



**NORTHLAND
POWER**

North Burgess Solar Project Draft Water Body Records Review Report

August 25, 2011

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

DRAFT Water Body
Records Review Report

North Burgess Solar Project

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Project Report

August 25, 2011

**Northland Power Inc.
North Burgess Solar Project**

DRAFT 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	5
2.3.1 Methodology.....	5
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 – Tay Valley Township.....	5
2.5.1 Methodology.....	5
2.5.2 Results.....	5
2.6 Municipal Records – County of Lanark.....	6
2.6.1 Methodology.....	6
2.6.2 Results.....	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 North Burgess L.P. (hereinafter referred to as “Northland”) is proposing to develop a 10-megawatt (MW) solar photovoltaic project titled North Burgess Solar Project (hereinafter referred to as the “Project”). The Project site will be located on approximately 85 hectares (ha) of land, located in Tay Valley Township, within Lanark County.

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

- i. in a water body
- ii. 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
- iii. within 300 m of the average annual high water mark of a lake trout lake that is at or above development capacity
- iv. within 120 m of the average annual high water mark of a permanent or intermittent stream, or
- v. within 120 m of a seepage area.” (O. Reg. 359/09, s. 30, Table).

Subsection 30(2) 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 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 covering areas within a minimum distance of 1 km from the Project site were searched. 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 or local services boards with jurisdiction over the Project area. Also, the Project site 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.com)
- Natural Heritage Information Centre (NHIC) biodiversity explorer (<https://www.biodiversityexplorer.mnr.gov.on.ca/nhicWEB/mainSubmit.do>).

2.1.2 Results

The LIO mapping indicates the presence of four watercourses on and within 120 m of the Project site. All of these watercourse form the drainage network for one main tributary of Grant's Creek (Tributary A on Figure 3.1), which flows out of the northwest corner of the Project site, draining into Grant's Creek approximately 350 m downstream. Tributary B, which originates on the Project site, flows south off the site before draining into Tributary A approximately 300 m west of the Project. Two of the tributaries of Grant's Creek (Tributaries C and D) enter the Project site on the north side and drain into Tributary A on the Project site.

MNR (2010) indicated that there are a number of watercourses that pass through the Project site and stated that consideration should be given to fish and fish habitat within these features.

No additional information on waterbodies on or within 120 m of the Project was found on the NHIC Biodiversity Explorer on-line mapping.

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 features as those described in Section 2.1.2. Additionally, in the southeast portion of the Project area there is a small amount of systematic agricultural drainage tile and the drainage is considered poor. The landsat layer of this map indicates that this area is mainly farmland with a portion of woodland in the south of the Project area. No drain fish habitat classification information was available for any of the watercourses.

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

No information regarding the Project site was found on the DFO website. The Species at Risk Distribution Map does show the Project area and the identified watercourses as described in Section 2.1.2. The map did not identify any Species at Risk or of Special Concern to be located in the Project area.

The NRCan mapping review resulted in a general environment map that did show the Project area. It showed only two of the tributaries of Grant's Creek, without any of the smaller tributaries.

2.4 Conservation Authority Records

2.4.1 Methodology

The proposed Project is situated within the jurisdiction of the Rideau Valley Conservation Authority (RVCA). The RVCA was asked to provide information regarding water bodies and natural heritage features in response to a Property Inquiry request. The RVCA website was also visited in an effort to find any information relating to the Project area.

2.4.2 Results

RVCA (2010) identified all of the tributaries noted in Section 2.1.2, and indicated that there are also three permanent wetlands on the Project site. No Regulated Areas (e.g., Flood or Erosion Hazard zones) are known to be present on the Project site.

2.5 Municipal Records – Tay Valley Township

2.5.1 Methodology

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

2.5.2 Results

A review of the Official Plan Schedule A2 for natural heritage resulted in no additional information beyond what is documented above. The Official Plan does show the Project area and Grant's Creek but showed none of the tributaries that are present on the Project site (Tay Valley Township, 2001).

2.6 Municipal Records – County of Lanark

2.6.1 Methodology

The Project is located in the County of Lanark. A review of the website (<http://www.county.lanark.on.ca/site3.aspx>) was conducted to find any records that could identify water features in the Project area.

2.6.2 Results

The County website did have a map showing the Project site, but only one of the tributaries of Grant’s Creek was shown (Lanark County, 2005). No further information regarding water features was found.

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.

