



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

Prepared for:  
DNV-GL  
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H1Y 3N1

Project No. 1756 | July 2017



**NATURAL RESOURCE SOLUTIONS INC.**

Aquatic, Terrestrial and Wetland Biologists

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

**Project Team:**

<b>Staff</b>	<b>Role</b>
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James Barber	Terrestrial and Wetland Biologist
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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



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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)
<b>Woodlands</b>				
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
<b>Wetlands</b>				
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 Wildlife Habitats</b>				
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
<b>Generalized Candidate Significant Wildlife Habitats</b>				
Waterfowl Stopover and Staging Areas (Terrestrial)	No	Yes	No	<b>Treated as Significant</b>
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	
Woodland Raptor Nesting Habitat	No	Yes	No	
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	

\*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**

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

Staff Name(s)	Purpose	Date	Start Time (hrs)	Duration (hrs)	Weather Conditions		
					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	-19- -17	1	0-20
Jeremy Bannon Ashley Cantwell	ELC/Wetland Assessments	January 31, 2017	0815	11	-23- -9	0-1	0-70
		February 1, 2017	0751	10.25	-13- -9	0-1	30-100
		February 2, 2017	0750	7.5	-15- -5	1-3	5-100
		February 3, 2017	1000	7.5	-8- -5	0-4	5-70
Jeremy Bannon Ashley Cantwell	ELC/Wetland Assessments	February 4, 2017	0800	5.25	-5- -10	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	-17- -13	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	-11- -9	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

Staff Name(s)	Purpose	Date	Start Time (hrs)	Duration (hrs)	Weather Conditions		
					Temp. (°C)	Beaufort Wind	Cloud Cover (%)
<b>James Barber</b>	Waterfowl Stopover and Staging Area Surveys	March 2, 2017	0825	6	-10	4	100
		March 8, 2017	0815	8.25	4-10	3-6	20
		March 21, 2017	0910	5.25	1-4	1	95-100
		March 29, 2017	0800	7	2-5	2	90-100
<b>Jeremy Bannon</b> Carlene Perkin	Reptile Hibernacula Surveys	April 26, 2017	1000	7	9-17	2-4	20-100
<b>James Barber</b> Jennifer McCarter	Reptile Hibernacula Surveys	April 27, 2017	1110	4	20-27	2-3	2-60
<b>Erin Bannon</b> <b>James Barber</b>	Reptile Hibernacula Surveys	May 3, 2017	1200	6	11-17	2-4	10-50
<b>Christy Humphrey</b>	Reptile Hibernacula Surveys	May 3, 2017	1705	0.5	17	3	10
<b>Erin Bannon</b> <b>James Barber</b>	Reptile Hibernacula Surveys	May 4, 2017	1125	3.5	15-17	1-2	20-40
<b>Erin Bannon</b> <b>Jeremy Bannon</b>	Reptile Hibernacula Surveys	May 11, 2017	1445	3.5	13-14	1-3	30-75
<b>Jeremy Bannon</b>	Reptile Hibernacula Surveys	May 11, 2017	1445	0.5	13	1	75
<b>Erin Bannon</b>	Reptile Hibernacula Surveys	May 12, 2017	0850	0.75	12	2	10
<b>Jeremy Bannon</b>	Reptile Hibernacula Surveys	May 12, 2017	0845	3.25	12-17	0-1	5-15
<b>Erin Bannon</b> <b>Jeremy Bannon</b>	Reptile Hibernacula Surveys	May 12, 2017	1500	2	17-19	0-3	15-45
<b>James Barber</b> Daniel Riley	Reptile Hibernacula Surveys	May 16, 2017	1530	0.5	20	4	80
<b>James Barber</b> Daniel Riley	Reptile Hibernacula Surveys	May 17, 2017	0815	8.5	18-31	2-7	5-40
<b>James Barber</b> Daniel Riley	Reptile Hibernacula Surveys	May 18, 2017	1020	8	25-31	4-8	10-15
<b>James Barber</b>	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
<b>Woodland Size Criteria</b>	
Woodland Cover	<ul style="list-style-type: none"> <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 Criteria</b>	
Woodland Interior	<ul style="list-style-type: none"> <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	<ul style="list-style-type: none"> <li>- 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.</li> </ul>
Linkages	<ul style="list-style-type: none"> <li>- 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.</li> </ul>
Water Protection	<ul style="list-style-type: none"> <li>- Woodlands 0.5ha or greater when woodland cover is 5-15%, or 2ha or greater when woodland cover is 16-30%, may be</li> </ul>

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 style="list-style-type: none"> <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>
Uncommon Characteristics Criteria	
Woodland Characteristics	<ul style="list-style-type: none"> <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 (MNR 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 (MNR 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>
<p>Waterfowl Stopover and Staging Area (Terrestrial)</p>	<p><b><u>Conducted</u></b>            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.</p> <p>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.</p> <p>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.</p> <p>All surveys were conducted from the roadside with a suitable vantage point of the habitat. 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 fields.</p> <p>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.</p> <p>The locations of each of the candidate significant habitats can be seen on Maps</p>	<p>Flooded areas with an annual mixed species aggregation concentration of 100 or more individuals of any of the following listed species:</p> <ul style="list-style-type: none"> <li>• American Black Duck</li> <li>• Wood Duck</li> <li>• Green-winged Teal</li> <li>• Blue-winged Teal</li> <li>• Mallard</li> <li>• Northern Pintail</li> <li>• Northern Shoveler</li> <li>• American Wigeon</li> <li>• Gadwall</li> </ul> <p>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.</p>

Seasonal Concentration Area	Evaluation Methods	Evaluation Criteria <sup>1</sup>
	<p>4-1 to 4-12 of the <i>Nation Rise Wind Farm Natural Heritage Site Investigation Report</i> (NRSI 2017).</p> <p>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.</p>	
<p>Waterfowl Stopover and Staging Area (Aquatic)</p>	<p><b>Conducted</b> 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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>The location of the candidate significant habitat WSA-001 can be seen on Maps 4-4 to 4-6 of the <i>Nation Rise Wind Farm Natural Heritage Site Investigation Report</i> (NRSI 2017).</p>	<p>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.</p> <ul style="list-style-type: none"> <li>• Canada Goose</li> <li>• Cackling Goose</li> <li>• Snow Goose</li> <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> <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> <li>• Red-breasted Merganser</li> <li>• Brant</li> <li>• Canvasback</li> </ul> <p>The combined area of the ELC Ecosites and a 100m radius area will be the SWH.</p>

Seasonal Concentration Area	Evaluation Methods	Evaluation Criteria <sup>1</sup>
	<p>The locations of the two survey locations (Point Counts A and B) are provided in the field notes in Appendix II).</p>	
<p>Raptor Wintering Area</p>	<p><b>Conducted</b>  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).</p> <p>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.</p> <p>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.</p> <p>The locations of monitoring sites and the candidate significant habitats can be seen in Appendix I.</p>	<p>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:</p> <ul style="list-style-type: none"> <li>• Rough-legged Hawk</li> <li>• Red-tailed Hawk</li> <li>• Northern Harrier</li> <li>• American Kestrel</li> <li>• Snowy Owl</li> <li>• Short-eared Owl (Special Concern)</li> <li>• Bald Eagle (Special Concern)</li> </ul> <p>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.</p>
<p>Bat Maternity Colony</p>	<p><b>Proposed</b>  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.</p>	<p>Maternity Colonies with confirmed use by:</p> <ul style="list-style-type: none"> <li>• &gt;10 Big Brown Bats, or</li> <li>• &gt;5 adult female Silver-haired Bats</li> </ul> <p>The area of the SWH will include the entire</p>

Seasonal Concentration Area	Evaluation Methods	Evaluation Criteria <sup>1</sup>
	<p>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.</p> <p>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 <i>Bats and Bat Habitats: Guidelines for Wind Power Projects</i> (OMNR 2011b). The locations of the candidate significant habitats can be seen on Maps 3-1 to 3-12.</p>	<p>woodland, the forest stand ELC Ecosite, or the forest stand ELC Eco-element containing the maternity colony(ies).</p>
Turtle Wintering Area	<p><b>Proposed</b> 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.</p> <p>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.</p>	<p>Presence of: ≥5 over-wintering Midland Painted Turtles; or ≥1 overwintering Northern Map Turtle or Snapping Turtle.</p> <p>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.</p>

Seasonal Concentration Area	Evaluation Methods	Evaluation Criteria <sup>1</sup>
	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.	
Reptile Hibernaculum	<p><b>Conducted</b> 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.</p> <p>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.</p> <p>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.</p>	<p>Presence of a snake hibernaculum used by ≥5 individuals of a single snake species or; individuals of ≥2 different snake species near a potential hibernacula:</p> <ul style="list-style-type: none"> <li>• Eastern Gartersnake</li> <li>• Northern Watersnake</li> <li>• Northern Red-bellied Snake</li> <li>• Northern Brownsnake</li> <li>• Smooth Green Snake</li> <li>• Northern Ring-necked Snake</li> <li>• Eastern Milksnake</li> <li>• Eastern Ribbonsnake</li> <li>• Five-lined Skink (Southern Shield population)</li> </ul> <p>The feature in which the hibernaculum is located plus a 30m buffer will be the SWH.</p>

<sup>1</sup> SWH Criteria Schedules for Ecoregion 6E (MNR 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 (MNR 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 (MNR 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	<p><b><u>Proposed</u></b>            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.</p>	<p>Field studies must identify four of the five Alvar Indicator Species (see below). The feature must not be dominated by exotic or introduced species (&lt;50% exotic vegetative cover), and must also be in excellent condition and fit in with surrounding landscape with few conflicting land uses.</p> <p>Alvar Indicator Species:</p> <ul style="list-style-type: none"> <li>• <i>Carex crawei</i></li> <li>• <i>Panicum philadelphicum</i></li> <li>• <i>Eleocharis compressa</i></li> <li>• <i>Scutellaria parvula</i></li> <li>• <i>Trichostema brachiatum</i></li> </ul>
Old-growth Forest	<p><b><u>Conducted</u></b>            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.</p>	<p>Dominant trees species within any of the following ecosites that are &gt;140 years old;</p> <ul style="list-style-type: none"> <li>• FOD</li> <li>• FOC</li> <li>• FOM</li> <li>• SWD</li> <li>• SWC</li> <li>• SWM</li> </ul> <p>The stand must have no evidence of forestry activities (i.e. does not contain cut stumps) to be considered SWH.</p> <p>The combined area of Forest Ecosites or an Eco-element within an Ecosite</p>

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	<p><b>Proposed</b>            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.</p>	<p>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 (&lt;50% exotic vegetative cover).</p> <p>Savannah Indicator Species:</p> <ul style="list-style-type: none"> <li>• Side-oats Grama</li> <li>• Dwarf Hackberry</li> <li>• Illinois Tick-trefoil</li> <li>• Smooth Small-leaved Tick-trefoil</li> <li>• White Prairie Gentian</li> <li>• Hairy Panic Grass</li> <li>• Ridged Panic Grass</li> </ul>
Tallgrass Prairie	<p><b>Proposed</b>            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.</p>	<p>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 (&lt;50% exotic vegetative cover).</p> <p>Prairie Indicator Species:</p> <ul style="list-style-type: none"> <li>• Side-oats Grama</li> <li>• Dwarf Hackberry</li> <li>• Illinois Tick-trefoil</li> <li>• Smooth Small-leaved Tick-trefoil</li> <li>• White Prairie Gentian</li> <li>• Hairy Panic Grass</li> <li>• Ridged Panic Grass</li> </ul>
Amphibian Breeding Habitat (Woodland)	<p>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</p>	<p>Woodland community with presence of breeding population of <math>\geq 1</math> of the following newt/salamander species or <math>\geq 2</math> of the following frog species with <math>\geq 20</math> individuals (adults or egg masses), or <math>\geq 2</math> of the following frog species with Call Level Codes of 3:</p> <ul style="list-style-type: none"> <li>• Eastern Newt</li> </ul>

Rare Vegetation Communities and Specialized Wildlife Habitats	Evaluation Methods	Evaluation Criteria <sup>1</sup>
	<p>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.</p> <p>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.</p> <p>An additional 18 habitats (AWO-001, AWO-004, AWO-006, AWO-007, AWO-008, AWO-010, AWO-011, AWO-012, AWO-013, AWO-0014, AWO-015, AWO-016, AWO-017, AWO-019, 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 pre-construction surveys have been proposed below.</p> <p><b><u>Proposed</u></b>  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.</p>	<ul style="list-style-type: none"> <li>• Blue-spotted Salamander</li> <li>• Spotted Salamander</li> <li>• Gray Treefrog</li> <li>• Spring Peeper</li> <li>• Western Chorus Frog</li> <li>• Wood Frog</li> </ul> <p>The SWH will be the wetland area plus a 230m radius of woodland area.</p> <p>If a wetland area is adjacent to a woodland (i.e. &lt;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.</p> <p>If Bullfrog (<i>Lithobates catesbeiana</i>) 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).</p>

Rare Vegetation Communities and Specialized Wildlife Habitats	Evaluation Methods	Evaluation Criteria <sup>1</sup>
	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	

<sup>1</sup> SWH Criteria Schedules for Ecoregion 6E (MNR 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	<p><b>Proposed</b>            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 <i>Birds and Bird Habitats: Guidelines for Wind Power Projects</i> (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.</p> <p>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.</p>	<p>Presence of nesting or breeding of <math>\geq 2</math> of the below listed species or 1 or more breeding Short-eared Owls<sup>1</sup>.</p> <ul style="list-style-type: none"> <li>• Upland Sandpiper</li> <li>• Grasshopper Sparrow</li> <li>• Vesper Sparrow</li> <li>• Northern Harrier</li> <li>• Savannah Sparrow</li> <li>• Short-eared Owl</li> </ul>

Species of Conservation Concern	Evaluation Methods	Evaluation Criteria
<b>Birds</b>		
Common Nighthawk ( <i>Chordeiles minor</i> )	<p><b>Proposed</b></p> <p>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:</p> <ul style="list-style-type: none"> <li>• At least 50% of the visible moon surface is illuminated, i.e. between 1<sup>st</sup> quarter and last quarter moon phases.</li> <li>• Little or no cloud-cover so that the moon is visible.</li> <li>• Calm or light winds, up to 3 on the Beaufort scale.</li> <li>• No precipitation.</li> <li>• Temperatures above 10°C.</li> </ul> <p>Surveys will begin at sunset and finish no later than 90 minutes after sunset.</p> <p>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.</p>	Probable or confirmed evidence of this species breeding within the habitat will confirm significance.
Eastern Wood-Pewee ( <i>Contopus virens</i> )	<p>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.</p> <p>An additional 17 candidate habitats (EAWP-001, EAWP-002, EAWP-003, EAWP-004, EAWP-005, EAWP-006, EAWP-007, EAWP-008, 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.</p>	Probable or confirmed evidence of this species breeding within the habitat will confirm significance.

