

# Nation Rise Wind Farm Natural Heritage Evaluation of Significance Report



Prepared for: DNV-GL 4100 Rue Molson, Suite 100 Montréal, QC H1Y 3N1





Project No. 1756 I July 2017



# **Nation Rise Wind Farm Natural Heritage Evaluation of Significance Report**

# **Project Team:**

Staff	Role
Andrew Ryckman	Project Advisor
Christy Humphrey	Project Manager/Biologist
Charlotte Teat	Terrestrial and Wetland Biologist
Erin Bannon	Terrestrial and Wetland Biologist
James Barber	Terrestrial and Wetland Biologist
Jeremy Bannon	Terrestrial and Wetland Biologist
Ken Burrell	Terrestrial and Wetland Biologist
Lillian Knopf	Terrestrial and Wetland Biologist
Pat Deacon	Terrestrial and Wetland Biologist
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Report submitted on July 11, 2017

Andrew Ryckman Senior Terrestrial & Wetland Biologist

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# 1.0 Project Description

Natural Resource Solutions Inc. (NRSI) was retained in April 2016 by DNVGL, on behalf of Nation Rise Wind Farm Limited Partnership (the Proponent) to conduct a Natural Heritage Assessment (NHA) in accordance with the Renewable Energy Approval (REA) Regulation, Ontario Regulation (O. Reg.) 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 34 permitted wind turbines, with a nameplate capacity of approximately 100 (MW).

The Nation Rise Wind Farm (Nation Rise WF or Project) is being proposed by Nation Rise Wind Farm Limited Partnership, a wholly-owned subsidiary of EDP Renewables Canada Ltd. (EDPR), and is located in the Township of North Stormont, Ontario. The Nation Rise Wind Farm is located in eastern Ontario, within the Township of North Stormont and the United Counties of Stormont, Dundas and Glengarry, Ontario. More specifically, the Project is located in the western portion of North Stormont bounded to the south by the Township of South Stormont and to the west by the boundary of the Township of North Dundas. The north portion of the Project is delimited by the municipality boundaries of Russell and The Nation. Courville Road and MacMillan Road are the east boundaries of the Project.

According to O. Reg. 359/09, as amended, and as per the Natural Heritage Assessment 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., construction disturbance areas described below) and where permanent infrastructure will be located, including the air space occupied by turbine blades.

Construction disturbance areas surrounding various Project components have been identified; such areas correspond to the outer limits of the "Project Location" boundaries on the maps. These areas denote zones where temporary disturbance during the

construction phase may occur such as temporary Project component laydown and storage areas.

In accordance with Section 27 of the REA Regulation, O. Reg. 359/09, NRSI has conducted an evaluation of significance to identify any significant natural features and wildlife habitats in and 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 staging and laydown areas, crane pads, access roads, electrical collector lines, substation, and meteorological towers. For the purposes of this report, NRSI will refer to the areas in and within 120m of the Project Location as the 'Project Area'. See Map 1 for an illustration of the Project Area and a general overview of the Project.

# 2.0 REA Requirements

Ontario Regulation 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 Project is classified as a Class 4 wind facility and is required to complete a REA.

Section 27 of the REA Regulation requires that, if any candidate significant natural feature is identified in or within 120m of the Project Location, a natural heritage evaluation of significance should be undertaken. This evaluation of significance should utilize evaluation criteria or procedures established or accepted by the Ministry of Natural Resources and Forestry (MNRF). In conjunction with the evaluation of significance, Subsection 4 of the REA Regulation requires that a report be prepared that sets out the following:

- 1. For each natural feature shown on the map mentioned in paragraph 3 of subsection 26 (3), a determination of whether the natural feature is provincially significant, significant, not significant, or not provincially significant.
- 2. A summary of the evaluation criteria or procedures used to make the determinations mentioned in paragraph 1.
- 3. The name and qualifications of any person who applied the evaluation criteria or procedures mentioned in paragraph 2.
- 4. The dates of the beginning and completion of the evaluation.

This NHA report has been organized and prepared to satisfy the requirements of the evaluation of significance as outlined in the REA Regulation.

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 MNRF, as required.

#### 3.0 Staff Roles

The requirements of the REA process indicate that the names and qualifications of staff participating in the evaluation of significance should be included. As a result, the qualifications and roles of key staff participating in the evaluation of significance at the Nation Rise WF have been outlined below.

# Andrew Ryckman, B.Sc.

Andrew is a Senior Terrestrial and Wetland Biologist with more than 11 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, including experience with project management, report generation, data analysis, and considerable field monitoring. Andrew also has experience coordinating evaluation of significance surveys for numerous wildlife habitat types, including, but not limited to, waterfowl stopover and staging areas, amphibian woodland breeding habitats, bat maternity colonies, and open country bird breeding habitats. 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 is certified in Ecological Land Classification (ELC) for southern Ontario (2010) and completed an Acoustic Monitoring Workshop led by Bat Conservation International (2009).

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.

#### Christy Humphrey, B.E.S.

Christy is a Terrestrial and Wetland Biologist with more than 8 years of experience in biological monitoring and conducts environmental impact assessments on a variety of project types. Her areas of expertise are in bats, as well as vegetation mapping and floral inventories. Christy has managed a variety of environmental projects, and has conducted and coordinated numerous types of surveys, including vegetation community delineations, wetland evaluations, bat surveys, mammal studies, breeding bird surveys and herpetofauna studies. Christy is certified in ELC for southern and northeastern Ontario (2010), and in the Ontario Wetland Evaluation System (OWES, 2012). She has also received training in Eastern Bat Acoustic Field Techniques (Bat Conservation and Management Inc. 2012) and Eastern Bat Survey Techniques (Bat Conservation and Management Inc. 2015). Christy has managed biological monitoring programs and reporting for a number of wind power projects throughout Ontario and Manitoba, and has extensive experience with client and agency liaison through her project management role on similar projects.

Christy'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. Christy was a lead biologist during the evaluation of

significance surveys, collecting site-specific habitat characteristics of woodlands, wetlands, and reptile hibernacula habitat. She also compiled and reviewed data and completed the evaluation of significance and reporting component for wetlands.

#### Charlotte Teat, M.E.S.

Charlotte is a Terrestrial and Wetland Biologist with more than 7 years of experience in biological monitoring and routinely conducts environmental impact assessments on a variety of project types. Charlotte has managed a variety of environmental projects, and has coordinated numerous types of surveys, including vegetation community delineations, bat surveys, mammal studies, breeding bird surveys and herpetofauna studies. She is certified in OWES (2012) and in the ELC system for southern Ontario (2013). Charlotte has managed the biological monitoring and reporting for numerous wind power projects throughout Ontario and Saskatchewan, and has extensive experience with client and agency liaison through her project management role on similar projects.

Charlotte assisted with the preparation of this report.

#### Erin Bannon, B.E.S.

Erin is a Terrestrial and Wetland Biologist with more than 5 years of experience in the environmental field. She routinely completes natural resource inventories, surveys of amphibians, plants, and mammals, and research and impact studies. Her background in wind energy engineering has also allowed her to gain experience in natural heritage studies. Erin has worked on projects focusing on the identification of important natural features and the evaluation of the significance and sensitivity of these features. During her consulting experience, Erin has conducted bird and bat assessments, amphibian studies, and other flora and fauna assessments throughout Ontario. She is certified in the ELC system for southern Ontario (2013), and has participated in field investigations and reporting for wind power projects throughout Ontario.

Erin was a lead biologist during the evaluation of significance surveys, collecting site-specific habitat characteristics of woodlands, wetlands, and reptile hibernacula habitat. She also assisted with the preparation of this report.

#### James Barber, B.Sc.

James Barber is an Environmental Scientist with a Bachelor of Science degree in Earth Science from University of Waterloo. He has extensive field experience, both volunteer and professional, including habitat assessments and monitoring programs. James has 6 years of professional experience in the environmental sector, with a focus on environmental baseline surveys for the renewable energy and mining sectors. James has wide range of avian skills and has conducted bird surveys throughout the province, including carrying out surveys during the breeding, migrating and winter seasons.

James was a lead biologist during the evaluation of significance surveys, conducting raptor wintering area surveys, waterfowl stopover and staging area surveys, and reptile hibernacula surveys within the Project Area.

## Jeremy Bannon, B.E.S.

Jeremy is a Terrestrial and Wetland Biologist with over 3 years of environmental consulting experience. Jeremy is certified in the ELC system for southern Ontario (2013), is a Certified Arborist (2015), and specializes in vegetation mapping and vascular plant inventories. Jeremy also has experience conducting a wide variety of field work for renewable energy projects, including habitat assessments and wildlife surveys. He regularly conducts wildlife inventories for birds, bats, and herpetofauna.

Jeremy was a lead biologist during the evaluation of significance surveys, collecting site-specific habitat characteristics of woodlands, wetlands, and reptile hibernacula habitat within the Project Area.

#### Ken Burrell, M.E.S.

Ken is a Terrestrial and Wetland Biologist with over 8 years of experience in terrestrial ecology, with a strong background in avian research. Ken is regarded as one of the leading amateur ornithologists in Ontario, having developed his skills through a wide range of avian surveys and from his extensive background volunteering for numerous organizations and working as a field biologist. Ken has conducted spring and fall migration studies as well as breeding bird surveys in the form of point counts, transects, and inventories involving a wide range of species. He has extensive migration monitoring experience throughout Ontario, as well as in Canada and the United States and is well-versed in Species at Risk (SAR) in Ontario and Canada, specifically having published several papers on SAR. Ken is also certified in ELC for northeastern Ontario (2011).

Ken was a lead biologist during the evaluation of significance surveys, collecting site-specific habitat characteristics of woodlands and wetlands and conducting raptor wintering area surveys within the Project Area.

### Lillian Knopf, B.Sc.

Lillian is a Terrestrial and Wetland Biologist with over 5 years of experience in the environmental field. She has managed components of several renewable energy projects, and has experience coordinating and conducting field investigations, including surveys of birds, bats, reptiles, amphibians, and vegetation inventories. Lillian has prepared reports for consulting firms, academia, and government agencies and has participated in reporting for wind energy projects throughout Ontario. She is also an M.Sc. Candidate in biology at the University of Waterloo.

Lillian assisted with the coordination of evaluation of significance field studies and assisted with the preparation of this report.

#### Pat Deacon, B.E.S.

Pat is a Terrestrial and Wetland Biologist with more than 6 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). He is also a certified Butternut Health Assessor (2014).

Pat was a lead biologist during the evaluation of significance surveys, collecting site-specific habitat characteristics of woodlands and wetlands within the Project Area.

# 4.0 Summary of Site Investigation

In accordance with the REA Regulation, NRSI biologists have completed comprehensive site investigations in and within 120m of the Project Location. The site investigations included, but were not limited to, conducting ELC and wildlife habitat surveys to determine the presence of candidate significant natural features in and within 120m of the Project Location. The candidate significant natural features and wildlife habitats identified as a result of the site investigations have been summarized in Table 1. This summary includes woodlands, wetlands, and wildlife habitats. Each feature that was carried forward to the evaluation of significance phase of this Project will be addressed in this report. Remaining features that were assessed as not requiring evaluation of significance have not been included in the summary below, and will not be discussed further. As outlined in Appendix D of the NHA Guide for Renewable Energy Projects (OMNR 2012), any habitats that are not required to be individually identified and delineated within 50m or 120m of a project component will be treated as significant and discussed in this report as generalized significant wildlife habitat (SWH).

Table 1. Summary of Candidate Significant Natural Features and Wildlife Habitats Identified During Site Investigations for the Nation Rise Wind Farm

Feature ID	Feature In Project Location (Y/N)	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Evaluation of Significance Required (Y/N)
Woodlands				
WOD-001	No	Yes	Yes	Yes
WOD-002	No	Yes	Yes	Yes
WOD-003	No	Yes	Yes	Yes
WOD-004	No	Yes	Yes	Yes
WOD-005	Yes	Yes	Yes	Yes
WOD-006	No	Yes	Yes	Yes
WOD-007	No	Yes	Yes	Yes
WOD-008	No	Yes	Yes	Yes
WOD-009	Yes	Yes	Yes	Yes
WOD-010	No	Yes	Yes	Yes
WOD-011	No	Yes	Yes	Yes
WOD-012	No	Yes	Yes	Yes
WOD-013	No	Yes	Yes	Yes
WOD-014	Yes	Yes	Yes	Yes
WOD-015	No	Yes	Yes	Yes
WOD-016	No	Yes	Yes	Yes
WOD-017	No	Yes	Yes	Yes
WOD-018	No	Yes	Yes	Yes

Feature ID	Feature In Project Location (Y/N)	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Evaluation of Significance Required (Y/N)
WOD-019	Yes	Yes	Yes	Yes
WOD-020	Yes	Yes	Yes	Yes
WOD-021	Yes	Yes	Yes	Yes
WOD-022	No	Yes	Yes	Yes
WOD-023	No	Yes	Yes	Yes
WOD-024	No	Yes	Yes	Yes
WOD-025	No	Yes	Yes	Yes
WOD-026	Yes	Yes	Yes	Yes
WOD-027	Yes	Yes	Yes	Yes
WOD-028	Yes	Yes	Yes	Yes
WOD-029	Yes	Yes	Yes	Yes
WOD-030	No	Yes	Yes	Yes
WOD-031	Yes	Yes	Yes	Yes
WOD-032	No	Yes	Yes	Yes
WOD-033	No	Yes	Yes	Yes
WOD-034	No	Yes	Yes	Yes
WOD-035	No	Yes	Yes	Yes
WOD-036	No	Yes	Yes	Yes
WOD-037	No	Yes	Yes	Yes
WOD-038	Yes	Yes	Yes	Yes
WOD-039	No	Yes	Yes	Yes
WOD-040	No	Yes	Yes	Yes
WOD-041	No	Yes	Yes	Yes
WOD-042	No	Yes	Yes	Yes
WOD-043	No	Yes	Yes	Yes
WOD-044	Yes	Yes	Yes	Yes
WOD-045	No	Yes	Yes	Yes
WOD-046	Yes	Yes	Yes	Yes
WOD-047	Yes	Yes	Yes	Yes
WOD-048	Yes	Yes	Yes	Yes
WOD-049	No	Yes	Yes	Yes
WOD-050	No	Yes	Yes	Yes
WOD-051	No	Yes	Yes	Yes
WOD-052	No	Yes	Yes	Yes
WOD-053	Yes	Yes	Yes	Yes
WOD-054	Yes	Yes	Yes	Yes
WOD-055	No	Yes	Yes	Yes
Wetlands				
WET-001	No	Yes	Yes	Yes
WET-002	No	Yes	Yes	Yes
WET-003	No	Yes	Yes	Yes
WET-004	No	Yes	Yes	Yes
WET-005	No	Yes	Yes	Yes
WET-006	No	Yes	Yes	Yes
WET-007	No	Yes	Yes	Yes

Feature ID	Feature In Project Location (Y/N)	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Evaluation of Significance Required (Y/N)
WET-008	No	Yes	Yes	Yes
WET-009	No	Yes	Yes	Yes
WET-011	No	Yes	Yes	Yes
WET-012	No	Yes	Yes	Yes
WET-013	No	Yes	Yes	Yes
WET-014	No	Yes	Yes	Yes
WET-015	No	Yes	Yes	Yes
WET-016	No	Yes	Yes	Yes
WET-017	No	Yes	Yes	Yes
WET-018	No	Yes	Yes	Yes
WET-019	No	Yes	Yes	Yes
WET-020	No	Yes	Yes	Yes
<b>Candidate Significant</b>	Wildlife Habitats			
WST-001	Yes	Yes	Yes	Yes
WST-002	No	Yes	Yes	Yes
WST-004	Yes	Yes	Yes	Yes
WST-005	Yes	Yes	Yes	Yes
WST-006	No	Yes	Yes	Yes
WST-007	Yes	Yes	Yes	Yes
WST-010	Yes	Yes	Yes	Yes
WST-011	No	Yes	Yes	Yes
WST-012	Yes	Yes	Yes	Yes
WST-013	Yes	Yes	Yes	Yes
WST-015	Yes	Yes	Yes	Yes
WST-016	Yes	Yes	Yes	Yes
WST-017	Yes	Yes	Yes	Yes
WST-018	No	Yes	Yes	Yes
WST-020	Yes	Yes	Yes	Yes
WST-021	Yes	Yes	Yes	Yes
WST-023	Yes	Yes	Yes	Yes
WST-024	Yes	Yes	Yes	Yes
WST-026	No	Yes	Yes	Yes
WST-027	Yes	Yes	Yes	Yes
WST-028	Yes	Yes	Yes	Yes
WST-029	Yes	Yes	Yes	Yes
WST-030	Yes	Yes	Yes	Yes
WST-031	Yes	Yes	Yes	Yes
WST-032	Yes	Yes	Yes	Yes
WST-033	Yes	Yes	Yes	Yes
WST-034	Yes	Yes	Yes	Yes
WST-035	Yes	Yes	Yes	Yes
WST-036	No	Yes	Yes	Yes
WSA-001	Yes	Yes	Yes	Yes
RWA-001	Yes	Yes	Yes	Yes
RWA-002	Yes	Yes	Yes	Yes

Feature ID	Feature In Project Location (Y/N)	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Evaluation of Significance Required (Y/N)
BMA-001	No	Yes	Yes	Yes
BMA-002	No	Yes	Yes	Yes
BMA-003	Yes	Yes	Yes	Yes
TWA-001	Yes	Yes	Yes	Yes
SNH-001	No	Yes	Yes	Yes
SNH-002	Yes	Yes	Yes	Yes
SNH-003	Yes	Yes	Yes	Yes
SNH-005	Yes	Yes	Yes	Yes
SNH-006	Yes	Yes	Yes	Yes
SNH-007	Yes	Yes	Yes	Yes
SNH-008	No	Yes	Yes	Yes
SNH-009	Yes	Yes	Yes	Yes
SNH-010	No	Yes	Yes	Yes
SNH-011	Yes	Yes	Yes	Yes
SNH-012	No	Yes	Yes	Yes
ALV-001	Yes	Yes	Yes	Yes
ALV-002	Yes	Yes	Yes	Yes
OGF-001	No	Yes	Yes	Yes
SAV-001	Yes	Yes	Yes	Yes
TGP-001	Yes	Yes	Yes	Yes
TGP-002	No	Yes	Yes	Yes
AWO-001	Yes	Yes	Yes	Yes
AWO-002	No	Yes	Yes	Yes
AWO-003	No	Yes	Yes	Yes
AWO-004	No	Yes	Yes	Yes
AWO-005	No	Yes	Yes	Yes
AWO-006	No	Yes	Yes	Yes
AWO-007	No	Yes	Yes	Yes
AWO-008	No	Yes	Yes	Yes
AWO-009	No	Yes	Yes	Yes
AWO-010	No	Yes	Yes	Yes
AWO-011	No	Yes	Yes	Yes
AWO-012	Yes	Yes	Yes	Yes
AWO-013	No	Yes	Yes	Yes
AWO-014	Yes	Yes	Yes	Yes
AWO-015	Yes	Yes	Yes	Yes
AWO-016	Yes	Yes	Yes	Yes
AWO-017	No	Yes	Yes	Yes
AWO-018	Yes	Yes	Yes	Yes
AWO-019	No	Yes	Yes	Yes
AWO-020	No	Yes	Yes	Yes
AWO-021	No	Yes	Yes	Yes
AWO-022	Yes	Yes	Yes	Yes
AWO-023	No	Yes	Yes	Yes
AWO-024	No	Yes	Yes	Yes

Feature ID	Feature In Project Location (Y/N)	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Evaluation of Significance Required (Y/N)
OCB-001	No	Yes	Yes	Yes
CONI-001	No	Yes	Yes	Yes
CONI-002	Yes	Yes	Yes	Yes
CONI-003	Yes	Yes	Yes	Yes
CONI-004	Yes	Yes	Yes	Yes
CONI-005	Yes	Yes	Yes	Yes
CONI-006	Yes	Yes	Yes	Yes
CONI-007	No	Yes	Yes	Yes
CONI-008	No	Yes	Yes	Yes
CONI-009	No	Yes	Yes	Yes
EAWP-001	No	Yes	Yes	Yes
EAWP-002	No	Yes	Yes	Yes
EAWP-003	No	Yes	Yes	Yes
EAWP-004	No	Yes	Yes	Yes
EAWP-005	No	Yes	Yes	Yes
EAWP-006	No	Yes	Yes	Yes
EAWP-007	No	Yes	Yes	Yes
EAWP-008	No	Yes	Yes	Yes
EAWP-009	No	Yes	Yes	Yes
EAWP-010	No	Yes	Yes	Yes
EAWP-011	No	Yes	Yes	Yes
EAWP-012	Yes	Yes	Yes	Yes
EAWP-013	No	Yes	Yes	Yes
EAWP-014	No	Yes	Yes	Yes
EAWP-015	Yes	Yes	Yes	Yes
EAWP-016	No	Yes	Yes	Yes
EAWP-017	No	Yes	Yes	Yes
EAWP-018	No	Yes	Yes	Yes
WOTH-001	No	Yes	Yes	Yes
WOTH-002	No	Yes	Yes	Yes
WOTH-003	No	Yes	Yes	Yes
WOTH-004	No	Yes	Yes	Yes
WOTH-005	No	Yes	Yes	Yes
MUWE-001	No	Yes	Yes	Yes
MUWE-002	Yes	Yes	Yes	Yes
MUWE-003	Yes	Yes	Yes	Yes
MUWE-004	Yes	Yes	Yes	Yes
MUWE-005	Yes	Yes	Yes	Yes
MUWE-006	No	Yes	Yes	Yes
MUWE-007	No	Yes	Yes	Yes
MUWE-008	No	Yes	Yes	Yes
MUWE-009	No	Yes	Yes	Yes
MUWE-010	No	Yes	Yes	Yes
MONA-001	No	Yes	Yes	Yes
MONA-002	Yes	Yes	Yes	Yes

Feature ID	Feature In Project Location (Y/N)	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Evaluation of Significance Required (Y/N)
MONA-003	Yes	Yes	Yes	Yes
MONA-004	Yes	Yes	Yes	Yes
MONA-005	Yes	Yes	Yes	Yes
MONA-006	Yes	Yes	Yes	Yes
Generalized Candidate	Significant Wild	life Habitats		
Waterfowl Stopover and Staging Areas (Terrestrial)	No	Yes	No	
Raptor Wintering Area	No	Yes	No	
Bat Maternity Colonies	No	Yes	No	
Reptile Hibernaculum	No	Yes	No	
Colonially – Nesting Bird Breeding Habitat (Bank and Cliff)	No	Yes	No	
Colonially – Nesting Bird Breeding Habitat (Tree/Shrubs)	No	Yes	No	
Alvar	No	Yes	No	
Savannah	No	Yes	No	
Tallgrass Prairie	No	Yes	No	
Other Rare Vegetation Community Types	No	Yes	No	Treated as
Woodland Raptor Nesting Habitat	No	Yes	No	Significant
Seeps and Springs	No	Yes	No	
Amphibian Breeding Habitat (Woodland)	No	Yes	No	
Woodland Area- sensitive Bird Breeding Habitat	No	Yes	No	
Shrub/Early Successional Bird Breeding Habitat	No	Yes	No	
Common Nighthawk	No	Yes	No	
Eastern Wood-Pewee	No	Yes	No	
Wood Thrush	No	Yes	No	
Eastern Musk Turtle	No	Yes	No	
Mühlenberg's Weissia	No	Yes	No	
Monarch	No	Yes	No	
West Virginia White	No	Yes	No	

<sup>\*</sup>As per Appendix D of the NHA Guide for Renewable Energy Projects (OMNR 2012).

# 5.0 Evaluation of Significance Methods

In accordance with the REA Regulation, NRSI biologists have completed a comprehensive records review and site investigation to confirm site-specific ecological functions of the features in and within 120m of the Project Location. The results of these tasks have provided the information required to evaluate the significance of several features in and within 120m of the Project Location. NRSI has reviewed all natural features in and within 120m of the Project Location and compared the site-specific conditions and results of the field investigations to available evaluation criteria to determine the significance of each feature. The methods and evaluation criteria used to determine significance are outlined in the following sections.

## 5.1 Survey Dates

In accordance with the REA Regulation, NRSI recorded dates, times, duration, and weather conditions during each evaluation of significance survey. This information has been summarized in Table 2. Detailed descriptions of staff roles and qualifications can be found in Section 3.0 of this report. The crew lead for each survey is indicated in bold font within the table.

Table 2. Evaluation of Significance Survey Details

	Chart Time	Duration	Weather Conditions				
Staff Name(s)	Purpose	Date	Start Time (hrs)	Duration (hrs)	Temp. (°C)	Beaufort Wind	Cloud Cover (%)
	ELC/Wetland	May 16, 2016	0853	9	5-9	4	100
Ob minter Historian branch	Assessments and	May 17, 2016	0950	9	10-20	1-3	5-50
Christy Humphrey Amanda Bichel	Confirmation of	May 18, 2016	1310	5.5	18	1	70
Amanda Bionoi	Significance (Amphibian	May 19, 2016	0815	10	7-22	0-3	30-100
	Habitat AWO-018)	May 20, 2016	1035	2.25	20	0	50
		June 6, 2016	0945	8.75	18-21	3-5	20-100
Chuiste Hermanhaar	EL C/Matland	June 7, 2016	1010	6.75	14-20	3-4	65-100
Christy Humphrey Carlene Perkin	ELC/Wetland Assessments	June 8, 2016	0940	9.25	10-12	2-5	90-100
Cancrio i cikiri	Assessificitis	June 9, 2016	0815	13.25	8-14	2-5	80-100
		June 10, 2016	1015	2.75	11-14	2-3	5
Christy Humphrey Christina Carter	51 0 M / 1		0930	7.75	-2- 4	0-1	0-70
Pat Deacon	ELC/Wetland Assessments	December 6, 2016	0810	8	-3	0-1	0-10
Erin Thompson Kathryn Broadbelt	Assessments		0755	6.75	-7-0	1-2	0-20
Christy Humphrey Christina Carter			0830	7.5	-4- +4	1-3	70-100
Pat Deacon	ELC/Wetland Assessments	December 7, 2016	0725	6.5	-13	0-1	20-100
Erin Thompson Kathryn Broadbelt	Assessments		0730	9.25	-4- +2	2	30-100
Pat Deacon	ELC/Wetland		0745	6.75	-1- +2	2	80-100
Erin Thompson Kathryn Broadbelt	Assessments	December 8, 2016	0730	9	-102	2-3	10-100
Christy Humphrey Christina Carter	51 O M 41 1		0740	5	-84	0-3	0-100
Pat Deacon	ELC/Wetland Assessments	December 9, 2016	0745	4.75	-7	1	5
Erin Thompson Kathryn Broadbelt	Assessments		0745	5.5	-84	2-3	10-90
Ken Burrell James Barber	Raptor Wintering Area Survey	January 10, 2017	0840	4.75	-64	1-3	100

			Ctart Time	Duration	Weather Conditions		
Staff Name(s)	Purpose	Date	Start Time (hrs)	(hrs)	Temp. (°C)	Beaufort Wind	Cloud Cover (%)
James Barber Jeremy Bannon	Raptor Wintering Area Survey	January 20, 2017	0810	3.75	1-2	1	100
Jeremy Bannon	ELC/Wetland Assessments	January 20, 2017	1035	3.75	2	1	100
James Barber Nathan Miller	Raptor Wintering Area Survey	January 26, 2017	0829	3.25	1	1	100
Jeremy Bannon Ashley Cantwell	ELC/Wetland Assessments	January 30, 2017	1630	1	-12	0	0-25
James Barber	Raptor Wintering Area Survey	January 31, 2017	0810	3.5	-1917	1	0-20
		January 31, 2017	0815	11	-239	0-1	0-70
Jeremy Bannon	ELC/Wetland	February 1, 2017	0751	10.25	-139	0-1	30-100
Ashley Cantwell	Assessments	February 2, 2017	0750	7.5	-155	1-3	5-100
	February 3, 2017	1000	7.5	-85	0-4	5-70	
Jeremy Bannon Ashley Cantwell	ELC/Wetland Assessments	February 4, 2017	0800	5.25	-510	1-3	70-100
Ken Burrell James Barber	Raptor Wintering Area Survey	February 9, 2017	1320	2.75	-12	2-3	60
Ken Burrell James Barber	Raptor Wintering Area Survey	February 10, 2017	0808	0.5	-16	3	0
Ken Burrell James Barber	ELC/Wetland Assessments	February 10, 2017	0855	7.75	-1713	2-3	0-60
Ken Burrell James Barber	ELC/Wetland Assessments	February 11, 2017	0910	0.75	-12	3	100
James Barber Nathan Miller	Raptor Wintering Area Survey	February 14, 2017	0800	3.5	-119	0-1	90-100
Erin Bannon	Desktop evaluation of woodland significance	February 16, 2017	1115	5	N/A Desktop evaluation of significance of woodlands		
Christy Humphrey	Desktop evaluation of wetland significance	February 19, 2017	1030	10.25	N/A Desktop evaluation of significance of wetlands		
James Barber	Raptor Wintering Area Survey	February 22, 2017	0810	3.5	2-4	1	100
James Barber	Raptor Wintering Area Survey	February 27, 2017	0938	3.5	4	3-4	90-100

			Start Time	Duration	Weather Conditions		
Staff Name(s)	Purpose	Date	(hrs)	(hrs)	Temp. (°C)	Beaufort Wind	Cloud Cover (%)
		March 2, 2017	0825	6	-10	4	100
James Barber	Waterfowl Stopover and	March 8, 2017	0815	8.25	4-10	3-6	20
	Staging Area Surveys	March 21, 2017	0910	5.25	1-4	1	95-100
		March 29, 2017	0800	7	2-5	2	90-100
Jeremy Bannon Carlene Perkin	Reptile Hibernacula Surveys	April 26, 2017	1000	7	9-17	2-4	20-100
James Barber Jennifer McCarter	Reptile Hibernacula Surveys	April 27. 2017	1110	4	20-27	2-3	2-60
Erin Bannon James Barber	Reptile Hibernacula Surveys	May 3, 2017	1200	6	11-17	2-4	10-50
Christy Humphrey	Reptile Hibernacula Surveys	May 3, 2017	1705	0.5	17	3	10
Erin Bannon James Barber	Reptile Hibernacula Surveys	May 4, 2017	1125	3.5	15-17	1-2	20-40
Erin Bannon Jeremy Bannon	Reptile Hibernacula Surveys	May 11, 2017	1445	3.5	13-14	1-3	30-75
Jeremy Bannon	Reptile Hibernacula Surveys	May 11, 2017	1445	0.5	13	1	75
Erin Bannon	Reptile Hibernacula Surveys	May 12, 2017	0850	0.75	12	2	10
Jeremy Bannon	Reptile Hibernacula Surveys	May 12, 2017	0845	3.25	12-17	0-1	5-15
Erin Bannon Jeremy Bannon	Reptile Hibernacula Surveys	May 12, 2017	1500	2	17-19	0-3	15-45
James Barber Daniel Riley	Reptile Hibernacula Surveys	May 16, 2017	1530	0.5	20	4	80
James Barber Daniel Riley	Reptile Hibernacula Surveys	May 17, 2017	0815	8.5	18-31	2-7	5-40
James Barber Daniel Riley	Reptile Hibernacula Surveys	May 18, 2017	1020	8	25-31	4-8	10-15
James Barber	Reptile Hibernacula Surveys	May 24, 2017	1220	0.25		2	100

#### 5.2 Woodlands

For each candidate significant woodland, ecological characteristics collected during site-specific ELC mapping were compared to the evaluation criteria for significant woodlands, as described in Table 11 of the NHA Guide for Renewable Energy Projects (OMNR 2012). These evaluation criteria include three broad categories: woodland size, ecological functions, and uncommon characteristics. The evaluation criteria for significant woodlands have been summarized in Table 3. All of the criteria identified in Table 3 rely on meeting minimum area thresholds as outlined in the NHA Guide, by applicable Municipality (OMNR 2012). Information collected from available background resources indicates that the Township of North Stormont contained 25.6% woodland cover and the Township of North Dundas contained 13.3% woodland cover in 2014 (SNCA 2016). As such, NRSI has used a woodland cover of 16-30% in the Township of North Stormont (WOD-001 to WOD-009, WOD-011, and WOD-013 to WOD-055), and a woodland cover of 5-15% in the Township of North Dundas (WOD-010 and WOD-012), where applicable, to inform evaluation criteria that are based on woodland cover as found in Table 11 of the NHA Guide.

Table 3. Woodland Evaluation of Significance Criteria

Evaluation Criteria	Standards of Significance
Woodland Size Criteria	
Woodland Cover	<ul> <li>If woodlands account for 5-15% of the total land use, woodlands 4ha in size or greater are significant.</li> <li>If woodlands account for 16-30% of the total land use, woodlands 20ha in size or greater are significant.</li> <li>The largest woodland in the planning area (or sub-unit) is considered significant.</li> </ul>
<b>Ecological Functions Crite</b>	ria
Woodland Interior	<ul> <li>- Woodlands with any size of interior habitat when woodland cover is 5-15%, or 2ha of interior habitat when woodland cover is 16-30% should be significant.</li> <li>- Interior habitat can be initially identified by any forested habitat no closer than 100m from any woodland edge.</li> </ul>
Proximity to Other Significant Woodlands or Habitats	- Woodlands 1ha or greater when woodland cover is 5-15%, or 4ha or greater when woodland cover is 16-30%, that may provide ecological benefit to other nearby significant natural features or fish habitat may be considered significant.
Linkages	- Woodlands 1ha or greater when woodland cover is 5-15%, or 4ha or greater when woodland cover is 16-30%, that provide linkage functions between other significant features within a specified distance (e.g., 120m) may be considered significant.
Water Protection	- Woodlands 0.5ha or greater when woodland cover is 5-15%, or 2ha or greater when woodland cover is 16-30%, may be

Evaluation Criteria	Standards of Significance	
	significant if they are within a sensitive watershed, or in close proximity to other hydrological features, including sensitive headwaters, fish habitat, and groundwater discharge.	
Woodland Diversity Representation (Composition)	<ul> <li>A naturally occurring composition of native forest species that have shown significant decline south and east of the Canadian Shield may be significant when woodlands are 1ha or greater when woodland cover is 5-15%, or 4ha or greater when woodland cover is 16-30%.</li> <li>If high native diversity throughout forested features is noted, a woodland may be significant. Woodland diversity is identified where an area is dominated, singly or in combination, by native naturally occurring sugar maple, black maple, silver maple, red maple, yellow birch, hickory, beech, black ash, walnut, tamarack, spruce, pine, oak, basswood or hemlock.</li> </ul>	
<b>Uncommon Characteristic</b>		
Woodland Characteristics	<ul> <li>- A woodland may be significant if it contains a unique species composition.</li> <li>- A vegetation community with a provincial S-Rank of S1, S2, or S3 and 1ha or greater in size when woodland cover is 5-15%, or 2ha or greater in size when woodland cover is 16-30%, may be considered significant.</li> <li>- Woodlands containing habitat for a rare, uncommon, or restricted woodland plant species and that are 1ha or greater in size when woodland cover is 5-15%, or 2ha or greater when woodland cover is 16-30%, may be considered significant.</li> <li>- Native woodlands showing characteristics of old woodlands or those with large tree stems may be considered significant.</li> </ul>	

A woodland meeting a significance criterion in Table 11 of the NHA Guide (OMNR 2012) must also have an average minimum width of 40m measured between crown edges, where the criterion size threshold is 0.5 to 4.0 hectares, or 60m where the criterion size threshold is 10.0 hectares or more, to be considered significant (OMNR 2012).

#### 5.3 Wetlands

There are no candidate Provincially Significant Wetlands in the Project Location. Wetlands within 120m of the Project Location were initially identified through the use of modified ELC for southern Ontario (Lee *et al.* 1998). This vegetation community classification system allows for the assessment of vegetation communities for preliminary delineations of upland, lowland, and wetland habitats among other community types. ELC communities identified as wetlands were then further delineated according to OWES.

Information within Appendix C: Wetland Characteristics and Ecological Function
Assessment for Renewable Energy Projects of the NHA Guide (OMNR 2012) provides a set of evaluation criteria focused on wetland characteristics and ecological functions relevant to the preparation of an Evaluation of Significance Report and completion of an appropriate Environmental Impact Study (EIS) when wetlands have been assumed to be provincially significant. The Wetland Characteristics and Ecological Function
Assessment ensures the relevant wetland attributes remain fully assessed (to the extent possible), and that sufficient information regarding the wetland is generated to meet EIS requirements. This assessment can be completed mainly through desktop work. The assessment is not used to officially define the status of wetlands (either as provincially significant or not significant). Using this approach presented in the NHA Guide (OMNR 2012), NRSI biologists assessed the functions of these potential wetlands, including biological and hydrological characteristics as well as special features of the community. These characteristics were collected, measured, and assessed using the OWES criteria and standards as a guideline.

#### 5.4 Wildlife Habitat

For the review of candidate SWH, NRSI biologists have consulted the SWH Criteria Schedules for Ecoregion 6E (MNRF 2015) and the SWH Technical Guide (OMNR 2000). These documents identify a wide variety of candidate SWH and criteria used to evaluate their respective significance. Evaluation criteria has been separated into the four broad groups of SWH, using the same general categories as the SWH Criteria Schedules for Ecoregion 6E (MNRF 2015): seasonal concentration areas, rare vegetation communities and specialized wildlife habitats, habitats for species of conservation concern, and animal movement corridors. Each of these groups of SWH is described in more detail in the sub-sections below.

#### 5.4.1 Seasonal Concentration Areas

A total of 47 candidate seasonal concentration areas have been identified in and within 120m of the Project Location. The vegetation mapping has been compared with the criteria outlined in the documents mentioned above to evaluate the significance of seasonal concentration areas in and within 120m of the Project Location. The general evaluation criteria for the wildlife habitats that have been carried forward from the *Nation Rise Wind Farm Natural Heritage Site Investigation Report* (NRSI 2017), as well as

methods used to evaluate the significance of these wildlife habitats, are outlined in Table 4.

Table 4. Seasonal Concentration Areas Evaluation of Significance Criteria

Seasonal Concentration Area	Evaluation Methods	Evaluation Criteria <sup>1</sup>
Waterfowl Stopover and Staging Area (Terrestrial)	Conducted  Surveys of field conditions were conducted as part of the site investigation phase of the project to determine the presence of seasonal flooding, as well as documenting the presence of waterfowl in and within 120m of the Project Location.  Due to the large size of the Project Area, and following the Birds and Bird Habitat Guidelines for Wind Power Projects (OMNR 2011b), routes consisting of more than 10km in length were conducted throughout the Project Area. Driving surveys were conducted along these routes on 4 separate visits, spaced between 6 and 13 days apart in March 2017 when waterfowl were expected to be present within the general vicinity of the Project Area.  Surveys were carried out during daylight hours, for at least 6 hours per visit, between 0800-1700hrs, when waterfowl are typically present using terrestrial staging areas. All individuals were recorded along with information on species, behaviour, and movement.  All surveys were conducted from the roadside with a suitable vantage point of the habitat. All surveys were expected to be suitable for surveying this habitat type since these vantage points will readily allow for abundance and species of staging waterfowl to be identified within open fields.  The objective of this wildlife survey was to estimate the total number of individuals of each species present in the area on a particular visit.  The locations of each of the candidate significant habitats can be seen on Maps	Flooded areas with an annual mixed species aggregation concentration of 100 or more individuals of any of the following listed species:  • American Black Duck  • Wood Duck  • Green-winged Teal  • Blue-winged Teal  • Mallard  • Northern Pintail  • Northern Shoveler  • American Wigeon  • Gadwall  A 100-300m radius buffer around the flooded field Ecosite habitat will be considered the SWH. The size and shape of the buffer will be determined based on the results of habitat use surveys.

Seasonal Concentration Area	Evaluation Methods	Evaluation Criteria <sup>1</sup>
	4-1 to 4-12 of the Nation Rise Wind Farm Natural Heritage Site Investigation Report (NRSI 2017).  The locations of waterfowl observed within	
	candidate terrestrial waterfowl stopover and staging areas, as well as the routes used to conduct the surveys, are provided in the field notes in Appendix II.	
Waterfowl Stopover and Staging Area (Aquatic)	Conducted Following the Birds and Bird Habitat Guidelines for Wind Power Projects (OMNR 2011b), 30-minute stopover counts at two locations with good vantage points of the single candidate habitat (WSA-001), were conducted on 4 separate visits, spaced between 6 and 13 days apart in March 2017 when waterfowl were expected to be present within the general vicinity of the Project Area.	Flooded areas with an annual mixed aggregation of 100 or more of the below listed species for 7 days, or areas with annual staging of ruddy ducks, canvasbacks, and redheads.  Canada Goose Cackling Goose Snow Goose
	Surveys were carried out during daylight hours, between 0800-1700hrs, when waterfowl are typically present using aquatic staging areas. All individuals were recorded along with information on species, behaviour, and movement.	<ul> <li>American Black Duck</li> <li>Northern Pintail</li> <li>Northern Shoveler</li> <li>American Wigeon</li> <li>Gadwall</li> <li>Green-winged Teal</li> <li>Blue-winged Teal</li> </ul>
	All surveys were conducted from the roadside with a suitable vantage point of the habitat. Both locations where the South Nation River is proposed to be crossed by collection line were visible from the selected vantage points. All surveys were conducted using binoculars and/or a spotting scope. Roadside surveys were expected to be suitable for surveying this habitat type since these vantage points will readily allow for abundance and species of staging waterfowl to be identified within open aquatic habitat.	<ul> <li>Hooded Merganser</li> <li>Common Merganser</li> <li>Lesser Scaup</li> <li>Greater Scaup</li> <li>Long-tailed Duck</li> <li>Surf Scoter</li> <li>White-winged Scoter</li> <li>Black Scoter</li> <li>Ring-necked Duck</li> <li>Common Goldeneye</li> <li>Bufflehead</li> <li>Redhead</li> <li>Ruddy Duck</li> </ul>
	The objective of this wildlife survey was to estimate the total number of individuals of each species present in the area on a particular visit.	<ul><li>Red-breasted Merganser</li><li>Brant</li><li>Canvasback</li></ul>
	The location of the candidate significant habitat WSA-001 can be seen on Maps 4-4 to 4-6 of the Nation Rise Wind Farm Natural Heritage Site Investigation Report (NRSI 2017).	The combined area of the ELC Ecosites and a 100m radius area will be the SWH.

Seasonal Concentration Area	Evaluation Methods	Evaluation Criteria <sup>1</sup>
Raptor Wintering Area	The locations of the two survey locations (Point Counts A and B) are provided in the field notes in Appendix II).  Conducted  NRSI conducted winter raptor surveys approximately every 7 days, on 4 visits in January 2017 and 4 visits in February 2017. These surveys were conducted at the 2 candidate raptor wintering areas (RWA-001 and RWA-002).  Surveys were carried out during daylight hours, between 0800-1700hrs, when raptors are expected to be most visible at potential perching locations. Surveys were carried out using binoculars and/or a spotting scope. All individuals were recorded along with information on species, behaviour, movement and time observed. Optimal weather conditions for these surveys are clear, sunny days with little to no precipitation. Surveys were postponed and re-scheduled if poor weather conditions were encountered, specifically if high winds or heavy precipitation were noted.  Where site access was granted, standardized area searches were conducted following a prescribed route along the woodland edge, searching for perching raptors or other raptor activity indicative of winter foraging areas. Where site access was unavailable, 30-minute visual behavioural point counts were conducted, along the edge of accessible property, in order to identify perching/foraging raptors along the woodland/field edge.  The locations of monitoring sites and the candidate significant habitats can be seen in Appendix I.	The use of these habitats by 1 or more Short-eared Owls or Bald Eagles, or at least 10 individuals and 2 of the following listed species:  Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl Short-eared Owl (Special Concern) Bald Eagle (Special Concern) Bald Eagle (Special Concern) To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds.
Bat Maternity Colony	Proposed Surveys within candidate bat maternity colony habitats where access is fully (BMA-001) or partially granted (BMA-003) will be conducted according to the methods outlined below. Site access was denied for BMA-002 and therefore no studies can occur within this feature.	Maternity Colonies with confirmed use by:  > >10 Big Brown Bats, or > >5 adult female Silverhaired Bats  The area of the SWH will include the entire

Seasonal Concentration Area	Evaluation Methods	Evaluation Criteria <sup>1</sup>
	Where site access is granted, exit surveys will be conducted during the month of June. Observers will choose a viewing station with a clear aspect of a cavity opening or crevice, which will be monitored from 30 minutes before dusk until 60 minutes after dusk for evidence of bats entering or exiting. An acoustic bat detector paired with a digital audio recorder will be used in conjunction with visual surveys to determine species. Each candidate tree will only be monitored once. Night-vision or infrared video equipment may be substituted for observers. Once an evening's monitoring is completed (60 minutes after sunset), the cameras will be collected by the NRSI staff members conducting visual surveys in the same candidate significant habitat and the visual recordings for each video recorder will be reviewed for evidence of significant bat roosting activity.  The locations of monitoring sites within the candidate significant habitats will be determined based on conditions of the site and in accordance with the criteria listed in Bats and Bat Habitats: Guidelines for Wind Power Projects (OMNR 2011b). The locations of the candidate significant	woodland, the forest stand ELC Ecosite, or the forest stand ELC Eco-element containing the maternity colony(ies).
Turtle Wintering Area	Proposed Surveys for emerging turtles will be completed at the single candidate turtle wintering area (TWA-001) using daytime basking surveys from land on 4 separate visits between March and May. Turtle basking surveys will be completed at temperatures above 10°C on calm, clear, or partly cloudy days, where possible.  Turtle basking surveys will generally follow the Visual Encounter Survey protocol developed by the MNRF for Blanding's Turtle (MNRF 2013). Sites will be approached slowly and visually scanned for turtles for a minimum of 20 minutes to allow for turtles to return to basking behaviour, if initially startled by approaching surveyors.	Presence of: ≥5 over-wintering Midland Painted Turtles; or ≥1 overwintering Northern Map Turtle or Snapping Turtle.  The mapped ELC Ecosite area with the over- wintering turtles will be 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.

Seasonal Concentration Area	Evaluation Methods	Evaluation Criteria <sup>1</sup>
Rentile Hihernaculum	The locations of monitoring sites within the candidate significant habitat will be determined based on the conditions of the site. The locations of the significant habitat can be seen on Maps 3-4 to 3-6.  Conducted	Presence of a snake
Reptile Hibernaculum	For the 10 candidate reptile hibernaculum habitats where site access has been granted (SNH-001, SNH-002, SNH-003, SNH-005, SNH-007, SNH-008, SNH-009, SNH-010, SNH-011 and SNH-012), the following surveys were conducted. Site access for SNH-006 was denied and therefore no surveys could be completed at this habitat. SNH-006 is treated as significant and carried forward to the EIS where appropriate mitigation measures will be addressed.  In each candidate snake hibernaculum habitat with granted site access, 4 area searches were conducted between April and May 2017 on warm days. The effort spent at each habitat was dependent on the size and complexity of each habitat, but lasted at least 10 minutes in length on each visit.  The locations of monitoring sites within the candidate significant habitats were determined based on conditions of the site. The locations of the candidate significant habitats can be seen on Maps 3-1 to 3-12.	hibernaculum used by ≥5 individuals of a single snake species or; individuals of ≥2 different snake species near a potential hibernacula:  • Eastern Gartersnake  • Northern Watersnake  • Northern Red-bellied Snake  • Northern Brownsnake  • Smooth Green Snake  • Northern Ring-necked Snake  • Eastern Milksnake  • Eastern Ribbonsnake  • Five-lined Skink (Southern Shield population)  The feature in which the hibernaculum is located plus a 30m buffer will be the SWH.

<sup>&</sup>lt;sup>1</sup> SWH Criteria Schedules for Ecoregion 6E (MNRF 2015)

# 5.4.2 Rare Vegetation Communities and Specialized Wildlife Habitat

Six candidate rare vegetation communities have been identified in and within 120m of the Project Location, including two candidate Alvar Community Types, one candidate Old Growth Forest, one candidate Savannah, and two candidate Tallgrass Prairies. Modified ELC for southern Ontario (Lee *et al.* 1998) was used to delineate these features, and site-specific characteristics were then compared with the evaluation criteria identified in the SWH Criteria Schedules for Ecoregion 6E (MNRF 2015).

A total of 24 candidate specialized wildlife habitats were identified within the Project Area. Evaluation criteria for specialized wildlife habitats are identified in the SWH

Criteria Schedules for Ecoregion 6E (MNRF 2015), and can include a variety of habitats that are required for the long-term survival of certain species, or species groups. General evaluation criteria used in the evaluation of significance of these candidate features, as well as methods used to evaluate the significance of these wildlife habitats, are outlined in Table 5.

Table 5. Rare Vegetation Communities and Specialized Wildlife Habitats Evaluation of Significance Criteria

Rare Vegetation Communities and Specialized Wildlife Habitats	Evaluation Methods	Evaluation Criteria <sup>1</sup>
Alvar	Proposed One standardized area search will be conducted within each of the candidate significant alvar habitats within the Project Area (ALV-001 and ALV-002). Surveys will be conducted during a time period when indicator plant species exhibit characteristics that allow for confident identification, preferably during the flowering period of late June or July. The location of the candidate significant habitat can be seen on Maps 4-2 and 4-12.	Field studies must identify four of the five Alvar Indicator Species (see below). The feature must not be dominated by exotic or introduced species (<50% exotic vegetative cover), and must also be in excellent condition and fit in with surrounding landscape with few conflicting land uses.  Alvar Indicator Species:  Carex crawei  Panicum philadelphicum  Eleocharis compressa  Scutellaria parvula  Trichostema brachiatum
Old-growth Forest	Conducted The presence of an old growth forest, (OGF-001), within one woodland (WOD-051) has been assumed based on surveys conducted during the site investigation phase of the Project. In order to refrain from coring trees to determine their exact age, this mature eco-element has been assumed to be old-growth forest. As such, no further surveys will be conducted. The location of this habitat can be seen on Map 4-12.	Dominant trees species within any of the following ecosites that are >140 years old;

Rare Vegetation Communities and Specialized Wildlife Habitats	Evaluation Methods	Evaluation Criteria <sup>1</sup>
		that contains the old growth characteristics will be the SWH.
Savannah	One standardized area search will be conducted within the candidate significant savannah habitat within the Project Area (SAV-001). Surveys will be conducted during a time period when indicator plant species exhibit characteristics that allow for confident identification. Given the flowering and identification characteristics of the indicator species, field surveys will occur during the period of July to September. The location of the candidate significant habitat can be seen on Map 4-11.	Field studies must identify one or more of the Savannah Indicator Species (see below). The feature must not be dominated by exotic or introduced species (<50% exotic vegetative cover).  Savannah Indicator Species:  Side-oats Grama  Dwarf Hackberry  Illinois Tick-trefoil  Smooth Small-leaved Tick-trefoil  White Prairie Gentian  Hairy Panic Grass  Ridged Panic Grass
Tallgrass Prairie	Proposed One standardized area search will be conducted within each of the candidate significant tallgrass prairie habitats within the Project Area (TGP-001 and TGP-002). Surveys will be conducted during a time period when indicator plant species exhibit characteristics that allow for confident identification. Given the flowering and identification characteristics of the indicator species, field surveys will occur during the period of July to September. The location of the candidate significant habitat can be seen on Maps 4-9 and 4-12.	Field studies must identify one or more of the Prairie Indicator Species (see below). The feature must not be dominated by exotic or introduced species (<50% exotic vegetative cover).  Prairie Indicator Species:  Side-oats Grama  Dwarf Hackberry  Illinois Tick-trefoil  Smooth Small-leaved Tick-trefoil  White Prairie Gentian  Hairy Panic Grass  Ridged Panic Grass
Amphibian Breeding Habitat (Woodland)	Five candidate significant habitats (AWO-002, AWO-003, AWO-005, AWO-009, and AWO-021) are located greater than 30m from the Project Location and are bordered by agricultural operations (annual row crops), residential properties, and/or Municipal roads that are located between the candidate habitats and Project Location. As the potential impacts of the agricultural operations and/or residential properties	Woodland community with presence of breeding population of ≥1 of the following newt/salamander species or ≥2 of the following frog species with ≥20 individuals (adults or egg masses), or ≥2 of the following frog species with Call Level Codes of 3:  • Eastern Newt

Rare Vegetation Communities and Specialized Wildlife Habitats	Evaluation Methods	Evaluation Criteria <sup>1</sup>
	occur closer to the edge of each candidate habitat than the Project Location, the potential effects of the Project are expected to be negligible when compared to existing non Project-related activities that are occurring at considerably closer distances. As a result, no pre-construction surveys are proposed at these habitats and they will be treated as significant and carried forward to the EIS.  One candidate significant habitat, AWO-018, was observed to meet the criteria for significance based on the number of indicator species present at the time of the site investigation. This habitat, shown on Map 4-12, has been confirmed significant and no further surveys will be conducted.  An additional 18 habitats (AWO-001, AWO-004, AWO-006, AWO-001, AWO-012, AWO-013, AWO-011, AWO-015, AWO-013, AWO-014, AWO-015, AWO-016, AWO-017, AWO-019, AWO-020, AWO-022, AWO-023 and AWO-020, AWO-022, AWO-023 and AWO-024) have been identified within 120m of access roads and/or overlapped by the Project Location, for which preconstruction surveys have been proposed below.  Proposed  NRSI will conduct 3 evening amphibian call surveys within or adjacent to any candidate significant amphibian woodland breeding habitat, once in each of April, May and June. Each survey will last 3 minutes, following the accepted Marsh Monitoring Program protocol, and will begin no earlier than one half hour after sunset and end before midnight. Semi-circular point counts will be conducted to monitor calling amphibians. Several point counts may be required in large habitats in order to adequately survey the area. Point counts will be located at least 500m apart to prevent counting duplicate amphibian calls.	Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog  The SWH will be the wetland area plus a 230m radius of woodland area.  If a wetland area is adjacent to a woodland (i.e. <120m), and a potential travel corridor connecting the wetland to the woodland is present, it will be considered in the delineation of the SWH depending on the species diversity and abundance results of the habitat use surveys.  If Bullfrog (Lithobates catesbeiana) is identified during evaluation of significance surveys in a candidate Amphibian Breeding Habitat (Woodland) containing permanent water with abundant emergent vegetation, applicable habitats will also be compared to the standards for significance for Amphibian Breeding Habitat (Wetland).

Rare Vegetation Communities and Specialized Wildlife Habitats	Evaluation Methods	Evaluation Criteria <sup>1</sup>
Habitats	During each survey, biologists will record species and calling abundance codes, along with other appropriate information (date, time, weather, etc.). A UTM will be taken for each call location to ensure consistency between survey visits.  Where site access is granted, 2 amphibian egg mass searches will also be conducted during daylight hours. The exact timing of the surveys will be dependent on spring conditions and when amphibians are expected to be breeding within the general vicinity of the Project Area, but are expected to occur once in April and again in either May or June. A minimum search effort of 30 minutes will be used on each visit, and in each habitat. These area searches will include walking within the wetland or vernal pool along the perimeter, looking for egg masses. Due to the composition and attributes of the candidate amphibian breeding habitats, special equipment will not be required to identify egg masses; however, visual surveys conducted in breeding ponds with high water levels will require the use of chest waders. This approach is expected to effectively identify egg masses, while minimizing any disturbance effects caused by sampling.  If candidate significant habitat (vernal pools) is determined to not be present during the first site visit, no specific studies will be conducted and the habitat will be confirmed not significant.  The locations of monitoring sites within the candidate significant habitats will be determined based on conditions of the site. The locations of the candidate significant habitats can be seen on	
	Maps 4-1 to 4-12.	

<sup>&</sup>lt;sup>1</sup>SWH Criteria Schedules for Ecoregion 6E (MNRF 2015)

## 5.4.3 Habitats for Species of Conservation Concern

NRSI biologists have considered the specific habitat requirements of several species of conservation concern that are known to occur within the vicinity of the Project. Habitat searches for these species were conducted as part of the site investigation. A single candidate habitat for species of conservation concern, plus an additional 48 candidate habitats for five unique species of special concern have been identified within the Project Area. General evaluation criteria used in the evaluation of significance of the species of conservation concern habitat types carried forward from the site investigation, as well as methods used to evaluate the significance of these wildlife habitats, are outlined in Table 6 below.

Table 6. Species of Conservation Concern and Rare Wildlife Species Evaluation of Significance Criteria

Species of Conservation Concern	Evaluation Methods	Evaluation Criteria
Open Country Bird Breeding Habitat	Proposed NRSI will conduct 3 open country breeding bird point count surveys at the single candidate open country bird breeding habitat (OCB-001) in June and early July, with no less than 10 days between visits, following the monitoring protocol for point count surveys in Birds and Bird Habitats: Guidelines for Wind Power Projects (OMNR 2011a). Surveys will be carried out between dawn (half hour before sunrise) and 3 hours after sunrise, during the time period when males are singing and defending territories. Where site access permits, the observer will walk along a standardized transect, stopping at each point count to undertake 10 minutes of observations and listening. Optimal weather conditions for these surveys are clear, calm, sunny days with little to no precipitation. During each visit, the highest observed breeding evidence will be recorded for each species.  The locations of monitoring sites within the candidate significant habitat will be determined based on conditions of the site. The location of the candidate significant habitat can be seen on Map 5-1 and 5-2.	Presence of nesting or breeding of ≥2 of the below listed species or 1 or more breeding Short-eared Owls¹.  • Upland Sandpiper  • Grasshopper Sparrow  • Vesper Sparrow  • Northern Harrier  • Savannah Sparrow  • Short-eared Owl

Species of	Ī	
Conservation	Evaluation Methods	Evaluation Criteria
Concern		
Birds		
Common Nighthawk (Chordeiles minor)	Proposed  NRSI will conduct 10-minute point counts within, or adjacent to, the 9 candidate common nighthawk habitats (CONI-001, CONI-002, CONI-003, CONI-004, CONI-005, CONI-006, CONI-007, CONI-008 and CONI-009) on 3 survey dates between late May and early July. Survey dates will be selected based on evenings (after sunset) or early morning (before sunrise) that fit the following parameters:  At least 50% of the visible moon surface is illuminated, i.e. between 1st quarter and last quarter moon phases.  Little or no cloud-cover so that the moon is visible.  Calm or light winds, up to 3 on the Beaufort scale.  No precipitation.  Temperatures above 10°C.	Probable or confirmed evidence of this species breeding within the habitat will confirm significance.
Eastern Wood-Pewee (Contopus virens)	Surveys will begin at sunset and finish no later than 90 minutes after sunset.  The monitoring site locations within these candidate significant habitats will be determined based on conditions of the site. The locations of each of the candidate significant habitats can be seen on Maps 5-1 to 5-12.  One habitat, EAWP-012, could not be verified as candidate significant wildlife habitat due to denied site access. With no reasonable alternative investigation options for this habitat, it has been treated as significant and no further monitoring is proposed.  An additional 17 candidate habitats (EAWP-001, EAWP-002, EAWP-003, EAWP-004, EAWP-005, EAWP-009, EAWP-010, EAWP-011, EAWP-013, EAWP-014, EAWP-015, EAWP-016, EAWP-017 and EAWP-018) will be surveyed following the methods outlined below.	Probable or confirmed evidence of this species breeding within the habitat will confirm significance.

Species of		
Conservation	Evaluation Methods	Evaluation Criteria
Concern		
	Proposed NRSI will conduct 10-minute point count surveys within or adjacent to each candidate SWH for eastern wood-pewee in June and early July. Each point count station will be surveyed 3 times, once during each of early, mid and late season (spring and early summer) and no less than 10 days apart.	
	The number of point counts required depends on the size and habitat diversity at each site. Following the monitoring protocol for point count surveys in <i>Birds and Bird Habitats: Guidelines for Wind Power Projects</i> (OMNR 2011a) and where site access allows, 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 will be conducted between dawn (one half hour before sunrise) and 3 hours after sunrise. These surveys will occur during 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 site locations within these candidate significant habitats will be determined based on conditions of the site. The locations of each of the candidate significant habitats can be seen on Maps 5-1 to 5-12.	
Wood Thrush ( <i>Hylocichla mustelina</i> )	One habitat, WOTH-003, could not be verified as candidate significant wildlife habitat due to denied site access. With no reasonable alternative investigation options for this habitat, it has been treated as significant and no further monitoring is proposed.	Probable or confirmed evidence of this species breeding within the habitat will confirm significance.

Species of Conservation Concern	Evaluation Methods	Evaluation Criteria
	An additional 4 candidate habitats (WOTH-001, WOTH-002, WOTH-004 and WOTH-005) will be surveyed following the methods outlined below.	
	Proposed  NRSI will conduct 10-minute point count surveys within candidate habitat identified for wood thrush in June and early July. Each point count station will be surveyed 3 times, once during each of early, mid and late season (spring and early summer) no less than 10 days apart.	
	The number of point counts required depends on the size and habitat diversity at each site. Following the monitoring protocol for point count surveys in <i>Birds and Bird Habitats: Guidelines for Wind Power Projects</i> (OMNR 2011a) and where site access allows, point counts will be spaced at least 250m apart in forests, ideally with the center 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 will be conducted between dawn (one half hour before sunrise) and 3 hours after sunrise. These surveys will occur during 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.	
Vegetation	The monitoring site locations within these candidate significant habitats will be determined based on conditions of the site. The locations of each of the candidate significant habitats can be seen on Maps 5-1 to 5-12.	

Species of	l	
Conservation Concern	Evaluation Methods	Evaluation Criteria
Mühlenberg's Weissia (Weissia muhlenbergiana)	Two candidate significant habitats (MUWE-006 and MUWE-008) are located greater than 30m from the Project Location and are bordered by agricultural operations (annual row crops), residential properties, and/or Municipal roads that are located between the candidate habitats and Project Location. As the potential impacts of the agricultural operations and/or residential properties occur closer to the edge of each candidate habitat than the Project Location, the potential effects of the Project are expected to be negligible when compared to existing non Project-related activities that are occurring at considerably closer distances. As a result, no pre-construction surveys are proposed at these habitats and they will be treated as significant and carried forward to the EIS.	If this species is documented, the MNRF will be informed of the species abundance and distribution within the habitat and the resulting determination of significance.
	An additional 8 candidate habitats (MUWE-001, MUWE-002, MUWE-003, MUWE-004, MUWE-005, MUWE-007, MUWE-009, and MUWE-010) have been identified within 120m of access roads and/or overlapped by the Project Location, which will be surveyed following the methods outlined below.	
	Proposed One standardized area search will be conducted within each candidate SWH for Mühlenberg's weissia. The UTM location of any individuals will be recorded. Surveys will be conducted during a time period when this species exhibits characteristics that allow for confident identification, which is during the period of February to mid-June.	
	The locations of each of the candidate significant habitats can be seen on Maps 5-1 to 5-12.	
Butterflies		
Monarch (Danaus plexippus)	A total of 6 candidate habitats (MONA-001, MONA-002, MONA-003, MONA-004, MONA-005 and MONA-006) will be surveyed following the methods outlined	Presence of this species within the habitat identified will confirm significance.

Species of Conservation Concern	Evaluation Methods	Evaluation Criteria
	below.	
	Proposed Standardized area searches will be conducted within each of the candidate monarch habitats, where full or partial access is granted. As a result of the ease of identification of this species, surveys will be carried out through visual surveys using binoculars, where appropriate. No netting or capture of individuals is anticipated.	
	Surveys will be conducted once in each of late June, early July, and early August, separated by at least one week, during the flight period for when this species is likely to be encountered. Surveys will be conducted between 0800-1700hrs during warm, sunny conditions with low wind and no precipitation, when temperatures exceed 15°C.	
	Search effort will cover the extent of all candidate significant habitats; however, effort may be focused on areas favoured by the species (such as where host plants are known to be found). All observations of the species, as well as behavioural information and plant associations will be recorded for each individual.	
	If, on the first site visit, host species (Asclepias spp.) are not found, the habitat will be confirmed to be not significant.	
	The locations of each of the candidate significant habitats can be seen on Maps 5-1 to 5-12.	

<sup>&</sup>lt;sup>1</sup> SWH Criteria Schedules for Ecoregion 6E (MNRF 2015)

# 5.4.4 Animal Movement Corridors

No candidate animal movement corridors have been identified in or within 120m of the Project Location. However, if Bullfrog is identified during evaluation of significance surveys in any candidate amphibian breeding habitats (woodland) containing permanent

water bodies with abundant emergent vegetation, amphibian movement corridors will also be considered for applicable habitats as part of the evaluation of significance using the evaluation of significance criteria as outlined in Table 7 below. Any applicable habitats will be surveyed as part of the pre-construction commitments.

Table 7. Animal Movement Corridors Evaluation of Significance Criteria

Animal Movement Corridors	Evaluation Methods	Evaluation Criteria <sup>1</sup>
		Corridors should consist of native vegetation, with several layers of vegetation.
	Significant Amphibian Breeding Habitat (Wetland) is to be examined for amphibian movement corridors.  If Bullfrog is identified during	Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant.
Amphibian Movement Corridors	evaluation of significance surveys in a candidate Amphibian Breeding Habitat (Woodland) containing permanent water with abundant emergent vegetation, amphibian movement corridors will also be	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.
	considered for these habitats.	Shorter corridors are more significant than longer corridors; however, amphibians must be able to get to and from their summer and breeding habitat.

<sup>&</sup>lt;sup>1</sup> SWH Criteria Schedules for Ecoregion 6E (MNRF 2015)

## 6.0 Evaluation of Significance Results

In accordance with the REA Regulation, NRSI biologists have completed a detailed evaluation of significance of all potentially significant natural features or wildlife habitats in and within 120m of the Project Location. These results are included in Sections 6.1 to 6.3 below.

As part of the evaluation of significance (NRSI 2017a), natural features and wildlife habitats were evaluated for significance following the evaluation criteria identified by the MNRF. As outlined in Appendix D of the NHA Guide for Renewable Energy Projects (OMNR 2012), where surveys could not be conducted in the appropriate season for the wildlife habitat type, these have been treated as significant with a commitment to conduct pre-construction surveys during the appropriate season to determine significance. Some habitats were also considered to be treated as significant where access to the habitat to conduct site investigation and/or evaluation of significance surveys has been denied.

In addition, as outlined in Appendix D of the NHA Guide for Renewable Energy Projects (OMNR 2012), any habitats that are not required to be individually identified and delineated within 50m or 120m of a project component, and which are not overlapped by project infrastructure (excepting where overlap may occur within existing developed public road rights-of-way) have been treated as significant and discussed in this report as generalized significant wildlife habitat (SWH). Some habitats identified as generalized SWH will be assessed during pre-construction surveys completed during the appropriate season to determine if habitats contain the applicable characteristics (e.g. generalized SWH for terrestrial waterfowl stopover and staging habitat) and as a result, the boundaries of some generalized SWHs may be further refined after pre-construction surveys are completed.

## 6.1 Woodlands

Site-specific field investigations and basemapping identified 55 candidate significant woodlands in and within 120m of the Project Location. After comparing site specific conditions to provincially established significance criteria, NRSI has confirmed the

presence of 31 significant woodlands in and within 120m of the Project Location. These woodlands will be carried forward to the EIS. Most of these woodlands are dominated by deciduous trees in forest and swamp communities, and significant woodlands range in size from 1.49ha to 190.10ha. The detailed evaluation of significance for each of these woodlands is provided in Table 8, which also details the specific location of these natural features in relation to project components. Maps 2-1 to 2-12 show the location of each of these significant woodlands in relation to the Project Location.

Table 8. Woodland Evaluation of Significance for the Nation Rise Wind Farm

					Е	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
WOD- 001₁ Woodland	0.56	SWDM2-2	WT - >120 AR - 5 CL - 5 CA - 5 SI - >120	No	No	No	No	No	No	No	No	No	N/A	No
WOD- 002 <sub>3</sub> Woodland	2.99	SWCR1-1  Inclusions* RBTB1 WODM5-2	WT - 10 (T2) AR - 3 CL - 3 CA - 3 SI - >120	No	No	No	No	Yes	No	Yes	No	Yes	2-1	Yes
WOD- 003 <sub>1</sub> Woodland	8.39	WODR1	WT ->120 AR ->120 CL - 75 CA - 75 SI ->120	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 004 <sub>2</sub> Woodland	22.88	FODM4-4 TAGM1 FODR1-1 FOMM2-3	WT -> 120 AR -> 120 CL - 65 CA - 65 SI -> 120	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	2-1 2-2	Yes
WOD- 005 <sub>2</sub> Woodland	54.41	FODR1-1 FODM5-1 SWCM1-1 FODM7-1 FOD TAGM1 WODM5-2 SWDM2-2 WOD	WT – 105 (T4) AR – 3 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	Yes	Yes (3.64ha)	Yes	Yes	Yes	Yes	Yes	No	Yes	2-1 2-2	Yes

	Feature Size ID (ha)				Е	cological F	unction	s (Y/N)						
		Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
		Inclusions* FOCM4-1 FODM7 FODM11												
WOD- 006₁ Woodland	3.75	FODM5-4 FODM11	WT - >120 AR - >120 CL - >120 CA - 4 SI - >120	No	No	No	No	Yes	No	Yes	No	Yes	2-1	Yes
WOD- 007₂ Woodland	77.95	TAGM1 SWDM2-2 SWDM4-5 WODR1 FOM FODR1-1 WOD WOMR1 SWCM1-1 SWM SWD SWMM1 FOC WOM FOD FODM5-5 FODR1	WT – 107 (T4) AR – >0.1 <sup>1</sup> CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	Yes	Yes (21.34ha)	Yes	No	Yes	Yes	Yes	No	Yes	2-1 2-2	Yes
WOD- 008 <sub>1</sub> Woodland	1.31	TAGM1 SWDM2-2	WT - >120 AR - >120 CL - 113 CA - 113 SI - >120	No	No	No	No	No	No	Yes	No	No	N/A	No

					Е	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
WOD- 009₂ Woodland	29.97	SWDR1 FODM7-1 FODM11 SWCM1-1 FOMM7  Inclusions* FOCM4-7 FODM7-7 SWDM4-5	WT – 47 (T4) AR – $>0.1^1$ CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – $>120$	Yes	Yes (4.13 ha)	Yes	Yes	Yes	No	Yes	No	Yes	2-1 2-2	Yes
WOD- 010₃ Woodland	8.59	FODM5-8 Inclusion* TAGM1	WT - >120 AR - >120 CL - >120 CA - 31 SI - >120	Yes (>4ha; Township of North Dundas)	Yes (0.28 ha)	No	No	No	Yes	Yes (>40m width; Township of North Dundas)	No	Yes	2-1	Yes
WOD- 011 <sub>2</sub> Woodland	31.42	WODM5-2 FODM11 FODM7-2 TAGM1 FODM5-8 SWDM2-2 SWMM1-1	WT - >120 AR - 79 CL - 67 CA - 67 SI - >120	Yes	Yes (4.18 ha)	Yes	No	Yes	Yes	Yes	No	Yes	2-1 2-2	Yes
WOD- 012 <sub>1</sub> Woodland	71.84	TAGM1 SWMM3-2 SWDM3-1 SWD SWC FOD  Inclusion* WOD	WT - >120 AR - >120 CL - >120 CA - 22 SI - >120	Yes (>4ha; Township of North Dundas)	Yes (27.81ha)	Yes	No	Yes	Yes	Yes (>40m width; Township of North Dundas)	No	Yes	2-3	Yes

					Е	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
WOD- 013 <sub>1</sub> Woodland	7.45	TAGM1 SWDM4-5	WT - >120 AR - >120 CL - 119 CA - 119 SI - >120	No	No	Yes	No	Yes	No	Yes	No	Yes	2-3	Yes
WOD- 014 <sub>3</sub> Woodland	8.57	FODM5-8 TAGM2 Inclusion* WODM5-2	WT ->120 AR ->120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI ->120	No	No	Yes	No	Yes	Yes	Yes	No	Yes	2-3	Yes
WOD- 015 <sub>2</sub>	190.10	SWCM1-1 SWDM2-2 FOCM4-1 SWMM1 SWDM4 SWD FOD TAGM1 FOC FODM6-5 SWDM3-3 SWCM1 FOM SWM FODR1 WOMR1  Inclusions* SWDM4-2 SWDM3	WT – 106 (T10) AR – 73 CL – 73 CA – 73 SI – >120	Yes	Yes (79.56ha)	Yes	No	Yes	Yes	Yes	No	Yes	2-3	Yes

					E	cological Fu	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
WOD- 016 <sub>3</sub> Woodland	0.63	FOMM7	WT – 55 (T10) AR – 25 CL – 25 CA – 25 SI – 58	No	No	No	No	No	No	No	No	No	N/A	No
WOD- 017 <sub>1</sub> Woodland	1.49	SWDM4-5 SWDM2-2 Inclusion* SWCM1-1	WT - 5 (T11) AR - 3 CL - 3 CA - 3 SI - >120	No	No	Yes	No	No	No	Yes	No	Yes	2-3	Yes
WOD- 018 <sub>3</sub> Woodland	1.59	TAGM1  Inclusion* SWDM2-2	WT - >120 AR - >120 CL - >120 CA - 56 SI - 56	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 019 <sub>1</sub> Woodland	4.31	FODM4-2	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 020 <sub>2</sub> Woodland	10.19	SWDM3-4 FODM FODM5-8	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	No	No	Yes	No	Yes	No	Yes	No	Yes	2-5	Yes
WOD- 021 <sub>1</sub> Woodland	11.66	SWDM3-4	WT ->120 AR ->120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI ->120	No	No	Yes	No	Yes	No	Yes	No	Yes	2-5 2-8	Yes

					E	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
WOD- 022 <sub>3</sub> Woodland	1.03	FODM4-5	WT - >120 AR - >120 CL - 90 CA - 90 SI - >120	No	No	No	No	No	No	No	No	No	N/A	No
WOD- 023 <sub>3</sub> Woodland	1.39	FODM5-8	WT ->120 AR ->120 CL ->120 CA - 2 SI - 2	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 024 <sub>3</sub> Woodland	1.86	FODM5-5 Inclusion* TAGM1	WT – 118 (T32) AR – 80 CL – 26 CA – 26 SI – 71	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 025 <sub>1</sub> Woodland	0.55	FODM4-5	WT - >120 AR - 93 CL - 71 CA - 71 SI - >120	No	No	No	No	No	No	No	No	No	N/A	No
WOD- 026 <sub>1</sub> Woodland	1.42	FODM11	WT - >120 AR - >120 CL - Overlapping CA - Overlapping SI - >120	No	No	No	No	No	No	No	No	No	N/A	No
WOD- 027 <sub>1</sub> Woodland	3.74	FODM4-2	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	No	No	No	No	No	No	Yes	No	No	N/A	No

					E	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
WOD- 028 <sub>1</sub> Woodland	4.13	SWDM2-2	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	No	No	Yes	No	Yes	No	No	No	No	N/A	No
WOD- 029 <sub>3</sub> Woodland	4.83	SWDM2-2	WT ->120 AR ->120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI ->120	No	No	Yes	No	Yes	No	No	No	No	N/A	No
WOD- 030 <sub>1</sub> Woodland	0.75	FODM5-8	WT ->120 AR ->120 CL - 63 CA - 63 SI ->120	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 031 <sub>2</sub> Woodland	26.99	TAGM1 FODR1-1 SWDR1 Inclusion* SWDM2-2	WT – 17 (T27) AR – >0.1 <sup>1</sup> CL – Overlapping <sup>2</sup> CA – Overlappin <sup>92</sup> SI – >120	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	2-7	Yes
WOD- 032₃ Woodland	1.56	FODM7-2 SWDM3-4 Inclusion* FODM5-6	WT – 120 (T29) AR – 93 CL – 93 CA – 93 SI – >120	No	No	No	No	Yes	No	No	No	No	N/A	No
WOD- 033 <sub>3</sub> Woodland	2.35	SWDM2-2	WT ->120 AR - 4 CL - 4 CA - 4 SI ->120	No	No	No	No	Yes	No	No	No	No	N/A	No

					E	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
WOD- 034 <sub>1</sub> Woodland	0.94	FODM5-2	WT - >120 AR - 49 CL - 36 CA - 36 SI - >120	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 035 <sub>2</sub> Woodland	57.16	SWDM2-2 FODM4-2 FODM5-6 WODM4-2 SWC SWD SWM WOD FOM	WT - >120 AR - >120 CL - 48 CA - 48 SI - >120	Yes	Yes (9.08ha)	Yes	No	Yes	Yes	Yes	No	Yes	2-7	Yes
WOD- 036 <sub>3</sub> Woodland	3.88	SWDM2-2	WT - >120 AR - >120 CL - >120 CA - 86 SI - >120	No	No	No	No	Yes	No	No	No	No	N/A	No
WOD- 037 <sub>1</sub> Woodland	4.32	TAGM1	WT - >120 AR - >120 CL - 87 CA - 87 SI - >120	No	No	Yes	No	No	No	Yes	No	Yes	2-8 2-9	Yes
WOD- 038 <sub>1</sub> Woodland	38.52	TAGM1 FODM5-8	WT ->120 AR ->120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI ->120	Yes	Yes (5.32ha)	Yes	No	Yes	Yes	Yes	No	Yes	2-8 2-9	Yes

					Е	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
WOD- 039 <sub>3</sub> Woodland	2.37	SWMM1-1	WT - >120 AR - >120 CL - 120 CA - 120 SI - >120	No	No	No	No	Yes	No	Yes	No	Yes	2-9	Yes
WOD- 040 <sub>3</sub> Woodland	3.32	TAGM1	WT ->120 AR ->120 CL - 21 CA - 21 SI ->120	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 041 <sub>3</sub> Woodland	3.62	TAGM1  Inclusion* SWDM4-5	WT - 9 (T43) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 042 <sub>1</sub> Woodland	2.15	FODM5-6	WT ->120 AR - 12 CL - 12 CA - 12 SI ->120	No	No	No	No	Yes	No	Yes	No	Yes	2-10	Yes
WOD- 043 <sub>2</sub> Woodland	32.29	SWDM4-5 SWMM1-1 FODM8-1 FOC SWD	WT - 5 (T46) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	Yes	Yes (2.33ha)	Yes	No	Yes	No	Yes	No	Yes	2-11	Yes
WOD- 044 <sub>2</sub> Woodland	126.04	WODM5 WOD FODM2-3 SWDM2-2 TAGM1 FOCM2-2 SWMM1-1	WT – 60 (T46) AR – 9 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	Yes	Yes (52.63ha)	Yes	No	Yes	Yes	Yes	Yes	Yes	2-11	Yes

				Woodland	E	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
		SWM SWC SWD SWCM1-1 SWDM2-2 Inclusion* FODM4												
WOD- 045 <sub>3</sub> Woodland	0.90	SWDM3-4	WT – 40 (T52) AR – >0.1 <sup>1</sup> CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	No	No	No	No	Yes	No	No	No	No	N/A	No
WOD- 046 <sub>1</sub> Woodland	11.60	SWDM2-2	WT - >120 AR - 110 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	No	Yes (2.02ha)	Yes	Yes	Yes	No	Yes	No	Yes	2-11	Yes
WOD- 047 <sub>1</sub> Woodland	14.21	TAGM3 FODM5-8 SWD	WT ->120 AR ->120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI ->120	No	Yes (2.14ha)	No	No	Yes	Yes	Yes	No	Yes	2-11	Yes
WOD- 048 <sub>3</sub> Woodland	20.12	SWMM1-1 SWCM1-1 FOCM4-1 FOCM2-2 SWDM3-1 SWDM2-2 FODM5-8	WT - >120 AR - >0.1 <sup>1</sup> CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	2-11 2-12	Yes

					Е	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
		TAGM1												
WOD- 049 <sub>2</sub> Woodland	14.87	SWDM4-5	WT – 11 (T56) AR – >0.1 <sup>1</sup> CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	No	No	Yes	No	Yes	No	Yes	No	Yes	2-11 2-12	Yes
WOD- 050 <sub>3</sub> Woodland	1.79	SWDM2-2	WT - >120 AR - 2 CL - 2 CA - 2 SI - >120	No	No	No	No	No	No	Yes	No	No	N/A	No
WOD- 051 <sub>2</sub> Woodland	36.08	SWDM4-2 FOCM4-1 SWDM4-5 FOCM2-2 SWDM2-2 SWM	WT – 18 (T50) AR – 3 CL – 3 CA – 3 SI – >120	Yes	Yes (6.85ha)	Yes	No	Yes	No	Yes	Yes	Yes	2-12	Yes
WOD- 052 <sub>3</sub> Woodland	0.87	SWDM2-2	WT - >120 AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	No	No	No	No	No	No	No	No	No	N/A	No
WOD- 053 <sub>3</sub> Woodland	18.97	FOMM7 SWDM3-1 FOMM7-2 SWDM2-2 SWD FOD	WT – 58 (T48) AR – 12 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	No	No	Yes	No	Yes	Yes	Yes	No	Yes	2-12	Yes
WOD- 054 <sub>3</sub> Woodland	40.81	SWDM2-2 FOMM7-2 TAGM1 SWC	WT – 115 (T48) AR – 14 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup>	Yes	Yes (16.59ha)	Yes	No	Yes	No	Yes	No	Yes	2-12	Yes

					E	cological F	unction	s (Y/N)						
Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity	Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
			SI ->120											
WOD- 055 <sub>3</sub> Woodland	16.27	FOMM5-2 FOCM2-2 SWDM4-5 SWDM2-2 Inclusion* SWDM3-1	WT - 78 (T57) AR - 5 CL - 5 CA - 5 SI - >120	No	No	Yes	No	Yes	No	Yes	No	Yes	2-12	Yes

<sup>\*</sup> ELC codes have not been mapped as they have been identified as inclusions (<0.5ha in size).

