



Future Solar Developments Inc.

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Natural Heritage Assessment Records Review
Proposed Groundmount Solar Facility LP 8
419 Penetanguishene Road
Barrie, ON

Project Number
WSL-00002250-00

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List of Distribution

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 Ontario Ministry of Natural Resources

Mr. Sam Qin
 Future Solar Developments Inc.

**Records Review Natural Heritage Features
Proposed Groundmount Solar Facility LP 8
419 Penetanguishene Road,
Barrie, Ontario**

1 Introduction

Exp Services Inc. (**exp**) was retained by Mr. Sam Qin of Future Solar Developments Inc. to conduct a Records Review of natural heritage features located on and or in the surrounding areas of the proposed ground-mounted solar facility set for plot LP 8 located at 419 Penetanguishene Road, Barrie, Ontario. For the purpose of this report all aspects of the proposed project layout, including the panel, road, transmission, laydown area and construction limits will be collectively identified as the “project location”. The project involves the design and construction of one (1) 100 kW solar farm.

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

1.1 Legislative Requirements

Ontario Regulation (O. Reg.) 359/09 – *Renewable Energy Approvals*, 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. In accordance with Section 4 of the REA Regulation, ground mounted solar facilities with a name plate capacity greater than 12 kilowatts (kW) are classified as a Class 3 solar facility and therefore, require a REA.

Section 25 of the REA Regulation requires the following natural heritage Records Review for Class 3 solar projects in order to identify whether the project is:

- a) In or within 120 metres of a provincial park or conservation reserve area;
- b) In a natural feature;
- c) Within 50 metres of an area of natural or scientific interest (ANSI) (earth sciences); and,
- d) Within 120 metres of a natural feature that is not an ANSI (earth science).

Natural features are defined in Part 1.1 of the REA Regulation as:

- a) An ANSI (earth science)
- b) An ANSI (life science)
- c) A coastal wetland
- d) A northern wetland
- e) A southern wetland
- f) A valleyland
- g) A wildlife habitat
- h) A woodland

Therefore, according to Subsection 3 of 25 the proponent (Future Solar Developments Inc.) shall prepare a report setting out a summary of the records searched and the results of the analysis conducted under subsection (1). O. Reg. 359/09, s. 25 (3).

1.2 Scope of Work

The following scope of work was undertaken as part of the Records Review for the project location and areas within 120 metres of it. These records were sourced in order to identify whether the project location was located in or within 120 metres of natural features listed in section 1.1 of this report. The following records were sourced as part of this review:

- Ontario Regulation 359/09 made under the *Environmental Protection Act*, 2009.
- Natural Heritage Information Centre (NHIC) Mapping and Databases
 - Various databases and mapping were used to identify species locations relative to the Site.
- Aerial Imagery
 - Aerial imagery was used to identify natural features relative to the Site location. Aerial imagery was obtained from Google Earth in 2004.
- Land Information Ontario (LIO)
 - LIO and Southern Ontario Land Resource Information System (SOLRIS) maps were used to identify natural features relative to the project location.
- NHIC Biodiversity Explorer
 - The explorer was used to search species, wildlife concentration areas, plant communities, invasive species occurrences, and natural areas.
- Nottawasaga Valley Conservation Authority (NVCA)
 - NVCA was contacted via email during April and May 2012, with a phone conversation on May 7, 2012 with David Featherstone, Manager Watershed Monitoring Program to identify natural and significant natural heritage features at the property location and on adjacent lands. NVCA provided specific consultation regarding areas that fall under Ontario Regulation 172/06. Patti Young, NVCA, Senior Planner was also contacted on August 10, 2012, to which Patrick Townes, Planning Assistant, provided mapping of natural features known to exist within the area.
- Ontario Ministry of Natural Resources Midhurst District (OMNR)
 - The Ontario Ministry of Natural Resources was contacted to obtain Records Review for the project location and adjacent lands.
- Township of Oro-Medonte Official Plan (OMOP).
 - The Official plan was used to identify any natural heritage features located at the project location and on adjacent lands.
- Simcoe County Official Plan (SCOP).
 - The Official plan was used to identify any natural heritage features located at the project location and on adjacent lands.
- Simcoe County Geo-Maps.
 - The Geocortex GIS mapping system was utilized to identify provincial parks, conservation areas, wetlands (significant or non-significant), ANSIs, and woodlands located near the project location.
- Ontario Herpetofaunal Summary Atlas.
 - The Ontario Herpetofaunal Summary Atlas was consulted to identify amphibian and reptile species that occur near the project location.
- Atlas of the Breeding Birds of Ontario.
 - The Atlas of the Breeding Birds of Ontario was consulted to identify breeding bird species that occur near the project location.
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
 - The COSEWIC website was consulted to determine the federal status of any herptile and bird species at risk that occur near the project location.

- Ontario's Crown Land Use Policy Atlas.
 - Ontario's Crown Land Use Policy Atlas was used to identify any national parks, provincial parks, and crown lands located near the project location.

Note the proposed project location is not within the Oak Ridge's Moraine, Niagara Escarpment or Green Belt Plan areas.

2 Record Results

Mapping and results obtained from records listed in Section 1.2 of this report were used to assess if natural heritage features exist in or within 120 metres of the project location. The following section provides the results from the records reviewed.

2.1 National Parks, Provincial Parks & Conservation Reserve

In accordance with OMNR Records Review, aerial imagery, Simcoe County Geo-Maps and Ontario's Crown Land Use Policy Atlas, no national parks, provincial parks or conservation reserves are located in or within 120 metres of the project location. According to Ontario's Crown Land Use Policy Atlas, the closest provincial park, the Springwater Provincial Park, is located 9 kilometers north-west of the project location. This park is also considered a small crown parcel.

2.2 Wetlands

Wetlands are defined in the REA Regulation, as land such as a swamp, marsh, bog or fen, other than land that is being used for agricultural purposes and no longer exhibits wetland characteristics, that,

- (a) is seasonally or permanently covered by shallow water or has the water table close to or at the surface; and,
- (b) has hydric soils and vegetation dominated by hydrophytic or water-tolerant plants.

In regards to wetlands, provincially significant means a wetland that OMNR has identified as provincially significant or that is considered to be provincially significant when evaluated using evaluation criteria or procedures established or accepted by the OMNR.

Results:

The NHIC database indicated that there are no wetlands located at or within 120 metres of the project location. Aerial imagery indicates a large man-made pond exists within the subject property.

Additionally, OMNR Records Review indicated that no wetlands exist at or within 120 metres of the project location. The OMNR, however, has indicated that this needs to be verified during a site investigation.

