



**NORTHLAND
POWER**

Glendale Solar Project

Water Body Records Review Report

October 5, 2011

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

Water Body
Records Review Report

Glendale Solar Project

H334844-0000-07-124-0208

Rev. 1

October 5, 2011

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Project Report

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Glendale Solar Project**

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1. Introduction

1.1 Project Description

Northland Power Solar Glendale L.P. (hereinafter referred to as “Northland”) is proposing to develop a 10-megawatt (MW) solar photovoltaic (PV) Project titled Glendale Solar Project (hereinafter referred to as the “Project”). The Project location will be located on approximately 45 hectares (ha) of land, in the Township of South Glengarry, within the United Counties of Stormont, Dundas and Glengarry.

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 location 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 location 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 that no watercourses are present on the Project location (Figure 3.1).

An unnamed tributary of the Raisin River originates approximately 50 m west of the southeastern corner of the Project location (Figure 3.1) and flows south through agricultural fields.

Beyond 120 m from the Project location, a tributary of Glen Falloch Drain is present approximately 165 m from the Project location and flows north to the Glen Falloch Drain, approximately 865 m away. There is also a small pond approximately 200 m south of the Project area.

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 identified the water bodies described in section 2.1.2, but no additional information on those features or information on other features (e.g., Fisheries and Oceans Canada Drain Classifications) was available. The mapping did state that drainage was poor and there are no tile drains on the Project location or any of the properties immediately adjacent. The landsat layer of this map indicates that this area is mainly woodland with smaller portions being 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 references to the Project location. The Species at Risk Distribution Map does show the Project area and the watercourses described in Section 2.1.2. It does not identify any of these streams as having species at risk. A tributary of Raisin River approximately 5 km downstream from the Project location is noted as having habitat for aquatic Species of Special Concern, namely Bridle Shiner (*Notropis bifrenatus*) and River Redhorse (*Moxostoma carinatum*) (Conservation Ontario, 2009).

The NRCAN mapping did not provide any additional information on waterbodies on or within 120 m of the Project location.

2.4 Conservation Authority Records

2.4.1 Methodology

The proposed Project is situated within the jurisdiction of the Raisin Region Conservation Authority (RRCA). The RRCA was asked to provide information regarding waterbodies and natural heritage features in response to a Property Inquiry request. The RRCA website was also reviewed to find any information relating to the Project area.

2.4.2 Results

The RRCA (2010) noted that the tributary approximately 165 m north of the Project location (i.e., the tributary of the Glen Falloch drain) is classified as a Class C water watercourse according to the DFO Drain Classification system and may provide baitfish habitat. RRCA (2010) indicated that there is no delineated floodplain for any watercourse on the Project location. RRCA did not identify any Provincially or Locally Significant Wetlands on the Project location.

The Raisin River Watershed Report Card (RRCA, 2010) indicated that there is habitat for aquatic Species of Special Concern, including Bridle Shiner and River Redhorse within downstream sections of the Tributary of Raisin River, although these species are not known to be present within 120 m of the Project location.

2.5 Municipal Records – Township of South Glengarry

2.5.1 Methodology

The Project is located within the lower tier municipality of the Township of South Glengarry. The Township website (<http://southglengarry.com/strategicplan.htm>) was examined to find any records that may identify water features in the Project area.

2.5.2 Results

A review of the website and the Strategic Plan for the Township of South Glengarry found that neither one made mention of any water bodies on or within 120 m of the Project location (Township of South Glengarry, 2007).

2.6 Municipal Records – United Counties of Stormont, Dundas and Glengarry

2.6.1 Methodology

A review of the United Counties of Stormont, Dundas and Glengarry website (<http://sdgcounties.ca/index.cfm?Title=Home>) was conducted to find any further information regarding the waterbodies on or within 120 m of the Project location.

2.6.2 Results

The constraints map portion of the Official Plan for the United Counties of Stormont, Dundas and Glengarry displays the Project area and the unnamed watercourses previously discussed, as well as the small pond as described in the Section 2.1.2. It describes the unnamed watercourse approximately 50 m east of the southeast side of the Project location as a tributary of South Raisin River.

