

# **Belleville North Solar Project**

Draft Natural Heritage Records Review Report January 31, 2011



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

DRAFT Natural Heritage Records Review Report

Belleville North Solar Project

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Project Report

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# Northland Power Inc. Belleville North Solar Project

# **DRAFT 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 City of Prince Edward County. This Project, known as the Belleville North Solar Project, is hereafter referred to as "Belleville North" or the "Project."

The Project location is approximately 40 hectares (ha) in size and located on Lot 65, Concession 5 Bay Side, west of the town of Crofton. The Project location is situated north of Burr Road and west of Highway 62 (shown in 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 the municipality, 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.

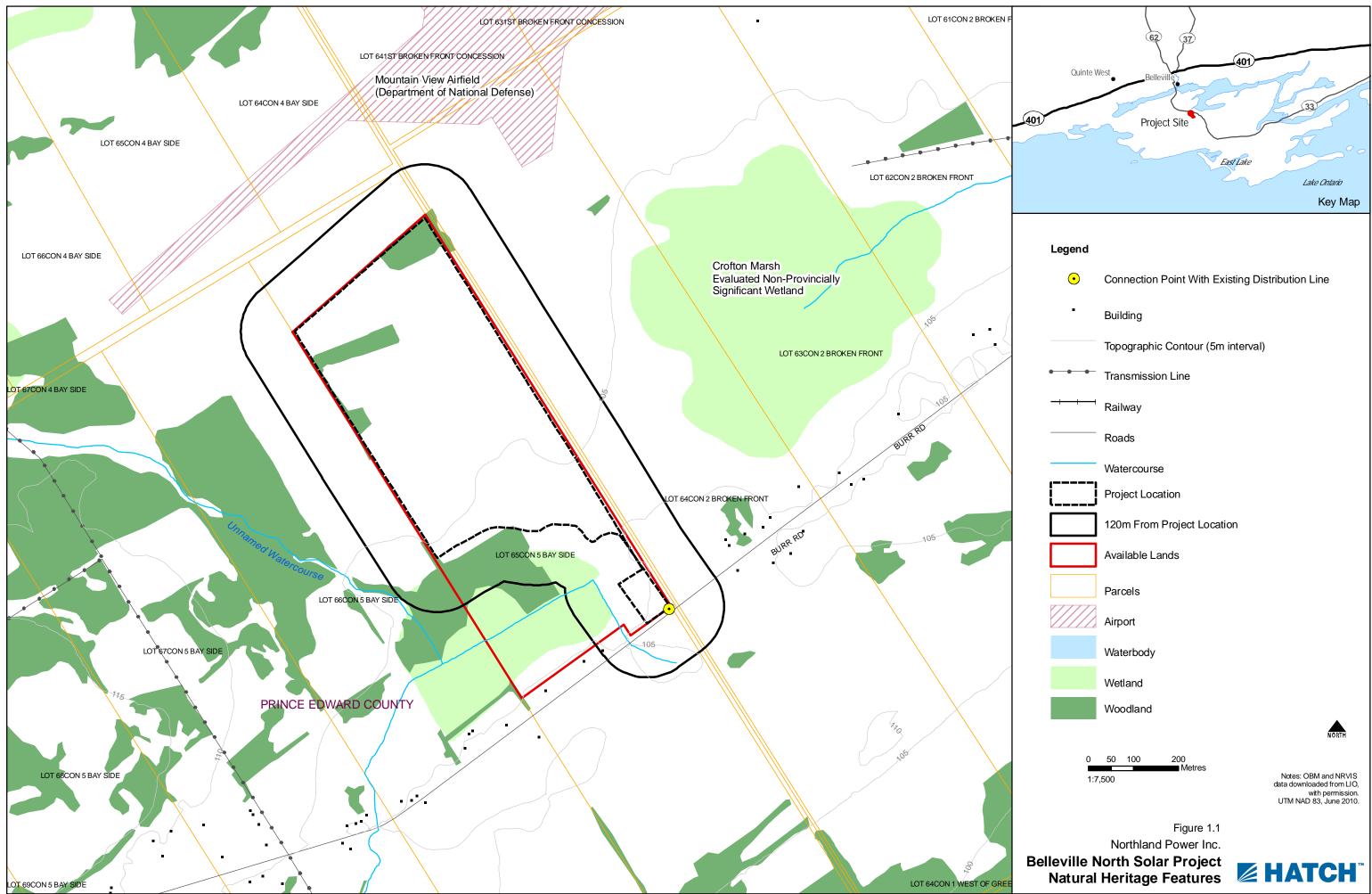
There are no planning boards, municipal planning authorities, local roads boards or local services boards within the jurisdiction of the Project location. Also, the Project location is not located within the Niagara Escarpment Commission Plan Area. Therefore, records review for these governing bodies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

