

August 2011



NORTHLAND POWER

**McLean's Mountain
Wind Farm**

Site Investigation Report



Submitted by:



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1. Introduction

Northland Power Inc. (Northland Power) and Mnidoo Mnising Power (MMP) propose to develop a wind facility with a maximum name plate capacity of 60 megawatts (MW) located south of Little Current in the Municipality of Northeastern Manitoulin and the Islands, Ontario (**Figure 1**). The renewable energy facility will be known as the McLean's Mountain Wind Farm and will be rated as a Class 4 wind facility. Northland Power has received a contract from the Ontario Power Authority (OPA) for the purchase of electricity generated by wind turbines from this renewable facility through the Province's Feed-in-Tariff (FIT) program (enabled by the Green Energy and Green Economy Act). The project will require approval under *Ontario Regulation 359/09 – Renewable Energy Approval (REA or Ontario Regulation 359/09)* under Section V.0.1 of the *Ontario Environmental Protection Act*.

Ontario Regulation 359/09 requires that all renewable energy projects conduct a site investigation for all natural heritage features that fall within the project location or the prescribed setback area (*REA* Section 26). This Site Investigation Report was completed in partial fulfilment of the regulatory requirements for the *REA* process. Additional details regarding the significance of natural features, potential impacts and mitigation measures required to protect these features will be provided in separate reports, including the Evaluation of Significance and Environmental Impact Study Reports. These reports will be submitted to the Ministry of Natural Resources (MNR) for review and comment, as required in *Ontario Regulation 359/09* and will provide for the protection of natural features within and adjacent to the project location. Discussion of species at risk, fish habitat and other information needs, as outlined in the MNR's Approval and Permitting Requirements Document for Renewable Energy (MNR 2009), are discussed in a separate report, under direction from the MNR and in compliance with the *REA*.

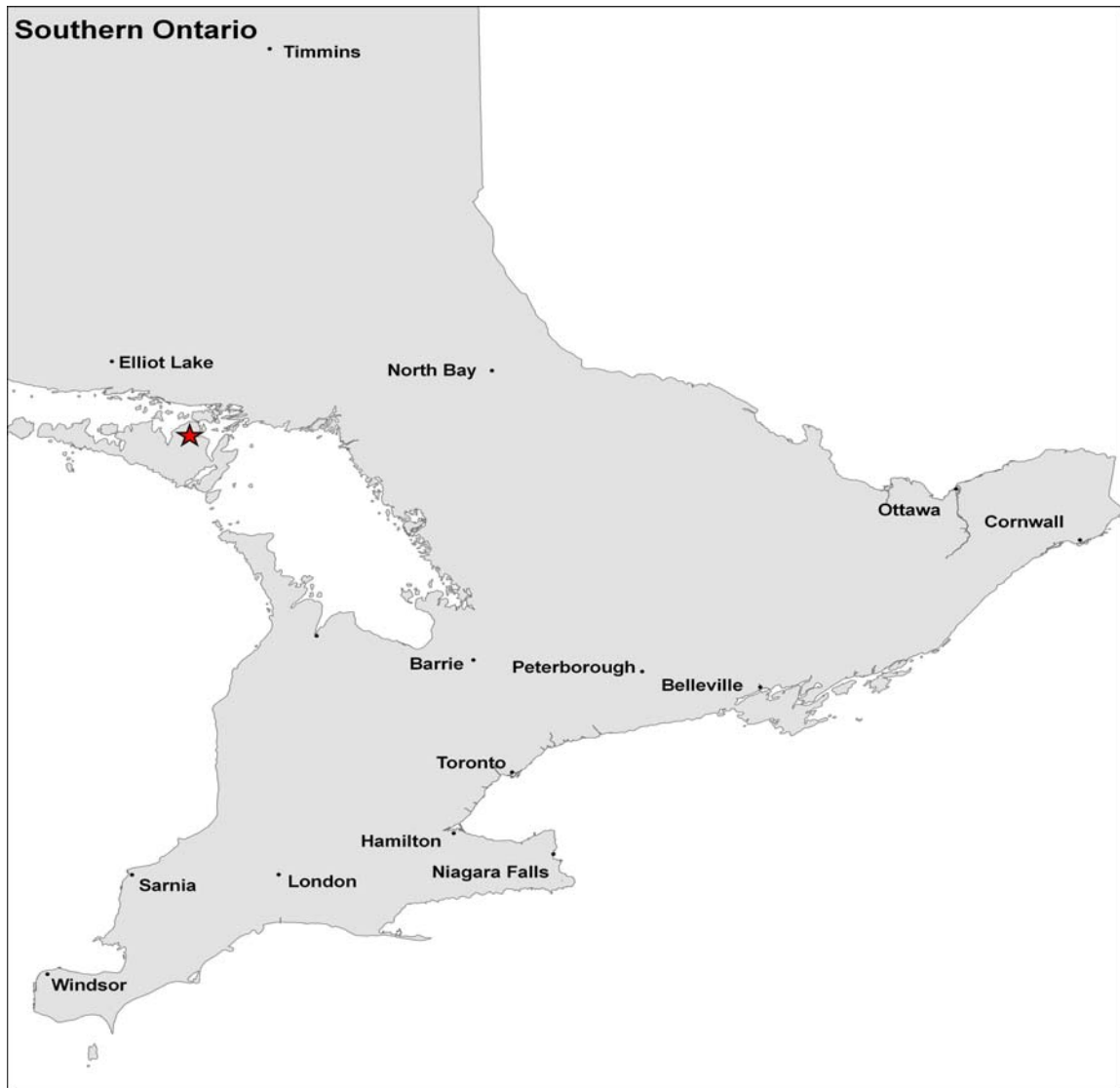


Figure 1: General Location of the McLean's Mountain Wind Farm Project in Ontario

2. The Proponent

Northland Power, founded in 1987, is an experienced developer, owner and operator of renewable power generation in Canada and abroad. Company activities include developing, managing, financing and owning renewable energy facilities. In the course of developing renewable energy projects, Northland Power satisfies various environmental approval requirements and obtains regulatory approvals that vary depending on the jurisdiction, project capacity and site location. In addition, Northland Power builds long-term relationships with the communities that host its' projects. Northland Power is committed to the health and welfare of the community of Little Current and the Town of Northeastern Manitoulin and the Islands.

Contact information for the Proponent is as follows:

Full Name of Company: Northland Power Incorporated
Address: 30 St. Clair Avenue West, 17th Floor
Telephone: (705) 271-5358, (705) 368-0303
Prime Contact: Rick Martin - Project Manager
Email: rickmartin@northlandpower.ca

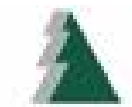
Dillon Consulting Limited is the prime contractor for the preparation of this Site Investigation Report. The contact at Dillon is:

Full Name of Company: Dillon Consulting Limited
Address: 235 Yorkland Blvd, Suite 800
Toronto, Ontario, M2J 4Y8
Telephone: (416) 229-4646 ext 2355
Fax: (416) 229-4692
Prime Contact: Don McKinnon, REA Project Manager
Email: DPMckinnon@dillon.ca

3. Project Location

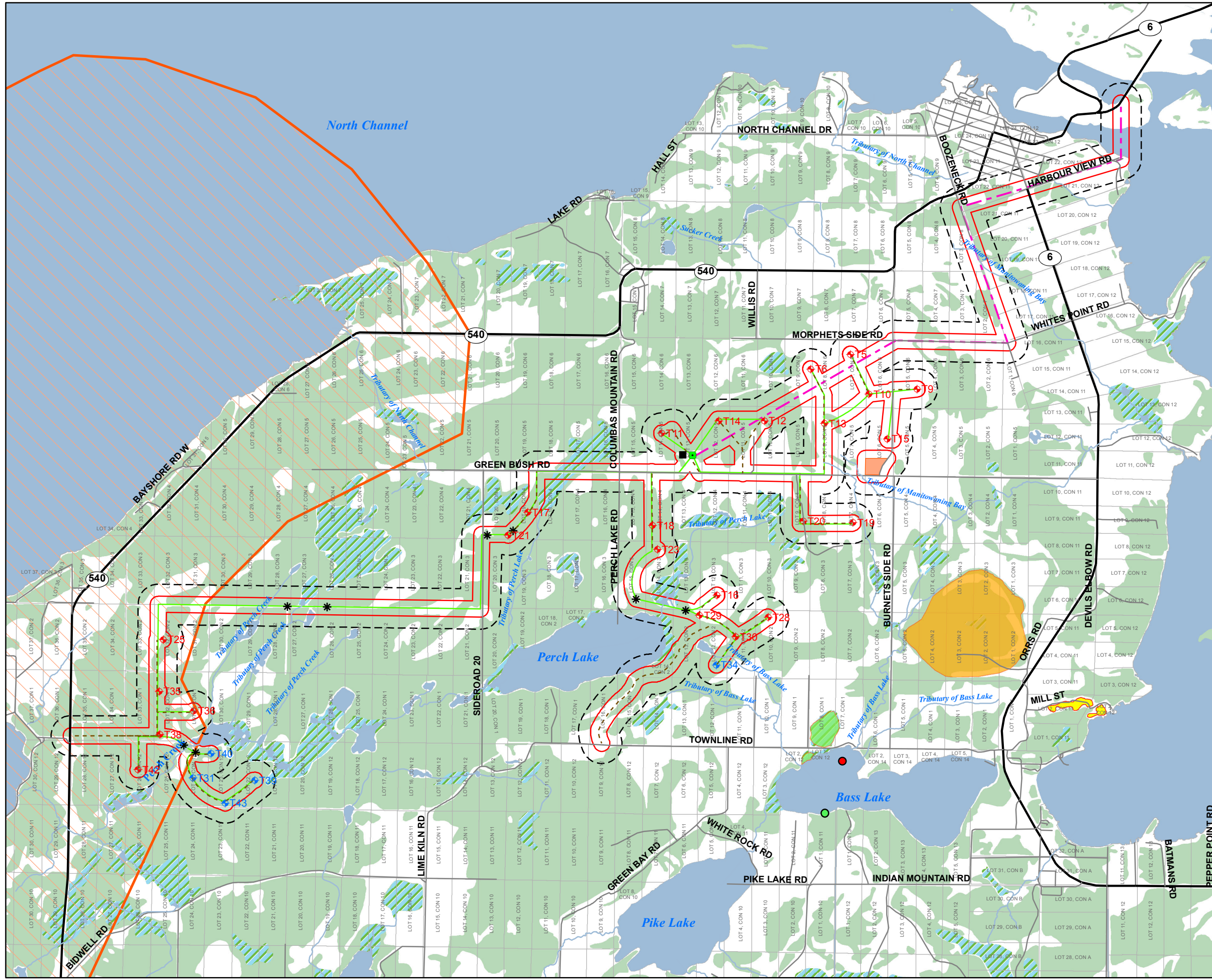
The proposed Class 4 wind facility is located in the Municipality of Northeastern Manitoulin and the Islands in northeastern Ontario, covering approximately 8,200 ha of land south of the Town of Little Current. **Figure 1** shows the general location of the project. **Figure 2** shows the project location as defined in *Ontario Regulation 359/09*, which is the location encompassing all projects components and includes the 120 m setbacks. Project components, including wind turbines and electrical facilities such as transmission line, inverters, transformers, substations and electrical feeder lines, will be located on private land or municipal rights-of-way. **Figure 2** is also a summary of the results of the analysis and determinations made in the records review and features mapped here will be updated based on the results of the site investigation. The planned wind facility will occur primarily within lands currently zoned as rural, with small areas zoned as agricultural and hazard lands (Municipality of Northeastern Manitoulin and the Islands 2002; see **Appendix A1**).

Turbines 31, 34, 39, 40, 43 are being permitted as alternate sites (listed as Five Extra Permitted Sites in the legend of report mapping). While construction of turbines at these sites is not anticipated, it is desirable to have approved alternate sites in the event that any of the other turbines sites proves not to be constructible. It is recognized that no access road is provided for alternate turbine sites in the southwest corner of the project location (Turbine 31, 39, 40 and 43). If turbine construction at one or more of these alternate sites in the southwest portion of the project location is determined necessary, NPI will obtain any additional approvals as required for the access road, prior to construction.



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McLean's Mountain Wind Farm Figure 2: Records Review Mapping



Legend

- Local Roads
 - Highway
 - 120 m Project Component Setback
 - 300 m Project Component Setback
 - Lots/Concessions
 - Water Body
 - Watercourse
 - Woodland
 - Unevaluated Wetland
- Area of Natural and Scientific Interest, Life Science**
- Sheguiandah Hill
 - Sheguiandah Quartzite Quarry
 - Base Lake Marsh/Swamp
- Wildlife Habitat**
- Osprey Nesting Site
 - Sandhill Crane Nesting Site
 - Important Bird Area (ON150)
- Project Components**
- 24 Wind Turbine Locations
 - Five Extra Permitted Sites
 - Substation
 - Operations Building
 - Horizontal Directional Drilling Access/Exit Pit
 - Access Road
 - Feeder Lines
 - Transmission Line
 - Construction Staging Area



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4. Summary of Records Review

As shown on **Figure 2**, a records review was completed according to Section 25 of *Ontario Regulation 359/09*. A summary of the determinations made during the record review is outlined in **Table 1**.

Table 1: Summary of Natural Heritage Assessment Records Review Determinations

Natural Feature ID	Source of Information	Evaluation Status	Distance Relative to Project Location
Provincial Parks and Conservation Reserves			
None identified within 120 m of project location			
ANSI, Life Science			
None identified within 120 m of project location			
ANSI, Earth Science			
None identified within 120 m of project location			
Valleylands			
None identified within 120 m of project location			
Wetlands			
Multiple southern wetlands	MNR Land Information Ontario Data Layer	Unevaluated	Within 120 m of Project Location
Woodlands			
Project location is within the Canadian Shield as shown in Figure 1 of the Provincial Policy Statement (MMAH 2005) and is therefore not applicable.			
Wildlife Habitat			
Seasonal Concentration Areas			
Manitoulin Island North Shore Important Bird Area (ON 150)	BirdLife International, last accessed December 2010	Globally Significant IBA; unevaluated as wildlife habitat	Within Project Location
Rare Vegetation Communities			
None identified within 120 m of project location	Natural Heritage Information Centre (NHIC), last accessed December 2010	Not Applicable to Project Location	
Specialised Wildlife Habitat			
Osprey nesting site	MNR Land Information Ontario Data Layer	Not evaluated	Greater than 120 m from the Project Location
Sandhill Crane nesting site	MNR Land Information Ontario Data Layer	Not evaluated	Greater than 120 m from the Project Location

Natural Feature ID	Source of Information	Evaluation Status	Distance Relative to Project Location
<i>Habitat of Species of Conservation Concern</i>			
Several Species of Conservation Concern have the potential to occur in general area of project location (see Appendix C1, Table C2). No known habitat areas for these species have been identified in or adjacent to the project location,			
<i>Animal Movement Corridors</i>			
No known movement corridors have been identified in or adjacent to the project location.			
<i>Provincial Plan Areas</i>			
The project location does not fall within a provincial plan area.			

5. Site Investigation Purpose

This site investigation report was completed to analyze the accuracy of the determinations made during the records review. It is consistent with Section 26 of *Ontario Regulation 359/09*, which states that a person who proposes to engage in a renewable energy project shall ensure that a physical investigation of the air, land and water within 120 m of the project location is conducted for the purpose of determining:

- Whether the results of the analysis summarized in the report prepared under subsection 25 (3) [Records Review Report] are correct or require correction, and identifying any required corrections;
- Whether any additional natural features exist, other than those that were identified in the report prepared under subsection 25 (3) [Records Review Report];
- The boundaries, located within 120 m of the project location, of any natural feature that was identified in the records review or the site investigation; and
- The distance from the project location to the boundaries [of the natural feature].

Species at risk listed under the federal *Species at Risk Act* and provincial *Endangered Species Act, 2007*, with the potential to interact with the project location and/or adjacent lands, are being considered in consultation with the appropriate agency. Reporting related to the protection of these species at risk is being provided to the appropriate agency under separate cover.

In addition, the MNR is responsible for administering approvals and permits related to certain resources and land uses. The applicability of these resources and land uses within the project location and adjacent areas will be outlined in a separate Approval and Permitting Requirements Document (APRD) being submitted to the MNR for parallel consideration with this Natural Heritage Assessment. This reporting format meets the Natural Heritage requirements, as set out in *Ontario Regulation 359/09*, and is consistent with the direction provided by the MNR.

6. Site Investigation Methodology

Based on the determinations made during the Records Review, all relevant natural features found within 120 m of the project location were the subject of multiple site investigations of the project location. These site investigations were also conducted to identify natural features not identified during the records review. Where possible, site investigations focused on those areas within 120 m of project components and areas of increased sensitivity.

The planning and development of this project has been ongoing since 2004 and an Environmental Assessment under the previous renewable energy process was completed and released for review. Methods used to document existing natural environment conditions in the project location adhered to previous MNR guidance documents and were developed through consultation with the MNR and Environment Canada. This Site Investigation Report documents this previously collected information, as well as some more recent field work, in a format prescribed by the *REA* process.

Table 2 outlines the method and/or procedure followed in order to determine the presence, absence and boundaries of a natural feature in the project location or 120 m setback. An outline of these methods is provided in greater detail in **Sections 6.1 to 6.4**.

Table 2: Overview of Methods Employed During Site Investigation of Natural Features

Feature	Records Review/ Consultation	ELC	OWES	Vegetation Survey	Wildlife Habitat Survey
Provincial Park/ Conservation Reserve	✓				
ANSI, Life Science	✓				
ANSI, Earth Science	✓				
Valleylands	✓	✓			
Wetlands	✓	✓	✓	✓	
Wildlife Habitat	✓	✓	✓	✓	✓

6.1 Ecological Land Classification

During field investigations, vegetation was characterized using the first approximation of Ecological Land Classification System (ELC) for Southern Ontario (Lee et al. 1998) however, ELC codes mapped reflect those of the second approximation. Vegetation community boundaries were initially determined through the review of aerial photography and field observer's knowledge of the site. During subsequent field visits, ELC community mapping was confirmed in the field and in some cases, further refined to reflect conditions observed in the field. Field studies involved identifying the dominant species for vegetation cover types based on visual estimates of species abundances. Where necessary, soil conditions (e.g. moisture regime, depth of soil profile, etc.) were reviewed in the field to confirm ELC classifications. Special attention was paid to the location of alvar communities, wetlands and areas of known wildlife habitat during fieldwork. Areas of anthropogenic uses such as agriculture and urban land uses were also mapped to provide a complete account of existing conditions within the project location.

6.2 Vegetation Surveys

Vegetation surveys consisted of wandering transects through dominant habitat types to determine species diversity, presence, relative abundance and geographic coverage within the project location. Vegetation surveys were conducted in the general project area in October 2008. In August 2009, vegetation surveys were complete in areas more likely to contain habitat for species of conservation concern. In June 2011, surveys were completed in alvar habitats to confirm indicator species. These surveys covered the general range of habitats present, focusing on areas in proximity to infrastructure as planned at the time of surveys.

6.3 Wetland Boundary Delineation

Wetlands found within the project location were surveyed using protocols outlined in the Southern Manual of the Ontario Wetland Evaluation System (MNR 2002) and were carried out by a certified evaluator. Wetland boundaries within 120 m of the project location, or in close proximity to this setback, were delineated using the tracking function of a GPS unit. The wetland boundaries were delineated by following wetland indicator species and were classified according to dominant vegetation form. On June 14, 2011, a field visit to wetlands within 30m

of project infrastructure was conducted with the MNR to confirm wetland boundaries previously delineated. Wetland boundaries within the remainder of the project location and adjacent lands were refined on June 24, 28 and 29, 2011.

6.4 Wildlife Habitat and Wildlife Surveys

The potential presence of wildlife habitat in the project location and adjacent lands, applicable to Ecoregion 6E, was assessed using the criteria outlined in Sections 4 – 7 and Appendix M, N, and Q of the Significant Wildlife Habitat Technical Guide (MNR 2000). Boundaries for wildlife habitat were determined on the basis of ELC mapping as well as other field visits conducted between 2004 and 2011, which covered all seasons. These additional studies were used to further characterize the presence of necessary habitat structure (e.g. permanent open water for green frogs, etc.) as well as habitat of appropriate size and shape (e.g. interior forest) reasonably required for significant wildlife habitat to occur. In some cases, field investigations of adjacent lands extended approximately 1 km from the project location where access to adjacent lands was permitted. Using all of the information collected during site investigations, wildlife habitat was either classified as candidate or not applicable.

6.4.1 Incidental Wildlife Surveys

Incidental observations of wildlife species included birds, herpetozoa, mammal and invertebrate species and were recorded during all phases of fieldwork in the project location as supplemental information to assist in the identification of wildlife habitat.

7. Name and Qualifications of Site Investigators

The names and qualifications of all site investigators are outlined in **Table 3** below. Curriculum vitae's (CVs) for each site investigator has been included in **Appendix B**. Some site investigators listed below have been involved with the McLean's Mountain Wind Farm project since 2004 and have been involved in numerous renewable energy projects within the Province of Ontario, under previous regulator frameworks, as well as *Ontario Regulation 359/09*.

Table 3: Names and Qualifications of Site Investigators

Name	Degrees and Professional Designations	Years of Experience	McLean's Mountain Wind Farm Project Role	Relevant Certifications
David Restivo	<ul style="list-style-type: none"> B.Sc. (Honours) Biology and Psychology Diploma of Engineering Technology and Applied Science – Environmental Protection Technology ECO Canada/CECAB - Certified Environmental Professional 	7	<ul style="list-style-type: none"> Dillon Biologist Bird and Wildlife Surveys Wetlands Surveys Ecological Land Classification 	<ul style="list-style-type: none"> Butternut Health Assessor ISA Certified Arborist OWES Certified ELC certification
Richard Baxter	<ul style="list-style-type: none"> B.Sc. in Resource Management – Fish and Wildlife Major Fish and Wildlife Technologists Diploma 	4	<ul style="list-style-type: none"> Dillon Biologist Bird and Wildlife Surveys Vegetation Surveys Wetlands Surveys Ecological Land Classification 	<ul style="list-style-type: none"> ELC certification
Jennifer Sylvester	<ul style="list-style-type: none"> B.Sc. (Conservation Biology) Ecosystem Restoration Post-Diploma Program Environmental Engineering Technology Diploma Program 	6	<ul style="list-style-type: none"> Dillon Biologist Vegetation Surveys Ecological Land Classification 	<ul style="list-style-type: none"> ELC certification
Ben Gottfried	<ul style="list-style-type: none"> Fish and Wildlife Technologists Diploma 	3	<ul style="list-style-type: none"> Dillon Technician Wildlife Surveys 	---
Ross James	<ul style="list-style-type: none"> PhD Former curator of Ornithology at the Royal Ontario Museum 	45	<ul style="list-style-type: none"> External Avian Biologist Bird Monitoring 	<ul style="list-style-type: none"> Member Society of Canadian Ornithologists Member Bird Studies Canada

8. Site Investigation Dates, Times, Duration and Weather Conditions

As outlined in **Table 4**, numerous site investigations of the project location were undertaken over a period of 7.5 years. The details of each site investigation, in accordance with *REA* Section 26(3), are provided in **Table 4** and should be read concurrently with **Table 3**.