NVCA records also indicate that areas regulated by Ontario Regulation 172/06, (regulation for development, interference with wetlands and alterations to shorelines and watercourses), are not located at or within 120 metres of the project location. Mapping provided by the NVCA, indicated an unevaluated wetland exists within the subject property that is present inside the woodland. Confirmation of presence or absence of this feature will need to be identified during the site investigation.

2.3 Woodlands

As per the definition in the REA Regulation, woodland means a treed area, woodlot or forested area, other than a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees, that is located south and east of the Canadian Shield. Larger woodlands are more likely to contain a greater diversity of plant and animal species and communities than smaller woodlands. They are also better buffered against edge effects or agricultural and urban activities.

Results:

The NHIC database and the SCOP indicated that there are no significant woodlands located at the project location. The OMOP indicated that significant woodlands exist east of the project location, outside the subject property.

According to Records Review conducted by the OMNR, a small woodland exists within 120 metres of the project location. Boundaries of this natural feature will need to be identified during a site investigation.

2.4 Valleylands

The REA Regulation identifies valleylands as a natural area south and east of the Canadian Shield that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year.

Results:

The NHIC database, SCOP and the OMOP indicate that no valleylands exist within the subject property.

The OMNR does not have records that indicate the presence or absence of valleylands in or within 120 metres of the project location, and is therefore unable to provide information about this natural feature in their Records Review. A site investigation is required to gather more information about this feature.

2.5 Areas of Natural and Scientific Interest (ANSIs)

ANSIs are defined in the REA Regulation as areas that have earth or life science values related to protection, scientific study or education. Only ANSIs confirmed by the OMNR as provincially significant are afforded protection through the REA Regulation.

ANSIs are divided into two (2) types: life science ANSI and earth science ANSI. Specifically, a life science ANSI can contain specific types of forests, valleys, prairies and wetlands of ecological importance. That is, they represent examples that are relatively undisturbed in terms of vegetation community and/or landforms associated with that vegetation. Those listed as provincially significant life science ANSIs are the best examples of that particular natural heritage feature in the province. In contrast, earth science ANSIs includes representative examples of bedrock, fossil, and landforms in Ontario, in addition to on-going geological processes.

Results:

The NHIC database, SCOP, OMOP, Simcoe County Geo Maps and OMNR indicated that there are no provincially or regionally identified ANSIs located in or within 120 metres of the project location.

2.6 Wildlife Habitat

Wildlife habitats are defined as areas where plants, animals and other organisms live or have the potential to live and find adequate amounts of food, water, shelter and space to sustain their population, including an area where a species concentrates at a vulnerable point in its annual or life cycle and an area that is important to a migratory or non-migratory species (REA Regulation).

According to the Significant Wildlife Habitat Technical Guide (2000), significant wildlife habitat is described under four (4) categories:

- Seasonal concentrations of animals;
- Rare vegetation communities or specialized habitats for wildlife;
- Animal movement corridors; and,
- Habitats of species of conservation concern.

2.6.1 Seasonal Concentration Areas

Areas of seasonal concentrations of animals are:

- areas where animals occur in relatively high densities for the species at specific periods in their life cycle and/or during particular seasons; and,
- tend to be localized and relatively small in relation to the area of habitat used at other times of the year.

An analysis of available records was carried out.

2.6.1.1 Deer Winter Congregation Areas

Deer and moose often inhabit forested regions and may venture onto disturbed areas. Deer winter congregation areas are defined by woodlands that are greater than 100 hectares in size or larger. Those woodlands that are less than 100 hectares may be considered if OMNR studies and assessments have deemed them significant. Conifer plantations that are smaller than 50 hectares may also be used as congregation areas.

Deer management is the responsibility of the OMNR and any deer winter congregation areas considered to be significant will be mapped by the OMNR.

Results:

According to Records Review conducted by the OMNR, there are no deer winter congregation areas at or within 120 metres of the project location.

2.6.1.2 Deer Yarding Areas

In the winter, deer often congregate in yards in order to survive severe winter conditions. Deer yards are often comprised of two (2) areas known as Stratum I and Stratum II. Stratum I is known as the core of the deer yard and is found within Stratum II. This area is normally comprised of coniferous tree species. Stratum II covers the entire deer yard area. Stratum II can be comprised of both deciduous and coniferous tree species, and can also include agricultural land.

Results:

According to Records Review conducted by the OMNR, there are no deer yarding areas at or within 120 metres of the project location. However, the OMNR has also indicated that a site investigation is required to verify this information. Deer yard map boundaries delineated by the OMNR can be obtained from LIO. Further conversation with the OMNR indicated that no mapped deer yards exist within 120 metres of the project location.

2.6.1.3 Waterfowl Stopover and Staging Areas (Terrestrial & Aquatic)

Terrestrial waterfowl stopover and staging areas are usually comprised of fields that contain flooding and/or sheet water during spring snowmelt and run-off. These habitats often contain important invertebrate foraging opportunities for migrating waterfowl such as American wigeon (*Anas americana*) and American black duck (*Anas rubripes*). Aquatic stopover and staging areas contain ponds, marshes, lakes, bays, coastal inlets and watercourses that may be used during their migration. Reservoirs managed as a large wetland or pond/lake are also included.

Results:

A number of breeding waterfowl birds are known to the Simcoe County area as identified by the Breeding Bird Atlas. A site investigation will identify whether these species utilize the project location and those areas within the 120 metre buffer zone. Further, the OMNR does not have records or data that indicate either the presence or absence of terrestrial or aquatic waterfowl stopover and staging habitat at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

2.6.1.4 Shorebird Migratory Stopover Area

These habitats include shorelines of lakes, rivers, and wetlands, including beach areas, bars, and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a significant wildlife habitat.

Results:

According to Breeding Bird Atlas, only a few shorebirds are known to the Simcoe County region. A site investigation will identify whether these species utilize the project location and those areas within the 120 metre buffer zone. Further, the OMNR does not have the records or data that indicate either the presence or absence of shorebird migratory stopover areas at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

2.6.1.4.1 Raptor Wintering Area

Raptor wintering areas can be described as a combination of fields and woodlands that provide roosting, foraging and resting for wintering raptors. These areas need to be greater than 20 hectares with a combination of forest and upland. These habitats are often least disturbed sites, idle/fallow or lightly grazed fields and/or meadows.

Results:

A number of raptors are known to the Simcoe County area as identified by the Breeding Bird Atlas. A site investigation will identify whether these species utilize the project location and those areas within the 120 metre buffer zone. Further, the OMNR does not have the records or data that indicate either the presence or absence of raptor wintering areas at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

2.6.1.5 Bat Hibernacula, Maternity and Migratory Stopover Areas

Bat hibernacula are often not well known, but may be found in caves, mine shafts, underground foundation and karsts.