### Superscripts:

- 1: Mapping depicts this woodland being overlapped by the Project Location; however, all project components, including the construction disturbance area, will be located adjacent to the woodland (>0.1m), or collector lines may be installed beneath the woodland via directional drilling.
- 2: Woodland will be overlapped by the Project Location that follows the municipal road right-of-way. Overlap with the woodland will occur entirely within the road right-of-way and will be minimized as much as possible.

### 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 Line

CA: Construction Activity/Temporary Infrastructure/Laydown Area

SI: Supporting Infrastructure - Building/Substation/Meteorological Tower/Point of Interconnect

## 6.2 Wetlands

NRSI biologists identified a total of 19 candidate provincially significant wetlands within 120m of the Project Location during the site investigations. NRSI has implemented the evaluation process from Appendix C of the NHA Guide (OMNR 2012) to treat all 19 wetlands as provincially significant and will apply appropriate mitigation measures as part of the EIS.

The wetlands identified within 120m of the Project Location are described in Table 9. Maps 2-1 to 2-12 show the location of each of the 19 significant wetlands in relation to the Project Location.

Table 9. Wetland Evaluation of Significance for the Nation Rise Wind Farm

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
WET-001 <sub>1</sub> Wetland McConnell Drain Watershed	3.54	Individual Wetland SWDM2-2 SWT 100% Swamp 2 Vegetation Communities 100% mineral (clay loam <sup>+</sup> ) 100% Palustrine	WT - >120 AR - 5 CL - 5 CA - 5 SI - >120	Wetland Type:     Swamp     Site Type:     Palustrine     Vegetation     Communities:     S1 h     S2 ts     Proximity to other     Wetlands:     380m from WET-002     (swamp), not     hydrologically     connected     Interspersion:     estimated to be very     low; simple     community shape, 2     communities     Open Water:     absent	Flood Attenuation:         High – no upstream         detention areas,         wetland is ~10% of its         catchment basin     Water Quality         Improvement:             Moderate - palustrine             with inflow; >50%             agricultural basin;             dominated by shrubs;             swamp with <50%             coverage of organic             soils; no indication of             groundwater             discharge             Shoreline Erosion             Control: None             Groundwater Recharge:             High - Palustrine with             loam soils	• None known	Treat as Significant	2-1	Yes
WET-002 <sub>3</sub> Wetland Gervais Drain Headwater	2.99	Individual Wetland SWCR1-1 100% Swamp 1 Vegetation Community 100% mineral (clay loam/fine sandy loam*, bedrock) 100% Isolated	WT - 10 (T2) AR - 3 CL - 3 CA - 3 SI - >120	Wetland Type:     Swamp     Site Type:     Isolated     Vegetation     Communities:     S1 ©     Proximity to other     Wetlands:     380m from WET-001     (swamp), not     hydrologically     connected     Interspersion:     estimated to be very     low; simple	Flood Attenuation: High – no upstream detention areas, wetland is ~30% of its catchment basin  Water Quality Improvement: Low - isolated; >50% agricultural basin; dominated by trees; swamp with <50% coverage of organic soils; no indication of groundwater discharge  Shoreline Erosion	None known	Treat as Significant	2-1	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
				community shape, 1 community  Open Water: absent	Control: None  • Groundwater Recharge: High - Isolated with shallow loam soils over bedrock				
WET-003 <sub>2</sub> Wetland Paquette McMahon Drain Watershed	34.47	Wetland Complex SWDM2-2 SWD SWCM1-1 MAMM1-3 SWT SWMM1-1 SWM 98% Swamp 2% Marsh 8 Vegetation Communities 100% mineral (silty clay loam, loam <sup>+</sup> ) 98% Palustrine 2% Isolated	WT – 105 (T4) AR – 68 CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	Wetland Type:     Swamp, Marsh     Site Type:     Palustrine, Isolated     Vegetation     Communities:     S1 h     S2 c     M1 ne     S3 ts     S4 h, ts     S5 c, ts     S6 h, c     S7 h, ts, Is     Proximity to other     Wetlands:     750m from WET-001     (swamp),     hydrologically     connected     Interspersion:     estimated to be     moderate to high; 7     wetland units with a     number of     communities,     complex boundaries     Open Water:     Type 1 (<1%)	Plood Attenuation: High – no upstream detention areas, wetland is ~5% of its catchment basin Water Quality Improvement: Moderate - largely palustrine with inflow; >50% agricultural basin; dominated by trees; swamp with <50% coverage of organic soils; no indication of groundwater discharge Shoreline Erosion Control: None Groundwater Recharge: High - Palustrine and Isolated with shallow loam soils over bedrock	Fish Habitat:     0.02ha of low marsh (pond)	Treat as Significant	2-1 2-2	Yes
WET-004 <sub>2</sub> Wetland Whissell Creek	14.08	Wetland Complex SWCM1-1 SWDR1	WT – 47 (T4) AR – 34 CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup>	Wetland Type: <u>Swamp</u> Site Type: <u>Palustrine</u> , Isolated     Vegetation	Flood Attenuation:     High – no upstream     detention areas,     wetland is ~25% of its     catchment basin	None known	Treat as Significant	2-1 2-2	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
Watershed		100% Swamp  2 Vegetation Communities  100% mineral (silty clay, clay loam)  89% Palustrine 11% Isolated	SI ->120	Communities: S1 c S2 ts, gc, ne Proximity to other Wetlands: 40m from WET-003 (swamp), not hydrologically connected Interspersion: estimated to be low to moderate; only 2 wetland units, but complex boundaries Open Water: absent	Water Quality Improvement:     Moderate - largely     palustrine with inflow;     >50% agricultural     basin; dominated by     trees; swamp with     <50% coverage of     organic soils; no     indication of     groundwater     discharge     Shoreline Erosion     Control: None     Groundwater Recharge:     High - Palustrine and     Isolated with shallow     loam and clay soils     over bedrock				
WET-005 <sub>2</sub> Wetland Smirle McConnell Drain Watershed	9.36	Wetland Complex SWDM4-5 SWMM1-1 SWDM2-2 100% Swamp 3 Vegetation Communities 100% mineral (silty loam, silty clay, loam*) 100% Palustrine	WT - >120 AR - 79 CL - 67 CA - 67 SI - >120	Wetland Type:     Swamp     Site Type:     Palustrine     Vegetation     Communities:     S1 h, ts     S2 c, h     S3 h, ne     Proximity to other     Wetlands:     180m from     unidentified wetland     (appears to be     swamp), not     hydrologically     connected     Interspersion:     estimated to be low     to moderate; only 2	Flood Attenuation:         Moderate to High —         one small other         wetland upstream         (west of Smirle Road),         wetland is ~10% of its         catchment basin      Water Quality     Improvement:         Moderate - largely         palustrine with inflow;         >50% agricultural         basin; dominated by         trees; swamp with         <50% coverage of         organic soils; no         indication of         groundwater         discharge          Shoreline Erosion	• Fish Habitat: 0.08ha of low marsh (ponds)	Treat as Significant	2-1 2-2	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
				wetland units, but complex boundaries  Open Water: Type 1 (2%)	Control: None • Groundwater Recharge: High - Palustrine with loam and clay soils				
WET-006 <sub>3</sub> Wetland Stephenson Drain Watershed	1.63	Individual Wetland SWDM4-5 100% Swamp 1 Vegetation Community 100% mineral (loam <sup>+</sup> ) 100% Palustrine	WT - >120 AR - >120 CL - 119 CA - 119 SI - >120	Wetland Type:     Swamp     Site Type:     Palustrine     Vegetation     Communities:     S1 h, ts, dh     Proximity to other     Wetlands:     630m from wetlands     to the west     (connected to     Morewood Bog PSW;     dominated by     swamp), not     hydrologically     connected     Interspersion:     estimated to be low;     only 1 wetland     community with 2     linear edges     Open Water:     absent	Flood Attenuation:         High – no upstream detention areas, wetland is ~10% of its catchment basin     Water Quality Improvement:         Moderate - palustrine with no inflows; >50% agricultural basin; dominated by trees; swamp with <50% coverage of organic soils; no indication of groundwater discharge         Shoreline Erosion Control: None         Groundwater Recharge:         High - Palustrine with loam soils	• None known	Treat as Significant	2-3	Yes
WET-007 <sub>2</sub> Wetland Genier Drain Watershed	22.34	Wetland Complex SWCM1-1 SWDM2-2 SWDM4 SWD SWDM4-2 SWMM1 100% Swamp	WT – 106 (T10) AR – 73 CL – 73 CA – 73 SI – >120	Wetland Type: Swamp Site Type: Palustrine Vegetation Communities: S1 c S2 h S3 h, ls S4 c, h, ne Proximity to other	Flood Attenuation: High – few small other wetlands upstream (west of Finch- Winchester Boundary Road), wetland is ~15% of its catchment basin Water Quality Improvement: Low to Moderate -	None known	Treat as Significant	2-3	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
		4 Vegetation Communities 100% mineral (clay loam) 100% Palustrine		Wetlands: 490m from WET-008 (swamp), not hydrologically connected Interspersion: estimated to be low; 3 wetland units, relatively simple shapes Open Water: absent	largely palustrine with no inflows; >50% treed/vegetated basin; dominated by trees; swamp with <50% coverage of organic soils; no indication of groundwater discharge  • Shoreline Erosion Control: None  • Groundwater Recharge: High - Palustrine with loam soils				
WET-008 <sub>2</sub> Wetland Furney Drain Watershed	34.68	Wetland Complex SWDM3-3 SWTM3 SWCM1 SWM SWDM4-5 SWDM2-2 100% Swamp 6 Vegetation Communities 100% mineral (clay loam, loam†) 95% Palustrine 5% Isolated	WT - 5 (T11) AR - 3 CL - 3 CA - 3 SI - >120	Wetland Type:     Swamp     Site Type:     Palustrine, Isolated     Vegetation     Communities:     S1 h     S2 ts     S3 c     S4 h, c     S5 h, Is, ts     S6 h, ts, gc, ne     Proximity to other     Wetlands:     490m from WET-007     (swamp), not     hydrologically     connected     Interspersion:     estimated to be low     to moderate; 9     communities, some     complex boundaries     Open Water:     Type 1 (<1%)	Flood Attenuation:     High – no upstream detention areas, wetland is ~25% of its catchment basin     Water Quality Improvement:     Low to Moderate - largely palustrine with inflow; >50% treed/vegetated basin; dominated by trees; swamp with <50% coverage of organic soils; some groundwater discharge (1 seepage area)     Shoreline Erosion Control: None     Groundwater Recharge:     High - Palustrine and Isolated with loam soils	• Fish Habitat: 0.04ha of low marsh (pond)	Treat as Significant	2-3	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
WET-009 <sub>2</sub> Wetland Unnamed Tributary Watershed	14.91	Wetland Complex SWDM3-4 100% Swamp 1 Vegetation Community 100% mineral (alluvial bottomland, variable <sup>+</sup> ) 100% Riverine	WT - >120 AR - >120 CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	Wetland Type:     Swamp     Site Type:     Riverine     Vegetation     Communities:     S1 h, ts     Proximity to other     Wetlands:     955m from WET-014     (swamp),     hydrologically     connected     Interspersion:     estimated to be low     to moderate; 2     communities,     relatively linear     shapes but complex     boundaries     Open Water:     Type 2 (9%)	Flood Attenuation: Low – WET-014, WET-015, WET-018, WET-019, WET-020, Hosaic Creek PSW are upstream, wetland is <1% of its catchment basin  Water Quality Improvement: Moderate - riverine; >50% agricultural basin; dominated by deciduous trees; swamp with <50% coverage of organic soils; no indication of groundwater discharge  Shoreline Erosion Control: High – trees/shrubs on banks  Groundwater Recharge: Low - Riverine with variable soils	• Fish Habitat: 1.39ha of permanently flooded swamp; ~9.5ha of seasonally flooded swamp.	Treat as Significant	2-5 2-8	Yes
WET-011 <sub>2</sub> Wetland Smirl/Rutley Drains Watershed	4.83	Individual Wetland SWDM2-2 100% Swamp 1 Vegetation Community 100% mineral (loam <sup>+</sup> , clay loam <sup>+</sup> , old rail bed)	WT - >120 AR - >120 CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	Wetland Type:     Swamp     Site Type:     Palustrine     Vegetation     Communities:     S1 h, dh     Proximity to other     Wetlands:     620m from WET-010     (swamp), not     hydrologically     connected	Flood Attenuation:     Low to Moderate - no     upstream detention     areas, wetland is ~3%     of its catchment basin     Water Quality     Improvement:         Moderate - palustrine         with inflow; >50%         agricultural basin;         dominated by trees;         swamp with <50%         coverage of organic	None known	Treat as Significant	2-6 2-7	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
		100% Palustrine		Interspersion:     estimated to be very     low; 1 community,     linear shape     Open Water:     absent	soils; no indication of groundwater discharge • Shoreline Erosion Control: None • Groundwater Recharge: High - Palustrine with loam soils				
WET-012 <sub>1</sub> Wetland Payne River Watershed	0.95	Individual Wetland SWDR1 100% Swamp 1 Vegetation Community 100% mineral (loam) 100% Isolated	WT - >120 AR - 116 CL - 116 CA - 116 SI - >120	Wetland Type:     Swamp     Site Type:     Isolated     Vegetation     Communities:     S1 h, ts, gc     Proximity to other     Wetlands:     1250m to unidentified     wetlands to WET-011     (swamp), not     hydrologically     connected     Interspersion:     estimated to be very     low; 1 community,     simple shape     Open Water:     absent	Flood Attenuation:         High – no upstream detention areas, wetland is ~25% of its catchment basin     Water Quality Improvement:         Low - isolated; 30-50% agricultural basin; dominated by trees; swamp with <50% coverage of organic soils; no indication of groundwater discharge         Shoreline Erosion Control: None         Groundwater Recharge:         High - Isolated with loam soils	None known	Treat as Significant	2-7	Yes
WET-013 <sub>2</sub> Wetland Duff Creek Watershed	48.29	Wetland Complex SWDM2-2 SWD SWC SWM 100% Swamp 4 Vegetation Communities	WT - >120 AR - 4 CL - 4 CA - 4 SI - >120	Wetland Type: Swamp Site Type: Palustrine Vegetation Communities: S1 h S2 c S3 h, gc S4 h, c Proximity to other	Flood Attenuation:     Low – large headwater     wetlands upstream     (north and south of     County Road 9),     wetland is ~3% of its     catchment basin      Water Quality     Improvement:     Low to Moderate -     largely palustrine with	• Fish Habitat: 0.12ha of permanently flooded swamp (creek); ~1.6ha of seasonally flooded swamp	Treat as Significant	2-7	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
		100% mineral (sandy clay, sand <sup>+</sup> , sandy loam <sup>+</sup> ) 100% Palustrine		Wetlands:    20m to unidentified    wetlands to the east    (appears to be    swamp),    hydrologically    connected • Interspersion:    estimate to be    moderate; 7    communities, some    complex arrangement • Open Water:	inflows; >50% treed/vegetated basin; dominated by trees; swamp with <50% coverage of organic soils; no indication of groundwater discharge • Shoreline Erosion Control: None • Groundwater Recharge: High - Palustrine with, sand, sandy loam, and				
WET-014 <sub>3</sub> Wetland Unnamed Tributary Watershed	3.88	Individual Wetland SWDM2-2 100% Swamp 1 Vegetation Community 100% mineral (silt loam) 100% Riverine	WT - >120 AR - >120 CL - >120 CA - 86 SI - >120	Type 1 (<1%)  • Wetland Type: Swamp • Site Type: Riverine • Vegetation Communities: S1 h, ne • Proximity to other Wetlands: 955m from WET-014 (swamp), hydrologically connected • Interspersion: estimated to be very low; 1 community, relatively linear shape • Open Water: Type 2 (10%)	clay soils  • Flood Attenuation:     Low – WET-015,     WET-018, WET-019,     WET-020, Hosaic     Creek PSW are     upstream, wetland is     <1% of its catchment     basin  • Water Quality Improvement:     Moderate - riverine;     >50% agricultural     basin; dominated by     deciduous trees;     swamp with <50%     coverage of organic     soils; no indication of     groundwater     discharge  • Shoreline Erosion     Control:     Moderate – narrow-     leaved emergents     dominate banks  • Groundwater Recharge:	• Fish Habitat: 0.39ha of tallgrass low marsh (creek); ~3.4ha of seasonally flooded swamp	Treat as Significant	2-8 2-9	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
					Low - Riverine with loam soils				
WET-015 <sub>3</sub> Wetland Duff Sanders Drain Watershed	2.37	Individual Wetland SWMM1-1 100% Swamp 1 Vegetation Community 100% mineral (clay) 100% Isolated	WT - >120 AR - >120 CL - 120 CA - 120 SI - >120	Wetland Type: <u>Swamp</u> Site Type: <u>Isolated</u> Vegetation     Communities:         S1 <u>c</u> , h     Proximity to other     Wetlands:         850m to unidentified         wetlands to the         northeast (appears to         be swamp), not         hydrologically         connected     Interspersion:         estimated to be very         low; 1 community,         simple shape     Open Water:         Type 1 (2%)	Flood Attenuation:         High – no upstream         detention areas,         wetland is ~25% of its         catchment basin      Water Quality     Improvement:         Low - isolated; >50%         agricultural basin;         dominated by trees;         swamp with <50%         coverage of organic         soils; no indication of         groundwater         discharge          Shoreline Erosion         Control: None          Groundwater Recharge:         High - Isolated with         clay soils	• Fish Habitat: 0.04ha of low marsh (pond)	Treat as Significant	2-9	Yes
WET-016 <sub>2</sub> Wetland Vanfoort Drain Watershed	21.65	Wetland Complex SWDM4-5 SWD SWMM1-1 SWT 100% Swamp 3 Vegetation Communities 100% mineral (sandy loam, loam†)	WT - 5 AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	Wetland Type: Swamp Site Type: Palustrine Vegetation Communities: S1 h S2 c, h S3 ts, ne Proximity to other Wetlands: 105m to unidentified wetlands to the west (appears to be	Flood Attenuation: High – no upstream detention areas, wetland is ~25% of its catchment basin  Water Quality Improvement: Low to Moderate - largely palustrine with inflow; >50% treed/vegetated basin; dominated by trees; swamp with <50% coverage of organic	None known	Treat as Significant	2-11	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
		100% Palustrine		swamp), hydrologically connected Interspersion: estimated to be low; 3 wetland units, relatively simple shapes Open Water: absent	soils; no indication of groundwater discharge • Shoreline Erosion Control: None • Groundwater Recharge: High - Palustrine with loam soils				
WET-017 <sub>2</sub> Wetland Foley Drain Watershed	117.07	Wetland Complex  SWCM1-1 SWC SWDM2-2 SWD MAM SWDM3-4 SWMM1-1 SWM  98% Swamp 2% Marsh  7 Vegetation Communities  100% mineral (silty clay loam, clay loam, sandy loam <sup>+</sup> )  97% Palustrine 2% Isolated 1% Riverine	WT - 40 AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	Wetland Type:     Swamp, Marsh     Site Type:     Palustrine, Isolated, Riverine     Vegetation     Communities:     S1    C     S2    h     M1    ne     S3    h, ne     S4    h, ts     S5    h, c     S6    c, h      Proximity to other     Wetlands:     145m to WET-016     (swamp), not     hydrologically     connected  Interspersion:     estimated to be     moderate to high; 14     communities in 4     wetland units,     complex boundaries  Open Water:     absent	Flood Attenuation:         High – one small         wetland upstream         (north of Casselman         Road), wetland is         -20% of its catchment         basin          Water Quality         Improvement:         Moderate - largely         palustrine with inflows         or riverine; >50%         agricultural basin;         dominated by trees;         swamp with <50%         coverage of organic         soils; no indication of         groundwater         discharge          Shoreline Erosion         Control:         High – trees/shrubs on         banks          Groundwater Recharge:         High - largely         Palustrine and         Isolated with loam         soils	None known	Treat as Significant	2-11	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
WET-018 <sub>2</sub> Wetland Gilles Drain Watershed	18.79	Wetland Complex SWDM3-1 SWD WECM1-1 SWMM1-1 100% Swamp 4 Vegetation Communities 100% mineral (sandy loam, sandy clay, clay loam <sup>+</sup> ) 100% Palustrine	WT - >120 AR - >120 CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	Wetland Type:     Swamp     Site Type:     Palustrine     Vegetation     Communities:     S1 h     S2 c     S3 h, c     S4 c, h     Proximity to other     Wetlands:     105m to WET-019     (swamp), not     hydrologically     connected     Interspersion:     estimated to be low;     3 wetland units,     relatively simple     shapes     Open Water:     absent	Flood Attenuation: High – no upstream detention areas, wetland is ~10% of its catchment basin  Water Quality Improvement: Low to Moderate - largely palustrine with no inflow or isolated; >50% agricultural basin; dominated by trees; swamp with <50% coverage of organic soils; no indication of groundwater discharge  Shoreline Erosion Control: None Groundwater Recharge: High - Palustrine with loam and clay soils	None known	Treat as Significant	2-11 2-12	Yes
WET-019 <sub>2</sub> Wetland Dunbar Campbell Adams Drain Watershed	50.52	Wetland Complex  SWDM2-2 SWDM4-5 SWM SWTM3-3 SWDM4-2  100% Swamp  10 Vegetation Communities  100% mineral (clay loam, sandy clay loam, silty clay, silty	WT – 11 (T56) AR – >0.1 <sup>1</sup> CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	<ul> <li>Wetland Type:     <u>Swamp</u></li> <li>Site Type:     <u>Riverine</u>, Palustrine</li> <li>Vegetation     Communities:     S1 h     S2 h, ls     S3 h, ts     S4 h, gc     S5 h, c     S6 ts, gc     S7 ts, m     S8 h, ts, gc     S9 h, ts, ne     S10 h, ts, gc, ne</li> </ul>	<ul> <li>Flood Attenuation:         Low – Hosaic Creek         PSW is upstream,         wetland is ~5% of its         catchment basin</li> <li>Water Quality         Improvement:         Moderate - largely         palustrine with inflows         or riverine; &gt;50%         agricultural basin;         dominated by trees;         swamp with &lt;50%         coverage of organic         soils; no indication of         groundwater</li> </ul>	• Fish Habitat: 0.58ha of permanently flooded swamp (creek)	Treat as Significant	2-11 2-12	Yes

Feature ID	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
		sand) 66% Riverine 34% Palustrine		Proximity to other Wetlands:     105m to WET-020 (swamp),     hydrologically connected     Interspersion:     estimated to be moderate to high; 12 communities in 6 wetland units, complex boundaries     Open Water:     Type 1 (1%)	discharge  Shoreline Erosion Control: Moderate to High – primarily trees/shrubs on banks; also narrow-leaved emergents and unvegetated (dredged) in sections  Groundwater Recharge: Moderate; 66% Riverine, 34% Palustrine, with sand, loam, and clay soils				
WET-020 <sub>3</sub> Wetland Fetterly Drain Watershed	41.50	Wetland Complex SWDM2-2 SWC SWDM3-1 SWTM3 SWTM5 SWDM4-5 100% Swamp 8 Vegetation Communities 100% mineral (loam*) 78% Palustrine 17% Riverine 5% Isolated	WT – 58 (T48) AR – >0.1 <sup>1</sup> CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	Wetland Type:     Swamp     Site Type:     Palustrine, Riverine, Isolated     Vegetation     Communities:     S1 h     S2 c     S3 h, gc     S4 h, ts     S5 ts, gc, m     S6 ls, ne, m     S7 h, ls, m     S8 ts, gc, ne, m     Proximity to other     Wetlands:     105m to WET-019     (swamp),     hydrologically     connected     Interspersion:     estimated to be     moderate to high; 13	Flood Attenuation:     Low – other     unidentified wetlands     and a small pond     (north of Hunters     Road) are upstream,     wetland is ~5% of its     catchment basin      Water Quality     Improvement:     Moderate - largely     palustrine with inflows     or riverine; >50%     agricultural basin;     dominated by trees;     swamp with <50%     coverage of organic     soils; no indication of     groundwater     discharge      Shoreline Erosion     Control:     High – trees/shrubs on     banks	• Fish Habitat: 0.31ha of permanently flooded swamp (creek)	Treat as Significant	2-12	Yes

Feature I	Size (ha)	Composition and Type	Distance to Project Location (m)	Biological Component	Hydrological Component	Special Features Component	Significance	Map(s)	EIS Required (Y/N)
				communities in 6 wetland units, complex boundaries Open Water: Type 1 (1%)	Groundwater Recharge:     High; largely     Palustrine and     Isolated with loam     soils				

<sup>\*</sup> Matthews and Richards 1954, and Ontario Agricultural College, 1954: Soil Survey of Stormont County.

### Superscript:

1: Mapping depicts this wetland being overlapped by the Project Location; however, all project components, including the construction disturbance area, will be located adjacent to the wetland (>0.1m), or collector lines may be installed beneath the wetland via directional drilling.

#### Subscripts:

- 1: Entire wetland delineated from property line/aerial photograph.
- 2: Wetland delineated via a combination of methods: on site and property line/aerial photograph.
- 3: Entire wetland delineated on site.

### Legend

WT: Wind Turbine AR: Access Road CL: Collector Line

CA: Construction Activity/Temporary Infrastructure/Laydown Area

SI: Supporting Infrastructure - Building/Substation/Meteorological Tower/Point of Interconnect

### 6.3 Wildlife Habitat

During the detailed site investigation of the Project, NRSI biologists examined natural features in and within 120m of the Project Location for the presence of wildlife habitats. Each of these wildlife habitats has been examined and compared with the standards of significance provided in the SWH Criteria Schedules for Ecoregion 6E (MNRF 2015) and the NHA Guide for Renewable Energy Projects (OMNR 2012) to evaluation the significance of the habitat, which will guide the preparation of the EIS.

The following discussion has been divided into three categories of wildlife habitat, seasonal concentration areas, rare vegetation communities and specialized wildlife habitats, and habitat for species of conservation concern. Each candidate significant wildlife habitat identified in the site investigation has been summarized, with more detailed information on survey methods and results provided in Table 10.

## 6.3.1 Seasonal Concentration Areas

Based on the results of the site investigation, NRSI biologists have identified 47 candidate significant seasonal concentration areas. Each of these seasonal concentration areas requires an evaluation of significance in order to determine whether they need to be carried forward to the EIS.

After comparing raptor wintering area survey results to provincially established significance criteria, NRSI has determined that the two candidate raptor wintering areas are not significant.

When comparing the results of reptile hibernation surveys to provincially established significance criteria, NRSI has determined that the 10 surveyed candidate reptile hibernacula habitats are not significant. Land access was not granted for candidate reptile hibernaculum SNH-006, therefore this feature is treated as significant and will be carried forward to the EIS.

In addition, after comparing waterfowl stopover and staging area survey results to provincially established significance criteria for terrestrial and aquatic habitats, NRSI has determined that each of the 29 waterfowl stopover and staging (terrestrial) habitats is not

significant, whereas the one waterfowl stopover and staging (aquatic) habitat is significant.

One each of a candidate bat maternity colony and a candidate reptile hibernacula habitats have been treated as significant, as access to these habitats was denied. Two candidate bat maternity colonies, one candidate turtle wintering area and 10 candidate reptile hibernacula habitats have been treated as significant with a commitment to conduct pre-construction surveys.

The general habitat characteristics and distance relative to the Project Location for each of these seasonal concentration areas can be found in Table 10 and are shown on Maps 3-1 to 3-12.

In addition, several seasonal concentration areas have been identified as generalized candidate SWH as they are not required to be individually identified and delineated within 50m or 120m of a project component. Seasonal concentration area habitats that have been generalized include:

- Waterfowl stopover and staging areas (terrestrial),
- Raptor wintering areas,
- · Bat maternity colonies,
- Reptile hibernacula,
- Colonially nesting bird breeding habitat (bank and cliff), and
- Colonially nesting bird breeding habitat (tree/shrubs).

Generalized candidate SWH are not specifically discussed further in this report but are shown on Maps 6-1 to 6-12.

6.3.2 Rare Vegetation Communities and Specialized Wildlife Habitats

The results of the site investigation have identified six rare vegetation communities and 24 candidate specialized wildlife habitats within 120m of the Project Location. Each of these candidate specialized wildlife habitats require an evaluation of significance in order to determine whether they need to be carried forward to the EIS.

One rare vegetation community, old-growth forest, has been treated as significant based on the mature age of this eco-element and the lack of non-native species that would be

indicative of disturbance. In order to refrain from coring trees to determine their exact age, this eco-element has been assumed to be old-growth forest. In addition, one specialized wildlife habitat, an amphibian breeding habitat (woodland), has been confirmed as significant as a result of indicator species observed during the site investigation. Two candidate alvar communities, one candidate savannah community, two tallgrass prairie communities, and 18 candidate amphibian breeding habitat (woodland) habitats have been treated as significant with a commitment to conduct preconstruction surveys.

The remaining five specialized wildlife habitats are all amphibian breeding habitats (woodland) which are located greater than 30m from the Project Location with existing activities (i.e. agricultural practices, residential property, and/or Municipal roads) occurring between the candidate habitat and the Project Location. As such, it has been determined that proposed activities associated with the Project will have a negligible effect (if any) relative to the existing activities that are occurring at considerably closer distances than the Project Location. These five habitats have been treated as significant with no recommendation to conduct site-specific studies, and will be addressed as such in the EIS. The general habitat characteristics and distance relative to the Project Location for each of these specialized wildlife habitats can be found in Table 10 and are shown on Maps 4-1 to 4-12.

In addition, several rare vegetation communities and specialized wildlife habitats have been identified as generalized candidate SWH, including:

- Alvars,
- Savannahs,
- Tallgrass prairies,
- · Other rare vegetation communities,
- Woodland raptor nesting habitats,
- Seeps and springs,
- Amphibian breeding habitats (woodland), and
- Woodland area-sensitive bird breeding habitats.

Generalized candidate SWH are not specifically discussed further in this report but are shown on Maps 6-1 to 6-12.

## 6.3.3 Habitats for Species of Conservation Concern

The results of the site investigation have identified 49 candidate habitats for species of conservation concern in and within 120m of the Project Location. A total of two habitats for species of conservation concern, including one habitat each of eastern wood-pewee and wood thrush, will be treated as significant without the commitment for additional preconstruction surveys, as site access has been denied and alternate survey locations (i.e. roadside, accessible adjacent property) are not available and/or not suitable to meet the habitat survey requirements. Two habitats for plant species of conservation concern, Mühlenberg's weissia, are located greater than 30m from the Project Location with existing activities (i.e. agricultural practices, residential property, and/or Municipal roads) occurring between the candidate habitat and the Project Location. As such, it has been determined that proposed activities associated with the Project will have a negligible effect (if any) relative to the existing activities that are occurring at considerably closer distances than the Project Location. These two habitats have been treated as significant with no recommendation to conduct site-specific studies, and will be addressed as such in the EIS. The remaining species of conservation concern habitats, including one open country bird breeding habitat, nine common nighthawk habitats, 17 eastern wood-pewee habitats, four wood thrush habitats, eight Mühlenberg's weissia habitats, and six monarch habitats have been treated as significant with a commitment to conduct preconstruction surveys. The general habitat characteristics and distance relative to the Project Location for each of these Special Concern and rare wildlife species can be found in Table 10 and are shown on Maps 5-1 to 5-12.

In addition, several habitats for Species of Conservation Concern have been identified as generalized candidate SWH, including:

- Shrub/early successional bird breeding habitat,
- · Common nighthawk habitats,
- Eastern wood-pewee habitats,
- Wood thrush habitats,
- Eastern musk turtle habitats.
- Mühlenberg's weissia habitats,
- Monarch habitats, and
- West Virginia white habitats.

Generalized candidate SWH and are not specifically discussed further in this report but are shown on Maps 6-1 to 6-12.

# 6.3.4 Animal Movement Corridors

No candidate animal movement corridors have been identified within the Project Area. However, if Bullfrog is identified during evaluation of significance surveys in any of the candidate amphibian breeding habitats (woodland) containing permanent water bodies with abundant emergent vegetation, amphibian movement corridors will also be considered for applicable habitats as part of the evaluation of significance and completed as part of the pre-construction commitments.

# 6.3.5 Summary of Wildlife Habitat

Based on the evaluation of significance conducted by NRSI biologists, a total of 95 SWH which may be affected by the operation of the Project have been identified in and within 120m of the Project Location. These include one SWH which has been confirmed as significant through observations of indicator species made during the site investigation (AWO-018), one SWH which has been confirmed as significant through evaluation of significance surveys detailed in this report (WSA-001), as well as one SWH which is assumed to be SWH in order to avoid the need to core trees to determine age (OGF-001). The remaining 92 wildlife habitats have been treated as significant with a commitment to conduct pre-construction surveys where site access has been granted, or without the commitment for additional pre-construction surveys. Additional pre-construction surveys will not be completed where site access has been denied and alternate survey locations (i.e. roadside, accessible adjacent property) are not available and/or not suitable to meet the habitat survey requirements.

In addition, several additional wildlife habitats have been identified within 120m of the Project Area that are not required to be individually identified and delineated within 50m or 120m of a project component. These habitats have been identified as generalized SWH, which are considered to be treated as significant. A summary of the 126 candidate SWH that were carried forward to this evaluation of significance phase of this Project is provided in Table 10. This table includes the size, composition, attributes, functions, distances to Project Locations, and map references of each habitat.

Table 10. Wildlife Habitat Evaluation of Significance for the Nation Rise Wind Farm

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
WST-001₁ Waterfowl Stopover and Staging Area (Terrestrial)	42.84	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - >120 CL - >120 CA - Overlapping SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-002 <sub>1</sub> Waterfowl Stopover and Staging Area (Terrestrial)	77.61	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - 76 (T09) AR - 61 CL - 61 CA - 61 SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-004 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	20.09	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT – Overlapping (T06) AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-005₁ Waterfowl Stopover and Staging Habitat (Terrestrial)	136.57	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT – 18 (T12) AR – 3 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-006 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	30.31	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - 16 AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-007 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	3.12	OAGM2  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - >120 CL - >120 CA - Overlapping SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-010₁ Waterfowl	14.38	OAGM1	WT - >120 AR - >120	Number of Indicator Species Observations:	Not Significant	N/A	No

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
Stopover and Staging Habitat (Terrestrial)		May provide foraging and resting habitat for migrating waterfowl.	CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	Visit 1: None Visit 2: None Visit 3: None Visit 4: None			
WST-011 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	22.93	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - 80 (T9) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - 66 SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-012 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	21.97	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT ->120 AR ->120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI ->120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-013 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	18.83	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-015 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	44.90	OAGM2  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 (T16) AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-016 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	8.32	OAGM2  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-017 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	25.07	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
WST-018 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	22.23	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - 31 (T27) AR - 6 CL - 6 CA - 6 SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-020 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	30.37	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT ->120 AR - 13 CL - Overlapping <sup>2</sup> CA - Overlapping SI ->120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: Northern Pintail (9)	Not Significant	N/A	No
WST-021 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	31.50	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT – Overlapping (T35) AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-023 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	17.85	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT – Overlapping (T41) AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-024 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	51.64	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - 12 CL - Overlapping CA - Overlapping SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: Northern Pintail (2)	Not Significant	N/A	No
WST-026 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	79.75	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - 15 (T29) AR - >0.1 CL - >0.1 CA - >0.1 SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-027₁ Waterfowl Stopover and Staging Habitat	49.70	OAGM1  May provide foraging and resting habitat for migrating	WT – 53 (T52) AR – 37 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup>	Number of Indicator Species Observations: Visit 1: None Visit 2: None	Not Significant	N/A	No

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
(Terrestrial)		waterfowl.	SI ->120	Visit 3: None Visit 4: None			
WST-028 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	8.99	OAGM2  May provide foraging and resting habitat for migrating waterfowl.	$WT -> 120$ $AR -> 120$ $CL - Overlapping^{2}$ $CA - Overlapping^{2}$ $SI -> 120$	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-029 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	34.35	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT – 45 (T16) AR – >120 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-030 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	10.69	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-031 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	198.18	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT – Overlapping (T38) AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-032 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	16.82	OAGM2  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-033 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	40.51	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-034 <sub>1</sub> Waterfowl	21.93	OAGM1	WT - >120 AR - >120	Number of Indicator Species Observations:	Not Significant	N/A	No

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
Stopover and Staging Habitat (Terrestrial)		May provide foraging and resting habitat for migrating waterfowl.	CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	Visit 1: None Visit 2: None Visit 3: None Visit 4: None			
WST-035 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	21.92	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - 18 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WST-036 <sub>1</sub> Waterfowl Stopover and Staging Habitat (Terrestrial)	19.11	OAGM1  May provide foraging and resting habitat for migrating waterfowl.	WT -23 (T11) AR - 94 CL - 62 CA - 62 SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
WSA-001₁ Waterfowl Stopover and Staging Area (Aquatic)	246.78	OA  May provide foraging and resting habitat for migrating waterfowl.	WT - >120 AR - >120 CL - Overlapping <sup>3</sup> CA - Overlapping <sup>3</sup> SI - >120	Number of Indicator Species Observations: Visit 1: Canada Goose (4725) and Snow Goose (31) Visit 2: Canada Goose (775), Snow Goose (6), and American Black Duck (1) Visit 3: Canada Goose (445) and Snow Goose (1) Visit 4: Canada Goose (127)	Confirmed Significant	3-4 3-5 3-6	Yes
RWA-001 <sub>2</sub> Raptor Wintering Area	89.91	OAGM2 FODM11 FODM7-1 MEMM3 MEM MEMM4 RBTB1-4 THDM2-1 THD FODM3-1 FOMM7 WODM5-2 MEMR1 MEGR1	WT – 24 (T04) AR – $>0.1^1$ CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – $>120$	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None Visit 5: None Visit 6: None Visit 7: None Visit 8: None	Not Significant	N/A	No

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
		May provide a combination of roosting, foraging, and resting habitat for wintering raptors.					
RWA-002 <sub>2</sub> Raptor Wintering Area	40.60	MEGR1 MEFR1 FODR1-1  May provide a combination of roosting, foraging, and resting habitat for wintering raptors.	WT - 27 (T27) AR ->0.1 <sup>1</sup> CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI ->120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None Visit 5: None Visit 6: None Visit 7: None Visit 8: None	Not Significant	N/A	No
BMA-001 <sub>3</sub> Bat Maternity Colony	1.91	FODM5-5  May provide roosting habitat and shelter for raising young.	WT – 117 (T32) AR – 80 CL – 26 CA – 26 SI – 61	To be confirmed through pre- construction surveys.  See Table 4 for survey methods.	Treated as Significant	3-5 3-6 3-8 3-9	Yes
BMA-002₁ Bat Maternity Colony	34.40	FOMM7-2 SWDM2-2 SWDM3-1  May provide roosting habitat and shelter for raising young.	WT - 60 (T48) AR - 9 CL - 9 CA - 9 SI - >120	Site access was denied. No site- specific surveys are proposed.	Treated as Significant	3-11	Yes
BMA-003 <sub>3</sub> Bat Maternity Colony	18.93	SWDM2-2 SWD SWM  May provide roosting habitat and shelter for raising young.	WT – 58 (T48) AR – 14 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	To be confirmed through pre- construction surveys.  See Table 4 for survey methods.	Treated as Significant	3-12	Yes
TWA-001 <sub>2</sub> Turtle Wintering Area	55.55	OA  May provide overwintering habitat for turtles.	WT - >120 AR - >120 CL - Overlapping <sup>3</sup> CA - Overlapping <sup>3</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 4 for survey methods.	Treated as Significant	3-4 3-5 3-6	Yes
SNH-001₃	2.99	Karst feature within	WT – 9 (T2)	Number of Indicator Species	Not	N/A	No

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
Reptile Hibernacula		SWCR1-1  May provide overwintering habitat for snakes.	AR - 3 CL - 3 CA - 3 SI - >120	Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Significant		
SNH-002 <sub>3</sub> Reptile Hibernacula	1.16	Rock pile within CVI_2  May provide overwintering habitat for snakes.	WT – Overlapping (T4) AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
SNH-003 <sub>3</sub> Reptile Hibernacula	0.89	Rock pile within MEGR1  May provide overwintering habitat for snakes.	WT – 24 (T4) AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
SNH-005 <sub>3</sub> Reptile Hibernacula	6.90	RBOB1-2 with shallow soils  May provide overwintering habitat for snakes.	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
SNH-006₁ Reptile Hibernacula	13.72	Rock and soil berm within FODM5-1.  May provide overwintering habitat for snakes.  Although the continuous habitat itself overlaps with the Municipal road right-ofway, the candidate feature (i.e. rock and soil berm) is not overlapping the right-of-way, and therefore not overlapping the Project Location.	WT - >120 AR - 2 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Site access was denied. No site- specific surveys are proposed.	Treated as Significant	3-2	Yes
SNH-007 <sub>3</sub> Reptile	4.5	MEMR1 with rock crevices	WT - >120 AR - Overlapping	Number of Indicator Species Observations:	Not Significant	N/A	No

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
Hibernacula		May provide overwintering habitat for snakes.	CL – Overlapping CA – Overlapping SI – >120	Visit 1: None Visit 2: Eastern Gartersnake (1) Visit 3: Eastern Gartersnake (1) Visit 4: None			
SNH-008₃ Reptile Hibernacula	0.67	Rock pile within TAGM1  May provide overwintering habitat for snakes.	WT – 17 (T27) AR – 3 CL – 3 CA – 3 SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: Eastern Gartersnake (1) Visit 4: Eastern Gartersnake (1)	Not Significant	N/A	No
SNH-009 <sub>3</sub> Reptile Hibernacula	1.03	Rock pile and cliff with crevices within THDM2  May provide overwintering habitat for snakes.	WT ->120 AR - 23 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI ->120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
SNH-010 <sub>3</sub> Reptile Hibernacula	0.65	Rock pile within MEGM3-5  May provide overwintering habitat for snakes.	WT - 90 (T48) AR - 39 CL - 39 CA - 39 SI - >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
SNH-011 <sub>3</sub> Reptile Hibernacula	7.42	Rock pile within OAGM1/edge of SWDM4-5 May provide overwintering habitat for snakes.	WT – 12 (T56) AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
SNH-012 <sub>3</sub> Reptile Hibernacula	7.58	Rock pile within OAGM4  May provide overwintering habitat for snakes.	WT – 107 (T57) AR – 91 CL – 91 CA – 91 SI – >120	Number of Indicator Species Observations: Visit 1: None Visit 2: None Visit 3: None Visit 4: None	Not Significant	N/A	No
ALV-001 <sub>3</sub> Alvar	4.50	MEMR1  May provide genetic, species, and ecosystem diversity, as well as habitat for species of conservation	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-2	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
		concern.					
ALV-002₃ Alvar	2.70	FOCM2-2  May provide genetic, species, and ecosystem diversity, as well as habitat for species of conservation concern.	WT - >120 AR - >0.1 <sup>1</sup> CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-12	Yes
OGF-001₃ Old Growth Forest	2.31	FODM7-5  May provide genetic, species, and ecosystem diversity, as well as habitat for species of conservation concern.	WT - 80 (T28) AR - 70 CL - 70 CA - 70 SI - >120	This feature has been treated as significant based on the mature age of this eco-element and the lack of non-native species that would be indicative of disturbance. In order to refrain from coring trees to determine their exact age, this eco-element has been assumed to be old-growth forest.	Treated as Significant	4-12	Yes
SAV-001 <sub>2</sub> Savannah	50.49	SVDR1 WOD  May provide genetic, species, and ecosystem diversity, as well as habitat for species of conservation concern.	WT - >120 AR - >120 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-11	Yes
TGP-001₃ Tallgrass Prairie	1.35	MEF  May provide genetic, species, and ecosystem diversity, as well as habitat for species of conservation concern.	WT - >120 AR - 44 CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-9	Yes
TGP-002₁ Tallgrass Prairie	3.89	MEM  May provide genetic, species, and ecosystem diversity, as well as habitat for species of conservation concern.	WT - >120 AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-11 4-12	Yes
AWO-001 <sub>2</sub>	26.32	SWCM1-1	WT ->120	To be confirmed through pre-	Treated as	4-1	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
Amphibian Breeding Habitat (Woodland)		FODM7-1 FOMM7 May be used for egg laying, breeding and feeding habitat.	AR - >0.1 <sup>1</sup> CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	construction surveys.  See Table 5 for survey methods.	Significant	4-2	
AWO-002 <sub>2</sub> Amphibian Breeding Habitat (Woodland)	11.92	SWMM1-1 FODM5-8 SWDM2-2 May be used for egg laying, breeding and feeding habitat.	WT - >120 AR - 79 CL - 67 CA - 67 SI - >120	This habitat is located greater than 30m from the Project Location with more potentially impactful existing activities (i.e. agricultural activities, residential properties, and/or Municipal roads) located between the habitat and the Project Location.  As such, this habitat will be treated as significant since potential negative effects are negligible relative to existing activities that are located considerably closer to the habitat than the Project Location.	Treated as Significant	4-1 4-2	Yes
AWO-003 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	1.20	FODM7-2 May be used for egg laying, breeding and feeding habitat.	WT - >120 AR - 106 CL - 106 CA - 106 SI - >120	This habitat is located greater than 30m from the Project Location with more potentially impactful existing activities (i.e. agricultural activities, residential properties, and/or Municipal roads) located between the habitat and the Project Location.  As such, this habitat will be treated as significant since potential negative effects are negligible relative to existing activities that are located considerably closer to the habitat than the Project Location.	Treated as Significant	4-1 4-2 4-3 4-4	Yes
AWO-004 <sub>1</sub> Amphibian Breeding Habitat (Woodland)	15.12	FODM5-1  May be used for egg laying, breeding and feeding habitat.	WT - >120 AR - 3 CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	Although access was denied to AWO-004, pre-construction surveys will be conducted at the property line or roadside adjacent to this habitat.  See Table 5 for survey methods.	Treated as Significant	4-2	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
AWO-005 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	19.44	SWCM1-1 SWDM4-2 SWDM2-2 FOCM4-1 SWMM1 SWDM4 May be used for egg laying, breeding and feeding habitat.	WT – 106 (T10) AR – 73 CL – 73 CA – 73 SI – >120	This habitat is located greater than 30m from the Project Location with more potentially impactful existing activities (i.e. agricultural activities, residential properties, and/or Municipal roads) located between the habitat and the Project Location.  As such, this habitat will be treated as significant since potential negative effects are negligible relative to existing activities that are located considerably closer to the habitat than the Project Location.	Treated as Significant	4-3	Yes
AWO-006 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	1.39	FODM5-8  May be used for egg laying, breeding and feeding habitat.	WT - >120 AR - 2 CL - >120 CA - 2 SI - 2	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-5 4-6 4-8 4-9	Yes
AWO-007 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	16.25	FODR1-1  May be used for egg laying, breeding and feeding habitat.	WT – 28 (T27) AR – 13 CL – 13 CA – 13 SI – >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-7	Yes
AWO-008 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	2.35	SWDM2-2  May be used for egg laying, breeding and feeding habitat.	WT - >120 AR - 4 CL - 4 CA - 4 SI - >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-7	Yes
AWO-009 <sub>1</sub> Amphibian Breeding Habitat (Woodland)	0.94	FODM5-2 May be used for egg laying, breeding and feeding habitat.	WT - >120 AR - 49 CL - 36 CA - 36 SI - >120	This habitat is located greater than 30m from the Project Location with more potentially impactful existing activities (i.e. agricultural activities, residential properties, and/or Municipal roads) located between the habitat and the Project Location.  As such, this habitat will be treated as significant since potential negative effects are negligible relative to	Treated as Significant	4-7	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
				existing activities that are located considerably closer to the habitat than the Project Location.			
AWO-010₁ Amphibian Breeding Habitat (Woodland)	2.15	FODM5-6  May be used for egg laying, breeding and feeding habitat.	WT - >120 AR - 12 CL - 12 CA - 12 SI - >120	Although access was denied to AWO-010, pre-construction surveys will be conducted at the property line or roadside adjacent to this habitat.  See Table 5 for survey methods.	Treated as Significant	4-10	Yes
AWO-011 <sub>2</sub> Amphibian Breeding Habitat (Woodland)	27.57	SWDM4-5 SWMM1-1 FODM8-1 FOC SWD May be used for egg laying, breeding and feeding habitat.	WT - 5 (T46) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-11	Yes
AWO-012 <sub>1</sub> Amphibian Breeding Habitat (Woodland)	112.65	SWDM2-2 FOCM2-2 SWMM1-1 SWM SWC SWD SWCM1-1  May be used for egg laying, breeding and feeding habitat.	WT – 60 (T46) AR – 9 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	Although access was denied to AWO-012, pre-construction surveys will be conducted at the property line or roadside adjacent to this habitat.  See Table 5 for survey methods.	Treated as Significant	4-11	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
AWO-013 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	0.90	SWDM3-4 May be used for egg laying, breeding and feeding habitat.	WT - 40 (T52) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-11	Yes
AWO-014 <sub>1</sub> Amphibian Breeding Habitat (Woodland)	11.60	SWDM2-2  May be used for egg laying, breeding and feeding habitat.	WT - >120 AR - 110 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	Although access was denied to AWO-014, pre-construction surveys will be conducted at the property line or roadside adjacent to this habitat.  See Table 5 for survey methods.	Treated as Significant	4-11	Yes
AWO-015 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	12.96	SWDM1-1 SWDM3-1 FODM5-8 SWMM1-1 FOCM4-1 May be used for egg laying, breeding and feeding habitat.	WT - >120 AR - 118 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI - >120	To be confirmed through pre- construction surveys. See Table 5 for survey methods.	Treated as Significant	4-11 4-12	Yes
AWO-016 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	7.15	SWMM1-1 SWCM1-1 FOCM2-2 SWDM2-2 May be used for egg laying, breeding and feeding habitat.	$WT -> 120$ $AR -> 0.1^{1}$ $CL - Overlapping^{2}$ $CA - Overlapping^{2}$ $SI -> 120$	To be confirmed through pre- construction surveys. See Table 5 for survey methods.	Treated as Significant	4-11 4-12	Yes
AWO-017 <sub>2</sub> Amphibian Breeding Habitat (Woodland)	14.87	SWDM4-5  May be used for egg laying, breeding and feeding habitat.	WT – 11 (T56) AR – >0.1 <sup>1</sup> CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-11 4-12	Yes
AWO-018 <sub>2</sub> Amphibian Breeding Habitat	18.97	FOMM7 SWDM3-1 FODM7-2	WT – 58 (T48) AR – 12 CL – Overlapping <sup>2</sup>	Confirmed significant based on the number of indicator species observed within the habitat during site	Confirmed Significant	4-12	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
(Woodland)		SWDM2-2  May be used for egg laying, breeding and feeding habitat.	CA – Overlapping <sup>2</sup> SI – >120	investigation surveys.  May 18-19, 2016  Spring Peeper (600 tadpoles)  Wood Frog (3 adults)			
AWO-019 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	0.87	SWDM2-2  May be used for egg laying, breeding and feeding habitat.	WT ->120 AR ->0.1 <sup>1</sup> CL ->0.1 <sup>1</sup> CA ->0.1 <sup>1</sup> SI ->120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-12	Yes
AWO-020 <sub>2</sub> Amphibian Breeding Habitat (Woodland)	36.08	FOCM2-2 SWDM2-2 SWDM4-2 SWDM4-5 SWM FOCM4-1 May be used for egg laying, breeding and feeding habitat.	WT – 18 (T50) AR – 3 CL – 3 CA – 3 SI – >120	To be confirmed through pre- construction surveys. See Table 5 for survey methods.	Treated as Significant	4-12	Yes
AWO-021 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	7.00	SWDM2-2 SWDM4-2 SWC May be used for egg laying, breeding and feeding habitat.	WT - 115 AR - 71 CL - 71 CA - 71 SI - >120	This habitat is located greater than 30m from the Project Location with more potentially impactful existing activities (i.e. agricultural activities, residential properties, and/or Municipal roads) located between the habitat and the Project Location.  As such, this habitat will be treated as significant since potential negative effects are negligible relative to existing activities that are located considerably closer to the habitat than the Project Location.	Treated as Significant	4-9 4-12	Yes
AWO-022 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	11.60	SWDM2-2 FOMM7-2 May be used for egg laying, breeding and feeding habitat.	WT ->120 AR - 14 CL - Overlapping <sup>2</sup> CA - Overlapping <sup>2</sup> SI ->120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-12	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
AWO-023 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	17.17	FOCM2-2 FOMM5-2 SWDM4-5 SWDM2-2 May be used for egg laying, breeding and feeding habitat.	WT - 78 (T57) AR - 5 CL - 5 CA - 5 SI - >120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-12	Yes
AWO-024 <sub>3</sub> Amphibian Breeding Habitat (Woodland)	1.79	SWDM2-2  May be used for egg laying, breeding and feeding habitat.	WT ->120 AR - 2 CL - 2 CA - 2 SI ->120	To be confirmed through pre- construction surveys.  See Table 5 for survey methods.	Treated as Significant	4-12	Yes
OCB-001 <sub>2</sub> Open Country Bird Breeding Habitat	30.16	MEGR1 OAGM2 MEM MEMM3 MEMM4  May be used for breeding or nesting habitat.	WT – 24 (T04) AR – 1 CL – 1 CA – 1 SI – >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	4-1 4-2	Yes
CONI-001 <sub>3</sub> Common Nighthawk Habitat	0.90	MEGR1  May be used for breeding, nesting or foraging habitat.	WT – 24 (T4) AR – 1 CL – 1 CA – 1 SI – >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-1 5-2	Yes
CONI-002 <sub>2</sub> Common Nighthawk Habitat	42.52	FODM7-1 FODM11 WODM5-2 MEM MEMM3 MEMM4 MEMR1 THD THDM2-1 RBTB1-4  May be used for breeding, nesting or foraging habitat.	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys. See Table 6 for survey methods.	Treated as Significant	5-1 5-2	Yes
CONI-003 <sub>3</sub>	6.92	RBOB1-2	WT - >120	To be confirmed through pre-	Treated as	5-1	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
Common Nighthawk Habitat		May be used for breeding, nesting or foraging habitat.	AR – Overlapping CL – Overlapping CA – Overlapping SI – >120	construction surveys. See Table 6 for survey methods.	Significant	5-2	
CONI-004 <sub>3</sub> Common Nighthawk Habitat	10.19	MEMM3  May be used for breeding, nesting or foraging habitat.	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping SI - >120	AR – Overlapping CL – Overlapping CA – Overlapping CA – Overlapping CA – Overlapping CA – Overlapping		5-5 5-6	Yes
CONI-005₃ Common Nighthawk Habitat	28.65	MEFR1 MEGR1  May be used for breeding, nesting or foraging habitat.	WT – 17 (T27) $AR - > 0.1^{1}$ $CL - Overlapping^{2}$ $CA - Overlapping^{2}$ SI - > 120	WT – 17 (T27) AR – >0.1 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> CS – Table 6 for survey methods		5-7	Yes
CONI-006₃ Common Nighthawk Habitat	2.47	MEMR1  May be used for breeding, nesting or foraging habitat.	WT - >120 AR - 24 CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-9 5-12	Yes
CONI-007 <sub>3</sub> Common Nighthawk Habitat	0.65	MEGM3-5  May be used for breeding, nesting or foraging habitat.	WT - 90 (T48) AR - 39 CL - 39 CA - 39 SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes
CONI-008 <sub>3</sub> Common Nighthawk Habitat	4.54	MEGM4-1  May be used for breeding, nesting or foraging habitat.	WT - 5 (T50) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes
CONI-009₃ Common Nighthawk Habitat	1.95	THDM2-8  May be used for breeding, nesting or foraging habitat.	WT - 32 (T57) AR - 5 CL - 5 CA - 5 SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes
EAWP-001 <sub>3</sub> Eastern Wood- Pewee Habitat	2.99	SWCR1-1  May be used for breeding, nesting or foraging habitat.	WT - 10 (T2) AR - 3 CL - 3 CA - 3 SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-1	Yes
EAWP-002 <sub>3</sub>	0.52	SWDM2-2	WT – 105 (T4)	To be confirmed through pre-	Treated as	5-1	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
Eastern Wood- Pewee Habitat		May be used for breeding, nesting or foraging habitat.	AR - 68 CL - 68 CA - 68 SI - >120	construction surveys. See Table 6 for survey methods.	Significant	5-2	
EAWP-003 <sub>3</sub> Eastern Wood- Pewee Habitat	1.48	SWDR1  May be used for breeding, nesting or foraging habitat.	WT – 47 (T4) AR – 33 CL – 33 CA – 33 SI – >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-1 5-2	Yes
EAWP-004 <sub>3</sub> Eastern Wood- Pewee Habitat	19.44	SWCM1-1 SWDM4-2 SWDM2-2 FOCM4-1 SWMM1 SWDM4  May be used for breeding, nesting or foraging habitat.	WT - 106 (T10) AR - 73 CL - 73 CA - 73 SI - >120	To be confirmed through pre- construction surveys. See Table 6 for survey methods.	Treated as Significant	5-4	Yes
EAWP-005 <sub>3</sub> Eastern Wood- Pewee Habitat	0.63	FOMM7  May be used for breeding, nesting or foraging habitat.	WT – 55 (T10) AR – 25 CL – 25 CA – 25 SI – 58	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-4	Yes
EAWP-006 <sub>3</sub> Eastern Wood- Pewee Habitat	1.49	SWDM4-5 SWCM1-1 SWDM2-2 May be used for breeding, nesting or foraging habitat.	WT - 5 (T11) AR - 3 CL - 3 CA - 3 SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-4	Yes
EAWP-007 <sub>3</sub> Eastern Wood- Pewee Habitat	1.42	FODM11  May be used for breeding, nesting or foraging habitat.	WT ->120 AR ->120 CL - Overlapping CA - Overlapping SI ->120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-5 5-6	Yes
EAWP-008 <sub>3</sub> Eastern Wood- Pewee Habitat	1.86	FODM5-5  May be used for breeding, nesting or foraging habitat.	WT – 118 (T32) AR – 80 CL – 26 CA – 26 SI – 71	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-5 5-6 5-8 5-9	Yes
EAWP-009 <sub>3</sub>	15.64	FODR1-1	WT – 28 (T27)	To be confirmed through pre-	Treated as	5-7	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
Eastern Wood- Pewee Habitat		SWDR1 SWDM2-2 May be used for breeding, nesting or foraging habitat.	AR - 13 CL - 13 CA - 13 SI - >120	construction surveys. See Table 6 for survey methods.	Significant		
EAWP-010 <sub>3</sub> Eastern Wood- Pewee Habitat	1.56	FODM7-2 SWDM3-4 FODM5-6 May be used for breeding, nesting or foraging habitat.	WT – 120 (T29) AR – 93 CL – 93 CA – 93 SI – >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-7	Yes
EAWP-011 <sub>3</sub> Eastern Wood- Pewee Habitat	0.90	SWDM3-4  May be used for breeding, nesting or foraging habitat.	WT - 40 (T52) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-11	Yes
EAWP-012 <sub>1</sub> Eastern Wood- Pewee Habitat	108.57	SWDM2-2 FOCM2-2 SWMM1-1 SWM SWC SWD SWCM1-1	WT – 60 (T46) AR – 9 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	Site access was denied. No site- specific surveys are proposed.	Treated as Significant	5-11	Yes
EAWP-013 <sub>2</sub> Eastern Wood- Pewee Habitat	25.65	nesting or foraging habitat.  SWDM4-5 SWMM1-1 FODM8-1 FOC SWD  May be used for breeding, nesting or foraging habitat.	WT - 5 (T46) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys. See Table 6 for survey methods.	Treated as Significant	5-11	Yes
EAWP-014 <sub>3</sub> Eastern Wood- Pewee Habitat	7.00	SWDM2-2 FOMM7-2 SWDM2-2 SWC May be used for breeding,	WT – 115 (T48) AR – 71 CL – 71 CA – 71 SI – >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
		nesting or foraging habitat.					
EAWP-015 <sub>2</sub> Eastern Wood- Pewee Habitat	18.98	FOMM7 SWDM3-1 FODM7-2 SWDM2-2 May be used for breeding, nesting or foraging habitat.	WT – 58 (T48) AR – 12 CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes
EAWP-016 <sub>3</sub> Eastern Wood- Pewee Habitat	5.81	FOMM5-2 FOCM2-2 May be used for breeding, nesting or foraging habitat.	WT – 78 (T57) AR – 5 CL – 5 CA – 5 SI – >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes
EAWP-017 <sub>2</sub> Eastern Wood- Pewee Habitat	14.87	SWDM4-5  May be used for breeding, nesting or foraging habitat.	WT – 11 (T56) AR – >0.1 <sup>1</sup> CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-11 5-12	Yes
EAWP-018 <sub>2</sub> Eastern Wood- Pewee Habitat	19.50	FOCM2-2 SWDM2-2 SWM May be used for breeding, nesting or foraging habitat.	WT – 18 (T50) AR – 7 CL – 7 CA – 7 SI – >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes
WOTH-001 <sub>3</sub> Wood Thrush Habitat	1.86	FODM5-5  May be used for breeding, nesting or foraging habitat.	WT - 118 (T32) AR - 80 CL - 26 CA - 26 SI - 71	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-5 5-6 5-8 5-9	Yes
WOTH-002 <sub>3</sub> Wood Thrush Habitat	15.64	FODR1-1 SWDR1 SWDM2-2 May be used for breeding, nesting or foraging habitat.	WT - 28 (T27) AR - 13 CL - 13 CA - 13 SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-7	Yes
WOTH-003₁ Wood Thrush Habitat	34.40	SWDM2-2 SWD SWM May be used for breeding,	WT - 60 (T46) AR - 9 CL - 9 CA - 9 SI - >120	Site access was denied. No site- specific surveys are proposed.	Treated as Significant	5-11	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
		nesting or foraging habitat.					
WOTH-004 <sub>3</sub> Wood Thrush Habitat	7.25	SWMM1-1  May be used for breeding, nesting or foraging habitat.	WT - 5 (T46) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-11	Yes
WOTH-005 <sub>2</sub> Wood Thrush Habitat	14.54	FOMM7 SWDM3-1 FODM7-2 SWDM2-2 SWD FOD  May be used for breeding, nesting or foraging habitat.	WT - 58 (T48) AR - 15 CL - 15 CA - 15 SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes
MUWE-001 <sub>3</sub> Mühlenberg's Weissia Habitat	0.90	MEGR1  Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	WT - 24 (T4) AR - 1 CL - 1 CA - 1 SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-1 5-2	Yes
MUWE-002₃ Mühlenberg's Weissia Habitat	4.50	MEMR1  Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-2	Yes
MUWE-003 <sub>3</sub> Mühlenberg's Weissia Habitat	6.92	RBOB1-2  Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-1 5-2	Yes
MUWE-004₃ Mühlenberg's Weissia Habitat	0.56	MEGM3-5  Provides suitable moisture regime, light levels, and	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-6	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
		soil properties that promote optimal growth and fecundity of this species.	SI ->120				
MUWE-005 <sub>3</sub> Mühlenberg's Weissia Habitat	10.19	MEMM3  Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-5 5-6	Yes
MUWE-006₁ Mühlenberg's Weissia Habitat	0.72	MEGM3  Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	WT - >120 AR - 99 CL - 99 CA - 99 SI - >120	This habitat is located greater than 30m from the Project Location with more potentially impactful existing activities (i.e. agricultural activities, residential properties, and/or Municipal roads) located between the habitat and the Project Location.  As such, this habitat will be treated as significant since potential negative effects are negligible relative to existing activities that are located considerably closer to the habitat than the Project Location.	Treated as Significant	5-10	Yes
MUWE-007₃ Mühlenberg's Weissia Habitat	0.31	MEMM4  Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	WT - >120 AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-11	Yes
MUWE-008 <sub>3</sub> Mühlenberg's Weissia Habitat	0.65	MEGM3-5  Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	WT - 90 (T48) AR - 39 CL - 39 CA - 39 SI - >120	This habitat is located greater than 30m from the Project Location with more potentially impactful existing activities (i.e. agricultural activities, residential properties, and/or Municipal roads) located between the habitat and the Project Location.  As such, this habitat will be treated as	Treated as Significant	5-12	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
				significant since potential negative effects are negligible relative to existing activities that are located considerably closer to the habitat than the Project Location.			
MUWE-009₃ Mühlenberg's Weissia Habitat	4.54	MEGM4-1  Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	WT - 5 (T50) AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes
MUWE-010₁ Mühlenberg's Weissia Habitat	3.89	MEM  Provides suitable moisture regime, light levels, and soil properties that promote optimal growth and fecundity of this species.	WT - >120 AR - >0.1 <sup>1</sup> CL - >0.1 <sup>1</sup> CA - >0.1 <sup>1</sup> SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-12	Yes
MONA-001 <sub>3</sub> Monarch Habitat	0.90	MEGR1  May be used for egg laying, breeding, and feeding habitat.	WT - 24 (T4) AR - 1 CL - 1 CA - 1 SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-1 5-2	Yes
MONA-002 <sub>2</sub> Monarch Habitat	38.60	WODM5-2 MEM MEMM3 MEMM4 MEMR1 THD THDM2-1 RBTB1-4  May be used for egg laying, breeding, and feeding habitat.	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys. See Table 6 for survey methods.	Treated as Significant	5-1 5-2	Yes
MONA-003 <sub>3</sub> Monarch Habitat	6.92	RBOB1-2  May be used for egg laying, breeding, and	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-1 5-2	Yes

Feature ID	Size (ha)	Composition and Functions	Distance to Project Location (m)	Evaluation Results	Significance	Map(s)	EIS Required (Y/N)
		feeding habitat.	SI ->120				
MONA-004 <sub>3</sub> Monarch Habitat	10.19	MEMM3  May be used for egg laying, breeding, and feeding habitat.	WT - >120 AR - Overlapping CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-5 5-6	Yes
MONA-005 <sub>3</sub> Monarch Habitat	28.65	MEFR1 MEGR1 May be used for egg laying, breeding, and feeding habitat.	WT – 17 (T27) AR – $>0.1^1$ CL – Overlapping <sup>2</sup> CA – Overlapping <sup>2</sup> SI – $>120$	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-7	Yes
MONA-006 <sub>3</sub> Monarch Habitat	2.46	MEMR1  May be used for egg laying, breeding, and feeding habitat.	WT - >120 AR - 24 CL - Overlapping CA - Overlapping SI - >120	To be confirmed through pre- construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-9 5-12	Yes

### Superscripts:

- 1: Mapping depicts this candidate SWH being overlapped by the Project Location; however, all project components, including the construction disturbance area, will be located adjacent to the candidate SWH (>0.1m), or collection lines may be installed beneath the habitat via directional drilling.
- 2: This candidate SWH will be overlapped by the Project Location that follows the municipal road right-of-way. Overlap with the candidate SWH will occur entirely within the road right-of-way and will be minimized as much as possible.
- 3: This candidate SWH will be overlapped by the collection line, which will consist of overhead lines spanning the habitat or underground lines, which will avoid overlap with the habitat by the use of directional drilling. Any associated impact will be minimized, to the extent possible.

### Subscripts:

- 1: Entire feature delineated from property line/aerial photograph.
- 2: Feature delineated via a combination of methods: on site and property line/aerial photograph.
- 3: Entire feature delineated on site.

#### 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

# 7.0 Evaluation of Significance Summary

In accordance with the REA Regulation, NRSI biologists have completed a comprehensive evaluation of significance of the natural features and wildlife habitats at the Project. The results of the evaluation have been discussed in the preceding sections, and have been summarized in Table 11 below.

Based on a comprehensive evaluation of significance, following provincial guidelines and standards, NRSI biologists have determined that several significant or treated as significant features, including 31 woodlands, 17 wetlands, and 95 SWH, are present within the Project Area. Several additional wildlife habitats have been considered generalized SWH (generalized wildlife habitats treated as significant), indicating they are not required to be individually identified and delineated within 50m or 120m of (but not overlapping) a project component. Each of these significant or generalized SWH are listed in Table 11 below, and will be discussed in detail in the EIS, which will be prepared under a separate cover.

Table 11. Summary of Candidate Significant Natural Features and Wildlife Habitats within the Nation Rise Wind Farm

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
Woodlands			
WOD-001	Yes	Yes	No
WOD-002	Yes	Yes	Yes
WOD-003	Yes	Yes	No
WOD-004	Yes	Yes	Yes
WOD-005	Yes	Yes	Yes
WOD-006	Yes	Yes	Yes
WOD-007	Yes	Yes	Yes
WOD-008	Yes	Yes	No
WOD-009	Yes	Yes	Yes
WOD-010	Yes	Yes	Yes
WOD-011	Yes	Yes	Yes
WOD-012	Yes	Yes	Yes
WOD-013	Yes	Yes	Yes
WOD-014	Yes	Yes	Yes
WOD-015	Yes	Yes	Yes
WOD-016	Yes	Yes	No
WOD-017	Yes	Yes	Yes

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
WOD-018	Yes	Yes	No
WOD-019	Yes	Yes	No
WOD-020	Yes	Yes	Yes
WOD-021	Yes	Yes	Yes
WOD-022	Yes	Yes	No
WOD-023	Yes	Yes	No
WOD-024	Yes	Yes	No
WOD-025	Yes	Yes	No
WOD-026	Yes	Yes	No
WOD-027	Yes	Yes	No
WOD-028	Yes	Yes	No
WOD-029	Yes	Yes	No
WOD-030	Yes	Yes	No
WOD-031	Yes	Yes	Yes
WOD-032	Yes	Yes	No
WOD-033	Yes	Yes	No
WOD-034	Yes	Yes	No
WOD-035	Yes	Yes	Yes
WOD-036	Yes	Yes	No
WOD-037	Yes	Yes	Yes
WOD-038	Yes	Yes	Yes
WOD-039	Yes	Yes	Yes
WOD-040	Yes	Yes	No
WOD-041	Yes	Yes	No
WOD-042	Yes	Yes	Yes
WOD-043	Yes	Yes	Yes
WOD-044	Yes	Yes	Yes
WOD-045	Yes	Yes	No
WOD-046	Yes	Yes	Yes
WOD-047	Yes	Yes	Yes
WOD-048	Yes	Yes	Yes
WOD-049	Yes	Yes	Yes
WOD-050	Yes	Yes	No
WOD-051	Yes	Yes	Yes
WOD-052	Yes	Yes	No
WOD-053	Yes	Yes	Yes
WOD-054	Yes	Yes	Yes
WOD-055	Yes	Yes	Yes
Wetlands			
WET-001	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-002	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
WET-003	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-004	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-005	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-006	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-007	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-008	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-009	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-011	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-012	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-013	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-014	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-015	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-016	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-017	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-018	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
WET-019	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
WET-020	Yes	Yes	Yes (Treated as Significant) <sup>1</sup>
Candidate Significant	Wildlife Habitats		
WST-001	Yes	Yes	No
WST-002	Yes	Yes	No
WST-004	Yes	Yes	No
WST-005	Yes	Yes	No
WST-006	Yes	Yes	No
WST-007	Yes	Yes	No
WST-010	Yes	Yes	No
WST-011	Yes	Yes	No
WST-012	Yes	Yes	No
WST-013	Yes	Yes	No
WST-015	Yes	Yes	No
WST-016	Yes	Yes	No
WST-017	Yes	Yes	No
WST-018	Yes	Yes	No
WST-020	Yes	Yes	No
WST-021	Yes	Yes	No
WST-023	Yes	Yes	No
WST-024	Yes	Yes	No
WST-026	Yes	Yes	No
WST-027	Yes	Yes	No
WST-028	Yes	Yes	No
WST-029	Yes	Yes	No
WST-030	Yes	Yes	No
WST-031	Yes	Yes	No
WST-032	Yes	Yes	No
WST-033	Yes	Yes	No
WST-034	Yes	Yes	No
WST-035	Yes	Yes	No
WST-036	Yes	Yes	No
WSA-001	Yes	Yes	Yes
RWA-001	Yes	Yes	No
RWA-002	Yes	Yes	No
BMA-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
BMA-002	Yes	Yes	Yes (Treated as Significant) <sup>3</sup>
BMA-003	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
TWA-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
SNH-001	Yes	Yes	No
SNH-002	Yes	Yes	No
SNH-003	Yes	Yes	No
SNH-005	Yes	Yes	No
SNH-006	Yes	Yes	Yes (Treated as Significant) <sup>3</sup>
SNH-007	Yes	Yes	No
SNH-008	Yes	Yes	No
SNH-009	Yes	Yes	No
SNH-010	Yes	Yes	No
SNH-011	Yes	Yes	No
SNH-012	Yes	Yes	No
ALV-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
ALV-002	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
OGF-001	Yes	Yes	Yes (Treated as Significant) <sup>4</sup>
SAV-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
TGP-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
TGP-002	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-002	Yes	Yes	Yes (Treated as Significant) <sup>5</sup>
AWO-003	Yes	Yes	Yes (Treated as Significant) <sup>5</sup>
AWO-004	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-005	Yes	Yes	Yes (Treated as Significant)⁵

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
AWO-006	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-007	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-008	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-009	Yes	Yes	Yes (Treated as Significant) <sup>5</sup>
AWO-010	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-011	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-012	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-013	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-014	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-015	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-016	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-017	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-018	Yes	Yes	Yes
AWO-019	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-020	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-021	Yes	Yes	Yes (Treated as Significant) <sup>5</sup>
AWO-022	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
AWO-023	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
AWO-024	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
OCB-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
CONI-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
CONI-002	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
CONI-003	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
CONI-004	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
CONI-005	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
CONI-006	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
CONI-007	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
CONI-008	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
CONI-009	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-002	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-003	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-004	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
EAWP-005	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-006	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-007	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-008	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-009	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-010	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-011	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-012	Yes	Yes	Yes (Treated as Significant) <sup>3</sup>
EAWP-013	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-014	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-015	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-016	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-017	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
EAWP-018	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
WOTH-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
WOTH-002	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
WOTH-003	Yes	Yes	Yes (Treated as Significant) <sup>3</sup>
WOTH-004	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
WOTH-005	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MUWE-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MUWE-002	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MUWE-003	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MUWE-004	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MUWE-005	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MUWE-006	Yes	Yes	Yes (Treated as Significant) <sup>5</sup>
MUWE-007	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MUWE-008	Yes	Yes	Yes (Treated as Significant) <sup>5</sup>
MUWE-009	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MUWE-010	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MONA-001	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MONA-002	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MONA-003	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>

Feature ID	Feature Within 120m of Project Location (Y/N)	Individually Delineated Feature Within 120m of the Project Location (Y/N)*	Significant/EIS Required (Y/N)
MONA-004	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MONA-005	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
MONA-006	Yes	Yes	Yes (Treated as Significant) <sup>2</sup>
Generalized Significant	Wildlife Habitat	ts	
Waterfowl Stopover and Staging Areas (Terrestrial)	Yes	No	
Raptor Wintering Area	Yes	No	
Bat Maternity Colonies	Yes	No	
Reptile Hibernaculum	Yes	No	
Colonially – Nesting Bird Breeding Habitat (Bank and Cliff)	Yes	No	
Colonially – Nesting Bird Breeding Habitat (Tree/Shrubs)	Yes	No	
Alvar	Yes	No	
Other Rare Vegetation Community Types	Yes	No	
Woodland Raptor Nesting Habitat	Yes	No	Yes (Treated as
Seeps and Springs	Yes	No	Significant)
Amphibian Breeding Habitat (Woodland)	Yes	No	
Woodland Area- sensitive Bird Breeding Habitat	Yes	No	
Shrub/Early Successional Bird Breeding Habitat	Yes	No	
Common Nighthawk	Yes	No	
Eastern Wood-Pewee	Yes	No	
Wood Thrush	Yes	No	
Eastern Musk Turtle	Yes	No	
Mühlenberg's Weissia	Yes	No	
Monarch	Yes	No	
West Virginia White	Yes	No	

<sup>\*</sup>As per Appendix D of the NHA Guide for Renewable Energy Projects (OMNR 2012).

# Superscripts:

<sup>1:</sup> This feature has been treated as significant, as per Appendix C of the NHA Guide (OMNR 2012).

- 2: This habitat has been treated as significant with a commitment to conduct pre-construction surveys.
- 3: This habitat has been treated as significant with no commitment to conduct pre-construction surveys, due to denied site access to the habitat.
- 4: This feature has been treated as significant based on the mature age of this eco-element and the lack of non-native species that would be indicative of disturbance. In order to refrain from coring trees to determine their exact age, this eco-element has been assumed to be old-growth forest. No further surveys are required at this habitat.
- 5: This habitat is located greater than 30m from the Project Location with more potentially impactful existing activities (i.e. agricultural activities, residential properties, and/or Municipal roads) located between the habitat and the Project Location. As such, this habitat will be treated as significant since potential negative effects are negligible relative to existing activities that are located considerably closer to the habitat than the Project Location. No further surveys are required at this habitat.

