

RE MIDHURST 4 SOLAR PROJECT

Water Body Records Review Report

August 3, 2011

RECURRENT
ENERGY





RE Midhurst 4 ULC

Water Body
Records Review Report

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Project Report

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1. Introduction

1.1 Project Description

RE Midhurst 4 ULC is proposing to develop and operate a 6.5-megawatt (MW) solar photovoltaic (Solar PV) facility, on an approximately 20-hectare (ha) parcel of land, located about 14 km northeast of Barrie, in the Township of Oro-Medonte in Simcoe County; herein referred to as “RE Midhurst 4” 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 for the RE Midhurst 4 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 location area. Also, the Project location 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 location.

2.1.2 Results

Mapping data obtained from LIO does not indicate any watercourses on the Project location. However, a tributary of Shelswell's Creek arises northeast of the Project location. The tributary channel is located approximately 125 m northeast of the Project location. The stream originates within the Shelswell's Creek Evaluated Non-Provincially Significant Wetland (ENPSW) Complex which is also located within 120 m of the Project location. Shelswell's Creek is a tributary of Lake Simcoe, which is located approximately 5 km south of the Project location.

Information provided by the Midhurst District MNR (2010) indicated that there are no fish community sampling records in the vicinity of the Project location. However, sampling records from Shelswell's Creek farther downstream indicate the presence of a cold/cool water fish community including brook trout (*Salvelinus fontinalis*), blacknose dace (*Rhinichthys atromaculatus*), northern redbelly dace (*Phoxinus eos*), pearl dace (*Margariscus margarita*), creek chub (*Semotilus atromaculatus*), white sucker (*Catostomus commersonii*), brook stickleback (*Culaea inconstans*), central mudminnow (*Umbra limi*), brassy minnow (*Hybognathus hankinsoni*) and bluntnose minnow (*Pimephales notatus*).

Another small watercourse is identified on LIO mapping approximately 500 m west of the Project location.

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) online 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 water course noted in Section 2.1.2. No other watercourses were present within 120 m of the Project location. A block of systematic tile drainage was shown on the property adjacent to the western boundary of the Project location.

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-eo/index-eng.htm](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 show the Project area and the identified tributary of Shelswell's Creek. It does not show any species at risk for the Shelswell's Creek or any of the tributaries.

The NRCan mapping search did not provide any additional information on waterbodies on or within 120 m of the Project location.

2.4 Conservation Authority Records

2.4.1 Methodology

The proposed project is situated within the jurisdiction of the Lake Simcoe Region Conservation Authority (LSRCA). The LSRCA maintains an on-line mapping database showing their Regulated Area under their Regulation for Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses (O.Reg. 179/06). Information on Regulated Areas, including flood hazards, erosion hazards and wetlands, was obtained from the LSRCA.

The LSRCA was also asked to provide any information they had available regarding the water features on or adjacent to the Project location.

2.4.2 Results

The LSRCA identified the tributary of Shelswell's Creek, which is a known cold water system, as being in close proximity to the northwest corner of the Project location (Walker, 2009). This tributary is within the LSRCA's Regulated Area, which consists of a Flood Hazard, Erosion Hazard and appropriate buffer. The Regulation Limit, which encompasses these features and appropriate setbacks is shown in Figure 3.1.

Mapping from the LSRCA identifies another small water course that arises out of the Shelswell's Creek wetland complex and flows west, underneath Line 5 N and through the adjacent subdivision on the north side of Highway 11. LSRCA also identifies this as a tributary of Shelswell's Creek. This water course is also within the LSRCA's Regulated Area, but it is located greater than 120 m from the Project location.

2.5 Municipal Records

2.5.1 Methodology

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 Oro-Medonte

The Project is located within the lower tier municipality of the Township of Oro-Medonte. Searches were conducted on information available on the township website (<http://www.oro-medonte.ca/index.htm>). The Official Plan for the Township (Township of Oro-Medonte, 2007) was also reviewed for any records pertaining to water features on or within 120 m of the Project location.

