

North Kent Wind 1 Project
Natural Heritage Site Investigation Report

Prepared for:
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NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

North Kent Wind 1 Project
Natural Heritage Site Investigation Report

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Pamela Hammer	Project Manager/Biologist
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Report submitted on October 26, 2015



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1.0 Project Description

Natural Resource Solutions Inc. (NRSI) was retained in March 2015 by AECOM, on behalf of North Kent Wind 1 LP, by its general partner, North Kent Wind 1 GP Inc. (North Kent Wind 1), to conduct a Natural Heritage Assessment (NHA) in accordance with the Renewable Energy Approval (REA) Regulation, Ontario Regulation 359/09. This assessment includes a records review, site investigation, evaluation of significance, and environmental impact study of any potentially significant natural features or wildlife habitats at a proposed wind energy generating facility of up to 50 permitted wind turbines, with a nameplate capacity of up to 100 megawatts (MW).

The North Kent Wind 1 Project (Project) is being proposed by North Kent Wind 1. North Kent Wind 1 is a joint venture limited partnership owned by affiliates of Pattern Renewable Holdings Canada ULC (Pattern Development) and Samsung Renewable Energy Inc. (Samsung Renewable Energy). North Kent Wind 1 is proposing to develop the Project north of the City of Chatham in the Municipality of Chatham-Kent, Ontario. The Project Study Area is generally bounded by Oldfield Line to the north, Bear Line Road to the west, Pioneer Line and Pine Line / Darrell Line to the south, and Centre Sideroad and Caledonia Road to the east. The Project will be located primarily on privately owned land with some components (e.g., electrical collector lines) being placed along public right-of-ways, none of which are proposed on provincial Crown land.

According to Ontario Regulation (O. Reg.) 359/09, as amended, and as per the NHA Guide for Renewable Energy Projects (OMNR 2012), the Project Location is defined as "...*a part of land and all or part of any building or structure in, on or over which a person is engaging in or proposes to engage in the project and any air space in which a person is engaging in or proposes to engage in the project*". As described therein, the Project Location boundary is the outer limit of where site preparation and construction activities will occur (i.e., disturbance areas described below) and where permanent infrastructure will be located, including the air space occupied by turbine blades.

In accordance with Section 26 of the REA Regulation, O. Reg 359/09, NRSI has conducted a site investigation to identify any potentially significant natural features and wildlife habitats within 120m of the Project Location. This includes areas within 120m of

proposed turbines, measured from blade tip, as well as within 120m of any areas that may be used as temporary lay-down areas, crane pads, access roads, points of interconnection (POI), operations and maintenance (O&M) buildings, and collection, distribution, and transmission lines. For the purposes of this report, NRSI will refer to the areas within 120m of the Project Location as the 'Project Area'. See Map 1 for an illustration of the Project Area and natural features.

2.0 REA Requirements

Ontario Regulation (O. Reg.) 359/09 – *Renewable Energy Approvals* under *Part V.0.1 of the Act* (herein referred to as the REA Regulation), made under the *Environmental Protection Act*, identifies the requirements for the development of renewable energy projects in Ontario. In accordance with the REA Regulation the North Kent Wind 1 Project is classified as a Class 4 wind facility and is required to complete a REA.

Section 26 of the REA Regulation requires proponents of Class 4 wind projects to undertake a natural heritage site investigation for the purpose of determining:

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

Natural Features are defined in Section 1.1 of the REA Regulation to be all or part of:

- an area of natural and scientific interest (ANSI; life science or earth science),
- a coastal, northern, or southern wetland,
- a wildlife habitat, or
- a woodland.

Subsection 3 of Section 26 of the REA Regulation requires the proponent to prepare a report that includes the following:

1. A summary of any corrections to the report prepared under subsection 25 (3) and the determinations made as a result of conducting the site investigations under subsection (1).
2. Information relating to each natural feature identified in the records review and in the site investigations, including the type, attributes, composition and function of the feature.
3. A map showing:
   a) the boundaries mentioned in clause (1) (c),
   b) the location and type of each natural feature identified in relation to the project location, and
   c) the distance mentioned in clause (1) (d).
4. The dates and times of the beginning and completion of the site investigation.

5. The duration of the site investigation.
6. The weather conditions during the site investigation.
7. A summary of methods used to make observations for the purposes of the site investigation.
8. The name and qualifications of any person conducting the site investigation.
9. Field notes kept by the person conducting the site investigation.

This Natural Heritage Site Investigation Report has been organized and prepared to satisfy the conditions of the requirements outlined above.

As part of this Project, NRSI has considered all aspects relating to provincially Threatened and Endangered species; however, since these species are addressed through a separate permitting process under the *Endangered Species Act* (2007), they have not been discussed within any of the NHA reports. These species will be addressed in full detail, including a description and results of field assessments, potential impacts, and recommended mitigation measures, as part of a separate reporting process to be addressed with the Ministry of Natural Resources and Forestry (MNRF), as required.

3.0 Staff Roles

The requirements of the REA process indicate that the name and qualifications of all staff participating in the site investigation should be included. As a result, the qualifications and roles of key staff participating in the site investigation for the North Kent Wind 1 Project have been outlined below.

Andrew Ryckman, B.Sc.
Andrew is a Senior Terrestrial and Wetland Biologist with more than 9 years of experience working on a variety of environmental projects. He has considerable experience managing Environmental Assessments and NHAs for wind project developments across Canada, with experience including project management, report generation, data analysis, and considerable field monitoring. Andrew specializes in acoustic bat inventories and sonogram analysis, and has working experience with bat monitoring equipment and various bat analysis software. He routinely utilizes analysis software to identify bat species, and has helped create a reference call library using recorded bat calls.

Andrew's role in this project was to act as the project advisor, overseeing all aspects of the NHA, including all associated field work and reporting.

Pamela Hammer, B.Sc.
Pamela is a Terrestrial and Wetland Biologist with more than 4 years of experience in the environmental field. She has managed several renewable energy projects, and routinely participates in and coordinates field investigations and reporting for renewable energy projects throughout Ontario. Pamela has experience mapping vegetation communities, conducting vegetation inventories and wildlife habitat assessments for birds, bats, herpetofauna and mammals. She also has experience conducting tree inventories, risk assessments, implementing integrated pest management practices, and environmental monitoring. Pamela is a Certified Arborist (2011), is qualified as a Tree Risk Assessor (2013), and is certified in the Ecological Land Classification (ELC) System for Southern (2014) and Northeastern Ontario (2011). Pamela is also a certified Butternut Health Assessor (2014). She also has extensive experience with client and agency liaison through her project management involvement.

Pamela's role in this project was to act as the project manager, overseeing all aspects of the NHA, including all associated field work and reporting. She was the main contact point for agency staff and assisted with the preparation of all corresponding reports.

Andrew Dean, B.E.S
Andrew is a Terrestrial and Wetland Biologist with more than 5 years of experience in the environmental industry, working in both the non-profit and private sectors. His areas of expertise include the coordination of, and participation in, a wide variety of biological field surveys including vegetation mapping and vascular plant inventories, acoustic bat monitoring, bat habitat

assessments and post-construction mortality monitoring at wind energy facilities. Andrew is trained and certified in both the ELC system for Southern Ontario (2011) and the Ontario Wetland Evaluation System (OWES) (2012), with considerable experience with tree identification, vegetation community classification, and botanical Species at Risk inventories. Andrew is also a certified Butternut Health Assessor (2014).

Andrew was a lead biologist, conducting ELC mapping, wetland assessments, and wildlife habitat assessment surveys within the Project Area.

Charlotte Moore, M.E.S.
Charlotte is a Terrestrial and Wetland Biologist with more than 5 years of experience in biological monitoring and conducts environmental impact assessments on a variety of project types. Charlotte has completed her Bachelor of Environmental Studies and has a Master of Environmental Studies from the University of Waterloo. Charlotte has managed a variety of environmental projects, and has coordinated numerous types of surveys, including ELC, bat surveys, breeding bird surveys and herpetofauna studies. She is OWES certified (2012) and certified in the ELC system for Southern Ontario (2013). Charlotte has managed numerous wind power projects throughout Ontario and Saskatchewan. She also has extensive experience with client and agency liaison through her project management involvement.

Charlotte was a lead biologist, conducting ELC mapping and wildlife habitat assessment surveys within the Project Area.

Christina Carter, M.E.S.
Christina is a Terrestrial and Wetland Biologist with over 6 years of environmental experience. She regularly manages a variety of environmental projects, including renewable energy projects of both wind and solar facilities. She has experience coordinating field work, attending client and staff meetings, collecting background information and reporting. Christina specializes in bird ecology and has experience coordinating and conducting natural area inventories for birds, bats and other mammals, reptiles, amphibians, and vegetation. Christina is also certified in the ELC system for Southern Ontario (2013).

Christina was a lead biologist, conducting wildlife habitat assessment surveys within the Project Area.

Christy Humphrey, B.E.S.
Christy is a Terrestrial and Wetland Biologist with more than 5 years of environmental consulting experience, working on a variety of project tasks. Her areas of expertise are vegetation mapping and floral inventories, visual and acoustic bat monitoring, and post-construction mortality monitoring; however, she also has experience conducting bird assessments, amphibian studies, and other fauna assessments. Christy is experienced in conducting literature and background reviews, preparing NHAs, Environmental Effects Monitoring Plans, Environmental Impact Studies, and post-construction mortality monitoring reports. She has received training in Eastern Bat Acoustic Field Techniques (Bat Conservation and Management Inc. 2012), and is certified in the ELC system for

Southern (2010) and Northeastern Ontario (2010), as well as OWES certified (2012).

Christy was a lead biologist, conducting ELC mapping, wetland assessments, and wildlife habitat assessment surveys within the Project Area. She also assisted with preparation of the report relating to wetlands.

Lillian Knopf, B.Sc.(Env.)

Lillian is a Terrestrial and Wetland Biologist with over 5 years of experience in the environmental field. She has experience coordinating and conducting field investigations, including surveys of birds, bats, reptiles, amphibians, and vegetation, sampling of benthic invertebrates, phytoplankton, and fish, and terrestrial and aquatic habitat assessments. Lillian has prepared reports for consulting firms, academia, and governmental agencies. She is also a M.Sc. Candidate in biology at the University of Waterloo.

Lillian assisted with the preparation of this report.

Nyssa Clubine, M.Sc. EPt

Nyssa is a Stream Corridor and Environmental Analyst with 5 years of experience in the environmental consulting field. She specializes in surface water drainage assessments and geomorphology. She obtained her Masters of Science from the University of Toronto in fluvial geomorphology and incorporates geomorphological principals with terrestrial and aquatic biology to provide holistic solutions to environmental issues. Nyssa has participated in many different types of environmental studies, including Environmental Impact Studies, aquatic habitat assessments, wildlife habitat assessments for birds, bats, herpetofauna and mammals, as well as post-construction mortality monitoring at wind energy facilities.

Nyssa conducted wildlife habitat assessment surveys within the Project Area.

Patrick Deacon, B.E.S.

Patrick is a Terrestrial and Wetland Biologist with 5 years of environmental consulting experience. He regularly conducts vegetation inventories and community mapping, and specializes in ecological restoration with particular focus on Species At Risk, tallgrass prairie ecosystems, and invasive species management. Pat is certified in the ELC system for Northeastern Ontario (2011) and is OWES certified (2012). Patrick is also a certified Butternut Health Assessor (2014).

Patrick was a lead biologist, conducting ELC mapping, wetland assessments, and wildlife habitat assessment surveys within the Project Area.

Victoria Rawls, B.Sc.

Victoria is a Terrestrial and Wetland Biologist with over one year of environmental consulting experience. She obtained her Bachelor of Science in Geography from Brock University and a Post Graduate Certificate in Environmental Management from Canadore College. She has experience

coordinating field work, attending client meetings, collecting background information and reporting. Victoria has participated in many different types of environmental studies, including Environmental Impact Studies, Phase I and II Environmental Site Assessments, wildlife habitat assessments for birds, bats, herpetofauna and mammals, as well as post-construction mortality monitoring at wind energy facilities.

Victoria assisted with the preparation of this report.

Kaitlin Boddaert, GIS & Urban Planning Diploma, GIS Analyst
Kaitlin is a GIS application specialist with 5 years of experience working in spatial technology for the production and publication of various digital maps and datasets. Kaitlin's academic background is in GIS and Urban Planning. Kaitlin's experience at NRSI includes, but is not limited to the collection and creation of datasets, spatial analysis of GIS data, the use of AutoCAD with integration into GIS, and the use of hard and soft data through scanning and georeferencing into digital format.

Kaitlin's role in the project was as lead GIS technician responsible for map creation under the guidance and direction of the lead biologists, project manager and advisor. She reviewed and collected all available background mapping resources.

4.0 Summary of Records Review

In accordance with the REA Regulation, the Project Area was examined for natural heritage features, including known Areas of Natural and Scientific Interest (ANSI), woodlands, wetlands, and wildlife habitat. Numerous agencies were contacted to compile the records review, including the MNRF, the Lower Thames Valley Conservation Authority (LTVCA) and the St. Clair Region Conservation Authority (SCRCA). NRSI also utilized numerous background review resources, such as the Natural Heritage Information Centre (NHIC), Ontario Breeding Bird Atlas (OBBA), Ontario Herpetofauna Atlas, and the Atlas of the Mammals of Ontario. The results of the records review are summarized in Table 1.

Table 1. Summary of Records Review for the North Kent Wind 1 Project

Criteria	Result
1. In or within 120m of a Provincial Park or Conservation Reserve	The Project is not located in or within 120m of a Provincial Park or Conservation Reserve.
2. In a Natural Feature	The results of the records review indicate the Project Location (i.e. disturbance area, collector lines, access roads, etc.) overlaps with 14 woodlands. Species associations and distances of these habitats to the Project Location will be confirmed during the site investigation phase of this NHA. The intention of the proposed Project Location is to avoid overlap with natural features, including woodlands, wherever possible.
3. Within 50m of a Provincially Significant ANSI-Earth Science (ES)	No Provincially Significant ANSI-ES is located within 50m of the Project Location.
4. Within 120m of a Natural Feature	
Provincially Significant ANSI-Life Science (LS)	No Provincially Significant ANSI-LS is located within the Project Area.
Coastal Wetland	No coastal wetlands are located within the Project Area.
Northern Wetland	No northern wetlands are located within the Project Area.
Southern Wetland	No known southern wetlands are located within the Project Area. There are 31 woodlands within the Project Area, each of which has the potential to contain unevaluated wetland habitat. All of the potential wetland habitats within the Project Area will be further examined during the site investigation phase of this NHA.
Wildlife Habitat	A total of 31 woodlands are located within the Project Area and could provide several types of

Criteria	Result
	significant wildlife habitat (SWH). Other natural features such as naturalized drainage ditches and hedgerows have been identified within the Project Area and could also provide SWH. These features will be surveyed to determine if they are used for animal movement corridors or provide habitat for species of conservation concern. All of these wildlife habitats will be examined during the site investigation phase and, if applicable, the evaluation of significance phase of this project to confirm presence of candidate SWH and determine the significance of each candidate SWH.
Woodland	A total of 31 woodlands are located within the Project Area. Basemapping indicates these habitats range in size from 0.4ha to 15.0ha. These woodlands are expected to be primarily dominated by mid-aged to mature deciduous tree species; however, young woodlands, treed plantations, or occasional coniferous woodlands may also be present within the Project Area.

The results of the records review of wildlife habitat are provided in Table 2. This table summarizes the presence of the full range of potential wildlife habitats within the Project Area. The purpose of this table is to guide the site investigation to further refine the types of wildlife habitats that have the potential to occur within the Project Area. Any wildlife habitats that have already been confirmed to be not applicable to the Project Area or are known to be absent from the Project Area will not be discussed in this, or subsequent, NHA reports for the North Kent Wind 1 Project.

Table 2. Summary of Wildlife Habitat Records Review for the North Kent Wind 1 Project

Wildlife Habitat	Present Within the Project Area	Present Within the Project Location	Carried Forward to Site Investigation (Y/N)
Seasonal Concentration Areas			
Waterfowl Stopover and Staging Areas (Terrestrial)	Possible	Possible	**Yes**
Waterfowl Stopover and Staging Areas (Aquatic)	Possible	Possible	**Yes**
Shorebird Migratory Stopover Area	Possible	Possible	**Yes**
Raptor Wintering Area	Unknown	Unknown	**Yes**
Bat Hibernacula	Unknown	Unknown	**Yes**

Wildlife Habitat	Present Within the Project Area	Present Within the Project Location	Carried Forward to Site Investigation (Y/N)
Bat Maternity Colonies	Unknown	Unknown	**Yes**
Bat Migratory Stopover Area	N/A	N/A	**No**
Turtle Wintering Areas	Unknown	Unknown	**Yes**
Snake Hibernaculum	Unknown	Unknown	**Yes**
Colonially – Nesting Bird Breeding Habitat (Bank and Cliff)	Unknown	Unknown	**Yes**
Colonially – Nesting Bird Breeding Habitat (Tree/Shrubs)	Unknown	Unknown	**Yes**
Colonially – Nesting Bird Breeding Habitat (Ground)	Unknown	Unknown	**Yes**
Migratory Butterfly Stopover Areas	N/A	N/A	**No**
Landbird Migratory Stopover Areas	N/A	N/A	**No**
Deer Winter Congregation Areas	No	No	**No**
Rare Vegetation Communities			
Cliffs and Talus Slopes	Unknown	Unknown	**Yes**
Sand Barrens	Unknown	Unknown	**Yes**
Alvar	Unknown	Unknown	**Yes**
Old Growth Forest	Unknown	Unknown	**Yes**
Savannah	Unknown	Unknown	**Yes**
Tallgrass Prairie	Unknown	Unknown	**Yes**
Other Rare Vegetation Communities	Unknown	Unknown	**Yes**
Specialized Wildlife Habitats			
Waterfowl Nesting Area	Unknown	Unknown	**Yes**
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Unknown	Unknown	**Yes**
Woodland Raptor Nesting Habitat	Unknown	Unknown	**Yes**
Turtle Nesting Areas	Unknown	Unknown	**Yes**
Seeps and Springs	Unknown	Unknown	**Yes**
Amphibian Breeding Habitat (Woodland)	Unknown	Unknown	**Yes**
Amphibian Breeding Habitat (Wetlands)	Unknown	Unknown	**Yes**
Habitats for Species of Conservation Concern			
Marsh Bird Breeding Habitat	Possible	Possible	**Yes**
Woodland Area-Sensitive Bird Breeding Habitat	Unknown	Unknown	**Yes**
Open Country Bird Breeding Habitat	Unknown	Unknown	**Yes**
Shrub/Early Successional Bird Breeding Habitat	Unknown	Unknown	**Yes**
Terrestrial Crayfish	Unknown	Unknown	**Yes**
Special Concern and Rare Wildlife Species	Possible	Possible	**Yes**
Animal Movement Corridors			
Amphibian Movement Corridors	Unknown	Unknown	**Yes**

5.0 Site Investigation Methods

Comprehensive site investigations to document the environmental and biological characteristics of the North Kent Wind 1 Project were undertaken in accordance with the REA Regulation and the requirements of the MNRF. These site-specific field investigations focused on vegetation community mapping to support and build on the information collected during the records review phase of this Project. The results of these site investigations were used to identify and map the boundaries of the natural features within the Project Area, and to identify candidate SWH. Information collected at this stage will be used to evaluate the significance of features in a subsequent report.

5.1 Survey Dates

In accordance with the REA Regulation, NRSI recorded dates, times, duration, and weather conditions during each site investigation. This information has been summarized in Table 3. Detailed descriptions of staff roles and qualifications can be found in Section 3.0 of this report, and detailed field forms have been appended to this report (Appendix I). The crew lead for each survey is indicated in bold font within the table.

Table 3. Site Investigation Survey Dates

Staff Name(s)	Purpose	Date (2015)	Start Time (hrs)	Duration (hrs)	Weather Conditions		
					Temp. (ºC)	Beaufort Wind	Cloud Cover (%)
Christina Carter Ashley Cantwell	Candidate Wildlife Habitat Assessment	March 24	0938	6.5	-2	1	0
Patrick Deacon Heather Fotherby	Candidate Wildlife Habitat Assessment	April 1	0930	6.5	0	1	75
Christy Humphrey Ashley Cantwell	Candidate Wildlife Habitat Assessment	April 8	0935	6.25	6	2	100
Charlotte Moore Victoria Rawls	Candidate Wildlife Habitat Assessment	April 14	1300	3	15	1	90
Charlotte Moore Victoria Rawls	ELC/Candidate Wildlife Habitat Assessment	April 15	0830	6.5	22	1	10
Charlotte Moore Victoria Rawls	Candidate Wildlife Habitat Assessment	April 16	0953	2.5	15	4	100
Christy Humphrey Lillian Knopf	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	April 23	1320	5.25	2.5	4	100
Christy Humphrey Lillian Knopf	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	April 24	0800	9	7	3	5
Andrew Dean Christopher Law	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	April 29	1135	4	18	2	40
Andrew Dean Christopher Law	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	April 30	1030	6.5	11	4	90
Andrew Dean Christopher Law	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	May 1	0815	7	11	3	5

Staff Name(s)	Purpose	Date (2015)	Start Time (hrs)	Duration (hrs)	Weather Conditions		
					Temp. (ºC)	Beaufort Wind	Cloud Cover (%)
Patrick Deacon Christopher Law	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	May 4	1417	0.75	20	3	100
Patrick Deacon Christopher Law	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	May 5	0840	7	12	3	100
Patrick Deacon Christopher Law	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	May 6	1350	2.5	21	2	50
Patrick Deacon Christopher Law	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	May 7	0850	4	21	2	5
Andrew Dean Blair Baldwin	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	May 28	1115	6.5	23.5	2	10
Andrew Dean	ELC/Wetland Assessments and Candidate Wildlife Habitat Assessment	June 9	1120	1	21	3	75
Nyssa Clubine Steve Burgin	Candidate Wildlife Habitat Assessment	June 16	1232	1.5	22	5	30

5.2 Alternative Site Investigations

As identified in Part IV, Section 26 (1.1) of the REA Regulation, an alternative site investigation may be conducted if the applicant determines that it is not reasonable to visit a site to conduct a site investigation. The denial of site access by adjacent landowners and unsafe site conditions, such as natural hazards or unstable soils, are examples of suitable situations where conducting a site investigation would not be reasonable (OMNR 2012).

All landowners with properties containing natural features within the North Kent Wind 1 Project Area were contacted by phone as an attempt to obtain site access. Where adjacent landowners were reached by phone and denied site access, or when adjacent landowners could not be reached by phone after three phone call attempts, alternative site investigations were conducted. Where this alternative method had to be employed, it is clearly indicated in this report and also on the field data sheets found in Appendix I of this report. The specific methods used during the alternative site investigations are detailed in Sections 5.4, 5.5, and 5.6 of this report. In all other instances, site access was granted through verbal confirmation and site investigations were conducted.

5.3 Designated Natural Areas

Natural areas, including provincial parks, conservation reserves, and ANSIs are identified and confirmed by regulatory agencies. No provincially significant features are present within the North Kent Wind 1 Project Area, and as such, provincial parks, conservation reserves, and ANSIs are not discussed further in this report.

5.4 Woodlands

Woodlands, as identified by the NHA Guide for Renewable Energy Projects (OMNR 2012), are defined as being a *"treed area, woodlot or forested area, other than a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees, that is located south and east of the Canadian Shield"*. The NHA Guide suggests that the ELC definition for "forest" (>60% tree cover) can be used to help identify woodlands in addition to the definition in the Guide (OMNR 2012).

To assist in the identification of woodlands within the Project Area, NRSI biologists have conducted detailed ELC mapping of all vegetation communities within the Project Area. The ELC mapping was completed using the modified ELC system for southern Ontario (Lee *et al*. 1998) and ELC code assignment was based on updates made to the system in 2008 (Lee 2008). ELC polygons were delineated during site investigations and through visual observations of vegetation communities. These observations were compared with available aerial photography to finalize boundaries, and woodland boundaries were delineated along the dripline of the woodland. No previous ELC mapping was available or used during these surveys.

ELC surveys included performing area searches within each polygon and the concurrent completion of detailed vegetation inventories for private properties where right-of-entry was obtained. During these area searches, NRSI biologists documented a wide range of applicable information as outlined in the ELC manual (Lee *et al*. 1998), including vegetation layer cover codes and dominance, polygon descriptions, stand composition, size class analysis, and the completion of detailed plant inventory lists and wildlife habitat assessments. The completion of substrate sampling (soil augers) was determined unnecessary for the identification of woodlands, but was used for the identification of wetlands, and is discussed in more detail below. The complete suite of information collected within each polygon can be found on the completed field data sheets (Appendix I).

ELC vegetation community codes assigned to polygons were based on the second approximation of ELC codes. Any natural features classified as forested communities (>60% canopy cover) are considered to be woodlands, and any natural features classified as savannahs or woodlands were roughly compared to the criteria above to determine if they meet the provincial criteria for woodlands. All woodlands have been delineated at the dripline using site-specific field evaluations combined with the use of detailed aerial photography.

For properties where site-specific access could not be obtained, NRSI biologists conducted ELC mapping from the closest observable point (i.e. roadside, neighbouring property, etc.) and compared this to a detailed review of aerial photographs to

characterize the polygon to the most detailed level possible. Where this alternative methodology had to be employed, it is clearly indicated on the ELC field data sheets found in Appendix I of this report.

For any woodlands identified within the Project Area, ecological characteristics were compared to the evaluation criteria for significant woodlands, as described in Table 11 of the NHA Guide for Renewable Energy Projects (OMNR 2012) to determine woodland form and function. These evaluation criteria include 3 broad categories: woodland size, ecological functions, and uncommon characteristics.

The completed ELC mapping is provided on Maps 3-1 to 3-9 and field notes and field maps can be found in Appendix I.

5.5 Wetlands

Wetlands include habitats that are seasonally or permanently covered by shallow water and display the presence of specific soil types and vegetation communities (OMNR 2012). Preliminary wetland identifications were made through the implementation of ELC mapping to identify lowland forests, wetlands, or other habitat types that may function as wetlands.

In addition to the detailed ELC methods described above, soil sampling (augering) was conducted in suspected wetlands to confirm the moisture regime. Vegetation inventories were also used to identify the presence and abundance of wetland indicator species. These habitats were then compared to the OWES manual to confirm their wetland status. Any communities identified as wetlands were delineated using site-specific field investigations combined with the use of detailed aerial photography. In accordance with OWES, wetland boundaries were delineated by OWES-certified staff where 50% of the plant community consisted of upland species, and data collected included wetland type, site type, presence of inflows/outflows, vegetation community delineation, number and types of forms (>25% cover), dominant species, dominant form, and soil type.

In potential wetlands where site access or right-of-entry could not be obtained, NRSI biologists conducted ELC mapping to the most detailed level possible from the nearest observation point, such as roadside or property boundary or through air photo

interpretation using detailed aerial photography. The limitations of this alternative method are that detailed habitat or substrate information is not easily determined, and could not be properly assessed. In these instances where borderline wetlands are present, assuming no direct overlap with Project Location, NRSI has assumed these features to be wetlands in the absence of appropriate habitat characteristics. Instances where site access could not be obtained are clearly identified on the ELC field data sheets found in Appendix I of this report.

5.6 Wildlife Habitat

The identification of wildlife habitat within the Project Area uses the definitions provided in the NHA Guide for Renewable Energy Projects (OMNR 2012), SWH Technical Guide (OMNR 2000), and SWH Criteria Schedules for Ecoregion 7E (MNRF 2015), which generally include areas where plants and animals live with adequate food, water, shelter and space to sustain their populations (OMNR 2012).

Candidate wildlife habitat assessments took place during ELC surveys so that as vegetation communities were delineated, surveys were conducted for wildlife habitat features that are associated with the identified vegetation communities. These surveys were undertaken through area searches for habitat features and through recording wildlife observations (i.e. visual sightings, vocalizations, tracks, etc.) of specific species. Habitat features for which area searches were performed included, but were not limited to: nests, snags, fallen logs, tree cavities, cliffs/banks, caves, burrows, dens, rock piles/stone walls, organics piles, karsts, old foundations, vernal pools/woodland ponds, sand, fine sandy gravel, and crayfish chimneys. Sites identified as requiring further study were revisited during a time of year appropriate for the specific type of wildlife habitat being assessed. All preliminary candidate wildlife habitat assessments were conducted between March 24, 2015 and June 16, 2015.

For properties where site-specific access could not be obtained, NRSI biologists conducted candidate wildlife habitat assessments from the closest observable point (i.e. roadside, neighbouring property, etc.), using binoculars, where appropriate, to observe any candidate wildlife habitat features. Where this alternative methodology had to be employed, it is clearly indicated on the wildlife habitat assessment field data sheets found in Appendix I of this report.

For the purposes of the NHA reports, NRSI has separated the discussion on wildlife habitat into the 4 habitat categories, including seasonal concentration areas, rare vegetation communities and specialized wildlife habitats, habitats for species of conservation concern, and animal movement corridors. Each of these broad habitat types is described in more detail in the following sections, and the field notes for each are provided in Appendix I.

5.6.1 Seasonal Concentration Areas

Wildlife seasonal concentration areas are defined as areas where animals occur in relatively high densities for all, or portions, of their life cycle (OMNR 2012). These areas are generally relatively small in size, particularly when compared to areas used by these species during other times of the year. Habitats of seasonal concentrations of animals have been identified by using the habitat criteria found in the SWH Criteria Schedules for Ecoregion 7E (MNRF 2015). The habitat criteria for each potential seasonal concentration area have been summarized in Table 4.

Table 4. Characteristics Used to Identify Candidate Seasonal Concentration Areas

Candidate Seasonal Concentration Areas	Criteria[1]	Methods
Habitat Characteristics		
Waterfowl Stopover and Staging Areas (Terrestrial)	• Fields with sheet water or annual spring melt water flooding found in any of the following Community Types: Meadow (ME), Thicket (TH), or fields utilized by tundra swans during Spring (mid-March to May). • A 100-300m radius buffer around the flooded field Ecosite habitat has been considered the candidate SWH. • Agricultural fields with seasonal flooding and waste grains are commonly used by waterfowl; these are not considered SWH unless used by Tundra Swans in the Long Point, Rondeau, Lake St. Clair, Grand Bend or Point Pelee areas.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists documented the presence of any potential waterfowl stopover and staging locations. • Surveys of field conditions were conducted in March-April 2015 to determine the presence of seasonal flooding and/or tundra swans. • The size of seasonally flooded areas was

Candidate Seasonal Concentration Areas	Criteria[1]	Methods
		determined through GIS mapping to determine if size is sufficient to support waterfowl aggregations of at least 100 individuals.
Waterfowl Stopover and Staging Areas (Aquatic)	• The following Community Types: Shallow Marsh (MAS), Shallow Aquatic (SA), Deciduous Swamp (SWD). • Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. • These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water). • The combined area of the ELC Ecosites and a 100m radius area is the SWH. • Sewage treatment ponds and storm water ponds do not qualify as a SWH; however, a reservoir managed as a large wetland or pond/lake does qualify.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists documented the presence of any potential waterfowl stopover and staging locations, recording the presence of suitable permanent open water containing an abundant food supply for waterfowl. • The size of suitable permanent open water was determined through GIS mapping to determine if size is sufficient to support waterfowl aggregations of at least 100 individuals.
Shorebird Migratory Stopover Area	• The following Community Types: Shoreline (BB), Sand Dune (SD), and Meadow Marsh (MAM). • Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. • Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. • Sewage treatment ponds and storm water ponds do not qualify as SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists documented the presence of any potential shorebird stopover locations.
Raptor Wintering Area	• For hawks/owls: presence of fields and woodlands (i.e. at least one Forest (FO) Community Type, in addition to one of the following Community Types: Meadow (ME), Thicket (TH), Savannah (SV), Woodland (WO) (<60% cover) that	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC

Candidate Seasonal Concentration Areas	Criteria[1]	Methods
	are >20ha and provide roosting, foraging and resting habitats for wintering raptors). • Upland habitat (ME, TH, SV, WO) must represent at least 15ha of the 20ha minimum size. • Field area of the habitat is to be wind swept with limited snow depth or accumulation. • For bald eagle: any of the following Community Types: Forest (FO) or Treed Swamp (SWD, SWM, SWC) on shoreline areas adjacent to large rivers or adjacent to lakes with open water. • Eagle sites have open water and large trees and snags available for roosting.	mapping, NRSI biologists documented the presence of any potential raptor wintering locations.
Bat Hibernacula	• Caves, mine shafts, underground foundations, Karsts or one of the following Community Types: Crevice (CCR), Cave (CCA). • The area includes 1000m radius around the entrance of the hibernaculum. • Does not include buildings or active mine shafts.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists documented the presence of any potential bat hibernacula locations.
Bat Maternity Colonies	• Any of the following Community Types: Deciduous Forest (FOD), Mixed Forest (FOM), Deciduous Treed Swamp (SWD), Mixed Treed Swamp (SWM) that have >25cm diameter at breast height (dbh) wildlife trees. • Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH). • Maternity roosts are not found in caves and mines in Ontario. • The area of the habitat includes the entire woodland, the forest stand ELC Ecosite, or the forest stand ELC Eco-element containing the maternity colonies. • If snag/ cavity tree density is ≥10 snags per hectare of trees ≥25 cm dbh, the site is a candidate for maternity colony roosts.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • Snag/cavity tree density was calculated by randomly selecting plots within a candidate natural feature. Ten plots were selected for natural features ≤10ha, with one plot being added for each hectare over 10ha to a maximum of 35 plots. These sampling plots were 12.6m radius (0.05ha) plots. The number of snag/cavity trees ≥25cm dbh were counted in each plot. The snag/cavity tree density of these plots was then extrapolated to the natural feature[2].

Candidate Seasonal Concentration Areas	Criteria[1]	Methods
	• Female bats prefer wildlife trees (snags/cavity trees) in early stages of decay (i.e. Class 1-3). • Silver-haired bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred.	• Where candidate natural features were too narrow to conduct 12.6m radius plots, all snag/cavity trees within the natural feature were counted.
Turtle Wintering Areas	• Over-wintering areas are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen, and are generally the same habitat as their core habitat. • Water has to be deep enough not to freeze and have soft mud substrates. • These habitats are found in the following Community Types: Swamp (SW), Marsh (MA), Open Water (OA), Shallow Water (SA), Open Fen (FEO), Open Bog (BOO). • The mapped ELC Ecosite area with the over-wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over-wintering is the SWH. • Man-made ponds, such as sewage lagoons or storm water ponds, are not considered SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists documented the presence of any potential turtle wintering locations.
Snake Hibernaculum	• Hibernation occurs in sites located below frost lines in burrows, rock crevices, broken and fissured rock, wetlands such as conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. • Any Ecosite in central Ontario other than very wet ones. • The following Community Types may be directly related to snake hibernacula: Talus (TA), Rock Barren (RB), Crevice (CCR), Cave (CCA), and Alvar (RBOA1, RBSA1, RBTA1). • The feature in which the hibernaculum is located plus a 30m	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists documented the presence of any potential snake hibernation locations.

