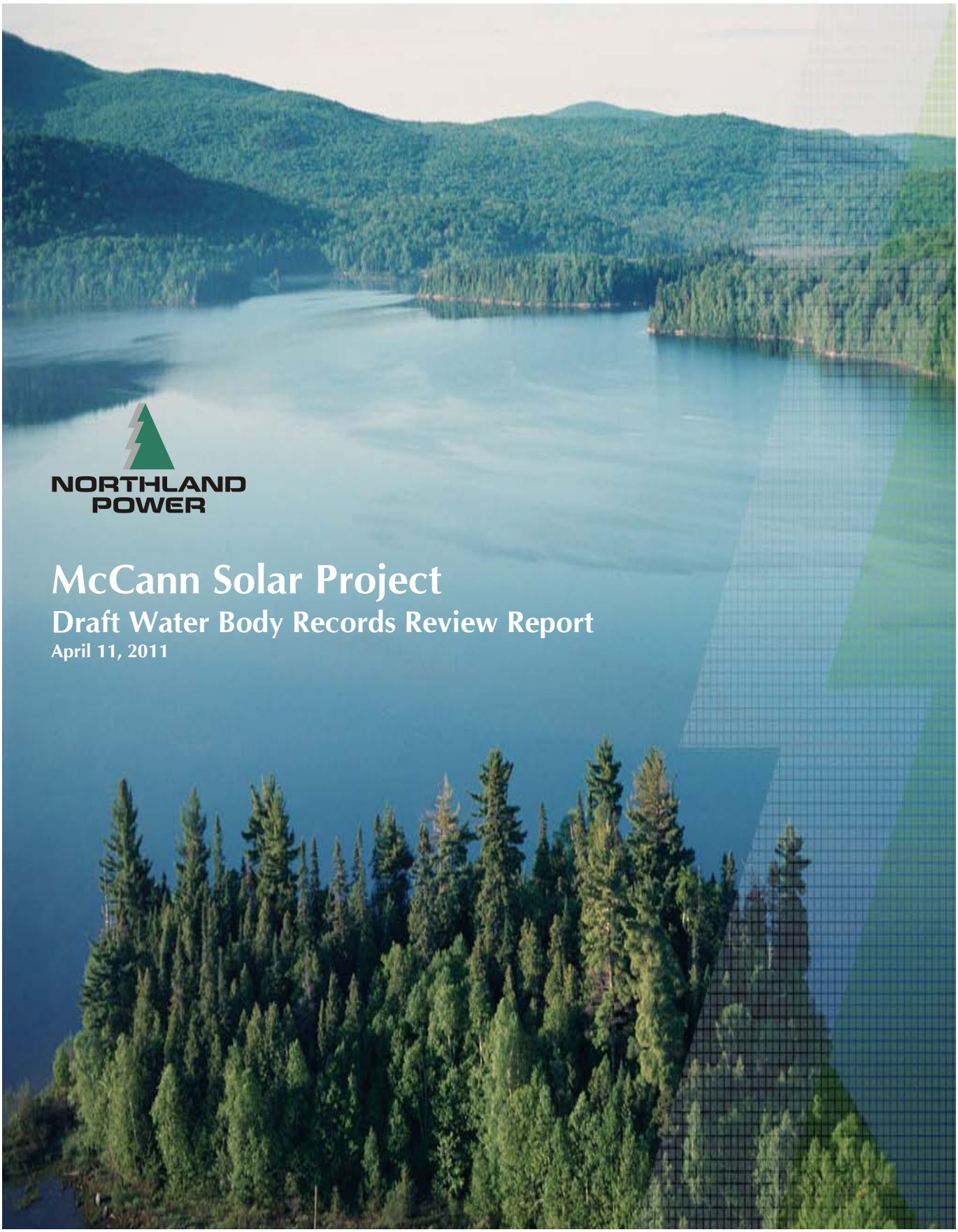

NORTHLAND POWER

# McCann Solar Project

## Draft Water Body Records Review Report

April 11, 2011

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

# DRAFT Water Body Records Review Report

## McCann Solar Project

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Project Report

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**Northland Power Inc.**
**McCann Solar Project**

# DRAFT Water Body 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 in the Township of Rideau Lakes, titled the McCann Solar Project (hereinafter referred to as the "Project"). The Project site 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.

## 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 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 database indicates the presence of one unnamed watercourse (which is a tributary of Big Rideau Lake), with a small online pond located within 120 m of the Project site (Figure 3.1). The unnamed watercourse enters the area adjacent to the Project site in the east and drains into a small pond that is to the north of the Project site.