Species of Conservation Concern	Evaluation Methods	Evaluation Criteria
	<p><b>Proposed</b>  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.</p> <p>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.</p> <p>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.</p> <p>Days with high wind speeds and rain will be avoided. During each visit, the highest observed breeding evidence will be recorded for each species.</p> <p>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.</p>	
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
	<p>An additional 4 candidate habitats (WOTH-001, WOTH-002, WOTH-004 and WOTH-005) will be surveyed following the methods outlined below.</p> <p><b>Proposed</b>  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.</p> <p>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.</p> <p>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.</p> <p>Days with high wind speeds and rain will be avoided. During each visit, the highest observed breeding evidence will be recorded for each species.</p> <p>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.</p>	
<b>Vegetation</b>		

Species of Conservation Concern	Evaluation Methods	Evaluation Criteria
<p>Mühlenberg's Weissia (<i>Weissia muhlenbergiana</i>)</p>	<p>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.</p> <p>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.</p> <p><b>Proposed</b></p> <p>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.</p> <p>The locations of each of the candidate significant habitats can be seen on Maps 5-1 to 5-12.</p>	<p>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.</p>
<b>Butterflies</b>		
<p>Monarch (<i>Danaus plexippus</i>)</p>	<p>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</p>	<p>Presence of this species within the habitat identified will confirm significance.</p>

Species of Conservation Concern	Evaluation Methods	Evaluation Criteria
	<p>below.</p> <p><b>Proposed</b> 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.</p> <p>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.</p> <p>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.</p> <p>If, on the first site visit, host species (<i>Asclepias</i> spp.) are not found, the habitat will be confirmed to be not significant.</p> <p>The locations of each of the candidate significant habitats can be seen on Maps 5-1 to 5-12.</p>	

<sup>1</sup> SWH Criteria Schedules for Ecoregion 6E (MNR 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>
Amphibian Movement Corridors	<p>Significant Amphibian Breeding Habitat (Wetland) is to be examined for amphibian movement corridors.</p> <p>If Bullfrog is identified during evaluation of significance surveys in a candidate Amphibian Breeding Habitat (Woodland) containing permanent water with abundant emergent vegetation, amphibian movement corridors will also be considered for these habitats.</p>	<p>Corridors should consist of native vegetation, with several layers of vegetation.</p> <p>Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant.</p> <p>Corridors should be at least 200m wide with gaps &lt;20m and, if following riparian areas, with at least 15m of vegetation on both sides of waterway.</p> <p>Shorter corridors are more significant than longer corridors; however, amphibians must be able to get to and from their summer and breeding habitat.</p>

<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**

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
WOD-001 <sub>1</sub> 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 <u>Inclusions*</u> 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 ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
		Inclusions* FOCM4-1 FODM7 FODM11												
WOD-006 <sub>1</sub> 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-007 <sub>2</sub> 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

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
WOD-009 <sub>2</sub> Woodland	29.97	SWDR1 FODM7-1 FODM11 SWCM1-1 FOMM7  <u>Inclusions*</u> FOCM4-7 FODM7-7 SWDM4-5	WT – 47 (T4) AR – >0.1 <sup>1</sup> 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-010 <sub>3</sub> Woodland	8.59	FODM5-8  <u>Inclusion*</u> 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  <u>Inclusion*</u> 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

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
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

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
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

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
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 <u>Inclusion*</u> 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

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
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  <u>Inclusion*</u> SWDM2-2	WT – 17 (T27) 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	2-7	Yes
WOD-032 <sub>3</sub> Woodland	1.56	FODM7-2 SWDM3-4  <u>Inclusion*</u> 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

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
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  <u>Inclusion*</u> SWDR1	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

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
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

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)	
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity						
		SWM SWC SWD SWCM1-1 SWDM2-2  <u>Inclusion*</u> 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	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  <u>Inclusion*</u>	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	

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
		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

Feature ID	Size (ha)	Composition	Distance to Project Location (m)	Woodland Size (>20ha, Y/N)	Ecological Functions (Y/N)					Woodland Width (>60m, Y/N)	Uncommon Characteristics (Y/N)	Significant (Y/N)	Map(s)	EIS Required (Y/N)
					Interior	Proximity to Other Significant Woodlands or Habitats	Linkages	Water Protection	Woodland Diversity					
			SI – >120											
WOD-055 <sub>3</sub> Woodland	16.27	FOMM5-2 FOCM2-2 SWDM4-5 SWDM2-2  <u>Inclusion*</u> 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

\* 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	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Palustrine</u></li> <li>Vegetation Communities: S1 <u>h</u> S2 <u>ts</u></li> <li>Proximity to other Wetlands: 380m from WET-002 (swamp), not hydrologically connected</li> <li>Interspersion: estimated to be very low; simple community shape, 2 communities</li> <li>Open Water: absent</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: High – no upstream detention areas, wetland is ~10% of its catchment basin</li> <li>Water Quality Improvement: Moderate - palustrine with inflow; &gt;50% agricultural basin; dominated by shrubs; swamp with &lt;50% coverage of organic soils; no indication of groundwater discharge</li> <li>Shoreline Erosion Control: None</li> <li>Groundwater Recharge: High - Palustrine with loam soils</li> </ul>	<ul style="list-style-type: none"> <li>None known</li> </ul>	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 <sup>+</sup> , bedrock)  100% Isolated	WT – 10 (T2) AR – 3 CL – 3 CA – 3 SI – >120	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Isolated</u></li> <li>Vegetation Communities: S1 <u>c</u></li> <li>Proximity to other Wetlands: 380m from WET-001 (swamp), not hydrologically connected</li> <li>Interspersion: estimated to be very low; simple</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: High – no upstream detention areas, wetland is ~30% of its catchment basin</li> <li>Water Quality Improvement: Low - isolated; &gt;50% agricultural basin; dominated by trees; swamp with &lt;50% coverage of organic soils; no indication of groundwater discharge</li> <li>Shoreline Erosion</li> </ul>	<ul style="list-style-type: none"> <li>None known</li> </ul>	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: <u>Swamp</u> , Marsh • Site Type: <u>Palustrine</u> , Isolated • Vegetation Communities: S1 <u>h</u> S2 <u>c</u> M1 <u>ne</u> S3 <u>ts</u> S4 <u>h</u> , ts S5 <u>c</u> , ts S6 <u>h</u> , c S7 <u>h</u> , ts, ls • 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%)	• Flood 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 <u>c</u> S2 <u>ts</u> , 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	<ul style="list-style-type: none"> <li>Water Quality Improvement: Moderate - largely palustrine with inflow; &gt;50% agricultural basin; dominated by trees; swamp with &lt;50% coverage of organic soils; no indication of groundwater discharge</li> <li>Shoreline Erosion Control: None</li> <li>Groundwater Recharge: High - Palustrine and Isolated with shallow loam and clay soils over bedrock</li> </ul>				
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 <sup>†</sup> )  100% Palustrine	WT – >120 AR – 79 CL – 67 CA – 67 SI – >120	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Palustrine</u></li> <li>Vegetation Communities: S1 <u>h</u>, <u>ts</u> S2 <u>c</u>, <u>h</u> S3 <u>h</u>, <u>ne</u></li> <li>Proximity to other Wetlands: 180m from unidentified wetland (appears to be swamp), not hydrologically connected</li> <li>Interspersion: estimated to be low to moderate; only 2</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: Moderate to High – one small other wetland upstream (west of Smirle Road), wetland is ~10% of its catchment basin</li> <li>Water Quality Improvement: Moderate - largely palustrine with inflow; &gt;50% agricultural basin; dominated by trees; swamp with &lt;50% coverage of organic soils; no indication of groundwater discharge</li> <li>Shoreline Erosion</li> </ul>	<ul style="list-style-type: none"> <li>Fish Habitat: 0.08ha of low marsh (ponds)</li> </ul>	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: <u>Swamp</u> • Site Type: <u>Palustrine</u> • Vegetation Communities: S1 <u>h</u> , 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	Control: None • 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: <u>Swamp</u> • Site Type: <u>Palustrine</u> • Vegetation Communities: S1 <u>c</u> S2 <u>h</u> S3 <u>h</u> , ls S4 <u>c</u> , 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 <sup>+</sup> )  95% Palustrine 5% Isolated	WT – 5 (T11) AR – 3 CL – 3 CA – 3 SI – >120	• Wetland Type: <u>Swamp</u> • Site Type: <u>Palustrine</u> , Isolated • Vegetation Communities: S1 <u>h</u> S2 <u>ts</u> S3 <u>c</u> S4 <u>h, c</u> S5 <u>h, ls, ts</u> S6 <u>h, ts, gc, ne</u> • 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*) 100% Riverine	WT – >120 AR – >120 CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Riverine</u></li> <li>Vegetation Communities: S1 <u>h</u>, <u>ts</u></li> <li>Proximity to other Wetlands: 955m from WET-014 (swamp), hydrologically connected</li> <li>Interspersion: estimated to be low to moderate; 2 communities, relatively linear shapes but complex boundaries</li> <li>Open Water: Type 2 (9%)</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: Low – WET-014, WET-015, WET-018, WET-019, WET-020, Hosaic Creek PSW are upstream, wetland is &lt;1% of its catchment basin</li> <li>Water Quality Improvement: Moderate - riverine; &gt;50% agricultural basin; dominated by deciduous trees; swamp with &lt;50% coverage of organic soils; no indication of groundwater discharge</li> <li>Shoreline Erosion Control: High – trees/shrubs on banks</li> <li>Groundwater Recharge: Low - Riverine with variable soils</li> </ul>	<ul style="list-style-type: none"> <li>Fish Habitat: 1.39ha of permanently flooded swamp; ~9.5ha of seasonally flooded swamp.</li> </ul>	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	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Palustrine</u></li> <li>Vegetation Communities: S1 <u>h</u>, <u>dh</u></li> <li>Proximity to other Wetlands: 620m from WET-010 (swamp), not hydrologically connected</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: Low to Moderate - no upstream detention areas, wetland is ~3% of its catchment basin</li> <li>Water Quality Improvement: Moderate - palustrine with inflow; &gt;50% agricultural basin; dominated by trees; swamp with &lt;50% coverage of organic</li> </ul>	<ul style="list-style-type: none"> <li>None known</li> </ul>	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		<ul style="list-style-type: none"> <li>Interspersion: estimated to be very low; 1 community, linear shape</li> <li>Open Water: absent</li> </ul>	<ul style="list-style-type: none"> <li>soils; no indication of groundwater discharge</li> <li>Shoreline Erosion Control: None</li> <li>Groundwater Recharge: High - Palustrine with loam soils</li> </ul>				
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	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Isolated</u></li> <li>Vegetation Communities: S1 <u>h</u>, ts, gc</li> <li>Proximity to other Wetlands: 1250m to unidentified wetlands to WET-011 (swamp), not hydrologically connected</li> <li>Interspersion: estimated to be very low; 1 community, simple shape</li> <li>Open Water: absent</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: High – no upstream detention areas, wetland is ~25% of its catchment basin</li> <li>Water Quality Improvement: Low - isolated; 30-50% agricultural basin; dominated by trees; swamp with &lt;50% coverage of organic soils; no indication of groundwater discharge</li> <li>Shoreline Erosion Control: None</li> <li>Groundwater Recharge: High - Isolated with loam soils</li> </ul>	<ul style="list-style-type: none"> <li>None known</li> </ul>	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	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Palustrine</u></li> <li>Vegetation Communities: S1 <u>h</u>, S2 <u>c</u>, S3 <u>h</u>, gc, S4 <u>h</u>, c</li> <li>Proximity to other</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: Low – large headwater wetlands upstream (north and south of County Road 9), wetland is ~3% of its catchment basin</li> <li>Water Quality Improvement: Low to Moderate - largely palustrine with</li> </ul>	<ul style="list-style-type: none"> <li>Fish Habitat: 0.12ha of permanently flooded swamp (creek); ~1.6ha of seasonally flooded swamp</li> </ul>	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 <ul style="list-style-type: none"> <li>Interspersion: estimate to be moderate; 7 communities, some complex arrangement</li> <li>Open Water: Type 1 (&lt;1%)</li> </ul>	inflows; >50% treed/vegetated basin; dominated by trees; swamp with <50% coverage of organic soils; no indication of groundwater discharge <ul style="list-style-type: none"> <li>Shoreline Erosion Control: None</li> <li>Groundwater Recharge: High - Palustrine with, sand, sandy loam, and clay soils</li> </ul>				
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	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Riverine</u></li> <li>Vegetation Communities: S1 <u>h</u>, ne</li> <li>Proximity to other Wetlands: 955m from WET-014 (swamp), hydrologically connected</li> <li>Interspersion: estimated to be very low; 1 community, relatively linear shape</li> <li>Open Water: Type 2 (10%)</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: Low – WET-015, WET-018, WET-019, WET-020, Hosaic Creek PSW are upstream, wetland is &lt;1% of its catchment basin</li> <li>Water Quality Improvement: Moderate - riverine; &gt;50% agricultural basin; dominated by deciduous trees; swamp with &lt;50% coverage of organic soils; no indication of groundwater discharge</li> <li>Shoreline Erosion Control: Moderate – narrow-leaved emergents dominate banks</li> <li>Groundwater Recharge:</li> </ul>	<ul style="list-style-type: none"> <li>Fish Habitat: 0.39ha of tallgrass low marsh (creek); ~3.4ha of seasonally flooded swamp</li> </ul>	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	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Isolated</u></li> <li>Vegetation Communities: S1 <u>c</u>, h</li> <li>Proximity to other Wetlands: 850m to unidentified wetlands to the northeast (appears to be swamp), not hydrologically connected</li> <li>Interspersion: estimated to be very low; 1 community, simple shape</li> <li>Open Water: Type 1 (2%)</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: High – no upstream detention areas, wetland is ~25% of its catchment basin</li> <li>Water Quality Improvement: Low - isolated; &gt;50% agricultural basin; dominated by trees; swamp with &lt;50% coverage of organic soils; no indication of groundwater discharge</li> <li>Shoreline Erosion Control: None</li> <li>Groundwater Recharge: High - Isolated with clay soils</li> </ul>	<ul style="list-style-type: none"> <li>Fish Habitat: 0.04ha of low marsh (pond)</li> </ul>	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 <sup>+</sup> )	WT – 5 AR – >0.1 <sup>1</sup> CL – >0.1 <sup>1</sup> CA – >0.1 <sup>1</sup> SI – >120	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Palustrine</u></li> <li>Vegetation Communities: S1 <u>h</u>, S2 <u>c</u>, h, S3 <u>ts</u>, ne</li> <li>Proximity to other Wetlands: 105m to unidentified wetlands to the west (appears to be</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: High – no upstream detention areas, wetland is ~25% of its catchment basin</li> <li>Water Quality Improvement: Low to Moderate - largely palustrine with inflow; &gt;50% treed/vegetated basin; swamp with &lt;50% coverage of organic</li> </ul>	<ul style="list-style-type: none"> <li>None known</li> </ul>	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 <ul style="list-style-type: none"> <li>Interspersion: estimated to be low; 3 wetland units, relatively simple shapes</li> <li>Open Water: absent</li> </ul>	soils; no indication of groundwater discharge <ul style="list-style-type: none"> <li>Shoreline Erosion Control: None</li> <li>Groundwater Recharge: High - Palustrine with loam soils</li> </ul>				
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	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u>, Marsh</li> <li>Site Type: <u>Palustrine</u>, Isolated, Riverine</li> <li>Vegetation Communities: S1 <u>c</u>, S2 <u>h</u>, M1 <u>ne</u>, S3 <u>h</u>, ne, S4 <u>h</u>, ts, S5 <u>h</u>, c, S6 <u>c</u>, h</li> <li>Proximity to other Wetlands: 145m to WET-016 (swamp), not hydrologically connected</li> <li>Interspersion: estimated to be moderate to high; 14 communities in 4 wetland units, complex boundaries</li> <li>Open Water: absent</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: High – one small wetland upstream (north of Casselman Road), wetland is ~20% 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 discharge</li> <li>Shoreline Erosion Control: High – trees/shrubs on banks</li> <li>Groundwater Recharge: High - largely Palustrine and Isolated with loam soils</li> </ul>	<ul style="list-style-type: none"> <li>None known</li> </ul>	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	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Palustrine</u></li> <li>Vegetation Communities: S1 <u>h</u> S2 <u>c</u> S3 <u>h, c</u> S4 <u>c, h</u></li> <li>Proximity to other Wetlands: 105m to WET-019 (swamp), not hydrologically connected</li> <li>Interspersion: estimated to be low; 3 wetland units, relatively simple shapes</li> <li>Open Water: absent</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: High – no upstream detention areas, wetland is ~10% of its catchment basin</li> <li>Water Quality Improvement: Low to Moderate - largely palustrine with no inflow or isolated; &gt;50% agricultural basin; dominated by trees; swamp with &lt;50% coverage of organic soils; no indication of groundwater discharge</li> <li>Shoreline Erosion Control: None</li> <li>Groundwater Recharge: High - Palustrine with loam and clay soils</li> </ul>	<ul style="list-style-type: none"> <li>None known</li> </ul>	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 style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Riverine, Palustrine</u></li> <li>Vegetation Communities: S1 <u>h</u> S2 <u>h, ls</u> S3 <u>h, ts</u> S4 <u>h, gc</u> S5 <u>h, c</u> S6 <u>ts, gc</u> S7 <u>ts, m</u> S8 <u>h, ts, gc</u> S9 <u>h, ts, ne</u> S10 <u>h, ts, gc, ne</u></li> </ul>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Fish Habitat: 0.58ha of permanently flooded swamp (creek)</li> </ul>	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		<ul style="list-style-type: none"> <li>Proximity to other Wetlands: 105m to WET-020 (swamp), hydrologically connected</li> <li>Interspersion: estimated to be moderate to high; 12 communities in 6 wetland units, complex boundaries</li> <li>Open Water: Type 1 (1%)</li> </ul>	<ul style="list-style-type: none"> <li>discharge</li> <li>Shoreline Erosion Control: Moderate to High – primarily trees/shrubs on banks; also narrow-leaved emergents and unvegetated (dredged) in sections</li> <li>Groundwater Recharge: Moderate; 66% Riverine, 34% Palustrine, with sand, loam, and clay soils</li> </ul>				
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 <sup>+</sup> )  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	<ul style="list-style-type: none"> <li>Wetland Type: <u>Swamp</u></li> <li>Site Type: <u>Palustrine</u>, Riverine, Isolated</li> <li>Vegetation Communities: S1 <u>h</u> S2 <u>c</u> S3 <u>h</u>, gc S4 <u>h</u>, ts S5 <u>ts</u>, gc, m S6 <u>ls</u>, ne, m S7 <u>h</u>, ls, m S8 <u>ts</u>, gc, ne, m</li> <li>Proximity to other Wetlands: 105m to WET-019 (swamp), hydrologically connected</li> <li>Interspersion: estimated to be moderate to high; 13</li> </ul>	<ul style="list-style-type: none"> <li>Flood Attenuation: Low – other unidentified wetlands and a small pond (north of Hunters Road) are 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 discharge</li> <li>Shoreline Erosion Control: High – trees/shrubs on banks</li> </ul>	<ul style="list-style-type: none"> <li>Fish Habitat: 0.31ha of permanently flooded swamp (creek)</li> </ul>	Treat as Significant	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)
				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 evaluate 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 pre-construction 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 pre-construction 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 pre-construction 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-001 <sub>1</sub> 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-005 <sub>1</sub> 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-010 <sub>1</sub> 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-027 <sub>1</sub> 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 <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-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-001 <sub>1</sub> 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	<b>3-4</b> <b>3-5</b> <b>3-6</b>	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 <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