#### 2.1 Ministry of Natural Resources Records

The following Ministry of Natural Resources (MNR) on-line 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).
- 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).





P:\NORTHLAND\333751\DATABASES\334844\GIS\BellevilleN\BellevilleNorth\_Land.mxd

$\overline{{ \cdot }}$	Connection Point With Existing Dis	g Distribution Line					
•	Building						
	Topographic Contour (5m interval)						
••-	Transmission Line						
	Railway						
	Roads						
	Watercourse						
	Project Location						
	120m From Project Location						
	Available Lands						
	Parcels						
	Airport						
	Waterbody						
	Wetland						
	Woodland						
		NORTH					
0	50 100 200 Metres						
1:7	,500	Notes: OBM and NRVIS data downloaded from LIO, with permission. UTM NAD 83, June 2010.					



Blank back





#### 2.1.1 Results

#### Ontario Crown Land Use Atlas Mapping

A review of the Crown Land Use Policy Atlas interactive map, accessed on May 14, 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:

- There are no wetland communities on the Project location, however there are unevaluated wetland communities identified within 120 m of the southern extent of the Project location.
- There are three woodlands present on, and four present within 120 m of, the Project location.
- No raptor nesting sites, deer wintering areas, or other specific wildlife habitat features were identified on or within 120 m of the Project location, though such features may be found present within the woodlands and wetlands present on and within 120 m of the Project location
- No ANSIs or valleylands were 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 identified the Project as being within the Napanee Limestone Plain Important Bird Area, which is discussed in greater detail in Section 2.5.

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

The NHIC database was accessed on May 3, 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, plant communities, wildlife concentration areas, natural areas and invasive species occurrences.

The results of the queries determined that there is one species of conservation concern (Climbing Prairie Rose (*Rosa setigera*)) and one natural area (Crofton Marsh LSW) within 1 km of the Project location. There were no records of plant communities, wildlife concentration areas or invasive species occurrences within 1 km of the Project location.

As a species of conservation concern, habitat for Climbing Prairie Rose, if present on or within 120 m of the Project location, would be considered wildlife habitat.

#### **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 at risk were identified whose ranges potentially overlapped with the Project location. These species are as follows, and are discussed further in Section 3:

- Milksnake (*Lampropeltis triangulum*)
- Western Chorus Frog (*Pseudacris triseriata*)





- Northern Ribbonsnake (Thamnophis sauritus)
- Northern Map Turtle (Graptemys geographica)
- Snapping Turtle (Chelydra serpentina).