Table 4: Site Investigation Dates, Times, Duration and Weather Conditions

Date	Survey Type	Site Investigator	Time	Duration (hours)	Weather Conditions*
June 2-5, July 11-13, 2004.	Spring and Summer Wildlife Habitat Survey	Ross James	6:00-10:00 & Daylight hours	4	Temp: 15-17 °C Clear skies Wind: 6-17 km/hr
September 19-22, October 21, 23, 2004	Fall Wildlife Habitat Survey	Ross James	Daylight hours	25	Temp: 10-25 °C Sun and cloud Mix Wind: 6-22 km/hr
April 18-21, May 3-6, May 23-26, 2005	Spring Wildlife Habitat Survey	Ross James	Daylight & evening hours	79.5	Temp: 6-25 °C Sun and cloud Mix Wind: 13-32 km/hr Occasional rain and snow
Jan 25-26, February 20-21, March 15-16, 2007	Winter Wildlife Habitat Survey	David Restivo	7:45-18:30	28	Temp: -18--3 °C, Cloud: 10-100%, Wind: B3-4
June 21-22, July 3-6, 2007	Summer Wildlife Habitat Survey	David Restivo	5:30-11:15	31.5	Temp: 12-15 °C, Cloud: 0-100%, Wind: B2-6
April 23, 30, May 8, 16, 2008	Spring Wildlife Habitat Survey	David Restivo, Richard Baxter	6:00-14:00	21	Temp: 0-19 °C, Cloud: 30-50%, Wind: B0-4
June 10-12, July 2-4, 2008	Spring and Summer Wildlife Habitat Survey	Richard Baxter	5:45-16:30	57	Temp: 8-25 °C Cloud: 5-100% Wind: B2-5
September 29-October 1, 2008	Vegetation Survey	Jen Sylvester, Richard Baxter	8:00-19:00	29.5	Temp: 6-11 °C Wind: 15-19 km/hr

Date	Survey Type	Site Investigator	Time	Duration (hours)	Weather Conditions*
					Cloudy with occasional rain
October 13-15, 22-23, 28-30, 2009	Fall Wildlife Habitat Survey	Richard Baxter	8:00-18:30	38.5	Temp 0-1°C, Cloud: 5-100%, Wind: B 0-3
May 3-4, June 2-3, July 7-8, 2010	Spring and Summer Wildlife Habitat Survey	Richard Baxter	5:30-23:00	49.5	Temp: 15-25 °C, Cloud: 0-100 %, Wind: B 0-3
December 2-4, 2010	Wetland Evaluation	David Restivo, Richard Baxter	9:00-17:00	24	Temp: 0 to -5 °C Cloud: 100% Wind: B 0-2
January 7-8, 2011	Wetland Evaluation	Richard Baxter	9:00-17:00	16	Temp: -10 °C Sun and cloud mix, Occasional light snow, Wind: B 1-2
May 4-5 2011	Spring Wildlife Habitat Survey	Richard Baxter	9:20 – 21:10	10.5	Temp: 15 - 16 °C Cloud: 0 – 10% Wind: B 1
May 10, 11, 12, 13, 2011	Stick Nest and Cavity nest assessment	Ben Gottfried	7:00 – 17:00	40	Temp: 10 °C Cloud: Variable Wind: B 2-3
May 30-31, 2011	Spring Wildlife Habitat Survey	Richard Baxter	13:45-22:40	7.5	Temp: 22 - 25 °C Cloud: 10 - 70% Wind: B 1
June 14-15, 2011	Wetland Delineation/ Evaluation	David Restivo	10:00 – 6:00 & 9:00 – 11:00	10	Temp: 22 - 24 °C Cloud: 10 - 40% Wind: B 1 - 2
June 24, 2011	Wetland Evaluation	David Restivo	9:00 – 6:00	9	Temp: 15 - 20 °C Cloud: 100% Wind: B 2 Light Rain
June 28-29 2011	Wetland Evaluation	David Restivo and Richard Baxter	9:00 – 6:00	20	Temp: 16 - 22 °C Cloud: 50 - 90% Wind: B 2 - 4

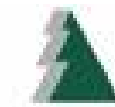
*Environment Canada Weather data for field survey dates has been attached in **Appendix C1**. The nearest Environment Canada weather station to the project is located at Sudbury.

8.1 Access to Adjacent Lands

As outlined in Ontario Regulation 359/09, all lands within 120 m of a project component must be assessed for natural features. For this project, the vast majority of all project components and lands within 120m of them are contained within leased lands (**Figure 3**). In a few places non-participating landowner lands are within 120 m of a project component occurring as a result of feeder lines or the transmission line, or, in approximately 3 cases, a turbine and its access road.

Northland Power is active within the local community and maintains communication with participating landowners and non-participating landowner to the degree possible. Requests were made by Northland Power on several occasions to gain access to adjacent lands over the years. Access to property outside of leased lands was not granted by non-participating landowners and therefore direct observation of natural features within 120 m of a project component was confined to leased land fence line and roadside surveys.

Alternative site investigation methods used to document the attributes, composition and function of natural features on non-participating lands within 120 m of a project component consisted of roadside or fence line observation. In each case, the natural feature on non-participating landowner land is part of a much larger feature which overlaps lease areas and are well documented through the studies reported here in. Site investigations confirmed that adjacent natural features on non-participating lands within 120 m of a project component are consistent with the surrounding landscape matrix reported herein.



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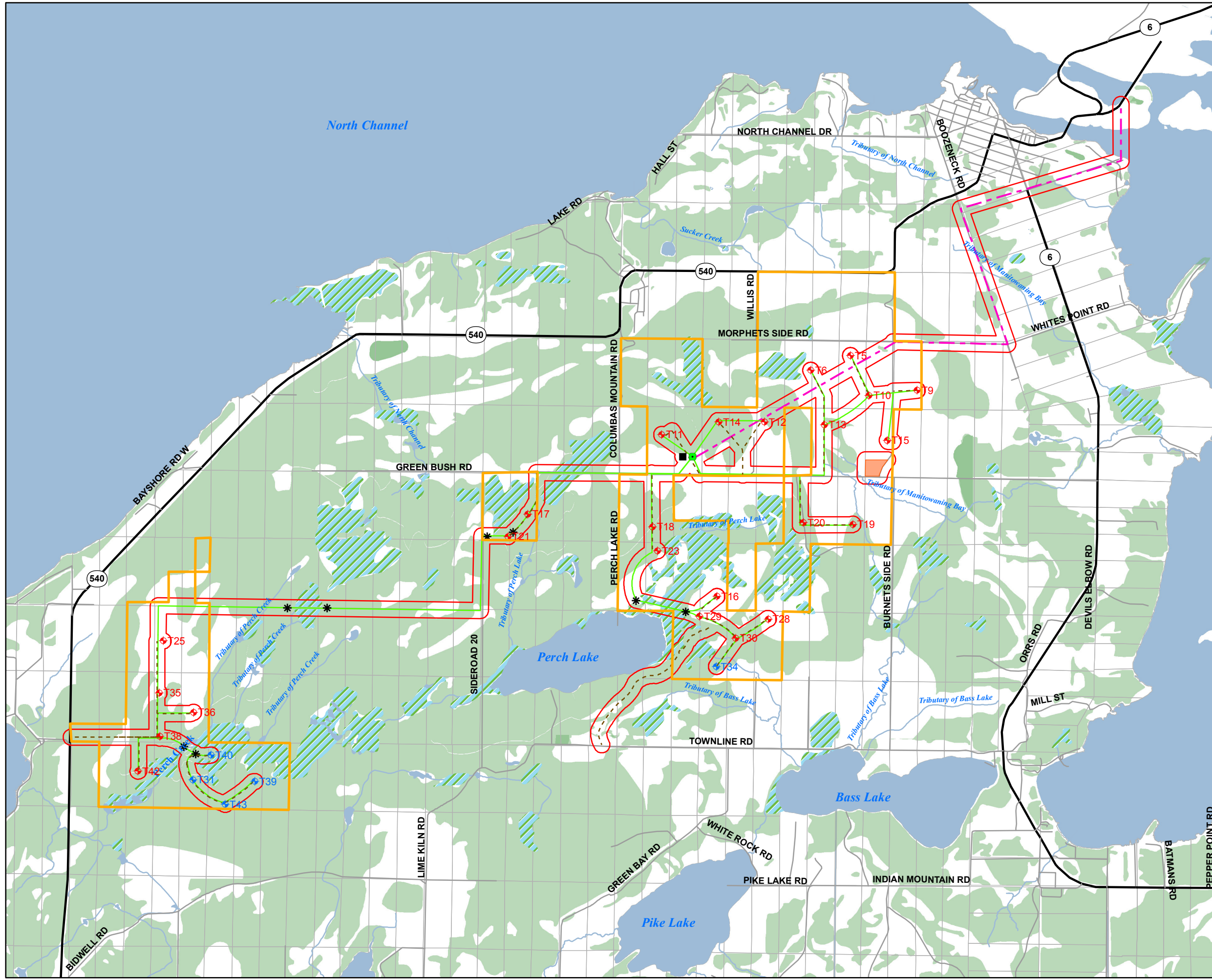
McLean's Mountain Wind Farm Figure 3: Participating Properties

Legend

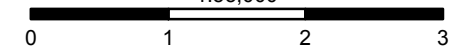
- Local Roads
- Highway
- 120 m Project Location Setback
- Participating Properties
- Lots/Concessions
- Water Body
- Watercourse
- Woodland
- Unevaluated Wetland

Project Components

- 24 Wind Turbine Locations
- Five Extra Permitted Sites
- Substation
- Operations Building
- Horizontal Directional Drilling Access/Exit Pit
- Access Road
- Feeder Lines
- Transmission Line
- Construction Staging Area



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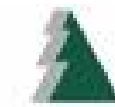
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 Figure 3 Participating Properties.mxd

9. Site Investigation Results

Based on the site investigation, the presence of natural features is documented below. In addition to assessing if the results of the records review were correct or required corrections and/or amendments, information relating to each natural feature within the project location and surrounding 120 m was collected, including the type, attributes, composition and function of the feature.

9.1 Ecological Land Classification

A total of twenty-five natural vegetation communities were observed in the areas within and adjacent to the project location; of these, twenty-one fall within 120 m of the project location. The location, type and boundaries of all vegetation communities are delineated on **Figure 4**. A photographic record of vegetation communities is provided in **Appendix D** and a botanical list is detailed in **Appendix E, Table E1**. Open fields within the project location and surrounding areas are primarily used as pastureland for cattle. Five units of Common Juniper Shrub Alvar were identified within the project location. This rare vegetation community is considered *Vulnerable* in Ontario with an SRank of S3. These communities are located along Sideroad 20 and Greenbush Road in proximity to feeder lines as well as Harbourview Road and on Goat Island in proximity to the transmission line (see **Figure 4**). A more detailed description of each of these Alvar communities is found below in **Table 7**. Soils in the project location were found to be shallow. This is in agreement with Ontario soil mapping for the general study area, which indicates the dominant soil is Farmington Loam. This type of soil consists of shallow loam textured calcareous tills over limestone bedrock and is generally less than 30 cm deep (Canada Department of Agriculture and Ontario Agricultural College 1959). **Table 5** outlines the communities documented during the field surveys that occur within 120 m of the project location.



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McLean's Mountain Wind Farm Figure 4: Ecological Land Classification

- Legend**
- Local Roads
 - Highway
 - Watercourse
 - 120m Project Component Setback
 - Lots/Concessions
 - Water Body
 - Woodland

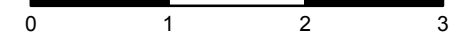
Ecological Land Classification (Based on Community Code)

- 1) BO: Bog
- 2) CVC_2: Light Industrial
- 3) CVL_3: Sewage and Water Treatment
- 4) CVR_1: Low Density Residential
- 5) FOD: Deciduous forest
- 6) FODM1: Dry-Fresh Oak Deciduous Forest
- 7) FODM5-1: Dry-Fresh Sugar Maple Deciduous Forest
- 8) FODM8-1: Fresh-Moist Poplar Deciduous Forest
- 9) FOMM10: Fresh-Moist Spruce Fir – Hardwood Mixed Forest
- 10) FOMM4: Dry-Fresh White Cedar Mixed Forest
- 11) MAMM1: Graminoid Mineral Meadow Marsh
- 12) MAMM3: Mixed Mineral Meadow Marsh
- 13) MASM1: Graminoid Mineral Shallow Marsh
- 14) MASM1-1: Cattail Mineral Shallow Marsh
- 15) MASM1-14: Reed Canary Grass Mineral Shallow Marsh
- 16) ME: Meadow
- 17) OAGM4: Open Pasture
- 18) OAO: Open Water
- 19) RBSA1-1: Common Juniper Shrub Alvar
- 20) SWCM1-2: White Cedar-Conifer Coniferous Swamp
- 21) SWDM2: Ash Mineral Deciduous Swamp
- 22) SWDM2-1: Black Ash Deciduous Swamp
- 23) SWDM2-2: Green Ash Deciduous Swamp
- 24) SWDM3: Maple Mineral Deciduous Swamp
- 25) SWDM4-5: Poplar Deciduous Swamp
- 26) SWMM1-1: White Cedar-Hardwood Mixed Swamp
- 27) SWMM3-2: Poplar-Conifer Mixed Swamp
- 28) SWMM4: Ash Mixed Swamp
- 29) SWTM2-5: Red-Osier Dogwood Mineral Deciduous Swamp
- 30) SWTM3: Willow Mineral Deciduous Thicket Swamp
- 31) TAGM4: Treed Pasture
- 32) WODM5-1: Fresh-Moist Poplar Deciduous Woodland

- Project Components**
- ◆ 24 Wind Turbine Locations
 - ◆ Five Extra Permitted Sites
 - Substation
 - Operations Building
 - ✱ Horizontal Directional Drilling Access/Exit Pit
 - Transmission Line
 - Access Road
 - Feeder Lines
 - Construction Staging Area



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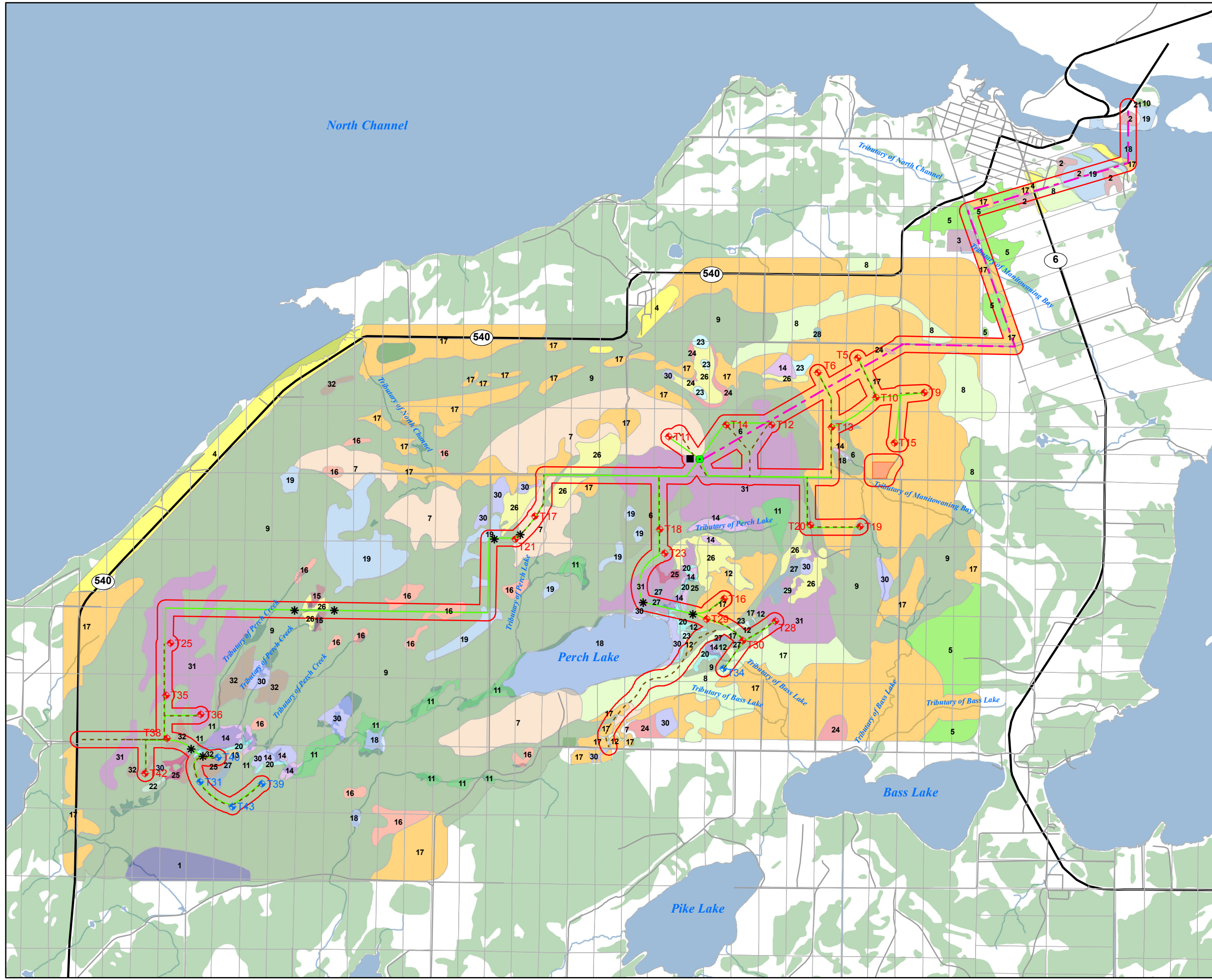


Table 5: Description of ELC Communities Documented in McLean's Mountain Wind Farm within 120 m of the Project Location

Second Approximation	First Approximation	Classification	Vegetation	Comments
RBSA1-1	ALS1-1	Common Juniper Shrub Alvar	This open vegetation community contains common juniper (<i>Juniperus communis</i>) shrubs with poverty oat grass (<i>Danthonia spicata</i>), field hawkweed (<i>Hieracium pratensis</i>), prairie smoke (<i>Geum triflorum</i>) thimble weed (<i>Anemone virginiana</i> var. <i>virginiana</i>) and Indian paintbrush (<i>Castilleja coccinea</i>) also present. Creeping juniper (<i>Juniperus horizontalis</i>) is observed on occasion in this community.	This community occurs in five patches within 120 m of the project location. Alvar patches fall within 120 m of feeder line and the transmission line. See Photo 1 in Appendix D .
ME	CUM-1	Meadow	Various open meadow communities occur throughout the project location. Most accessible open communities in the study area are currently used as pasture. Several open habitats that were inaccessible or far removed from project components have been classed broadly as meadow.	This community occurs in small patches mainly occurring in forest and woodland openings falling within 120 m of feeder line in some locations.
WODM5-1	CUW 1-2	Fresh-Moist Poplar Deciduous Woodland	This open woodland community is dominated by trembling aspen (<i>Populus tremuloides</i>). Other tree species present include ironwood (<i>Ostrya virginiana</i>) and white birch (<i>Betula papyrifera</i>). Shrubs present include leatherwood (<i>Dirca palustris</i>) and beaked hazel (<i>Corylus cornuta</i>). Herbaceous species present include eastern bracken fern (<i>Pteridium aquilinum</i> var. <i>latiusculum</i>), black snakeroot (<i>Sanicula marilandica</i>) helleborine (<i>Epipactis helleborine</i>) and large-leaved aster (<i>Aster macrophyllus</i>).	This community occurs in small patches within a larger area of mixed forest mainly in the western areas of the project location.
FODM	FOD	Deciduous Forest	Forest community dominated by deciduous species with trembling aspen and sugar maple being most common.	Deciduous forest communities occur in the east end of the project location falling within 120 m of the transmission line.
FODM1	FOD1	Dry-Fresh Oak Deciduous Forest	This deciduous forest community is dominated by bur oak (<i>Quercus macrocarpa</i>). Other species include ironwood, fragrant sumac (<i>Rhus aromatica</i>), wild columbine (<i>Aquilegia canadensis</i>) and thimble weed.	This community occurs in the eastern end of the project location around Greenbush Road with turbines, feeder lines and access roads falling within 120 m.
FODM5-1	FOD 5-1	Dry-Fresh Sugar Maple Deciduous Forest	This deciduous forest community is dominated by sugar maple (<i>Acer saccharum</i> ssp. <i>saccharum</i>) with ironwood in the understory. Leatherwood is present in the shrub layer. Herbaceous species present include heal-all (<i>Prunella vulgaris</i> ssp. <i>lanceolata</i>), round-lobed hepatica (<i>Anemone acutiloba</i>) and Pennsylvania sedge (<i>Carex pensylvanica</i>)	This community occurs in several large patches throughout the larger study area with turbines, feeder lines and access roads falling within 120 m. See Photo 2 in Appendix D .
FODM8-1	FOD 8-1	Fresh-Moist Poplar Deciduous Forest	This upland deciduous forest community is dominated by trembling aspen.	Patches of this community occur in the east end of the project location with the transmission line falling within 120 m.
FOMM10	FOM	Fresh-Moist Spruce/Fir-Hardwood Mixed Forest	This mixed forest community contains balsam fir (<i>Abies balsamea</i>), white spruce (<i>Picea glauca</i>) along with eastern white cedar (<i>Thuja occidentalis</i>), white birch (<i>Betula papyrifera</i>) and trembling aspen. Shrubby species present include rose species (<i>Rosa</i> sp.) and leather wood. Herbaceous species present include wild sarsaparilla (<i>Aralia nudicaulis</i>), Menzie's rattlesnake plantain (<i>Goodyera oblongifolia</i>) and bottlebrush grass (<i>Elymus hystrix</i>).	This is the largest vegetation community in the larger study area with turbines, feeder lines and access roads falling within 120 m. See Photo 3 in Appendix D .

Second Approximation	First Approximation	Classification	Vegetation	Comments
SWTM3	SWT2-2	Willow Mineral Deciduous Swamp Thicket	This swamp thicket community is dominated by willow species (<i>Salix sp.</i>), including pussy willow (<i>Salix discolor</i>) and also contain red-osier dogwood (<i>Cornus stolonifera</i>). Herbaceous species present include rush species (<i>Juncus sp.</i>) wild strawberry (<i>Fragaria virginiana ssp. virginiana</i>) and water horehound (<i>Lycopus sp.</i>)	Small patches of this community occur in wetlands dispersed throughout the larger study area with access roads and feeder lines falling within 120 m. See Photo 4 in Appendix D.
SWDM3	SWD3	Maple Mineral Deciduous Swamp	Deciduous swamp community dominated by swamp maple species, i.e. red maple (<i>Acer rubrum</i>), Freeman's maple (<i>Acer x freemanii</i>). Herbaceous species present include sweet coltsfoot and dwarf raspberry.	This community occurs in small patches in the north section of the project location with feeder line and transmission line falling within 120 m.
SWDM2-2	SWD2-2	Green Ash Deciduous Swamp	This community contains green ash (<i>Fraxinus pennsylvanica</i>) with ground layer vegetation including bulrushes (<i>Scirpus sp.</i>), sedges (<i>Carex sp.</i>) and grass species.	Small patches of this community occur in the northern portion of the project location with an access road falling within 120 m. See Photo 5 in Appendix D.
SWDM4-5	SWD4-5	Poplar Deciduous Swamp	This community contains trembling aspen and largetooth aspen (<i>Populus grandidentata</i>) and has willow species and red-osier dogwood in the understory.	This community occurs in the central project location with access road and feeder line falling within 120 m.
SWMM1-1	SWM1-1	White-Cedar Hardwood Mixed Swamp	This community contains eastern white cedar, balsam fir, tamarack (<i>Larix laricina</i>), trembling aspen and white birch. Ground layer species present include sweet coltsfoot, field horsetail (<i>Equisetum arvense</i>), large-leaf aster and rattlesnake fern (<i>Botrychium virginianum</i>).	This community occurs in the central and western portions of the project location with turbines, access roads and feeder lines falling within 120 m. See Photo 6 in Appendix D.
SWMM3-2	SWM3-2	Poplar-Conifer Mixed Swamp	This community contains trembling aspen, black ash (<i>Fraxinus nigra</i>), green ash (<i>Fraxinus pennsylvanica</i>), eastern white cedar, white spruce and balsam fir. Shrubby species present include beaked hazel and red-osier dogwood. Ground layer species include flat-topped white aster (<i>Aster umbellatus var. umbellatus</i>) twin flower and wild sarsaparilla.	This community occurs in the central project location with access road and feeder line falling within 120 m. See Photo 7 in Appendix D.
SWCM1-2	SWC1-2	White Cedar –Conifer Coniferous Swamp	This community contains eastern white cedar with white spruce and balsam fir also present. Shrubs include pussy willow (<i>Salix discolor</i>) and speckled alder (<i>Alnus incana ssp. rugosa</i>). Herbaceous species present include sweet coltsfoot (<i>Petasites frigidus</i>), dwarf raspberry (<i>Rubus pubescens</i>) and bunch berry (<i>Cornus stolonifera</i>).	Patches of this community occur in the central portion of the project location with feeder lines and access roads falling within 120 m. See Photo 8 in Appendix D.
SWMM4	SWM	Ash Mixed Swamp	This community contains green ash and eastern white cedar as the major canopy species.	This community occurs in the north of the project location with access road and feeder line falling within 120 m.
MASM1-1	MAS2-1	Cattail Mineral Shallow Marsh	This marsh community contains broad leaved cattail (<i>Typha latifolia</i>) and dead coniferous species. Other plants present include bulrush species (<i>Scirpus sp.</i>)	This community occurs in the central project location with access road and feeder line falling within 120 m. See Photo 9 in Appendix D.

