Environment

NextEra Energy Canada, ULC
Goshen Wind Energy Centre

Water Assessment and Water Body Report – Goshen Wind Energy Centre

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60155032

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Glossary of Terms

Access Roads	The access roads will be 11 m wide during the construction phase to accommodate the large cranes, and will be maintained during operation.
Area of Disturbance	The Area of Disturbance consists of: • A 60 m wide area for construction of access roads. The actual access road will be sited within this area of disturbance in consultation with the landowner and taking into consideration potential environmental effects. • A 122 m square area around each turbine for the laydown and assembly of the wind turbine components. • A 20 m wide area for construction of collection lines. The actual collection line will be sited within this area of disturbance in consultation with the landowner and taking into consideration potential environmental effects.
Area of Investigation	Area within 120 m from Project Location.
Ecological Land Classification (ELC)	A system to delineate natural regions based on ecological factors. In Ontario, the Ministry of Natural Resources defines ecological units on the basis of bedrock, climate, physiography, and corresponding vegetation, creating an Ecological Land Classification System.
Geographic Information System (GIS)	A system for creating, storing, analyzing and managing spatial data and associated attributes.
Harmful Alteration, Destruction or Disruption of Fish Habitat (HADD)	According to Section 35(1) of the *Fisheries Act*, no one is allowed to cause a HADD unless an authorization, according to Section 35(2) of the *Fisheries Act*, has been obtained. "No net loss of the productive capacity of existing fish habitat" is the conservation goal guiding an authorization to cause a HADD.
Project Components	Refers to the turbine, access roads, collection lines, meteorological towers, transmission line and substation / breaker switch station.
NextEra	NextEra Energy Canada, ULC
O. Reg. 359/09	Renewable Energy Approval under the Environmental Protection Act.
Project Study Area (Study Area)	Wind Energy Centre Study Area and Transmission Line Study Area
Water Body Report	A report that identifies and assesses any negative environmental efforts of the project on a water body and on land within 30 m of the water body.

Acronyms

ABCA .....Ausable Bayfield Conservation Authority
DFO .....Federal Department of Fisheries and Oceans
MOE.....Ontario Ministry of the Environment
MNR.....Ontario Ministry of Natural Resources
MW.....Megawatt
NextEra .....NextEra Energy Canada, ULC
O.Reg. 359/09.....Ontario Regulation 359/09
PDR .....Project Description Report
The Project.....Goshen Wind Energy Centre
REA.....Renewable Energy Approval
TC .....Transport Canada
UTRCA.....Upper Thames River Conservation Authority

1. Introduction

Goshen Wind, Inc., a wholly owned subsidiary of NextEra Energy Canada, ULC (NextEra), is proposing to construct a wind energy project in Bluewater and South Huron, Huron County, Ontario. The Project is referred to as the Goshen Wind Energy Centre (the "Project"). All turbines will be located on private lands. The wind turbine technology proposed for this Project is up to 71 GE 1.6-100 Wind Turbines and one GE 1.56-100 Wind Turbine. With a nameplate capacity of 102 megawatts (MW), the Project will be categorized as a Class 4 facility. Although NextEra is seeking a Renewable Energy Approval (REA) for 72 wind turbines, only 63 are proposed to be constructed for the Project.

This report was prepared in accordance with the Water Assessment and Water Body requirements of Ontario Regulation 359/09 (*O. Reg. 359/09*) and the Technical Guide to Renewable Energy Approvals developed by the Ministry of the Environment (MOE, 2011). The REA process combines previous requirements under the Ontario Environmental Assessment Act with clear provincial rules and standards in *O. Reg. 359/09* under the *Environmental Protection Act*.

