



Axio Power Canada Inc./  
SunEdison Canada

Draft Water Body Records  
Review Report

For

Belleville TS Demorestville  
Solar Energy Project

H335467  
Rev. E  
August 17, 2011

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Project Report

August 17, 2011

**Axio Power Canada Inc./SunEdison Canada  
Belleville TS Demorestville - Solar Energy Project**

**Draft Water Body Records Review Report**

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## 1. Introduction

### 1.1 Project Description

Axio Power Canada Inc./SunEdison Canada (“Axio/SunEdison”) is proposing to develop a 10 megawatt (MW) solar photovoltaic project titled Belleville TS Demorestville Solar Energy Project (hereinafter referred to as the “Project”). The Project Location<sup>1</sup> is situated on approximately 36 hectares (ha) of land on Part of Lot 51, Concession 1, Sophiasburgh Township, County of Prince Edward (single tier municipality) and within the Picton Ecodistrict 6E-15.

### 1.2 Renewable Energy 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), came into force on September 24, 2009 and identifies the Renewable Energy Approval (REA) requirements for renewable energy generation facilities in Ontario. The REA Regulation has since been amended by O. Reg. 521/10, which came in effect as of January 1, 2011.

As per the REA Regulation (Part II, Section 4), ground-mounted solar facilities with a nameplate capacity greater than (>) 10 kilowatts (kW) are classified as Class 3 solar facilities and require an REA.

### 1.3 Purpose of Report

Subsection 30 (1) 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.

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<sup>1</sup> “Project Location means, when used in relation to a renewable energy project, a part of land and all or part of any building or structure in, on or over which a person is engaging in or proposes to engage in the project and any air space in which a person is engaging in or proposed to engage in the project” (O. Reg. 359/09, s. 1 (1)).

## 2. Methodology and Results

The following sections document the records that were reviewed and assessed. The focus of the assessment was identifying whether or not the Project Location is within or adjacent to any water body features. The definition of a water body is stated in Section 1 (1) of the REA regulation:

*“water body’ includes a lake, a permanent stream, an intermittent stream and a seepage area but does not include,*

- (a) grassed waterways,*
- (b) temporary channels for surface drainage, such as furrows or shallow channels that can be tilled and driven through,*
- (c) rock chutes and spillways,*
- (d) roadside ditches that do not contain a permanent or intermittent stream,*
- (e) temporarily ponded areas that are normally farmed,*
- (f) dugout ponds, or*
- (g) artificial bodies of water intended for the storage, treatment or recirculation of runoff from farm animal yards, manure storage facilities and sites and outdoor confinement areas.”*

The following sections of this report were organized with respect to the governing bodies identified in Column 1 of the Table in Section 30 of the REA Regulation.

Records related to water body features that are within a minimum distance of 1 km from the Project Location were reviewed. This included records from the Ministry of Natural Resources, Ministry of the Environment, Ontario Ministry of Agriculture, Food and Rural Affairs, Federal Government, Quinte Conservation and the County of Prince Edward. The results are discussed below in relation to the distances specified between the Project Location and water body features, as identified in Section 30 of the REA Regulation (Section 1.3).

There are no Planning Boards, Local Roads Boards or Local Services Boards with jurisdiction over the Project study area. Also, the Project Location is not within the Niagara Escarpment Commission Plan Area. Therefore, records from these governing bodies 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 (OBM) and natural feature layers from Land Information Ontario (LIO) (<http://www.mnr.gov.on.ca/en/Business/LIO/index.html>), supplemented with OBM maps from the Geographic Network of Canada (GNC) (<http://www.geographynetwork.ca/>)
- Natural Heritage Information Centre (NHIC) on-line mapping (<https://www.biodiversityexplorer.mnr.gov.on.ca/nhicWEB/main.jsp>).

### 2.1.2 Results

OBM mapping identified the following water body features within 1 km of the Project Location:

- A tributary of Demorestville Creek located approximately 200 m north of the Project Location. Contour lines indicate that the watercourse flows from the northeast to the southwest.
- A tributary of Demorestville Creek approximately 390 m west of the southwest boundary of the Project Location. Contour lines indicate that the watercourse flows southwest from its origin point.

No water body features were identified on or within 120 m of the Project Location. Furthermore, no additional water features were identified from the mapping available on the NHIC website.