# 8.0 References

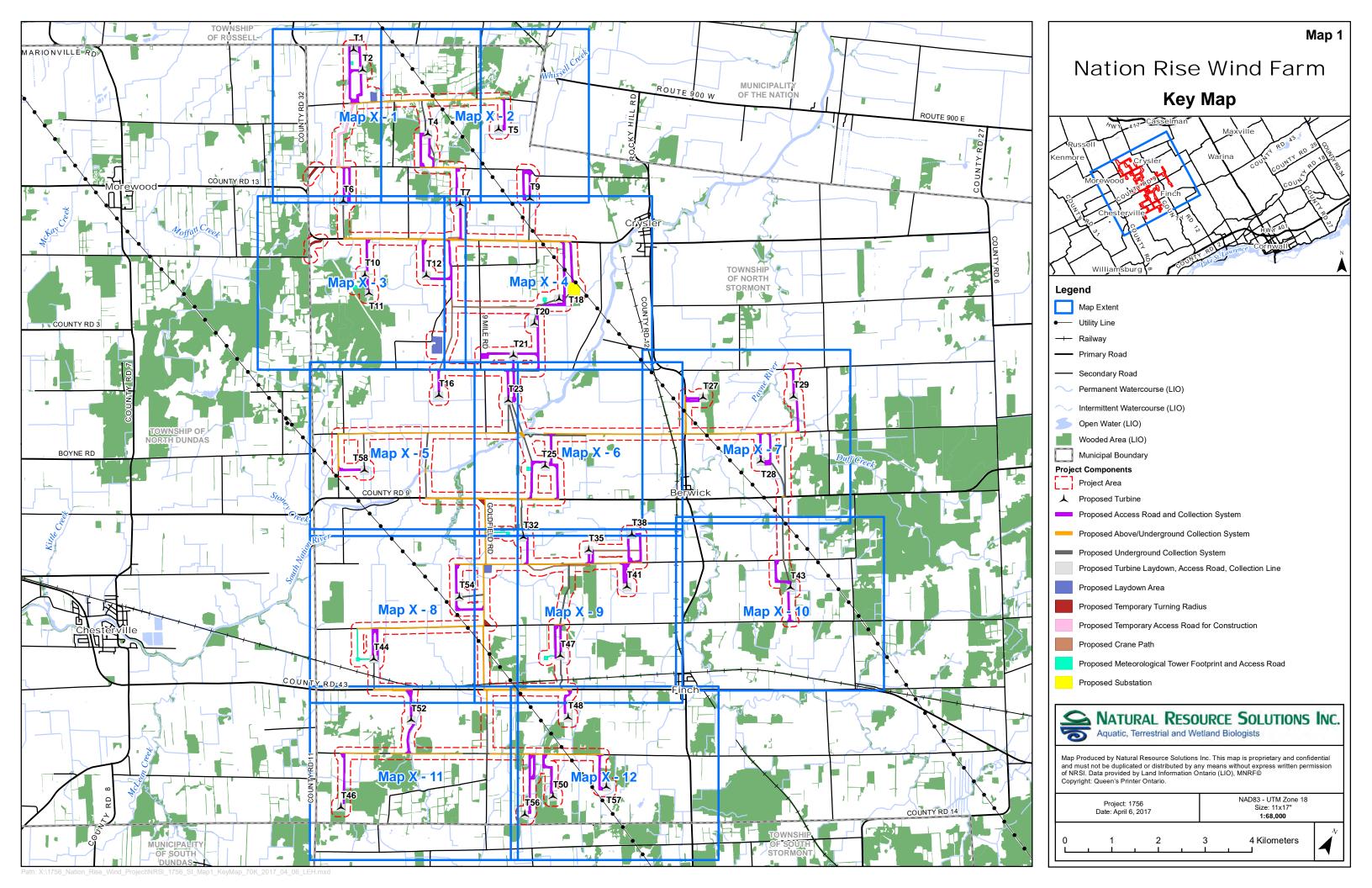
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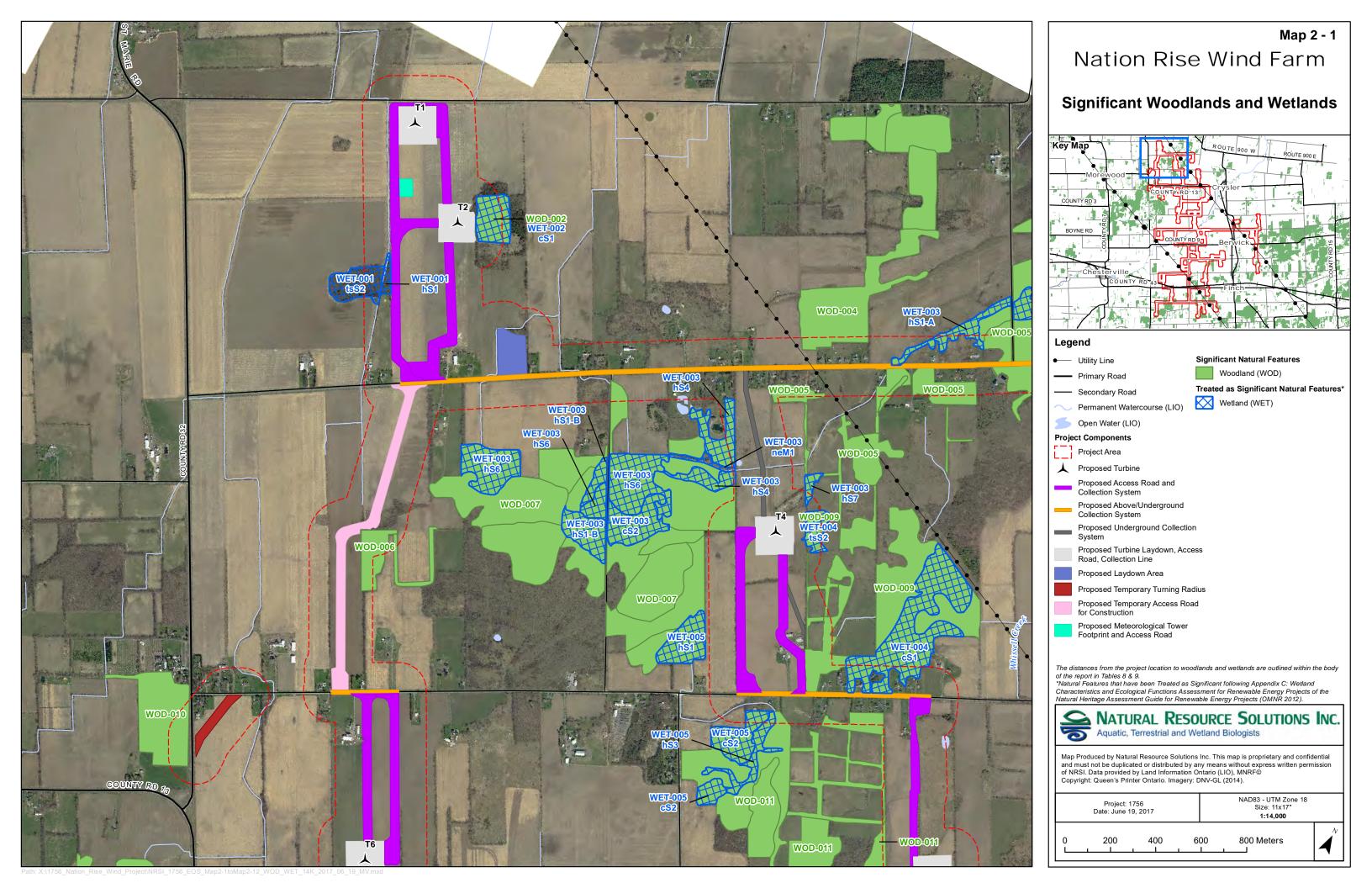
# Internet Sources

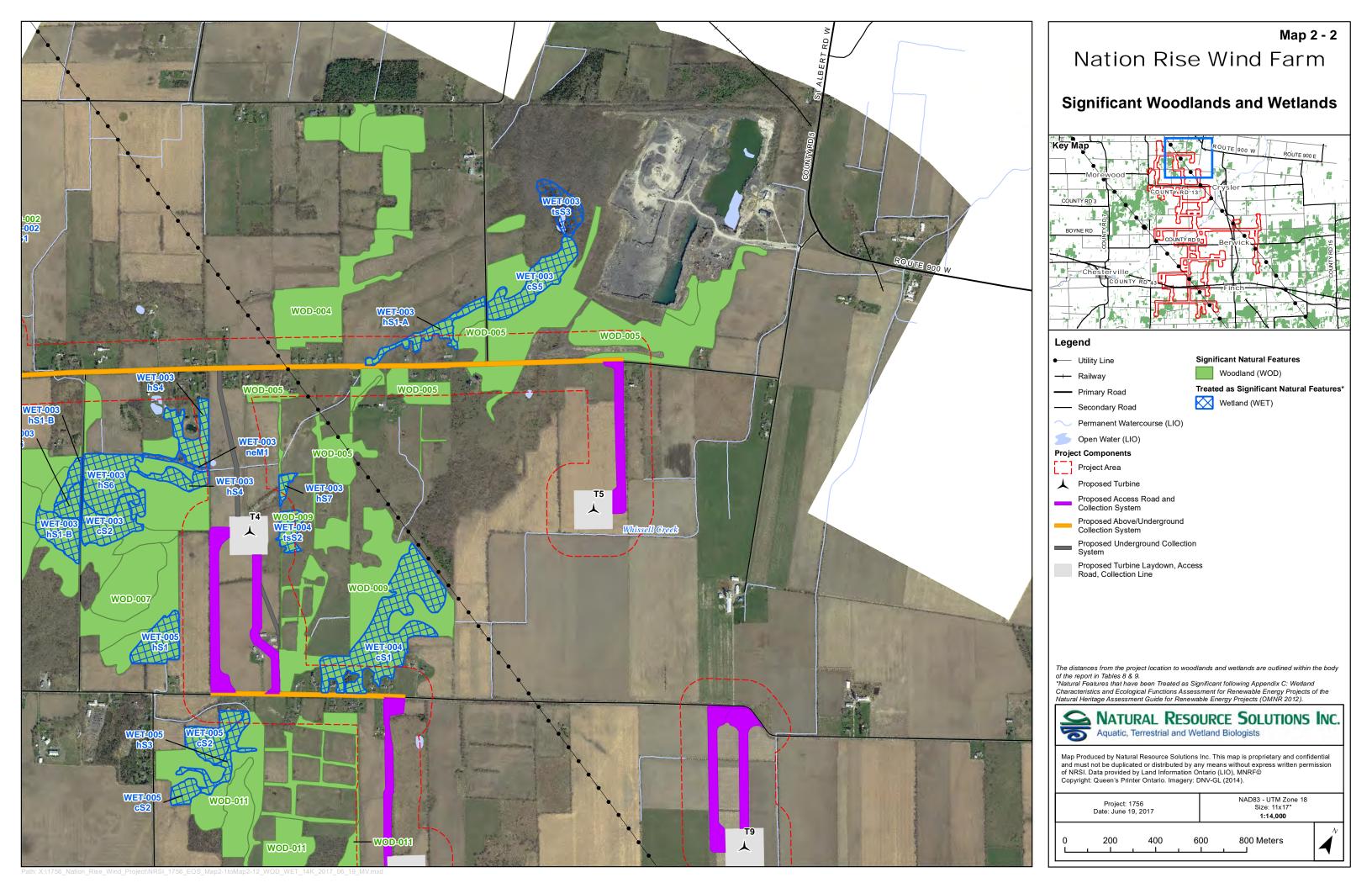
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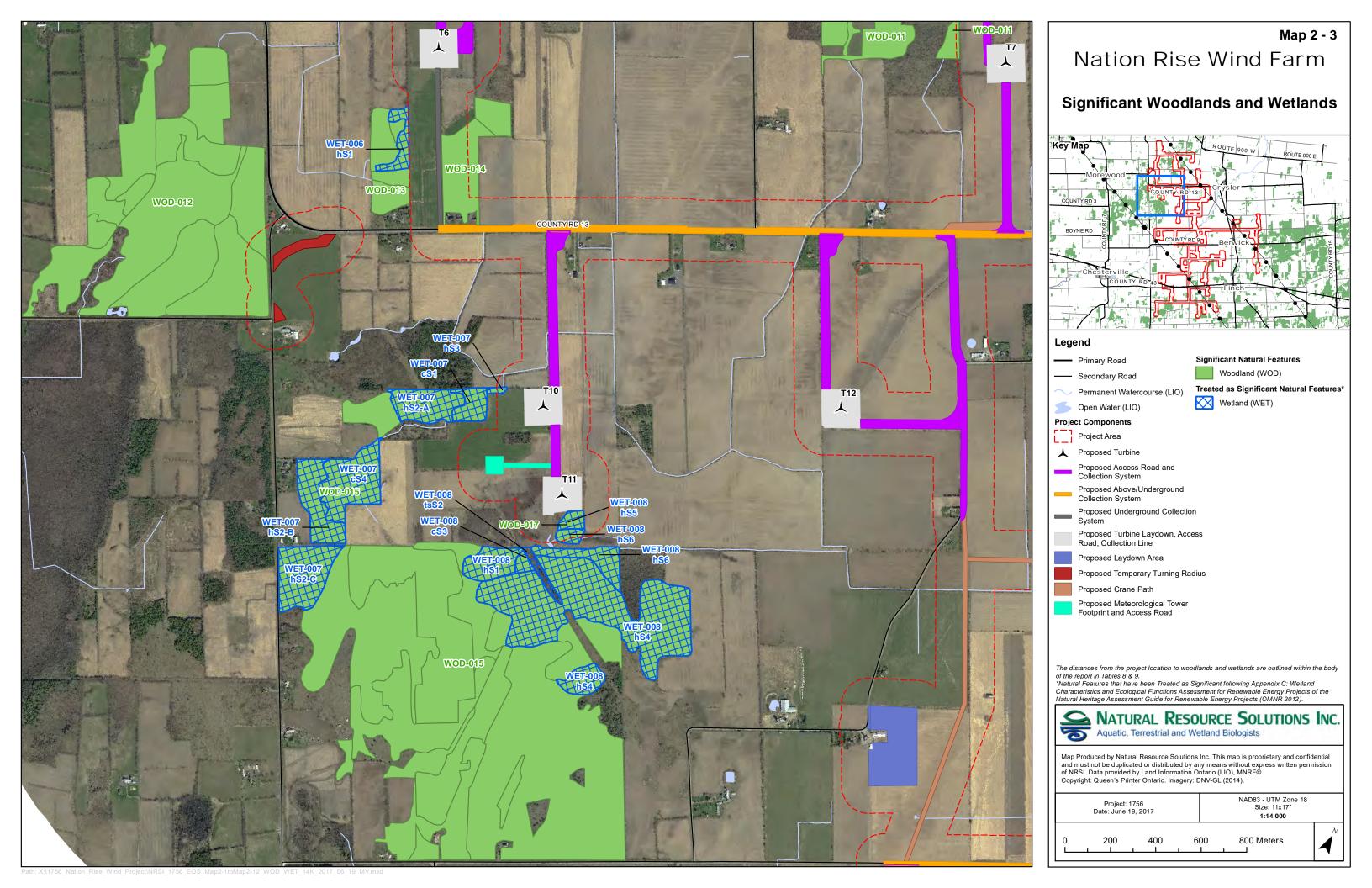


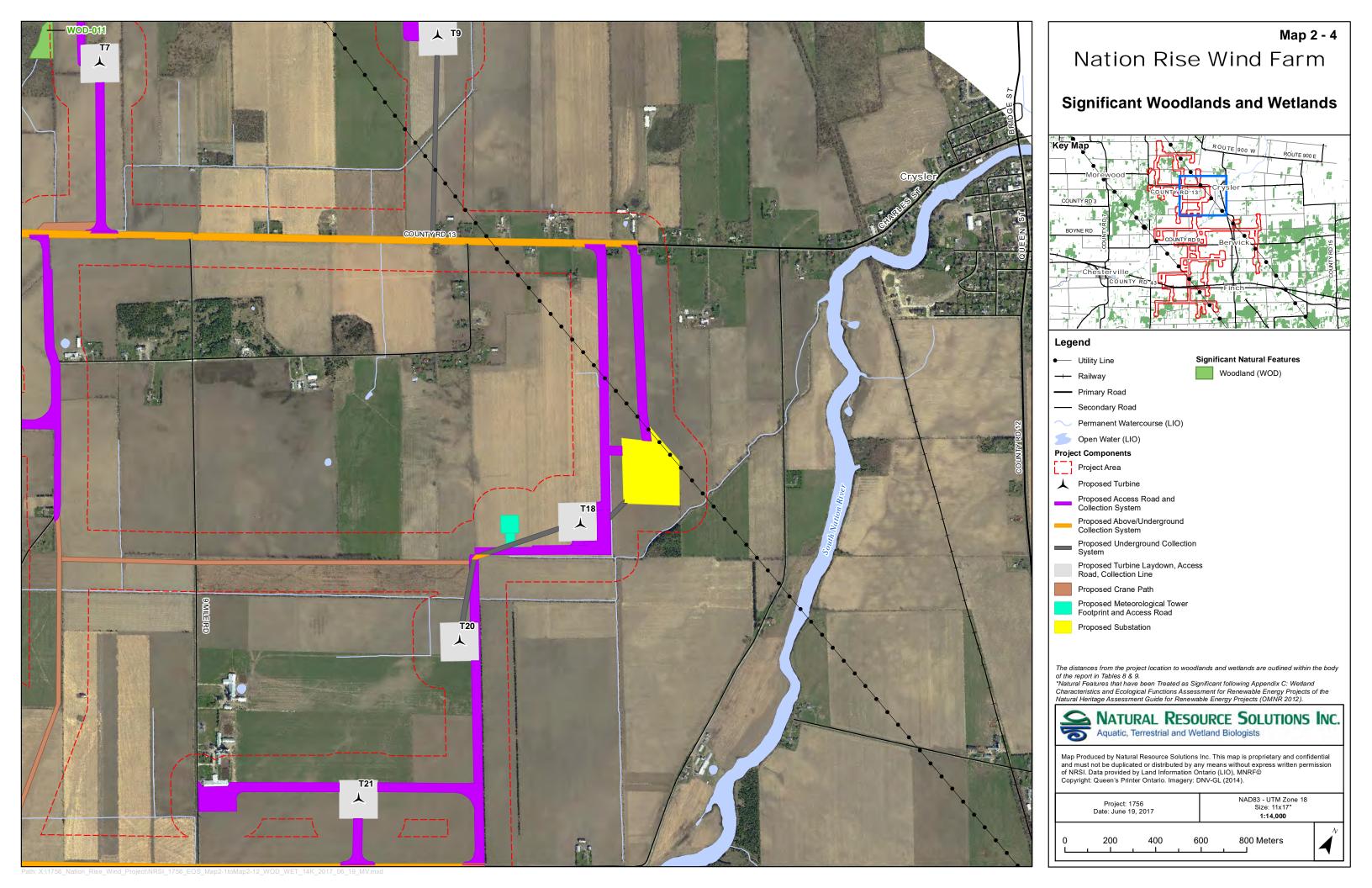


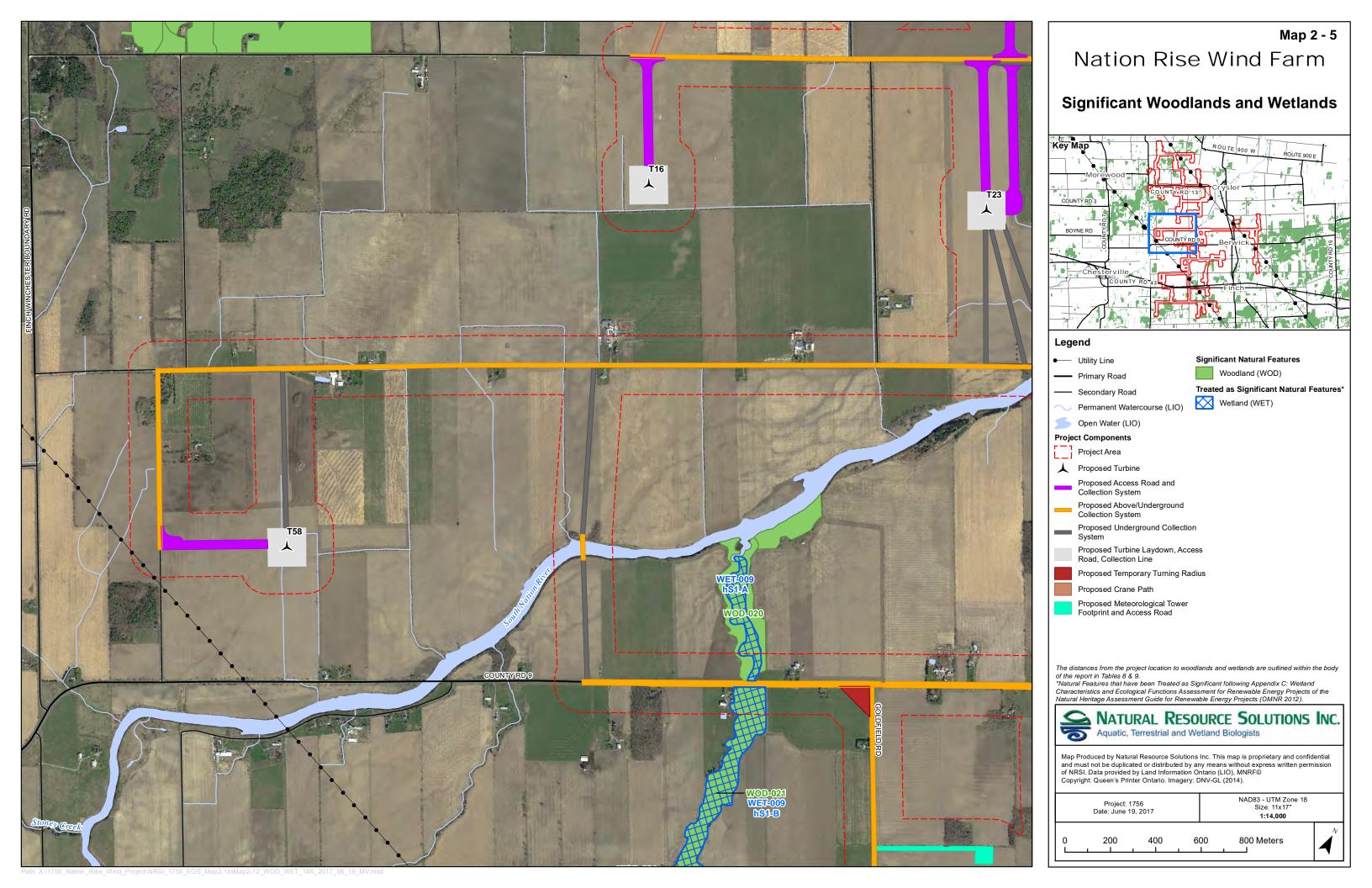


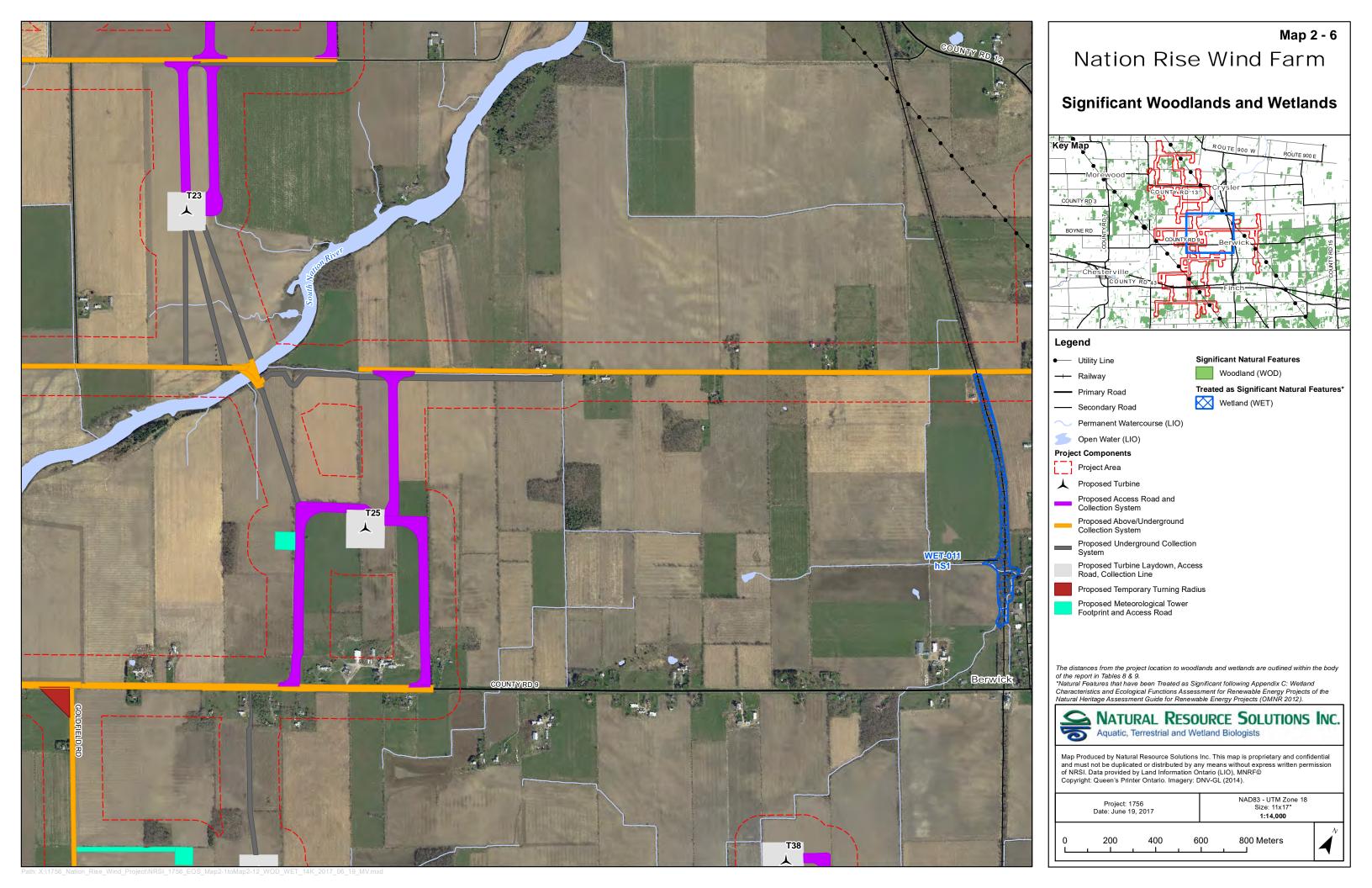


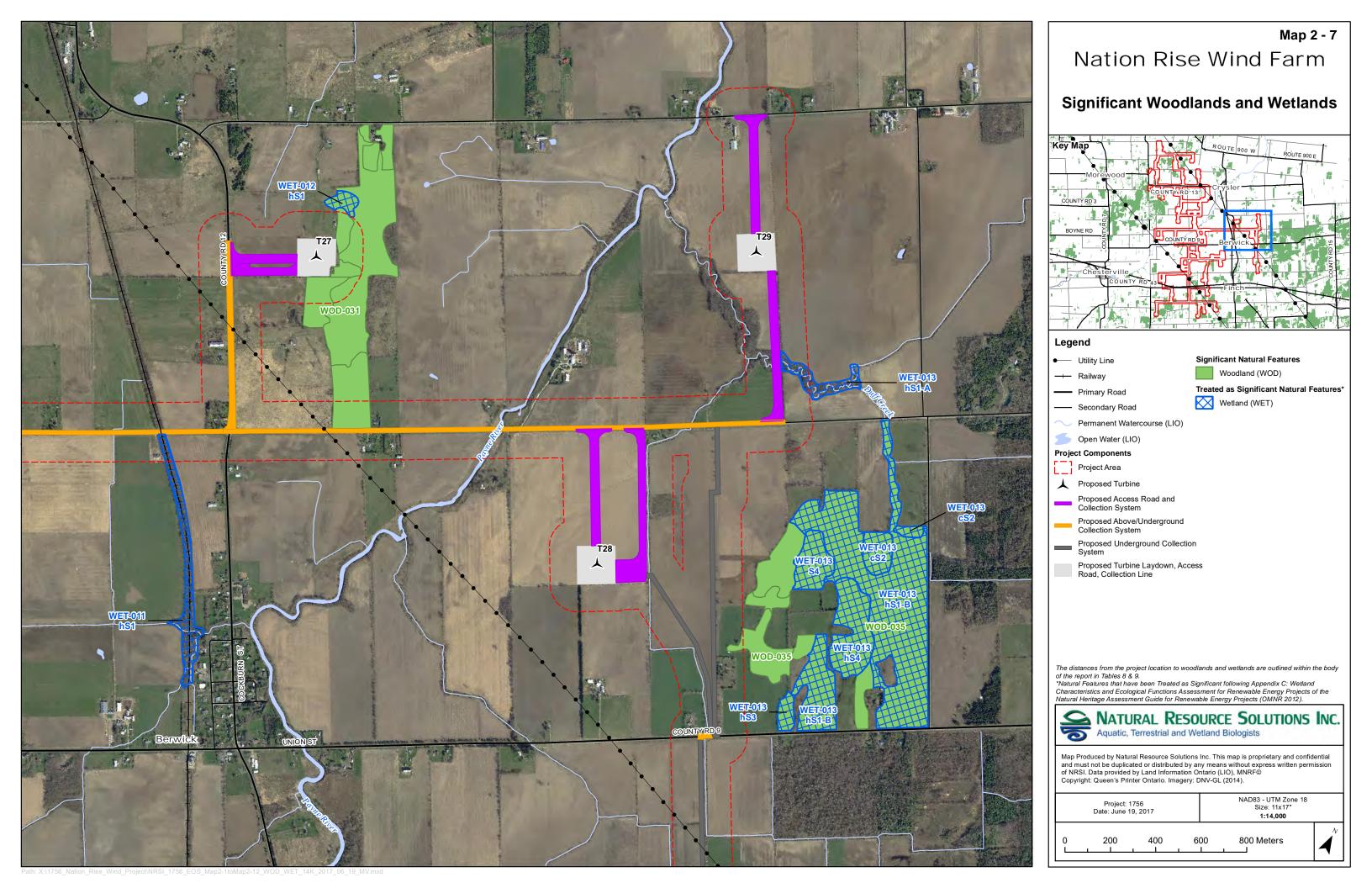


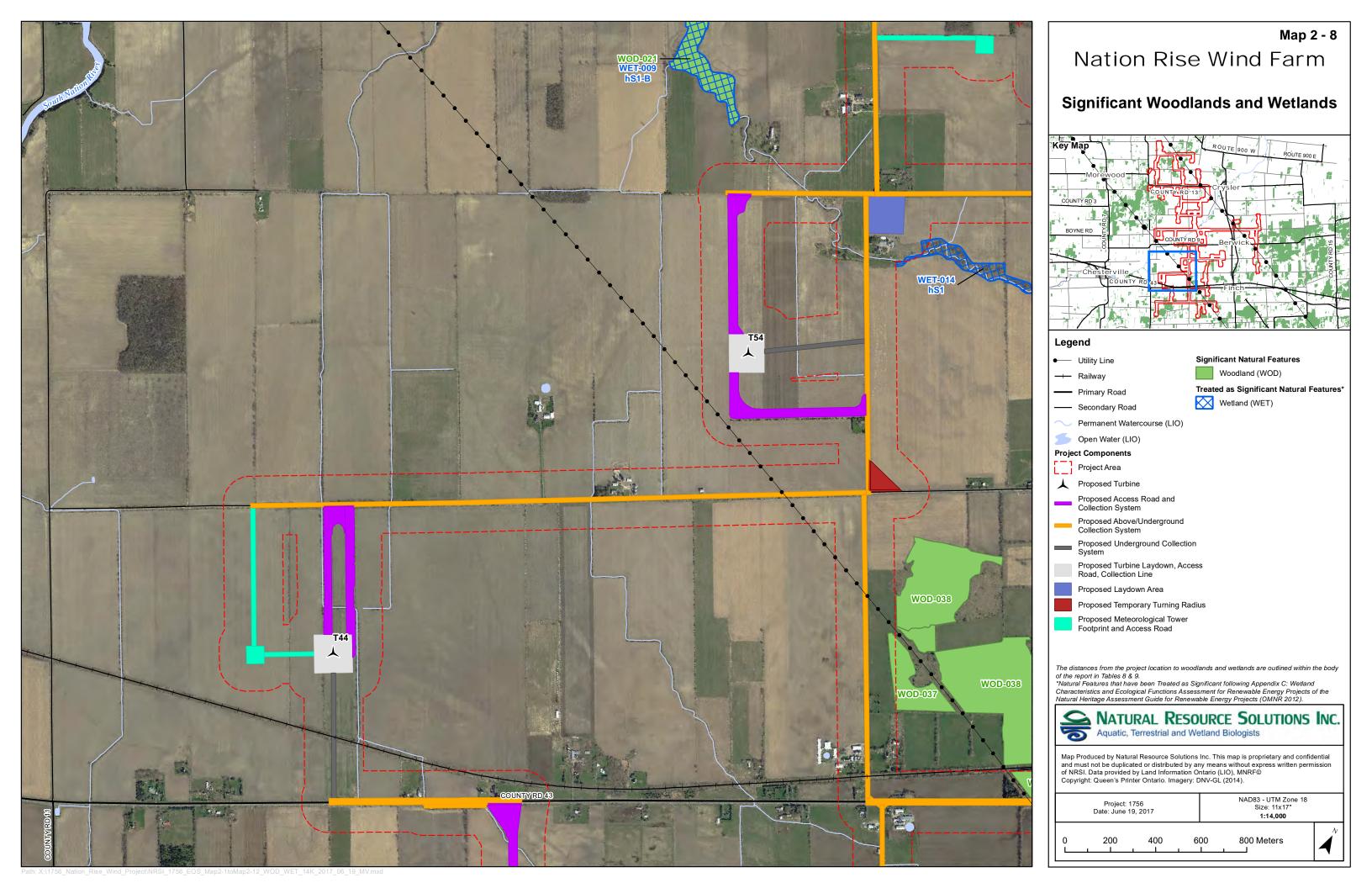


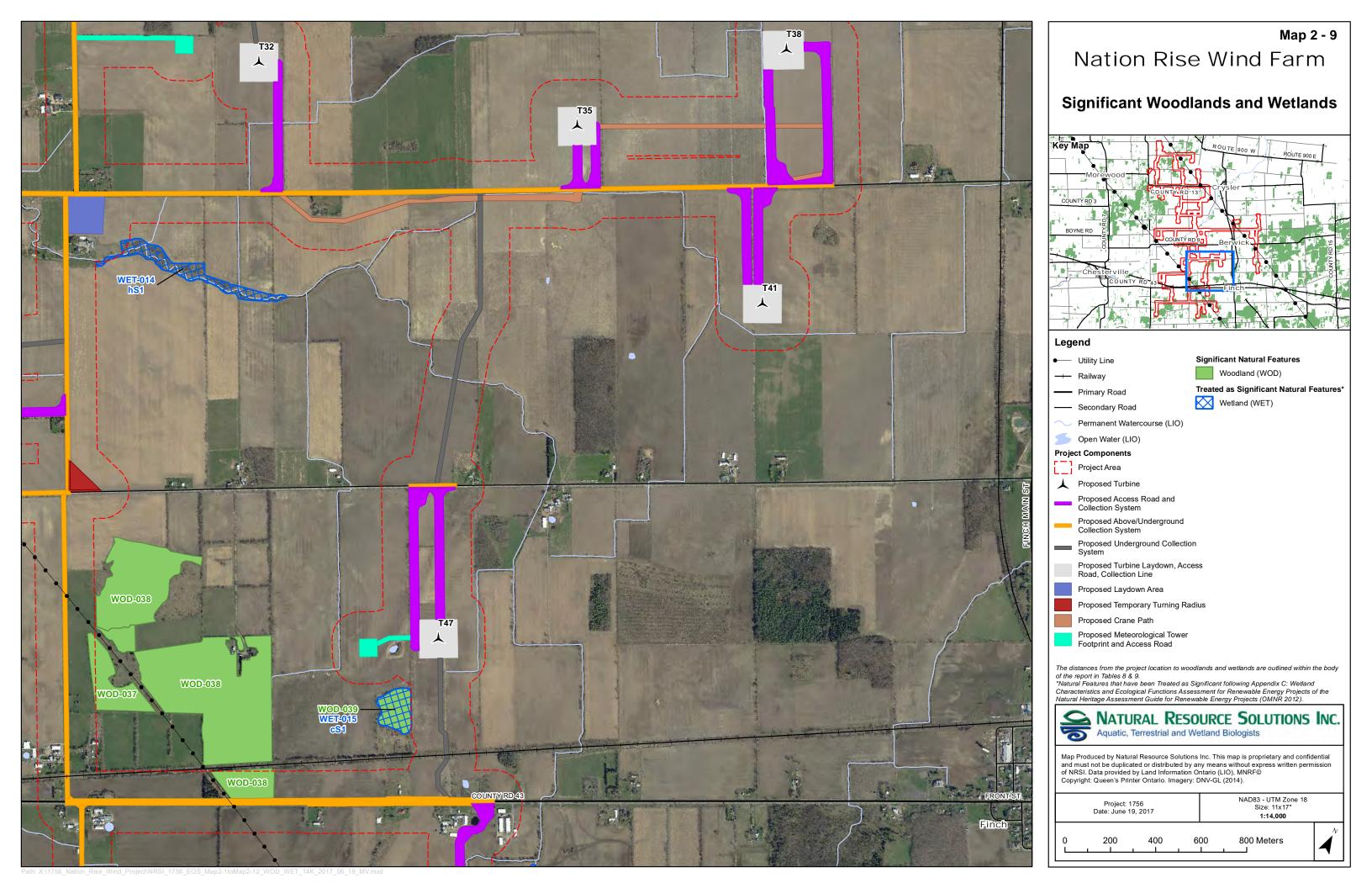


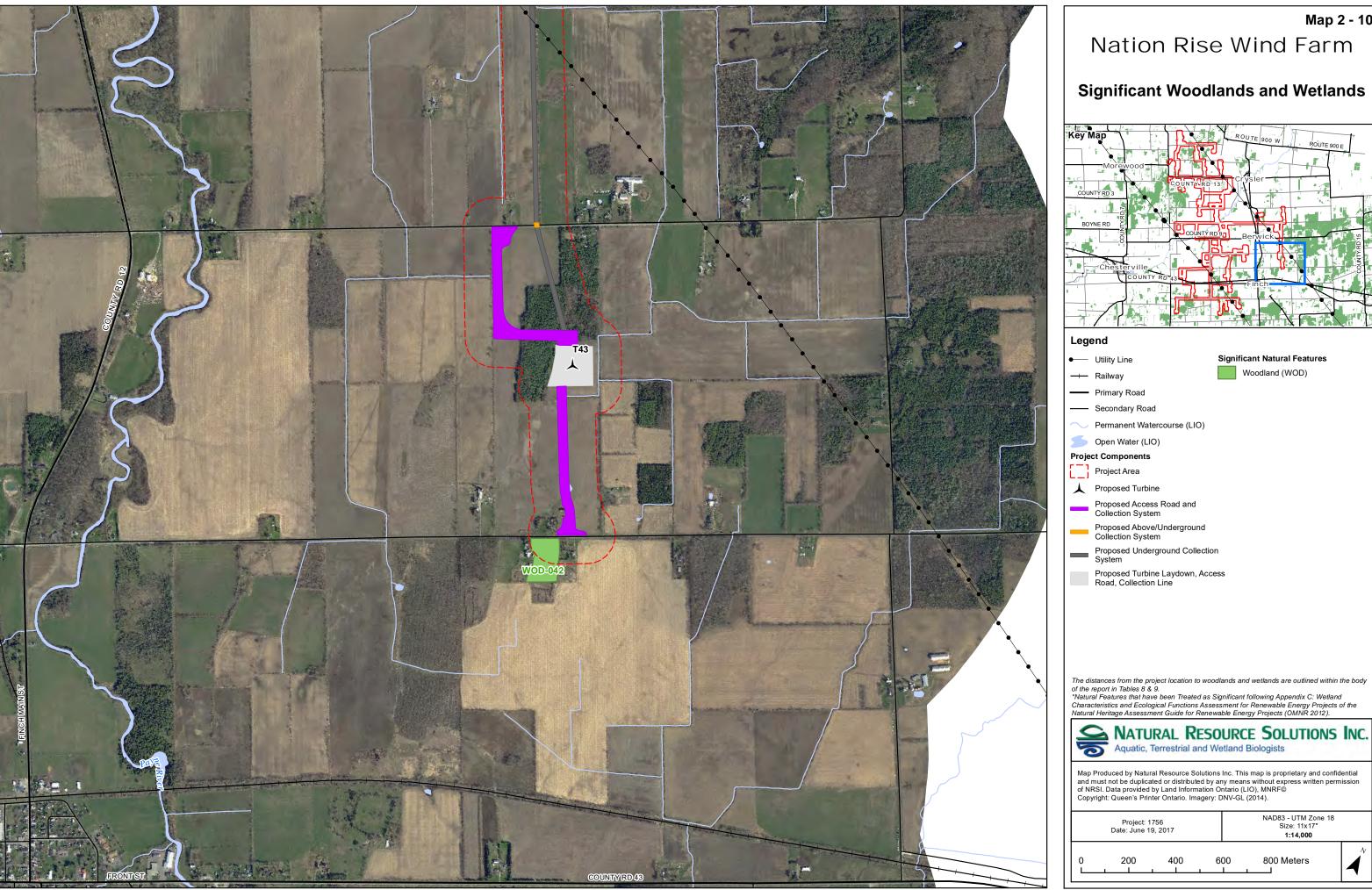








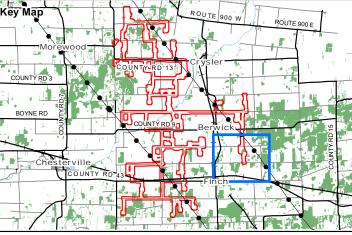




Map 2 - 10

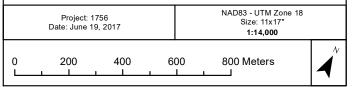
## Nation Rise Wind Farm

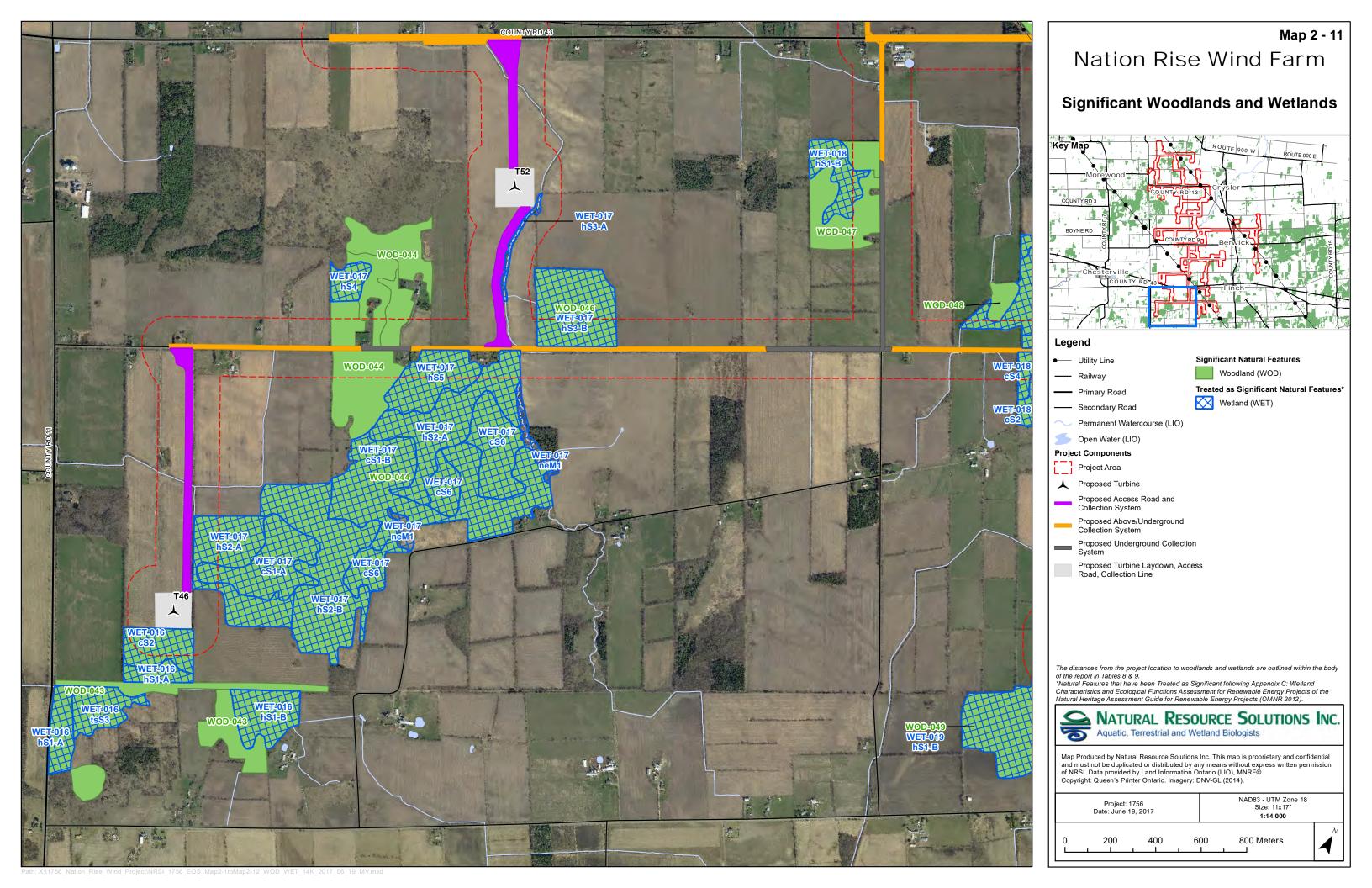
## **Significant Woodlands and Wetlands**

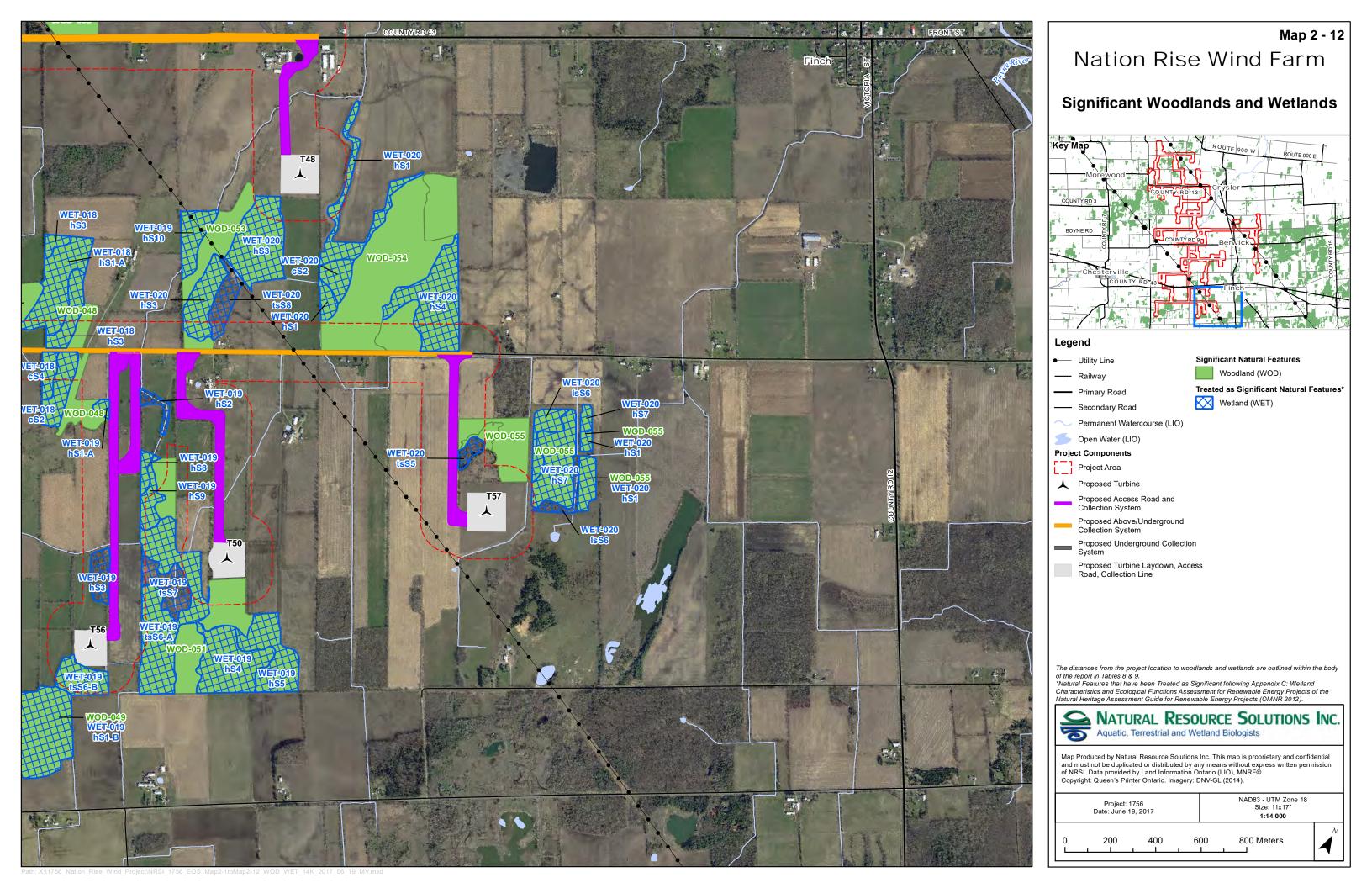




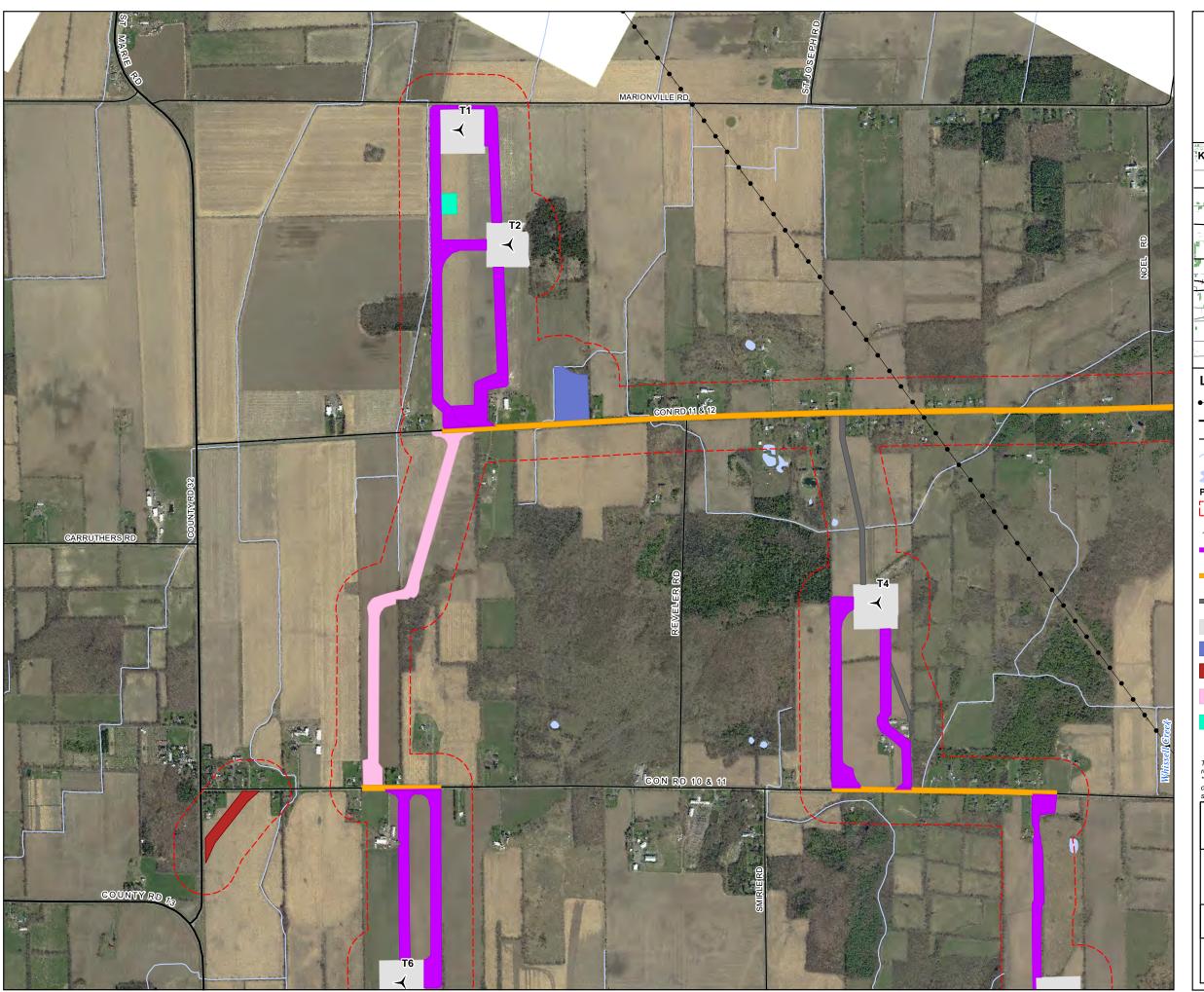
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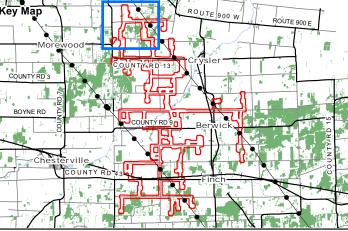




Map 3 - 1

## Nation Rise Wind Farm

#### **Significant Seasonal Concentration Areas**



#### Legend

- Utility Line
- --- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)

#### **Project Components**

Project Area

▲ Proposed Turbine

Proposed Access Road and Collection System

Proposed Above/Underground Collection System

Proposed Underground Collection System

> Proposed Turbine Laydown, Access Road, Collection Line

Proposed Laydown

Proposed Temporary Turning Radius

Proposed Temporary Access Road for Construction

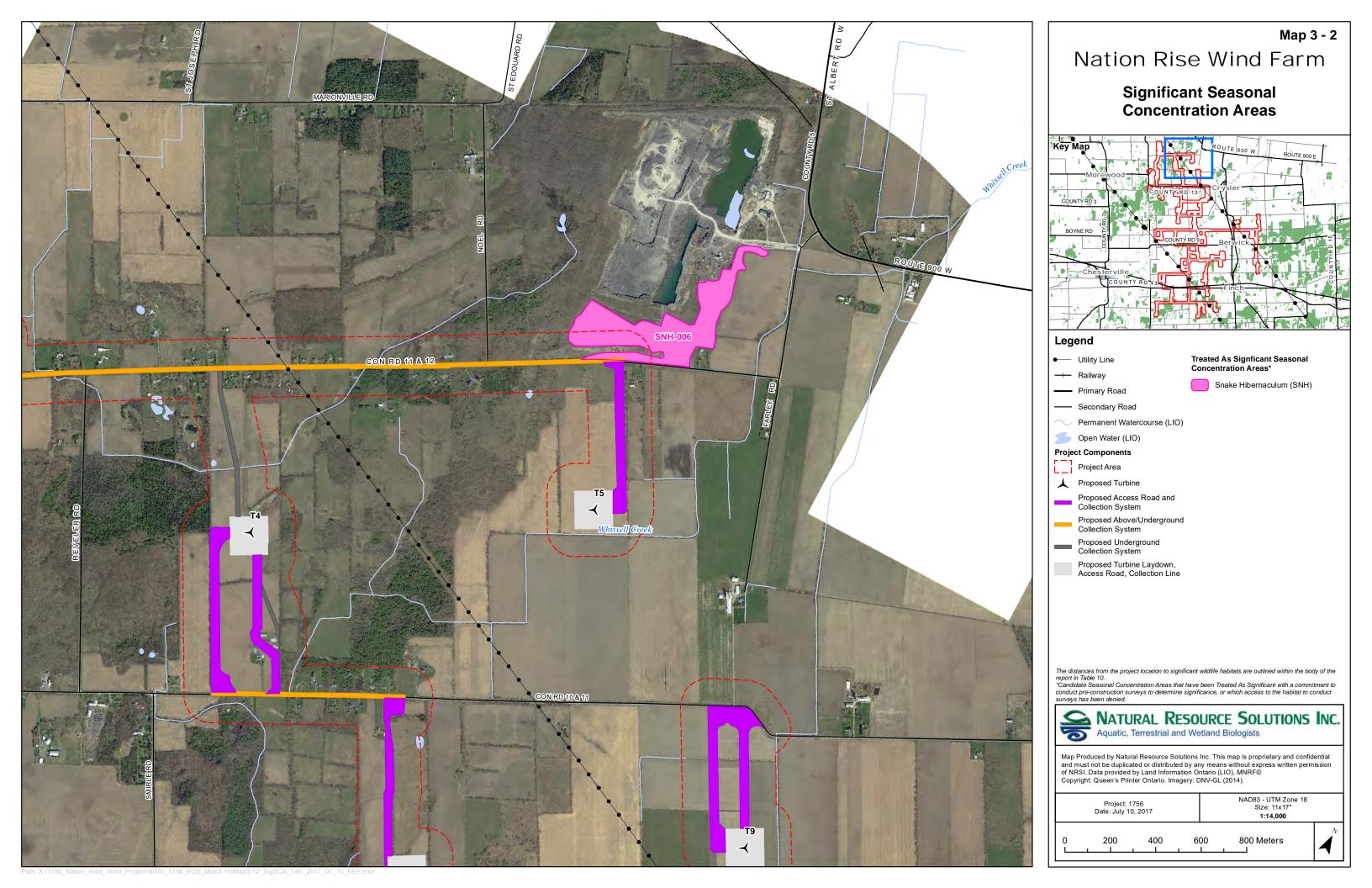
Proposed Meteorological Tower Footprint and Access Road

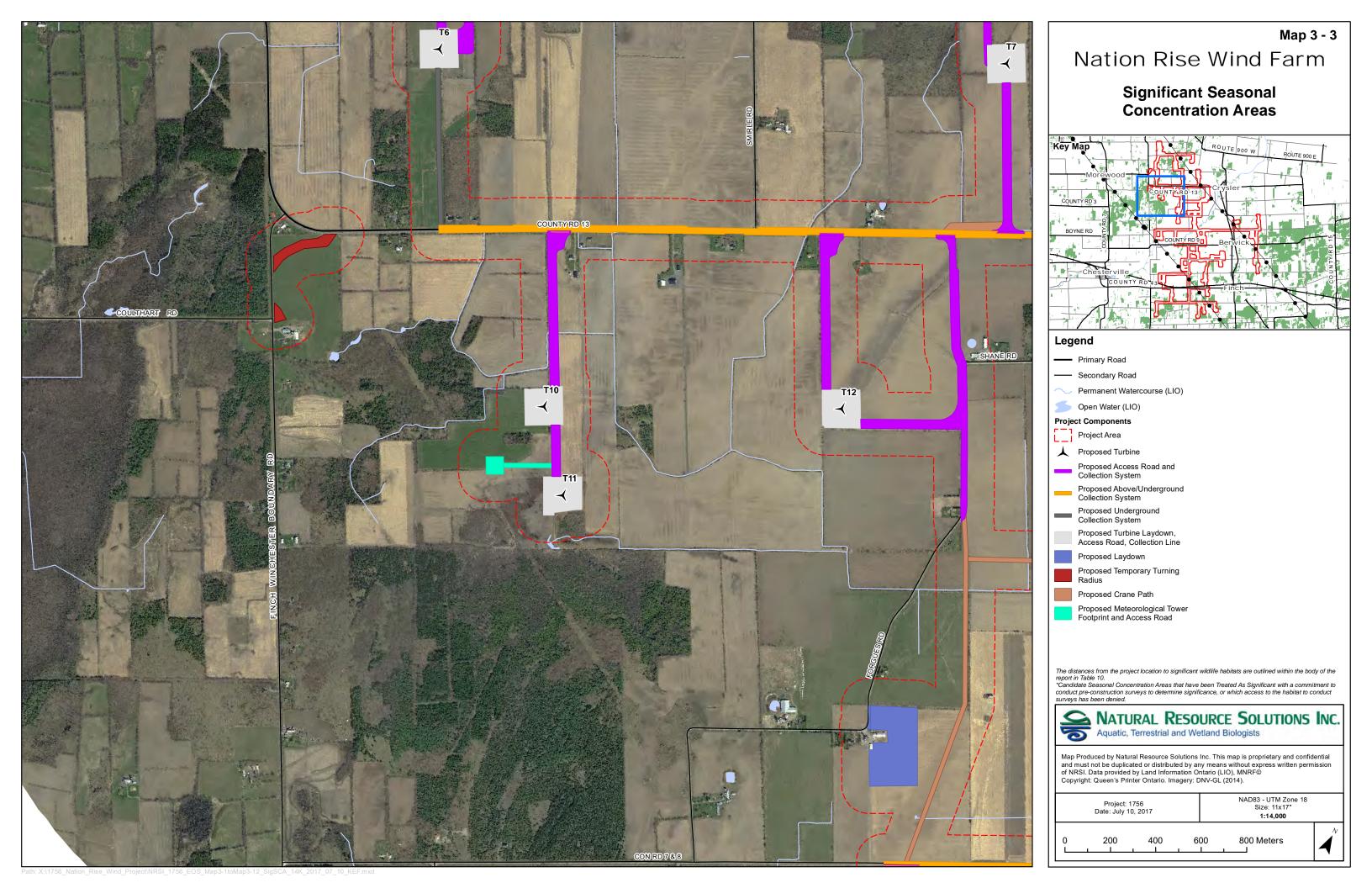
The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.
"Candidate Seasonal Concentration Areas that have been Treated As Significant with a commitment to conduct pre-construction surveys to determine significance, or which access to the habitat to conduct surveys has been denied.

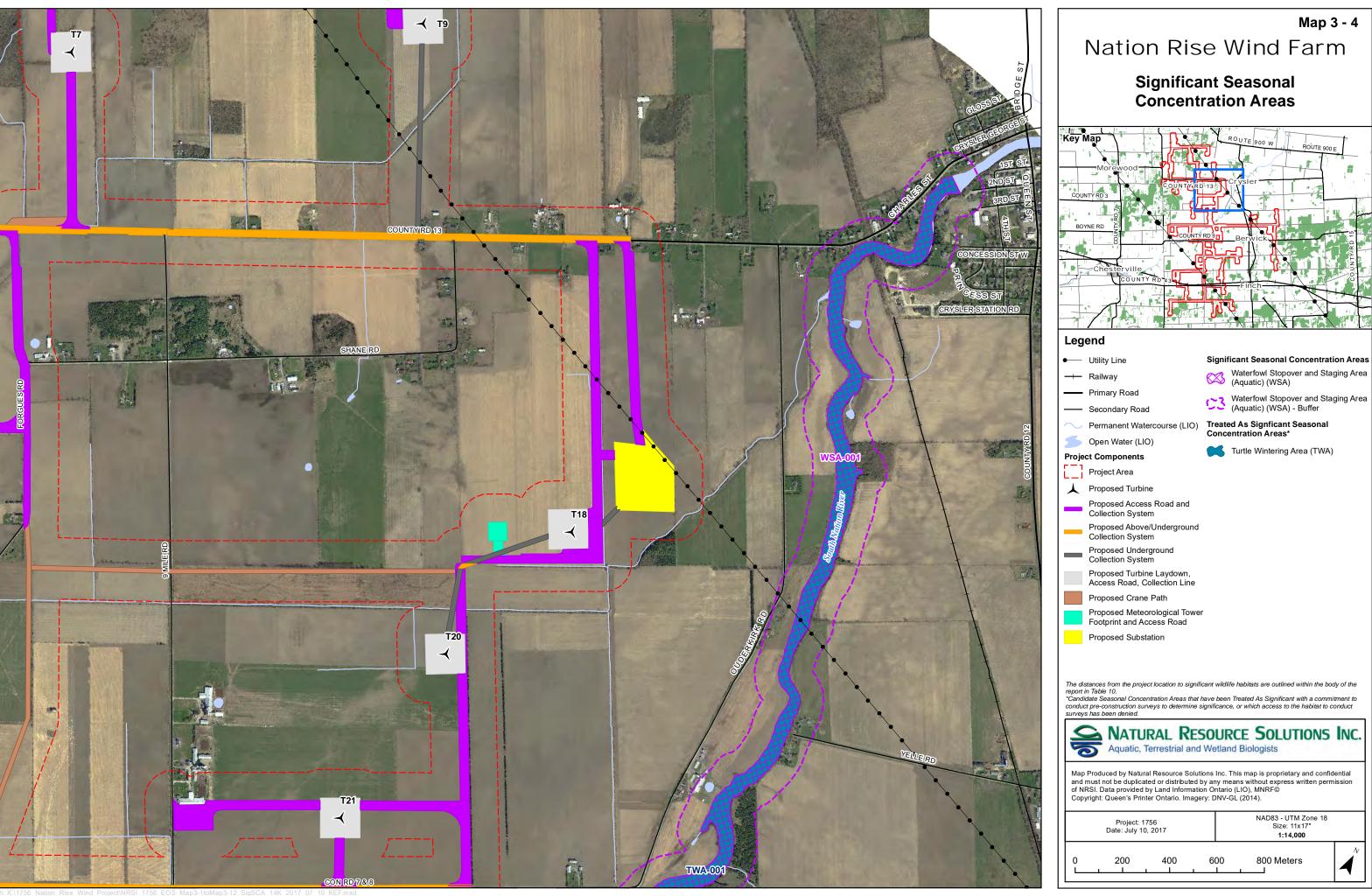


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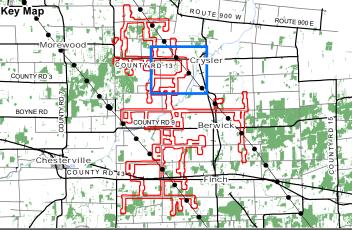
NAD83 - UTM Zone 18 Size: 11x17" 1:14,000 Project: 1756 Date: July 10, 2017 800 Meters







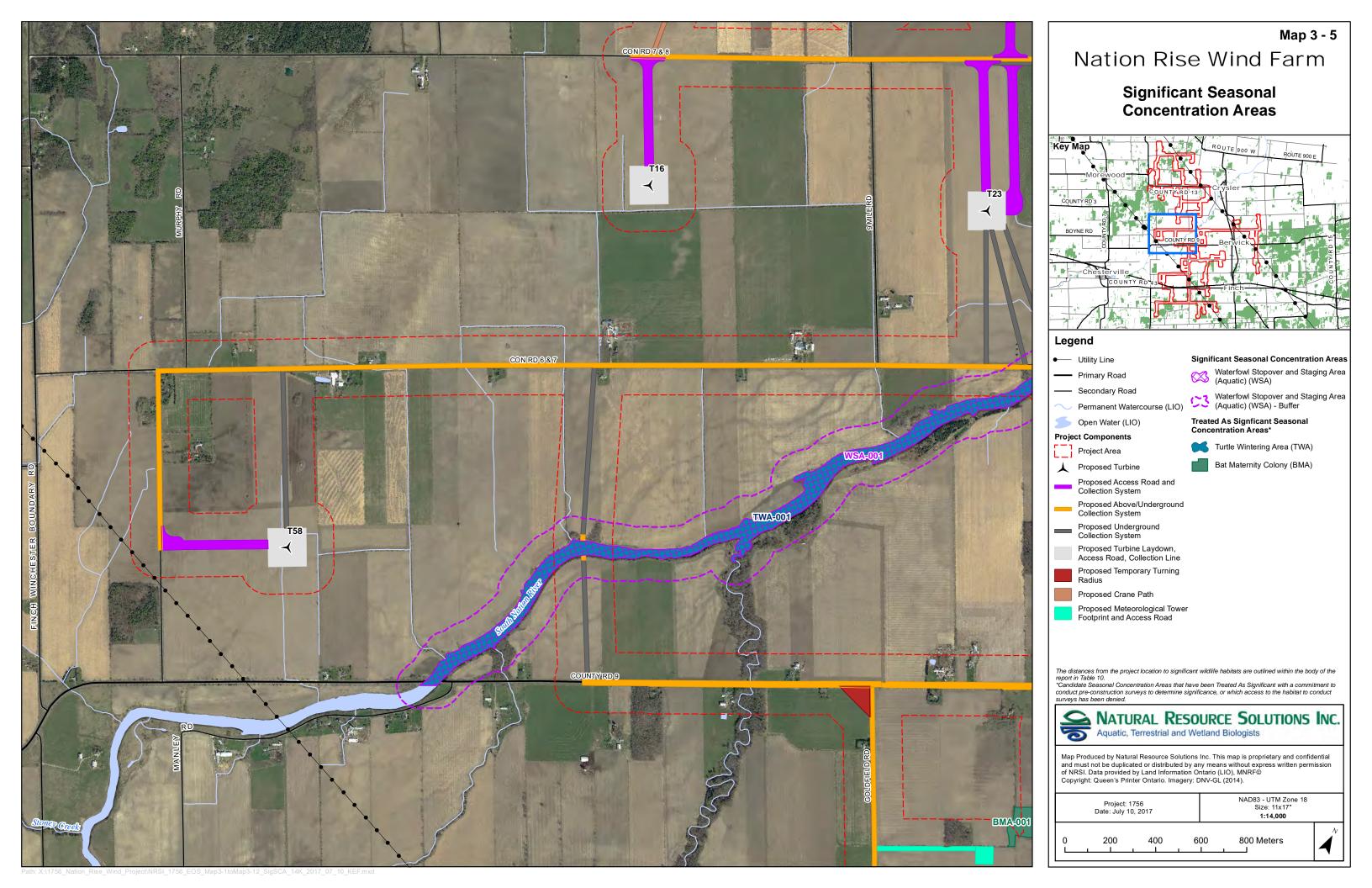
#### **Significant Seasonal Concentration Areas**

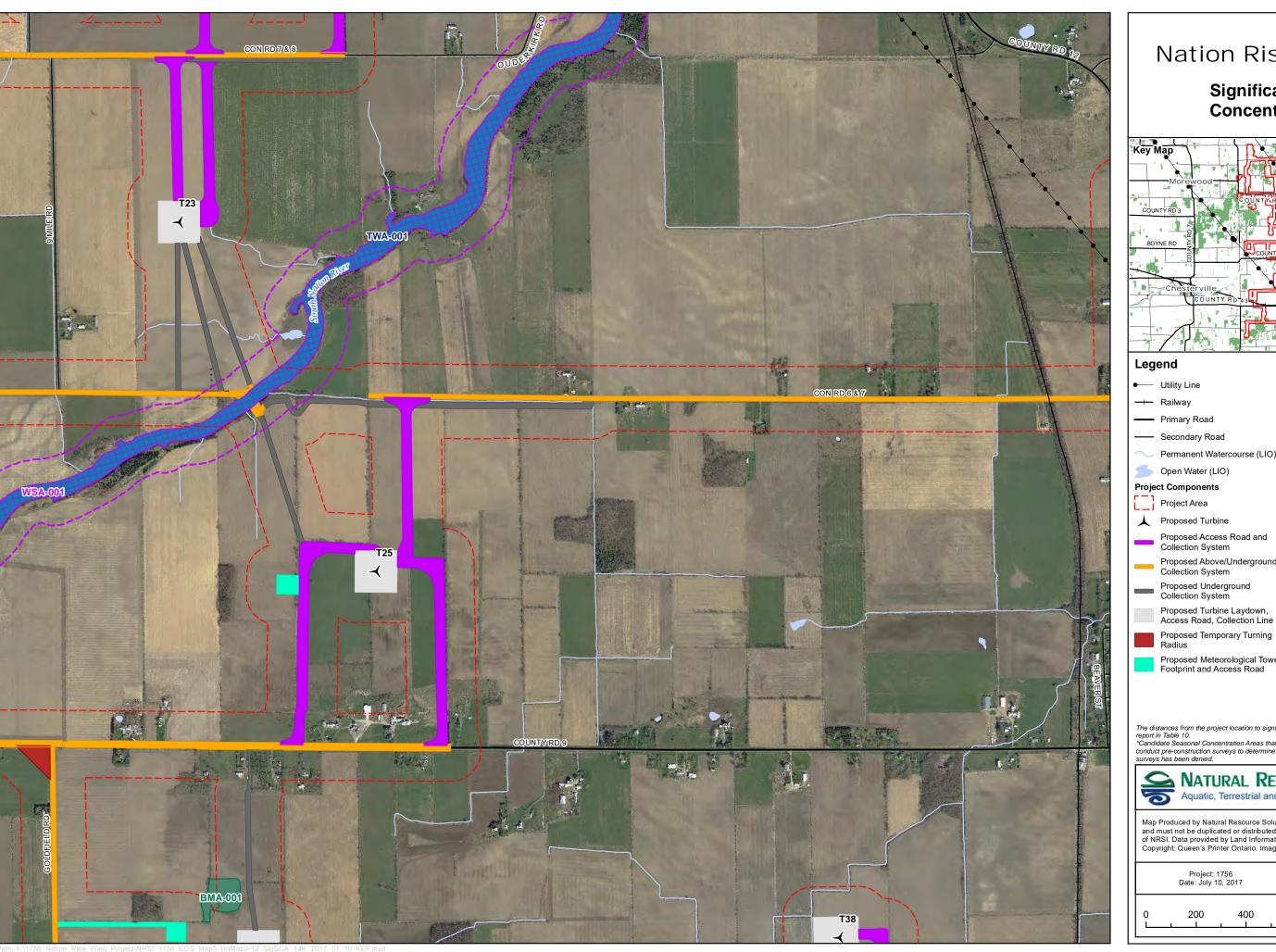




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NAD83 - UTM Zone 18 Size: 11x17" 1:14,000 800 Meters

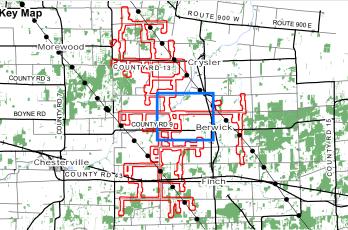




Map 3 - 6

## Nation Rise Wind Farm

#### **Significant Seasonal Concentration Areas**



Primary Road

— Secondary Road

#### **Project Components**

Proposed Access Road and Collection System

Proposed Above/Underground Collection System

Proposed Underground Collection System

Proposed Turbine Laydown, Access Road, Collection Line

Proposed Temporary Turning

Proposed Meteorological Tower Footprint and Access Road

#### Significant Seasonal Concentration Areas

Waterfowl Stopover and Staging Area (Aquatic) (WSA)

Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer

Treated As Signficant Seasonal Concentration Areas\*

Turtle Wintering Area (TWA)

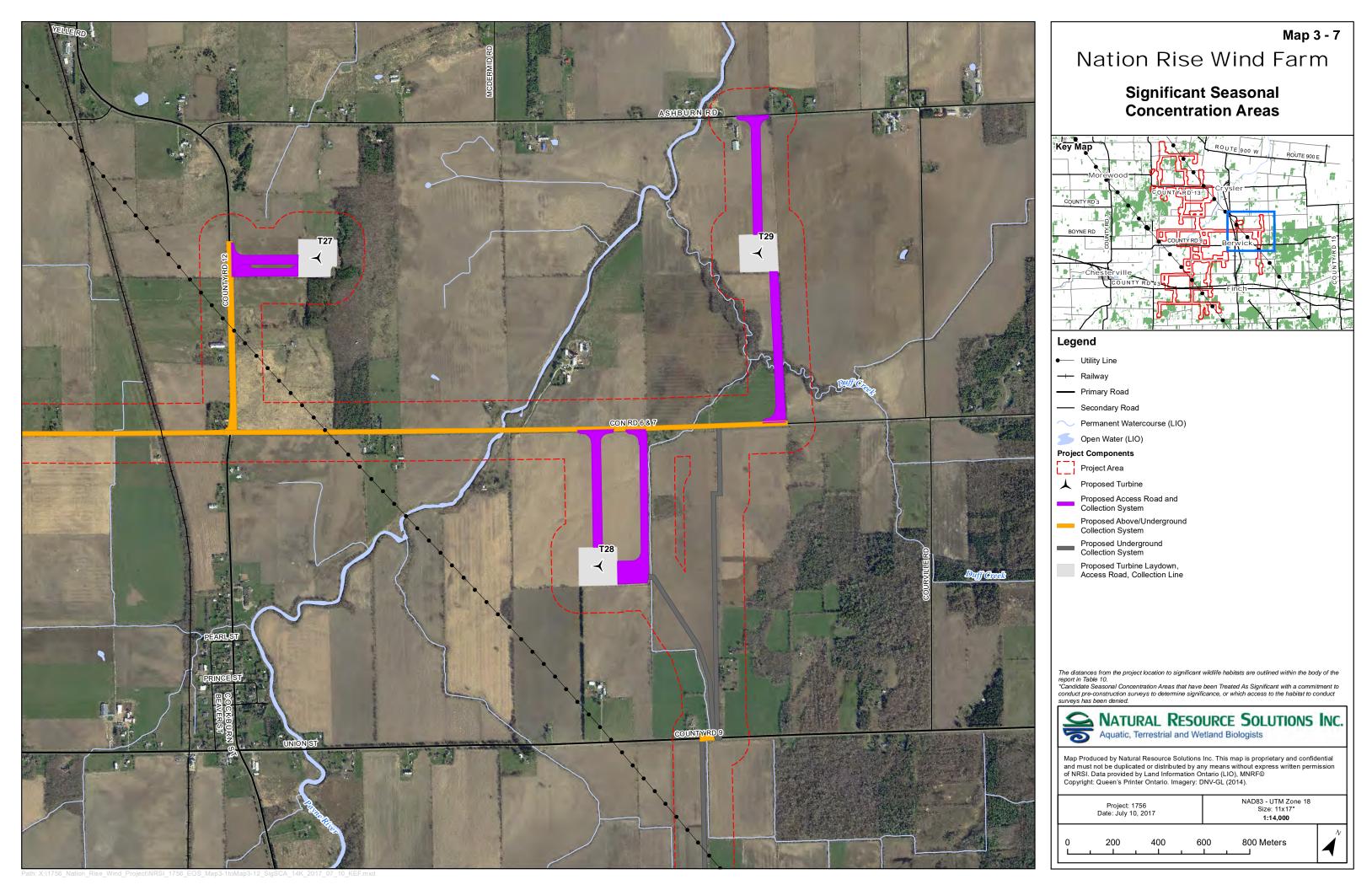
Bat Maternity Colony (BMA)

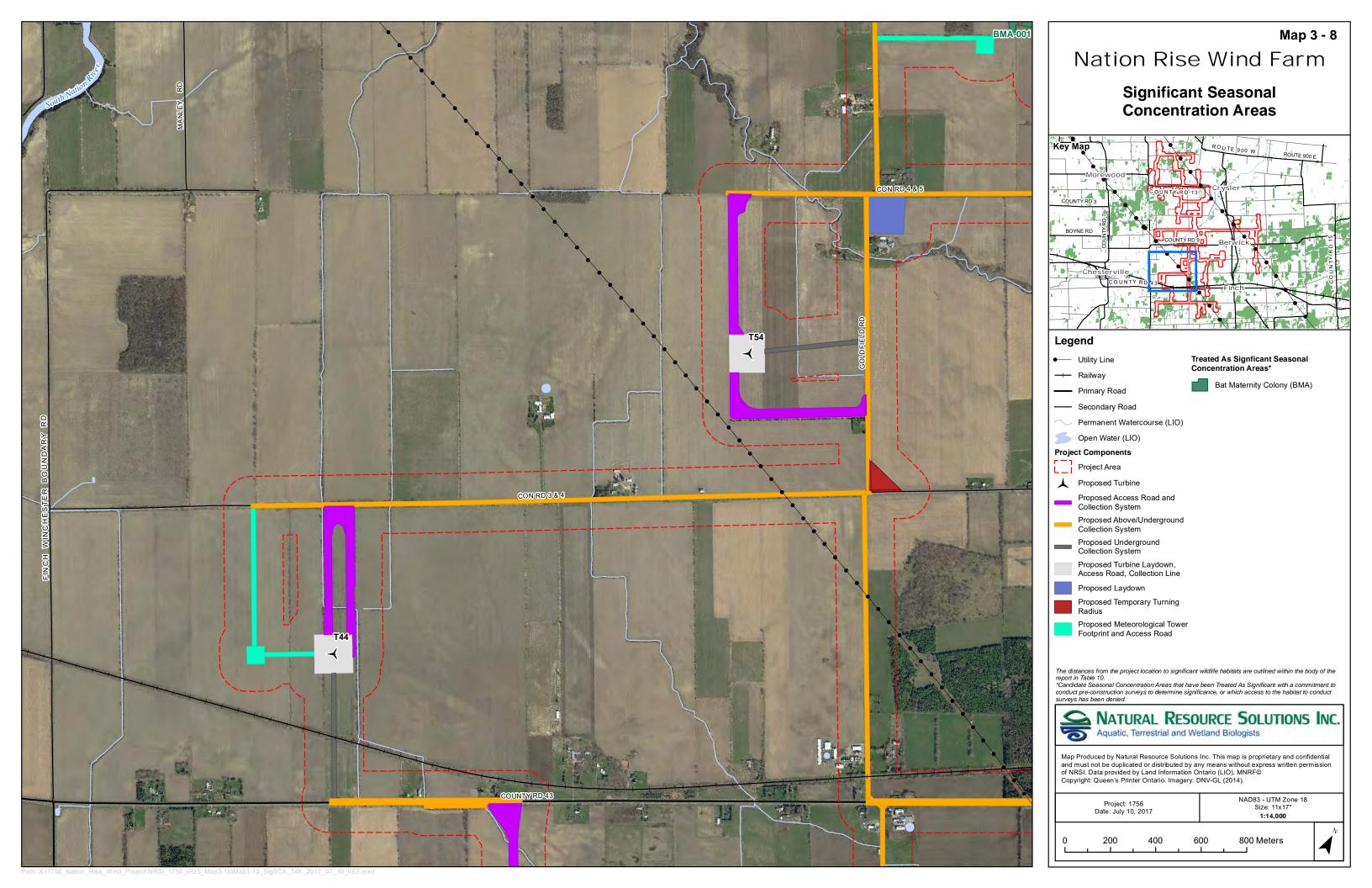
The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.
"Candidate Seasonal Concentration Areas that have been Treated As Significant with a commitment to conduct pre-construction surveys to determine significance, or which access to the habitat to conduct surveys has been denied.

