Romney Wind Energy Centre
Natural Heritage Pre-construction Monitoring Report

Prepared for:
DNV GL
Suite 100, 4100 Rue Molson
Montreal Canada
H1Y 3N1

Project No. 1736C | September 2018

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Romney Wind Energy Centre
Natural Heritage Pre-construction Monitoring Report

Project Team:

Staff	Role
Andrew Ryckman	Project Advisor
Charlotte Teat	Project Manager/Biologist
Andrew Dean	Terrestrial and Wetland Biologist
Carlene Perkin	Terrestrial and Wetland Biologist
Kathryn Hoo	Terrestrial and Wetland Biologist
Nathan Miller	Terrestrial and Wetland Biologist

Report submitted on September 13, 2018

Charlotte Teat

Charlotte Teat
Terrestrial & Wetland Biologist

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1.0 Introduction

Natural Resource Solutions Inc. (NRSI) was retained by DNV GL, on behalf of Romney Energy Centre Limited Partnership (the "Proponent"), 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.

The Proponent is proposing to develop the Romney Wind Energy Centre (the "Project"). This Project, with a total nameplate capacity of up to 60 megawatts (MW), is considered to be a Class 4 wind facility. A total of 18 wind turbine locations are being permitted. The Project is located within the Town of Lakeshore and the Municipality of Chatham Kent, Ontario. More specifically, the Project is located south of Highway 401, and extends along Richardson Side Road and Wheatley Road near the community of Wheatley, ON. The Project is located entirely within Ecoregion 7E (MNRF 2017a).

Project components will be installed primarily on privately-owned agricultural lots, with the electrical collector lines located, in part, within public road allowances. It is planned to connect to the existing Hydro One Networks Inc. (HONI) 230 kV transmission line located within the Town of Lakeshore, close to Richardson Side Road. A small section of transmission line (less than 1km) is proposed for the Project, to be built by HONI from the Point of Common Coupling (PCC) to the Point of Interconnect (POI).

For the purposes of this report, the Project Location boundary refers to the outer limit of where site preparation and construction activities will occur (i.e., disturbance areas described below) and/or where permanent infrastructure will be located, including the air space occupied by turbine blades. See Map 1 for an illustration of the Project Location and natural features.

The Romney WEC NHA (NRSI 2017) received confirmation from the Ministry of Natural Resources and Forestry (MNRF) on July 11, 2017 (refer to Appendix I). As part of this confirmation, several wildlife habitats have been treated as significant with a

commitment for additional pre-construction surveys to be undertaken during the appropriate season, prior to any construction activities. This report has been prepared to present the results of surveys which satisfy the pre-construction survey requirements as outlined in the Environmental Impact Study (EIS) report of the NHA (NRSI 2017). Surveys have been conducted for each of the following wildlife habitat types identified in the EIS report of the NHA as requiring a pre-construction survey:

- Eastern wood-pewee (*Contopus virens*),
- Bald eagle (*Haliaeetus leucocephalus*),
- Cattail sedge (*Carex typhina*),
- Pumpkin ash (*Fraxinus profunda*),
- Halberd-leaved smartweed (*Persicaria arifolia*), and
- Shumard oak (*Quercus shumardii*).

2.0 Staff Roles

The qualifications and roles of key staff participating in the pre-construction surveys at the Project are outlined below.

Andrew Ryckman, B.Sc.
Andrew is a Senior Terrestrial and Wetland Biologist and head of the Renewable Energy Branch at NRSI with more than 12 years of experience working on renewable energy projects, including the management of more than 120 proposed and operational wind energy facilities across Canada, totaling more than 10,000MW of proposed generating power. He routinely manages the natural heritage aspects of renewable energy projects and regularly coordinates the assessment and monitoring of potential impacts from wind energy facilities to wildlife, including birds, bats, and herpetofauna, among other biological disciplines. He has specific expertise relating to bats, having coordinated more than 20,000 hours of acoustic monitoring and assessments of more than 600 potential bat roosting sites. Andrew is certified in Ecological Land Classification (ELC; 2010) for southern Ontario, and has successfully completed a Bat Conservation International (BCI) Acoustic Monitoring Workshop (2008).

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.

Charlotte Teat, M.E.S.
Charlotte is a Terrestrial and Wetland Biologist with more than eight years of experience in biological monitoring and environmental impact assessment on a variety of project types. Charlotte has managed a wide range of environmental projects, and has coordinated numerous types of ecological surveys, including the implementation of ELC, bat studies, avian surveys, and herpetofauna studies. She is certified in the Ontario Wetland Evaluation System (2012) and the ELC system for southern Ontario (2013). Charlotte has coordinated post-construction monitoring on numerous projects throughout Ontario and is knowledgeable of the provincial requirements and expectations for post-construction mortality and behaviour monitoring.

Charlotte's role in this Project was to act as the project manager, coordinating 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. Charlotte was also a lead biologist, conducting breeding bird surveys for the Project.

Andrew Dean, B.E.S.
Andrew is a Terrestrial and Wetland Biologist with more than seven 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 OWES (2012), with considerable experience in tree identification, vegetation community classification, and botanical Species at Risk (SAR) inventories. Andrew is also a certified Butternut Health Assessor (2014).

Andrew was a lead biologist, conducting vegetation surveys for the Project.

Carlene Perkin, B.Sc.
Carlene is a Terrestrial and Wetland Biologist with more than three years of experience in environmental consulting. She has participated in projects involving ELC and vegetation surveys, fish population assessments, amphibian monitoring, bat acoustic studies, and breeding bird inventories. She has also led field surveys as part of an on-going salamander Species at Risk research project. Carlene has obtained her Ontario Benthos Biomonitoring Network (OBBN) certification (2016) and Class 2 Backpack Electrofishing (2016). Her specialization lies in conducting vascular plant community assessments.

Carlene was a lead biologist, conducting vegetation surveys for the Project.

Kathryn Hoo, B.Sc.
Kathryn is a Terrestrial and Wetland Biologist with over six years of experience in the biological field. She has extensive experience conducting biological monitoring fieldwork, specifically bird surveys. Kathryn is experienced in both visual and auditory bird identification, and has completed bird surveys at numerous locations across Ontario and Canada, including leading mist-netting surveys, banding birds, and performing migration surveys, among a variety of other bird surveys.

Kathryn was a lead biologist, conducting breeding bird surveys and bald eagle surveys for the Project.