Table 2.1	Reptiles and Amphibians Potentially Occurring on or within 120 m of the
	Project Location and their Conservation Status <sup>1</sup>

6	•	Con	servation <b>R</b>	lank <sup>2</sup>	At Risk Status			
-	ecies	Global GRANK	Canada NRANK <sup>3</sup>	Ontario SRANK⁴	COSEWIC	COSEWIC SARO/ ESA		
Common Name Salamanders	Scientific Name	Gibtin		Situati		ESA		
Salamanders	Masturius				1	1		
Mudpuppy	Necturus maculosus	G5	N4	S4	NAR	NAR	-	
Yellow-spotted Salamander	Ambystoma maculatum	G5	N5	S4	-	-	-	
Eastern Red- backed Salamander	Plethodon cinereus	G5	N5	S5	-	-	-	
Eastern Newt	Notophthalmus viridescens	G5T5	N5	S5	-	-	-	
Frogs and Toads					-			
American Toad	Bufo americanus	G5	N5	S5	-	-	-	
Spring Peeper	Pseudacris crucifer	G5	N5	S5	-	-	-	
Western Chorus Frog (Great Lakes/St. Lawrence population)	Pseudacris triseriata	G5TNR		53	THR	NAR	THR (Schedule 1)	
Gray Treefrog	Hyla versicolor	G5	N5	S5	-	-	-	
American Bullfrog	Rana castebiana	G5	N5	S4	-	-	-	
Green Frog	Rana clamitans	G5	N5	S5	-	-	-	
Pickerel Frog	Rana palustris	G5	N5	S4	NAR	NAR	-	
Northern Leopard Frog	Rana pipiens	G5	N5	S5	NAR	NAR	-	
Wood Frog	Rana sylvatica	G5	N5	S5	-	-	-	
Turtles								
Snapping Turtle	Chelydra serpentina	G5	N5	S3	SC	SC	-	
Midland Painted Turtle	Chrysemys picta marginata	G5T5	N5	S5	-	-	-	
Northern Map Turtle	Graptemys geographica	G5		<b>S</b> 3	SC	SC	SC (Schedule 1)	
Snakes								
Eastern Gartersnake	Thamnophis sirtalis sirtalis	G5T5	N5	S5	-	-	-	
Northern Ribbonsnake Ribtionsnake		G5		53	SC	SC	SC (Schedule 1, Great Lakes Population)	
Northern Watersnake	Nerodia sipedon sipedon	G5T5	N5	S5	NAR	NAR		
Red-bellied	Storeria	G5T5	N5	S5	-	-	-	





6		Conservation Rank <sup>2</sup>			At Risk Status			
Sh	Species			Ontario	COSEWIC	SARO/	SARA	
Common Name	Scientific Name	GRANK	NRANK <sup>3</sup>	SRANK <sup>4</sup>	COSEWIC	ESA	JAKA	
Snake	occipitomaculata							
Dekay's Brownsnake	Storeria dekayi	G5	N5	S5	NAR	NAR	-	
Smooth Green Snake	Opheodrys vernalis	G5	N5	S4	-	-	-	
Northern Ring- necked Snake	Diadophis punctatus edwardsii	G5	N5	S4	-	-	-	
Milksnake	Lampropeltis triangulum	G5	N5	S3	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 (2000).

- <sup>2</sup> Accessed from NHIC, 2008b.
- <sup>3</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. <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.

As species of conservation concern, potential habitat for Milksnake, Northern Ribbonsnake, Western Chorus Frog, Northern Map Turtle and Snapping Turtle, if present on or within 120 m of the Project location, would be considered wildlife habitat.

#### 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. No information relevant to the Project location was available.

J. Bosna, Public Inquiries Coordinator of Environment Canada's Ontario Region was contacted on November 4, 2010 to request information relating to natural features. At J. Bosna's request, an electronic information request was sent to the Environment Canada's Ontario Region inquiry centre (EnviroInfo.Ontario@ec.gc.ca). Information relating to all natural features was requested, however specific reference was made to the Napanee Limestone Plain Important Bird Area.

A follow-up e-mail was sent on December 15, 2010, to reiterate the request for information.

#### 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.

No specific records have been received to date from Environment Canada, however this section will be updated in a revised version of this report should information become available.





