



**NORTHLAND
POWER**

Rideau Lakes Solar Project Water Body Records Review Report

August 15, 2011



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

Water Body
Records Review Report

Rideau Lakes Solar Project

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Project Report

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**Northland Power Inc.
Rideau Lakes Solar Project**

Water Body Records Review Report

Table of Contents

1. Introduction	3
1.1 Project Description	3
1.2 Legislative Requirements.....	3
2. Methodology and Results	3
2.1 Ministry of Natural Resources Records	4
2.1.1 Methodology.....	4
2.1.2 Results.....	4
2.2 Ontario Ministry of Agriculture, Food and Rural Affairs Records.....	4
2.2.1 Methodology.....	4
2.2.2 Results.....	4
2.3 Federal Government Records	4
2.3.1 Methodology.....	4
2.3.2 Results.....	5
2.4 Conservation Authority Records	5
2.4.1 Methodology.....	5
2.4.2 Results.....	5
2.5 Municipal Records	5
2.5.1 Methodology, Township of Rideau Lakes	5
2.5.2 Results, Township of Rideau Lakes	5
2.5.3 Methodology, United Counties of Leeds and Grenville	5
2.5.4 Results, United Counties of Leeds and Grenville	6
3. Summary of Results and Next Steps	6
3.1 Summary of Results.....	6
3.2 Next Steps.....	6
4. References.....	9

List of Tables

Table 3.1 Summary of Records Review Determinations 6

List of Figures

Figure 3.1 Water Body Features 7

1. Introduction

1.1 Project Description

Northland Power Solar Rideau Lakes L.P. (hereinafter referred to as “Northland”) is proposing to develop a 10-megawatt (MW) solar photovoltaic project titled Rideau Lakes Solar Project (hereinafter referred to as the “Project”). The Project site will be located on approximately 50 hectares (ha) of land, located in the Township of Rideau Lakes, within the United Counties of Leeds and Grenville.

1.2 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 a Class 3 solar facility and require a REA.

Section 30 of the REA Regulation requires proponents of Class 3 solar projects to undertake a water body records review to identify “whether the project is

1. in a water body
2. within 120 m of the average annual high water mark of a lake, other than a lake trout lake that is at or above development capacity
3. within 300 m of the average annual high water mark of a lake trout lake that is at or above development capacity
4. within 120 m of the average annual high water mark of a permanent or intermittent stream, or
5. within 120 m of a seepage area.” (O. Reg. 359/09, s. 30, Table).

Subsection 2 of Section 30 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 Water Body Records Review Report has been prepared for the Rideau Lakes Project to meet these requirements.

2. Methodology and Results

The following sections document the records that were reviewed and analyzed and the results from this analysis. The focus of the assessment was identifying whether or not the Project was located within or adjacent to any of the water features listed above in Section 1.2. The sections are organized as identified in Column 1 of the table in Section 30 of the REA Regulation.

Records were searched within a minimum distance of 1 km from the Project site. The results are discussed below in relation to the distances specified between the Project and water features as defined in Section 30 of the REA Regulation (see Section 1.2).

There are no Planning Boards, Municipal Planning Authorities, Local Roads Boards, Local Services Boards with jurisdiction in the project study area. Also, the project study area is not located within the Niagara Escarpment Commission Plan Area. Therefore, records from these agencies were not reviewed.

2.1 Ministry of Natural Resources Records

2.1.1 Methodology

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

- Ontario Base Maps and natural feature layers from Land Information Ontario (LIO) (www.geographynetwork.ca)
- Natural Heritage Information Centre (NHIC) biodiversity explorer (<https://www.biodiversityexplorer.mnr.gov.on.ca/nhicWEB/mainSubmit.do>)

2.1.2 Results

The MNR natural features layer from the LIO indicates that an unnamed tributary of Sucker Creek originates approximately 50 m south of the Project site (Figure 3.1) and flows into Sucker Creek approximately 2 km downstream. Sucker Creek drains into Newboro Lake approximately 800 m southwest of the Project site. Another unnamed tributary of Newboro Lake is located approximately 250 m northwest of the Project area.

The MNR biodiversity explorer interactive map shows the same water features as described above, as well as the Newboro Lake Marsh Area of Natural and Scientific Interest (ANSI) located approximately 1 km south of the Project area.

2.2 Ontario Ministry of Agriculture, Food and Rural Affairs Records

2.2.1 Methodology

The following Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) on-line records were reviewed:

- rural drainage mapping (http://www.lio.ontario.ca/imf-ows/imf.jsp?site=ads_en)

2.2.2 Results

Rural drainage mapping identifies the same tributary of Sucker Creek and indicates that the drainage on the Project site is poor. The landsat aerial photography layer of this map indicates that this area is mainly farmland.

2.3 Federal Government Records

2.3.1 Methodology

The following federal government websites were reviewed to determine if any records regarding water features on or adjacent to the property were available:

- Fisheries and Oceans Canada (DFO) website (<http://www.dfo-mpo.gc.ca/index-eng.htm>)

- DFO Species at Risk Distribution Map (<http://www.conservation-ontario.on.ca/projects/DFO.html>)
- Natural Resource Canada (NRCAN) (http://ess.nrcan.gc.ca/mapcar/index_e.php).