Nathan Miller, M.Sc.
Nathan is a Terrestrial and Wetland Biologist with more than seven years of experience in environmental consulting. Nathan has carried out numerous avian studies utilizing a wide range of research techniques including point counts, transects, standardized area searches and nest searches, as well as mortality monitoring for avian and bat species at wind energy projects. Nathan also has extensive experience identifying and monitoring avian significant wildlife habitats both pre, during and post-construction for numerous wind energy projects across Canada.

Nathan was a lead biologist, conducting breeding bird surveys for the Project.

3.0 Monitoring Commitments

This report addresses 15 individual wildlife habitats, representing six different types of special concern and rare wildlife species (habitat for species of conservation concern), all of which were treated as significant and required pre-construction surveys to determine the significance of the habitat and inform the implementation of appropriate mitigation measures in accordance with the EIS report of the NHA (NRSI 2017). Details of these habitats, including distance to infrastructure, are outlined in Table 1. The candidate significant wildlife habitats which have been treated as significant are shown on Maps 3-1 to 3-5.

Table 1. Summary of Treated as Significant Wildlife Habitats Requiring Pre-construction Surveys Within 120m of the Project

Feature ID	Distance to Nearest Infrastructure (m)[1]	Distance to Infrastructure with an Operational Effect (m)[1]	Map(s)
Special Concern and Rare Wildlife Species			
Eastern Wood-Pewee Habitat			
EWP-001	AR, CL, CA – >0.1*	WT – 8 (T17)	SCC-A 3-2 3-3
EWP-003	AR, CL, CA – >0.1*	WT – 15 (T8)	SCC-D 3-4
EWP-004	AR, CL, CA – >0.1*	WT – 15 (T9)	SCC-G 3-5
EWP-005	AR, CL, CA – >0.1*	WT – 56 (T13)	SCC-H 3-5
Bald Eagle Habitat			
BAL-002	WT, AR, CL, CA, SI – >120	WT - >120[2]	3-4
Cattail Sedge Habitat			
CSE-001	AR, CL, CA – >0.1*	AR – >0.1*	SCC-A 3-2 3-3
CSE-003	AR, CL, CA – 1	AR – 1	SCC-C 3-3 3-4
CSE-007	AR, CL, CA – 109	AR – 109	SCC-E 3-4 3-5
Pumpkin Ash Habitat			
PAS-001	AR, CL, CA – >0.1*	AR – >0.1*	SCC-A 3-2 3-3
PAS-003	AR, CL, CA – 1	AR – 1	SCC-C 3-3 3-4
PAS-007	AR, CL, CA – 109	AR – 109	SCC-E 3-4 3-5
Halberd-leaved Smartweed Habitat			

Table 1. Summary of Treated as Significant Wildlife Habitats Requiring Pre-construction Surveys Within 120m of the Project

Feature ID	Distance to Nearest Infrastructure (m)[1]	Distance to Infrastructure with an Operational Effect (m)[1]	Map(s)
HLS-001	AR, CL, CA – >0.1*	AR – >0.1*	SCC-A 3-2 3-3
HLS-003	AR, CL, CA – 1	AR – 1	SCC-C 3-3 3-4
Shumard Oak Habitat			
SHO-001	AR, CL, CA – >0.1*	AR – >0.1*	SCC-A 3-2 3-3
SHO-003	AR, CL, CA – 1	AR – 1	SCC-C 3-3 3-4

[1] Distances as reported in the Romney WEC Natural Heritage Assessment (NRSI 2017).
[2] BAL-002 is located greater than 120m from the Project Location, but has the potential to overlap with Project Infrastructure if an up to 800m buffer is applied to the habitat, which will be discussed later in the report based on the results of the site investigation and/or evaluation of significance surveys completed as part of pre-construction commitments for this feature.
** 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/ Laydown Area
SI: Supporting Infrastructure - Building/Substation/Meteorological Tower/Point of Interconnect

4.0 Survey Methods

The identification of significant wildlife habitat in and within 120m of the Project Location was completed by comparing the site specific conditions and habitat use to the definitions and provincial criteria outlined in the Significant Wildlife Habitat Technical Guide (OMNR 2000) and associated Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF 2015).

The methods outlined in Table 2 below were approved by the MNRF as part of the NHA (NRSI 2017; Appendix I). To ensure a standardized and repeatable approach between each visit, as well as over multiple years, all surveys adhered to standardized methods.

Table 2. Summary of Pre-Construction Monitoring Methods for the Project

Wildlife Habitat Type	Generalized Methods*
Eastern Wood-Pewee	The following evaluation methods (shown below) will be implemented for EWP-001 and the accessible portions of EWP-005. They will also be implemented along the property line for EWP-003 and EWP-004 where specific site access was denied. NRSI will conduct 10-minute point count surveys within (or adjacent to) each candidate SWH for eastern wood-pewee. Each point count station was surveyed 3 times during the period of June to early July, 2017, with no less than 10 days between visits. The number of point counts required was based on the size and habitat diversity at each site. Following the *Birds and Bird Habitats Guidelines for Wind Power Projects* (OMNR 2011a), point counts will be spaced at least 250m apart in forests, ideally with the centre point at least 100m from the habitat edge. Where more than one point count will be conducted within each candidate habitat, a standardized transect will also be conducted between point count sites. Surveys were conducted between dawn (one half hour before sunrise) and 3 hours after sunrise, a time period when males are expected to be actively singing and defending territories. Days with high wind speeds and rain will be avoided. During each visit, the highest observed breeding evidence will be recorded for each species. The monitoring locations within these candidate significant habitats have been determined based on conditions of the site. The locations of each of the candidate significant habitats and monitoring stations can be seen on Maps 3-1 to 3-5.
Bald Eagle	If the possible bald eagle nest record, BAL-002, is determined to be present and active during the pre-construction survey, the following methods were conducted at this location before construction of the Project begins. If the nest is present, a site investigation survey will be conducted in the month of March to confirm the current use and activity of the nest and additional surveys will be conducted in accordance with the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E* (MNRF 2015), the *Bald Eagle Habitat Management*

