

# **McCann Solar Project**

Natural Heritage Records Review Report July 8, 2011



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

Natural Heritage Records Review Report

McCann Solar Project

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Project Report

July 8, 2011

# Northland Power Inc. McCann Solar Project

# Natural Heritage Records Review Report

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### 1. Introduction

### 1.1 **Project Description**

Northland Power Solar McCann L.P. (hereinafter referred to as "Northland") is proposing to develop a 10-megawatt (MW) solar photovoltaic Project, titled the McCann Solar Project (hereinafter referred to as the "Project"). The Project will be located on approximately 40 hectares (ha) of land, located just south of Big Rideau Lake in the Township of Rideau Lakes, within the United Counties of Leeds and Grenville (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.

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

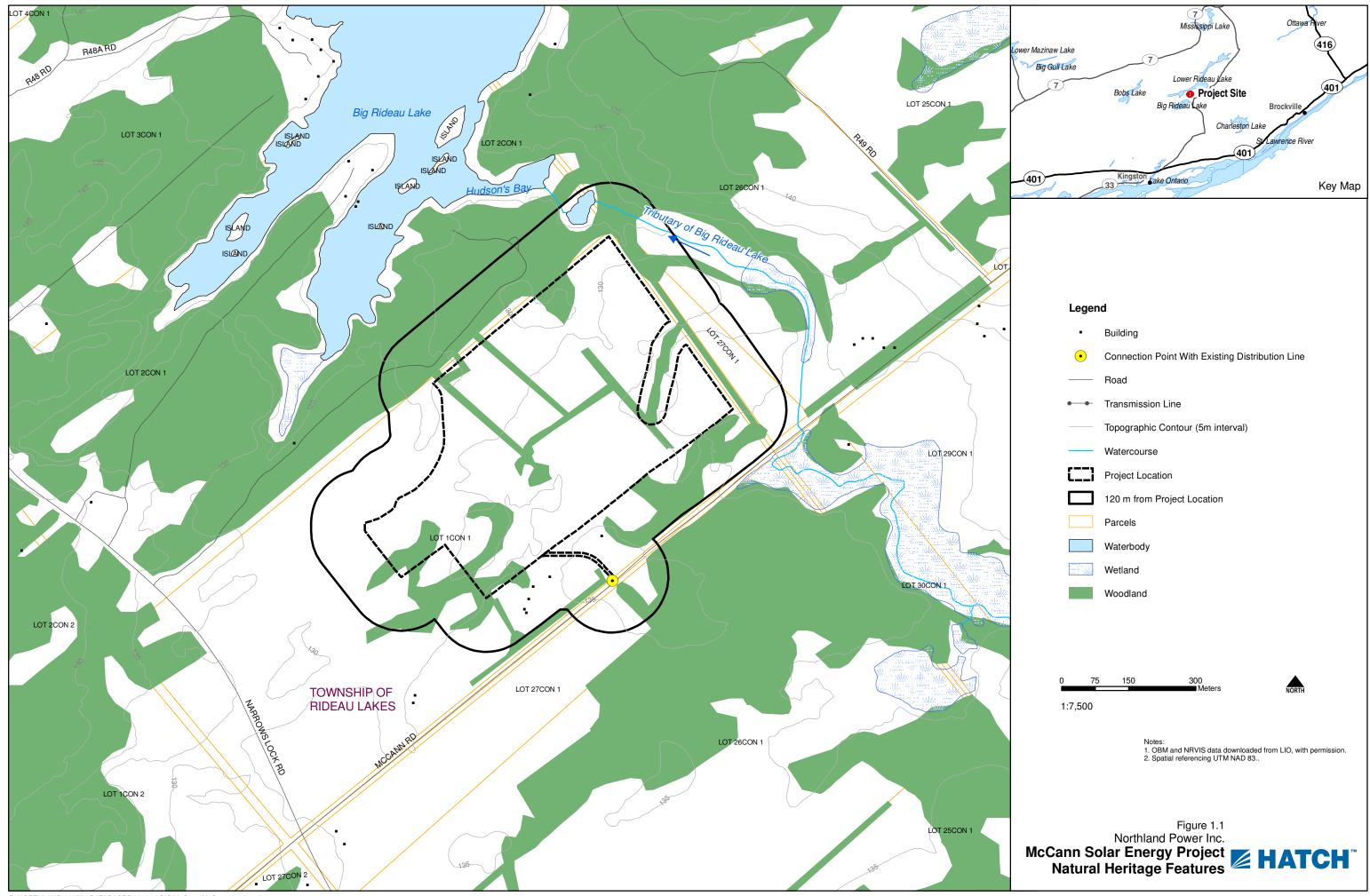
This Records Review Report is based on a review of published and non-published information on natural heritage features identified on or in close proximity to the Project location. The background documents reviewed were obtained from the municipalities, local planning staff, local conservation authority, and provincial and federal government agencies.

Records were searched within a minimum distance of 1 km from the Project location. 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 within the jurisdiction of the Project location. Also, the Project is not located within the Niagara Escarpment Commission Plan Area. Therefore, records review for these governing bodies was not conducted.





