

RE MIDHURST 6 SOLAR PROJECT

Water Body Records Review Report

March 18, 2011

RECURRENT
ENERGY





RE Midhurst 6 ULC

Water Body
Records Review Report

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Project Report

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RE Midhurst 6 ULC
RE Midhurst 6 Solar Project

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1. Introduction

1.1 Project Description

RE Midhurst 6 ULC is proposing to develop and operate a 9-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 30-hectare (ha) parcel of land, located about 10 km north of Barrie and approximately 700 m north of the Midhurst Settlement Area, in the Township of Springwater in the County of Simcoe; herein referred to as “RE Midhurst 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 nameplate 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 for the RE Midhurst 6 Project to meet these requirements. It has also been prepared in accordance with the MOE’s 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 1.2. The sections are organized by the governing bodies identified in Column 1 of the Table in Section 30 of the REA Regulation.

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

The Midhurst District MNR office was also asked to provide any information they had available regarding water features on or adjacent to the Project area.

2.1.2 Results

Mapping data obtained from LIO indicates that there is one watercourse originating on the Project site, which flows in a northern direction (identified as Tributary A of Matheson Creek in Figure 3.1). Another watercourse (identified as Tributary B of Matheson Creek in Figure 3.1) is also located within 120 m east of the Project site, running parallel with the eastern Project boundary. The two watercourses converge north of the Project site and discharge into the Midhurst Swamp Evaluated Non-Provincially Significant Wetland (ENPSW) Complex, located approximately 700 m north of the Project site.

Information obtained from MNR (2010) indicated that the watercourses on and within 120 m of the Project site are tributaries of Matheson Creek. No fish community information is available for these tributaries, but fish species known to be present in Matheson Creek downstream from the Project site include coldwater species such as brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), sculpin species (*Cottus sp.*), central mudminnow (*Umbra limi*) and brook stickleback (*Culaea inconstans*). MNR indicated that the sensitivity of the tributaries would be High, given that they are generally considered to be coldwater due to proximity to Matheson Creek (MNR, 2010).

No additional waterbodies 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 identified the two watercourses noted in Section 2.1.2. No other watercourses or drains were present within 120 m of the Project site. No tile drainage was identified within 120 m of the Project site.

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/regions/central/habitat/os-eo/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 did not result in any references for the Project area. No site-specific information was available. A review of the Species at Risk Distribution Map does not show the identified watercourses but there are no identified species at risk in the Project area in the surrounding watercourses.

The NRCan mapping search did not provide any additional information on waterbodies on the Project site.

2.4 Conservation Authority Records

2.4.1 Methodology

The proposed Project is situated within the jurisdiction of the Nottawasaga Valley Conservation Authority (NVCA). NVCA maintains an on-line mapping database showing its regulated area under O. Reg. 172/06 (Regulation for Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses). Information on Regulated Areas, including flood hazards, erosion hazards and wetlands, was obtained from the NVCA.

2.4.2 Results

The Regulated Areas map indicates that Tributary A of Matheson Creek, originating on the Project site, has an associated Slope Hazard Area and a small portion of a Meander Belt (Figure 3.1). Tributary B of Matheson Creek is also within the Regulated Area, with the flood hazard approaching the Project site boundary and a slope hazard present on the Project site. The flood hazard noted in NVCA mapping is based on the water levels that would occur during the 1:100-yr storm event, which is designated as the NVCA's flood event standard.

2.5 Municipal Records

2.5.1 *Methodology* *Simcoe County*

The Project is located within the upper tier municipality of Simcoe County. The County maintains an on-line mapping database (<http://maps.simcoe.ca>) showing the general environmental and infrastructure features of the area, as well as high-resolution satellite imagery. The Simcoe County Official Plan (County of Simcoe, 2007) was also searched to find any records that may identify water features in the Project area.

Township of Springwater

The Project is located within the lower tier municipality of the Township of Springwater. Searches of information available on the township website (<http://www.springwater.ca>) were conducted. The Official Plan for the Township (Township of Springwater, 2000) was also reviewed.