Table 2. Summary of Pre-Construction Monitoring Methods for the Project

Wildlife Habitat Type	Generalized Methods*
	Guidelines (OMNR 1987) and the *Birds and Bird Habitats: Guidelines for Wind Power Projects* (OMNR 2011a). The monitoring program will consist of twice-weekly surveys near the active bald eagle nest, from March until mid-August, or whenever the chick(s) leaves the nest. Twice-weekly surveys during this time period will allow for the collection of all appropriate information regarding the behaviour and habitat use of the bald eagles, including any successful juveniles, to support the delineation of habitat zones surrounding the nest in accordance with the Bald Eagle Habitat Management Guidelines (OMNR 1987). The behavioural study will focus on the flight patterns, sight lines, perching habitat, and foraging habitat of the nesting eagles and any juveniles in order to refine the habitat zones around the nest. On each survey date, a biologist, using binoculars or a spotting scope, will document and map all activity of the eagle(s) for at least 4 hours of combined monitoring from at least one suitable vantage point on each visit. All bald eagle behaviour will be recorded during the survey, with the approximate location, age, and behaviour (e.g. courtship, nest building, incubation), including mapping all flight corridors and habitats used. All bald eagle movements within an 800m radius from the nest will be recorded. Surveys will be completed during calm, clear weather conditions, when possible. The location of the potentially significant nest can be seen on Maps 3-1 to 3-5. BAL-002 is located greater than 120m from the Project Location, but has the potential to overlap with Project Infrastructure if an up to 800m buffer is applied to the habitat.
Cattail Sedge	One standardized area search will be conducted within each of the 3 candidate significant cattail sedge habitats (CSE-001, CSE-003 and CSE-007) within 120m of the Project Location. The UTM location of any individuals or clusters will be recorded and a stem count will be conducted. Surveys will be conducted during a time period when this species exhibits characteristics that allow for confident identification, which is during the fruiting period of June to August. The locations of each of the candidate significant habitats can be seen on Maps 3-1 to 3-5.
Pumpkin Ash	One standardized area search will be conducted within each of the 3 candidate significant pumpkin ash habitats (PAS-001, PAS-003 and PAS-007) within 120m of the Project Location. The UTM location of any individuals or clusters will be recorded and a stem count will be conducted. Surveys will be conducted during a time period when this species exhibits characteristics that allow for confident identification, which is when fruit and leaves are present between August and mid-October. The locations of each of the candidate significant habitats can be seen on Maps 3-1 to 3-5.
Halberd-leaved Smartweed	One standardized area search will be conducted within each of the 2 candidate halberd-leaved smartweed habitats (HLS-001 and HLS-003). The UTM location of any individuals or clusters will be recorded and a stem count will be conducted. Surveys will be conducted during a time period when this species exhibits characteristics that allow for confident identification, which is when flowers are present between June and July. The locations of each of the candidate significant habitats can be seen on Maps 3-1 to 3-5.
Shumard Oak	One standardized area search will be conducted within each of the 2 candidate significant Shumard oak habitats (SHO-001 and SHO-003) within 120m of the Project Location. The UTM location of any individuals or clusters will be recorded and a stem count will be conducted. Surveys will be conducted during a time

Table 2. Summary of Pre-Construction Monitoring Methods for the Project

Wildlife Habitat Type	Generalized Methods*
	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 can also be confirmed year-round if no other similar oak species are present in a given habitat. The locations of each of the candidate significant habitats can be seen on Maps 3-1 to 3-5.

** The survey methods described have assumed that site access will be granted. In the event that specific site access is not available for all, or part, of a specific feature, a potential alternative survey method will be conducted and/or the habitat will continue to be treated as significant.*

4.1 Survey Dates

NRSI recorded dates, times, duration, and weather conditions during each field survey. This information is summarized in Table 3. Detailed descriptions of staff roles and qualifications can be found in Section 2.0 of this report. The crew lead for each survey is indicated in bold font within the table.

Table 3. Summary of Pre-construction Survey Details at the Project

Date	Survey(s)	Start Time (24hr)	Duration	Weather Conditions			Staff
				Temperature (°C)	Cloud Cover (%)	Beaufort Wind Scale	
June 8, 2017	• Bird Species of Conservation Concern Surveys (Eastern Wood-Pewee)	05:49	2hr 46min	17	10	1	**Charlotte Teat** Kandyce Affleck
June 20, 2017	• Bird Species of Conservation Concern Surveys (Eastern Wood-Pewee)	05:55	2hr 10 min	16	50	3	**Nathan Miller** Kandyce Affleck
June 21, 2017	• Bird Species of Conservation Concern Surveys (Eastern Wood-Pewee)	06:00	0hr 30min	15	50	2	**Nathan Miller** Kandyce Affleck
July 4, 2017	• Bird Species of Conservation Concern Surveys (Eastern Wood-Pewee)	06:08	2hr 42min	17	20	1	**Kathryn Hoo** Kandyce Affleck
	• Bird Species of Conservation Concern Surveys (Bald Eagle)	11:30	1 hr 30min	24	10	3	**Kathryn Hoo** Kandyce Affleck
July 19, 2017	• Plant Species of Conservation Concern Surveys (Cattail Sedge and Halberd-leaved Smartweed)	10:00	4hr 0min	28	25	2	**Carlene Perkin** Kandyce Affleck
October 11, 2017	• Plant Species of Conservation Concern Surveys (Pumpkin Ash)	09:56	6hr 19min	11	100	3	**Carlene Perkin** Kandyce Affleck
December 11, 2017	• Bird Species of Conservation Concern Surveys (Bald Eagle) • Plant Species of Conservation Concern Surveys (Shumard Oak)	11:05	2hr 15min	-2	100	1	**Andrew Dean** Kathryn Hoo

4.2 Bird Species of Conservation Concern Habitat

As identified in the EIS report of the NHA for the Romney WEC (NRSI 2017), NRSI biologists identified four candidate habitats for eastern wood-pewee (*Contopus virens*) and one candidate habitat for bald eagle (*Haliaeetus leucocephalus*) that have been treated as significant with a commitment to conduct pre-construction surveys. An additional candidate habitat for eastern wood-peewee (EWP-002) has been treated as significant with no further proposed monitoring due to lack of site access. Since no pre-construction monitoring occurred in this habitat, it will not be discussed further in this report.

Surveys in the candidate habitats for eastern wood-pewee adhered to the standardized methods that were detailed in the EIS report of the NHA for the Romney WEC (NRSI 2017) and approved by the MNRF as part of the NHA confirmation. Monitoring locations within the 4 candidate habitats are shown on Maps 3-1 to 3-5. The results of the evaluation of significance surveys are summarized in Section 5.0.

4.3 Plant Species of Conservation Concern Habitat

As identified in the EIS report of the NHA for the Romney WEC (NRSI 2017), NRSI biologists identified the following 10 candidate habitats for plant species of conservation concern within 120m of the Project Location that have been treated as significant with a commitment to conduct pre-construction surveys:

- 3 cattail sedge habitats,
- 3 pumpkin ash habitats,
- 2 halberd-leaved smartweed habitats, and
- 2 Shumard oak habitats.