P:\NORTHLAND\333751\DATABASES\334844\GIS\McCann\McCann\_land.mxd

•	Building
•	Connection Point With Existing Distribution Line
	Road
••-	Transmission Line
	Topographic Contour (5m interval)
	Watercourse
[]]	Project Location
	120 m from Project Location
	Parcels
	Waterbody
HEF Sale	Wetland
	Woodland



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#### 2.1 Ministry of Natural Resources Records

The following Ministry of Natural Resources (MNR) on-line records were reviewed:

- Ontario Crown Land 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).

#### 2.1.1 Results

#### Ontario Crown Land Use Atlas Mapping

A review of the Crown Land Use Policy Atlas interactive map, accessed on June 2, 2010, did not indicate any Crown land within 1 km of the Project location.

#### MNR LIO Mapping

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

- Big Rideau Lake is located within 1 km north of the Project location
- five wooded areas are identified as being located on the Project location
- a wooded area is located adjacent to the southern boundary of the Project location
- an unevaluated wetland is located within 120 m southeast of the Project location
- a small fragment of a small, unevaluated wetland is present within 120 m north of the Project location
- there are no nesting sites identified on or within 1 km of the Project location
- there are no wintering areas identified on or within 1 km of the Project location
- there are no ANSIs on or within 1 km 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 2, 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 and plant communities, wildlife concentration areas, natural areas and invasive species occurrences.



The results of the queries determined that there has been an occurrence of one uncommon species [Prairie Warbler (*Dendroica discolor*)], a provincially tracked species, within 1 km of the Project location. There were no records of rare plant communities or wildlife concentration areas within 1 km of the Project location.

In addition to searching the NHIC database, natural heritage information was requested from the Kemptville District MNR office on June 12, 2010. Information was received on July 12, 2010 (Appendix C). The MNR identified three unevaluated wetland pockets within 120 m of the Project location (MNR, 2010). MNR also identified the presence of several woodlands within 120 m of the Project location. MNR (2010) also noted the occurrence of a Prairie Warbler occurrence within 120 m of 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 potentially overlapped with the Project location. These species are as follows, and discussed further in Section 3:

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

#### 2.2 Conservation Authority Records

The Project location is located within the jurisdiction of the Rideau Valley Conservation Authority (RVCA). A formal request for natural heritage information was sent to the RVCA by way of letter, in May 2010. Information, in the form of a Property Inquiry, was provided by the RVCA on June 29, 2010 (see Appendix B).

#### 2.2.1 Results

The information provided by RVCA did not identify any natural heritage features on the Project location. It did show several small wetlands within 120 m of the Project location and identified Big Rideau Lake within 300 m of the Project location (RVCA, 2010). There are no Regulated Areas under the RVCA's Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation.



# Table 2.1Reptiles and Amphibians Potentially Occurring on or within 120 m of the<br/>Project Location and their Conservation Status1

Spe		servation R		At Risk Status			
spe		Global	Canada	Ontario	COSEWIC	SARA	
Common Name	Scientific Name	GRANK	NRANK <sup>4</sup>	SRANK <sup>3</sup>	COSEMIC	SARO	JAKA
Salamanders	1 .	1	1	1	1	1	r
Mudpuppy	Necturus maculosus	G5	N4	S4	NAR	NAR	-
	Notophthalmus	<u> </u>		<b>6</b> -			
Red-spotted Newt	viridescens	G5	N5	S5	-	-	-
	viridescens Ambystoma						
Blue-spotted	jeffersonianum-	_	_	_	_	_	_
Salamander Complex	laterale "complex						
Yellow-spotted	Ambystoma	<u> </u>		6.4			
Salamander	maculatum	G5	N5	S4	-	-	-
Eastern Red-backed	Plethodon cinereus	G5	N5	S5			
Salamander		GD	CNI		-	-	-
Eastern Newt	Notophthalmus	G5T5	N5	S5	_	-	_
	viridescens	0010	1.10	00			
Frogs and Toads		65	N	<b>C -</b>	I		
American Toad	Bufo americanus	G5	N5	S5	-	-	-
Spring Peeper	Pseudacris crucifer	G5	N5	S5	-	-	-
Western Chorus Frog (Great Lakes/St.	Pseudacris triseriata	G5TNR		<b>S</b> 3	THR	NAR	THR
Lawrence population)	r seudacris triseriata	GETINK	-	55	ITK	IN/AK	(Schedule 1)
Gray Treefrog	Hyla versicolor	G5	N5	S5	-	-	_
Wood Frog	Rana sylvatica	G5	N5	\$5 \$5	-	-	-
American Bullfrog	Rana castebiana	G5	N5	55 54	-		
Green Frog	Rana clamitans	G5	N5	\$5 \$5	-	_	
Pickerel Frog	Rana palustris	G5	N5	55 54	NAR	NAR	_
Northern Leopard Frog	Rana pipiens	G5	N5	\$5 \$5	NAR	NAR	-
Wood Frog	Rana sylvatica	G5	N5	\$5	-	-	-
Turtles							
Snapping Turtle	Chelydra serpentina	G5	N5	\$3	SC	SC	-
Midland Painted Turtle	Chrysemys picta marginata	G5T5	N5	<b>S</b> 5	-	-	-
	Graptemys						SC
Northern Map Turtle	geographica	G5	-	S3	SC	SC	(Schedule 1)
Lizard							
							SC
							(Schedule 1,
Five-Lined Skink	Eumeces fasciatus	G5	N4	\$3	SC	-	Great Lakes/
							St. Lawrence
Snakes							Population
Slidkes	Thamnophis sirtalis						
Eastern Gartersnake	sirtalis	G5T5	N5	S5	-	-	-
							SC
Eastern Ribbonsnake	Thamnophis sauritus	0-		60	50	50	(Schedule 1,
Eastern Ribbonshake	septentrionalis	G5	-	S3	SC	SC	Great Lakes
							Population)
Northern Watersnake	Nerodia sipedon	G5T5	N5	S5	NAR	NAR	
i tortiferri matershake	sipedon	315	14.5	55		1.7.11	
Red-bellied Snake	Storeria	G5T5	N5	S5	-	-	-
	occipitomaculata	ļ				<u> </u>	