1.1 The Proponent

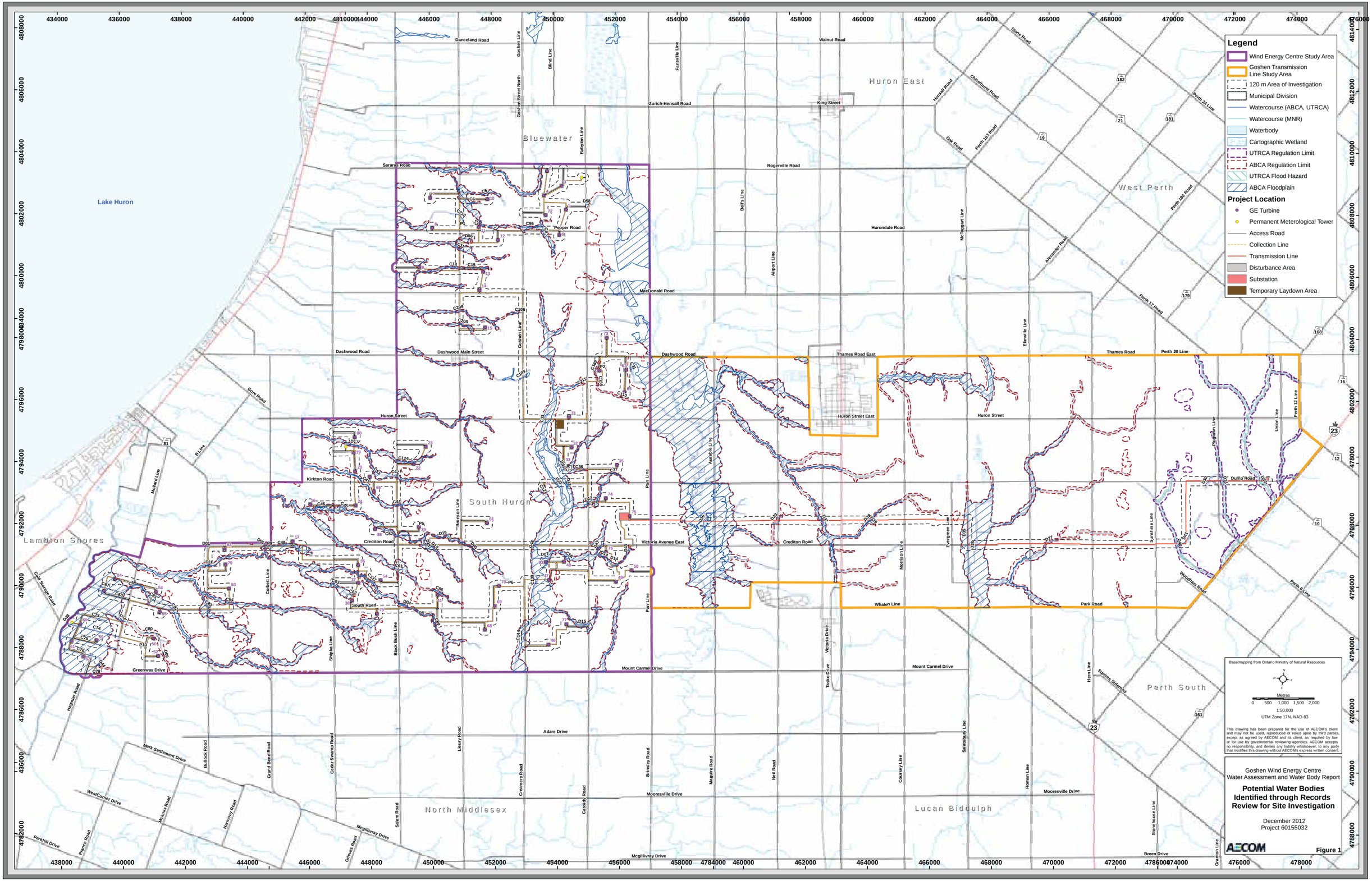
The Project will be owned and operated by Goshen Wind, Inc., a subsidiary of NextEra. NextEra Energy Canada's indirect parent company is NextEra Energy Resources, LLC, a global leader in wind energy generation with a current operating portfolio of over 90 wind energy projects in North America. In Canada, wind energy centres currently owned and operated by NextEra Energy Canada include: Mount Copper and Mount Miller, (both 54 megawatts (MW)) located in Murdochville, Quebec; Pubnico Point, (31 MW) located near Yarmouth, Nova Scotia; and Ghost Pine (82 MW), located in Kneehill County, Alberta.