Additional candidate habitats for each of these species have been treated as significant with no further proposed monitoring due to lack of site access (CSE-002, CSE-004, CSE-005, CSE-006, PAS-002, PAS-004, PAS-005, PAS-006, HLS-002, HLS-004, HLS-005, HLS-006, SHO-002, SHO-004, SHO-005, and SHO-006).

Surveys in the candidate plant species of conservation concern habitats adhered to the standardized methods that were detailed in the EIS report of the NHA for the Romney WEC (NRSI 2017) and approved by the MNRF as part of the NHA confirmation. The

locations of each of the 10 candidate habitats are shown on Maps 3-1 to 3-5. The results of the evaluation of significance surveys are summarized in Section 5.0.

5.0 Evaluation of Significance Survey Results

The following table (Table 4) lists all candidate significant wildlife habitats, describes the findings of the field surveys, and compares these findings with established criteria to determine if each habitat will be considered significant. The monitoring locations within each of the habitats requiring an evaluation of significance are shown on Maps 3-1 to 3-5.

Table 4. Evaluation Results and Determination of Significance of Candidate Significant Wildlife Habitats Within 120m of the Project

Feature ID	Evaluation Results	Evaluation Criteria[1]	Significant (Y/N)
Special Concern and Rare Wildlife Species			
Eastern Wood-Pewee Habitat			
EWP-001 (SCC-A)	**Visit #1** Number of Species Observations and Highest Breeding Evidence: • 1 PO (Singing Male) **Visit #2** Number of Species Observations and Highest Breeding Evidence: • None **Visit #3** Number of Species Observations and Highest Breeding Evidence: • None	Probable or confirmed evidence of this species breeding within the habitat will confirm significance.	No
EWP-003 (SCC-D)	**Visit #1** Number of Species Observations and Highest Breeding Evidence: • 1 PO (Singing Male) **Visit #2** Number of Species Observations and Highest Breeding Evidence: • None **Visit #3** Number of Species Observations and Highest Breeding Evidence: • 2 PR (Permanent Territory)		**Yes**
EWP-004 (SCC-G)	**Visit #1** Number of Species Observations and Highest Breeding Evidence: • None **Visit #2** Number of Species Observations and Highest Breeding Evidence: • None		No

Table 4. Evaluation Results and Determination of Significance of Candidate Significant Wildlife Habitats Within 120m of the Project

Feature ID	Evaluation Results	Evaluation Criteria[1]	Significant (Y/N)
	Visit #3 Number of Species Observations and Highest Breeding Evidence: • 2 PO (Singing Males)		
EWP-005 (SCC-H)	**Visit #1** Number of Species Observations and Highest Breeding Evidence: • 3 PO (Singing Male) **Visit #2** Number of Species Observations and Highest Breeding Evidence: • 1 PR (Permanent Territory) **Visit #3** Number of Species Observations and Highest Breeding Evidence: • 5 PR (Permanent Territory)		**Yes**
Bald Eagle Habitat			
BAL-002	No evidence of a bald eagle nest or use of the habitat by bald eagles was observed at this location.	Presence of an active bald eagle nest will confirm significance.	No
Cattail Sedge Habitat			
CSE-001 (SCC-A)	Number of Species Observations: • None	Presence of this species within the habitat identified will trigger discussions with MNRF to determine if this represents a significant species population.	No
CSE-003 (SCC-C)	Number of Species Observations: • None		No
CSE-007 (SCC-E)	Number of Species Observations: • None		No
Pumpkin Ash Habitat			
PAS-001 (SCC-A)	Number of Species Observations: • None	Presence of this species within the habitat identified will trigger discussions with MNRF to determine if this represents a significant species population.	No
PAS-003 (SCC-C)	Number of Species Observations: • None		No
PAS-007 (SCC-E)	Number of Species Observations: • None		No
Halberd-leaved Smartweed Habitat			
HLS-001 (SCC-A)	Number of Species Observations: • None	Presence of this species within the habitat identified will trigger discussions with MNRF to determine if this represents a significant species population.	No
HLS-003 (SCC-C)	Number of Species Observations: • None		No
Shumard Oak Habitat			
SHO-001 (SCC-A)	Number of Species Observations: • Approximately 10 to 20 individual stems observed in total (concentrated in the northeast section of the habitat)	Presence of this species within the habitat identified will trigger discussions with MNRF to determine if this represents a significant	**Yes** Based on the presence of approximately 10 to 20 individuals in

Table 4. Evaluation Results and Determination of Significance of Candidate Significant Wildlife Habitats Within 120m of the Project

Feature ID	Evaluation Results	Evaluation Criteria[1]	Significant (Y/N)
		species population.	suitable habitat, NRSI has confirmed that this habitat is significant.
SHO-003 (SCC-C)	Number of Species Observations: • Approximately 30 to 45 individual stems observed in total (scattered throughout the habitat)		**Yes** Based on the presence of approximately 30 to 45 individuals in suitable habitat, NRSI has confirmed that this habitat is significant.

[1.] As per the EOS report of the NHA for the Romney WEC (NRSI 2017)

Breeding Evidence Codes
(Ontario Breeding Bird Atlas)
PO Possible Breeding
PR Probable Breeding

6.0 Mitigation Considerations

This report was prepared to be consistent with appropriate provincial guidelines and recommendations relating to renewable energy projects, including specific details relating to the evaluation of significance of each habitat. The results of the pre-construction surveys have identified that of the 15 candidate significant wildlife habitats requiring an evaluation of significance, four wildlife habitats have been confirmed as significant. These significant wildlife habitats include two significant bird species of conservation concern habitats (eastern wood-pewee), and two significant plant species of conservation concern habitats (Shumard oak) and are summarized in Table 5 below. The mitigation measures and post-construction monitoring commitments as outlined in the EIS report of the NHA (NRSI 2017) will apply for each of these significant habitats.

Table 5. Summary of Significant Wildlife Habitats Within 120m of the Project

Feature ID	SCC Map Code	Map
Special Concern and Rare Wildlife Species		
Eastern Wood-Pewee Habitat		
EWP-003	SCC-D	3-4
EWP-005	SCC-H	3-5
Shumard Oak Habitat		
SHO-001	SCC-A	3-2 3-3
SHO-003	SCC-C	3-3 3-4

The remaining wildlife habitats, that are not listed above, were studied following approved pre-construction survey protocols and have been determined to not be significant when compared to established and approved standards of significance. Since these habitats are not significant, the mitigation measures and monitoring commitments for these habitats, as described in the EIS report of the NHA (NRSI 2017), are no longer applicable.

