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Natural Heritage Site Investigation
Proposed Groundmount Solar Facility LP 8
419 Penetanguishene Road
Barrie, ON

Project Number
WSL-00002250-00

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Legal Notification

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Chapter 1 – Introduction & Background

1 Introduction & Background

Exp Services Inc. (**exp**) was retained by Mr. Sam Qin of Future Solar Developments Inc. to conduct a Site Investigation 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 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. 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 m of a provincial park or conservation reserve area;
b) In a natural feature;
c) Within 50 m of an area of natural or scientific interest (ANSI) (earth sciences); and,
d) Within 120 m 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

According to Subsection 3 of 26 the proponent (Future Solar Developments Inc.) shall conduct the following Site investigation in order to determine the following:

a) A physical investigation of the air, land and water within 120 metres of the project location in order to determine if:
    i. the results of the analysis summarized in the "records review" report are correct or require correction , and identify any required corrections;
    ii. Whether any additional natural features exist, other than those that were identified in the "records review" report;

iii. The boundaries, located within 120 metres of the project location, of any natural feature that was identified in the records review or the Site Investigation; and,

iv. The distance from the project location to the boundaries determined under clause (c).

b) The proponent must also prepare a report setting out the following as part of Subsection 3 of Section 26:

i. any corrections to the "records review" report and the determinations made as a result of conducting the Site Investigation;

ii. information that relates to each natural feature identified in the records review and in the Site Investigation including the type, attributes, composition and function of the feature;

iii. A map the shows the following features:

- The boundaries that are located within the 120 metres of the project location of any natural feature that was identified in the records review and Site Investigation;
- The location and type of each natural feature identified in relation to the project location; and,
- The distance of the boundaries from the project location.

iv. The date and time of the beginning and completion of the Site Investigation;

v. The duration of the Site Investigation;

vi. The weather conditions at the time the Site Investigation was conducted;

vii. A summary of the methods used to make the observations for the purposes of the site investigation;

viii. The name and qualifications of any person conducting the Site Investigation; and,

ix. Field notes kept by the person conducting the Site Investigation.

This natural heritage Site Investigation report has been prepared to meet the above requirements as presented in subsection 3 section 26 of the REA Regulation. The methodology utilized as part of the Site Investigation follows the Ontario Ministry of Natural Resources Natural Heritage Assessment Guidelines for Renewable Energy Projects dated July 2011.

1.2 Summary of Results of Records Review

The project location has been identified to contain natural features, as presented in **Table 1-1** (**exp**, 2012). *The following Site Investigation will delineate the boundaries of those natural features identified.*

Table 1-1: Summary of Records Review for LP8

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 indicate 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.
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.

1.3 Site Investigation

A visit to the project location was completed on January 11, 2012. Weather at the time of the investigation was sunny. Temperature at the time of visit ranged from -2 to 2 °C. The Site Investigation was conducted over the course of two (2) hours, between 1:00 pm and 3:00 PM. A second Site Investigation was completed on August 15, 2012 between 3:00 and 4:30 PM, with temperatures ranging between 15 and 20 °C. During the Site Investigations, incidental observations of terrestrial and aquatic wildlife and birds were noted.

Subsequent Site Investigations were completed on May 7th and June 28th to conduct frog surveys at the project location. These Investigations were completed after sunset as per the

Marsh Monitoring Program protocol (MMP). Information concerning these surveys is presented in Appendix C.

1.3.1 Name and Qualifications of Person Conducting Site Investigation

Ms. Melissa Torchia, M.A.Sc, is an ecologist that specializes in ecological inventories for sites across the province of Ontario. In this regard, she is familiar with methods required for natural heritage assessments that help quantify the natural environment in support of environmental assessments, environmental impact studies and endangered species screening. She is a certified Ontario Wetland Evaluator and Arborist; in addition she has also completed natural heritage data sensitivity training provided by the Ontario Ministry of Natural Resources (OMNR). Examples of past studies include riparian habitats and forest investigations in cities such as, Brantford, Welland, Ivy Lea, Algonquin Park and Picton. These assessments were guided by the *Ontario Environmental Protection Act*, *Ontario Environmental Assessment Act*, *Ontario Endangered Species Act*, and the *Ontario Planning Act*. Melissa has also been involved with the preparation of a planting plan for the endangered species of butternut, in addition to planting plans for creek restoration projects. Melissa Torchia received her Honours Bachelor of Science degree in environmental science at York University. She then received her Master's in Applied Science degree, specializing in urban forestry from Ryerson University. Her Master's thesis focused on the use of trees to cool the urban microclimate, which was conducted in the downtown core of Toronto on the University of Toronto Campus.