Candidate Seasonal Concentration Areas	Criteria[1]	Methods
	buffer is the SWH.	
Colonially – Nesting Bird Breeding Habitat (Bank and Cliff)	• Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, or barns found in any of the following Community Types: Meadow (ME), Thicket (TH), Savannah (SV), Bluff (BL), Cliff (CL). • A colony identified as SWH will include a 50m radius habitat area from the peripheral nests. • Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. • Does not include a licensed/permitted Mineral Aggregate Operation.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists documented the presence of any potential colonial bird nesting locations.
Colonially – Nesting Bird Breeding Habitat (Tree/Shrubs)	• Any of the following Community Types: Mixed Swamp (SWM), Deciduous Swamp (SWD), Coniferous Treed Fen (FETC1). • The edge of the colony and a minimum 300m area of habitat or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH. • Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. • Most nests in trees are 11 to 15m from ground, near the top of the tree.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists documented the presence of any stick/bowl nests within potentially suitable habitats.
Colonially – Nesting Bird Breeding Habitat (Ground)	• Any rocky island or peninsula within a lake or large river, close proximity to watercourses in open fields or pastures with scattered trees or shrubs found in any of the following Community Types: Meadow Marsh (MAM), Shallow Marsh (MAS), Meadow (ME), Thicket (TH), Savannah (SV). • Nesting colonies of gulls and terns on islands or peninsulas associated with open water or in marshy areas. • Brewer's Blackbird (*Euphagus cyanocephalus*) colonies are found	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists documented the presence of any potential colonial bird nesting locations.

Candidate Seasonal Concentration Areas	Criteria[1]	Methods
	loosely on the ground or in low bushes in close proximity to streams and irrigation ditches within farmlands. • The edge of the colony and a minimum 150m area of habitat, or the extent of the ELC Ecosites containing the colony or any island <3.0ha with a colony is the SWH.	

[1] SWH Criteria Schedules for Ecoregion 7E (MNRF 2015)
[2] OMNR Bat and Bat Habitats: Guidelines for Wind Power Projects (OMNR 2011)

5.6.2 Rare Vegetation Communities and Specialized Wildlife Habitat

Rare vegetation communities are areas that contain a provincially rare vegetation community and/or areas that contain a vegetation community that is rare within the planning area (MNRF 2015). Specialized wildlife habitats are considered to be areas that support wildlife species that have highly specific habitat requirements, areas with exceptionally high species diversity or community diversity, or areas that provide habitat that greatly enhances a species' survival (MNRF 2015).

Rare vegetation communities and specialized wildlife habitats have been identified within the North Kent Wind 1 Project Area by using the habitat criteria found in the SWH Criteria Schedules for Ecoregion 7E (MNRF 2015). The habitat criteria for rare vegetation communities and specialized wildlife habitats have been summarized in Table 5.

Table 5. Characteristics Used to Identify Candidate Rare Vegetation Communities and Specialized Wildlife Habitats

Candidate Rare Vegetation Communities and Specialized Wildlife Habitats	Criteria[1]	Methods
Rare Vegetation Communities		
Cliffs and Talus Slopes	• Any of the following Community Types: CLO (Open Cliff), CLS (Shrub Cliff), CLT (Treed Cliff), TAO (Open Talus), TAS (Shrub Talus), TAT (Treed Talus).	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area.
Sand Barren	• Any of the following Community	• Habitat identification

Candidate Rare Vegetation Communities and Specialized Wildlife Habitats	Criteria[1]	Methods
	Types: SBO1 (Open Sand Barren Ecosite), SBS1 (Shrub Sand Barren Ecosite), SBT1 (Treed Sand Barren Ecosite) that are >0.5ha in size. • Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics). • Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always ≤ 60%.	occurred through the detailed ELC mapping that was conducted throughout the Project Area.
Alvar	• Any of the following Community Types: ALO1 (Open Alvar Rock Barren Ecosite), ALS1 (Alvar Shrub Rock Barren Ecosite), ALT1 (Treed Alvar Rock Barren Ecosite), FOC1 (Dry Pine Calcareous Shallow Coniferous Forest Ecosite), FOC2 (Dry Cedar Calcareous Shallow Coniferous Forest Ecosite), CUM2 (Bedrock Cultural Meadow Ecosite), CUS2 (Bedrock Cultural Savannah Ecosite), CUT2-1 (Common Juniper Cultural Alvar Thicket Type), CUW2 (Bedrock Cultural Woodland Ecosite) that are >0.5ha in size. • Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics). • Alvar is particularly rare in ecoregion 7E where the only known sites are found in the western islands of Lake Erie.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area.
Old Growth Forest	• Any of the following Community Types: FOD (Deciduous Forest), FOM (Mixed Forest), FOC (Coniferous Forest), SWD (Deciduous Swamp), SWM (Mixed Swamp), SWC (Coniferous Swamp) that are >0.5ha in size. • If dominant trees species of the Ecosite are >140 years old, then stand is SWH. • The area of Forest Ecosites combined or an Eco-element within an Ecosite that contains the old growth characteristics is the SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area.

Candidate Rare Vegetation Communities and Specialized Wildlife Habitats	Criteria[1]	Methods
	• The stand will have experienced no recognizable forestry activities (i.e. does not contain cut stumps).	
Savannah	• Any of the following Community Types: TPS1 (Dry-Fresh Tallgrass Mixed Savanna Ecosite), TPS2 (Fresh-Moist Tallgrass Deciduous Savanna Ecosite), TPW1 (Dry-Fresh Black Oak Tallgrass Deciduous Woodland Ecosite), TPW2 (Fresh-Moist Tallgrass Deciduous Woodland Ecosite), CUS2 (Bedrock Cultural Savannah Ecosite). • These communities must be restored or natural. • Remnant sites, such as railway right of ways, are not considered SWH. • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics). • In ecoregion 7E, known Tallgrass Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario). • No minimum size to site.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area.
Tallgrass Prairie	• Any of the following Community Types: TPO1 (Dry Tallgrass Prairie Ecosite), TPO2 (Fresh-Moist Tallgrass Prairie Ecosite). • These communities must be restored or natural. • Remnant sites, such as railway right of ways, are not considered SWH. • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics). • In ecoregion 7E, known Tallgrass	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area.

Candidate Rare Vegetation Communities and Specialized Wildlife Habitats	Criteria[1]	Methods
	Prairie and savannah remnants are scattered between Lake Huron and Lake Erie, near Lake St. Clair, north of and along the Lake Erie shoreline, in Brantford and in the Toronto area (north of Lake Ontario). • No minimum size to site.	
Other Rare Vegetation Communities	• Provincially Rare S1, S2 and S3 Communities Types are listed in Appendix M of the SWH Technical Guide (MNR 2000). • Any ELC Ecosite Code that has a possible ELC Vegetation Type that is provincially rare is candidate SWH. • Rare vegetation communities may include beaches, fens, forests, marshes, barrens, dunes, and swamps. • The area of the ELC Vegetation Type polygon is the SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area.
Candidate Specialized Wildlife Habitats		
Waterfowl Nesting Area	• Upland habitats of any kind located adjacent to (≤120m) any PSW or the following wetland Community Types: Meadow Marsh (MAM), Shallow Marsh (MAS), Shallow Aquatic (SA), Mineral Thicket Swamp (SWT), or Mineral Deciduous Swamp (SWD). • Wetland is >0.5ha or cluster of 3 or more smaller wetlands within 120m of each other where waterfowl nesting occurs. • Upland areas should be at least 120m wide. • Wood Ducks (*Aix sponsa*) and Hooded Mergansers (*Lophodytes cucullatus*) utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During area searches associated with ELC mapping, NRSI biologists identified potential waterfowl nesting area locations, recording the presence of suitable permanent open water, in addition to shrubland/grassland or suitable cavity trees for nesting in upland areas >40cm dbh • Proximity of upland habitat to wetland habitat and determination of wetland size have been confirmed through GIS mapping.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	• Any of the following Community Types: Forest (FO) or Treed Swamp (SW) that is immediately adjacent to rivers, lakes, ponds,	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the

Candidate Rare Vegetation Communities and Specialized Wildlife Habitats	Criteria[1]	Methods
	and wetlands. • Nests may be located in dead trees over water along forested shorelines, islands or structures. • Nests located on man-made objects (e.g. telephone poles and constructed nesting platforms) are not SWH.	Project Area. • During area searches of this habitat, NRSI biologists looked for large suitable trees, or the presence of stick nests within suitable treed habitats.
Woodland Raptor Nesting Habitat	• Any of the following Community Types: Forest (FO), Treed Swamp (SW), Coniferous Plantation (TAGM1) that are >30ha in size or contain >4ha of interior habitat. • Interior habitat is determined with a 200m buffer from the forest edge.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • Habitat size, interior habitat, and edge buffer were all determined through GIS mapping.
Turtle Nesting Areas	• Exposed mineral soil (sand or gravel) areas <100m from or within the following Community Types: Shallow Marsh (MAS), Shallow Aquatic (SA), Open Bog (BOO), Open Fen (FEO). • For an area to function as a turtle nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. • Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. • A radius of 30-100m around the nesting area has been considered the candidate SWH. • Travel routes from wetland to nesting area are to be considered within the SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area.
Seeps and Springs	• Locations where groundwater comes to surface, often in forested headwater areas. • Any forested area (with <25% meadow, field, or pasture) within the headwaters of a stream or river system may have seeps or springs. • The area of an ELC Forest Ecosite or an Eco-element within the Ecosite containing the seeps/springs is the SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area.

Candidate Rare Vegetation Communities and Specialized Wildlife Habitats	Criteria[1]	Methods
	• Presence of a site with 2 or more seeps/springs should be considered SWH.	
Amphibian Breeding Habitat (Woodland)	• Forests (FO) and Treed Swamps (SW), in addition to wetlands/lakes/ponds/vernal pools that are >500m^2 in size (about 25m diameter) that are found within or adjacent (<120m) to the woodland. • The habitat is the wetland area plus a 230m radius of woodland area. • If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • Habitat size and proximity to other habitats were determined through GIS mapping. • Surveys of woodland conditions were conducted in April-June 2015 to determine the presence of seasonal flooding and/or vernal pools.
Amphibian Breeding Habitat (Wetlands)	• Any of the following Community Types: Swamp (SW), Marsh (MA), Fen (FE), Bog (BO), Open Water (OA), Shallow Aquatic (SA) that are >500m^2 or 25m in diameter, and located >120m from woodlands. • The ELC Ecosite wetland area and the shoreline are the SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • Habitat size and proximity to other habitats were determined through GIS mapping. • Surveys of wetland conditions were conducted in April-June 2015 to determine the presence of seasonal flooding and/or vernal pools.

[1] SWH Criteria Schedules for Ecoregion 7E (MNRF 2015)

5.6.3 Habitats for Species of Conservation Concern

Habitats of species of conservation concern are those habitats that have been identified as important in maintaining long-term, viable populations of these species. The habitat characteristics for species of conservation concern have been summarized in Table 6 and Table 7. The presence of these habitat characteristics was investigated during site investigations in order to determine whether habitat for species of conservation concern is present within the Project Area.

Table 6. Characteristics Used to Identify Candidate Habitats for Species of Conservation Concern

Candidate Habitats for Species of Conservation Concern	Criteria[1]	Methods
Marsh Bird Breeding Habitat	• Nesting occurs in wetlands. For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest at a considerable distance from water. • All wetland habitats with shallow water and emergent aquatic vegetation. • May include any of the following Community Types: Meadow Marsh (MAM), Shallow Aquatic (SA), Open Bog (BOO), Open Fen (FEO), or for Green Heron: SW (Swamp), MA (Marsh) and Meadow (ME) Community Types.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • During ELC mapping and area searches, NRSI biologists documented the presence of any potential nesting locations, as well as the presence of shallow water and emergent aquatic vegetation. • The surveys of wetland and open aquatic conditions were conducted in April-June 2015 to determine the presence of shallow water and emergent aquatic vegetation.
Woodland Area-Sensitive Bird Breeding Habitat	• Habitats where interior forest (at least 200m from the forest edge) breeding birds are breeding. • These include any of the following Community Types: Forest (FO), Treed Swamp (SW) that are mature forest stands (>60 years old) or woodlots >30ha.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • Woodland size and interior forest calculations were determined through GIS mapping.
Open Country Bird Breeding Habitat	• Large grassland areas (including natural and cultural fields and meadows) >30ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years, in the following Community Type: Meadow (ME).	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • Habitat size was determined through GIS mapping.
Shrub/Early Successional Bird Breeding Habitat	• Large oldfield areas succeeding to shrub and thicket habitats >10ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years, in the following Community Types: Thickets (TH), Savannahs (SV), Woodlands (WO).	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the Project Area. • Habitat size was determined through GIS mapping.
Terrestrial Crayfish	• Any of the following Community Types: Meadow Marsh (MAM),Shallow Marsh (MAS),	• Habitat identification occurred through the detailed ELC mapping that was conducted

Candidate Habitats for Species of Conservation Concern	Criteria[1]	Methods
	Deciduous Swamp (SWD), Mixed Swamp (SWM), Thicket Swamp (SWT). • Meadows (ME) with inclusions of above meadow marsh Ecosites may be used. • Wet meadows and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. • Area of the ELC Ecosite polygon or Eco-element area of meadow marsh or swamp within the larger Ecosite area is the SWH.	throughout the Project Area. • During ELC mapping and area searches, NRSI biologists documented the presence of any chimneys in suitable habitats.
Special Concern and Rare Wildlife Species	• All Special Concern or provincial rare (S1-S3, SH) plant and animal species element occurrences within a 1 or 10km grid.	• Area searches to determine candidate habitat for any identified species or communities were conducted during ELC mapping.

[1] SWH Criteria Schedules for Ecoregion 7E (MNRF 2015)

Table 7. Criteria for Species of Conservation Concern Identified Near the North Kent Wind 1 Project Area

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
Birds					
Grasshopper Sparrow (*Ammodramus savannarum)*	S4B	-	SC	• Breed in large human-created grasslands (>5ha), such as pastures and hayfields, and natural prairies, such as alvars[1]. • These areas are characterized by well-drained, often poor soil dominated by relatively low sparse perennial herbaceous vegetation[1]. • The over-wintering range is generally similar to that used in the breeding range[1].	• Breeding habitat for this species was identified using area searches for suitable habitat in conjunction with ELC mapping (RBOA1, ME, OAGM2, OAGM4). Based on the disturbed nature of heavily grazed pastures and rotational hayfields, they are not included as candidate SWH for this species.
Short-eared Owl (*Asio flammeus*)	S2N S4B	SC	SC	• Prefers large open areas including grasslands, meadows that are grassy or bushy, marshes, bogs, and tundra[2, 3].	• Breeding habitat for this species is addressed under the consideration of Open Country Bird Breeding Habitat. • Overwintering habitat for this species is addressed under the consideration of Raptor Wintering Areas.
Redhead *(Aythya americana)*	S2B S4N	-	-	• Prefers shallow cattail and bulrush marshes with good interspersion of vegetation with open areas, often near lakes, ponds and fens[3, 4]. • Typically nests close to shallow water (most within 2m)[3].	• Breeding habitat for this species was identified using area searches for suitable habitat in conjunction with ELC mapping (MAS adjacent to bodies of water). • Migration habitat for this species is addressed separately under the consideration of Waterfowl Stopover and Staging Areas (Aquatic).
Canvasback (*Aythya valisneria*)	S1B S4N	-	-	• Prefers large marshes for nesting, and deep, permanent water bodies for feeding and courtship[3].	• Breeding habitat for this species was identified using area searches for suitable habitat in conjunction with ELC mapping (MA, OA).

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
					• Migratory habitat for this species is addressed separately under the consideration of Waterfowl Stopover and Staging Areas (Aquatic).
Common Nighthawk *(Chordeiles minor)*	S4B	SC	THR	• Prefers open habitats, such as forest clearings, open woodlands, ploughed fields, or gravel beaches[3]. • Nests on open ground, in clearings in dense forests, ploughed fields, gravel beaches or barren areas with rocky soils, in open woodlands and on flat gravel roofs[3].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (RB, SH, ME, TH, SV, WO, and FO that contains large clearings).
Eastern Wood-Pewee *(Contopus virens)*	S4B	SC	SC	• Prefers open, deciduous, mixed or coniferous forests predominated by oak with little understory, forest clearings, edges, farm woodlots, and parks[3].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (WO, FO, TAGM2, TAGM3, SWC, SWM, SWD).
Peregrine Falcon (*Falco peregrinus anatum/tundrius*)	S3B	SC	SC	• Nests on rock cliffs and crags, especially situated near water, and on tall buildings in urban centres[3].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (CL near bodies of water, TA, BL, CV).
Bald Eagle *(Haliaeetus leucocephalus)*	S2N S4B	SC	NAR	• Requires large continuous areas of deciduous or mixed woods near large lakes or rivers[3]. • Require an area of 255ha for nesting, shelter, feeding and roosting[3]. • Prefers open woods with 30 to 50% canopy cover and will nest in trees 50 to 200m from the shore of a water body. The bald eagle requires tall, dead or partially dead trees within 400m of a nest for perching[3].	• Breeding habitat for this species is addressed under the consideration of Bald Eagle and Osprey Nesting, Foraging and Perching Habitat. • Overwintering habitat for this species is addressed under the consideration of Raptor Wintering Areas.

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
Wood Thrush *(Hylocichla mustelina)*	S4B	SC	THR	• Prefers undisturbed, moist, mature deciduous or mixed forest with deciduous sapling growth[3, 5].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (FOM, FOD, SWM, SWD).
Great Black-backed Gull (*Larus marinus*)	S2B	-	-	• Requires flat, rocky, coastal islands, moorlands, rocky beaches or cliffs and nests in solitary or in small (rarely large) colonies[3].	• Breeding habitat for this species is addressed under the consideration of Colonially-Nesting Bird Breeding Habitat (Ground).
Red-headed Woodpecker *(Melanerpes erythrocephalus)*	S4B	SC	THR	• Lives in open woodlands and woodland edges, especially in oak savannahs and riparian forest[3]. • The species can also be found in fields or pastures, orchards and small woodlots[3]. These habitats contain a higher density of dead trees, which they commonly use for nesting and perching[3]. • Requires trees with a diameter at breast height of at least 40cm for tree cavity nesting and require approximately 4ha for territory[3].	• Area searches within suitable habitat (ME, TH, SV, WO, FO, SW) for large (>40cm dbh) cavity trees were conducted in conjunction with ELC mapping, with snag size class analysis documented on ELC data sheets. • Based on the generalist nature of this species, specific breeding habitat is often difficult to identify. This species will be considered when development is proposed within woodland edges; otherwise it will be identified as generalized candidate SWH where the ELC codes above occur.
Black-crowned Night-Heron (*Nycticorax nycticorax*)	S3B S3N	-	-	• Prefers a wide variety of wetland habitats, including deciduous woodland swamps, cattail marshes, islands, wooded river and lake banks, and coastal wetlands[3, 6]. • Migratory habitat consists of wetlands associated with migratory routes, generally along coastal areas or the Mississippi River system[6].	• Breeding habitat for this species is addressed under the consideration of Colonially-Nesting Bird Breeding Habitat (Trees/Shrubs). • Area searches for suitable migratory habitat were conducted in conjunction with ELC mapping (SH, SWM, SWD, MAM, MAS, OA along coastal areas).

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
Horned Grebe (*Podiceps auritus*)	S1B S4N	SC	SC	• Prefers deep water marshes, or sloughs with a mix of open water and emergent vegetation, such as small freshwater ponds or protected bays of larger lakes with emergent vegetation[3]. • Migratory stopover occurs regularly along coastlines and inland at larger bodies of water such as rivers (>1000ha), and somewhat irregularly at smaller inland lakes[7].	• Area searches for suitable migratory habitat were conducted in conjunction with ELC mapping (SH, MA, OA, SA).
Red-necked Grebe (*Podiceps grisegena*)	S3B S4N	NAR	NAR	• Prefers freshwater lakes, marshes, impoundments, or sewage lagoons with >4 ha of open water, and sheltered marshy areas or bays of larger lakes[3].	• Area searches for suitable breeding habitat were conducted in conjunction with ELC mapping (MA, OA, SA).
Forster's Tern (*Sterna forsteri)*	S2B	DD	DD	• Breeds in marshes, generally with lots of open water and large stands of island-like vegetation[7]. Can be either coastal salt marsh or large marshy lakes in the interior[8]. • Nests are typically placed in clumps of marsh vegetation close to open water[7].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MA, OA, SA in or adjacent to open water).

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
Yellow-headed Blackbird *(Xanthocephalus xanthocephalus)*	S2B	-	-	• Prefers deep (0.6 to 1.2m) marshes or sloughs, lake edges with emergent vegetation, cattails, and reedy lakes[3]. • Forages on grain fields, freshly ploughed ground and barnyards[3].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MAS).
Herpetofauna					
Snapping Turtle *(Chelydra serpentina)*	S3	SC	SC	• Resides in habitat that consists of permanent or semi-permanent fresh water, marshes, swamps or bogs or rivers and streams with soft muddy banks or bottoms[3]. • Uses soft soil or clean dry sand on south-facing slopes for nest sites, which can be some distance from water. They will also take advantage of man-made structures for nest sites, including roads (especially with gravel shoulders), dams and aggregate pits[3]. • Often hibernate together in groups in mud under water[3].	• Habitat for this species is addressed under the consideration of Turtle Nesting Area and Turtle Wintering Area Habitat.

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
Northern Map Turtle *(Graptemys geographica)*	S3	SC	SC	• Found in large bodies of water with soft bottoms and aquatic vegetation[3]. • Basks in groups on logs, rocks, beaches or sandy edges and uses soft soil or clean dry sand for nest sites that can be some distance from water[3]. • Home range size is larger for females (approximately 70ha) than males (approximately 30ha) and includes hibernation, basking, nesting and feeding areas, while aquatic corridors (e.g. streams) are required for movement[3].	• Habitat for this species is addressed under the consideration of Turtle Nesting Area and Turtle Wintering Area Habitat.
Vegetation					
Prairie Milkweed (*Asclepias sullivantii)*	S1	-	-	• Prefers wet meadows and prairies and can be found along roadsides and railroads[3, 9]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of June and July[10].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MEGM2, MEGM4, MEFM3, MEFM4, MEMM2, MEMM4, THMM2, THDM5, SVMM3, SVDM2, SVDM4, WOCM2, WOMM4, WODM5, WODM6). Based on the disturbed nature of roadsides, they are not included as candidate SWH for this species.
Pawpaw *(Asimina triloba)*	S3	-	-	• Found in moist forests and thickets and along stream banks[3, 9]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (THDM5, SVMM3, SVDM2, SVDM4, WOCM2, WOMM4, WODM5, WODM6, FOCM3, FOCM4, FOMM6, FOMM7, FOMM8, FOMM9,

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
				flowering or leaf-on period of April to September[10].	FOMM10, FODM6, FODM7, FODM8, FODM9, FODM10, SWC, SWM, SWD, SWT).
Muskingum Sedge (*Carex muskingumensis)*	S3	-	-	• Prefers wet-mesic hardwood forests[3]. • Identification of sedges should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably after the plant has flowered in June or July.	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (FOMM6, FOMM7, FOMM8, FOMM9, FOMM10, FODM6, FODM7, FODM8, FODM9, FODM10, SWM, SWD).
Rigid Sedge (*Carex tetanica)*	S3	-	-	• Calcareous fens, bogs and swales[11]. • Also found in moist grasslands, sandy shores and ditches, prairies, and seepages[3]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of June to July[12].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (SH, ME, FE, BO, MA, and seepage areas). Based on the disturbed nature of ditches, they are not included as candidate SWH for this species.
Hoary Tick-trefoil (*Desmodium canescens)*	S2	-	-	• Dry, normal sandy soil found in woodlands, savannahs, prairie, meadows and fields. Needs sun or partial shade[11]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of July to September[12].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MEGM1, MEGM3, MEFM1, MEFM2, MEMM1, MEMM3, SVCM1, SVMM1, SVMM2, SVDM1, SVDM3, WOCM1, WOMM1, WOMM2, WOMM3, WODM1, WODM2, WODM3, WODM4 containing sandy soils).
Round-Fruited Panic Grass (*Dichanthelium sphaerocarpon)*	S3	-	-	• Moist to dry sandy fields, prairies and lakeshores, in acid soil[3]. • Also found in dry, open, sandy forests[9]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (SH, MEGM1, MEGM3, MEFM1, MEFM2, MEMM1, MEMM3, SVCM1, SVMM1, SVMM2, SVDM3, WOCM1, WOMM1,

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
				identification, preferably during the flowering period of July to September[12].	WOMM2, WOMM3, WODM1, WODM2, WODM3, WODM4, FOCM1, FOCM2, FOMM1, FOMM2, FOMM3, FOMM4, FOMM5, FODM1, FODM2, FODM3, FODM4, FODM5 containing openings and sandy soils).
Blue Ash (*Fraxinus quadrangulata)*	S3	SC	SC	• Deciduous floodplain forests, and along sandy beaches and on limestone outcrops associated with Lake Erie[13, 14]. • Identification can be made year-round based on the presence of distinctively shaped branches and twigs[11].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (SH, FODM6, FODM7, FODM8, FODM9, FODM10, SWD).
Swamp Rose-mallow (*Hibiscus moscheutos)*	S3	SC	SC	• Commonly found in deep-water cattail marshes and in meadow marshes[13]. • Also found in open wet woods, thickets, spoil banks, drainage ditches, and open river bottoms[9,13]. • Identification can be made year-round (in absence of heavy snow cover) based on the robust, distinctive, and persistent nature of the plant and dead stems.	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MEGM2, MEGM4, MEFM3, MEFM4, MEMM2, MEMM4 adjacent to watercourses, THCM2, THMM2, THDM5, SVMM3, SVDM2, SVDM4, WOCM2, WOMM4, WODM5, WODM6, SWC, SWM, SWD, SWT, MAM, MAS). Based on the disturbed nature of spoil banks and drainage ditches, they are not included as candidate SWH for this species.
American Lotus (*Nelumbo lutea)*	S2	-	-	• Wet clay, sand, or loam soil. Ponds, lakes, rivers, lagoons, openings in marshes and other shallow waters[11, 15]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MAM, MAS, OA, SA).

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
				flowering period of July to August[12].	
Black Gum (*Nyssa sylvatica)*	S3	-	-	• Moist, shaded, humus enriched forests or riparian edges[11]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering or leaf-on period of April to September[12].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (FOCM3, FOCM4, FOMM6, FOMM7, FOMM8, FOMM9, FOMM10, FODM6, FODM7, FODM8, FODM9, FODM10, SWC, SWM, SWD).
Northern Fogfruit (*Phyla lanceolata)*	S2	-	-	• Wet black soil prairies, seeps, areas in or around ditches, powerline clearances in floodplain forests, and moist depressions in yards[16]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of July to August[16].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MEGM2, MEGM4, MEFM3, MEFM4, MEMM2, MEMM4, FOCM3, FOCM4, FOMM6, FOMM7, FOMM8, FOMM9, FOMM10, FODM6, FODM7, FODM8, FODM9, FODM10, SWC, SWM, SWD). Based on the disturbed nature of ditches and residential yards, they are not included as candidate SWH for this species.
Shumard Oak (*Quercus shumardii)*	S3	SC	SC	• Prefers moist, heavier soils and full sun, but is adaptable to loamy soils and partial shade in swamps[14, 17]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the period of October to December when leaves and fully-developed acorns are available. The absence of the species	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (SW).

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
				can also be confirmed year-round if no other similar oak species are present in a given habitat.	
Gray-headed Prairie Coneflower (*Ratibida pinnata)*	S3	-	-	• Dry to moist sandy loam savannahs, forest edges, prairie, meadows or fields that are sunny to partially shaded[11]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of June to September[12].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MEGM1, MEGM3, MEFM1, MEFM2, MEMM1, MEMM3, SVCM1, SVMM1, SVMM2, SVDM3, FOCM1, FOCM2, FOMM1, FOMM2, FOMM3, FOMM4, FOMM5, FODM1, FODM2, FODM3, FODM4, FODM5 with sandy loam soils).
Climbing Prairie Rose (*Rosa setigera)*	S3	SC	SC	• Typically found in open habitats with moist, heavy, clay to clay-loam soils such as old fields and abandoned agricultural land, as well as prairie remnants and shrub thickets[14]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the leaf-on period of June to September[16].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (ME, TH, SV, WO).
Lizard's Tail (*Saururus cernuus)*	S3	-	-	• Fresh-water wetlands, including hardwood swamps and floodplains, stream margins, muddy pond shores, freshwater tidal wetlands and floating mats[18]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of June to August[12].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (SH, FODM6, FODM7, FODM8, FODM9, FODM10, SW, MA, OA, SA).

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
Wild Senna (*Senna hebecarpa)*	S1	-	-	• Moist woodlands, moist meadows near rivers, savannahs, fens, pastures and roadsides[11, 16]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of July to August[16].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MEGM2, MEGM4, MEFM3, MEFM4, MEMM2, MEMM4, SVMM3, SVDM2, SVDM4, WOCM2, WOMM4, WODM5, WODM6, SWC, SWM, SWD, FE). Based on the disturbed nature of heavily grazed pastures and roadsides, they are not included as candidate SWH for this species.
Cup-Plant (*Silphium perfoliatum var. perfoliatum)*	S2	-	-	• Inhabits wet prairies, floodplains or openings in floodplain forests[9, 19]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of July to August[16].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MEGM2, MEGM4, MEFM3, MEFM4, MEMM2, MEMM4, FOCM3, FOCM4, FOMM6, FOMM7, FOMM8, FOMM9, FOMM10, FODM6, FODM7, FODM8, FODM9, FODM10, SWC, SWM, SWD).
Riddell's Goldenrod (*Solidago riddellii)*	S3	SC	SC	• Wet prairie-like sites, prairie-like flood plains and roadside ditches[13]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of August to September[12].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (MEGM2, MEGM4, MEFM3, MEFM4, MEMM2, MEMM4). Based on the disturbed nature of roadside ditches, they are not included as candidate SWH for this species.
Southern Slender Ladies' Tresses (*Spiranthes lacera var. gracilis)*	S1	-	-	• Moist to dry, typically sandy, acidic soils[20]. Meadows, prairies, barrens, open woods, dunes, old fields, roadsides, cemeteries, lawns[15]. • Identification should be made during a time period when this species exhibits	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (SB, ME, WO). Based on the disturbed nature of roadsides, cemeteries, and lawns, they are not included as candidate SWH for this

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
				characteristics that allow for confident identification, preferably during the flowering period of August to September[9].	species.
Wing-stem (*Verbesina alternifolia*)	S3	-	-	• Typically found in sandy thickets, clay banks, rich alluvial woods and along river banks, as well as floodplain swamps and fens[3, 9]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of August to September[12].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (SH, THCM2, THMM2, THDM5 containing sand, WOCM2, WOMM4, WODM5, WODM6, FOCM3, FOCM4, FOMM6, FOMM7, FOMM8, FOMM9, FOMM10, FODM6, FODM7, FODM8, FODM9, FODM10, SW).
Giant Ironweed (*Vernonia gigantea)*	S1?	-	-	• Prefers prairies and other grasslands, old fields, roadsides, savannas and woodlands growing on dry to moist soils[21]. • Floodplain forests, marshy thickets, and meadows[9]. • Especially common in overgrazed pasture[21]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of July to October[22].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (ME, TH, SV, WO, FOCM3, FOCM4, FOCM5, FOMM6, FOMM7, FOMM8, FOMM9, FOMM10, FODM6, FODM7, FODM8, FODM9, FODM10, FODM11, SWC, SWM, SWD, SWT, MAM). Based on the disturbed nature of overgrazed pastures and roadsides, they are not included as candidate SWH for this species.
Virginia Culver's-root (*Veronicastrum virginicum*)	S2	-	-	• Occurs in open, moist deciduous forests, prairies, and meadows, as well as fens, river banks, deciduous savannas (especially with oaks), and adjacent roadsides[3, 9]. • Identification should be made during a	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (ME, SVD, WOD, FE). Based on the disturbed nature of roadsides, they are not included as candidate SWH for this species.

Species of Conservation Concern	S-Rank (OMNR 2010)	SARO Status (2015)	COSEWIC Status (2015)	Criteria	Methods
				time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of June to September[12].	
Cream Violet (*Viola striata*)	S3	-	-	• Found in low, wet woodlands and rich floodplain forests, as well as thickets by streams and occasionally in swamps[3, 9]. • Identification should be made during a time period when this species exhibits characteristics that allow for confident identification, preferably during the flowering period of April to May[12].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (THCM2, THMM2, THDM5, WOCM2, WOMM4, WODM5, WODM6, FOCM3, FOCM4, FOMM6, FOMM7, FOMM8, FOMM9, FOMM10, FODM6, FODM7, FODM8, FODM9, FODM10, SW).
Insects					
Blue-ringed Dancer (*Argia sedula)*	S2	-	-	• Lakes, ditches, streams and rivers with gentle current and dense vegetation[23].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (OA, SA with gentle current and dense vegetation). Based on the disturbed nature of ditches, they are not included as candidate SWH for this species.
Blue-tipped Dancer (*Argia tibialis)*	S3	-	-	• Streams and rivers of various flows, also sloughs[23].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (OA, SA, and sloughs).
Variegated Meadowhawk (*Sympetrum corruptum)*	S3	-	-	• Ponds and slow streams, preferably with sandy or cobble bottoms[23].	• Area searches for suitable habitat were conducted in conjunction with ELC mapping (OA, SA with sandy or cobble bottoms).

1. COSEWIC (2013)
2. Wiggins et al. (2006)
3. OMNR SWH Technical Guide (2000)
4. Woodin & Michot (2002)

[5.] Evans et al. (2011)
[6.] Hothem et al. (2010)
[7.] Cornell Lab of Ornithology (2015)
[8.] National Audubon Society (2015)
[9.] Reznicek et al. (2011)
[10.] Gleason & Cronquist (1991)
[11.] Evergreen (2014)
[12.] Britton & Brown (1970)
[13.] Government of Canada (2015)
[14.] MNFR (2014)
[15.] Royal Botanical Gardens (2013)
[16.] Hilty (2015)
[17.] Sheviak & Brown (2003)
[18.] Batcher (2002)
[19.] Michigan Natural Features Inventory (2010)
[20.] University of Wisconsin-Madison (2002)
[21.] United States Department of Agriculture (2015)
[22.] Mohlenbrock (2002)
[23.] Abbott (2015)

Provincial Rank (S-Rank)	**COSEWIC and SARO Status**
S1: Critically Imperiled	END/E: Endangered
S2: Imperiled	THR/T: Threatened
S3: Vulnerable	SC: Special Concern
S4: Apparently Secure	NAR: Not at Risk
SH: Historic	DD: Data Deficient

5.6.4 Animal Movement Corridors

Animal movement corridors are defined by the MNRF as *"distinct passageways or well defined natural features used by animals to move between habitats, which are required by the animals to complete their life cycles"* (MNRF 2015). Animal movement corridors are represented by a diversity of landscape features such as riparian areas, woodlands, ravines, ridges and fencerows (MNRF 2015). Aerial photography and site-specific field investigations were used to identify animal movement corridor features in and within 120m of the North Kent Wind 1 Project Location. More specifically, the presence of amphibian movement corridors was examined. Movement corridors for amphibians traveling from their terrestrial habitat to breeding habitat can be extremely important for local amphibian populations. According to the SWH Criteria Schedules for Ecoregion 7E (MNRF 2015), amphibian movement corridors, which are used between breeding and summer habitat, must be determined when wetland amphibian breeding habitat has been confirmed as SWH. NRSI has used the presence of any candidate wetland amphibian breeding habitats located within the Project Area, as outlined in Section 5.6.2 (Table 5), to identify potential amphibian movement corridors within the Project Area. In the event that significant wetland amphibian breeding habitat is present within the Project Area, further investigation of the presence of amphibian movement corridors will be completed. The habitat characteristics used to identify animal movement corridors within the Project Area are outlined in Table 8.

