

RE SMITHS FALLS 6 SOLAR PROJECT

Water Body Records Review Report

February 23, 2011

RECURRENT
ENERGY





RE Smiths Falls 6 ULC

Water Body
Records Review Report

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Project Report

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RE Smiths Falls 6 ULC
RE Smiths Falls 6 Solar Project

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1. Introduction

1.1 Project Description

RE Smiths Falls 6 ULC is proposing to develop and operate a 10-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 33-hectare (ha) parcel of land, located approximately 5 km southeast of Smiths Falls in the Township of Rideau Lakes in the United Counties of Leeds and Grenville; herein referred to as “RE Smiths Falls 6” 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, they do require an REA.

Section 30 of the REA Regulation requires proponents of Class 3 solar projects to undertake a Water Records Review to identify “whether the project is

- i. in a waterbody
- 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 on identifying whether or not the project was located within or adjacent to any of the water features listed above Section 1.2. The sections are organized by the governing bodies identified in Column 1 of the Table in Section 30 of the REA Regulation.

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.com)
- Natural Heritage Information Centre (NHIC) on-line mapping (<http://nhic.mnr.gov.on.ca/MNR/nhic/queries/nhic.mwf>).

The Kemptville District MNR office was also asked to provide any information they had available regarding water features on or adjacent to the Project site. This information was received on July 7, 2010.

2.1.2 Results

Mapping data obtained from LIO indicates that a small watercourse crosses the Project site, discharging into Otter Creek Provincially Significant Wetland (PSW) west of the Project site. A very small portion of the Otter Creek PSW is located within 120 m of the Project site. The Otter Creek PSW consists of a low-lying shoreline associated with Otter Creek, which is a tributary of the Rideau River. Otter Creek PSW and Otter Creek itself are located from 150 to 450 m north of the Project boundary.

Information received from the Kemptville MNR office indicates that Otter Creek contains known fish spawning areas for Largemouth Bass (*Micropterus salmoides*), Yellow Perch (*Perca flavescens*), and Northern Pike (*Esox lucius*), and these spawning areas exist in small watercourses as well.

No additional water features were identified on the mapping available on the NHIC website.

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 watercourse crossing the property and Otter Creek, as noted in Section 2.1.2. No other watercourses or drains were present within 120 m of the Project site. The field to the west of the Project site is noted as having systematic tile drainage.

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 ([www. http://www.dfo-mpo.gc.ca/regions/central/habitat/os-ee/index-eng.htm](http://www.dfo-mpo.gc.ca/regions/central/habitat/os-ee/index-eng.htm))
- DFO Species at Risk Distribution Map (<http://www.conservations-ontario.on.ca/projects/DFO.html>)
- Natural Resource Canada (NRCan) (http://ess.nrcan.gc.ca/mapcar/index_e.php).

2.3.2 Results

No site-specific information with respect to the water features on and in proximity to the Project site was available on the DFO website. A review of the Species at Risk Distribution map reveals that there are not any aquatic species at risk known from the Project site.

The NRCan mapping review resulted in a general environment map showing the Rideau River, Otter Creek PSW and tributaries in the general project area, but there was no additional information on those on and in proximity to 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). RVCA maintains an on-line mapping database showing its regulated area under O. Reg. 174/06 (Regulation for Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses). The Regulated Areas map for the Project site and surrounding area was downloaded and reviewed. The RVCA was also asked to provide any information they had available regarding the water features on or adjacent to the Project site.

2.4.2 Results

The watershed regulation map provided by the RVCA (2010) identifies the same watercourses shown by the LIO mapping noted in Section 2.1.2, although the small watercourse crossing the property is not included within the RVCA's Regulated Area. RVCA also indicates a large flood hazard zone (corresponding to the 1:100-yr flood hazard) adjacent to Otter Creek, which covers approximately 10 to 15% of the Project site. The flood hazard zone appears to be due to the high water level of Otter Creek, which would inundate a portion of the northern section of the low-lying Project site.

2.5 Municipal Records

2.5.1 Methodology

County of Leeds and Grenville

The Project is located within the upper tier municipality of United County of Leeds and Grenville. The County maintains an on-line mapping database (http://www.uclg.ca/en/community/locations_regional_maps.asp) showing the general features of the area.

Township of Rideau Lakes

The Project is located within the lower tier municipality of the Township of Rideau Lakes. Searches of available material were conducted on their website (<http://www.twprideaulakes.on.ca/>). The Official Plan for the Township (Novatech Engineering Consultants Ltd., 2004) was also reviewed.

2.5.2 Results

County of Leeds and Grenville

The County of Leeds and Grenville website was reviewed for relevant information. A map of the general water features of the County was examined. The watercourse traversing the Project site (as noted in Section 2.1.2) was not present on the map, although Otter Creek and the Rideau River were present.

Township of Rideau Lakes

The Township of Rideau Lakes website provides a general overview map showing the water features associated with Otter Creek PSW, although it does not show the tributary traversing the Project site.

The Official Plan (Novatech Engineering Consultants Ltd., 2004), Schedule A5 (South Elmsley Ward) showed Otter Creek, but did not show the tributaries on the Project site. Parts of Otter Creek are identified as Natural Heritage Land Use features. The Project site is identified as Agricultural.