Bat maternity colonies are normally found in tree cavities and in buildings, however, habitats found in buildings are not considered significant wildlife habitat. Maternity roosts are not found in caves or mines in Ontario. Maternity colonies are located in mature deciduous or mixed forest stands with greater than 10 large diameter (25 centimetres dbh) wildlife trees per hectare. Female bats tend to prefer tree snags in the early stages of decay. Northern myotis (*Myotis septentrionalis*) prefer contiguous tracts of older forest cover for foraging and roosting in snags and trees. Silver-haired bats (*Lasionycteris noctivagans*) tend to prefer mature forest stands comprised of deciduous or mixed deciduous species, and those older areas that have approximately 21 snags per hectare.

Migratory bats that travel long distances typically migrate during the late summer and early fall from summer breeding habitats throughout Ontario to southern wintering areas. During migration in the fall, bats tend to congregate at unknown areas at stopover habitats.

Results:

The OMNR does not have the records or data that indicate either the presence or absence of bat hibernacula, maternity areas at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

However, the OMNR has also indicated that they have not developed criteria for evaluating the significance of bat migratory stopover areas, and therefore no site investigation is required for this specific habitat.

2.6.1.6 Turtle Wintering Areas

Turtle wintering areas are normally the same area as their regular habitat. The water at these sites need to be deep enough not to freeze to the bottom during the winter months and must contain soft mud

substrates. Over winter sites are those that typically contain permanent waterbodies, large wetlands, bogs and fens that contain adequate amounts of dissolved oxygen.

Results:

According to the Records Review, OMNR does not have the records or data that indicate either the presence or absence of turtle wintering areas at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

The Ontario Herpetofaunal Summary Atlas identified a number of herptiles to exist within Simcoe County. A site investigation will identify whether these species utilize the project location and those areas within the 120 metre buffer zone.

2.6.1.7 Reptile Hibernaculum

Reptile hibernaculum is usually found in burrows, rock crevices and other natural locations below the frost line. Key areas are those that contain broken or fissured rock, which can provide access to subterranean sites below the frost line. Wetlands are also important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover.

Results:

The Ontario Herpetofaunal Summary Atlas identified a number of herptiles to exist within Simcoe County. A site investigation will identify whether these species utilize the project location and those areas within the 120 metre buffer zone. Further, the OMNR does not have the records or data that indicate either the presence or absence of reptile hibernacula at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

2.6.1.8 Colonial Nesting Bird Breeding Habitat (Bank & Cliff)

Colonial nesting bird breeding habitat near banks and cliffs consist of areas with exposed soil banks, are undisturbed or naturally eroding, and those which are not a licensed/permitted aggregate area. This does not include man-made structures such as bridges or buildings, or recently disturbed soil areas such as berms, embankments, soil and/or aggregate stockpiles.

Results:

A number of colonial nesting birds (bank & cliff) are known to the Simcoe County area as identified by the Breeding Bird Atlas (e.g. Bank swallow (*Riparia riparia*), and Cliff swallow (*Petrochelidon pyrrhonota*)). A site investigation will identify whether these species utilize the project location and those areas within the 120 metre buffer zone.

According to the Records Review, OMNR does not have the records or data that indicate either the presence or absence of colonial nesting bird breeding habitat (bank and cliff) at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

2.6.1.9 Colonial Nesting Bird Breeding Habitat (Trees/Shrubs)

Tree and shrub habitat for colonial nests can be found in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and occasionally emergent vegetation may also be used. Most nests in trees are 11 to 15 metres from the ground near the top of the tree.

Results:

A number of colonial nesting birds (trees and shrubs) are known to the Simcoe County area as identified by the Breeding Bird Atlas (e.g. Great blue heron (*Ardea herodias*), and Green heron (*Butorides virescens*)). A site investigation will identify whether these species utilize the project location and those areas within the 120 metre buffer zone.

The OMNR does not have the records or data that indicate either the presence or absence of colonial nesting bird breeding habitat (trees/shrubs) at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

2.6.1.10 Colonial Nesting Bird Breeding Habitat (Ground)

Colonial ground nesting birds, such as gulls and terns are typically located on islands or peninsulas associated with open water or in marshy areas.

Results:

A number of colonial nesting birds (ground) are known to the Simcoe County area as identified by the Breeding Bird Atlas (e.g. Common tern (*Sterna hirundo*), and Herring gull (*Larus argentatus*)). A site investigation will identify whether these species utilize the project location and those areas within the 120 metre buffer zone.

The OMNR does not have the records or data that indicate either the presence or absence of colonial nesting bird breeding habitat (ground) at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

2.6.1.10.1 Migratory Butterfly Stopover Areas

Migratory butterfly stopover areas are typically at a minimum of ten (10) hectares in size with a combination of field and forest habitat present, and located within five (5) kilometres of Lake Ontario and Lake Erie. This habitat typically provides an area for stopover during migration. They cannot be disturbed areas, and must contain fields or meadows with an abundance of nectar plants.

Results:

According to Records Review conducted by the OMNR and aerial imagery, migratory butterfly stopover areas are not relevant to this project location because it is not within five (5) kilometres of Lake Ontario.

2.6.1.10.2 Landbird Migratory Stopover Areas

Landbird migratory stopover areas are those that contain woodlands of five (5) hectares in size or greater and within five (5) kilometres of Lake Ontario. Woodlands that are less than two (2) kilometres from Lake Erie or Lake Ontario are more significant. These sites can contain a wide variety of habitats that consist of forests, grasslands, and wetland areas.

Results:

According to Records Review conducted by the OMNR and aerial imagery, landbird migratory stopover areas are not relevant to this project location because it is not within five (5) kilometres of Lake Ontario.

2.6.2 Rare Vegetation Communities or Specialized Habitat

Rare or specialized habitats include rare vegetation communities or concentrations of rare plants. These specialized areas may also provide habitat to rare animal species. According to the Significant Wildlife Habitat Technical Guide (2000), the following definition of each was provided:

Rare vegetation communities include:

- Areas that contain a provincially rare vegetation communities or one that is rare within a planning area.

Specialized Habitats include:

- Areas that support wildlife species that have highly specific habitat requirements;
- Areas with high species and community diversity; and,
- Areas that provide habitat that greatly enhance species survival.

A summary of rare vegetation communities and specialized habitats, in relation to the project location and the surrounding 120 metres are presented in **Table 2-1** and **Table 2-2**.