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-002 <sub>1</sub> 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-001 <sub>3</sub>	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-006 <sub>1</sub> 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-of-way, 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-008 <sub>3</sub> 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. FOCM2-2					
ALV-002 <sub>3</sub> Alvar	2.70	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-001 <sub>3</sub> Old Growth Forest	2.31	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	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-001 <sub>3</sub> Tallgrass Prairie	1.35	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-002 <sub>1</sub> Tallgrass Prairie	3.89	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-010 <sub>1</sub> 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 <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	4-11 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	To be confirmed through pre-construction surveys.  See Table 6 for survey methods.	Treated as Significant	5-5 5-6	Yes
CONI-005 <sub>3</sub> Common Nighthawk Habitat	28.65	MEFR1 MEGR1  May be used for breeding, nesting or foraging habitat.	WT – 17 (T27) 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 6 for survey methods.	Treated as Significant	5-7	Yes
CONI-006 <sub>3</sub> 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-009 <sub>3</sub> 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	<b>5-2</b>	
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	<b>5-1</b> <b>5-2</b>	<b>Yes</b>
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	<b>5-4</b>	<b>Yes</b>
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	<b>5-4</b>	<b>Yes</b>
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	<b>5-4</b>	<b>Yes</b>
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	<b>5-5</b> <b>5-6</b>	<b>Yes</b>
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	<b>5-5</b> <b>5-6</b> <b>5-8</b> <b>5-9</b>	<b>Yes</b>
EAWP-009 <sub>3</sub>	15.64	FODR1-1	WT – 28 (T27)	To be confirmed through pre-	Treated as	<b>5-7</b>	<b>Yes</b>

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  May be used for breeding, nesting or foraging habitat.	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	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 FODM7-2 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-003 <sub>1</sub> 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-002 <sub>3</sub> 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-004 <sub>3</sub> 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-006 <sub>1</sub> 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-007 <sub>3</sub> 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-009 <sub>3</sub> 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-010 <sub>1</sub> 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 <sup>1</sup> 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)
<b>Woodlands</b>			
WOD-001	Yes	Yes	No
WOD-002	Yes	Yes	<b>Yes</b>
WOD-003	Yes	Yes	No
WOD-004	Yes	Yes	<b>Yes</b>
WOD-005	Yes	Yes	<b>Yes</b>
WOD-006	Yes	Yes	<b>Yes</b>
WOD-007	Yes	Yes	<b>Yes</b>
WOD-008	Yes	Yes	No
WOD-009	Yes	Yes	<b>Yes</b>
WOD-010	Yes	Yes	<b>Yes</b>
WOD-011	Yes	Yes	<b>Yes</b>
WOD-012	Yes	Yes	<b>Yes</b>
WOD-013	Yes	Yes	<b>Yes</b>
WOD-014	Yes	Yes	<b>Yes</b>
WOD-015	Yes	Yes	<b>Yes</b>
WOD-016	Yes	Yes	No
WOD-017	Yes	Yes	<b>Yes</b>

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	<b>Yes</b>
WOD-021	Yes	Yes	<b>Yes</b>
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	<b>Yes</b>
WOD-032	Yes	Yes	No
WOD-033	Yes	Yes	No
WOD-034	Yes	Yes	No
WOD-035	Yes	Yes	<b>Yes</b>
WOD-036	Yes	Yes	No
WOD-037	Yes	Yes	<b>Yes</b>
WOD-038	Yes	Yes	<b>Yes</b>
WOD-039	Yes	Yes	<b>Yes</b>
WOD-040	Yes	Yes	No
WOD-041	Yes	Yes	No
WOD-042	Yes	Yes	<b>Yes</b>
WOD-043	Yes	Yes	<b>Yes</b>
WOD-044	Yes	Yes	<b>Yes</b>
WOD-045	Yes	Yes	No
WOD-046	Yes	Yes	<b>Yes</b>
WOD-047	Yes	Yes	<b>Yes</b>
WOD-048	Yes	Yes	<b>Yes</b>
WOD-049	Yes	Yes	<b>Yes</b>
WOD-050	Yes	Yes	No
WOD-051	Yes	Yes	<b>Yes</b>
WOD-052	Yes	Yes	No
WOD-053	Yes	Yes	<b>Yes</b>
WOD-054	Yes	Yes	<b>Yes</b>
WOD-055	Yes	Yes	<b>Yes</b>
<b>Wetlands</b>			
WET-001	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-002	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>

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	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-004	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-005	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-006	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-007	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-008	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-009	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-011	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-012	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-013	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-014	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-015	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-016	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-017	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-018	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>
WET-019	Yes	Yes	<b>Yes (Treated as Significant)<sup>1</sup></b>

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	<b>Yes (Treated as Significant)<sup>1</sup></b>
<b>Candidate Significant Wildlife Habitats</b>			
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	<b>Yes</b>
RWA-001	Yes	Yes	No
RWA-002	Yes	Yes	No
BMA-001	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>
BMA-002	Yes	Yes	<b>Yes (Treated as Significant)<sup>3</sup></b>
BMA-003	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>

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	<b>Yes (Treated as Significant)<sup>2</sup></b>
SNH-001	Yes	Yes	No
SNH-002	Yes	Yes	No
SNH-003	Yes	Yes	No
SNH-005	Yes	Yes	No
SNH-006	Yes	Yes	<b>Yes (Treated as Significant)<sup>3</sup></b>
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	<b>Yes (Treated as Significant)<sup>2</sup></b>
ALV-002	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>
OGF-001	Yes	Yes	<b>Yes (Treated as Significant)<sup>4</sup></b>
SAV-001	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>
TGP-001	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>
TGP-002	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>
AWO-001	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>
AWO-002	Yes	Yes	<b>Yes (Treated as Significant)<sup>5</sup></b>
AWO-003	Yes	Yes	<b>Yes (Treated as Significant)<sup>5</sup></b>
AWO-004	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>
AWO-005	Yes	Yes	<b>Yes (Treated as Significant)<sup>5</sup></b>

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	<b>Yes (Treated as Significant)<sup>2</sup></b>
MONA-005	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>
MONA-006	Yes	Yes	<b>Yes (Treated as Significant)<sup>2</sup></b>
<b>Generalized Significant Wildlife Habitats</b>			
Waterfowl Stopover and Staging Areas (Terrestrial)	Yes	No	<b>Yes (Treated as Significant)</b>
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	
Seeps and Springs	Yes	No	
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	

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

**Superscripts:**

1: 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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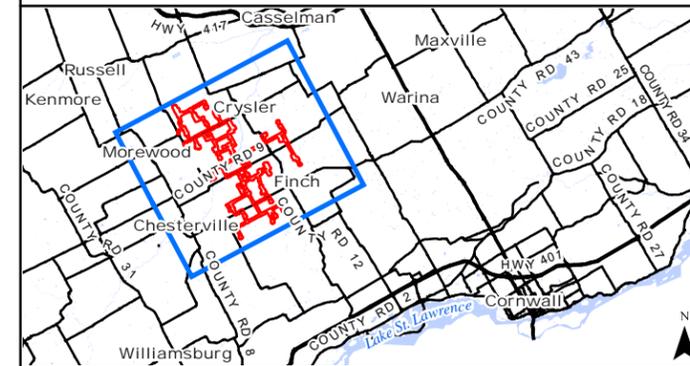
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**Map 1**  
**Key Map**

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# Nation Rise Wind Farm Key Map