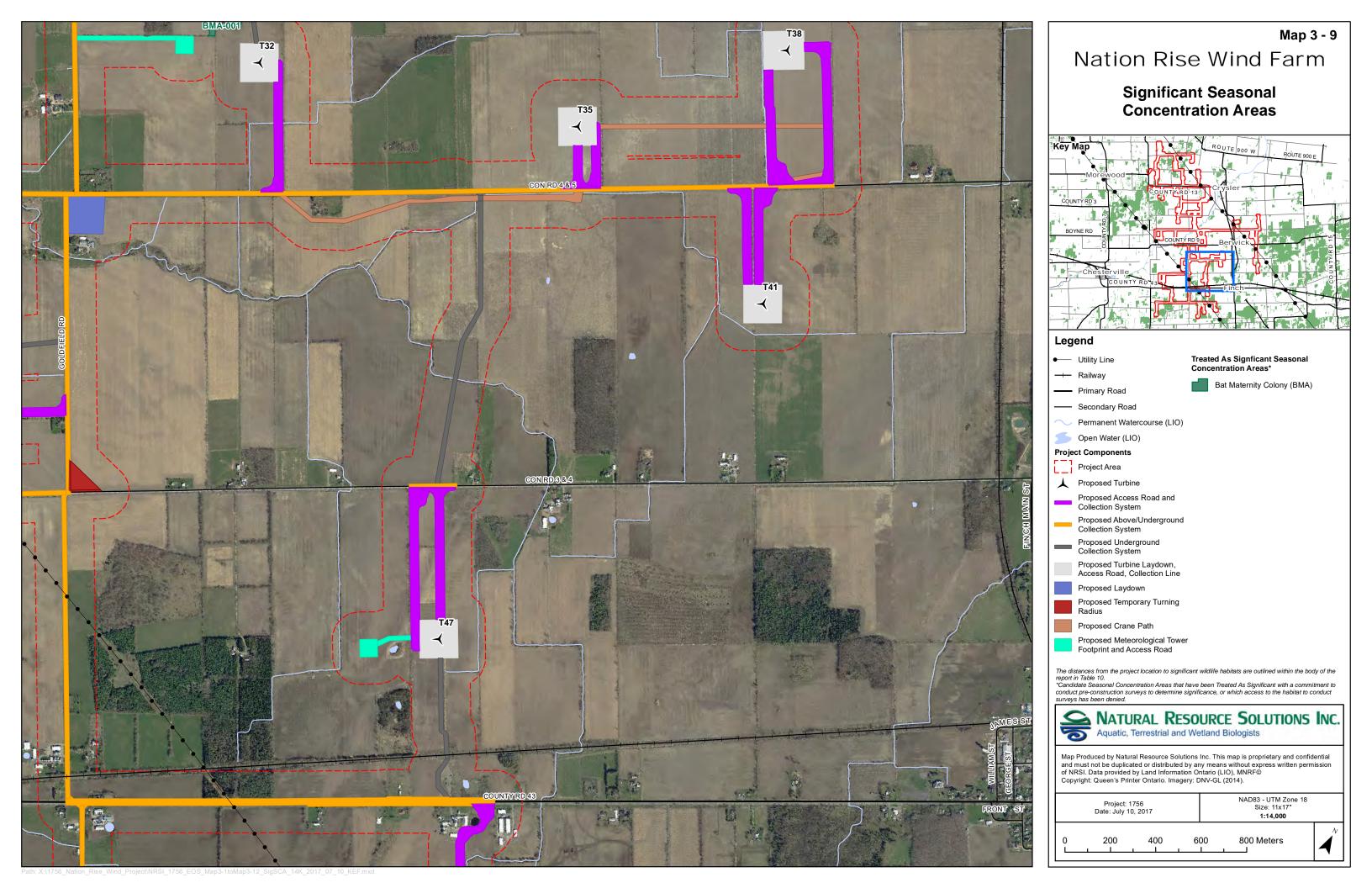


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NAD83 - UTM Zone 18 Size: 11x17" 1:14,000 Project: 1756 Date: July 10, 2017 800 Meters



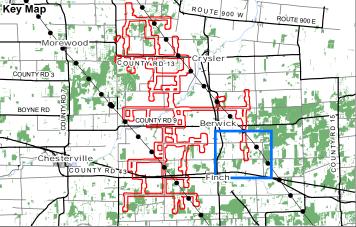




Map 3 - 10

## Nation Rise Wind Farm

#### **Significant Seasonal Concentration Areas**



#### Legend

Utility Line

— Railway

Primary Road

- Secondary Road

Permanent Watercourse (LIO)

Open Water (LIO)

#### **Project Components**

Project Area

Proposed Access Road and Collection System

Proposed Above/Underground Collection System

Proposed Underground Collection System

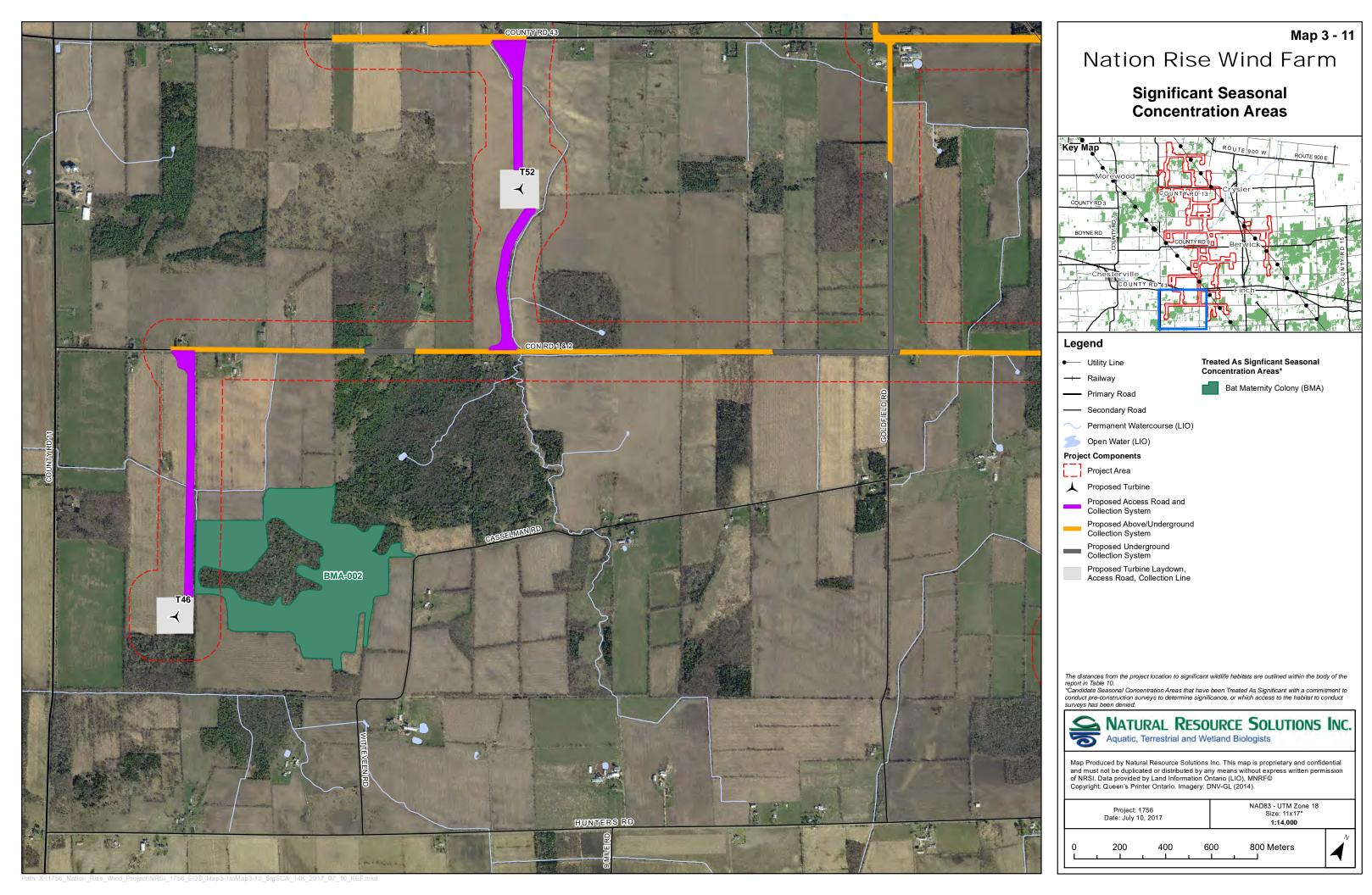
Proposed Turbine Laydown, Access Road, Collection Line

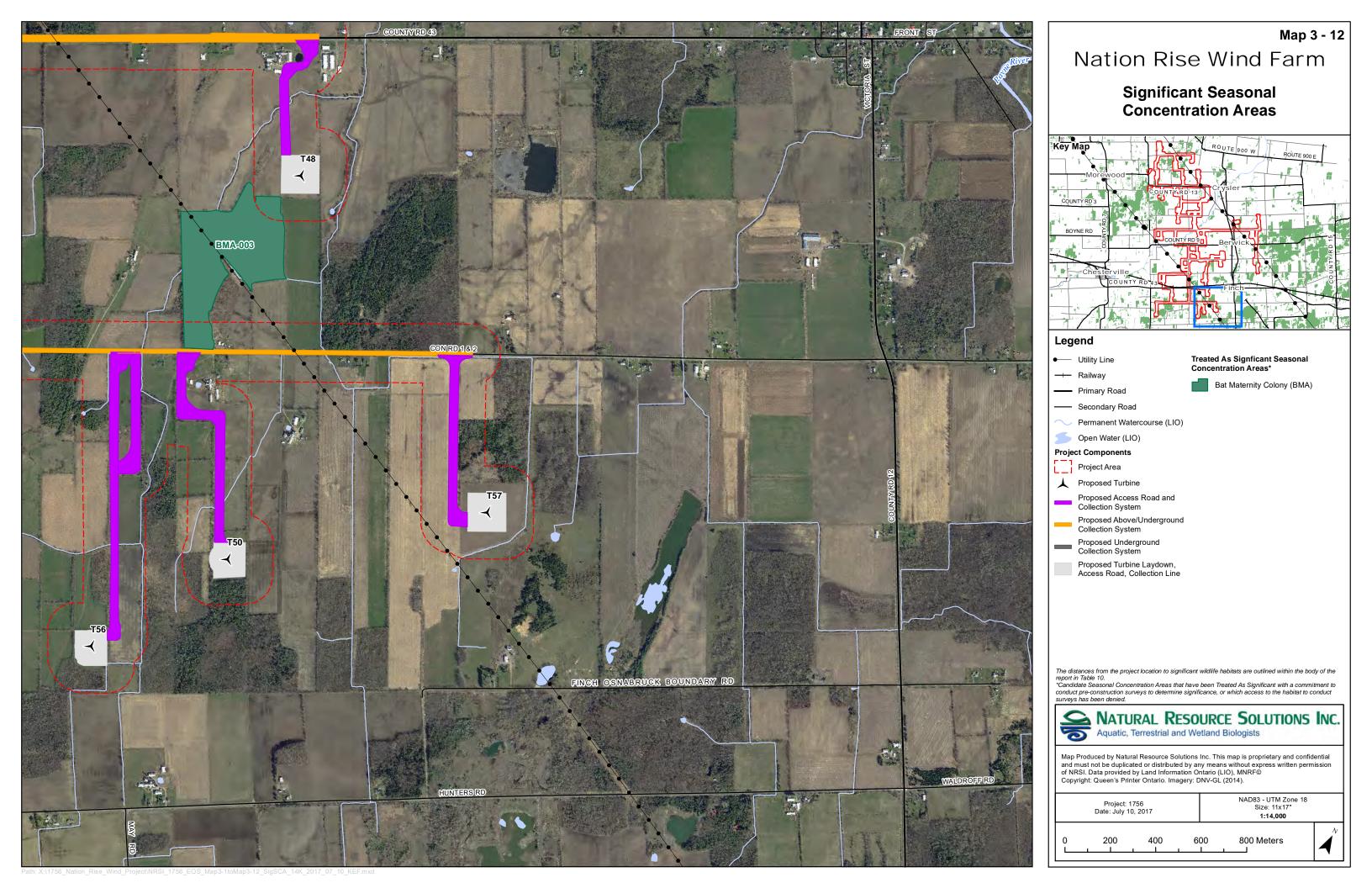
The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.
"Candidate Seasonal Concentration Areas that have been Treated As Significant with a commitment to conduct pre-construction surveys to determine significance, or which access to the habitat to conduct surveys has been denied.

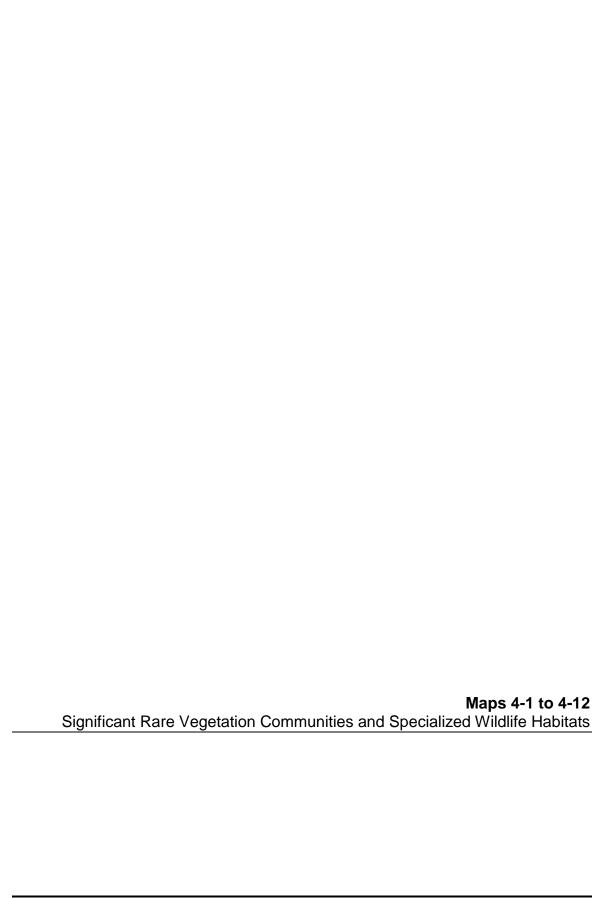


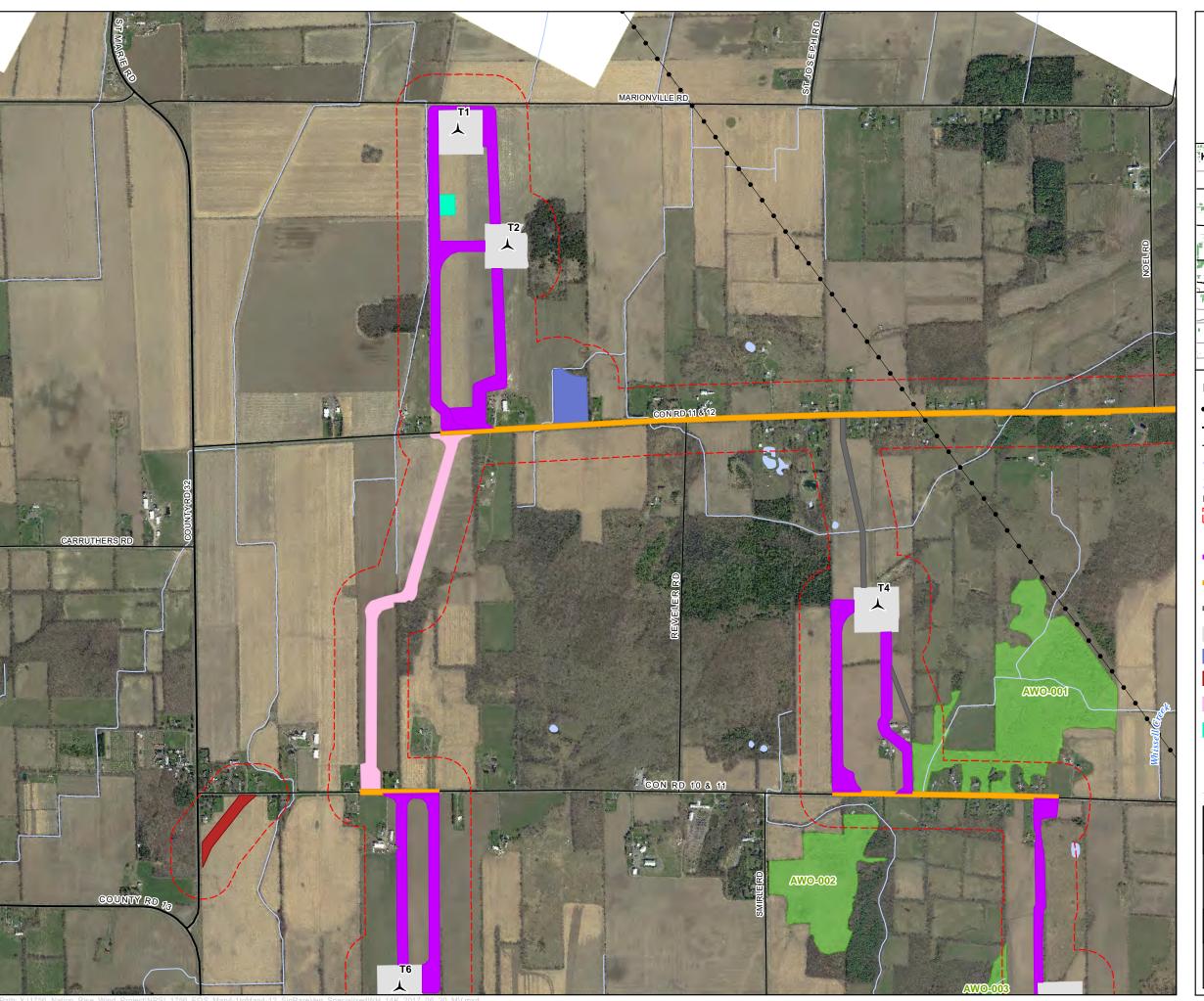
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NAD83 - UTM Zone 18 Size: 11x17" 1:14,000 Project: 1756 Date: July 10, 2017 800 Meters

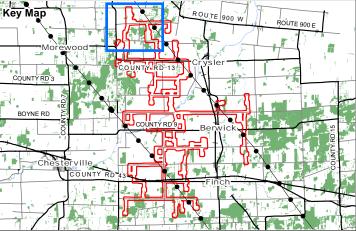








# Significant Rare Vegetation Communities & Specialized Wildlife Habitat



Treated As Significant Specialized Wildlife Habitats\*

Amphibian Breeding Habitat (Woodland) (AWO)

#### Legend

Utility Line

Primary Road

Secondary Road

Permanent Watercourse (LIO)

Open Water (LIO)

#### **Project Components**

Project Area

▲ Proposed Turbine

Proposed Access Road and Collection System

Proposed Above/Underground Collection System

Proposed Underground Collection System

Proposed Turbine Laydown, Access Road, Collection Line

Proposed Laydown

Proposed Temporary Turning

Proposed Temporary Access

Road for Construction

Proposed Meteorological Tower Footprint and Access Road

The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.

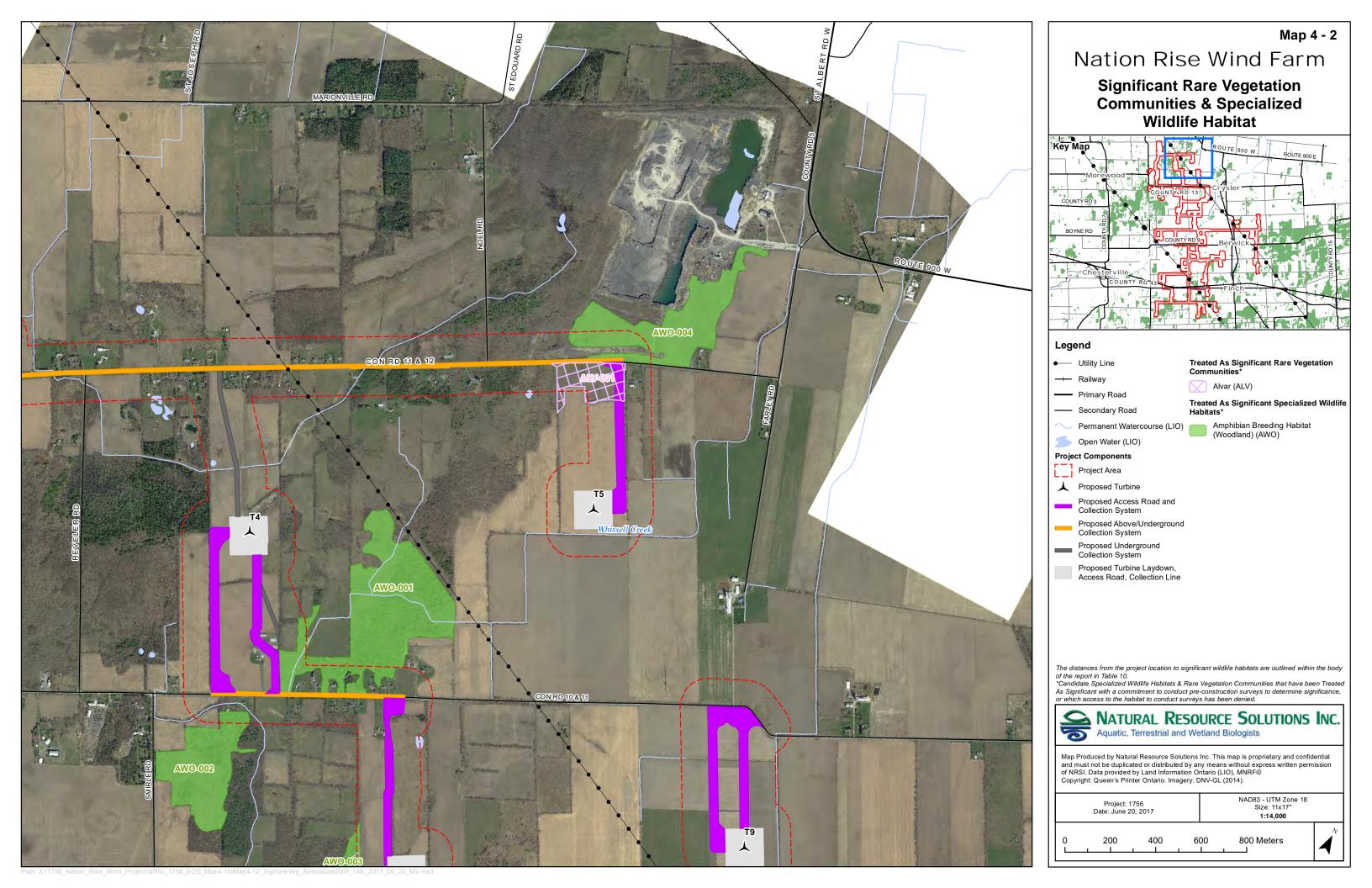
of the report in Table 10.

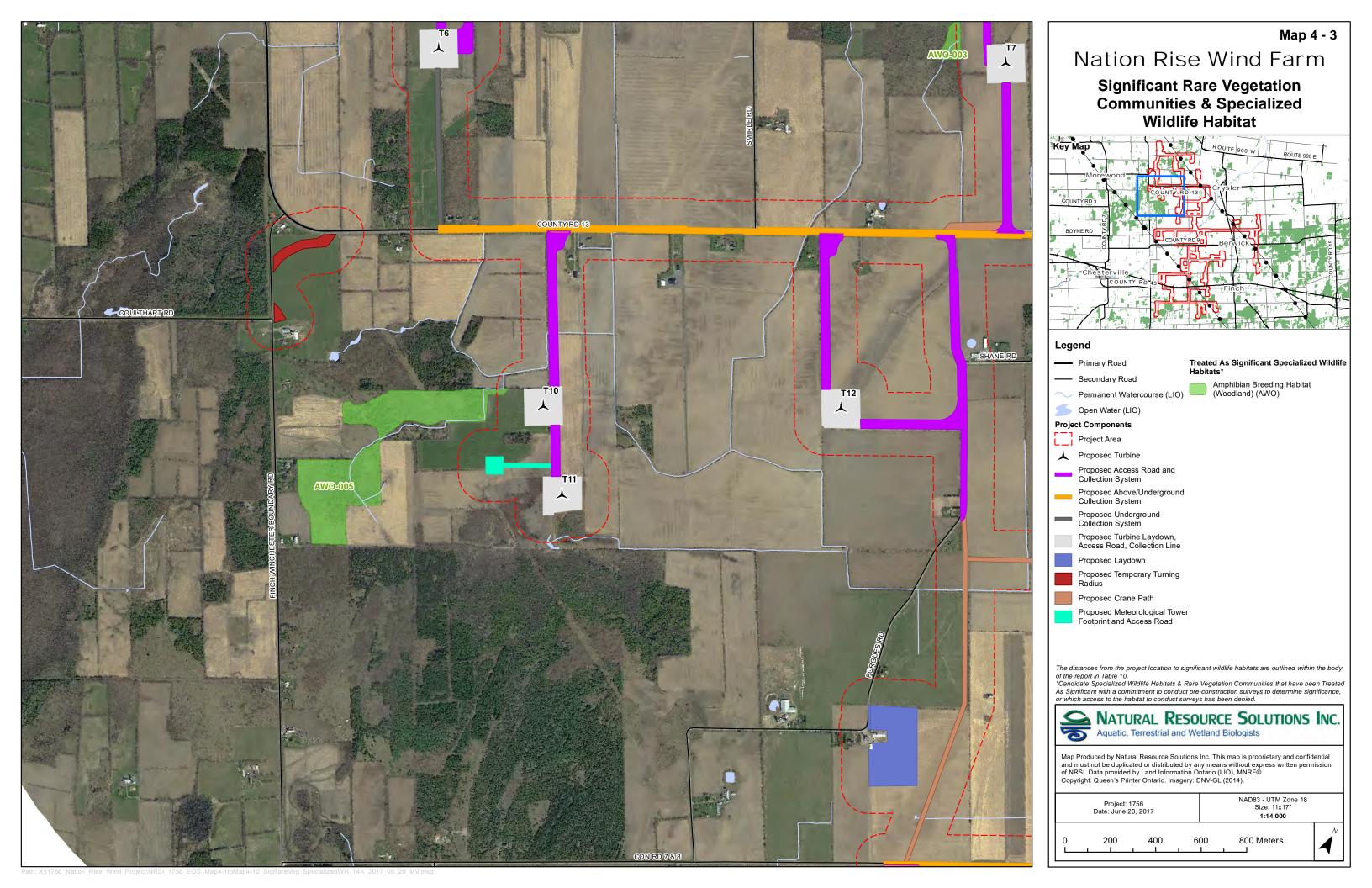
\*\*Candidate Specialized Wildlife Habitats & Rare Vegetation Communities that have been Treated As Significant with a commitment to conduct pre-construction surveys to determine significance, or which access to the habitat to conduct surveys has been denied.

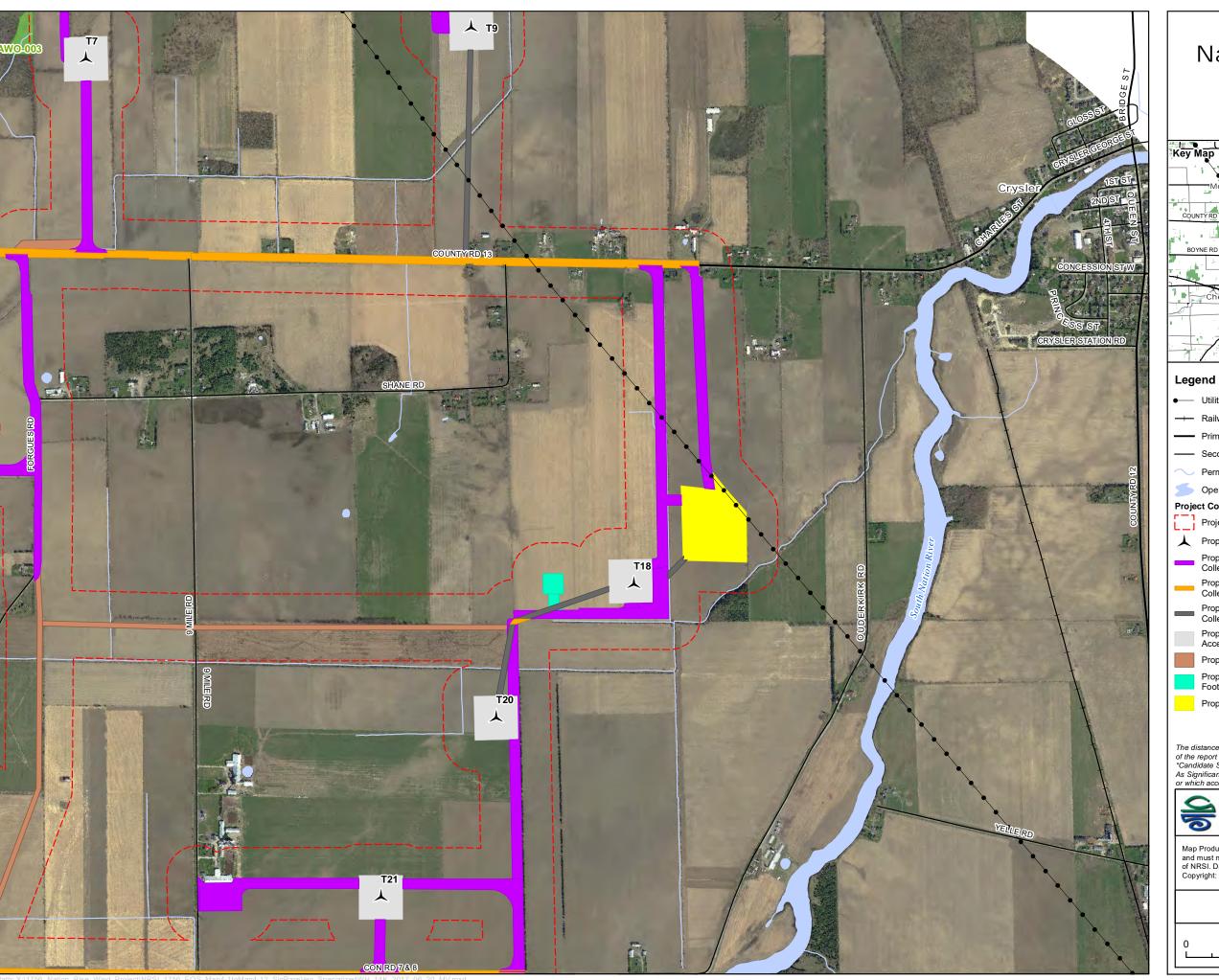


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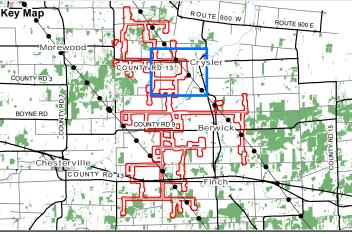
	Project: 1 Date: June 2		NAD83 - UTM Zone 18 Size: 11x17" 1:14,000			
0	200	400	60	00	800 Meters	<b>✓</b>







# Significant Rare Vegetation Communities & Specialized Wildlife Habitat



Treated As Significant Specialized Wildlife Habitats\*

Amphibian Breeding Habitat (Woodland) (AWO)

Utility Line

Primary Road

Secondary Road

Permanent Watercourse (LIO)

Open Water (LIO)

#### **Project Components**

Project Area

▲ Proposed Turbine

Proposed Access Road and Collection System

Proposed Above/Underground Collection System

Proposed Underground Collection System

Proposed Turbine Laydown, Access Road, Collection Line

Proposed Crane Path

Proposed Meteorological Tower Footprint and Access Road

Proposed Substation

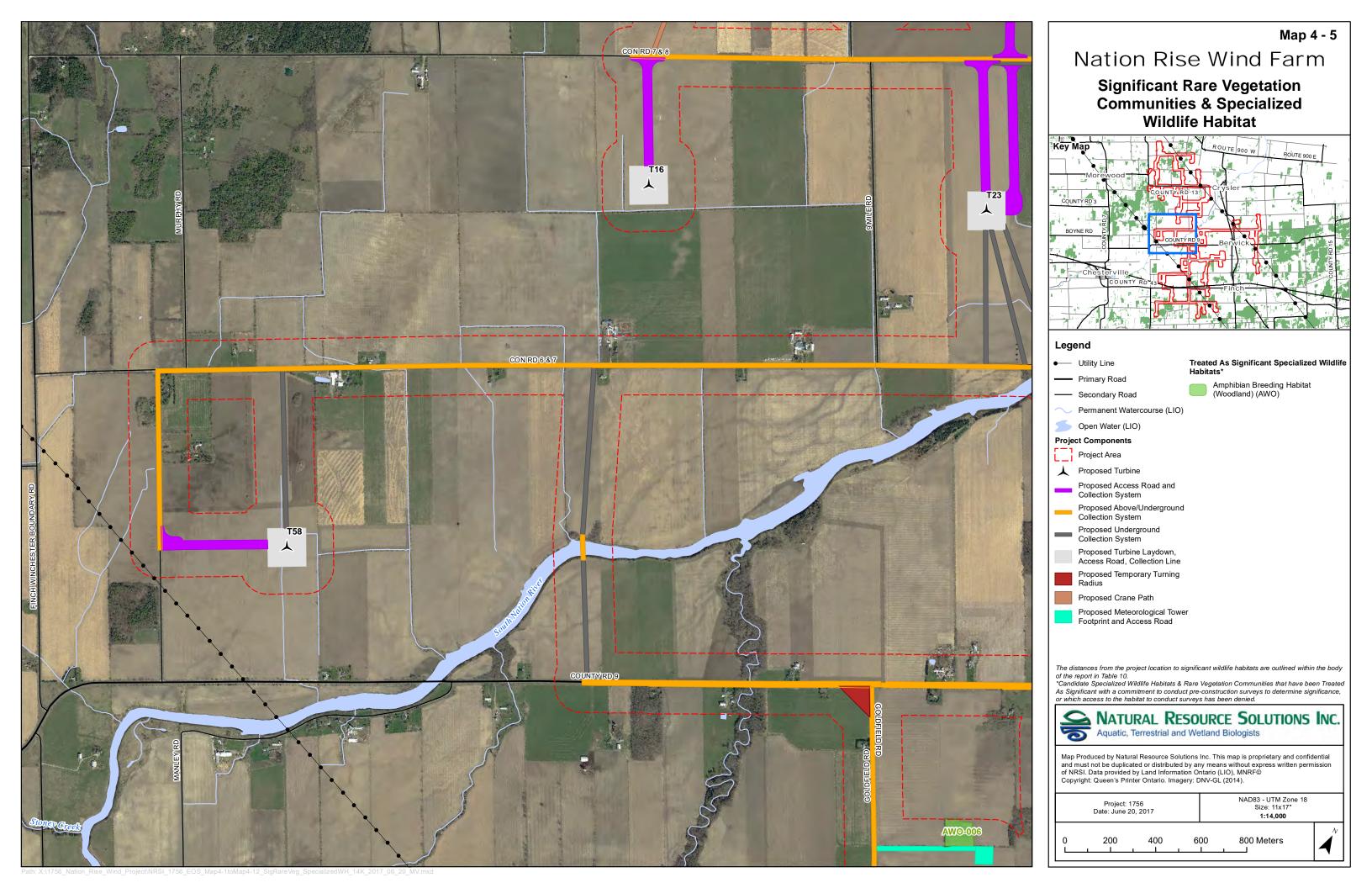
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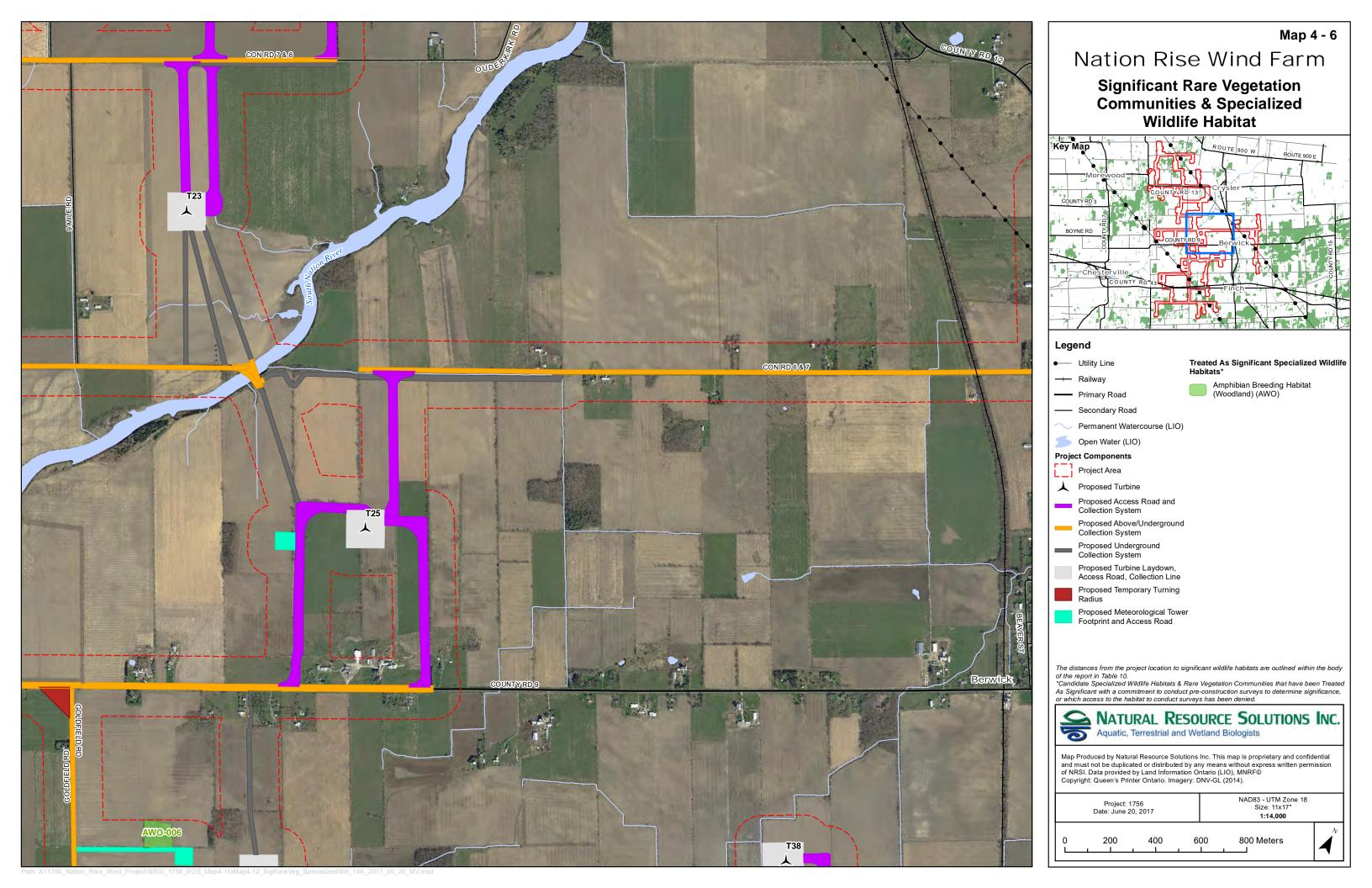
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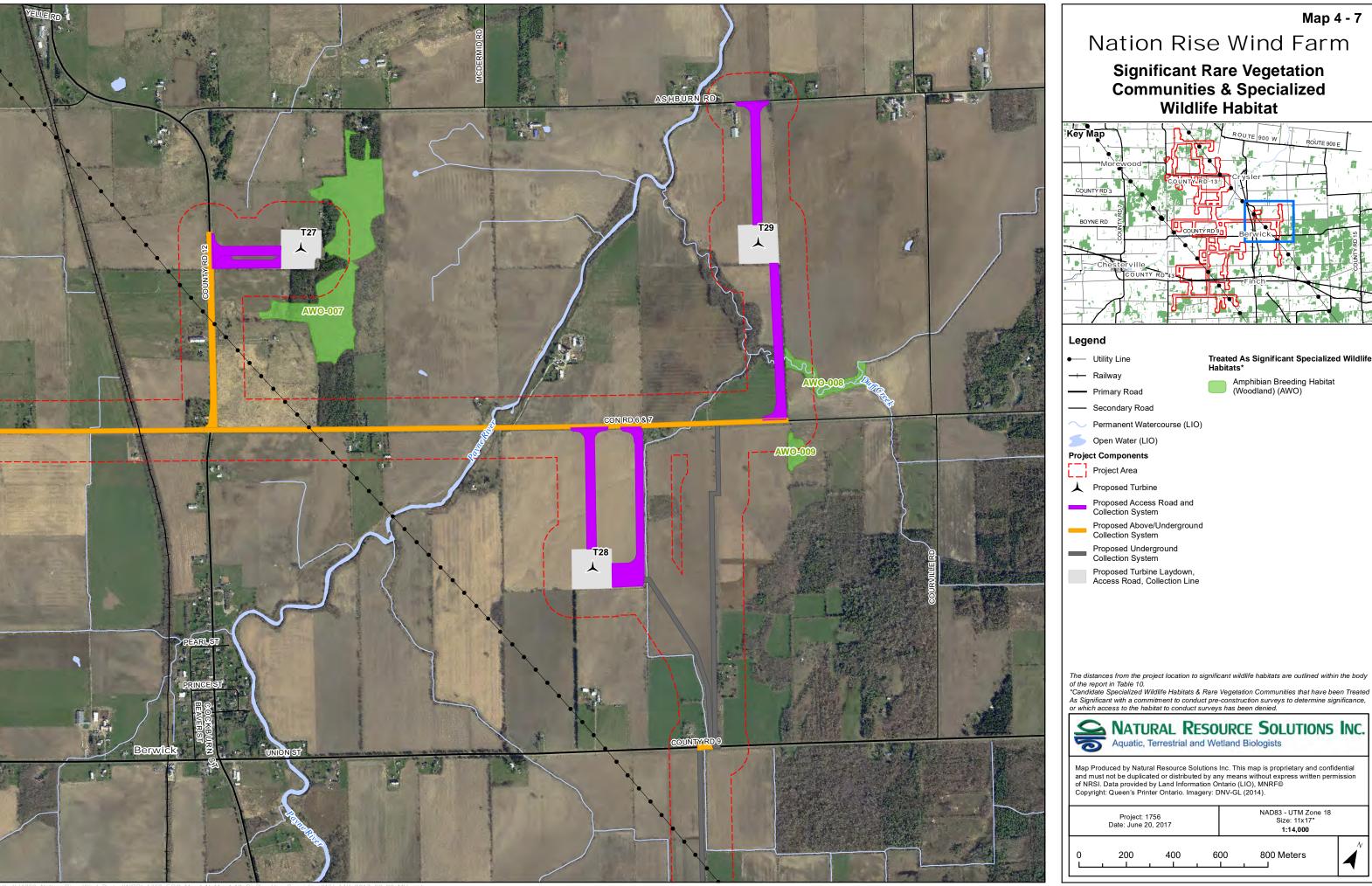


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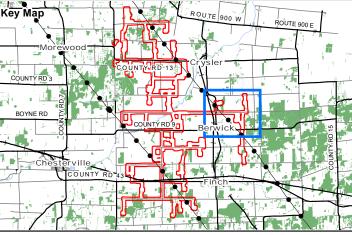
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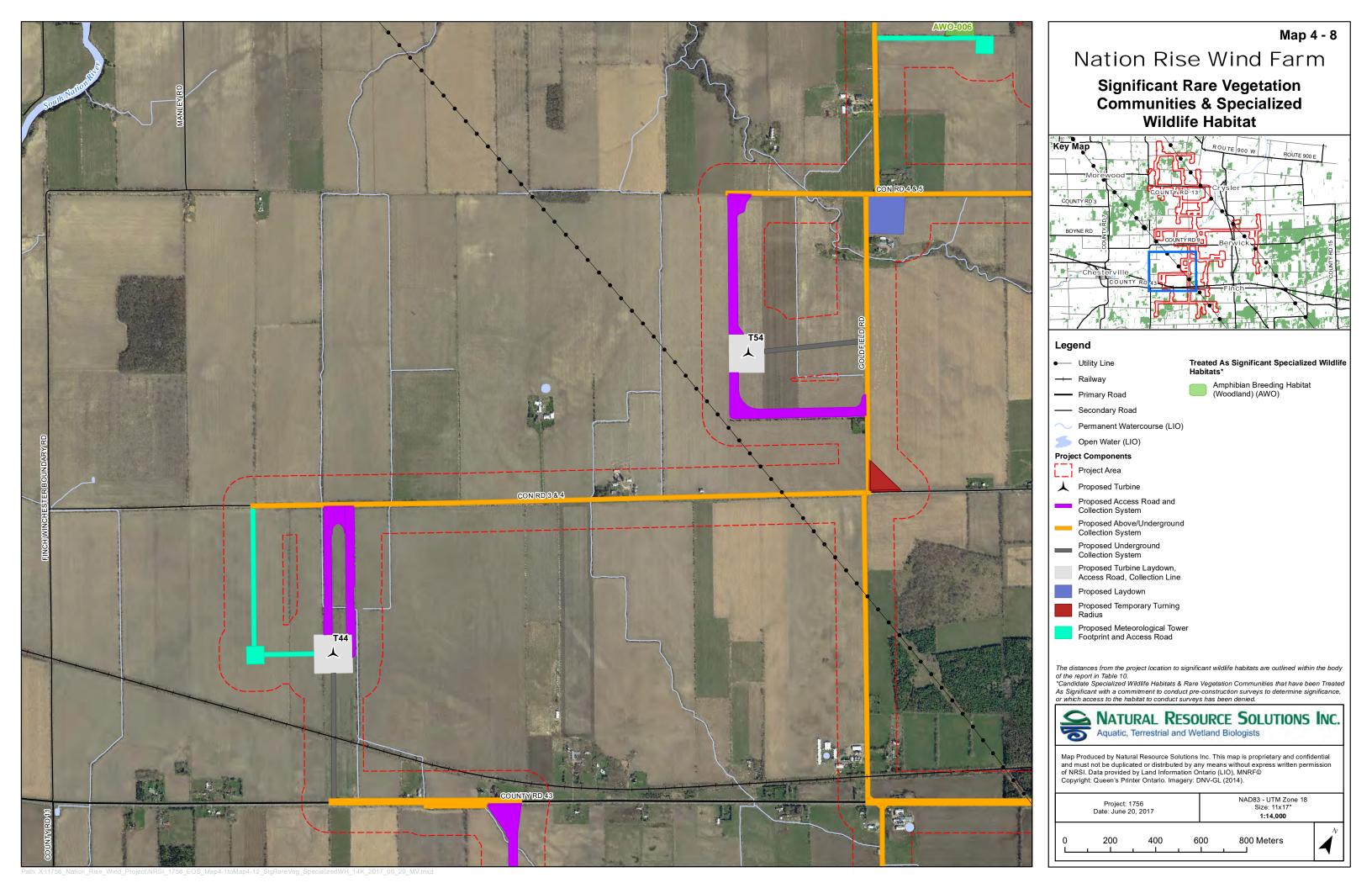
# Significant Rare Vegetation Communities & Specialized

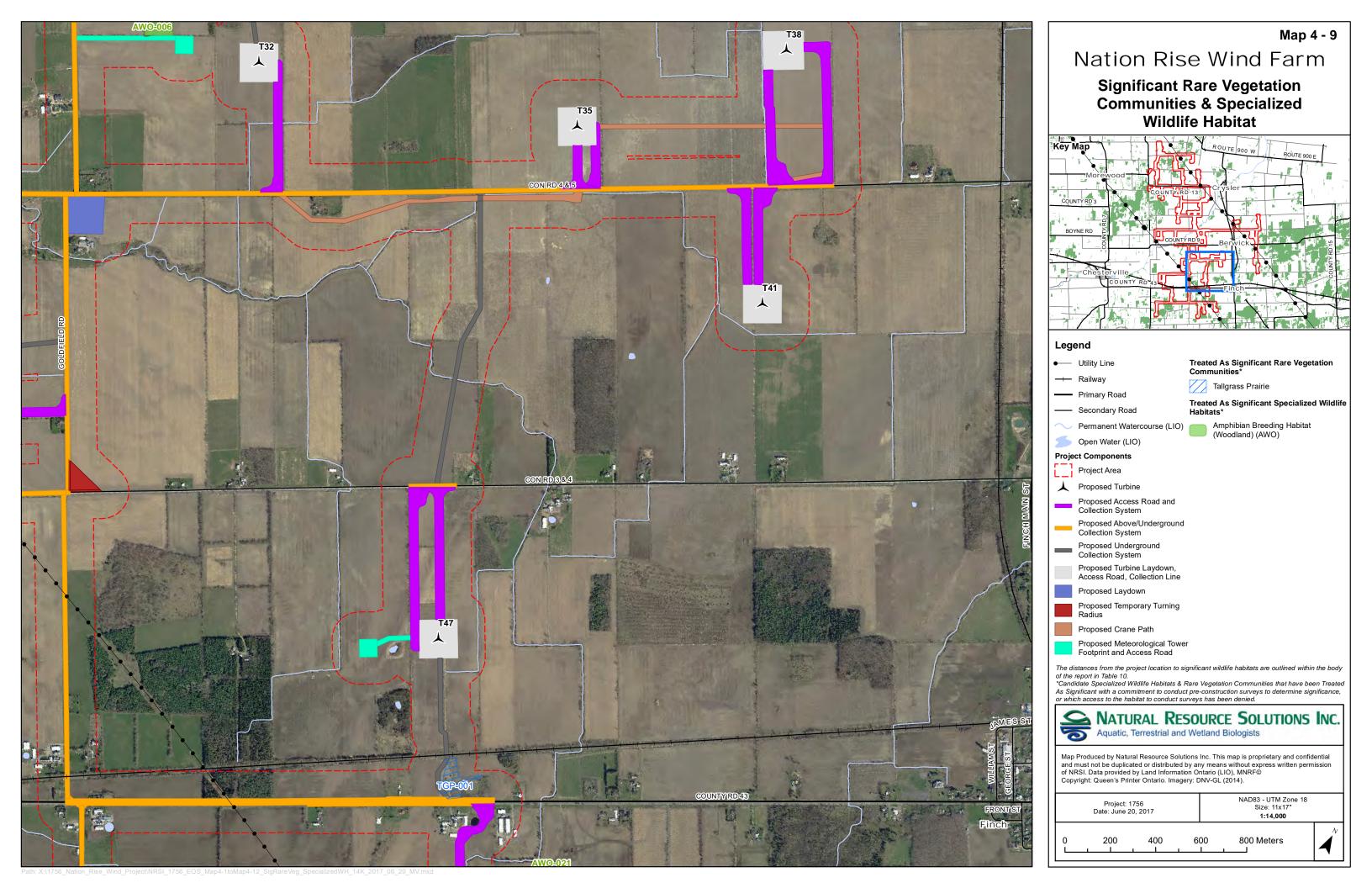


The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.



NAD83 - UTM Zone 18 Size: 11x17" 1:14,000 800 Meters

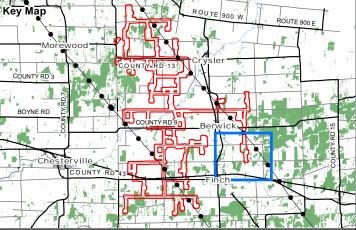




Map 4 - 10

## Nation Rise Wind Farm

## Significant Rare Vegetation Communities & Specialized Wildlife Habitat



Treated As Significant Specialized Wildlife Habitats\*

Amphibian Breeding Habitat (Woodland) (AWO)

#### Legend

Utility Line

- Primary Road

Secondary Road

Permanent Watercourse (LIO)

Open Water (LIO)

#### **Project Components**

Project Area

▲ Proposed Turbine

Proposed Access Road and Collection System

Proposed Above/Underground Collection System

Proposed Underground Collection System

Proposed Turbine Laydown, Access Road, Collection Line

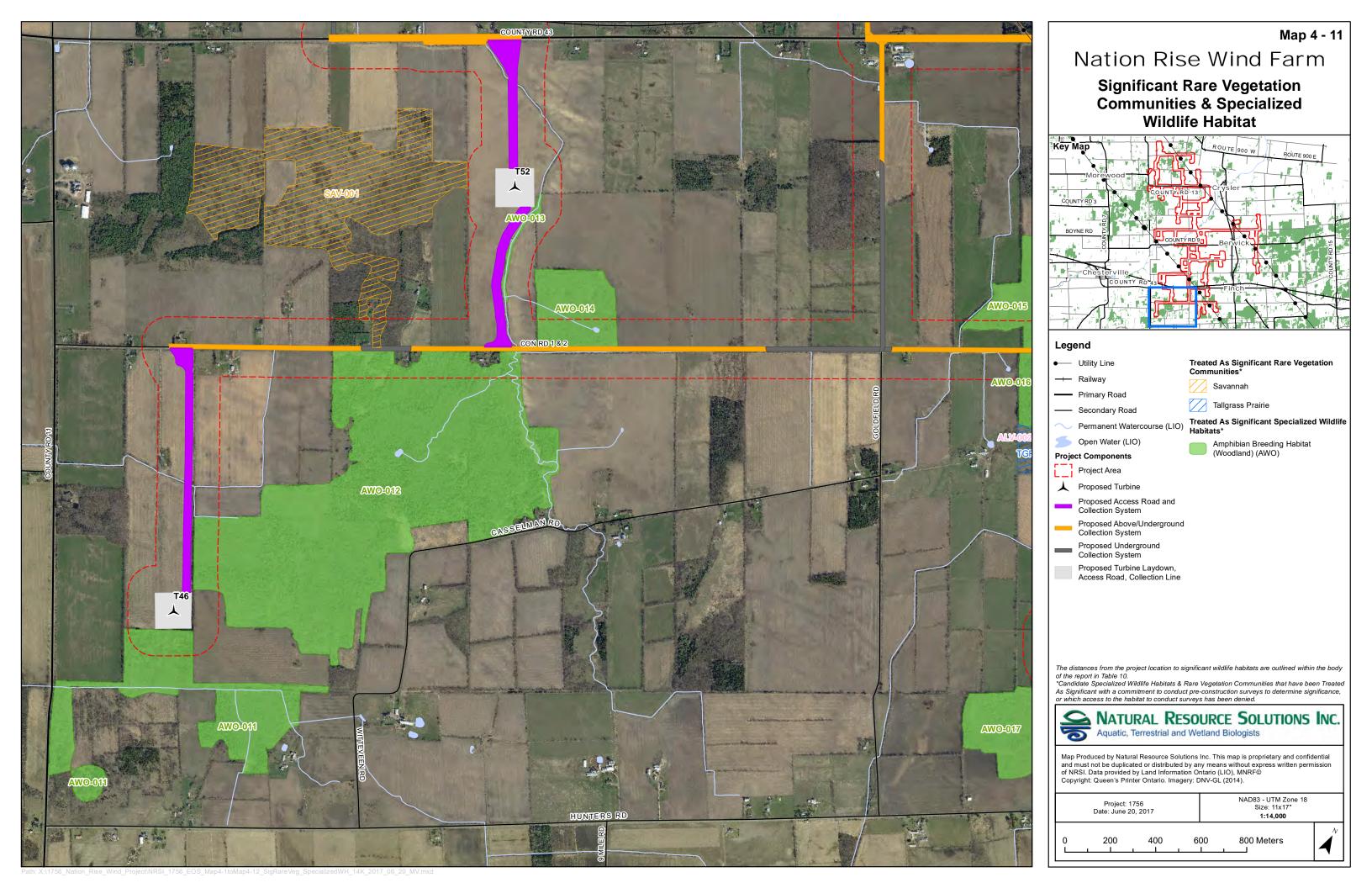
The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.

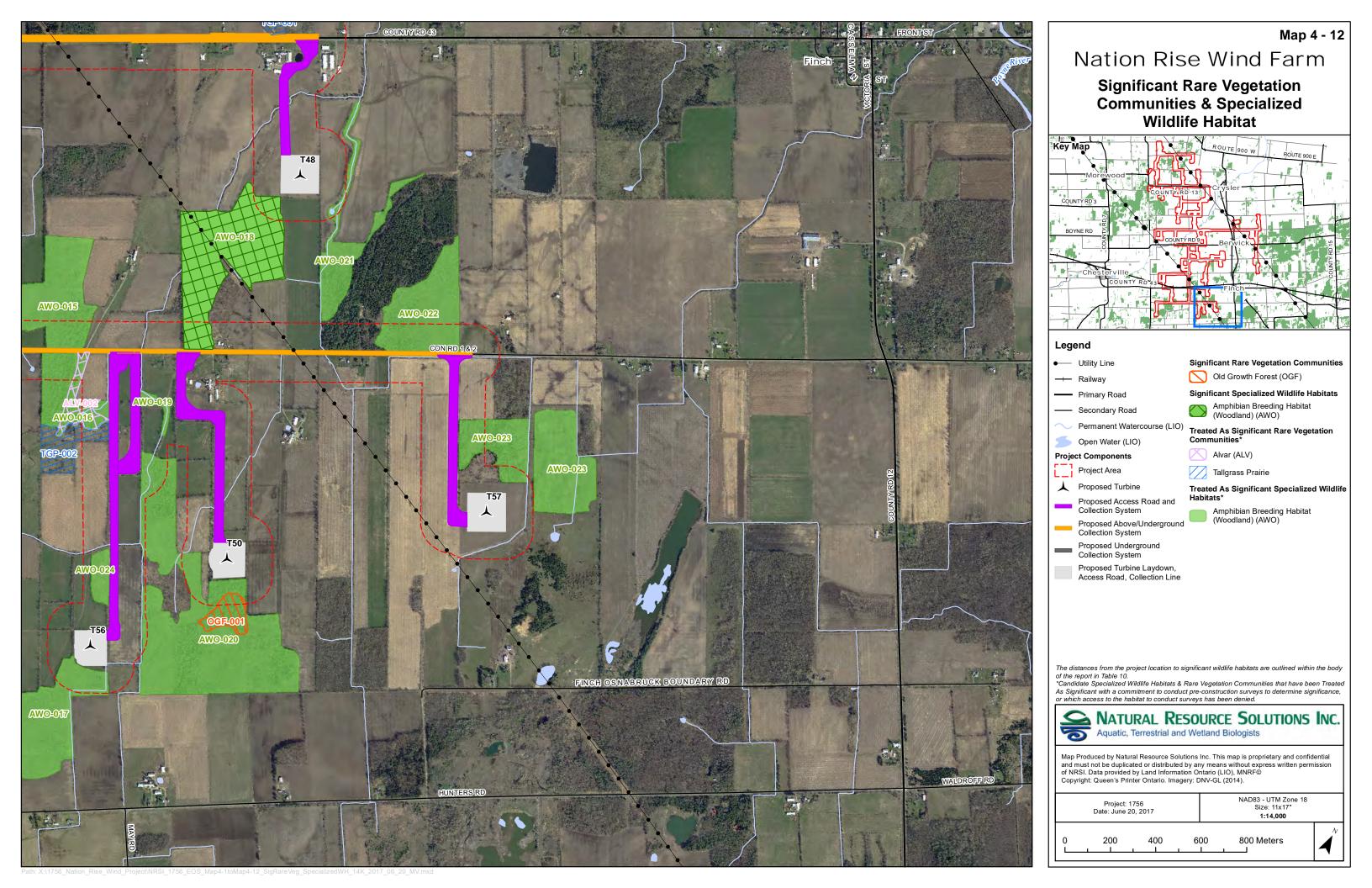
"Candidate Specialized Wildlife Habitats & Rare Vegetation Communities that have been Treated As Significant with a commitment to conduct pre-construction surveys to determine significance, or which access to the habitat to conduct surveys has been denied.

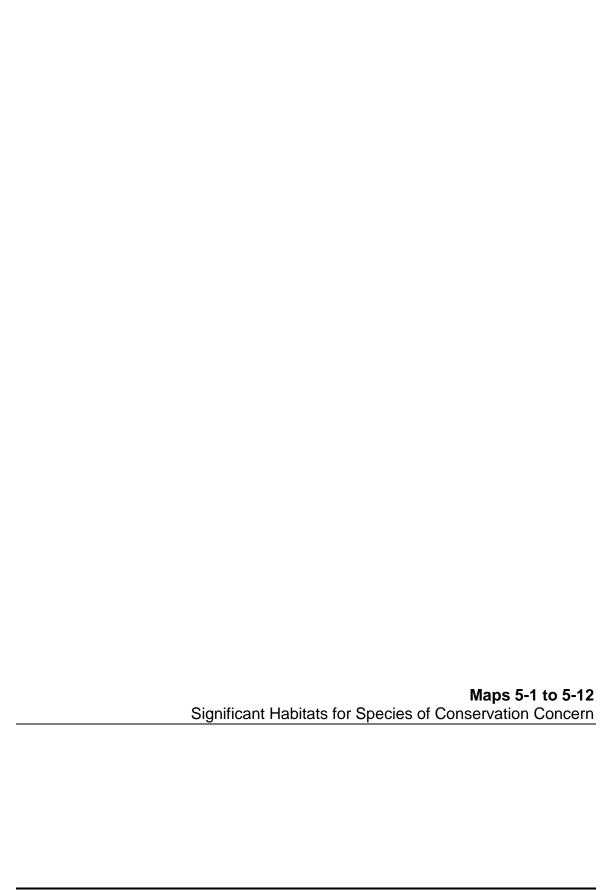


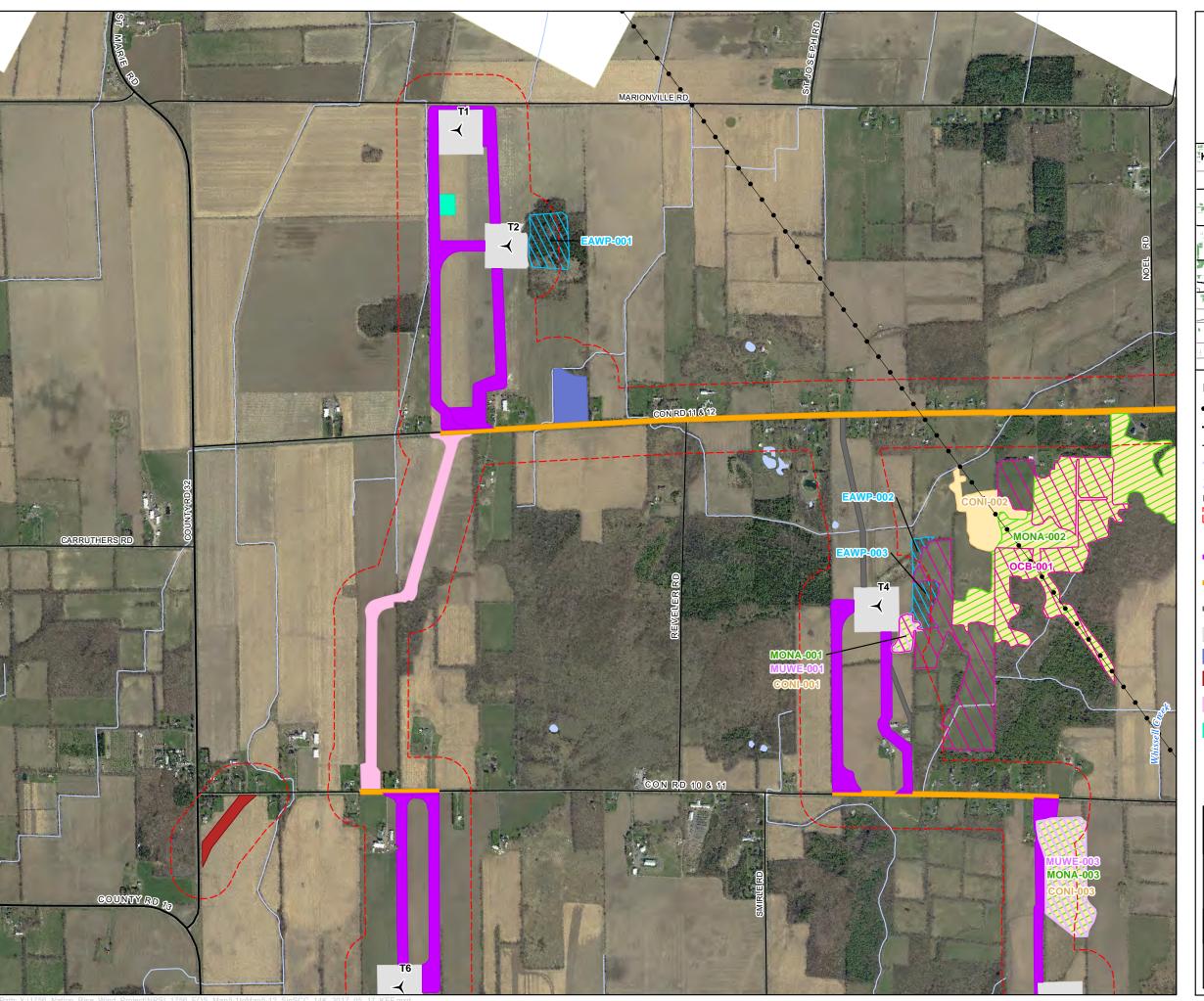
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NAD83 - UTM Zone 18 Size: 11x17" 1:14,000 Project: 1756 Date: June 20, 2017 800 Meters





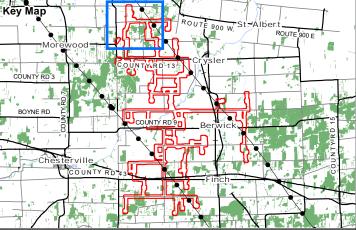




Map 5 - 1

### Nation Rise Wind Farm

# Signficant Habitats for Species of Conservation Concern



Treated As Significant Habitats for Species of Conservation Concern\*

Eastern Wood-Pewee (EAWP)

Open Country Bird Breeding Habitat (OCB)

Monarch (MONA)

Common Nighthawk (CONI)

Mühlenberg's Weissia (MUWE)

#### Legend

Utility Line

Primary Road

— Secondary Road

Permanent Watercourse (LIO)

Open Water (LIO)

**Project Components** 

Project Area

▲ Proposed Turbine

Proposed Access Road and Collection System

Proposed Above/Underground Collection System

D .....

Proposed Underground Collection System

Proposed Turbine Laydown, Access Road, Collection Line

Proposed Laydown Area

Proposed Temporary Turning Radius

Proposed Temporary Access

Road for Construction

Proposed Meteorological Tower Footprint and Access Road

The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.

of the report in Table 10.

\*\*Candidate Habitats for Species of Conservation Concern that have been Treated As Significant with a commitment to conduct pre-construction surveys to determine significance, or which access to the habitat to conduct surveys has been denied.