Table 8. Characteristics Used to Identify Candidate Animal Movement Corridors

Candidate Animal Movement Corridors	Criteria	Methods
Amphibian Movement Corridors	• Movement corridors must be considered when Amphibian Breeding Habitat (Wetland) is confirmed as SWH. • Movement corridors are between breeding habitat and summer habitat. • Corridors should be at least 200m wide with gaps <20m and, if following riparian areas, with at least 15m of vegetation on both sides of waterway.	• Significant amphibian breeding habitat (wetland) to be examined for amphibian movement corridors. • The width and presence of gaps along potential corridors were determined using GIS mapping.

[1] SWH Criteria Schedules for Ecoregion 7E (MNRF 2015)

6.0 Site Investigation Results

6.1 Woodlands

Site investigations conducted in the North Kent Wind 1 Project Area have identified a total of 16 woodlands. This is a change from the records review, as available basemapping initially indicated a total of 31 woodlands within the North Kent Wind 1 Project Area. Many of these woodlands were counted as individual woodlands during the records review; however, under the definition of a woodland in the NHA Guide (OMNR 2012), woodlands bisected by an opening of 20m or less from crown edges are considered to be single woodlands. As such, site investigations have confirmed that some of these individually identified woodlands should be combined into larger woodlands based on the definition in the NHA Guide (OMNR 2012). The site investigation has also confirmed that some of the woodlands identified through the records review are hedgerows and fencerows, which do not meet the ELC definition of a "forest" (>60% tree cover). In addition, the site investigation has confirmed that some of the woodlands identified during the records review process no longer exist.

The Project Location is within the boundary of 8 woodlands (WOD-001, WOD-002, WOD-003, WOD-007, WOD-010, WOD-012, WOD-013, and WOD-017); however, directional drilling will be used to bore beneath these features and/or infrastructure will be placed outside of the features, in order to avoid impacts to the features themselves. Woodlands within the North Kent 1 Project Area range in size from 0.50ha to 22.88ha, and are primarily dominated by deciduous tree associations. ELC mapping of these features can be seen on Maps 3-1 to 3-9, while detailed mapping of woodlands within the Project Area can be seen on Maps 4-1 to 4-9. Woodland size, composition, attributes, functions and distance to the Project Location are summarized in Table 9.

Table 9. Summary of Woodlands in the North Kent Wind 1 Project Area

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
WOD-001$_1$ Woodland	1.46	FODM6-5	Fresh-Moist Sugar Maple-Hardwood Deciduous Forest with occasional bitternut hickory (*Carya cordiformis*), red oak (*Quercus rubra*), Freeman's maple (*Acer X freemanii*), American basswood (*Tilia americana*), shagbark hickory (*Carya ovata*), and sugar maple (*Acer saccharum*).	• Woodland diversity	WT – >120 AR – >120 CL – Overlapping** CA – Overlapping** SI – >120	**4-1**	**Yes**
WOD-002$_2$ Woodland	22.88	FODM7-5 SWDM3-3	Fresh-Moist Black Maple Lowland Deciduous Forest with abundant sugar maple and occasional American beech (*Fagus grandifolia*), bitternut hickory, black walnut (*Juglans nigra*), bur oak (*Quercus macrocarpa*), sycamore (*Platanus occidentalis*), white elm (*Ulmus americana*), and red oak. Swamp Maple Mineral Deciduous Swamp with abundant Freeman's maple and occasional	• Large woodland • Provides some interior habitat • Close proximity to other woodlands or habitats • Provides some water protection • Woodland diversity • Uncommon characteristics: occasionally occurring sycamore (CC 8) and common hackberry (CC 8); large tree size structure, with occasional trees >50cm dbh	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	**4-6**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
			bitternut hickory, white elm, eastern cottonwood (*Populus deltoides*), American basswood, bur oak, sycamore, sugar maple, white ash (*Fraxinus americana*), black walnut, common hackberry (*Celtis occidentalis*), and black cherry (*Prunus serotina*).				
		SWDM3-3	Swamp Maple Mineral Deciduous Swamp with abundant Freeman's maple and white elm and occasional bur oak and Manitoba maple (*Acer negundo*).				
		SWDM4-2	White Elm Mineral Deciduous Swamp with occasional sycamore, white elm, common hackberry, Freeman's maple, black walnut, eastern cottonwood, and Manitoba maple.				
		SWDM4-2	White Elm Mineral Deciduous Swamp with occasional white pine (*Pinus strobus*), Freeman's maple, bitternut hickory, white elm, black walnut, bur				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
			oak, sugar maple, Manitoba maple, and eastern cottonwood.				
		SWDM4-2	White Elm Mineral Deciduous Swamp with abundant white elm and occasional bur oak, American basswood, bitternut hickory, Freeman's maple, and Manitoba maple.				
		TAGM3	Deciduous Plantation dominated by Freeman's maple with occasional white elm and eastern red cedar (*Juniperus virginiana*).				
		SWDM4*	Mineral Deciduous Swamp with occasional white elm, with some Freeman's maple and green ash (*Fraxinus pennsylvanica*).				
WOD-003$_3$ Woodland	5.85	SWDM3-3	Swamp Maple Mineral Deciduous Swamp with abundant white elm and Freeman's maple and occasional bur oak, American basswood, and Manitoba maple.	• Large woodland • Close proximity to other woodlands or habitats • Provides some water protection • Woodland diversity • Uncommon characteristics: low abundance of common hackberry (CC 8)	WT – >120 AR – >120 CL – Overlapping** CA – Overlapping** SI – >120	**4-1** **4-6**	**Yes**
		SWDM3-4	Manitoba Maple Mineral				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
			Deciduous Swamp with abundant Manitoba maple and occasional white elm and willow species (*Salix* spp.).				
WOD-004$_3$ Woodland	1.10	SWDM3-3	Swamp Maple Mineral Deciduous Swamp with abundant Freeman's maple and Manitoba maple and occasional white elm and white mulberry (*Morus alba*).	• Provides some water protection • Uncommon characteristics: low abundance of common hackberry (CC 8)	WT – >120 AR – 86 CL – 86 CA – 86 SI – >120	**4-5**	**Yes**
WOD-005$_3$ Woodland	6.21	FODM4-1 SWDM3-3	Dry-Fresh Beech Deciduous Forest with abundant American beech and occasional shagbark hickory, black cherry, white elm, and hop hornbeam (*Ostrya virginiana*). Swamp Maple Mineral Deciduous Swamp dominated by Freeman's maple with occasional white elm, shagbark hickory, red maple (*Acer rubrum*), bitternut hickory, and green ash.	• Large woodland • Provides some water protection • Woodland diversity • Uncommon characteristics: occasional smaller enchanter's nightshade (*Circaea alpina)* (CC 6) and rare bristle-stalked sedge (*Carex leptalea* ssp. *leptalea*) (CC 8); large tree size structure, with occasional trees >50cm dbh	WT – >120 AR – 67 CL – 67 CA – 67 SI – >120	**4-5**	**Yes**
WOD-006$_1$ Woodland	2.54	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest with occasional black maple	• Large woodland • Woodland diversity • Uncommon characteristics: rare vegetation community	WT – >120 AR – 85 CL – 85 CA – 85	**4-5**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
			(*Acer nigrum*), red oak, American basswood, American beech, sugar maple, and white elm.	(S3?); large tree size structure, with occasional trees >50cm dbh	SI – >120		
WOD-007$_3$ Woodland	1.12	FODM12	Naturalized Deciduous Plantation with occasional black locust (*Robinia pseudo-acacia*), common hackberry, white ash, Eastern red cedar, and blue beech (*Carpinus caroliniana*). Several rare species have been identified in this woodland; however, since they are all confirmed to be planted by the landowner (Landowner pers. comm. 2015), it does not meet the uncommon characteristics criteria for woodland significance.	• Provides some water protection	WT – >120 AR – >120 CL – Overlapping** CA – Overlapping** SI – >120	**4-6**	**Yes**
WOD-008$_2$ Woodland	4.19	SWDM3-3	Swamp Maple Mineral Deciduous Swamp with abundant Freeman's maple and occasional green ash and white elm.	• Large woodland • Provides some water protection • Uncommon characteristics: low abundance of common hackberry (CC 8) and Muskingum sedge (*Carex muskingumensis*) (CC 9); large tree size structure, with occasional trees	WT – >120 AR – >0.1*** CL – >0.1*** CA – >0.1*** SI – >0.1***	**4-6**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
				>50cm dbh			
WOD-009$_3$ Woodland	1.04	SWDM3-3	Swamp Maple Mineral Deciduous Swamp with abundant Freeman's maple and occasional green ash, white elm, eastern cottonwood, and American basswood.	• Provides some water protection • Woodland diversity • Uncommon characteristics: low abundance of Gray's Sedge (*Carex grayi*) (CC 8) and Muskingum sedge (CC 9); large tree size structure, with occasional trees >50cm dbh	WT – >120 AR – >0.1*** CL – >0.1*** CA – >0.1*** SI – >0.1***	**4-6**	**Yes**
WOD-010$_2$ Woodland	1.37	FODM7-7	Fresh-Moist Manitoba Maple Lowland Deciduous Forest with abundant Manitoba maple and occasional green ash, white mulberry, trembling aspen (*Populus tremuloides*), and Freeman's maple.	• Provides some water protection	WT – >120 AR – >120 CL – Overlapping** CA – Overlapping** SI – >120	**4-6**	**Yes**
WOD-011$_3$ Woodland	2.63	SWDM4-2 FODM5-5*	White Elm Mineral Deciduous Swamp with abundant American basswood and white elm and occasional bitternut hickory, sugar maple, black cherry, and white mulberry. Dry-Fresh Sugar Maple-Hickory Deciduous Forest with sugar maple, bitternut hickory, and white elm.	• Large woodland • Close proximity to other woodlands or habitats • Provides some water protection • Woodland diversity	WT – 92 (T31) AR – >0.1*** CL – >0.1*** CA – >0.1*** SI – >120	**4-6**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
WOD-012$_3$ Woodland	11.45	FODM12	Naturalized Deciduous Plantation with abundant trembling aspen and occasional red oak and white ash.	• Large woodland • Uncommon characteristics: low abundance of common hackberry (CC 8)	WT – >120 AR – >120 CL – Overlapping** CA – Overlapping** SI – >120	**4-6** **4-7** **4-8**	**Yes**
		FODM7-1	Fresh-Moist White Elm Lowland Deciduous Forest with abundant white elm and occasional black cherry, shagbark hickory, American basswood, and blue beech.				
		TAGM1	Coniferous Plantation with white pine.				
		TAGM3	Deciduous Plantation dominated by red oak with occasional white mulberry and lesser numbers of Eastern red cedar, white ash, and trembling aspen.				
		FODM5-11*	Dry-Fresh Sugar Maple-Hardwood Deciduous Forest with occasional black cherry, shagbark hickory, American basswood, and blue beech.				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
WOD-013$_3$ Woodland	0.79	SWDM3-4	Manitoba Maple Mineral Deciduous Swamp with occasional Manitoba maple, white mulberry, and eastern red cedar, as well as some Freeman's maple and white elm.	• Close proximity to other woodlands or habitats • Provides some water protection	WT – >120 AR – >120 CL – Overlapping** CA – Overlapping** SI – >120	**4-7**	**Yes**
WOD-016$_1$ Woodland	1.19	TAGM2	Mixed Plantation with abundant Freeman's maple, white spruce (*Picea glauca*), and white cedar (*Thuja occidentalis*) and occasional white pine, sycamore, and white ash.	• Close proximity to other woodlands or habitats • Provides some water protection • Uncommon characteristics: occasional sycamore (CC 8)	WT – >120 AR – >120 CL – 23 CA – 23 SI – >120	**4-9**	**Yes**
WOD-017$_1$ Woodland	0.60	SWDM3-3	Swamp Maple Mineral Deciduous Swamp with abundant Freeman's maple and white elm and occasional Norway spruce (*Picea abies*), white pine, and white cedar.	• Close proximity to other woodlands or habitats • Provides some water protection • Uncommon characteristics: low abundance of common hackberry (CC 8)	WT – >120 AR – >120 CL – Overlapping** CA – Overlapping** SI – >120	**4-6**	**Yes**
WOD-018$_3$ Woodland	0.50	SWDM3-3	Swamp Maple Mineral Deciduous Swamp with abundant Freeman's maple and Manitoba maple and occasional white elm and bur oak.	• Close proximity to other woodlands or habitats • Provides some water protection • Uncommon characteristics: low abundance of common hackberry (CC 8); large tree size structure, with	WT – 16 (T26) AR – >0.1*** CL – >0.1*** CA – >0.1*** SI – >120	**4-5**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
				occasional trees >50cm dbh			

** ELC codes have not been mapped as they have been identified as inclusions (<0.5ha in size).*
*** Directional drilling will be used to bore beneath this feature in order to avoid impacts to the feature itself.*
**** On the mapping, this woodland appears to be overlapped; however, all project components, including the construction disturbance area, will be located adjacent to the woodland (>0.1m).*

Subscripts:
1: Entire woodland delineated from property line/ aerial photograph.
2: Woodland delineated via a combination of methods: on site and property line/aerial photograph.
3: Entire woodland delineated on site.

Legend
WT: Wind Turbine
AR: Access Road
CL: Collector Lines
CA: Construction Activity/Temporary Infrastructure/Balance of Operations
SI: Supporting Infrastructure - Building/Substation/Laydown Area/Point of Interconnect

6.2 Wetlands

During the site investigation, a total of 7 potentially significant wetlands were identified within the North Kent Wind 1 Project Area. This is a change from the records review, as available basemapping indicated that no confirmed wetlands were located within the North Kent Wind 1 Project Area. The Project Location is within the boundaries of 3 wetlands (WET-001, WET-002, and WET-007); however, directional drilling will be used to bore beneath these features and/or infrastructure will be placed outside of the features, in order to avoid impacts to the features themselves. All wetlands were delineated during site-specific field visits, along with the aid of detailed aerial photography interpretation where site access was not available.

The 7 wetlands identified within the Project Area include both individual wetlands and wetland complexes, and range in size from 0.79ha to 12.59ha. These wetlands typically represent riverine lowland forests/treed swamps situated along drains or watercourses. The Project Area is generally represented by very flat land with loam soils. Drains and watercourses have very steep banks and are regularly dredged to maintain flow, and agricultural fields are heavily tile-drained. As a result, forests along drains and watercourses lack defined floodplains, as water is quickly carried off the land through these conduits, which can rise significantly in rain events. It is likely that these drains and watercourses very infrequently exceed their banks; many of the drains and watercourses are lined with berms caused by the dredging. Wetlands in the area are almost exclusively dominated by white elm (*Ulmus americana*) and Freeman's maple (*Acer X freemanii*).

Vegetation mapping can be seen on Maps 3-1 to 3-9 and detailed mapping of wetlands and wetland complexes can be seen on Maps 4-1 to 4-9. Wetland size, composition, attributes, functions and distance to the Project Location are summarized in Table 10.

Table 10. Summary of Wetlands in the North Kent Wind 1 Project Area

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
WET-001$_2$ Wetland Little Bear Creek Watershed	12.59	Wetland Complex SWDM4-2 White Elm Mineral Deciduous Swamp SWDM3-3 Swamp Maple Mineral Deciduous Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **One Form:** **hS1-A** deciduous trees (*Ulmus americana*) **hS1-B** deciduous trees (*Acer x freemanii, Ulmus americana*) **Two Forms:** **hS2** deciduous trees (*Acer x freemanii*), herbaceous (*Alliaria petiolata*, *Geum* sp.) **hS3** deciduous trees (*Ulmus americana*), low shrubs (*Rubus occidentalis*) **Three Forms:** **hS4** deciduous trees (*Acer x freemanii*), tall shrubs (*Ulmus americana*), low shrubs (*Prunus virginiana, Ribes americanum*) **Four Forms:** **hS5** deciduous trees (*Ulmus americana*), tall shrubs (*Ulmus americana, Acer negundo*), low shrubs (*Ribes americanum*), herbaceous (*Hydrophyllum virginianum*)	• Primary productivity • Open water habitat • Short-term water quality improvement • Shoreline erosion control	WT – 37 (T28) AR – 12 CL – Overlapping* CA – Overlapping* SI – >120	**4-6**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
			Soils 100% mineral (clay loam, sandy loam[1]) Site Type 83% Riverine 17% Palustrine				
WET-002$_3$ Wetland Little Bear Creek Watershed	6.26	Individual Wetland SWDM3-4 Manitoba Maple Mineral Deciduous Swamp SWDM3-3 Swamp Maple Mineral Deciduous Swamp	Wetland Types 100% Swamp Vegetation Communities **One form:** **hS1** deciduous trees (*Acer negundo*) **Four forms:** **hS2** deciduous trees (*Ulmus americana*), tall shrubs (*Ulmus americana*), low shrubs (*Ribes americanum*), herbaceous (*Alliaria petiolata*) Soils 100% mineral (silt loam[1], clay loam) Site Type 100% Riverine	• Primary productivity • Open water habitat • Short-term water quality improvement • Shoreline erosion control • Habitat for locally significant plant species (Field Observation - *Hackelia virginiana*[2] in hS2)	WT – >120 AR – >120 CL – Overlapping* CA – Overlapping* SI – >120	**4-1** **4-6**	**Yes**
WET-003$_3$ Wetland Sylvester Drain Watershed	1.59	Wetland Complex SWDM3-3 Swamp Maple Mineral Deciduous Swamp	Wetland Types 100% Swamp Vegetation Communities **Four Forms:** **hS1-A** deciduous trees (*Acer X freemanii*), tall shrubs (*Ulmus*	• Primary productivity • Flood attenuation • Shoreline erosion control • Groundwater recharge	WT – 16 (T26) AR – >0.1** CL – >0.1** CA – >0.1** SI – >120	**4-5**	**No** **Does not meet minimum size of 2ha (as per OWES)**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
			americana), low shrubs (*Ribes americanum, Rubus occidentalis*), herbaceous (*Geum* sp., *Symphyotrichum lateriflorum*) **hS1-B** deciduous trees (*Acer X freemanii*), tall shrubs (*Acer negundo*), low shrubs (*Ribes americanum*), herbaceous (*Geum canadense*) <u>Soils</u> 100% mineral (silt loam, loam) <u>Site Type</u> 69% Isolated 31% Palustrine				
WET-004$_3$ Wetland Sylvester Drain Watershed	5.08	Individual Wetland SWDM3-3 Swamp Maple Mineral Deciduous Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **One Form:** **hS1** deciduous trees (*Acer X freemanii*) <u>Soils</u> 100% mineral (clay loam) <u>Site Type</u> 100% Isolated	• Primary productivity • Flood attenuation • Groundwater recharge • Habitat for locally significant plant species (Field Observation - *Circaea alpina*[2], *Carex leptalea* ssp. *leptalea*[2])	WT – >120 AR – 99 CL – 99 CA – 99 SI –>120	**4-5**	**Yes**
WET-005$_2$ Wetland Little Bear Creek Watershed	5.24	Wetland Complex SWDM3-3 Swamp Maple Mineral Deciduous Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **Four Forms:** **hS1-A** deciduous trees (*Acer X*	• Primary productivity • Flood attenuation • Short-term water quality improvement • Shoreline erosion control	WT – >120 AR – >0.1** CL – >0.1** CA – >0.1** SI – >0.1**	**4-6**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
			freemanii, Ulmus americana), tall shrubs (*Fraxinus pennsylvanica*), low shrubs (*Toxicodendron rydbergii*), herbaceous (*Geum canadense, Circaea lutetiana* ssp. *canadensis*) **hS1-B** deciduous trees (*Acer X freemanii, Ulmus americana*), tall shrubs (*Cornus foemina ssp. racemosa*), low shrubs (*Toxicodendron rydbergii*), herbaceous (*Geum canadense*) <u>Soils</u> 100% mineral (silty clay loam, clay loam) <u>Site Type</u> 80% Palustrine 20% Isolated	• Groundwater recharge • Habitat for provincially significant plant species (Field Observation - *Carex muskingumensis* in hS1-A) • Habitat for locally significant plant species (Field observation - *Hackelia virginiana*[2], *Carex projecta*[2], *Carex muskingumensis*[2] in hS1-A)			
WET-006$_2$ Wetland Henderson-Campbell Drain Watershed	2.09	Individual Wetland SWDM4-2 White Elm Mineral Deciduous Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **Four Forms:** **hS1** deciduous trees (*Ulmus americana*), tall shrubs (*Ulmus americana*), low shrubs (*Ribes americanum*), herbaceous (*Hydrophyllum virginianum*) <u>Soils</u> 100% mineral (silty clay) <u>Site Type</u> 100% Riverine	• Primary productivity • Open water habitat • Short-term water quality improvement • Shoreline erosion control • Habitat for locally significant plant species (Field Observation - *Cardamine concatenata*[2])	WT – 92 (T31) AR – >0.1** CL – >0.1** CA – >0.1** SI – >120	**4-6**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
WET-007$_3$ Wetland Big Creek Watershed	0.79	Individual Wetland SWDM3-4 Manitoba Maple Mineral Deciduous Swamp Type	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **One Form:** **hS1** deciduous trees (*Acer negundo*) <u>Soils</u> 100% mineral (clay loam[1]) <u>Site Type</u> 100% Riverine	• Primary productivity • Open water habitat • Short-term water quality improvement • Shoreline erosion control	WT – >120 AR – >120 CL – Overlapping* CA – Overlapping* SI – >120	**4-7**	**No** **Does not meet minimum size of 2ha (as per OWES)**

** Directional drilling will be used to bore beneath this feature in order to avoid direct impacts to the feature itself.*
*** On the mapping, this wetland appears to be overlapped; however, all project components, including the construction disturbance area, will be located adjacent to the wetland (>0.1m).*

Subscripts:
1: Entire woodland delineated from property line/ aerial photograph.
2: Woodland delineated via a combination of methods: on site and property line/aerial photograph.
3: Entire woodland delineated on site.

Superscripts:
1: Richards et al. 1949: Soil Survey of Essex County.
2: Oldham 1993. Distribution and Status of the Vascular Plants of Southwestern Ontario.

Legend
WT: Wind Turbine
AR: Access Road
CL: Collector Lines
CA: Construction Activity/Temporary Infrastructure/Balance of Operations
SI: Supporting Infrastructure - Building/Substation/Laydown Area/Point of Interconnect

6.3 Wildlife Habitat

Wildlife habitat as outlined by the SWH Criteria Schedules for Ecoregion 7E (MNRF 2015) was examined during the site investigation and is categorized into the following four groups: seasonal concentration areas, rare vegetation communities and specialized wildlife habitat, habitat for species of conservation concern and animal movement corridors. These categories are outlined below and all candidate SWH are summarized in Table 15 and mapped on Maps 5-1 through 7-9. Wildlife habitats that were determined to be generalized candidate SWH, according to Appendix D of the NHA Guide for Renewable Energy Projects (OMNR 2012), are included in Table 16 and have been mapped on Maps 8-1 to 8-9.

6.3.1 Seasonal Concentration Areas

The North Kent Wind 1 Project site investigation involved a thorough assessment of natural areas for seasonal concentration areas for wildlife habitat. Potential habitat for 11 types of seasonal concentration areas was examined during the site investigation phase of the Project. Seasonal concentration areas within the Project Area are described in further detail and assessed as to whether they will be carried forward to the evaluation of significance phase of this Project in Table 11 below. Candidate seasonal concentration areas are further described in Table 15 and locations are provided on Maps 5-1 to 5-9. Generalized candidate SWH within the Project Area can be found in Table 16 and locations are provided on Maps 8-1 to 8-9.

Table 11. Summary of Seasonal Concentration Areas for Wildlife Habitat Identified in the North Kent Wind 1 Project Area

Seasonal Concentration Areas	Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
Waterfowl Stopover and Staging Areas (Terrestrial)	Yes	No meadow (ME) or thicket (TH) communities with annual spring melt water flooding have been identified within the Project Area. Several agricultural fields with waste grains (wheat, soybeans and corn) located within the Lake St. Clair area containing annual spring melt water flooding and/or utilized by tundra swans have been identified within the Project Area. A total of 5 candidate terrestrial waterfowl stopover and staging areas habitats have been identified within 120m of a project component that will have an operational impact. An additional 14 candidate terrestrial waterfowl stopover and staging areas habitats have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH.	**Yes**	**Yes**
Waterfowl Stopover and Staging Areas (Aquatic)	No	No suitable Shallow Marsh (MAS), Shallow Aquatic (SA), or Deciduous Swamp (SWD) Community Types containing suitable permanent open water with an abundant food supply for waterfowl were identified in the Project Area.	**No**	**No**
Shorebird Migratory Stopover Area	No	No suitable Shoreline (BB), Sand Dune (SD) or Meadow Marsh (MAM) Community Types were identified in the Project Area.	**No**	**No**
Raptor Wintering Area	No	Hawks/Owls: No Forest (FO) or Swamp (SW) Community Types in addition to Meadow (ME), Thicket (TH), Savannah (SV), or Woodland (WO) Community Types with <60% cover, that are >20ha in size were identified within the Project Area. Bald Eagle: No Forest (FO) or Treed Swamp (SWD, SWM, SWC)	**No**	**No**

Seasonal Concentration Areas	Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		on shoreline areas adjacent to large rivers or adjacent to lakes with open water identified within the Project Area.		
Bat Hibernacula	No	No mine shafts, underground foundations, Karsts or Crevice (CCR), or Cave (CCA) Community Types were identified within the Project Area.	**No**	**No**
Bat Maternity Colonies	Yes	Several Deciduous Forest (FOD) and Deciduous Treed Swamp (SWD) Community Types containing >25cm dbh wildlife trees have been identified within the Project Area. Where site access was obtained, NRSI biologists identified one woodland containing ≥10 wildlife trees per hectare, measured at ≥25cm dbh, within 120m of a project component that will have an operational impact. Where site access could not be obtained, an additional woodland within 120m of a project component that will have an operational impact has been assumed to contain ≥10 wildlife trees per hectare, measured at ≥25cm dbh. These woodlands will be considered candidate bat maternity colonies. Seven woodlands containing ≥10 wildlife trees per hectare, measured at ≥25cm dbh have been identified within 120m of a project component that will not have an operational impact. These woodlands will be considered generalized candidate SWH.	**Yes**	**Yes**
Turtle Wintering Areas	Yes	Three Open Water (OA) Community Types have been identified as candidate turtle wintering areas since they contain water that is deep enough not to freeze, and have soft mud substrates. As the Project Location does not overlap with these habitats, there will be no operational impact. As such, these communities will be considered generalized candidate SWH.	**No**	**Yes**
Snake Hibernaculum	Yes	No Talus (TA), Rock Barren (RB), Crevice (CCR), Cave (CCA), or Alvar (RBOA1, RBSA1, RBTA1) Community Types were identified within the Project Area.	**No**	**Yes**

Seasonal Concentration Areas	Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		One old rock/debris pile was identified on a rural residential property adjacent to an Open Water (OA) Community Type. Although the depth of this feature is unknown, broken/fissured large concrete slabs were identified that may be suitable for snake hibernacula. Since this feature is located within 120m of a project component that will not have an operational impact, it will be considered generalized candidate SWH. Also, some rock and log piles have been identified within the Project Area. Most of these features appear to be the result of agricultural field clearing, and visual assessments confirmed that these features do not extend below the frost line. As such, these features do not provide suitable habitat as snake hibernacula.		
Colonially – Nesting Bird Breeding Habitat (Bank and Cliff)	No	No Meadow (ME), Thicket (TH), Savannah (SV), Bluff (BL) or Cliff (CL) Community Types contain eroding banks, sandy hills, borrow pits, steep slopes, sand piles, bridge abutments, silos, or barns within the Project Area.	**No**	**No**
Colonially – Nesting Bird Breeding Habitat (Tree/Shrubs)	Yes	Several Deciduous Swamp (SWD) Community Types have been identified within the Project Area. Where site access was obtained, NRSI biologists conducted area searches for nest bowls within these Community Types. Site investigations confirmed that no old nests were observed within the Project Area. Where site access could not be obtained, one candidate colonial-nesting bird breeding habitat (tree/shrub) has been assumed within 120m of a project component that will have an operational impact. One additional candidate colonial-nesting bird breeding habitat	**Yes**	**Yes**

Seasonal Concentration Areas	Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		(tree/shrub) has been identified within 120m of a project component that will not have an operational impact. This community will be considered generalized candidate SWH.		
Colonially – Nesting Bird Breeding Habitat (Ground)	No	Gulls/Terns: No suitable rocky islands or peninsulas located within large lakes or rivers identified within the Project Area. Brewer's blackbird: No Meadow Marsh (MAM), Shallow Marsh (MAS), Thicket (TH), or Savannah (SV) Community types located in close proximity to a watercourse were identified in the Project Area. Although some Meadow (ME) Community Types located in close proximity to a watercourse were identified in the Project Area, a review of available background information obtained from the Records Review phase of the Project, including the OBBA (Cadman *et al.* 2007), revealed that Brewer's blackbird is not known to breed in this area of the province. As such, habitat for this species is not applicable within the Project Area.	**No**	**No**

6.3.2 Rare Vegetation Communities and Specialized Wildlife Habitat

The North Kent Wind 1 Project site investigation involved a thorough assessment of natural areas for rare vegetation communities and specialized wildlife habitats. Potential habitat for 14 types of rare vegetation communities and specialized wildlife habitats were examined during the site investigation phase of the project. Rare vegetation communities and specialized wildlife habitat within the Project Area are described in further detail and assessed as to whether they will be carried forward to the evaluation of significance phase of this Project in Table 12 below. Candidate rare vegetation communities and specialized wildlife habitats are further described in Table 15 and locations are provided on Maps 6-1 to 6-9. Generalized candidate SWH within the Project Area can be found in Table 16 and mapped on Maps 8-1 to 8-9.

Table 12. Summary of Rare Vegetation Communities and Specialized Wildlife Habitat Identified In the North Kent Wind 1 Project Area

Rare Vegetation Communities and Specialized Wildlife Habitats	Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
Rare Vegetation Communities				
Cliffs and Talus Slopes	No	None of the Cliff or Talus Slope Community Types outlined in Table 5 have been identified within the Project Area.	**No**	**No**
Sand Barren	No	None of the Sand Barren Community Types outlined in Table 5 have been identified within the Project Area.	**No**	**No**
Alvar	No	None of the Alvar Community Types outlined in Table 5 have been identified within the Project Area.	**No**	**No**
Old Growth Forest	Yes	One mature Deciduous Forest (FOD) Community Type has been identified within the Project Area, located within WOD-002. As site access could not be obtained, it has been assumed that this community contains dominant tree species estimated to be greater than 140 years old. This community is located within 120m of a project component that will have an operational impact.	**Yes**	**No**
Savannah	No	None of the Savannah Community Types outlined in Table 5 have been identified within the Project Area.	**No**	**No**
Tallgrass Prairie	No	None of the Tall-grass Prairie Community Types outlined in Table 5 have been identified within the Project Area.	**No**	**No**
Other Rare Vegetation Communities	Yes	Where site access was obtained, no provincially rare vegetation community types have been identified within the Project Area. Where site access could not be obtained, one provincially rare vegetation community within WOD-006 has been assumed within the Project Area. This provincially rare (S3?) vegetation community has been identified as a Fresh-Moist Sugar Maple-Black Maple Deciduous Forest (FODM6-2). This community is located within 120m of a	**Yes**	**No**

Rare Vegetation Communities and Specialized Wildlife Habitats	Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		project component that will have an operational impact.		
Specialized Wildlife Habitats				
Waterfowl Nesting Area	Yes	One Forest (FO) Community Type that is greater than 120m wide has been identified adjacent (within 120m) to Deciduous Swamp (SWD) Community Types. As site access could not be obtained, it has been assumed that the wetland community contains suitable permanent open water in addition to suitable cavity nesting trees >40cm dbh in the adjacent upland forest. These Community Types are located within 120m of a project component that will have an operational impact, and have been considered as a candidate waterfowl nesting area.	**Yes**	**No**
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	No	No Forest (FO) or Treed Swamp (SW) Community Types that are immediately adjacent to rivers, lakes, ponds, or wetlands were identified within the Project Area. The site investigation also confirmed that no osprey or bald eagle stick nests were identified within the Project Area.	**No**	**No**
Woodland Raptor Nesting Habitat	No	No Forest (FO) or Treed Swamp (SW) Community Types that are >30ha or contain >4ha of interior habitat have been identified within the Project Area.	**No**	**No**
Turtle Nesting Areas	No	No Mineral or Organic Shallow Marsh (MAS), Shallow Aquatic (SA), Open Bog (BOO), or Open Fen (FEO) Community Types have been identified within the Project Area.	**No**	**No**
Seeps and Springs	No	No seeps or springs were identified within the Project Area.	**No**	**No**
Amphibian Breeding Habitat (Woodland)	Yes	Where site access was obtained, no suitable Treed Swamp (SWD) and Forest (FO) Community Types containing vernal pools have been identified within the Project Area. Where site access could not be obtained, two candidate	**Yes**	**Yes**

Rare Vegetation Communities and Specialized Wildlife Habitats	Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		amphibian breeding habitats (woodland) have been identified within 120m of a project component that will have an operational impact. One of these candidate habitats has been assumed as the presence of vernal pooling could not be verified. The other candidate habitat has been verified as vernal pooling was identified through a property line assessment. An additional 4 candidate woodland amphibian breeding habitats have been identified within 120m of a project component that will not have an operational impact. These 4 habitats will be considered generalized candidate SWH.		
Amphibian Breeding Habitat (Wetlands)	No	No Swamp (SW), Marsh (MA), Fen (FE), Bog (BO), Open Water (OA), Shallow Aquatic (SA) Community Types that are greater than 500m^2 or 25m in diameter, and located more than 120m from woodlands, have been identified within the Project Area.	**No**	**No**

6.3.3 Habitat for Species of Conservation Concern

The North Kent Wind 1 Project site investigation involved a thorough assessment of natural areas for habitat for species of conservation concern. A total of 6 types of potential habitats for species of conservation concern were examined during the site investigation phase of the Project. Habitat for species of conservation concern within the Project Area are described in further detail and assessed as to whether they will be carried forward to the evaluation of significance phase of this Project in Table 13 below. Candidate habitats for species of conservation concern are further described in Table 15 and locations are provided on Maps 7-1 to 7-9. Generalized candidate SWH within the Project Area can be found in Table 16 and mapped on Map 8-1 to 8-9.