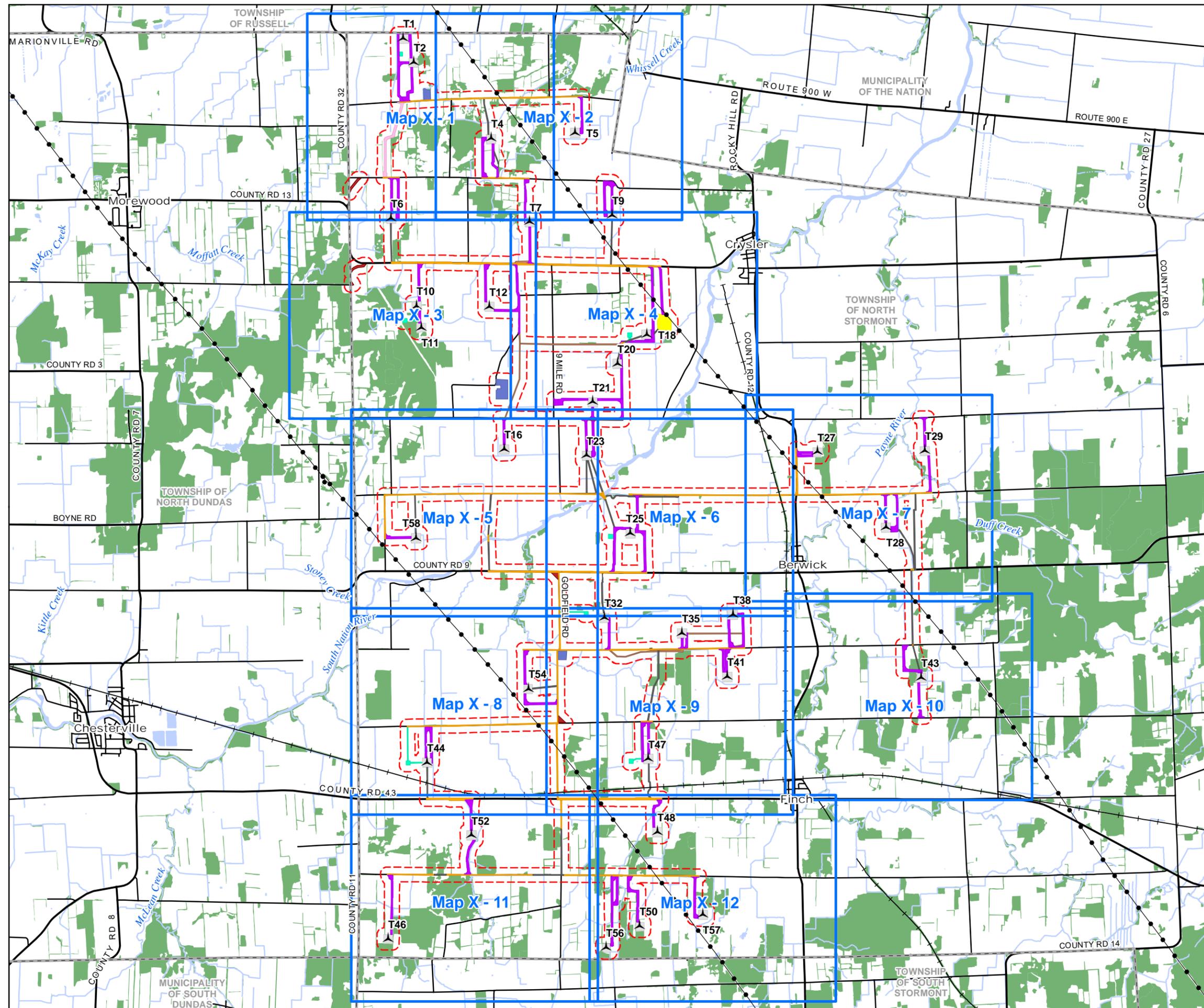
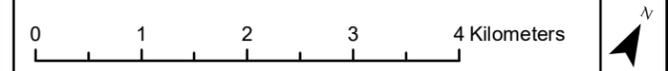


- Legend**
- Map Extent
  - Utility Line
  - Railway
  - Primary Road
  - Secondary Road
  - Permanent Watercourse (LIO)
  - Intermittent Watercourse (LIO)
  - Open Water (LIO)
  - Wooded Area (LIO)
  - Municipal Boundary
- Project Components**
- Project Area
  - Proposed Turbine
  - Proposed Access Road and Collection System
  - Proposed Above/Underground Collection System
  - Proposed Underground Collection System
  - Proposed Turbine Laydown, Access Road, Collection Line
  - Proposed Laydown Area
  - Proposed Temporary Turning Radius
  - Proposed Temporary Access Road for Construction
  - Proposed Crane Path
  - Proposed Meteorological Tower Footprint and Access Road
  - Proposed Substation



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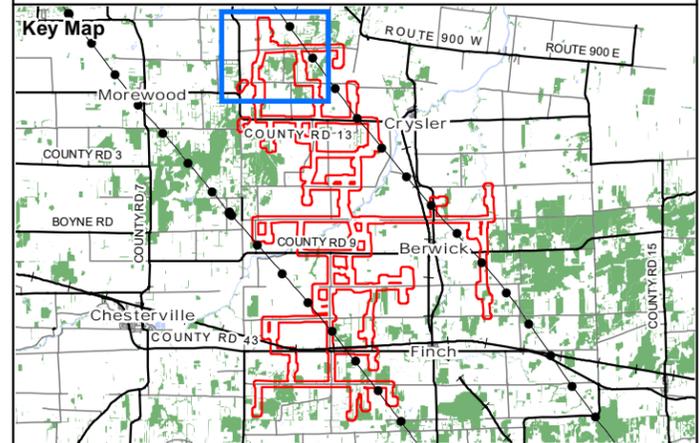
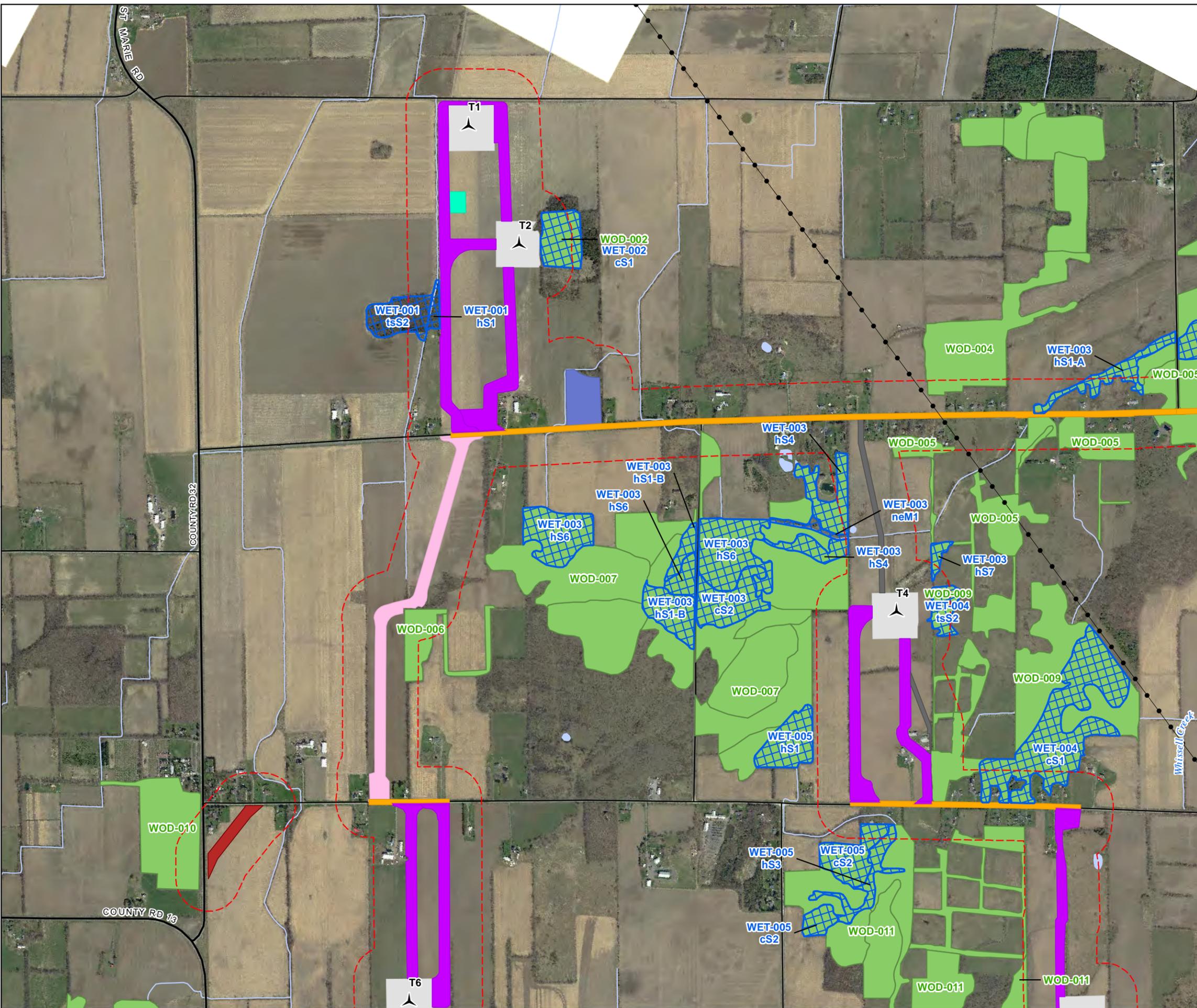
Project: 1756 Date: April 6, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:68,000
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**Maps 2-1 to 2-12**  
**Significant Woodlands and Wetlands**

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# Nation Rise Wind Farm Significant Woodlands and Wetlands



**Legend**

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

**Significant Natural Features**

- Woodland (WOD)
- Wetland (WET)

**Treated as Significant Natural Features\***

- Wetland (WET)

**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 Area
- Proposed Temporary Turning Radius
- Proposed Temporary Access Road for Construction
- Proposed Meteorological Tower Footprint and Access Road

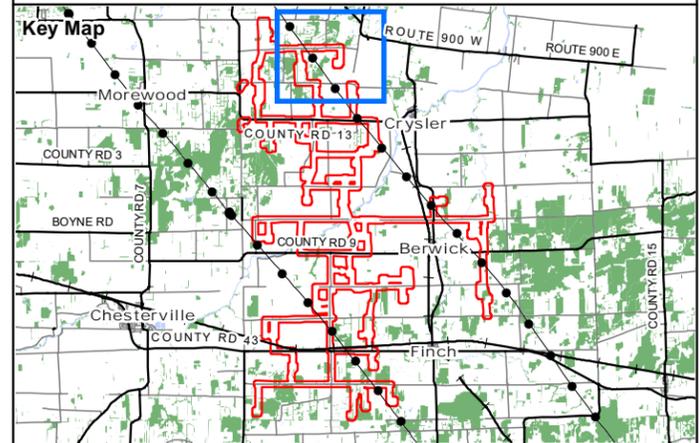
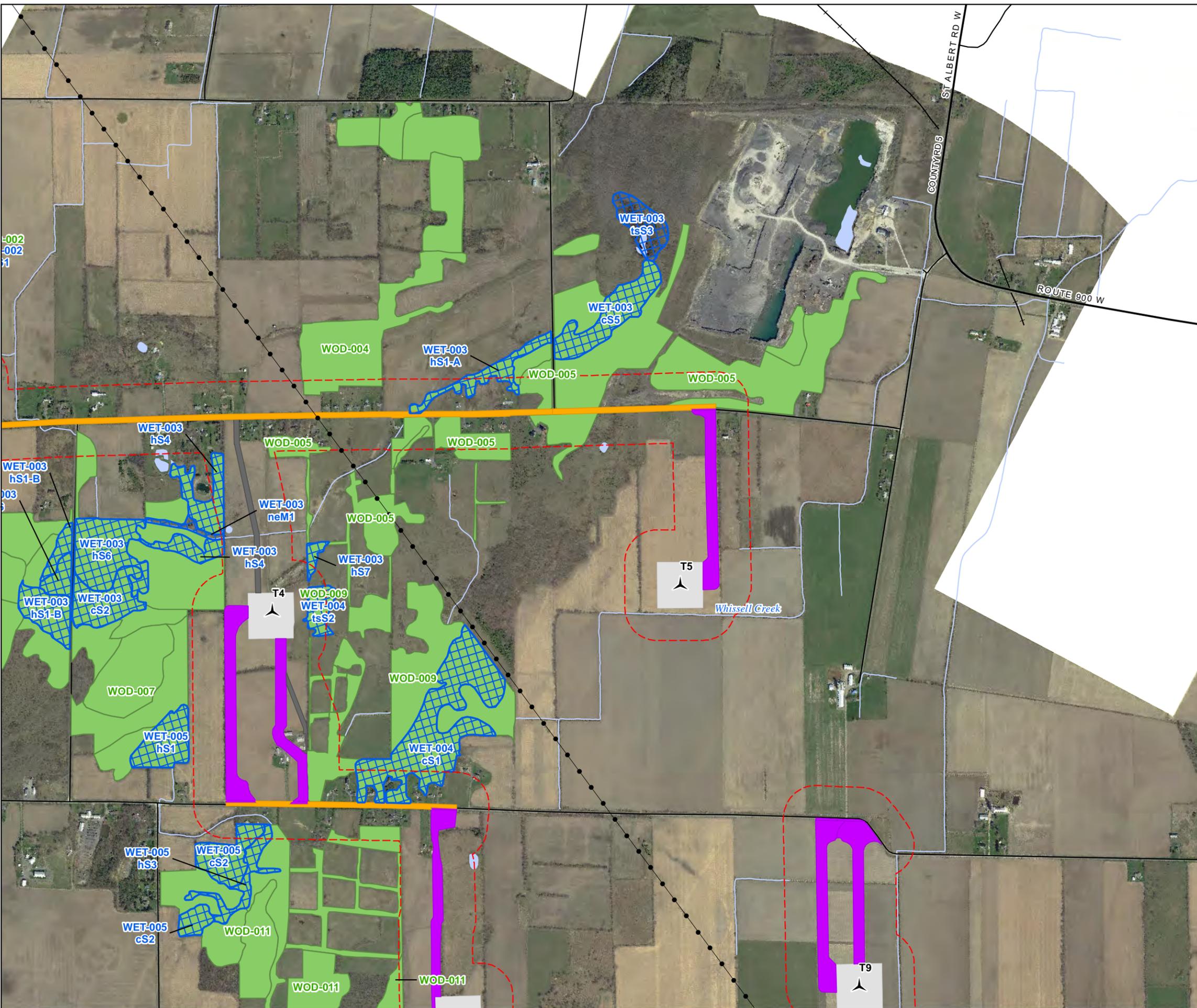
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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm Significant Woodlands and Wetlands