## 2.2 Ministry of the Environment

### 2.2.1 Methodology

A request for information related to water body features within a minimum distance of 1 km was sent to the Ministry of the Environment (MOE) by way of email dated April 15, 2011.

### 2.2.2 Results

The MOE responded to the information request on May 4, 2011, which included a map showing the water body features within proximity to the Project Location (Appendix A). The MOE did not identify any new or different water body features than those already identified by OBM mapping (Section 2.1.2). Therefore, no water body features were identified on or within 120 m of the project location by the MOE.

## 2.3 Ontario Ministry of Agriculture, Food and Rural Affairs Records

### 2.3.1 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](http://www.lio.ontario.ca/imf-ows/imf.jsp?site=ads_en)).

### 2.3.2 Results

The OMAFRA rural drainage mapping did not identify any constructed drains or agricultural tile drainage on or within 1 km of the Project Location.

The OMAFRA mapping identified the same water body features within 1 km of the Project Location as shown on the OBM mapping (Section 2.1.2).

## 2.4 Federal Government Records

### 2.4.1 Methodology

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

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

- DFO Aquatic Species at Risk Distribution Mapping available from Conservation Ontario website (<http://www.conservation-ontario.on.ca/projects/DFO.html>)
- Natural Resource Canada (NRCAN) National Topographic System (NTS) topographic maps (<http://atlas.nrcan.gc.ca/site/english/maps/topo/map>)

## 2.4.2 Results

No reference to water bodies on or adjacent to the Project Location was found on the DFO website.

The DFO Aquatic Species at Risk Distribution Mapping did not identify any aquatic Species at Risk within 120 m of the Project Location. Water body features as illustrated on the DFO mapping (e.g. Demorestville Creek tributaries) appeared the same as those depicted on the OBM mapping (discussed in Section 2.1.2).

The NRCAN topographic mapping identified the same water body features within 1 km of the Project Location as shown on the OBM mapping (Section 2.1.2).

## 2.5 Conservation Authority Records

### 2.5.1 Methodology

Information provided on the Quinte Conservation (QC) website (<http://quinteconservation.ca/web/>) was reviewed for any records regarding water body features on or adjacent to the Project Location.

A copy of the draft Project Description Report (PDR) was provided to QC for review in advance of a Project start-up meeting that was held on June 16, 2010.

Follow-up contacts were made with QC to obtain any relevant studies, information and/or GIS (Geographic Information System) mapping data related to water body features and natural heritage features on or adjacent to the Project Location.

### 2.5.2 Results

Review of the Prince Edward Region Watershed map (available on the QC website) identified the same water body features within 1 km of the Project Location as shown on the OBM mapping (Section 2.1.2). Other water features, illustrated on the rural drainage mapping, appeared the same as those depicted on the OBM mapping.

Telephone discussion with QC confirmed that they have no GIS Natural Heritage features mapping data other than that distributed by MNR via Land Information Ontario (LIO) database, and that they do not have Regulated Area mapping for the Project Location.

## 2.6 Municipal Records

### 2.6.1 Methodology

Information provided by the County of Prince Edward was reviewed to determine if any records regarding water body features on or adjacent to the Project Location were available.

A copy of the draft Project Description Report (PDR) was provided to the County of Prince Edward for review in advance of a Project start-up meeting that was held on June 16, 2010. Staff members



from the municipality attended the meeting and provided general information and comments on the relevant water body features, as well as natural heritage features.

Where required, follow-up contacts were made with the municipality to obtain any relevant studies, information and/or GIS mapping data related to water body features and natural heritage features on or adjacent to the Project Location.

### **2.6.2 Results**

The County of Prince Edward Official Plan (consolidated 2006) Schedules (available online at: [http://www.pecounty.on.ca/government/planning\\_services/planning.php](http://www.pecounty.on.ca/government/planning_services/planning.php)) identified a tributary of Demorestville Creek north of the Project Location as shown on the OBM mapping (Section 2.1.2). However, the tributary shown on the OBM mapping that is situated southwest of the Project Location, beyond the 120 m setback, was not identified on the County of Prince Edward Official Plan Schedules.

### 3. Summary of Results and Next Steps

#### 3.1 Summary of Results

Table 3.1 summarizes the results of the Records Review in regards to the water body features identified in Section 2. A map depicting the identified water body features on, and in proximity to, the Project Location is provided in Figure 3.1.