NRSI biologists have also reviewed the specific habitat considerations of several individual species of conservation concern that are known to occur in or within the vicinity of the North Kent Wind 1 Project. Individual species of conservation concern include all species that have been designated as a species of Special Concern according to the Species At Risk in Ontario (SARO) list, or have been given a provincial S-Rank of S1-S3, but have not been designated as either Endangered or Threatened within Ontario. Species At Risk (provincially Threatened or Endangered) will be addressed as part of a separate reporting process with the MNRF in accordance with *Appendix B Requirements of the Endangered Species Act, 2007* of the *Approval and Permitting Requirements Document for Renewable Energy Projects* to address the *Endangered Species Act* (2007), as required. Many special concern and S1-S3 species and communities were identified during the records review as potentially being present within the Project Area. Habitat searches for these species were conducted as part of the site investigation for the North Kent Wind 1 Project. Habitat for these species of conservation concern within the Project Area are described in further detail and assessed as to whether they will be carried forward to the evaluation of significance phase of this project in Table 14 below. Candidate habitats for species of conservation concern are further described in Table 15 and locations are provided on Maps 7-1 to 7-9. Generalized candidate SWH within the Project Area can be found in Table 16 and mapped on Maps 8-1 to 8-9.

Table 13. Summary of Habitats of Species of Conservation Concern Identified In the North Kent Wind 1 Project Area

Habitat for Species of Conservation Concern	Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
Marsh Bird Breeding Habitat	Yes	Several Deciduous Swamp (SW) and Meadow (ME) habitats have been identified within the Project Area. Where site access was obtained, NRSI biologists confirmed that none of these Community Types within the Project Area contain shallow water and emergent aquatic vegetation. Where site access could not be obtained, one candidate marsh bird breeding habitat has been assumed within 120m of a project component that will have an operational impact. An additional 2 candidate marsh bird breeding habitats have been identified within 120m of a project component that will not have an operational impact. These 2 habitats will be considered generalized candidate SWH.	**Yes**	**Yes**
Woodland Area-sensitive Bird Breeding Habitat	No	No Forest (FO) or Treed Swamp (SW) Community Types that are mature forest stands (>60 years old) or woodlots >30ha in size containing interior forest habitat (at least 200m from the forest edge) have been identified within the Project Area.	**No**	**No**
Open Country Bird Breeding Habitat	No	No large grassland areas (including natural and cultural fields and meadows) >30ha that are not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years have been identified in the Project Area.	**No**	**No**
Shrub/Early Successional Bird Breeding Habitat	No	No oldfield areas succeeding to shrub and thicket habitats >10ha that are not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years have been identified in the Project Area.	**No**	**No**
Terrestrial Crayfish	Yes	Several Deciduous Treed Swamp (SWD) Community	**No**	**Yes**

Habitat for Species of Conservation Concern	Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		Types have been identified within the Project Area. Where site access was obtained, NRSI biologists confirmed that none of these Community Types within the Project Area contain crayfish chimneys. Where site access could not be obtained, 4 candidate terrestrial crayfish habitats have been assumed within 120m of a project component that will not have an operational impact. These 4 habitats will be considered generalized candidate SWH.		
Special Concern and Rare Wildlife Species	Yes	All Special Concern or provincially rare (S1-S3, SH) plant and animal species element occurrences within a 1km or 10km grid have been considered in detail, and outlined in Table 14.	**Yes**	**Yes**

Table 14. Summary of Species of Conservation Concern Identified In the North Kent Wind 1 Project Area

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
Birds				
Grasshopper Sparrow	Yes	Several pastures and hayfields have been identified within the Project Area. No grasslands >5ha in size have been identified within 120m of the project component that will have an operational impact. One grassland habitat >5ha in size has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH.	**No**	**Yes**
Redhead	No	No Shallow Marsh (MAS) Community Types adjacent to bodies of water have been identified within the Project Area.	**No**	**No**
Canvasback	No	No Shallow Marsh (MAS), Meadow Marsh (MAM), Shallow Aquatic (SA), or Open Aquatic (OA) Community Types in or adjacent to lakes or large marshes have been identified within the Project Area.	**No**	**No**
Common Nighthawk	Yes	Several open areas with little to no ground vegetation have been identified within the Project Area. No candidate habitats for common nighthawk have been identified within 120m of a project component that will have an operational impact. One candidate habitat for common nighthawk has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH.	**No**	**Yes**
Eastern Wood-Pewee	Yes	Several Forest (FO), Woodland (WO), Deciduous Treed Swamp (SWD), and Mixed Plantation (TAGM2) Community Types have been identified within the Project Area. A total of 3 candidate habitats for eastern wood-pewee have been identified within 120m of a project component that will have an operational impact. An additional 15 candidate habitats for eastern wood-pewee have been identified	**Yes**	**Yes**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH.		
Peregrine Falcon	No	No rock cliffs, crags, or tall buildings in urban centers have been identified within the Project Area.	**No**	**No**
Wood Thrush	Yes	Several mature Deciduous Forest (FOD) and Deciduous Treed Swamp (SWD) Community Types have been identified within the Project Area. A total of 1 candidate habitat for wood thrush has been identified within 120m of a project component that will have an operational impact. An additional 4 candidate habitats for wood thrush have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH.	**Yes**	**Yes**
Red-headed Woodpecker	Yes	Several Forest (FO) and Swamp (SW) Community Types containing trees >40cm dbh have been identified within the Project Area. No candidate habitats for red-headed woodpecker have been identified within 120m of a project component that will have an operational impact. A total of 12 candidate habitats for red-headed woodpecker have been identified where development is not proposed within woodland edges. These habitats will be considered generalized candidate SWH.	**No**	**Yes**
Black-crowned Night-Heron	No	No Shallow Marsh (MAS), Open Aquatic (OA), or Meadow Marsh (MAM) Community Types along coastal areas have been identified within the Project Area.	**No**	**No**
Horned Grebe	No	No Shallow Marsh (MAS), Shallow Aquatic (SA), or Open Aquatic (OA) Community Types in or adjacent to lakes or large marshes have been identified within the Project Area.	**No**	**No**
Red-necked Grebe	No	No Shallow Marsh (MAS), Shallow Aquatic (SA), or Open Aquatic (OA) Community Types in or adjacent to lakes, marshes or large sewage lagoons have been identified within the Project Area.	**No**	**No**
Forster's Tern	No	No Shallow Marsh (MAS), Shallow Aquatic (SA), or Open Aquatic (OA) Community Types in or adjacent to lakes or large marshes have been identified within the	**No**	**No**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		Project Area.		
Yellow-headed Blackbird	No	No Shallow Marsh (MAS) Community Types have been identified within the Project Area.	**No**	**No**
Vegetation				
Prairie Milkweed	Yes	Several wet meadows and savannahs have been identified within the Project Area. A total of 1 candidate habitat for prairie milkweed has been identified within 120m of a project component that will have an operational impact*. No additional candidate habitats for prairie milkweed have been identified within 120m of a project component that will not have an operational impact*.	**Yes**	**No**
Pawpaw	Yes	Several moist forests and swamps have been identified within the Project Area. A total of 2 candidate habitats for pawpaw have been identified within 120m of a project component that will have an operational impact*. An additional 3 candidate habitats for pawpaw have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH.	**Yes**	**Yes**
Muskingum Sedge	Yes	Several wet-mesic forests have been identified within the Project Area. A total of 8 candidate habitats for Muskingum sedge have been identified within 120m of a project component that will have an operational impact*. An additional 6 candidate habitats for Muskingum sedge have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH. An additional candidate habitat for Muskingum sedge, identified as a White Elm Mineral Deciduous Swamp Ecosite (SWDM4-2), is located within 120m of a proposed access road (Turbine T28). This candidate habitat is located adjacent to an existing road (Centre Sideroad) and the access road is located on the southwest	**Yes**	**Yes**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		side of the existing road. As the candidate habitat is currently impacted by the closer, existing road, no operational impacts to the species are anticipated as a result of the proposed access road within 120m of the candidate habitat. As such, this habitat will be considered generalized candidate SWH.		
Rigid Sedge	Yes	Several Meadow (ME) Community Types have been identified within the Project Area. A total of 1 candidate habitat for rigid sedge has been identified within 120m of a project component that will have an operational impact*. One additional candidate habitat for rigid sedge has been identified within 120m of a project component that will not have an operational impact*. This habitat will be considered generalized candidate SWH.	**Yes**	**Yes**
Hoary Tick-trefoil	Yes	One dry Meadow (ME) Community Type has been identified within the Project Area. No candidate habitat for hoary tick-trefoil has been identified within 120m of a project component that will have an operation impact*. A total of one candidate habitat for hoary tick-trefoil has been identified within 120m of a project component that will not have an operational impact*. This habitat will be considered generalized candidate SWH.	**No**	**Yes**
Round-Fruited Panic Grass	Yes	Several dry woodlands, meadows, and forest edges have been identified within the Project Area. A total of 2 candidate habitats for round-fruited panic grass have been identified within 120m of a project component that will have an operational impact*. An additional candidate habitat for round-fruited panic grass has been identified within 120m of a project component that will not have an operational impact*. This habitat will be considered generalized candidate SWH.	**Yes**	**Yes**
Blue Ash	Yes	Several moist deciduous forests have been identified within the Project Area.	**Yes**	**Yes**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		A total of 2 candidate habitats for blue ash have been identified within 120m of a project component that will have an operational impact*. An additional 3 candidate habitats for blue ash have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH.		
Swamp Rose-mallow	Yes	Several open, wet woodlands have been identified within the Project Area. A total of 2 candidate habitats for swamp rose-mallow have been identified within 120m of a project component that will have an operational impact*. An additional 2 candidate habitats for swamp rose-mallow have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH.	**Yes**	**Yes**
American Lotus	Yes	One pond has been identified within the Project Area. No candidate habitat for American lotus has been identified within 120m of a project component that will have an operation impact*. A total of 1 candidate habitat for American lotus has been identified within 120m of a project component that will not have an operational impact*. This habitat will be considered generalized candidate SWH.	**No**	**Yes**
Black Gum	Yes	Several moist forests and riparian edges have been identified within the Project Area. A total of 3 candidate habitats for black gum have been identified within 120m of a project component that will have an operational impact*. An additional 3 candidate habitats for black gum have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH.	**Yes**	**Yes**
Northern Fogfruit	Yes	Several Swamp (SW) Community Types, along with moist floodplain forests and moist meadows have been identified within the Project Area.	**Yes**	**Yes**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		A total of 8 candidate habitats for northern fogfruit have been identified within 120m of a project component that will have an operational impact*. An additional 7 candidate habitats for northern fogfruit have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH. An additional candidate habitat for northern fogfruit, identified as a White Elm Mineral Deciduous Swamp Ecosite (SWDM4-2), is located within 120m of a proposed access road (Turbine T28). This candidate habitat is located adjacent to an existing road (Centre Sideroad) and the access road is located on the southwest side of the existing road. As the candidate habitat is currently impacted by the closer, existing road, no operational impacts to the species are anticipated as a result of the proposed access road within 120m of the candidate habitat. As such, this habitat will be considered generalized candidate SWH.		
Shumard Oak	Yes	Several Swamp (SW) Community Types have been identified within the Project Area. A total of 3 candidate habitats for Shumard oak have been identified within 120m of a project component that will have an operational impact*. An additional candidate habitat for Shumard oak has been identified within 120m of a project component that will not have an operational impact*. This habitat will be considered generalized candidate SWH.	**Yes**	**Yes**
Gray-headed Prairie Coneflower	Yes	Several Meadow (ME) and Forest (FO) Community Types have been identified within the Project Area. A total of 2 candidate habitats for gray-headed prairie coneflower have been identified within 120m of a project component that will have an operational impact*. An additional candidate habitat for gray-headed prairie coneflower has been	**Yes**	**Yes**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		identified within 120m of a project component that will not have an operational impact*. This habitat will be considered generalized candidate SWH.		
Climbing Prairie Rose	Yes	Several Meadow (ME) Community Types have been identified within the Project Area. A total of 1 candidate habitat for climbing prairie rose has been identified within 120m of a project component that will have an operational impact*. An additional candidate habitat for climbing prairie rose has been identified within 120m of a project component that will not have an operational impact*. This habitat will be considered generalized candidate SWH.	**Yes**	**Yes**
Lizard's Tail	Yes	Several Swamp (SW), Moist Deciduous Forest (FODM), and Open Aquatic (OA) Community Types have been identified within the Project Area. A total of 8 candidate habitats for lizard's tail have been identified within 120m of a project component that will have an operational impact*. An additional 7 candidate habitats for lizard's tail have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH. An additional candidate habitat for lizard's tail, identified as a White Elm Mineral Deciduous Swamp Ecosite (SWDM4-2), is located within 120m of a proposed access road (Turbine T28). This candidate habitat is located adjacent to an existing road (Centre Sideroad) and the access road is located on the southwest side of the existing road. As the candidate habitat is currently impacted by the closer, existing road, no operational impacts to the species are anticipated as a result of the proposed access road within 120m of the candidate habitat. As such, this habitat will be considered generalized candidate SWH.	**Yes**	**Yes**
Wild Senna	Yes	Several moist Meadow (ME) and Swamp Community Types have been identified within the Project Area.	**Yes**	**Yes**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		A total of 9 candidate habitats for wild senna have been identified within 120m of a project component that will have an operational impact*. An additional 3 candidate habitats for wild senna have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH. An additional candidate habitat for wild senna, identified as a White Elm Mineral Deciduous Swamp Ecosite (SWDM4-2), is located within 120m of a proposed access road (Turbine T28). This candidate habitat is located adjacent to an existing road (Centre Sideroad) and the access road is located on the southwest side of the existing road. As the candidate habitat is currently impacted by the closer, existing road, no operational impacts to the species are anticipated as a result of the proposed access road within 120m of the candidate habitat. As such, this habitat will be considered generalized candidate SWH.		
Cup-Plant	Yes	Several moist Swamp (SW), Meadow (ME) and Forest (FO) Community Types have been identified within the Project Area. A total of 4 candidate habitats for cup-plant have been identified within 120m of a project component that will have an operational impact*. An additional 6 candidate habitats for cup-plant have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH. An additional candidate habitat for cup-plant, identified as a White Elm Mineral Deciduous Swamp Ecosite (SWDM4-2), is located within 120m of a proposed access road (Turbine T28). This candidate habitat is located adjacent to an existing road (Centre Sideroad) and the access road is located on the southwest side of the existing road. As the candidate habitat is currently impacted by the closer, existing road, no operational impacts to the species are anticipated as a result of the proposed access road within 120m of the candidate habitat. As such, this habitat	**Yes**	**Yes**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		will be considered generalized candidate SWH.		
Riddell's Goldenrod	Yes	One moist Meadow (ME) Community Type has been identified within the Project Area. A total of 1 candidate habitat for Riddell's goldenrod has been identified within 120m of a project component that will have an operational impact*. No additional candidate habitats for Riddell's goldenrod have been identified within 120m of a project component that will not have an operational impact*.	**Yes**	**No**
Southern Slender Ladies' Tresses	Yes	Several Meadows (ME) Community Types have been identified within the Project Area. A total of 1 candidate habitat for southern slender ladies' tresses has been identified within 120m of a project component that will have an operational impact*. An additional candidate habitat for southern slender ladies' tresses has been identified within 120m of a project component that will not have an operational impact*. This habitat will be considered generalized candidate SWH.	**Yes**	**Yes**
Wing-stem	Yes	Several Swamp (SW) and Forest (FO) Community Types have been identified within the Project Area. A total of 8 candidate habitats for wing-stem have been identified within 120m of a project component that will have an operational impact*. An additional 8 candidate habitats for wing-stem have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH.	**Yes**	**Yes**
Giant Ironweed	Yes	Several moist Meadow (ME), Deciduous Forest (FOD), and Swamp (SW) Community Types have been identified within the Project Area. A total of 8 candidate habitats for giant ironweed have been identified within 120m of a project component that will have an operational impact*.	**Yes**	**Yes**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
		An additional 8 candidate habitats for giant ironweed have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH. An additional candidate habitat for giant ironweed, identified as a White Elm Mineral Deciduous Swamp Ecosite (SWDM4-2), is located within 120m of a proposed access road (Turbine T28). This candidate habitat is located adjacent to an existing road (Centre Sideroad) and the access road is located on the southwest side of the existing road. As the candidate habitat is currently impacted by the closer, existing road, no operational impacts to the species are anticipated as a result of the proposed access road within 120m of the candidate habitat. As such, this habitat will be considered generalized candidate SWH.		
Virginia Culver's-root	Yes	Two Meadow (ME) Community Types have been identified within the Project Area. A total of 1 candidate habitat for Virginia culver's-root has been identified within 120m of a project component that will have an operational impact*. An additional candidate habitat for Virginia culver's-root has been identified within 120m of a project component that will not have an operational impact*. This habitat will be considered generalized candidate SWH.	**Yes**	**Yes**
Cream Violet	Yes	Several moist Forest (FO) and Swamp (SW) Community Types have been identified within the Project Area. A total of 1 candidate habitat for cream violet has been identified within 120m of a project component that will have an operational impact*. An additional 3 candidate habitats for cream violet have been identified within 120m of a project component that will not have an operational impact*. These habitats will be considered generalized candidate SWH.	**Yes**	**Yes**
Insects				
Blue-ringed	Yes	Two suitable streams with gentle currents and vegetation have been identified within	**No**	**Yes**

Species	Habitat Present Within the Project Area	Rationale	Candidate Significant Wildlife Habitat (Y/N)	Generalized Candidate Significant Wildlife Habitat (Y/N)
Dancer		the Project Area. No candidate habitat for blue-ringed dancer has been identified within 120m of a project component that have an operational impact. An additional 2 candidate habitats for blue-ringed dancer have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH.		
Blue-tipped Dancer	Yes	Two suitable streams have been identified within the Project Area. No candidate habitat for blue-tipped dancer has been identified within 120m of a project component that have an operational impact. An additional 2 candidate habitats for blue-tipped dancer have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH.	**No**	**Yes**
Variegated Meadowhawk	Yes	Several suitable streams or ponds with sandy or cobble bottoms have been identified within the Project Area. No candidate habitat for variegated meadowhawk has been identified within 120m of a project component that have an operational impact. An additional 3 candidate habitats for variegated meadowhawk have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH.	**No**	**Yes**

** The presence of candidate or generalized habitats was identified when area searches conducted during the appropriate time of year confirmed the presence of this species within suitable habitat. Candidate or generalized habitats for this species were assumed to be present when area searches were not conducted during the appropriate time of year or when site access was not granted, and therefore, the presence of this species could not be verified.*

6.3.4 Animal Movement Corridors

The records review process revealed no potential animal movement corridors within the Project Area. The detailed site investigation confirmed the presence of several linear features, including treed fencerows and naturalized drains, within the Project Area, which have the potential to act as animal movement corridors. These features were examined during the site investigation and compared with the other appropriate wildlife habitats that may suggest the presence of animal movement corridors. Specifically, NRSI biologists used the presence of any candidate wetland amphibian breeding habitats located within the Project Area, as outlined in Table 5, to identify amphibian movement corridors as per the criteria outlined in the SWH Criteria Schedules for Ecoregion 7E (MNRF 2015). As a result, no candidate animal movement corridors were identified during the site investigation.

6.3.5 Summary of Wildlife Habitat

Based on the comprehensive site investigation conducted by NRSI biologists, a total of 94 candidate SWH which may be affected by the operation of the North Kent Wind 1 Project (OMNR 2012) have been identified within the Project Area. In addition, several additional wildlife habitats have been identified within the Project Area where components will not have operational effects. These habitats have been identified as generalized candidate SWH. A summary of the 94 candidate SWH that will be carried forward to the evaluation of significance phase of this Project is provided in Table 15. This table includes the size, composition, attributes, functions, distances to Project Locations, and map references of each habitat. A summary of the generalized candidate SWH that are found within the Project Area is provided in Table 16.

Table 15. Summary of Candidate Significant Wildlife Habitats in the North Kent Wind 1 Project Area

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
Seasonal Concentration Areas								
WST-001 Waterfowl Stopover and Staging Area (Terrestrial)	35.91	OAGM1	Annual Row Crop Communities (corn)	May provide foraging and resting habitat for migrating waterfowl.	Annual spring melt water and suitable agricultural field with waste grains present	WT – >120 AR – Overlapping CL – Overlapping CA – Overlapping SI – Overlapping	5-5 5-6	**Yes**
WST-002 Waterfowl Stopover and Staging Area (Terrestrial)	26.79	OAGM1	Annual Row Crop Communities (soybeans)		Annual spring melt water and suitable agricultural field with waste grains present	WT – 10 (T7) AR – 16 CL – >0.1* CA – >0.1* SI – >120	5-6	**Yes**
WST-003 Waterfowl Stopover and Staging Area (Terrestrial)	26.29	OAGM1	Annual Row Crop Communities (soybeans)		Annual spring melt water and suitable agricultural field with waste grains present	WT – >120 AR – 9 CL – >0.1* CA – >0.1* SI – >120	5-7	**Yes**
WST-004 Waterfowl Stopover and Staging Area (Terrestrial)	38.85	OAGM1	Annual Row Crop Communities (soybeans)		Annual spring melt water and suitable agricultural field with waste grains present	WT – Overlapping (T48) AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	5-4 5-9	**Yes**
WST-005 Waterfowl Stopover and Staging Area (Terrestrial)	45.66	OAGM1	Annual Row Crop Communities (corn)		Annual spring melt water and suitable agricultural field with waste grains present	WT – Overlapping (T48) AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	5-4 5-9	**Yes**
BMA-001 Bat Maternity Colony	11.91	FODM7-5 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest White Elm	May provide roosting habitat and shelter for raising young.	Suitable number of snags/cavity trees (≥10snags/ha) to provide candidate habitat	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	5-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
			Mineral Deciduous Swamp					
BMA-002 Bat Maternity Colony	2.63	SWDM4-2 FODM5-5	Bur Oak Mineral Deciduous Swamp Dry-Fresh Sugar Maple-Hickory Deciduous Forest		Suitable number of snags/cavity trees (≥10snags/ha) to provide candidate habitat	WT – 92 (T31) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	5-6	**Yes**
CBT-001 Colonial-Nesting Bird Breeding Habitat (Tree/Shrubs)	5.37	SWDM4-2	White Elm Mineral Deciduous Swamp	May provide nesting and breeding habitat for colonial birds using trees or shrubs	Candidate deciduous swamp habitat	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	5-6	**Yes**
Rare Vegetation Communities and Specialized Wildlife Habitats								
OGF-001 Old Growth Forest	6.54	FODM7-5	Fresh-Moist Black Maple Lowland Deciduous Forest	May provide genetic, species, and ecosystem diversity, as well as habitat for species of conservation concern.	Mature, undisturbed forest stand with old growth characteristics, including closed canopy, large dbh trees, moist growing conditions, and provides habitat for rare species of conservation concern	WT – 61 (T28) AR – 12 CL – 12 CA – 12 SI – >120	6-6	**Yes**
ORV-001 Other Rare Vegetation Communities	2.53	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest	May provide habitat for species of conservation concern and	Presence of provincially rare (S3?) Community Type	WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	6-5	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
				increase vegetation diversity				
WFN-001 Waterfowl Nesting Area	13.20	FODM7-5 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest White Elm Mineral Deciduous Swamp	May provide nesting habitat for waterfowl	Suitable upland habitat adjacent to a swamp community	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	6-6	**Yes**
AWO-001 Amphibian Breeding Habitat (Woodland)	11.91	FODM7-5 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest White Elm Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat.	Candidate deciduous forest and swamp habitat with the presence of seasonal flooding and/or vernal pools	WT – 37(T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	6-6	**Yes**
AWO-002 Amphibian Breeding Habitat (Woodland)	2.53	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest		Candidate deciduous forest habitat with the presence of seasonal flooding and/or vernal pools	WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	6-5	**Yes**
Habitats for Species of Conservation Concern								
MBB-001 Marsh Bird Breeding Habitat	5.37	SWDM4	Mineral Deciduous Swamp	May be used for breeding or nesting habitat.	Candidate wetland habitat containing shallow water with emergent aquatic vegetation	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
Special Concern and Rare Wildlife Species								
EWP-001 Eastern Wood-Pewee Habitat	14.00	FODM7-5 SWDM3-3 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest Swamp Maple Mineral Deciduous Swamp White Elm Mineral Deciduous Swamp	May be used for breeding, nesting or foraging habitat.	Candidate deciduous forest and/or swamp habitat	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-A (1) 7-6	**Yes**
EWP-002 Eastern Wood-Pewee Habitat	2.63	FODM5-6 SWDM4-2	Dry-Fresh Sugar Maple-Basswood Deciduous Forest White Elm Mineral Deciduous Swamp			WT – 92(T31) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-M (1) 7-6	**Yes**
EWP-003 Eastern Wood-Pewee Habitat	0.50	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – 16 (T26) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-G (1) 7-5	**Yes**
WTH-001 Wood Thrush Habitat	6.54	FODM7-5	Fresh-Moist Black Maple Lowland Deciduous Forest	May be used for breeding, nesting or foraging habitat.	Candidate moist, mature deciduous forest habitat	WT – 61 (T28) AR – 12 CL – 12 CA – 12 SI – >120	SCC-C (2) 7-6	**Yes**
PMI-001	2.02	MEMM4	Fresh-Moist	Provides suitable	Candidate moist	WT – 102 (T30)	SCC-P (23)	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
Prairie Milkweed Habitat			Mixed Meadow	moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	meadow habitat	AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	7-6	
PAW-001 Pawpaw Habitat	11.91	FODM7-5 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest White Elm Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist deciduous forest and/or swamp habitat	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-B (4) 7-6	**Yes**
PAW-002 Pawpaw Habitat	2.53	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest			WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	SCC-J (4) 7-5	**Yes**
MSE-001 Muskingum Sedge Habitat	14.00	FODM7-5 SWDM3-3 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest Swamp Maple Mineral Deciduous Swamp White Elm Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate wet-mesic deciduous forest and/or swamp habitat.	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-A (5) 7-6	**Yes**
	2.53	FODM6-2	Fresh-Moist			WT – >120	SCC-J (5)	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
MSE-002 Muskingum Sedge Habitat			Sugar Maple-Black Maple Deciduous Forest			AR – 85 CL – 85 CA – 85 SI – >120	7-5	
MSE-003 Muskingum Sedge Habitat	1.09	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 86 CL – 86 CA – 86 SI – >120	SCC-F (5) 7-5	**Yes**
MSE-004 Muskingum Sedge Habitat	5.08	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 99 CL – 99 CA – 99 SI – >120	SCC-H (5) 7-5	**Yes**
MSE-005 Muskingum Sedge Habitat	2.09	SWDM4-2	White Elm Mineral Deciduous Swamp			WT – 92 (T31) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-N (5) 7-6	**Yes**
MSE-006 Muskingum Sedge Habitat	1.04	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA –>0.1* SI – >0.1*	SCC-L (5) 7-5 7-6	**Yes**
MSE-007 Muskingum Sedge Habitat	4.19	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-K (5) 7-6	**Yes**
MSE-008 Muskingum Sedge Habitat	0.50	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – 16 (T26) AR – >0.1* CL – >0.1* CA – >0.1*	SCC-G (5) 7-5	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
						SI – >120		
RSE-001 Rigid Sedge Habitat	2.02	MEMM4	Fresh-Moist Mixed Meadow	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist meadow habitat.	WT – 102 (T30) AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	SCC-P (6) 7-6	**Yes**
RFP-001 Round-Fruited Panic Grass Habitat	0.54	FODM5-6	Dry-Fresh Sugar Maple-Basswood Deciduous Forest	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate dry deciduous forest habitat	WT – >120 AR – 68 CL – 68 CA – 68 SI – >120	SCC-O (7) 7-6	**Yes**
RFP-002 Round-Fruited Panic Grass Habitat	1.12	FODM4-1	Dry-Fresh Beech Deciduous Forest			WT – >120 AR – 67 CL – 67 CA – 67 SI – >120	SCC-I (7) 7-5	**Yes**
BAS-001 Blue Ash Habitat	11.91	FODM7-5 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest White Elm Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist deciduous forest and/or swamp habitat.	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-B (8) 7-6	**Yes**
BAS-002 Blue Ash Habitat	2.53	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest			WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	SCC-J (8) 7-5	**Yes**
SRM-001 Swamp Rose-mallow Habitat	5.37	SWDM4-2	White Elm Mineral Deciduous	Provides suitable moisture regime, light levels, and	Candidate nutrient rich swamp habitat.	WT – 37 (T28) AR – 12 CL – Overlapping**	SCC-E (9) 7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
			Swamp	soil properties that promote optimal growth and fecundity of this species.		CA – Overlapping** SI – >120		
SRM-002 Swamp Rose-mallow Habitat	4.19	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-K (9) 7-6	**Yes**
BGU-001 Black Gum Habitat	14.00	FODM7-5 SWDM3-3 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest Swamp Maple Mineral Deciduous Swamp White Elm Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist deciduous forest and/or swamp habitat.	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-A (10) 7-6	**Yes**
BGU-002 Black Gum Habitat	2.53	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest			WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	SCC-J (10) 7-5	**Yes**
BGU-003 Black Gum Habitat	4.19	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-K (10) 7-6	**Yes**
NFO-001 Northern Fogfruit Habitat	14.00	FODM7-5 SWDM3-3	Fresh-Moist Black Maple Lowland Deciduous Forest	Provides suitable moisture regime, light levels, and soil properties that promote	Candidate moist deciduous forest and swamp habitat.	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-A (11) 7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
		SWDM4-2	Swamp Maple Mineral Deciduous Swamp White Elm Mineral Deciduous Swamp	optimal growth and fecundity of this species.				
NFO-002 Northern Fogfruit Habitat	1.09	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 86 CL – 86 CA – 86 SI – >120	SCC-F (11) 7-5	**Yes**
NFO-003 Northern Fogfruit Habitat	5.08	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 99 CL – 99 CA – 99 SI – >120	SCC-H (11) 7-5	**Yes**
NFO-004 Northern Fogfruit Habitat	2.53	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest			WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	SCC-J (11) 7-5	**Yes**
NFO-005 Northern Fogfruit Habitat	1.04	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-L (11) 7-5 7-6	**Yes**
NFO-006 Northern Fogfruit Habitat	2.09	SWDM4-2	White Elm Mineral Deciduous Swamp			WT – 92 (T31) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-N (11) 7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
NFO-007 Northern Fogfruit Habitat	2.02	MEMM4	Fresh-Moist Mixed Meadow			WT – 102 (T30) AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	SCC-P (11) 7-6	**Yes**
NFO-008 Northern Fogfruit Habitat	4.19	SWDM3-3.	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-K (11) 7-6	**Yes**
SHU-001 Shumard Oak Habitat	5.08	SWDM3-3	Swamp Maple Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist mineral rich swamp habitats	WT – >120 AR – 99 CL – 99 CA – 99 SI – >120	SCC-H (12) 7-5	**Yes**
SHU-002 Shumard Oak Habitat	5.37	SWDM4-2	White Elm Mineral Deciduous Swamp			WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-D (12) 7-6	**Yes**
SHU-003 Shumard Oak Habitat	2.09	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	SCC-E (12) 7-6	**Yes**
GPC-001 Gray-headed Prairie Coneflower Habitat	0.54	FODM5-6	Dry-Fresh Sugar Maple-Basswood Deciduous Forest	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate dry deciduous forest habitat	WT – >120 AR – 68 CL – 68 CA – 68 SI – >120	SCC-O (13) 7-6	**Yes**
GPC-002 Gray-headed Prairie Coneflower Habitat	1.12	FODM4-1	Dry-Fresh Beech Deciduous Forest			WT – >120 AR – 67 CL – 67 CA – 67 SI – >120	SCC-I (13) 7-5	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
CPR-001 Climbing Prairie Rose Habitat	2.02	MEMM4	Fresh-Moist Mixed Meadow	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate open moist meadow habitat	WT – 102 (T30) AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	SCC-P (14) 7-6	**Yes**
LTA-001 Lizard's Tail Habitat	14.00	FODM7-5 SWDM3-3 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest Swamp Maple Mineral Deciduous Swamp White Elm Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate deciduous forest or swamp habitat.	WT –37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-A (15) 7-6	**Yes**
LTA-002 Lizard's Tail Habitat	2.53	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest			WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	SCC-J (15) 7-5	**Yes**
LTA-003 Lizard's Tail Habitat	1.09	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 86 CL – 86 CA – 86 SI – >120	SCC-F (15) 7-5	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
LTA-004 Lizard's Tail Habitat	5.08	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 99 CL – 99 CA – 99 SI – >120	SCC-H (15) 7-5	**Yes**
LTA-005 Lizard's Tail Habitat	2.09	SWDM4-2	White Elm Mineral Deciduous Swamp			WT – 92 (T31) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-N (15) 7-6	**Yes**
LTA-006 Lizard's Tail Habitat	1.04	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-L (15) 7-5 7-6	**Yes**
LTA-007 Lizard's Tail Habitat	4.19	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-K (15) 7-6	**Yes**
LTA-008 Lizard's Tail Habitat	0.50	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – 16 (T26) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-G (15) 7-5	**Yes**
WSE-001 Wild Senna Habitat	0.50	SWDM3-3	Swamp Maple Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species	Candidate deciduous mineral rich swamp or moist meadow habitat	WT – 16 (T26) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-G (16) 7-5	**Yes**
WSE-002 Wild Senna Habitat	2.09	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	SCC-E (16) 7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
WSE-003 Wild Senna Habitat	5.37	SWDM4-2	White Elm Mineral Deciduous Swamp			WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-D (16) 7-6	**Yes**
WSE-004 Wild Senna Habitat	1.09	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 86 CL – 86 CA – 86 SI – >120	SCC-F (16) 7-5	**Yes**
WSE-005 Wild Senna Habitat	5.08	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 99 CL – 99 CA – 99 SI – >120	SCC-H (16) 7-5	**Yes**
WSE-006 Wild Senna Habitat	4.19	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-K (16) 7-6	**Yes**
WSE-007 Wild Senna Habitat	1.04	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-L (16) 7-5 7-6	**Yes**
WSE-008 Wild Senna Habitat	2.09	SWDM4-2	White Elm Mineral Deciduous Swamp			WT – 92 (T31) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-N (16) 7-6	**Yes**
WSE-009 Wild Senna Habitat	2.02	MEMM4	Fresh-Moist Mixed Meadow			WT – 102 (T30) AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	SCC-P (16) 7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
CUP-001 Cup-Plant Habitat	5.37	FODM4-2	Dry-Fresh White Ash- Hardwood Deciduous Forest	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate dry deciduous forest habitat	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-D (17) 7-6	**Yes**
CUP-002 Cup-Plant Habitat	4.19	SWDM3-3	Swamp Maple Mineral Deciduous Swamp		Candidate deciduous swamp habitat	WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-K (17) 7-6	**Yes**
CUP-003 Cup-Plant Habitat	2.09	SWDM4-2	White Elm Mineral Deciduous Swamp			WT – 92 (T31) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-N (17) 7-6	**Yes**
CUP-004 Cup-Plant Habitat	2.02	MEMM4	Fresh-Moist Mixed Meadow		Candidate moist meadow habitat	WT – 102 (T30) AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	SCC-P (17) 7-6	**Yes**
RGL-001 Riddell's Goldenrod Habitat	2.02	MEMM4	Fresh-Moist Mixed Meadow	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species	Candidate moist meadow habitat	WT – 102 (T30) AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	SCC-P (18) 7-6	**Yes**
SLT-001 Southern Slender Ladies' Tresses Habitat	2.02	MEMM4	Fresh-Moist Mixed Meadow	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist meadow habitat	WT – 102 (T30) AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	SCC-P (19) 7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
WIS-001 Wing-stem Habitat	14.00	FODM7-5 SWDM3-3 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest Swamp Maple Mineral Deciduous Swamp White Elm Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist deciduous swamps and wetland habitat	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-A (20) 7-6	**Yes**
WIS-002 Wing-stem Habitat	1.09	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 86 CL – 86 CA – 86 SI – >120	SCC-F (20) 7-5	**Yes**
WIS-003 Wing-stem Habitat	5.08	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 99 CL – 99 CA – 99 SI – >120	SCC-H (20) 7-5	**Yes**
WIS-004 Wing-stem Habitat	2.53	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest			WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	SCC-J (20) 7-5	**Yes**
WIS-005 Wing-stem Habitat	4.19	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-K (20) 7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
WIS-006 Wing-stem Habitat	1.04	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-L (20) 7-5 7-6	**Yes**
WIS-007 Wing-stem Habitat	2.09	SWDM4-2	White Elm Mineral Deciduous Swamp			WT – 92 (T31) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-N (20) 7-6	**Yes**
WIS-008 Wing-stem Habitat	0.50	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – 16 (T26) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-G (20) 7-5	**Yes**
GIW-001 Giant Ironweed Habitat	1.09	SWDM3-3	Swamp Maple Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist deciduous swamps, forest and meadow habitat	WT – >120 AR – 86 CL – 86 CA – 86 SI – >120	SCC-F (3) 7-5	**Yes**
GIW-002 Giant Ironweed Habitat	5.08	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – 99 CL – 99 CA – 99 SI – >120	SCC-H (3) 7-5	**Yes**
GIW-003 Giant Ironweed Habitat	2.09	SWDM4-2	White Elm Mineral Deciduous Swamp			WT – 92 (T31) AR – >0.1* CL – >0.1* CA – >0.1* SI – >120	SCC-N (3) 7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
GIW-004 Giant Ironweed Habitat	14.00	FODM7-5 SWDM3-3 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest Swamp Maple Mineral Deciduous Swamp White Elm Mineral Deciduous Swamp			WT – 37 (T28) AR – 12 CL – Overlapping** CA –Overlapping** SI – >120	SCC-A (3) 7-6	**Yes**
GIW-005 Giant Ironweed Habitat	1.04	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-L (3) 7-5 7-6	**Yes**
GIW-006 Giant Ironweed Habitat	4.19	SWDM3-3	Swamp Maple Mineral Deciduous Swamp			WT – >120 AR – >0.1* CL – >0.1* CA – >0.1* SI – >0.1*	SCC-K (3) 7-6	**Yes**
GIW-007 Giant Ironweed Habitat	2.53	FODM6-2	Fresh-Moist Sugar Maple-Black Maple Deciduous Forest			WT – >120 AR – 85 CL – 85 CA – 85 SI – >120	SCC-J (3) 7-5	**Yes**
GIW-008 Giant Ironweed Habitat	2.02	MEMM4	Fresh-Moist Mixed Meadow			WT – 102 (T30) AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	SCC-P (3) 7-6	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Map(s)	EOS Required (Y/N)
VCR-001 Virginia Culver's-root Habitat	2.02	MEMM4	Fresh-Moist Mixed Meadow	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist meadow habitat	WT – 102 (T30) AR – 62 CL – Overlapping** CA – Overlapping** SI – >120	SCC-P (22) 7-6	**Yes**
CVI-001 Cream Violet Habitat	11.91	FODM7-5 SWDM3-3 SWDM4-2	Fresh-Moist Black Maple Lowland Deciduous Forest Swamp Maple Mineral Deciduous Swamp White Elm Mineral Deciduous Swamp	Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	Candidate moist deciduous swamp and forest habitat	WT – 37 (T28) AR – 12 CL – Overlapping** CA – Overlapping** SI – >120	SCC-B (21) 7-6	**Yes**