The primary contacts for the project are as follows:

Project Proponent	Project Consultant
Nicole Geneau Project Director NextEra Energy Canada, ULC 390 Bay Street, Suite 1720 Toronto, Ontario, M5H 2Y2 Phone: 1-416-364-9714 Email: Goshen.Wind@nexteraenergy.com Website: www.NextEraEnergyCanada.com	Marc Rose Senior Environmental Planner AECOM 300-300 Town Centre Blvd. Markham, Ontario, L3R 5Z6 Phone: 905-477-8400 x 388 Email: marc.rose@aecom.com

1.2 Project Location and Description

The proposed Project is located in Huron County, within the Municipalities of Bluewater and South Huron. The Project Study Area consists of the areas being studied for the wind farm components (Wind Energy Centre Study Area), as well as for the interconnection route (i.e., the area being studied for transmission lines to connect the Project to the electrical grid) (Transmission Line Study Area). The Wind Energy Centre Study Area is generally bounded by Klondyke Road to the west, Rogerville Road to the north, Parr Line to the east, and Mount Carmel Drive to the south, in the Municipalities of Bluewater and South Huron. The Transmission Line Study Area is located to the east of the Wind Energy Centre Study Area, and is generally bounded by Parr Line to the west, Thames Road to the north, Perth 164 Road to the east, and Park Road to the south, extending into the Municipality of South Huron.



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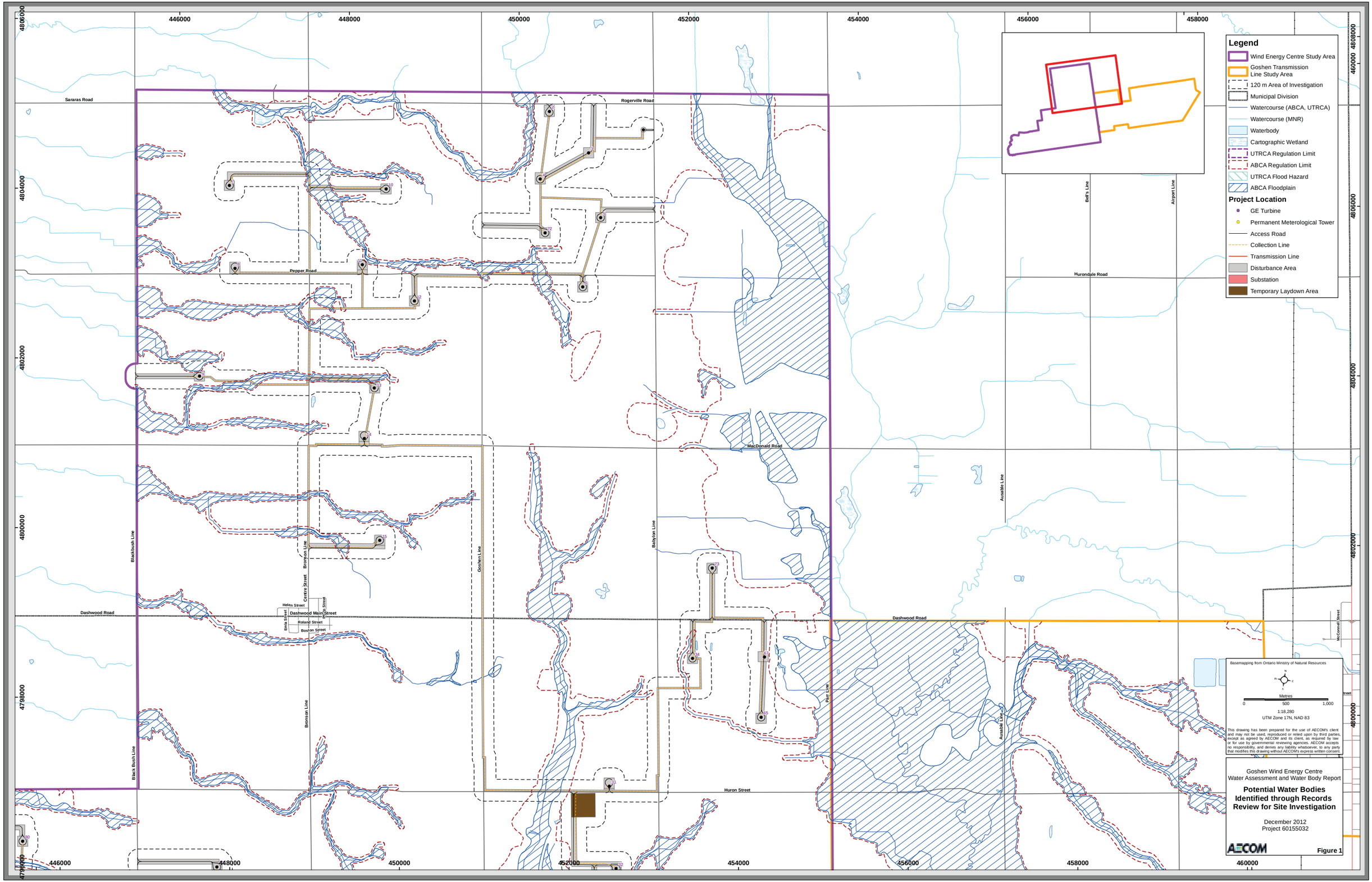

