



## **Future Solar Developments Inc.**

**3400 Pharmacy Avenue, Unit 8  
Scarborough, Ontario  
M1W 3J8**

Water Assessment Records Review LP7 Report  
9274 Union Drive  
Strathroy, ON

**Project Number:**  
WSL-00002250

**Prepared By:**  
**exp** Services Inc.  
1595 Clark Blvd  
Brampton, ON L6T 4V1  
Canada

**Date Submitted:**  
July 2012



## **Legal Notification**

This report has been prepared by **exp** Services Inc. on behalf of Mr. Sam Qin of Future Solar Developments Inc. for the submission to the Ontario Ministry of the Environment as part of the Renewable Energy Approval process.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. **Exp** Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this project.

## Table of Contents

<b>1</b>	<b>Introduction.....</b>	<b>4</b>
1.1	Project Description .....	4
1.2	Legislative Requirements .....	4
<b>2</b>	<b>Methodology .....</b>	<b>5</b>
2.1	Ontario Ministry of Natural Resources (OMNR) .....	5
2.2	Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) .....	5
2.3	Fisheries and Oceans Canada (DFO) .....	5
2.4	Conservation Authorities .....	5
2.5	Municipalities .....	5
<b>3</b>	<b>Records Review Results.....</b>	<b>6</b>
3.1	Ontario Ministry of Natural Resources (OMNR) .....	6
3.2	Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) .....	6
3.3	Department of Fisheries and Oceans Canada (DFO) .....	6
3.4	Conservation Authorities .....	7
3.5	Municipalities .....	7
<b>4</b>	<b>Summary of Results of Records Review .....</b>	<b>8</b>
<b>5</b>	<b>Closure .....</b>	<b>9</b>
<b>6</b>	<b>References .....</b>	<b>10</b>

## List of Tables

Table 4-1: Project Location in accordance with O. Reg. 359/09 .....	8
---	---

## List of Figures

Figure 1: Rural drainage map (Land Information Ontario, 2008) .....	6
Figure 2: Distribution of fish species at risk (Conservation Ontario, 2009). .....	7

## Appendices

Appendix A – Site Plan

**Water Assessment Records Review  
Proposed Groundmount Solar Facility LP 7  
9274 Union Drive,  
Strathroy, Ontario**

## **1 Introduction**

### **1.1 Project Description**

Exp Services Inc. (**exp**) was retained by Mr. Sam Qin of Future Solar Developments Inc. to conduct a records review of waterbodies located on, and/or in the surrounding areas of the proposed ground-mounted solar facility set for plot LP 7 located at 9274 Union Dr, Strathroy-Caradoc, Ontario. For the purpose of this report the entire Site including the 120 metre buffer from the solar panel will be identified as “subject property”, those areas including the panel and construction limits will be identified as “Site”. The project involves the design and construction of one (1) 100 kW solar farm. It is estimated that the size of the 100 kW plot is approximately 0.24 hectares.

The purpose of this investigation was to identify waterbodies located in close proximity of the proposed solar farm and to resolve any potential effect(s) that the construction activities will have on the natural environment.

### **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 renewable 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 Class 3 solar facilities, 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 for to identify whether the project location is:

- a. In a water body.
- b. 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.
- c. Within 300 m of the average annual high water mark of a lake trout lake that is at or above development capacity.
- d. Within 120 m of the average annual high water mark of a permanent or intermittent stream.
- e. Within 120 m of a seepage area.

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 assessment records review report has been prepared to meet these requirements.

## **2 Methodology**

Records were reviewed and analyzed in accordance with section 30 of O. Reg. 359/09. The objective of this assessment is to determine if the Site is located within or in close proximity to any of the water features listed in section 1.2 of this report.

Section 30 (2) of O. Reg. 359/09 identifies the records that should be reviewed and analyzed. The following are records that were reviewed and/or government agencies that were contacted for the purposes of this report. Refer to Site Plan in Appendix A for Site location.

### **2.1 Ontario Ministry of Natural Resources (OMNR)**

The OMNR Natural Heritage Information Centre (NHIC) on-line mapping website was consulted to obtain records for aquatic species, and natural water features present in close proximity to the subject property (OMNR, 2012).