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. This mapping and aerial photograph show the stream on the northwestern corner of the property and the associated wetland complex is evident.

The Official Plan – Land Use Designation Map (County of Simcoe, 2007) showed the tributary of Shelswell's Creek adjacent to the northwestern corner of the Project location. No other water features were identified within 120 m of the Project. Schedule 5.2.2 (Evaluated Wetlands) shows the several locally significant wetland complexes of the Shelswell's Creek wetland adjacent to the Project location.

Township of Oro-Medonte

Township of Oro-Medonte website provided a link to the above mentioned County of Simcoe Interactive map as well as provided a general map for the Township showing. No new features were found in relation to the Project location.

The Official Plan Natural Features map (Schedule B) showed the tributary of Shelswell's Creek on and adjacent to the Project location, but did not identify any additional water features not already discussed.

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 an 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 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 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	One small stream, draining from Shelswell's Wetland Complex is potentially located within 120 m of the Project location depending on the high water mark.
Is the Project within 120 m of a seepage area?	No	No seepage areas were found within 120 m of the Project location during the records review.

Therefore, depending on the layout of the proposed solar facility, the Project location could be located within 120 m of the average annual high water mark of the tributary of Shelswell's Creek northeast 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 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 on or within 120 m of the Project location, (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.

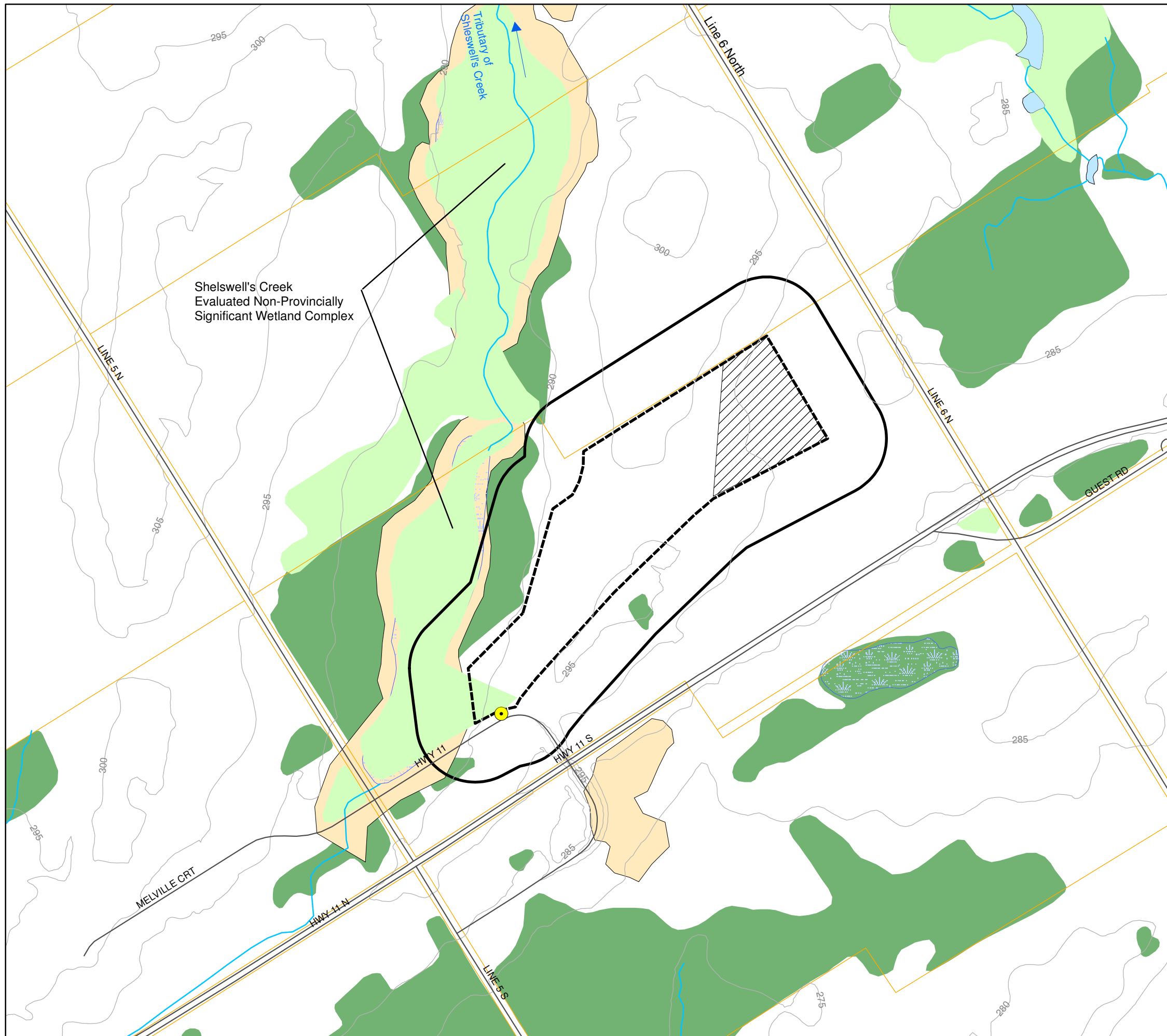
4. References

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

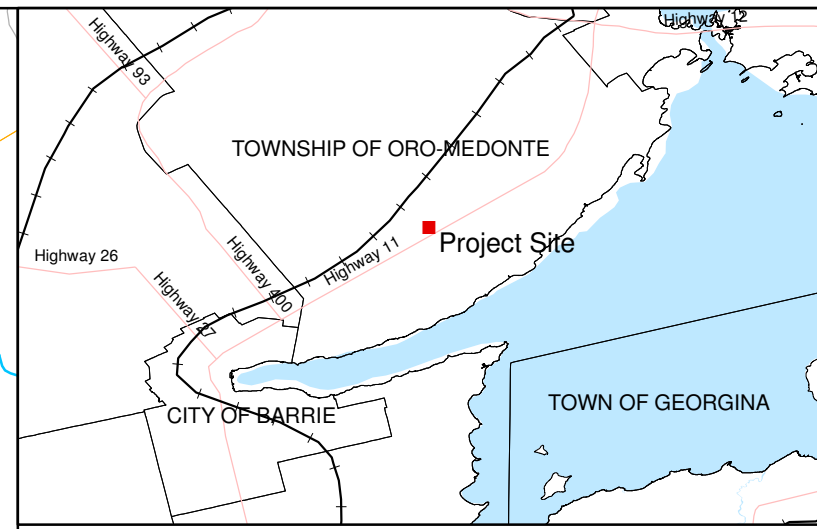
Lake Simcoe Region Conservation Authority (LSRCA). 2009. Letter (I. Walker, Environmental Planner, LSRCA to S. Caffyn, Development Manager, Recurrent Energy LLC). October 29, 2009.

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

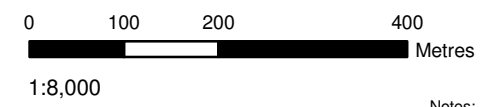
Township of Oro-Medonte. 2007. Township of Oro-Medonte Official Plan. Printed March 16, 2007.



Shelswell's Creek
Evaluated Non-Provincially
Significant Wetland Complex



- Legend**
- Connection Point with Existing Distribution Line
 - Roads
 - Rail
 - Topographic Contour (5m interval)
 - Watercourse
 - Project Location
 - 120 m from Project Location
 - Temporary Construction Laydown Area
 - Parcels
 - Waterbody
 - Wetland
 - Evaluated Wetland
 - Wooded Area
- Lake Simcoe Region Conservation Authority Data**
- Regulated Area



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

Figure 3.1
Recurrent Energy
RE Midhurst 4
Water Body Features HATCH™