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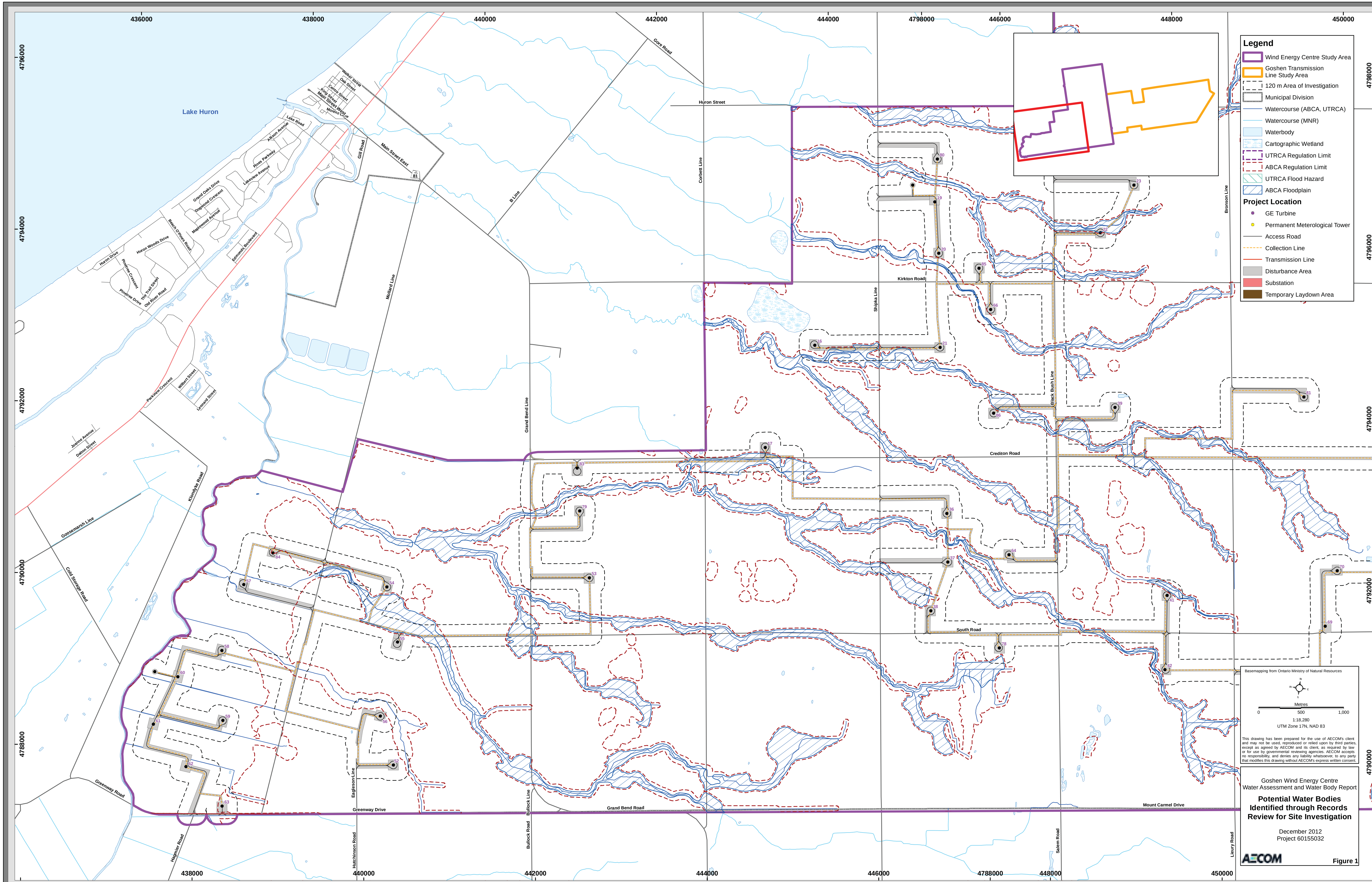
Legend
Wind Energy Centre Study Area
Goshen Transmission Line Study Area
120 m Area of Investigation
Municipal Division
Watercourse (ABCA, UTRCA)
Watercourse (MNR)
Waterbody
Cartographic Wetland
UTRCA Regulation Limit
ABCA Regulation Limit
UTRCA Flood Hazard
ABCA Floodplain
Project Location
GE Turbine
Permanent Meterological Tower
Access Road
Collection Line
Transmission Line
Disturbance Area
Substation
Temporary Laydown Area
Lake Huron
Huron Street
Kirkton Road
Crediton Road
South Road
Grand Bend Road
Greenway Drive
Mount Carmel Drive
Corbett Line
Grand Bend Line
Mollard Line
Shipka Line
Black Bush Line
Bronson Line
Bullock Road
Eagleson Line
Hutchinson Road
Salem Road
Lieury Road
Klondyke Road
Goosemarsh Line
Cold Storage Road
Greenway Road
Haggitt Road
Gore Road
B Line
Main Street East
Gill Road
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438000
440000
442000
444000
446000
448000
450000
4788000
4790000
4792000
4794000
4796000
4798000
Basemapping from Ontario Ministry of Natural Resources
Metres
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UTM Zone 17N, NAD 83