** On the mapping, this candidate SWH appears to be overlapped; however, all project components, including the construction disturbance area, will be located adjacent to the candidate SWH (>0.1m).*
*** Directional drilling will be used to bore beneath this feature in order to avoid impacts to the feature itself.*

Legend
WT: Wind Turbine
AR: Access Road
CL: Collector Lines
CA: Construction Activity/Temporary Infrastructure/Balance of Operations
SI: Supporting Infrastructure - Building/Substation/Laydown Area/Point of Interconnect

Table 16. Summary of Generalized Candidate Significant Wildlife Habitat Identified in the North Kent Wind 1 Project Area

Wildlife Habitat	Present Within the Project Area	Criteria Rationale
Seasonal Concentration Areas		
Waterfowl Stopover and Staging Areas (Terrestrial)	Yes	Fourteen agricultural fields with waste grains and containing annual spring melt water flooding, have been identified within 120m of a project component that will not have an operational impact. These habitats have been considered generalized candidate SWH. Located >120m from wind turbines.
Bat Maternity Colonies	Yes	Seven Deciduous Forest (FOD) and Deciduous Treed Swamp (SWD) Community Types have been identified within 120m of a project component that will not have an operational impact. These communities have been considered generalized candidate SWH. Located >120m from wind turbines.
Turtle Wintering Areas	Yes	Three Open Water (OA) Community Types have been identified as candidate turtle wintering areas since they contain water that is deep enough not to freeze, and have soft mud substrates. As the Project Location does not overlap with these habitats, there will be no operational impact. As such, these communities have been considered generalized candidate SWH. No development within habitat.
Snake Hibernaculum	Yes	One old rock/debris pile was identified on a rural residential property adjacent to an Open Water (OA) Community Type. Although the depth of this feature is unknown, broken/fissured large concrete slabs were identified that may be suitable for snake hibernacula. Since this feature is located within 120m of a project component that will not have an operational impact, it will be considered generalized candidate SWH. Located >120m from wind turbines and access roads.
Colonially – Nesting Bird Breeding Habitat (Tree/Shrubs)	Yes	One Deciduous Swamp (SWD) Community Types have been identified within 120m of a project component that will not have an operational impact. This Community will be considered generalized candidate SWH. Located >120m from wind turbines and access roads.

Wildlife Habitat	Present Within the Project Area	Criteria Rationale
Rare Vegetation Communities and Specialized Wildlife Habitats		
Amphibian Breeding Habitat (Woodland)	Yes	Four Treed Swamp (SWD) and Forest (FO) Community Types have been identified within 120m of a project component that will not have an operational impact. These 4 habitats will be considered generalized candidate SWH. Located >120m from access roads.
Habitats for Species of Conservation Concern		
Marsh Bird Breeding Habitat	Yes	Two Swamp (SW) habitats with shallow water and emergent aquatic vegetation have been identified within 120m of a project component that will not have an operational impact. Located >120m from wind turbines.
Terrestrial Crayfish	Yes	Four Deciduous Treed Swamp (SWD) Community Types have been identified as candidate terrestrial crayfish habitats. As the Project Location does not overlap with these habitats, there will be no operational impact. As such, these communities have been considered as generalized candidate SWH. No development within habitat.
Special Concern and Rare Wildlife Species		
Grasshopper Sparrow	Yes	One grassland habitat has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH. Located >120m from wind turbines.
Common Nighthawk	Yes	One open area with little to no ground vegetation has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH. Located >120m from wind turbines.
Eastern Wood-Pewee	Yes	Fifteen Forest (FO), Deciduous Treed Swamp (SWD), and Mixed Plantation (TAGM2) Community Types have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from wind turbines.
Wood Thrush	Yes	Four Deciduous Forest (FOD) and Deciduous Treed Swamp (SWD) Community Types have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH.

Wildlife Habitat	Present Within the Project Area	Criteria Rationale
		Located >120m from wind turbines.
Red-headed Woodpecker	Yes	Twelve Forest (FO) and Swamp (SW) Community Types containing trees >40cm dbh have been identified where development is not proposed within woodland edges. These habitats will be considered generalized candidate SWH. No development within habitat.
Pawpaw	Yes	Three moist forests and swamps have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads.
Muskingum Sedge	Yes	Seven wet-mesic forests have been identified within 120m of a project component that will not have an operational impact. These habitats have been considered generalized candidate SWH. Located >120m from access roads*.
Rigid Sedge	Yes	One meadow has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH. Located >120m from access roads.
Hoary Tick-trefoil	Yes	One dry meadow has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH. Located >120m from access roads.
Round-Fruited Panic Grass	Yes	One dry meadow has been identified within 120m of a project component that will not have an operational impact. This habitat has been considered generalized candidate SWH. Located >120m from access roads.
Blue Ash	Yes	Three moist deciduous forests have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads.
Swamp Rose-mallow	Yes	Two open, wet woodlands have been identified 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads.

Wildlife Habitat	Present Within the Project Area	Criteria Rationale
American Lotus	Yes	One pond has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH. Located >120m from access roads.
Black Gum	Yes	Three moist forests and riparian edges have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads.
Northern Fogfruit	Yes	Eight floodplain forests have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads*.
Shumard Oak	Yes	One Swamp (SW) Community Type has been identified within 120m of a project component that will not have an operational impact. This habitat has been considered generalized candidate SWH. Located >120m from access roads.
Gray-headed Prairie Coneflower	Yes	One Meadow (ME) Community Type has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH. Located >120m from access roads.
Climbing Prairie Rose	Yes	One Meadow (ME) Community Type has been identified within 120m of a project component that will not have an operational impact. This habitat has been considered generalized candidate SWH. Located >120m from access roads.
Lizard's Tail	Yes	Eight Swamp (SW), Moist Deciduous Forest (FODM), and/or Open Aquatic (OA) Community Types have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads*.
Wild Senna	Yes	Four Swamp (SW) Community Types have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads*.

Wildlife Habitat	Present Within the Project Area	Criteria Rationale
Cup-Plant	Yes	Seven Swamp (SW) and/or moist Forest (FO) Community Types have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads*.
Southern Slender Ladies' Tresses	Yes	One Meadow (ME) Community Type has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH. Located >120m from access roads.
Wing-stem	Yes	Eight Swamp (SW) and Forest (FO) Community Types have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads.
Giant Ironweed	Yes	Nine Meadow (ME) and/or Deciduous Forest (FOD) Community Types have been identified within 120m of a project component that will not have an operational impact. These habitats have been considered generalized candidate SWH. Located >120m from access roads*.
Virginia Culver's-root	Yes	One Meadow (ME) Community Type has been identified within 120m of a project component that will not have an operational impact. This habitat will be considered generalized candidate SWH. Located >120m from access roads.
Cream Violet	Yes	Three moist Forest (FO) and/or Swamp (SW) Community Types have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. Located >120m from access roads.
Blue-ringed Dancer	Yes	Two suitable streams with gentle currents and vegetation have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. No development within habitat.
Blue-tipped Dancer	Yes	Two suitable streams have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH.

Wildlife Habitat	Present Within the Project Area	Criteria Rationale
		No development within habitat.
Variegated Meadowhawk	Yes	Three suitable streams and/or ponds with sandy or cobble bottoms have been identified within 120m of a project component that will not have an operational impact. These habitats will be considered generalized candidate SWH. No development within habitat.

** Candidate habitats may be located within 120m of an access road; however, since they are currently impacted by closer, existing roads, no operational impacts to the species are anticipated as a result of proposed access roads within 120m of the candidate habitats. As such, these habitats have been considered generalized candidate SWH.*

7.0 Summary of Site Investigation

In accordance with the REA Regulation, NRSI biologists have completed a comprehensive site investigation of the North Kent Wind 1 Project Area. The results of the investigation have been discussed in the preceding sections, and are summarized in Table 17. This summary includes woodlands, wetlands, and SWH, some of which will be carried forward to the evaluation of significance phase of this project, as noted in the table.

Table 18 outlines differences to the summary of the Records Review report, while Table 19 outlines differences to candidate SWH identified in the Records Review report.

Table 17. Summary of Natural Features and Candidate Wildlife Habitat Site Investigation for the North Kent Wind 1 Project

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With a Potential Operational Effect (m)	Evaluation of Significance Required (Y/N)
Woodlands				
WOD-001	>120	CL, CA – Overlapping*	N/A	**Yes**
WOD-002	37 (T28)	CL, CA – Overlapping*	N/A	**Yes**
WOD-003	>120	CL, CA – Overlapping*	N/A	**Yes**
WOD-004	>120	AR, CL,CA – 86	N/A	**Yes**
WOD-005	>120	AR, CL, CA – 67	N/A	**Yes**
WOD-006	>120	AR, CL, CA – 85	N/A	**Yes**
WOD-007	>120	CL, CA – Overlapping*	N/A	**Yes**
WOD-008	>120	AR, CL, CA, SI – >0.1**	N/A	**Yes**
WOD-009	>120	AR, CL, CA, SI – >0.1**	N/A	**Yes**
WOD-010	>120	CL, CA – Overlapping*	N/A	**Yes**
WOD-011	92 (T31)	AR, CL, CA – >0.1**	N/A	**Yes**
WOD-012	>120	CL, CA – Overlapping*	N/A	**Yes**
WOD-013	>120	CL, CA – Overlapping*	N/A	**Yes**
WOD-016	>120	CL, CA – 23	N/A	**Yes**
WOD-017	>120	CL, CA – Overlapping*	N/A	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With a Potential Operational Effect (m)	Evaluation of Significance Required (Y/N)
WOD-018	16 (T26)	AR, CL, CA – >0.1**	N/A	**Yes**
Wetlands				
WET-001	37 (T28)	CL, CA – Overlapping*	N/A	**Yes**
WET-002	>120	CL, CA – Overlapping*	N/A	**Yes**
WET-003	16 (T26)	AR, CL, CA – >0.1**	N/A	**No**
WET-004	>120	AR, CL, CA – 99	N/A	**Yes**
WET-005	>120	AR, CL, CA, SI – >0.1**	N/A	**Yes**
WET-006	92 (T31)	AR, CL, CA – >0.1**	N/A	**Yes**
WET-007	>120	CL, CA – Overlapping*	N/A	**No**
Candidate Significant Wildlife Habitats				
WST-001	>120	AR, CA, SI – Overlapping	WT – >120	**Yes**
WST-002	10 (T7)	CL, CA – >0.1**	WT – 10 (T7)	**Yes**
WST-003	>120	CL, CA – >0.1**	WT – >120	**Yes**
WST-004	Overlapping (T48)	AR, CL, CA – Overlapping	WT – Overlapping (T48)	**Yes**
WST-005	Overlapping (T48)	AR, CL, CA – Overlapping	WT – Overlapping (T48)	**Yes**
BMA-001	37 (T28)	CL, CA – Overlapping*	WT – 37 (T28)	**Yes**
BMA-002	92 (T31)	AR, CL, CA – >0.1**	WT – 92 (T31)	**Yes**
CBT-001	37 (T28)	CL, CA – Overlapping*	WT – 37 (T28) AR – 12	**Yes**
OGF-001	61 (T28)	AR, CL, CA – 12	AR – 12	**Yes**
ORV-001	>120	AR, CL, CA – 85	AR – 85	**Yes**
WFN-001	37 (T28)	CL, CA – Overlapping*	WT – 37(T28)	**Yes**
AWO-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
AWO-002	>120	AR, CL, CA – 85	AR – 85	**Yes**
MBB-001	37 (T28)	CL, CA – Overlapping*	WT – 37 (T28)	**Yes**
EWP-001	37 (T28)	CL, CA – Overlapping*	WT – 37 (T28)	**Yes**
EWP-002	92 (T31)	AR, CL, CA – >0.1**	WT – 92 (T31)	**Yes**
EWP-003	16 (T26)	AR, CL, CA – >0.1**	WT – 16 (T26)	**Yes**
WTH-001	61 (T28)	AR, CL, CA – 12	WT – 61 (T28)	**Yes**
PMI-001	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
PAW-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
PAW-002	>120	AR, CL, CA – 85	AR – 85	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With a Potential Operational Effect (m)	Evaluation of Significance Required (Y/N)
MSE-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
MSE-002	>120	AR, CL, CA – 85	AR – 85	**Yes**
MSE-003	>120	AR, CL, CA – 86	AR – 86	**Yes**
MSE-004	>120	AR, CL, CA – 99	AR – 99	**Yes**
MSE-005	92 (T31)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
MSE-006	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
MSE-007	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
MSE-008	16 (T26)	AR, CL, SI – >0.1**	AR – >0.1**	**Yes**
RSE-001	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
RFP-001	>120	AR, CL, CA – 68	AR – 68	**Yes**
RFP-002	>120	AR, CL, CA – 67	AR – 67	**Yes**
BAS-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
BAS-002	>120	AR, CL, CA – 85	AR – 85	**Yes**
SRM-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
SRM-002	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
BGU-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
BGU-002	>120	AR, CL, CA – 85	AR – 85	**Yes**
BGU-003	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
NFO-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
NFO-002	>120	AR, CL, CA – 86	AR – 86	**Yes**
NFO-003	>120	AR, CL, CA – 99	AR – 99	**Yes**
NFO-004	>120	AR, CL, CA – 85	AR – 85	**Yes**
NFO-005	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
NFO-006	92 (T31)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
NFO-007	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
NFO-008	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
SHU-001	>120	AR, CL, CA – 99	AR – 99	**Yes**
SHU-002	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
SHU-003	>120	AR, CL, CA – 85	AR – 85	**Yes**
GPC-001	>120	AR, CL, CA – 68	AR – 68	**Yes**
GPC-002	>120	AR, CL, CA – 67	AR – 67	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With a Potential Operational Effect (m)	Evaluation of Significance Required (Y/N)
CPR-001	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
LTA-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
LTA-002	>120	AR, CL, CA – 85	AR – 85	**Yes**
LTA-003	>120	AR, CL, CA – 86	AR – 86	**Yes**
LTA-004	>120	AR, CL, CA – 99	AR – 99	**Yes**
LTA-005	92 (T31)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
LTA-006	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
LTA-007	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
LTA-008	16 (T26)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
WSE-001	16 (T26)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
WSE-002	>120	AR, CL, CA – 85	AR – 85	**Yes**
WSE-003	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
WSE-004	>120	AR, CL, CA – 86	AR – 86	**Yes**
WSE-005	>120	AR, CL, CA – 99	AR – 99	**Yes**
WSE-006	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
WSE-007	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
WSE-008	92 (T28)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
WSE-009	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
CUP-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
CUP-002	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
CUP-003	92 (T31)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
CUP-004	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
RGL-001	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
SLT-001	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
WIS-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
WIS-002	>120	AR, CL, CA – 86	AR – 86	**Yes**
WIS-003	>120	AR, CL, CA – 99	AR – 99	**Yes**
WIS-004	>120	AR, CL, CA – 85	AR – 85	**Yes**
WIS-005	>120	AR, CL, CA, SI – >0.1**	AR – >0.1**	**Yes**
WIS-006	>120	AR, CL, CA, SI – >0.1**	AR – >0.1**	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With a Potential Operational Effect (m)	Evaluation of Significance Required (Y/N)
WIS-007	92 (T31)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
WIS-008	16 (T26)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
GIW-001	>120	AR, CL, CA – 86	AR – 86	**Yes**
GIW-002	>120	AR, CL, CA – 99	AR – 99	**Yes**
GIW-003	92 (T31)	AR, CL, CA – >0.1**	AR – >0.1**	**Yes**
GIW-004	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
GIW-005	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
GIW-006	>120	AR, CL, CA, SI- >0.1**	AR – >0.1**	**Yes**
GIW-007	>120	AR, CL, CA – 85	AR – 85	**Yes**
GIW-008	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
VCR-001	102 (T30)	CL, CA – Overlapping*	AR – 62	**Yes**
CVI-001	37 (T28)	CL, CA – Overlapping*	AR – 12	**Yes**
Generalized Candidate Significant Wildlife Habitats				
Waterfowl Stopover and Staging Areas (Terrestrial)	N/A	N/A	WT – >120	**Yes**
Bat Maternity Colonies	N/A	N/A	WT – >120	**Yes**
Turtle Wintering Areas	N/A	N/A	No development within habitat	**Yes**
Snake Hibernaculum	N/A	N/A	WT – >120 AR – >120	**Yes**
Colonially – Nesting Bird Breeding Habitat (Tree/Shrubs)	N/A	N/A	WT – >120 AR – >120	**Yes**
Amphibian Breeding Habitat (Woodland)	N/A	N/A	AR – >120	**Yes**
Marsh Bird Breeding Habitat	N/A	N/A	WT – >120	**Yes**
Terrestrial Crayfish	N/A	N/A	No development within habitat	**Yes**
Grasshopper Sparrow	N/A	N/A	WT – >120	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With a Potential Operational Effect (m)	Evaluation of Significance Required (Y/N)
Common Nighthawk	N/A	N/A	WT – >120	**Yes**
Eastern Wood-Pewee	N/A	N/A	WT – >120	**Yes**
Wood Thrush	N/A	N/A	WT – >120	**Yes**
Red-headed Woodpecker	N/A	N/A	No development within habitat	**Yes**
Pawpaw	N/A	N/A	AR – >120	**Yes**
Muskingum Sedge	N/A	N/A	AR – >120	**Yes**
Rigid Sedge	N/A	N/A	AR – >120	**Yes**
Hoary Tick-trefoil	N/A	N/A	AR – >120	**Yes**
Round-Fruited Panic Grass	N/A	N/A	AR – >120	**Yes**
Blue Ash	N/A	N/A	AR – >120	**Yes**
Swamp Rose-mallow	N/A	N/A	AR – >120	**Yes**
American Lotus	N/A	N/A	AR – >120	**Yes**
Black Gum	N/A	N/A	AR – >120	**Yes**
Northern Fogfruit	N/A	N/A	AR – >120	**Yes**
Shumard Oak	N/A	N/A	AR – >120	**Yes**
Gray-headed Prairie Coneflower	N/A	N/A	AR – >120	**Yes**
Climbing Prairie Rose	N/A	N/A	AR – >120	**Yes**
Lizard's Tail	N/A	N/A	AR – >120	**Yes**
Wild Senna	N/A	N/A	AR – >120	**Yes**
Cup-Plant	N/A	N/A	AR – >120	**Yes**
Southern Slender Ladies' Tresses	N/A	N/A	AR – >120	**Yes**
Wing-stem	N/A	N/A	AR – >120	**Yes**
Giant Ironweed	N/A	N/A	AR – >120	**Yes**
Virginia Culver's-root	N/A	N/A	AR – >120	**Yes**
Cream Violet	N/A	N/A	AR – >120	**Yes**
Blue-ringed Dancer	N/A	N/A	No development within habitat	**Yes**
Blue-tipped Dancer	N/A	N/A	No development within habitat	**Yes**
Variegated Meadowhawk	N/A	N/A	No development within habitat	**Yes**

** Directional drilling will be used to bore beneath this feature in order to avoid impacts to the feature itself.*

*** On the mapping, this feature appears to be overlapped; however, all project components, including the construction disturbance area, will be located adjacent to the feature (>0.1m).*

Legend
WT: Wind Turbine
AR: Access Road
CL: Collector Lines
CA: Construction Activity/Temporary Infrastructure/Balance of Operations
SI: Supporting Infrastructure - Building/Substation/Laydown Area/Point of Interconnect

Table 18. Summary of Corrections to the Records Review for the North Kent Wind 1 Project

Criteria	Result	Corrections Based on Site Investigation
1. In or within 120m of a Provincial Park or Conservation Reserve	The Project is not located in or within 120m of a Provincial Park or Conservation Reserve.	**No changes.**
2. In a Natural Feature	The results of this records review indicate the Project Location (i.e. disturbance area, collector lines, access roads, etc.) overlaps with 14 woodlands. Species associations and distances of these habitats to the Project Location will be confirmed during the site investigation phase of this NHA. The intention of the proposed Project Location is to avoid overlap with natural features, including woodlands, wherever possible.	**Yes.** **The results of the site investigation have confirmed that the Project Location overlaps with 8 woodlands (WOD-001, WOD-002, WOD-003, WOD-007, WOD-010, WOD-012, WOD-013, and WOD-017) and 3 wetlands (WET-001, WET-002, and WET-007); however, directional drilling will be used to bore beneath these features and/or infrastructure will be placed outside of the features, in order to avoid impacts to the features themselves.**
3. Within 50m of a Provincially Significant ANSI-Earth Science (ES)	No Provincially Significant ANSI-ES is located within 50m of the Project Location.	**No changes.**
4. Within 120m of a Natural Feature		
Provincially Significant ANSI-Life Science (LS)	No Provincially Significant ANSI-LS is located within the Project Area.	**No changes.**
Coastal Wetland	No coastal wetlands are located within the Project Area.	**No changes.**
Northern Wetland	No northern wetlands are located within the Project Area.	**No changes.**
Southern Wetland	No known southern wetlands are located within the Project Area. There are 31 woodlands within the Project Area, each of which has the potential to contain unevaluated wetland habitat. All of the potential wetland habitats within the Project Area will be further examined during the site investigation phase of this NHA.	**Yes.** **A total of 7 wetlands are located within the North Kent Wind 1 Project Area.** **The Project Location overlaps with 3 of these wetlands (WET-001, WET-002, and WET-007); however, directional drilling will be used to bore beneath these features and/or infrastructure will be**

Criteria	Result	Corrections Based on Site Investigation
		placed outside of the features, in order to avoid impacts to the features themselves.
Wildlife Habitat	A total of 31 woodlands are located within the Project Area and could provide several types of SWH. Other natural features such as naturalized drainage ditches and hedgerows have been identified within the Project Area and could also provide SWH. These features will be surveyed to determine if they are used for animal movement corridors or provide habitat for species of conservation concern. All of these wildlife habitats will be examined during the site investigation phase and, if applicable, the evaluation of significance phase of this project to confirm presence of candidate SWH and determine the significance of each candidate SWH.	**Yes.** **A total of 94 wildlife habitats have been identified within the North Kent Wind 1 Project Area. These wildlife habitats include seasonal concentration areas (8), rare vegetation communities and specialized wildlife habitats (5), and habitats for species of conservation concern (1). A number of habitats for special concern and rare wildlife species have also been identified (80) within the Project Area.**
Woodland	A total of 31 woodlands are located within the Project Area. Basemapping indicates these habitats range in size from 0.4 to 15.0ha. These woodlands are expected to be primarily dominated by mid-aged to mature deciduous tree species; however, young woodlands, treed plantations, or occasional coniferous woodlands may also be present within the Project Area.	**Yes.** **A total of 16 woodlands are located within the Project Area.** **The Project Location overlaps with 8 of these woodlands (WOD-001, WOD-002, WOD-003, WOD-007, WOD-010, WOD-012, WOD-013, and WOD-017); however, directional drilling will be used to bore beneath these features and/or infrastructure will be placed outside of the features, in order to avoid impacts to the features themselves. Woodlands range in size from 0.50ha to 22.88ha.**

Table 19. Summary of Corrections to the Wildlife Habitats Records Review for the North Kent Wind 1 Project

Wildlife Habitat	Present Within the Project Area	Present Within Project Location	Carried Forward to Site Investigation (Y/N)	Status Based on Site Investigation
Seasonal Concentration Areas				
Waterfowl Stopover and Staging Areas (Terrestrial)	Possible	Possible	Yes	Carried forward as candidate SWH and generalized candidate SWH
Waterfowl Stopover and Staging Areas (Aquatic)	Possible	Possible	Yes	Not carried forward
Shorebird Migratory Stopover Area	Possible	Possible	Yes	Not carried forward
Raptor Wintering Area	Unknown	Unknown	Yes	Not carried forward
Bat Hibernacula	Unknown	Unknown	Yes	Not carried forward
Bat Maternity Colonies	Unknown	Unknown	Yes	Carried forward as candidate SWH and generalized candidate SWH
Bat Migratory Stopover Area	N/A	N/A	No	N/A
Turtle Wintering Areas	Unknown	Unknown	Yes	Carried forward as generalized candidate SWH
Snake Hibernaculum	Unknown	Unknown	Yes	Carried forward as generalized candidate SWH
Colonially – Nesting Bird Breeding Habitat (Bank and Cliff)	Unknown	Unknown	Yes	Not carried forward
Colonially – Nesting Bird Breeding Habitat (Tree/Shrubs)	Unknown	Unknown	Yes	Carried forward as candidate SWH and generalized candidate SWH
Colonially – Nesting Bird Breeding Habitat (Ground)	Unknown	Unknown	Yes	Not carried forward
Migratory Butterfly Stopover Areas	N/A	N/A	No	N/A
Landbird Migratory Stopover Areas	N/A	N/A	No	N/A
Deer Winter Congregation Areas	No	No	No	N/A
Rare Vegetation Communities				
Cliffs and Talus Slopes	Unknown	Unknown	Yes	Not carried forward
Sand Barrens	Unknown	Unknown	Yes	Not carried forward
Alvar	Unknown	Unknown	Yes	Not carried forward
Old Growth Forest	Unknown	Unknown	Yes	Carried forward as candidate SWH
Savannah	Unknown	Unknown	Yes	Not carried forward

Wildlife Habitat	Present Within the Project Area	Present Within Project Location	Carried Forward to Site Investigation (Y/N)	Status Based on Site Investigation
Tallgrass Prairie	Unknown	Unknown	Yes	Not carried forward
Other Rare Vegetation Communities	Unknown	Unknown	Yes	Carried forward as candidate SWH
Specialized Wildlife Habitats				
Waterfowl Nesting Area	Unknown	Unknown	Yes	Carried forward as candidate SWH
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Unknown	Unknown	Yes	Not carried forward
Woodland Raptor Nesting Habitat	Unknown	Unknown	Yes	Not carried forward
Turtle Nesting Areas	Unknown	Unknown	Yes	Not carried forward
Seeps and Springs	Unknown	Unknown	Yes	Not carried forward
Amphibian Breeding Habitat (Woodland)	Unknown	Unknown	Yes	Carried forward as candidate SWH and generalized candidate SWH
Amphibian Breeding Habitat (Wetlands)	Unknown	Unknown	Yes	Not carried forward
Habitat for Species of Conservation Concern				
Marsh Bird Breeding Habitat	Possible	Possible	Yes	Carried forward as candidate SWH and generalized candidate SWH
Woodland Area-Sensitive Bird Breeding Habitat	Unknown	Unknown	Yes	Not carried forward
Open Country Bird Breeding Habitat	Unknown	Unknown	Yes	Not carried forward
Shrub/Early Successional Bird Breeding Habitat	Unknown	Unknown	Yes	Not carried forward
Terrestrial Crayfish	Unknown	Unknown	Yes	Carried forward as generalized candidate SWH
Special Concern and Rare Wildlife Species	Possible	Possible	Yes	Carried forward as candidate SWH and generalized candidate SWH
Animal Movement Corridors				
Amphibian Movement Corridors	Unknown	Unknown	Yes	Not carried forward

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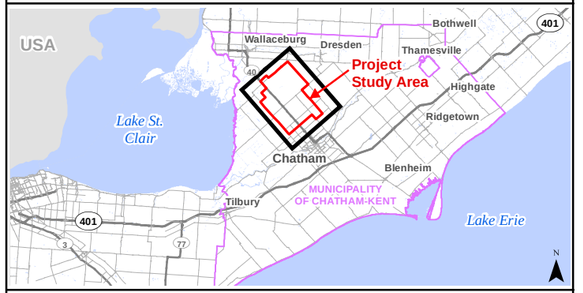
Map 1
Project Area and Natural Features

Map 1

North Kent Wind 1 Project

Project Area and Natural Features



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building
- Proposed Laydown Area

Natural Features

- Permanent Watercourse
- Intermittent Watercourse
- Open Water
- Woodland
- Important Bird Area (IBA)

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Imagery: AECOM (March 2015)

Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:55,000**

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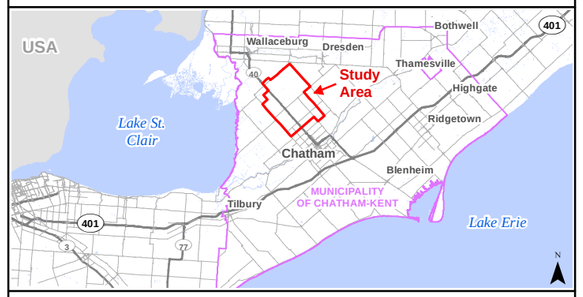
Map 2
Key Map

Map 2

North Kent Wind 1 Project

Key Map



Legend

- Map Extent
- Utility Line
- Highway
- Primary Road
- Secondary Road

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building
- Proposed Laydown Area

Natural Features

- Permanent Watercourse
- Intermittent Watercourse
- Open Water
- Woodland

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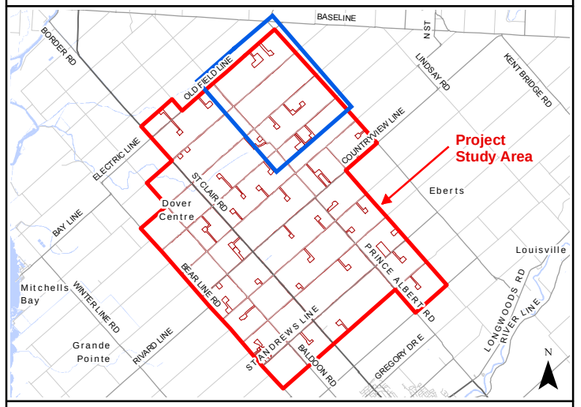
Maps 3-1 to 3-9
Vegetation Communities

Map 3 - 1

North Kent Wind 1 Project

Vegetation Communities



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road

- Ecological Land Classification (ELC)

(CVR) Residential

(FODM6-5) Fresh-Moist Sugar Maple-Hardwood Deciduous Forest Type

(IAG) Agricultural Infrastructure

(OAGM1(h)) Annual Row Crops (hay)

(OAGM1) Annual Row Crops

(OAGM4) Open Pasture

(OAO) Open Aquatic

(SWDM3-3) Swamp Maple Mineral Deciduous Swamp Type

(TAGM5) Fencerow

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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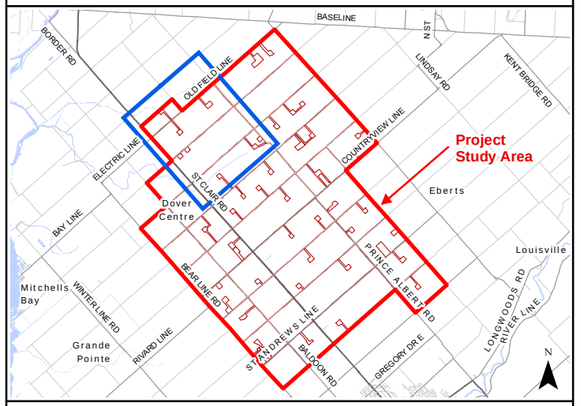
Map 3 - 2

North Kent Wind 1 Project

Vegetation Communities



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

- Ecological Land Classification (ELC)

(CVR) Residential
(IAG) Agricultural Infrastructure
(OAGM1(h)) Annual Row Crops (hay)
(OAGM1) Annual Row Crops
(OAO) Open Aquatic