1.4 Property Description

This project location is situated in Barrie, Ontario, and is proposed to contain one (1) 100 kW solar farm plot identified as LP 8. A general land classification for the project location is noted as previous agricultural land. The ground was covered with snow at the time the Site Investigation was conducted in January, but evidence of herbaceous plants was observed throughout the area, and confirmed during the August Site Investigation.

The project location is located at the end of the gravel road that exits onto Penetanguishene Road. There is one (1) residential property closer to Penetanguishene Road, with cleared land leading up to the project location. The LP 8 plot area for the proposed solar farm is located west of the property owner's residential dwelling. The land is fairly flat, with an absence of woody vegetation. A hedgerow of mid-age to mature deciduous trees is present along the west edge of the project location, which continues along the northern edge of the property. The woodland on the east is dominated by a mixture of coniferous and deciduous tree species. This wooded area contained several small ponds that were frozen during the January Site Investigation. At that time, the landowner explained these ponds contain no fish, and that they were not connected to any water courses. During the August Site Investigation, we observed the ponds located within the woodland east of the residential dwelling to be dry, with no connections to other features. Another large pond located just west of the residential dwelling, did contain water during the August Site Investigation, and was observed to not be connected with other features.

The gravel driveway leading up to the property owner's residential dwelling is lined with mid-age to mature coniferous and deciduous trees.

For natural feature boundaries refer to **Figure 1.** Photos of the project location and surrounding areas are found in Appendix A.

Chapter 2 – Methodology

2 Methodology

Natural heritage features were identified within the records review prepared by **exp** (2012), whereby, unknown and known features were further investigated to identify their presence or absence within 120 metres of the project location, as well as to delineate boundary limits.

The entire project location and lands within 120 metres were investigated by the observer on foot in order to document and characterize the natural features present. Boundaries outside 120 metres of the project location were also investigated in order to better understand the ecological systems present.

Photographs on and within 120 metres of the project location were taken in order to document the vegetation communities, in addition to any other natural features that may be considered for significance. Wildlife observations were made throughout the Site Investigations either through visual sightings, auditory calls or tracks. Areas searched as part of the investigation included the identification of habitat for wildlife, in addition to habitat for species of special concern.

Chapter 3 –
Site Investigation Observation Results

3 Site Investigation Observation Results

3.1 Ecological Land Classification

The ELC is an approach that attempts to identify the distribution and groupings of plant species, and categorize, organize and name ecosystems. The goal of the Ontario ELC program is to establish a comprehensive and consistent province wide approach for ecosystem description, inventory and interpretation. When complete, the ELC can be used to improve the collective ability to manage both natural resources and the information about those resources. The following sections are components of the ELC which describes and classifies the subject Site, as identified in *Ecological Land Classification for Southern Ontario: First Approximation and Its Application*, by the Ministry of Natural Resources (Lee *et al.*, 1998).

Field notes were compiled with respect to community description and classification; stand characteristics; list of plant species present; extent of disturbance; and, a description of the wildlife habitat.

Animal and plant species significance or rarity on a National and Provincial level was based on the Natural Heritage Information Centre (NHIC) database as well as standard status lists obtained from the Committee On the Status of Endangered Wildlife in Canada (COSEWIC, 2012) and Species at Risk in Ontario (SARO, 2012).

All information was applied to the ELC for Southern Ontario Field Guide (SCSS FG-02) (Lee *et al.,* 1998). The data collected was applied and compared to the various descriptions of community types found in Southern Ontario, and used to outline ecological patterns on the landscape. Descriptive standards and disturbance factors listed in the manual were applied to the field notes and physical and biological characteristics observed on or within the project location.

3.2 Stand Composition

A stand characteristic is the classification of a collection of plants having a relatively uniform composition and structure. The purpose of identifying the stand characteristics at a given location is to categorize the habitats present in order to determine the types of natural features and to investigate the wildlife expected to be in the area.