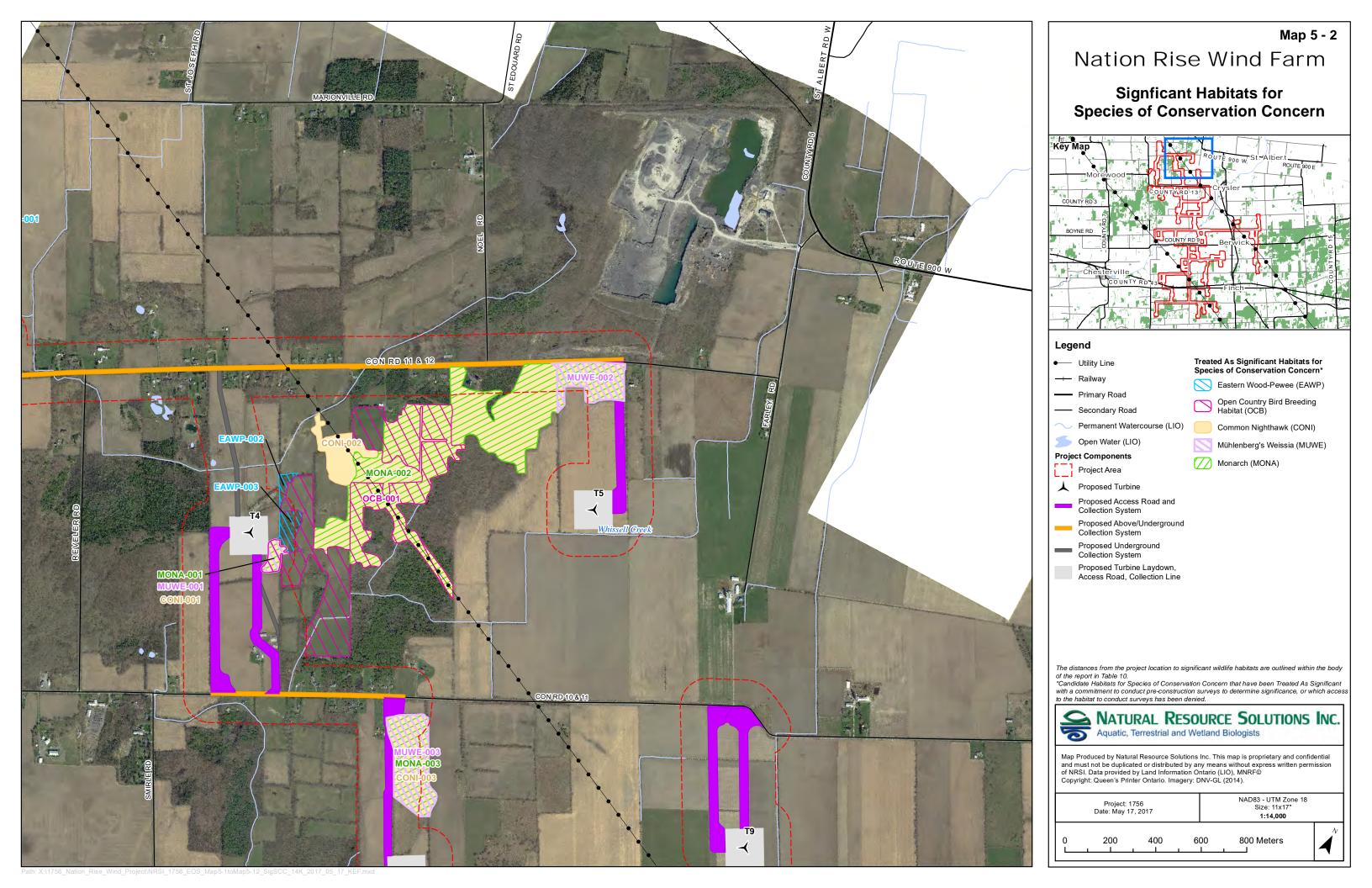


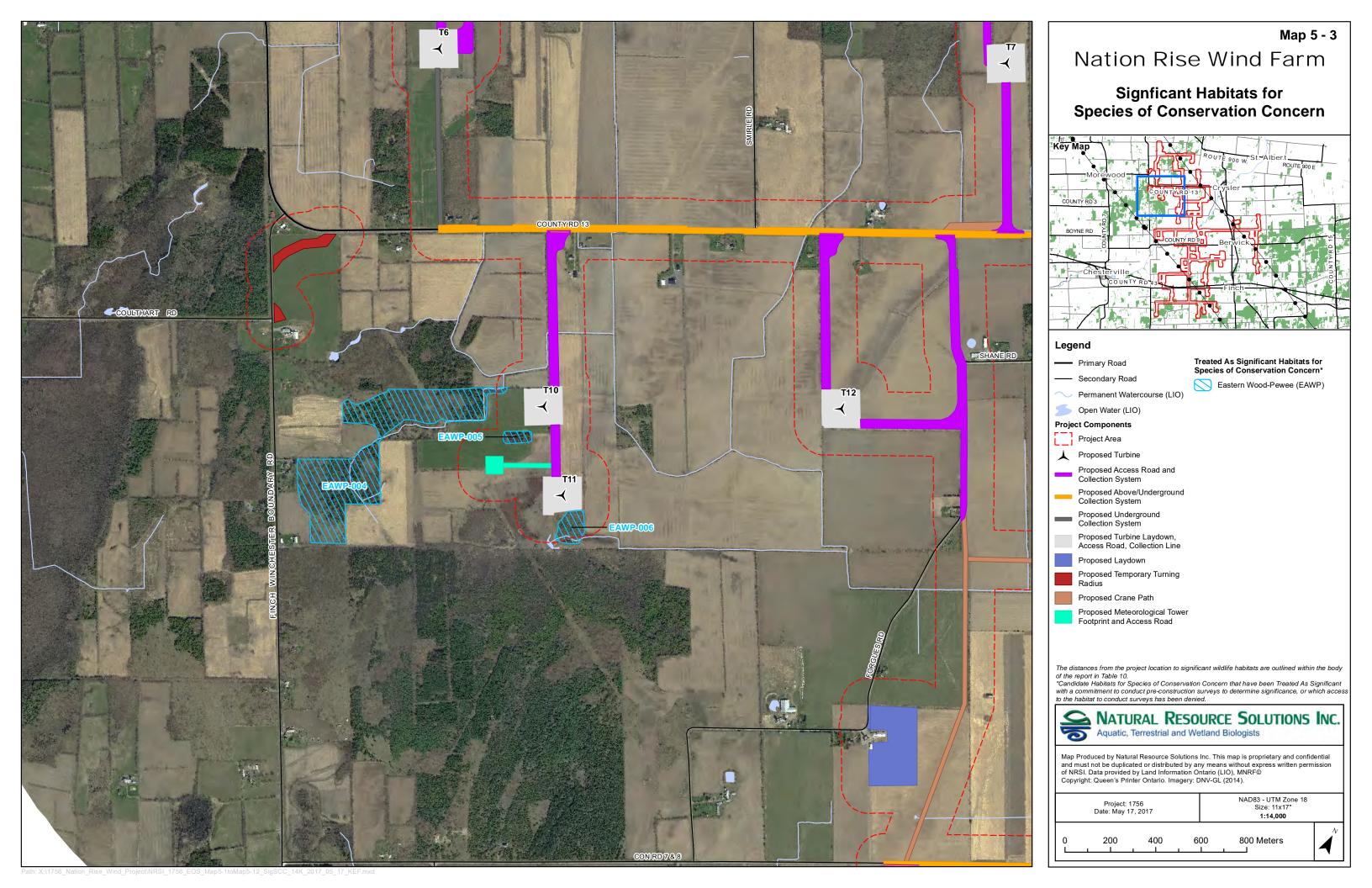
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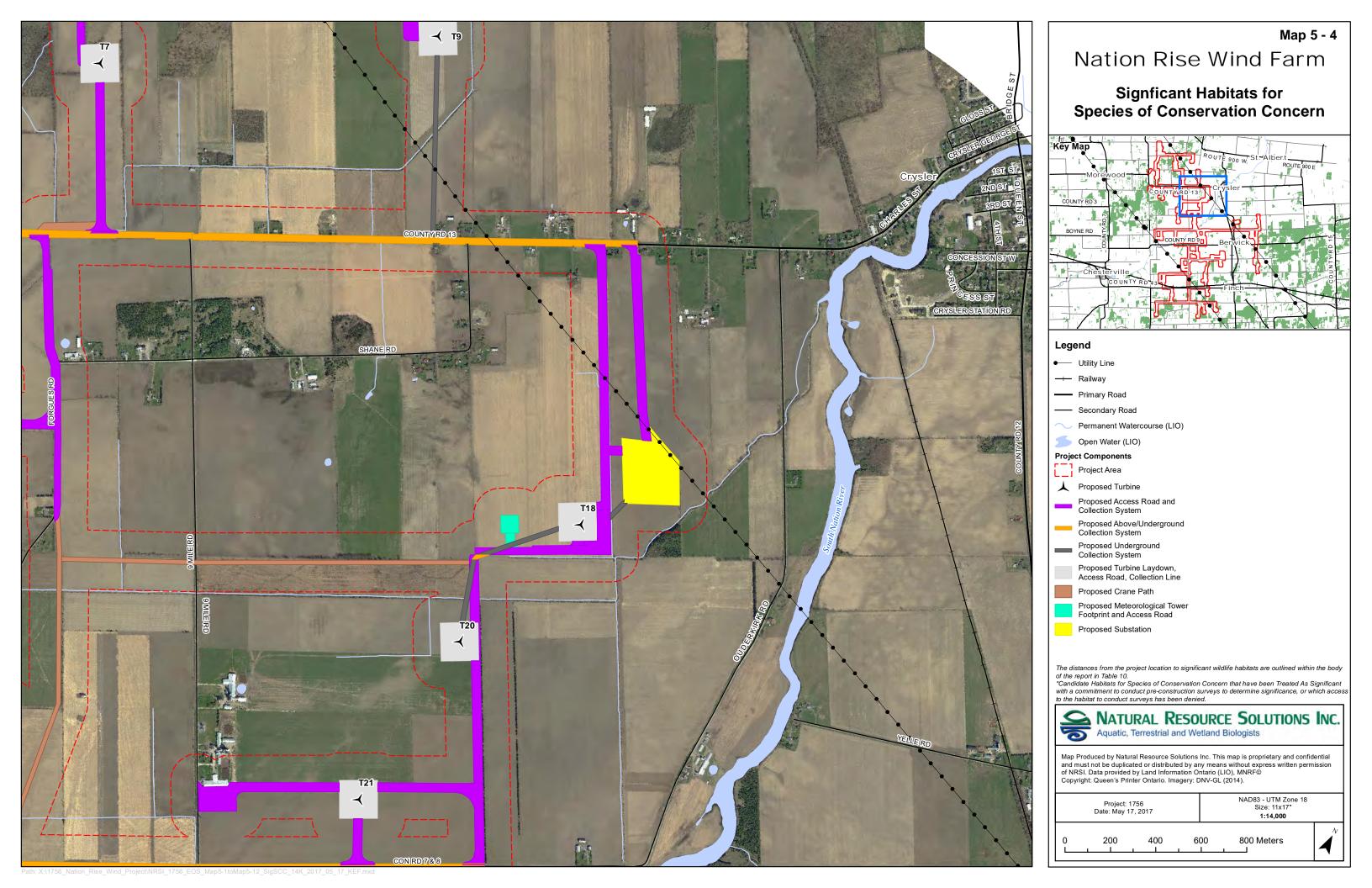
Project: 1756
Date: May 17, 2017

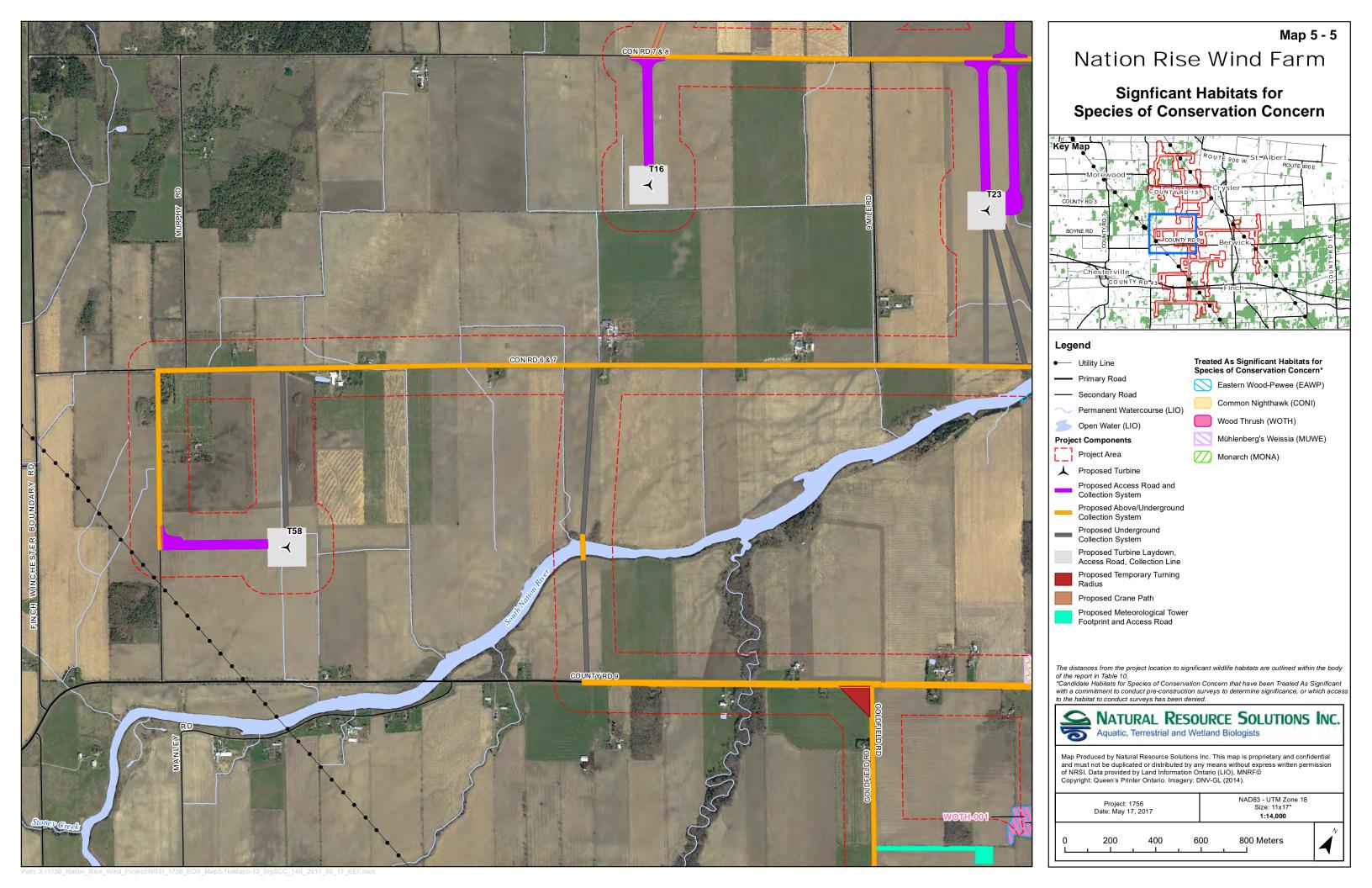
NAD83 - UTM Zone 18
Size: 11x17"
1:14,000

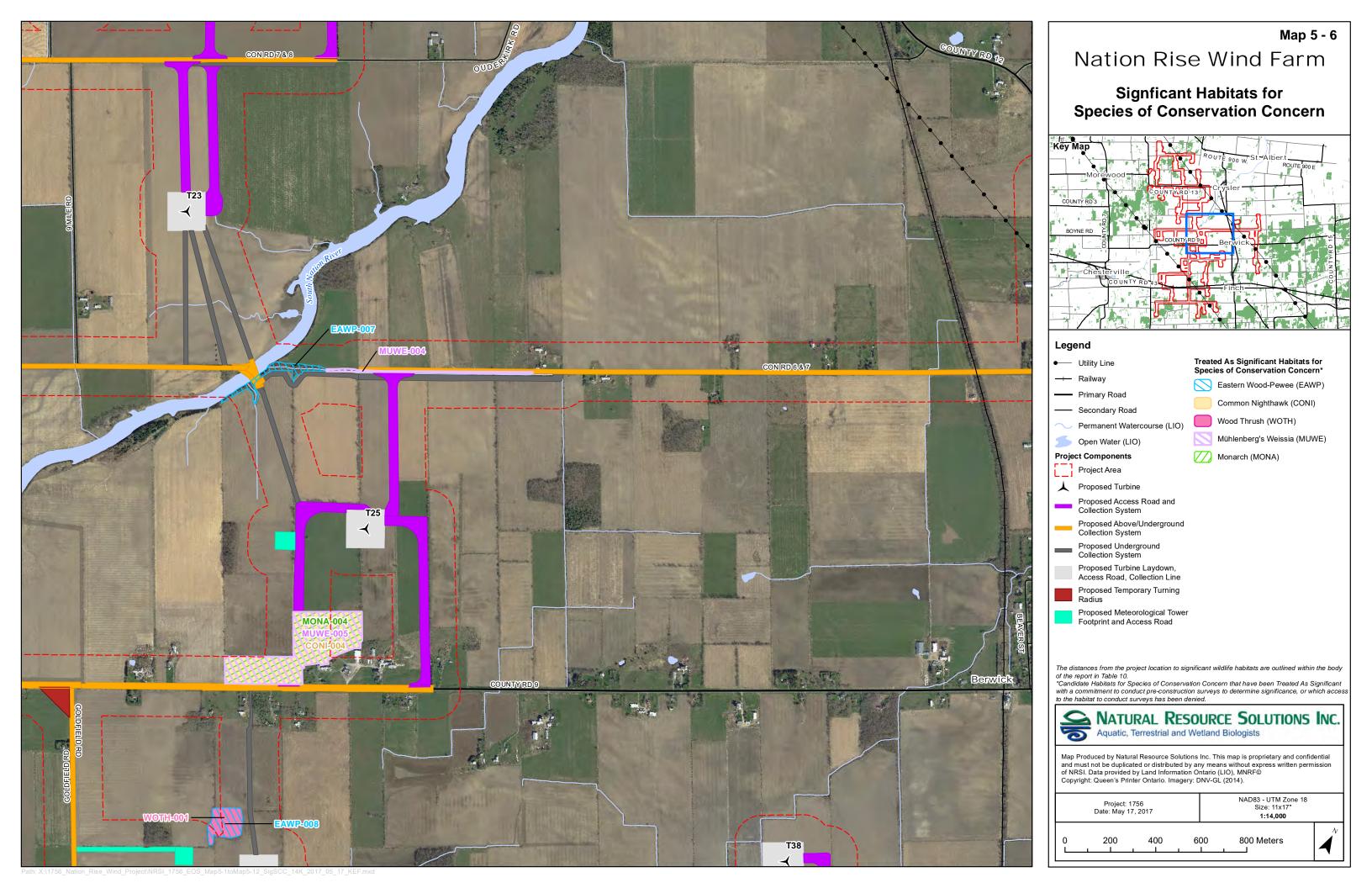
0 200 400 600 800 Meters

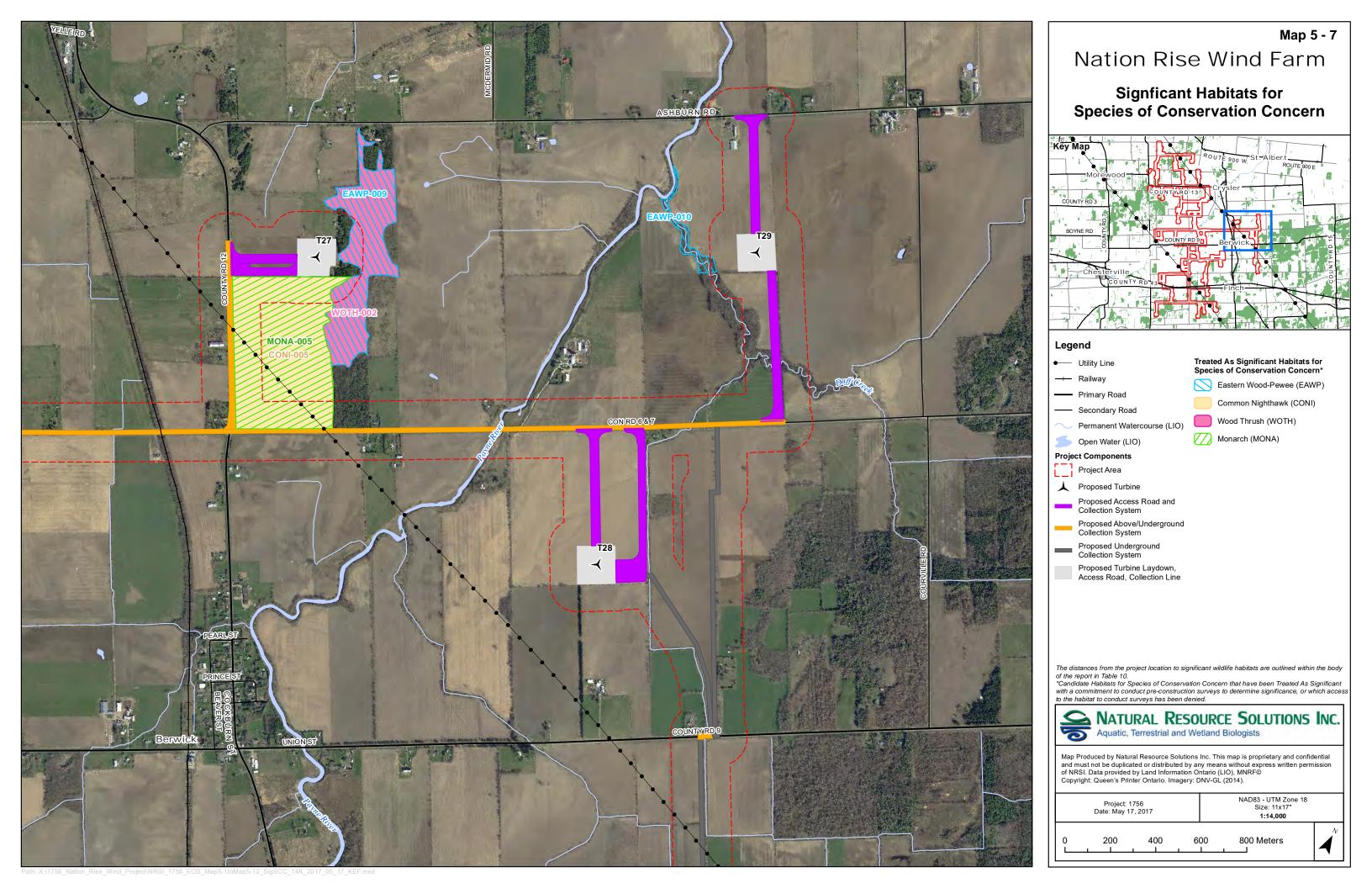


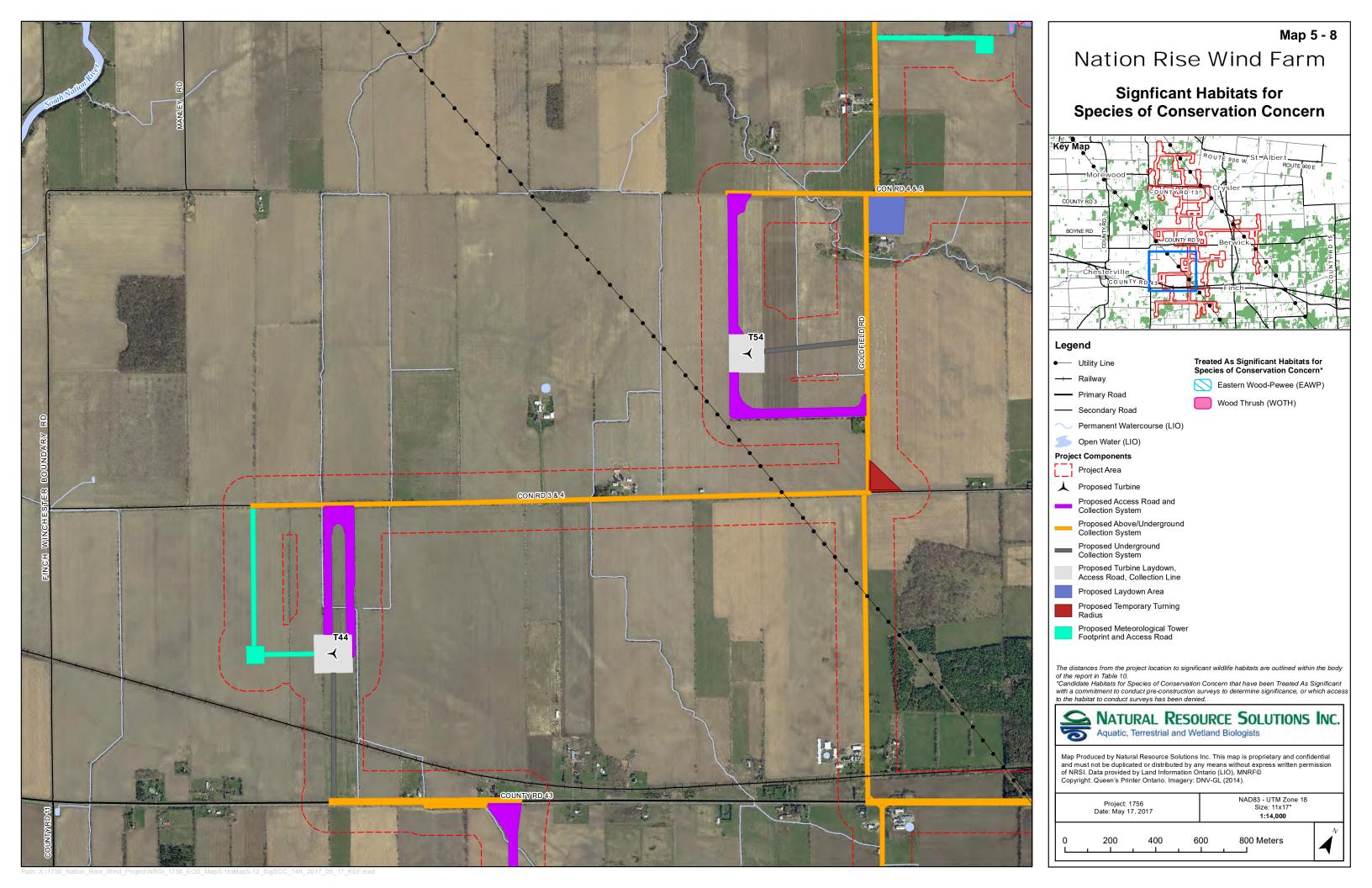


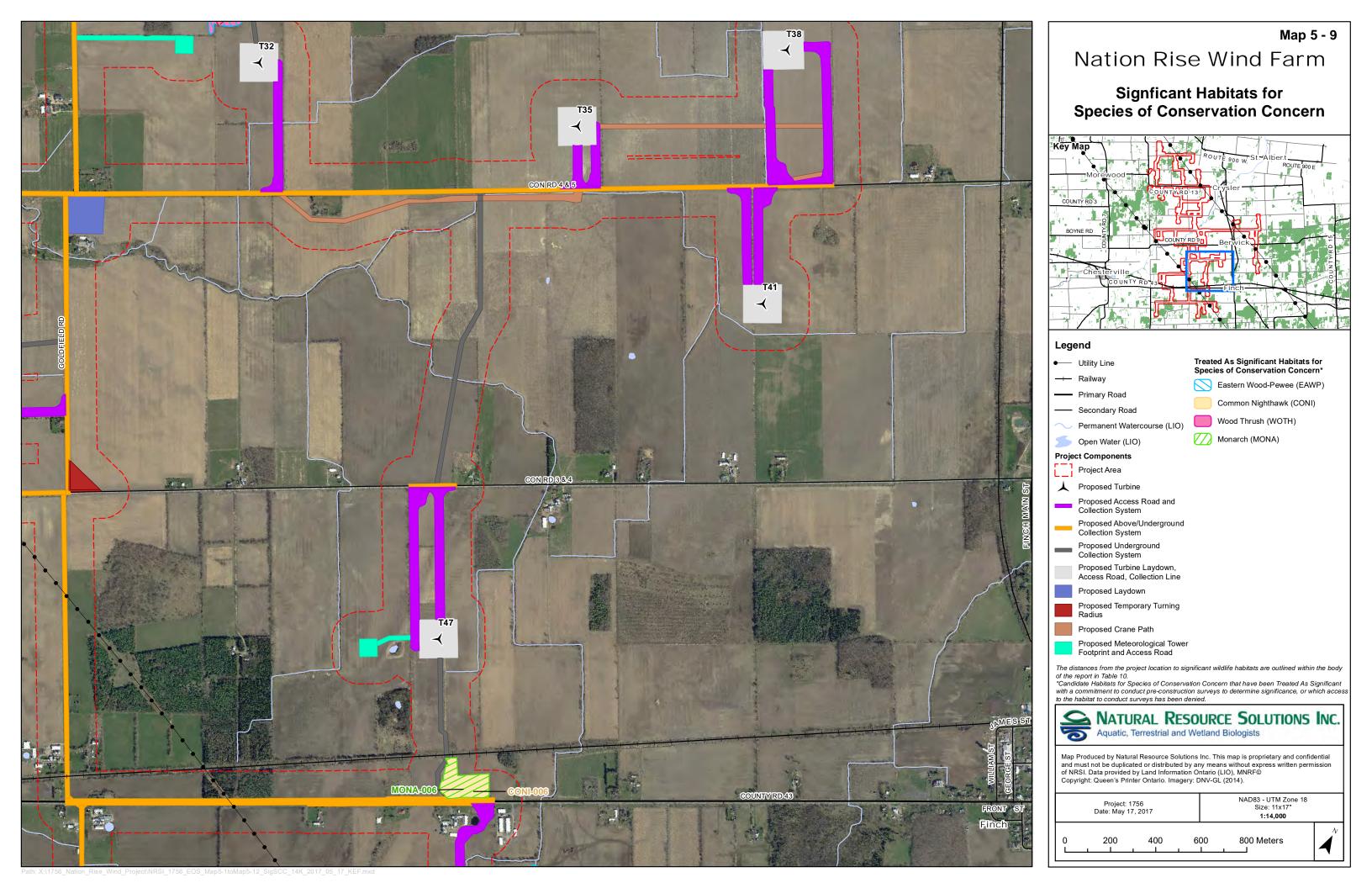








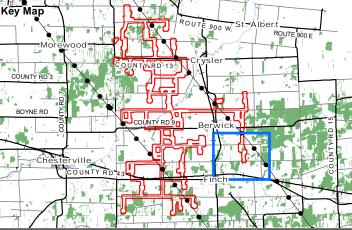




Map 5 - 10

## Nation Rise Wind Farm

### **Signficant Habitats for Species of Conservation Concern**



Treated As Significant Habitats for Species of Conservation Concern\*

Mühlenberg's Weissia (MUWE)

Permanent Watercourse (LIO)

#### **Project Components**

Proposed Access Road and Collection System

Proposed Above/Underground Collection System

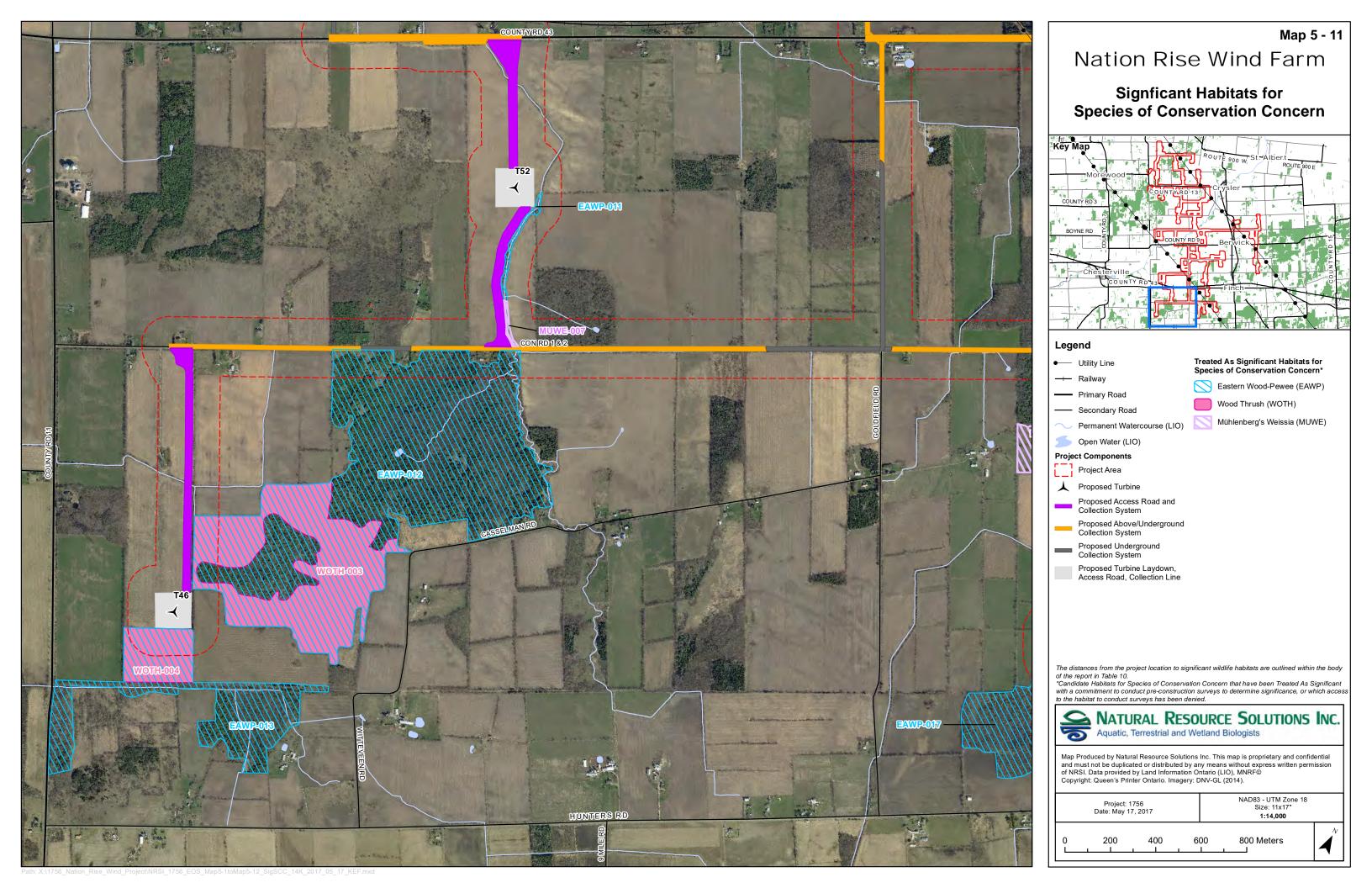
Proposed Turbine Laydown, Access Road, Collection Line

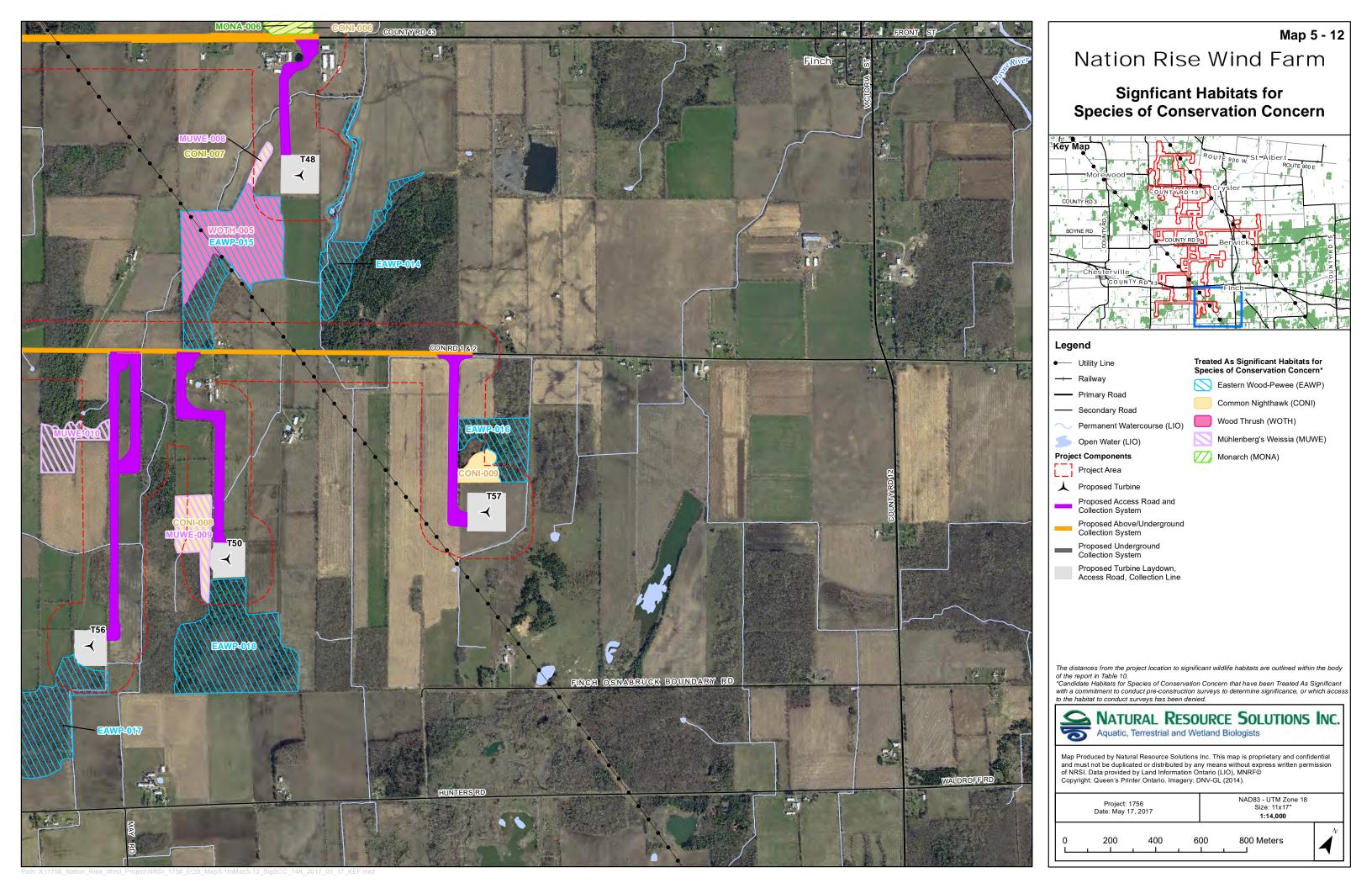
The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.
"Candidate Habitats for Species of Conservation Concern that have been Treated As Significant with a commitment to conduct pre-construction surveys to determine significance, or which access to the habitat to conduct surveys has been denied.

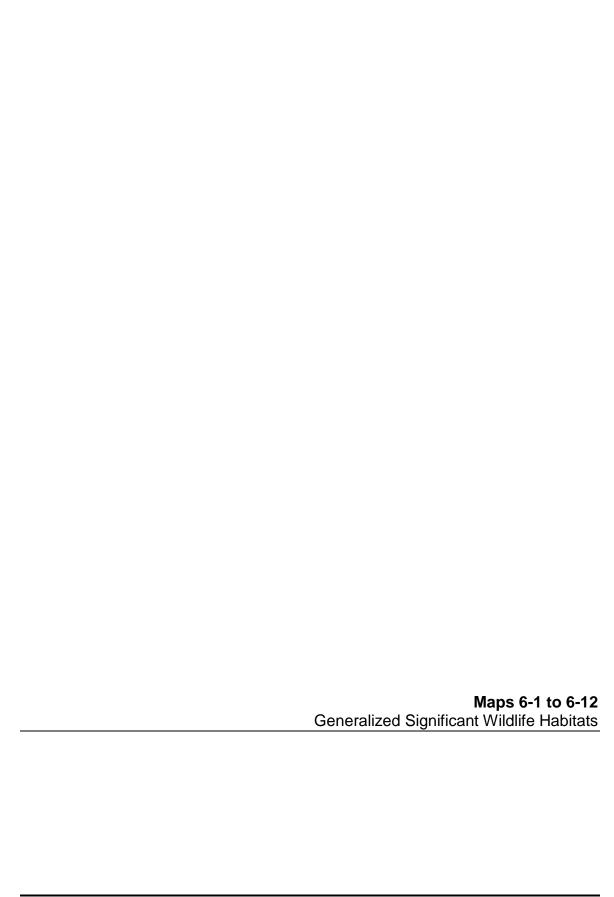


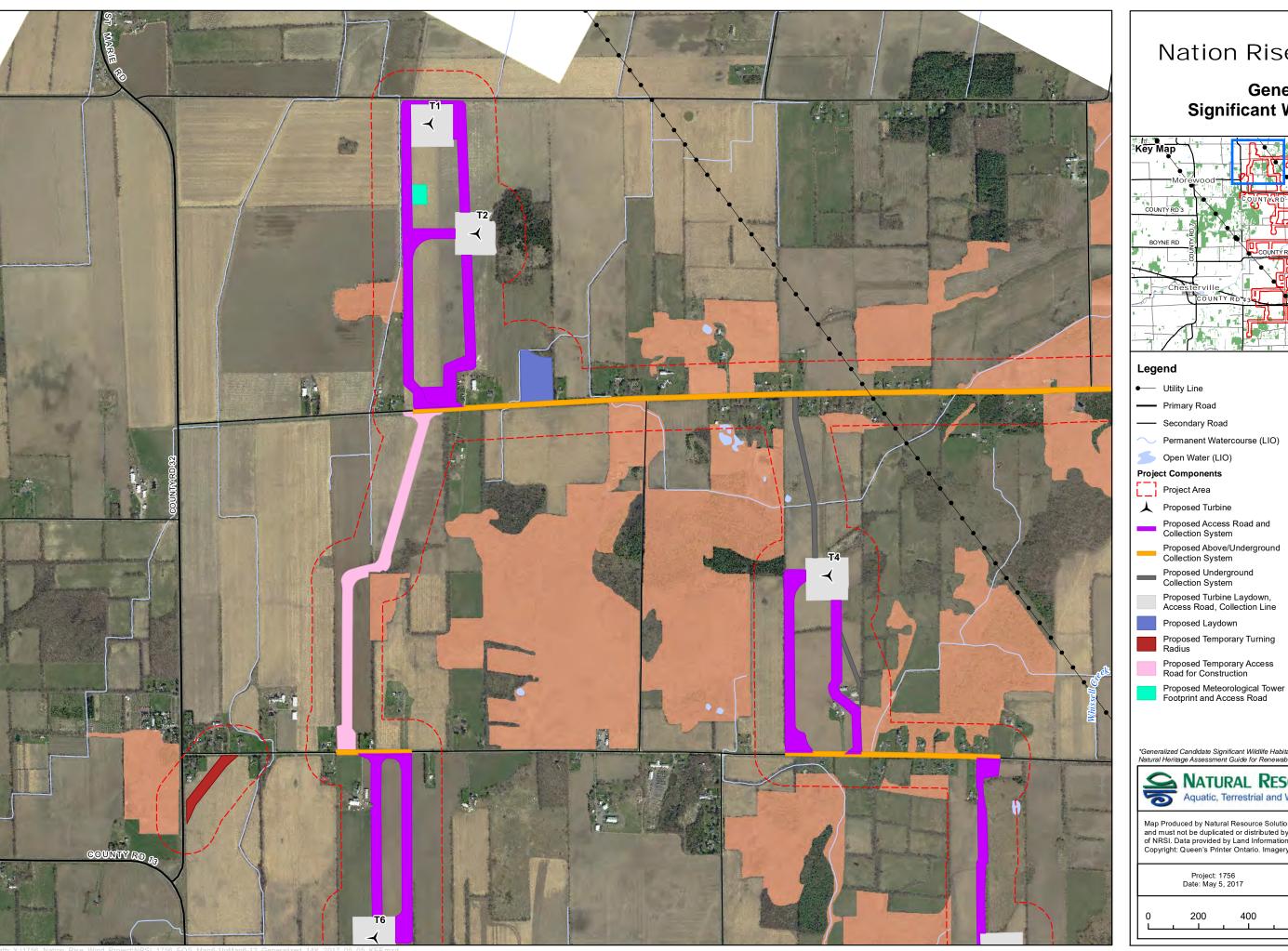
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NAD83 - UTM Zone 18 Size: 11x17" 1:14,000 Project: 1756 Date: May 17, 2017 800 Meters





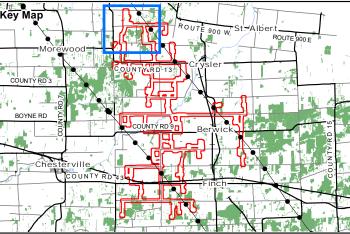




Map 6 - 1

## Nation Rise Wind Farm

#### Generalized Significant Wildlife Habitat



Treated As Significant Generalized Wildlife Habitats\*

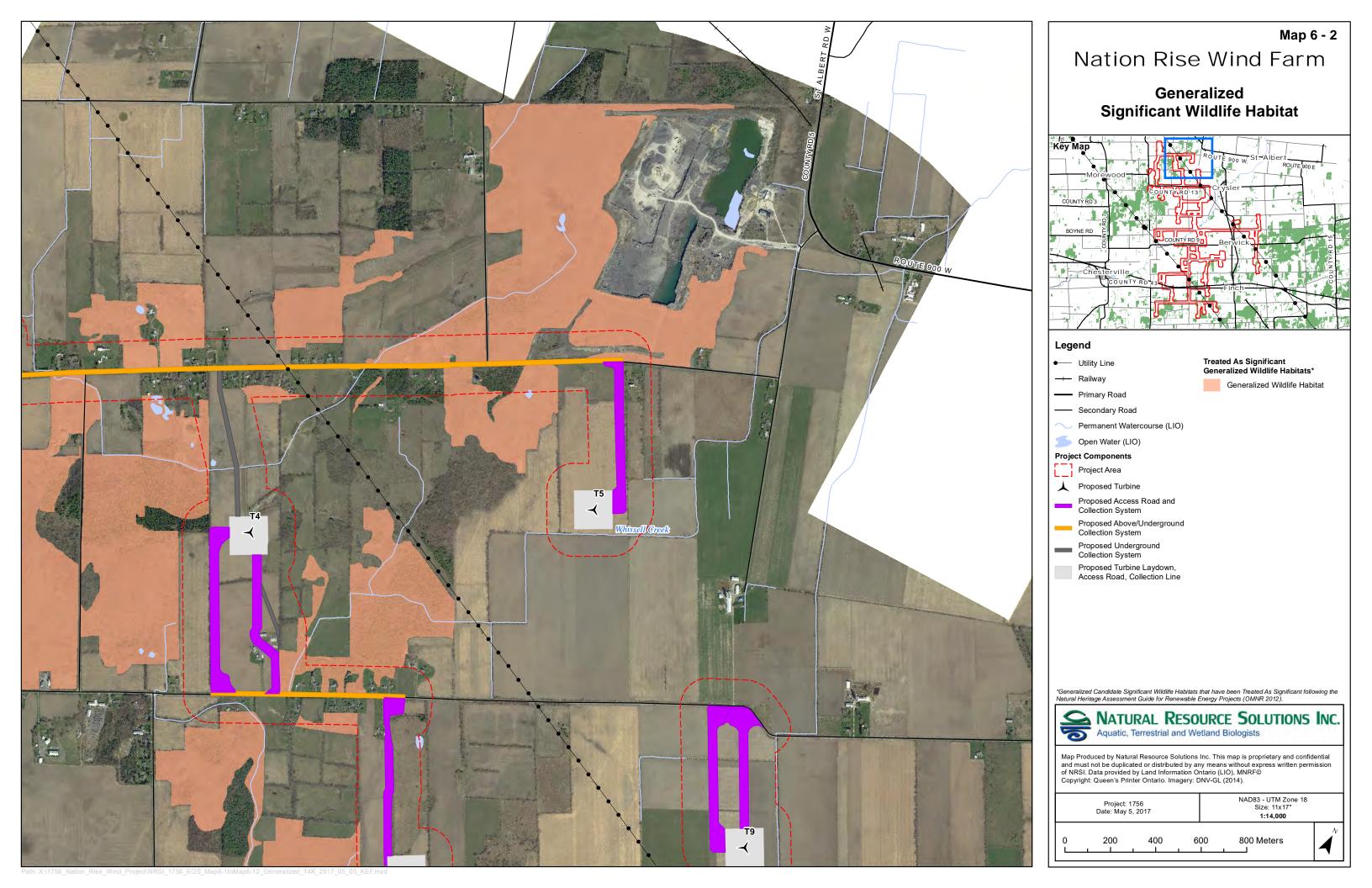
Generalized Wildlife Habitat

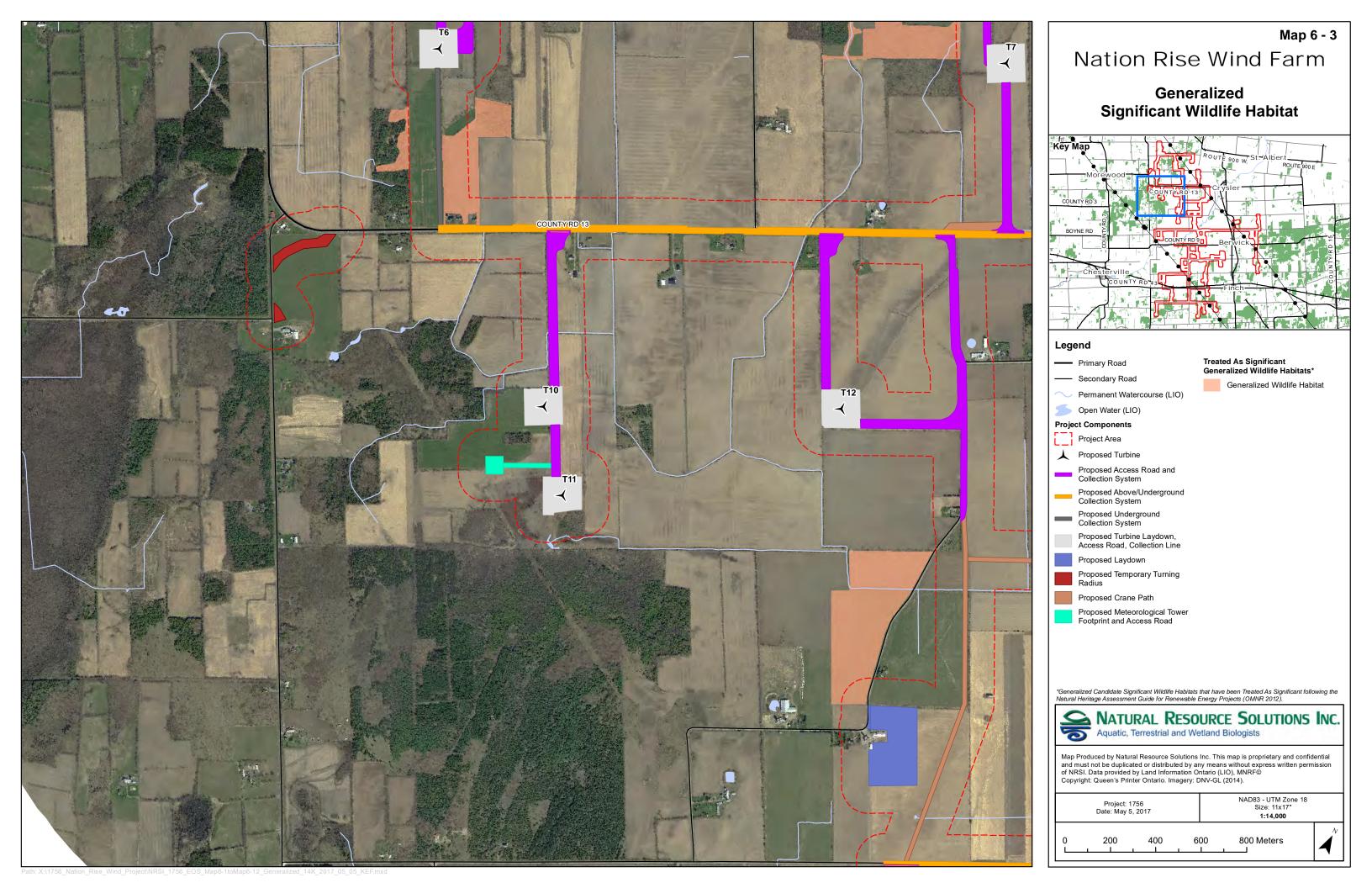
\*Generalized Candidate Significant Wildlife Habitats that have been Treated As Significant following the Natural Heritage Assessment Guide for Renewable Energy Projects (OMNR 2012).

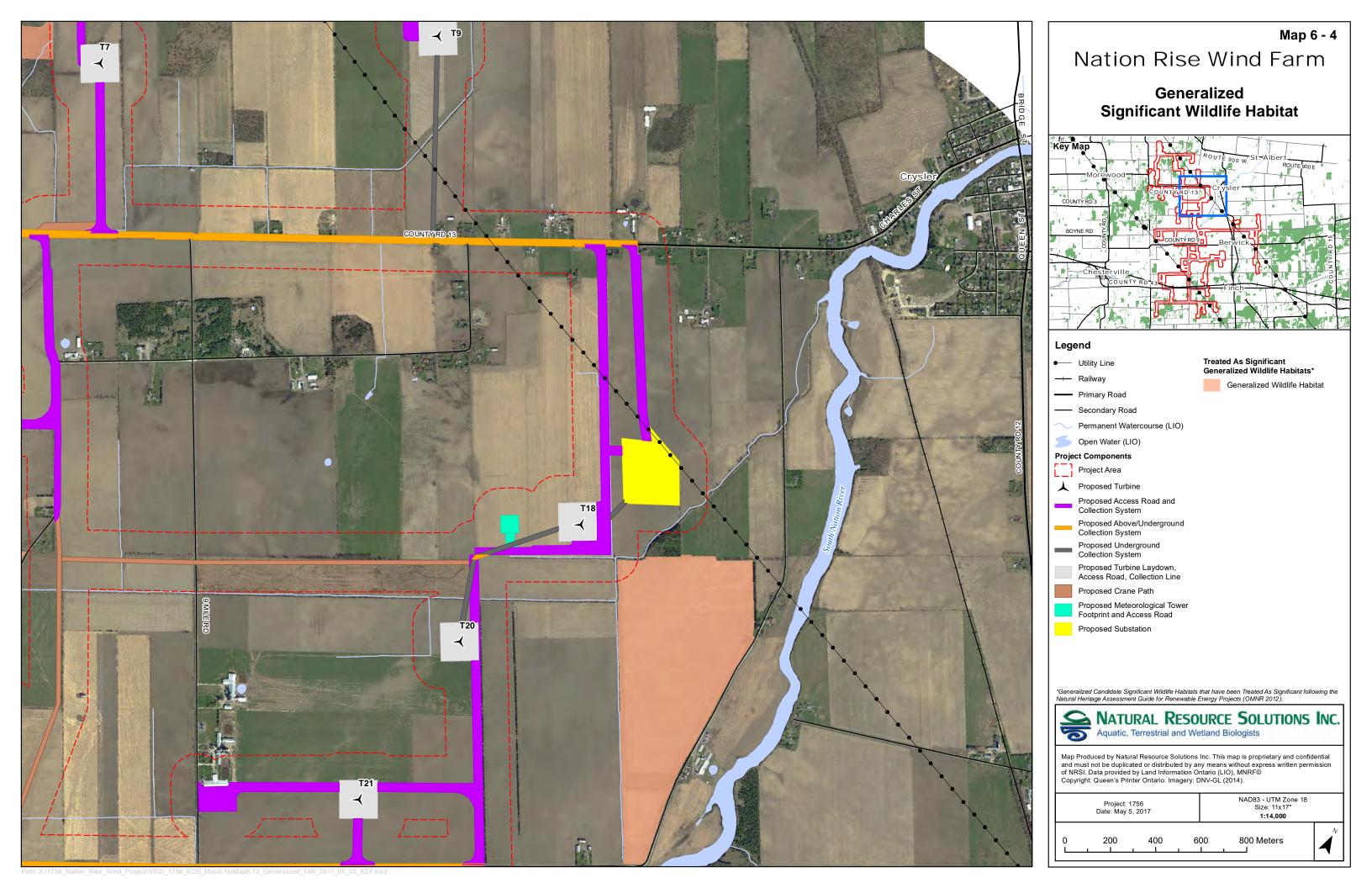


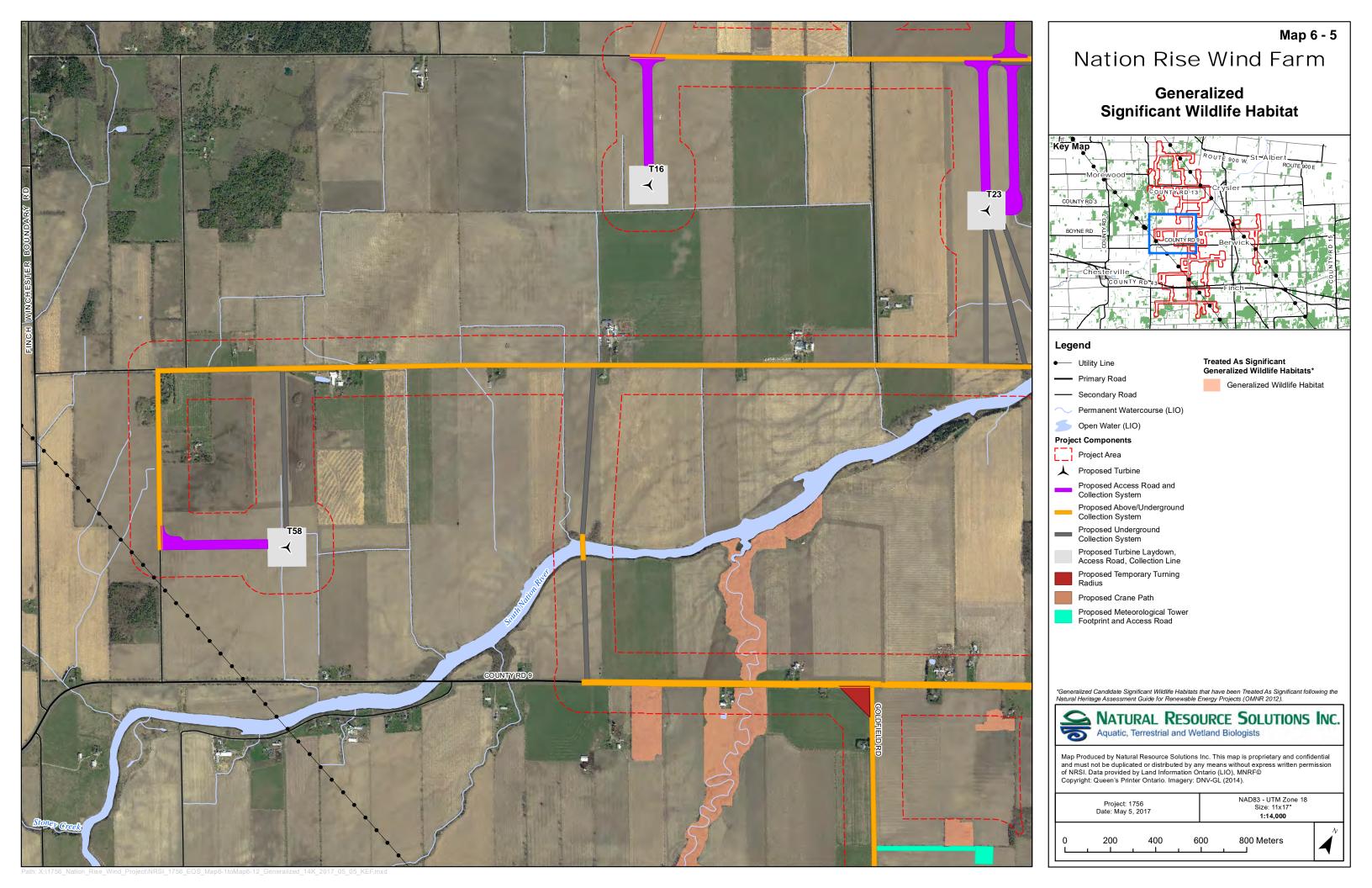
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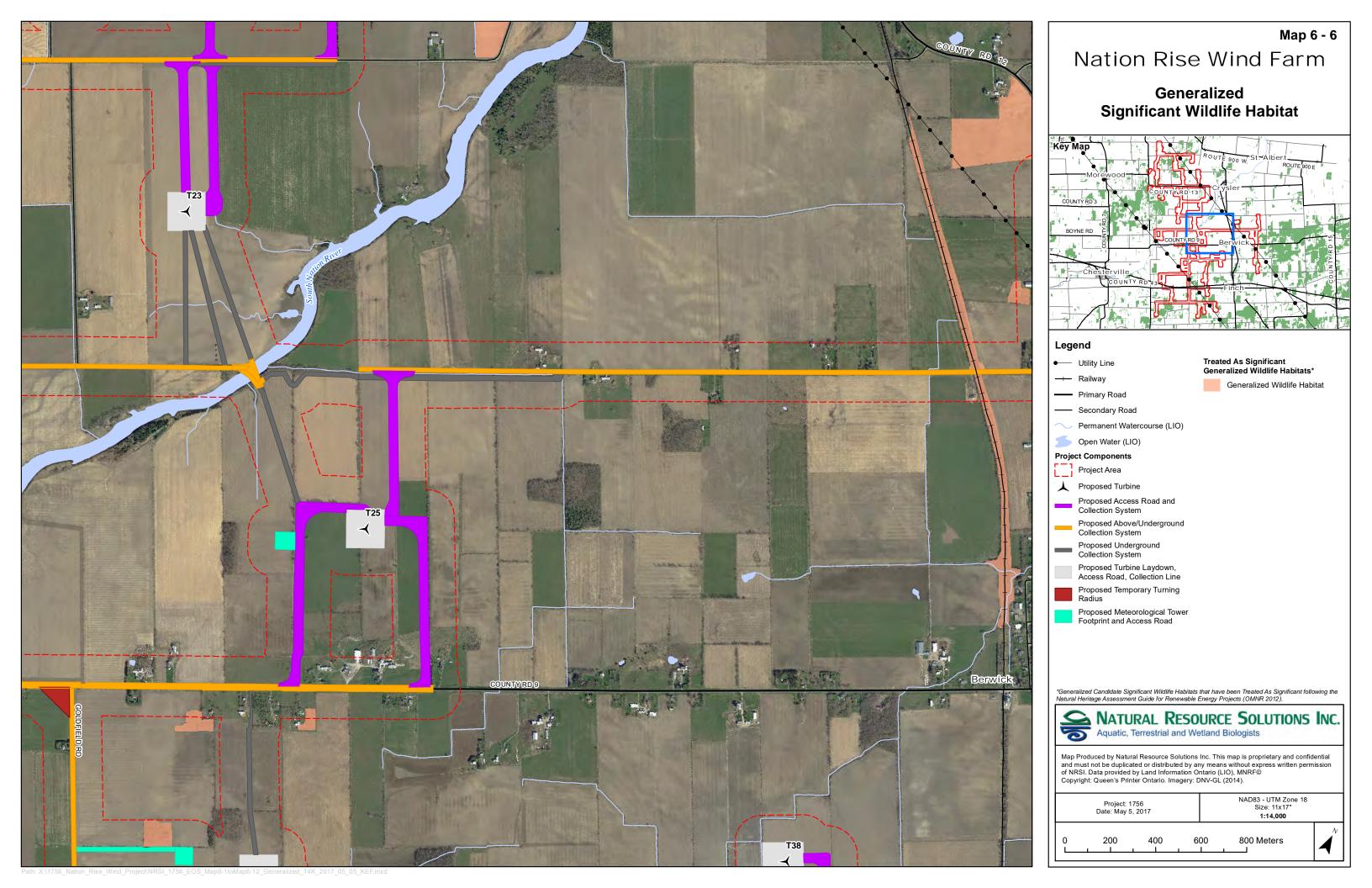
	Project: Date: May		NAD83 - UTM Zone 18 Size: 11x17" 1:14,000				
0	200	400	60	0	800 Meters	<b>✓</b>	

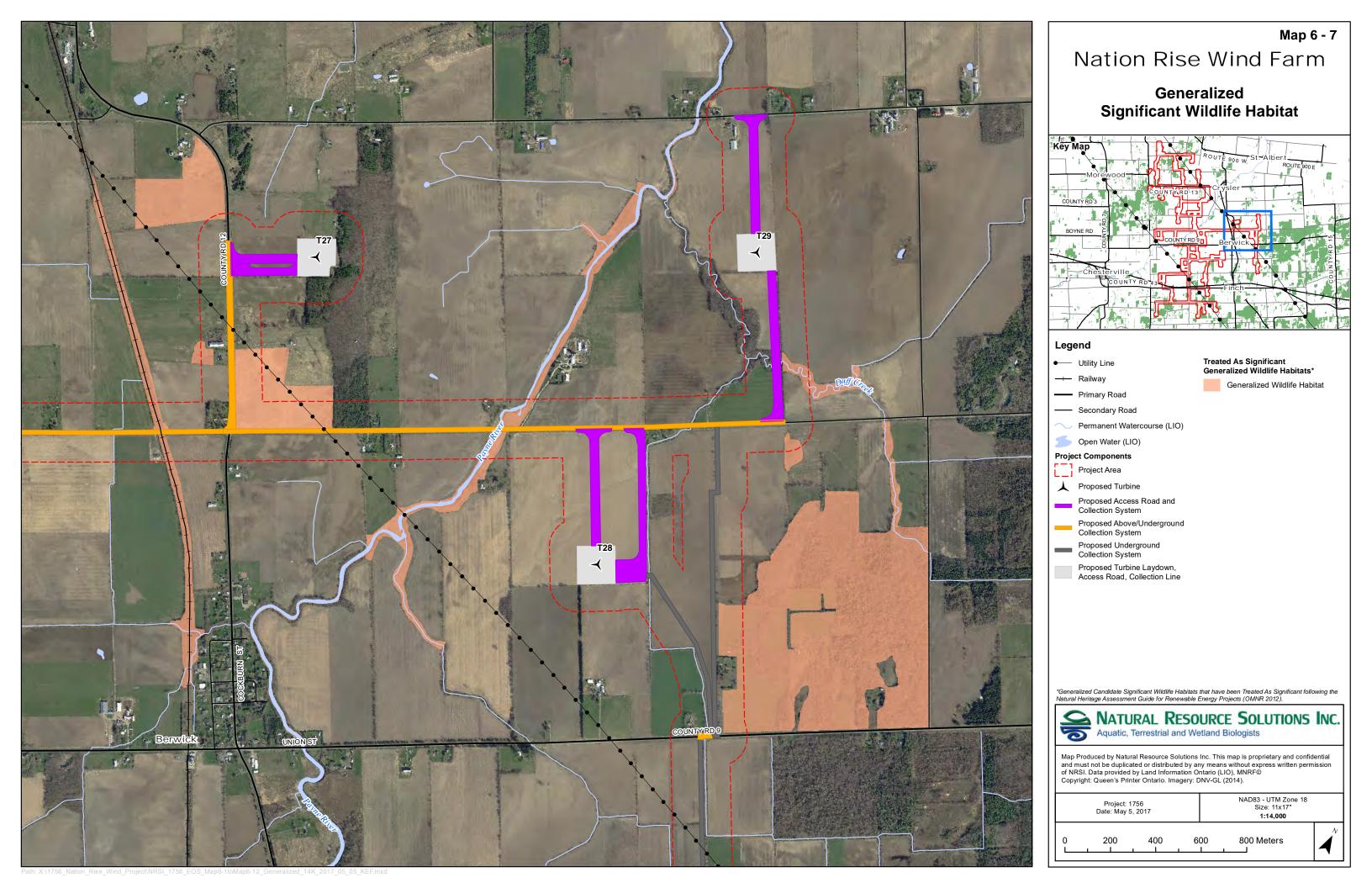


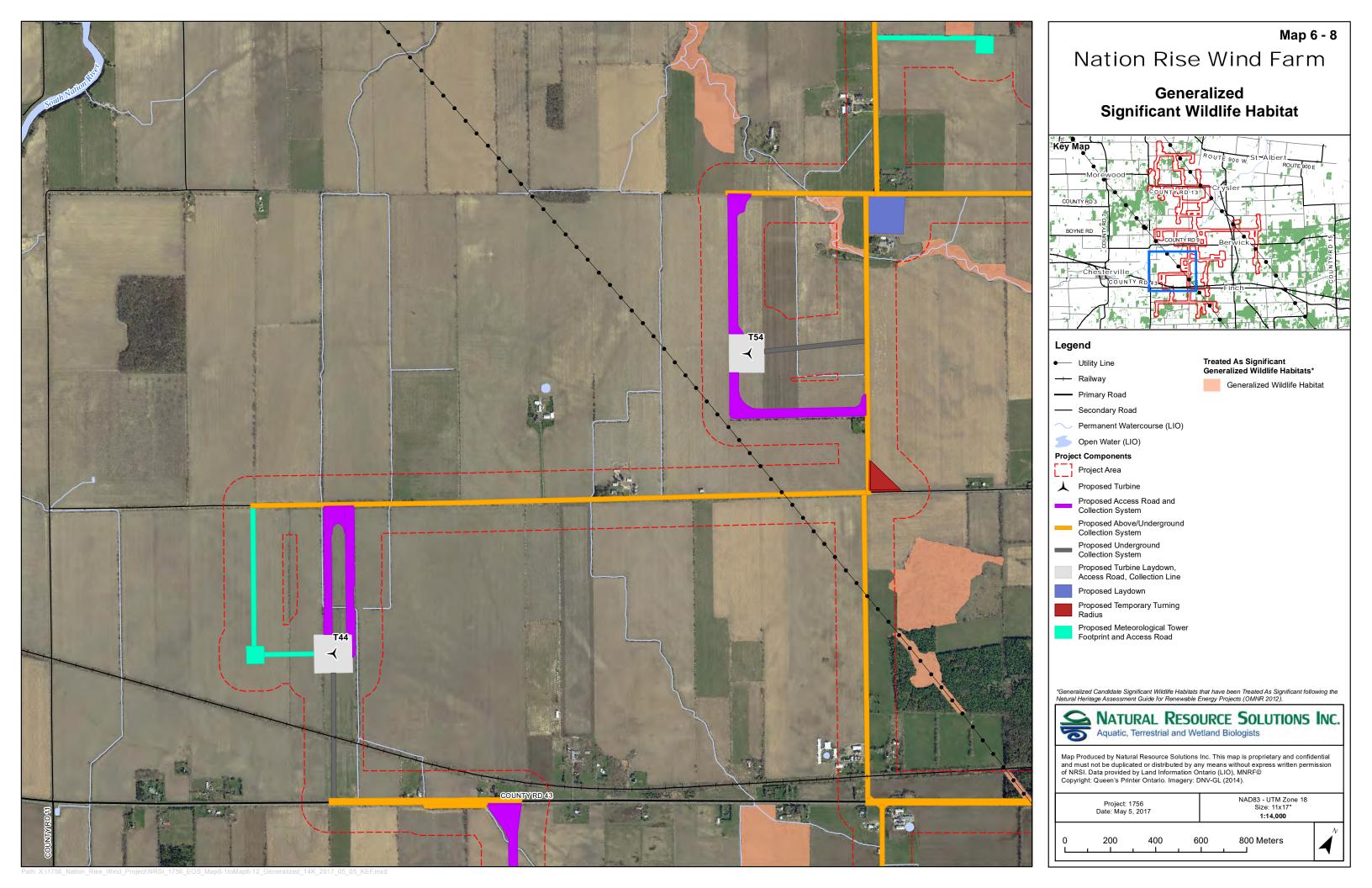


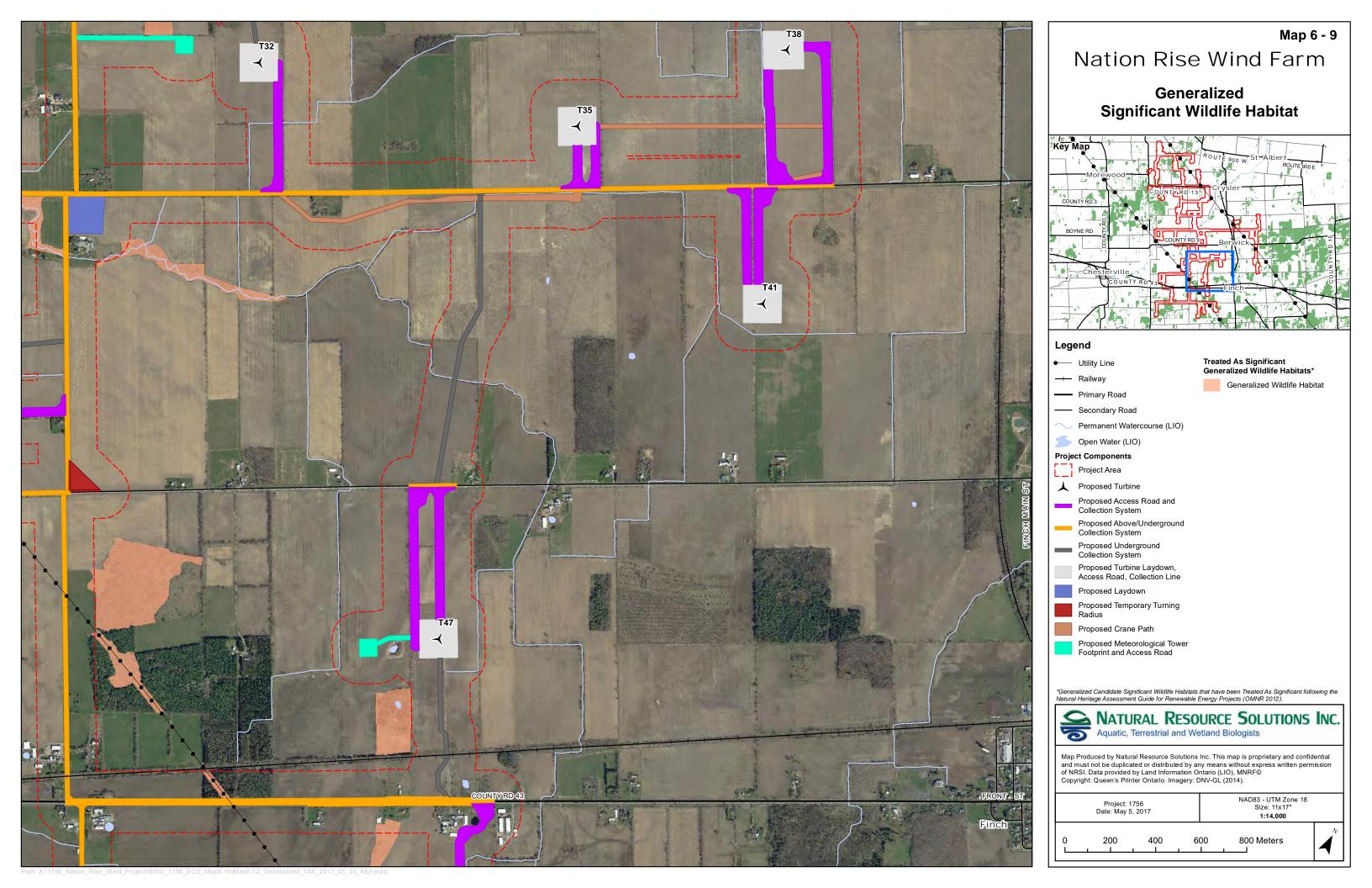


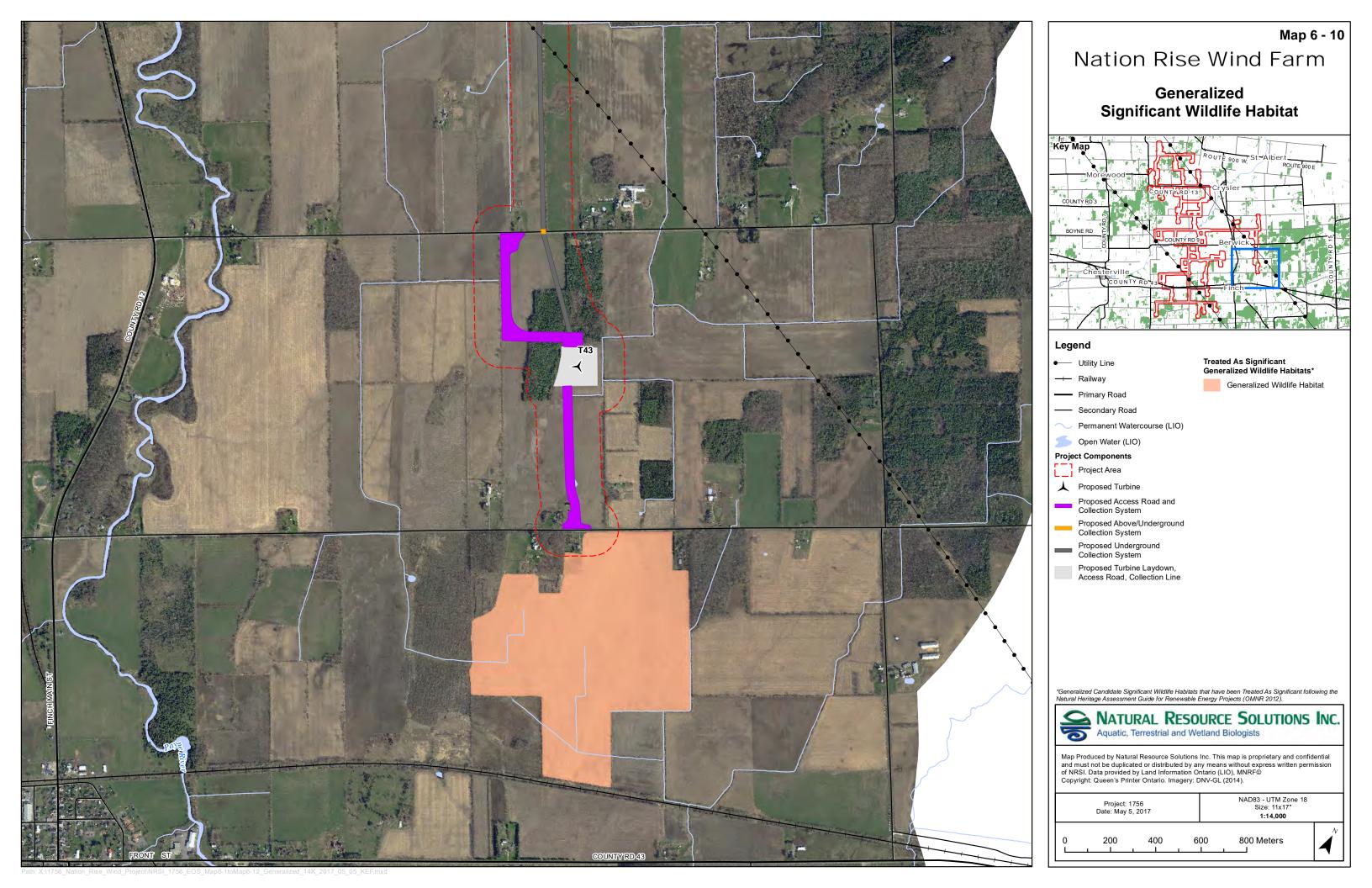


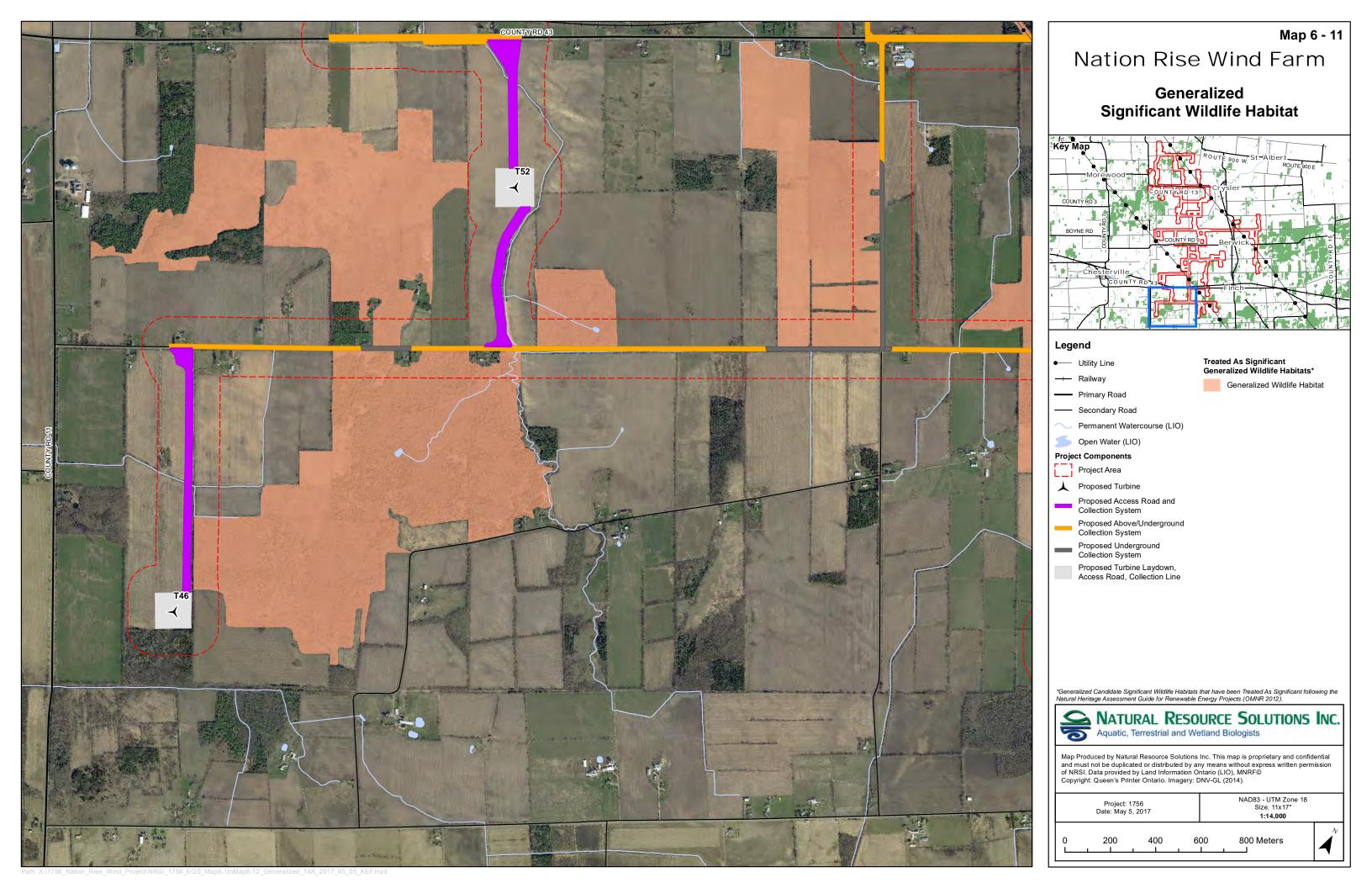


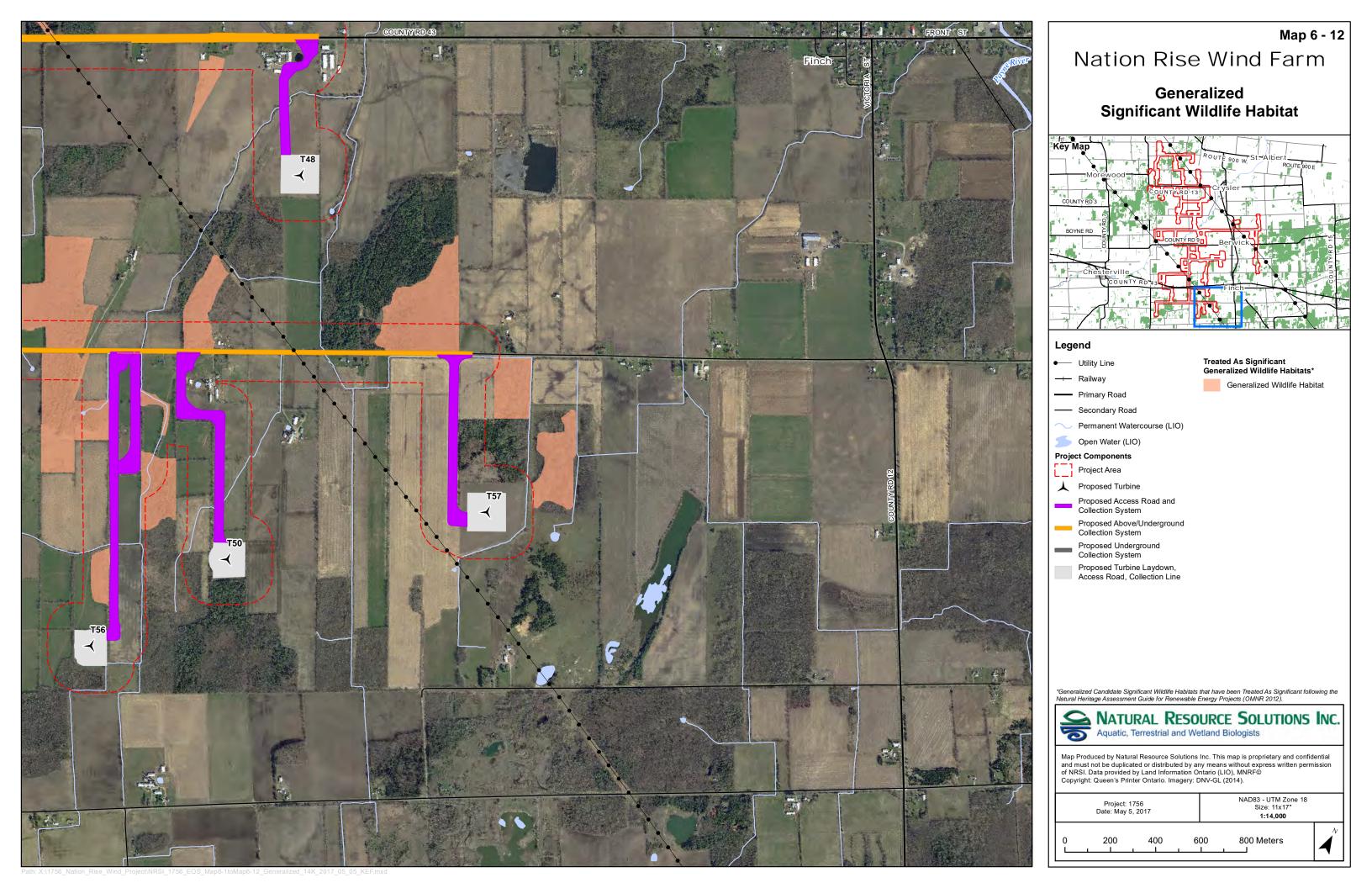


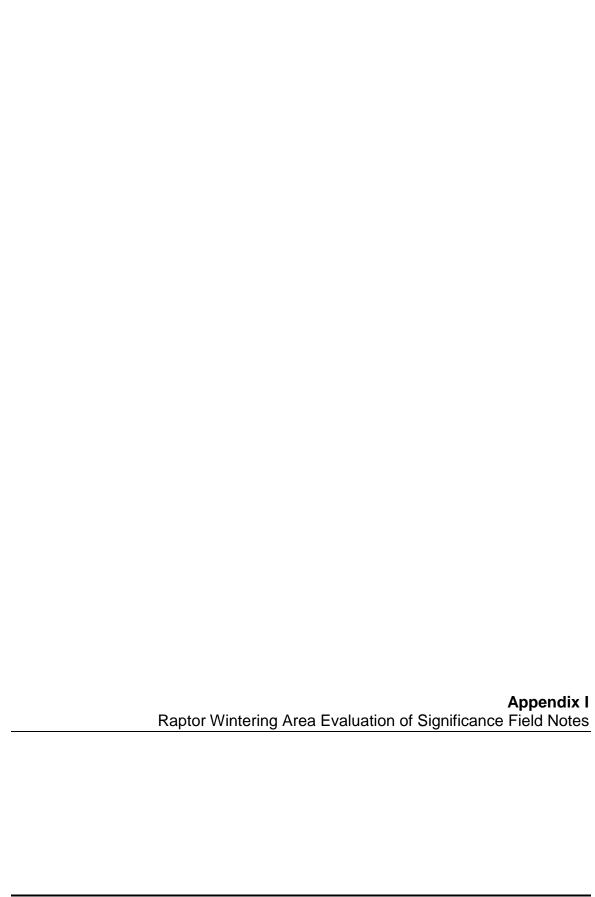


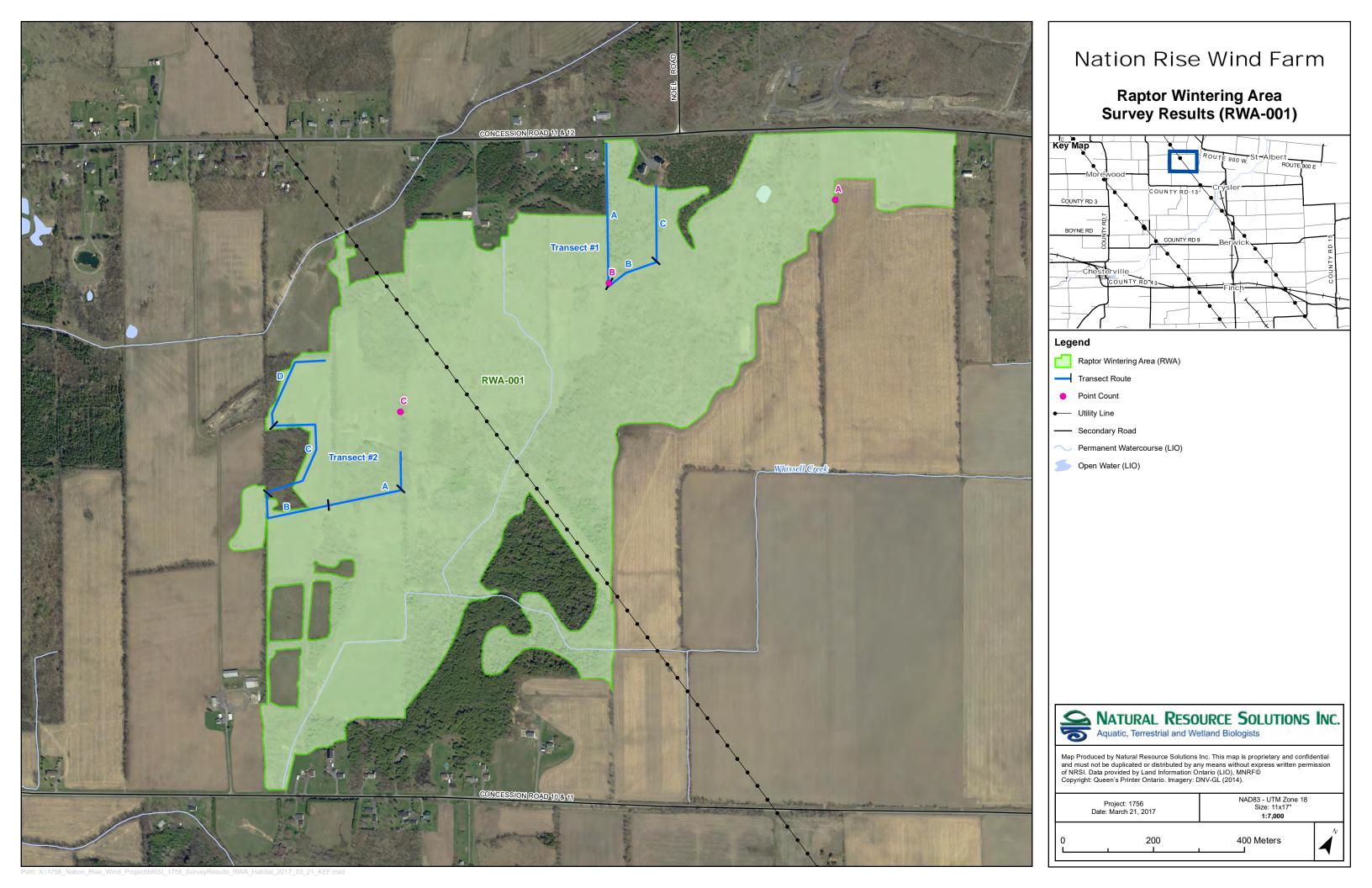


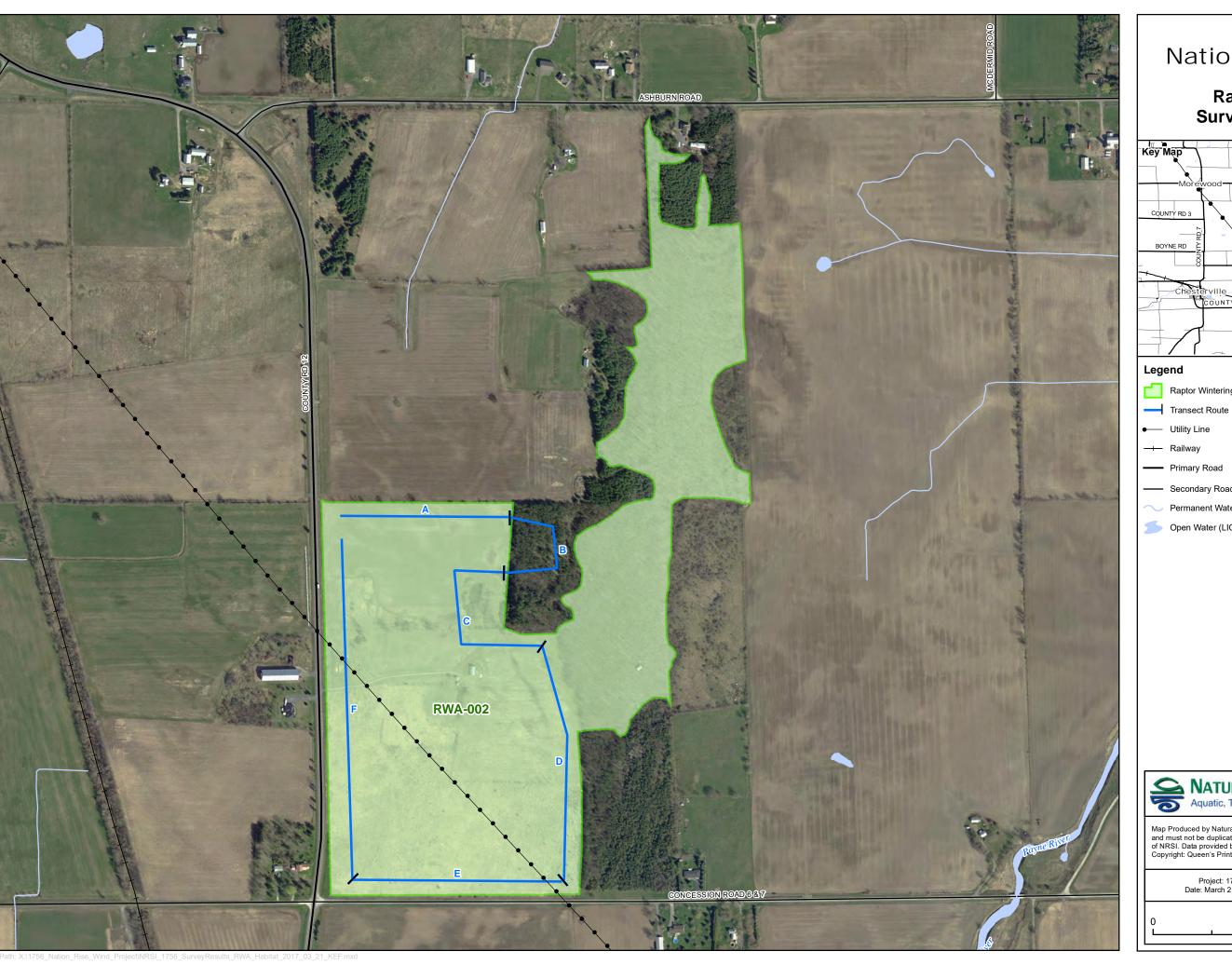












## Nation Rise Wind Farm

# Raptor Wintering Area Survey Results (RWA-002)



#### Legend

Raptor Wintering Area (RWA)

Utility Line

—— Railway

Primary Road

Secondary Road

Permanent Watercourse (LIO)

Open Water (LIO)



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NAD83 - UTM Zone 18 Size: 11x17" 1:6,000

Project: 1756 Date: March 21, 2017

400 Meters



BIRD TRANS	D TRANSECT								
Project Name Habitat	NATION RI  RUA 11 (RWA-001) Transect Route 1-B-16								
Length UTM Start	. 6 3 km         Survey spring migration         breeding fall migration         winter Maytime/ migration           187 0483347 500777 UTM End         18T 0483388 - 5007770								
Date (dd/mm/yy)	10/01/17								
Start Time:	0930 End Time: 1032 Obs. J. BARBLA K. BURGEL								
<b>Weather</b> Air Temp.	6 °C Wind Speed 2 Wind Direction 5€ (from)								
Cloud Cover									
Precipitation	Visibility High Med Low								
Height Category: 0=	0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.								
Behaviour should be record breeding evide Wind speed (Beaufo	e recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to								

(RIMA-COI)

Habitat: Rh	A 11		Transect F	Route:  /	7-18-1C	Date: 10	101/16	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
					- NO OBS T	PANSUUT	A _			
Ainy mospercu		2								
JOHN MOUD PICKER		1								
MK-CHE JUNCO		1								
BLUE JAY										
-										-
		1 -1								
		$\vdash$								
				1						
				111						

BIRD TRANS	ECT	
Project Name		Project # 15 1756
Habitat	RWA-11 (RWA-OUI)	Transect Route 2D-2C-28-2A
Length	0.93 km Survey	y spring breeding fall winter daytime/ migration migration raptor
UTM Start	187 0482997 5007124	UTM End 18T 0483190 - 5007085
Date (dd/mm/yy)	10/01/17	
Start Time:	1228 End Time: 1254	Obs. KGB, J. Barber
184 4h		
<b>Weather</b> Air Temp	°C Wind Speed	d Wind Direction SE (from)
Cloud Cover	100 %	Cloud Height High Med Low Low
Precipitation	Nove	Visibility High☑ Med☐ Low☐
Height Category: 0=	-0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m	ı etc.
record breeding evide Wind speed (Beaufo	ence as applicable ort): 0=calm; 1=smoke drifts; 2=wind felt o	on, flying, perching, perched on ground, or swimming. Can also use to on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg walk; 9=light structural damage; 10=trees uprooted

Habitat: 💫	WA-11 (RW)	(100-4	Transect F	Route: 21	3-2C-28-ZA	Date: )	on 10/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passe
Condinal	1241	1	C	L.	Formaina	Ø		350	50	AND DESCRIPTION OF STREET
Continol ne Jay	17244	2	B	Y	Foreigna		- The second second second second	330	100	A STATE OF THE PART OF THE PAR
Roven	1248	a de activida de la constitución	A	7	Tercho	6	has proposed the second transfer over ,	130	400	and the second s
					-					
		1								
		1.21								
	+									
		7 17								

AVIAN POINT	COUNT FORM
Project Name	NATION RISE WP Project # 1756
Habitat	RWA 11 (RWA-001) Point Count ID RWALLA (RWA-001 A)
Date (dd/mm/yy)	Survey spring breeding fall winter daytime/ migration migration raptor
UTM	187 048 3816 50679 47
Start Time:	0840 End Time: 0910 Obs. TRABER K. BURCLL
<b>Weather</b> Air Temp.	6°C Wind Speed 2-3 Wind Direction (from)
Cloud Cover	
Precipitation	Visibility High \( \overline{\infty} \) Med \( \overline{\infty} \) Low \( \overline{\infty} \)
Height Category: 0-0	0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
Behaviour should be record breeding evide Wind speed (Beaufor	e recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to

Habitat: RW	1A-11 (RWA	(100-1	Point Coun	nt ID: A	Date: 10	101/16	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
ROCK PILEON	0847		N	racheo	3		180	1500	2
BLUE JAY	1849	11	N	FLYING	2_	900	6	300	1
BLUE JAM	0857	2	Y	ELYIAL.	Z	90	Ø	206	/
Ambriego Carb	0851	6	Y	FLYIAL	2	90°	6	300	/
							-		
		15.							
				1					

AVIAN POINT	COUNT FORM						
Project Name	NATion	RISO WP	Pro	ject#	1758		
Habitat	RWA-11 (RWA	-001)	Point Cou	unt ID	RWA-	// 13 (RWA-COUTE)	
	10/01/		pring brong brong	eeding	win gration	ter //daytime/ raptor	
Start Time:	187 0483462 0941 End 1		1011	Obs.	- sous in	K-Burne	
<b>Weather</b> Air Temp,	°c	Wind Speed	2	Wind E	Direction 5	(from)	
Cloud Cover			Cloud Height	High	Med	Low	
Precipitation	Nows		Visibility	High	Med	Low	
Height Category: 0=	0-9m; 1=10-19m; 2=20-29r	n; 3 = 30-39m etc.					
record breeding evide Wind speed (Beaufor	recorded as: foraging, mo ence as applicable rt): 0=calm; 1=smoke drifts trees move: 8=twigs breal	; 2=wind felt on fac	e; 3=leaves move; 4	1=sm.branche	s move; 5=sm.		