3. Summary of Results and Next Steps

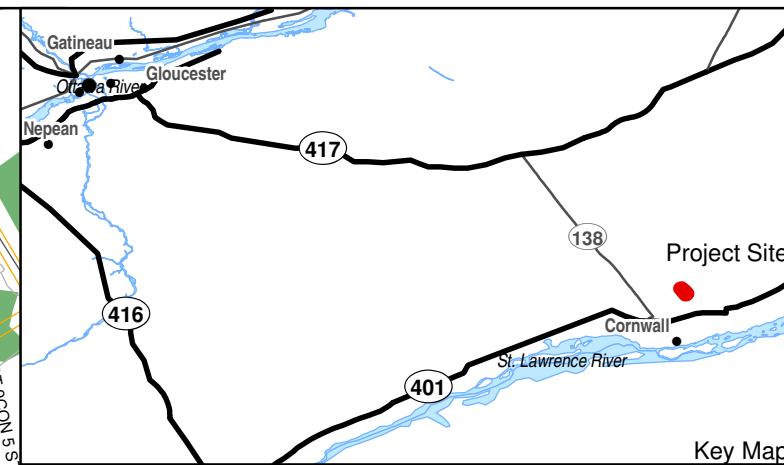
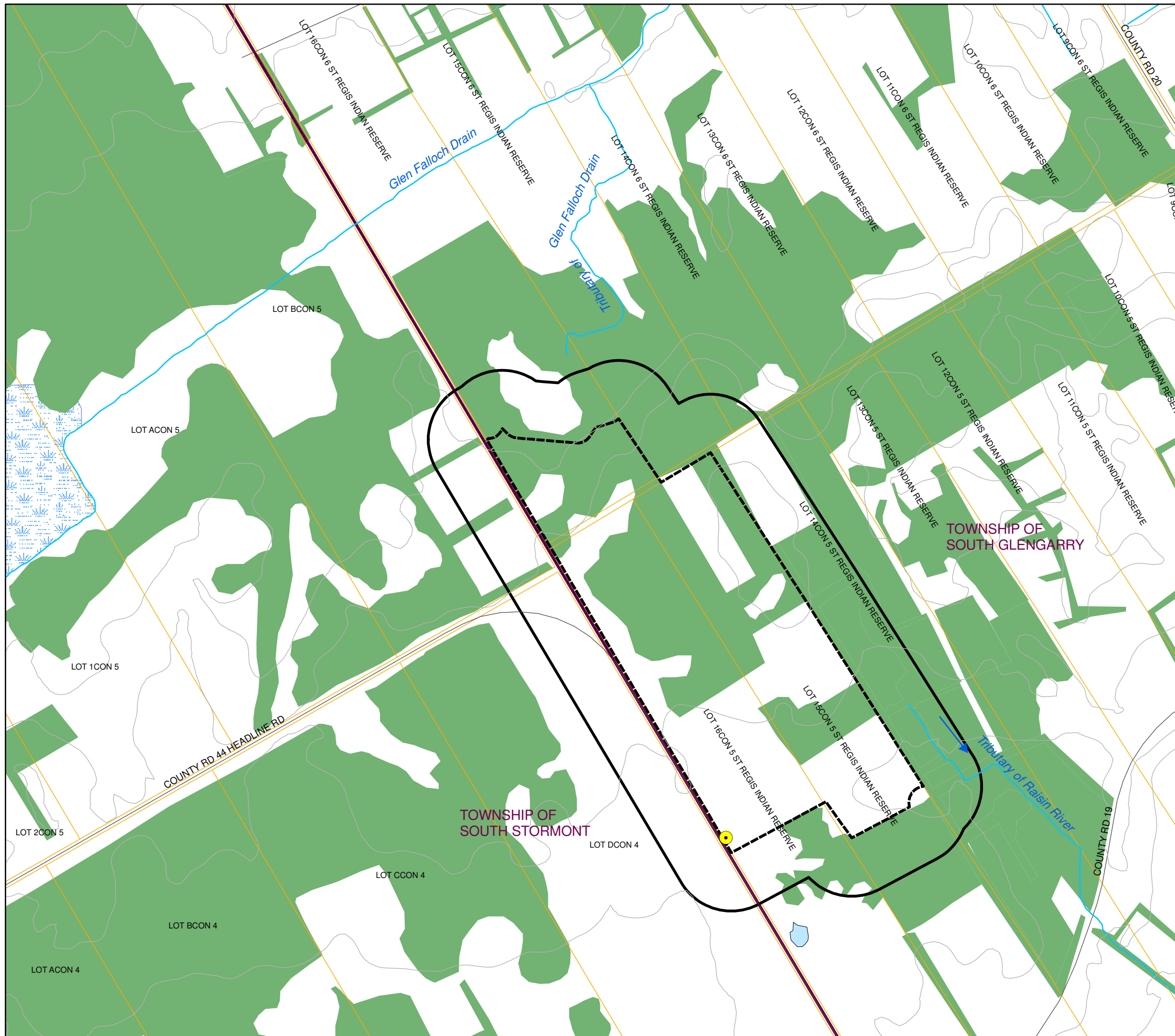
3.1 Summary of Results

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 location.
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 location.
Is the Project within 120 m of the average annual high water mark of a permanent or intermittent stream?	No	There is one watercourse within 120 m of the Project location
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 one permanent or intermittent watercourse.



- Legend**
- Connection Point With Existing Distribution Line
 - Road
 - Railway
 - Topographic Contour (5m Interval)
 - Watercourse
 - Project Location
 - Study Area
 - Parcel
 - Municipal Boundary
 - Wooded Area
 - Waterbody
 - Unevaluated Wetland



1:8,000

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.
Glendale Solar Project
Water Body Features

Back of figure

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.

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.
- Raisin Region Conservation Authority (RRCA). 2010. Letter. L. Forrester (Watershed Planner & Regulations Officer, RRCA) to C. Coughlin (Aquatic Biologist, Hatch Ltd.). June 13, 2010.
- RRCA. 2007. Watershed Report Cards. Available on-line at <http://www.rrca.on.ca/view.php?id=31> Accessed May 6, 2010.
- Township of South Glengarry. 2007. Strategic Plans. Available on-line at <http://southglengarry.com/strategicplan.htm>. Accessed May 6, 2010.
- United Counties of Stormont, Dundas and Glengarry. 2006. Official Plan. Available on-line at <http://sdgcounties.ca/index.cfm?Title=Official%20Plan>. Accessed May 6, 2010.