#### 2.3 Quinte Conservation Authority Records

The Project location is located within the jurisdiction of the Quinte Conservation Authority (QCA). A formal request for natural heritage and species at risk information was sent to the QCA on June 8, 2010. Follow-up calls were made in July and November 2010.

#### 2.3.1 Results

Follow-up from Tim Trustham, Ecologist/Planner with the Quinte Conservation Authority in November 2010 indicated that the Conservation Authority has no records relating to natural heritage features on or within 120 m of the Project location.

#### 2.4 County of Prince Edward

The Project location is located within the County of Prince Edward, a single-tiered municipality. The County of Prince Edward Official Plan identifies natural heritage features within the municipality on Schedules A, Environmentally Sensitive Areas and B, Environmental Constraints. These schedules were reviewed and the results are discussed below.

#### 2.4.1 Results

Information relating to natural heritage features was also requested during a meeting with representatives from several departments, including planning, of the County of Prince Edward on June 16, 2010. No specific information was provided, however it was recommended that the Official Plan be reviewed and the Quinte Conservation Authority be contacted (see Section 2.3).

Schedule A, Environmentally Sensitive Areas, of the Official Plan was accessed on May 14, 2010. Schedule A revealed a major groundwater recharge area, and two Great Blue Heron (*Ardea herodias*) rookeries, west of the Project location. However, both of these features are located greater than 120 m from the Project location.

Schedule B, Environmental Constraints of the Official Plan was accessed on May 14, 2010 identified that the Project location is located primarily within the Consecon Lake watershed.

#### 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

#### Ontario Breeding Bird Atlas

The Ontario Breeding Bird Atlas online database was accessed on May 4, 2010 to determine which breeding bird species have been recorded within map square 18UP18, which overlaps the Project location. The square coverage summary sheet was downloaded and the results are provided in Appendix A. Of the species that were recorded, three species of conservation concern were



identified whose ranges overlap that of the Project location. These species are as follows, and discussed in Section 3:

- Red-headed Woodpecker (Melanerpes erythrocephalus)
- Common Nighthawk (Chordeiles minor)
- Cerulean Warbler (Dendroica cerulea)

As species of conservation concern, potential habitat for Red-headed Woodpecker, Common Nighthawk and Cerulean Warbler, if present on or within 120 m of the Project location, would be considered wildlife habitat.

#### 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.

#### Important Bird Areas of Canada

The Project location was determined to be within the Napanee Limestone Plain Important Bird Area (IBA). The Napanee Limestone Plain IBA is considered important for its grassland and alvar bird populations, with a known concentration of approximately 20% of the estimated Canadian population of Loggerhead Shrike (*Lanius ludovicianus*). (Bird Studies Canada, 2010). Features of the Napanee Limestone Plain IBA may provide wildlife habitats.

#### Ontario Oil, Gas and Salt Resources - Petroleum Well Mapping

There are no petroleum resources identified within 120 m of the Project location.

б то		Cons	ervation R	ank <sup>2</sup>	At Risk Status		
Spe Common Name	cies Scientific Name	Global GRANK	Canada NRANK <sup>3</sup>	Ontario SRANK <sup>4</sup>	COSEWIC	SARO	SARA
Opossums	Scientific Name	0.0.1.11					
Virginia Didelphis Opossum virginiana		G5	N4	S4	-	-	-
Shrews and Moles		•					
Common Shrew	Sorex cinereus	G5	N5	S5	-	-	-
Northern Short- tailed Shrew	Northern Short- Blarina		N5	S5	-	-	-
Star-nosed Mole	Condylura cristata	G5	N5	S5	-	-	-
Bats			1		•		
Little Brown Bat	Myotis lucifuga	G5	N5	S5	-	-	-
Silver-haired Bat	Lasionycteris noctivagans	G5	N5	S4	-	-	-
Big Brown Bat			N5	S5	-	-	-
Eastern Red Bat Lasiurus borealis		G5	N4N5	S4	-	-	-
<b>Rabbits and Hares</b>							
Eastern Cottontail	Sylvilagus floridanus	G5	N5	S5	-	-	-

