

Water Body Report Addendum

Belleville TS Demorestville

Solar Energy Project

prepared for

SunEdison

(formerly with Axio Power Canada Inc.)



ECOLOGICAL SERVICES

Report Author Signature

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Date

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INTRODUCTION

This Water Body Report addendum pertains to a proposed revision to the layout of the Belleville TS Demorestville Solar Energy Project. The Project Location is a 36 hectare (ha) parcel situated on Part of Lots 51 and 52, Concession 1, Sophiasburgh Township, within the County of Prince Edward (single tier municipality) and within Picton Ecodistrict 6E-15. REA Natural Heritage Assessment reports for this project were submitted to MNR Peterborough on July 7, 2011 and a Letter of Confirmation was received by SunEdison on July 21, 2011.

In response to significant community concerns over visual impacts that were raised by local residents and neighbours of the Demorestville project, SunEdison has committed to shifting the Project Location an additional 30 metres north of Black's Road. This addendum details changes to the content of previously submitted Water Body Reports (Records Review, Site Investigation) resulting from the relocation. A new Environmental Impact Study Report has also been prepared due to the presence of an intermittent stream (Demorestville Creek) within 120 m of the revised Project Location.

WAER BODY RECORDS REVIEW UPDATE

A Draft Water Body Records Review Report was submitted for the Belleville TS Demorestville Solar Energy Project (Hatch Ltd., 2011). Figure 3.1 below corresponds to the updated Project Layout. Due to proximity of Demorestville Creek to the new Project Location, a change in the records review summary (Table 3.1) is indicated below (*italicized*). Additional changes are also noted for Section 2.1.2.

2.1.2 Results

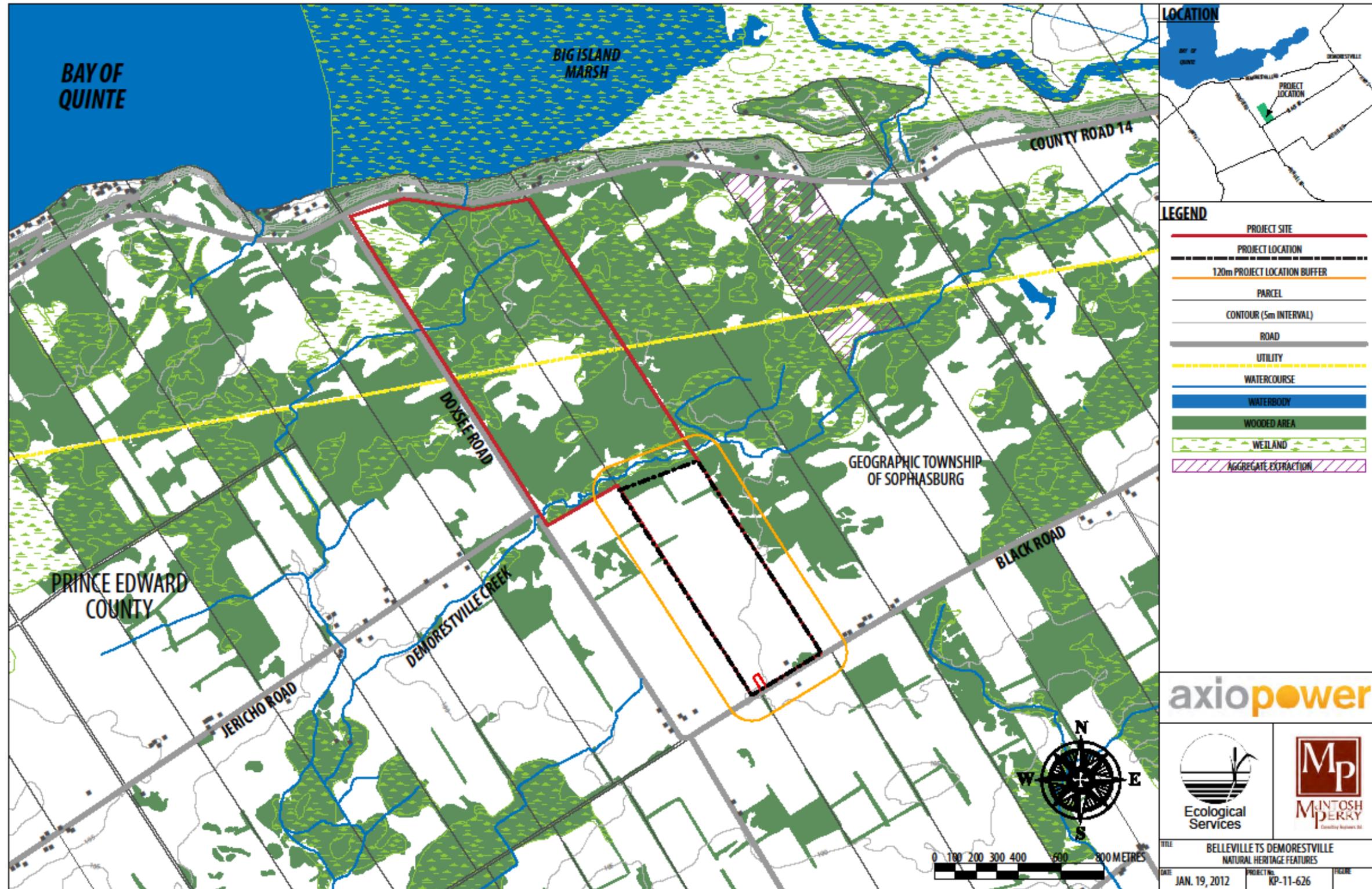
OBM mapping identified the following water body features within 1 km of the Project Location:

- A tributary of Demorestville Creek located approximately *50 m* north of the Project Location. Contour lines indicate that the watercourse flows from the northeast to the southwest.

Table 3.1 Summary of Records Review Determinations for the Belleville TS Demorestville 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?	<i>Yes</i>	<i>An intermittent stream (Demorestville Creek) occurs within 120 m of the Project Location</i>
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

Figure 3.1 Belleville TS Demorestville Water Body Features



WATER BODY SITE INVESTIGATION REPORT UPDATE

A Draft Water Body Site Investigation Report was submitted for the Belleville TS Demorestville Solar Energy Project (Ecological Services, 2011). Changes to the determinations made in that report as a result of the Project relocation are presented below for each relevant section (*indicated in bold italics*).

2. Summary of Records Review Results

The following table (Table 2.1) provides a summary of the determinations made in the *Water Body Records Review Report* (Hatch Ltd., 2011) with respect to water body features in and within a specified distance from the Project Location.

Table 2.1 Summary of Records Review Determinations

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?	Yes	<i>An intermittent stream (Demorestville Creek) occurs within 120 m of the Project Location</i>
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

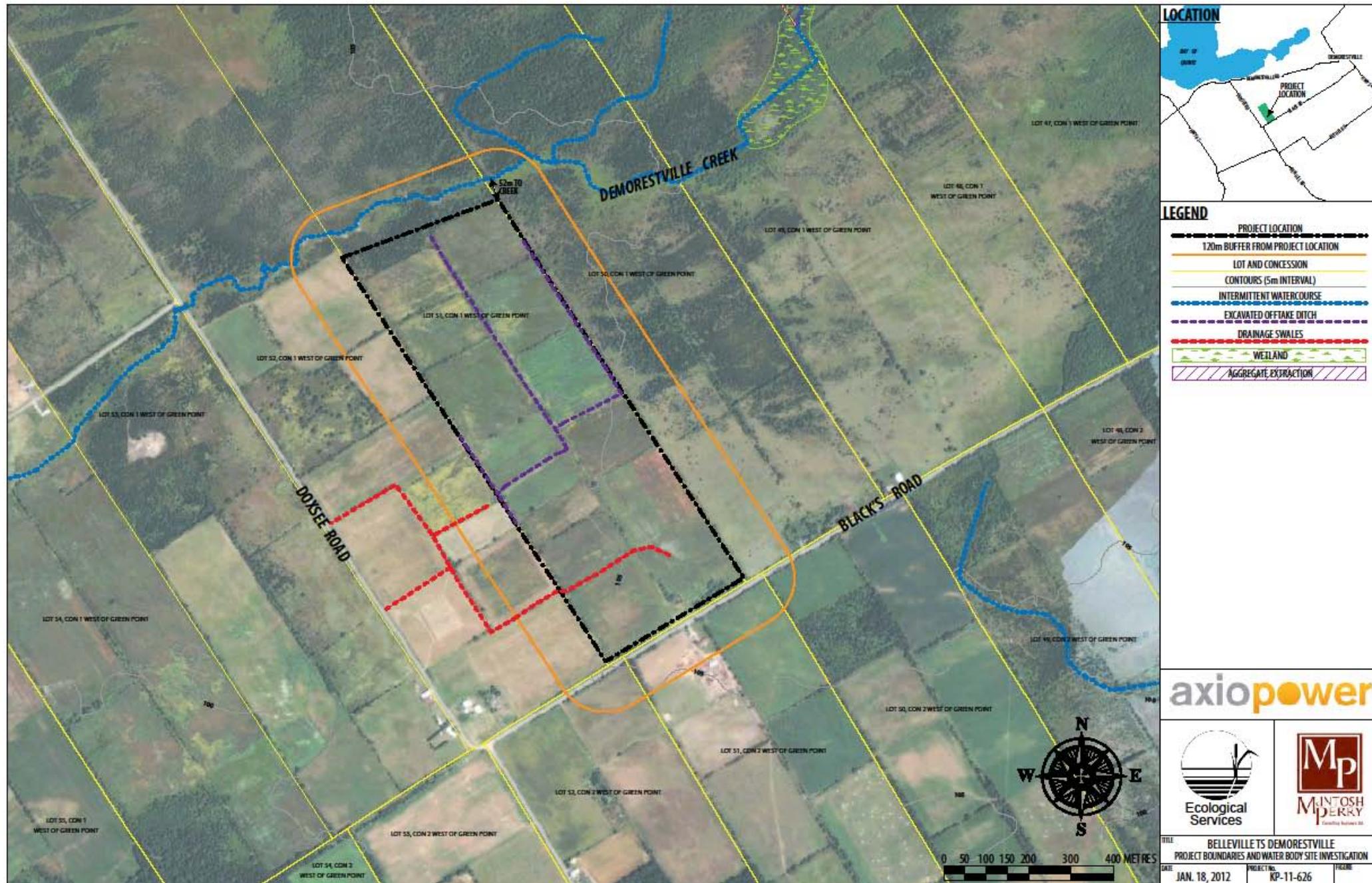
As outlined in Table 2.1, the *Water Body Records Review Report* (Hatch Ltd., 2011) **identified an intermittent stream with the high water mark occurring within 120 m of the Project Location**. The presence/absence of these and any additional water body features not identified in the *Water Body Records Review Report* (Hatch Ltd., 2011) is discussed in the following sections. Any corrections required to the *Water Body Records Review Report* (Hatch Ltd., 2011), particularly with respect to Table 2.1, is discussed in Section 5.