MNR (2010) indicated that there are a number of small watercourses in proximity to the site, although no mapping was provided to identify the location of these watercourses. No other watercourses are shown on the LIO mapping as being within 120 m of the Project site. MNR (MNR, 2010) also indicated that there is a largemouth bass (*Micropterus salmoides*) spawning area on the Big Rideau River, although the exact locations were not provided.

Big Rideau Lake is identified as a designated Lake Trout Lake by the MNR (MNR, 2006). However, it is currently unknown if the lake is at capacity with respect to lake trout management.

The MNR also had a biodiversity explorer interactive map available on-line (https://www.biodiversityexplorer.mnr.gov.on.ca/nhicWEB/mainSubmit.do). This map does not show any additional water features within the proposed Project area than those described above.

## 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 unnamed watercourse described in Section 2.1.2. It also identifies the Project site as having poor drainage. The landsat 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 references to Big Rideau Lake, which is within 300 m of the Project site. The website does discuss several species at risk known to be present in Big Rideau Lake, including bridle shiner (*Notropis bifrenatus*), grass pickerel (*Esox americanus vermiculatus*) and pugnose shiner (*Notropis anogenus*). However, the sampling locations for these species were not close to the Project site.

The Species at Risk Distribution Map does show the Project site and the identified watercourse, as described in Section 2.1.2. This map shows this watercourse as having Species of Special Concern in the unnamed watercourse but it does not identify the specific species or locations these were found.

The NRCan mapping review resulted in a general environment map that did show the Project area. It shows the small pond to the north of the Project area as connecting directly to the inlet of Hudson's Bay in Big Rideau Lake. Otherwise it does show the same unnamed watercourse flowing past the Project site.

## 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 Project site ultimately drains north toward Big Rideau Lake.

A Property Inquiry letter was requested from the RVCA to identify natural features on and within 120 m of the Project site. The RVCA's "Rideau Lakes Watershed Plan" (RVCA, 2009a) was examined for information pertaining to the water body features of the Project site. Other information reviewed on the RVCA website included the Watershed Information System and Regulated Areas mapping overview.

### *2.4.2 Results*

Mapping from the RVCA Property Inquiry (2010) identified the unnamed tributary of Big Rideau Lake running adjacent to the Project area as a permanent stream (RVCA, 2010). No other watercourses were identified within 120 m of the Project site. The Regulated Areas mapping did not indicate the presence of any Regulated river or stream valleys with identified Flood or Erosion Hazards in

proximity to the Project site. No RVCA stream assessment data was available for the watercourse within 120 m of the Project site.

## 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) had a section regarding natural features. The location of the Project site did not correspond to any of the identified natural features, therefore no further information was found.

### *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 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*

The review of the website (http://www.uclg.ca/en/) produced an on-line community map (http://www.uclg.ca/en/business/resources/LGCommunityMap.pdf - United Counties of Leeds and Grenville, 2003). This map did show the Project area but no further information regarding water features was obtained.