#### McCann Solar Project Natural Heritage Records Review Report

	Cor	servation R	ank²	At Risk Status			
Spe	Global	Canada	Ontario	COSEWIC	SARO	SARA	
Common Name	Common Name Scientific Name GRANK NRANK⁴		SRANK <sup>3</sup>	COSEWIC	SAKU	JAKA	
Dekay's Brownsnake	Storeria dekayi	G5	N5	S5	NAR	NAR	-
Smooth Green Snake	Opheodrys vernalis	G5	N5	S4	-	-	-
Northern Ringneck Snake	Diadophis punctatus edwardsi	G5 T5	Τ5	S4	-	-	-
Eastern Milksnake	Lampropeltis triangulum	G5	N5	<b>S</b> 3	SC	SC	SC (Schedule 1)

<sup>1</sup> As determined from potential climatic domain maps in McKenney et al (2007) and range maps provided in Oldham and Weller (2002).

<sup>2</sup> Accessed from NHIC, 2010

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

<sup>4</sup>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

#### 2.3 Municipal Records – Township of Rideau Lakes

The Project location is located within the Township of Rideau Lake, a lower tier municipality. A review of the official Township website (<u>http://www.twprideaulakes.on.ca/</u>) was conducted to find any further natural heritage information about the Project location.

#### 2.3.1 Results

The Official plan of the Township of Rideau Lakes (TRL, 2004) does not identify any natural heritage features, such as provincial significant wetland or ANSIs on or within 120 m of the Project location. Similarly, the Zoning By-law does not identify the area on or within 120 m of the Project location as environmentally sensitive.

#### 2.4 Municipal Records – United Counties of Leeds and Grenville

The Project location is located within the upper tier municipality of the United Counties of Leeds and Grenville. A review of the official County website (<u>http://www.uclg.ca/en/index.asp</u>) was undertaken to determine if there is any additional natural heritage information available regarding the Project location.

#### 2.4.1 Results

A community map on the County website did show the Project area and it confirmed that the Project location was not located within 1 km of any Provincial Parks. No further information regarding any natural features was found on the website.

#### 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)
- Eastern Ontario Model Forest.

#### 2.5.1 Results

#### 2.5.1.1 Ontario Breeding Bird Atlas

The Ontario Breeding Bird Atlas on-line database was accessed on June 2, 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-km<sup>2</sup> blocks which are given a map square number. The Project location is located within map square 18UQ94. The square coverage summary sheet was downloaded and the results are provided in Appendix A. Of the species that were recorded, numerous species of conservation concern were identified whose ranges overlap that of the Project location. These species are as follows, and discussed in Section 3:

- Cerulean Warbler (Dendroica cerulean)
- Canada Warbler (Wilsonia canadensis)
- Golden-winged Warbler (Vermivora chrysoptera)
- Black Tern (Chlidonias niger)
- Red-headed Woodpecker (*Melanerpes erythrocephalus*)
- American Kestrel (Falco sparverius)
- Black-billed Cuckoo (Coccyzus erythropthalmus)
- 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).



#### 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 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 Potential	v Occurring on or withi	n 120 m of the Project Location
Tuble 2.2 Maintais Fotentian	y occurring on or writin	120 m of the Project Location

Species <sup>1</sup>		Con	servation Ra	unk <sup>2</sup>	At Risk Status			
-		Global	Canada	Ontario	COSEWIC	SARO	SARA	
Common Name	Scientific Name	GRANK	NRANK <sup>4</sup>	SRANK <sup>3</sup>	costine	5/ 110	<i>5/</i> <b>10 1</b>	
Shrews and Moles			-					
Common Shrew	Sorex cinereus	G5	N5	S5	-	-	-	
Smoky Shrew	Sorex fumeus	G5	N5	S5	-	-	-	
Northern Short- tailed Shrew	Blarina brevicauda	G5	N5	S5	-	-	-	
Star-nosed Mole	Condylura cristata	G5	N5	S5	-	-	-	
Bats	, ,				•			
Little Brown Bat	Myotis lucifuga	G5	N5	S5	-	-	-	
Big Brown Bat	Epstesicus fuscus	G5	N5	S5	-	-	-	
Eastern Red Bat	Lasiurus borealis	G5	N4N5	S4	-	-	-	
Rabbits and Hares			1					
Eastern Cottontail	Sylvilagus floridanus	G5	N5	S5	-	-	-	
Snowshoe Hare	Lepus americanus	G5	-	S5	-	-	-	
European Hare	Lepus europeanus	G5	NE	SE	-	-	-	
Rodents					•			
Eastern Chipmunk	Tamias striatus	G5	N5	S5	-	-	-	
Woodchuck	Marmota monax	G5	N5	S5	-	-	-	
Gray Squirrel	Sciurus carolinensis	G5	N5	S5	-	-	-	
Red Squirrel	Tamiasciurus hudsonicus	G5	N5	S5	-	-	-	
Northern Flying Squirrel	Glaucomys sabrinus	G5	-	S5	-	-	-	
Southern Flying Squirrel	Glaucomys volans	G5	N3	S4	-	-	-	
Beaver	Castor canadensis	G5	N5	S5	-	-	-	
White-footed Mouse	Peromyscus leucopus	G5	N5	S5	-	-	-	
Deer Mouse	Peromyscus maniculatus	G5	N5	S5	-	-	-	
Meadow Vole	Microtus pennsylvanicus	G5	N5	S5	-	-	-	
Muskrat	Ondatra zibethicus	G5	N5	S5	-	-	-	
Norway Rat	Rattus norvegicus	G5	NE	SE	-	-	-	
House Mouse	Mus musculus	G5	NE	SE	-	-	-	
Meadow Jumping Mouse	Zapus hudsonius	G5	N5	S5	-	-	-	
Woodland Jumping Mouse	Napaeozapus insignis	G5	N5	S5	-	-	-	