The project location was mainly cleared; previously used for agricultural purposes. On the east side of the residential dwelling was a small woodland that contained a mixture of mature and immature coniferous and deciduous trees. Composition of the woodland was fairly dense, with signs of new growth. The hedgerow located along the northern section of the property also contained mid-age to mature deciduous trees. This hedgerow continued along the western side of the project location and extended toward the gravel road to the south. Another hedgerow of mid-age to mature mixed deciduous and coniferous trees lined the gravel driveway leading east towards the residential dwelling. Ground cover consisted of a mixture of herbaceous plants located throughout the project location, with increased density in the woodland on the east side. The trees found in both the hedgerow and woodland area were dominantly between 10 to 25 metres in height. There were rare sightings of deadfall within the woodland area, but no signs of snags. The woodland can be considered a young to mature community, with dominant species around mid-age.

3.2.1 Community Description and Classification

The organizational framework contained within the *ELC for Southern Ontario* (Lee *et al.*, 1998) protocol describes communities according to six (6) nested levels: Site Region, System, Community Class, Community Series, Ecosite, and Vegetation Type. These nested levels vary in spatial scale, with the Site Region classifying communities at the largest spatial scale, to Vegetation Type which describes communities at the finest spatial scale.

There are two (2) Site Regions in Southern Ontario, 6E and 7E (Lee *et al.*, 1998). The project location is situated within Site Region 6E, the Lake Erie – Rideau Site Region. This region is dominated by deciduous tree species such as Sugar maple (*Acer saccharum*), American elm (*Ulmus americana*), American beech (*Fagus grandifolia*), Black cherry (*Prunus serotina*), White ash (*Fraxinus americana*), Red oak (*Quercus rubra*), White oak (*Quercus alba*), and Butternut (*Juglans cinerea*) Other less common trees include Sassafras (*Sassafras albidum*), Black walnut (*Juglans nigra*), Big shellbark hickory (*Carya laciniosa*), Black oak (*Quercus velutina*) and Pin oak (*Quercus palustris*) (Lee *et al.*, 1998).

The System is an organizational level in the ELC that helps to reduce a complex natural landscape into a small number of community based units. The system identified at the property location is classified as Terrestrial.

The Community Class is useful in organizing communities into groups with similar ecological patterns and processes (Lee *et al.*, 1998). The community series breaks down community classes further, and are based on the type of vegetation cover or the plant form that make up the community, such as open, treed, or shrub; deciduous, coniferous, or mixed.

There were a number of different Community Classes present at the project location which included: Forest, Cultural and Swamp. Community Series found at the project location included cultural meadow, mixed forest and thicket swamp. Additional small communities were also noted within the 120 metre buffer from the project location, which include a hedgerow identified as cultural and a common reed monoculture.

In addition, vegetation communities are further categorized into an Ecosite and Vegetation Type according to ELC protocol. An Ecosite is defined as "a part of an ecosection having relatively uniform parent material, soil and hydrology, and a chronosequence of vegetation" (Lee *et al.*, 1998). Thus, it is a landscape unit with a consistent set of environmental factors and vegetation characteristics. Vegetation Type is the finest level of resolution in the ELC, representing plant species assemblages associated with an Ecosite.

The ecosite and vegetation communities found on and within 120 metres of the LP 8 project location include:

- Dry Moist Old Field Meadow Type (CUM1-1)
- Fresh Moist White Cedar – Hardwood Mixed Forest Type (FOM7-2)
- Red Osier Mineral Thicket Swamp Type (SWT2-5)
- Cultural (Hedgerow) (CU)
- Common Reed Monoculture (CRM)

For ecosite and vegetation community polygons refer to **Figure 2**

3.3 Plant Community

A plant community is a unit of vegetation within a given area. Identifying a plant community within a project location is necessary to determine the type of environment present (e.g. shade-tolerant area) and to identify the type of wildlife expected to be at the project location, in addition to sensitive areas. This information will also aid in the identification of any locally, regionally or provincially rare, threatened or endangered vegetative species and communities at the project location. If identified, these species and/or communities will need to be preserved and protected.

3.3.1 Fresh - Moist White Cedar - Hardwood Mixed Forest (FOM7-2)

The woodland east of the project location is situated within the 120 metre buffer zone. Information gathered from the August Site Investigation enabled ELC classification of this woodland at the finest scale, at the Vegetation Type level. Consequently, the woodland was classified as FOM7-2, Fresh – Moist White Cedar – Hardwood Mixed Forest Type. The FOM7-2 Vegetation Type is characterized by Eastern white cedar *(Thuja occidentalis)* along with variety of hardwood tree species, such as Black ash *(Fraxinus nigra)*, Trembling aspen *(Populus tremuloides)*, Red maple *(Acer rubrum)*, Paper birch *(Betula papyrifera)* and Yellow birch *(Betula alleghaniensis)*.