**Table 3.1 Summary of Records Review Determinations for the Belleville TS Desmorestville Solar Energy Project**

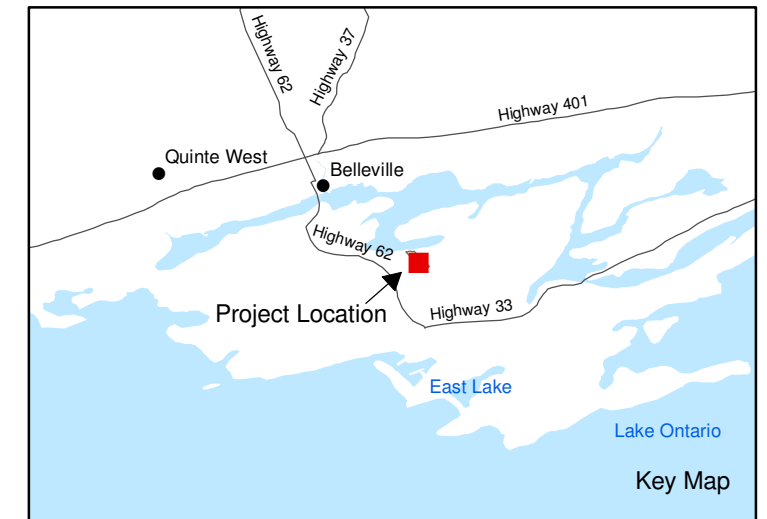
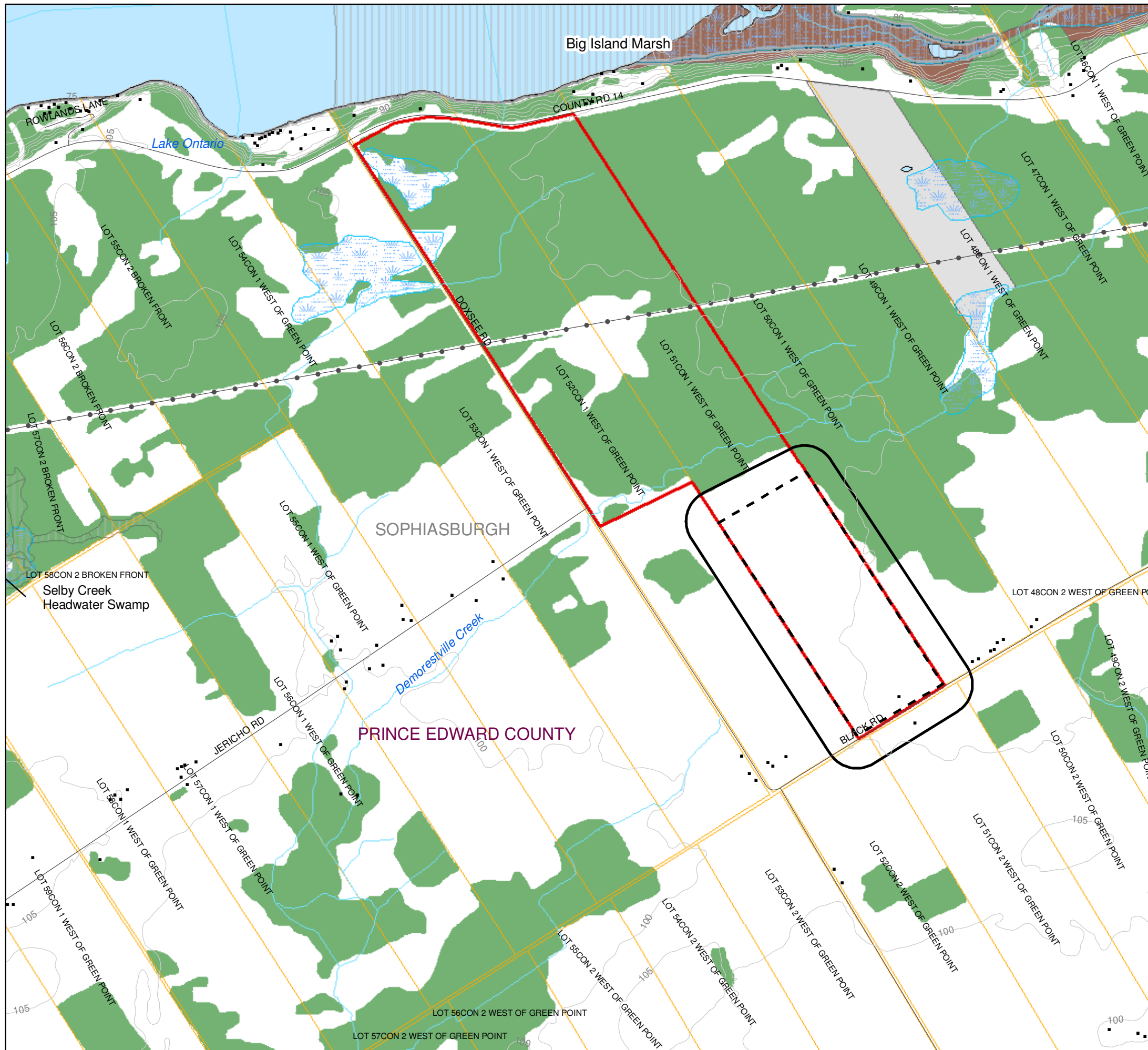
Determination to be Made	Yes/No	Description
Is the Project Location in a water body?	No	No water bodies were identified on or within 120 m of the Project Location.
Is the Project Location within 120 m of the average annual high water mark of a lake, other than a lake trout lake that is at or above development capacity?	No	No lakes were identified on or within 120 m of the Project Location.
Is the Project Location 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 were identified in the vicinity of the Project Location.
Is the Project Location within 120 m of the average annual high water mark of a permanent or intermittent stream?	No	No permanent or intermittent streams were identified on or within 120 m of the Project Location. The nearest streams are located approximately 200 m north and 390 m southwest of the Project Location, respectfully
Is the Project Location within 120 m of a seepage area?	No	No seepage areas were identified on or within 120 m of the Project Location.