Table 2-1: Rare Vegetation Communities

Habitat	Records Observation*	OMNR Records Review
Cliff & Talus Slope	According to SOLRIS mapping no Cliff or Talus slopes were evident within 120 m of the project location. Confirmation of absence will be carried through the Site Investigation.	No data from OMNR. Site Investigation required.
Sand Barren	According to SOLRIS mapping no sand barrens were evident within 120 m of the project location. Confirmation of absence will be carried through the Site Investigation.	No data from OMNR. Site Investigation required.
Alvar	According to SOLRIS mapping no Alvars were evident within 120 m of the project location. Confirmation of absence will be carried through the Site Investigation.	No data from OMNR. Site Investigation required.
Old Growth Forest	A wooded area exists just within the subject property. Site Investigation required.	No data from OMNR. Site Investigation required.
Savannah	According to SOLRIS mapping no Savannahs were evident within 120 m of the project location. Confirmation of absence will be carried through the Site Investigation.	No data from OMNR. Site Investigation required.
Tall Grass Prairie	According to SOLRIS mapping no Tall Grass Prairies were evident within 120 m of the project location. Confirmation of absence will be carried through the Site Investigation.	No data from OMNR. Site Investigation required.
Other Rare Vegetation Communities	Unknown. Site Investigation required.	No data from OMNR. Site Investigation required.

* Note: Records Observation information was sourced from NHIC, aerial imagery, SOLRIS, NVCA, OMOP, SCOP and Simcoe County Geo-Maps.

Table 2-2: Specialized Habitats

Habitat	Records Observation*	OMNR Records Review
Waterfowl Nesting Area	No known wetlands were identified during records searched to be within 120 m of the project location. Site Investigation required to confirm absence of habitat.	No data from OMNR. Site Investigation required.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Lakes and natural ponds do not exist at or within 120 m of the project location. Site Investigation required to confirm absence of habitat.	No data from OMNR. Site Investigation required.
Woodland Raptor Nesting Habitat	No large woodlands exist within the subject property. Only a small woodland exists within 120 m of the project location. Site Investigation required to confirm absence of habitat.	No data from OMNR. Site Investigation required.
Turtle Nesting Area	Unknown. Site Investigation required.	No data from OMNR. Site Investigation required.
Seep and Springs	Unknown. Site Investigation required.	No data from OMNR. Site Investigation required.
Amphibian Breeding Habitat (Woodland)	Unknown. Site Investigation required.	No data from OMNR. Site Investigation required.
Amphibian Breeding Habitat (Wetland)	Unknown. Site Investigation required.	No data from OMNR. Site Investigation required.

* Note: Records Observation information was sourced from NHIC, aerial imagery, LIO, SOLRIS, NVCA, OMOP, SCOP and Simcoe County Geo-Maps.

2.6.3 Animal Movement Corridors

Animal movement corridors are:

- Habitats that link two (2) or more wildlife habitats that are critical to the maintenance of a population of a particular species or group of species; and,
- Habitats with a key ecological function to enable wildlife to move, with minimum mortality, between areas of significant wildlife habitat or core natural areas.

According to the Ecoregion 6E Criterion Schedule animal movement corridors to be considered for this project location include amphibian and deer movement corridors.

2.6.3.1 Amphibian Movement Corridors

Amphibian movement corridors may be present in all eco-sites that are associated with water. These corridors link breeding and summer habitats, and may be extremely important for local populations

Results:

The Ontario Herpetofaunal Summary Atlas identified a number of herptiles to exist within Simcoe County. A site investigation will identify whether these species utilize the project location and those areas within the 120 metre buffer zone as a movement corridor.

The OMNR does not have the records or data that indicate either the presence or absence of amphibian movement corridors at or within 120 metres of the project location. A site investigation is required to gather more information about this feature.

2.6.3.2 Deer Movement Corridors

Deer movement corridors may be found in all forested ecosites. Once a deer winter congregation or yarding habitat is determined, these areas will generally have corridors that deer use during fall migration and spring dispersion. For example, if the project location contains a Stratum II area, the potential for deer corridors is increased.

Results:

Both deer winter congregation areas and yarding habitats were inferred as absent in the areas 120 metres from and including the project location. No additional site investigation work for this habitat is required.

2.6.4 Habitat of Species of Conservation Concern

Habitats for species of conservation concern include:

- Habitat of species that are rare or substantially declining, or have high percentage of their global population in Ontario and are rare or uncommon in the planning area;
- Species that are rare within the planning area, even though they may not be provincially rare;
- Special Concern (SC) species identified under the ESA or the SARO List (formerly referred to as vulnerable);
- Species that are listed as rare or historical in Ontario based on records kept by the NHIC (S1 is extremely rare, S2 is very rare, S3 is rare to uncommon, SH is historical);
- Species identified as nationally endangered or threatened by the COSEWIC, which are not protected in regulation under Ontario's ESA; and,
- Excludes habitats of endangered and threatened species.

A summary of species of conservation concern habitats that may potentially exist at or within 120 metres of the project location is presented in **Table 2-3**.

Table 2-3: Habitat for Species of Conservation Concern

Habitat	Records Observation*	OMNR Records Review
Marsh Bird Breeding Habitat	No wetlands were identified. Site Investigation is required to confirm absence.	No data from OMNR. Site Investigation required.
Woodland Area-Sensitive Bird Breeding Habitat	A small wooded area is located within 120 m. Site Investigation required to confirm absence.	No data from OMNR. Site Investigation required.
Open Country Bird Breeding Habitat	Unknown. Site Investigation required.	No data from OMNR. Site Investigation required.
Shrub/Early Successional Bird Breeding Habitat	Unknown. Site Investigation required.	No data from OMNR. Site Investigation required.
Special Concern Species	Unknown. Site Investigation required.	Data from the OMNR is unknown for the specific project location. Site Investigation required. Possible special concern species include: Snapping turtle, Monarch, Milksnake, Golden-winged warbler, Canada warbler.
S1-S3, SH species and communities	Unknown. Site Investigation required.	No data from OMNR. Site Investigation required. However, species information within 1 km of site is available, as presented above.
Terrestrial Crayfish	Unknown. Site Investigation required.	No data from OMNR. Site Investigation required.

* Note: Records Observation information was sourced from NHIC, aerial imagery, LIO, SOLRIS, NVCA, OMOP, SCOP and Simcoe County Geo-Maps.

A geographical search for occurrences of species of conservation concern and associated habitat was conducted using the NHIC database. A search was conducted on the one (1) km² to two (2) km² area surrounding and including the property location. It is understood that the NHIC information is based on public regional reports, and habitat boundaries that may be variable. The Ontario Herpetofaunal Summary Atlas and the Atlas of the Breeding Birds of Ontario were also consulted to identify herptiles and breeding birds located in proximity to the property location that would fall under the species of special concern. The COSEWIC database was then used to determine if any of these species are federally endangered or threatened, but not considered endangered or threatened provincially. A summary of these species of conservation concern are presented in **Table 2-4**.