**Legend**

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

**Significant Natural Features**

- Woodland (WOD)

**Treated as Significant Natural Features\***

- Wetland (WET)

**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

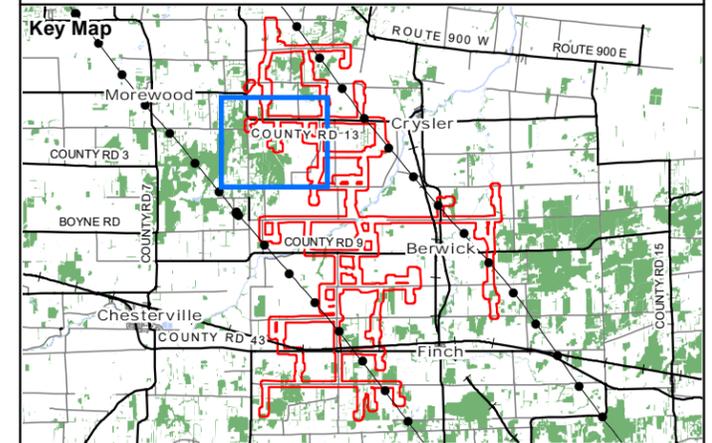
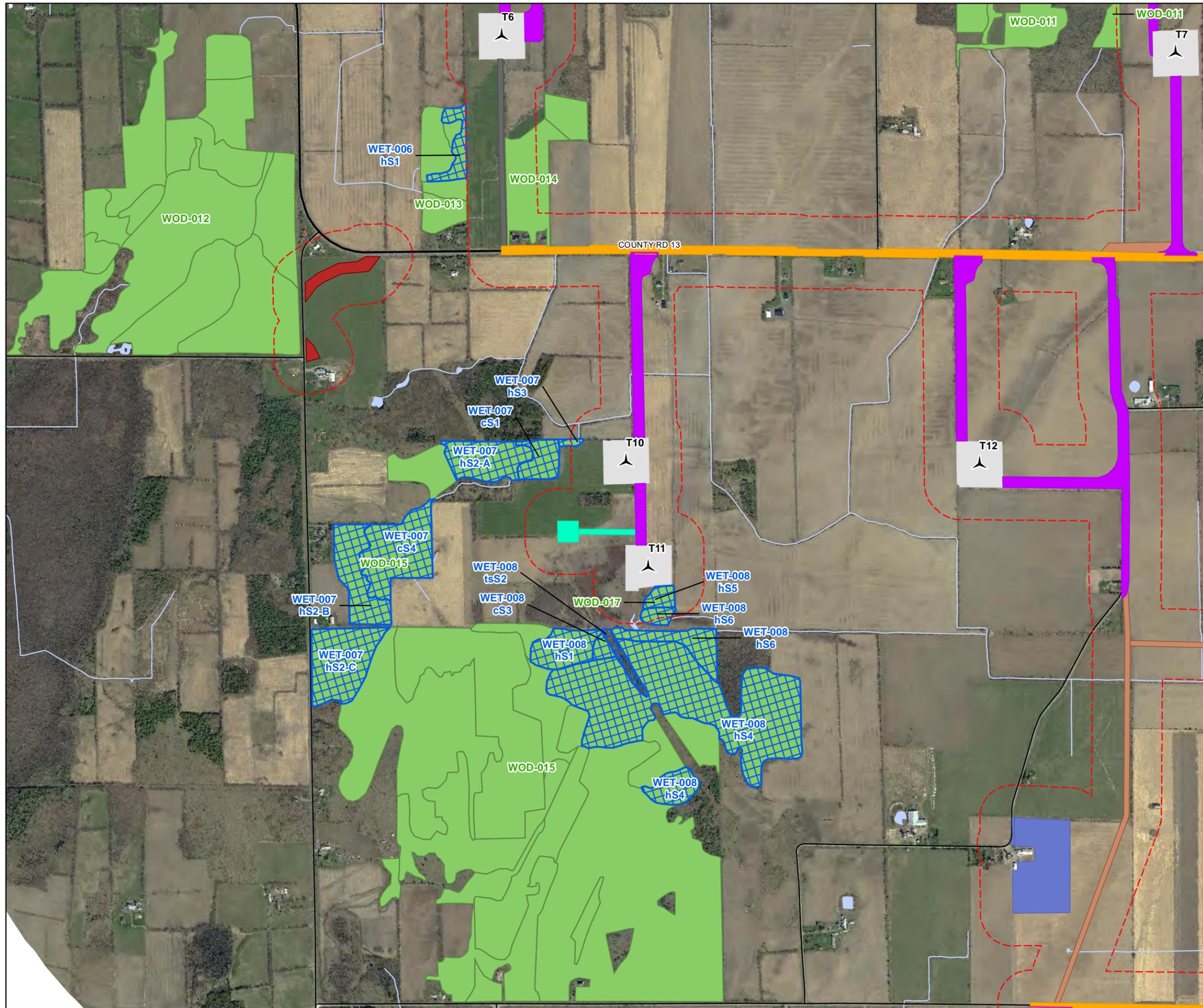
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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm Significant Woodlands and Wetlands



**Legend**

- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- Significant Natural Features
  - Woodland (WOD)
  - Treated as Significant Natural Features\*
    - Wetland (WET)

**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 Area
- Proposed Temporary Turning Radius
- Proposed Crane Path
- Proposed Meteorological Tower Footprint and Access Road

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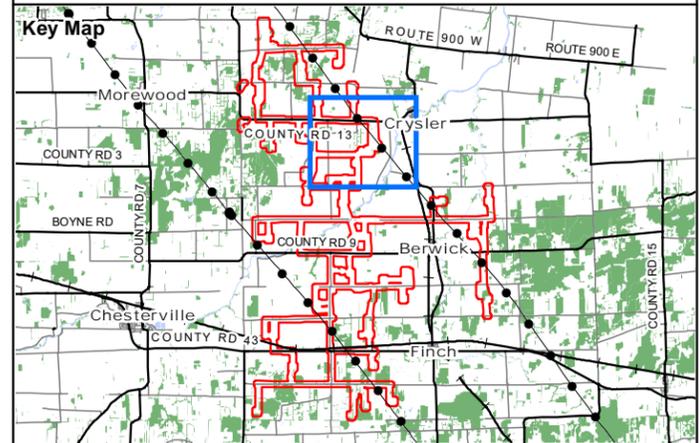
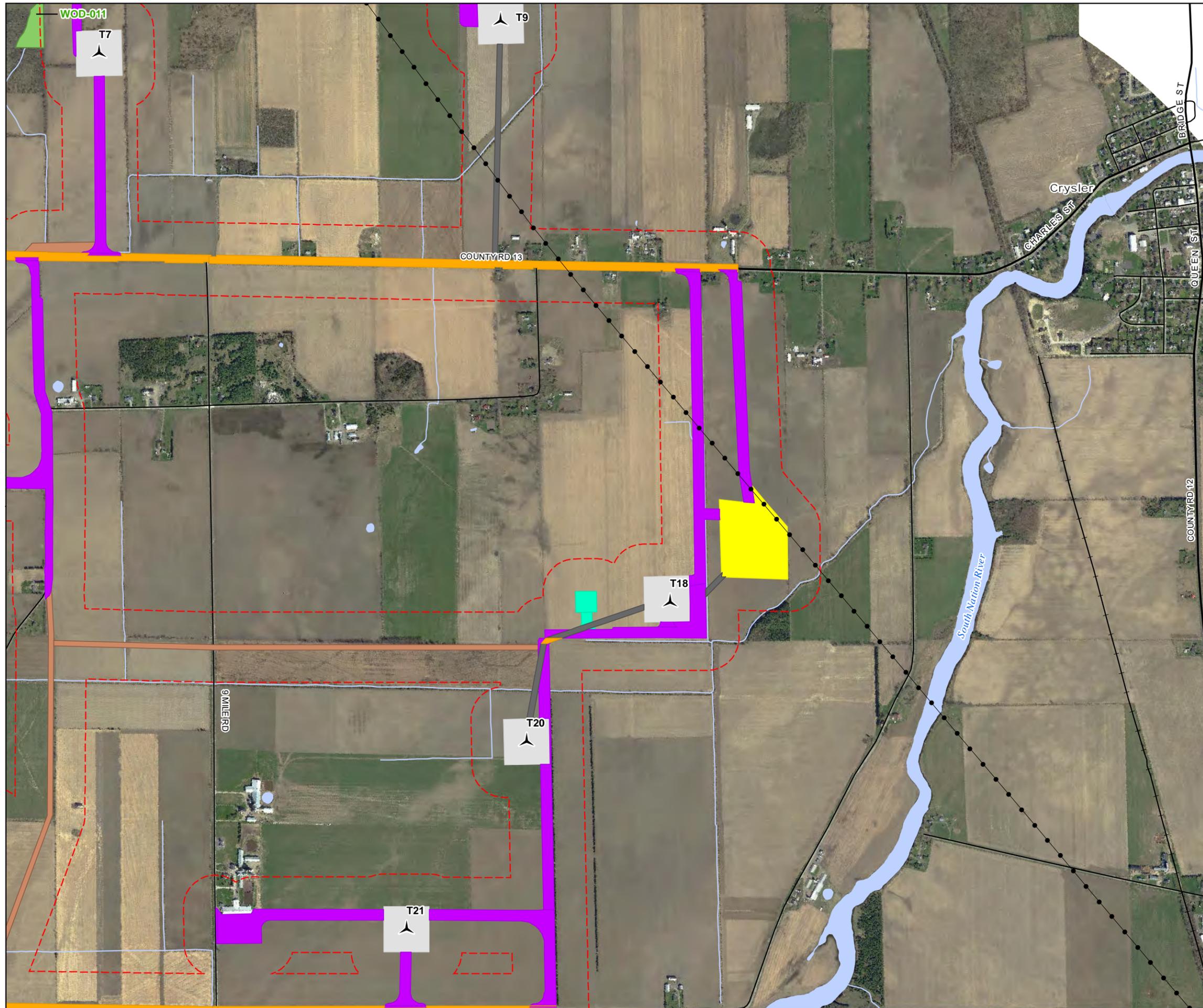


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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Significant Woodlands and Wetlands



- Legend**
- Utility Line
  - Railway
  - Primary Road
  - Secondary Road
  - Permanent Watercourse (LIO)
  - Open Water (LIO)
- Significant Natural Features**
- Woodland (WOD)
- 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
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  - Proposed Substation

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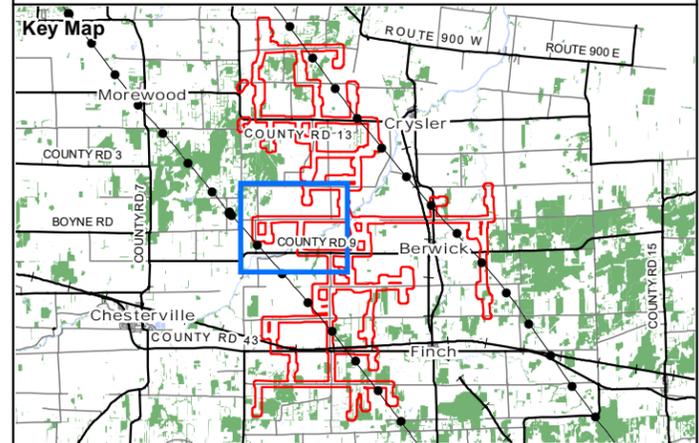
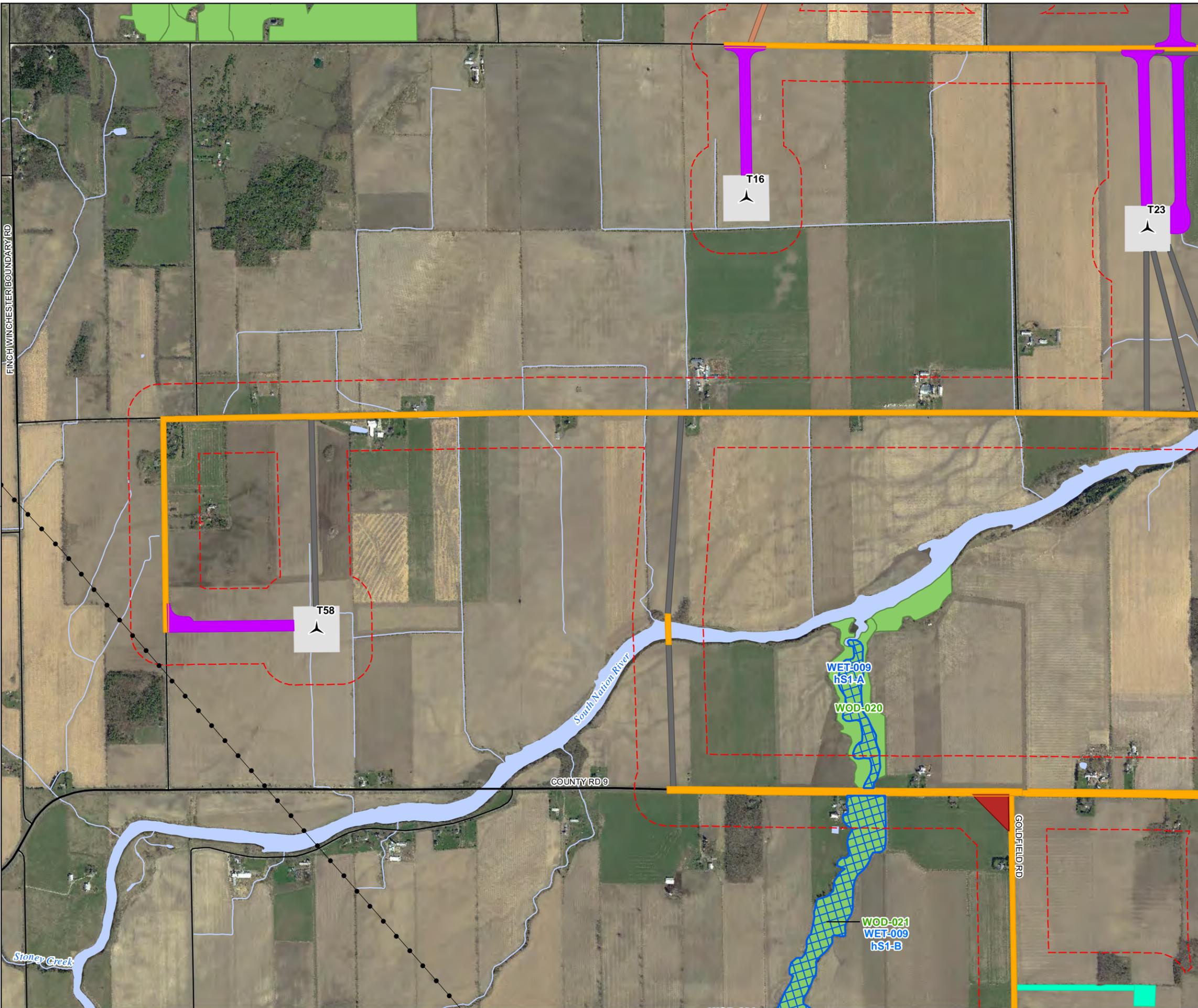