Habitat: RW	4-11 CRW3	(KWA	Point Coun	tID: RWA 11-B	Date: $61/16/17$ Project #: 1756				
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
COMMON RAVEN	0954	1	Y	FLYING	- E	180°	900	105	1
AMORICAN CRIS	0957	1000	У	Hernelly		180 °	90°	500	1
CURS PEAU STATUTA	0959	RIA XV Cappy	4	CZYING		180 .	90°	200	1
BLACK CAPTED CHICARE			Y	1-trans		1806	90°	200	1
with - BRASTED NUTTINEH	1004		Y	HEMI		180°	900	200	1
						1			
									_

AVIAN POIN	IT COUNT FOR	M					
Project Name	Nation Rise Wit	<u>£</u>	Pro	oject#	1758		
Habita	it RWA-11C u	2WA-001)	Point Co	unt ID	RW11-	C (RWA-0010	٥)
Date (dd/mm/yy) UTN	10/01/17 M 187 0483189	Survey∏sprin migra	ng bro	reeding	wint	ter daytime/ raptor	
Start Time:		nd Time: 1324		Obs.	BANB GA	K. Benner	۷
<b>Weather</b> Air Temp.	3°c	Wind Speed		Wind E	DirectionS	(from)	
Cloud Cover	/00 %		Cloud Height	High	Med	Low	
Precipitation	NONG.		Visibility	High	Med	Low	
Height Category: 0	=0-9m; 1=10-19m; 2=20	-29m; 3 = 30-39m etc.					
record breeding evid <b>Wind speed</b> (Beaufo	dence as applicable fort): 0=calm; 1=smoke d	mobbing, migration, flying lrifts; 2=wind felt on face; 3 preak off, hard to walk: 9=li	3=leaves move; 4	4=sm.branches	s move; 5=sm.		

Habitat: ƙ₩	t-11 CKWA	-WI)	Point Cou	nt ID:	Date: Jo	10/17	Project #: \	756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
Bive Jay	1254	4	N	Flying	6	140°	186	300	3
Bive Jay	1318	1	Y	Flying	1		10°	200	_
×									
				-					
	-	10-1							-

BIRD TRAN	SECT
	NATION RISE UP Project # 1756
Habita	at $PWA - 4Z (RWA-002)$ Transect Route $E-D-C-B-A-F$
Length	2.2 km Survey spring breeding fall winter daytime/ migration migration raptor
UTM Start	187 0490838 5003744 UTM End
Date (dd/mm/yy)	10/01/17
Start Time:	1105 End Time: 1155 Obs. J. BARBER L. BURREL
/-	
<b>Weather</b> Air Temp.	-4 °C Wind Speed $2$ Wind Direction $5E$ (from)
Cloud Cover	
Precipitation	Visibility High Med Low
Height Category: 0	0=0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
record breeding evi <b>Wind speed</b> (Beau	be recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to idence as applicable ifort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted

Habitat: RWA	-42 (RWA-1	002)	Transect F	Route: ∈	-D-C-B-A-F	Date: /c	101/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLACK-CAPAS CHICKIE	11:37	8	В	7	FORA & ING	1		0/4	5	1
with the relation withher	11:32	3	B	4	Forgsink	1	_	0/H	5	1
American Publin	11:32	1	B	Y	FORTH IN			0/4	10	1
BLUB JAY	11:37	1	В	У	Tana int		-	0/14	10	1
		H								
										9
				-						

BIRD TRANS	SECT
Project Name Habitat	NATION RISE WF Project # 1756  RWA-11B (RWA-001) Transect Route C-B-A
Length	km Survey spring breeding fall winter daytime/ migration migration raptor
UTM Start	UTM End
Date (dd/mm/yy)	20/01/17
Start Time:	10:30 End Time: 1/25 Obs. James Cr. J. Bannow
Weather	
Air Temp.	°C Wind Speed Wind Direction (from)
Cloud Cover	
Precipitation	Visibility High Med Low
Height Category: 0=0	=0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
record breeding evide Wind speed (Beaufor	e recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to ence as applicable ort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg g trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted

Habitat: RW	11-B		Transect F	Route: (	C-B-A	Date: 2	0/01/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
SLACK CAPPED Chuchb	10:40		C	Y	FORAGING		6/4		20	/
WHITE-BREASTED MOTHER			С	Y	Formarias		0/4	/	20	/
BLUE JAY	10:35	2	C	Y	Fongalah	1	9/4	/	70	/
DARK-ETED Junco	10:35		С	Y	FORAGINA		9/H	/	20	/
MOURNING DEVE	10:32	4	C	Y	FURNALIPE		9/4	/	20	/
AMERICAN ROOM	11:20	1	A	X	FOR AGING.	1	%H	/	20	/
							7			
SHARD-SHINNED HAWK	12:40	1	С	1	FLYING	1	90	270	30	l
					į.					

	RWA-11 C (RWA-001)		ject# <u>/</u>		
Length		nigration	eeding	winter	Ò∕daytime/ raptor
UTM Start		JTM End			
Date (dd/mm/yy)	20/01/17				
Start Time:	<u>0931</u> End Time: <u>0942</u>	Obs.	J-BARBER	e J. 8	Norma (
<b>Weather</b> Air Temp.	Z°C Wind Speed		Wind Dir	rection $oldsymbol{arepsilon}$	(from)
Cloud Cover	/60%	Cloud Height	High	MedX	Low
Precipitation	NONE	Visibility	High	Med	Low
Height Category: 0=	0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.				
record breeding evide Wind speed (Beaufo	recorded as: foraging, mobbing, migration, fly nce as applicable t): 0=calm; 1=smoke drifts; 2=wind felt on fact trees move: 8=twigs break off, hard to walk; 9	e; 3=leaves move; 4	1=sm.branches	move; 5=sm.tree	

Habitat: Ru	SAIIC		Transect F	Route: 🗦	)-C-B-A	Date: 20	0/61/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUG JAY	0931	1	D	Y	Fund 4124	8 B		90	200	/
BCCH	0931	1	D	Y	Fond 4 wh	Ø		90	200	/
V										
									==-	
							1			
		1 1						S		

AVIAN POINT	COUNT FORM
Project Name	NRTINU 12156 Project # 1756
Habitat_	RUA-11 A (RWA-COI) Point Count ID A (RWA-COIA)
Date (dd/mm/yy)	20/01/17 Survey spring breeding fall winter daytime/ migration migration raptor
UTM _ Start Time: _	
<b>Weather</b> Air Temp.	°C Wind Speed Wind Direction E (from)
Cloud Cover	100 % Cloud Height High Med Low
Precipitation	LIGHT MIST SHOTET WET SHOW KNOWN Visibility High Med Low
Height Category: 0=0-	0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
record breeding evider <b>Wind speed</b> (Beaufort)	recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to nce as applicable t): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted

Habitat: んん	A 11 A		Point Count ID:			101/17	Date: 20/01//7 Project #: 1756					
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes			
PLUE JAY	1134		N	Heares	1	/	360	300	/			
AMER ICAN CROW	1135	1	$\sim$	Homes	1		360	400				
BURELCHAPES CHICLES	1175		N	Homes	8		270	50x	/			
SHARP-SHINNED HAWK	9.18	1	Y	FLYING/PERCHED	l	90	270	200	1			

Project Name	T COUNT FOR		Project #	1756	
Habita			Point Count ID _	K	(RWA-0018)
Date (dd/mm/yy)	20/01/17	Survey spring migration	breeding fal	l	daytime/
UTN	1				
Start Time:	10 49 E	nd Time: 1/ /9	Obs.	JBARSTR	J GANNON
<b>Weather</b> Air Temp.	°c	Wind Speed	Wind	Direction	(from)
Cloud Cover		Clo	oud Height High	Med	Low
0.000				Mad	Low
Precipitation	NOME		Visibility High	Med	<u>-</u>
Precipitation	Nove =0-9m; 1=10-19m; 2=20-	-29m; 3 = 30-39m etc.	Visibility High	Med	

Habitat: Ru	VALL B		Point Cour	nt ID:	Date: 20	101/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUE JAT	1049	2	Y	fone4 in 4	Ø	/	360	100	/
	1050		Y	Fund Glash	ø	/	360	50	/
Make-the Junes Makelogu Chow	1054	2	Y	FUNDAINS  FUNDAINS	1	270	98	300	1
		+							
		1=1							

COUNT FOR	VI				
		Pro	ject#	1756	
RWALL C	(RWA-001)	Point Co	unt ID <u>R</u>	WALL C	(RWA-001C)
20/01/17				_	nter daytime/ raptor
0943 Er	d Time: 1013		Obs.	BANGER	J-BANAN
2 °c	Wind Speed /		Wind [	Direction	E (from)
/00 %		Cloud Height			
NOTE		Visibility	High	Med 🗌	Low
	mobbing, migration, flyir	ng, perching, perc	hed on ground	l, or swimming	g. Can also use to
): 0=calm; 1=smoke dr					n.trees move; 6=Irg
	PANION RIS  RWAII - C  20 / 01 / 17  20 / 01 / 17  C / 00 %  Nore  1-9m; 1=10-19m; 2=20-19m; 2=20-19m; 1=smoke drives as applicable as applica	End Time: 1013  2 °C Wind Speed 1  // / / / / / / / / / / / / / / / / /	Pro  RWAII C (RWA-OUT)  Point Cor  20 / 01 / 17  Survey spring migration  Pro  20 / 01 / 17  Survey spring migration  Draw spring migration  Cloud Height  Visibility  Pegm; 1=10-19m; 2=20-29m; 3 = 30-39m etc.  Precorded as: foraging, mobbing, migration, flying, perching, perching as applicable  Expression of the core of the core in the core	Project #    Project #   Point Count ID   Point Count ID	Project # 1756    Project # 1756   Proje

Habitat: $\ell \omega$	AIIC		Point Cour	nt ID:	Date: 20 /01/17 Project #: 1756						
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes		
chercher chick.	0943	Z	N	Formalas	Ø		90	266	/		
Common Roman	0944		Y	aying	1	270	360	300	1		
white before noting	\$1 6950	-1	Y	ForaGING	6		360	200	/		
franca lobin	0951		У	HUARD/FORALIM	Ø	/	90	100	/		
PUSKTIN WORDVERKE	0957		Y	HEARD	/	/	90	388	/		
HANNY WOODENCE	1006		Y	HtmaD/Konasions	ø		310	200	/		
Common RENON	1003	1	Y	FLYING	1	270	360	408	1		
annyan RANON	1005	5	4	arms	2	270	360	400	1		
								1 1			
		-1									
				-				1			
		, T									

BIRD TRANS	SECT
Project Name Habitat	NATION RISE WP Project # 1756  RWA - 42 (RWA-002) Transect Route E-D-C-B-A-F
Length UTM Start	km Survey spring breeding fall winter daytime/ min migration migration raptor  UTM End
Date (dd/mm/yy)	20/61/17 09/0 TRANSE TRANSE
Start Time:	0810 End Time: 0855 Obs. J. BANNON
<b>Weather</b> Air Temp.	/ °C Wind Speed/ Wind Direction E (from)
Cloud Cover	
Precipitation	
	-0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
record breeding evide Wind speed (Beaufo	e recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to ence as applicable ort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg g trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted

(RWA-COZ)

Habitat: R い	9-42		Transect F	Route: ⊱	D-C-B-A-F	Date: 26	101/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
ron Typen smike	0815		E	У	PERCHOD	Ø	/	90	200	/
BLUE JAY	0819		D	X	FORALING	8		90	100	1
AMERICAN CROW	0870	Z	D	У	FLTING	ø	270	278	100	1
BLUE JMY	0830	1	D	X	ForALING	Ø		95	100	/
BLACK-CAPPED CRICIAN	0830		D	Y	FORALING	B	/	98	100	-
ompor namo	0833		A	Y	Myirl	PPL-I Decay	360	270	400	3
ROUGH-LEGGLED HAWK	0837	1	A	N	RYING	2	270	360	900	1
PILEATUD WOODPLUKE	0831	1	C	У	MYING		360	90	100	1
								7		

BIRD TRANS	ECT						
	NATION RISE RWH-1/B	(RWA-DOI)	Pr Transect		1756 A-B-C		
Length UTM Start	km /5 min	Survey	springt migration UTM End	oreeding	l	ter daytime/ raptor	,
Date (dd/mm/yy)	26/61/17	,					
Start Time:	0925 End	d Time: <u>                                     </u>	Obs.	J. BANBLI	2 N.	ALLEN	
<b>Weather</b> Air Temp.		Wind Speed_	1	Wind [	Direction	NW (from)	
Cloud Cover	%		Cloud Height	High	Med	Low	
Precipitation	Nove		Visibility	High	Med	Low	
	0.0 4-40.40 2-20.2	10 2 = 20 20 a					
Behaviour should be record breeding evide Wind speed (Beaufo	0-9m; 1=10-19m; 2=20-2 e recorded as: foraging, mence as applicable rt): 0=calm; 1=smoke drif g trees move; 8=twigs bre	nobbing, migration,	, flying, perching, per face; 3=leaves move	; 4=sm.branche	es move; 5=sm.		

(RWA-Od)

Habitat: $R\omega$	A-11 B		Transect F	Route:	1-B-C	Date: 26	101/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
ACCIPITER SP.	0928		A	Y	FLY, Nh	1	270	360	200	1
NonThere CARDINIAL	1008	1	C	4	FORALING FURALING	0	0/4	360	50	1
dans mospean	1008	(	C	7	FURALING	B	9/4	360	50	/
					` `					
	1									

Project Name Habita		- C (RWA-OX	_	oject # Route	1756 D-C-B-	<u>A</u>	
Length UTM Start	km min	Survey	spring b migration UTM End	preeding [] fall	win	ter daytime/ raptor	
Date (dd/mm/yy)	26/01/17		OTM Ellu _				
Start Time:	0829	End Time: D84	Obs.	J. BANB	en N	MILLER	
<b>Weather</b> Air Temp,	/	Wind Speed _	1	Wind [	Direction/	بس (from)	
Cloud Cover	%		Cloud Height	High	Med	Low	
Precipitation	nong		Visibility	High	Med	Low	
			etc.				

Habitat: Ru	A11 C		Transect F	Route:	D-C-B-A	Date: 26	161/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLACK-COMPUS CHICKADOS	0829	3	D	Y	Fungalay			366	100	1
GLUB JAY	0830	4	D	7	PERCHOS		/	180	300	
PEM WILLAW ROBIN	0831	10	D	7	FURGHING	-		180	300	1
Downy word frame	0831		D	7	Formatish	_		270	50	/
AMURICAN CROW	0835	2	$\sim$	Y	functions	1		70	150	
								4		
		1		-						

AVIAN POINT	COUNT FORM
Project Name	NATION RISC OF Project # 1756
Habitat	RWA 11-19 (RWA-001) Point Count ID A (RWA-001A)
Date (dd/mm/yy)	26/01/17 Survey spring breeding fall winter daytime/ migration migration raptor
UTM	
Start Time:	1025 End Time: 1055 Obs. J. BANGER N. MILLER
<b>Weather</b> Air Temp.	°C Wind Speed Wind Direction V (from)
Cloud Cover	
Precipitation	
Height Category: 0=	0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
Behaviour should be record breeding evide	recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to
Wind speed (Beaufo	rt): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg
branches move: 7=lrd	utrees move: 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted

Habitat: Kw	A 11-A		Point Coun	t ID: A	Date: 26	6/61/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUE JA	1026	6	N	PERCHUS		/	180	500	
BLACK CAPPUT CHICK.	1026	1	×	Foraninh	-	/	270	306	
murican crow	1056	5	N	REACHUS	2		180	406	
MONTHURN PLICKER	1049	1	N	PTACHED		/	180	400	/

	T COUNT FOR		Project #	1758	
Habita	RWA-112	B (RWA-001)	Point Count ID	BCR	(8100-AW
Date (dd/mm/yy)	26/01/17	Survey ☐spring migrati	breeding for	allwini	er daytime/
UTN	1				
Start Time;	0932 Er	nd Time: /602	Obs	JBARBUR	N. MILLER
<b>Weather</b> Air Temp.	/°c	Wind Speed	Wind	Direction //	(from)
Cloud Cover		Clo	oud Height High	Med	Low
Precipitation	work		Visibility High	Med	Low
Height Category: 0=	=0-9m; 1=10-19m; 2=20-	29m; 3 = 30-39m etc.			
<b>Behaviour</b> should be record breeding evid		mobbing, migration, flying, p	erching, perched on grou	nd, or swimming.	Can also use to

(RWA-OUI) Date: 26/01/17 Habitat: Rw11 - B1756 Point Count ID: Project #: Flight Height # of Obs. in Direction from Dist. from Species Time Behaviour **Passes** Birds Habitat? Category Obs. (°) Obs. (m) Direction (°) WHITE BRESING 0933 360 100 Furnylow D BLUE JAY 0933 150 360 PERCHOS AMERICAN CROW 0939 BLACK-CAPPEN 0958 N F291NG 90 180 800 A Ang 4124 50

AVIAN POINT	COUNT FORM
Project Name	NATION RISC WA Project # 1756
Habitat_	RW11-C (RWA-OOL) Point Count ID (RWA-OOLC)
Date (dd/mm/yy) _	26/61/17 Survey spring breeding fall winter adaytime/ migration migration raptor
UTM_	
Start Time:	0840 End Time: 0911 Obs. J. BAMBER N-MILLER
<b>Weather</b> Air Temp.	°C Wind Speed Wind Direction ルル (from)
Cloud Cover	

Habitat: Rw	A11-U		Point Coun	t ID:	Date: 26 /	101/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
AMURICAN CROW	0841	2	У	PERCHOS	1	_	360	200	
BLUE JAY	0842	1	Y	PENCHON	1		360	200	
BLUCK-CUPPED CHICKABUG	0856	3	7	formalina	Ø	/	180	50	/
Common RAVIN	0100	1	Y	A7/N4	2	180	90	300	
EVAUTAGAN STARLING	0104	40	У	PEACHUS		/	360	100	/
AMUNICAN NOWN	0984	20	У	PUNCHUS		/	360	100	
SHARP-SAMOUS HOWK	0907	1	Y	FLYING	1	360	180	100	1
		( II							
					ļ, — <u>-</u> -				

BIRD TRANS	SECT						
Project Name Habitat	NATION NISE RWA 42	(RWA-002)	-	roject #		-R-A-F	
Length UTM Start	km min	Survey	spring []I migration UTM End	breeding	l	nter daytime/ raptor	
Date (dd/mm/yy)	26/01/17		-				0.4
Start Time:	En	d Time: 1/45	Obs.	J. Banso	n N.	MICER	
<b>Weather</b> Air Temp.	/°c	Wind Speed_	1	Wind [	Direction	NW_(from)	
Cloud Cover	100 %		Cloud Height	High	Med	Low	
Precipitation	Nove		Visibility	High	Med	Low	
Height Category: 0=	:0-9m; 1=10-19m; 2=20-2	29m: 3 = 30-39m ef	CC.				
Behaviour should be record breeding evid Wind speed (Beaufo	e recorded as: foraging, r	mobbing, migration,	flying, perching, perace; 3=leaves move	e; 4=sm.branche	es move; 5=sn		

(RWA-OUZ)

Habitat: R	WA-42		Transect R	Route: E	-D-C-B-A-F	Date: 2	6/01/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
B-C-CHICKEDER	1113	1	0	Y	Gengy, NL	Ø		90	20	1
					, and the second					
					-7					

BIRD TRANS	SECT
	NATION RISE WP Project # 1756
Habitat	Transect Route A-B-C
Length	km Survey spring breeding fall winter daytime//6 min migration migration raptor
UTM Start	UTM End
Date (dd/mm/yy)	31/01/2017
Start Time:	1011 End Time: 1057 Obs. JBARBER
<b>Weather</b> Air Temp.	
Cloud Cover	
Precipitation	Visibility High Med Low
Height Category: 0=	-0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
Behaviour should be record breeding eviden	e recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to
Wind speed (Beaufo	ort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg g trees move: 8=twigs break off, hard to walk: 9=light structural damage: 10=trees uproofed

Habitat: Ru	M-11B		Transect F	Route: /	-B-C	Date: 3	1/01/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
NONTHORN SHRIKE	1011	1	A	Y	Ryinh	11	90	270	40	1
BLUE JAY	1015	4	A	У	Formalinh	Ø	/	9/4	10	/
AMERICAN CROW	1015	1	A	У	PEACHOS	Ø		9/4	20	
BLACK-CAPPED CHICKING	1015	1	A	У	Forestinh	Ø	/	9/4	10	

Project Name Habitat	Transect Route $D-C-B-A$	_
Length UTM Start	km Survey spring breeding fall winter migration migration  UTM End	daytime/ raptor
Date (dd/mm/yy)	31/01/17	
Start Time:	0919 End Time; 6930 Obs. J. BARBUR	
<b>Weather</b> Air Temp.		_(from)
Cloud Cover	% Cloud Height High Med Lov	w
	₩ Visibility High Med Lo	wΠ

(RWA-001) Habitat: RWA-11C Date: 31/61/17 Project #: 1756 Transect Route: D-C-B-A Flight Height # of Direction from Transect Obs. in Dist. from Species Time Behaviour **Passes** Habitat? Birds Segment Category Direction (°) Obs. (°) Obs. (m) BINDS - ND

AVIAN POIN	T COUNT FOR	M			
Project Name Habitat	NATION RI LWA-11A		Project #	1756 11A (RWA-001A	
Date (dd/mm/yy) UTM	31/61/17	Survey spring migration	breeding fall	winter day gration rapt	
Start Time:	-	nd Time: 1140	Obs	J.BARBER	
<b>Weather</b> Air Temp.		Wind Speed/	Wind [	Direction (from)	
Cloud Cover	<u></u> %	Cloud	Height High	Med Low	
Precipitation	NONE	V	/isibility High	Med Low	
Height Category: 0=	=0-9m; 1=10-19m; 2=20-	29m; 3 = 30-39m etc.			
record breeding evide Wind speed (Beaufo	lence as applicable ort): 0=calm; 1=smoke dr	mobbing, migration, flying, perc rifts; 2=wind felt on face; 3=leav reak off, hard to walk; 9=light str	es move; 4=sm.branche	s move; 5=sm.trees move; 6	

(RWA-COI)

Habitat: Ru	NA-11A		Point Count	ID: ILA		1/01/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passe
- NO	RINDS						17 = 1		
		251							
	1								
						0			

AVIAN POINT	COUNT FORM
	NMINU RISE Project # 1756  RWA-113 (RWA-COLD) Point Count ID 11B (RWA-COLB)
Date (dd/mm/yy)	31/01/17 Survey spring breeding fall winter daytime/ migration migration raptor
UTM . Start Time:	1022 End Time: 1052 Obs. J. BANBER
<b>Weather</b> Air Temp.	
Cloud Cover	
Precipitation	Visibility High Med Low
Behaviour should be record breeding evide Wind speed (Beaufor	necorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to note as applicable t): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg

(RWA-UOI) Habitat: RWA-11B (IB Date: 31/61/17 1756 **Point Count ID:** Project #: Height Flight # of Obs. in Direction from Dist. from Species Time Behaviour Passes Habitat? Birds Category Direction (°) Obs. (°) Obs. (m) WHITE-BREASTED MTHATCH 1030 50 forasing 90 MYING 3 9/4 1037 180 30 SNOW BUNTING

AVIAN POINT	COUNT FOR	M					
Project Name	NATION RISE		Pro	ject#	1756		
Habitat	RWA-11 (	C (RWA-COD)	Point Cou	ınt ID	1100	RWA-OOIC)	
Date (dd/mm/yy)	31/61/17	Survey sprir migr	ngbre	eeding	win win	ter daytime/ raptor	
UTM				_			
Start Time:	<u>0936</u> Er	nd Time: 1000		Obs.	J-BANB	·ER	
<b>Weather</b> Air Temp.	°c	Wind Speed		Wind D	Direction	(from)	
Cloud Cover	%		Cloud Height	High	Med	Low	
Precipitation	NONE		Visibility	High	Med	Low	
Height Category: 0=	0-9m; 1=10-19m; 2=20-	-29m: 3 = 30-39m etc					
Behaviour should be record breeding evide Wind speed (Beaufor	recorded as: foraging, ence as applicable rt): 0=calm; 1=smoke di	mobbing, migration, flying lrifts; 2=wind felt on face; 3 preak off, hard to walk: 9=1	3=leaves move; 4	4=sm.branches	s move; 5=sm.		

Habitat: NW	A-11C		Point Coun	tID: 11C	Date: 3	1/01/17	Project #: /	756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
CHICKADEE	0930		У	FURALING			98	150	/
IMORICAN NOBIN	0930	1	Y	HEARD			180	100	/
common Roman	0957		У	HEARD MYING	2	186	360	150	1
							7		
				<u> </u>	- \$				
					-				
						-			

BIRD TRANSI	ECT					
Project Name	NATION RIS	se up	Pro	ject#	1756	
Habitat _	RWA-	42 (RWA-002)	Transect	Route <u>£</u>	E-D-C-	B-A-F
Length	km min	Survey	spring bromigration	eeding []fall miç	l  win gration	iter daytime/
UTM Start			UTM End			
Date (dd/mm/yy)	31/01/17	_				
Start Time:	0810	End Time: 0850	Obs.	J.BA	REER	
<b>Weather</b> Air Temp.	-19 °c	Wind Speed_		Wind [	Direction	(from)
Cloud Cover	<u> </u>		Cloud Height	High	Med	Low
Precipitation -	NOWE		Visibility	High	Med	Low
		=20-29m; 3 = 30-39m etc				One sharing to
<b>Behaviour</b> should be record breeding evider		ng, mobbing, migration,	flying, perching, perc	hed on ground	I, or swimming	. Can also use to
		e drifts; 2=wind felt on fa				.trees move; 6=Irg

(RWA-002)

Habitat: Rh	1A-42		Transect R	Route: E	D-C-B-A-F	Date: 3	1/01/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
DOWN WOODPECKER	0824	1	C	У	ForAbiNh	1	/	360	30	/
									/	

BIRD TRANS	ECT						U.
Project Name Habitat	NATION RI RWA-11	B (RWA-DOI)		oject#	1756 A-B-C		
Length - UTM Start	/ <b>%</b> min		spring b migration UTM End	oreeding  fall mig	☐winte gration	r aptor	
Date (dd/mm/yy) _ Start Time:	09/02/17 1512 Er	nd Time: 1600	Obs.	J. RMBra	V. Bunit	71	
Start rime.		id Tillie.		O Di i-Scic	2.4/2		
<b>Weather</b> Air Temp.	-12 °c	Wind Speed	2	Wind E	Direction	(from)	
Cloud Cover	60 %		Cloud Height	High	Med	Low	
Precipitation _	Move		Visibility	<i>—</i> High <b>⊠</b>	Med	Low	
Height Category: 0=0	1-10 10m: 2-20	20m: 2 - 30 30m ata					
Behaviour should be r		,		rched on around	or swimming (	an also use to	
record breeding evider	nce as applicable						
Wind speed (Beaufort branches move; 7=lrg						ees move; 6=lrg	

(RWA-WI)

Habitat:	RWA . 11B		Transect F	Route: /	7-B-C	Date: 6	9/02/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
Pence-cupted	1515	3	A	Y	Farehirk	D	/	5/H	20	/
BLUE JMY	1516	2	Α	У	fonetinh	15	/	<b>⊅</b> /H	20	/
AMERICAN TRIE SOMMOW	1516	4	A	У	FORALINL	0		%H	20	/
Dark-EYED Junco	1517	2	A	Y	FISHER GINL	Ø	/	9/11	20	/
										l.
				-						
								- 3		

BIRD TRANS	ECT						
Project Name	NATION RISE	E WP	Pro	ject#	1756		
Habitat	RWA-11C	(RWA-001)	Transect I	Route	D-C-B-1	9	
Length	km min		nigration	eeding	winter gration	daytime/ raptor	
UTM Start  Date (dd/mm/yy)	09/02/17		JTM End				
Start Time:	1415 End	Time:	Obs.	J BANBER	K swener	L	
<b>Weather</b> Air Temp.	-/2_°c	Wind Speed	3	Wind E	Direction	~ (from)	
Cloud Cover	60_%		Cloud Height	High	Med	Low	
Precipitation	Nowe		Visibility	High	Med	Low	
	0-9m; 1=10-19m; 2=20-29 recorded as: foraging, ma		vina. perchina. perc	ned on around	I. or swimmina. Ca	an also use to	
record breeding evide				_			
• · · · · · · · · · · · · · · · · · · ·	trees move: 8=twigs brea					ss move, o-iig	

Habitat: R	labitat: RWA - II C Transect Route: D-C-3-A					Date: 09/02/17 Project #: 1756					
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes	
BLUE JAM	1418	ni kitanga s	<b>D</b>	y	PERCHED	1	/	90	50	/	
			100								
								1			

AVIAN POINT	COUNT FORM
Project Name	NATION RISE UP Project # 1756-6
Habitat	RWA-11 (RWA-001) Point Count ID RWA-1/A (RWA-001A)
Date (dd/mm/yy)	Survey spring breeding fall winter daytime/ migration migration raptor
UTM_	
Start Time.	0808 End Time: 0838 Obs. TEARER K-BURRELL
<b>Weather</b> Air Temp.	
Cloud Cover	€ % Cloud Height High Med Low
Precipitation	Visibility High Med Low
Height Category: 0=0	-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
Behaviour should be record breeding evider Wind speed (Beaufort	recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to

Habitat: 化に	JA -IIA		Point Count	ID: RWA-11A	Date: /C	102/17	Project #:	1756-6	2
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUE JAM	0812	And the second	Y	Forestinh	The state of the s	/	90	200	/
							-		
									1
		- 3				(C)			

AVIAN POINT	COUNT FOR	M				
Project Name _ Habitat	NATION RIS			_	1756	
Парна	RWA. 118	(KWA-UUI)	Point Cou	שו זחנ =	11B (R)	WA-OUIB)
Date (dd/mm/yy) -	09/02/17	Survey ☐s m	spring bro	reeding	∥	daytime/
UTM_						
Start Time:	/523 Er	nd Time:/553	3	Obs.	J. BARBER	K. BURREL
						3
<b>Weather</b> Air Temp.		Wind Speed	2	Wind [	Direction	(from)
Cloud Cover	65_%		Cloud Height	High	Med	Low
Precipitation -	NEWE	-	Visibility	High	Med	Low
Height Category: 0=0	)-9m; 1=10-19m; 2=20-	·29m; 3 = 30-39m etc.				
Behaviour should be i		mobbing, migration, fly	ing, perching, perching	hed on ground	d, or swimming. Ca	an also use to
record breeding evider Wind speed (Beaufort	· ·	rifts: 2=wind felt on fac	e: 3=leaves move:	4=sm_branche	es move: 5=sm.tre	es move: 6=lra
• •	trees move; 8=twigs bi	•				

IB	1	Point Count	ID: 118	Date: 7	9/02/17	Project #:	1756	
Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
1547	1	Y	Forguing	D	/	90	50	/
				+				
				7				
+				4				
				7				
					/			
	Time	Time # of Birds	Time # of Obs. in Birds Habitat?	Birds Habitat?	Time # of Obs. in Behaviour Height Category	Time # of Obs. in Behaviour Height Flight Category Direction (°)	Time # of Obs. in Behaviour Height Flight Direction from Obs. (°)  Behaviour Category Direction (°)  Obs. (°)	Time # of Obs. in Behaviour Height Flight Direction from Obs. (°) Obs. (m)

AVIAN POIN	IT COUNT FORM
Project Name	
Habita	at RWA-11C (RWA-001) Point Count ID 1/C (RWA-001C)
Date (dd/mm/yy)	
UTI	M
Start Time:	1428 End Time: 1458 Obs. J'BARBOR K. BURNELL
<b>Weather</b> Air Temp.	
Cloud Cover	
Precipitation	NINE Visibility High Med Low
Height Category: 0	0=0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
Behaviour should be record breeding evice Wind speed (Beauf	be recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to

(RWA-OCI)

Habitat:	RWA-110		Point Count ID	D: 11C	Date: O	9/02/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passe
-NO	BIRDS								
					1				
	7								

BIRD TRANS	ECT					
Project Name	NATION R		Project #			
Habitat	RWA 42	(RWA-002) Tra	ansect Route	E-D-C-3-4	<u>1- F</u>	
Length	km min	Survey spring migration		allwinten	er daytime/ raptor	
UTM Start		UTM End	h			
Date (dd/mm/yy)	09/02/17					
Start Time:	1320 E	nd Time: <u>1353</u>	Obs. J RAR	sen t	BURREL	
<b>Weather</b> Air Temp.	2°c	Wind Speed3	Wind	I Direction//	W (from)	
Cloud Cover	60%	Cloud	l Height High	Med	Low	
Precipitation	NOWE		/isibility High	Med	Low	
Height Category: 0=	0-9m; 1=10-19m; 2=20	-29m; 3 = 30-39m etc.				
Behaviour should be record breeding evide		mobbing, migration, flying, perc	ching, perched on grou	nd, or swimming.	Can also use to	
Wind speed (Beaufor	rt): 0=calm; 1=smoke d	rifts; 2=wind felt on face; 3=leav reak off, hard to walk; 9=light st			rees move; 6=lrg	

(RWA-002)

Habitat: $\ell \omega$	9-42		Transect R	Route:¿}	)-C-B-A-F	Date: 09	1/02/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
AMRO	1321	1	F	Y	PticHos	Ø		90	300	/
CEDM WAXWING	1337	· ·	C	У	FLYING	1	180	360	86	1
SNOW BUNTING	1352	4	E	X	Forakinsh	D	/	9/4	50	/

Project Name Habita	MATION RISE  L RWA-11		Project #	756 -B-A	_
ength	20 min	Survey spring migration UTM End	breeding fall migrati	winte	er daytime/ raptor
Date (dd/mm/yy)	14/02/17		-		
Start Time;	1060 E	nd Time: 1650 Obs.	JBANSON	10.	MILLER
<b>Veather</b> Air Temp.	9 °c	Wind Speed/	Wind Direc	tion <i></i>	(from)
Cloud Cover	100 %	Cloud Heigh	t High 🗹 I	Med	Low
Precipitation	None	Visibility	/ High	Med	Low

(RWA-CU)

5A-11B		Transect F	Route:	1-B-A	Date: 19	1/02/17	Project #:	1756	
Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
1001	1	C	Y	forgy/NL	B	/	180	30	/
1001	4	C	Y	foregri wh			180	10	/
1005	3	C	4	FORALING	W	/	136	16	/
1005	4	C	Y	Formaling	Ø	/	180	16	/
1016	15	С	Y	P GACHED	-	/	%H	15	/
1010	4	C	4	PERCHOD	B	/		5	/
1008	2	C	Y	FORGLINK	Ø	/	911	10	/
	Time  1001  1005  1005  1016	Time # of Birds  100   (  100   4  100   3  100   4  101   15  101   15	Time # of Birds Segment    100	Time # of Birds Segment Habitat?    100	Time # of Birds Segment Obs. in Habitat? Behaviour  1001 1 C Y brigging  1001 4 C Y from which  1005 3 C Y from which  1005 4 C Y from which  1018 15 C Y from which  1010 4 C Y from which	Time # of Birds Segment Habitat? Behaviour Height Category  1001 1 C Y brigginh &  1001 4 C Y fraginh &  1005 3 C Y fraginh &  1005 4 C Y fraginh &  1010 15 C Y fraginh &  1010 15 C Y fraction I	Time # of Birds Segment Habitat? Behaviour Height Category Direction (°)  100   1	Time # of Birds   Transect   Obs. in   Behaviour   Height   Category   Direction from Obs. (°)      100	Time # of Birds   Transect   Obs. in   Behaviour   Height   Category   Direction from Obs. (°)   Ob

BIRD TRANSI	ECT						
Project Name _ Habitat _		RISE WP	•	oject# Route	1756 A-b-(	<u>-                                    </u>	
Length - - UTM Start	km min	Survey	spring b migration UTM End	oreeding fall miç	☐wir gration	daytim raptor	
Date (dd/mm/yy)	14/02/17		_				
Start Time:	0903	End Time: <u>8914</u>	Obs.	J. BANS	ta 1	MILLER	
<b>Weather</b> Air Temp.	-9_°c	Wind Speed _	1	Wind [	Direction	5E(from)	
Cloud Cover	106 %		Cloud Height	High	Med	Low	
Precipitation	Nowo		Visibility	High	Med	Low	
Height Category: 0=0	-9m; 1=10-19m; 2=	20-29m; 3 = 30-39m etc	<b>c</b> .				
record breeding evider Wind speed (Beaufort	nce as applicable ): 0=calm; 1=smoke	ng, mobbing, migration, e drifts; 2=wind felt on fa	ace; 3=leaves move;	; 4=sm.branche	s move; 5=sm		

Habitat: 🛭 🕡	AIIC		Transect F	Route: A	B-C-)	Date: /	1/02/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
AMERICAN CROW	0903	1	B	У	Fry rach	1	270	360	200	1
CHILLANDS CHILLANDS	0904		В	Y	For 24/104	2	/	90	40	
SLUE JAY	0907	7	B	У	FUNAGIAG	Ø		90	30	/
Common navy	0907		3	Y	Frying	2	270	3/0	300	1
	-	-						-		
		E 1								
							<u> </u>			
		-								
									1	
						J = 1				

AVIAN POINT	COUNT FORM
Project Name Habitat	NATION RISE WP Project # 1756  RWA- 11A (RWA-OUI) Point Count ID 1/A (RWA-OUIA)
-	
Date (dd/mm/yy)	Survey spring breeding fall winter daytime/
UTM	
Start Time:	1059 End Time: 1/29 Obs. J. BARBER N. MILLER
Weather	
Air Temp.	- 9 °C Wind Speed Wind Direction SE (from)
Cloud Cover	90 % Cloud Height High Med Low
Precipitation	Visibility High Med Low
Height Category: 0=0	0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
Behaviour should be	recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to
record breeding evide	
	t): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg

Habitat: RW	1-11A		Point Count	ID: //A	Date: /4	102/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLACK CAPTED EltiCKADES	1100		Y	FonALIAL	8	/	95	66	/
American cao w	(11 (x)	1	N		1		270	700	/
AMERICAN ROBIN	1118	11	N	PENCHUD AY/NG	2	270	360	300	_1_
									17

AVIAN POINT	COUNT FORM
	RWA-1/B (RWA-001) Point Count ID 11B (RWA-0018)
Date (dd/mm/yy) _ UTM	Survey spring breeding fall winter daytime/ migration migration raptor
Start Time:	1012 End Time: 1042 Obs. J. Bangen N. MILLER
<b>Weather</b> Air Temp.	9°C Wind Speed Wind DirectionS€(from)
Cloud Cover	
Precipitation	Visibility High Med Low
Behaviour should be record breeding evide Wind speed (Beaufor	0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.  recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to ence as applicable t): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg trees move: 8=twigs break off, hard to walk; 9=light structural damage: 10=trees uproofed

Habitat: R	111-A01	3	Point Coun	tID: UB	Date: /²	4/02/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
AMMI CAN ROBIN	1617	300	Y	FLYING	4	180	360	40	1
: American Robin	1017	1	Y	FLYING	4	270	360	40	1
common ronge	1017	1	Y	FLTING	2	270	. 360	150	1
AMERICAN ROBIN	1021	4	Y	PERCHED	1	1	180	30	/
AMBRICAN ROBIN	1023	40	Y	FEGINA	4	270	365	40	1
SNOW BUNTING	1023	2	Y	FIGNES	3	180	360	30	1
BLACK - CADPLES	1028	2	Y	FORALING	Ø	/	180	10	/
AMMICUM NOBIN	1033	25	¥	MYING	4	180	360	40	

AVIAN POINT	COUNT FORM
Project Name Habitat	NATION RISE Project # 1756  RWA-1/C (RWA-001) Point Count ID 1/C (RWA-001C)
Date (dd/mm/yy)	14/02/17 Survey spring breeding fall winter daytime/ migration migration raptor
Start Time:	0914 End Time: 0944 Obs. JBANBER N. MILLER
<b>Weather</b> Air Temp.	9°C Wind Speed Wind Direction55 (from)
Cloud Cover	
Precipitation -	Work Visibility High Med Low
Height Category: 0=0	0-9m; 1=10-19m; 2=20-29m; 3 = 30-39m etc.
record breeding evider Wind speed (Beaufort	recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to ence as applicable t): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg trees move: 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uproofed

Habitat: Ru	VA 11	c	Point Count	ID: 1/C	Date: /	4/02/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUE JM	0920	2	Y	PURCHUD	1	1	90	40	/
AMMICAN ROBIN	0925	200	У	FLYING	2	270	360	30	1
NUT HATCH	0926	1	4	FORAGING	Ø	/	90		/
PUNCHCAN ROBIN	0942	1	Y	RYING	2	270	360	36	1
DOWNY WOODPELKING	(-	1	Y	Forestinh	Ø	/	6/4	5	/
Ambrican Roga	0943	200	X	RYINL	2	270	36.	30	
								1 = -1	

BIRD TRANS	ECT						
Project Name Habitat	NATION RWA 40	RISE - (RWA-002)	Pr Transect	_	1756 E-D-C-	B-A-F	
Length UTM Start	km min	Survey	spring the migration	oreeding	win gration	ter daytime/ raptor	
Date (dd/mm/yy)	14/02/17		OTWIEND _				
Start Time:	0800hg	End Time: 0840 h	Obs.	J. BAMB	the N.	MILLER	
<b>Weather</b> Air Temp.		Wind Speed	1	Wind [	Direction	(from)	
Cloud Cover	106 %		Cloud Height	HighX	Med	Low	
Precipitation	NOME		Visibility	High	Med	Low	
Height Category: 0=0	D-9m; 1=10-19m; 2=2	0-29m; 3 = 30-39m etc	C.				
record breeding evide Wind speed (Beaufor	ence as applicable t): 0=calm; 1=smoke	, mobbing, migration, drifts; 2=wind felt on fa break off, hard to walk	ace; 3=leaves move	; 4=sm.branche	s move; 5=sm.		

(RWA-WZ)

Habitat: R	WA-42		Transect F	Route: <i>€</i> -	D-C-B-A-F	Date: /4	1/02/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
AMERICAN CROW	0807	2	3	λ	ETIMA	2	96	90	300	2
					-				-	

BIRD TRANSE	СТ						
Project Name Habitat	NATION RWA = 11		Pro Transect	oject# Route	1756 AB-C		
Length _	km 15 min		spring migration	eeding [fall mig	wint	er aptor	
UTM Start _	-1-1-		JTM End				
Date (dd/mm/yy)	22/62/11						
Start Time:	1000	End Time:	Obs	J. BARY	BER		
<b>Weather</b> Air Temp.	2_∘c	Wind Speed	1	Wind	Direction	(from)	
Cloud Cover	/60 %		Cloud Height	High	Med	Low	
Precipitation _	NONE		Visibility	High	Med	Low	
Height Category: 0=0-9	9m; 1=10-19m; 2=20-2	9m; 3 = 30-39m etc.					
evidence as applicable <b>Wind speed</b> (Beaufort):	0=calm; 1=smoke drif	nobbing, migration, flying, ts; 2=wind felt on face; 3= rd to walk; 9=light structur	leaves move; 4=sm.b	ranches move;			

Habitat:	WA-11	13	Transect R	oute: A	-B-C	Date: Z	2/02/7		1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
RLUE JAY	1007	7	A	Y	forga ING			360	10	/
DARK. M. CO JUNCO	1003	2	A	Y	FMAGINA	1		360	10	
erfféd Grousé	1006	)	B	Ý	PER CHED	B	/	360	10	
						yl =				
7		-								

BIRD TRANSE	СТ						
Project Name _	NATION R	ISE	Pr	oject#	756		
Habitat_	RWA-11C	/	Transect	t Route	)-C-BA	<u> </u>	
Length _	km min	Survey	spring migration	reeding	wir	nter daytime/	
UTM Start _			UTM End				
Date (dd/mm/yy)	22/02/17	_					
Start Time:	0904	End Time: 0917	Obs.	JBA	RBER		
<b>Weather</b> Air Temp.	2	Wind Speed	)	Wind	Direction	(from)	
Cloud Cover _	100 %		Cloud Height	High	Med	Low	
Precipitation _	NONE		Visibility	High	Med	Low	
Height Category: 0=0-9	m; 1=10-19m; 2=20	-29m; 3 = 30-39m etc.					
evidence as applicable  Wind speed (Beaufort):	0=calm; 1=smoke d	mobbing, migration, flying rifts; 2=wind felt on face; and to walk; 9=light struct	3=leaves move; 4=sm.	branches move;			

Habitat: 人いA	+-//c		Transect R	oute: D-	C-B-A	Date: 27	2/02/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUE JAY	0907	7	D	Y	Punctus	1		90	100	
PILERTUD WOODFUKUR	0917	1	В	Y	Penator	1		180	200	/
DOWNY WODPELLEN	0913	1	В	Y	PERCHED	Ø		90	50	/
BLACK WAP (-) CHICKADES	09/6	2	В	Y	FURA GING	/		90	20	/
AMTA ICAN ONON	0916	/	B	À	MYINL	2	270	90	200	1
	T.									
	12									

Date (dd/mm/yy) 22/62/17 Survey breeding fall winter spring migration winter migration raptor  Start Time: 1/35 Obs. JBARBER  Weather Air Temp. 2 °C Wind Speed / Wind Direction (from)  Cloud Cover 100 % Cloud Height High Med Low	Project Name Habitat	RWA-11A	Project #Point Count ID
Weather Air Temp.  Cloud Cover   00 %   Cloud Height   High   Med   Low	_	22/02/17 Sur	Spring migration
	Start Time:	1105 End Time:	1135 Obs. J.BARBER
Cloud Height High Med Low		Z°C Wind Spe	eed/ Wind Direction 5 (from)
	Cloud Cover	(00 %	Cloud Height High Med Low
Visibility High Med Low	Precipitation	None	Visibility VIII N

Habitat: NW	A-11A		Point Coun	tID: UA	Date: Z	2/02/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs.	Passes
BLUE JAY	11 11	2	N	PETCHED	2	/	180	500	/
American chow	11 18	)	Y	FRYING	2	180	360	50	Ъ
AMURICAN ROBIN	11 23	1	N	PERCHOD  PERCHOD	T		270	400	/
F *									
				=	13 (12				

AVIAN POINT C	OUNT FORM	
- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	NATION RISE	Project # 1756
Habitat_	RWA-11B	Point Count ID 1/B
Date (dd/mm/yy)	22/02/17	Survey breeding fall winter daytime/
UTM_		
Start Time: _	/007 End Tim	ne: 1037 Obs. J. BAMBER
<b>Weather</b> Air Temp.	2∘c	Wind Speed / Wind Direction (from)
Cloud Cover _	100 %	Cloud Height High Med Low
Precipitation _	None	Visibility High Med Low
Height Category: 0=0-9	m; 1=10-19m; 2=20-29m; 3 =	= 30-39m etc.
evidence as applicable Wind speed (Beaufort):	0=calm; 1=smoke drifts; 2=wi	i, migration, flying, perching, perched on ground, or swimming. Can also use to record breeding rind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches alk; 9=light structural damage; 10=trees uprooted

Habitat:	WA-11	13	Transect R	oute: A	-B-C	Date: Z	2/02/7		1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
RLUE JAY	1007	7	A	Y	forga ING			360	10	/
DARK. M. CO JUNCO	1003	2	A	Y	FMAGINA	1		360	10	
erfféd Grousé	1006	)	B	Ý	PER CHED	B	/	360	10	
						yl =				
7										

BIRD TRANSE	СТ						
Project Name _	NATION R	ISE	Pr	oject#	756		
Habitat_	RWA-11C	/	Transect	t Route	)-C-BA	<u> </u>	
Length _	km min	Survey	spring migration	reeding	wir	nter daytime/	
UTM Start _			UTM End				
Date (dd/mm/yy)	22/02/17	_					
Start Time:	0904	End Time: 0917	Obs.	JBA	RBER		
<b>Weather</b> Air Temp.	2	Wind Speed	)	Wind	Direction	(from)	
Cloud Cover _	100 %		Cloud Height	High	Med	Low	
Precipitation _	NONE		Visibility	High	Med	Low	
Height Category: 0=0-9	m; 1=10-19m; 2=20	-29m; 3 = 30-39m etc.					
evidence as applicable  Wind speed (Beaufort):	0=calm; 1=smoke d	mobbing, migration, flying rifts; 2=wind felt on face; and to walk; 9=light struct	3=leaves move; 4=sm.	branches move;			

Habitat: 人いA	+-//c		Transect R	oute: D-	C-B-A	Date: 27	2/02/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUE JAY	0907	7	D	Y	Punctus	1		90	100	
PILERTUD WOODFUKUR	0917	1	В	Y	Penator	1		180	200	/
DOWNY WODPELLEN	0913	1	В	Y	PERCHED	Ø		90	50	/
BLACK WAP (-) CHICKADES	09/6	2	В	Y	FURA GING	/		90	20	/
AMTA ICAN ONON	0916	/	B	À	MYINL	2	270	90	200	1
	T.									
	12									

BIRD TRANSE	СТ						
Project Name _ Habitat_	NATION RUA-L		_	roject# t Route _ <i>E</i>	1756 -D-C-3		
Length	km min	Survey	spring migration	oreeding fall mig	win	ter daytime/	
UTM Start Date (dd/mm/yy)	22/02/17		UTM End				
Start Time:	0810	End Time: 0840	Obs	J-BAV	istr		
<b>Weather</b> Air Temp.	2∘c	Wind Speed_	1	Wind [	Direction	(from)	-
Cloud Cover	100 %		Cloud Height	High	Med	Low	o ()
Precipitation _	NONE		Visibility	High	Med	Low	
Height Category: 0=0-9		-29m; 3 = 30-39m etc. mobbing, migration, flying	g, perching, perched o	n ground, or swin	nming. Can also	o use to record breed	ina
Wind speed (Beaufort):	0=calm; 1=smoke dr	rifts; 2=wind felt on face; 3 ard to walk; 9=light structu	3=leaves move; 4=sm.l	branches move:			9

Habitat: RW	A-42		Transect Re	oute: E	D-C-B-A-F	Date: Z	2/02/17	Project #:		
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
LUE JAY	0817	1	D	Y	PERCHUD	1		366	60	
CATCKADEE	0825	4	B	Y	FMAGING	D	/	90	10	/
NONTHERN SHRIKE	0832	)	F	X	PERCHED	1	/	270	40	/
		1/2								
T-										

Project Name	MTION	RISE	Pro	oject#	1756	
Habitat_	RWA	113	Transect	Route _	9-B-C	
ength	km /5 min	Survey	spring migration	eeding	☐ winte	er / daytime/ raptor
JTM Start _			UTM End			
Date (dd/mm/yy)	27/02/17	-				
Start Time:	1130	End Time: 17.15	Obs	J. BAY	rs ta	
<b>Veather</b> Air Temp.	4 °c	Wind Speed	3	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Direction	(5,0,00)
_	100	willa Speea_				(from)
Cloud Cover	<del></del> %		Cloud Height	High	Med	Low
Precipitation	MONE		Visibility	High	Med	Low
leight Category: 0=0-9r	m; 1=10-19m; 2=20	-29m; 3 = 30-39m etc.				

Habitat: NW	A-11B		Transect Ro	oute: A	B-C	Date: Z	7/02/17		1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUE JAM	1134	1	A	У	peneros	1	/	360	10	1
PILEPITED WINDSPLUCE	1/35	1	B	Y	FLYING	3	90	360	30	)
reentes Mastered										
					-					

_
daytime/ raptor
(from)
ow_
ow_
Naj 17

Habitat: Rh	A IIC		Transect Ro	oute:	-C-B-A	Date: 27	7/02/17	Project #:	1756	λ-
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
COMMON GRACKLE	1040	14	D	Y	PERCHOD	1		90	30	/
190 - WINGER BLACKBAD	1040	2	D	Y	PERCHED	1	/	30	30	/
CAMADA GOOSE	1041	9	B	Y	FLYING	5		9/H	50	1
	77 1									

AVIAN POIN	T COUNT FORM		1				
Project Name Habit	NATION RIS		Pro Point Co	oject#	1756 11A		
Date (dd/mm/yy)	27/02/17 TM	Survey	bre spring migration	eeding	winte	daytime/	
Start Time:	1705	Time: 130	5	Obs	J. SANSER		
<b>Weather</b> Air Temp.	4°c	Wind Speed	3	Wind	Direction_ &	(from)	
Cloud Cover	90 %		Cloud Height	High	Med	Low	
Precipitation	NOWE		Visibility	High	Med	Low	
Behaviour should be evidence as applical Wind speed (Beaufo	ee recorded as: foraging, mobb ble fort): 0=calm; 1=smoke drifts; 2 love; 8=twigs break off, hard to	oing, migration, flying, 2=wind felt on face; 3	=leaves move; 4=sm.b	oranches move;			g

Habitat: RU	JA-11A	-	Point Count I	D: RWA-1/A	Date: Z	7/02/17		1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
CANADA GOOSE	1235	20	Y	FLYING	20	€ 90	360	200	)
American Crow	1300	2	N	PERCHOS	2	/	180	500	/

AVIAN POINT	COUNT FORM					
Project Name	NATION RI	15€	Pro	oject#	1756	
Habitat_	RWA-11.	В	Point Co	ount ID	118	
Date (dd/mm/yy)	27/02/17	Survey s	browning migration	reeding	winter	daytime/
UTM_						
Start Time:	1137 End	d Time: \[ \lambda \rightarrow	207	Obs.	J. BARBER	
<b>Weather</b> Air Temp	<i>4</i> _°c	Wind Speed	3	Wind I	Direction_ W	(from)
Cloud Cover	100 %		Cloud Height	High	Med	Low
Precipitation _	NONE		Visibility	High	Med	Low
U-1-1-0-1	1 10 10 0 00 00	0 00 00 1				
	9m; 1=10-19m; 2=20-29m					
Behaviour should be red evidence as applicable	corded as: foraging, mobl	bing, migration, flying, p	perching, perched on	ground, or swin	mming. Can also us	se to record breeding
Wind speed (Beaufort):	0=calm; 1=smoke drifts;				5=sm.trees move;	6=Irg branches
move; /=Irg trees move;	8=twigs break off, hard to	o walk; 9=light structura	al damage; 10=trees	uprooted		

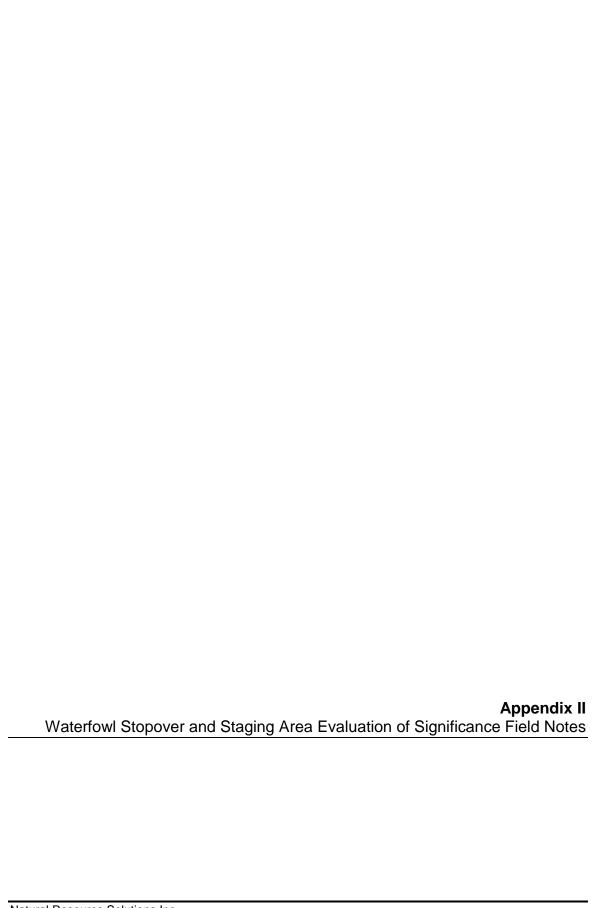
Habitat: Q	NA - 11B		Point Coun	t ID: 1) B	Date: 7.7	1/02/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)		Dist. from Obs.	Passes
AMERICAN CABO	1/38	1	N	PERCHED	1	/	360	500	/
PILENTLY WOODPERLUR	1/40	2	N	FLYLING /PERCHOS	2	90	360	200	
CAMADA 40056	1/41	6	Y	FLYING	8	360	360	90	)
CANASA GOOSE	1159	19	Y	FLYING	8	90	360	90	)
CANADA LOOSE	1205	25	Y	FLYING FLYING FLYING	8	90	368	90	1
		$\rightarrow$							

AVIAN POINT	COUNT FORM						
Project Name	NATION RIS	5E	Pro	oject#	1756	<u></u>	
Habitat_	RWA-11	C	Point Co	unt ID	MC		
Date (dd/mm/yy)	27/62/17	Surveysp	bro	eedingfall miç	☐win gration	ter daytime/	
UTM_							
Start Time:	1051 End	Time: 1/2/		Obs.	J BANB EN	Z	
<b>Weather</b> Air Temp.	<u>4</u> •c	Wind Speed	3	Wind	Direction	(from)	
Cloud Cover	100 %		Cloud Height	High	Med	Low	
Precipitation _	NONE		Visibility	High	Med	Low	
Height Category: 0=0-9	0m; 1=10-19m; 2=20-29m;	3 = 30-39m etc.					
Behaviour should be re- evidence as applicable Wind speed (Beaufort):	corded as: foraging, mobb  0=calm; 1=smoke drifts; 2 8=twigs break off, hard to	ing, migration, flying, posture = wind felt on face; 3=le	eaves move; 4=sm.b	ranches move;			

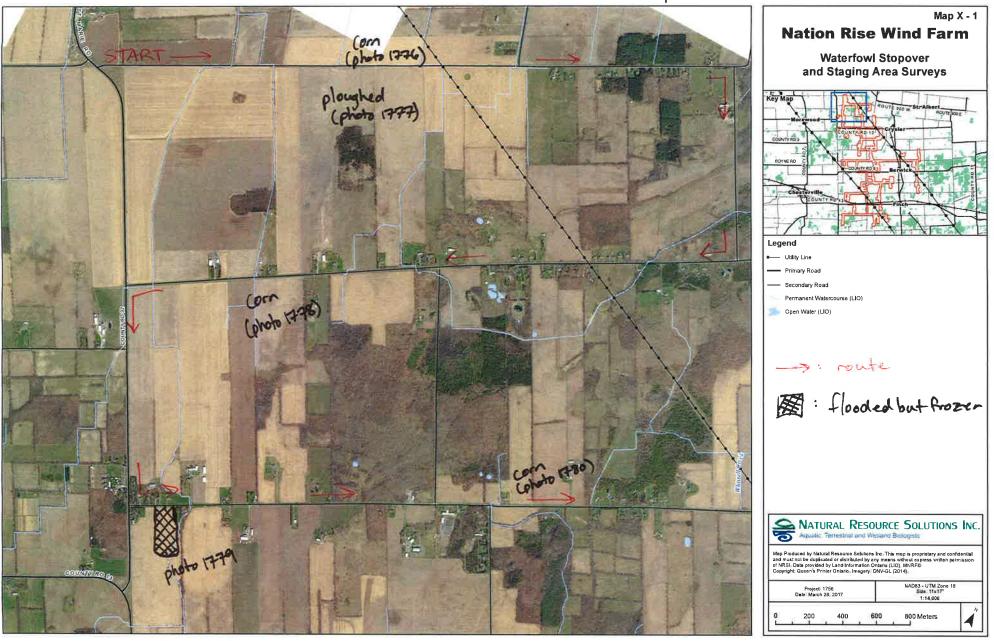
Habitat: RW	7-110	-	Point Count	ID: // C	Date: 2	7/02/17	Project #:	1756	
Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
SWNY WOSPPEKER	1110	1	У	FORAGING	D		360	150	/
								-	
		_							

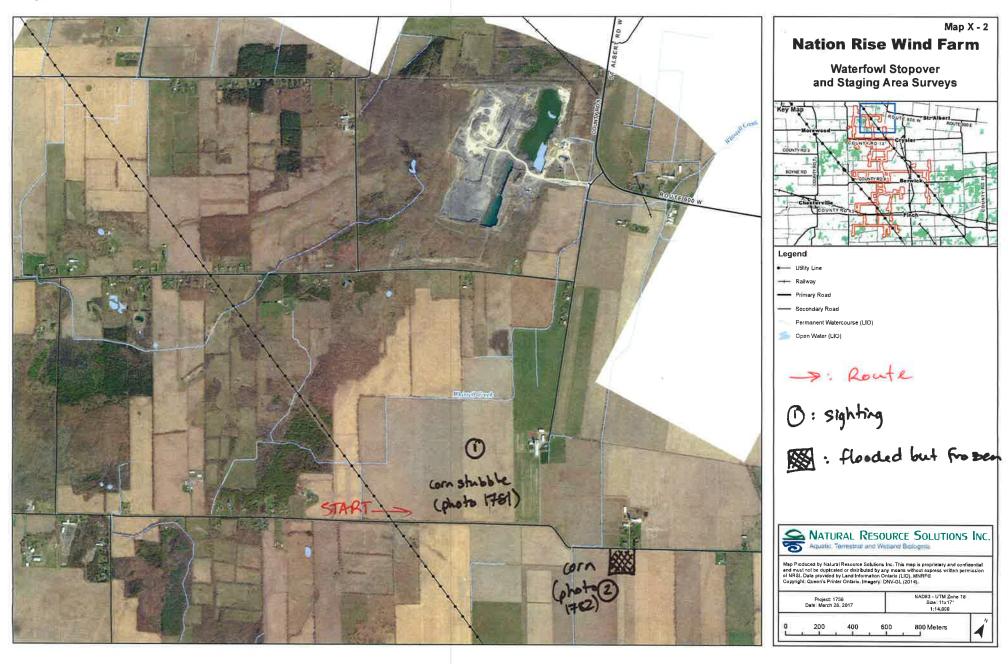
Project Name    NATION RISE   Project #   TSE     Habitat   RWA 4Z   Transect Route   E-D-C-B-A-F	BIRD TRANSE	СТ						
Length    km	Project Name	NATION	RISE	Pi	oject#	1756		
	Habitat_	RWA	42	Transec	t Route	E-D-C-B	A-F	
Date (dd/mm/yy)         Z7 / 62 / 17           Start Time:         0938         End Time:         / 101Z         Obs.         J Bries VR           Weather Air Temp.         4 °C         Wind Speed         4 Wind Direction         S W (from)           Cloud Cover         90 %         Cloud Height         High Med Low         Low	ength -		Survey				_	
Start Time:         0938         End Time:         101Z         Obs.         J Brask Lac           Weather Air Temp.         4 °C         Wind Speed         4 Wind Direction         5 W (from)           Cloud Cover         90 %         Cloud Height         High         Med         Low	JTM Start	,		UTM End				
Weather bir Temp.     4 °C     Wind Speed     4 Wind Direction     5 W (from)       Cloud Cover     90 %     Cloud Height     High Med Low Low	ate (dd/mm/yy)	27/02/17	7					
Sloud Cover	start Time:	0938	End Time:	Obs	J. BAM	BER		_
Sloud Cover Signit Figure 1		4 °c	Wind Speed_	4	Wind	Direction 5	(from)	
recipitation Visibility High Med Low	loud Cover	90 %		Cloud Height	High .	Med	Low	
	recipitation	NONE		Visibility	High	Med	Low	
Behaviour should be recorded as: foraging, mobbing, migration, flying, perching, perched on ground, or swimming. Can also use to record breeding	evidence as applicable Wind speed (Beaufort):	0=calm; 1=smoke o	, mobbing, migration, flying drifts; 2=wind felt on face; 3 nard to walk; 9=light structi	3=leaves move; 4=sm	.branches move;			

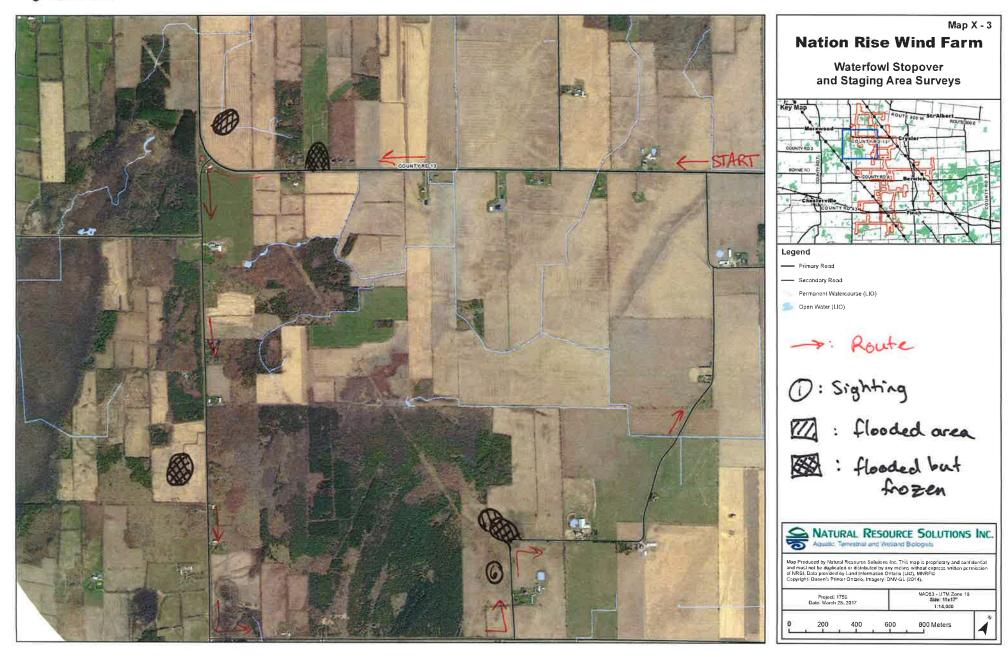
Habitat:	WA - 42	2	Transect Ro	oute: E	D-C-B-A-F	Date: 2	7/02/17	Project #:	1756	
Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUE JAY	0942		Ē	Y	PERCHED	)	/	90	40	1
PATRICAN ROBIN	6945	3	D	У	FYING	4	180	360	50	)
CANADA GOOSE	0946	8	D	Y	Frying	15	45	360	200	)
Amorican Crow	0947	4	D	Y	RYING	2	90	360	40	2
NAMHURN SHRIKE	0947	1	F	Y	PERCHOD	B	/	270	50	
SNOW GOOSE	1007	1400	F	У	FLYING	50	270	360	600	1
		+								