# Table 2.2Mammals Potentially Occurring on or within 120 m of the<br/>Project Location and their Conservation Status1



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C.	Cons	servation R	ank <sup>2</sup>	At Risk Status			
Spe Common Name	cies Scientific Name	Global GRANK	Canada NRANK <sup>3</sup>	Ontario SRANK <sup>4</sup>	COSEWIC	SARO	SARA
Snowshoe Hare	Lepus americanus	G5		S5	-	-	-
European Hare	Lepus europeanus	G5	NE	SE	-	-	-
Rodents					1		
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	-	-	-
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	-	-	-
Porcupine	Erethizon dorsatum	G5		S5	-	-	-
Carnivores							
Coyote	Canis latrans	G5	N5	S5	-	-	-
Red Fox	Vulpes vulpes	G5	N5	S5	-	-	-
Raccoon	Procyon lotor	G5 G5	N5	S5	-	-	-
Ermine			N5	S5	-	-	-
Long-tailed Mustela frenata		G5 G5	N5	S4	-	-	-
Mink			N5	S4	-	-	-
Striped Skunk	Mephitis mephitis	G5	N5	S5	-	-	-
Ungulates							
White-tailed Deer	Odocoileus virginianus	G5	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), 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.





## 3. Summary of Results

Table 3.1 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.

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

### 4. **References**

Bird Studies Canada. 2010. IBA Site Summary – Napanee Limestone Plain, Napanee, ON. Available on-line at http://www.bsc-eoc.org/iba/site.jsp?siteID = ON152. Accessed May 21, 2010.

Bird Studies Canada, Ontario Field Ornithologists, Environment Canada, Ontario Nature, and Ontario Ministry of Natural Resources. 2006. Ontario Breeding Bird Atlas Internet Site. Available on-line at www.birdsontario.org/atlas/atlasmain.html. Accessed February 16, 2010.

County of Prince Edward. 2008. Official Plan. Accessed May 21, 2010. Available on-line at http://www.pecounty.on.ca/government/planning\_services/planning.php.

Dobbyn, J.S. 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists. 122 pp

Government of Canada. 2009a. Species Profile – Northern Bobwhite. Government of Canada, Species at Risk Public Registry, Available on-line at

http://www.sararegistry.gc.ca/species/speciesDetails\_e.cfm?sid = 28. Accessed May 21, 2010.

Government of Canada. 2009b. Species Profile – Red-headed Woodpecker. Government of Canada, Species at Risk Public Registry, Available on-line at





<u>http://www.sararegistry.gc.ca/species/speciesDetails\_e.cfm?sid = 57</u>. Accessed May 21, 2010; Last Updated January 11, 2010.

Government of Ontario. 2005. Provincial Policy Statement. Available on-line at <u>http://www.mah.gov.on.ca/Asset1421.aspx</u>.

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





# Appendix A Ontario Breeding Bird Atlas Results





#### Square Summary (18UP18)

#species (1st atlas)			#species (2nd atlas)				#hours		#pc done		
poss	prob	conf	total	poss	prob	conf	total	1st	2nd	road	offrd
30	20	38	88	15	23	72	110	16	90	35	54

#### Region summary (#20: Prince Edward)

#squares	#sq wi	th data	#spe	ecies	#pc done	target #pc			
	1st	2nd	1st	2nd	"po dono				
26	26	26	156	163	954	650			