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Project: 1612
Date: July 21, 2015

NAD83 - UTM Zone 17
Size: 11x17"
1:17,500

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N

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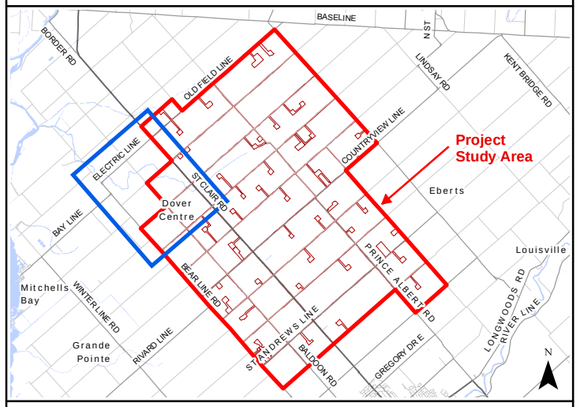
Map 3 - 3

North Kent Wind 1 Project

Vegetation Communities



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Ecological Land Classification (ELC)

(CGL_2) Parkland
(CGL_4) Recreational
(CVC) Commercial and Institutional
(CVC_2) Light Industry
(CVR) Residential
(IAG) Agricultural Infrastructure
(OAGM1(h)) Annual Row Crops (hay)
(OAGM1) Annual Row Crops

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

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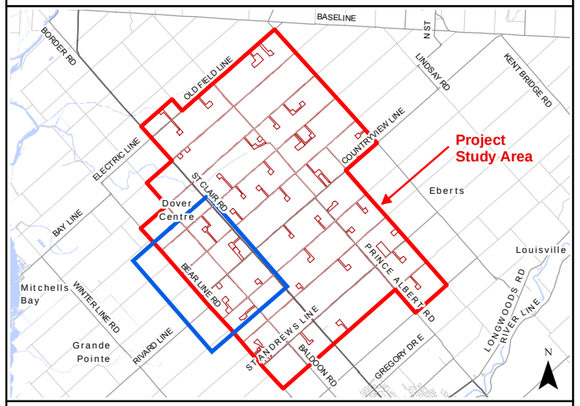
Map 3 - 4

North Kent Wind 1 Project

Vegetation Communities



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Ecological Land Classification (ELC)

(CGL_1) Golf Course
(CGL_2) Parkland
(CGL_4) Recreational
(CVC) Commercial and Institutional
(CVR) Residential
(IAG) Agricultural Infrastructure
(OAGM1) Annual Row Crops
(OAGM4) Open Pasture

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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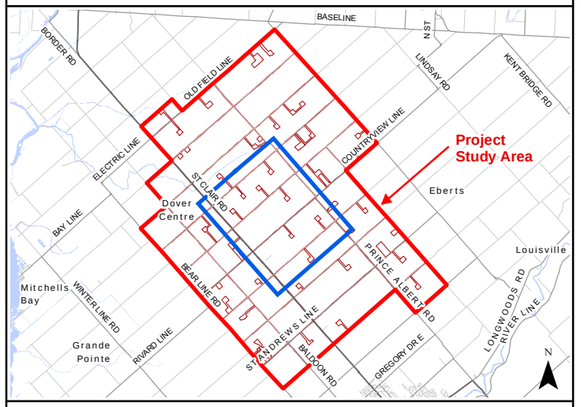
Map 3 - 5

North Kent Wind 1 Project

Vegetation Communities



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

- Ecological Land Classification (ELC)
- (CGL_1) Golf Course
- (CVR) Residential
- (FODM12) Naturalized Deciduous Plantation Ecosite
- (FODM4-1) Dry-Fresh Beech Deciduous Forest Type
- (FODM6-2) Fresh-Moist Sugar Maple-Black Maple Deciduous Forest Type
- (IAG) Agricultural Infrastructure
- (OAGM1(h)) Annual Row Crops (hay)
- (OAGM1) Annual Row Crops
- (OAO) Open Aquatic
- (SWDM3-3) Swamp Maple Mineral Deciduous Swamp Type
- (TAGM5) Fencerow

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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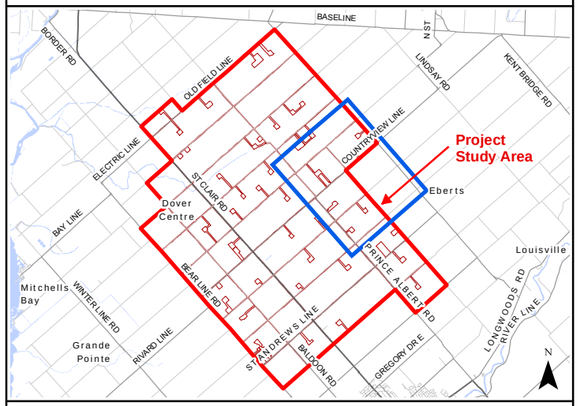
Map 3 - 6

North Kent Wind 1 Project

Vegetation Communities



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building
- Ecological Land Classification (ELC)

(CVR) Residential

(FODM12) Naturalized Deciduous Plantation Ecosite

(FODM5-5) Dry-Fresh Sugar Maple-Hickory Deciduous Forest Type

(FODM7-5) Fresh-Moist Black Maple Lowland Deciduous Forest Type

(FODM7-7) Fresh-Moist Manitoba Maple Lowland Deciduous Forest Type

(IAG) Agricultural Infrastructure

(MEMM4) Fresh-Moist Mixed Meadow Ecosite

(OAGM1) Annual Row Crops

(OAO) Open Aquatic

(SVDM4) Fresh-Moist Deciduous Savanna Ecosite

(SWDM3-3) Swamp Maple Mineral Deciduous Swamp Type

(SWDM3-4) Manitoba Maple Mineral Deciduous Swamp Type

(SWDM4-2) White Elm Mineral Deciduous Swamp Type

(TAGM3) Deciduous Plantation

(TAGM5) Fencerow

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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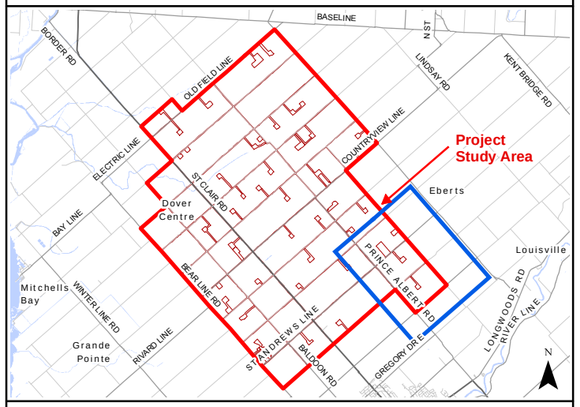
Map 3 - 7

North Kent Wind 1 Project

Vegetation Communities



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

- Ecological Land Classification (ELC)
- (CGL) Greenlands
- (CVR) Residential
- (CVR_4) Rural Residential
- (IAG) Agricultural Infrastructure
- (MEGM3-5) Smooth Brome Graminoid Meadow Type
- (OAGM1) Annual Row Crops
- (OAGM4) Open Pasture
- (OAO) Open Aquatic
- (SAGM1) Vineyard
- (SWDM3-3) Swamp Maple Mineral Deciduous Swamp Type
- (SWDM3-4) Manitoba Maple Mineral Deciduous Swamp Type
- (TAGM3) Deciduous Plantation
- (TAGM5) Fencerow
- (TH) Thicket

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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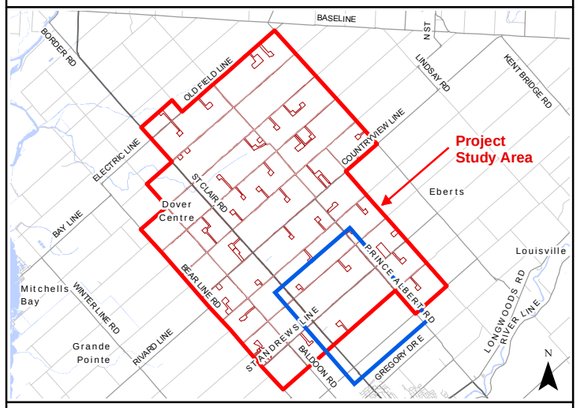
Map 3 - 8

North Kent Wind 1 Project

Vegetation Communities



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

- Ecological Land Classification (ELC)

(CVR) Residential
(FOD) Deciduous Forest
(FODM12) Naturalized Deciduous Plantation Ecosite
(IAG) Agricultural Infrastructure
(OAGM1) Annual Row Crops
(OAO) Open Aquatic
(SAGM5) Nursery
(TAGM3) Deciduous Plantation
(TH) Thicket

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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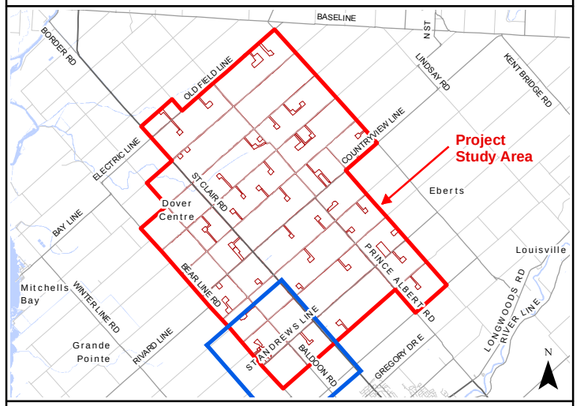
Map 3 - 9

North Kent Wind 1 Project

Vegetation Communities



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed Laydown Area

- Ecological Land Classification (ELC)

(CGL_2) Parkland
(CVR) Residential
(CVR_4) Rural Residential
(IAG) Agricultural Infrastructure
(OAGM1) Annual Row Crops
(OAGM4) Open Pasture
(OAO) Open Aquatic
(SAGM2) Orchard
(SAGM4) Plantation
(SAGM5) Nursery
(TAGM2) Mixed Plantation
(TAGM5) Fencerow

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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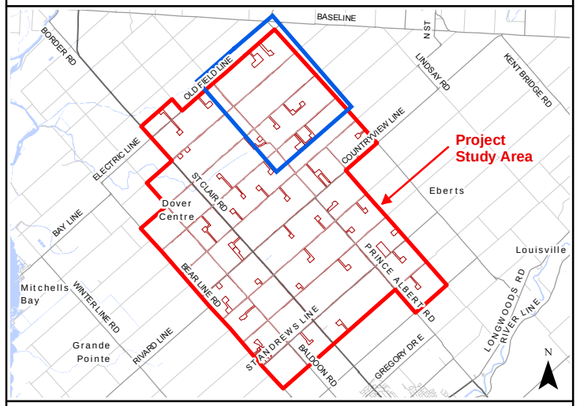
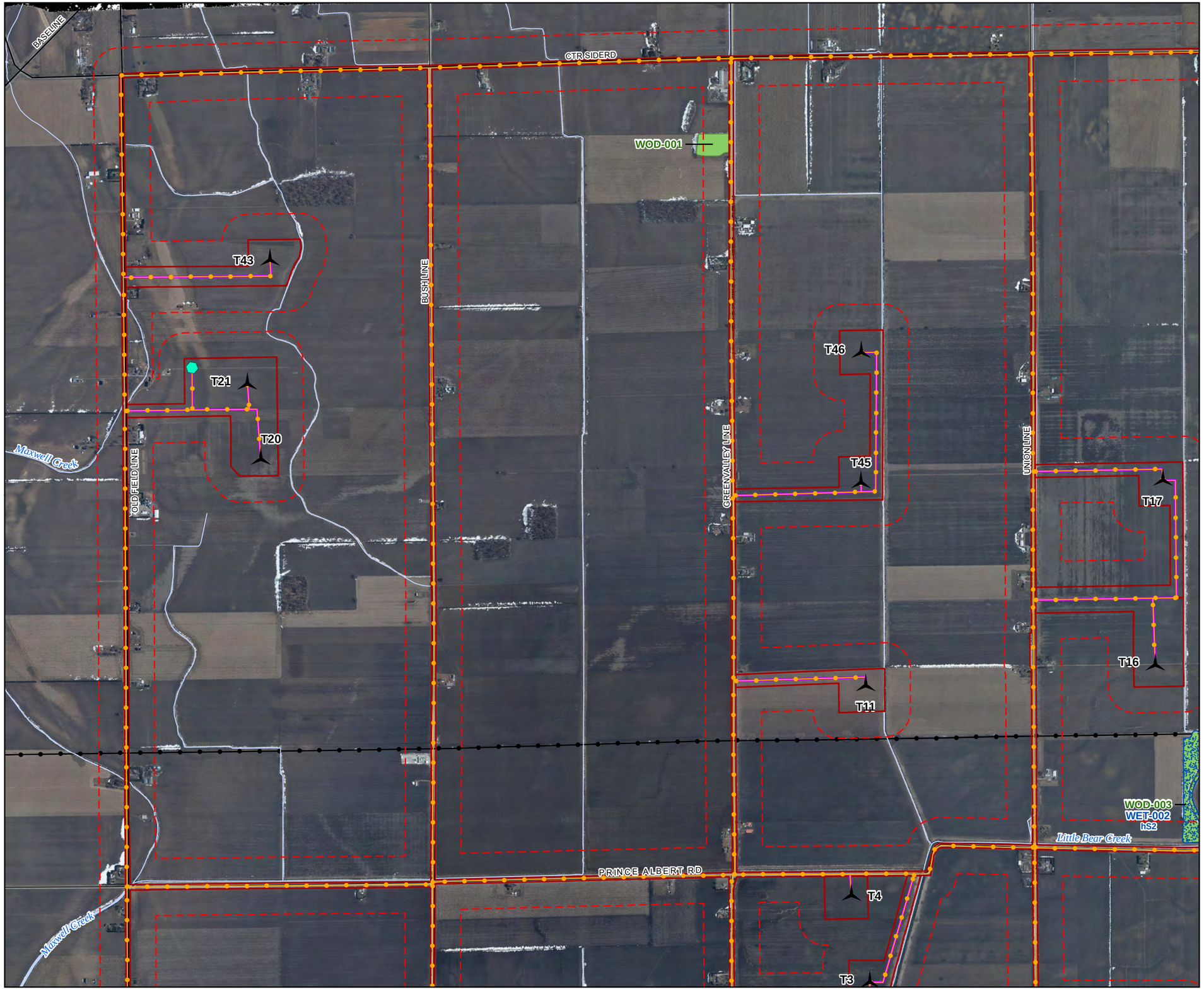
Maps 4-1 to 4-9
Woodlands and Wetlands

Map 4 - 1

North Kent Wind 1 Project

Woodlands and Wetlands





Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road

Natural Features

- Woodland
- Wetland

** The distances from the project location to woodlands and wetlands are outlined within the body of the report in Tables 9 and 10.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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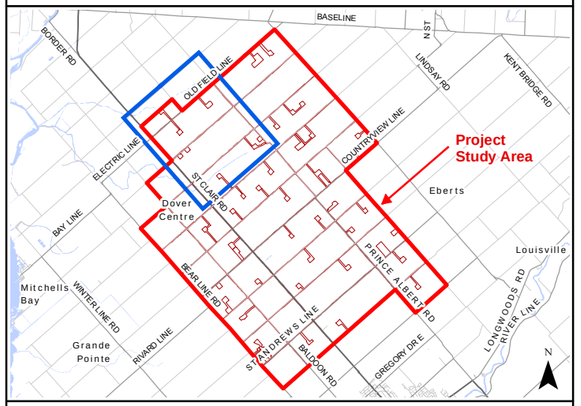
Map 4 - 2

North Kent Wind 1 Project

Woodlands and Wetlands



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

** The distances from the project location to woodlands and wetlands are outlined within the body of the report in Tables 9 and 10.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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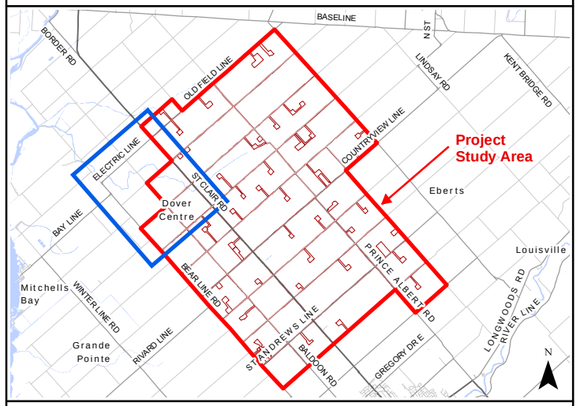
Map 4 - 3

North Kent Wind 1 Project

Woodlands and Wetlands



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

** The distances from the project location to woodlands and wetlands are outlined within the body of the report in Tables 9 and 10.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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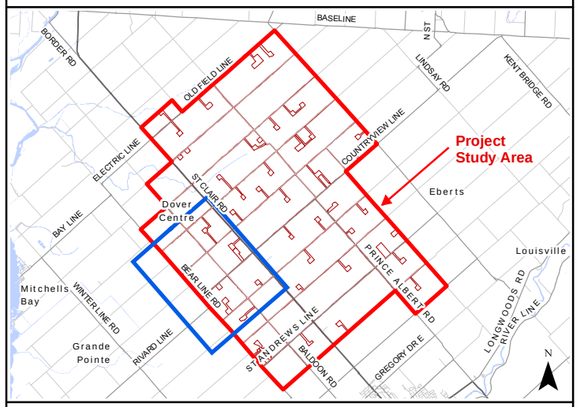
Map 4 - 4

North Kent Wind 1 Project

Woodlands and Wetlands



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

** The distances from the project location to woodlands and wetlands are outlined within the body of the report in Tables 9 and 10.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

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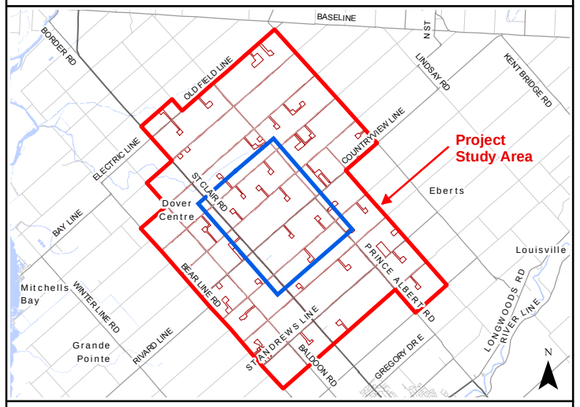
Map 4 - 5

North Kent Wind 1 Project

Woodlands and Wetlands



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

Natural Features

- Woodland
- Wetland

** The distances from the project location to woodlands and wetlands are outlined within the body of the report in Tables 9 and 10.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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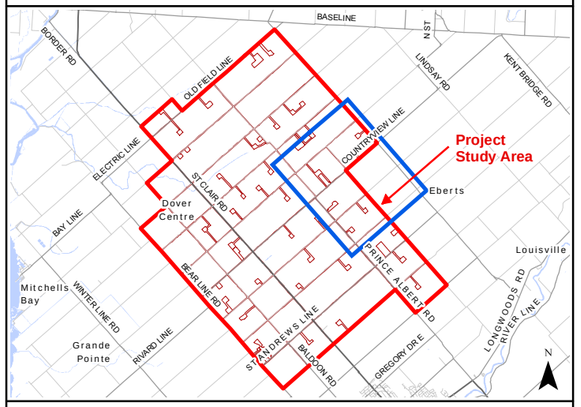
Map 4 - 6

North Kent Wind 1 Project

Woodlands and Wetlands



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

Natural Features

- Woodland
- Wetland

** The distances from the project location to woodlands and wetlands are outlined within the body of the report in Tables 9 and 10.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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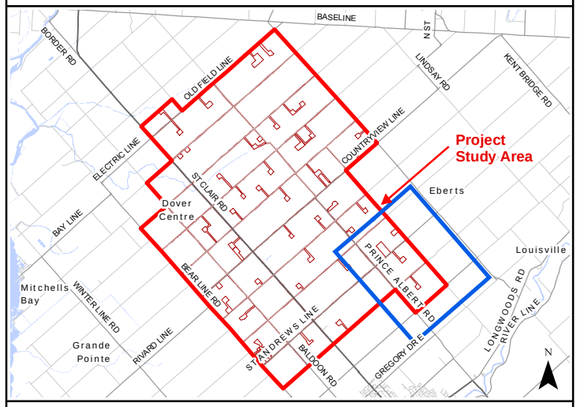
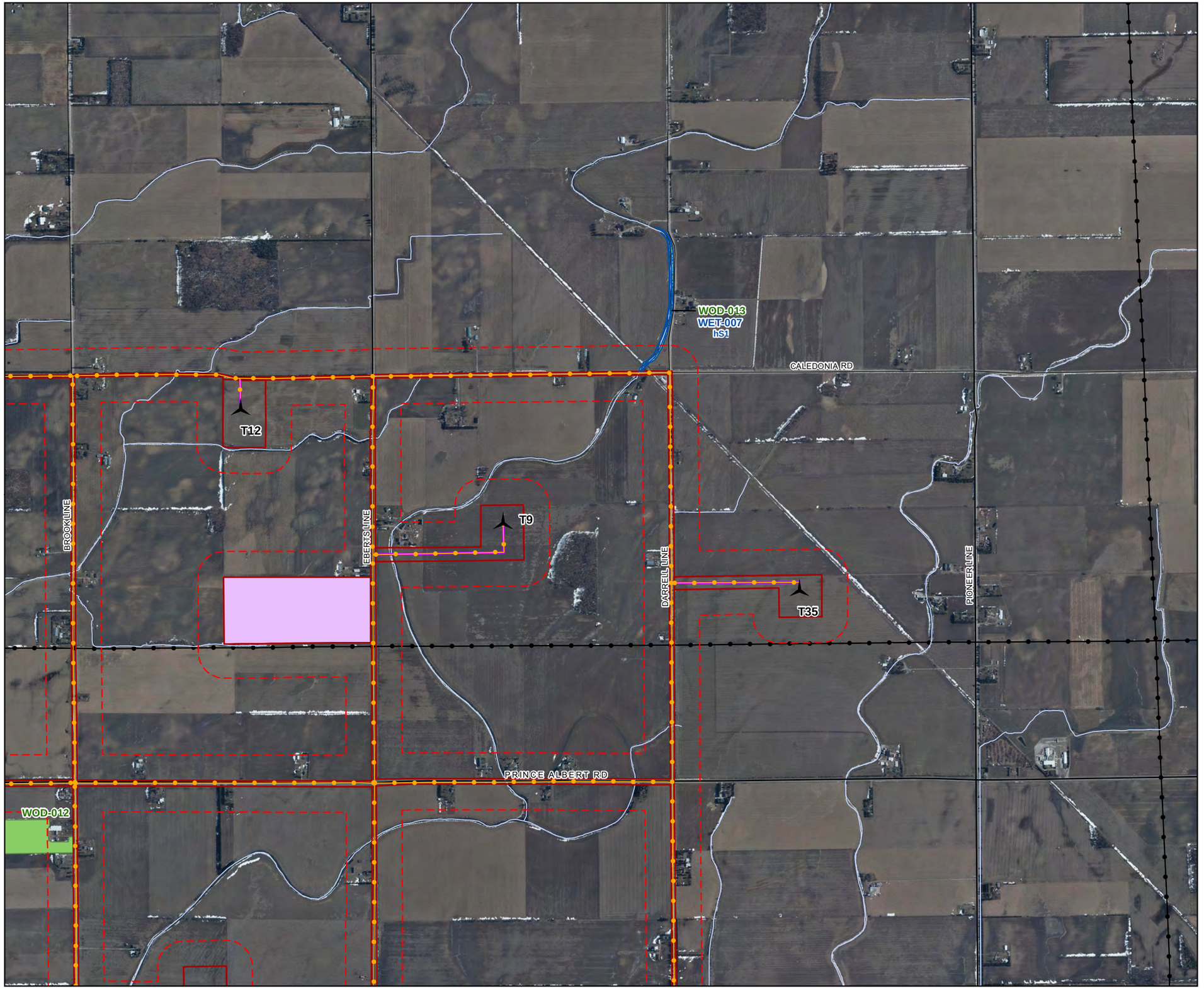
Map 4 - 7

North Kent Wind 1 Project

Woodlands and Wetlands





Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

Natural Features

- Woodland
- Wetland

** The distances from the project location to woodlands and wetlands are outlined within the body of the report in Tables 9 and 10.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

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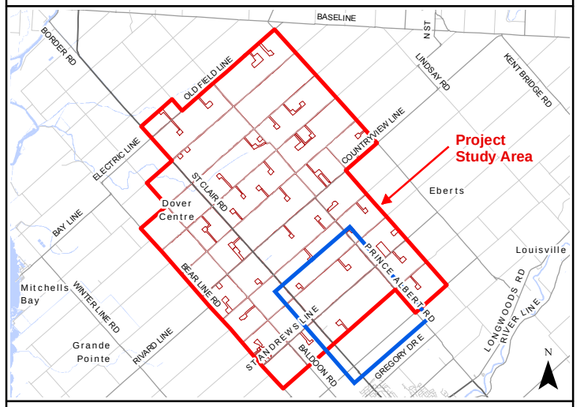
Map 4 - 8

North Kent Wind 1 Project

Woodlands and Wetlands



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

Natural Features

- Woodland

** The distances from the project location to woodlands and wetlands are outlined within the body of the report in Tables 9 and 10.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

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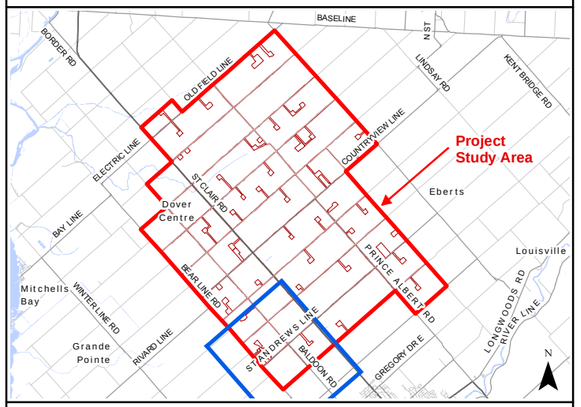
Map 4 - 9

North Kent Wind 1 Project

Woodlands and Wetlands



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed Laydown Area

Natural Features

- Woodland

** The distances from the project location to woodlands and wetlands are outlined within the body of the report in Tables 9 and 10.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

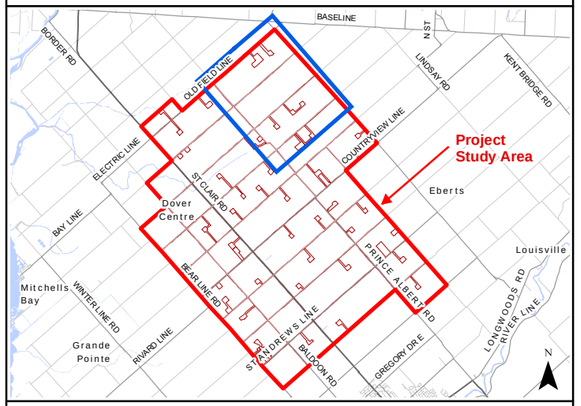
Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map4-1toMap4-9_WOD_WET_18K_2015_07_21_LEH.mxd

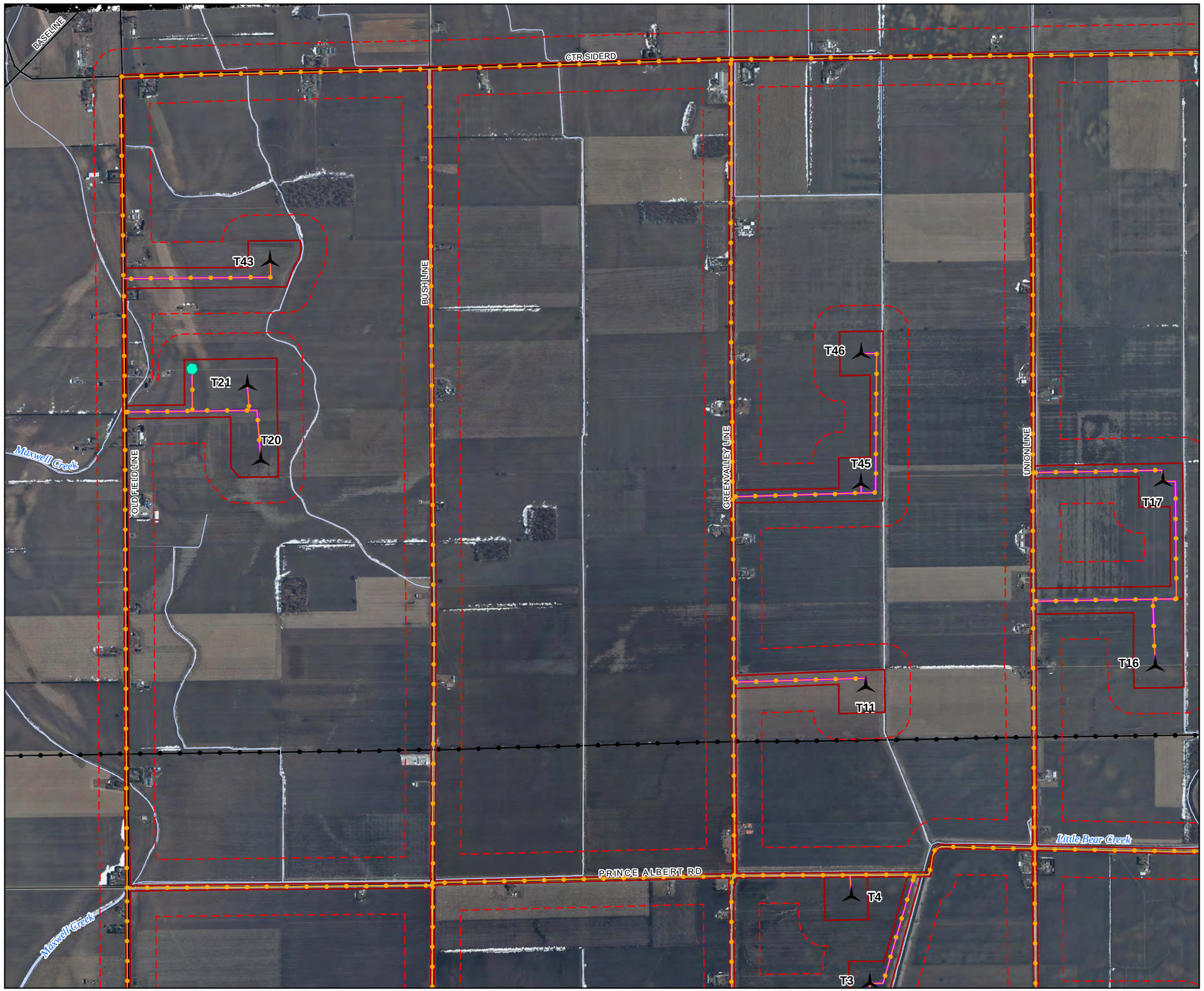
Maps 5-1 to 5-9
Candidate Seasonal Concentration Areas

Map 5 - 1

North Kent Wind 1 Project

Candidate Seasonal Concentration Areas





Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

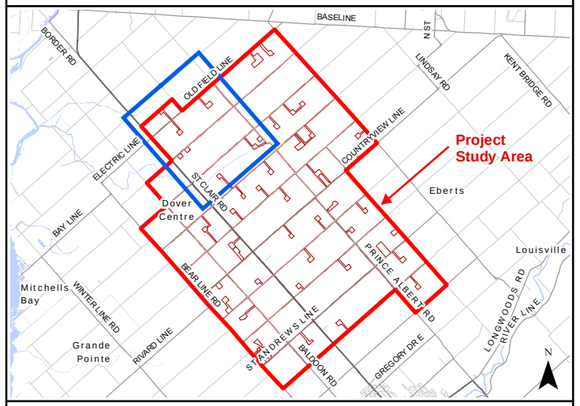
N

Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map5-1toMap5-9_CandidateSCA_18K_2015_07_21_LEH.mxd

Map 5 - 2

North Kent Wind 1 Project

Candidate Seasonal Concentration Areas



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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0 250 500 750 1,000 Meters

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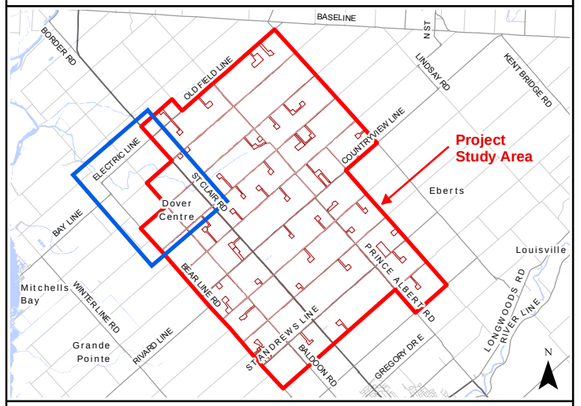
Map 5 - 3