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Goshen Wind Energy Centre
Water Assessment and Water Body Report

Potential Water Bodies Identified through Records Review for Site Investigation

December 2012
Project 60155032

AECOM

Figure 1

Map Document: (N:\projects\0-aecom\60155032\2010\Final\GIS\Spatial\MXDs\Report\MXDs\NHA_Mapping\60155032_Bluewater_NaturalFeatureRecReview.mxd)
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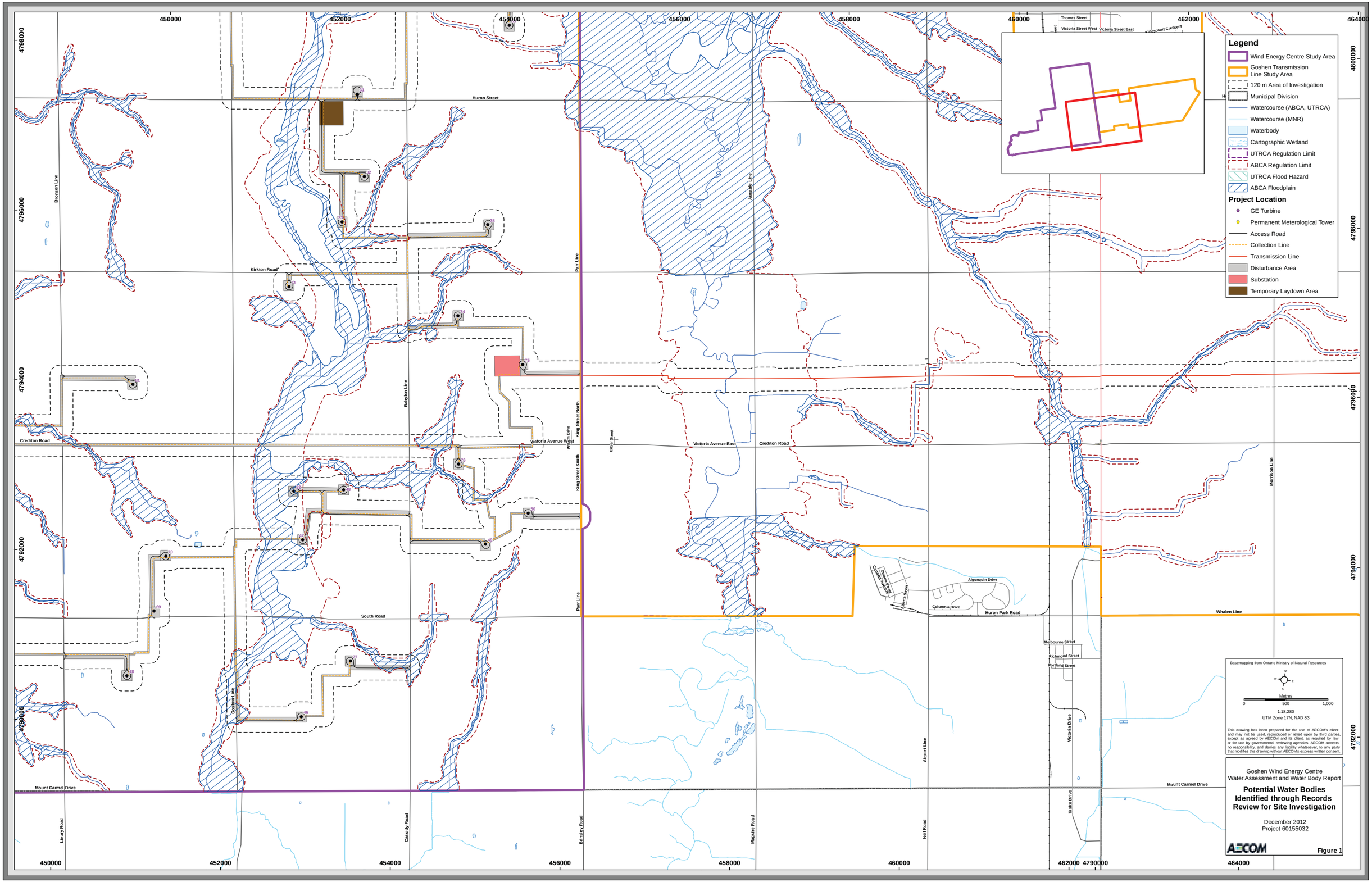