Second Approximation	First Approximation	Classification	Vegetation	Comments
MAMM3	MAM	Mixed Mineral Meadow Marsh	This community contains poverty oat grass, ribgrass (<i>Plantago lanceolata</i>), fox sedge (<i>Carex vulpinoidea</i>), meadow sedge (<i>Carex granularis</i>), Canada bluejoint (<i>Calamagrostis canadensis</i>), and black bulrush species (<i>Scirpus atrovirens</i>). Herbaceous species include spotted joe-pyeweed (<i>Eupatorium maculatum</i>), spearmint (<i>Mentha spicata</i>), boneset (<i>Eupatorium perfoliatum</i>) and spotted jewelweed (<i>Impatiens capensis</i>).	This community occurs in several areas of the project location with access roads, feeder lines and turbines falling within 120 m.
MASM1	MAS2	Graminoid Mineral Shallow Marsh	This community contains various sedge (<i>Carex sp.</i>) and grass species, cattail, spotted joe-pye-weed (<i>Eupatorium maculatum ssp. maculatum</i>) with occasional shrub species including red-osier dogwood (<i>Cornus stolonifera</i>), meadowsweet (<i>Spirea sp.</i>), and speckled alder (<i>Alnus incana ssp. rugosa</i>).	This community occurs in the western portion of the project location with a turbine falling within 120 m.
MASM1-14	MAS2	Reed Canary Grass Mineral Shallow Marsh	This community contains reed canary grass (<i>Phalaris arundinacea</i>) with dead coniferous species.	This community occurs in the western portion of the project location with a feeder line falling within 120 m and the eastern portion of the project location with a transmission line falling within 120 m.
OAGM4	OAG	Open Pasture	Open active pasture land.	This is the major land use in the eastern end of the project location with large areas in the vicinity of the Green Bush Road and McLean's Mountain Road junction and in the southern area of the project location north of Townline Road. See Photo 10 in Appendix D .
TAGM4	TAG	Tree Pasture	Treed active pasture land with generally widely spaced tree species including bur oak and sugar maple.	Areas of treed pasture occur in the western end of the project location, along Green Bush Road and in the south east end of the project location. See Photo 11 in Appendix D .
OA0	OA0	Open Aquatic	Open water aquatic habitats.	Several small areas of open aquatic habitat area found throughout the larger study area. In addition Perch Lake is present, in the southern portion of the project location. See Photo 12 in Appendix D .

9.2 Vegetation Survey

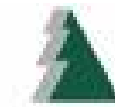
In total, 246 flora species were identified during the site investigation (a full list of species encountered is included in **Appendix E, Table E1**). In general, active pastureland and old field contain lower biodiversity with fewer high conservation coefficient species based on fieldwork. Species of Conservation Concern are further discussed in **Table 7** and **Section 9.6.1**.

9.3 Valleylands

A search and analysis of the records and resources outlined in the records review did not identify any valleylands in the project location or within the surrounding 120 m. The results of the site investigation verified this determination.

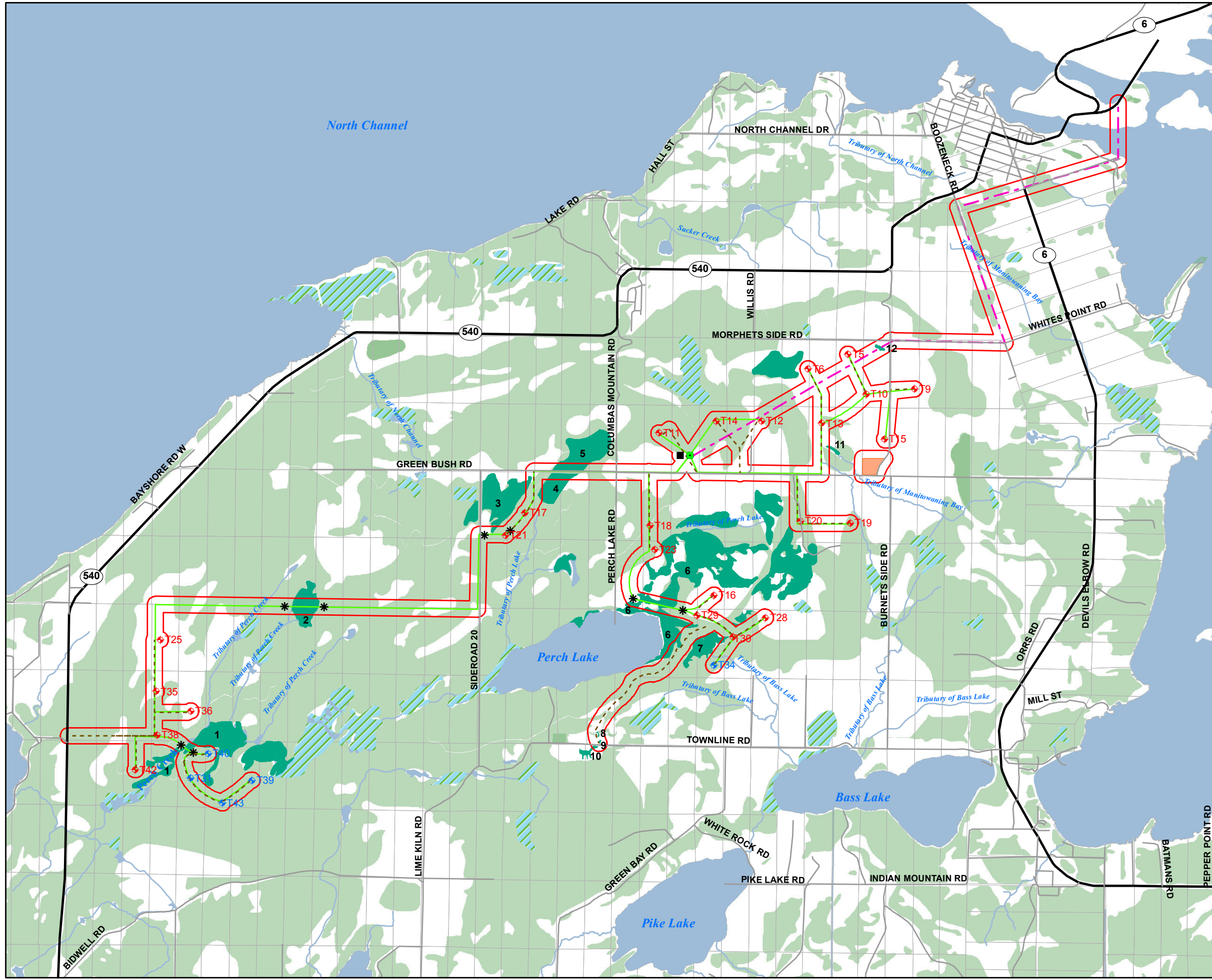
9.4 Wetlands

Several units of unevaluated southern wetlands were identified during the records review within 120 m of the project location. In addition, several more wetlands were identified through fieldwork conducted in late 2010 and 2011. In total, 12 wetland units have been identified within 120 m of the project location. The boundaries of these 12 wetlands were delineated using the OWES protocol during the site investigation work and shown on **Figure 5**. **Table 6** outlines the attributes, composition and function of each wetland unit identified during the site investigation found to be within 120 m of the project location and confirms if the wetland was included in the records review or was identified as a result of these site investigations (**Figure 5**). **Table 6** also outlines the project components that fall within 120 m of each wetland boundary.



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McLean's Mountain Wind Farm Figure 5: Wetland Identification



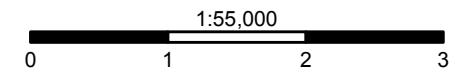
Legend

- Local Roads
- Highway
- 120 m Project Location Setback
- Lots/Concessions
- Water Body
- Watercourse
- 1 Delineated Unevaluated Wetlands
- Woodland*
- Unevaluated Wetland Outside of the 120m Project Component Setback*

Project Components

- 24 Wind Turbine Locations
- Five Extra Permitted Sites
- Substation
- Operations Building
- Horizontal Directional Drilling Access/Exit Pit
- Transmission Line
- Access Road
- Feeder Lines
- Construction Staging Area

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 Figure 10 Wetland and Woodland Identification 070611.mxd

Table 6: Summary of Wetlands Within 120m of the Project Location

Wetland ID	Wetland Identified during Records Review?	Attributes		Composition		Function		Project Components within 120 m
		Size (hectares)	Distance to nearest wetland unit	Relevant Species	ELC Communities	Associated Candidate Wildlife Habitat*	Hydrologic Connection	
1	✓	49	15 m from an unevaluated wetland	<i>Typha latifolia</i> , <i>Salix</i> spp., <i>Thuja occidentalis</i> , <i>Spirea</i> spp., <i>Phalaris arundinacea</i> , Sedge spp., <i>Picea glauca</i> , <i>Abies balsamea</i> , <i>Populus tremuloides</i> , <i>Populus grandidentata</i> , <i>Cornus stolonifera</i> , <i>Alnus incana</i> , Grass spp.	Willow Mineral Deciduous Thicket Swamp, Poplar Deciduous Swamp, Cattail Mineral Shallow Marsh, White Cedar-Conifer Coniferous Swamp, Poplar-Conifer Mixed Swamp, Willow Mineral Deciduous Thicket Swamp	Woodland Amphibian Breeding Habitat, Waterfowl Nesting Area, Turtle Overwintering Area and Bullfrog Concentration Area.	Perch Creek, downstream of Perch Lake, also receives water from Perch Creek tributaries	Access Road, Feeder Lines, Turbines
2	☒	17.7	122 m from an unevaluated wetland	<i>Thuja occidentalis</i> , <i>Abies balsamea</i> , <i>Picea glauca</i> , <i>Populus balsamifera</i> , <i>Fraxinus nigra</i> , <i>Phalaris arundinacea</i> ,	Reed Canary Grass Mineral Shallow Marsh, White Cedar-Hardwood Mixed Swamp	Woodland Amphibian Breeding Habitat, Turtle Overwintering Area and Bullfrog Concentration Area.	Head waters of tributary to Perch Creek	Feeder Line
3	☒	31.6	5 m from an unevaluated wetland	<i>Thuja occidentalis</i> , <i>Abies balsamea</i> , <i>Larix laricina</i> , <i>Populus tremuloides</i> , <i>Betula papyrifera</i> , <i>Salix</i> spp., <i>Fraxinus nigra</i>	White Cedar-Hardwood Mixed Swamp, Willow Mineral Deciduous Thicket Swamp	Woodland Amphibian Breeding Habitat, Turtle Overwintering Area, Bullfrog Concentration Area., Sites Supporting Area-sensitive Species: Forest Birds and Reptile Hibernacula.	May contribute to a tributary of Perch Lake	Access Road, Feeder Lines, Turbines
4	☒	13.9	6 m from unit 5	<i>Thuja occidentalis</i> , <i>Picea glauca</i> , <i>Populus balsamifera</i> , <i>Fraxinus nigra</i> , <i>Alnus incana</i> , <i>Cornus stolonifera</i>	White Cedar-Hardwood Mixed Swamp	Woodland Amphibian Breeding Habitat.	Head waters of tributary to Perch Lake	Access Road, Feeder Line
5	☒	29.3	6 m from unit 4	<i>Thuja occidentalis</i> , <i>Picea glauca</i> , <i>Populus balsamifera</i> , <i>Fraxinus nigra</i> , <i>Alnus incana</i> , <i>Cornus stolonifera</i>	White Cedar-Hardwood Mixed Swamp	Woodland Amphibian Breeding Habitat, Turtle Overwintering Area, Bullfrog Concentration Area and	Head waters of tributary to Perch Lake	Access Road, Feeder Line
6	☒	106.6	28 m from an unevaluated wetland	<i>Salix</i> spp., <i>Myrica gale</i> , <i>Cornus stolonifera</i> , <i>Igeum avens</i> , <i>Thuja occidentalis</i> , <i>Picea glauca</i> , <i>Abies balsamea</i> , <i>Fraxinus pennsylvanica</i> , <i>Populus tremuloides</i> , <i>Populus grandidentata</i> , <i>Larix laricina</i> , <i>Carex vulpinoidea</i> ., <i>Scirpus atrovirens</i> , <i>Typha latifolia</i> , <i>Phalaris arundinacea</i>	Willow Mineral Deciduous Thicket Swamp, White Cedar-Conifer Coniferous Swamp, Green Ash Deciduous Swamp, Cattail Mineral Shallow Marsh, Poplar Deciduous Swamp, White Cedar-Hardwood Mixed Swamp	Woodland Amphibian Breeding Habitat, Turtle Overwintering Area, Bullfrog Concentration Area and Waterfowl Nesting Area,	Palustrine wetland connected to Perch Lake	Feeder Line, Turbine, Access Road

Wetland ID	Wetland Identified during Records Review?	Attributes		Composition		Function		Project Components within 120 m
		Size (hectares)	Distance to nearest wetland unit	Relevant Species	ELC Communities	Associated Candidate Wildlife Habitat*	Hydrologic Connection	
7	✓	20.6	158 m from unit 5	<i>Thuja occidentalis, Picea glauca, Abies balsamea, Populus tremuloides, Typha latifolia, Carex bebbiana, C. granularis, Scirpus atrovirens, Calamagrostis canadensis; Hieracium caespitosum,</i>	Cattail Mineral Shallow Marsh, White Cedar-Conifer Coniferous Swamp, Mixed Mineral Meadow Marsh, Poplar-Conifer Mixed Swamp	None	Palustrine wetland connected to Bass Lake	Access Road, Feeder Lines, Turbines
8	☒	0.1	11 m from unit 7	<i>Carex utriculata, Carex vulpinoidea; Mentha spicata</i>	Mixed Mineral Meadow Marsh	Raptor Winter Feeding and Roosting Area	Head waters of tributary to Bass Lake	Access Road,
9	☒	0.3	11 m from unit 8	<i>Ceratophyllum spp.; Scirpus atrovirens, Carex vulpinoidea; Typha latifolia, Scirpus validus</i>	Mixed Mineral Meadow Marsh, Open water	Raptor Winter Feeding and Roosting Area	Head waters of tributary to Bass Lake	Access Road,
10	☒	2.0	39 m from unit 8	<i>Salix spp., Cornus stolonifera;</i>	Willow Mineral Deciduous Thicket Swamp	None	Head waters of tributary to Bass Lake	Access Road,
11	☒	1.0	1,049 m from an unevaluated wetland	<i>Typha latifolia; Scirpus atrovirens, Carex comosa, C. vulpinoidea, Phalaris arundinacea</i>	Cattail Mineral Shallow Marsh	Raptor Winter Feeding and Roosting Area	Head waters of tributary to Manitowaning Bay	Access Road, Feeder Line
12	☒	0.6	1,049 m from an unevaluated wetland	<i>Acer freemanii, Fraxinus pennsylvanica; Typha latifolia; Phalaris arundinacea</i>	Maple Mineral Deciduous Swamp	Woodland Amphibian Breeding Habitat, Raptor Winter Feeding and Roosting Area and Sites Supporting Area-Sensitive Species: Open Country Breeding Birds	Isolated wetland with no known connectivity	Transmission Line

*see Table 7 in Section 9.6 for more information

9.5 Woodlands

The project location is within the Canadian Shield as shown on Figure 1 of the Provincial Policy Statement (MMAH 2005). Therefore, woodland areas of this project do not meet the definition of woodland in section 1 of Ontario Regulation 359/09 and do not require further evaluation.

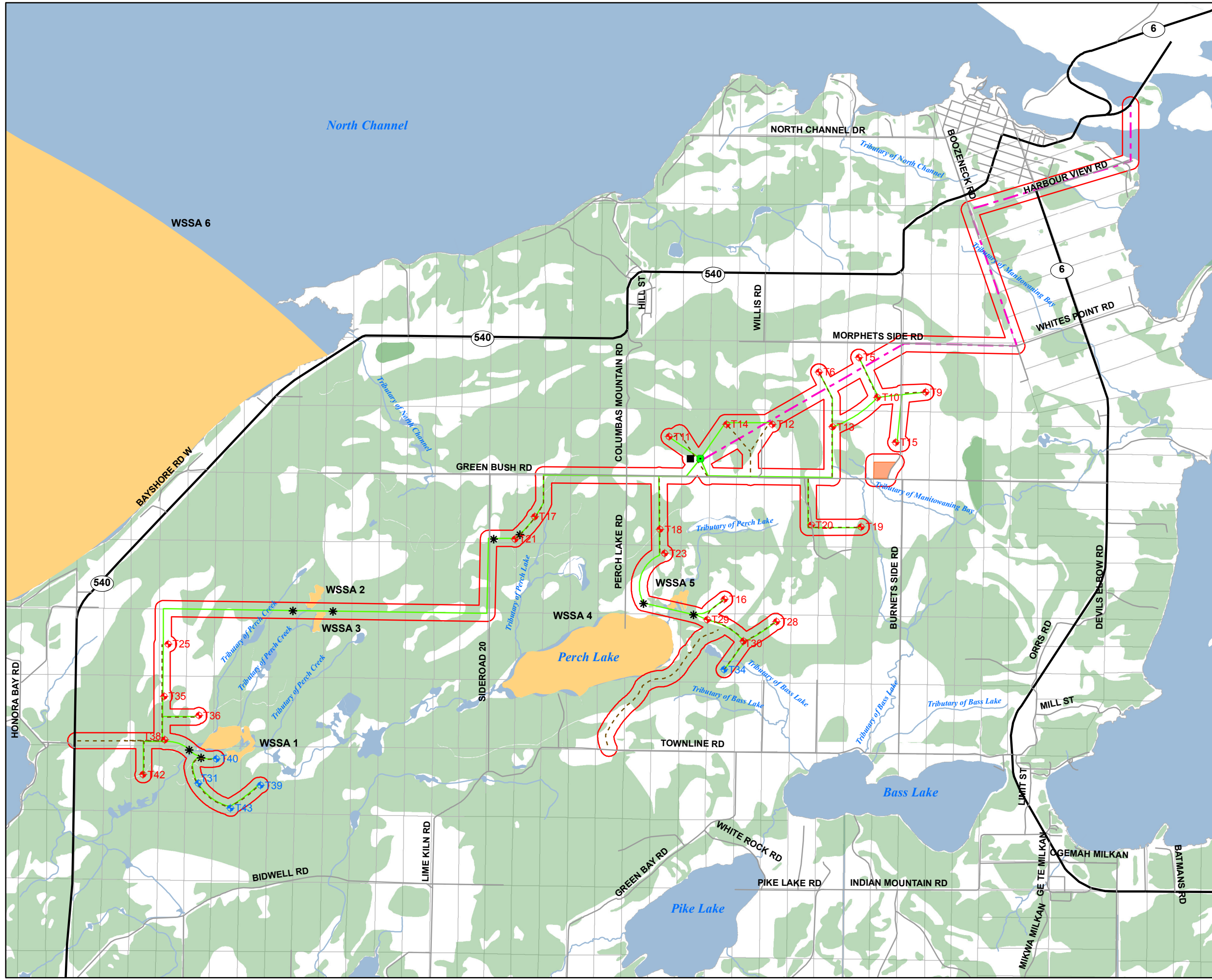
9.6 Wildlife and Wildlife Habitat

An overall review of known wildlife habitat that has been identified in the area of the project location was completed in the Records Review Report. The records review information has been augmented by the results of the site investigation work. The information collected during the site investigation was assessed in consideration of the criteria outlined in Sections 4 – 7 and Appendix M, N, and Q of the Significant Wildlife Habitat Technical Guide (MNR 2000) for wildlife habitat applicable to Ecoregion 6E. Based on this information, candidate wildlife habitats in the area surrounding the project location were determined. **Table 7** outlines wildlife habitat applicable to Ecoregion 6E and summarizes if it is applicable to the project location and adjacent area(s). The boundaries and location of each candidate wildlife habitat is described in **Table 7** and where necessary mapped on **Figures 4** (ELC), **Figure 5** (Wetlands) and **Figures 6-14** (Wildlife Habitat).