2.5.2 *Results* *Simcoe County*

Satellite imagery viewed on the Simcoe county website showed the same waterbodies previously discussed in Section 2.1.2. The imagery appears to indicate a non-farmed vegetated buffer around the portion of Tributary A on the Project site. This may be indicative of a groundwater discharge zone with the slope hazard area and should be confirmed during the site investigation.

The Official Plan – Land Use Designation Map (County of Simcoe, 2007) shows the two watercourses on and adjacent to the site, as previously discussed in Section 2.1.2.

Township of Springwater

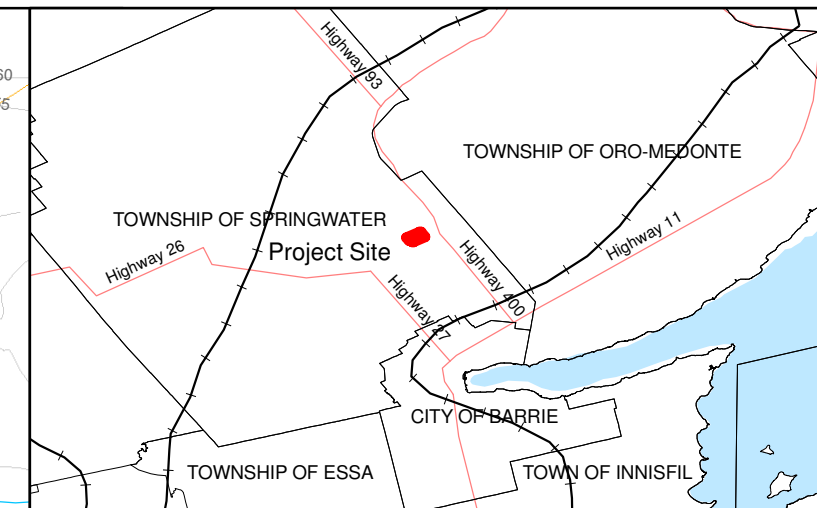
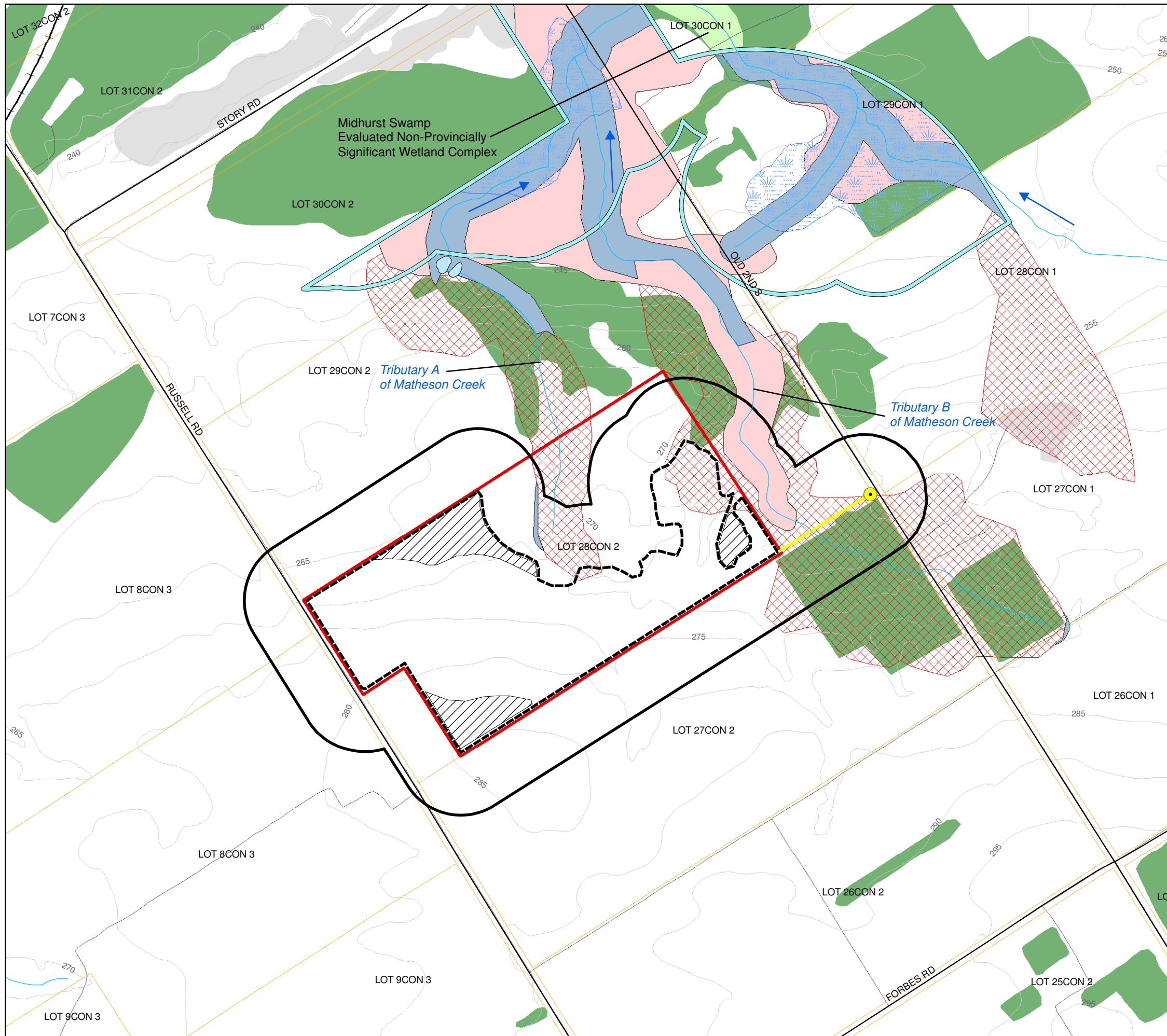
The Township of Springwater website provided a link to the above-mentioned County of Simcoe Interactive map as well as provided a general map for the Township. No new waterbodies were found in relation to the Project site.

