

RE BREEN 2 SOLAR PROJECT

Water Body Records Review Report

August 19, 2011

RECURRENT
ENERGY





RE Breen 2 ULC

Water Body
Records Review Report

RE Breen 2 Solar Project

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Project Report

August 19, 2011

RE Breen 2 ULC
RE Breen 2 Solar Project

Water Body Records Review Report

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1. Introduction

1.1 Project Description

RE Breen 2 ULC is proposing to develop and operate a 10-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 32-hectare (ha) parcel of land, located in the Municipality of Thames Center, County of Middlesex, approximately 8.5 km southwest of the City of Ingersoll; herein referred to as “RE Breen 2” or the “Project”.

1.2 Legislative Requirements

Ontario Regulation (O. Reg.) 359/09 – *Renewable Energy Approvals Under Part V.0.1 of the Act*, made under the *Environmental Protection Act* (herein referred to as the REA Regulation) identifies the Renewable Energy Approval (REA) requirements for green energy projects in Ontario. As 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 therefore, require an 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 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. It has also been prepared in accordance with the Ministry of Environment’s DRAFT Technical Bulletin – Guidance for Preparing the Water Assessment and Water Body Reports (dated January 28, 2011).

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 1.3. The sections are organized by the governing bodies 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 location. 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 1.3).

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 review for these governing bodies was not conducted.

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) on-line mapping (<http://nhic.mnr.gov.on.ca/MNR/nhic/queries/nhic.mwf>).

2.1.2 Results

Mapping obtained from LIO indicates that there are no waterbodies located within the Project location. Mapping does show that Reynolds Creek approaches the eastern Project location boundary. Reynolds Creek is a tributary of the Thames River, which is located approximately 1 km north of the Project location.

No additional water features were identified on the mapping available on the NHIC website. Available mapping shows the Thames River and Reynolds Creek but does not show any other waterbodies within 120 m of the Project location.

2.2 Federal Government Records

2.2.1 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 (www.dfo-mpo.gc.ca/regions/central/habitat/os-eo/index-eng.htm)
- DFO Aquatic Species at Risk Mapping (<http://www.conservation-ontario.on.ca/projects/DFO.html>)
- Natural Resource Canada (NRCAN) (http://ess.nrcan.gc.ca/mapcar/index_e.php).

2.2.2 Results

The search of the DFO website resulted in several references to aquatic species at risk designated under the federal Species At Risk Act (SARA) being present in the Thames River, which is located approximately 1 km south of the Project location (Cudmore et al., 2004). No site specific information was available regarding waterbodies or aquatic Species at Risk within 120 m of the Project location.

The NRCan mapping search resulted in a general environment map showing the Thames River and tributaries in the general Project location area, but no site specific information was available. No waterbodies were shown in the Project location.

2.3 Conservation Authority Records

2.3.1 Methodology

The proposed Project is situated within the jurisdiction of the Upper Thames River Conservation Authority (UTRCA). UTRCA maintains an on-line mapping database showing its regulated area under O. Reg. 157/06 and O. Reg. 97/04 (Regulation for Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses). Mapping data, including the Regulated Area boundary, flood hazard boundary and erosion hazard boundary was obtained from the UTRCA (UTRCA, 2010) and was added to the Project location maps to identify waterbodies within 120 m of the Project location.

2.3.2 Results

The Regulated Areas mapping from UTRCA (2010) indicates that there are no waterbodies within the Project location. Reynolds Creek is within the UTRCA's Regulated Area. However, only a small portion of the Regulated Area encroaches onto the Project location. However, the flooding hazard, which for the purposes of UTRCA's Regulation, corresponds to the water level associated with the 1:250-yr return period flood, does not encroach onto the Project location.

2.4 Municipal Records

2.4.1 Methodology

Middlesex County

The Project is located within the upper tier municipality of Middlesex County. The County maintains an on-line mapping database showing the general environmental and infrastructure features of the area, as well as high resolution satellite imagery.

The Middlesex County Official Plan (County of Middlesex, 2006) was also searched to find any records that may identify water features on or within 120 m of the Project location.

Municipality of Thames Centre

The Project is located within the lower tier municipality of Thames Centre. Searches of available material were conducted on their website. The Official Plan for the Township (Municipality of Thames Centre, 2004) was also reviewed to identify any records showing water features on or within 120 m of the Project location.

2.4.2 Results

Middlesex County

Satellite imagery viewed on the Middlesex County website showed Reynolds Creek and its adjacent valleylands as being adjacent to the Project location. No waterbodies are shown as being located in the Project location.

No water features were shown on or in close proximity to the Project location in Schedule A (Land Use) or Schedule C (Natural Heritage Features) in the Middlesex County Official Plan (County of

Middlesex, 2006). The schedules did show the South Thames River as being a flood regulated watercourse.

Municipality of Thames Centre

Mapping available on the Municipality of Thames Centre website shows Reynolds Creek. The Township’s Official Plan (Schedule A – Land Use Plan) shows Reynolds Creek with the surrounding area being designated as Protection Area (Municipality of Thames Centre, 2004).

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 1.3. A map depicting the identified water features on and in proximity to the site is provided in Figure 3.1.