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McLean's Mountain Wind Farm Figure 6: Waterfowl Stopover and Staging Areas - Aquatic



Legend

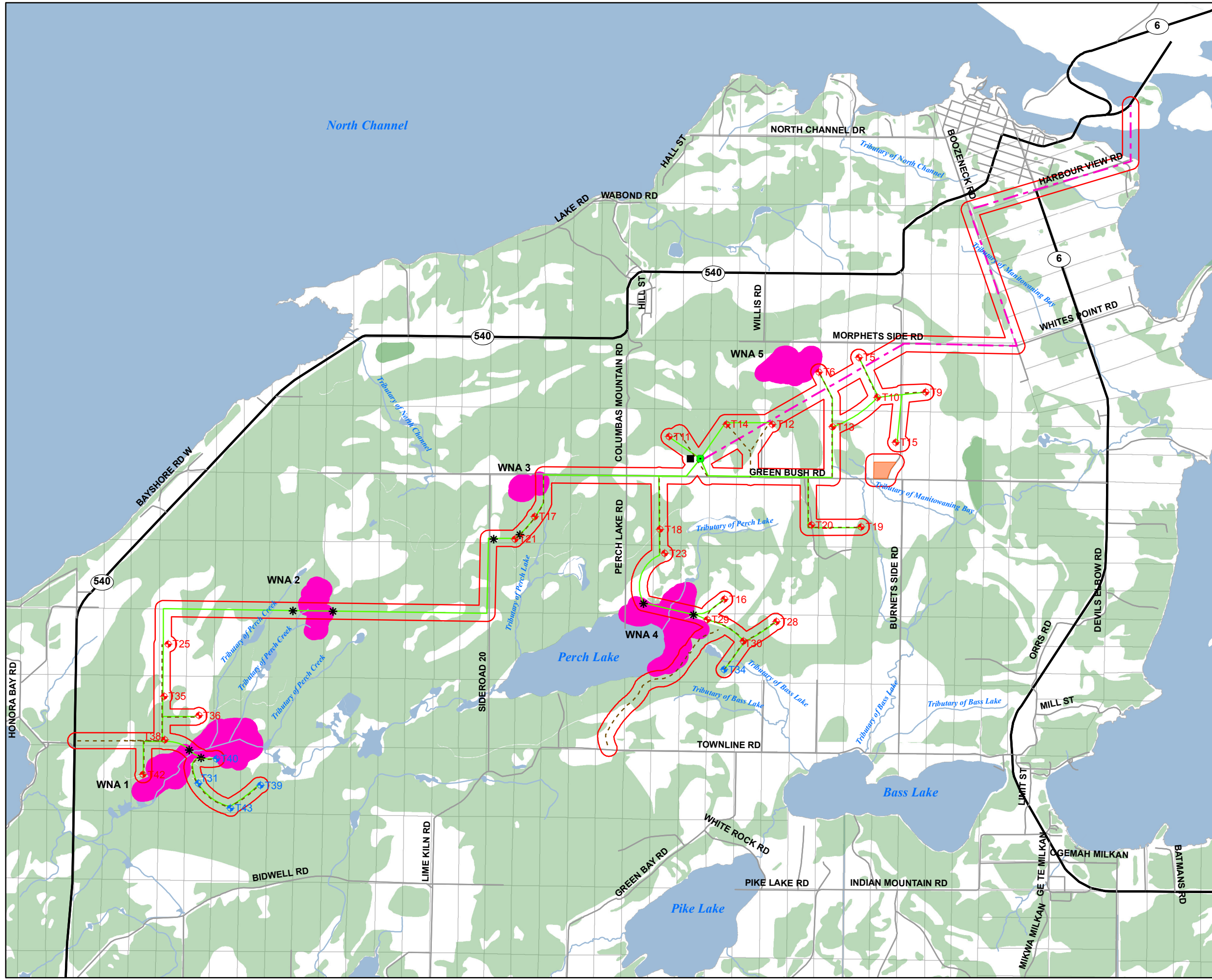
- Local Roads
 - Highway
 - Watercourse
 - 120 m Project Location Setback
 - Lots/Concessions
 - Water Body
 - Unclassified Woodland Community
 - Waterfowl Stopover and Staging Areas - Aquatic (Including: MASM1, MASM1-1, MASM1-14, SWDM3)
- #### Project Components
- ◆ 24 Wind Turbine Locations
 - ◆ Five Extra Permitted Sites
 - Substation
 - Operations Building
 - * Horizontal Directional Drilling Access/Exit Pit
 - Transmission Line
 - - - Access Road
 - Feeder Lines
 - Construction Staging Area



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**McLean's Mountain Wind Farm
Figure 7: Waterfowl Nesting Area**



Legend

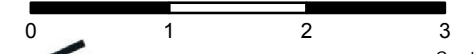
- Local Roads
- Highway
- Watercourse
- 120 m Project Location Setback
- Lots/Concessions
- Water Body
- Unclassified Woodland Community
- Waterfowl Nesting Areas (Including: MAMM1, MAMM3, MASM1, MASM1-1, MASM1-14, ME, SWDM2, SWDM2-1, SWDM2-2, SWDM3, SWDM4-5, SWTM2-5, SWTM3)

Project Components

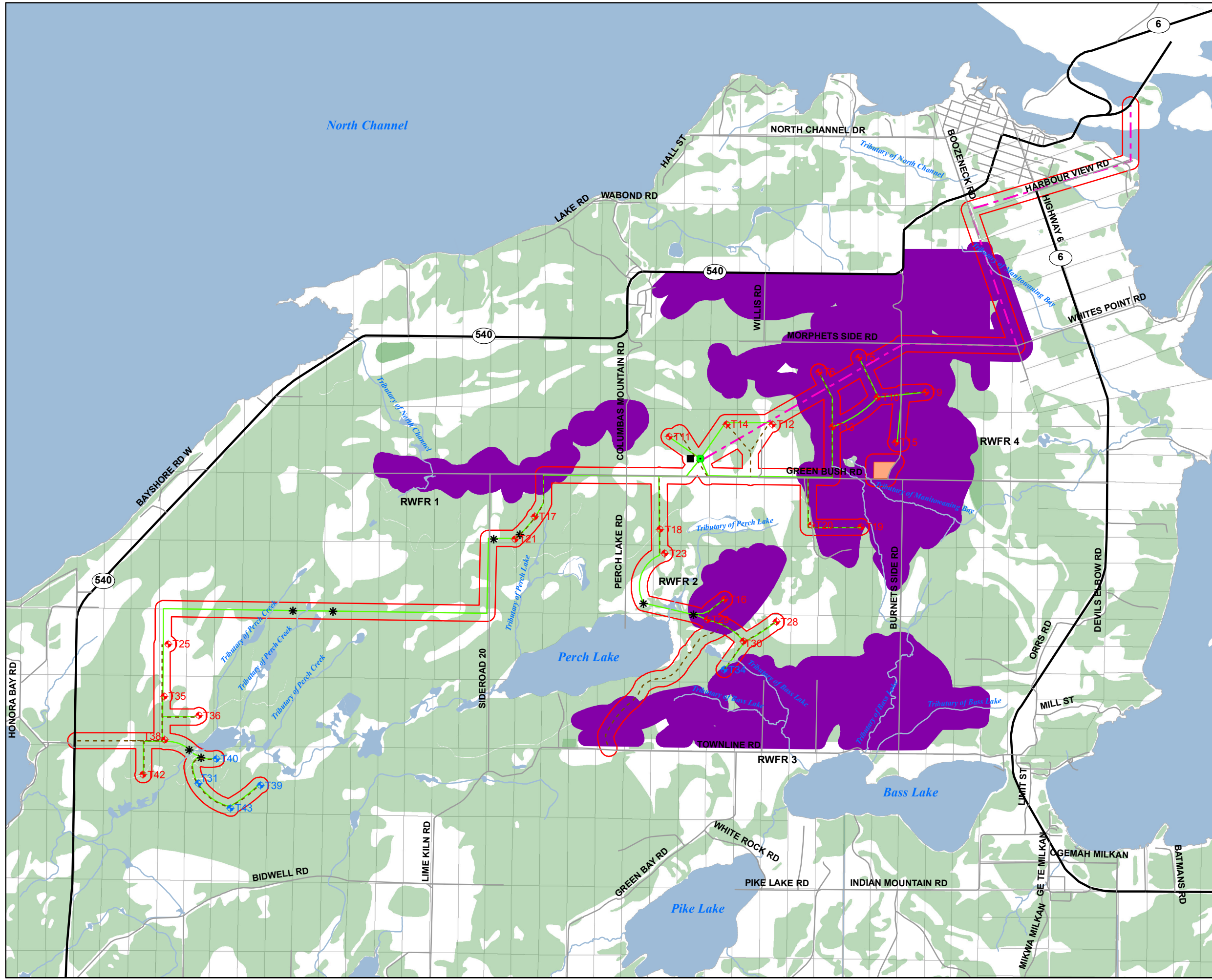
- ◆ 24 Wind Turbine Locations
- ◆ Five Extra Permitted Sites
- Substation
- Operations Building
- * Horizontal Directional Drilling Access/Exit Pit
- Transmission Line
- - - Access Road
- Feeder Lines
- Construction Staging Area



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**McLean's Mountain Wind Farm
Figure 8: Raptor Winter Feeding
and Roosting Area**



Legend

- Local Roads
- Highway
- Watercourse
- 120 m Project Location Setback
- Lots/Concessions
- Water Body
- Unclassified Woodland Community
- Raptor Winter Feeding and Roosting Area (120m Buffer) (Including: OAGM4)

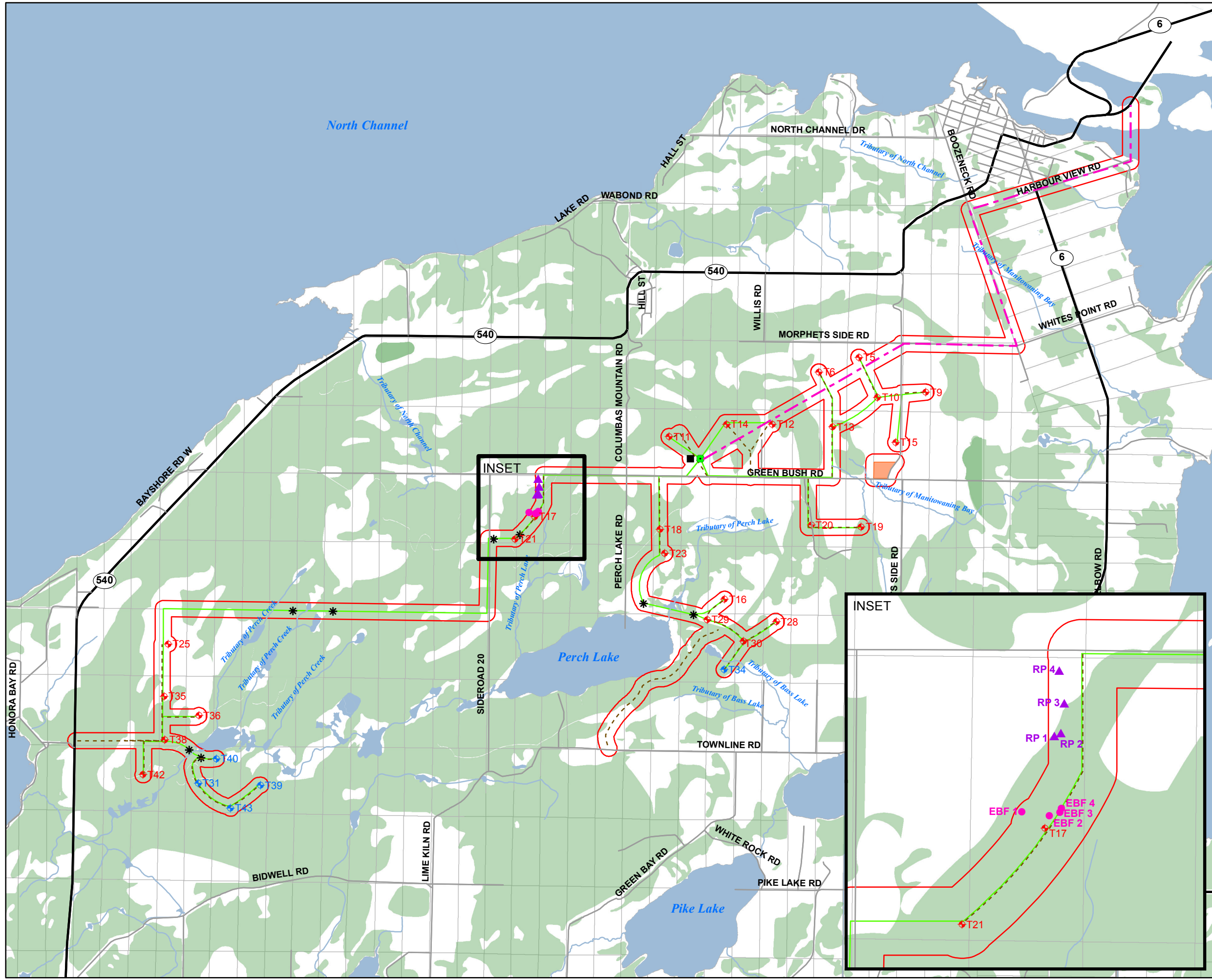
Project Components

- ◆ 24 Wind Turbine Locations
- ◆ Five Extra Permitted Sites
- Substation
- Operations Building
- * Horizontal Directional Drilling Access/Exit Pit
- Transmission Line
- - - Access Road
- Feeder Lines
- Construction Staging Area



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**McLean's Mountain Wind Farm
Figure 9: Reptile Hibernacula**



- Legend**
- Rock Piles
 - Exposed Bedrock Fissure
 - Local Roads
 - Highway
 - Watercourse
 - 120 m Project Location Setback
 - Lots/Concessions
 - Water Body
 - Unclassified Woodland Community

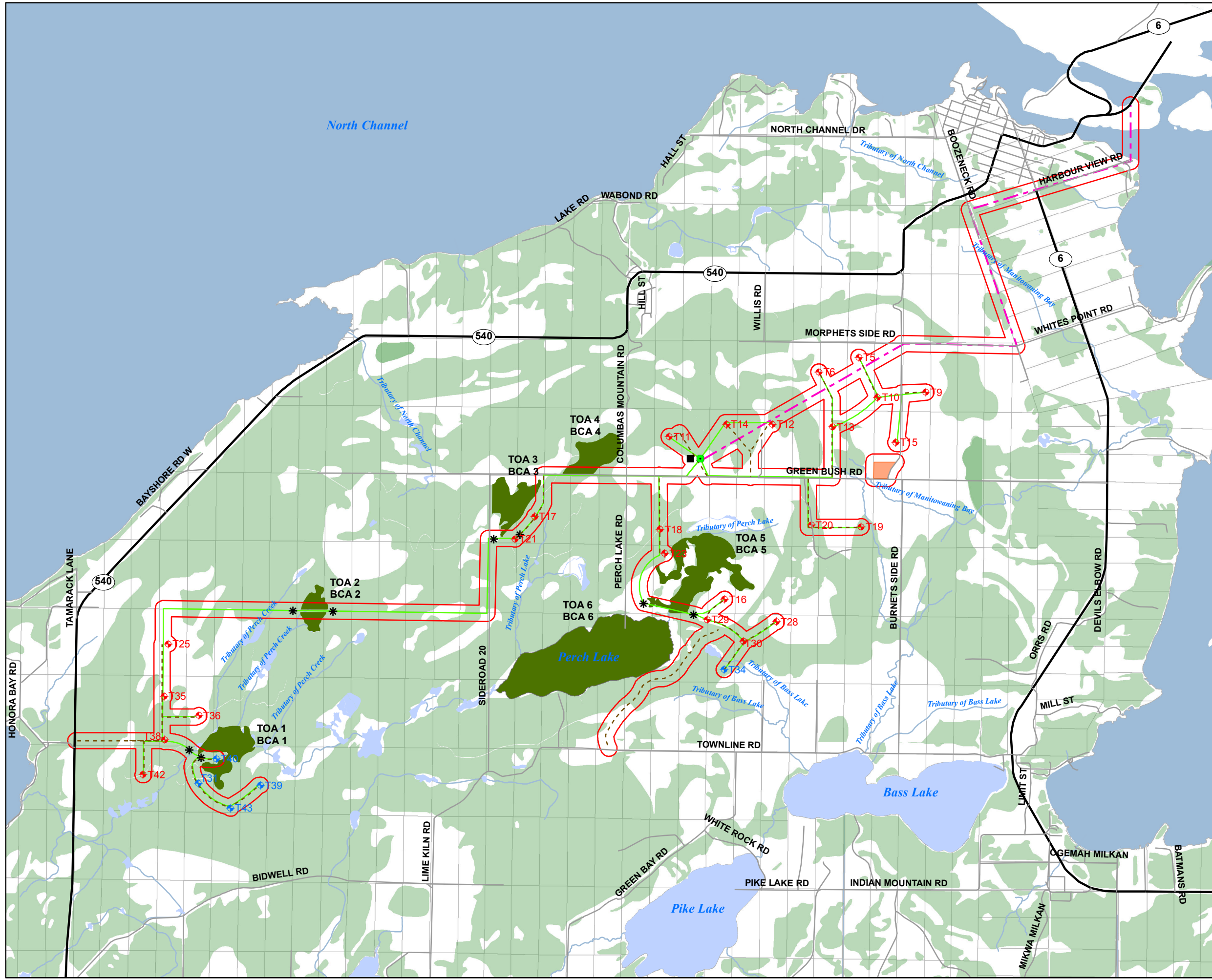
- Project Components**
- 24 Wind Turbine Locations
 - Five Extra Permitted Sites
 - Substation
 - Operations Building
 - Horizontal Directional Drilling Access/Exit Pit
 - Transmission Line
 - Access Road
 - Feeder Lines
 - Construction Staging Area



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**McLean's Mountain Wind Farm
Figure 10: Bullfrog Concentration Areas & Turtle Overwintering Area**



Legend

- Local Roads
- Highway
- Watercourse
- 120 m Project Location Setback
- Lots/Concessions
- Water Body
- Unclassified Woodland Community
- Turtle Overwintering Area & Bullfrog Concentration Areas

Project Components

- ◆ 24 Wind Turbine Locations
- ◆ Five Extra Permitted Sites
- Substation
- Operations Building
- * Horizontal Directional Drilling Access/Exit Pit
- - - Transmission Line
- - - Access Road
- Feeder Lines
- Construction Staging Area



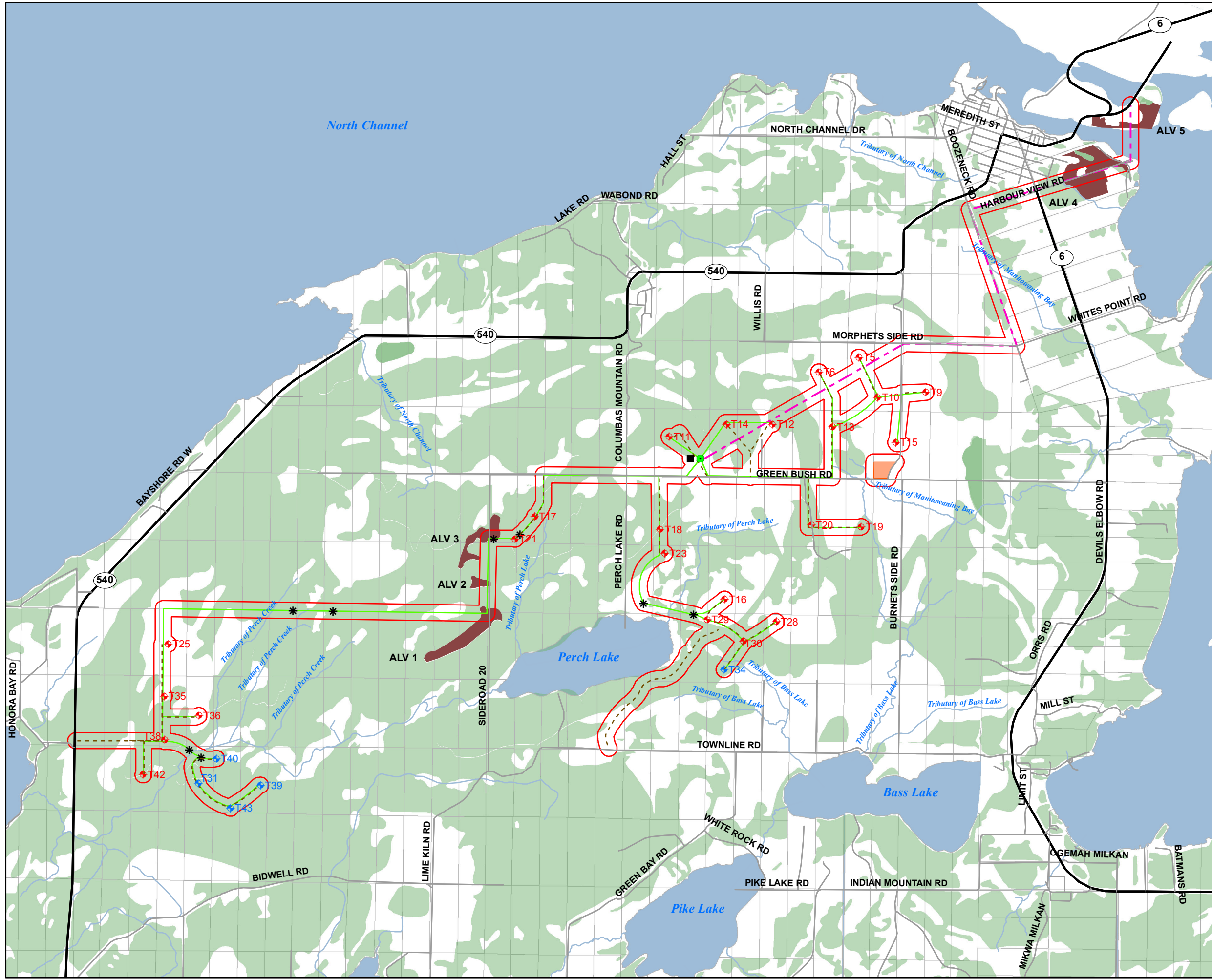
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McLean's Mountain Wind Farm Figure 11: Rare Vegetation Communities



Legend









- Local Roads
 - Highway
 - Watercourse
 - 120 m Project Location Setback
 - Lots/Concessions
 - Water Body
 - Unclassified Woodland Community
 - RBSA1-1: Common Juniper Shrub Alvar
- Project Components**
- 24 Wind Turbine Locations
 - Five Extra Permitted Sites
 - Substation
 - Operations Building
 - Horizontal Directional Drilling Access/Exit Pit
 - Transmission Line
 - Access Road
 - Feeder Lines
 - Construction Staging Area












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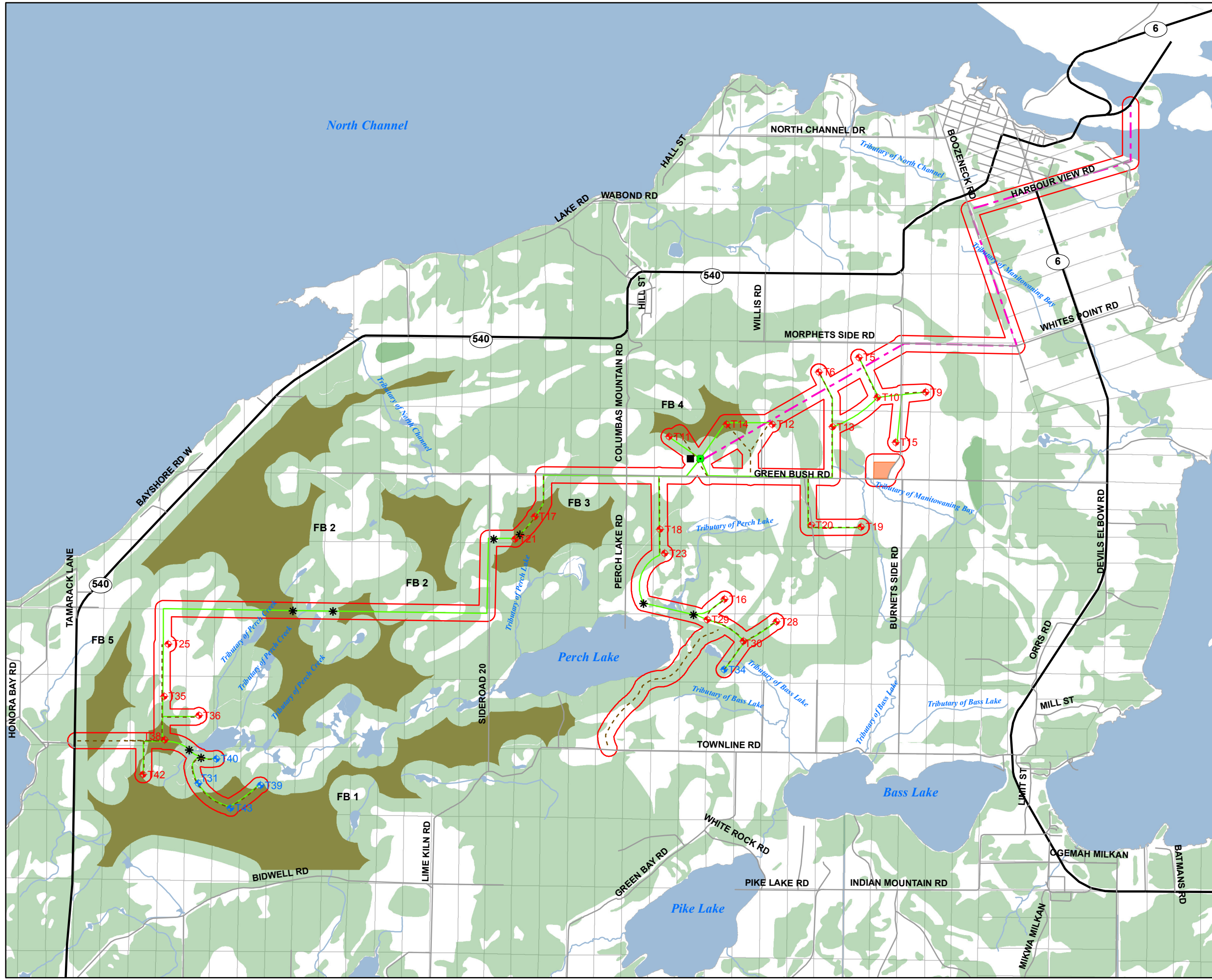
**McLean's Mountain Wind Farm
Figure 13: Sites Supporting Area -
Sensitive Species: Forest Birds**