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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm

## Significant Woodlands and Wetlands



- Legend**
- Utility Line
  - Primary Road
  - Secondary Road
  - Permanent Watercourse (LIO)
  - Open Water (LIO)
  - 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 Temporary Turning Radius
  - Proposed Crane Path
  - Proposed Meteorological Tower Footprint and Access Road
- Significant Natural Features**
- Woodland (WOD)
  - Wetland (WET)
- Treated as Significant Natural Features\***
- Wetland (WET)
- Project Components**
- Project Area

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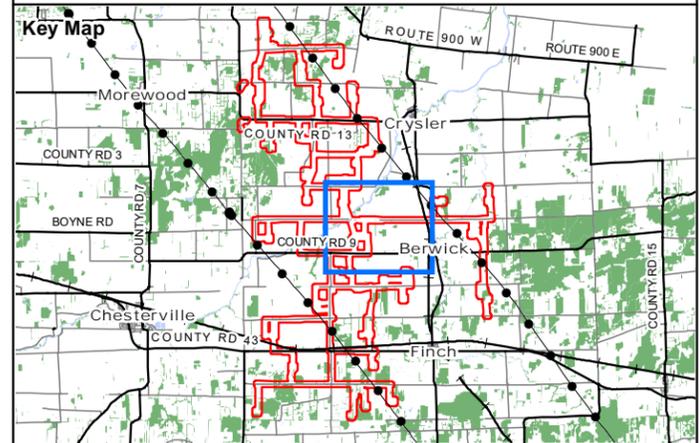
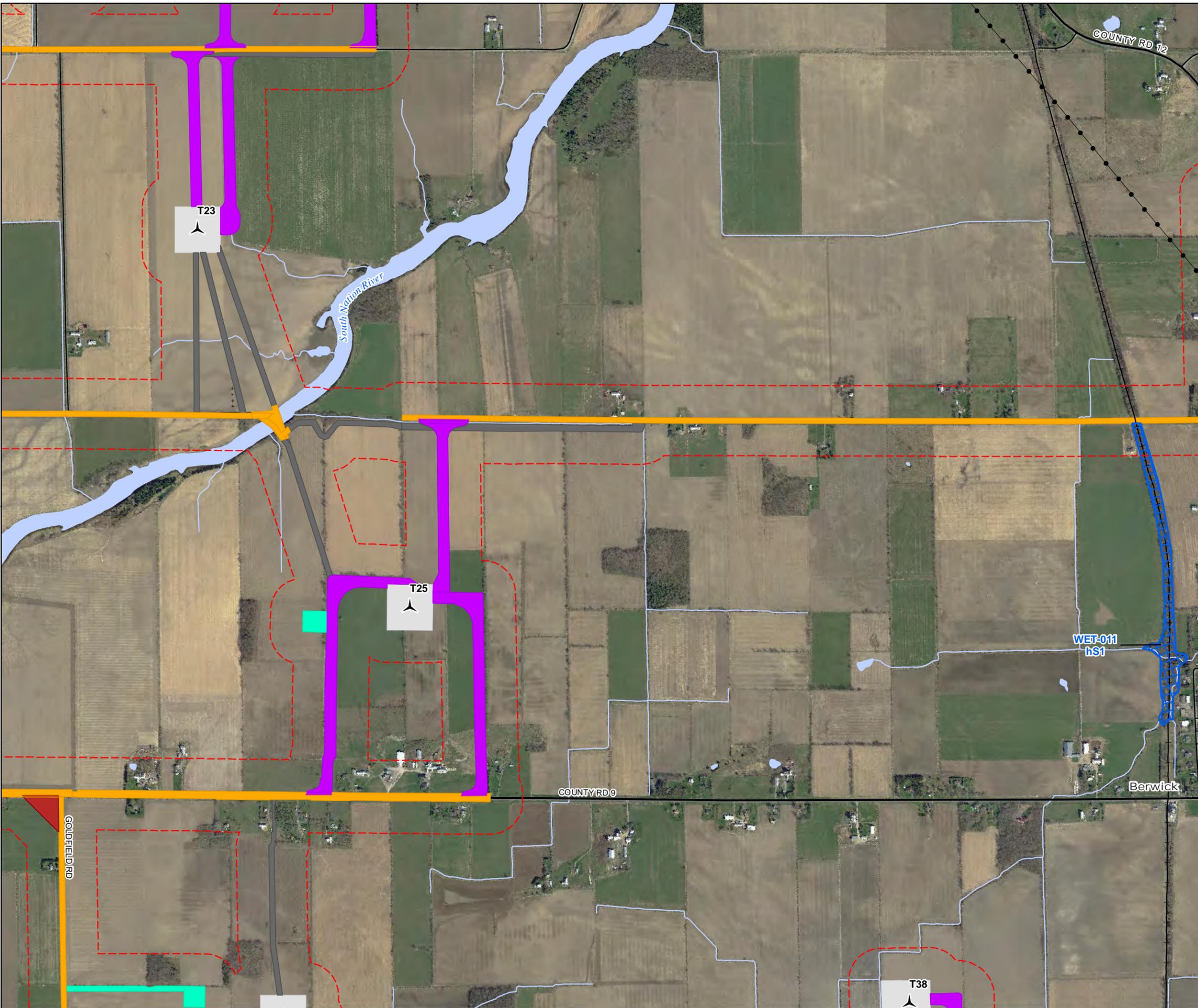


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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm

## Significant Woodlands and Wetlands



**Legend**

- Utility Line
- Railway
- 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
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- Proposed Meteorological Tower Footprint and Access Road

**Significant Natural Features**

- Woodland (WOD)

**Treated as Significant Natural Features\***

- Wetland (WET)

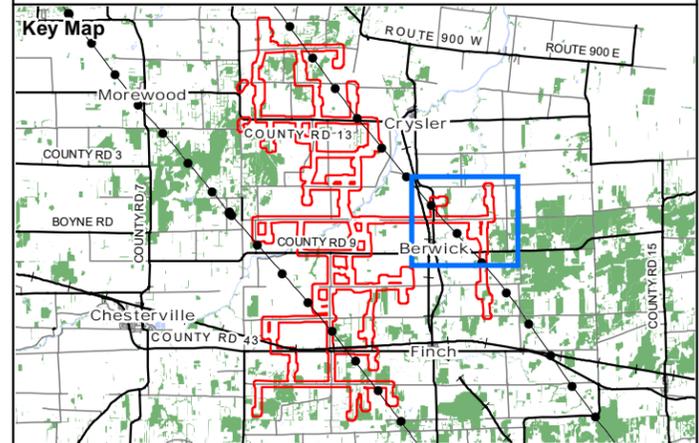
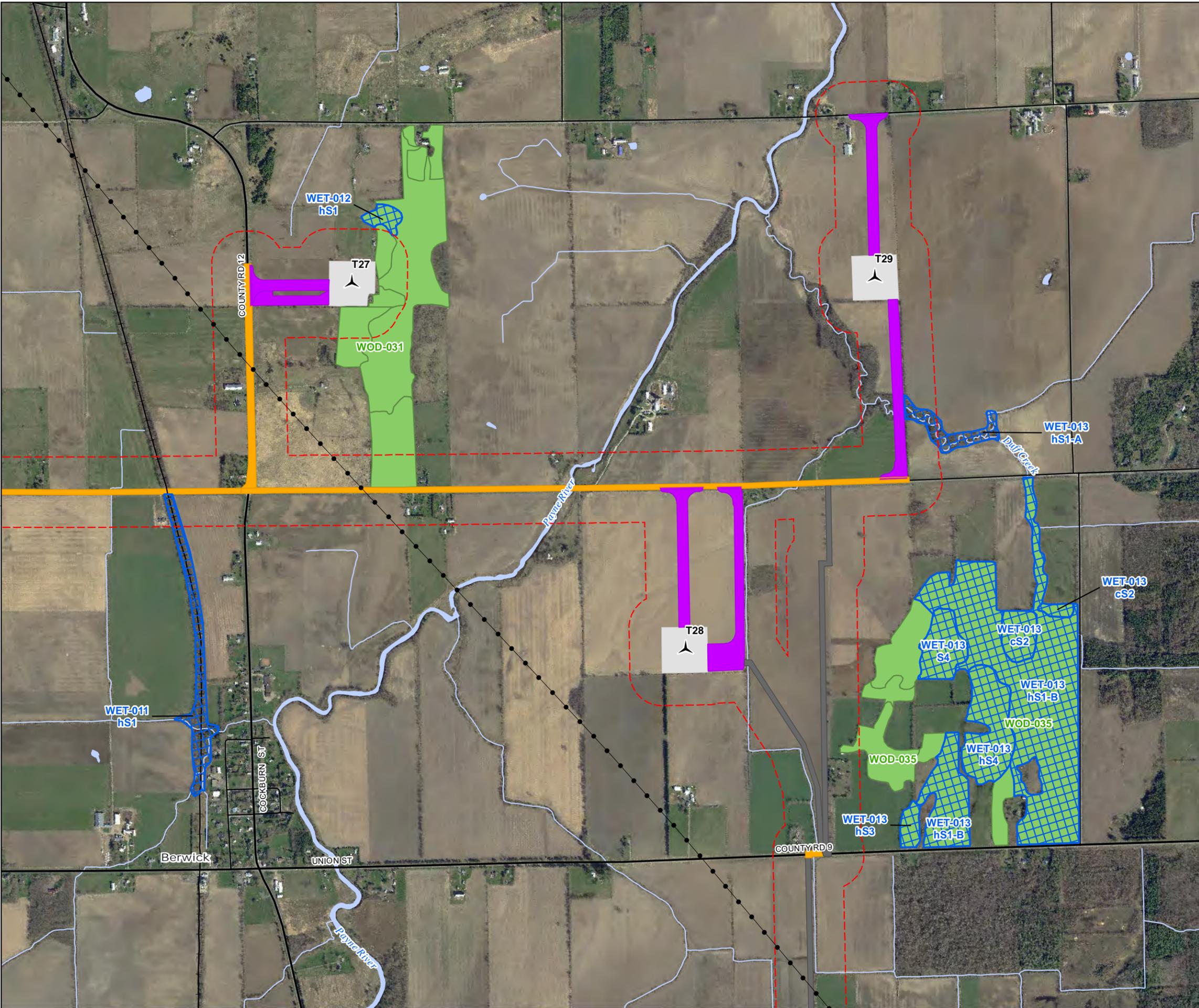
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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm Significant Woodlands and Wetlands



**Legend**

- Utility Line
- Railway
- 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
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- Proposed Turbine Laydown, Access Road, Collection Line

**Significant Natural Features**

- Woodland (WOD)
- ▨ Treated as Significant Natural Features\*
- ▨ Wetland (WET)