Target number of point counts in this square: 18 road side, 7 off road (3 in open wetlands, 1 in treed wetlands, 1 in coniferous forest, 1 in mixed forest, 1 in alvar). 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			2nd	1st	2nd			2nd	1st	2nd
Canada Goose		FY	30	96	Turkey Vulture		Ρ	34	88	Common Tern §		Н	15	11
Mute Swan		NY	0	53	Osprey		NY	0	76	Mourning Dove	NE	NY	100	96
Wood Duck		AE	80	92	Northern Harrier	CF	FY	92	96	Yellow-billed Cuckoo			26	26
Gadwall			26	26	Sharp-shinned Hawk	S	FY	19	88	Black/Yell-billed Cuckoo			0	30
American Wigeon		Н	11	7	Cooper's Hawk			15	80	Black-billed Cuckoo		S	61	96
American Black Duck	P		69	80	Northern Goshawk			11	0	Eastern Screech-Owl		Т	50	80
Mallard	FY	FY	96	96	Red-should Hawk †			11	0	Great Horned Owl		NY	80	88
Blue-winged Teal	P	FY	96	73	Broad-winged Hawk ‡			7	0	Long-eared Owl ‡			15	3
Northern Shoveler			11	7	Red-tailed Hawk	FY	FY	92	92	Short-eared Owl †			11	7
Northern Pintail			38	7	American Kestrel	NY	NY	92	88	North Saw-whet Owl			23	15
Green-winged Teal			0	42	Peregrine Falcon †			3	3	Common Nighthawk	S		61	15
Redhead †			3	0	King Rail †			0	19	Whip-poor-will	S		50	15
Ring-necked Duck ‡			3	3	Virginia Rail	S	FY	65	84	Chimney Swift	H	Н	76	34
Hooded Merganser		Ρ	26	65	Sora	S	S	69	69	Ruby-thr Hummingbird	H	Т	92	96
Common Merganser			7	19	Common Moorhen	Н	Ρ	84	73	Belted Kingfisher	P	FY	84	96
Red-breast Merganser			11	46	American Coot	Н	Н	26	34	Red-headed Woodpecker †	P		80	34
Gray Partridge ‡			7	0	Coot/Moorhen			0	3	Red-bell Woodpecker		Т	15	69
Ring-necked Pheasant		Т	26	38	Killdeer	NE	NE	100	100	Yellow-bellied Sapsucker			19	34
Ruffed Grouse	NE	FY	80	88	Rock Dove	NE	FY	84	84	Downy Woodpecker	P	FY	96	96
Sharp-tailed Grouse †	_		3	0	Spotted Sandpiper	Ρ	FY	96	100	Hairy Woodpecker	P	FY	92	92
Wild Turkey		FY	0	80	Upland Sandpiper	S	FY	73	76	Northern Flicker	D	NY	100	96
Common Loon	Н	FY	73	73	Common Snipe	S	D	92	92	Pileated Woodpecker		NY	53	88
Pied-billed Grebe	Н	S	34	61	American Woodcock	D	FY	80	88	Eastern Wood-Pewee	FY	Т	88	96
Double-crest Cormorant §		NE	15	19	Wilson's Phalarope †			7	0	Alder Flycatcher			23	57
American Bittern	Н	Т	96	92	Ring-billed Gull §			30	19	Willow Flycatcher	P	Т	80	100
Least Bittern †	Н	Р	42	61	Herring Gull §			15	11	Least Flycatcher		FY	84	100
Great Blue Heron §	NY	Н	73	88	Great Black-backed Gull †			11	3	Eastern Phoebe	NY	NY	80	92
Green Heron §	Н	Н	88	88	Caspian Tern †		Х	11	3	Gr Crested Flycatcher	CF	CF	96	96