7.0 References

Ministry of Natural Resources and Forestry (MNRF). 2015. Significant Wildlife Habitat Criteria Schedules For Ecoregion 7E. January 2015.

Natural Resource Solutions Inc. (NRSI). 2017. Romney Wind Energy Centre Natural Heritage Assessment. June 2017.

Ontario Ministry of Natural Resources (OMNR). 2012. Natural Heritage Assessment Guide for Renewable Energy Projects. November 2012.

Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide. October 2000.

Map 1
Project Location and Natural Features

Map 1

Romney WEC

Project Location and Natural Features

Legend

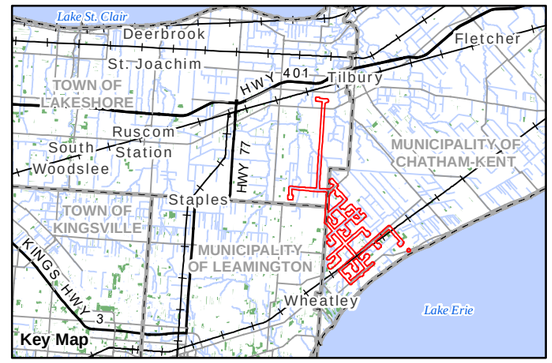
- Utility Line
- Railway
- Highway
- Primary Road
- Secondary Road

Project Components

- 120m Setback
- Project Location
- Turbine (L68)
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed O&M Building

Natural Features

- Permanent Watercourse
- Intermittent Watercourse
- Open Water
- Wooded Area



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Aquatic, Terrestrial and Wetland Biologists

Project:1736C Date: September 13, 2018	NAD83 - UTM Zone 17 Size: 11x17" **1:68,000**

0 1 2 3 4 Kilometers

N

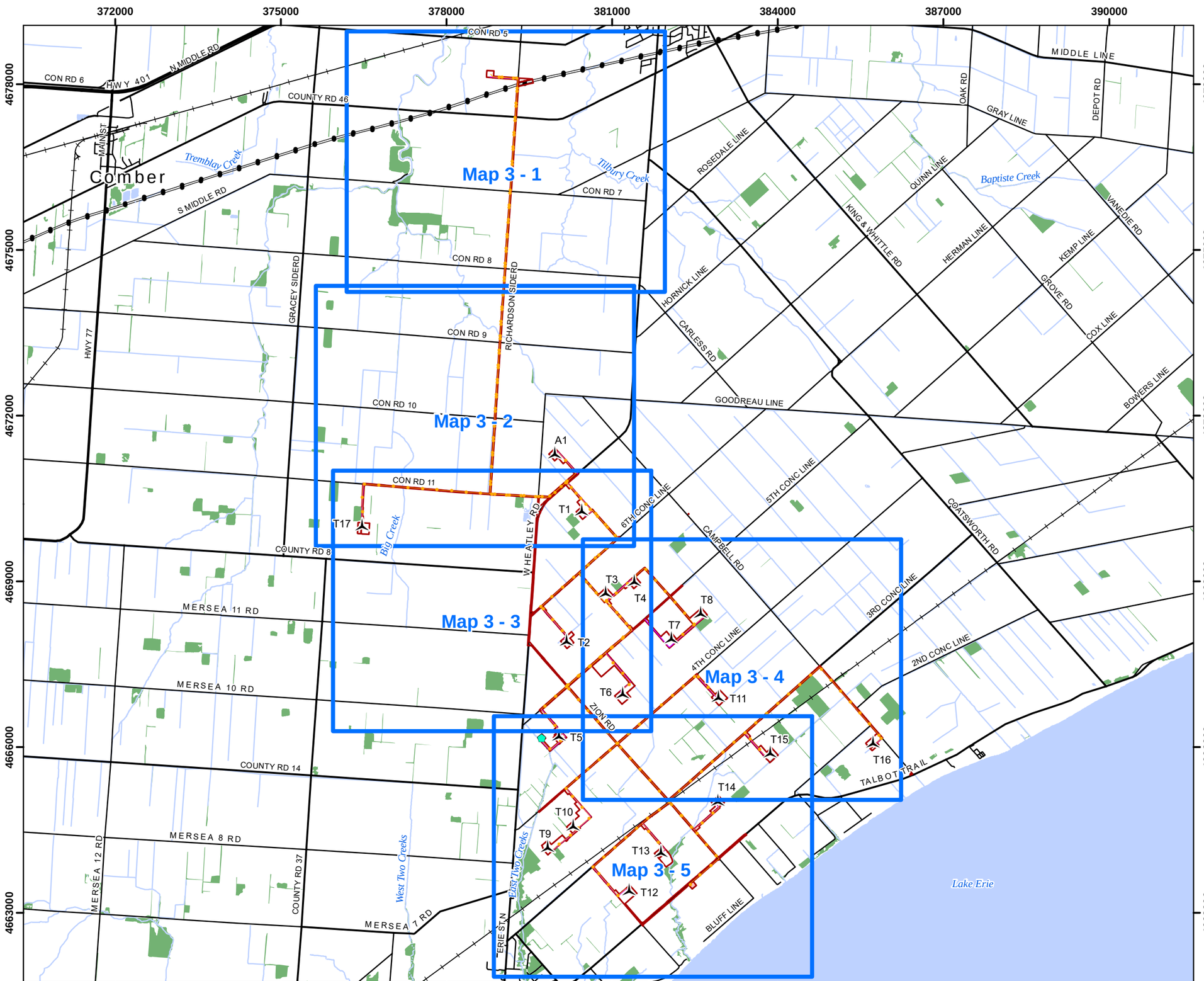
Path: X:\1736_Romney_WEC\NRSI_1736_SI_Map1_ProjectLocation_NaturalFeatures_65K_2018_09_13_KEF.mxd

Map 2
Key Map

Map 2

Romney WEC

Key Map



Legend

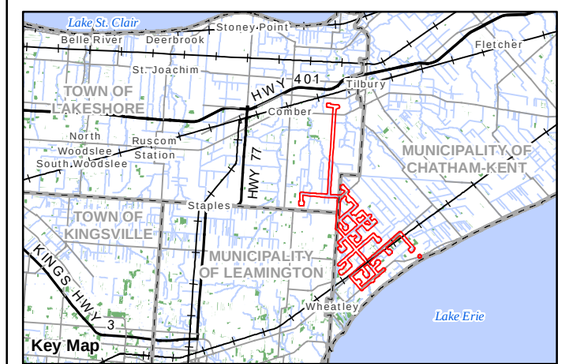
- Map Extent
- Utility Line
- Railway
- Highway
- Primary Road
- Secondary Road

