovenbird	A	DD	91	96
Blue-headed Vireo	S	A	44	81	Hermit Thrush	FY	S	85	82	North Waterthrush	S	S	71	74
Warbling Vireo	D	S	62	51	Wood Thrush	S	S	82	76	Louis Waterthrush †			0	1
Philadelphia Vireo		H	10	24	American Robin	FY	NY	94	92	Mourning Warbler	CF	S	83	75
Red-eyed Vireo	A	S	96	98	Gray Catbird	CF	S	89	77	Common Yellowthroat	CF	A	97	98
Gray Jay		T	35	37	Northern Mockingbird ‡			1	4	Wilson's Warbler ‡			1	1
Blue Jay	FY	A	90	96	Brown Thrasher	T	S	74	65	Canada Warbler	A	S	80	78
American Crow	FY	FY	91	94	European Starling	NY	CF	83	78	Scarlet Tanager		S	75	80
Common Raven	FY	CF	85	95	Cedar Waxwing	D	P	94	97	Eastern Towhee	H		25	28
Horned Lark			4	2	Golden-winged Warbler		S	40	20	Chipping Sparrow	A	CF	91	92
Purple Martin	P		30	9	Blue/Gold-wing Warbler			0	8	Clay-colored Sparrow ‡			2	5
Tree Swallow	FY	FY	97	85	Brewster's Warbler †			1	0	Field Sparrow	H		20	15
North Rgh-wing Swallow	FY	H	35	18	Tennessee Warbler			10	12	Vesper Sparrow		FY	41	23
Bank Swallow §	NU	NY	56	23	Nashville Warbler	FY	S	89	94	Savannah Sparrow	CF	FY	61	61
Cliff Swallow §	V	AE	62	29	Northern Parula		S	8	38	Grasshopper Sparrow ‡			1	3
Barn Swallow	FY	FY	90	74	Yellow Warbler	S	S	96	94	Le Conte's Sparrow ‡			0	1
Black-capped Chickadee	P	CF	91	96	Chestn-sided Warbler	FY	CF	94	96	Song Sparrow	CF	DD	98	98
Boreal Chickadee		T	3	12	Magnolia Warbler	A	NE	84	95	Lincoln's Sparrow			11	27
Red-breast Nuthatch	S	CF	88	92	Cape May Warbler	P	S	25	28	Swamp Sparrow	CF	S	91	89
White-breast Nuthatch	S	T	61	74	Black-thr Blue Warbler	S	S	69	89	White-throat Sparrow	A	CF	95	97
Brown Creeper		P	48	68	Yellow-rumped Warbler	FY	P	94	98	Dark-eyed Junco	S	P	48	50

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Ontario Breeding Bird Atlas - Summary Sheet for Square 17PL25 (page 3 of 3)

SPECIES	Code		%	
	1st	2nd	1st	2nd
Northern Cardinal			2	10
Rose-breast Grosbeak	A	S	88	88
Indigo Bunting	A	P	68	74
Bobolink	CF	S	58	51
Red-wing Blackbird	NE	A	98	90
Eastern Meadowlark	T	T	37	43
Rusty Blackbird			5	7
Brewer's Blackbird			1	3
Common Grackle	CF	CF	92	92
Brown-head Cowbird	D	H	81	56
<u>Baltimore Oriole</u>	CF		67	38
Purple Finch	P	FY	91	88
House Finch		S	0	7
Red Crossbill			10	0
White-winged Crossbill	H	D	16	31
Pine Siskin	H	H	52	40
American Goldfinch	P	D	88	87
Evening Grosbeak	H	H	62	67
House Sparrow	NY	H	31	20

This list includes all species found during the Ontario Breeding Bird Atlas (1st atlas: 1981-1985, 2nd atlas: 2001-2005) in the region #28 (Parry Sound). 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 17PL25 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 #28). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), ‡ (regionally rare), or † (provincially rare). Current as of 7/07/2010. An up-to-date version of this sheet is available from <http://www.birdsontario.org/atlas/summaryform.jsp?squareID=17PL25>

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