### **2.2 Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)**

The OMAFRA rural drainage on-line mapping website was reviewed to obtain records of natural water or drainage features within 120 m of the Site (Land Information Ontario, 2008).

### **2.3 Fisheries and Oceans Canada (DFO)**

Conservation Ontario provides maps of the *Distribution of Fish Species at Risk* for the various conservation authorities in the province. The fish distribution data represented on these maps were obtained from a national freshwater fish distribution database maintained by DFO (Conservation Ontario, 2009).

The subject property is situated within the jurisdiction of the St. Clair Region Conservation Authority (SCRCA). Therefore the *Distribution of Fish Species at Risk* map was obtained for the SCRCA region, and reviewed to extract records on the extent of critical habitats with fish and mussel species at risk in relation to the subject property.

### **2.4 Conservation Authorities**

The SCRCA was contacted regarding water features on or in close proximity to the subject property. The SCRCA on-line mapping website was also reviewed to obtain records of natural water features on or in close proximity to the subject property (SCRCA, 2012).

### **2.5 Municipalities**

The subject property is situated within the County of Middlesex. The County of Middlesex was contacted regarding water features on or in close proximity to the subject property.

### 3 Records Review Results

#### 3.1 Ontario Ministry of Natural Resources (OMNR)

OMNR NHIC records indicate that there are no aquatic species located within 120 m of the Site (OMNR, 2012). The Gold Creek locally significant wetland is located within 1 kilometre of the Site, but is outside the subject property. The Gold Creek as indicated by the OMNR district office has the potential to provide habitat for blanding's turtle (*Emydoidea blandingii*), spiny softshell (*Apalone spinifera spinifera*) and eastern hog-nosed snake (*Heterodon platirhinos*).

#### 3.2 Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)

OMAFRA rural drainage mapping records indicate that a watercourse and a constructed drain is located more than 120 m away, at approximately 293 m north-east of the Site (**Figure 1**). Additionally, systematic agricultural drainage tiles are located approximately 63 m north-west of the Site (Land Information Ontario, 2008).



**Figure 1:** Rural drainage map (Land Information Ontario, 2008)

#### 3.3 Department of Fisheries and Oceans Canada (DFO)

The *Distribution of Fish Species at Risk* map for the SCRCA revealed that there is no critical habitat with fish or mussel species at risk located within 120 m from the Site (**Figure 2**).



**Figure 2:** Distribution of fish species at risk (Conservation Ontario, 2009).

### 3.4 Conservation Authorities

The SCRCA mapping records indicate that the Gold Creek is located beyond 120 m from the Site, at approximately 320 m north-east of the Site. No other waterbodies are located within the subject property.

### 3.5 Municipalities

Authorities contacted from the County of Middlesex indicated that no waterbodies are located within the subject property.

## 4 Summary of Results of Records Review

Based on the current Site and subject property the following **Table 4-1** summarizes the results as they pertain to the water bodies that are known to exist within the subject property.

**Table 4-1:** Project Location in accordance with O. Reg. 359/09

Project Location	Yes/No/Unknown	Project Description
Is the Project within a waterbody?	No	The Site is not located 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	The Site is not located within 120 metres of an average annual high water mark Lake that is at or above development capacity.
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	The Site is not located within 300m of a lake trout lake of any status.
Is the Project within 120 m of the average annual high water mark of a permanent or intermittent stream?	No	The Site is not located within 120 m of the annual high water mark of permanent or intermittent stream.
Is the Project within 120 m of a seepage area?	Unknown	No known seepages were identified during the Records Review

As per Section 29 of the REA Regulation, a site investigation will be required to confirm the features identified during this records review. This site investigation will confirm and provide any correction to the information presented within this records review, along with identifying additional waterbodies that exist on-Site or within the subject property (120 metres). It will be conducted in accordance with Section 31 of O.Reg 359/09. The site investigation will also help determine the boundaries of the waterbodies that presently exist on-Site or within the subject property, and determine their distance from the proposed project location for the ground-mounted solar facility.



## 5 Closure

We trust this report is satisfactory for your purposes. We would be pleased to provide additional information, to clarify any questions that arise following the review of this report.