Legend

-  Local Roads
-  Highway
-  Watercourse
-  120 m Project Location Setback
-  Lots/Concessions
-  Water Body
-  Unclassified Woodland Community (< 200m from edge)
-  Unclassified Woodland Community (Interior > 200 m from edge)
(Including: FOD, FODM1, FODM5-1, FODM8-1, FOMM10, FOMM4, FODM5-1, SWCM1-2, SWDM2-1, SWDM2-1, SWDM2-2, SWDM2, SWDM3, SWDM4-5, SWMM1-1, SWMM3-2, SWMM4)

Project Components

-  24 Wind Turbine Locations
-  Five Extra Permitted Sites
-  Substation
-  Operations Building
-  Horizontal Directional Drilling Access/Exit Pit
-  Transmission Line
-  Access Road
-  Feeder Lines
-  Construction Staging Area

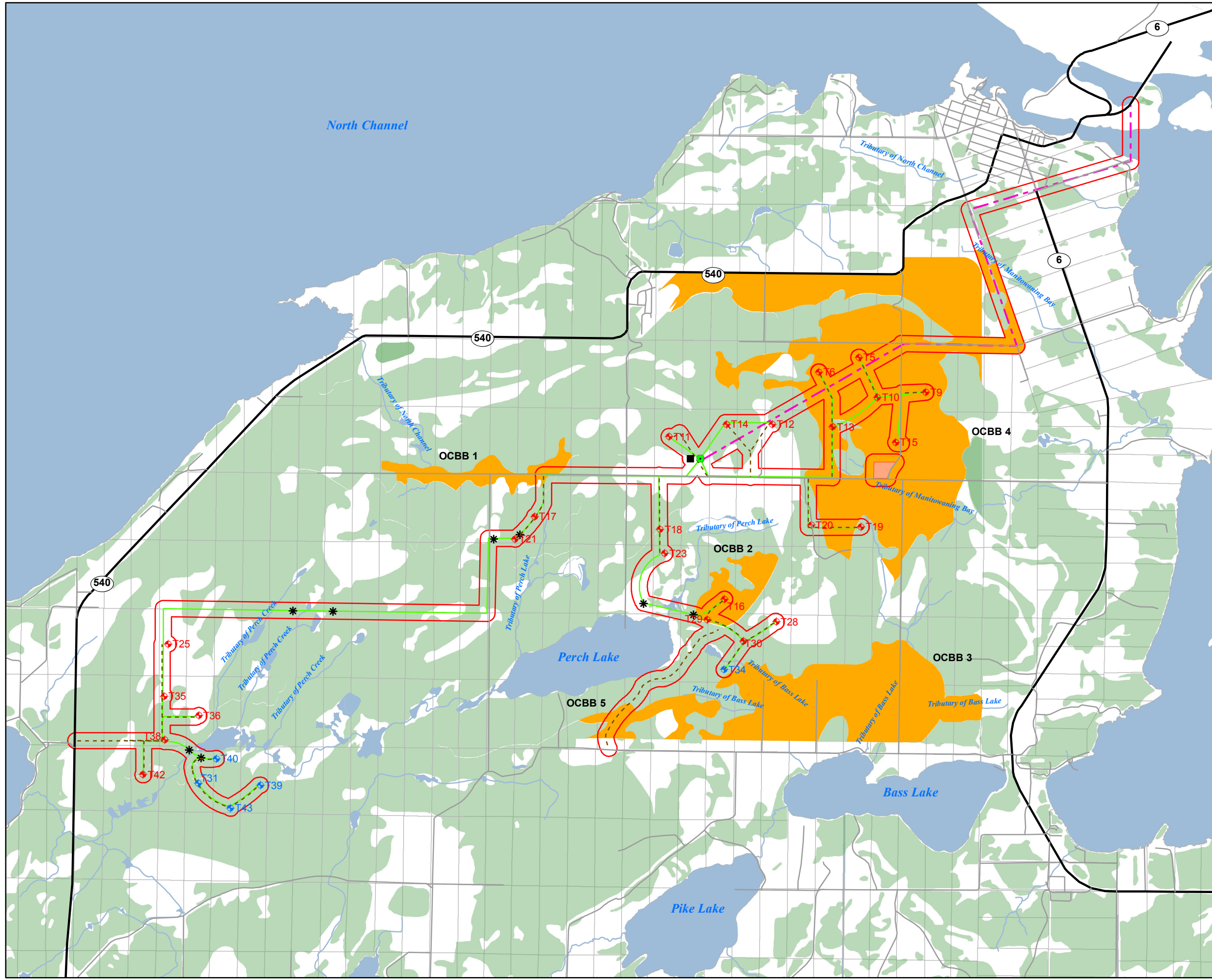


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**McLean's Mountain Wind Farm
Figure 14: Sites Supporting Area -
Sensitive Species: Open Country
Breeding Bird Habitat**

Legend

- Local Roads
 - Highway
 - Watercourse
 - 120 m Project Location Setback
 - Lots/Concessions
 - Water Body
 - Unclassified Woodland Community
 - Open Country Breeding Bird Habitat > 30 ha (Including: OAGM4, ME)
- Project Components**
- ◆ 24 Wind Turbine Locations
 - ◆ Five Extra Permitted Sites
 - Substation
 - Operations Building
 - * Horizontal Directional Drilling Access/Exit Pit
 - Transmission Line
 - - - Access Road
 - Feeder Lines
 - Construction Staging Area



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Table 7: Wildlife Habitat in the Project Location and Surrounding 120 metres based on Records Review and Site Investigation Information.

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
SEASONAL CONCENTRATION AREAS										
Colonial Bird Nesting Sites - Tree/Shrub (Heron)	Live or dead standing trees in wetlands, lakes, islands and on peninsulas. ELC codes SWM2, SWM3, SWM5, SWM6, SWD1, SWD2, SWD3, SWD4, SWD5, SWD6, SWD7, and FET1.	Some suitable ELC communities exist within the project location (Figure 4).	---	Breeding bird habitat	✓	---	---	No nest bowls were observed during Site Investigations. No herons were noted nesting in wetlands adjacent to the project location.	---	---
Colonial Bird Nesting Sites (Swallows)	Eroding banks, sandy hills, pits, steep slopes, rock faces or rock piles. ELC codes CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, and CLT1.	Open Pasture communities have been identified within the project location (Figure 4)	---	Breeding bird habitat	✓	---	---	Suitable habitat does not exist in the project location or 120 m setback. No exposed sand substrates or piles were observed.	---	---
Waterfowl Stopover and Staging Areas (Terrestrial)	Fields with sheet water during the spring. ELC codes CUM1, CUT1 with evidence of annual spring flooding from melt water or run-off within these ecosites.	Open Pasture and Meadow communities are located within the project location (Figure 4). This habitat is divided by roads and general infrastructure. Flooding is minimal and restricted to the flood plain of a Manitowaning Bay tributary.	---	Migratory stopover	✓	---	---	No extensive sheet water areas were observed in the project location which could provide quality stopover and staging areas for large groups of waterfowl.	---	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Waterfowl Stopover and Staging Areas (Aquatic) - WSSA 1	Ponds, marshes, lakes bays, coastal inlets and watercourses used during migration which provide an abundant food supply. ELC codes MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, and SWD3.	This unit contains 22.67 ha of contiguous Cattail Mineral Shallow Marsh and Graminoid Mineral Shallow Marsh habitat (Figure 4 and 6). Hardwood mixed forest, swamp and meadow habitat characterize adjacent lands. Tributaries of Perch Creek run through this habitat providing a permanent water source with some areas of standing water.	Representative Photo 12	Migratory stopover	✓	---	---	This area of habitat is relatively small and contains very limited areas of open water to support large populations of migrating waterfowl. Abundant high quality habitat is present in the larger landscape and associated with Lake Huron.	Feeder Line and Access Road	100 m to Feeder Line
Waterfowl Stopover and Staging Areas (Aquatic) - WSSA 2	Ponds, marshes, lakes bays, coastal inlets and watercourses used during migration which provide an abundant food supply. ELC codes MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, and SWD3.	This unit contains 4.47 ha of Reed Canary Grass Mineral Shallow Marsh habitat (Figure 4 and 6). The duration and extent of water in this habitat is dependent upon beaver activity. Some areas dry up in the late summer and fall. Additional marsh habitat is located south of Guida's sideroad in WSSA 3. Mixed swamp and hardwood mixed forest habitat characterize adjacent lands.	Representative Photo 12	Migratory stopover	✓	---	---	This area of habitat is relatively small and contains very limited areas of open water to support large populations of migrating waterfowl. Abundant high quality habitat is present in the larger landscape and associated with Lake Huron.	Feeder Line	45 m to Feeder Line

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Waterfowl Stopover and Staging Areas (Aquatic) - WSSA 3	Ponds, marshes, lakes bays, coastal inlets and watercourses used during migration which provide an abundant food supply. ELC codes MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, and SWD3.	This unit contains 3.19 ha of Reed Canary Grass Mineral Shallow Marsh habitat (Figure 4 and 6). Duration and extent of water in this habitat is dependent upon beaver activity to the north of Guida's Sideroad in relation to WSSA 2. Some areas dry up in the late summer and fall. Mixed swamp and hardwood mixed forest habitat characterize adjacent lands.	Representative Photo 12	Migratory stopover	✓	---	---	This area of habitat is relatively small and contains very limited areas of open water to support large populations of migrating waterfowl. Abundant high quality habitat is present in the larger landscape and associated with Lake Huron.	Feeder Line	20 m to Feeder Line
Waterfowl Stopover and Staging Areas (Aquatic) - WSSA 4	Ponds, marshes, lakes bays, coastal inlets and watercourses used during migration which provide an abundant food supply. ELC codes MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, and SWD3.	Perch Lake represents 186.7 ha of contiguous, permanent open water habitat surrounded by deciduous and hardwood mixed forest, treed pasture and mixed mineral marsh (Figure 4 and 6). Minimal shoreline and emergent vegetation is present. A tributary connects this unit to WSSA 5 located northeast of Perch Lake.	Representative Photo 12	Migratory stopover	✓	---	---	This area of open water habitat contains minimal shoreline and emergent vegetation. The habitat provided by Perch Lake is small compared to the abundant high quality habitat present along the Lake Huron shoreline.	Feeder Line	55 m to Feeder Line
Waterfowl Stopover and Staging Areas (Aquatic) - WSSA 5	Ponds, marshes, lakes bays, coastal inlets and watercourses used during migration which provide an abundant food supply. ELC codes MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, and SWD3.	This unit consists of 4.82 ha of Cattail Mineral Shallow Marsh habitat surrounded by treed pasture, hardwood mixed forest and mixed swamp habitat (Figure 4 and 6). A tributary of Perch Lake flows through this unit downstream to Perch Lake (WSSA 4). Permanent water levels are dependent on beaver activity.	Representative Photo 12	Migratory stopover	✓	---	---	This area of habitat is relatively small and contains very limited areas of open water to support large populations of migrating waterfowl. Abundant high quality habitat is present in the larger landscape and associated with Lake Huron.	Feeder Line	50 m to Feeder Line

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Waterfowl Stopover and Staging Areas (Aquatic) - WSSA 6	Ponds, marshes, lakes bays, coastal inlets and watercourses used during migration which provide an abundant food supply. ELC codes MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, and SWD3.	Important Bird Area: Open Water (Figure 6).	---	Migratory stopover	✓	---	---	IBA status is based on pelagic bird species which depend on large open water habitat in Lake Huron and the North Channel therefore no habitat exists within the project location.	---	---
Waterfowl Nesting Area – WNA 1	Waterfowl nesting areas are associated with wetland and woodlands located in upland areas. Upland areas associated with ELC ecosites MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, and SWD4.	This 104 ha unit contains 19.9 ha of Cattail Mineral Shallow Marsh, 7 ha of Poplar Deciduous Swamp, 5.9 ha of White-Cedar Conifer Coniferous Swamp, 3.1 ha of Black Ash Deciduous Swamp, 2.8 ha of Graminoid Mineral Shallow Marsh, 2.2 ha of Poplar-Conifer Mixed Swamp and 1.8 ha of Graminoid Mineral Meadow Marsh habitat surrounded by 51.6 ha of Fresh-Moist Spruce Fir – Hardwood Mixed Forest, 7.4 ha of Fresh-Moist Poplar Deciduous Woodland and 1.4 ha of Meadow (Figure 4 and 7).	Representative Photos 3-9	Waterfowl Nesting Area	---	✓	---	Suitable marsh and swamp habitat adjacent to upland areas along Perch Creek.	T 40, Feeder Line and Access Road	Within project location

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Waterfowl Nesting Area – WNA 2	Waterfowl nesting areas are associated with wetland and woodlands located in upland areas. Upland areas associated with ELC ecosites MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, and SWD4.	This 36.4 ha unit contains 8.1 ha of White Cedar-Hardwood Mixed Swamp and 7.7 ha of Reed Canary Grass Mineral Shallow Marsh habitat surrounded by 20.7 ha of Fresh-Moist Spruce Fir – Hardwood Mixed Forest (Figure 4 and 7).	Representative Photos 3-9	Waterfowl Nesting Area	✓	---	---	Although appropriate upland habitat is present, with wetland itself does not contain large areas of open water and is primarily composed of thick emergent vegetation. Larger, less disturbed areas of suitable habitat, with lower potential for predation, are located within the project location.	Feeder Line	Within project location
Waterfowl Nesting Area – WNA 3	Waterfowl nesting areas are associated with wetland and woodlands located in upland areas. Upland areas associated with ELC ecosites MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, and SWD4.	This 20.5 ha unit contains 5.3 ha of White Cedar – Hardwood Mixed Swamp, and 3.5 ha of Willow Mineral Deciduous Thicket Swamp habitat surrounded by 8.8 ha of Open Pasture, 2.6 ha of Dry-Fresh Sugar Maple Deciduous Forest and 0.3 ha of Fresh-Moist Spruce Fir – Hardwood Mixed Forest (Figure 4 and 7).	Representative Photos 3-9	Waterfowl Nesting Area	✓	---	---	Although appropriate upland habitat is present, with wetland itself does not contain large areas of open water and is primarily composed of thick emergent vegetation. Larger, less disturbed areas of suitable habitat, with lower potential for predation, are located within the project location.	Feeder Line and Access Road	Within project location

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Waterfowl Nesting Area – WNA 4	Waterfowl nesting areas are associated with wetland and woodlands located in upland areas. Upland areas associated with ELC ecosites MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, and SWD4.	This 89 ha unit contains 13.7 ha of Willow Mineral Deciduous Thicket Swamp, 12 ha of White Cedar-Conifer Coniferous Swamp, 5 ha of Cattail Mineral Shallow Marsh, 3.4 ha of Poplar-Conifer Mixed Swamp, 1.7 ha of Green Ash Deciduous Swamp and 1.1 ha of Mixed Mineral Meadow Marsh habitat surrounded by 18.3 ha of Open Water, 16.6 ha of Fresh-Moist Spruce Fir – Hardwood Mixed Forest, 10.5 ha of Tree Pasture, 5.6 ha of Fresh-Moist Poplar Deciduous Forest and 1 ha of Open Pasture (Figure 4 and 7).	Representative Photos 3-9	Waterfowl Nesting Area	---	✓	---	Suitable swamp habitat adjacent to upland areas may be utilized by waterfowl species for nesting habitat.	T29, Access Road, Feeder Line	Within project location
Waterfowl Nesting Area – WNA 5	Waterfowl nesting areas are associated with wetland and woodlands located in upland areas. Upland areas associated with ELC ecosites MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, and SWD4.	This 43.8 ha unit contains 10.1 ha of Cattail Mineral Shallow Marsh, 5.8 ha of Green Ash Deciduous Swamp and 4.9 ha of White Cedar – Hardwood Mixed Swamp habitat surrounded by 19.4 ha of Open Pasture, 1.9 ha of Fresh-Moist Spruce Fir – Hardwood Mixed Forest and 1.8 ha of Fresh-Moist Poplar Deciduous Forest (Figure 4 and 7).	Representative Photos 3-9	Waterfowl Nesting Area	---	✓	---	Suitable marsh and swamp habitat adjacent to upland areas and open pasture may be utilized by waterfowl species for nesting habitat.	Turbine 6, Feeder Line and Access Road	0 m to Turbine 6

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Raptor Winter Feeding and Roosting Area RWFR 1	Open fields, hayfields, pastures and meadows that support large and productive small mammal populations with a diversity of herbaceous vegetation providing food for mammals. Windswept fields that are not covered by snow are preferred for hunting. Roosting sites are likely to be found in mature mixed or coniferous woodlands. Combination of ELC codes from forest class (FOC, FOD, and FOM) and upland class (CUM, CUT, CUS, and CUW).	This unit contains 228 ha of open pasture areas and a buffer of 120 m inside adjacent wooded areas (Figure 4 and 8). Cows do graze in this area during certain times of the year. Overall the area is minimally disturbed. Open Pasture: 95.5 ha surrounded by Dry-Fresh Sugar Maple Deciduous Forest: 73 ha; Fresh-Moist Spruce Fir – Hardwood Mixed Forest: 40.3 ha; White Cedar-Hardwood Mixed Swamp: 11.45 ha; and Willow Mineral Deciduous Thick Swamp: 7.7 ha.	Representative Photo 10	Winter foraging and roosting	✓	---	---	This area is of marginal quality, small in size and larger, more appropriate Raptor Winter Feeding and Roosting Habitat is located within the project location. These larger areas have the potential to support large populations of raptor species, abundant prey species and perches within abundant open pasture and surrounding woodland habitat.	Feeder Line and Access Road	Within project location
Raptor Winter Feeding and Roosting Area RWFR 2	Open fields, hayfields, pastures and meadows that support large and productive small mammal populations with a diversity of herbaceous vegetation providing food for mammals. Windswept fields that are not covered by snow are preferred for hunting. Roosting sites are likely to be found in mature mixed or coniferous woodlands. Combination of ELC codes from forest class (FOC, FOD, and FOM) and upland class (CUM, CUT, CUS, and CUW).	This unit contains 129 ha of open pasture areas and a buffer of 120 m inside adjacent wooded areas. (Figure 4 and 8). Cows do graze in this area during certain times of the year. Overall the area is minimally disturbed. Open Pasture: 68.7 ha surrounded by Fresh-Moist Spruce Fir - Hardwood Mixed Forest: 30.4 ha; Fresh-Moist Poplar Deciduous Forest: 2.5 ha; and White Cedar – Hardwood Mixed Swamp: 20 ha.	Representative Photo 10	Winter foraging and roosting	✓	---	---	This area is of marginal quality, small in size and larger, more appropriate Raptor Winter Feeding and Roosting Habitat is located within the project location. These larger areas have the potential to support large populations of raptor species, abundant prey species and perches within abundant open pasture and surrounding woodland habitat.	Turbine 16 and 29; Feeder Line and Access Roads	Within project location

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Raptor Winter Feeding and Roosting Area RWFR 3	Open fields, hayfields, pastures and meadows that support large and productive small mammal populations with a diversity of herbaceous vegetation providing food for mammals. Windswept fields that are not covered by snow are preferred for hunting. Roosting sites are likely to be found in mature mixed or coniferous woodlands. Combination of ELC codes from forest class (FOC, FOD, and FOM) and upland class (CUM, CUT, CUS, and CUW).	<p>This unit contains 611.13 ha of open pasture areas and a buffer of 120 m inside adjacent wooded areas (Figure 4 and 8). Cows do graze in this area during certain times of the year. Overall the area is minimally disturbed.</p> <p>Open Pasture: 431.70 surrounded by Deciduous Forest: 29 ha; Fresh-Moist Poplar Deciduous Forest: 97 ha; Fresh-Moist Spruce Fir – Hardwood Mixed Forest: 20.6 ha; Maple Mineral Deciduous Swamp: 17.3 ha; Dry-Fresh Sugar Maple Deciduous Forest: 7 ha; Mixed Mineral Meadow Marsh: 0.2 ha; Open Water: 0.12 ha; and Willow Mineral Deciduous Thicket Swamp; 7.8 ha.</p>	Representative Photo 10	Winter foraging and roosting	---	✓	---	This area of open pasture is of a sufficient size, shape, quality and has woodlands along its periphery in many locations. This area could function as suitable habitat for roosting and foraging for winter raptors.	Turbine 34, Feeder Line and Access Roads	Within project location