Table 2-4: Species of Conservation Concern in Vicinity of the Project Location.

Type of Organism	Scientific Name	Common Name	NHIC	SARO	COSEWIC
Amphibians & Reptiles	<i>Clemmys guttata</i>	Spotted Turtle	S3	END	END
	<i>Emydoidea blandingii</i>	Blanding's Turtle	S3	THR	THR
	<i>Pantherophis gloydi</i>	Eastern Foxsnake (Georgian Bay Population)	S3	THR	END
	<i>Sternotherus odoratus</i>	Eastern Musk Turtle (Stinkpot)	S3	THR	THR
	<i>Thamnophis sauritus</i>	Eastern Ribbonsnake	S3	SC	SC
	<i>Plestiodon fasciatus</i>	Five-lined Skink (Georgian Bay Pop.)	S3	SC	SC
	<i>Graptemys geographica</i>	Northern Map Turtle	S3	SC	SC
	<i>Chelydra serpentina</i>	Snapping Turtle	S3	SC	SC
	<i>Clemmys insculpta</i>	Wood Turtle	S2	END	THR
	<i>Heterodon platirhinos</i>	Eastern Hognose Snake	S3	THR	THR
	<i>Lampropeltis triangulum</i>	Eastern Milk Snake	S3	SC	SC

Type of Organism	Scientific Name	Common Name	NHIC	SARO	COSEWIC
Amphibians & Reptiles	<i>Pseudacris triseriata</i>	Western Chorus Frog - Great Lakes / St. Lawrence - Canadian Shield Population	S3	NAR	THR
	<i>Ambystoma jeffersonianum</i>	Jefferson Salamander	S2	THR	END
	<i>Sistrurus catenatus catenatus</i>	Eastern Massasauga (Georg. Bay Pop.)		THR	THR
Birds	<i>Chlidonias niger</i>	Bald Eagle	S3B	SC	NAR
	<i>Dendroica cerulea</i>	Canada Warbler	S3B	SC	END
	<i>Chaetura pelagica</i>	Cerulean Warbler	S4B, S4N	SC	THR
	<i>Chordeiles minor</i>	Common Nighthawk	S4B	SC	THR
	<i>Vermivora chrysoptera</i>	Golden-winged Warbler	S4B	SC	THR
	<i>Ammodramus henslowii</i>	Henslow's Sparrow	SHB	END	END
	<i>Wilsonia citrina</i>	Hooded Warbler	S3B	SC	THR
	<i>Seiurus motacilla</i>	Louisiana Waterthrush	S3B	SC	SC
	<i>Contopus cooperi</i>	Olive-sided Flycatcher	S4B	SC	THR
	<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	S4B	SC	THR
	<i>Asio flammeus</i>	Short-eared Owl	S2N, S4B	SC	SC
	<i>Coturnicops noveboracensis</i>	Yellow Rail	S4B	SC	SC
	<i>Wilsonia canadensis</i>	Black Tern	S4B	SC	THR
	<i>Rallus elegans</i>	King Rail	S2B	END	END
Insects	<i>Danaus plexippus</i>	Monarch Butterfly	S2N, S4B	SC	SC
	<i>Pieris virginiensis</i>	West Virginia White	S3	SC	
	<i>Somatochlora hineana</i>	Hine's Emerald	S1	END	END
Fish	<i>Esox americanus vermiculatus</i>	Grass Pickerel	S3	SC	SC
	<i>Acipenser fulvescens</i>	Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	S2	THR	THR
	<i>Ichthyomyzon fossor</i>	Northern Brook Lamprey	S3	SC	SC
Plants	<i>Panax quinquefolius</i>	American Ginseng	S2	END	END
	<i>Asplenium scolopendrium americanum</i>	American Hart's-tongue Fern	S3	SC	SC
	<i>Juglans cinerea</i>	Butternut	S3?	END	END
	<i>Platanthera leucophaea</i>	Eastern Prairie-fringed Orchid	S2	END	END
	<i>Isoetes engelmannii</i>	Engelmann's Quillwort	S1	END	END
	<i>Aristida basiramea</i>	Forked Three-awned Grass	S2	END	END
	<i>Cirsium hillii</i>	Hill's Thistle	S3	THR	THR
	<i>Chimaphila maculata</i>	Spotted Wintergreen	S1	END	END

NHIC: Natural Heritage Information Centre (Ontario S-Rank); SARO: Species at Risk Ontario; COSEWIC: Committee on the Status of Endangered Wildlife in Canada; S1: Critically Imperiled (Extremely rare); S2: Imperiled (Very rare); S3: Vulnerable (Rare to Uncommon); S#B: Breeding; S#N: Staging areas non-breeding; SH: Historic – no records in past 20 years.

The NHIC database revealed no species, rare plant communities, invasive species, wildlife conservation areas, and/or natural areas within one (1) to two (2) km² of the project location.

A number of species of rare, special concern or ranked S1-S3, and SH by Ontario records (NHIC) are known to exist within the subject area as presented in **Table 2-4** above. Habitat of these species may be considered significant wildlife habitat and will be reviewed more closely during the site investigation to determine whether they are present in or within 120 metres of the project location.

Species listed as Endangered or Threatened under the SARO List will be considered separately as per the *Endangered Species Act (ESA) (2007)*, and in accordance with OMNR's Approval and Permitting Requirements Document (APRD). The identification of Endangered or Threatened species under SARO to occur within the project location area will be evaluated during the site investigation. If species are found during the investigation procedures following the ESA will be adhered to.

3 Summary

Based on the current property location and the surrounding areas **Table 3-1** summarizes the results as they pertain to the natural heritage features in and within 120 metres of the project location. It is expected that other natural features exist and will be identified during a site investigation.

Table 3-1: Summary of Natural Heritage Records Review

REA Regulation	Natural Heritage Feature Existence Yes/No/Unknown	Records Review Requirement
Is in or within 120 m of a provincial park or conservation reserve?	No	Ontario's Crown Land Use Policy Atlas, in addition to the OMNR Records Review indicated that no provincial parks or conservation reserves are located at or within 120 m of the project location.
Is the project located in a natural feature?	Unknown	It is unknown if natural features exist at or within 120 m of the project location. Site investigation is required.
Is the project area located within 50 m of an ANSI (earth science)	No	NHIC, OMOP and SCOP, OMNR records indicate that the project location is not located within 50 m of an ANSI (earth science).
Is the project area located within 120 m of a natural feature that is not an ANSI		
a) ANSI (life science)	No	NHIC, OMOP SCOP, and OMNR records indicate that the project location is not located within 120 m of an ANSI (life science).
b) Coastal wetland	No	NHIC, OMOP and SCOP records indicate that the project location is not located within 120 m of a coastal wetland.
c) Northern wetland	No	The project location is not located north of Ecoregions 5E, 6E and 7E as identified in Figure 1 of the Provincial Policy Statement.