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S	Con	servation Ra	ınk²	At Risk Status			
Species <sup>1</sup> Common Name Scientific Name		Global GRANK	Canada NRANK⁴	Ontario SRANK <sup>3</sup>	COSEWIC	SARO	SARA
Porcupine	Erethizon dorsatum	G5	-	S5	-	-	-
Carnivores			•	•	•	•	
Coyote	Canis latrans	G5	N5	S5	-	-	-
Red Fox	Vulpes vulpes	G5	N5	S5	-	-	-
Black Bear	Ursus americanus	G5	N5	S5	-	-	-
Raccoon	Procyon lotor	G5	N5	S5	-	-	-
Marten	Martes Americana	G5	N5	S5	-	-	-
Fisher	Martes pennanti	G5	N5	S5	-	-	-
Ermine	Mustela erminea	G5	N5	S5	-	-	-
Mink	Mustela vison	G5	N5	S4	-	-	-
Striped Skunk	Mephitis mephitis	G5	N5	S5	-	-	-
River Otter	Lontra canadensis	G5	N5	S5	-	-	-
Canada Lynx	Lynx canadensis	G5	N5	S5	-	-	-
Ungulates							
White-tailed Deer	Odocoileus virginianus	G5	N5	S5	-	-	-

<sup>1</sup> As determined from Dobbyn (1994).

<sup>2</sup> Accessed from NHIC, 2010

<sup>3</sup> SRANK = Provincial Status (NHIC, 2010); S = Sub-national Rank (Ontario), 2 = Imperilled,

3 = Vulnerable, 4 = Apparently Secure, 5 = Secure, E = Exotic, U = Unknown

<sup>4</sup> 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

#### 2.5.1.3 Important Bird Areas of Canada

A review of the Project area indicates that the Project is not within any Important Bird Areas of Canada.

#### 2.5.1.4 Eastern Ontario Model Forest

Mark Richardson, General Manager of the Eastern Ontario Model Forest (EOMF), was contacted to determine if the EOMF had any information relating to woodlands in the area of the Project location. In an e-mail of February 18, 2011 to Sean Male of Hatch, Mark Richardson indicated that the EOMF did not have data specific to the area.

### 3. Species of Conservation Concern

As identified in Section 2, several species of conservation concern 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

• **Red-headed Woodpecker** – Listed as being of special concern on the Species at Risk in Ontario (SARO) list. This species can be found in field edges and farmyards with a few large trees



(Government of Canada, 2009b). Habitat of this type is available on the Project location, and fledged young were observed within the 10 by 10-km survey square which overlaps the Project location during the first OBBA (1981 to 1985), though none were observed in the second (2001 to 2005) (Bird Studies Canada et al., 2006). It is possible that Red-headed Woodpeckers could occur in the woodlands on or within 120 m of the Project location.

- **Cerulean Warbler** Listed as being of special concern on the SARO list. Cerulean Warblers nest within mature deciduous upland or swamp forests with a tall canopy of uneven structure, often with gaps, and a sparse understorey.
- **Golden-winged Warbler** Listed as being of special concern on the SARO list. Golden-winged Warbler breed within successional scrub habitats surrounded by forests which are used for foraging and song posts.
- **Canada Warbler** Listed as being of special concern on the SARO list. Canada Warbler are usually found breeding within most-coniferous deciduous forests with a well-developed understorey. In eastern Ontario, they are most commonly found in areas on the Canadian Shield.
- Black Tern Listed as being of special concern on the SARO list. Black Terns nest in colonies on shallow marshes. No nesting colonies are present within the vicinity of the Project location, and suitable habitat is not known to occur on or within 120 m; therefore, Black Tern are not expected to occur on or within 120 m of the Project location.
- 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. 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.
- **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.
- 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.
- **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.
- **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.



- **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.
- **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.
- **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.
- **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.
- 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.
- 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.
- **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 successionally habitats.
- **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.