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Raptor Winter Feeding and Roosting Area RWFR 4	Open fields, hayfields, pastures and meadows that support large and productive small mammal populations with a diversity of herbaceous vegetation providing food for mammals. Windswept fields that are not covered by snow are preferred for hunting. Roosting sites are likely to be found in mature mixed or coniferous woodlands. Combination of ELC codes from forest class (FOC, FOD, and FOM) and upland class (CUM, CUT, CUS, and CUW).	This 1386.72 ha unit contains open pasture areas and a buffer of 120 m inside adjacent wooded areas (Figure 4 and 8). Cows do graze in this area during certain times of the year. Overall the area is minimally disturbed. Open Pasture: 1001.9 ha surrounded by Deciduous Forest: 21 ha; Dry-Fresh Oak Deciduous Forest: 44 ha; Fresh-Moist Poplar Deciduous Forest: 101.8 ha; Fresh-Moist Spruce Fir – Hardwood Mixed Forest: 99.2 ha; Cattail Mineral Shallow Marsh: 8.7 ha; Green Ash Deciduous Swamp: 5.9 ha; Maple Mineral Deciduous Swamp: 5.5 ha; White Cedar – Hardwood Mixed Swamp: 11.4 ha; and Willow Mineral Deciduous Thicket Swamp: 5.5 ha.	Representative Photo 10	Winter foraging and roosting	---	✓	---	This area of open pasture is of a sufficient size, shape, quality and has woodlands along its periphery in many locations. This area could function as suitable habitat for roosting and foraging for winter raptors.	Turbines 5, 6, 9, 10, 13, 15, 19 and 20; Feeder Lines and Access Roads.	Within project location
Bald Eagle Winter Feeding and Roosting Areas	Abundant open water areas and fish, as well as extensive large trees and snags provide high quality habitat.	Perch Creek (Figure 5) is the only area that could potentially function as habitat which flows through wetland areas with associated beaver activity. Stream width ranged from 2.5 m to 20.0 m with an average depth of 0.15 m. Numerous minnow species were observed. A fish barrier (waterfall) prevents large species from moving upstream to this watercourse from Lake Huron.	---	Winter foraging and roosting	✓	---	---	Habitat is limited in size and other higher quality habitats associated with Lake Huron are abundant in the area. Perch Lake and its creeks freeze in the winter.	---	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Migratory Stopover Areas – Landbird	Stopover areas are used along Great Lakes shorelines and stop at traditionally used sites to feed, rest and/or wait out periods of bad flying weather. These areas must provide a variety of different habitats ranging from open fields to large woodlands to provide adequate food and cover for a diversity of species. Many of the best sites are found within 2 km of Lake Ontario and Lake Erie.	The project location is a mix of woodland, pasture, wetland and Alvar communities (Figure 4). It is approximately 2.5 km in from the Lake Huron shoreline.	Representative Photos 2,3,5,6,7 and 8	Migrating songbird feeding and roosting habitat.	✓	---	---	The project location is not located within 5 km of Lake Ontario or Lake Erie.	---	---
Migratory Stopover Areas – Shorebird	Shorelines of lakes, rivers, and wetlands including beach areas, bars and seasonally flooded shoreline, usually muddy and unvegetated. Rock groins and other forms of armour rock on lakeshore can be utilized. ELC codes BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SD01, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, and MAM5.	Graminoid Mineral Meadow Marsh and Mixed Mineral Meadow Marsh (Figure 4). Shoreline of Perch Lake and shallow areas of Perch Creek.	Representative Photo 12	Migrating shorebird feeding and roosting habitat	✓	---	---	Shoreline of Perch Creek and Perch Lake are limited in size and quality. Marsh areas are small and isolated. None of these sites have a history of use by shorebirds. These habitats together do not provide ideal habitat for migrating shorebirds. More appropriate habitats are abundant in areas outside of the project location.	---	---
Migratory Stopover Areas – Butterfly	Habitats present include Alvars and pastures with an abundance of nectar producing plants found in proximity to Great Lakes shorelines.	The project location is a mix of woodland, pasture wetland and Alvar communities (Figure 4). It is approximately 2.5 km in from the Lake Huron shoreline.	Representative Photos 1, 10 and 11	Butterfly roosting and feeding habitat	✓	---	---	The project location is not located within 5 km of Lake Ontario or Lake Erie.	---	---
Bat Maternal Roost Colonies	Mature forests consisting of Maple, Oak, Poplar and White Pine greater than 25 cm DBH with abundant tree cavities and snags. High quality habitat is characterized by 10 suitable cavity trees per hectare.	Areas of young and middle age regenerating forest occur (Figure 4). Limited habitat consisting of 14 widely dispersed cavity trees were observed throughout the project location.	---	Roosting habitat	✓	---	---	The density of cavity trees within the project location is too low for this habitat to occur.	---	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Reptile Hibernacula - Rock Pile - RP1	No direct ecosites relate to this habitat. Often found in animal burrows, rock crevices and other areas that enable animals to hibernate below the frost line and often in association with water to prevent desiccation. Frequently found among broken rocks at the base of cliffs or karst topography.	Man-made rock pile is approximately 1.5 m by 3.0 m located south of Greenbush Road (Figure 9). This rock pile has well established vegetation and lichen growth on and around the rocks.	Representative Photo 13	Winter cover	✓	---	---	Rock pile is found at the surface and would not provide adequate winter cover for reptiles	Feeder Line and Access Road	95 m from Feeder Line
Reptile Hibernacula - Rock Pile - RP2	No direct ecosites relate to this habitat. Often found in animal burrows, rock crevices and other areas that enable animals to hibernate below the frost line and often in association with water to prevent desiccation. Frequently found among broken rocks at the base of cliffs or karst topography.	Man-made rock pile is approximately 1.0 m by 2.0 m located south of Greenbush Road (Figure 9). No vegetation or lichen growth was observed on or around the rock pile suggesting recent construction.	Representative Photo 13	Winter cover	✓	---	---	Rock pile is found at the surface and would not provide adequate winter cover for reptiles	Feeder Line and Access Road	70 m from Feeder Line
Reptile Hibernacula - Rock Pile - RP3	No direct ecosites relate to this habitat. Often found in animal burrows, rock crevices and other areas that enable animals to hibernate below the frost line and often in association with water to prevent desiccation. Frequently found among broken rocks at the base of cliffs or karst topography.	Natural rock pile is approximately 2.0 m by 3.0 m located south of Greenbush Road (Figure 9). This rock pile consists of large and small scattered and embedded rocks under the shade of trees with lichen growth.	Representative Photo 13	Winter cover	✓	---	---	Rock pile is found at the surface and would not provide adequate winter cover for reptiles	Feeder Line and Access Road	60 m from Feeder Line
Reptile Hibernacula - Rock Pile - RP4	No direct ecosites relate to this habitat. Often found in animal burrows, rock crevices and other areas that enable animals to hibernate below the frost line and often in association with water to prevent desiccation. Frequently found among broken rocks at the base of cliffs or karst topography.	This large man-made rock pile is approximately 4.0 m by 5.0 m located just south of Greenbush Road (Figure 9). Vegetation growth along the perimeter of the rock pile was observed but not within or on the rocks.	Representative Photo 13	Winter cover	✓	---	---	Rock pile is found at the surface and would not provide adequate winter cover for reptiles	Feeder Line and Access Road	75 m from Feeder Line

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Reptile Hibernacula - Exposed Bedrock Fissure - EBF 1	No direct ecosites relate to this habitat. Often found in animal burrows, rock crevices and other areas that enable animals to hibernate below the frost line and often in association with water to prevent desiccation. Frequently found among broken rocks at the base of cliffs or karst topography.	Approximately 0.61 m long and 0.76 m deep located south of Greenbush Road near Turbine 17 (Figure 9).	Representative Photo 14	Winter cover	✓	---	---	Bedrock fissure will not provide adequate winter cover for reptiles during the winter as it is too shallow and is likely to freeze.	Turbine 17, Feeder Line and Access Road	99 m from Turbine 17
Reptile Hibernacula - Exposed Bedrock Fissure - EBF 2	No direct ecosites relate to this habitat. Often found in animal burrows, rock crevices and other areas that enable animals to hibernate below the frost line and often in association with water to prevent desiccation. Frequently found among broken rocks at the base of cliffs or karst topography.	Approximately 0.91 m at deepest point in two areas located south of Greenbush Road near Turbine 17 (Figure 9).	Representative Photo 14	Winter cover	✓	---	---	Bedrock fissure will not provide adequate winter cover for reptiles	Turbine 17, Feeder Line and Access Road	25 m from Feeder Line
Reptile Hibernacula - Exposed Bedrock Fissure - EBF 3	No direct ecosites relate to this habitat. Often found in animal burrows, rock crevices and other areas that enable animals to hibernate below the frost line and often in association with water to prevent desiccation. Frequently found among broken rocks at the base of cliffs or karst topography.	Hole at the base of a tree approximately 0.61 m deep located south of Greenbush Road near Turbine 17 (Figure 9).	Representative Photo 14	Winter cover	✓	---	---	Bedrock fissure will not provide adequate winter cover for reptiles	Turbine 17, Feeder Line and Access Road	Within project location
Reptile Hibernacula - Exposed Bedrock Fissure - EBF 4	No direct ecosites relate to this habitat. Often found in animal burrows, rock crevices and other areas that enable animals to hibernate below the frost line and often in association with water to prevent desiccation. Frequently found among broken rocks at the base of cliffs or karst topography.	Fissure approximately 0.90 m deep, 0.90 m long and 0.10 m deep located south of Greenbush Road near Turbine 17 (Figure 9).	Representative Photo 14	Winter cover	✓	---	---	Bedrock fissure will not provide adequate winter cover for reptiles	Turbine 17, Feeder Line and Access Road	Within project location

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Bullfrog Concentration Area - BCA 1	Aquatic and marsh habitat. Bullfrogs require permanent waterbodies for survival.	This unit contains 37.8 ha of contiguous Cattail Mineral Shallow Marsh, White Cedar-Conifer Coniferous Swamp, Poplar Deciduous Swamp, Poplar-Conifer Mixed Swamp and Willow Mineral Deciduous Thicket Swamp habitat with permanent water (Figure 4 and 10). Deciduous woodland and hardwood mixed forest characterize adjacent lands. A tributary of Perch Creek connects this unit to BCA 2 along Guida's Sideroad.	Representative Photo 3 - 9	Breeding and foraging habitat for Bullfrogs.	---	✓	---	Suitable permanent waterbodies and marsh habitat are present in/adjacent to the project location.	Turbine 40, Feeder Line and Access Road	15 m from Feeder Line
Bullfrog Concentration Area - BCA 2	Aquatic and marsh habitat. Bullfrogs require permanent waterbodies for survival.	This unit contains 16.3 ha of Reed Canary Grass Mineral Shallow Marsh, White Cedar-Hardwood Mixed Swamp with permanent water (Figure 4 and 10). Hardwood mixed forest characterizes adjacent land. A tributary of Perch Creek connects this unit to BCA 1 to the south.	Representative Photo 3	Breeding and foraging habitat for Bullfrogs.	---	✓	---	Suitable permanent waterbodies and marsh habitat are present in/adjacent to the project location.	Feeder Line	20 m from Feeder Line
Bullfrog Concentration Area - BCA 3	Aquatic and marsh habitat. Bullfrogs require permanent waterbodies for survival.	This unit contains 31.6 ha of White Cedar-Hardwood Mixed Swamp and Willow Mineral Deciduous Thicket Swamp habitat with permanent water (Figure 4 and 10). Open pasture, Alvar, deciduous forest and hardwood mixed forest characterize adjacent land.	Representative Photo 3	Breeding and foraging habitat for Bullfrogs.	---	✓	---	Suitable permanent waterbodies and marsh habitat are present in/adjacent to the project location.	Feeder Line and Access Road	25 m from Feeder Line

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Bullfrog Concentration Area - BCA 4	Aquatic and marsh habitat. Bullfrogs require permanent waterbodies for survival.	This unit contains 29.3 ha of White Cedar-Hardwood Mixed Swamp habitat with permanent water (Figure 4 and 10). Deciduous forest, Alvar, mixed swamp, open pasture and hardwood mixed forest characterize adjacent land.	Representative Photo 3	Breeding and foraging habitat for Bullfrogs.	---	✓	---	Suitable permanent waterbodies and marsh habitat are present in/adjacent to the project location.	Feeder Line	15 m from Feeder Line
Bullfrog Concentration Area - BCA 5	Aquatic and marsh habitat. Bullfrogs require permanent waterbodies for survival.	This unit contains 74.4 ha of Cattail Mineral Shallow Marsh, White Cedar-Conifer Coniferous Swamp, Poplar Deciduous Swamp, White Cedar-Hardwood Mixed Swamp with permanent water (Figure 4 and 10). Open pasture, treed woodland and hardwood mixed forest characterize adjacent lands. A tributary of Perch Lake flows through this unit connecting to BCA 7.	Representative Photo 3 - 9	Breeding and foraging habitat for Bullfrogs.	---	✓	---	Suitable permanent waterbodies and marsh habitat are present in/adjacent to the project location.	Turbine 23, Feeder Line and Access Road	10 m from Feeder Line
Bullfrog Concentration Area - BCA 6	Aquatic and marsh habitat. Bullfrogs require permanent waterbodies for survival.	Perch Lake represents 186.7 ha of contiguous, permanent open water habitat surrounded by deciduous and hardwood mixed forest, treed pasture and mixed mineral marsh (Figure 4 and 6). Minimal shoreline and emergent vegetation is present. A tributary of Perch Lake connects this unit to BCA 5.	Representative Photo 3 - 9	Breeding and foraging habitat for Bullfrogs.	---	✓	---	Suitable permanent waterbodies and marsh habitat are present in/adjacent to the project location.	Feeder Line	85 m from Feeder Line

RARE VEGETATION COMMUNITIES

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Alvar - ALV 1	Naturally open areas of thin soil over flat limestone, dolostone or marble rock supporting a sparse vegetation of shrubs and herbs. Trees are often absent or scattered. Vegetation is adapted to extreme variations in temperature and soil moisture. ELC ecosite ALO1, ALS1 and ALT1.	This unit contains 22.7 ha of Common Juniper Shrub Alvar habitat surrounded by hardwood mixed forest (Figure 4 and 11).	Representative Photo 1	Habitat for alvar adapted species	---	✓	---	Considered a rare vegetation community. An Alvar indicator species was identified.	Feeder Line	Within project location
Alvar - ALV 2	Naturally open areas of thin soil over flat limestone, dolostone or marble rock supporting a sparse vegetation of shrubs and herbs. Trees are often absent or scattered. Vegetation is adapted to extreme variations in temperature and soil moisture. ELC ecosite ALO1, ALS1 and ALT1.	This unit contains 3.6 ha of Common Juniper Shrub Alvar habitat surrounded by hardwood mixed forest (Figure 4 and 11).	Representative Photo 1	Habitat for alvar adapted species	---	✓	---	Considered a rare vegetation community. An Alvar indicator species was identified.	Feeder Line	Within project location
Alvar - ALV 3	Naturally open areas of thin soil over flat limestone, dolostone or marble rock supporting a sparse vegetation of shrubs and herbs. Trees are often absent or scattered. Vegetation is adapted to extreme variations in temperature and soil moisture. ELC ecosite ALO1, ALS1 and ALT1.	This unit contains 15 ha of Common Juniper Shrub Alvar habitat surrounded by hardwood mixed forest (Figure 4 and 11).	Representative Photo 1	Habitat for alvar adapted species	---	✓	---	Considered a rare vegetation community. An Alvar indicator species was identified.	Feeder Line	Within project location
Alvar - ALV 4	Naturally open areas of thin soil over flat limestone, dolostone or marble rock supporting a sparse vegetation of shrubs and herbs. Trees are often absent or scattered. Vegetation is adapted to extreme variations in temperature and soil moisture. ELC ecosite ALO1, ALS1 and ALT1.	This unit contains 38.2 ha of Common Juniper Shrub Alvar habitat surrounded by light industrial area, low density residential area and deciduous forest (Figure 4 and 11).	Representative Photo 1	Habitat for alvar adapted species	---	✓	---	Considered a rare vegetation community. An Alvar indicator species was identified.	Transmission Line	Within project location
Alvar - ALV 5	Naturally open areas of thin soil over flat limestone, dolostone or marble rock supporting a sparse vegetation of shrubs and herbs. Trees are often absent or scattered. Vegetation is adapted to extreme variations in temperature and soil moisture. ELC ecosite ALO1, ALS1 and ALT1.	This unit contains 15.3 ha of Common Juniper Shrub Alvar habitat surrounded by light industrial area, open water, deciduous swamp and mixed forest (Figure 4 and 11).	Representative Photo 1	Habitat for alvar adapted species	✓	---	---	No alvar indicator species were observed. This community is adjacent to areas of development and is better classified as a cultural community that has undergone severe disturbance.	Transmission Line	Within project location
SPECIALISED HABITAT FOR WILDLIFE										

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Mink and Otter Feeding/ Denning Sites – MOFD 1	Shorelines dominated by coniferous or mixed forest cover with abundant shrubs as well as stumps and deadfall.	Perch Lake (Figure 5) shoreline predominantly vegetated with conifer and mixed forest. Shrub area limited to lake inlet. Rock piles and deadfall log structures are sparse. No large logs or log jams observed. Tree diameter ranged from 20-40 cm dbh.	Photo 15	Mink and Otter Shoreline Foraging and Den Sites	✓	---	---	Forest habitat adjacent to Perch Lake is not suitable feeding or denning sites as key habitat structure such as abundant shrubs, stumps and deadfall were not observed.	---	---
Mink and Otter Feeding/ Denning Sites – MOFD 2	Shorelines dominated by coniferous or mixed forest cover with abundant shrubs as well as stumps and deadfall.	Perch Creek (Figure 5) shoreline predominantly vegetated with conifer and mixed forest. Shrub area limited. Rock piles and deadfall log structures are sparse. No large logs or log jams observed. Tree diameter ranged from 20-40 cm dbh.	Photo 16	Mink and Otter Shoreline Foraging and Den Sites	✓	---	---	Forest habitat adjacent to Perch Creek is not suitable feeding or denning sites as key habitat structure such as abundant shrubs, stumps and deadfall were not observed.	---	---
Osprey or Bald Eagle Nesting Habitat	High quality habitat consists of nesting areas adjacent or in proximity to clear and shallow water bodies with productive fish populations. These sites will have numerous conifer and/or deciduous trees in good condition along the shoreline providing good visibility and clear flight lines, little disturbance and traditional use of sites.	Open water areas were identified in Perch Creek and Perch Lake (Figure 5). Wetlands in the area are mainly treed or covered in thickets which do not provide any sizable open water areas.	None	Nesting and foraging habitat	✓	---	---	Nests were not observed along Perch Creek or Perch Lake. The site is not known to be traditionally used.	---	---
Woodland Amphibian Breeding Habitat – WABH 1	Ponds used by several species of frogs and salamanders. The best breeding ponds are unpolluted and contain a variety of vegetation structure in and around the edge of the pond for egg-laying and calling by frogs. Closed-canopy woodlands with rather dense undergrowth maintaining a damp environment are preferred. Moist fallen logs are an important habitat component required for salamanders. Sites with several ponds and/or ponds close to creeks are valuable. Associated with ELC ecosites FOC, FOM, FOD, SWC, SWM and SWD.	This narrow unit contains 9.9 ha of Black Ash Deciduous Swamp and Poplar Deciduous Swamp habitat adjacent to Hardwood Mixed Forest and Fresh-Moist Poplar Deciduous Forest (Figure 4 and 12). A tributary of Perch Creek flows through this unit which provides permanent water and standing pool areas.	Representative Photos 4-9	Breeding habitat	---	✓	---	Suitable amphibian breeding sites are present in swamp communities mapped within and adjacent to the project location.	Feeder Line and Access Road	65 m from Feeder Line and Access Road

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Woodland Amphibian Breeding Habitat – WABH 2	Ponds used by several species of frogs and salamanders. The best breeding ponds are unpolluted and contain a variety of vegetation structure in and around the edge of the pond for egg-laying and calling by frogs. Closed-canopy woodlands with rather dense undergrowth maintaining a damp environment are preferred. Moist fallen logs are an important habitat component required for salamanders. Sites with several ponds and/or ponds close to creeks are valuable. Associated with ELC ecosites FOC, FOM, FOD, SWC, SWM and SWD.	This small unit contains 5.9 ha of Poplar Deciduous Swamp and Poplar-Conifer Mixed Swamp habitat adjacent to Fresh-Moist Poplar Deciduous Woodland and Hardwood Mixed Forest (Figure 4 and 12). This unit contains pockets of permanent open water.	Representative Photos 4-9	Breeding habitat	---	✓	---	Suitable amphibian breeding sites are present in swamp communities mapped within and adjacent to the project location.	Turbine 40, Feeder Line and Access Road	40 m from Turbine 40
Woodland Amphibian Breeding Habitat – WABH 3	Ponds used by several species of frogs and salamanders. The best breeding ponds are unpolluted and contain a variety of vegetation structure in and around the edge of the pond for egg-laying and calling by frogs. Closed-canopy woodlands with rather dense undergrowth maintaining a damp environment are preferred. Moist fallen logs are an important habitat component required for salamanders. Sites with several ponds and/or ponds close to creeks are valuable. Associated with ELC ecosites FOC, FOM, FOD, SWC, SWM and SWD.	This unit contains 4.1 ha of White Cedar – Hardwood Mixed Swamp habitat adjacent to Hardwood Mixed Forest (Figure 4 and 12). Permanent standing water was observed and presence is dependent on beaver activity. This unit is connected to a tributary of Perch Creek and located south of WABH 4, separated by Guida's Sideroad.	Representative Photos 4-9	Breeding habitat	---	✓	---	Suitable amphibian breeding sites are present in swamp communities mapped within and adjacent to the project location.	Feeder Line	20 m from Feeder Line
Woodland Amphibian Breeding Habitat – WABH 4	Ponds used by several species of frogs and salamanders. The best breeding ponds are unpolluted and contain a variety of vegetation structure in and around the edge of the pond for egg-laying and calling by frogs. Closed-canopy woodlands with rather dense undergrowth maintaining a damp environment are preferred. Moist fallen logs are an important habitat component required for salamanders. Sites with several ponds and/or ponds close to creeks are valuable. Associated with ELC ecosites FOC, FOM, FOD, SWC, SWM and SWD.	This unit contains 4.6 ha of White Cedar – Hardwood Mixed Swamp habitat adjacent to Hardwood Mixed Forest (Figure 4 and 12). Presence of standing water is dependent on beaver activity. This unit is separated from WABH 3 by Guida's Sideroad.	Representative Photos 4-9	Breeding habitat	---	✓	---	Suitable amphibian breeding sites are present in swamp communities mapped within and adjacent to the project location.	Feeder Line	20 m from Feeder Line

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Woodland Amphibian Breeding Habitat – WABH 5	Ponds used by several species of frogs and salamanders. The best breeding ponds are unpolluted and contain a variety of vegetation structure in and around the edge of the pond for egg-laying and calling by frogs. Closed-canopy woodlands with rather dense undergrowth maintaining a damp environment are preferred. Moist fallen logs are an important habitat component required for salamanders. Sites with several ponds and/or ponds close to creeks are valuable. Associated with ELC ecosites FOC, FOM, FOD, SWC, SWM and SWD.	This unit contains 18.6 ha of White Cedar – Hardwood Mixed Swamp habitat adjacent to Dry-Fresh Sugar Maple Deciduous Forest (Figure 4 and 12). This unit contains pockets of permanent open water.	Representative Photos 4-9	Breeding habitat	---	✓	---	Suitable amphibian breeding sites are present in swamp communities mapped within and adjacent to the project location.	Feeder Line and Access Road	25 m from Feeder Line
Woodland Amphibian Breeding Habitat – WABH 6	Ponds used by several species of frogs and salamanders. The best breeding ponds are unpolluted and contain a variety of vegetation structure in and around the edge of the pond for egg-laying and calling by frogs. Closed-canopy woodlands with rather dense undergrowth maintaining a damp environment are preferred. Moist fallen logs are an important habitat component required for salamanders. Sites with several ponds and/or ponds close to creeks are valuable. Associated with ELC ecosites FOC, FOM, FOD, SWC, SWM and SWD.	This unit contains 43.2 ha of White Cedar – Hardwood Mixed Swamp habitat adjacent to Dry-Fresh Sugar Maple Deciduous Forest and Hardwood Mixed Forest (Figure 4 and 12). This unit contains pockets of permanent open water.	Representative Photos 4-9	Breeding habitat	---	✓	---	Suitable amphibian breeding sites are present in swamp communities mapped within and adjacent to the project location.	Feeder Line and Access Road	30 m from Feeder Line
Woodland Amphibian Breeding Habitat – WABH 7	Ponds used by several species of frogs and salamanders. The best breeding ponds are unpolluted and contain a variety of vegetation structure in and around the edge of the pond for egg-laying and calling by frogs. Closed-canopy woodlands with rather dense undergrowth maintaining a damp environment are preferred. Moist fallen logs are an important habitat component required for salamanders. Sites with several ponds and/or ponds close to creeks are valuable. Associated with ELC ecosites FOC, FOM, FOD, SWC, SWM and SWD.	This unit contains 2.7 ha of Poplar - Conifer Mixed Swamp habitat adjacent to Treed Pasture (Figure 4 and 12). This unit contains pockets of permanent open water.	Representative Photos 4-9	Breeding habitat	---	✓	---	Suitable amphibian breeding sites are present in swamp communities mapped within and adjacent to the project location.	Feeder Line	70 m from Feeder Line