SPECIES		Code %		%	SPECIES		Code		6	SPECIES		Code		%	
		2nd	1st	2nd		1st	2nd	1st	2nd		1st	2nd	1st	2nd	
Loggerhead Shrike †	NE		11	11	Brown Thrasher	S	FY	92	92	Vesper Sparrow	NE	FY	92	92	
Yellow-throated Vireo ‡			7	0	European Starling	NY	NY	100	100	Savannah Sparrow	FY	CF	100	96	
Warbling Vireo	S	CF	96	96	Cedar Waxwing	NU	FY	84	100	Grasshopper Sparrow	Т	Т	92	88	
Red-eyed Vireo	S	FY	92	96	Blue-winged Warbler ‡			3	0	Henslow's Sparrow †			19	0	
Blue Jay	FY	CF	100	100	Golden-winged Warbler ‡			7	0	Song Sparrow	FY	NY	100	100	
American Crow	NY	FY	100	100	Blue/Gold-wing Warbler			0	0	Swamp Sparrow	S	CF	92	96	
Horned Lark	Ρ	FY	92	84	Nashville Warbler			30	50	White-throat Sparrow		S	73	76	
Purple Martin	NE	NY	80	88	Yellow Warbler	Ρ	NE	96	100	Dark-eyed Junco ‡			7	7	
Tree Swallow	NY	NY	100	100	Chestn-sided Warbler		Т	19	92	Northern Cardinal	FY	FY	88	88	
North Rgh-wing Swallow	FY	FY	76	92	Magnolia Warbler ‡			0	11	Rose-breast Grosbeak	CF	NY	92	96	
Bank Swallow §	Н	FY	57	65	Black-thr Blue Warbler ‡			0	7	Indigo Bunting	S	Т	84	88	
Cliff Swallow §			69	73	Yellow-rumped Warbler			19	34	Bobolink	NE	FY	100	96	
Barn Swallow	NY	NY	96	100	Black-thr Green Warbler		Т	11	61	Red-wing Blackbird	CF	CF	100	100	
Black-capped Chickadee	FY	CF	96	96	Blackburnian Warbler ‡			0	0	Eastern Meadowlark	CF	NE	100	96	
Red-breast Nuthatch			19	38	Pine Warbler			0	26	Common Grackle	CF	FY	100	100	
White-breast Nuthatch	Ρ	FY	92	92	Cerulean Warbler †		Н	0	3	Brown-head Cowbird	Ρ	FY	100	92	
Brown Creeper			38	73	Black-white Warbler	S	S	50	76	Orchard Oriole		S	15	53	
House Wren	A	AE	96	96	American Redstart	S	Т	53	100	Baltimore Oriole	FY	NY	100	96	
Winter Wren			23	26	Ovenbird	S	Т	73	84	Purple Finch			11	26	
Sedge Wren			19	11	North Waterthrush	S	S	46	53	House Finch		NE	11	84	
Marsh Wren	CF	NY	76	80	Mourning Warbler			7	15	Pine Siskin ‡		Х	7	11	
Golden-crown Kinglet ‡			7	7	Common Yellowthroat	A	NE	96	100	American Goldfinch	Ρ	NE	96	100	
Blue-gr Gnatcatcher		Ρ	15	65	Canada Warbler ‡			7	11	House Sparrow	NY	FY	96	84	
Eastern Bluebird		FY	11	84	Yellow-breast Chat †			3	0						
Veery	S	Т	65	88	Scarlet Tanager	Ρ	Ρ	61	92						
Wood Thrush	S	Т	80	84	Eastern Towhee	S	FY	80	92						
American Robin	NY	NY	100	100	Chipping Sparrow	NE	NE	96	100						
Gray Catbird	А	CF	96	96	Clay-colored Sparrow		CF	23	69						

Ontario Breeding Bird Atlas - Summary Sheet for Square 18UP18 (page 2 of 2)

This list includes all species found during the Ontario Breeding Bird Atlas (1st atlas: 1981-1985, 2nd atlas: 2001-2005) in the region #20 (Prince Edward). 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 18UP18 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 #20). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), ‡ (regionally rare), or † (provincially rare). Current as of 5/05/2010. An up-to-date version of this sheet is available from <a href="http://www.birdsontario.org/atlas/summaryform.jsp?squareID=18UP18">http://www.birdsontario.org/atlas/summaryform.jsp?squareID=18UP18</a>

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