#### 3.1.2 Reptiles and Amphibians

- Several species of turtle, including **Northern Map** and **Snapping** (listed as being of Special Concern on the SARO list), may potentially occur within 120 m of the Project location. Watercourses on and near the Project location could provide habitat for these species.
- Western Chorus Frog Listed as threatened under SARA. The Western Chorus Frog frequents low-land areas such as marshes and wooded wetland areas. It requires seasonally dry temporary ponds for tadpoles growth and is rarely found in permanent ponds (Government of Canada, 2009d). This type of habitat may be present within the wooded and wetland areas on and within 120 m of the Project location.
- Milksnake Listed as being of special concern on the SARO list (Government of Canada, 2009e). This species lives in open woodlands, fields and farm buildings (McKenney et al, 2007). Habitat of this type is available on and adjacent to the Project location. Suitable habitat is found on and within 120 m of the Project location.



- **Eastern Ribbonsnake** Listed as being of special concern on the SARO list. This species is semiaquatic and is typically found along watercourses and ponds bordered by dense vegetation (Government of Canada, 2009f). Eastern Ribbonsnake may be present in the area surrounding the watercourses present on and within 120 m of the Project location.
- **Five-lined Skink** Listed as being of Special Concern on the SARO list. The habitat of the Fivelined 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.

### 4. Summary of Results

Table 4.1 summarizes the results of the records review according to the features identified in Section 1.2. A map depicting the identified natural features on and in proximity to the site is provided in Figure 1.1.

Determination to be Made	Yes/No	Description
Is the Project in or within 120 m of a provincial park or conservation	No	The nearest such features are located more than 120 m away from the Project location.
reserve?		than 120 m away from the Project location.
Is the Project in a natural feature?	Yes	There are woodlands identified on the
		Project location
Is the Project within 50 m of an ANSI	No	The nearest earth science ANSI is located
(earth science)?		several kilometres from the Project
		location.
Is the Project within 120 m of a	Yes	The Project location is located within
natural feature that is not an ANSI		120 m of unevaluated wetlands and
(earth science)?		woodlands.

Table 4.1	Summary	of Records Review Determinations
Tuble III	Janna	or needrus nerren Determinutions

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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# Appendix A Ontario Breeding Bird Data



Square Summary (18UQ94)										
#specie	s (1st a	tlas)	#spe	ecies (	2nd a	tlas)	#ho	ours	#pc	done
poss pro	b conf	total	poss	prob	conf	total	1st	2nd	road	offrd
13 43	62	118	30	26	65	121	74	72	64	4

Region	summary	(#21:	Kingston)

#

laguaraa	#sq w	ith data	#spe	ecies	#na dana	target #p			
squares	1st	2nd	1st	2nd	#pc done	target #pc			
75	75					1875			

Target number of point counts in this square: 21 road side, 4 off road (1 in open wetlands, 1 in treed wetlands, 1 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	Co	de	%		SPECIES	Cod	le	%	SPECIES	Co	de	%	
SPECIES	1st	2nd	1st	2nd	SPECIES	1st	2nd	1st 2nd	SFECIES	1st	2nd	1st	2nd
Canada Goose		FY	52	97	Pied-billed Grebe		S	61 78	Spotted Sandpiper	Ρ	Н	90	78
Mute Swan ‡			0	8	Double-crest Cormorant §			14 21	Upland Sandpiper	Ρ		73	58
Trumpeter Swan †		FY	0	9	American Bittern	Т	Т	92 88	Common Snipe	NE	NE	98	98
Tundra Swan †			0	0	Least Bittern †		S	46 37	American Woodcock	D	Т	97	81
Wood Duck	FY	AE	92	94	Great Blue Heron §	Н	H	97 89	Wilson's Phalarope †			6	4
Gadwall			24	21	Green Heron §	Н	FY	97 86	Ring-billed Gull §			17	18
American Wigeon			16	14	Black-crown NHeron † §			13 4	Herring Gull §	Н	Н	26	32
American Black Duck	Ρ		81	29	Turkey Vulture	Ρ	Т	84 94	Great Black-backed Gull †			2	5
Mallard	FY	FY	100	98	Osprey	NY	NY	52 77	Caspian Tern †			10	5
Blue-winged Teal	Ρ	Р	98	66	Bald Eagle †		NY	5 12	Black Tern † §	Н		54	45
Northern Shoveler			18	16	Northern Harrier		Н	89 76	Common Tern §			18	17
Northern Pintail			24	17	Sharp-shinned Hawk	H		52 58	Forster's Tern † §			0	2
Green-winged Teal			0	37	Cooper's Hawk		Р	29 49	Mourning Dove	FY	FY	100	98
Canvasback †			0	0	Northern Goshawk			18 18	Budgerigar ‡			0	0
Redhead †			8	1	Red-should Hawk †	Т	NY	42 54	Yellow-billed Cuckoo		S	62	49
Ring-necked Duck			22	30	Broad-winged Hawk	Н	Р	50 49	Black/Yell-billed Cuckoo		S	0	41
Lesser Scaup ‡			2	1	Red-tailed Hawk	NY	AE	100 93	Black-billed Cuckoo	Т	Н	98	89
Common Goldeneye ‡			0	1	American Kestrel	AE	CF	98 84	Barn Owl †			1	0
Hooded Merganser		AE	40	62	Merlin	H		2 34	Eastern Screech-Owl	Т	S	74	76
Common Merganser	Н		18	33	Peregrine Falcon †			1 0	Great Horned Owl	Т	D	96	76
Red-breast Merganser			12	8	King Rail †			1 2	Barred Owl	Т	Т	40	65
Ruddy Duck †			1	5	Virginia Rail	Р	S	86 89	Long-eared Owl			41	16
Gray Partridge			20	1	Sora	Т	FY	81 76	Short-eared Owl †			22	8
Ring-necked Pheasant		FY	34	28	Common Moorhen	Т	S	80 56	North Saw-whet Owl			61	10
Ruffed Grouse	FY	FY	92	88	American Coot			26 12	Common Nighthawk	D	NE	86	54
Sharp-tailed Grouse †			0	1	Coot/Moorhen		S	0 8	Chuck-will's-widow †			1	0
Wild Turkey		FY	4	80	Sandhill Crane ‡			0 4	Whip-poor-will	NY	Т	89	69
Northern Bobwhite †			1	0	Killdeer	DD	FY	98 97	Chimney Swift	AE		76	50
Common Loon	FY	FY	84	85	Rock Dove	FY	Н	96 93	Ruby-thr Hummingbird	AE	Н	92	96