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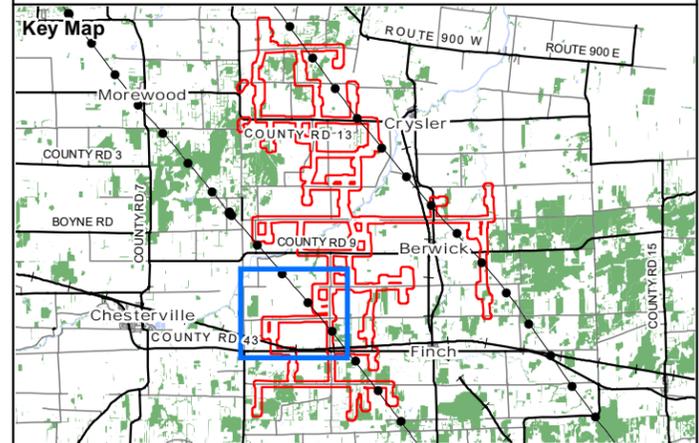
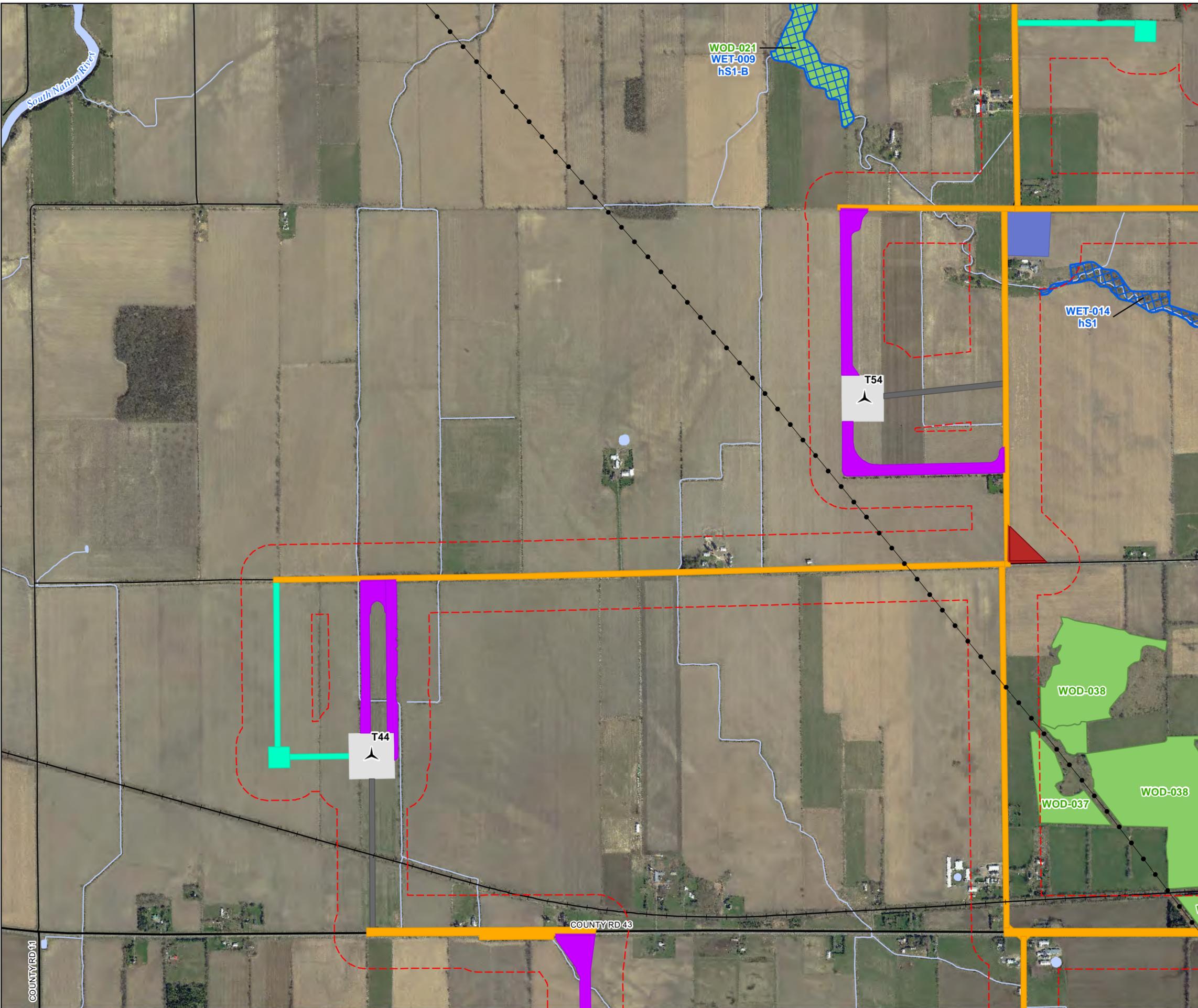
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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Significant Woodlands and Wetlands



**Legend**

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

**Significant Natural Features**

- Woodland (WOD)

**Treated as Significant Natural Features\***

- ▨ Wetland (WET)

**Project Components**

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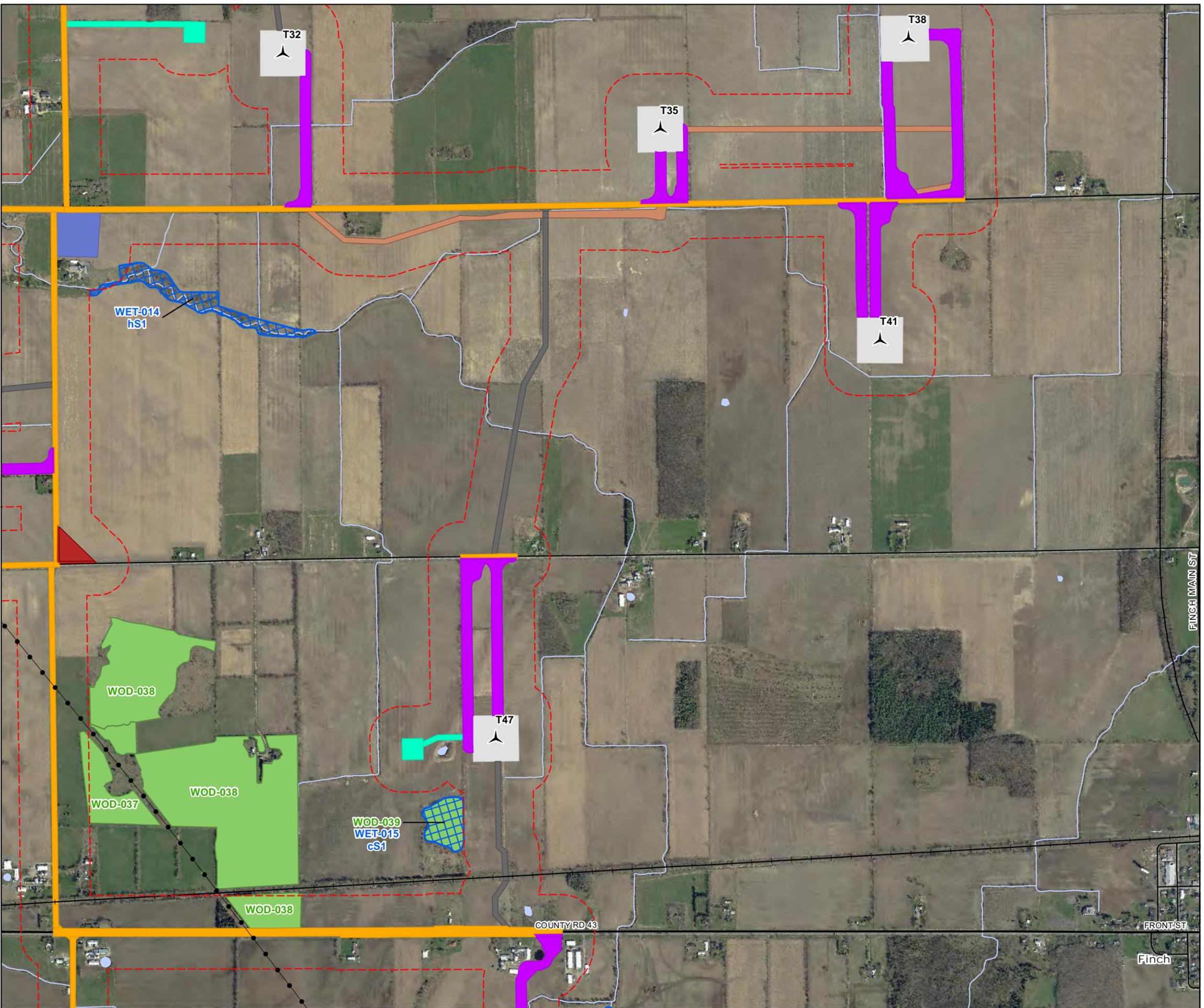
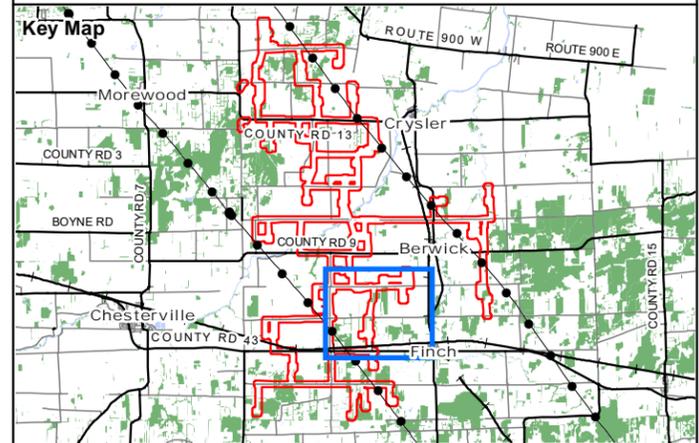


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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000

# Nation Rise Wind Farm

## Significant Woodlands and Wetlands



**Legend**

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

**Significant Natural Features**

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- Treated as Significant Natural Features\*
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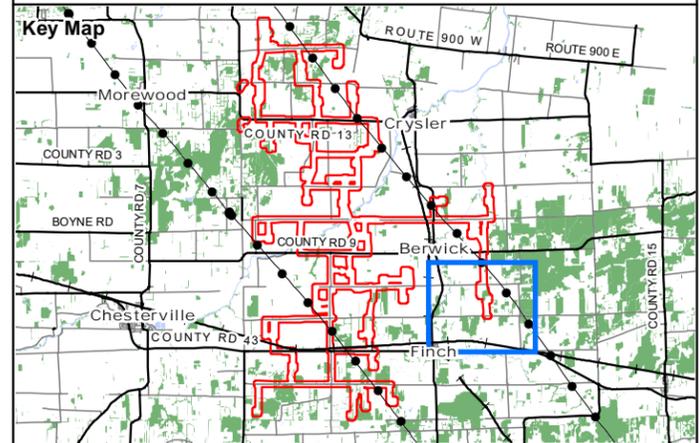
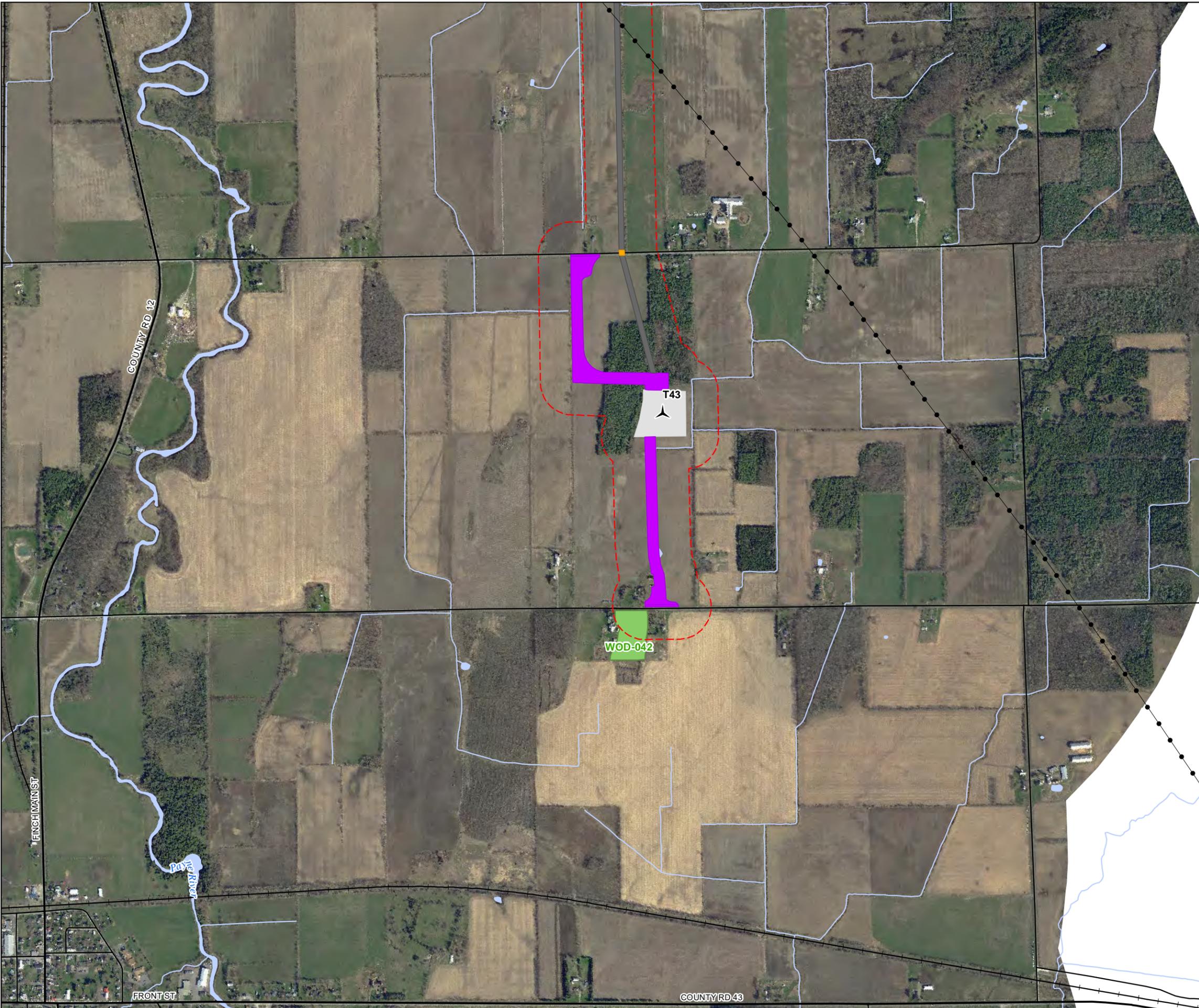


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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Significant Woodlands and Wetlands



**Legend**

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

**Significant Natural Features**

- Woodland (WOD)