The Official Plan (Township of Springwater, 2000) contains a Natural Features map in Schedule B. The map showed no additional water body features within 120 m of the Project site.

3. Summary of Results and Next Step

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.



- Legend**
- Roads
 - Watercourse
 - Topographic Contour (5m Interval)
 - Available Lands
 - 120 m from Project Location
 - Pit/Quarry
 - Waterbody
 - Evaluated Wetland
 - Wooded Area
- Nottawasaga Valley Conservation Authority Data**
- Meander Belt
 - Slope Hazard Area
 - NVCA Wetlands Buffer
 - Wetlands
 - Flood Hazard Area
- Project Components**
- Connection Point With Existing Distribution Line
 - New Distribution Line From Project
 - Project Location
 - Temporary Construction Laydown Area



Notes:
 1. Base data downloaded from www.geographynetwork.ca, other environmental data from LIO,
 2. Spatial referencing UTM NAD83, July 2010.

Figure 3.1
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 Water Body Features **HATCH™**

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 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 Project site.
Is the Project within 120 m of the average annual high water mark of a permanent or intermittent stream?	Yes	Two small watercourses originate on or within 120 m of the Project site.
Is the Project within 120 m of a seepage area?	No	No seepage areas are noted within 120 m of the Project site, based on the information obtained from the records review. However, the area around Tributary A on the Project site could be a potential seepage area.

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 two permanent or intermittent streams. In addition, a seepage area may be present at the upstream end of Tributary A on the Project site.

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

County of Simcoe. 2007. The County of Simcoe Official Plan. Available on-line at http://www.simcoe.ca/ws_cos/media/media/planning%20files/CtyOP_Sch_All.pdf. Accessed March 19, 2010.

Ministry of Natural Resources (MNR). 2010. Unpublished Fish and Fish Habitat Information. Provided to Hatch Ltd. May 4, 2010.

Township of Springwater. 2000. Township of Springwater Official Plan. Available on-line at http://www.springwater.ca/ws_par/groups/public/@pub/@springwater/documents/web_content/wspar_021709.pdf. Accessed March 19, 2010.