next page >>

SPECIES		Code %			SPECIES	Code %			SPECIES		Code		%	
	1st	2nd	1st	2nd	JFEUIED	1st	2nd	1st	2nd	JFEUED	1st	2nd	1st	2nd
Belted Kingfisher	Ρ	Р	97	97	Purple Martin	FY	NY	84	73	Cedar Waxwing	D	Н	98	98
Red-headed Woodpecker †			54	8	Tree Swallow	FY	AE	100	98	Blue-winged Warbler			9	18
Red-bell Woodpecker ‡			0	20	North Rgh-wing Swallow	AE	FY	92	78	Golden-winged Warbler	Т	Р	46	60
Yellow-bellied Sapsucker	AE	FY	68	72	Bank Swallow §	AE	AE	88	68	Blue/Gold-wing Warbler			0	29
Downy Woodpecker	FY	FY	96	98	Cliff Swallow §	AE		62	60	Lawrence's Warbler †			1	1
Hairy Woodpecker	FY	Р	97	98	Barn Swallow	FY	AE	100	98	Brewster's Warbler †			1	9
Three-toed Woodpecker ‡			1	0	Black-capped Chickadee	NY	AE	98	98	Tennessee Warbler			4	2
Black-backed Woodpecker ‡			1	0	Tufted Titmouse †			0	2	Nashville Warbler	NE		77	82
Northern Flicker	AE	AE	100	98	Red-breast Nuthatch	А	S	58	74	Northern Parula ‡			1	8
Pileated Woodpecker	CF	AE	86	93	White-breast Nuthatch	Т	CF	97	97	Yellow Warbler	NY	FY	100	98
Olive-sided Flycatcher ‡			2	4	Brown Creeper	Ρ		61	58	Chestn-sided Warbler	CF	Т	80	96
Eastern Wood-Pewee	FY	Т	98	98	Carolina Wren ‡			2	10	Magnolia Warbler	Т	S	24	60
Yellow-bellied Flycatcher			8	4	House Wren	AE	FY	98	97	Black-thr Blue Warbler			20	44
Alder Flycatcher	Т	S	74	88	Winter Wren			42	57	Yellow-rumped Warbler	S	S	53	85
Willow Flycatcher	Т	A	73	80	Sedge Wren			34	24	Black-thr Green Warbler		S	48	76
Least Flycatcher	Т	AE	97	97	Marsh Wren		NU	74	81	Blackburnian Warbler	Т		46	54
Eastern Phoebe	NE	AE	98	98	Golden-crown Kinglet			5	14	Pine Warbler	Т	NY	58	80
Gr Crested Flycatcher	AE	AE	98	98	Ruby-crown Kinglet ‡			1	0	Prairie Warbler †			12	10
Eastern Kingbird	NE	NE	100	98	Blue-gr Gnatcatcher			22	21	Cerulean Warbler †	Т	S	25	26
Loggerhead Shrike †	Н		34	18	Eastern Bluebird	FY	CF	62	85	Black-white Warbler	Т	S	86	89
Yellow-throated Vireo	FY	Т	64	61	Veery	Т	Т	93	94	American Redstart	NE	CF	96	98
Blue-headed Vireo		Н	5	28	Swainson's Thrush			5	4	Ovenbird	Т	CF	90	94
Warbling Vireo	NY	A	98	98	Hermit Thrush	Т	S	36	53	North Waterthrush	AE	Н	82	88
Philadelphia Vireo	Т		9	9	Wood Thrush	Т	Т	97	98	Louis Waterthrush †			6	6
Red-eyed Vireo	CF	CF	98	98	American Robin	NY	CF	100	98	Mourning Warbler		Н	25	25
Blue Jay	V	FY	97	98	Gray Catbird	CF	CF	98	98	Common Yellowthroat	NE	FY	98	98
American Crow	FY	FS	98	98	Northern Mockingbird			22	29	Hooded Warbler †			0	0
Common Raven		FY	22	77	Brown Thrasher	CF	Т	100	94	Wilson's Warbler ‡			1	0
Horned Lark	Р	Н	85	65	European Starling	FY	CF	100	98	Canada Warbler	S		36	21