REA Regulation	Natural Heritage Feature Existence Yes/No/Unknown	Records Review Requirement
d) Southern wetland	No	NHIC, OMOP, SCOP and OMNR indicate no wetlands exist within 120 m of the project location. A site investigation will confirm absence of this feature.
e) Valleyland	Unknown	It is not known if valleylands exist within 120 m of the project location. Site investigation is required.
f) Woodland	Yes	OMNR Records Review indicate that a small woodland is located within 120 m of the project location.
g) Wildlife habitat	Unknown	It is not known if wildlife habitat exists within 120 m of the project location. Site investigation is required.

As per Section 26 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 natural features that exist at or within 120 metres of the project location. The Site investigation will also help determine the boundaries of the natural features at or within 120 metres of the project location, and determine their distance from the proposed project location for the ground-mounted solar facility. A summary of the natural features that need to be further surveyed and confirmed through a site investigation is presented in **Table 3-2**.

Table 3-2: Natural features to be confirmed during a site investigation

Natural Feature	Present in Project Location	Present within 120 m of Project Location	Carried Forward to Site Investigation
Provincial park	No	No	No
Conservation reserve	No	No	No
Earth Science ANSI	No	No	No
Life Science ANSI	No	No	No
Wetland	No	No	Yes (for verification)
Woodland	No	Yes	Yes
Valleyland	No	Unknown	Yes
Wildlife habitat	Unknown	Unknown	Yes

4 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 Natural Resources 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.

5 Closure

We trust this preliminary 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 for Review

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

DRAFT for Review

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

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Figures

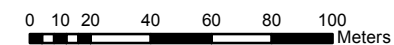
DRAFT



Legend

- Pond
- Proposed Solar Panel
- Construction Limit
- 120 m Buffer
- Forest
- Hedgerow

Source: County of Simcoe GIS Mapping, based on 2008 Aerial Photography



exp Services Inc.

1595 CLARK BOULEVARD
BRAMPTON, ONTARIO
L6T 4V1
T - (905) 793-9800
F - (905) 793-0641

PROJECT TITLE:

FUTURE SOLAR DEVELOPMENTS INC. LP8
304 PHASE NATURAL HERITAGE STUDY
419 PENETANGUISHENE ROAD
BARRIE, ONTARIO

DRAWING TITLE:

NATURAL HERITAGE
ASSESSMENT SITE MAP

PROJECT No.:

WSL-00002250-00

DWN:

PS

SCALE:

AS NOTED

CHKD:

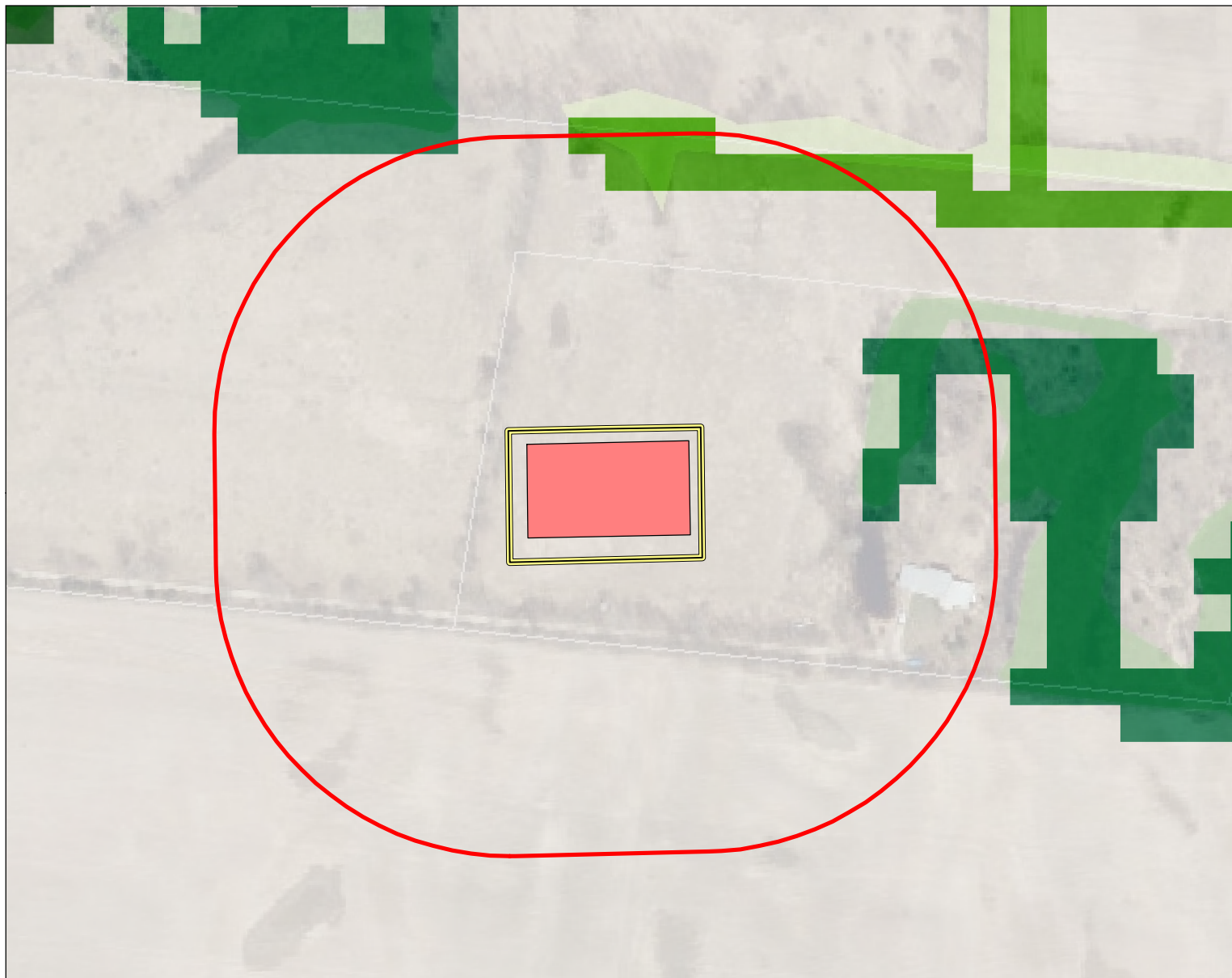
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DATE:

AUGUST 2012

FIG. No.:

1



Legend

- Proposed Solar Panel
- Construction Limit
- 120 m Buffer
- Coniferous Forest
- Mixed Forest
- Hedge Rows
- Undifferentiated