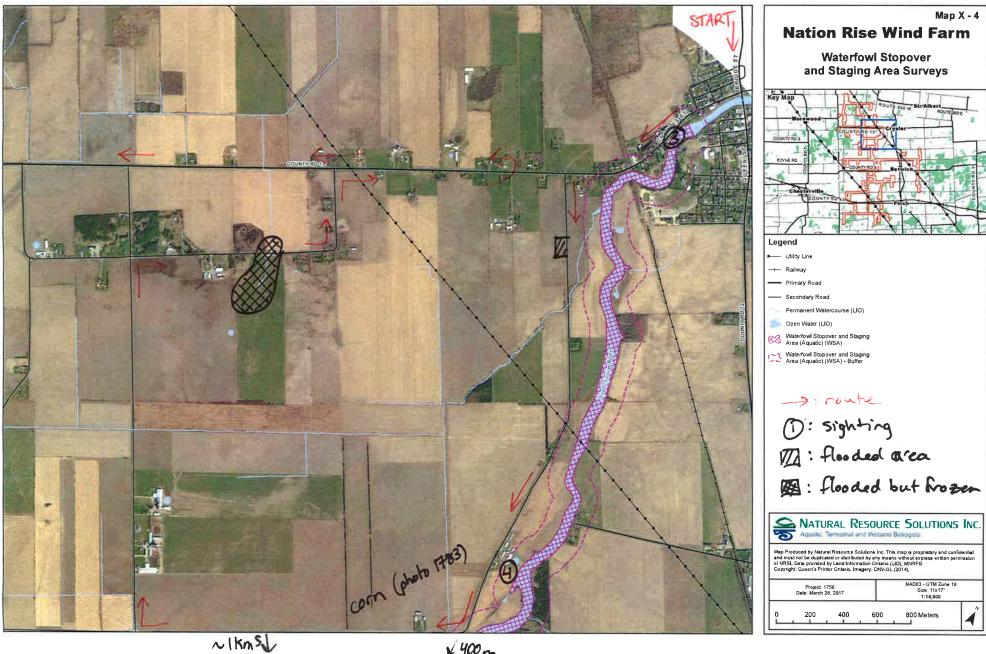


# fields mostly snowliced over is crops poking through





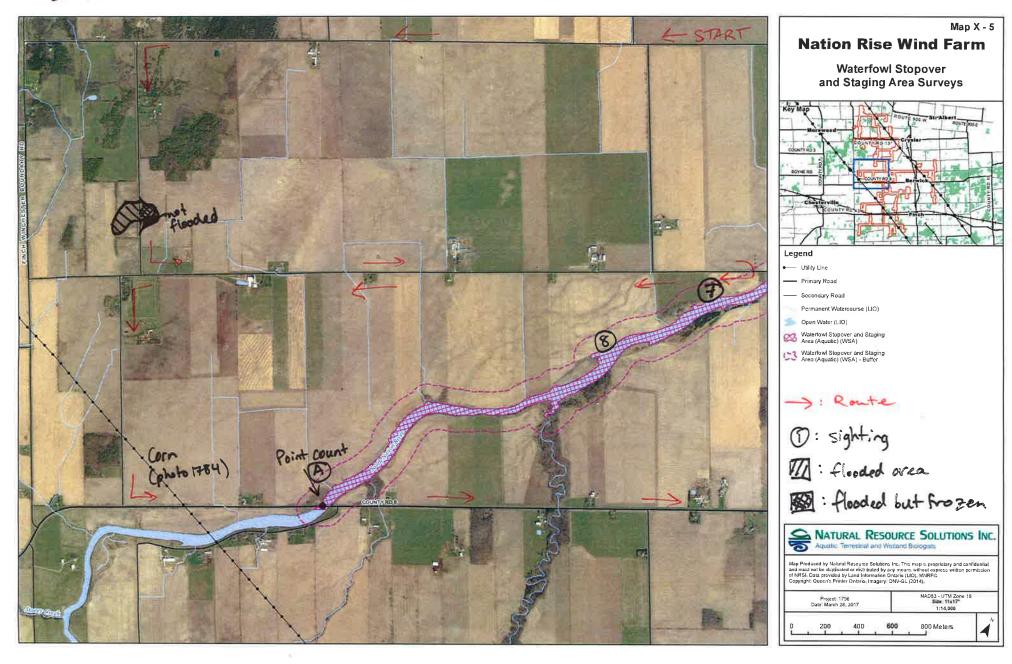




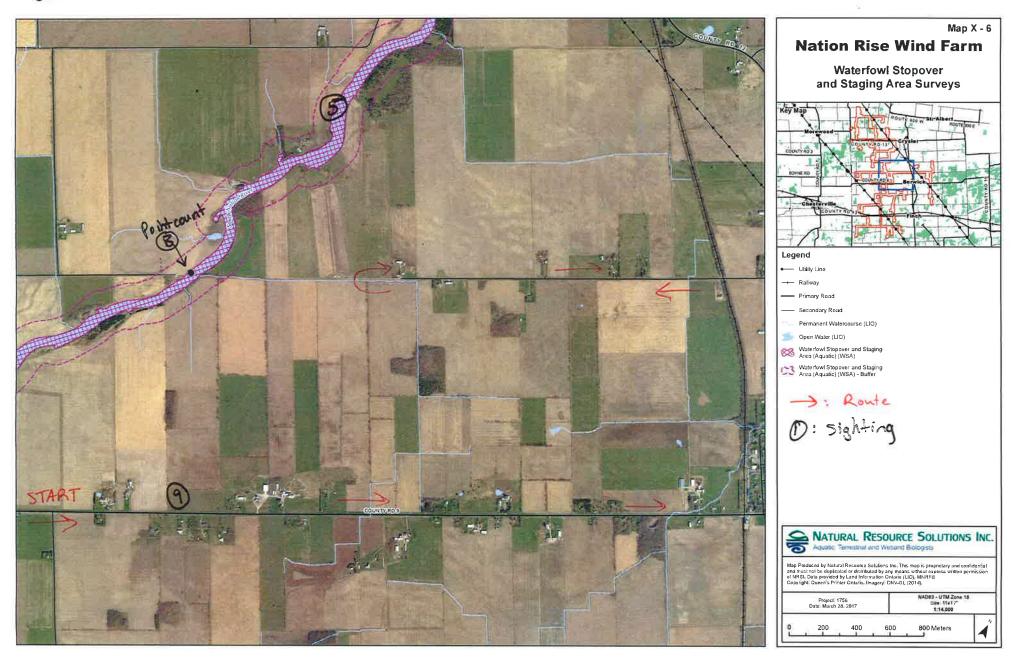
Aboo snow guese flying West @ 09:55 5

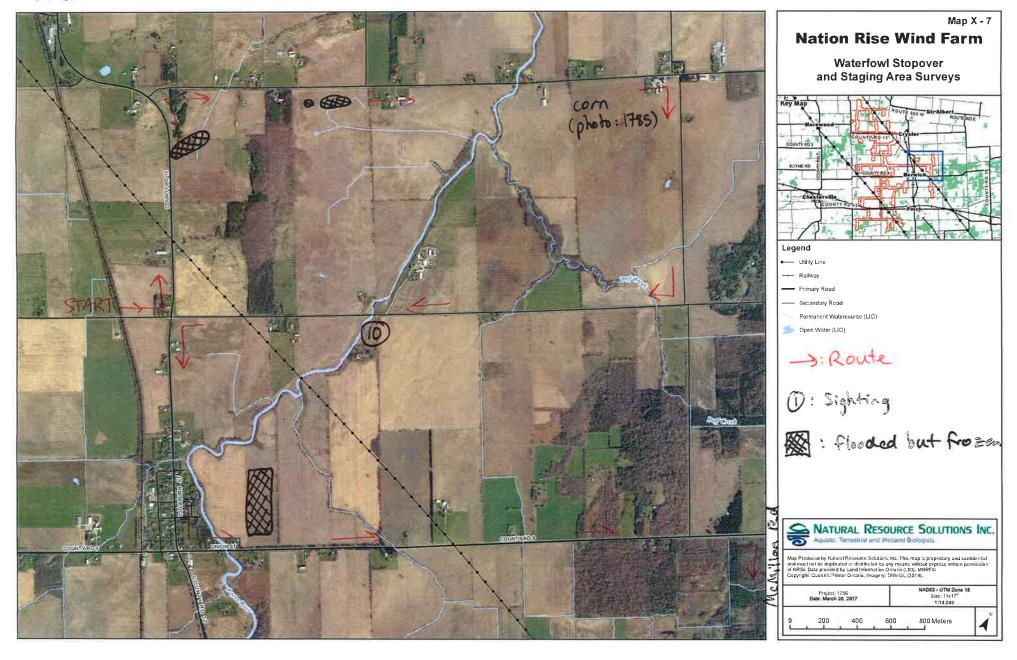
¥ 400m

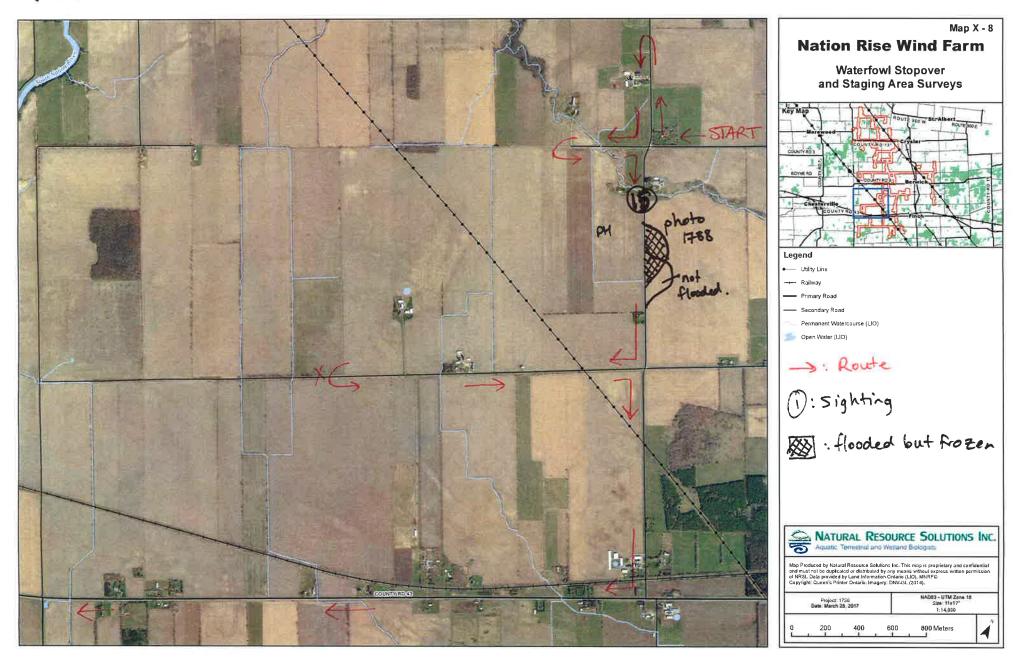
Vto map \$6

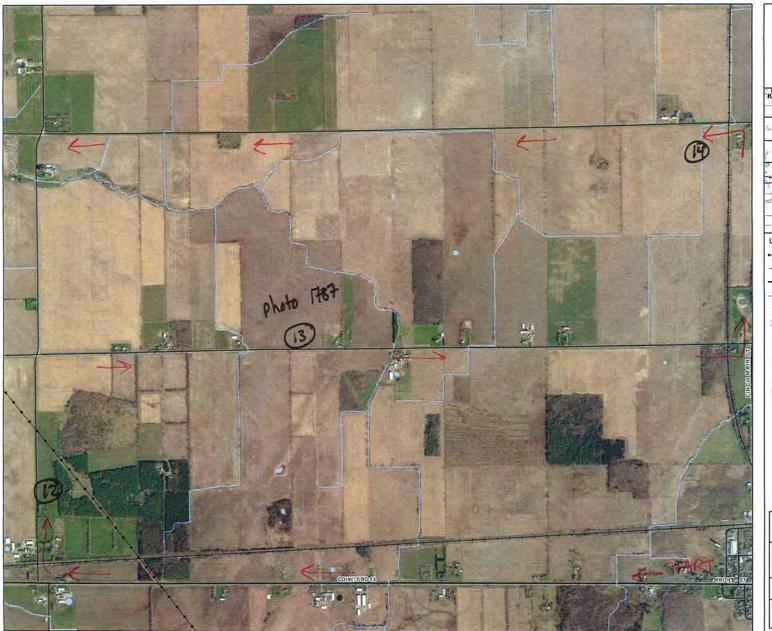


J. Boles

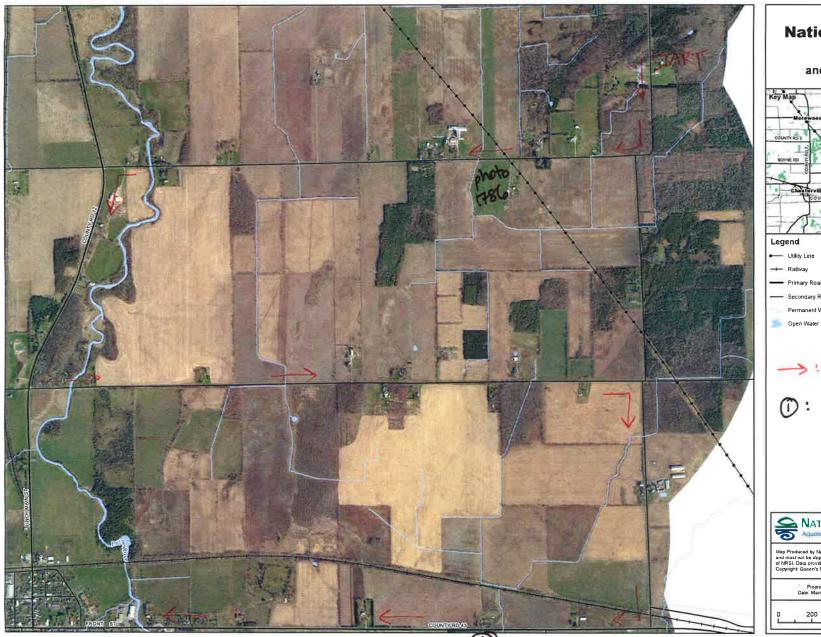






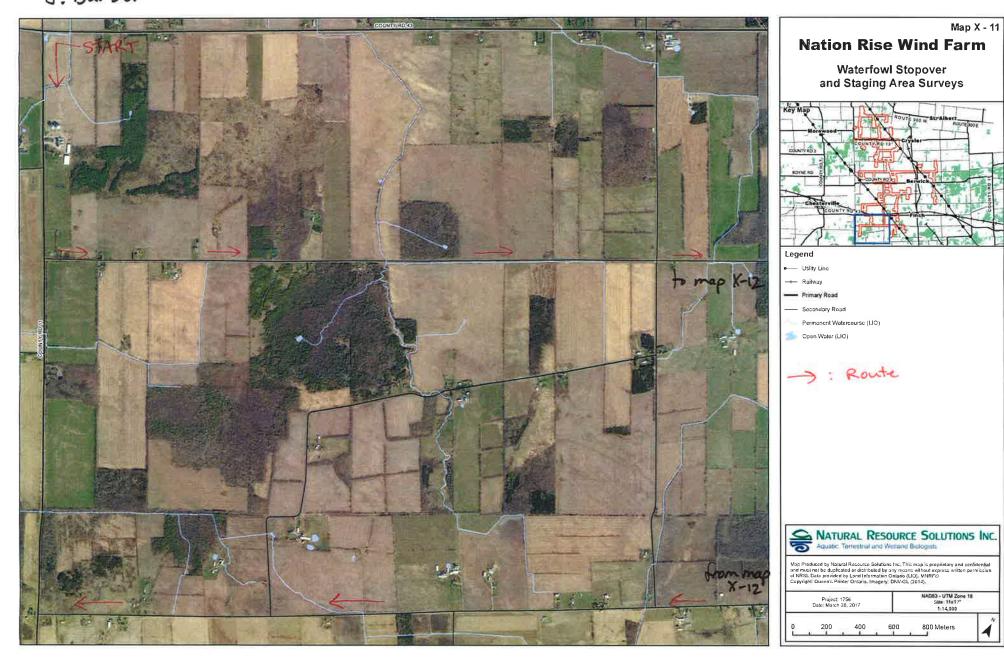


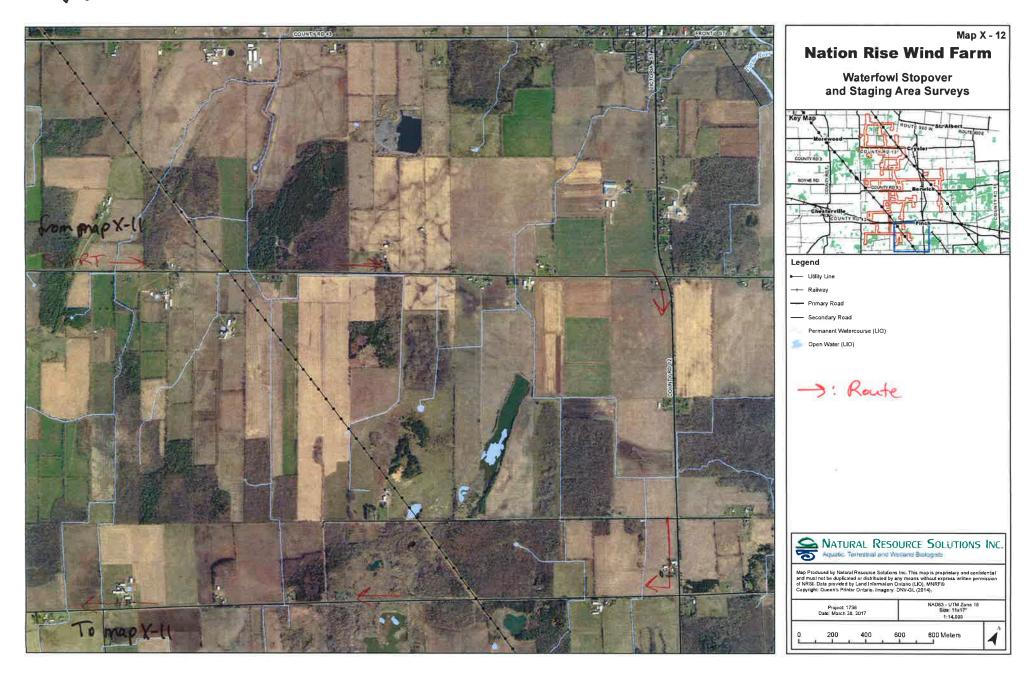






March 2,2017 J. Barber





#1756 Nation Rise MP March 2, 2017 Waterfowl Survey - Loving transacts -10°C Wind MW 30 km/hr Sun/cloud but blowing snow Start time = 08:25' End time = 14:25 Map X-2 (09:15) () - Canada goose (2) photo: 1781 2 - Canada goose (1) Map X-4 (09:30) - Canada goose (185) on river photo DX \_ 8632 (475) on riverbank = Cackling goose (2) photo: 8639

rg 1 of 3

- Canada goose (1800) ~ 400m south of map X-4 (on map x-6) photo: 8655 Map X-3 (6) - Canada goose (3) Ply-over Map X-5 (10:50) - Snow goose (65)-Field Nofriver - Canada goose (350)-Flying low over river - Snow goose (250)-In air flying W 8) - Canada goose (~300) - on N bank Map X-6 (12 20) (1) - Canada goose (45) - Gying Woverfeld Map X-7 (13:00) 10) - Canada goose (26) in rive,

\* good potential for more v ore naterfoul here on upcoming surveys. Pg 2 of 3

Nation Rise WP #1756 March 2, 2017 T. Barber Waterfowl survey Map X-10 (13:40) D (south side of 43-flooded river)
- Canada goose (275) Map X-9 (4:00) (13:50) 12-Canada goose (650) - Flying South (3) - Canoda goose (65) - Phying south (4) - Snowgoose (525) - Flying SE photo: 8699 Map X-8 (B) - Show goose (3) low flying west photo OSC-8703 - Canada goose (45) Slying NE

Pg 3 of 3

Waterfowl Stopover Surv 30 Minute Point Count	<b>∕ey</b> Project Name: <b>/</b>	IATION E	SE	_Project#	1756
	Stat	ion: A			_
Wind speed: 5-6 NW	Date	: MANICH	2/2	:017	
Cloud cover: 70 %	Visi	:#: 1	2	3	(circle)
Air Temp. − 9 °C	Star	t Time:	50 - 12	20	

 Precip.
 NONE
 Observers:
 J BANBER

 UTM
 187
 0485897
 4999559

PH8705: 8675 8677

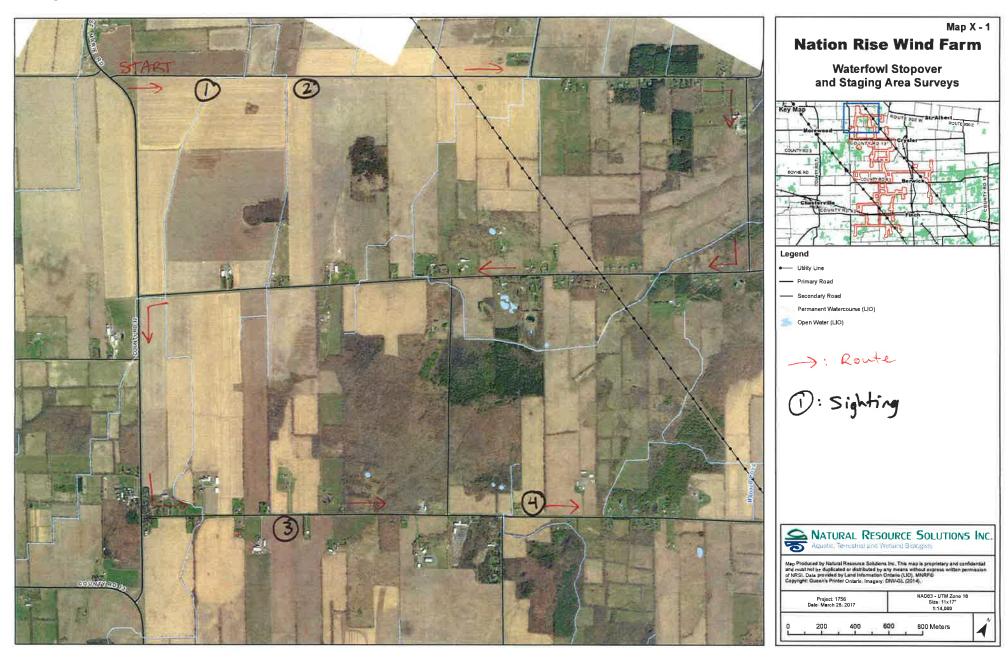
Species Name	V				Within Habitat Outside Habitat Breeding Wind		Outside Habitat Breeding		Breeding	Wind Scale
opecies ivaille	<50m	50-100m	>100m*	<50m	50-100m	>100m*	Evidence	0 Calm		
CANADA GOOSE		1200	850			35		1 Smoke drifts 2 Wind fell on face		
AMERICAN CROW	1						-	3 Leaves in motion 4 Sm branches move		
RUCK PILESN			4					5 Sm trees sway 6 Lrg branches move		
ROCK PILYEN SNOW GOOSE CAN ADA GOOSE			15			5		7 Whole trees in motion 8 Twigs break off, hard		
CAN AMA GOSSE						5 42		walk		
								9 Light structural damag 10 Trees uprooted		
			-							
			-					Breeding Evidence		
								Codes Observed		
		+			1			X - No evidence of breeding		
		-						Possible		
								H - Suitable nesting habitat		
		1						S - Singing male		
								Probable P - Pair		
								T - Permanent territory		
						-		D - Courtship or display V - Visiting prob nest		
						_		site A - Agitated behaviour		
								anxiety calls  B - Brood patch/cloacal		
					-	_		protuberance		
								N - Nest building or excavation		
							-	Confirmed DD - Distraction display		
								NU - Used nest or egg shell		
								FY - Fledged young		
								AE - Adults at occupied nest		
								FS - Faecal sac CF - Carrying food		
		1						NE - Nest containing eggs		
								NY - Nest with young		
								14		

Comments: ALL GEESE WITHIN HABTAT ON WEST BANK

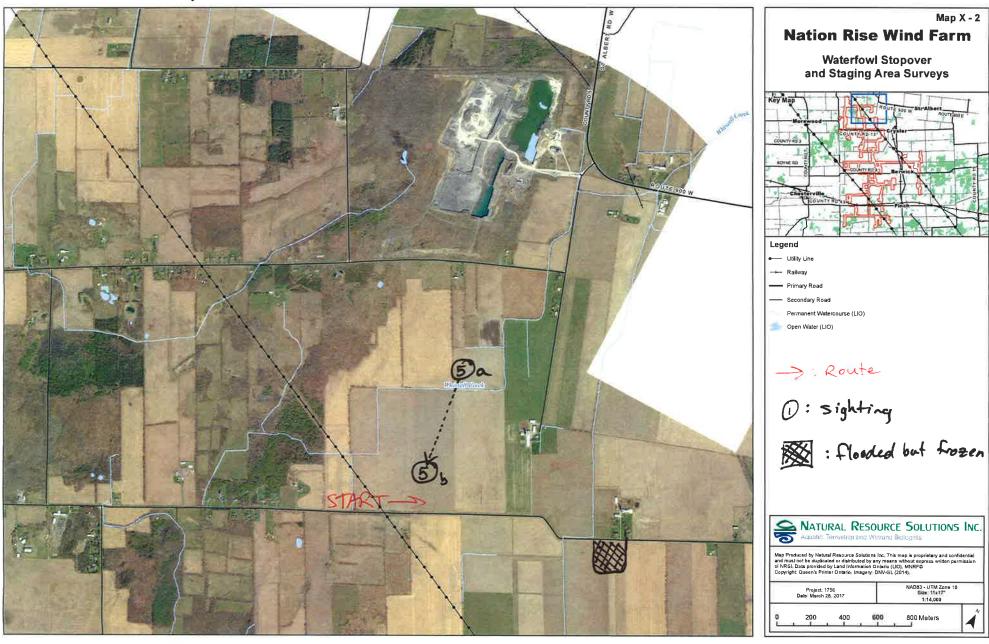
			Station.	B			-	
Wind speed: 5-6 A	IW		Date:	MARCH	1 2	1 201	7	
Cloud cover: 95 %			Visit #:	(D)	2	3	(circle)	PHOTOS:
Air Temp. −/0 °C	)		Start Time		5 - 1	135	, ,	DSC_8657
Precip. NOVE			Observers		BARBER			DSC_8665
UTM 187 048	2687	50	08814				_	
Species Name		Vithin Habit	T	0	utside Hab	tat	Breeding	Wind Scale
CANADA GOOSE	<50m	50-100m	>100m*	<50m	50-100m	>100m*	Evidence	0 Calm 1 Smoke drifts
SNOW 400SE		275	2400			450		2 Wind felt on face 3 Leaves in motion
BLUE JAM	1	76		-				4 Sm branches move 5 Sm trees sway
AMERICAN CROW	1							6 Lrg branches move 7 Whole trees in motion
CAMALA GOOSE						375		8 Twigs break off, hard to walk
CANAISA GOOSE						3		9 Light structural damage 10 Trees uprooted
								Breeding Evidence Codes
	_							
								Observed X - No evidence of

CANADA GOOSE		2/3	2400			450		2 Wind felt on face
SNOW 400SE		16						3 Leaves in motion 4 Sm branches move
BLUE JAM	1							5 Sm trees sway
AMERICAN (ROW	1							6 Lrg branches move 7 Whole trees in motion 8 Twigs break off, hard to
CAMALA GOOSE						375		walk 9 Light structural damage
CANASA GOOSE						3	) ====	10 Trees uprooted
					-			Breeding Evidence Codes Observed
					-			X - No evidence of breeding
								Possible H - Suitable nesting
								habitat S - Singing male
						1		<u>Probable</u> P - Pair
								T - Permanent territory D - Courtship or display
	-							V - Visiting prob. nest site
								A - Agitated behaviour or anxiety calls
								B - Brood patch/cloacal proluberance
								N - Nest building or excavation Confirmed
								DD - Distraction display NU - Used nest or egg
								shell FY - Fledged young
				===				AE - Adults at occupied nest
								FS - Faecal sac CF - Carrying food
								NE - Nest containing eggs
								NY - Nest with young

Comments: ALL GETSE WITHIN HABITAT RUSTING / FEEDING ON

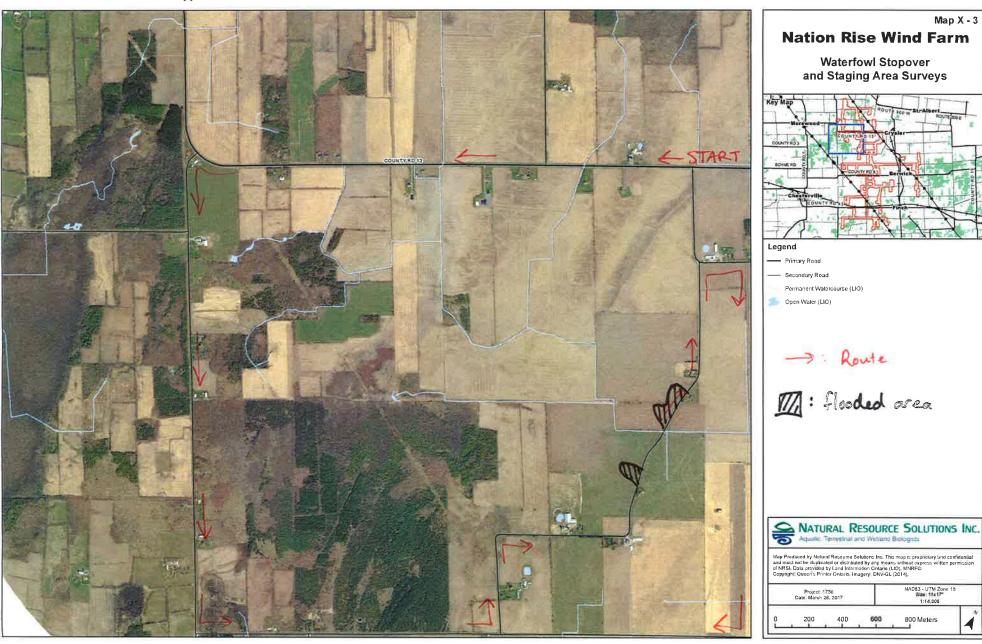


+5°C

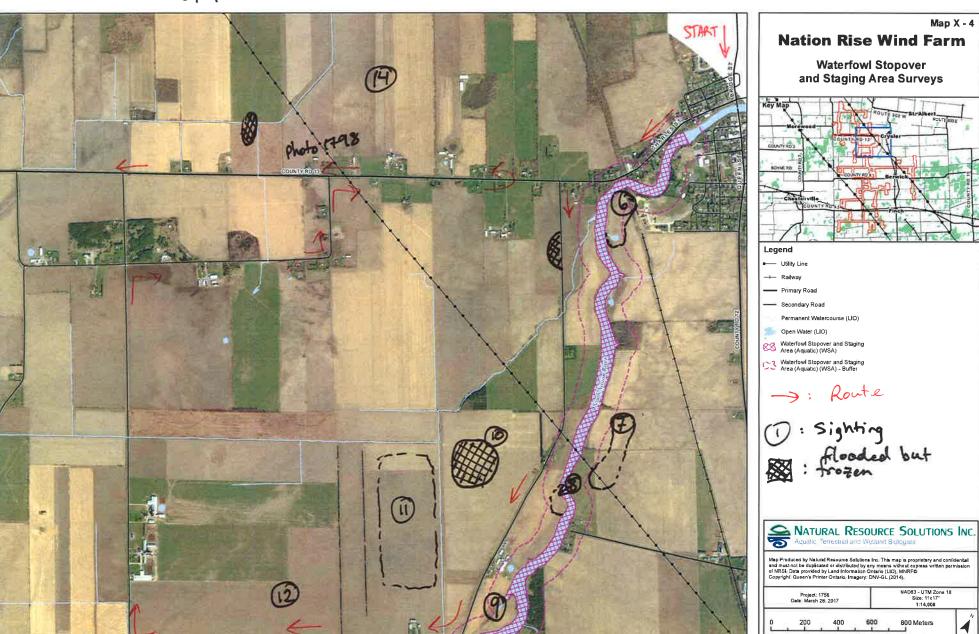


J. Borber

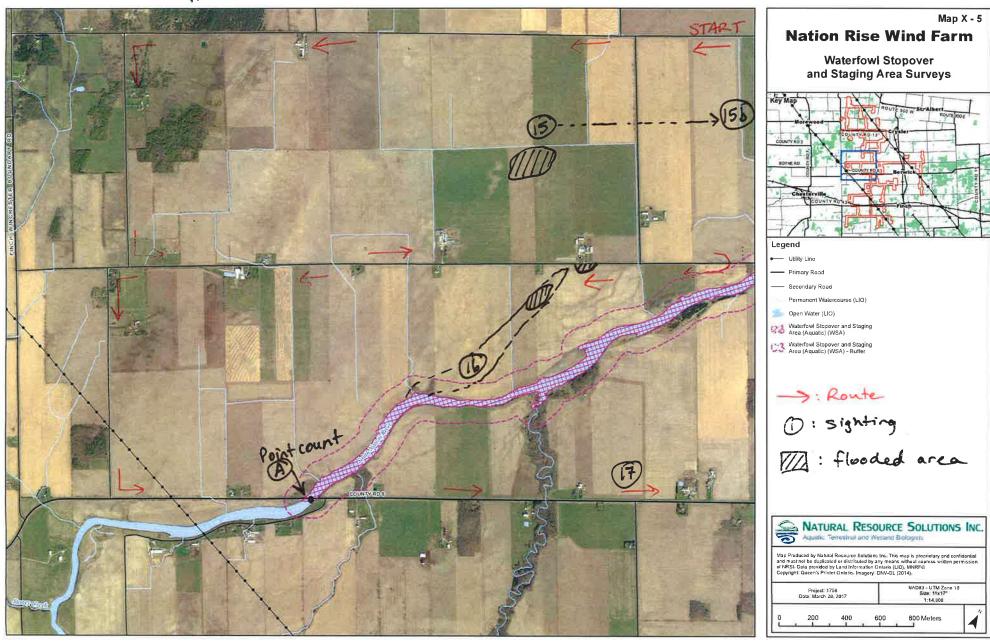


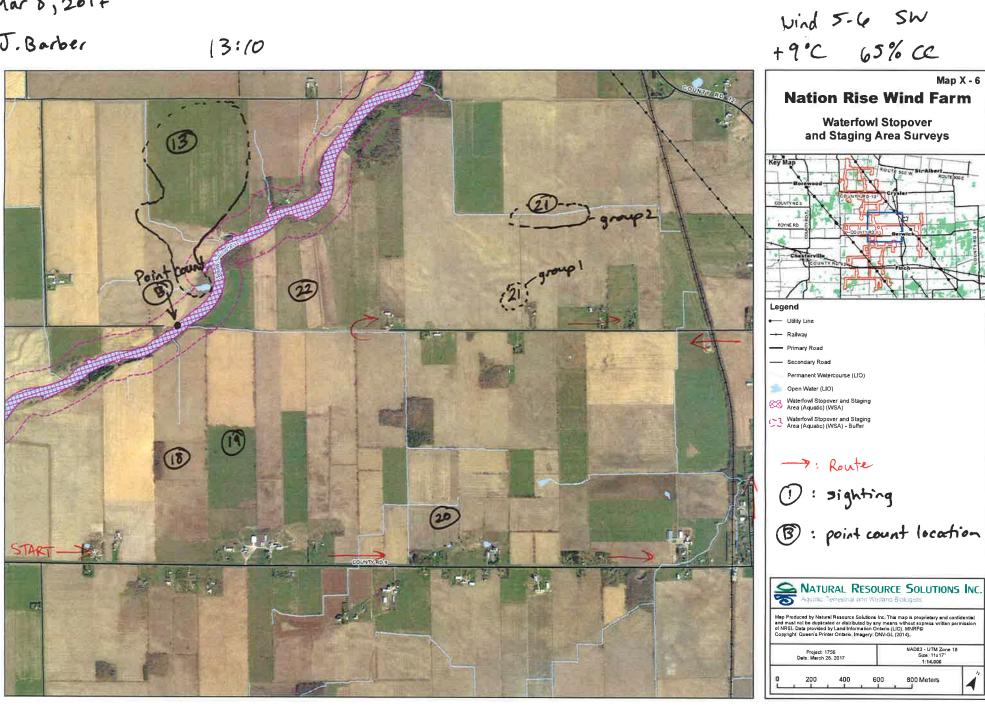


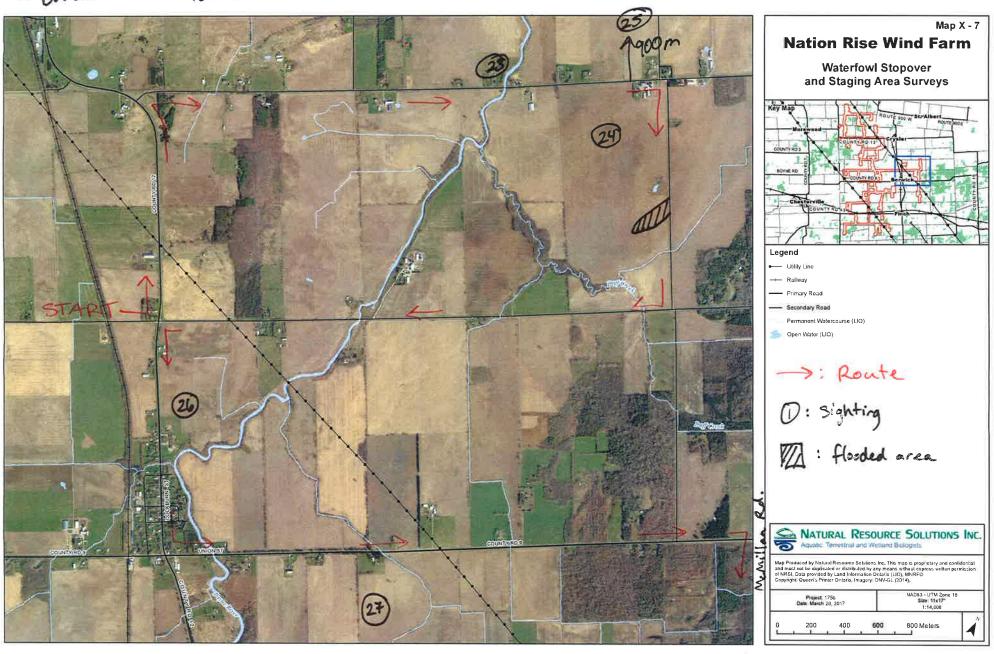
09:40



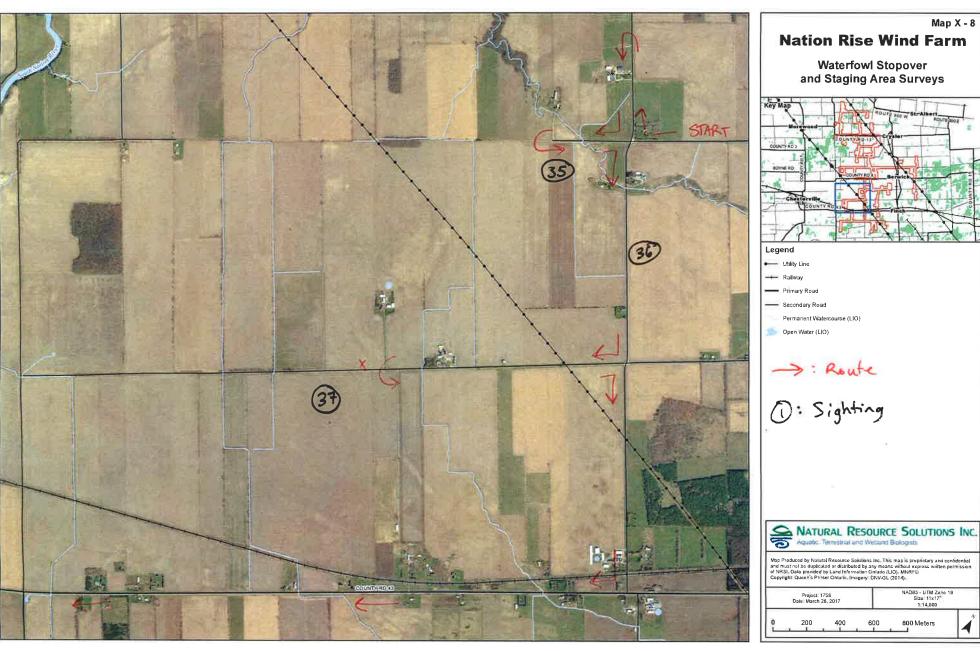
+6°C



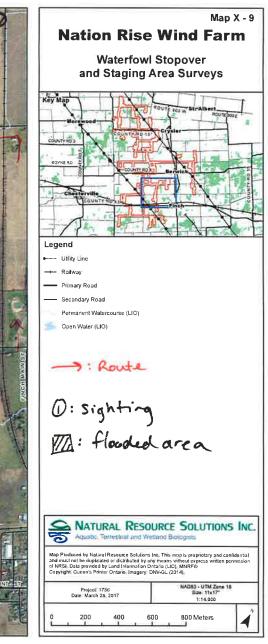


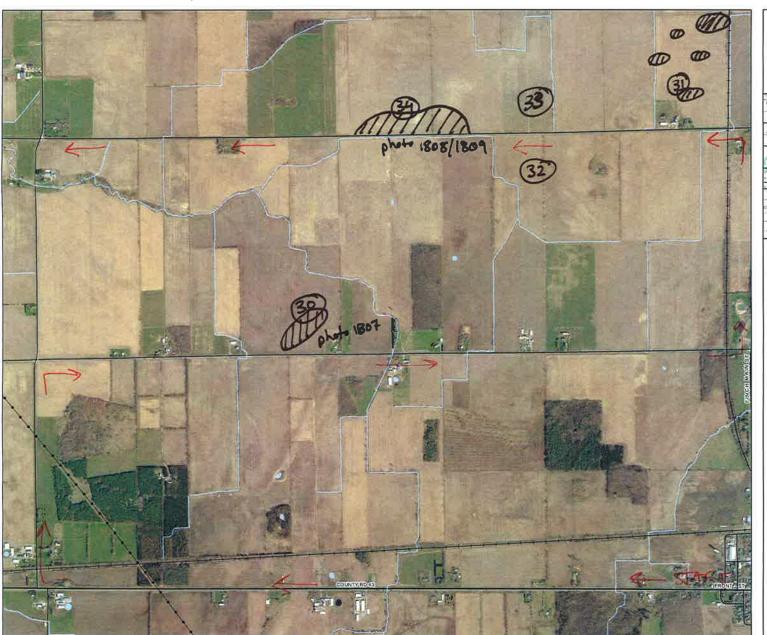


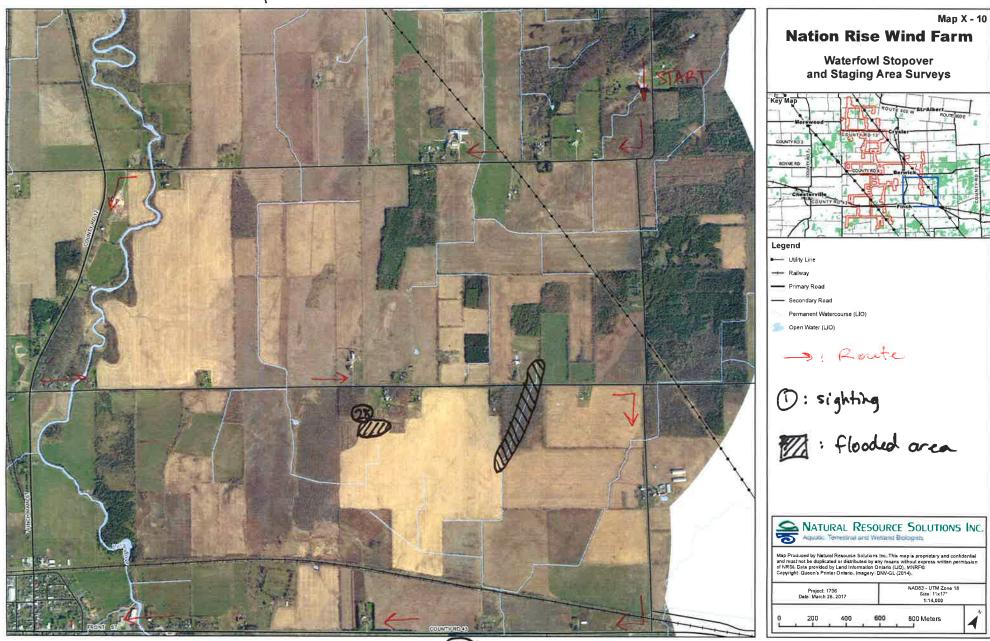


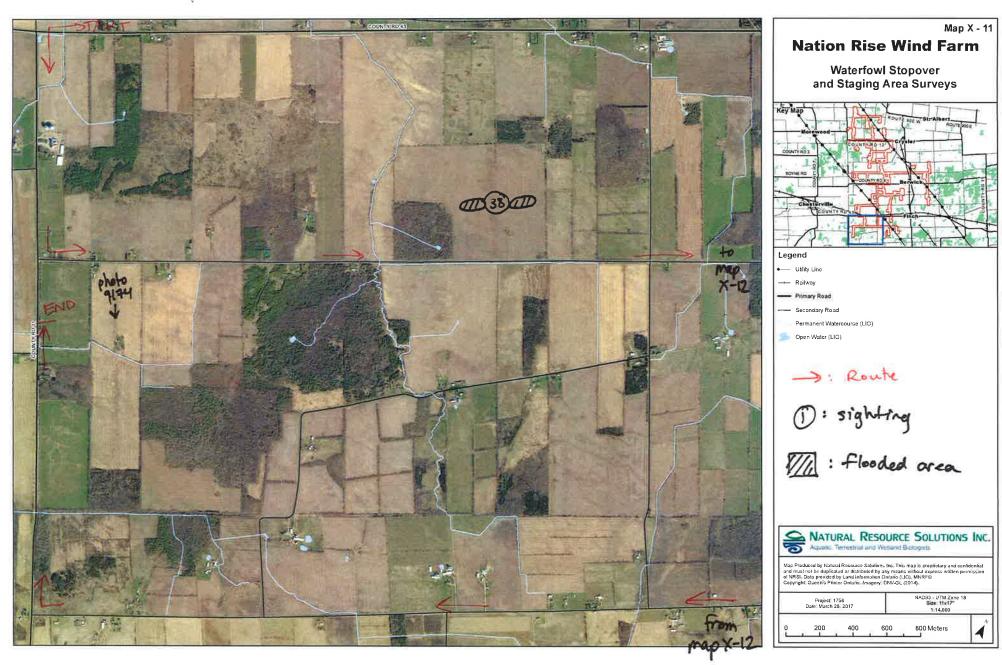


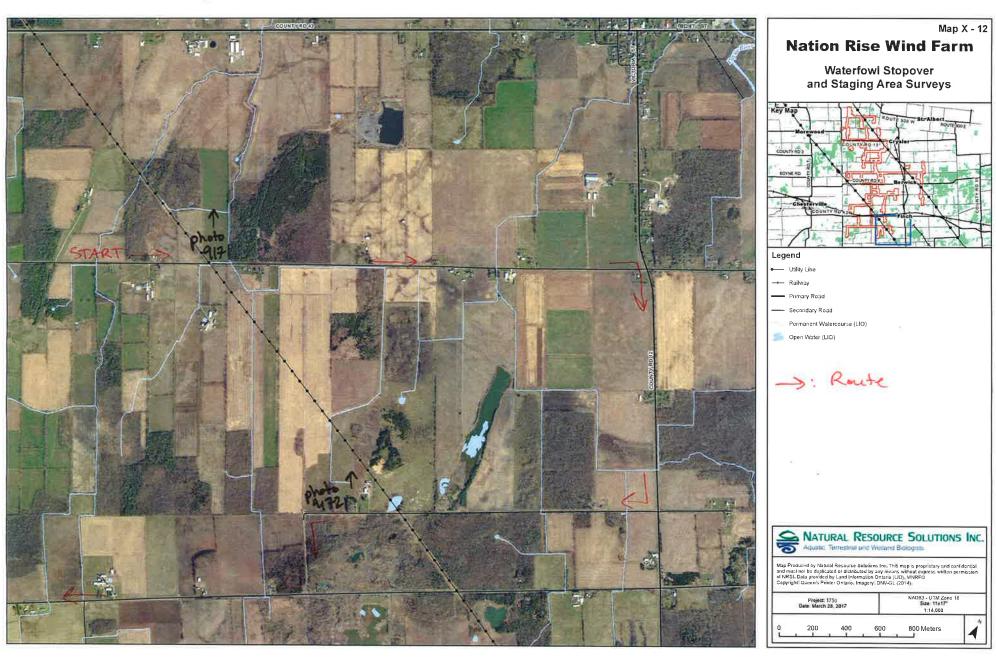
+10°C wind 6-7 SW











Nation Rise WP #1756 T. Barber March 8, 2017 Waterfowl Surveys - driving transects +4°C Wind 20 Km/h SW 20% cloud End time = 16:30 Start time = 08:15 Map X-1 (08:15) 1 - Canada goose (~1200) - 9 groups flying low South - Show goose (18) - flying low south 2) - Canada goose (225) - Plyover - Snow goose (65) - Plyover 3 - Canada goose (600) - 8 groups fly-over - Canada goose (450) - Flyover to N - Snow goose (175) - Hyover heading

Pg 1 of +

Map X-2 (09:05) (5) a+b - snow goose (2200) foraging in - Canada goose (2800)/ con Field (approx. 1/2 of flock moving from position a > b while saming). - Northern pintail (1) Map X-4 (09:40) 6) - Canada goose ( v 6000) lining Ebank continuously arriving 109:50) - Canada goox (~3500) in corn field on E side of river, approx 300m from river - Snow goose (1) (8) - (anada goose (800) on west bank of river (within buffer) - Hooded merganser of (in river) - Mallard (4) Pg 2 of 7

#1756 Nation Rise WP March 8, 2017 J. Barber Map X-4 9 - Northern pintail (4) - landed (48) - Snow goose (~10,000) Slew in - Canada goose (~5,000) low from South and 1/2 landed (a (7) photo 8923 1/2 continued N 10 - Canada goose (250) in field 1) - Canada goose (2500) foraging throughout coir field 12) - Canada goose (1500) > spread - Show goose (150) across corn field Map X-6 2 (3) - (anada goose (9000) > spread across - Snow goose (350) field foraging

Pg 3 of 7

Map X-4 (11:00) (19) - Snow goose (600) foraging in corn Map X-5 (11.25) (5) - Canada goose (~3,000) originally
- Snow goose (~550) in con field,
Then moved en masse to (6) - Canada goose (12000) - 1 giant (see map) Foraging in - Snow glese (125) - few SNGO in flock - Canada goose (575) foraging in com Sold Map X-6 (13:10) (18) - Canada goose (2200) 1 km N of es Pg 4 of 7

Nation Rise WP #1756. J. Barber March 8, 2017 Map X-6 (19) - Canada goose (320) NIKM Nof 20 - Canada gooce (900) foraging in corn - Canada goose (5500) - Snow goose (125) 21) - (anada goose (2500) - Snow goose (1) Map X-7 (13:40) (23) - Canada goose (600) - foraging along riverbunk 4 associated field - Canada goose (75) #900m N of road, so off map, but notable: - Show goose (6000) - Canada goose (5000) Pg. 5 of 7

Nation Rise WP March 8, 2017 J. Barber Map x-9 (15:30) (34) - Canada goose (3200) photos: 9154 - Snow goose (65) - Northern pintail (32) 9133 - American wigeon (1) Map X-8 (15:50) (35) - Canada goose (65) - foraging in carn field 36 - Canada goose (225) N200 m from (37) - Canada goose (125) Map X-11 (16:05) 38 - Carada goose (50) Pg. 7 of 7

Waterfowl	Stopover	Survey
-----------	----------	--------

Project Name: NATION RISE Project # 1756 30 Minute Point Count

POINT COUNT Station:

Wind speed: 4-5 5W 2017 MANCH 8 Date: 65 (2) Cloud cover: 1

% Visit #: 3 (circle) 8 1235-1305 Air Temp. °C Start Time:

NONE JBARBUR Precip. Observers:

4999566 18T 0485901 UTM

Cassias Nama	V	ithin Habita	at	0	utside Hab	itat	Breeding	Wind Scale
Species Name	<50m	50-100m	>100m*	<50m	50-100m	>100m*	Evidence	0 Calm 1 Smoke drifts
CANDA GOOSE		350	75			4000		2 Wind felt on face
SNOW GOOSE	1		11			175		3 Leaves in motion 4 Sm branches move
AMERICAN BLACK DUCK			1				4	5 Sm trees sway 6 Lrg branches move
RAPTOR SP								7 Whole trees in motio
AMERICAN CROW						1		8 Twigs break off, hard walk
7. 177,0172 (100)								9 Light structural dame 10 Trees uprooted
								Breeding Evidence
					1		+	Codes Observed
					-			X - No evidence of breeding
		-						Possible
		-					-	H - Suitable nesting habitat
								S - Singing male Probable
		-						P - Pair T - Permanent territor
								D - Courtship or displi V - Visiting prob nest
								site
								A - Agitated behavious anxiety calls
								B - Brood patch/cload protuberance
								N - Nest building or excavation
				1				Confirmed
								DD - Distraction displ NU - Used nest or eg
								shell FY - Fledged young
								AE - Adults at occupii nest
				4				FS - Faecal sac CF - Carrying food
								NE - Nest containing eggs
								NY - Nest with young
				V Total				

PHOTOS: 1803 8990

SOUTH NATION RIVER PROCEN NOW AT THIS LOCATION

Waterfowl Stopover Surv 30 Minute Point Count	<b>/ey</b> Project Name	: NATION RISE Project #	1756	<del>-</del>
		Station: POINT COUNT B		
Wind speed: 4-55W		Date: MARCH 08/2017		
Cloud cover: 25 %		Visit #: 1 (2) 3	(circle)	
Air Temp. 8 °C		Start Time: 1155 - 1225	_	PHOTOS: 8953
Precip. NONE		Observers: J. BARBER		1800
UTM 18 T 0487588	5002036			1859/1866

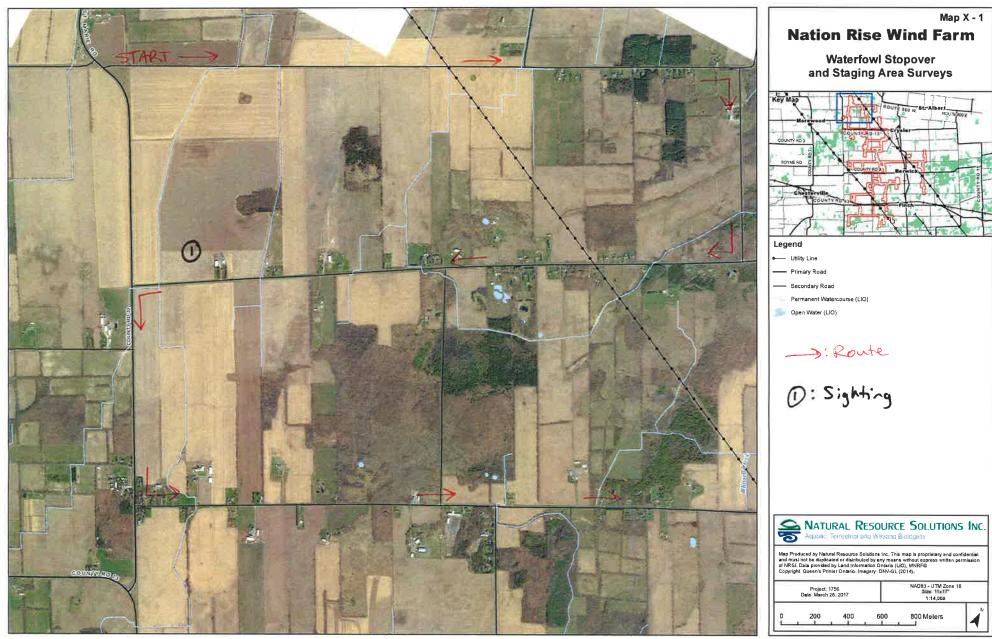
Species Name	V	/ithin Habita	at	0	utside Hab	itat	Breeding	Wind Scale
	<50m	50-100m	>100m*	<50m	50-100m	>100m*	Evidence	0 Calm
CANADA GOOSE			350			11000		1 Smoke drifts 2 Wind felt on face
SNOW GOOSE			6			350		3 Leaves in motion 4 Sm branches move 5 Sm trees sway 6 Lrg branches move
HUMENED LANCK		2						
BLUE JAI		2						7 Whole trees in motion 8 Twigs break off, hard
AMENICAN ROBIN	2							walk 9 Light structural damag
RED WINKED BEACKSIND								10 Trees uprooted
RINA-BILLED GULL		1						
RED TATUS HANK						1		
NONTHERN PINTAL						6		
								Breeding Evidence
+								Observed
CANASA GOOSE			-			8000		X - No evidence of breeding
SNOW GOOSE						400		Possible H - Suitable nesting
								habitat S - Singing male
								Probable P - Pair
			7 E					T - Permanent territory D - Courtship or display
								V - Visiting prob nest
								site A - Agilated behaviour of
								anxiety calls  B - Brood patch/cloacal
							-	protuberance N - Nest building or
								excavation Confirmed
								DD - Distraction display NU - Used nest or egg
								shell FY - Fledged young
								AE - Adults at occupied
								FS - Faecal sac
								CF - Carrying food NE - Nest containing
				200				eggs NY - Nest with young
								-

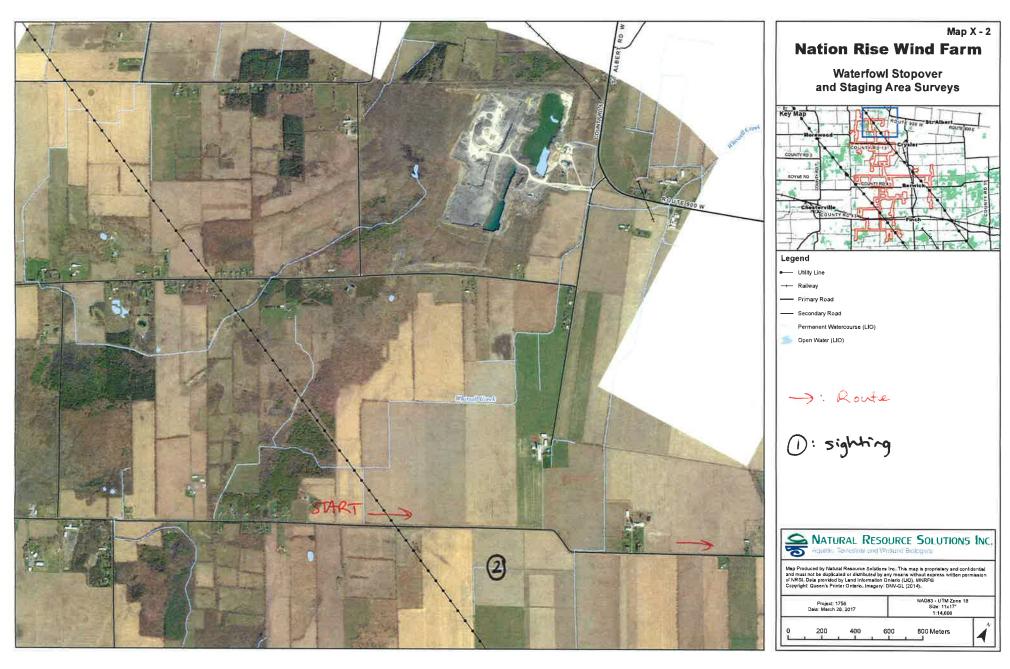
Comments: 5007H NATION = 95% FROUN AT THIS LOCATION.

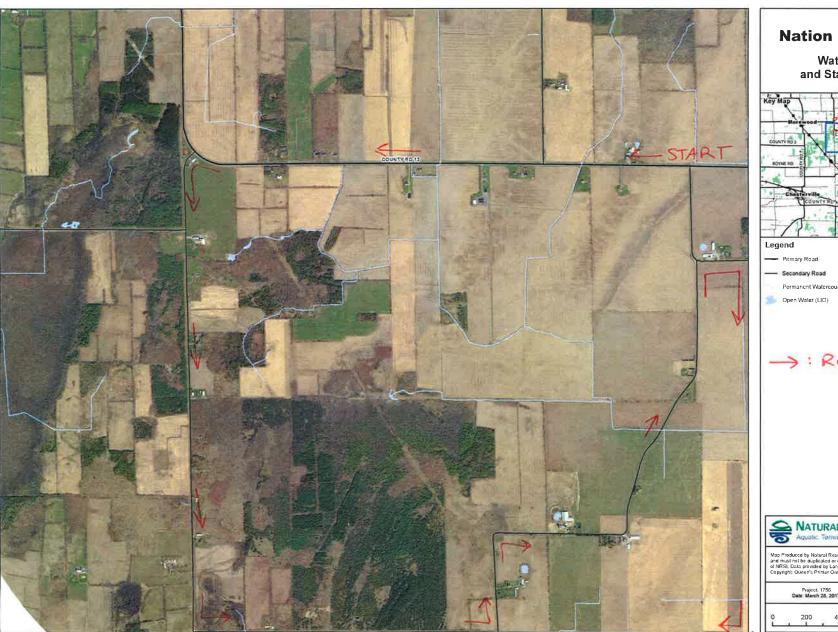
- SOME OF THESE WEBS NOTES @ (3)

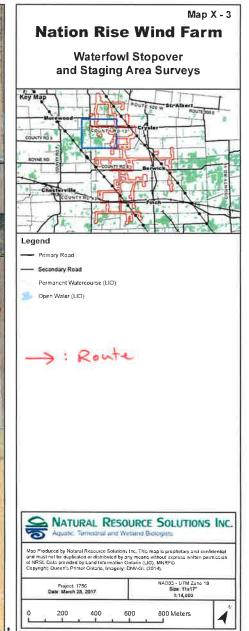
+1°C Light wet snow wind 1 SW

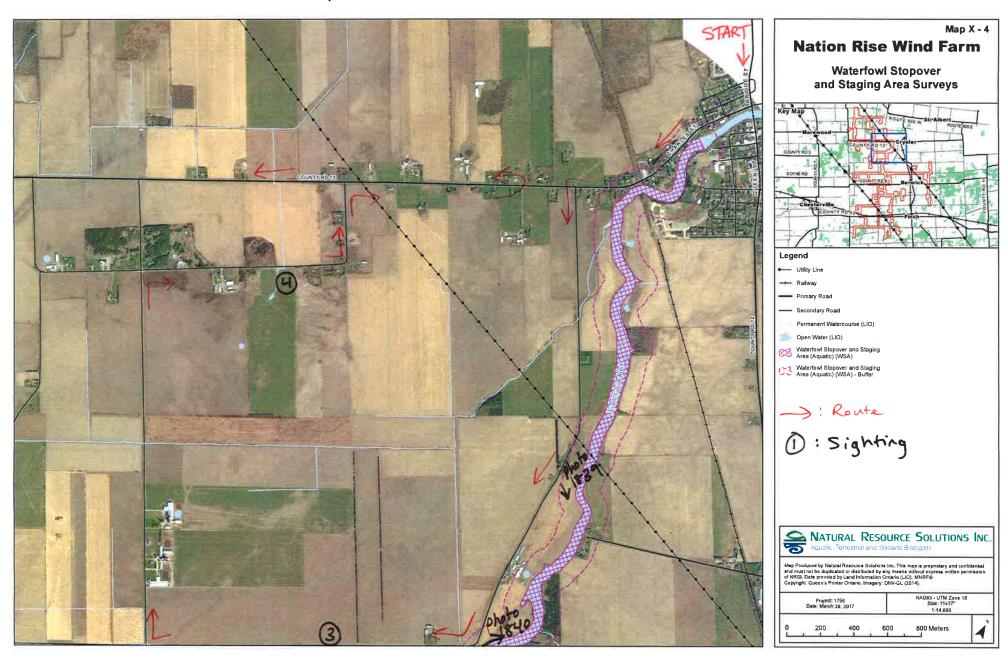
100% cc

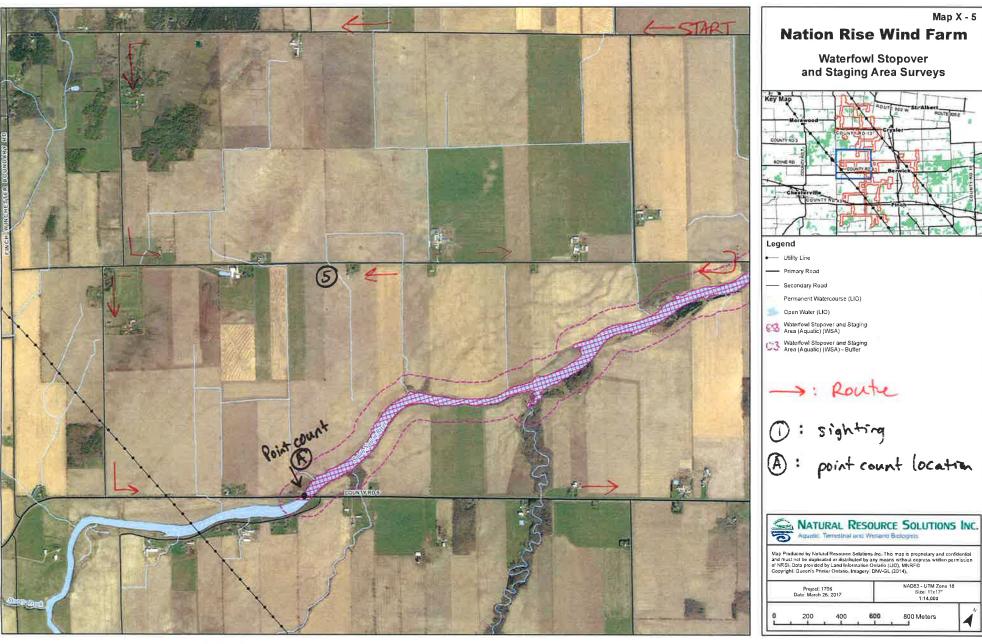




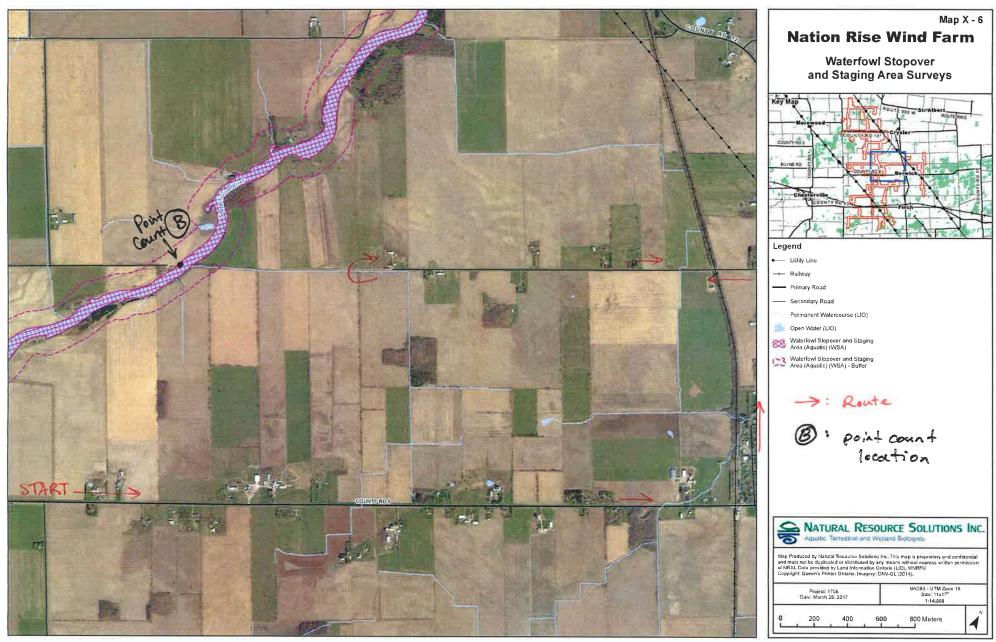


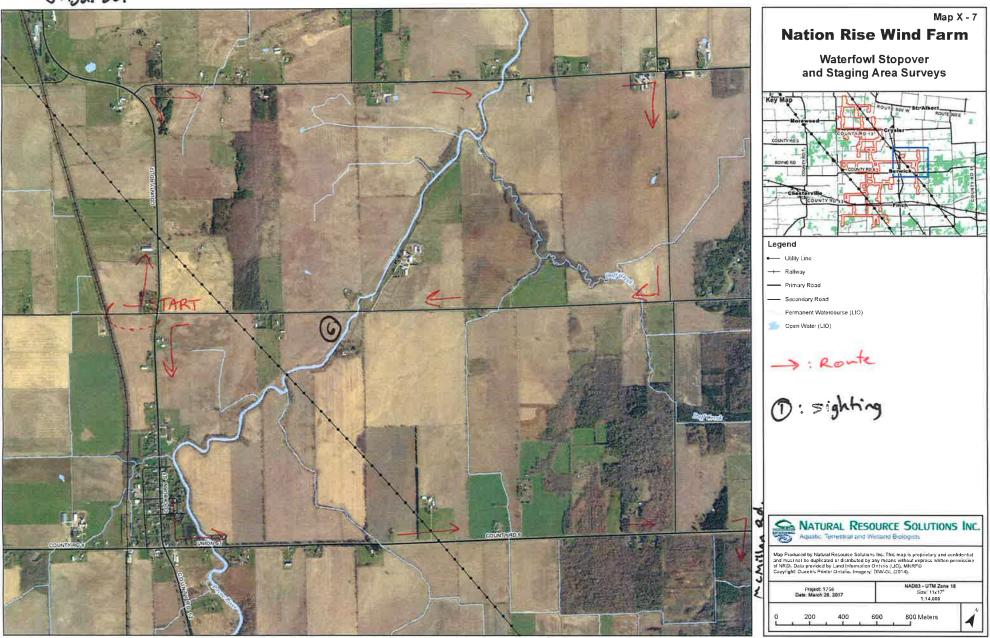


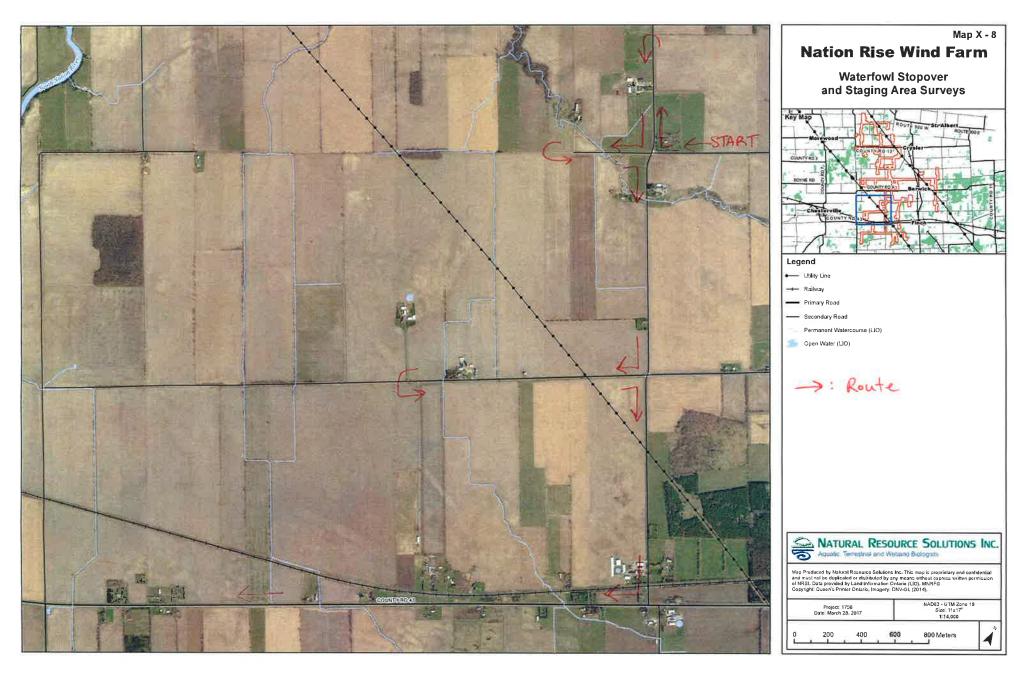


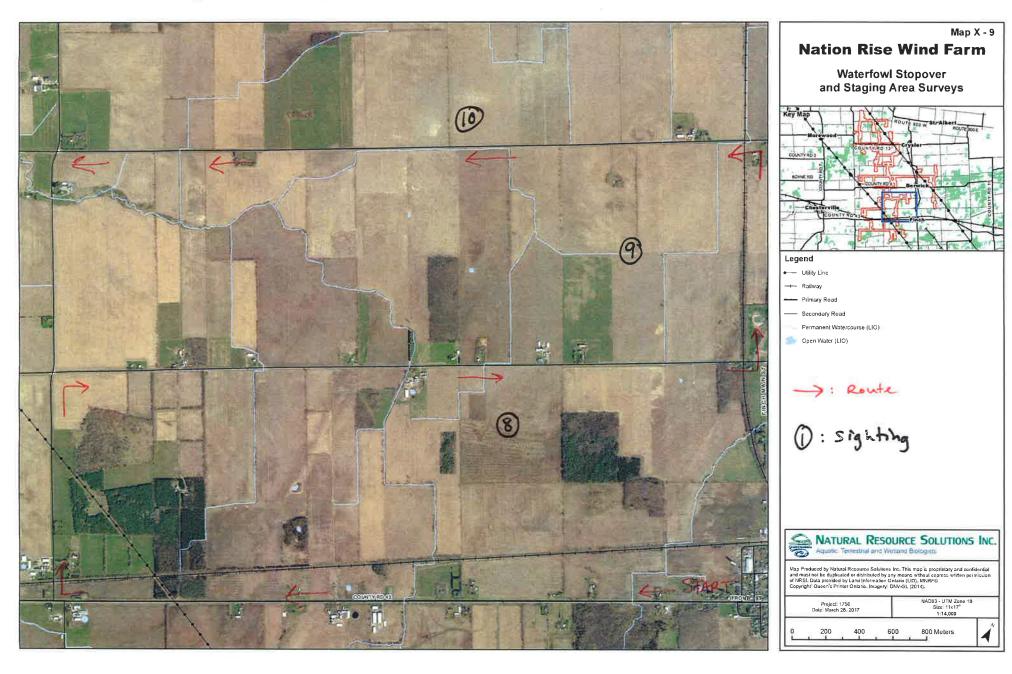


100% cc +3°C occasional light rain shower

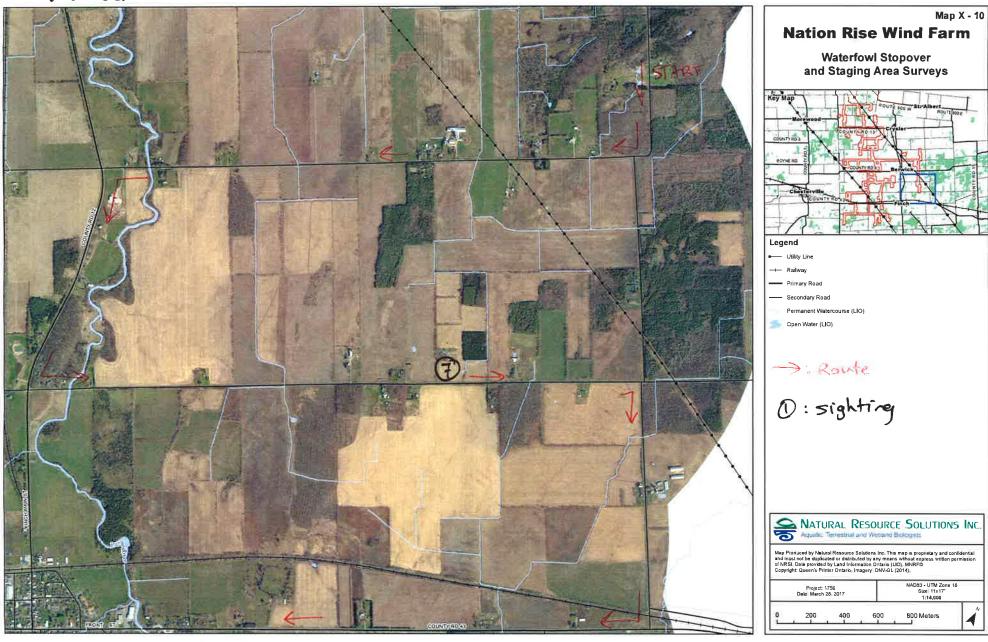




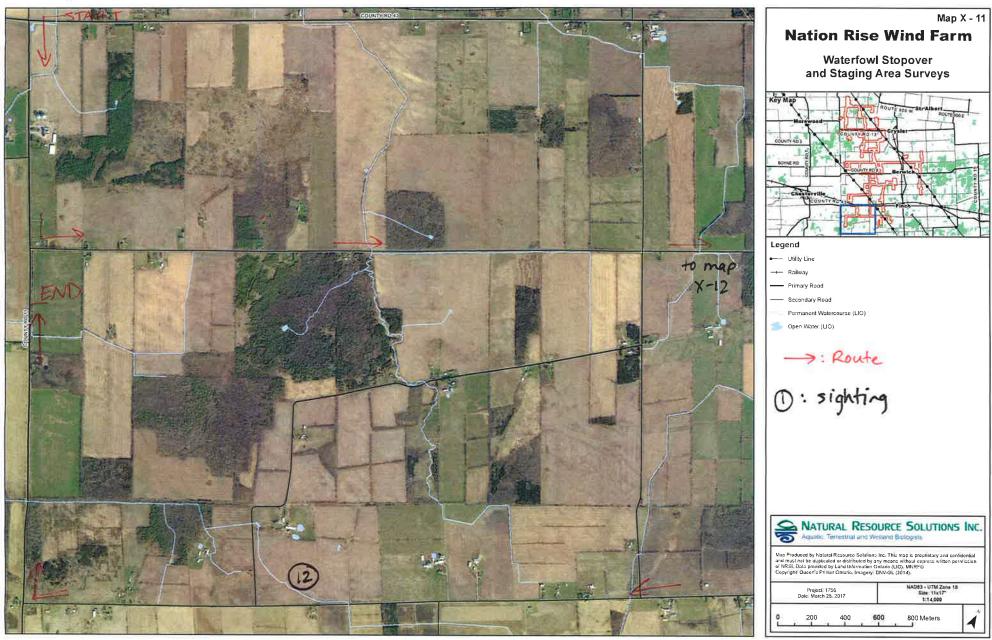


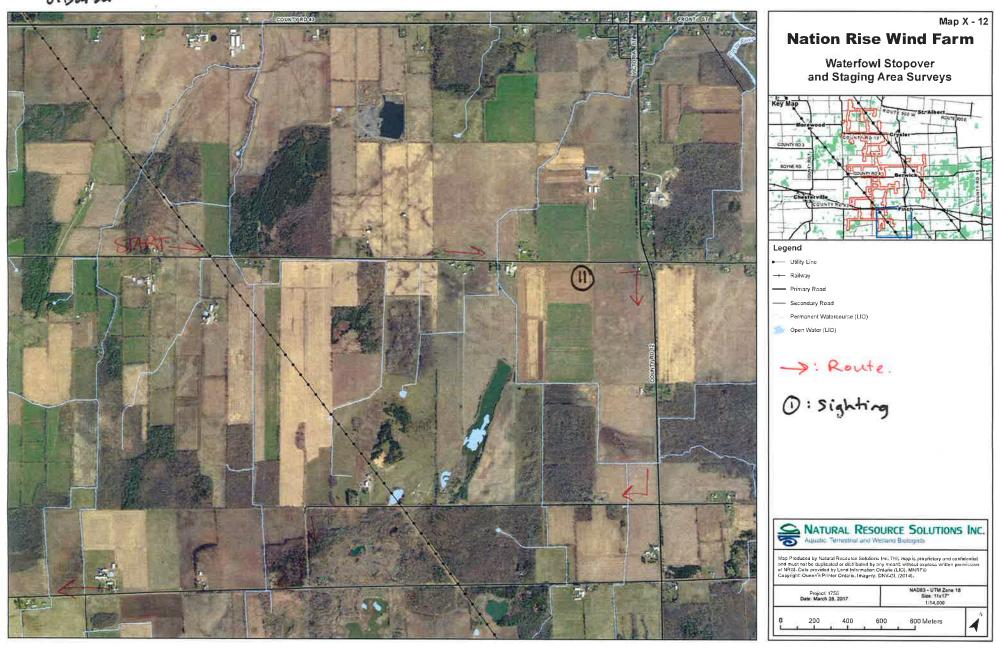


12:40 J. Barber

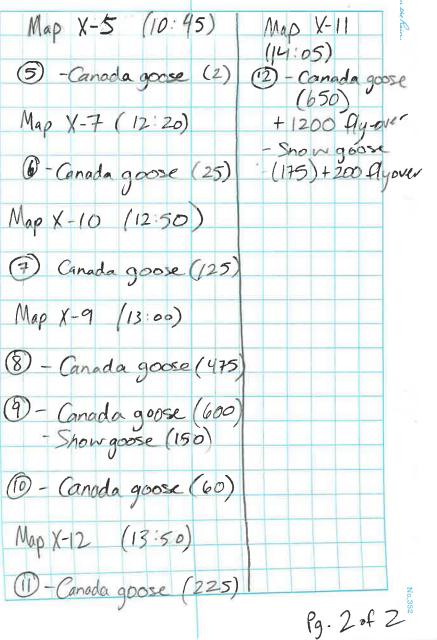


+4°C 100% CC





Nation Rise WP 21 March, 2017	
	veys-driving transects
+1°C Wind= 1 SW	overcast at light snow
Start the=	
Map X-1 (09)  O - Canada	
Wap X-2 (09	
2 - Canada	goose (355) - along drainage diteh (00) (photo 1839)
	la goose (3) photo 1840
1 - Canada	
	Pg 1 of 2



Waterfowl Stopover Sur 30 Minute Point Count	Project Name: NATION 1215E Project # 1756	
	Station: POINT COUNT A	
Wind speed: / 5W	Date: MANCH 21 2017	
Cloud cover: 95 %	Visit #: 1 2 (3) (circle)	
Air Temp. 3 °C	Start Time: 1137 - 1207	4070.1842
Precip. NONE	Observers: J BARBER	0556

Comments:

UTM

Species Name	V	/ithin Habita	at	0	utside Habi	tat	Breeding	Wind Scale
Species Name	<50m	50-100m	>100m*	<50m	50-100m	>100m*	Evidence	0 Calm
CANADA GOOSE			425			125		1 Smoke drifts 2 Wind felt on face
5NOW 40050								3 Leaves in motion 4 Sm branches move
RLD- WINALD GLACKBIED		3					5	4 Sm branches move 5 Sm trees sway 6 Lrg branches move
BLACK LAPPLE CHEKADEE	1							7 Whole trees in motion 8 Twigs break off, hard
SNOW BUTING					120		(FLY OVER)	walk 9 Light structural damage
NORTHERN CANDINAL						1	5	10 Trees uprooted
SNOW GOOSE						4		
								Breeding Evidence Codes
			11					Observed X - No evidence of
								breeding
								Possible H - Suitable nesting
								habitat S - Singing male
								Probable P - Pair
								T - Permanent territory D - Courtship or display
								V = Visiting prob nest
								site A - Agilated behaviour
							1	anxiety calls  B - Brood patch/cloaca
								protuberance N - Nest building or
								excavation Confirmed
								DD - Distraction displa NU - Used nest or egg
								shell
								FY - Fledged young AE - Adults at occupied
								nest FS - Faecal sac
								CF - Carrying food NE - Nest containing
								eggs NY - Nest with young
								, rest man young
							-	

SOUTH ENATION RIVER FRANCES

ADJACUNT CILLOS 90% SNOW COVERED

Waterfowl Stopover Survey
20 Minute Point Count Project Name: PMIN RISE 1756 Project # B POINT COUNT Station: SW Wind speed: MARCH 21 7017 Date: 95 % (3) Cloud cover: 2 Visit #: 1 (circle) 2 °c 1100 - 11.30 Air Temp. Start Time: PHUTO: 1841

Observers:

J. BARBER

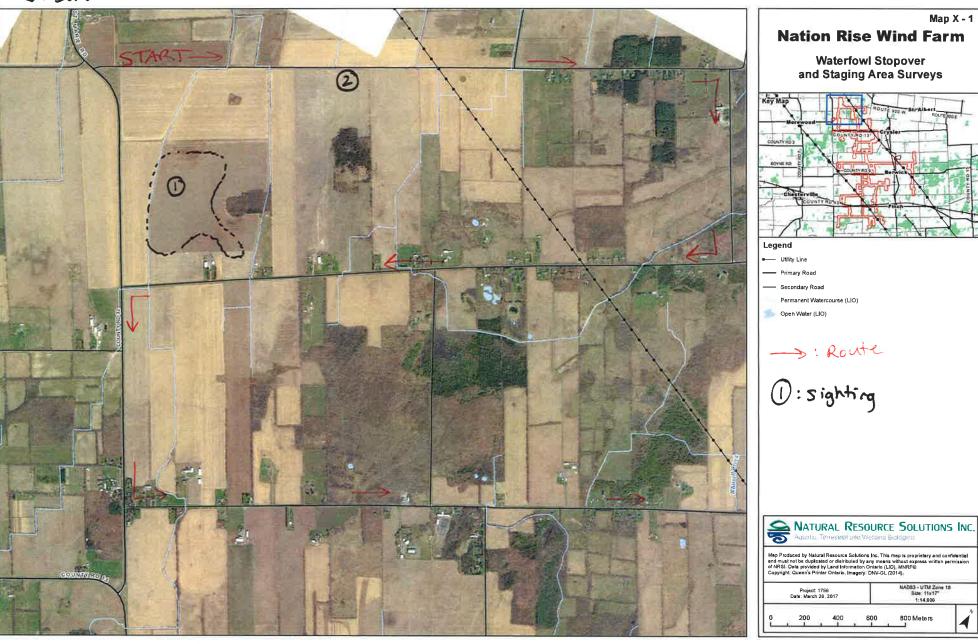
UTM

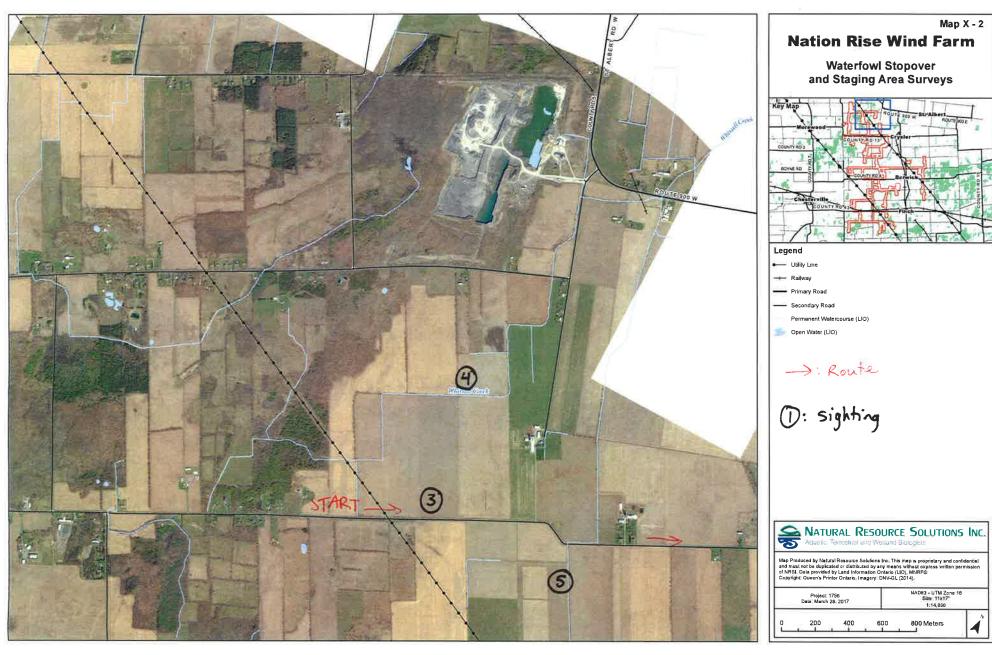
Precip.