Ontario Breeding Bird Atlas - Summary Sheet for Square 18UQ94 (page 2 of 3)

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SPECIES	Code %	SPECIES	Code %			
SPECIES	1st 2nd 1st 2nd	SPECIES	1st 2nd	1st 2nd		
Yellow-breast Chat †	4 0	White-winged Crossbill		5 2		
Scarlet Tanager	CF T 90 92	Pine Siskin	Р	54 14		
Eastern Towhee	AE FY 97 90	American Goldfinch	N NB	100 98		
Chipping Sparrow	FY FY 100 98	Evening Grosbeak		17 10		
Clay-colored Sparrow	S 9 33	House Sparrow	AE FS	98 92		
Field Sparrow	FY FY 96 94					
Vesper Sparrow	T P 93 74					
Savannah Sparrow	FY CF 98 97					
Grasshopper Sparrow	50 58					
Henslow's Sparrow †	17 1					
Song Sparrow	NY FY 100 98					
Lincoln's Sparrow	5 4					
Swamp Sparrow	AE FY 97 97					
White-throat Sparrow	T S 92 85					
Dark-eyed Junco	FY 12 16					
Northern Cardinal	S T 61 88					
Rose-breast Grosbeak	CF T 98 98					
Indigo Bunting	CF FY 97 94					
Bobolink	FY FY 98 96					
Red-wing Blackbird	NY AE 100 98					
Eastern Meadowlark	FY FY 97 94					
Common Grackle	CF FS 100 98					
Brown-head Cowbird	FY P 100 97					
Orchard Oriole ‡	1 12					
Baltimore Oriole	CF AE 100 98					
Pine Grosbeak ‡						
Purple Finch	P H 68 84					
House Finch	T 22 72					
Red Crossbill	P 18 4					

#### Ontario Breeding Bird Atlas - Summary Sheet for Square 18UQ94 (page 3 of 3)

This list includes all species found during the Ontario Breeding Bird Atlas (1st atlas: 1981-1985, 2nd atlas: 2001-2005) in the region #21 (Kingston). 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 18UQ94 during the 2nd at 1st atlas respectively. The % columns give the percentage of squares in that region where that species was reported during the 2nd at 1st atlas (1st atlas expected chance of finding that species in region #21). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), ‡ (regionally rare), or † (provincially rare). Current as of 6/07/2010. An up-to-date version of this sheet is available from <a href="http://www.birdsontario.org/atlas/summaryform.jsp?squarelD=18UQ94">http://www.birdsontario.org/atlas/summaryform.jsp?squarelD=18UQ94</a>

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# Appendix **B**

Rideau Valley Conservation Authority Data



RIDEAU VALLEY CONSERVATION AUTHORITY

3889 Rideau Valley Drive, P.O. Box 599, Manotick, ON K4M 1A5 tel 613-692-3571 | 1-800-267-3504 | fax 613-692-0831 | www.rvca.ca A member of Conservation

Date: June 29, 2010 Our File: 10-RLA-GEN Reference: Barker on

Hatch Ltd. 500 - 4342 Queen St Niagara Falls, ON L2E 7J7 Attn: Caleb Coughlin

#### Subject: Property Inquiry for the renewable energy project located at Part of Lot 1, Concession 1, in the Township of North Crosby, Rideau Lakes Township, fronting on McCann Rd.

Dear Mr. Coughlin,

A search of our database indicates that there are currently no outstanding violations or orders on the property that we are aware of in so far as the Rideau Valley Conservation Authority's regulations are concerned. We are unaware of any directives, orders or breaches of regulations with respect to the current use of the property.

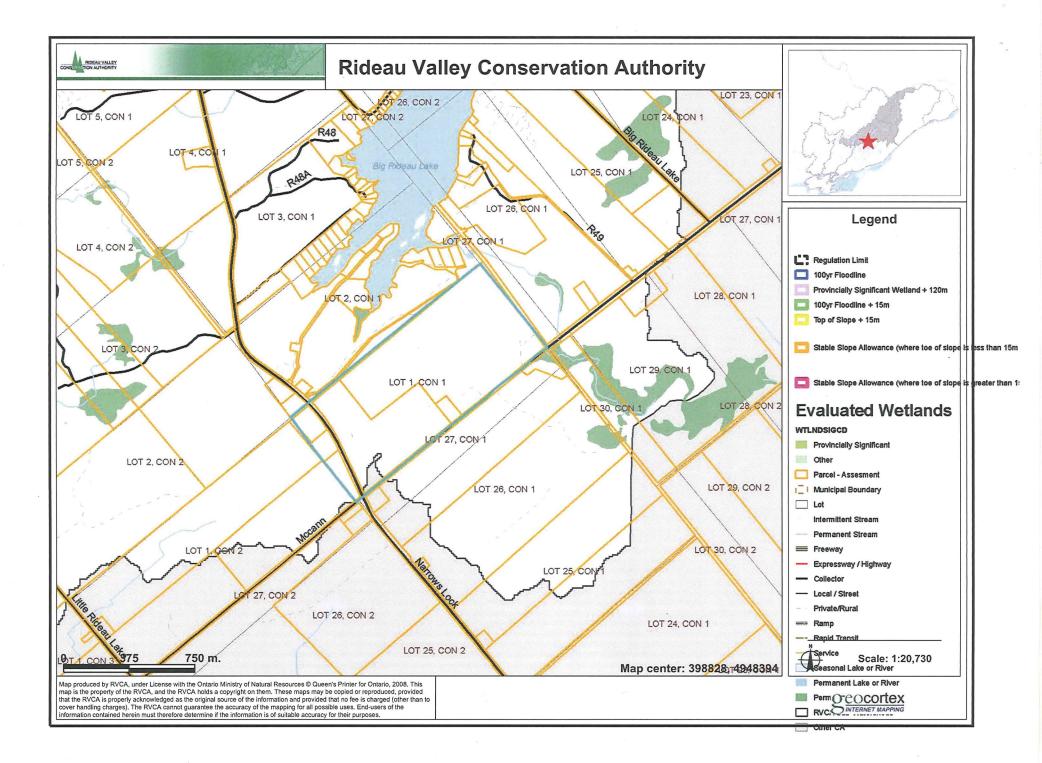
Any watercourse on the site is subject to the Development, Interference with Wetlands and Alteration to Shorelines and Watercourses Regulation. The regulation requires that the owner obtain written approval from the Conservation Authority prior to straightening, changing, diverting or interfering in any way with the channel of the watercourse (this includes watercourse crossings). The Conservation Authority typically requires a 30 metre development setback from the normal highwater mark of any watercourse to protect water quality, prevent erosion, encourage nutrient uptake and to mitigate impacts on fish habitat.