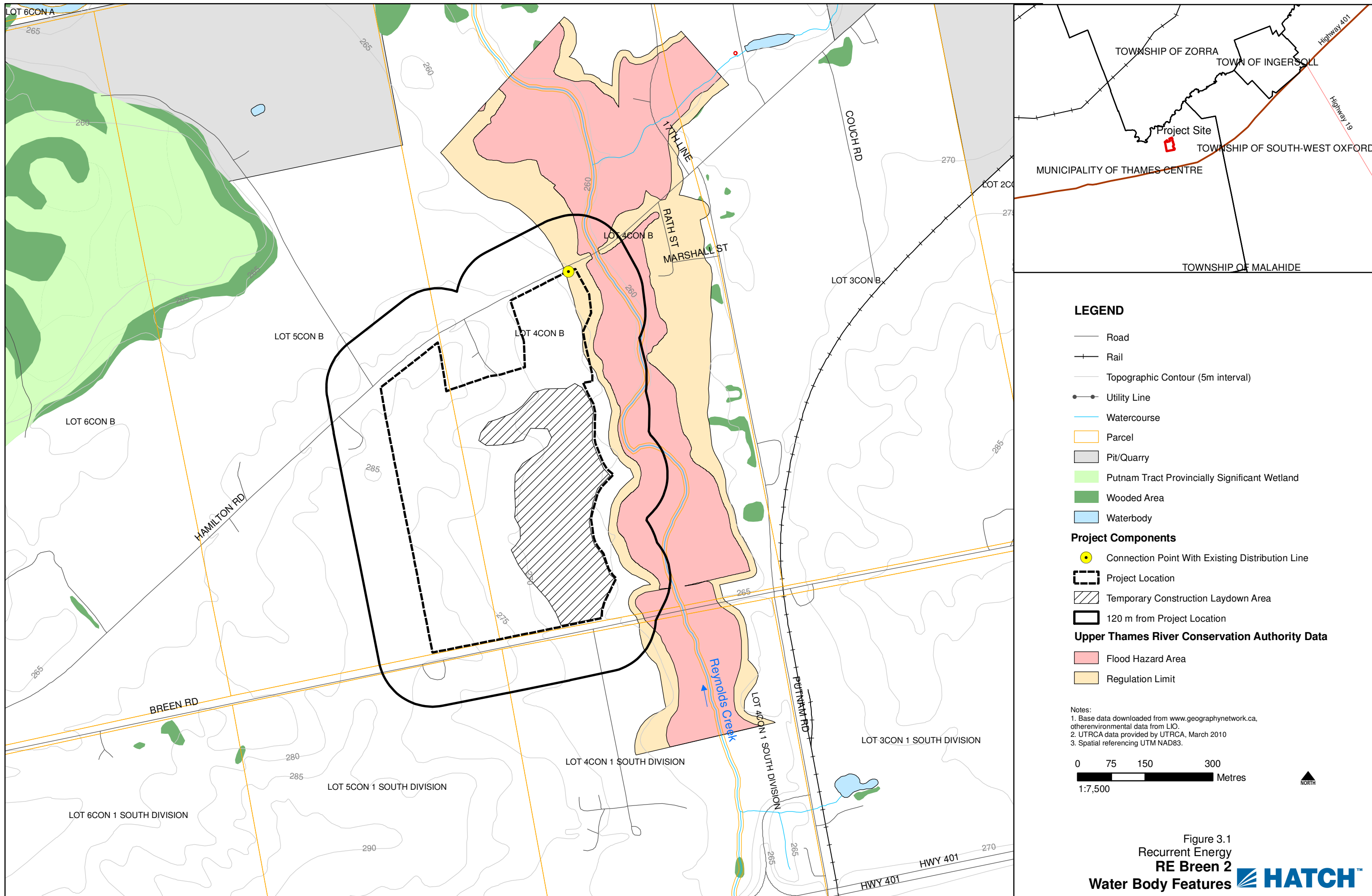
Table 3.1 Summary of Records Review Determinations

Determination to be Made	Yes/No	Description
Is the Project in a water body?	No	No part of the Project will be constructed 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 on or 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 are present on or 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?	Yes	Reynolds Creek is Located to the east of the Project location with the high water mark encroaching the Project location boundary.
Is the Project within 120 m of a seepage area?	No	No seepage areas were identified during the Records Review.

Therefore, depending on the layout of the proposed solar facility, some components of the Project could potentially be located within 120 m of the average annual high water mark of Reynolds 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 (i.e., the average annual high water mark).



LEGEND

- Road
 - +— Rail
 - Topographic Contour (5m interval)
 - Utility Line
 - Watercourse
 - ▭ Parcel
 - ▭ Pit/Quarry
 - ▭ Putnam Tract Provincially Significant Wetland
 - ▭ Wooded Area
 - ▭ Waterbody
- Project Components**
- Connection Point With Existing Distribution Line
 - ▭ Project Location
 - ▨ Temporary Construction Laydown Area
 - ▭ 120 m from Project Location
- Upper Thames River Conservation Authority Data**
- ▭ Flood Hazard Area
 - ▭ Regulation Limit

Notes:
 1. Base data downloaded from www.geographynetwork.ca, other environmental data from LIO.
 2. UTRCA data provided by UTRCA, March 2010
 3. Spatial referencing UTM NAD83.



Figure 3.1
 Recurrent Energy
 RE Breen 2
 Water Body Features **HATCH™**

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4. References

County of Middlesex. 2006. County of Middlesex Official Plan. Consolidated Version 2006.

On-line at

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Cudmore, B., MacKinnon, C.A. and S.E. Madzia. 2004. Aquatic Species at Risk in the Thames River Watershed, Ontario. Can. Man. Rep. Fish. Aquat. Sci. 2707. On-line at <http://www.dfo-mpo.gc.ca/Library/316802.pdf>. Accessed February 16, 2010.

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Upper Thames River Conservation Authority (UTRCA). 2010. Re: 6955 Hamilton Road, County of Oxford – Recurrent Energy Solar Projects – Breen 2. Correspondence from T. Arnett (UTRCA) to N. Boucher (Hatch Ltd.). March 12, 2010.