Project Components

- Project Location
- Turbine (L68)
- Proposed Meteorlogical Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed O&M Building

Natural Features

- Permanent Watercourse
- Intermittent Watercourse
- Open Water
- Wooded Area



NATURAL RESOURCE SOLUTIONS INC.
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Project:1736C
Date: September 13, 2018

NAD83 - UTM Zone 17
Size: 11x17"
1:68,000

0 1 2 3 4 Kilometers

N

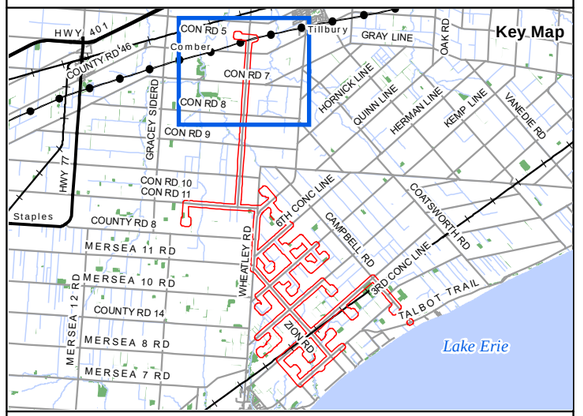
Path: X:\1736_Romney_EWS\GIS\NRSI_1736_Map2_KeyMap_65K_2018_09_13_KEF.mxd

Maps 3-1 to 3-5
Treated as Significant Wildlife Habitats

Map 3 - 1

Romney WEC

Treated as Significant Wildlife Habitats



Legend

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

Project Components

- 120m Setback
- Project Location
- Proposed Collection Line
- Proposed Access Road

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Project:1736
Date: September 13, 2018

NAD83 - UTM Zone 17
Size: 11x17"
1:18,500

N

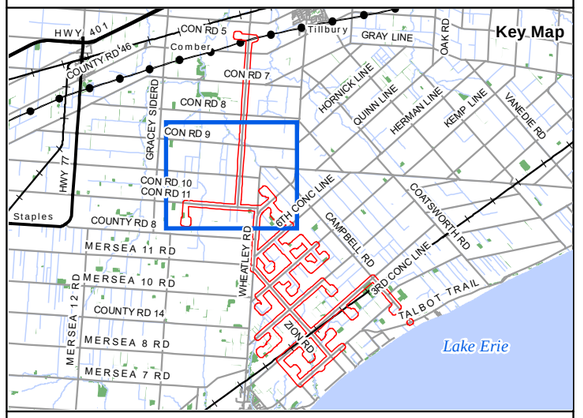
0 400 800 1,200 Meters

Path: X:\1736_Romney_WEC\NRSI_1736_Map3-1toMap3-5_TreatedasSigWildlifeHabitat_19K_2018_09_13_KEF.mxd

Map 3 - 2

Romney WEC

Treated as Significant Wildlife Habitats



Legend

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

Project Components

- 120m Setback
- Project Location
- Turbine (L68)
- Proposed Collection Line
- Proposed Access Road

Treated as Significant Wildlife Habitat

- Bird Monitoring Station
- Species of Conservation Concern Habitat (SCC)
- 1 - Eastern Wood-Pewee
- 7 - Cattail Sedge
- 9 - Pumpkin Ash
- 10 - Shumard Oak
- 14 - Halberd-leaved Smartweed

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Aquatic, Terrestrial and Wetland Biologists

Project:1736
Date: September 13, 2018

NAD83 - UTM Zone 17
Size: 11x17"
1:18,500

N

0 400 800 1,200 Meters

376000 377000 378000 379000 380000 381000

4674000 4673000 4672000 4671000 4670000

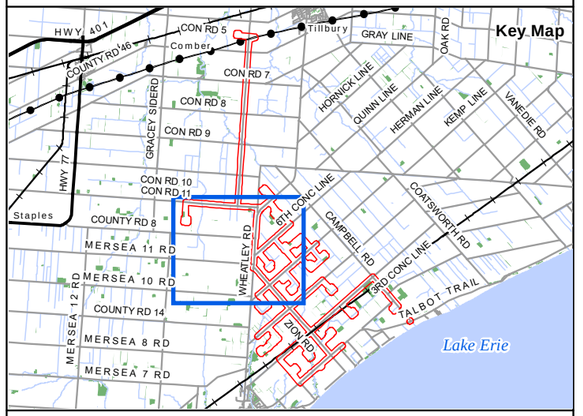
CON RD 9
CON RD 10
CON RD 11
RICHARDSON SIDERD
GOODREAU LINE
CAMPBELL RD
TILBURY W & ROMNEY RD
WHEATLEY RD
6TH CONC LINE
Big Creek
A1
T1
T17
SCC-A (1, 7, 9, 10, 14)