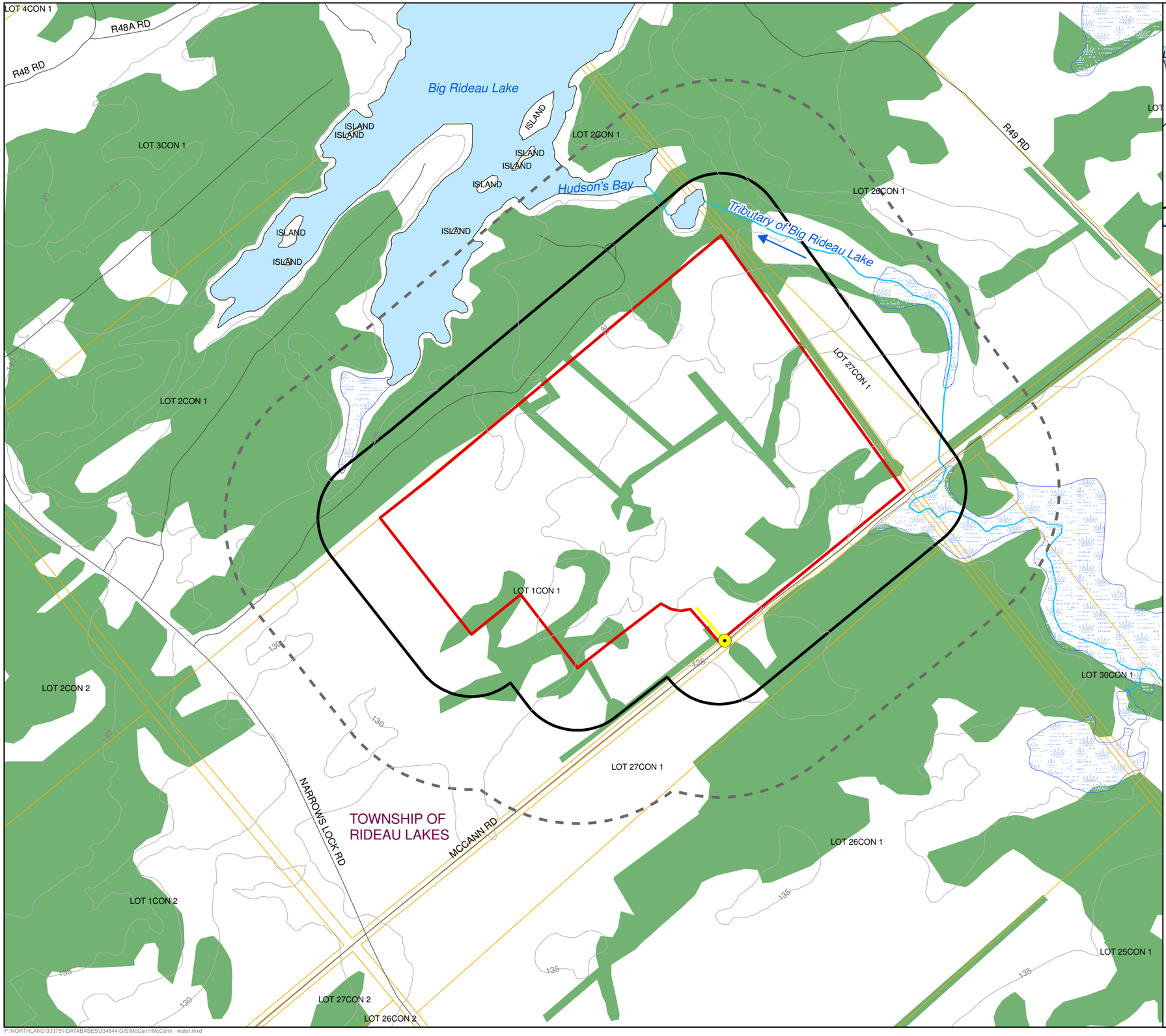
# 3. Summary of Results and Next Steps

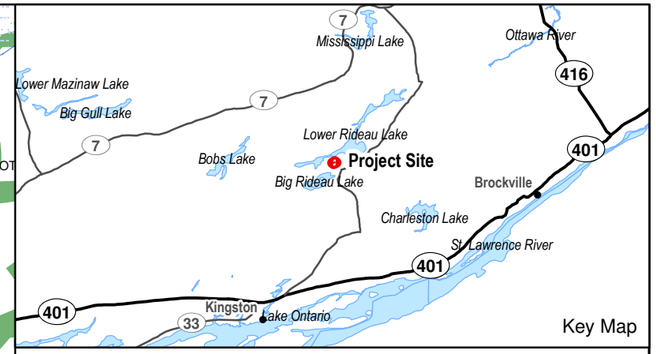
## 3.1 Summary of Results

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 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? | Yes | Big Rideau Lake is located < 300 m from the Project site. |
| Is the Project within 120 m of the average annual high water mark of a permanent or intermittent stream? | Yes | There is one water course 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. |




**Legend**

- Connection Point With Existing Distribution Line
- Proposed New Distribution Line
- Building
- Roads
- Transmission Line
- Topographic Contour (5m interval)
- Watercourse
- Project Site
- Study Area (120m)
- Study Area (300m)
- Parcels
- Waterbody
- Wetland Area
- Wooded Area

0 75 150 300 Metres

1:7,500

NORTH

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

Figure 3.1
Northland Power Inc.
**McCann Solar Energy Project**
**Water Body Features**

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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 stream and within 300 m of the a designated lake trout lake (although the capacity of the lake with respect to shoreline development is currently unknown).

## 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.

# 4. References

Fisheries and Oceans Canada (DFO). Available on-line at http://www.dfo-mpo.gc.ca/index-eng.htm Accessed May 11, 2010.

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United Counties of Leeds and Grenville. 2003. Local and Regional Maps. Available on-line at http://www.uclg.ca/en/community/locations_regional_maps.asp. Accessed May 11, 2010.