4.1 Site Description

The Project is located within the Demorestville Creek watershed and covers approx. 20-30 km². The watershed is flat and composed primarily of successional red cedar dominated woodlands and agricultural lands. Demorestville Creek is located **approx. 50 m north** of the Project Location and flows approx. 1.5 km east to Big Island Marsh/Muscote Bay. Surface run-off from the Project Location is conveyed west via two constructed drainage channels to Doxsee Road and then north along a road ditch to Demorestville Creek. There are no REA defined watercourses or water bodies present **within the Project Location**.

The Project Location is situated on cropland and fallow fields within an agriculturally dominated rural area. Adjacent properties include abandoned farmland and cattle pasture consisting of early-mid successional woodlands, cultural thicket and cultural meadow.

Figure 4.1 Project Location and regional water body features.



4.2.2 Intermittent Streams

An intermittent stream is considered a water body, and is defined in Subsection 1 (1) of the REA Regulation as “a *natural or artificial channel, other than a dam, that carries water intermittently and does not have established vegetation within the bed of the channel, except vegetation dominated by plant communities that require or prefer the continuous presence of water or continuously saturated soil for their survival*” (O. Reg. 359/09).

The *Water Body Records Review Report* (Hatch Ltd., 2011) **identified an intermittent stream** within 120 m of the Project Location. This was confirmed during a site investigation completed on June 20, 2010.

Demorestville Creek is a seasonally intermittent stream that is located approx. **50 m** north of the Project Location (Figure 4.3). At the time of the site survey in June, 2010, there was no water contained within this watercourse and no developed wetland or aquatic vegetation community associated with the riparian channel.

5. Conclusions

Subsection 31 (1) of the REA Regulation requires that the *Water Body Site Investigation Report* include a summary of any corrections to the *Water Body Records Review Report* (Hatch Ltd., 2011), as well as the determinations made as a result of conducting the site investigations. The following table (Table 5.1) identifies the corrections required (if any) and determinations made for the water body features identified in the *Water Body Records Review Report* (Hatch Ltd., 2011) and documented during the site investigations.

Table 5.1 Corrections required to the Demorestville Solar Energy Project Water Body Records Review Report

Determination to be Made	Yes/No	Corrections Required?
Is the Project Location in a water body?	No	There are no corrections required to the <i>Water Body Records Review Report</i> (Hatch Ltd., 2011) with respect to water bodies. The site investigation confirmed that there are no water bodies 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	There are no corrections required to the <i>Water Body Records Review Report</i> (Hatch Ltd., 2011) with respect to lakes. The site investigation confirmed that there are no lakes 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	There are no corrections required to the <i>Water Body Records Review Report</i> (Hatch Ltd., 2011) with respect to lake trout lakes. The presence/absence of lake trout lakes is the responsibility of the MNR and is not required for the site investigation.
Is the Project Location within 120 m of the average annual high water mark of a permanent or intermittent stream?	Yes	There are no corrections required to the <i>Water Body Records Review Report</i> (Hatch Ltd., 2011) with respect to permanent or intermittent streams. The site investigation confirmed <i>that there is an intermittent stream within 120 m</i> of the Project Location.
Is the Project Location within 120 m of a seepage area?	No	There are no corrections required to the <i>Water Body Records Review Report</i> (Hatch Ltd., 2011) with respect to seepage areas. The site investigation confirmed that there are no seepage areas within 120 m of the Project Location.

As a watercourse feature identified under REA occurs within 120 m of the Demorestville Project Location a Water Body Environmental Impact Study Report is required to address potential negative environmental effects.

LIST OF REFERENCES

Hatch Engineering Ltd. 2011. Draft Water Body Records Review Report for Belleville TS Demorestville Solar Energy Project H335467 Rev. E August 17, 2011.

Ecological Services. 2011. Water Body Site Investigation Report for Belleville TS Demorestville Proposed Solar Energy Project. July 18, 2011.