LIGHT MIST

Species Name	Name Within Habitat Outside Habit		Within Habitat		Within Habitat Outside Habitat		Within Habitat		side Habitat		Wind Scale	
	<50m	50-100m	>100m*	<50m	50-100m	>100m*	Breeding Evidence	0 Calm 1 Smoke drifts				
HURNED LARK						2	5	2 Wind felt on face				
RED - WINDED BLACK BIRA			4				5	3 Leaves in motion 4 Sm branches move				
SNOW BUNTING					65			5 Sm trees sway 6 Lrg branches move				
CAMADA GOOSE			5					7 Whole trees in motion 8 Twigs break off, hard t				
RED WINKED BLACKBIRD			60					walk 9 Light structural damag				
MUVENING DOVE	1							10 Trees uprooted				
CANNO A GOOSE			15									
DARK-EYED JUICO						8						
						0						
								Breeding Evidence				
								Codes Observed				
								X - No evidence of breeding				
								Possible H - Suitable nesting				
								habitat				
							1	S - Singing male Probable				
				-				P - Pair T - Permanent territory				
			_		-			D - Courtship or display V - Visiting prob nest				
		-						site				
								A - Agitated behaviour of anxiety calls				
								B - Brood patch/cloacal protuberance				
								N - Nest building or excavation				
								Confirmed DD - Distraction display				
								NU - Used nest or egg				
								shell FY - Fledged young				
								AE - Adults at occupied nest				
					/			FS - Faecal sac CF - Carrying food				
								NE - Nest containing				
								eggs NY - Nest with young				
		1										

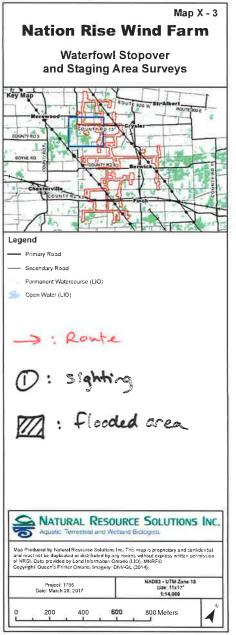
Comments	SOUTH	NO110-3	RIVOR	F120	ZEN		
	FIELD.	5 95	1/6 SA	10-1	Covered	)	

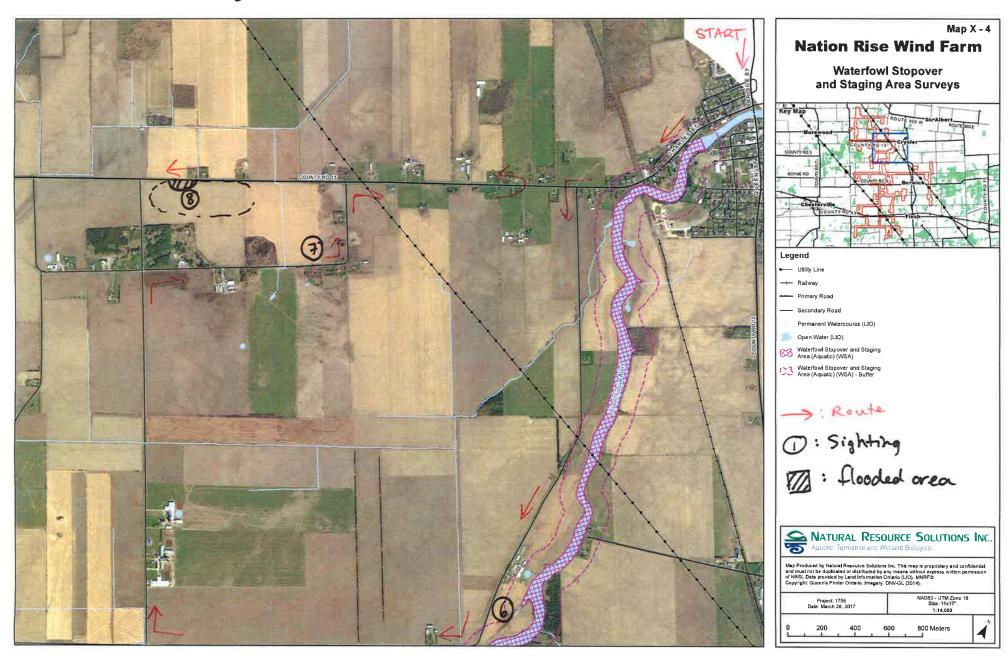


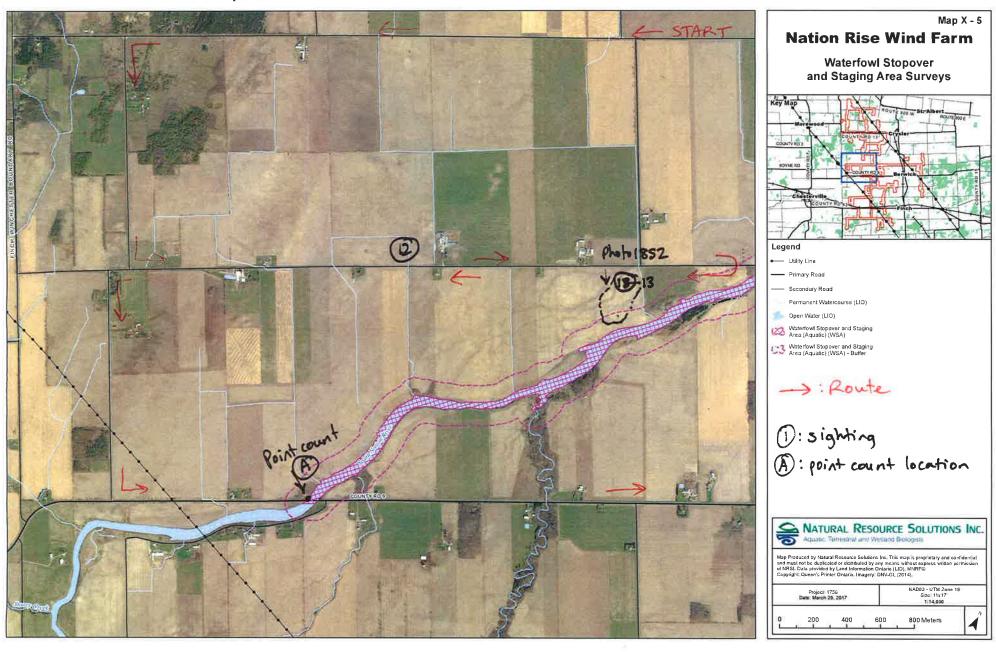


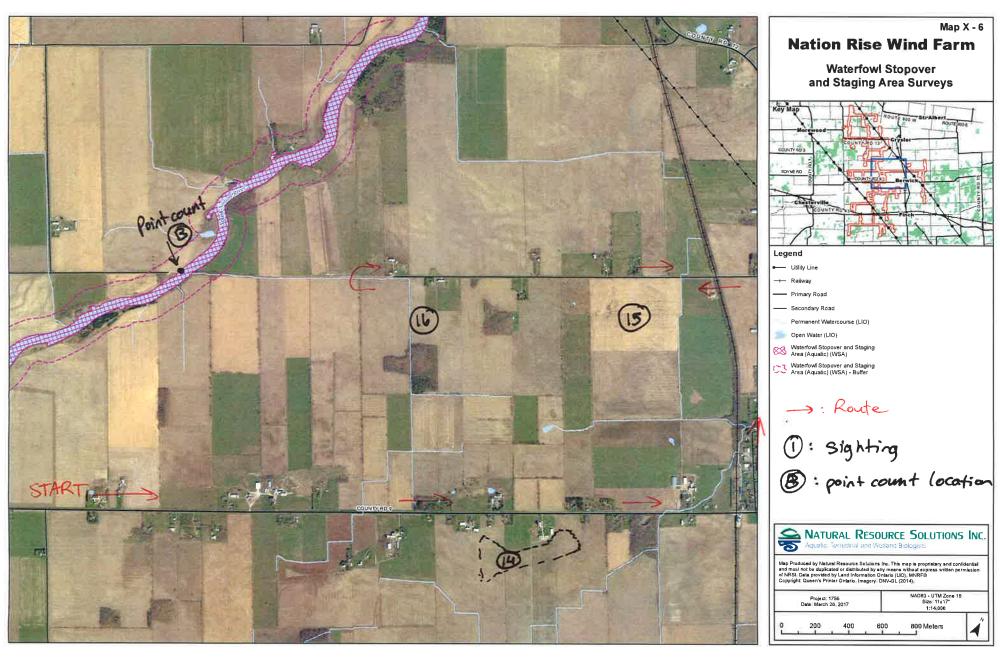
J. Borber





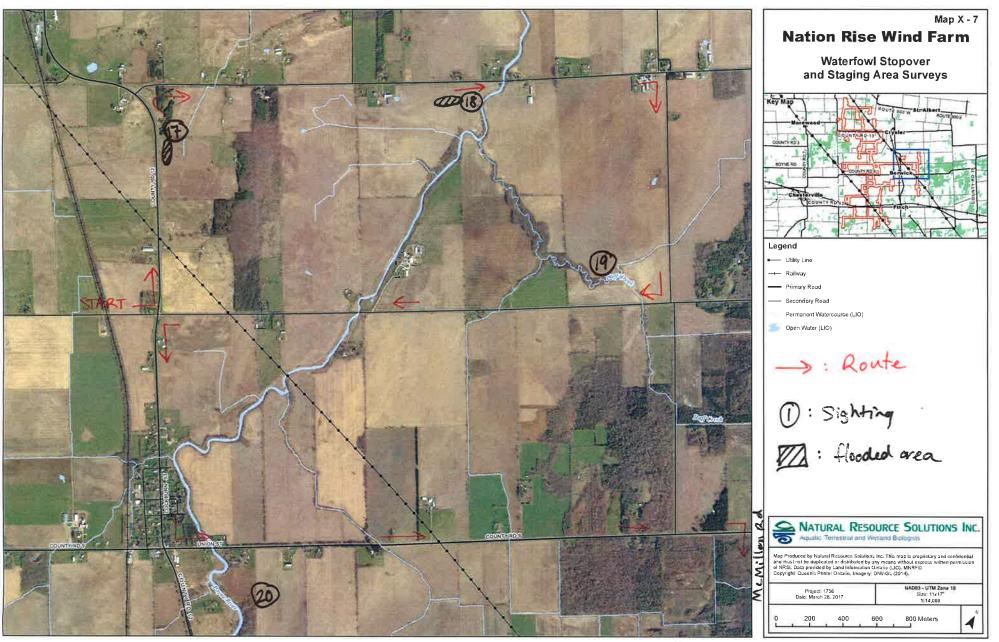


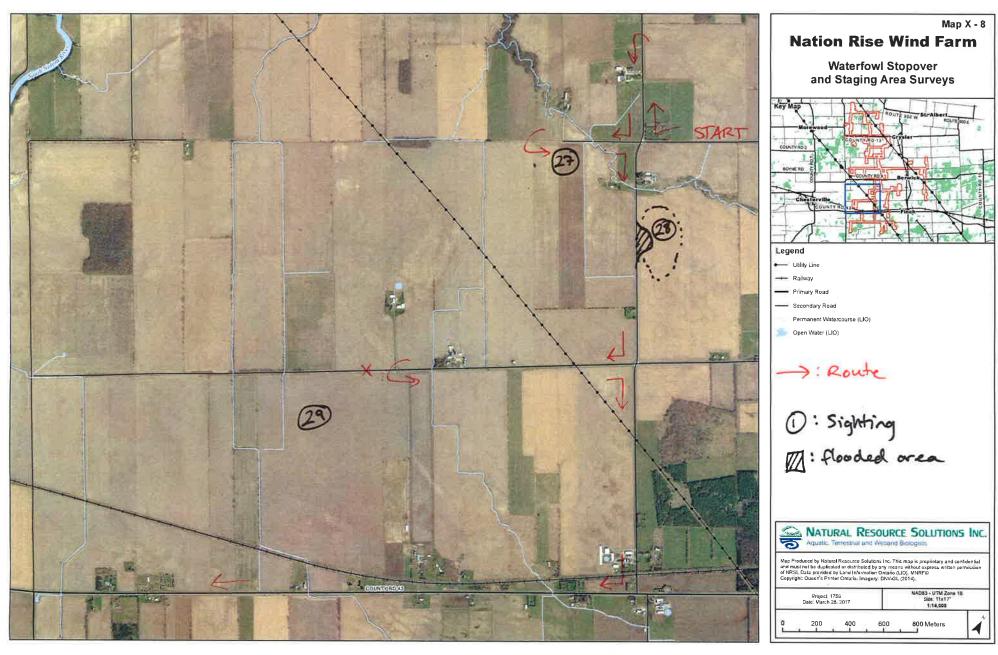


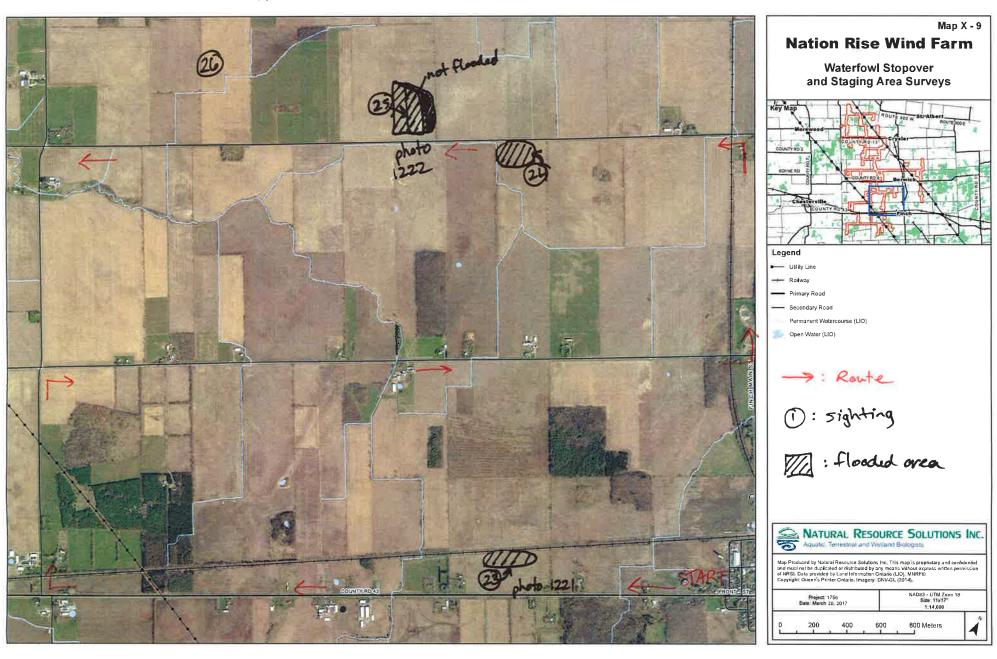


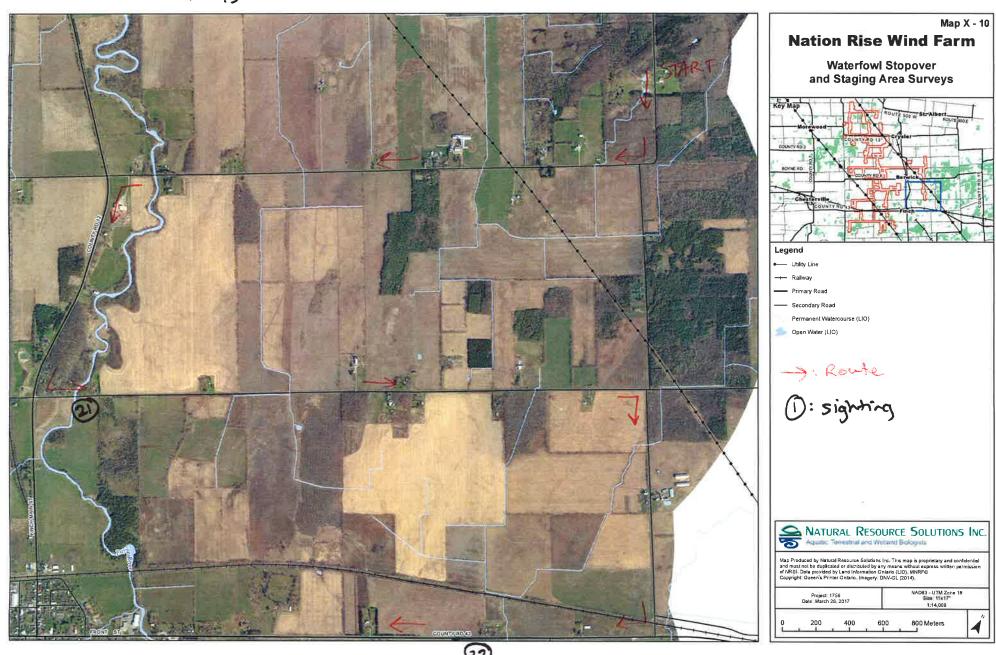
+5°C 2NW

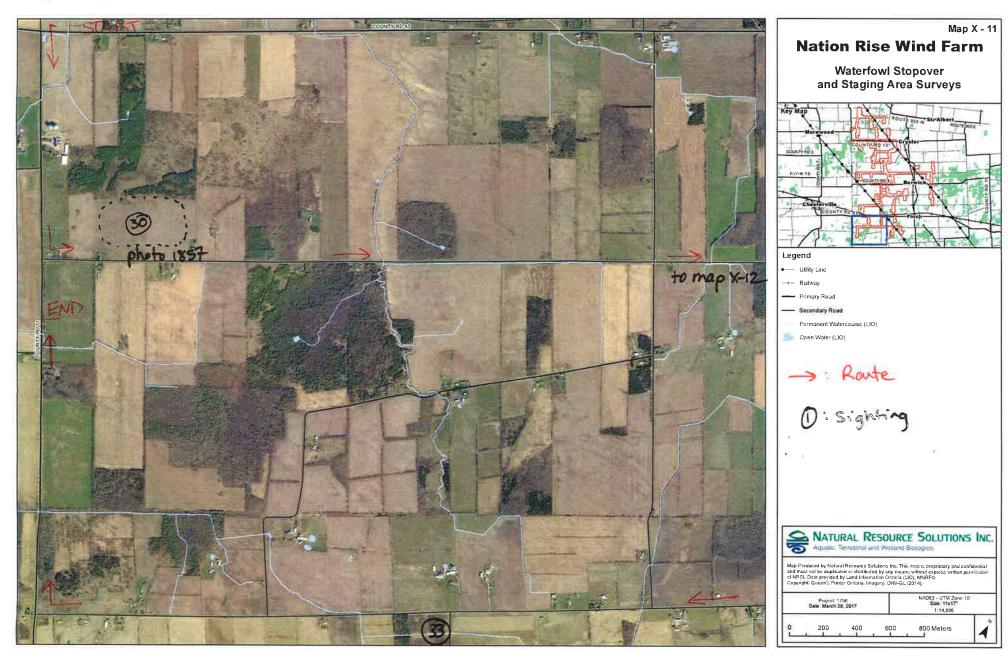
90% cc no precip.

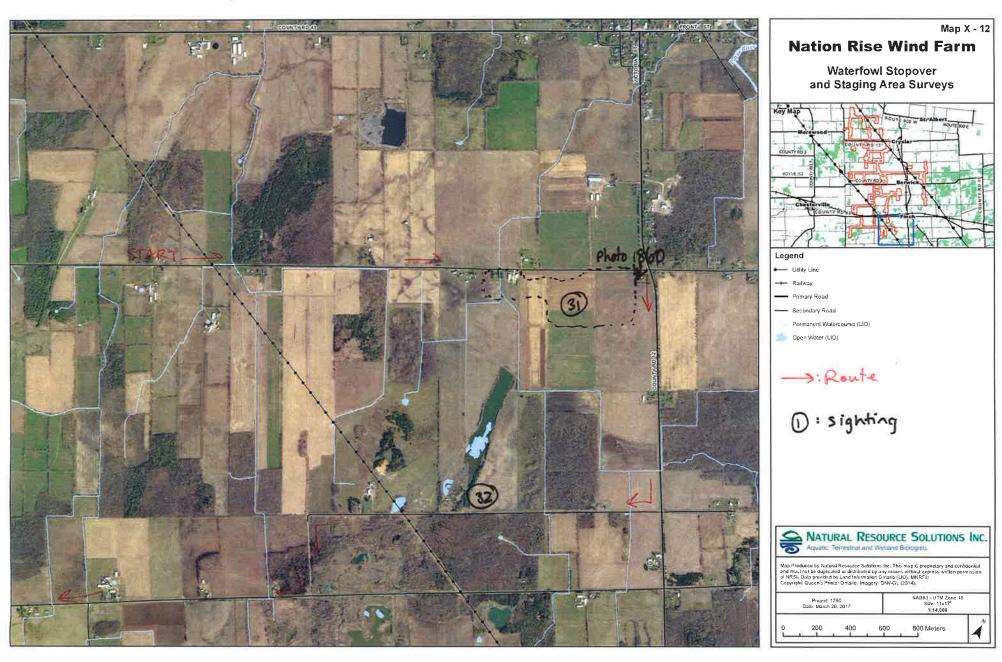












Nation Rise WP #1756 29 March, 2017 J. Barber Waterfowl Surveys - driving transacts +2°C 100% cc Wind: 2 NW no precip. End hme = 15:00 Start time = 0800 Map X-1 (08 00) 1 - Snow goose (5200) mixed flock, - Canada goose (800) more arriving 3 - Canada goox (05) Map X-2 3) - Snow goose (125) - Canada goose (15) -Snow goose (1500) - Canada goose (200)

Map X-2 3 - Snow goose (2200) - Canada goose (250) Map X-4 (08:55) 6 - Canada goose (25) -on riverbank (150) - Snow goose (150) - Snow goose (2000) loose flock Map X-3 (9:40) 9 - Snowgoose (300) - Canada goose (40) (10) - Snow goese (175) -Canada goose (6) 1 - Show goose (65)

Pg. 2 of 6

Nation Rise WP #1756 29 March 2017 J. Barber Map X-5 (10:20) 1 - Canada goose (140) (10:35) 13) - Canada goose (450) - approx 150 within 100m buffer Map X-6 (11:50) (19) - Snow goose (2600) - Canada goose (450) (15) - Canada goose (225) photo 1214 ( - Show goose (550) + 2000 flyover (a) 300 m height - Canada goose (250) + 800 Plyover Map X-7 (12:10) - Canada goose (35) in flooded portion - Canada goose (480) -Northern pintail (9) Pg. 3 of 6

<i>A</i>
Map X-7
(9) - Canada goose (600)
D - Canada goose (800) - Snow goose (125)
Map X-10 (12:45)
(21) - Canada goose (16)
2) - Canada goose (115) - creek/Plooded area
Map X-9 (13:05) just South of road
23) - Canada goose (120) in small flooded
24) - Northern pintail (pair)(2) - Canada goose (180) > 10w flyover - Snow goose (40) > height 30m
25) - Canada goose (225) in wet area
- Snow goose (100) Pay of (28)
Pg. 4 of 6

Nation Rise WP #1756 29 March, 2017 T. Barber Map X-8 (13:45) 27) - Canada goose (350) 28 - Canada goose (300) thirty spread over corn 29) - Canada goose (350) - Snow goose (75) Map X-11 (14:10) (30) - Canada goose (1200) Photo 1857 Map X-123 (14:25) (31) - Snow goose (6000) - massive flock w largest concentration in eastern portion of areer (photo 1860) - Canada goose (225) 32) - (anada goose (175)

Map X-11 (14:50) (33) - Canada-goose (1100) - Snow goose (350) Pg. 6 of 6

30 Minute Point Count Pro	ct Name:NATION RISEProject #1756_
	Station: POINT COUNT A
Wind speed: Z NW	Date: MARCH 29 ZO17
Cloud cover: 95 %	Visit #: 1 2 3 (circle)
Air Temp. 4 °C	Start Time: 1/15 - 1/45
Dragin AMAT	Charmen T. DARRE PHOTO.

UTM

Species Name		ithin Habita		Ot	Breeding		
Opecies Name	<50m	50-100m	>100m*	<50m	50-100m	>100m*	Evidence
CANADA GUESE			125		350	(LOW FLYOVER)	
SNOW GOOSE			,		1100	(LOW FLYOVEN)	
AMBLICAN ROBIN		1					
RED WINLES BLACKBLES		1	2				
		1					
						-	

Comments:			

Matorfowl	Stopover	SURVOY
vvateriowi	Stopover	Survey

30 Minute Point Count

Project Name: NPTION RISE

Project #

1756

Station:	POINT	COUNT	(B)	

Cloud cover: 95 % Visit #: 1 2 3 (4)(circle)

Air Temp. 4 °C Start Time: 1040 - 1/10 PHOTO: 1853

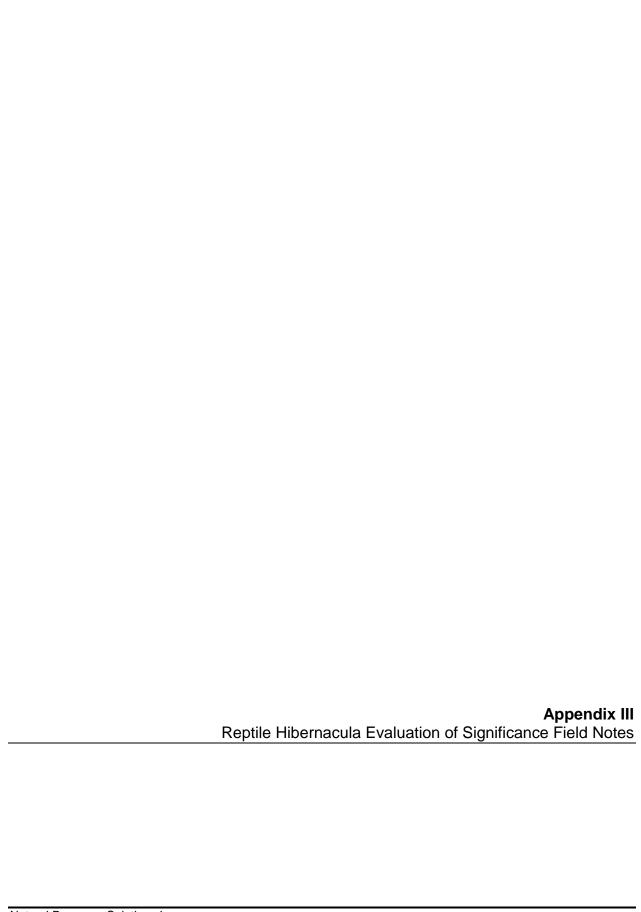
Precip. NONE Observers: J'BARBER

UTM

Species Name	Within Habitat			0	Breeding		
	<50m	50-100m	>100m*	<50m	50-100m	>100m*	Breeding Evidence
ROB-WINNED BLACKBIND			Z		1		5
CANADA GOOSE			2			175	
SNOW GOOSE						550	
WHITE BREASTED WHAT HAVELY			1				
KILISTER			1				
				-			
							-

Comments: SOUTH NATION RIVER FROZEN

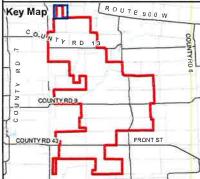
\* 2700 SNOW GEESE FLYOVER (HEIGHT 1km) SWANE @ 11:07





## Nation Rise Wind Project

SNH-001



## Legend

Snake Hibernaculum (SNH)

Parcel



NATURAL RESOURCE SOLUTIONS INC. Aquatic, Terrestrial and Welland Biologists

Map Produced by Natural Resource Solutions Inc.
This map is proprietary and confidential and must not be
duplicated or distributed by any means without express written
permission of NRSI. Data provided by MNRF® Copyright:
Queen's Printer Ontario, Imagery: DNV GL (2014)

Project: 1756 Date: April 21, 2017

NAD83 - UTM Zone 18 Size: 8.5 x 11" 1:6,500

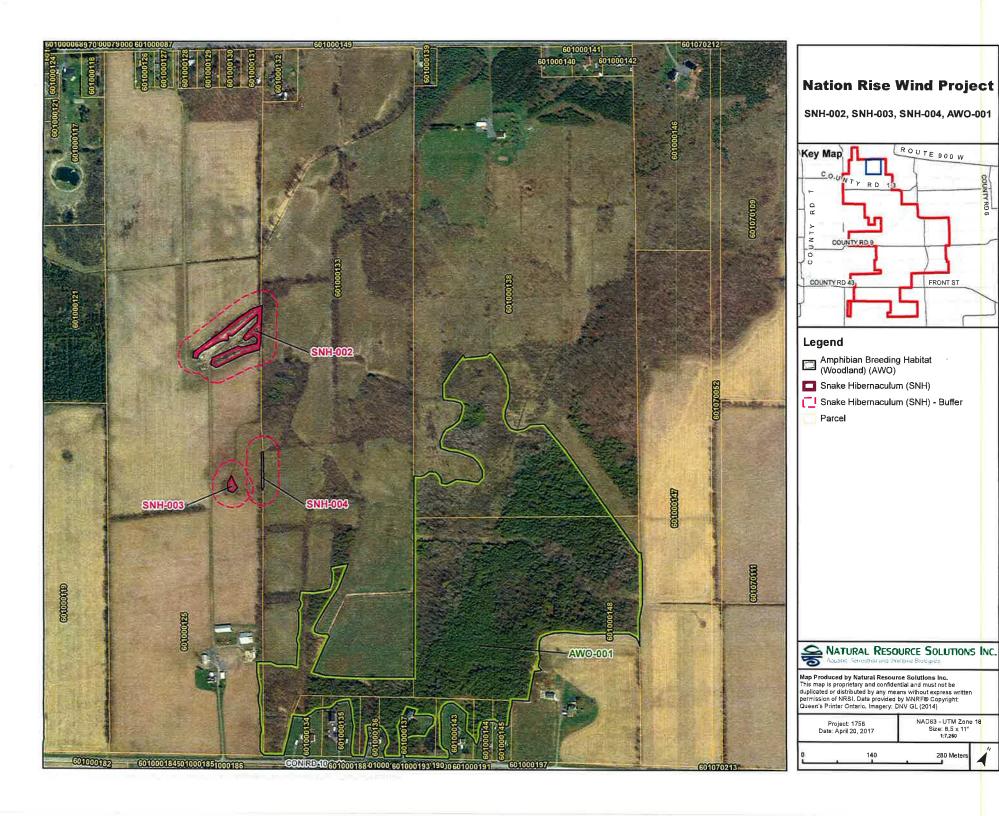


Snake Are	a Search	Surve	/	Location:	SNH-001	Project # 1756				
Project Start time:	<u>Nation</u> 11: 18	Rise	End time:	11>33	Date:DD/ MM/YY 2.6/C					
Weather	14	~		W. 10	2 445 150					
Air Temp.		ິຕ			Wind Di					
Cloud Cover	_100	.%		Cloud Height	_	Med Low				
Precipitation	None		3	Visibility	High⊠	Med Low				
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted										
Am gadfinch woodpelker, raven, Am cras, Killdeer Hild turkey, homed lark										
Species	Behaviour	Age	Sex	Length	Comments (UT	M, Photo Numbers, Habitat)				
None					Karst hospitalt	6 to 11:33				
	1.8									
1										

Snake Area	a Search	Survey	/	Location:	SNH-001		Project # <u>1756</u>		
Project	Netio	in Ris	C	Date:DD/ MM/YY 03/05/17					
Start time:	12:06	ŝ	End time:	12:36	Observers <u>E</u>	1B JI	ROB		
Weather Air Temp.	11	υ		Wind Speed	Q Wind	1 Direction	(from)		
Cloud Cover	50			Cloud Height	High☐	Med∑			
		50			<del>-</del>	Med∏	Low		
Precipitation	None		•	Visibility	High <mark>⊠</mark> ———		LOW		
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
Species	Behaviour	Age	Sex	Length	Comments (	UTM, Photo	Numbers, Habitat)		
Noneerved	a hay seed on the last								
		=							
							·		

Snake Area	a Search	Survey	1	Location:	SNH-001	Project #			
Project	Nation	n Ris	e WP	<del>,</del>	Date:DD/ MM/YY \\ \	05/17			
Start time:	17:15	8	End time:	17:07	Observers Em	B JBB			
Weather Air Temp.	14	r		Wind Speed	Q Wind D	Direction (from)			
Cloud Cover	30	%	6	Cloud Height	——— High <mark></mark> ∑	Med Low			
Precipitation	NIDAE			Visibility	High	Med Low			
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
0	I Dahariaral	A = =	Con	I Lanath 1	Commonts (UI	FM Dhoto Numbers Hebitati			
Species	Behaviour	Age	Sex	Length	Comments (U	ΓM, Photo Numbers, Habitat)			
None abserved	all This like the Shares, days								
						1			
			,						

Snake Area	a Search	Survey	/	Location:	SNH-001	Project # 1756			
Project		Rise	<b>F</b> -15	9:34	Date:DD/ MM/YY 17/0				
Start time:	9:24	-	End time:	1/31	Observers <u>JRI</u>	אט מע			
<b>Weather</b> Air Temp.	_18	°C		Wind Speed_	3 Wind E	Direction <u>SW</u> (from)			
Cloud Cover	10	%		Cloud Height	High	Med Low			
Precipitation	None		•	Visibility	High	Med Low			
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
Species	Behaviour	Age	Sex	Length	Comments (U	ΓΜ, Photo Numbers, Habitat)			
None o	oserve								



Snake Are	a Search	Surve	У	Location:	SNH	ಬ	Project #		
Project Start time;	_ NationR _ 15:10		End time:	5% <u>2</u> 5		SPNAN			
Weather									
Air Temp.		.°C		Wind Speed_	3	Wind Direction	(from)		
Cloud Cover	<u>(w</u>	%		Cloud Height	High	☑ Med	Low		
Precipitation	Nonc			Visibility	High	☑ Med ☐	Low		
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted  און									
		100000		HIM CHOW I WHAT	e smodted	Speriola			
Species	Behaviour	Age	Sex	Length	Comme	ents (UTM, Phot	o Numbers, Habitat)		
None					protos: 15:	10 s, bushing hab 10 - 15,25	sturpesent		
						8			

Snake Area	a Search	Survey	/	Location	SNH-002	F	Project #		
Project	Citrola	n Risa	e WP		Date:DD/ MM/YY(	05/17	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Start time:	HILT	8	End time:	1531	Observers	NB (4)	SB 15:11- 15:131		
<b>Weather</b> Air Temp.	_13	C		Wind Speed_	-		(from)		
Cloud Cover	_75_	%		Cloud Height	High	Med 🦳	Low		
Precipitation	None			Visibility	High⊠	Med	Low		
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
wn.to.led	e or thorox	S, TOCK	1007 71000	US, Sparren	sp nestrons	JU ZUVY, OZ	in nock file		
Species	Behaviour	Age	Sex	Length	Comments	(UTM, Photo I	Numbers, Habitat)		
None					4				
				-					

Snake Are	a Search	Surve	у	Location	5NH-002	F	Project # 1756		
Project	Nation 9	hise			Date:DD/ MM/YY_\\\				
Start time:	8:50		End time:	9:28	Observers EM	В			
<b>Weather</b> Air Temp.	19	°C		Wind Speed_	Q Wind	Direction _	SE(from)		
Cloud Cover		%		Cloud Height	High⊠	Med	Low		
Precipitation	None		-,	Visibility	High⊠	Med	Low		
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted  TWW, AMRO, Brown Throsher, RWBB, den with Signs of Use (raccon fox3)-sgrs-dugung, suit pill of									
Species	Behaviour	Age	Sex	Length	Comments (L	JTM, Photo	Numbers, Habitat)		
None observed									
								-	
								1	

Snake Area Search Survey Location: 50H-00Z Project #										
Project Start time:	NA 11 54	1100 R	So End time:	1215	Date:DD/ MM/YY Observers	17/05, JRDB	1/7 DJR			
Weather										
Air Temp.	26	°C		Wind Speed_	<u> </u>	/ind Direction	(from)			
Cloud Cover		.%		Cloud Height	High 💭	Med	] Low [			
Precipitation	M	Ø	<b>-</b> 3	Visibility	High	Med	] Low[]			
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted										
Species	Behaviour	Age	Sex	Length	Commen	ts (LITM Phot	o Numbers, Habitat)			
			Gex	Lengui	Commen		o Humbers, Habitaty			
Alone	8850.	(VED)								
			-							

Snake Area	a Search	Surve	У	Location:	_ gnHvo	3	Project #	1756
Project Start time:	<u>Nestion</u>	i Rise	End time:	V7. 7.	Date:DD/ MM/YY_	26/04/17 JAB (CEP		
	10.11	-	LIIG timo.	15:51_	Obscivere_	J PU CEI		
<b>Weather</b> Air Temp.	(6	°C		Wind Speed_	3	Wind Direction	_E(	from)
Cloud Cover	90	.%		Cloud Height	High	Med	Low	
Precipitation	None		-	Visibility	High	∬ Med∏	Low	
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted  white throughout Sportum,								
WAS THOMSE !	sportw,							
Species	Behaviour	Age	Sex	Length		nts (UTM, Photo	o Numbers, H	abitat)
Wore					appears 9	uperflaul 541-1551		
					V			
							->	

Snake Area	a Search	Surve	/	Location:	SNH-003	Project #\756
Project Start time:	<u> Mation</u> 14:46	Rise	End time:	14:56	Date:DD/ MM/YY 1/	1 <u>05/17</u>
Weather						
Air Temp.	13	.℃		Wind Speed_	Wind	Direction (from)
Cloud Cover	75	.%		Cloud Height	High	Med \( \) Low \( \)
Precipitation	none			Visibility	High <b></b>	Med Low
						nches move; 5=sm.trees move; ge; 10=trees uprooted
Species	Behaviour	Age	Sex	Length		JTM, Photo Numbers, Habitat)
none					photos. 14 48	AMRO
						2

Snake Area	a Search	Survey	/	Location:	SNH-c	203	Project # <u>1756</u>
Project	Nation	Ri se				12/05/17	2
Start time:	08:49	<u> </u>	End time:	08:59	Observers	JBB	
Weather Air Temp.	_12	°		Wind Speed_	1	Wind Direction	SE (from)
Cloud Cover	_<5	%		Cloud Height	High	Med [	Low
Precipitation	hone			Visibility	High	<b>⊠</b> Med ☐	Low
				felt on face; 3=leav f, hard to walk; 9=li			; 5=sm.trees move; s uprooted
Species	Behaviour	l Ago	Sex	Length	Comm	ante (LITM Phote	o Numbers, Habitat)
	Dellavioui	Age	Sex	Lengin	Comme	ants (OTW, FIIOt	o Numbers, Habitat)
hove dozered							
			2				

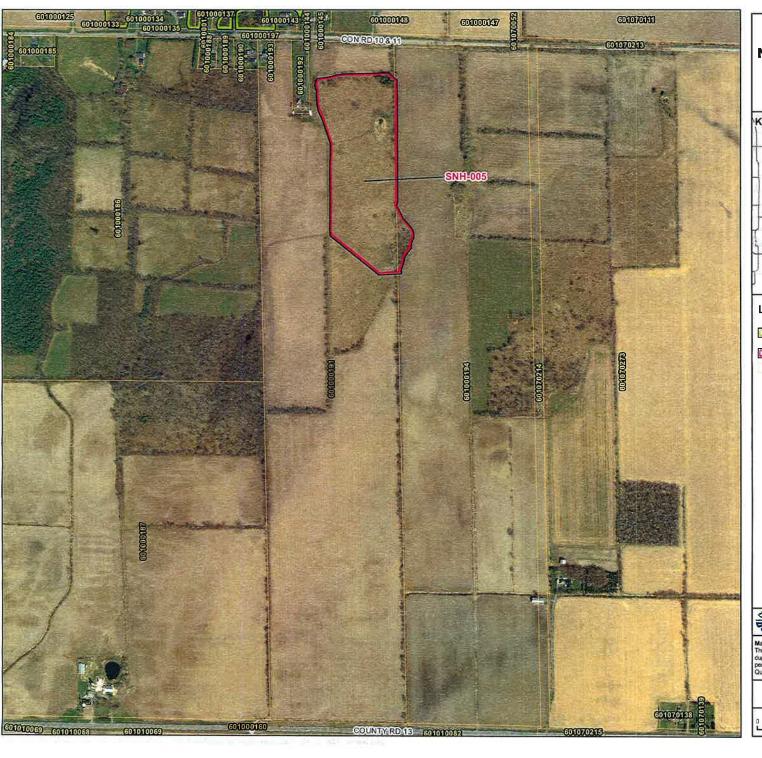
Snake Area	a Search	Survey	/	Location:	SNH-00_	3	Project # _1756		
Project	NA	TION /	eise		Date:DD/ MM/YY	17/05/	/17		
Start time:	1130	•):	End time:	1140	Observers	JRDS.	DJR		
<b>Weather</b> Air Temp.	25	C		Wind Speed_	4-5 Wi	nd Direction	5W (from)		
Cloud Cover		%		Cloud Height	High	Med	Low		
Precipitation	No	ONE	•	Visibility	High	Med	Low		
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
				3					
Species	Behaviour	Age	Sex	Length	Comments	(UTM, Photo	o Numbers, Habitat)		
Nove	OBSER	VED							

Snake Area	a Search	Surve	y	Location:	5NA 004		Project #		
Project Start time:	Nation15130		End time:	16:4D	Date:DD/ MM/YY Observers	26/4/17 5118, CEP			
Weather									
Air Temp.	_ 16	.°C		Wind Speed_	<u>3</u> W	ind Direction	(from)		
Cloud Cover	90	%		Cloud Height	High 🗸	Med	Low		
Precipitation	Nove_		-	Visibility	High <mark></mark>	Med	Low		
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
Species	Behaviour	Age	Sex	Length	Comment	ts (UTM, Photo	o Numbers, Habitat)		
None					appears zup	Acal >1540			
					<u> </u>				

Snake Are	a Search	Surve	/	Location:	SNH-004	Project #			
Project	Nation	1 Rise				5/17			
Start time:	14.58		End time:	15:08	Observers	<u>U</u>			
<b>Weather</b> Air Temp.	13	°		Wind Speed_	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Direction (from)			
Cloud Cover	75	%		Cloud Height	High 🗌	Med Low			
Precipitation	none			Visibility	High⊠	Med Low			
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
	•		-						
Species	Behaviour	Age	Sex	Length	·	TM, Photo Numbers, Habitat)			
none					American goblinch photo 14:59	, sosy ando nob			

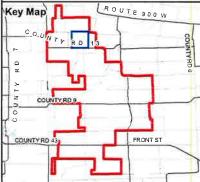
Snake Area	a Search	Survey	1	Location:	SNH-0	04	Project # 1756	
Project	Nation	Rise			Date:DD/ MM/YY	12/05/17		
Start time:	09:15		End time:	09:25	Observers _	J B B		
<b>Weather</b> Air Temp.	13			Wind Speed_	1 v	Wind Direction	SE (from)	
Cloud Cover	_5	%		Cloud Height	High⊠	Med	Low	
Precipitation	nove	(sunny)		Visibility	High⊠	Med_	Low	
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted								
Species	Behaviour	Age	Sex	Length			o Numbers, Habitat)	
none observed					northern card chipping social		her sosp, field spanous	

Snake Area	a Search	Survey	/	Location:	SNH -O	04	Project # <u>1756</u>		
Project Start time:		ion pi	End time:		Date:DD/ MM/YYObservers				
Weather									
Air Temp.	_25	-		Wind Speed_	Wii	nd Direction	(from)		
Cloud Cover	5	_		Cloud Height	High	Med	Low		
Precipitation	NOV	No.	4	Visibility	High	Med	Low		
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
Species	Behaviour	Age	Sex	Length	Comments	(UTM, Pho	oto Numbers, Habitat)		
KONE	8B56	nuw					7		
		-							
							_		



## **Nation Rise Wind Project**

SNH-005



### Legend

- Amphibian Breeding Habitat (Woodland) (AWO)
- Snake Hibernaculum (SNH)

Parcel



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Project: 1756 Date: April 21, 2017

NAD83 - UTM Zone 18 Size: 8,5 x 11" 1:8,000 300 Meters

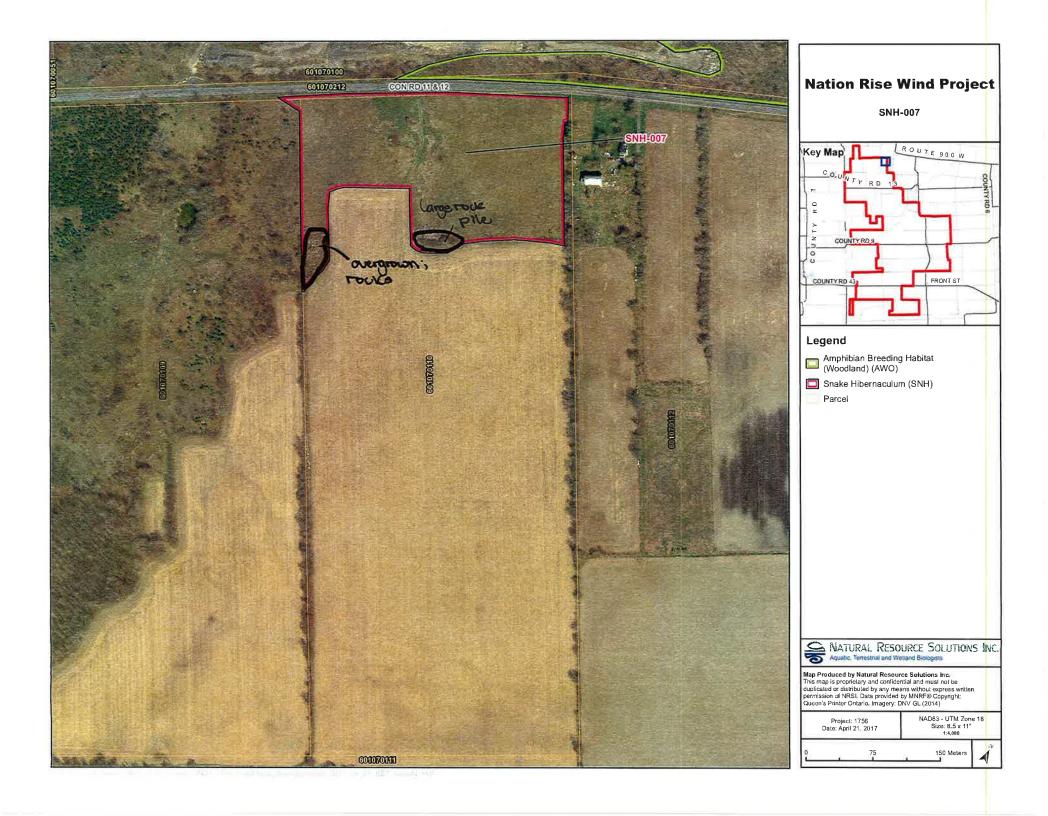


Snake Are	ea Search	Surve	/	Location:	SNH	-WS	Project #	17-56
Project	Nation R	ise			Date:DD/ MM/YY	26/04/1=	}	
Start time:	12:09	-	End time:	12.50	Observers	JBB CEF	)	
<b>Weather</b> Air Temp,	13	ဇ		Wind Speed_	Q	Wind Direction	E	(from)
Cloud Cover	_100_	_%		Cloud Height	High[		Low	]
Precipitation	none		-	Visibility	High[	ַ Med∏	Low	]
				felt on face; 3=leav ff, hard to walk; 9=li				move;
Mumine a	ove Pedwa	reject bias	ichird, E	c lipmunk, song	Sporrad in	untermoated :	orkered i	INOS WILL
Species	Behaviour	Age	Sex	Length∀	Commo	ents (UTM, Photo	Numbers,	Habitat)
None					Lorge amo	ntsof holes an	d parking	meas holos1209-12
								-
								-

Snake Area	a Search	Surve	,	Location:	: SNH-0	05	Project # _1756_		
Project		Tow RI	'SE	(	Date:DD/ MM/YY	03/05			
Start time:	1634	=	End time:	_/7/3	Observers _	JRDB	EMB		
<b>Weather</b> Air Temp.	_17			Wind Speed_	4_\	Wind Direction	Nω (from)		
Cloud Cover	_26	<b>-</b> %		Cloud Height	High <b>X</b>	Med _	Low		
Precipitation	Nove	<u> </u>	•	Visibility	High	Med _	Low		
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
					+(g)				
Species	Behaviour	Age	Sex	Length	Comme	nts (UTM, Photo	Numbers, Habitat)		
NONE	OBSERV	ED							
						1.51			

Snake Area	a Search	Survey	/	Location:	SNH-009	<u> </u>	Project #	1756		
Project Start time:	Nati	on Ri	SC NVP		Date:DD/ MM/YY \\ Observers \( \int \mathbb{F} \)					
Weather	10				2					
Air Temp.	_13	℃		Wind Speed_	∠ Wind I	Direction _	NE	(from)		
Cloud Cover	50	-%		Cloud Height	High	Med	Low			
Precipitation	2004		<b>-</b> 6	Visibility	High <mark>5</mark>	Med	Low			
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted										
Species	Behaviour	Age	Sex	Length	Comments (U	TM, Photo	Numbers, h	tabitat)		
Nune observe	1									

Snake Area Search Survey				Location:	SNH-005	Project # 1756			
Project			RISE	17.55	Date:DD/ MM/YY 17/0 Observers TRAB	5/17			
Start time:	1225		End time:	1255	Observers	DJK			
<b>Weather</b> Air Temp.	27	°C		Wind Speed_	Wind Directi	onS W(from)			
Cloud Cover		%		Cloud Height	High Med	d Low			
Precipitation	NOWE	5	=	Visibility	High Med	d Low			
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
Species	Behaviour	Age	Sex	Length	Comments (UTM, P	hoto Numbers, Habitat)			
AME	OBSE	RUGD							
						7			
						1			
				T.					



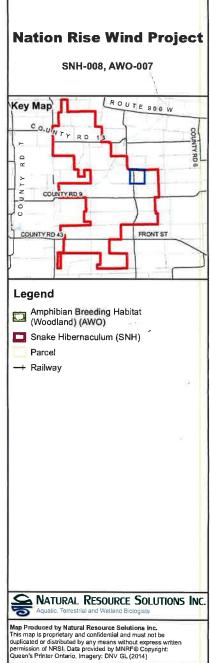
Snake Area	a Search	Survey	1	Location:	SNH-007	1	Project #	1756
	Nation	Rise			Date:DD/ MM/YY <u>2.6</u>			
Start time:	17:09		End time:	10:50	Observers	66,66	<u> </u>	
<b>Weather</b> Air Temp.	11	ຶດ	9	Wind Speed	3Wind	d Direction	le le	(from)
Cloud Cover	100	.%		Cloud Height	High	Med 🗌	Low	
Precipitation	none			Visibility	High☑	Med	Low	
6=Irg branches mo	ve; 7=lrg tree	es move; 8=t	wigs break of	felt on face; 3=leav f, hard to walk; 9=li	ght structural dama	age; 10=trees	uprooted	
Bounthooner	depurrous	now, Cor	ode goose,	Mark rapped of	recordee , tasto	x75ca+, Am	- Soldfinch, B	lic joy
Species	Behaviour	Age	Sex	Length	Comments	(UTM, Phot	o Numbers, H	labitat)
None observed					Lots of Kerst/vol. 10:09-10:50	es/posking hi	ibtat observed	A Secpholos
							142-	
	- 1				*		-	

Snake Area	a Search	Survey	/	Location:	: SNH 0	07	Project #
Project	NAT	In 1	2156		Date:DD/ MM/YY	03/03	5/17
Start time:	1722		End time:	1800		TRDB	
<b>Weather</b> Air Temp.	17			Wind Speed_	3-4 W	ind Direction	<u>N</u> ω (from)
Cloud Cover	10	_%		Cloud Height	High	Med	Low
Precipitation	Y	NONE	-	Visibility	High	Med	] Low[]
				l felt on face; 3=lea off, hard to walk; 9=			e; 5=sm.trees move; s uprooted
Species	Behaviour	Age	Sex	Length	Comments	s (UTM, Phot	to Numbers, Habitat)
GANTER SNAKE	BASKING) + RUTREAT	ADVLT	VNK	≈14"	1 SEE M	1AP - EXPO	SED CRACKUS BEDROCK
	0						

Snake Area	a Search	Survey	/	Location:	SVH-	207		Project	# <u>1756</u>
Desirat	Nation	2:.0			Date:DD/	11/05	112		
Project						11/05/			_
Start time:	17:40	-S:	End time:	18:12	Observers	EMB, J	BB		
<b>Weather</b> Air Temp.	14	°C		Wind Speed_		Wind Dire	ection _	SE	(from)
Cloud Cover	65	%		Cloud Height	High	ا 🗆	Med	Low	<u>'</u>
Precipitation	none		•	Visibility	High		Med	Low	'□
Wind speed (Bea 6=lrg branches mo									es move;
Species	Behaviour	Age	Sex	Length	Comm	ents (UTM	l, Photo	Number	s, Habitat)
eastern garter snate	baskina	unknown	unknown	~50cm	483949 S		kar	st ha 6/ta	f in field
					XSeveral K	erst area	3 C 901	ear to ho	in deep
					CHE VOCAS		3.53		

Snake Area	a Search	Survey	1	Location;	SNH-00	7 1	Project # <u>[758</u>
Project	NATIO	W RIS	56	0905		17/05,	
Start time:	0815		End time:	0905	Observers	JRDB	DJR
<b>Weather</b> Air Temp.	18	C		Wind Speed_	Wir	nd Direction _	W (from)
Cloud Cover	%			Cloud Height	High	Med	Low
Precipitation	NON	<u> </u>	Ē	Visibility	High 🔼	Med	Low
				felt on face; 3=leav ff, hard to walk; 9=l			
Species	Behaviour	Age	Sex	Length	Comments	(UTM, Photo i	Numbers, Habitat)
NONE	MSCR	ND					
100.00							
							-





NADB3 - UTM Zone 18 Size: 8.5 x 11" 1:7,000

Project: 1756 Date: April 21, 2017

Snake Are	a Search	Surve	У	Location	: SNH-C	DOR	Project #_1756
Project	Nation	hise W	lind Fall		Date:DD/	27/64/13	}
Start time:	12:42		End time:	12:57	Observers _	JBB, CE	ξP
<b>Weather</b> Air Temp.	30	C		Wind Speed_	2	Wind Direction	(from)
Cloud Cover	<u>(()</u>	-%		Cloud Height	High	Med_	] Low
Precipitation	none	20	Ē	Visibility	High	Med Med	Low
Wind speed (Be 6=Irg branches m Am. toad, An	nove; 7=lrg tree	es move; 8=1	twigs break o	off, hard to walk; 9=	ives move; 4=s	m.branches moved damage; 10=tree	e; 5=sm.trees move; es uprooted
Species	Behaviour	Age	Sex	Length	Comme	ents (UTM, Pho	to Numbers, Habitat)
				+		•	·
none					Photos	17:38-17:2	3 AMTO ralling
	-				Rockpile	rontains ho	bs/burious
					<u> </u>		
		Ñ			<u> </u>		
			19				
						0.391-31 <u>-</u>	
	1		<del> </del>		<del>                                     </del>		
					<del> </del>		

Snake Are	a Search	Survey	1	Location:	5NH-08	08	Project # _1756
Project Start time:	NATION 1	PISE .	End time:	1734		03 05 1 CHRUSTY	Hummpley
Weather		*0)					
Air Temp.	17	o.		Wind Speed_	<u> </u>	Vind Direction	NW(from)
Cloud Cover	/0	%		Cloud Height	High☑	Med 🗌	Low
Precipitation	None		ě	Visibility	High∭	Med _	Low
Wind speed (Bea 6=lrg branches m	aufort): 0=calm ove; 7=lrg tree	n; 1=smoke d es move; 8=t	drifts; 2=wind wigs break of	felt on face; 3=leav f, hard to walk; 9=li	ves move; 4=sm ight structural da	.branches move amage; 10=trees	e; 5=sm.trees move; s uprooted
Species	Behaviour	Age	Sex	Length	Commen	its (UTM, Phot	o Numbers, Habitat)
NoNE							
						. 7. 1	

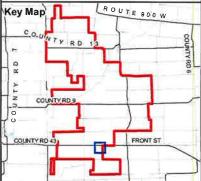
Snake Are	a Search	Surve	/	Location:	SNH-OC	n8	Project #
Project	Nation					12/05/17	2-
Start time:	17.36	<b>3</b> /)	End time:	11:48	Observers _	7 872	
<b>Weather</b> Air Temp.	_17	°C		Wind Speed_	01	Wind Direction	(from)
Cloud Cover	15	%		Cloud Height	High	Med _	Low
Precipitation	none		-	Visibility	High	Med Med	Low
				felt on face; 3=leav ff, hard to walk; 9=l			; 5=sm.trees move; s uprooted
Species	Behaviour	Age	Sex	Length	Comme	nts (UTM, Photo	o Numbers, Habitat)
gardersnake	basking.	unk	ank	~50cm	see map shoto of la	ration R D: L	-14
					BECH		
	1						

Snake Area	a Search	Survey	/	Location:	SNH-0	08	Project #	1756
Project Start time:		Tan	RISE End time:	1635	Date:DD/ MM/YY	17/06 TRS6	/17 DJR	
Weather	71			ž.				
Air Temp.		•		Wind Speed_	Wind	-		
Cloud Cover	40	.%		Cloud Height			Low	
Precipitation	Now	<u> </u>	_	Visibility	High	Med	Low	
<b>Wind speed</b> (Bea 6=Irg branches mo	ufort): 0=calm; ove; 7=lrg tree:	; 1=smoke o	drifts; 2=wind twigs break o	felt on face; 3=leav	ves move; 4=sm.bra light structural dama	nches move ge; 10=trees	; 5=sm.trees m s uprooted	nove;
				·				
Species	Behaviour	Age	Sex	Length	Comments (	UTM, Photo	o Numbers, H	labitat)
COMMIN	BASKING.	unk	NAK	20"	DSEE MA	۴		
						))		
				200				
1								
				•				



# **Nation Rise Wind Project**

SNH-009, SNH-010



#### Legend

- Snake Hibernaculum (SNH)
  - Parcel
- → Railway



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Project: 1756 Date: April 21, 2017 NAD83 - UTM Zone 18 Size: 8.5 x 11" 1:5,000

9

180 Meter

Meters

Snake Area	a Search	Survey	/	Location:	SNH-	009	Project #	156
Project Start time:	NATIO	, 200 181.	SE End time:	1139	Date:DD/ MM/YY Observers	27/04 JRDB		
<b>Weather</b> Air Temp.	20.5	°C		Wind Speed	2 v	Vind Direction	SE (	from)
Cloud Cover	2			Cloud Height		/ Med		
Precipitation	NOU	E		Visibility	High	Med	] Low	
Wind speed (Bea 6=Irg branches mo	ufort): 0=calm ove; 7=lrg tree	n; 1=smoke o es move; 8=	drifts; 2=wind twigs break of	felt on face; 3=leav f, hard to walk; 9=l	ves move; 4=sm ight structural da	branches move amage; 10=tree	e; 5=sm.trees m s uprooted	ove;
Species	Behaviour	Age	Sex	Length	Commen	its (UTM, Phot	to Numbers, H	abitat)
NOM	0350	RVED						
					Y			
								).
,						<del>*</del>		
								1
								(1)
<u>)</u>				22				

Snake Area	Search	Survey	1	Location:	SNH-0	09	Project # 1756
	Natio	n Ris				04/05/	_
Start time:	<u> 11:9a</u>		End time:	11:41	Observers _{	TWR 3	TKDIS
<b>Weather</b> Air Temp.	15	c		Wind Speed_		Vind Direction	(from)
Cloud Cover	40	%		Cloud Height	High	Med[	Low
Precipitation	None			Visibility	High	Med	Low
Wind speed (Bead 6=Irg branches mo	ufort): 0=calm ove; 7=lrg tree	ı; 1=smoke d es move; 8=t	drifts; 2=wind wigs break of	felt on face; 3=leav f, hard to walk; 9=li	ves move; 4=sm ight structural da	i.branches mov amage; 10=tree	e; 5=sm.trees move; es uprooted
Species	Behaviour	Age	Sex	Length	Commen	its (UTM, Pho	to Numbers, Habitat)
None							
							_

Snake Are	a Search	Surve	/	Location:	2H-009	Project #
Project Start time:	Nation 16:46	n Rise	End time:	16:56	Date:DD/ MM/YY LA /OS Observers EMB, J	5/17
	10, 14					
<b>Weather</b> Air Temp,	17	°C		Wind Speed_	Wind Di	rection(from)
Cloud Cover	_15_	%		Cloud Height	High🏻	Med Low
Precipitation	none	-	-	Visibility	High	Med Low
					res move; 4=sm.branch ght structural damage;	es move; 5=sm.trees move; 10=trees uprooted
Species	Behaviour	Age	Sex	Length	Comments (UTI	M, Photo Numbers, Habitat)
noneobsenel					AMCR, RWDB, AMR	0
					3 95	
						-

Snake Area	Search	Survey	/	Location:	SNH	009	Project # 1756
Project Start time:	NA7.	You a		10 38	Date:DD/ MM/YY		
	1001	0	End unie.	10 70	Observers	01000	2010
<b>Weather</b> Air Temp.	25	C		Wind Speed_	4-5	Wind Direction	S∞_(from)
Cloud Cover	15%			Cloud Height	High	Med _	Low
Precipitation .	NME		-	Visibility	High	Med _	Low
Wind speed (Beau 6=lrg branches mo	ufort): 0=calm ove; 7=lrg tree	; 1=smoke c s move; 8=t	drifts; 2=wind wigs break of	felt on face; 3=leav f, hard to walk; 9=li	/es move; 4=s ight structural	sm.branches move damage; 10=trees	e; 5=sm.trees move; s uprooted
Species	Behaviour	Age	Sex	Length	Comm	ents (UTM, Phot	o Numbers, Habitat)
Nove	0BSt	RVED					
						<u> </u>	
		1					

Snake Area	a Search	Survey	/	Location;	SNH-C	010	Project # 1756	
Project Start time:	NATIO 1152	N pels	End time:	1210		27/04. JRDB	/17 JIM	
Weather								
Air Temp.	22.5	C		Wind Speed_	Wir	nd Direction _	(from)	
Cloud Cover	5	%		Cloud Height	High	Med□	Low	
Precipitation	NONE			Visibility	High	Med□	Low	
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted								
Species	Behaviour	Age	Sex	Length	Comments	(UTM, Photo	Numbers, Habitat)	
NONE D	BSTRVED				i			
,								
							TV.	

Snake Area	a Search	Survey	1	Location:	SMH-0	10_	Project # 175%
Project	Natio	on R	ise		Date:DD/ MM/YY_0%	1051	13
Start time:	11:49	•	End time:	12:00	Observers <u>En</u>	NB JR	DB
Weather	Ĭ i z	~		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	^ 1AC	1.00	)   (6)
Air Temp.		°C		Wind Speed_	<u>Q</u> Win	-	
Cloud Cover	30_	%		Cloud Height	High	Med _	Low
Precipitation	None		4	Visibility	High	Med.	Low
				felt on face; 3=leav f, hard to walk; 9=li			; 5=sm.trees move; s uprooted
Species	Behaviour	Age	Sex	Length	Comments	(UTM, Photo	o Numbers, Habitat)
nove							
_							*
				10			

Snake Area	a Search	Survey	/	Location;	SNH-C	010		Projec	1#1756
Project	Nation	Rise			Date:DD/ MM/YY	12/05	117		
Start time:	15:05	•3:	End time:	15:15	Observers	EMB	,JBB		n
<b>Weather</b> Air Temp.	_18	c		Wind Speed_	3	Wind Dir	ection _	W	(from)
Cloud Cover	15	%		Cloud Height	High	3	Med	Lov	v 🗌
Precipitation	nore			Visibility	High	₫	Med	Lov	v
				felt on face; 3=leav ff, hard to walk; 9=l					es move;
Species	Behaviour	Age	Sex	Length	Comme	ents (UTN	Л, Photo	Numbe	rs, Habitat)
More degreed									
				<u> </u>					

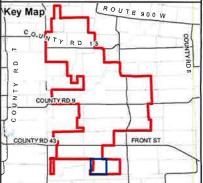
Snake Area	a Search	Search Survey Location: SNH - 010 Project #							
Project	NATIO	N RI	SE		Date:DD/ MM/YY/8	105,	/17		
Start time:	1555	60	End time:	1608	Observers <u>Tel</u>	BD	JR	_	
Weather Air Temp.	31	C		Wind Speed_	7-8 Wind D	irection	SW (from)		
Cloud Cover	10	%		Cloud Height	High	Med	Low		
Precipitation	No	NE	_	Visibility	High	Med 🗌	Low		
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
Species	Behaviour	Age	Sex	Length	Comments (UT	M, Photo	Numbers, Habitat)		
common agn TEN	BASKING ON BATH			~ 26"	SEEN APPROX ISON -ON PATH	BY CA	HASITAT SEC		

= Concession 1,2 ->



# **Nation Rise Wind Project**

AWO-020, SNH-011



#### Legend

- Amphibian Breeding Habitat (Woodland) (AWO)
- Snake Hibernaculum (SNH)
  - Parcel



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Project: 1756 Date: April 21, 2017 NAD83 - UTM Zone 18 Size: 8.5 x 11" 1:7,500

140

1

Snake Are	a Search	n Surve	у	Location	: SNH	-011	Project #	1756
Project Start time:	NA/10 14:52	NU R1	SS End time;		Date:DD/ MM/YY_ Observers	Z7/07 JRBB		
Weather								
Air Temp.	27.5	_°C		Wind Speed_	2	Wind Direction		(from)
Cloud Cover		-%		Cloud Height	High)	∬ Med [	] Low	]
Precipitation	NINE		-	Visibility	High	] Med	Low	]
<b>Wind speed</b> (Bea 6=Irg branches m	aufort): 0=caln ove; 7=lrg tree	n; 1=smoke es move; 8=	drifts; 2=wind twigs break o	felt on face; 3=lea ff, hard to walk; 9=	ves move; 4=sr light structural c	n.branches move damage; 10=tree	e; 5=sm.trees r s uprooted	move;
Species	Behaviour	Age	Sex	Length	Comme	nts (UTM, Phot	o Numbers, I	Habitat)
NONE OBSE	: ZVED							
				==				
						v v		
						S-100 at 186		

Snake Are	a Search	Survey	1	Location:	2111-011	Project # <u>1</u> 356				
Project Start time:	<u>Natio</u> 13:49	n Ris	End time:	13:59	Date:DD/ MM/YY 64	105/17 NB TROB				
Weather					- III.					
Air Temp.	16	r		Wind Speed_	Wind	Direction (from)				
Cloud Cover	25	%		Cloud Height	High∭	Med Low				
Precipitation	None	af.		Visibility	High	Med Low				
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted										
Species	Behaviour	Age	Sex	Length	Comments (l	JTM, Photo Numbers, Habitat)				
None										

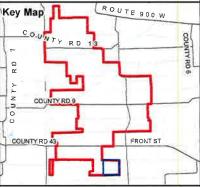
Snake Are	a Search	Survey	/	Location:	SNHO	1	Project # <u>1756</u>
Project	Notion 16:21	Rise				2/05/17	
Start time:	16:91		End time:	16:31	Observers _6	EMB, JUB	
<b>Weather</b> Air Temp.	19	_°℃		Wind Speed_	<i>O</i> v	Vind Direction	(from)
Cloud Cover	20	-%		Cloud Height	High∤	Med	Low
Precipitation	none			Visibility	High	Med	Low
				felt on face; 3=leav f, hard to walk; 9=l			e; 5=sm.trees move; s uprooted
Species	Behaviour	Age	Sex	Length	Commen	ts (UTM, Phot	o Numbers, Habitat)
none observal							
					KILL SOST	AMG D. CC	BA BUER COCK
						n snat on rock	
					16		
				IK.			

Snake Area Search Survey Location: SNH-OII Project # 17									
Project	NATIO	n RIS	É		Date:DD/ MM/YY	4/05/17			
Start time:	1220	•3	End time:	123/	Observers JRI	<i>B</i>			
<b>Weather</b> Air Temp.		C		Wind Speed_	Z Wind Di	rection (from)			
Cloud Cover		% HAZY		Cloud Height		Med Low Low			
Precipitation	wy	3	e	Visibility	High	Med Low			
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted									
Species	Behaviour	Age	Sex	Length	Comments (UTI	M, Photo Numbers, Habitat)			
NONE	135	ENVEN							
700.0			=						
				7.					
	-								
l									



## **Nation Rise Wind Project**

AWO-023, SNH-012



- Amphibian Breeding Habitat (Woodland) (AWO)
- Snake Hibernaculum (SNH)
- Snake Hibernaculum (SNH) Buffer



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Project 1756 Date April 20, 2017

NAD83 - UTM Zone 18 Size: 8.5 x 11" 1:7,500

280 Meters



Snake Area	a Search	Survey	/	Location:	SMHOIM	d	Project #	196
Project Start time:	<u>Nation</u>	Rise	End time:	11:02	Date:DD/ MM/YY Observers	FNHO/36		
Weather								
Air Temp.	<u>q</u>	°C		Wind Speed_	<u> </u>	ind Direction	(fron	1)
Cloud Cover	_70	%		Cloud Height	High☑	, Med∐	Low	
Precipitation	_ NON C			Visibility	High☑	Med	Low	
Wind speed (Bea 6=lrg branches mo	aufort): 0=calm ove; 7=lrg tree	n; 1=smoke o es move; 8=1	drifts; 2=wind twigs break of	felt on face; 3=leav ff, hard to walk; 9=l	ves move; 4=sm. ight structural da	branches move mage; 10=trees	; 5=sm.trees move; s uprooted	
Species	Behaviour	Age	Sex	Length	Comment	ts (UTM, Photo	o Numbers, Habit	at)
None					Photos: 10:5	7-11,05		
			V	T				
							-	

Snake Area	a Search	Surve	/	Location:	SNH-C	12	Project # 1756
Project	Nation #	lise			Date:DD/ MM/YY_	26/04/ JRDB,	17
Start time:	16:45	•:	End time:	16.58	Observers_	JRDB,	Jom
<b>Weather</b> Air Temp.	17.5	ຶ່ວ		Wind Speed_			SE_(from)
Cloud Cover	20	%		Cloud Height	High	<u></u> Med∏	Low
Precipitation	NONE			Visibility	High	∬ Med ☐	Low
Wind speed (Bea 6=Irg branches mo	ufort): 0=calm ove; 7=lrg tree	ı; 1=smoke e es move; 8=	drifts; 2=wind twigs break o	felt on face; 3=leav ff, hard to walk; 9=l	ves move; 4=sr ight structural c	n.branches move lamage; 10=trees	; 5=sm.trees move; uprooted
Species	Behaviour	Age	Sex	Length	Comme	nts (UTM, Photo	Numbers, Habitat)
NONE			***************************************		dimensional programme and to the stage of		
							·
							61
				-			

Snake Area	a Search	Survey	/	Location:	SNH-018	2	Project # <u>1756</u>			
Project Start time:	Nation 14:36	n Rise	End time:		Date:DD/ MM/YY /) <sup>L</sup> Observers E					
Weather		100000					-			
Air Temp.	<u></u>	.℃		Wind Speed _	Wind	d Direction	(from)			
Cloud Cover	20	.%		Cloud Height	High⊠	Med	Low			
Precipitation	Nor	10.		Visibility	High	Med	Low			
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted										
Species	Behaviour	Ago	Sex	Longth	Comments (	LITM Photo	o Numbers, Habitat)			
	Dellavioui	Age	Sex	Length	Comments (	OTIVI, FIIOR	o Numbers, Habitat)			
None observed					-					
				E1						
				_						
		į.								
			2							
=										

Snake Area	a Search	Survey	1	Location:	SUH-008	Project # <u>۱۶۵</u> 6
Project	Nation			15/26	Date:DD/ MM/YY 12/05	/17
Start time:	15:29		End time:	15:39	Observers JBB	
<b>Weather</b> Air Temp.	19	C		Wind Speed_	Wind Dir	ection <u>SW</u> (from)
Cloud Cover	45	%		Cloud Height	High	Med Low
Precipitation	NOW.		<u> </u>	Visibility	High⊠	Med Low
Wind speed (Bea 6=Irg branches mo	ufort): 0=calm ove; 7=lrg tree	; 1=smoke o s move; 8=t	drifts; 2=wind wigs break o	felt on face; 3=lea ff, hard to walk; 9=l	ves move; 4=sm.branch light structural damage;	es move; 5=sm.trees move; 10=trees uprooted
Species	Behaviour	Age	Sex	Length	Comments (UTM	Л, Photo Numbers, Habitat)
mie obseral						
=						confirmed on
						-2017 that
						ld be for
					SNH-C12	-LAK.
					Section .	2.2
1						

Snake Area	3 Search	Survey	/	Location:	: SNH-	-012	Project # 1756
Project	1538 End time:			1548	Date:DD/ MM/YY	16/05 TROB	1/17 NTP
Start time:	1770	#6	End time:	1310	Observers	UKUD	
<b>Weather</b> Air Temp.	20	<b>-</b>		Wind Speed_	4 v	Wind Direction	(from)
Cloud Cover	80 NON	_%		Cloud Height	High	Med_	Low
Precipitation	NON	NONE		Visibility	High	Med_	] Low
Wind speed (Beaufort): 0=calm; 1=smoke drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrg branches move; 7=lrg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted							
Species	Behaviour	Age	Sex	Length	Commer	nts (UTM, Phot	to Numbers, Habitat)
NON	E 0	Bsen	(61)				
						-	
	'						
	<u> </u>						