Dominant upper canopy species identified during the Site Investigation in this Vegetation Type include Eastern white cedar, Black ash, Trembling aspen, Bur oak *(Quercus macrocarpa)*, American elm, Sugar maple, White ash, Paper birch, Eastern white pine (*Pinus strobus*), and American beech. Understory species primarily consisted of woody shrubs such as Alternate-leaved Dogwood *(Cornus alternifolia)*, Red osier dogwood (*Cornus sericea*), Hawthorn species *(Crataegus* sp.*)*, and Cherry species (*Prunus* sp.). Ground layer species were made up of vines and herbaceous plants that consisted of White baneberry (*Actaea pachypoda*), Wood strawberry (*Fragaria vesca*), Virginia creeper (*Parthenocissus quinquefolia*), Poison ivy (*Rhus radicans*), Raspberry species (*Rubus* sp.), Bittersweet nightshade (*Solanum dulcamara*), Marsh fern (*Thelypteris palustris*), Wild grape species (*Vitis* sp.), Goldenrod (*Solidago* sp.), Bull thistle (*Cirsium vulgare*) and Wild carrot (*Daucus carota*). Dominant plant species observed during both Site Investigations are presented in **Table 3-1.**

Table 3-1: List of Dominant Plant Species Observed in FOM7-2

Layer	Scientific Name	Common Name
Canopy	*Thuja occidentalis*	Eastern white cedar
	Fraxinus nigra	Black ash
	Populus tremuloides	Trembling aspen
	Quercus macrocarpa	Bur oak
	Ulmus americana	American elm
	Acer saccharum	Sugar maple
	Fraxinus americana	White ash
	Betula papyrifera	Paper birch
	Pinus strobus	Eastern white pine
	Fagus grandifolia	American beech

Layer	Scientific Name	Common Name
Understory	*Cornus alternifolia*	Alternate-leaved dogwood
	Cornus sericea	Red osier dogwood
	Crataegus sp.	Hawthorn sp.
	Prunus sp.	Cherry sp.
Ground Layer	*Carex & Poa* sp.	Grass sp.
	Actaea pachypoda	White baneberry
	Fragaria vesca	Wood strawberry
	Parthenocissus quinquefolia	Virginia creeper
	Rhus radicans	Poison ivy
	Rubus sp.	Raspberry sp.
	Solanum dulcamara	Bittersweet nightshade
	Thelypteris palustris	Marsh fern
	Vitis sp.	Grape sp.
	Solidago sp.	Goldenrod
	Cirsium vulgare	Bull thistle
	Daucus carota	Wild carrot

3.3.2 Cultural (Hedgerow) (CU)

The hedgerow that runs along the western and northern edge of the property can only be classified at the ELC Community Class level because as a hedgerow, it does not fit the descriptions of plantations, meadows, thickets, savannahs or woodlands. Cultural communities are those whose characteristics are a result of anthropogenic disturbance or maintenance. In this particular case, hedgerows are created and maintained by people to divide properties and as barriers to minimize wind disturbance.

Vegetation species observed during the Site Investigation include a variety of deciduous tree species, woody shrubs, herbaceous plants, and grass species. As is usually the case with disturbed sites, the presence of non-native species, such as Common buckthorn *(Rhamnus cathartica)*, is more prevalent in this community than in other vegetation communities in the area surrounding the project location. Dominant plant species observed during both Site Investigations are presented in **Table 3-2.**

Table 3-2: List of Dominant Plant Species Observed in CU

Layer	Scientific Name	Common Name
Canopy	*Acer saccharum*	Sugar maple
	Fraxinus nigra	Black ash
	Malus sp.	Apple sp.
	Prunus serotina	Black cherry
	Quercus macrocarpa	Bur oak
	Tilia americana	American basswood
	Ulmus americana	American elm
Understory	*Rhamnus cathartica*	Common buckthorn

Layer	Scientific Name	Common Name
Understory	*Cornus sericea*	Red osier dogwood
	Rhus typhina	Staghorn sumac
Ground Layer	*Vitis* sp.	Wild grape sp.
	Asclepias syriaca	Common milkweed
	Aster borealis	Slender white aster
	Daucus carota	Wild carrot
	Rumex sp.	Dock sp.
	Solidago sp.	Goldenrod sp.
	Symphyotrichum novae-angliae	New england aster
	Vicia cracca	Bird vetch
	Phalaris arundinacea	Reed canary grass