2.3.2 Results

The review of the DFO website resulted in no further information regarding the Project site.

The Species at Risk Distribution Map does show the Project area and the identified watercourses as described in Section 2.1.2. The tributary of Newboro Lake approximately 250 m northwest of the Project site is noted as having aquatic Species at Risk present.

The NRCAN mapping review resulted in a general environment map that did show the Project area, but it did not show the tributary of Sucker Creek south of the Project site.

2.4 Conservation Authority Records

2.4.1 Methodology

The proposed Project is situated within the jurisdiction of the Cataraqui Region Conservation Authority (CRCA). The CRCA website was reviewed for information pertaining to the Project site. Relevant information sources included mapping and the Source Water Protection Program documentation.

2.4.2 Results

A Property Inquiry obtained from the CRCA (2010a) confirmed that there are no natural hazard features (e.g., flood or erosion hazards), wetlands, watercourses or shorelines on the Project site.

The CRCA's Draft Assessment Report: Cataraqui Source Protection Area (Volume 1) (CRCA, 2010b) indicates that the Project site is in close proximity to significant groundwater recharge areas. The Project area is located in the Newboro Lake watershed, which is part of the overall Great Cataraqui River watershed.

2.5 Municipal Records

2.5.1 Methodology, Township of Rideau Lakes

The Project is located within the lower tier municipality of the Township of Rideau Lakes. The Township website (<http://www.twprideaulakes.on.ca/>) was examined to find any records that may identify water features in the Project area.

2.5.2 Results, Township of Rideau Lakes

A review of the Official Plan for the Township of Rideau Lakes (2004) natural features mapping did not identify any natural features on or within 120 m of the Project site.

2.5.3 Methodology, United Counties of Leeds and Grenville

The Project is located in the United Counties of Leeds and Grenville. A review of the website (<http://www.uclg.ca/en/>) was conducted to find any records that could identify water features in the Project area.

2.5.4 Results, United Counties of Leeds and Grenville

Mapping on the County website (2003) did not identify any water features in the Project area.

3. Summary of Results and Next Steps

3.1 Summary of Results

Table 3.1 summarizes the results of the records review according to the features identified in Section 1.2. A map depicting the identified water features on and in proximity to the site is provided in Figure 3.1.