Source: County of Simcoe GIS Mapping, based on 2008 Aerial Photography

0 10 20 40 60 80 100
Meters



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PROJECT TITLE:

FUTURE SOLAR DEVELOPMENTS INC. LP8
304 PHASE NATURAL HERITAGE STUDY
419 PENETANGUISHENE ROAD
BARRIE, ONTARIO

DRAWING TITLE:

SOUTHERN ONTARIO LAND RESOURCE
INFORMATION SYSTEM (SOLRIS)
NATURAL HERITAGE MAP LP8

PROJECT No.:

WSL-00002250-00

DWN:

PS

SCALE:

AS NOTED

CHKD:

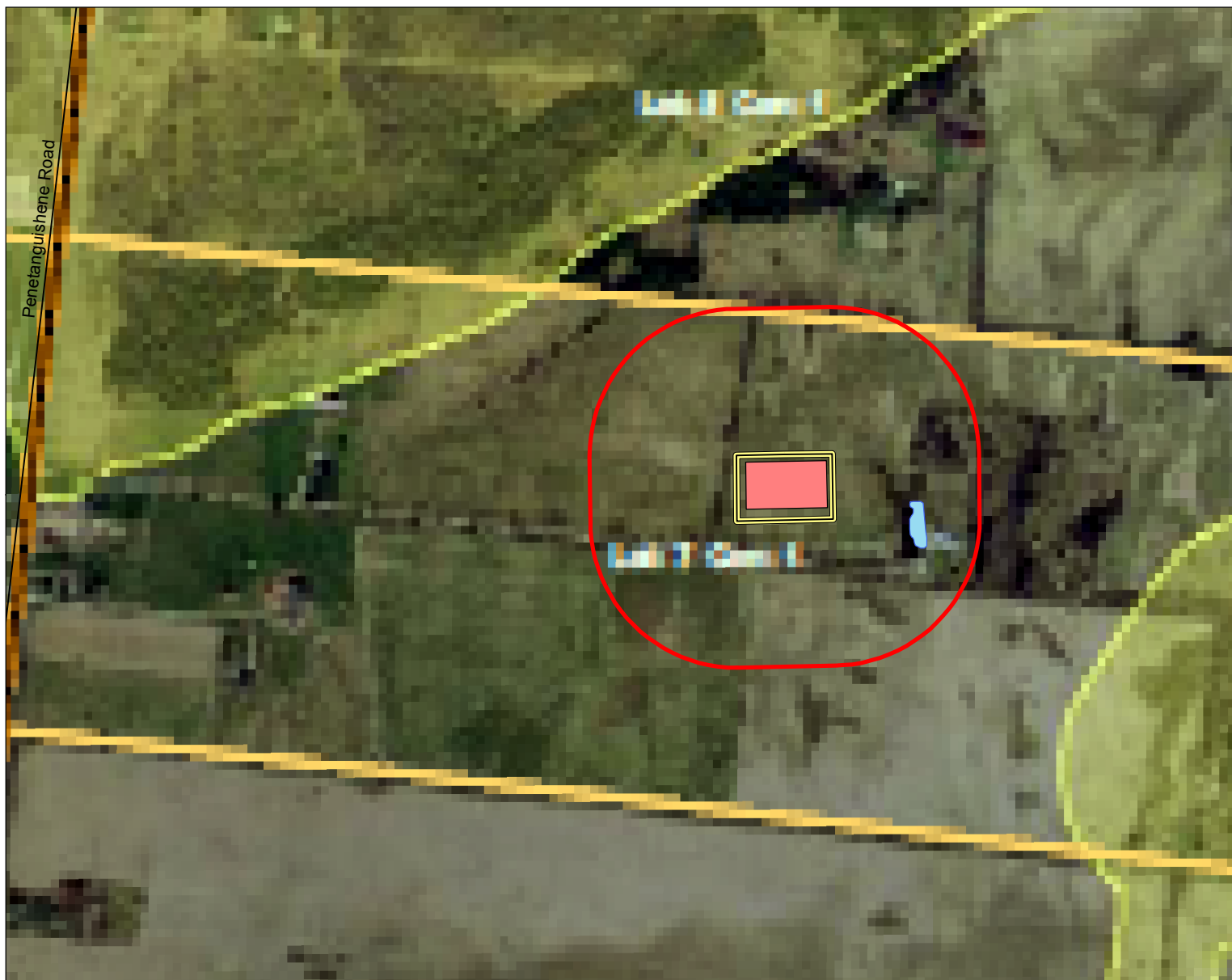
DF

DATE:

AUGUST 2012

FIG. No.:

2



Legend

- Pond
- Proposed Solar Panel
- Construction Limit
- 120 m Buffer
- Regulation Limit

Source: County of Simcoe GIS Mapping, based on 2008 Aerial Photography

0 20 40 80 120 160 200
Meters



exp Services Inc.

1595 CLARK BOULEVARD
BRAMPTON, ONTARIO
L6T 4V1
T - (905) 793-9800
F - (905) 793-0641

PROJECT TITLE:

FUTURE SOLAR DEVELOPMENTS INC.
(LP8) 419 PENETANGUISHENE ROAD
BARRIE, ONTARIO

DRAWING TITLE:

NOTTAWASAGA VALLEY
CONSERVATION AUTHORITY
ONTARIO REGULATION 172/06 LIMIT

PROJECT No.:

WSL-00002250-00

SCALE:

AS NOTED

DATE:

AUGUST 2012

DWN:

PS

CHKD:

DF

FIG. No.:

3

Appendix A – OMNR Records Review

DRAFT

REOT

District NHA Records Review Template for Renewable Energy Projects

ECOREGION 6E

Wind, Solar, Bioenergy

Ministry of Natural Resources

Renewable Energy Operation Team

June 12, 2012

This template has been aligned with the
draft Ecoregion 6E Criterion Schedule

NHA Records Review

Project Name:	Solar Project 419 Penetanguishene Rd			
Project Location:	MNR District Midhurst	Municipality Simcoe County, Twp of Oro-Medonte	Geo.Twp, Lot(s) & Con(s) Oro	419 Penetanguishene Rd.
Applicant:	Future Solar Developments Inc		Phone #: 3400 Pharmacy Ave. Unit 8, Scarborough, ON Address:	
Consultant:	Exp Services Inc.		Phone #: 905-793-9809 x2335 Address: 1595 Clark Blvd. Brampton, ON Melissa.torchia@exp.com	
Generation type:	<input type="checkbox"/> wind onshore	<input type="checkbox"/> wind offshore	X <input type="checkbox"/> solar	<input type="checkbox"/> biomass/biogas
Nameplate Capacity:	100 kw			
Name of MNR Records Reviewer:	Erin Thompson Erin.L.Thompson@ontario.ca			
Date Records Compiled:	June 5, 2012			
What Ecodistrict is the project located in?	6E-6			

Please note the following definitions:

No = MNR has verified that there is no such natural feature present in or within 120 m of the proposed site.