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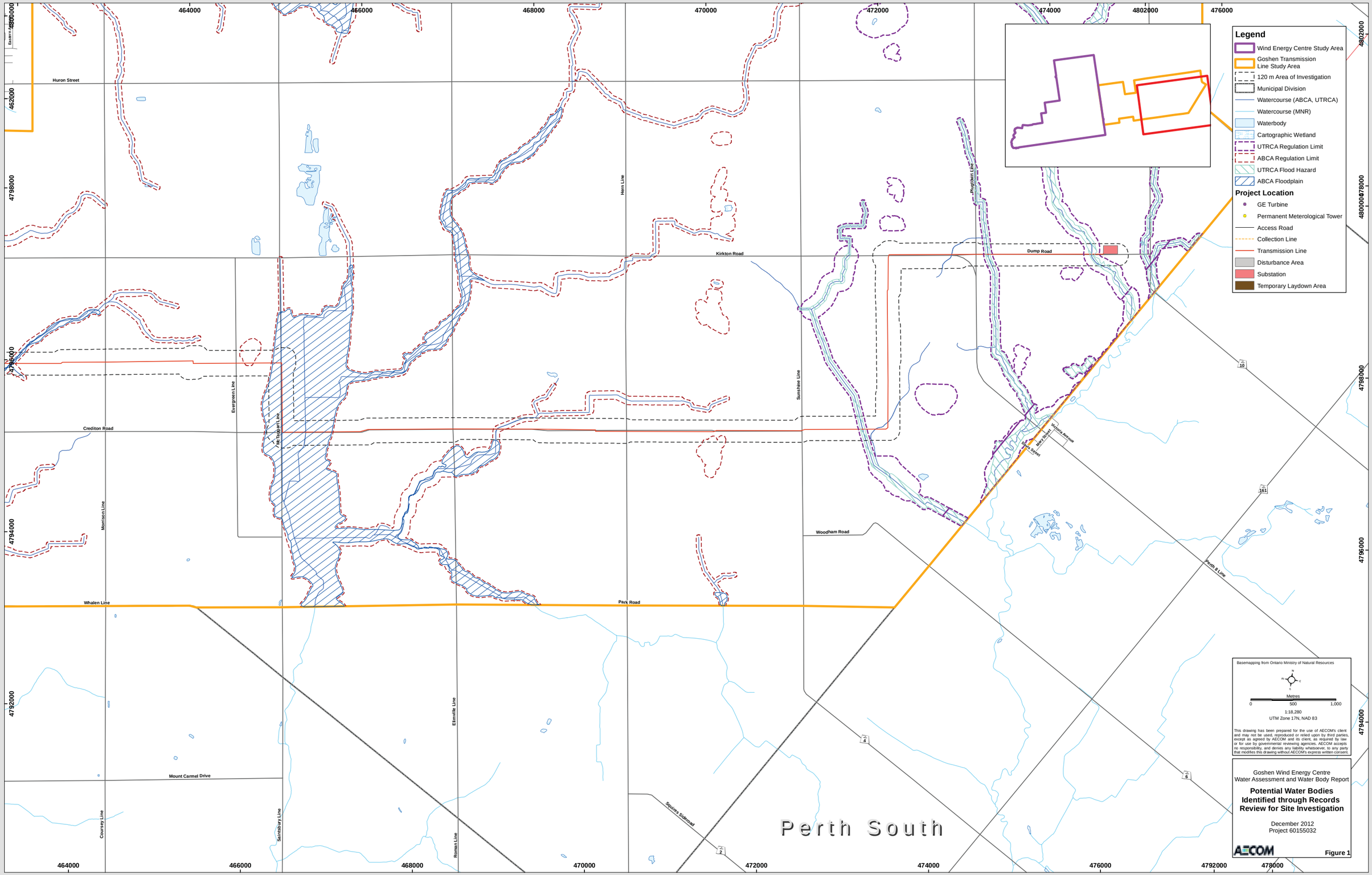

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The location of the Project Study Area was defined early in the planning process for the proposed wind energy facility, based on the availability of wind resources, approximate area required for the proposed project, and availability of existing infrastructure for connection to the electrical grid. The Project Study Area was used to facilitate information collection.

The following co-ordinates define the external boundaries of the Project Study Area:

Longitude	Latitude
-81.6753290	43.4155312
-81.3011931	43.3810955
-81.3303330	43.3036317
-81.7743607	43.2379854

Disturbance Areas have been identified surrounding various Project components, and are depicted on Figure 1-2. These denote areas where temporary disturbance during the construction phase may occur as a result of: temporary project component laydown and storage areas, crane pad construction, turbine turnaround areas, and construction of access roads and electrical collection system. With the exception of the project components described above, no permanent infrastructure is proposed within these areas. Following construction activities, the land will be returned to pre-construction conditions.

For the purposes of completing the Water Bodies Assessment, a 120 metre (m) Area of Investigation was defined, based on the requirements of O. Reg. 359/09 and the *Technical Guide to Renewable Energy Approvals* (MOE, June 2011). The Area of Investigation encompasses the Project Location and an additional 120 m measured from the Project Location boundary as described above. As part of the REA process, features located within the 120 m Area of Investigation must be investigated and evaluated to determine whether they are significant or provincially significant, in order to ascertain whether development prohibitions apply as per O. Reg. 359/09. The location of the 120 m Area of Investigation is shown on Figure 1-2.

More information on the Project Location and the specific project components, including predicted areas of disturbance associated with construction of each of the project components, are found in the Construction Plan Report.

1.3 Water Assessment and Water Body Report Requirements

Under the REA process, a person who proposes to engage in a renewable energy project is required to conduct a Water Assessment (O.Reg. 359/09, Section 29), consisting of the following:

- A Records Review (Section 30);
- A Site Investigation (Section 31).

Through this process, applicants identify water bodies near the proposed Project Location and determine prohibitions and setbacks provisions.