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Woodland Amphibian Breeding Habitat – WABH 8	Ponds used by several species of frogs and salamanders. The best breeding ponds are unpolluted and contain a variety of vegetation structure in and around the edge of the pond for egg-laying and calling by frogs. Closed-canopy woodlands with rather dense undergrowth maintaining a damp environment are preferred. Moist fallen logs are an important habitat component required for salamanders. Sites with several ponds and/or ponds close to creeks are valuable. Associated with ELC ecosites FOC, FOM, FOD, SWC, SWM and SWD.	This unit contains 54.1 ha of White Cedar – Hardwood Mixed Swamp and Poplar Deciduous Swamp habitat adjacent to Treed Pasture and Hardwood Mixed Forest (Figure 4 and 12). This unit contains pockets of permanent open water.	Representative Photos 4-9	Breeding habitat	---	✓	---	Suitable amphibian breeding sites are present in swamp communities mapped within and adjacent to the project location.	Turbine 23, Feeder Line and Access Road	95 m from Turbine 23
Woodland Amphibian Breeding Habitat – WABH 9	Ponds used by several species of frogs and salamanders. The best breeding ponds are unpolluted and contain a variety of vegetation structure in and around the edge of the pond for egg-laying and calling by frogs. Closed-canopy woodlands with rather dense undergrowth maintaining a damp environment are preferred. Moist fallen logs are an important habitat component required for salamanders. Sites with several ponds and/or ponds close to creeks are valuable. Associated with ELC ecosites FOC, FOM, FOD, SWC, SWM and SWD.	This unit contains 0.81 ha of Maple Mineral Deciduous Swamp habitat (Figure 4 and 12).	---	Breeding habitat	✓	---	---	This area is one of the smaller areas of habitat in the local landscape. Larger areas of high quality habitat are found within the project location which are more likely to provide greater vegetation structure, breeding ponds and fallen debris.	Transmission Line	Within project location
Turtle Nesting Areas	Preferred nesting habitats are usually on relatively soft substrates such as sand or fine gravel that allow turtles to easily dig their nests and are located in open, sunny areas. Best nesting habitat is close to water and away from roads, decreasing mortality and sites less prone to loss of eggs by predation from skunks, raccoons and other animals.	Overburden in and adjacent to the project location is thin (150 mm to 600 mm) and composed of silty clay. Appropriate nesting substrate is minimal and associated with roads.	Representative Photos 9 and 12	Turtle Nesting Habitat	✓	---	---	No natural nesting substrates were found within the project location.	---	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Turtle Overwintering Areas - TOA 1	Permanent water bodies, large wetlands, bogs or fens with adequate dissolved oxygen. Associated with ELC ecosites MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1 SAM1, SAF1, BOO1 and FEO1.	This unit contains 37.8 ha of contiguous Cattail Mineral Shallow Marsh, White Cedar-Conifer Coniferous Swamp, Poplar Deciduous Swamp, Poplar-Conifer Mixed Swamp and Willow Mineral Deciduous Thicket Swamp habitat with permanent deep water areas (Figure 4 and 10). Deciduous woodland and hardwood mixed forest characterize adjacent lands. A tributary of Perch Creek connects this unit to TOA 2 along Guida's Sideroad.	Representative Photos 9 and 12	Turtle Overwintering Habitat	---	✓	---	The habitat structure and deeper open water area make this wetland suitable for turtle overwintering.	Turbine 40, Feeder Line and Access Road	15 m from Feeder Line
Turtle Overwintering Areas - TOA 2	Permanent water bodies, large wetlands, bogs or fens with adequate dissolved oxygen. Associated with ELC ecosites MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1 SAM1, SAF1, BOO1 and FEO1.	This unit contains 16.3 ha of Reed Canary Grass Mineral Shallow Marsh, White Cedar-Hardwood Mixed Swamp with permanent deep water areas (Figure 4 and 10). Hardwood mixed forest characterizes adjacent land. A tributary of Perch Creek connects this unit to TOA 1 to the south.	Representative Photos 9 and 12	Turtle Overwintering Habitat	---	✓	---	Suitable habitat represented by marsh and swamp ELC ecosites with deep open water areas observed.	Feeder Line	20 m from Feeder Line
Turtle Overwintering Areas - TOA 3	Permanent water bodies, large wetlands, bogs or fens with adequate dissolved oxygen. Associated with ELC ecosites MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1 SAM1, SAF1, BOO1 and FEO1.	This unit contains 31.6 ha of White Cedar-Hardwood Mixed Swamp and Willow Mineral Deciduous Thicket Swamp habitat with permanent deep water areas (Figure 4 and 10). Open pasture, Alvar, deciduous forest and hardwood mixed forest characterize adjacent land.	Representative Photos 9 and 12	Turtle Overwintering Habitat	---	✓	---	Suitable habitat represented by marsh and swamp ELC ecosites with deep open water areas observed.	Feeder Line and Access Road	25 m from Feeder Line

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Turtle Overwintering Areas - TOA 4	Permanent water bodies, large wetlands, bogs or fens with adequate dissolved oxygen. Associated with ELC ecosites MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1 SAM1, SAF1, BOO1 and FEO1.	This unit contains 29.3 ha of White Cedar-Hardwood Mixed Swamp habitat with permanent deep water areas (Figure 4 and 10). Deciduous forest, Alvar, mixed swamp, open pasture and hardwood mixed forest characterize adjacent land.	Representative Photos 9 and 12	Turtle Overwintering Habitat	---	✓	---	Suitable habitat represented by swamp ELC ecosites with deep open water areas observed.	Feeder Line	15 m from Feeder Line
Turtle Overwintering Areas - TOA 5	Permanent water bodies, large wetlands, bogs or fens with adequate dissolved oxygen. Associated with ELC ecosites MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1 SAM1, SAF1, BOO1 and FEO1.	This unit contains 74.4 ha of Cattail Mineral Shallow Marsh, White Cedar-Conifer Coniferous Swamp, Poplar Deciduous Swamp, White Cedar-Hardwood Mixed Swamp with permanent deep water areas (Figure 4 and 10). Open pasture, treed woodland and hardwood mixed forest characterize adjacent lands. A tributary of Perch Lake flows through this unit connecting to TOA 7.	Representative Photos 9 and 12	Turtle Overwintering Habitat	---	✓	---	Suitable habitat represented by swamp ELC ecosites with deep open water areas observed.	Turbine 23, Feeder Line and Access Road	10 m from Feeder Line
Turtle Overwintering Areas - TOA 6	Permanent water bodies, large wetlands, bogs or fens with adequate dissolved oxygen. Associated with ELC ecosites MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1 SAM1, SAF1, BOO1 and FEO1.	Perch Lake represents 186.7 ha of contiguous, permanent open water habitat surrounded by deciduous and hardwood mixed forest, treed pasture and mixed mineral marsh habitat (Figure 4 and 6). Minimal shoreline and emergent vegetation is present. A tributary of Perch Lake connects this unit to TOA 5.	Representative Photos 9 and 12	Turtle Overwintering Habitat	---	✓	---	Suitable habitat represented by marsh and swamp ELC ecosites with deep open water areas observed.	Feeder Line	85 m from Feeder Line

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Sites Supporting Area-Sensitive Species: Forest Birds - FB1	Most significant forest stands should contain at least 10 ha of interior forest excluding at least a 200 m buffer around the forest interior. Sites with abundant large, mature trees are more significant. Forests comprised of mainly closed canopy of large trees and a variety of vegetation layers tend to support a greater diversity of species due to the broad range of habitats provided. Minimum forest habitat is at least 100 m away from any edge habitat.	This unit contains 525.7 ha of interior Fresh – Moist Spruce Fir – Hardwood Mixed Forest habitat (Figure 4 and 13).	Representative Photo 3	Breeding bird habitat	---	✓	---	Mid-aged mixed forest with continuous canopy cover. Large woodland area providing suitable interior habitat.	Turbine 39 and 43; Feeder Line and Access Road	Within project location
Sites Supporting Area-Sensitive Species: Forest Birds - FB2	Most significant forest stands should contain at least 10 ha of interior forest excluding at least a 200 m buffer around the forest interior. Sites with abundant large, mature trees are more significant. Forests comprised of mainly closed canopy of large trees and a variety of vegetation layers tend to support a greater diversity of species due to the broad range of habitats provided. Minimum forest habitat is at least 100 m away from any edge habitat.	This unit contains 581.8 ha of interior Fresh – Moist Spruce Fir – Hardwood Mixed Forest habitat (Figure 4 and 13).	Representative Photo 3	Breeding bird habitat	---	✓	---	Mid-aged mixed forest with some small openings in canopy cover. Large woodland area providing suitable interior habitat.	Feeder Line	Within project location
Sites Supporting Area-Sensitive Species: Forest Birds - FB3	Most significant forest stands should contain at least 10 ha of interior forest excluding at least a 200 m buffer around the forest interior. Sites with abundant large, mature trees are more significant. Forests comprised of mainly closed canopy of large trees and a variety of vegetation layers tend to support a greater diversity of species due to the broad range of habitats provided. Minimum forest habitat is at least 100 m away from any edge habitat.	This unit contains 113.2 ha of interior Fresh – Moist Spruce Fir – Hardwood Mixed Forest habitat (Figure 4 and 13). The forest was identified to be of younger age structure than the larger areas of FB 1 and 2	Representative Photo 3	Breeding bird habitat	✓	---	---	This area is one of the smaller younger aged areas of habitat. Larger units of more representative interior forest habitat are present within the project location. The larger areas have greater potential to support large populations of area-sensitive forest birds with abundant forest age diversity and stratification.	Turbine 17, Feeder Line and Access Road	Within project location

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Sites Supporting Area-Sensitive Species: Forest Birds - FB4	Most significant forest stands should contain at least 10 ha of interior forest excluding at least a 200 m buffer around the forest interior. Sites with abundant large, mature trees are more significant. Forests comprised of mainly closed canopy of large trees and a variety of vegetation layers tend to support a greater diversity of species due to the broad range of habitats provided. Minimum forest habitat is at least 100 m away from any edge habitat.	This unit contains 52.5 ha of interior Fresh – Moist Spruce Fir – Hardwood Mixed Forest habitat (Figure 4 and 13).	Representative Photo 3	Breeding bird habitat	✓	---	---	This area is one of the smaller areas of habitat in the local landscape. Larger units of more representative interior forest habitat are present within the project location. The larger areas have greater potential to support large populations of area-sensitive forest birds with abundant forest age diversity and stratification.	Turbine 11, Feeder Line and Access Road	Within project location
Sites Supporting Area-Sensitive Species: Forest Birds - FB5	Most significant forest stands should contain at least 10 ha of interior forest excluding at least a 200 m buffer around the forest interior. Sites with abundant large, mature trees are more significant. Forests comprised of mainly closed canopy of large trees and a variety of vegetation layers tend to support a greater diversity of species due to the broad range of habitats provided. Minimum forest habitat is at least 100 m away from any edge habitat.	This unit contains 65.9 ha of interior Fresh – Moist Spruce Fir – Hardwood Mixed Forest habitat (Figure 4 and 13).	Representative Photo 3	Breeding bird habitat	✓	---	---	This area is one of the smaller areas of habitat in the local landscape. Larger units of more representative interior forest habitat are present within the project location. The larger areas have greater potential to support large populations of area-sensitive forest birds with abundant forest age diversity and stratification.	Turbine 14, Feeder Line and Access Road	Within project location

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Sites Supporting Area-Sensitive Species: Open Country Breeding Birds - OCBB 1	Large grassland areas are required to be buffered from disturbance and increase the distance between nesting habitats and woody edges as well as nesting potential. Some species require 10 – 30 ha of grassland habitat including Species at Risk. Grasslands with a variety of vegetation structure, density and composition tend to support a greater diversity of nesting bird species.	This unit is a thin linear strip of Open Pasture habitat, has an area of 69ha, and is forested on either side. The area is used seasonally to graze cows (Figure 4 and 14) and observed to be more disturbed than other representative habitat in the project location.	Representative Photo 10	Breeding bird habitat	✓	---	---	This unit is small in size, consisting of a long thin linear strip. Larger units of more representative open country breeding habitat are present within the project location. The larger units have greater potential to support large populations of area-sensitive open country birds by providing more area, less disturbance and reduced predation.	Feeder Line and Access Road	Within project location
Sites Supporting Area-Sensitive Species - Open Country Breeding Birds - OCBB 2	Large grassland areas are required to be buffered from disturbance and increase the distance between nesting habitats and woody edges as well as nesting potential. Some species require 10 – 30 ha of grassland habitat including Species at Risk. Grasslands with a variety of vegetation structure, density and composition tend to support a greater diversity of nesting bird species	This unit contains 68.7 ha of Open Pasture habitat which is used seasonally to graze cows (Figure 4 and 14).	Representative Photo 10	Breeding bird habitat	✓	---	---	This unit is small in size compared with two other extremely large areas of open pasture habitat in the project location. The larger units have greater potential to support large populations of area-sensitive open country birds by providing more area, less disturbance and minimal predation.	Turbine 16 and 29; Feeder Line and Access Road	Within project location

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Sites Supporting Area-Sensitive Species - Open Country Breeding Birds - OCBB 3	Large grassland areas are required to be buffered from disturbance and increase the distance between nesting habitats and woody edges as well as nesting potential. Some species require 10 – 30 ha of grassland habitat including Species at Risk. Grasslands with a variety of vegetation structure, density and composition tend to support a greater diversity of nesting bird species.	This unit contains 375.6 ha of Open Pasture habitat, which is used seasonally to graze cows (Figure 4 and 14).	Representative Photo 10	Breeding bird habitat	---	✓	---	One of the largest units containing suitable habitat for open country breeding bird species in the project location. Minimal disturbance.	Turbine 34, Feeder Line, and Access Road	85 m from Turbine 34
Sites Supporting Area-Sensitive Species - Open Country Breeding Birds - OCBB 4	Large grassland areas are required to be buffered from disturbance and increase the distance between nesting habitats and woody edges as well as nesting potential. Some species require 10 – 30 ha of grassland habitat including Species at Risk. Grasslands with a variety of vegetation structure, density and composition tend to support a greater diversity of nesting bird species.	This unit contains 1071.2 ha of Open Pasture habitat, which is used seasonally to graze cows (Figure 4 and 14).	Representative Photo 10	Breeding bird habitat	---	✓	---	One of the largest units containing suitable habitat for open country breeding bird species in the project location. Minimal disturbance.	Turbine 5, 6, 9, 10, 13, 15, 19 and 20; Feeder Line and Access Road	Within project location
Sites Supporting Area-Sensitive Species - Open Country Breeding Birds - OCBB 5	Large grassland areas are required to be buffered from disturbance and increase the distance between nesting habitats and woody edges as well as nesting potential. Some species require 10 – 30 ha of grassland habitat including Species at Risk. Grasslands with a variety of vegetation structure, density and composition tend to support a greater diversity of nesting bird species.	This unit contains 59 ha of Open Pasture habitat, which is used seasonally to graze cows (Figure 4 and 14).	Representative Photo 10	Breeding bird habitat	✓	---	---	This is the smallest unit of potential habitat and is again long and thin with no interior habitat. Larger units of more representative open country breeding habitat are present within the project location. The larger units have greater potential to support large populations of area-sensitive open country birds by providing more area, less disturbance and minimal predation.	Access Road	Within project location
HABITAT OF SPECIES OF CONSERVATION CONCERN										

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Northern Long-eared Bat	Hibernates during winter in mines or caves; during summer males roost alone and females form maternity colonies of up to 60 adults; roosts in houses, manmade structures but prefers hollow trees or under loose bark; hunts within forests, below canopy	Young to mid-aged woodland areas found throughout the project location but with a very low density (14) of cavity trees found sparsely throughout the project location.	Representative Photos 2 and 3	Habitat for Species of Conservation Concern	✓	---	---	Cavity and exfoliated trees are sparse within the project location and not considered to be present in an appropriate density to provide this type of habitat.	---	---
Monarch	Breeding habitat is confined to where milkweeds grow since these leaves are the sole food source for caterpillars. Milkweed grows in meadows in farmlands, roadsides and in ditches, arid valleys and south-facing hillsides. Adults require nectar from Milkweed as well as other wildflowers as well; typically Goldenrods, Asters, Purple Loosestrife and various Clover species ¹ .	No large concentration areas of Milkweed were located in the project location or adjacent areas. Although not abundant, roadsides contained more Milkweed occurrences than in other areas.	---	Habitat for Species of Conservation Concern	✓	---	---	No concentration areas were noted within the project location.	---	---
Northern Shrike	Nests in taiga habitat and at the border of taiga and tundra, in open country with medium or tall trees or shrubs. Winters in open country habitat with tall perches, including shrubby fields, wetlands and forest edges. Feeds on small birds, mammals and insects ² .	Open country, shrub, wetland and forest edge habitat found within the project location (Figure 4).	---	Habitat for Species of Conservation Concern	---	✓	---	Candidate winter habitat is found within and adjacent to the project location.	---	---
Rough-legged Hawk	Nests primarily in tundra habitat adjacent to the Hudson Bay coast. Nests in sparsely treed areas such as large bogs and other openings. During migration open agricultural lands are preferred. In the winter, this hawk inhabits open country and marsh habitat. Preferred night roosts are tall conifers, particularly Norway Spruce or White Cedar but small clumps of deciduous trees may also be used. Highly dependent on the Meadow Vole; abundance depends on local populations ³ .	Open pasture and forest habitat found within the project location (Figure 4).	---	Habitat for Species of Conservation Concern	---	✓	---	Candidate open pasture and adjacent forest habitat have the potential to provide wintering feeding and roosting habitat. This habitat may also be used during migration from time to time. This species is also covered under Raptor Winter Feeding and Roosting Areas.	---	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Short-eared Owl	Grasslands, open areas or meadows that are grassy or bushy; marshes, bogs or tundra; both diurnal and nocturnal habits; ground nester; destruction of wetlands by drainage for agriculture is an important factor in the decline of this species; home range 25 - 125 ha; requires 75 - 100 ha of contiguous open habitat.	Large areas of open pasture with a mix of forest and wetland area habitat found within and adjacent to the project location (Figure 4).	---	Habitat for Species of Conservation Concern	---	✓	---	Candidate habitat for this species is present within the project location.	---	---
Bald Eagle	Require large continuous area of deciduous or mixed woods around large lakes, rivers; require area of 255 ha for nesting, shelter, feeding, roosting; prefer open woods with 30 to 50% canopy cover; nest in tall trees 50 to 200 m from shore; require tall, dead, partially dead trees within 400 m of nest for perching; sensitive to toxic chemicals.	Small lake (Perch Lake) and woodland areas present throughout the project location (Figure 4).	---	Habitat for Species of Conservation Concern	✓	---	---	No stick nests were observed. Open water in the project location freezes in winter. Larger areas of suitable habitat exist in the areas associated with the shorelines of Lake Huron.	---	---
Black Tern (Marsh Breeding Bird Habitat)	Marsh bird breeding habitat is associated with wetlands containing shallow water with emergent aquatic vegetation. wetlands, coastal or inland marshes; large cattail marshes, marshy edges of rivers, lakes or ponds, wet open fens, wet meadows; returns to same area to nest each year in loose colonies; must have shallow (0.5 to 1 m deep) water and areas of open water near nests; requires marshes >20 ha in size; feeds over adjacent grasslands for insects; also feeds on fish, crayfish and frogs.	Wetlands in the project location are primarily swamp and thickets (Figure 4). The limited emergent vegetation wetlands that do occur (e.g. cattail marshes) are limited in size and do not have any extended portion of open water area associated with them.	Representative Photos 4-10 and 12.	Breeding bird habitat; Habitat for Species of Conservation Concern	✓	---	---	No candidate wildlife habitat occurs as wetland units are not large enough nor contain appropriate vegetation to support the requirements of Black Tern. Perch Lake does not provide large areas of emergent vegetation along its shoreline.	---	---
Canada Warbler	An interior forest species; dense, mixed coniferous, deciduous forests with closed canopy, wet bottomlands of cedar or alder; shrubby undergrowth in cool moist mature woodlands; riparian habitat; usually requires at least 30 ha.	Multiple areas of interior forest habitat is found within the project location (Figure 4 and 13)	---	Habitat for Species of Conservation Concern	---	✓	---	Species has been observed during site investigations in the project location. This species also falls under Sites Supporting Area-Sensitive Species: Forest Birds.	---	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Common Nighthawk	Open ground; clearings in dense forests; ploughed fields; gravel beaches or barren areas with rocky soils; open woodlands; flat gravel roofs.	Open Pasture, Meadow and Forest habitat found within project location (see Figure 4).	---	Habitat for Species of Conservation Concern	---	✓	---	Species has been observed during site investigations in the project location. Suitable habitat is present and has the potential to support this species during its life cycle. This species also falls under Sites Supporting Area-sensitive Species: Open Country Breeding Birds.	---	---
Olive-sided Flycatcher	Semi-open, conifer forest, prefers spruce; near pond, lake or river; treed wetlands for nesting; burns with dead trees for perching.	Coniferous forest, ponds, lakes, rivers as well as treed wetlands are located within the project location (Figure 4)	---	Habitat for Species of Conservation Concern	---	✓	---	This species has not been observed during site investigations but suitable habitat does exist within the project location.	---	---
Red-headed Woodpecker	Open, deciduous forest with little understory; fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; feeds on insects and stores nuts or acorns for winter; loss of habitat is limiting factor; requires cavity trees with at least 40 cm dbh; require about 4 ha for a territory.	Deciduous forest, fields, open pasture and swamps are located within the project location (Figure 4)	---	Habitat for Species of Conservation Concern	---	✓	---	This species has not been observed during site investigations but suitable habitat does exist within the project location.	---	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Red-necked Grebe	Permanent freshwater lakes with a fringe of aquatic emergent vegetation; marshes, impoundments or sewage lagoons with > 4 ha of open water; protected marshy areas or bays in larger lakes; nest greatly affected by wave action of boats and other human disturbances.	Open water area within Perch Lake is located within the project location (Figure 4).	---	Habitat for Species of Conservation Concern	✓	---	---	This species was not observed during site investigations and habitat for this species is found along the North Channel of Lake Huron where high concentrations of this species have been documented.	---	---
Horned Grebe	Deep water marshes or sloughs with a mix of open water, emergent vegetation; small freshwater ponds or protected bays of larger lakes with emergent vegetation; territories are about 1 ha, but birds are very territorial.	Wetlands with open water and Perch Lake are found within the project location.	---	Habitat for Species of Conservation Concern	✓	---	---	This species was not observed during site investigations. Perch lake and small wetland areas are located within the project location. Most wetlands have high amounts of vegetation and less open water. Larger areas of high quality habitat are found along the North Channel of Lake Huron.	---	---
Lapland Longspur	Breeds in the high arctic tundra in wet meadows, grassy tussocks and scrub habitat. Migration and winter habitat consists of plowed fields, stubble and open grasslands ² .	Open pasture and meadow is found within the project location.	---	Habitat for Species of Conservation Concern	✓	---	---	This breeding range of this species is not overlap with the project location.	---	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Long-tailed Duck	Ontario breeding habitat is restricted to tundra habitat along the Hudson Bay coast. Migration occurs through Southern Ontario from early March until the end of May as well as mid-September to early December. Migration routes typically align with major river corridors. During migration this species inhabits large, deep, open water habitat; the lower Great Lakes act as primary staging areas. During the winter, this species is found almost exclusively on the Great Lakes (mainly Lake Ontario) in open areas well out from shore and may return to the same wintering area each year ³ .	Perch Lake represents the largest open water habitat in the project location.		Habitat for Species of Conservation Concern	✓	---	---	Perch Lake represents a very small habitat in comparison to the abundant high quality habitat which is present in the larger landscape and associated with Lake Huron.		
Great Black-backed Gull	Flat rocky coastal islands, moorlands, rocky beaches, cliffs; nest is solitary or in small (rarely large) colonies.	---		Habitat for Species of Conservation Concern	✓	---	---	Suitable habitat for this species is not found within the project location.	---	---
Caspian Tern	Open habitat near large lakes or rivers, beaches, shorelines, rocky or sandy beaches, offshore islands; negatively affected by elevated water levels during nesting season; feeds on fish; found in association with Ring-billed Gulls.	Open water habitat found within Perch Lake (Figure 5).		Habitat for Species of Conservation Concern	✓	---	---	Perch Lake represents a very small habitat in comparison to the abundant high quality habitat which is present in the larger landscape and associated with Lake Huron.	---	---
Common Snapping Turtle	Permanent, semi-permanent fresh water; marshes, swamps or bogs; rivers and streams with soft muddy banks or bottoms; often uses soft soil or clean dry sand on south-facing slopes for nest sites; may nest at some distance from water; often hibernate together in groups in mud under water; home range size ~28 ha.	Permanent water areas found within wetland habitat and Perch Lake (Figure 5).	Representative Photos 4-10 and 12.	Habitat for Species of Conservation Concern	---	✓	---	Candidate Snapping Turtle overwintering and foraging habitat was observed during Site Investigations.	---	---
Cooper's MilkVetch	Found in open woods, frequently on limestone plains. Associated with Alvars, riparian areas, woodlands and woodland edges. This species is indicative of Alvar habitats in southern Ontario.	Multiple units of Common Juniper Shrub Alvar and woodland edges occur in the project location (see Figure 4).	Representative Photo 1	Habitat for Species of Conservation Concern	---	✓	---	Cooper's Milkvetch was observed during site investigations in the area of Turbine 30.	Turbine 30	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
Slender Blazing Star	Found on limestone and dolostone pavement, prairies and open woods. Associated with Alvars, prairie/grassland, savannah and woodland habitat.	Multiple units of Common Juniper Shrub Alvar located in project location (see Figure 4). Woodland habitat is found throughout the project location.	Representative Photos 1-3.	Habitat for Species of Conservation Concern	---	✓	---	Slender Blazing Star was observed during site investigations along Harbour View Road.	Transmission Line	---
Green Arrow-arum	Found in shallow waters in streams, rivers and marshes. Associated with Alvars, aquatic and wetland habitat.	Several watercourses, marsh habitat and alvars are found within the project location (see Figure 4).	Representative Photos 1, 4-9.	Habitat for Species of Conservation Concern	---	✓	---	Green Arrow-arum was not located during site investigations but appropriate habitat is known to exist in areas adjacent to project location.	---	---
Houghton's Flat Sedge	Found in dry open sandy areas. Associated with dunes (sand) and shorelines.	---	---	Habitat for Species of Conservation Concern	✓	---	---	No dry open sandy areas are found within the project location to support this species.	---	---
Grooved Yellow Flax	Habitat consists of prairies and dry, sandy open sites. Associated with prairies/grasslands and savannah.	---	---	Habitat for Species of Conservation Concern	✓	---	---	No dry open sandy areas are found within the project location to support this species.	---	---
Clustered Broomrape	Habitat consists of shallow soil over limestone. Associated with Alvars.	Multiple units of Common Juniper Shrub Alvar located in project location (see Figure 4).	Representative Photo 1	Habitat for Species of Conservation Concern	---	✓	---	Clustered Broomrape was not located during site investigations but appropriate habitat is known to exist in areas adjacent to project location.	---	---
Prairie Dropseed	Habitat consists of moist to dry limestone plains and calcareous shores. Associated with Alvars and prairie/grassland. This species is indicative of Alvar habitats in southern Ontario.	Multiple units of Common Juniper Shrub Alvar located in project location (see Figure 4).	Representative Photo 1	Habitat for Species of Conservation Concern	---	✓	---	Prairie Dropseed was not located during site investigations but appropriate habitat is known to exist in areas adjacent to project location.	---	---