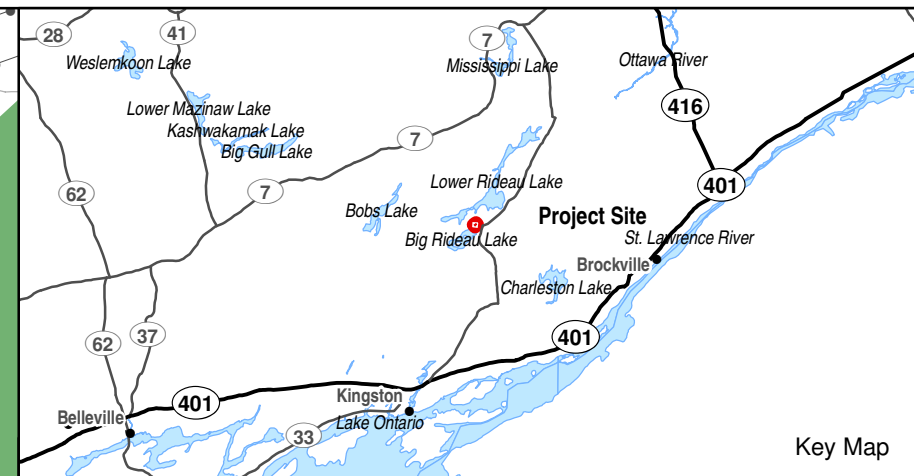
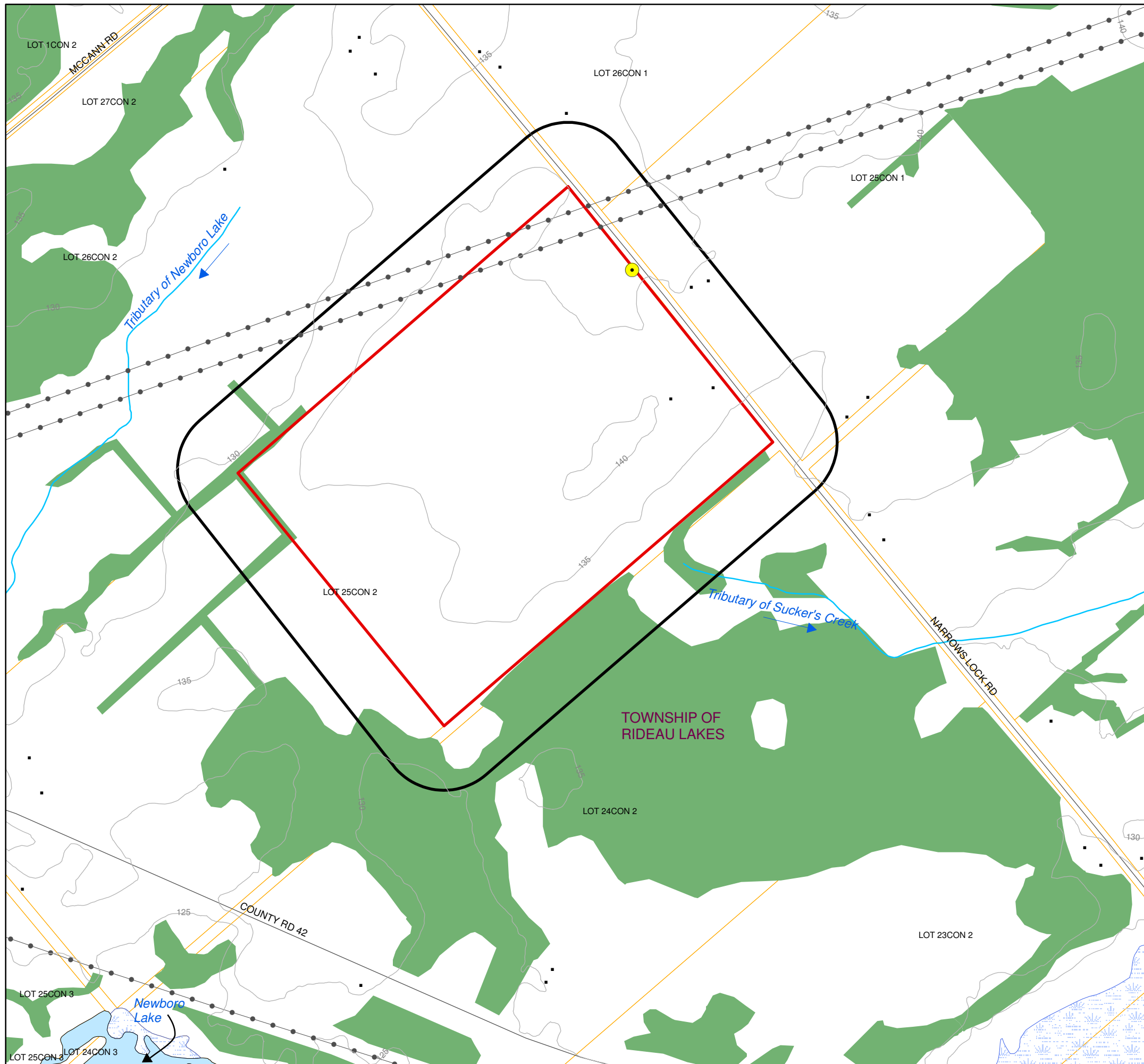
Table 3.1 Summary of Records Review Determinations

Determination to be Made	Yes/No	Description
Is the Project in a water body?	No	The Project will not be in a water body.
Is the Project within 120 m of the average annual high water mark of a lake, other than a lake trout lake that is at or above development capacity?	No	There are no lakes within 120 m of the Project area.
Is the Project within 300 m of the average annual high water mark of a lake trout lake that is at or above development capacity?	No	No lake trout lakes are present in the Project area.
Is the Project within 120 m of the average annual high water mark of a permanent or intermittent stream?	Yes	There is one watercourse located within 120 m of the Project area. The tributary of Sucker Creek is located within 120 m south of the Project site.
Is the Project within 120 m of a seepage area?	No	No seepage areas are present within the Project area.

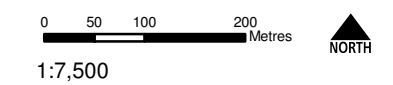
Therefore, depending on the layout of the proposed Project, some components of the Project could potentially be located within 120 m of the average annual high water mark of the tributary of Sucker Creek.

3.2 Next Steps

A site investigation, as required in Section 31 of the REA Regulation will be completed to i) confirm the features identified during this records review, ii) identify if any corrections to the information presented herein are required, iii) determine whether any additional waterbodies exist in the Project area, iv) confirm the boundaries of any water feature within 120 m of the Project and v) determine the distance from the Project to the water boundary.



- Legend**
- Building
 - Connection Point with Existing Distribution Line
 - Roads
 - Transmission Line
 - Topographic Contour (5m interval)
 - Watercourse
 - ▭ Project Site
 - ▭ Study Area
 - ▭ Parcels
 - ▭ Waterbody
 - ▭ Wetland Area
 - ▭ Wooded Area



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

Figure 3.1
 Northland Power Inc.
 Rideau Lakes Solar Energy Project
 Water Body Features

Back of Fig 3.1

4. References

- Cataraqui Region Conservation Authority (CRCA). 2010a. Letter Re: Property Inquiry Lot 25, Conc. 2, Narrows Look Road, Township of Rideau lakes, Assessment Roll No. 08318360510480000000. J. Messenger (CRCA) to C. Coughlin (Hatch). June 30, 2010.
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