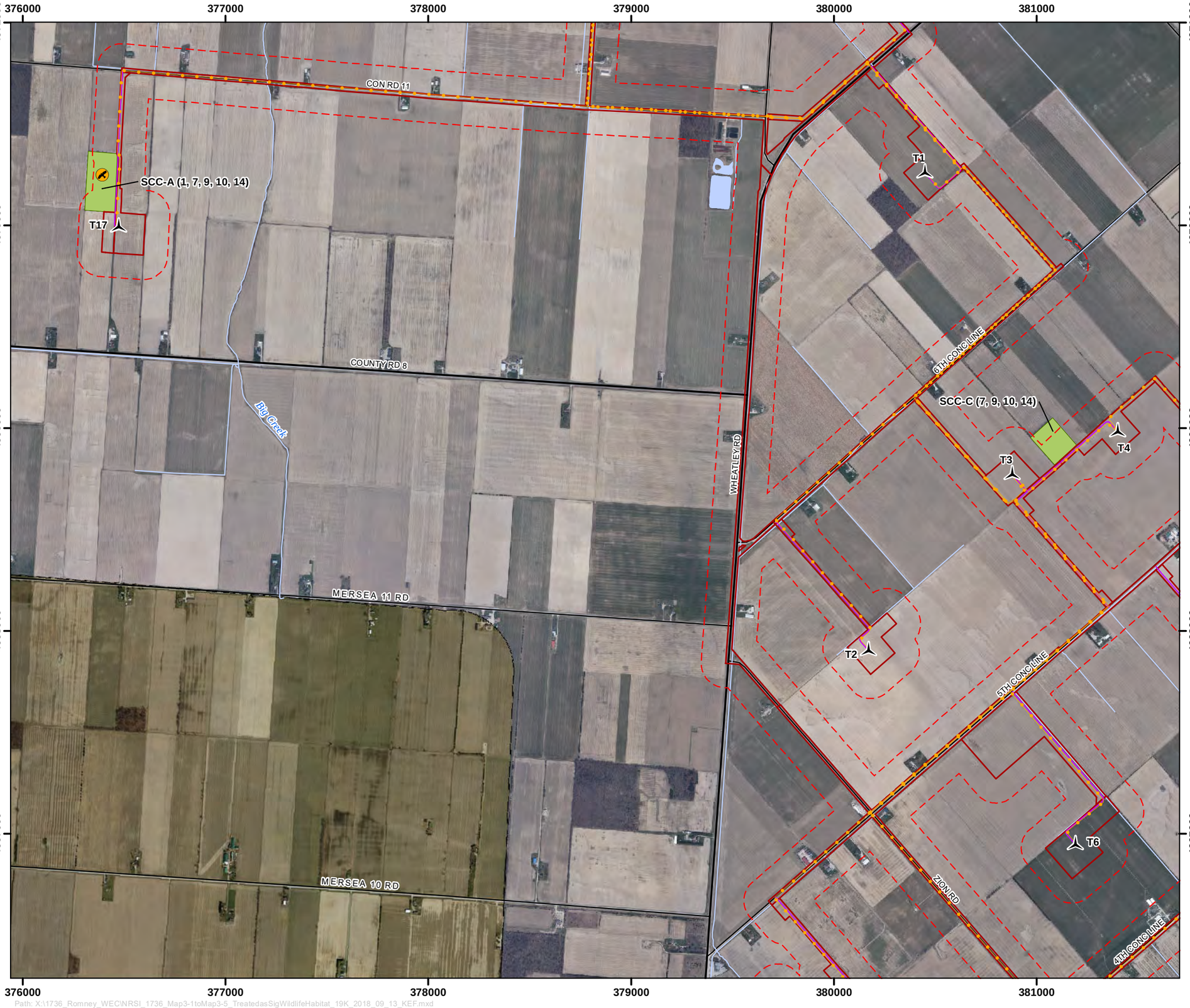
Path: X:\1736_Romney_WEC\NRSI_1736_Map3-1toMap3-5_TreatedasSigWildlifeHabitat_19K_2018_09_13_KEF.mxd

Map 3 - 3

Romney WEC

Treated as Significant Wildlife Habitats





Legend

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

Project Components

- 120m Setback
- Project Location
- Turbine (L68)
- Proposed Collection Line
- Proposed Access Road

Treated as Significant Wildlife Habitat

- Bird Monitoring Station
- Species of Conservation Concern Habitat (SCC)
- 1 - Eastern Wood-Pewee
- 7 - Cattail Sedge
- 9 - Pumpkin Ash
- 10 - Shumard Oak
- 14 - Halberd-leaved Smartweed

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Project:1736
Date: September 13, 2018

NAD83 - UTM Zone 17
Size: 11x17"
1:18,500

0 400 800 1,200 Meters

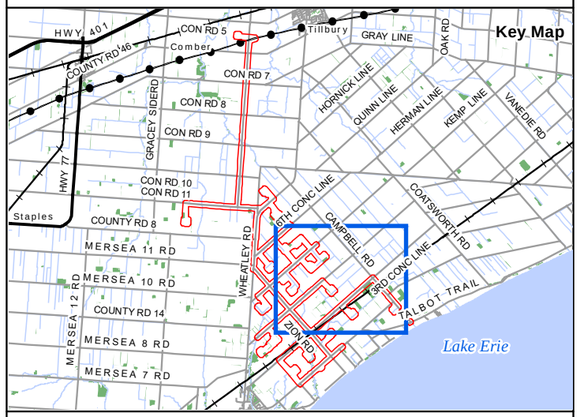
N

Path: X:\1736_Romney_WEC\NRSI_1736_Map3-1toMap3-5_TreatedasSigWildlifeHabitat_19K_2018_09_13_KEF.mxd

Map 3 - 4

Romney WEC

Treated as Significant Wildlife Habitats



381000 382000 383000 384000 385000 386000

4669000 4668000 4667000 4666000

SCC-C (7, 9, 10, 14)
T4
T3
6TH CONC LINE
CAMPBELL RD
T8
SCC-D (1)
T7
4TH CONC LINE
T6
T11
3RD CONC LINE
T15
T16
2ND CONC LINE
ZION RD
Yellow Creek
SCC-E (7, 9)
TALBOT TRAIL

Legend

- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse

Project Components

- 120m Setback
- Project Location
- Turbine (L68)
- Proposed Collection Line
- Proposed Access Road

Treated as Significant Wildlife Habitat

- Bird Monitoring Station
- Bald Eagle Nest Record (BAL-002)
- Species of Conservation Concern Habitat (SCC)
- 1 - Eastern Wood-Pewee
- 7 - Cattail Sedge
- 9 - Pumpkin Ash
- 10 - Shumard Oak
- 14 - Halberd-leaved Smartweed

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Project:1736
Date: September 13, 2018

NAD83 - UTM Zone 17
Size: 11x17"
1:18,500

N

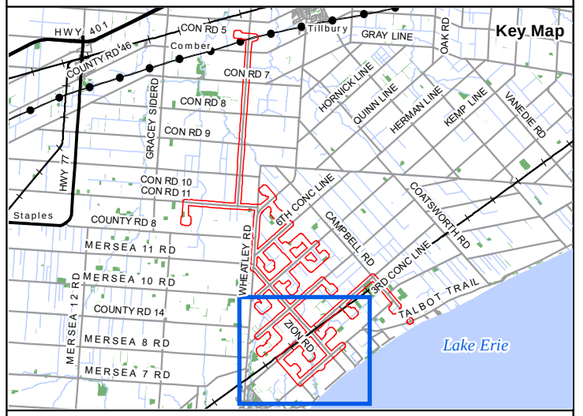
0 400 800 1,200 Meters

Path: X:\1736_Romney_WEC\NRSI_1736_Map3-1toMap3-5_TreatedasSigWildlifeHabitat_19K_2018_09_13_KEF.mxd