Therefore, based on the information sources reviewed in this report, a site investigation will be required to verify if any water body features are located on and/or within 120 m of the Project Location.

#### 3.2 Next Steps

A site investigation, as required in Section 31 of the REA Regulation will be completed to:

- i. confirm the water body features identified during this records review
- ii. identify if any corrections to the information presented herein are required
- iii. determine whether any water bodies exist in the Project area
- iv. confirm the boundaries of any water body features within 120 m of the Project, and
- v. determine the distance from the Project to any identified water body boundaries (i.e., the average annual high water mark).



**LEGEND**

- Building
- +— Railway
- Road
- Topographic Contour (5 m interval)
- Transmission Line
- Watercourse
- ANSI, Life Science
- Authorized Aggregate Site
- Parcel
- Project Location
- 120 m from Project Location
- Project Site
- Water Body
- Provincially Significant Wetland
- Unevaluated Wetland (OBM Mapping)
- Woodland

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



Figure 3.1  
 Axio Power Canada Inc.  
 Belleville TS Demorestville  
 Water Body Features **HATCH™**

## 4. References

County of Prince Edward. 2006. County of Prince Edward Official Plan (consolidated 2006). Available on-line at: [http://www.pecounty.on.ca/government/planning\\_services/planning.php](http://www.pecounty.on.ca/government/planning_services/planning.php), Accessed August 9, 2010.

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Government of Ontario. 2009. Ontario Regulation 359/09 made under the Environmental Protection Act 2007, Renewable Energy Approvals under Part V.0.1. of the Act. September 8, 2009 version. Printed in the Ontario Gazette: October 10, 2009. Available on-line at: [Http://www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws\\_src\\_regs\\_r09359\)e.htm](Http://www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws_src_regs_r09359)e.htm).

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Quinte Conservation (QC) (No Date). Prince Edward Region Watershed Map. Available on-line at [http://quinteconservation.ca/web/images/stories/protecting\\_our\\_watersheds/images/pec\\_watershed\\_map.pdf](http://quinteconservation.ca/web/images/stories/protecting_our_watersheds/images/pec_watershed_map.pdf). Accessed August 9, 2010.

# Appendix A

## Ministry of the Environment Information



**Legend**

- Railway
- Utility Line
- Watercourse
- Lot and Concession
- Wetland
- Water Body

Approximate Location of Project



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