Wildlife Habitat	Attributes*	Composition		Function	Status			Rationale for Status	Project Components within 120 m	Distance to Nearest Project Component
		Condition of Habitat	Photo Record (Appendix D)		Not Applicable	Candidate	Previously Evaluated			
A Moss (Recurved Hypnum Moss)	Calcareous soils typically found on relatively plane surfaces of cliffs or boulders particularly where humidity is persistent ⁴ .	---	---	Habitat for Species of Conservation Concern	✓	---	---	Suitable habitat for this species is not found within the project location. This species was not observed during vegetation surveys.	---	---
ANIMAL MOVEMENT CORRIDORS										
Amphibians	Amphibian movement corridors relate to mixes of wetland, woodland and water bodies specific to the significant breeding habitat of listed amphibian species. Large areas of uninterrupted natural habitat between wetland habitats provide suitable potential amphibian movement corridors within the project location (Figure 10).	Wetland, woodland and waterbodies found within the project location (see Figure 5).	Representative Photos 2-9	Vegetative cover	✓	---	---	Suitable amphibian habitat is found in continuous stretches within the project location.	---	---

*Based on Significant Wildlife Habitat Technical Guide, MNR 2000; ¹COSEWIC 2010; ²Cornell University 2011; ³Sandilands, Al. 2005; ⁴Schofield 2006

9.6.1 Species of Conservation Concern

Species of Conservation Concern were identified according to the definition provided in the Significant Wildlife Habitat Technical Guide (MNR 2000) with exception to species that have been identified as *Threatened* and *Endangered* species in Ontario. Therefore, species listed in **Appendix E** with an SRANK of S1, S2 or S3, *Special Concern* in Ontario or only have a status of Threatened or Endangered federally, denote species of conservation concern. Relevant Species of Conservation Concern are discussed in **Table 7** above. Reporting related to the protection of Ontario species at risk is being provided to the appropriate agency under separate cover.

9.6.1.1 Vascular Plant and Bryophyte Diversity

Using readily available secondary source information, **Table 8** outlines the provincially rare plant species that have been determined as potentially occurring in or adjacent to the project location. The only available records pertaining to vascular plant and bryophyte diversity were those available through a search of the MNR's NHIC database. During the site investigations of the project location and 120 m setback areas, Slender Blazing Star (*Liatris cylindrica*) was observed in association with the Alvar 4 community located on Lot 22, Con 12, east of Highway 6. Additionally, Cooper's Milkvetch (*Astragalus neglectus*), which has a provincial conservation rank of S3, was observed in the Fresh-Moist Spruce/Fir-Hardwood Mixed Forest community in proximity to Turbine 30. A complete list of species encountered, including the status of individual species, is presented in **Appendix E, Table E1**. Species nomenclature is based on the Ontario Plant List (Newmaster *et al.* 1998).

Table 8: Vascular Plants and Bryophytes of Conservation Concern with Potential to Occur in the Project Location and Surrounding 120 metres

Common Name	Scientific Name	Conservation Status			Observed During Site Investigation		Associated Habitat	Project Components within 120 m
		SRank	ESA, 2007	SARA	Present	Non-detect		
Wallrue spleenwort	<i>Asplenium ruta-muraria</i>	S2	---	---	---	✓	Cliffs, rock outcroppings and talus slopes	---
Green Arrow-arum	<i>Peltandra virginica</i>	S2	---	---	---	✓	Alvar, aquatic and wetlands	Turbine 23, 30 and 40; Feeder Lines, Access Roads and Transmission Line
Houghton's Flat Sedge	<i>Cyperus houghtonii</i>	S3	---	---	---	✓	Dunes (sand) and shorelines	---
Slender Blazing Star	<i>Liatris cylindracea</i>	S3	---	---	✓	---	Alvars, prairie and grassland, savannahs and woodlands.	Turbines 5,, 6, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 30, 31, 38, 39, 40, 42 and 43; Feeder Lines, Access Roads and Transmission Line
Grooved Yellow Flax	<i>Linum sulcatum</i>	S3	---	---	---	✓	Prairie/grasslands and savannahs	---
Clustered Broomrape	<i>Orobanche fasciculata</i>	SH	---	---	---	✓	Alvars	Feeder Line and Transmission Line
Prairie Dropseed	<i>Sporobolus heterolepis</i>	S3	---	---	---	✓	Alvars and prairie/grassland	Turbines 5, 6, 9, 10, 13, 15, and 16; Feeder Lines, Access Roads and Transmission Line
A Moss	<i>Hypnum recurvatum</i>	S1	---	---	---	✓	Cliffs and boulders	---
Cooper's Milkvetch	<i>Astragalus neglectus</i>	S3	---	---	✓	---	Alvars, riparian, woodlands and woodland edges	Turbines 11, 12, 14, 17, 18, 19, 20, 21, 30, 31, 38, 39, 40, 42 and 43; Access Roads, Feeder Lines and Transmission Line.

9.6.1.2 *Vegetation Communities of Conservation Concern*

A search and analysis of the records and resources researched during the Records Review Report did not identify any known vegetation communities of conservation concern in the project location or within the surrounding 120 m. This search included sand barrens, savannahs, tallgrass prairies and alvars. As discussed above, areas of Common Juniper Shrub Alvar were observed in the project location and adjacent areas during the site investigation. This community can be found in less disturbed areas of the project location that are not used intensively for pasture. Common Juniper Shrub Alvar is considered a rare vegetation community according to Appendix M of the Significant Wildlife Habitat Technical Guide (MNR 2000). No additional rare vegetation communities or communities of conservation concern were identified in the project location.

9.6.1.3 *Bird Species of Conservation Concern*

The Records Review indicated the potential for 17 bird species of conservation concern to occur in the project study area. During a variety of site investigations during 2004 - 2011, several bird species of conservation concern were observed. These include:

- Northern Shrike (S2S3B, SZN);
- Rough-legged Hawk (S1B, SZN);
- Short-eared Owl (SC provincially);
- Bald Eagle (SC provincially);
- Canada Warbler (SC provincially); and
- Common Nighthawk (SC provincially)

A single northern shrike (*Lanius excubitor*) was observed in October 2009 around Perch Lake during migration season. Two rough-legged hawks were observed during fall 2004. One observation of rough-legged hawk was made during a spring site visit along McLean's Mountain Road, approximately 1 km north of Greenbush Road. This species was not observed within the project location. Two Short-eared owls were first observed on McLean's Mountain in the winter of 2010. Additional observations were made in April and May 2011 of

a single individual along McLean's Mountain Road, approximately 1 km north of Greenbush Road in association with Open Country Breeding Bird 4. Bald eagles were observed during fall 2004 and spring 2005 site investigations. Two individuals were observed in 2004 and 5 were observed in 2005 circling high above the east end of the project location.

Canada warbler was observed in the summer of 2008 and 2010 in the project location. Observations were associated with habitat along Guida's Sideroad, west of Sideroad 20 in open cedar/mixed forest habitat and in association with Sites Supporting Area-Sensitive Species: Forest Birds 2. Two individuals were observed in 2008 during Breeding Bird Surveys in association with Sites Supporting Area-sensitive Species: Forest Birds 2 beaver pond/swamp habitat. Five individuals were observed in 2010 during Breeding Bird Surveys in open areas near Turbine 25, Turbine 36, and in association with Open Country Breeding Bird Habitat 4. An individual species was observed in May 2011 in the wetland along Guida's Sideroad as well as open habitat along McLean's Mountain Sideroad approximately 1 km north of Greenbush Road in association with Open Country Breeding Bird 4.

See **Table 7** for a discussion of species status and habitat. A complete list of species with potential to occur, or that were observed to occur in the project location during site investigations are available in **Appendix E, Table E2**.

9.6.1.4 *Mammal Species of Conservation Concern*

The Records Review indicated the potential for 1 mammal species of conservation concern to occur in the project study area. During the site investigation a total of 4 suspected calls of northern long-eared bat (S3) were detected during the monitoring period. Besides this bat, no other mammal species of conservation concern were observed in or near the project location during the site investigation. A complete list of species is available in **Appendix E, Table E2**.

9.6.1.5 *Herpetozoa Species of Conservation Concern*

The Records Review identified two herptile species of conservation concern that have the potential to occur in the area of the project location; common snapping turtle and eastern milksnake, both listed provincially as *Special Concern*. Four individual common snapping turtles (*Chelydra serpentina*) were observed during site investigation work. Eastern milksnake

(*Lampropeltis triangulum triangulum*) was not observed. The habitat of the common snapping turtle is considered as candidate wildlife habitat as this species is listed as federally and provincially of *Special Concern* and has a provincial conservation rank of S3. Besides common snapping turtle, all herpetozoa species observed during fieldwork are considered common and secure in Ontario. A complete list of herptile species is available in **Appendix E, Table E2**.

9.6.1.6 *Invertebrate Species of Conservation Concern*

The Records did not indicate the potential presence of invertebrate species of conservation concern to occur in the project study area. However, one invertebrate species of conservation concern was observed in low numbers during fieldwork, the monarch butterfly (*Danaus plexippus*). This species is listed as federally and provincially of *Special Concern*. A complete list of invertebrate species is available in **Appendix E, Table E2**.

10. Summary of Amendments to the Records Review

Based on the results of the site investigations, ten previously unidentified wetlands units were delineated within 120 m of the project location including wetland units 2-6 and 8-12. In addition, two previously identified unevaluated wetlands required an adjustment to their boundaries (units 1 and 7; see **Figure 5**). Further, several candidate significant wildlife habitats have been added as potentially occurring within the 120 m of the project location and two potential significant wildlife habitats identified in the records review report have been discounted as not occurring within 120 m of the project location. Several species of conservation concern have been identified as occurring in the project location or immediate areas. Five occurrences of the rare Common Juniper Shrub Alvar community were observed during site investigations.

Table 9 identifies any necessary corrections to the determinations made during the Records Review Report, including the addition of natural features, the absence of natural features identified during the records review and the amendments to boundaries of all natural features located within 120 m of the project location.

Table 9: Summary of Amendments to the Records Review

Natural Feature ID	Identified During Records Review?	Amendment to Records Review Required?	Source of Information for Amendment	Change in Distance Relative to Project Location?	Summary of Amendments
Provincial Parks and Conservation Reserves					
Not applicable to project location					
ANSI, Life Science					
Not applicable to project location					
ANSI, Earth Science					
Not applicable to project location					
Valleylands					
Not applicable to project location					
Wetlands					
1	✓	✓	Site Investigation	✓	Changes to previous wetland boundary delineation
2	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
3	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
4	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
5	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
6	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
7	✓	✓	Site Investigation	✓	Changes to previous wetland boundary delineation
8	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
9	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
10	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
11	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
12	☒	✓	Site Investigation	✓	Wetland unit identified and boundary delineated
Wildlife Habitat					
Seasonal Concentration Areas					
Waterfowl Stopover and Staging Areas (Important Bird Area)	✓	✓	Site investigation	✓	Not present within 120 m of project location. Boundary is more appropriately within the North Channel of Lake Huron.

Natural Feature ID	Identified During Records Review?	Amendment to Records Review Required?	Source of Information for Amendment	Change in Distance Relative to Project Location?	Summary of Amendments
Waterfowl Nesting Areas (WNA 1 – 5)	<input checked="" type="checkbox"/>	✓	Site Investigation	✓	Candidate Significant Wildlife Habitat
Raptor Winter Feeding and Roosting Area (RWFR 1 – 5)	<input checked="" type="checkbox"/>	✓	Site Investigation	✓	Candidate Significant Wildlife Habitat
Bullfrog Concentration Areas (BCA 1 – 7)	<input checked="" type="checkbox"/>	✓	Site Investigation	✓	Candidate Significant Wildlife Habitat
Rare Vegetation Communities					
Alvar (ALV 1 – 5)	<input checked="" type="checkbox"/>	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Specialised Wildlife Habitat					
Woodland Amphibian Breeding Habitat (WABH 1 – 9)	<input checked="" type="checkbox"/>	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Osprey Nesting site	✓	✓	Site investigation	✓	Not present within 120 m of project location
Sandhill Crane Nesting Site	✓	✓	Site investigation	✓	Not present within 120 m of project location
Turtle Over-Wintering Areas (TOA 1 – 7)	<input checked="" type="checkbox"/>	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Sites Supporting Area-sensitive Species: Forest Birds (FB 1 – 5)	<input checked="" type="checkbox"/>	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Sites Supporting Area-sensitive Species: Open Country Breeding Birds (OCBB 1 – 5)	<input checked="" type="checkbox"/>	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Habitat of Species of Conservation Concern					
Northern Shrike	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Rough-legged Hawk	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Short-eared Owl	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Black Tern	✓	✓	Site investigation	✓	None
Bald Eagle	✓	✓	Site investigation	✓	None
Canada Warbler	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Common Nighthawk	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Long-tailed Duck	✓	✓	Site investigation	✓	None
Horned Grebe	✓	✓	Site investigation	✓	None
Red-necked Grebe	✓	✓	Site investigation	✓	None

Natural Feature ID	Identified During Records Review?	Amendment to Records Review Required?	Source of Information for Amendment	Change in Distance Relative to Project Location?	Summary of Amendments
Great Black-backed Gull	✓	✓	Site investigation	✓	None
Caspian Tern	✓	✓	Site investigation	✓	None
Red-headed Woodpecker	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Olive-sided Flycatcher	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Lapland Longspur	✓	✓	Site investigation	✓	None
Cooper's Milkvetch	---	✓	Site investigation	✓	10 m from Turbine 30; Candidate Significant Wildlife Habitat
Wallrue Spleenwort	✓	✓	Site investigation	✓	None
Green Arrow-arum	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Houghton's Flat Sedge	✓	✓	Site investigation	✓	None
Slender Blazing Star	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Grooved Yellow Flax	✓	✓	Site investigation	✓	None
Clustered Broomrape	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Prairie Dropseed	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
A Moss	✓	✓	Site investigation	✓	None
Common Snapping Turtle	✓	✓	Site investigation	✓	Candidate Significant Wildlife Habitat
Eastern Milksnake	✓	✓	Site investigation	✓	None
Northern Long-eared Bat	✓	✓	Site investigation	✓	None
Monarch	✓	✓	Site investigation	✓	None

11. Conclusions

This report is intended to fulfill requirements for the Site Investigation Report under *Ontario Regulation 359/09*. Based on the results of the site investigations, this report identified the accuracy of the records review, the addition of any previously unidentified natural features, the boundaries of natural features located within 120 m of the project location, and the distance of the natural feature from the project location.

This site investigation report is the second report in a series that will fulfill the natural heritage assessment component of the *REA* process. Applicable natural features identified in **Table 10** will be evaluated for their significance in the Evaluation of Significance Report.

Table 10: Identified Natural Features within 120 m of the Project Location

Natural Feature ID	Feature in Relation to Project Location		Evaluation of Significance Status		
	Within	Within Prescribed Setback	Requires Evaluation	Previously Evaluated	Evaluation Not Required
PROVINCIAL PARKS AND CONSERVATION RESERVES					
Not applicable to project location					
ANSI, LIFE SCIENCE					
Not applicable to project location					
ANSI, EARTH SCIENCE					
Not applicable to project location					
VALLEYLANDS					
Not applicable to project location					
WETLANDS					
1	---	✓	✓	---	---
2	---	✓	✓	---	---
3	---	✓	✓	---	---
4	---	✓	✓	---	---
5	---	✓	✓	---	---
6	---	✓	✓	---	---
7	---	✓	✓	---	---
8	---	✓	✓	---	---
9	---	✓	✓	---	---

Natural Feature ID	Feature in Relation to Project Location		Evaluation of Significance Status		
	Within	Within Prescribed Setback	Requires Evaluation	Previously Evaluated	Evaluation Not Required
10	---	✓	✓	---	---
11	---	✓	✓	---	---
12	✓	✓	✓	---	---
CANDIDATE WILDLIFE HABITAT					
<i>Seasonal Concentration Areas</i>					
Waterfowl Nesting Area – WNA 1	✓	✓	✓	---	---
Waterfowl Nesting Area – WNA 2	✓	✓	---	---	✓
Waterfowl Nesting Area – WNA 3	✓	✓	---	---	✓
Waterfowl Nesting Area – WNA 4	✓	✓	✓	---	---
Waterfowl Nesting Area – WNA 5	---	✓	✓	---	---
Raptor Wintering Feeding and Roosting Area - RWFR 1	✓	✓	---	---	✓
Raptor Wintering Feeding and Roosting Area - RWFR 2	✓	✓	---	---	✓
Raptor Wintering Feeding and Roosting Area - RWFR 3	✓	✓	✓	---	---
Raptor Wintering Feeding and Roosting Area - RWFR 4	✓	✓	✓	---	---
Bullfrog Concentration Area – BCA 1	---	✓	✓	---	---
Bullfrog Concentration Area – BCA 2	---	✓	✓	---	---
Bullfrog Concentration Area – BCA 3	---	✓	✓	---	---
Bullfrog Concentration Area – BCA 4	---	✓	✓	---	---

Natural Feature ID	Feature in Relation to Project Location		Evaluation of Significance Status		
	Within	Within Prescribed Setback	Requires Evaluation	Previously Evaluated	Evaluation Not Required
Bullfrog Concentration Area – BCA 5	---	✓	✓	---	---
Bullfrog Concentration Area – BCA 6	---	✓	✓	---	---
Bullfrog Concentration Area – BCA 7	---	✓	✓	---	---
<i>Rare Vegetation Communities</i>					
Alvar – ALV 1	✓	✓	✓	---	---
Alvar – ALV 2	✓	✓	✓	---	---
Alvar – ALV 3	✓	✓	✓	---	---
Alvar – ALV 4	✓	✓	✓	---	---
Alvar – ALV 5	✓	✓	✓	---	✓
<i>Specialised Wildlife Habitat</i>					
Woodland Amphibian Breeding Habitat – WABH 1	---	✓	✓	---	---
Woodland Amphibian Breeding Habitat – WABH 2	---	✓	✓	---	---
Woodland Amphibian Breeding Habitat – WABH 3	---	✓	✓	---	---
Woodland Amphibian Breeding Habitat – WABH 4	---	✓	✓	---	---
Woodland Amphibian Breeding Habitat – WABH 5	---	✓	✓	---	---
Woodland Amphibian Breeding Habitat – WABH 6	---	✓	✓	---	---
Woodland Amphibian Breeding Habitat – WABH 7	---	✓	✓	---	---
Woodland Amphibian Breeding Habitat – WABH 8	---	✓	✓	---	---

Natural Feature ID	Feature in Relation to Project Location		Evaluation of Significance Status		
	Within	Within Prescribed Setback	Requires Evaluation	Previously Evaluated	Evaluation Not Required
Woodland Amphibian Breeding Habitat – WABH 9	✓	✓	---	---	✓
Turtle Over-Wintering Areas – TOA 1	---	✓	✓	---	---
Turtle Over-Wintering Areas – TOA 2	---	✓	✓	---	---
Turtle Over-Wintering Areas – TOA 3	---	✓	✓	---	---
Turtle Over-Wintering Areas – TOA 4	---	✓	✓	---	---
Turtle Over-Wintering Areas – TOA 5	---	✓	✓	---	---
Turtle Over-Wintering Areas – TOA 6	---	✓	✓	---	---
Turtle Over-Wintering Areas – TOA 7	---	✓	✓	---	---
Sites Supporting Area-Sensitive Species: Forest Birds – FB1	✓	✓	✓	---	---
Sites Supporting Area-Sensitive Species: Forest Birds – FB2	✓	✓	✓	---	---
Sites Supporting Area-Sensitive Species: Forest Birds – FB3	✓	✓	---	---	✓
Sites Supporting Area-Sensitive Species: Forest Birds – FB4	✓	✓	---	---	✓
Sites Supporting Area-Sensitive Species: Forest Birds – FB5	✓	✓	---	---	✓
Sites Supporting Area-Sensitive Species: Open Country Breeding Birds – OCBB 1	✓	✓	---	---	✓
Sites Supporting Area-Sensitive Species: Open Country Breeding Birds – OCBB 2	✓	✓	---	---	✓

Natural Feature ID	Feature in Relation to Project Location		Evaluation of Significance Status		
	Within	Within Prescribed Setback	Requires Evaluation	Previously Evaluated	Evaluation Not Required
Sites Supporting Area-Sensitive Species: Open Country Breeding Birds – OCBB 3	---	✓	✓	---	---
Sites Supporting Area-Sensitive Species: Open Country Breeding Birds – OCBB 4	✓	✓	✓	---	---
Sites Supporting Area-Sensitive Species: Open Country Breeding Birds – OCBB 5	✓	✓	---	---	✓
<i>Habitat of Species of Conservation Concern</i>					
Northern Shrike	---	✓	✓	---	---
Rough-legged Hawk	---	✓	✓	---	---
Short-eared Owl	---	✓	✓	---	---
Bald Eagle	---	✓	✓	---	---
Canada Warbler	---	✓	✓	---	---
Common Nighthawk	---	✓	✓	---	---
Olive-sided Flycatcher	---	✓	✓	---	---
Red-headed Woodpecker	---	✓	✓	---	---
Common Snapping Turtle	---	✓	✓	---	---
Cooper's Milkvetch	---	✓	✓	---	---

Natural Feature ID	Feature in Relation to Project Location		Evaluation of Significance Status		
	Within	Within Prescribed Setback	Requires Evaluation	Previously Evaluated	Evaluation Not Required
Slender Blazing Star	---	✓	✓	---	---
Green Arrow-arum	---	✓	✓	---	---
Clustered Broomrape	---	✓	✓	---	---
Prairie Dropseed	---	✓	✓	---	---

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