Map 3 - 5

Romney WEC

Treated as Significant Wildlife Habitats



Legend

- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse
- Open Water

Project Components

- 120m Setback
- Project Location
- Turbine (L68)
- Proposed Meteorological Tower
- Proposed Collection Line
- Proposed Access Road
- Proposed O&M Building

Treated as Significant Wildlife Habitat

- Bird Monitoring Station
- Bird Monitoring Transect
- Species of Conservation Concern Habitat (SCC)

1 - Eastern Wood-Pewee

7 - Cattail Sedge

9 - Pumpkin Ash

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Project:1736
Date: September 13, 2018

NAD83 - UTM Zone 17
Size: 11x17"
1:18,500

0 400 800 1,200 Meters

N

Path: X:\1736_Romney_WEC\NRSI_1736_Map3-1toMap3-5_TreatedasSigWildlifeHabitat_19K_2018_09_13_KEF.mxd

Appendix I
Romney Wind Energy Centre NHA Letter of Confirmation

Ministry of
Natural Resources
Regional Resources Section
Southern Region
300 Water Street
4th Floor, South Tower
Peterborough, ON K9J 8M5

Ministère des
Richesses naturelles

Ontario

July 11, 2017

Romney Energy Centre Limited Partnership
53 Jarvis Street, Suite 300
Toronto, ON
M5C 2H2

RE: NHA Confirmation for Romney Wind Energy Centre

Dear Mark Gallagher:

In accordance with the Ministry of the Environment and Climate Change's (MOECC's) Renewable Energy Approvals (REA) Regulation (O.Reg.359/09), the Ministry of Natural Resources and Forestry (MNRF) has reviewed the natural heritage assessment (NHA) and environmental impact study (EIS) for the Romney Wind Energy Centre located in the Town of Lakeshore in the Municipality of Chatham-Kent, the final version of which was submitted by Romney Energy Centre Limited Partnership on June 30, 2017.

In accordance with Section 28(2) and 38(2)(b) of the REA regulation, MNRF provides the following confirmations following review of the NHA and EIS:

1. The MNRF confirms that the determination of the existence of natural features and the boundaries of natural features was made using applicable evaluation criteria or procedures established or accepted by MNRF.
2. The MNRF confirms that the site investigation and records review were conducted using applicable evaluation criteria or procedures established or accepted by MNRF, if no natural features were identified.
3. The MNRF confirms that the evaluation of the significance or provincial significance of the natural features was conducted using applicable evaluation criteria or procedures established or accepted by MNRF.
4. The MNRF confirms that the project location is not in a provincial park or conservation reserve.
5. The MNRF confirms that the environmental impact assessment report has been prepared in accordance with procedures established by the MNRF.

In accordance with Section 28(3)(c) and 38(2)(c), MNRF also offers the following comments in respect of the project:

Pre-construction Monitoring

In accordance with Appendix D of the Natural Heritage Assessment Guide, a commitment has been made to complete pre-construction assessments of habitat use for the following candidate significant wildlife habitats:

- Bald Eagle Habitat (features BAL-002*)
- Eastern Wood Pewee Habitat (features EWP-001, 003, 004, 005)
- Cattail Sedge Habitat (features CSE-001, 003, 007)
- Pumpkin Ash Habitat (features PAS-001, 003, 007)
- Halberd-leaved Smartweed Habitat (features HLS-001, 003)
- Shumard Oak Habitat (features SHO-001, 003)

* Feature BAL-002 includes a commitment to determine if a nest is present in the woodland and if so, whether the nest is active. If the nest is present and active, behavioral monitoring is required as a pre-construction survey commitment.

MNRF has reviewed and confirmed the assessment methods and the range of mitigation options. Pending completion of the assessments and determination of significance, the appropriate mitigation is expected to be implemented, as committed to in the EIS.

Post-construction Monitoring

A commitment has been made in the NHA and EIS to conduct post-construction monitoring, and if determined necessary, implement mitigation measures. For the Romney Wind Energy Centre this includes the following features if they are deemed significant following results of pre-construction monitoring requirements listed above:

- Bald Eagle Habitat (features BAL-002)
- Eastern Wood Pewee Habitat (features EWP-001, 003, 004, 005)
- Cattail Sedge Habitat (features CSE-001, 003, 007)
- Pumpkin Ash Habitat (features PAS-001, 003, 007)
- Halberd-leaved Smartweed Habitat (features HLS-001, 003)
- Shumard Oak Habitat (features SHO-001, 003)

In addition, the following confirmed significant wildlife habitats will receive post-construction monitoring, and mitigation outlined in the NHA and EIS will be applied:

- Bald Eagle Habitat (BAL-001)

In addition to the NHA, Environmental Effects Monitoring Plans (EEMP) that address post-construction monitoring and mitigation for birds and bats must be prepared and implemented. EEMPs for birds and bats must be prepared in accordance with MNRF Guidelines and should be reviewed by MNRF in advance of submitting a REA application to MOECC to minimize potential delays in determining if the application is complete. Comments provided by MNRF with respect to the EEMP must be submitted as part of the application for a REA.

This confirmation letter is valid for the project as proposed in the NHA and EIS. Should any changes be made to the proposed project that would alter the NHA or EIS, MNRF may need to undertake additional review of the NHA and EIS.

Where specific commitments have been made by the applicant in the NHA and EIS with respect to project design, construction, rehabilitation, operation, mitigation, or monitoring, MNRF expects that these commitments will be considered in MOECC's Renewable Energy Approval decision and, if approved, be implemented by the applicant.

In accordance with S.12 (1) of the Renewable Energy Approvals Regulation, this letter must be included as part of your application submitted to the MOECC for a Renewable Energy Approval.

Please be aware that your project may be subject to additional legislative approvals as outlined in the Ministry of Natural Resources' *Approvals and Permitting Requirements Document*. These approvals are required prior to the construction of your renewable energy facility.

If you wish to discuss any part of this confirmation or additional comments provided, please contact Mike Poskin, A/Renewable Energy Coordinator, at 705-755-1362.

Sincerely,

Erin Cotnam
Land Use Planning Supervisor
Regional Operations Division
Ministry of Natural Resources and Forestry

cc. Mitch Wilson, District Manager, MNR Aylmer District
cc. Mike Poskin, A/Renewable Energy Coordinator, MNRF
cc. Amy Cameron, Regional Planning Ecologist, MNRF
cc. Kelly Belshaw, Regional Planner, MNRF
cc. Mohsen Keyvani, MOECC
cc. Nick Colella, MOECC
cc. Zeljko Romic, MOECC