3.3.3 Dry – Moist Old Field Meadow Type (CUM1-1)

The project location is situated on a field that has previously been cleared for agricultural purposes. The field is no longer in agricultural production. It was classified during the Site Investigations as a Dry-Moist Old Field Meadow Type (CUM1-1)

3.3.4 Red Osier Mineral Thicket Swamp Type (SWT2-5)

A small rectangular shaped depression in the ground is present within the eastern woodland. This area was frozen over during the January Site Investigation, and dry during the August Investigation. However, the topography of the area and the presence of wetland species, such as Red osier dogwood and Sensitive fern *(Onoclea sensibilis)*, indicate that the area is prone to seasonal flooding during periods of heavy rainfall and the spring snowmelt. A diversity of rushes, sedges and additional ferns were also present, which is another characteristic of wetland areas. This area, however, falls beyond the 120 metres buffer zone from the project location. A summary of dominant plant species observed during both Site Investigations are presented in **Table 3-3.**

Table 3-3: List of Dominant Plant Species Observed in SWT2-5

Layer	*Scientific Name*	Common Name
Low shrubs	*Cornus sericea*	Red osier dogwood
Ground cover	*Onoclea sensibilis*	Sensitive fern
	Thelypteris palustris	Marsh fern
Narrow-leaved emergent	*Carex intumescens*	Bladder sedge

3.3.4.1 Common Reed Monoculture (CRM)

A dense monoculture of the invasive Common reed *(Phragmites australis)* is present in a small circular area along the boundary between the former agricultural field (CUM1-1) and the mixed White Cedar – hardwood forest (FOM7-2). Common reed grows aggressively with a single plant spreading at a rate of one (1) to two (2) metres per year, both vegetatively via underground rhizomes and through seed dispersal (Lake Huron Centre for Coastal Conservation, 2012). Dense monocultures of Common reed often displace and exclude other native plant species from establishing.

3.3.5 Other communities

An artificial dugout pond is located adjacent to the residential dwelling, east of the project location. Although the dugout pond is located within 120 metres of the project location, it was identified as an isolated pond that is not connected to any permanent or intermittent streams or drains, as observed during the Site Investigation and communicated by the landowner. Some plant species were observed emerging and surrounding the dugout pond during the August Site Investigation. A summary of these plant species are presented in **Table 3-4.**

Table 3-4: List of Dominant Plant Species Observed in and Around the Dugout Pond

Layer	*Scientific Name*	Common Name
Narrow-leaved emergent	*Carex intumescens*	Bladder sedge
	Scirpus cyperinus	Woolgrass
Robust emergent	*Typha latifolia*	Common cattail

3.4 Extent of Disturbance

A project location can also be described by the extent and intensity by which management or disturbance has occurred on the project location. It is important to note disturbance as it can influence community structure and function. Anthropogenic disturbances are usually more selective, and directly affect one (1) or several specific species, where as physical forces such as earthquakes or drought can affect the entire plant community.

Disturbances such as non-native species, gaps in forest canopy, plantations, tracks and trails, noise, disease and death of trees as well as wind throw (blown down) are recorded and observed at a given location.

During the January Site Investigation a small number of disturbances were observed. There was a moderate amount of noise being generated from the home owner's residence, in addition to signs of minor flooding in the eastern woodland; localized around the several man-made ponds. There were also signs of moderate wind throw, disease and death of trees, and gaps in the forest canopy as a result of the man-made ponds and clearings. Moderate deer (*Odocoileus virginianus)* browse activity was also observed during January in the eastern woodland, as tracks were noted throughout, in addition to presence of skat. Other tracks noted in the woodland included those from rabbits (*Leporidae* sp.).

Non-native invasive species were observed in a couple of the vegetation communities during the August Site Investigation. In the Cultural hedgerow along the western and northern edge of the property, non-natives species such as Common buckthorn, Wild carrot and Bird vetch, were occasionally present throughout this vegetation community. However, native species, such as Bur Oak and Sugar Maple, remain as the dominant species within

the hedgerow. The Common reed monoculture (non-native invasive species) is present at the boundary of the field and mixed forest. At the present time, the extent of the Common reed monoculture is limited, but there lies the potential for this species to spread into surrounding areas due to its aggressive spreading and growing habits. No signs of tracks were observed in the woodland during the August Investigation.

Other signs of disturbance observed during both Site Investigations result from anthropogenic sources associated with the residential dwelling and driveway. Debris material existed in these areas, however the extent of disturbance is considered localized and it was restricted to the areas immediately surrounding the dwelling and driveway.