North Kent Wind 1 Project

Candidate Seasonal Concentration Areas



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

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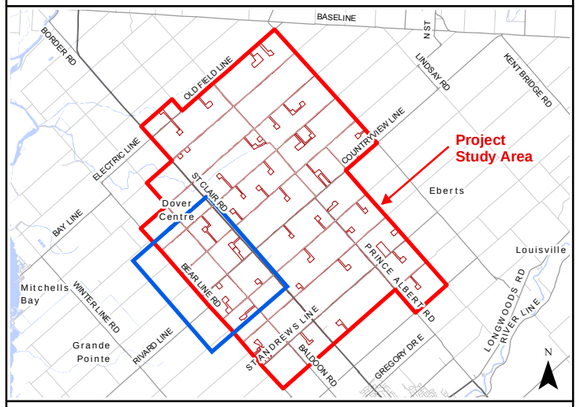
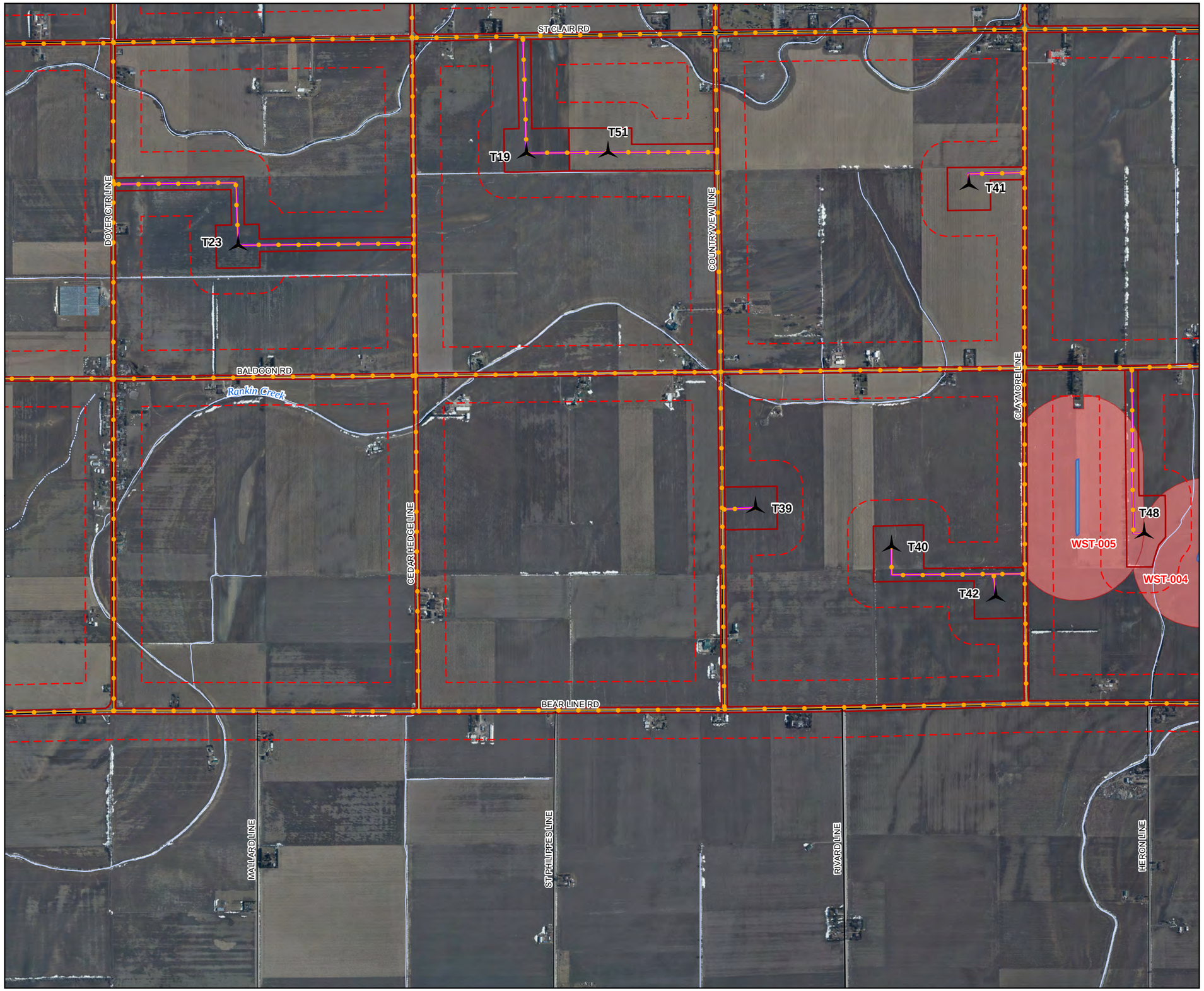
Map 5 - 4

North Kent Wind 1 Project

Candidate Seasonal Concentration Areas





Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

Candidate Seasonal Concentration Areas

- Waterfowl Stopover and Staging Area (Terrestrial)(WST)
- Standing Water

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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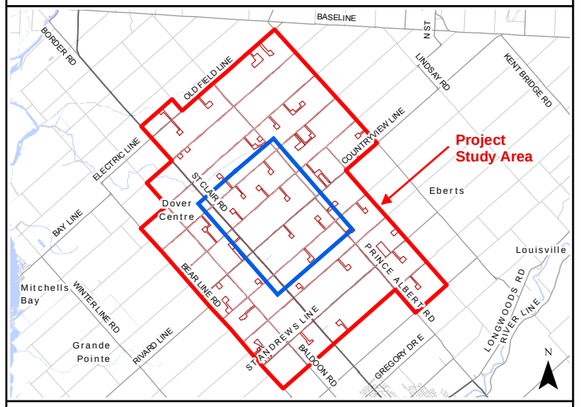
Map 5 - 5

North Kent Wind 1 Project

Candidate Seasonal Concentration Areas





Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

Candidate Seasonal Concentration Areas

- Waterfowl Stopover and Staging Area (Terrestrial)(WST)
- Standing Water

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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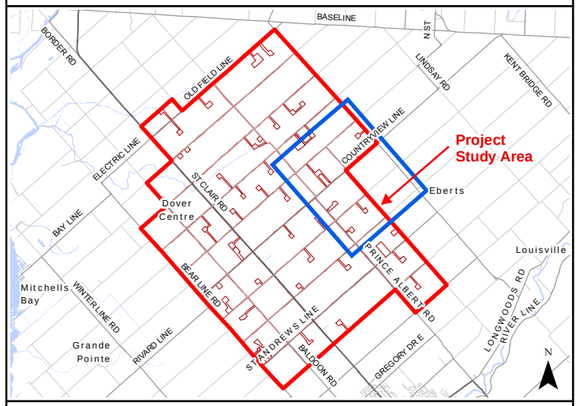
Map 5 - 6

North Kent Wind 1 Project

Candidate Seasonal Concentration Areas



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

Candidate Seasonal Concentration Areas

- Waterfowl Stopover and Staging Area (Terrestrial)(WST)
- Standing Water
- Bat Maternity Colony (BMA)
- Colonially – Nesting Bird Breeding Habitat (Tree/Shrubs) (CBT)

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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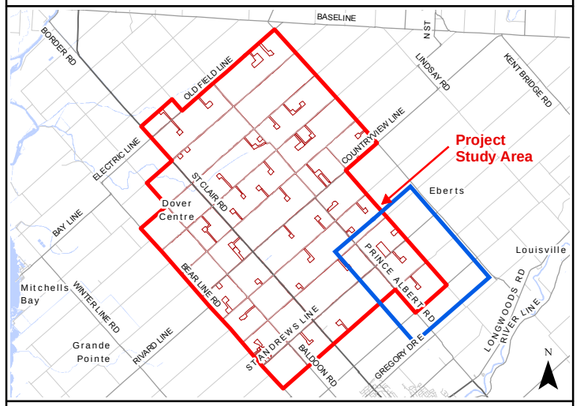
Map 5 - 7

North Kent Wind 1 Project

Candidate Seasonal Concentration Areas



Legend

Project Location

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse
- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

Candidate Seasonal Concentration Areas

- Waterfowl Stopover and Staging Area (Terrestrial)(WST)
- Standing Water

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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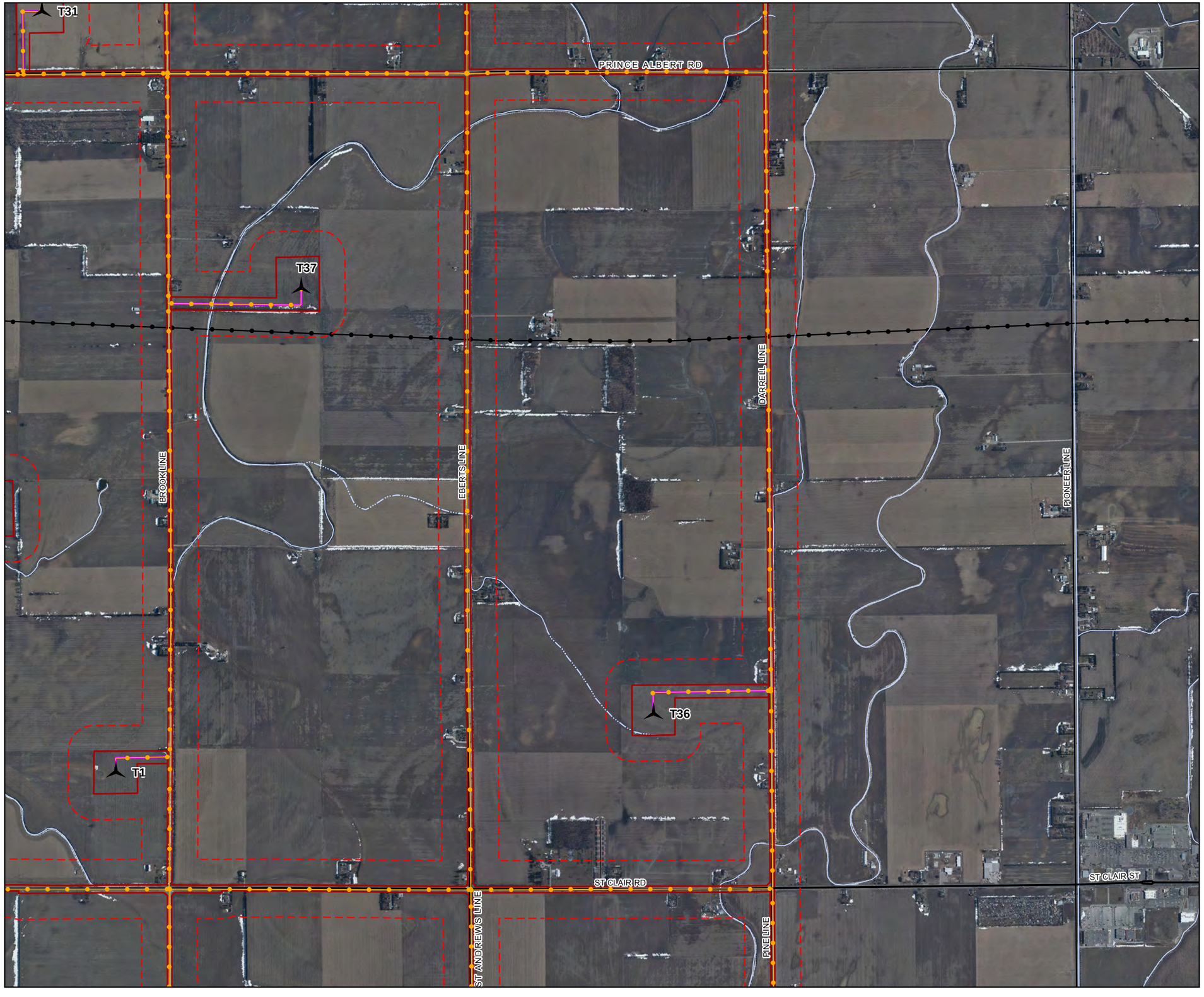
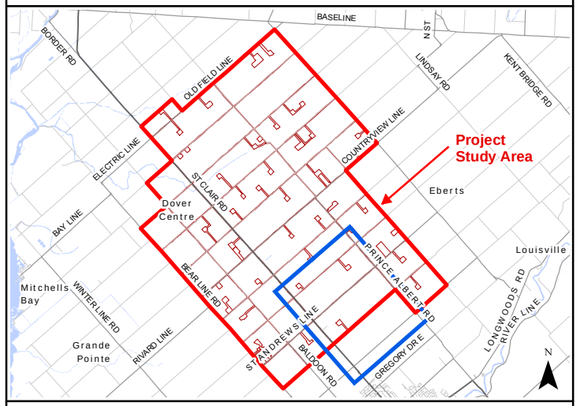


Map 5 - 8

North Kent Wind 1 Project

Candidate Seasonal Concentration Areas



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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0 250 500 750 1,000 Meters

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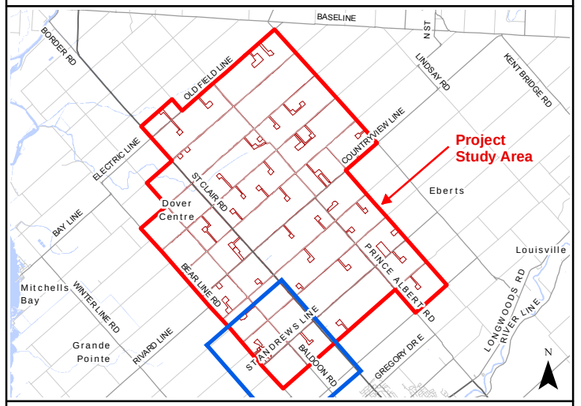
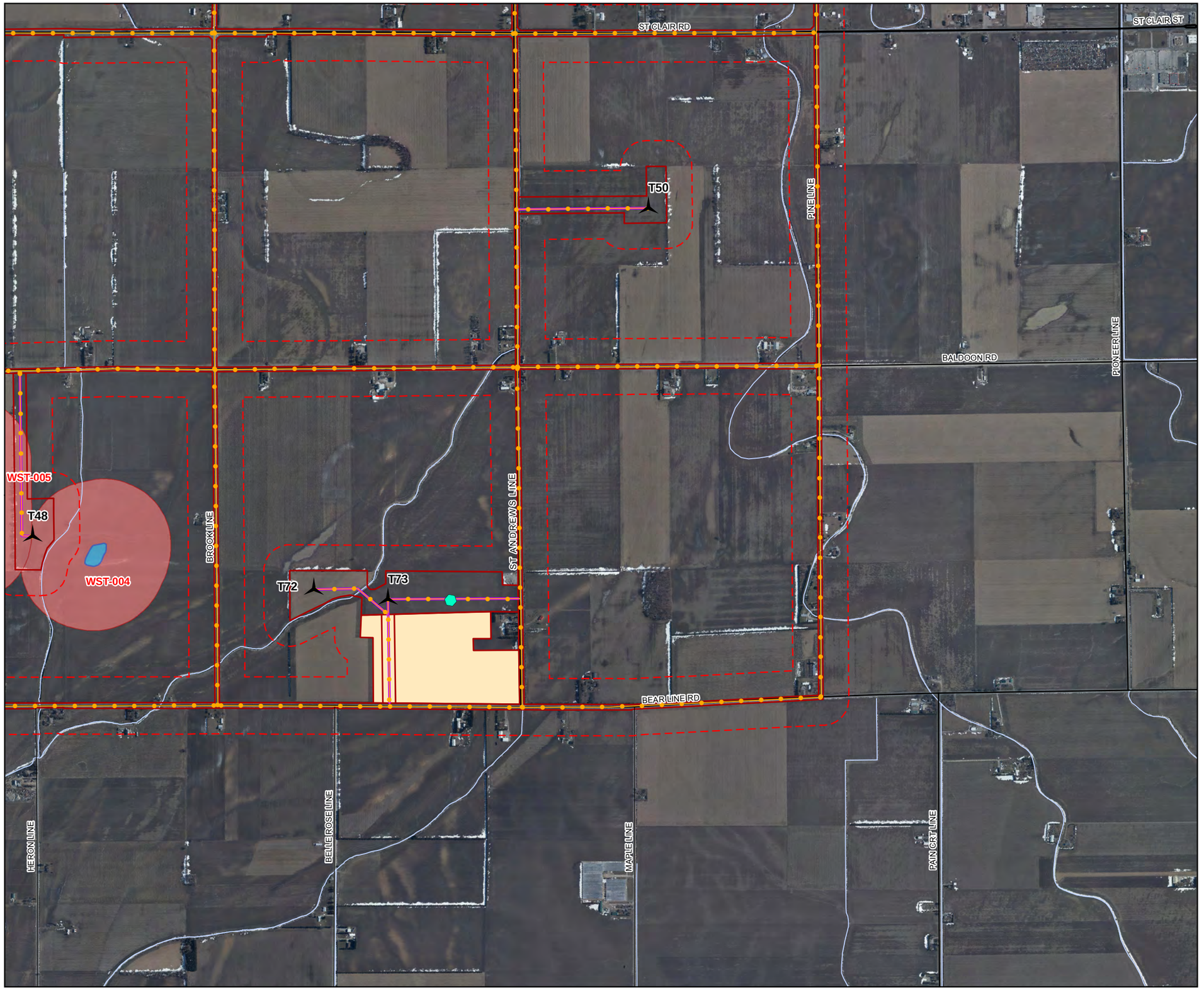
Map 5 - 9

North Kent Wind 1 Project

Candidate Seasonal Concentration Areas





Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed Laydown Area

Candidate Seasonal Concentration Areas

- Waterfowl Stopover and Staging Area (Terrestrial)(WST)
- Standing Water

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0 250 500 750 1,000 Meters

N

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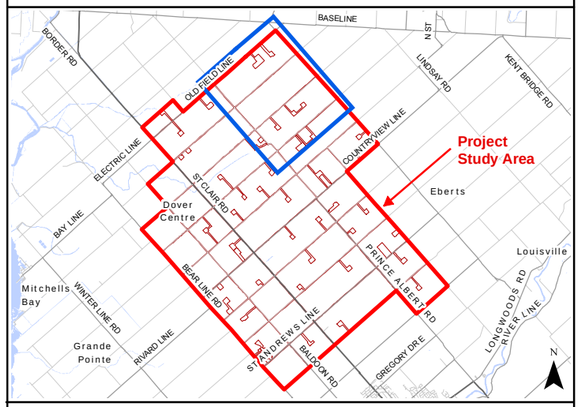
Maps 6-1 to 6-9
Candidate Rare Vegetation Communities and Specialized Wildlife Habitats

Map 6 - 1

North Kent Wind 1 Project

Candidate Rare Vegetation Communities & Specialized Wildlife Habitats



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road

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0 250 500 750 1,000 Meters

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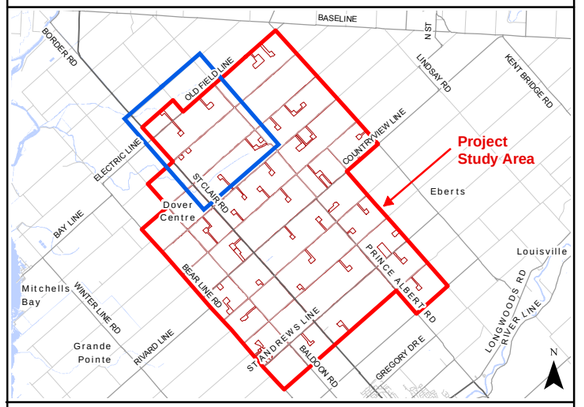
Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map6-1toMap6-9_RareVegCommunties_18K_2015_07_21_LEH.mxd

Map 6 - 2

North Kent Wind 1 Project

Candidate Rare Vegetation Communities & Specialized Wildlife Habitats



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

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0 250 500 750 1,000 Meters

N

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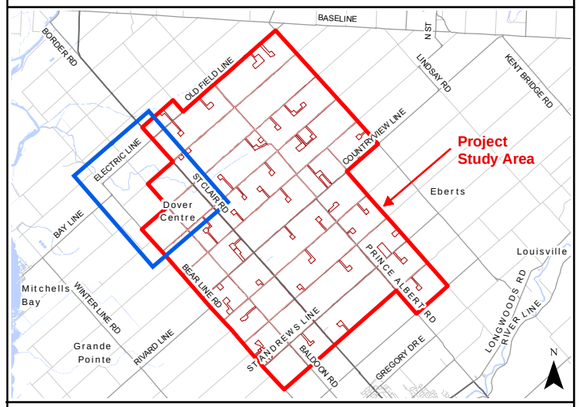
Map 6 - 3

North Kent Wind 1 Project

Candidate Rare Vegetation Communities & Specialized Wildlife Habitats



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

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0 250 500 750 1,000 Meters

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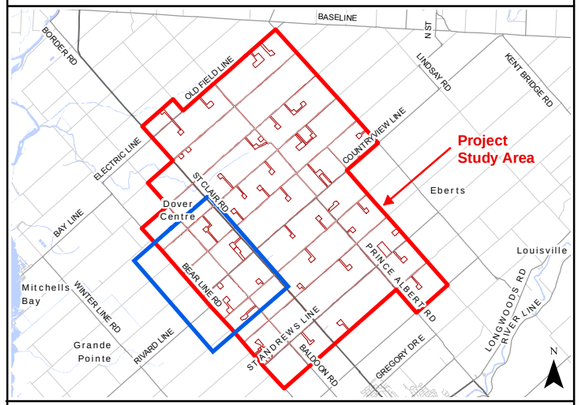
Map 6 - 4

North Kent Wind 1 Project

Candidate Rare Vegetation Communities & Specialized Wildlife Habitats



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

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Aquatic, Terrestrial and Wetland Biologists

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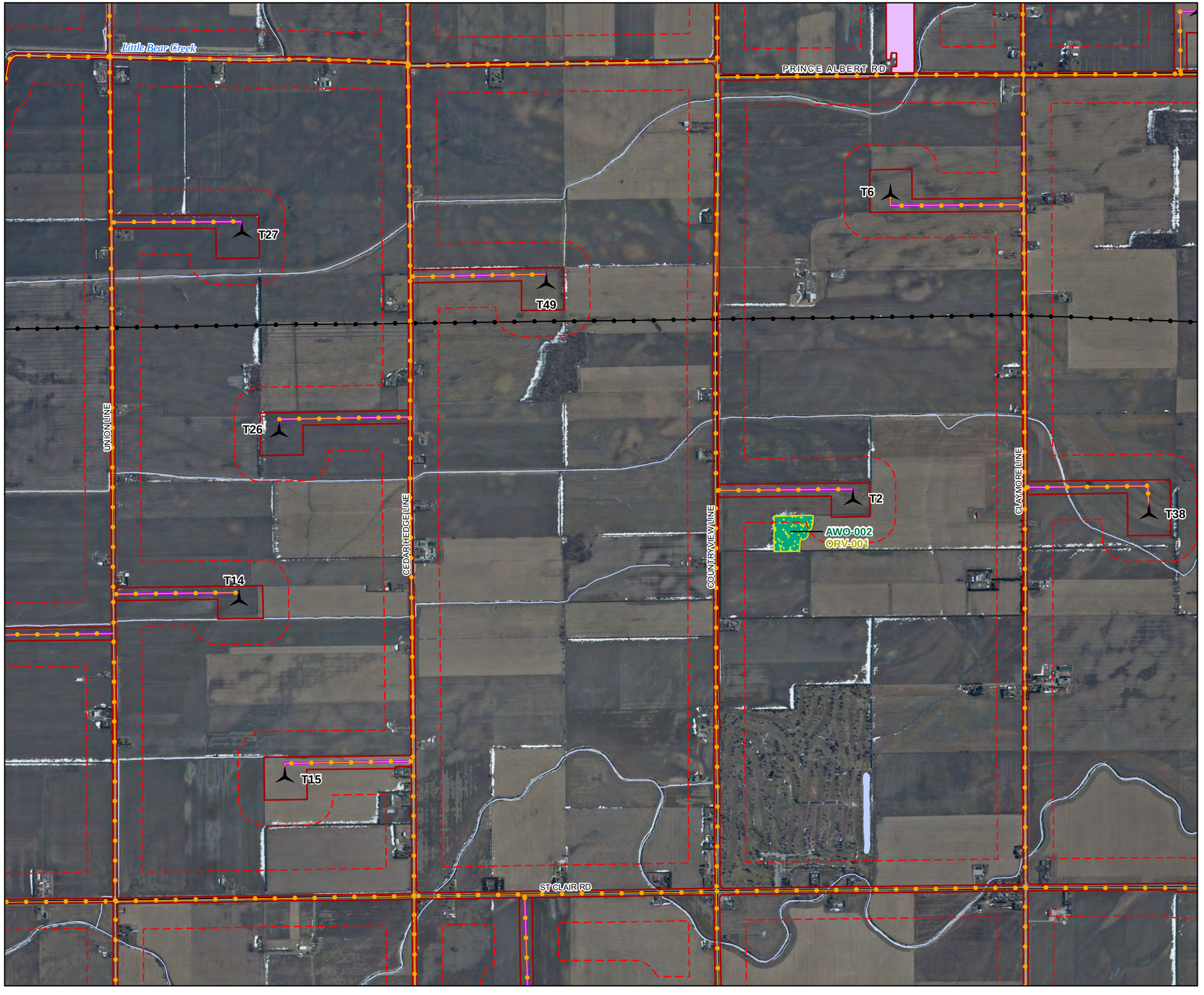
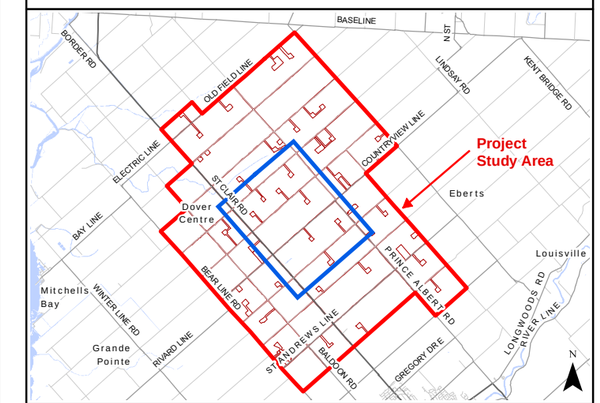


Map 6 - 5

North Kent Wind 1 Project

Candidate Rare Vegetation Communities & Specialized Wildlife Habitats



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

Candidate Rare Vegetation Communities

- Other Rare Vegetation Communities (ORV)

Candidate Specialized Wildlife Habitats

- Amphibian Breeding Habitat (Woodland)(AWO)

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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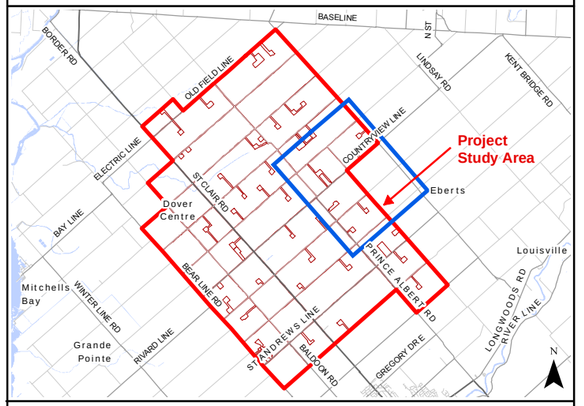
Map 6 - 6

North Kent Wind 1 Project

Candidate Rare Vegetation Communities & Specialized Wildlife Habitats



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

Candidate Rare Vegetation Communities

- Old Growth Forest (OGF)

Candidate Specialized Wildlife Habitats

- Amphibian Breeding Habitat (Woodland)(AWO)
- Waterfowl Nesting Area (WFN)

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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0 250 500 750 1,000 Meters

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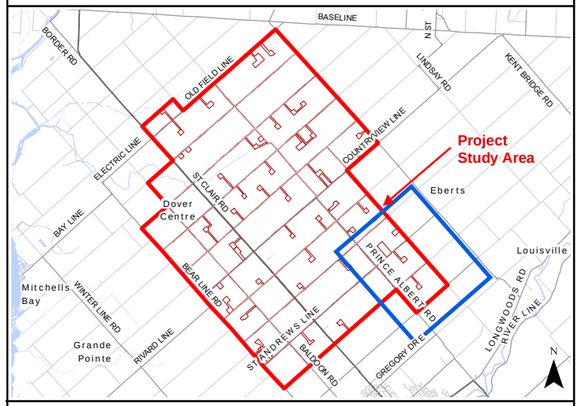
Map 6 - 7

North Kent Wind 1 Project

Candidate Rare Vegetation Communities & Specialized Wildlife Habitats



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building

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0 250 500 750 1,000 Meters

N

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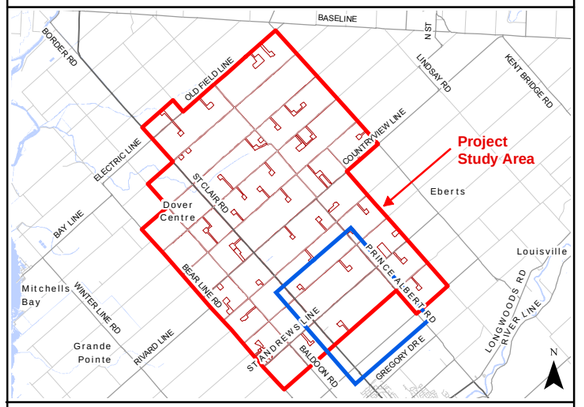
Map 6 - 8

North Kent Wind 1 Project

Candidate Rare Vegetation Communities & Specialized Wildlife Habitats



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

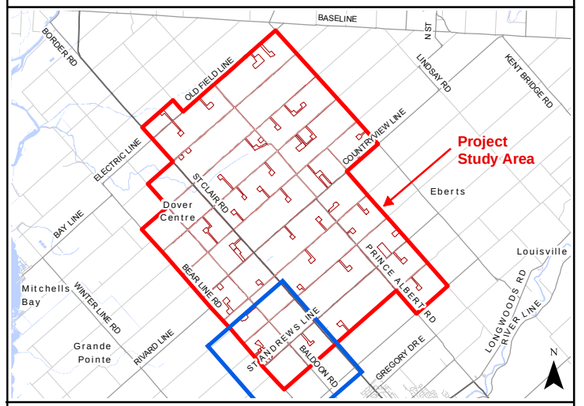
N

Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map6-1toMap6-9_RareVegCommunties_18K_2015_07_21_LEH.mxd

Map 6 - 9

North Kent Wind 1 Project

Candidate Rare Vegetation Communities & Specialized Wildlife Habitats



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed Laydown

** The distances from the project location to candidate significant wildlife habitats are outlined within the body of the report in Table 15.*

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

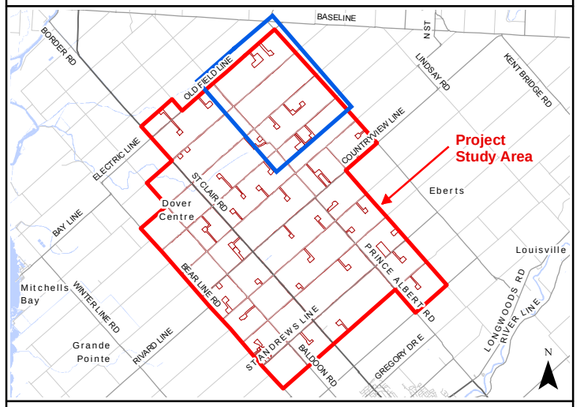
Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map6-1toMap6-9_RareVegCommunties_18K_2015_07_21_LEH.mxd

Maps 7-1 to 7-9
Candidate Habitats for Species of Conservation Concern

Map 7 - 1

North Kent Wind 1 Project

Candidate Habitats for Species of Conservation Concern



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road

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Project: 1612 July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

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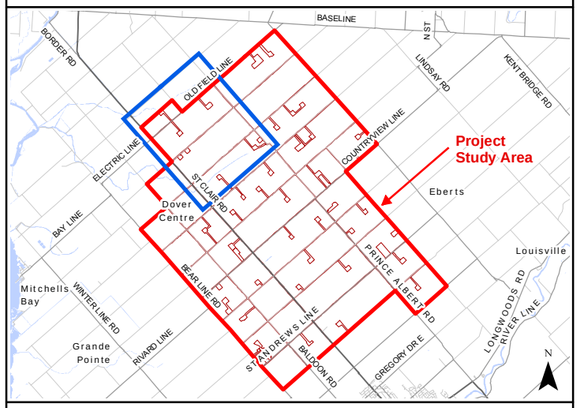
Map 7 - 2

North Kent Wind 1 Project

Candidate Habitats for Species of Conservation Concern



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

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Project: 1612 July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

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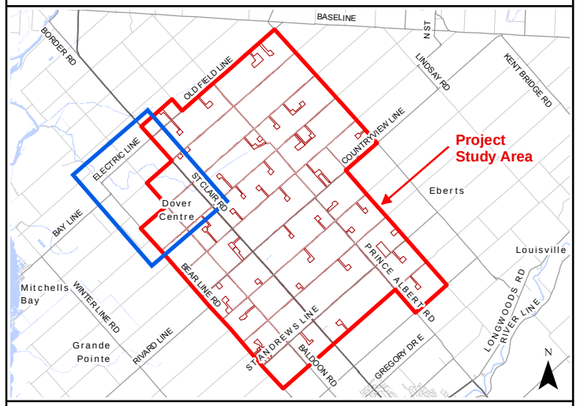
Map 7 - 3

North Kent Wind 1 Project

Candidate Habitats for Species of Conservation Concern



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

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Project: 1612 July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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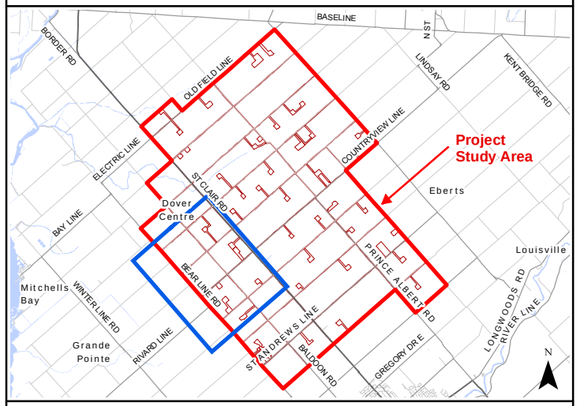
Map 7 - 4

North Kent Wind 1 Project

Candidate Habitats for Species of Conservation Concern



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

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Project: 1612 July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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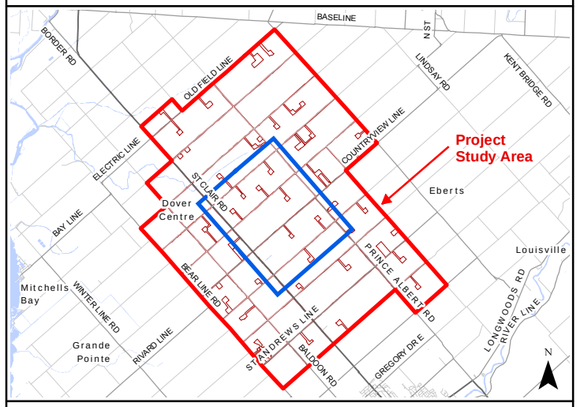
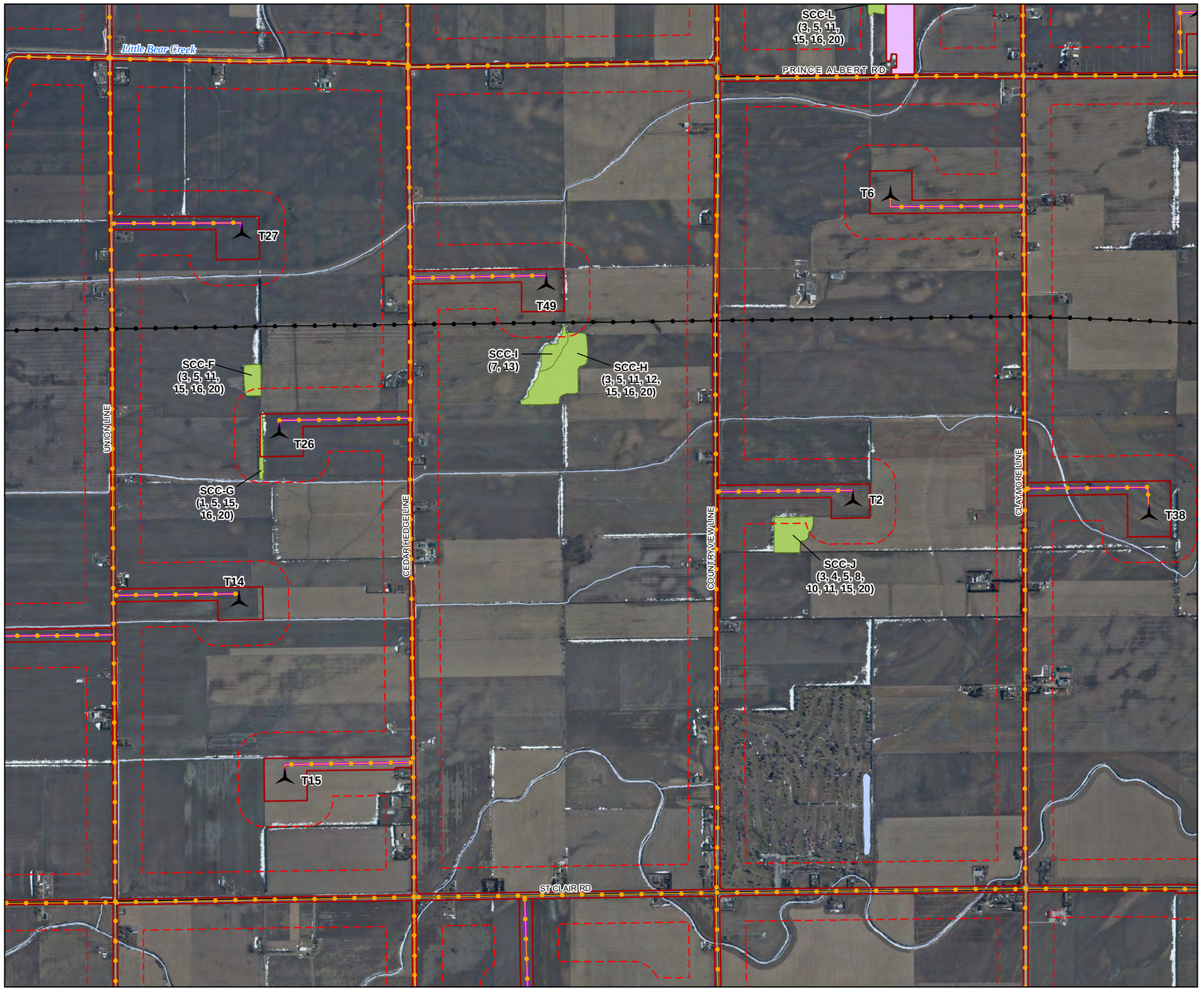
Map 7 - 5