YES = MNR has verified that this natural feature is present in or within 120 m of the proposed site. Site investigation is required to delineate the boundary of the natural feature.

UNKNOWN = MNR does not have any data to indicate presence/absence of this type of natural feature. Site investigation is required. Where the natural feature is deemed present, the boundary of the feature must be delineated.

Although this data represents the MNR's best current available information, it is important to note that a lack of occurrence (ie: unknown response) at a site does not mean that natural feature type is not present at the location. The Natural Heritage Assessment Guide for Renewable Energy Projects (MNR, 2001) and the Draft Significant Wildlife Habitat Ecoregion 6E Criterion Schedule (MNR, 2012) provide guidance with respect to identifying those features requiring Site Investigations. MNR continues to encourage Renewable Energy Approval Applicants to maintain communication and seek technical advice throughout the approval process. Information on Threatened and Endangered species is provided in a separate table.

Feature Type	Present within 120m of project location (yes, no, unknown, N/A)	Present within project location (yes, no, unknown, N/A)	MNR Comments (comments may expand on information provided and/or may include relevant records within the vicinity that were not within project location or 120m of project area)	Information Source (NHIC, district staff, etc. Include the data layer name where possible)
Provincial Park	No	No	Include this	

			information in the records review report and <u>do not</u> carry forward to site investigation	
Conservation Reserve	No	No	Include this information in the records review report and <u>do not</u> carry forward to site investigation	
Earth Science ANSI*	No	No	Include this information in the records review report and <u>do not</u> carry forward to site investigation	
Life Science ANSI	No	No	Include this information in records review report and <u>do not</u> carry forward to site investigation.	
Wetland	No	No	<p>None indicated, however this should be verified on-site</p> <p>Include this information in the records review report and <u>carry forward</u> to site investigation report.</p>	
Woodland	yes	no	<p>There is a small amount of woodland area within 120 m of the proposed site. This area may provide connection between two larger wooded areas north and south of the site.</p> <p>Include this information in the</p>	

					records review report and <u>carry forward</u> to site investigation report.	
Valleyland			unknown	unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
Significant Wildlife Habitat	Habitats of Seasonal Concentrations of Animals	Waterfowl stopover and staging areas (terrestrial)	unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Waterfowl stopover and staging areas (aquatic)	unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Shorebird migratory stopover areas	unknown	unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Raptor Wintering Area	unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Bat hibernacula	unknown	unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Bat Maternity Colonies	unknown	unknown	Include this information in the records review report and <u>carry</u>	

					<u>forward</u> to site investigation report.	
		Bat Migratory Stopover Areas	N/A	N/A	MNR has not developed criteria for evaluating the significance of this habitat feature (see page 13 of the Bat Guidelines). Include this information in the records review report and <u>do not</u> carry forward to site investigation.	
		Turtle Wintering Area	unknown	unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Reptile Hibernaculum	unknown	unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Colonial-Nesting bird breeding habitat (bank and cliff swallows)	unknown	unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Colonial-Nesting bird breeding habitat (tree/shrub)	unknown	unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Colonial-Nesting bird breeding habitat (ground)	unknown	unknown	Include this information in the records review report and <u>carry forward</u> to site investigation	

					report.	
		Migratory butterfly stopover areas	N/A	N/A	This project is >5 km away from Lake Ontario Include this information in the records review report and <u>do not</u> carry forward to site investigation.	
		Landbird (songbird) migratory stopover areas	N/A	N/A	This project is >5 km away from Lake Ontario Include this information in the records review report and <u>do not</u> carry forward to site investigation	
		Deer Yarding Areas	No	No	Include this information in the records review report and <u>carry forward</u> to site investigation. MNR has already delineate the boundary of the deer yard, therefore this layer file must be acquired through LIO and presented in the SI report map.	
		Deer Winter Congregation Areas	No	No	Include this information in the records review report and <u>do not</u> carry forward to site investigation.	
	Rare Vegetation Communities or Specialized Habitats for Wildlife	Cliffs and Talus Slopes	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Sand Barren	Unknown	Unknown	Include this	

					information in the records review report and <u>carry forward</u> to site investigation report.	
		Alvar	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Old Growth Forest	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Savannah	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Tallgrass Prairie	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Other Rare Vegetation Communities	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Foraging areas with abundant mast	N/A	N/A		
		Lek - Sharp-tailed Grouse	N/A	N/A		
		Waterfowl Nesting Area	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	

		Bald Eagle and Osprey Nesting, Foraging and Perching habitat	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Woodland Raptor Nesting habitat	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Turtle Nesting Areas	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Seeps and Springs	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Amphibian Breeding Habitat (Woodland)	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
		Amphibian Breeding Habitat (Wetlands)	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation report.	
	Animal Movement Corridors (list all that apply)	Amphibians	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation.	
		Deer	Unknown	Unknown	Include this information in the records review	

					report and <u>carry forward</u> to site investigation.	
	Species of Conservation Concern (list all that apply)	Marsh Bird Breeding Habitat	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation.	
		Woodland Area-Sensitive Breeding Bird Habitat	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation.	
		Open Country Breeding Bird Habitat	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation.	
		Shrub/Early Successional Bird Breeding Habitat	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation.	
		Special Concern Species	Unknown	Unknown	Special concern species that may occur within the project area are; Snapping Turtle, Monarch, Milksnake, Golden-winged Warbler, Canada Warbler. Include this information in the records review report and <u>carry forward</u> to site investigation.	
		S1-S3, SH species and communities	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation.	

					NOTE: occurrence information was provided for features within 1km of the project location.	
		Terrestrial Crayfish	Unknown	Unknown	Include this information in the records review report and <u>carry forward</u> to site investigation.	

Is any portion of the project located within the Oak Ridges Moraine Plan Area? ☐ Yes ☒ No
If yes, are any of the following features known to be present on or within 120m of the project location?

- ☐ Sand Barrens
☐ Savannah
☐ Tallgrass Prairie
☐ Unknown

Is the project location within the Protected Countryside (Greenbelt)? ☐ Yes ☒ No
If yes, are any of the following features known to be present on or within 120m of the project location?

- ☐ Sand Barrens
☐ Savannah
☐ Tallgrass Prairie
☐ Alvar
☐ Unknown

* Earth Science ANSI only needs to be considered if it is located within 50m of the project location