3.5 Wildlife and Wildlife Habitat

In terms of wildlife and wildlife habitat, those areas on or within 120 metres of the project location may contain elements that can provide suitable habitats for wildlife. For example, small mammals and birds often inhabit soils or use fallen logs. In addition, the presence of trees, or species of trees that produce fruits such as nuts or berries, may prove to be an important food source for some species.

Those areas inside the 120 metre buffer zone do contain a few tree species that produce fruit (for example, trees such as *Malnus* sp. and *Prunus* sp.) and seeds (trees such as *Acer* sp.) that local animal and bird species may feed upon. The density of the forest cover in the area east of the residential dwelling does provide significant shelter for local wildlife to take refuge during periods of extreme weather conditions.

On the whole, wildlife sightings observed during the Site Investigations are presented in **Table 3-5** and include sightings of black-capped chickadee (*Poecile atricapillus*), Red-winged blackbird (*Agelaius phoeniceus*), Song sparrow (*Melospiza melodia*), Northern cardinal (*Cardinalis cardinalis*), American gold-finch (*Spinus tristis*), American robin (*Turdus migratorius*), and Monarch (*Danaus plexippus*). A woodpecker was heard in the woodland east of the project location during the January Site Investigation. Both white-tailed deer and rabbit tracks and skat were present throughout the east woodland as well, and were also noted during the January Site Investigation. Two (2) amphibian surveys were conducted in May and June. Those species observed include Spring peepers (*Pseudacris crucifer*), American toad (*Anaxyrus americanus*), Green frogs (*Lithobates clamitans*), a Leopard frog (*Lithobates pipiens*) and a Mink frog (*Lithobates septentrionalis*).

Table 3-5: Wildlife Evidence in Surrounding Area

Scientific Name	Common Name	Notes/Evidence	Date Observed
Odocoileus virginianus	White-tailed deer	Tracks/Scat	January
Leporidae sp.	Rabbit species	Tracks/Scat	January
Picidae sp.	Woodpecker	Heard tapping on tree	January
Poecile atricapillus	Black-capped chickadee	Sighting	January
Agelaius phoeniceus	Red-winged blackbird	Vocals	June

Scientific Name	Common Name	Notes/Evidence	Date Observed
Melospiza melodia	Song sparrow	Vocals	June
Cardinalis cardinalis	Northern cardinal	Vocals	June
Spinus tristis	American gold-finch	Sighting	June
Turdus migratorius	American robin	Sighting	June
Pseudacris cruifer	Spring peeper	Vocals	June
Anaxyrus americanus	American toad	Vocals	June
Lithobates clamitans	Green frog	Vocals	June
Lithobates pipiens	Leopard frog	Sighting	June
Lithobates septentrionalis	Mink frog	Sighting	June
Danaus plexippus	Monarch	Sighting	August

3.6 Adjacent Land

The adjacent land north of the project location is another residential property. There is cleared land for agricultural use located west of the project location, with a house located several hundreds of meters away.

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Chapter 4 –
Confirmation of Records Review Results

4 Confirmation of Records Review Results

4.1 Key Natural Heritage Features

Natural heritage features are defined as those that contain significant wetlands, significant woodlands, significant valleylands, significant portions of habitat for endangered and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest (ANSIs). All of these features are important for their environmental and social values as a legacy of the natural landscapes of an area (OMNR, 2011).

The following sections confirm the presence or absence of natural features on or within 120 metres of the project location that were identified or unknown in the records review prepared by **exp** (2012).

4.1.1 Provincial Parks & Conservation Reserve

Record Review Results:

The records review concluded that no provincial parks or conservation reserves are located on or within 120 metres of the project location. There is therefore no need to confirm the presence of parks and reserves during a Site Investigation (**exp**, 2012).

4.1.2 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 of 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.

Record Review Results:

NVCA records indicated an unevaluated wetland exists within 120 metres of the project location that is present inside the woodland. A Site Investigation was required to verify this finding (**exp**, 2012).

Site Investigation Results:

The January Site Investigation identified several man-made ponds and flooding in the eastern woodland region on the east side of the residential dwelling. During the August Site Investigation the woodland region was observed to be completely dry. Those species present in the area of the woodland with the exception of a small depression outside the 120 metre buffer zone, contained 50 percent of upland species. A summary of the evaluation of this wetland region is found in Appendix B.