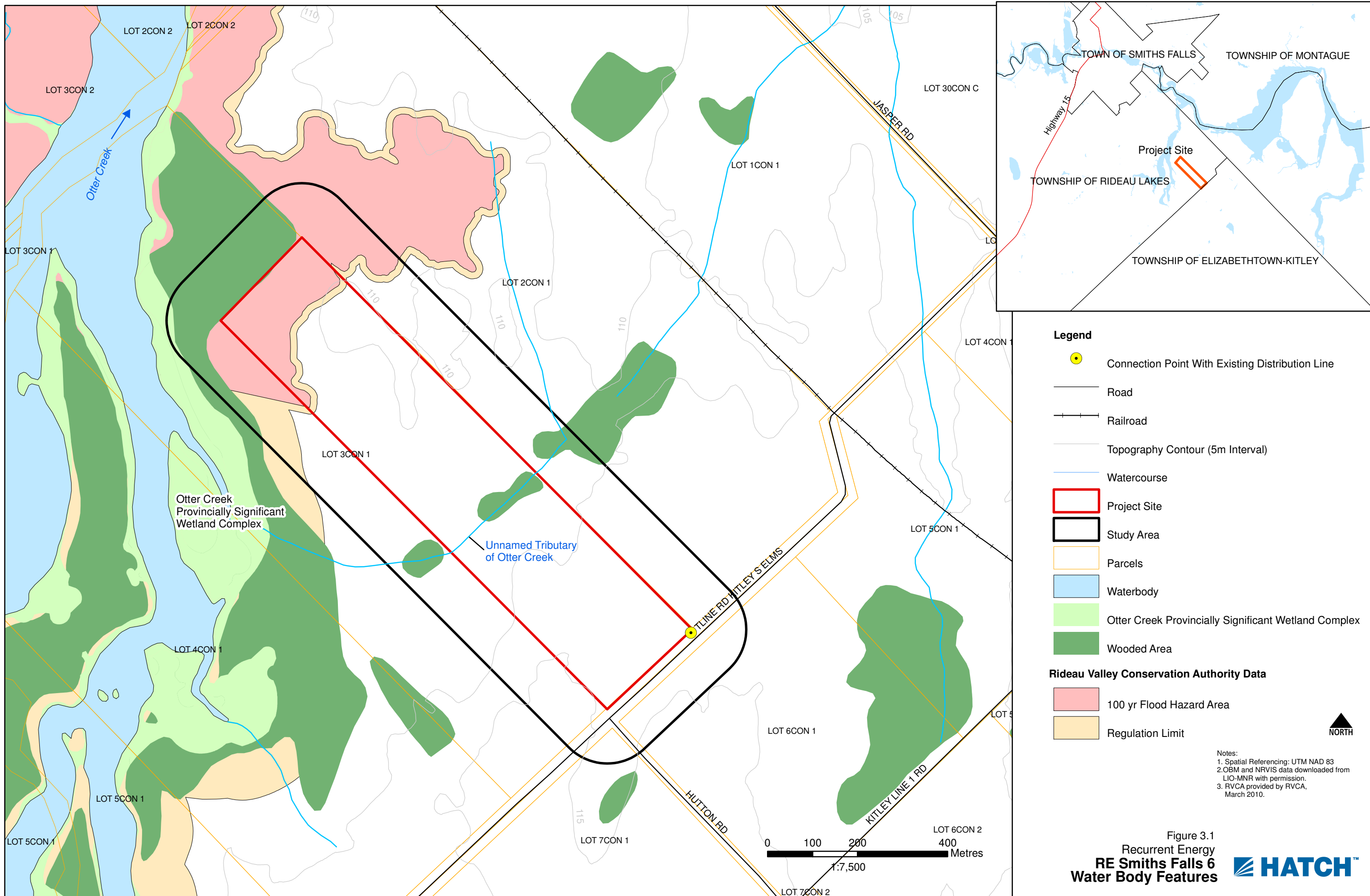
3. Summary of Results and Next Steps

3.1 Summary of Results

Table 3.1 summarizes the results of the Record 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 waterbody?	No	No part of the project will be constructed within a waterbody
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 located 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 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	One small watercourse crosses the Project site.
Is the project within 120 m of a seepage area?	No	No groundwater seepage areas were identified during the Records Review.



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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 one permanent or intermittent stream. It could also be within the Regulated Flood Hazard zone of Otter Creek (but outside the average annual high water mark).

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

Novatech Engineering Consultants Ltd. 2004. Official Plan of the Township of Rideau Lakes. Prepared for the Township of Rideau Lakes, April 2, 2004. On-line at <http://www.twprideaulakes.on.ca/plan/trl-official-plan-2004-web.pdf>. Accessed April 5, 2010.

Rideau Valley Conservation Authority (RVCA). 2010. Letter regarding "Property Inquiry for the renewable energy project located at Lot 3, Concession 1, in the Township of South Elmsley, Township of Rideau Lakes, Kitley South Elmsley Townline Rd." M. Waters (Resources Specialist, RVCA) to N. Boucher (Aquatic Biologist, Hatch).