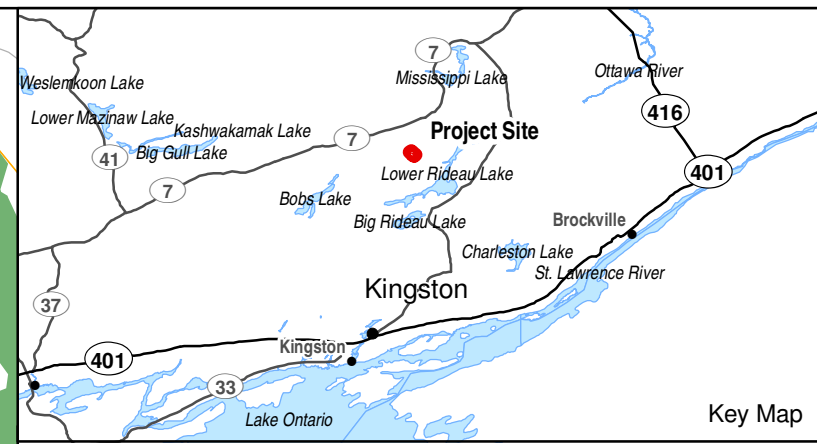
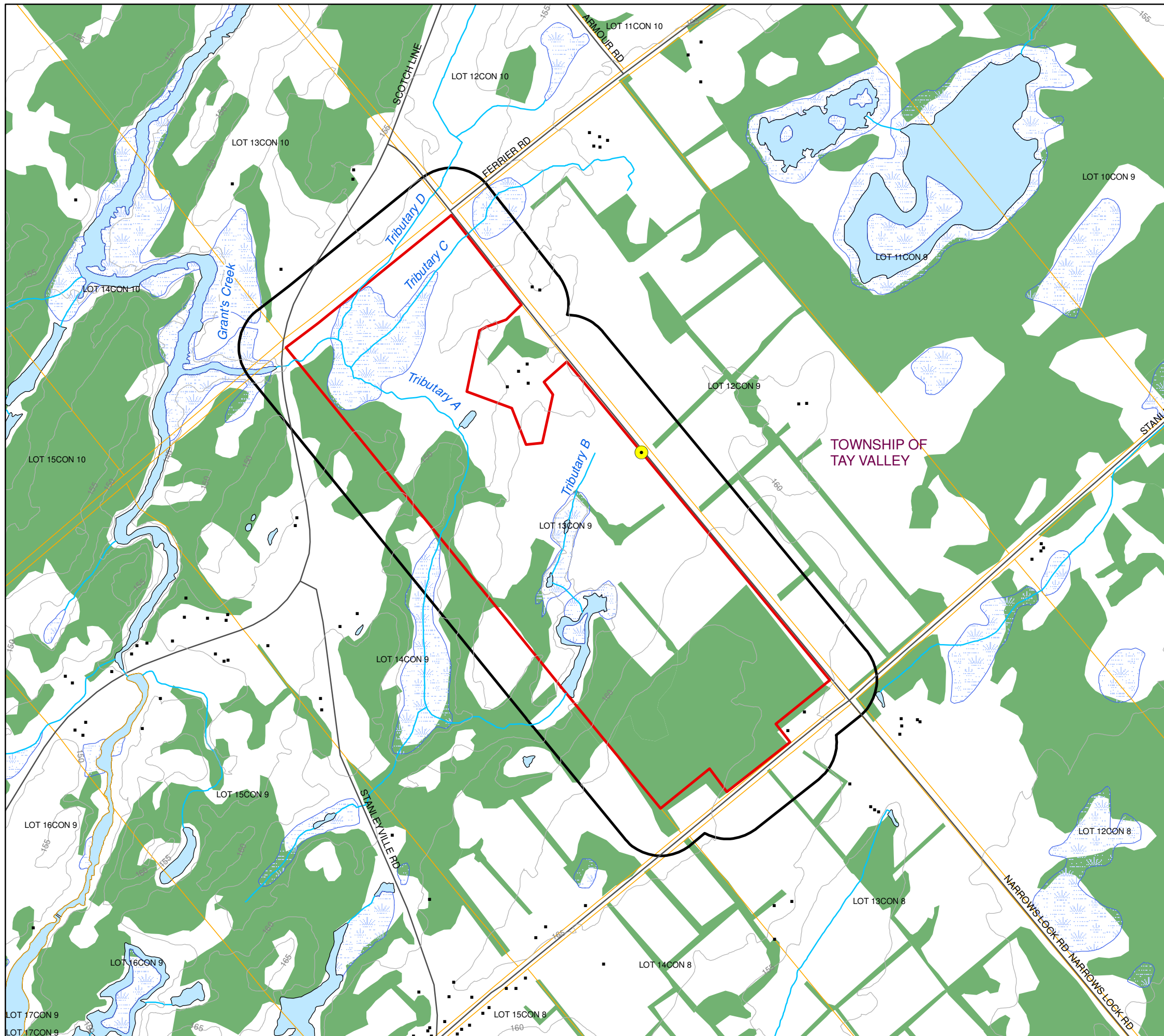
Table 3.1 Summary of Records Review Determinations

Determination to be Made	Yes/No	Description
Is the Project in a water body?	No	The Project will not be situated within 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	No lakes are present within 120 m of the Project site.
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 at or above development capacity are present within 300 m of the Project site.
Is the Project within 120 m of the average annual high water mark of a permanent or intermittent stream?	Yes	There are watercourses on and within 120 m of the Project site.
Is the Project within 120 m of a seepage area?	No	No seepage areas are present within the Project area.

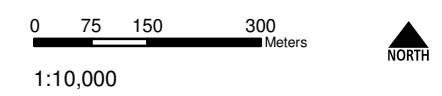
Therefore, depending on the layout of the proposed Project, some components of the Project could potentially be located within 120 m of the average annual high water mark of four permanent or intermittent watercourses.

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 water bodies exist in the Project



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



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

Figure 3.1
 Northland Power Inc.
North Burgess Solar Project
Water Body Features

Back of figure

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.

4. References

Conservation Ontario. 2009. 2009 Aquatic Species at Risk. Available on-line at <http://www.conservation-ontario.on.ca/projects/DFO.html>. Accessed May 6, 2010.

Ministry of Natural Resources (MNR). 2010. Letter. L. Melvin (A/District Planner, Kemptville District, MNR) to S. Male (Terrestrial Ecologist, Hatch Ltd.). July 8, 2010.

Rideau Valley Conservation Authority (RVCA). 2009. Rideau Valley Conservation Authority: Ecological Land Classification. Available on-line at http://209.5.125.108/rvcawims/public/Eco_land_class/viewer.htm. Accessed May 11, 2010.

Tay Valley Township. 2001. Planning & Development: Official Plan. Available on-line at <http://www.tayvalleytwp.ca/>. Accessed May 11, 2010.

Lanark County. 2005. Maps: Lanark County Maps. Available on-line at <http://www.county.lanark.on.ca/Page18.aspx>. Accessed May 11, 2010.