Sincerely,

**exp** Services Inc.

DRAFT

---

Melissa Torchia M.A.Sc.  
Environmental Scientist  
Environmental Sciences Division

DRAFT

---

Dean Fitzgerald, Ph.D.  
Team Leader – Ecological Services  
Environmental Sciences Division

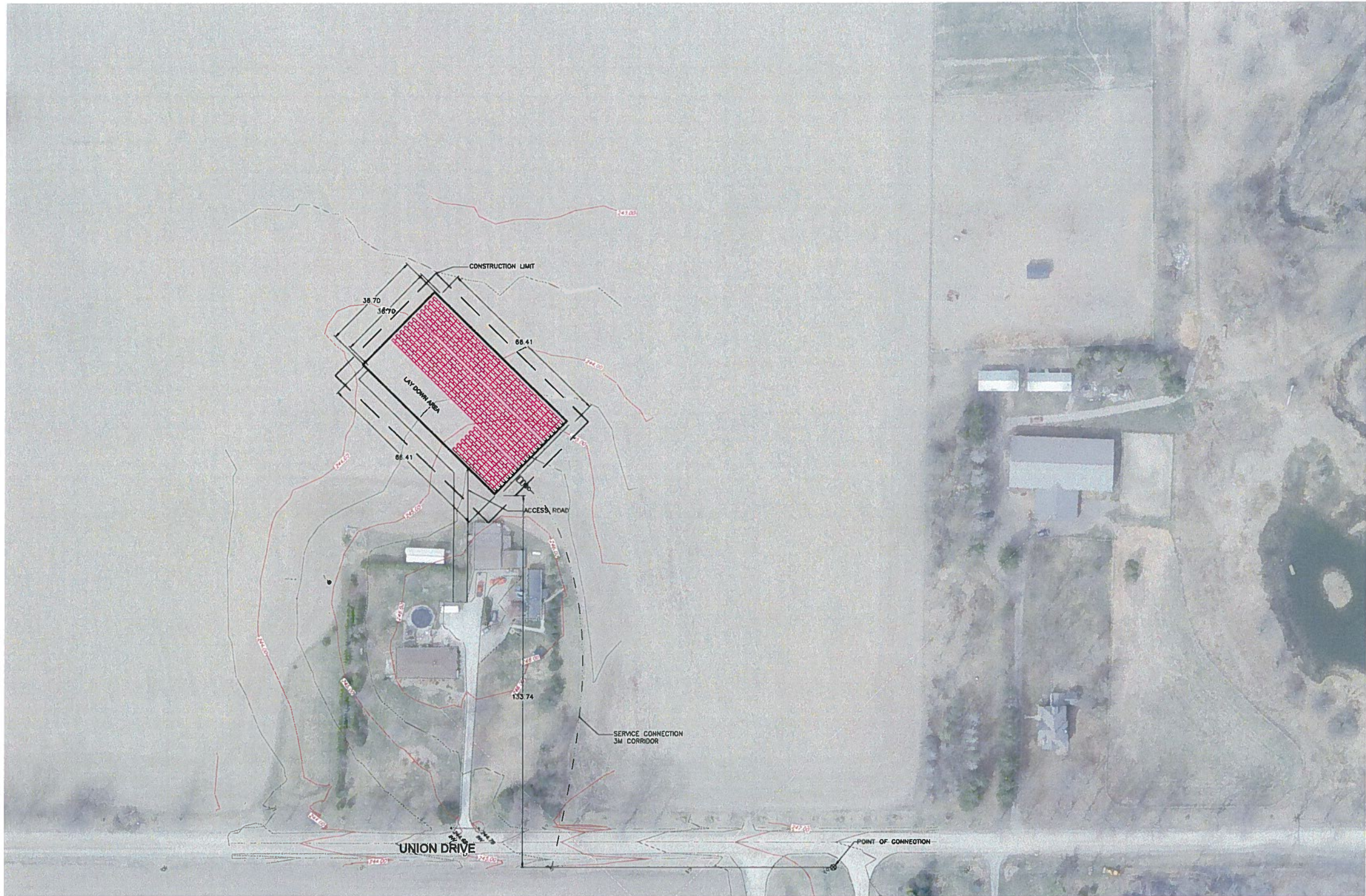
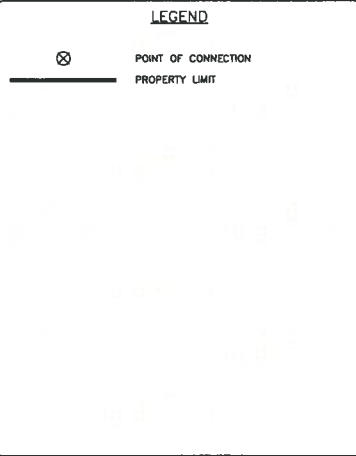
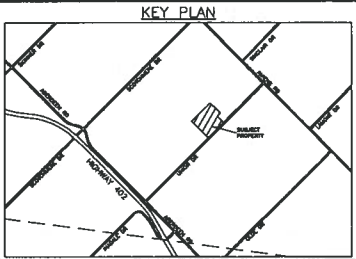
## 6 References