North Kent Wind 1 Project

Candidate Habitats for Species of Conservation Concern





Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/Substation/Laydown/ O&M Building

Candidate Habitats for Species of Conservation Concern

- Species of Conservation Concern Habitat (SCC)

1 - Eastern Wood-Pewee
3 - Giant Ironweed
4 - Pawpaw
5 - Muskingum Sedge
7 - Round-Fruited Panic Grass
8 - Blue Ash
10 - Black Gum
11 - Northern Fogfruit
12 - Shumard Oak
13 - Gray-headed Prairie Coneflower
15 - Lizard's Tail
16 - Wild Senna
20 - Wing-stem

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Project: 1612 July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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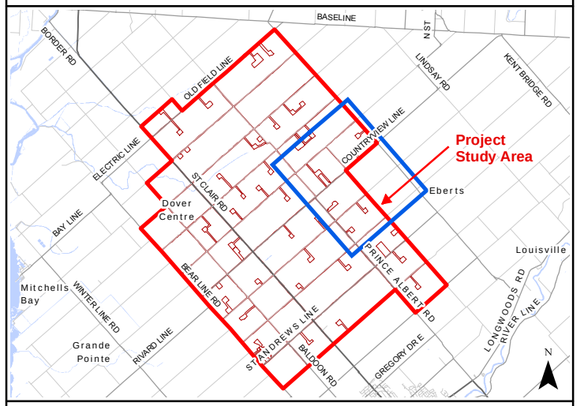
Map 7 - 6

North Kent Wind 1 Project

Candidate Habitats for Species of Conservation Concern



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/Substation/Laydown/ O&M Building

Candidate Habitats for Species of Conservation Concern

- Marsh Bird Breeding Habitat (MBB)
- Species of Conservation Concern Habitat (SCC)

1 - Eastern Wood-Pewee
2 - Wood Thrush
3 - Giant Ironweed
4 - Pawpaw
5 - Muskingum Sedge
6 - Rigid Sedge
7 - Round-Fruited Panic Grass
8 - Blue Ash
9 - Swamp Rose-mallow
10 - Black Gum
11 - Northern Fogfruit
12 - Shumard Oak
13 - Gray-headed Prairie Coneflower
14 - Climbing Prairie Rose
15 - Lizard's Tail
16 - Wild Senna
17 - Cup-Plant
18 - Riddell's Goldenrod
19 - Southern Slender Ladies' Tresses
20 - Wing-stem
21 - Cream Violet
22 - Virginia Culver's-root
23 - Prairie Milkweed

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Project: 1612 July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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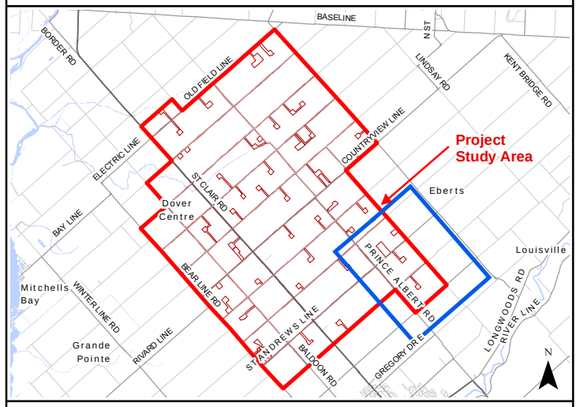
Map 7 - 7

North Kent Wind 1 Project

Candidate Habitats for Species of Conservation Concern



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/Substation/Laydown/ O&M Building

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Project: 1612 July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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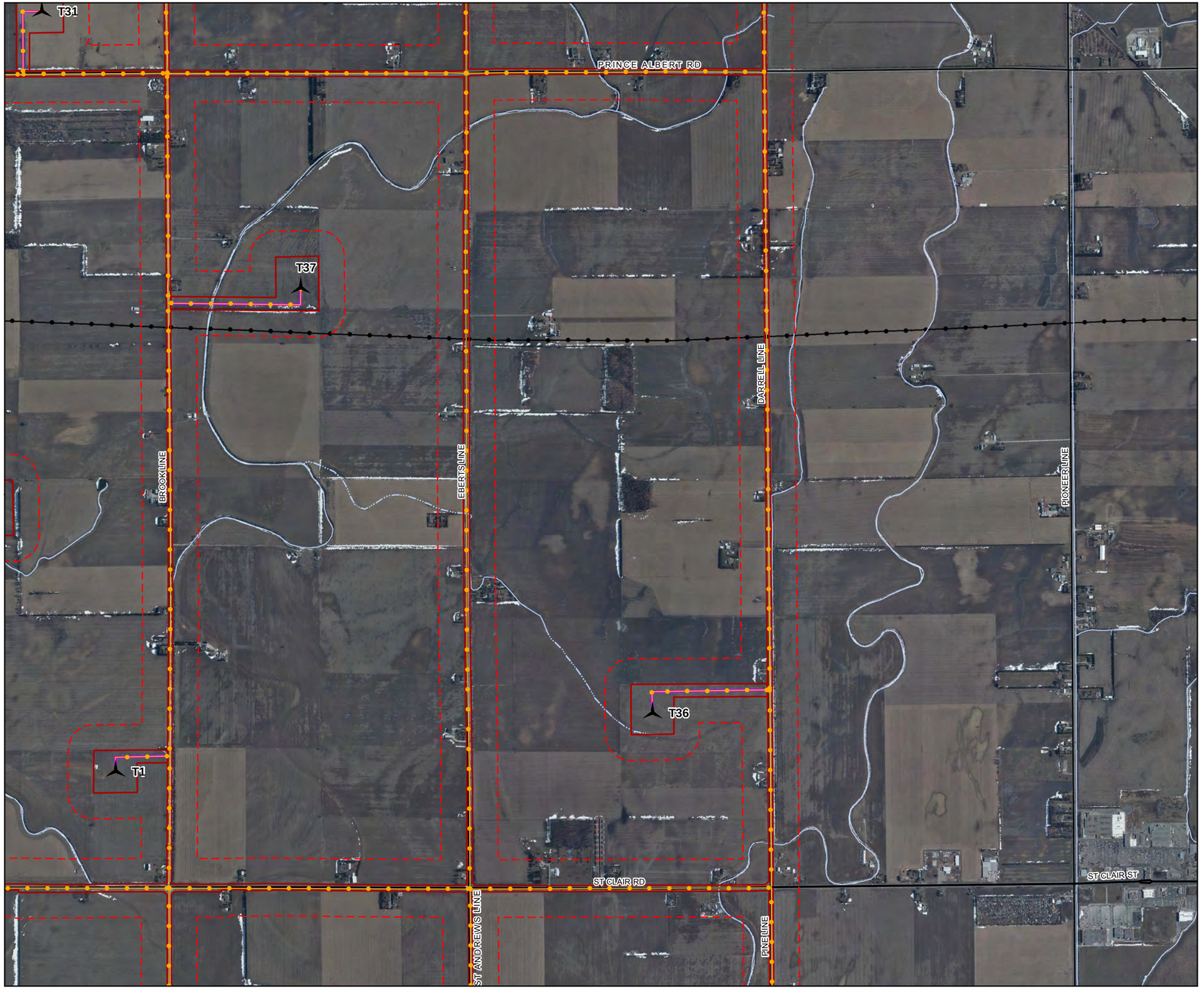
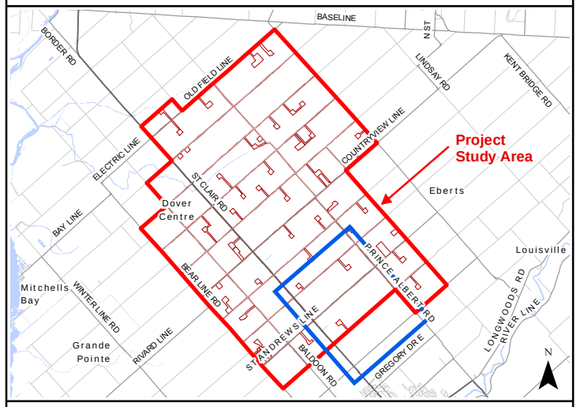


Map 7 - 8

North Kent Wind 1 Project

Candidate Habitats for Species of Conservation Concern



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road

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Project: 1612 July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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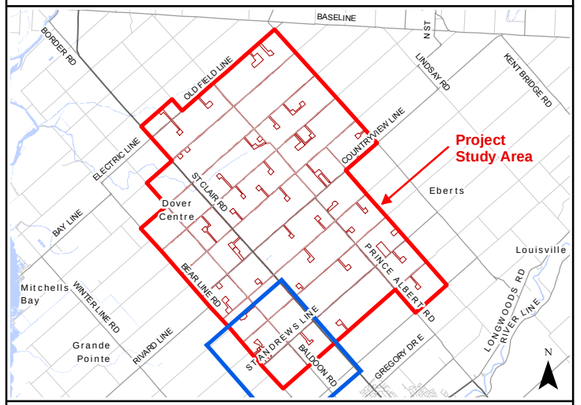
Map 7 - 9

North Kent Wind 1 Project

Candidate Habitats for Species of Conservation Concern



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed Laydown

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Project: 1612 July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

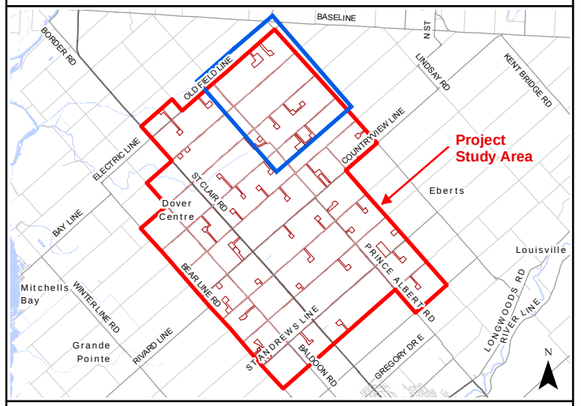
Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map7-1toMap7-9_CandidateSCC_18K_2015_07_21_LEH.mxd

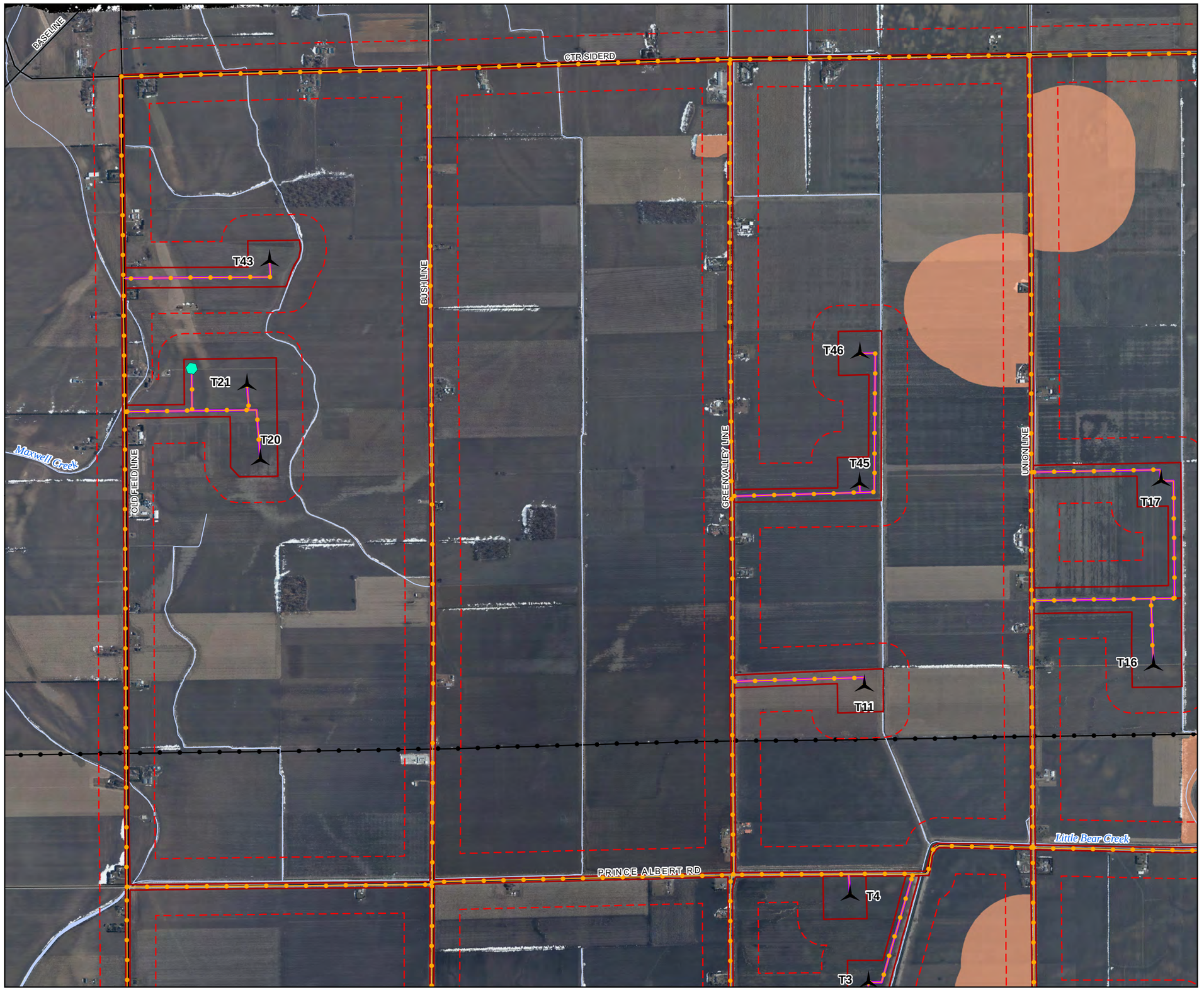
Maps 8-1 to 8-9
Generalized Candidate Significant Wildlife Habitat

Map 8 - 1

North Kent Wind 1 Project

Generalized Candidate Significant Wildlife Habitat





Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- **Generalized Candidate Significant Wildlife Habitat**

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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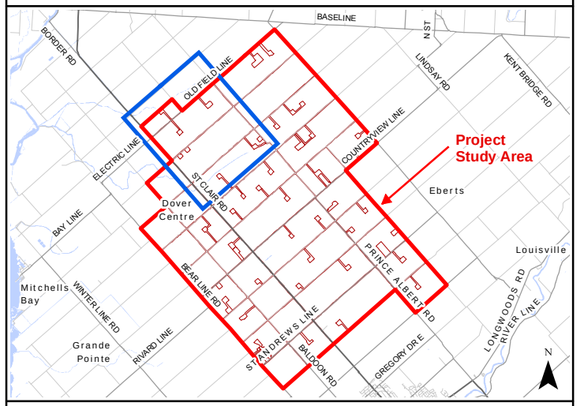
Map 8 - 2

North Kent Wind 1 Project

Generalized Candidate Significant Wildlife Habitat



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- **Generalized Candidate Significant Wildlife Habitat**

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

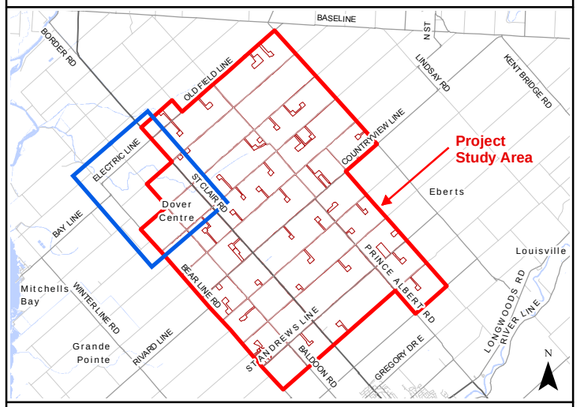
N

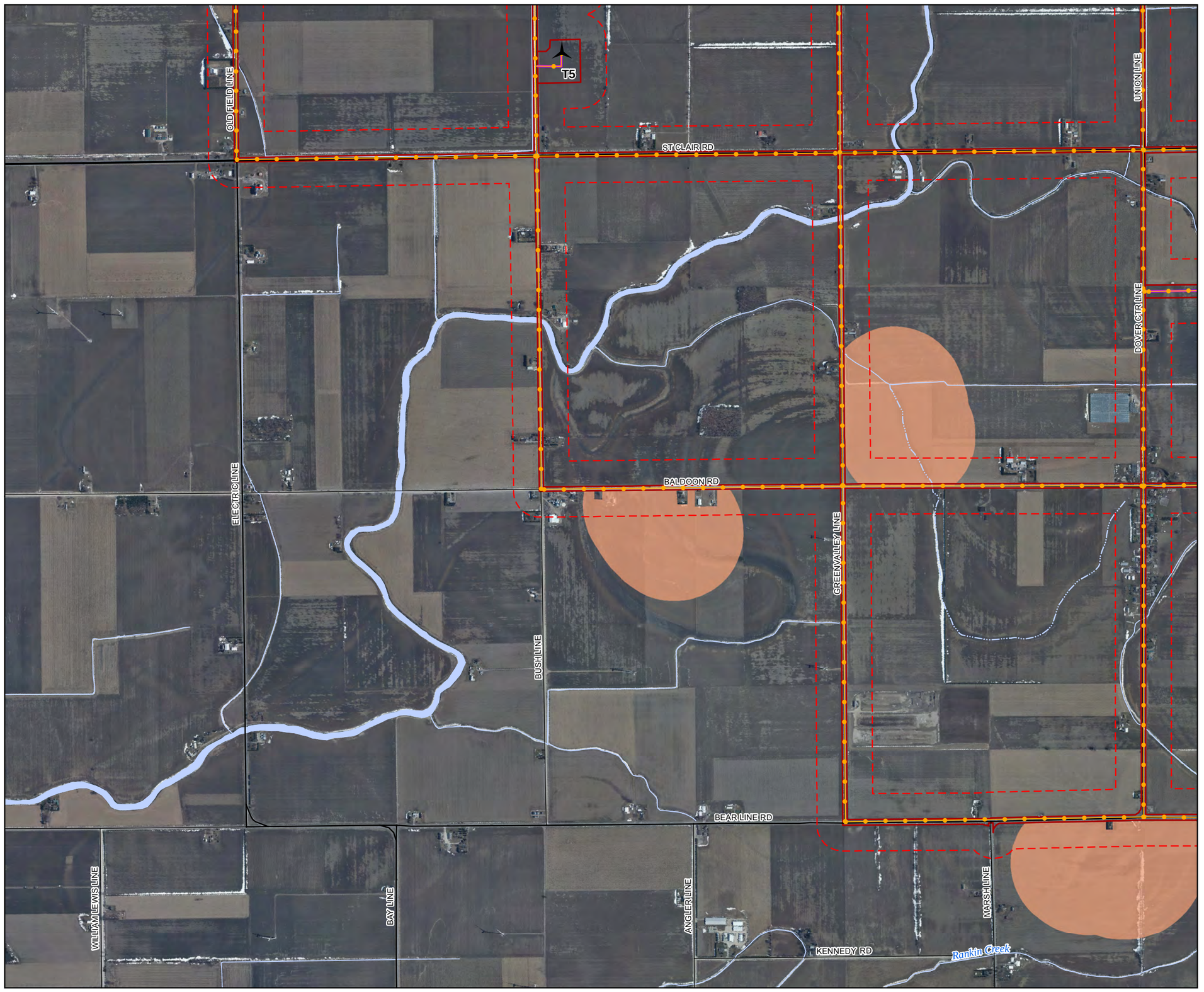
Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map8-1toMap8-9_GeneralizedHabitat_18K_2015_07_21_LEH.mxd

Map 8 - 3

North Kent Wind 1 Project

Generalized Candidate Significant Wildlife Habitat





Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- **Generalized Candidate Significant Wildlife Habitat**

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

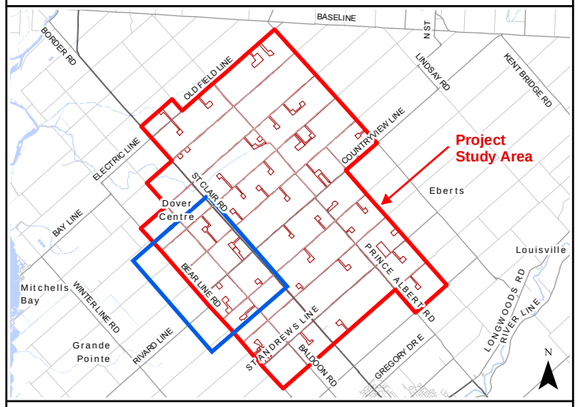
N

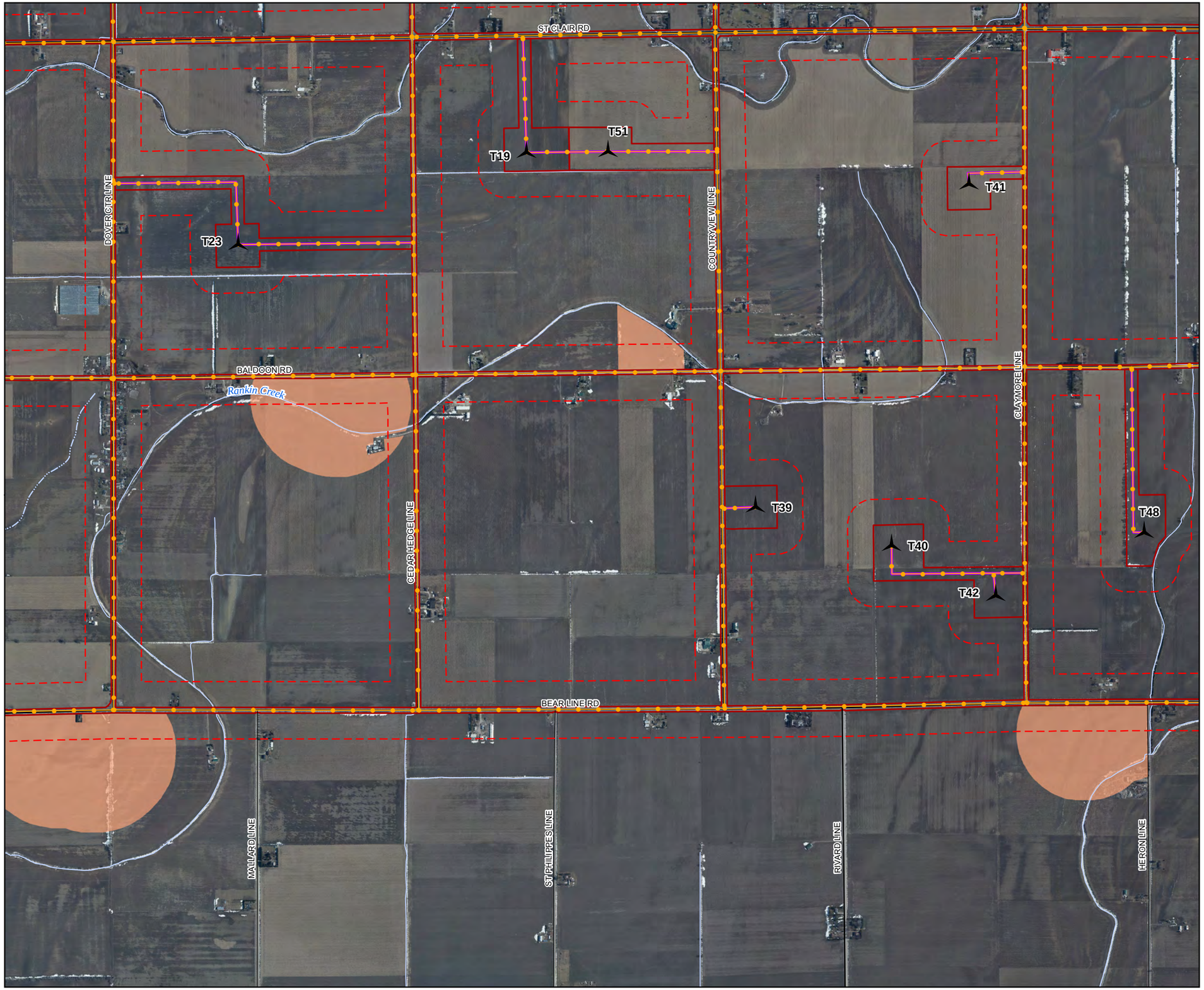
Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map8-1toMap8-9_GeneralizedHabitat_18K_2015_07_21_LEH.mxd

Map 8 - 4

North Kent Wind 1 Project

Generalized Candidate Significant Wildlife Habitat





Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- **Generalized Candidate Significant Wildlife Habitat**

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

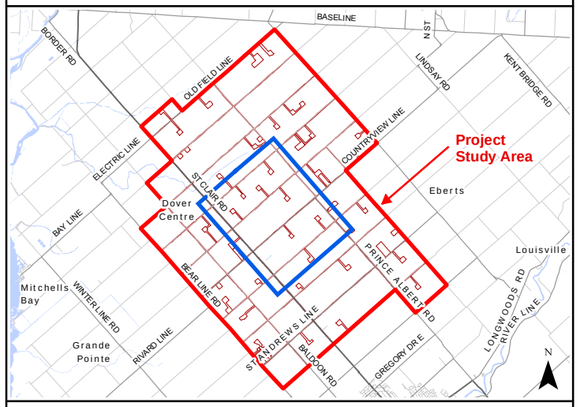
N

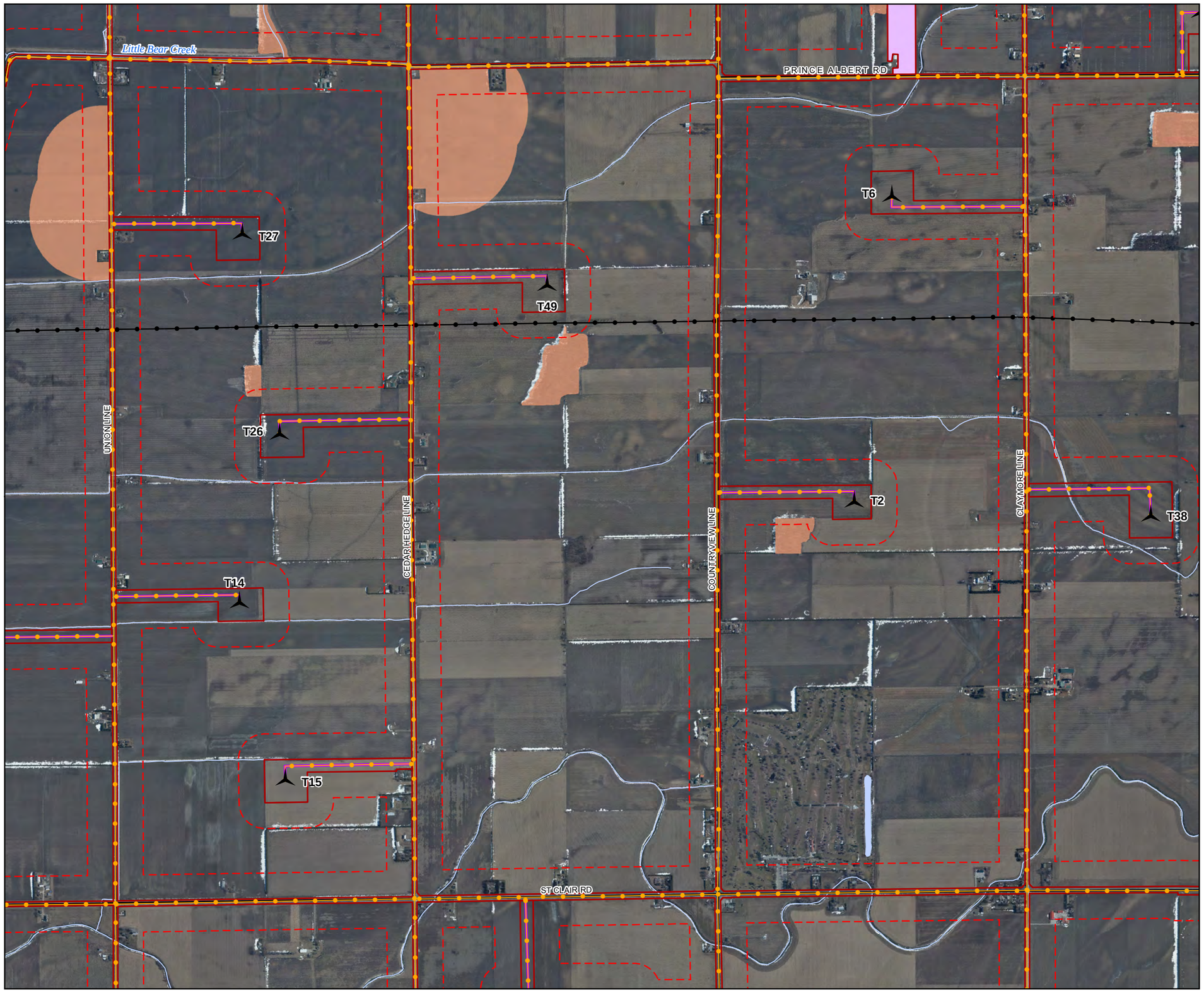
Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map8-1toMap8-9_GeneralizedHabitat_18K_2015_07_21_LEH.mxd

Map 8 - 5

North Kent Wind 1 Project

Generalized Candidate Significant Wildlife Habitat





Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building
- **Generalized Candidate Significant Wildlife Habitat**

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

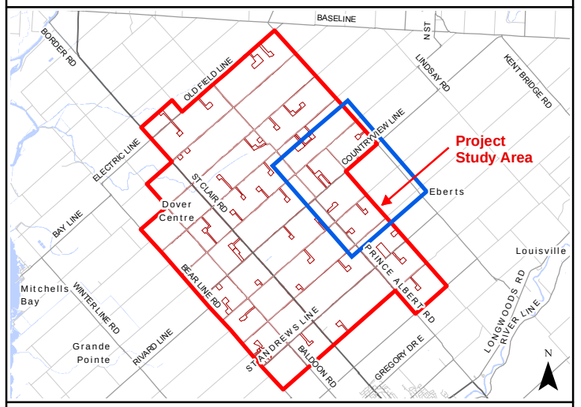
N

Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map8-1toMap8-9_GeneralizedHabitat_18K_2015_07_21_LEH.mxd

Map 8 - 6

North Kent Wind 1 Project

Generalized Candidate Significant Wildlife Habitat



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building
- **Generalized Candidate Significant Wildlife Habitat**

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

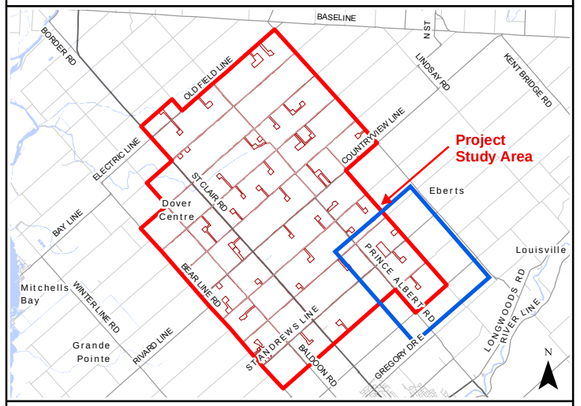
N

Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map8-1toMap8-9_GeneralizedHabitat_18K_2015_07_21_LEH.mxd

Map 8 - 7

North Kent Wind 1 Project

Generalized Candidate Significant Wildlife Habitat



Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- Proposed POI/ Substation/ Laydown/ O&M Building
- **Generalized Candidate Significant Wildlife Habitat**

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

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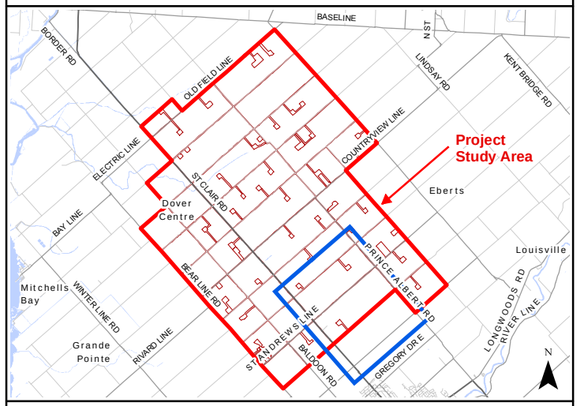
Map 8 - 8

North Kent Wind 1 Project

Generalized Candidate Significant Wildlife Habitat



Legend

- Utility Line
- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Intermittent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Collection Line
- Proposed Access Road
- **Generalized Candidate Significant Wildlife Habitat**

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

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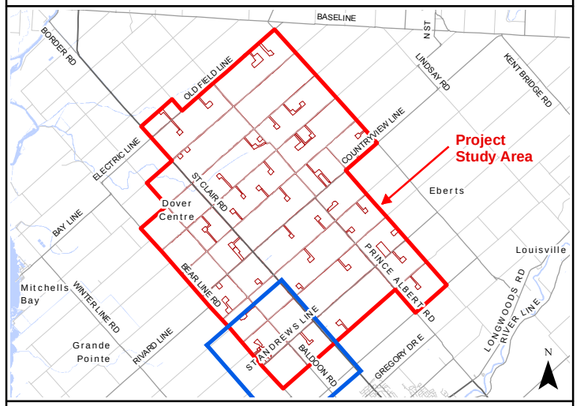
Map 8 - 9

North Kent Wind 1 Project

Generalized Candidate Significant Wildlife Habitat



Legend

- Highway
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Location

- Project Area (120m Buffer)
- Construction Disturbance Area
- Proposed Turbine
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed Laydown Area
- **Generalized Candidate Significant Wildlife Habitat**

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Project: 1612 Date: July 21, 2015	NAD83 - UTM Zone 17 Size: 11x17" **1:17,500**

0 250 500 750 1,000 Meters

N

Path: X:\1612_NorthKentWP\NRSI_1612_SI_Map8-1toMap8-9_GeneralizedHabitat_18K_2015_07_21_LEH.mxd