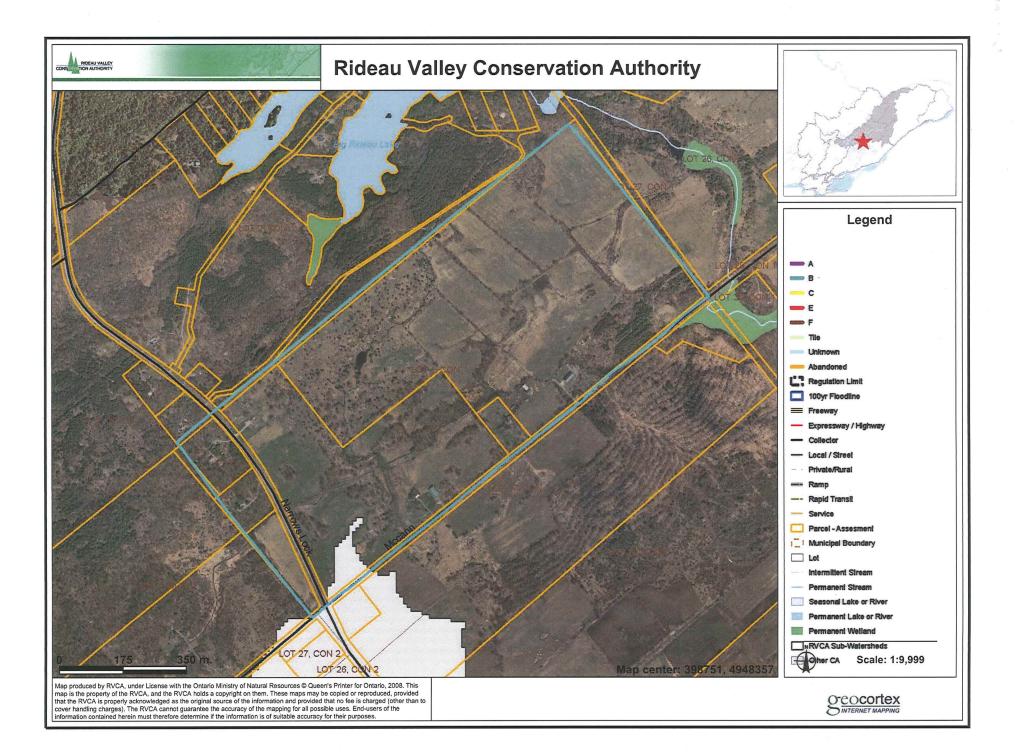
There are no features such as an ANSI (Area of Natural and Scientific Interest) located on the property. Should a *Planning Act* application be submitted to the municipality respecting any future development proposals, the Conservation Authority would likely be circulated the proposal for comments relating to the control of flooding, pollution and erosion. You may wish to contact the Ministry of Natural Resources – Kemptville (613-258-8204) for additional information concerning significant woodlots, wildlife habitat, and endangered species as we currently do not have mapping identifying these features.

The foregoing information is given for your convenience only and relates to the current use of the land. Municipal land use requirements may vary. It should be clearly understood that you must satisfy yourself as to whether the premises and the existing or proposed use thereof is or would be in conformity with all applicable regulations of the appropriate Conservation Authority. Should you have any questions please contact me at (613) 692-3571 x 1132.

Yours truly,

Megan Watters Resource Specialist







# Appendix C

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 Téléc.: (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</u>. 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 require (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 <u>Deborah.Nizman@ontario.ca</u>.

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: <u>http://www.mnr.gov.on.ca/en/Business/FW/Publication/MNR\_E001285P.html</u>
- Ontario Wetland Evaluation System: <u>http://www.mnr.gov.on.ca/en/Business/Biodiversity/2ColumnSubPage/STEL02\_176756.html</u>

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

Sincerely,

Lama Mel:

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