- Conservation Ontario. (2009). *2012 Aquatic Species At Risk*. Retrieved from Conservation Ontario Projects: <http://www.conservation-ontario.on.ca/projects/DFO.html>
- Government of Ontario. Ontario Regulation 359/09: Renewable Energy Approvals under Part V.0.1 of the Act. (Environmental Protection Act).  
[http://www.e-laws.gov.on.ca/html/regs/english/elaws\\_regs\\_090359\\_e.htm](http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_090359_e.htm)
- Land Information Ontario. (2008). *Agricultural Information Atlas*. Retrieved from Ontario Ministry of Natural Resources: [http://www.lio.ontario.ca/imf-ows/imf.jsp?site=aia\\_en](http://www.lio.ontario.ca/imf-ows/imf.jsp?site=aia_en)
- Natural History Information Centre (NHIC). 2010. Natural Heritage Information Centre Database. Available online. Accessed. January 2012.  
<http://nhic.OMNR.gov.on.ca/OMNR/nhic.cfm>
- SCRCA. (2012, July). *CA Maps*. Retrieved from St. Clair Conservation: [http://maps.camaps.ca/SilverlightViewer1\\_4/Viewer.html?ViewerConfig=http://maps.camaps.ca/Geocortex/Essentials/REST/sites/scrca/viewers/SCRCA\\_SL/virtualdirectory/Config/Viewer.xml](http://maps.camaps.ca/SilverlightViewer1_4/Viewer.html?ViewerConfig=http://maps.camaps.ca/Geocortex/Essentials/REST/sites/scrca/viewers/SCRCA_SL/virtualdirectory/Config/Viewer.xml)

## **Appendix A: Site Plan**

DRAFT





STATISTICS: SOLAR ARRAY

NUMBER OF MODULES: 507  
NUMBER OF MODULES PER STRING: 13  
NUMBER OF STRINGS: 39  
PANEL TYPE: CANADIAN SOLAR CS6P-230  
FEEDER NAME: M24  
CONNECTION VOLTAGE: 16kV

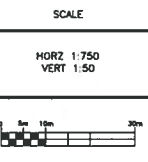
CONTRACT IDENTIFICATION # F-001363-SPV-130-505  
FIT REFERENCE # FIT-F02W7G1

**NOTES**

THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

**NOT FOR  
CONSTRUCTION**

NO.	REVISION DESCRIPTION	DATE	BY	APPD	NO.	REVISION DESCRIPTION	DATE	BY	APPD
1	ISSUED FOR INFORMATION	08/06/12	TB	MHN					



DRAWN BY

REVIEWED BY

CLIENT  
**FUTURE SOLAR DEVELOPMENTS INC.**  
3400 PHARMACY AVE, SCARBOROUGH, ON

exp.  
The new reality of Time Association

exp. Services Inc.  
11111 LESLIE AVE. 10-11 JENNIFER AVE.  
MARKHAM, ON L3R 9V6  
Canada  
www.exp.ca  
• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •  
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DESIGNER  
K.H.  
REVISOR  
K.H.  
CHECKED  
G.B.  
DATE  
K.H.  
PREP. DATE  
G.B.  
APPROVED  
G.B.

PROJECT  
**FUTURE SOLAR**  
9274 UNION DR, STRATHROY, ON

PROJ. NO.  
WSL-2250

SURVEY  
FBS

DATE  
OCT 7, 2011

TITLE  
**SITE PLAN**  
LP7

DRAWING NO.  
SP 4