**Project Components**

- Project Area
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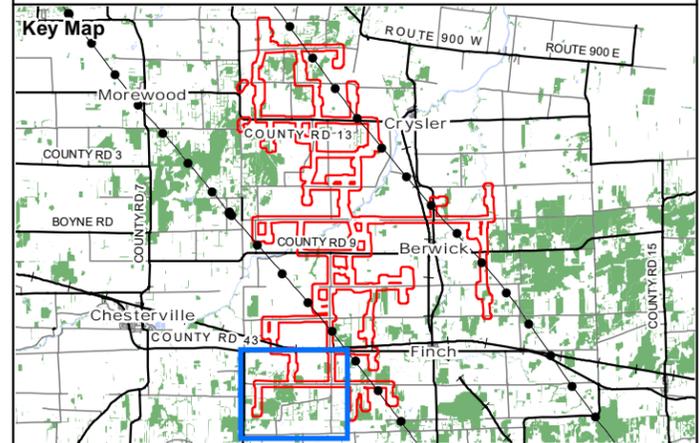
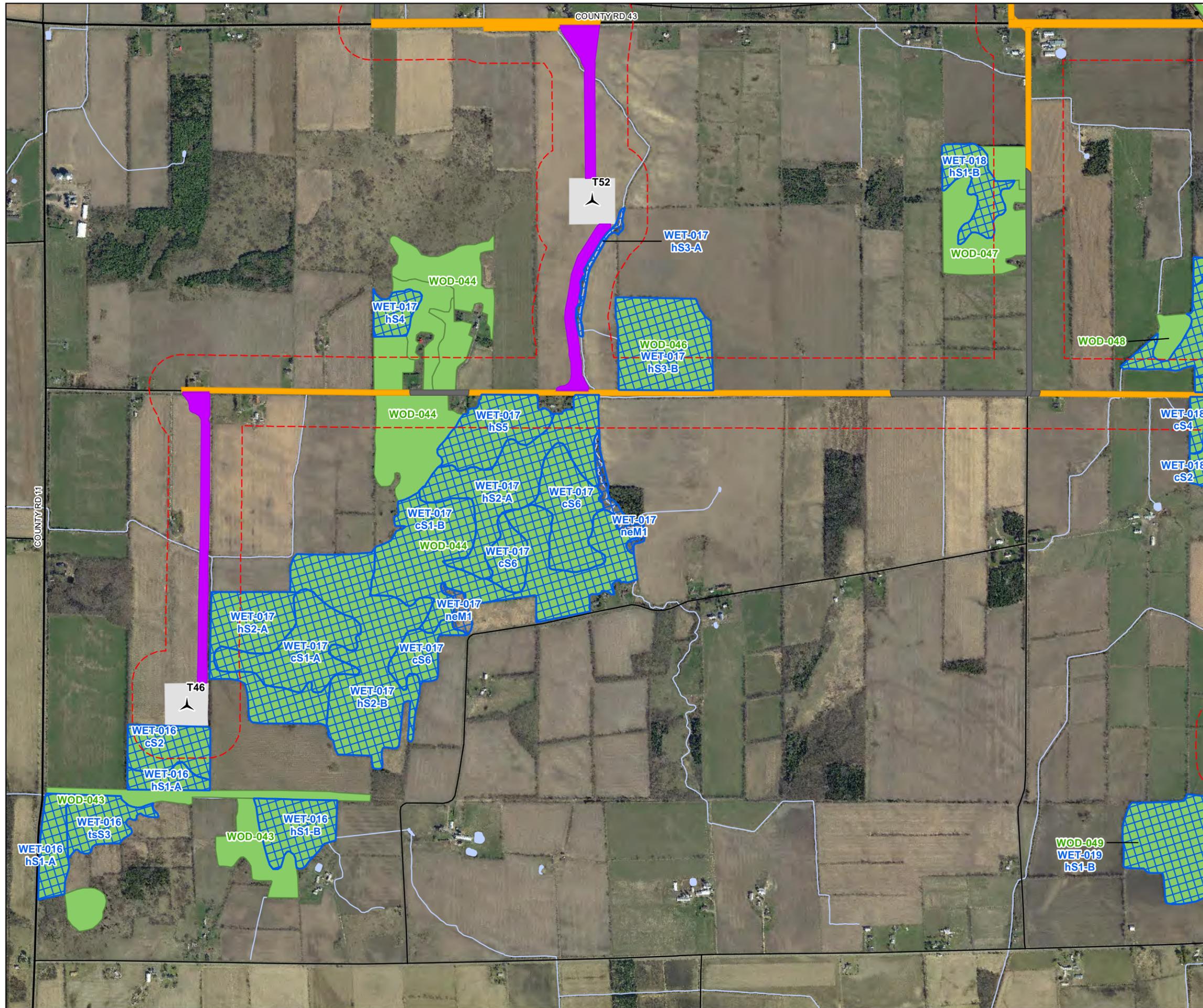


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Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm

## Significant Woodlands and Wetlands



**Legend**

- Utility Line
- Railway
- 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

**Significant Natural Features**

- Woodland (WOD)

**Treated as Significant Natural Features\***

- Wetland (WET)

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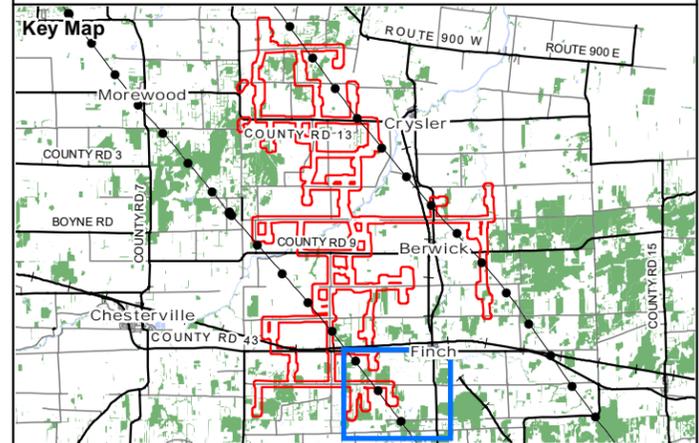
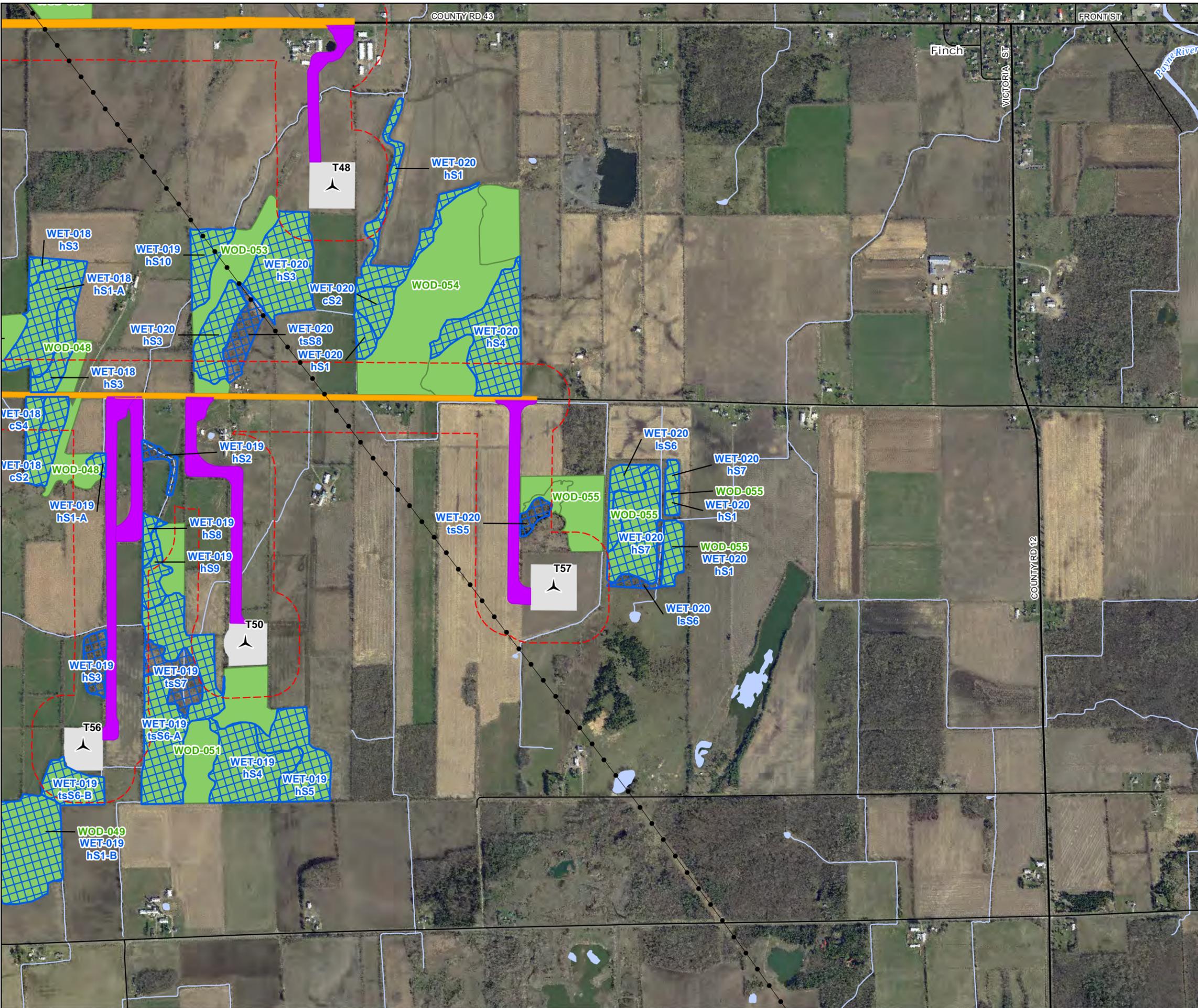
Project: 1756  
 Date: June 19, 2017

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

0 200 400 600 800 Meters

# Nation Rise Wind Farm

## Significant Woodlands and Wetlands



**Legend**

- Utility Line
- Railway
- 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

**Significant Natural Features**

- Woodland (WOD)

**Treated as Significant Natural Features\***

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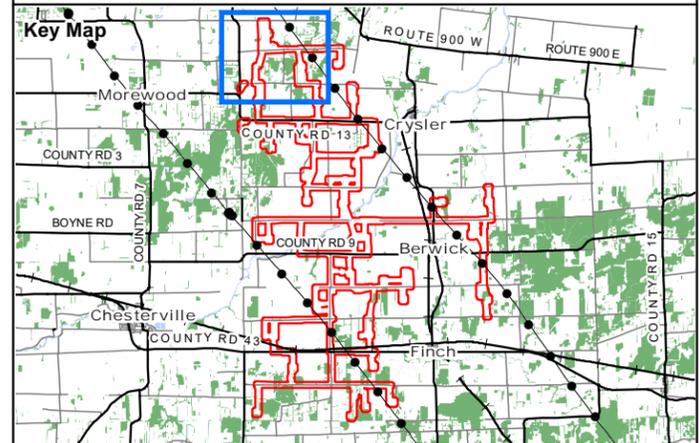
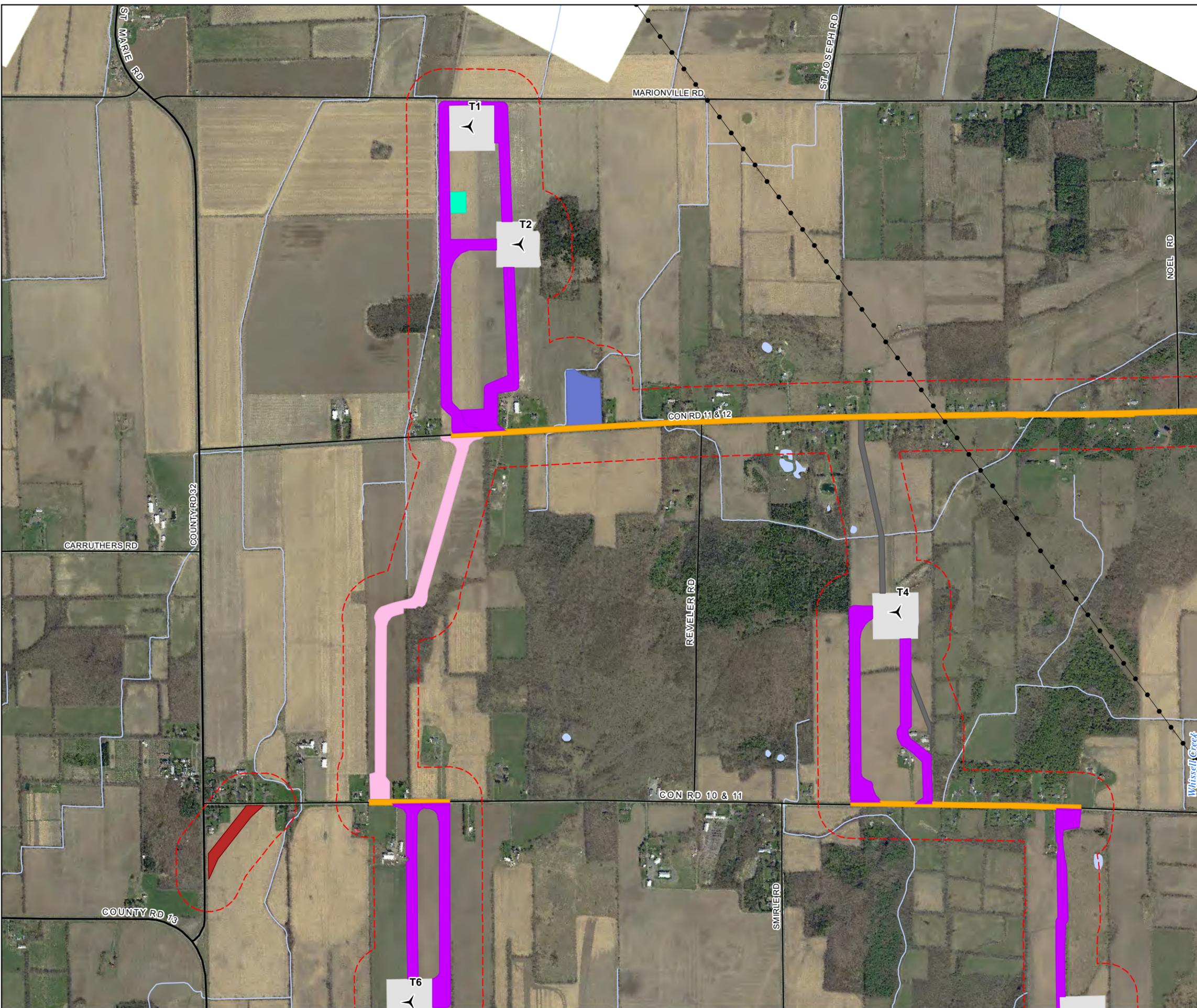
Project: 1756 Date: June 19, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

**Maps 3-1 to 3-12**  
Significant Seasonal Concentration Areas

---

# 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.

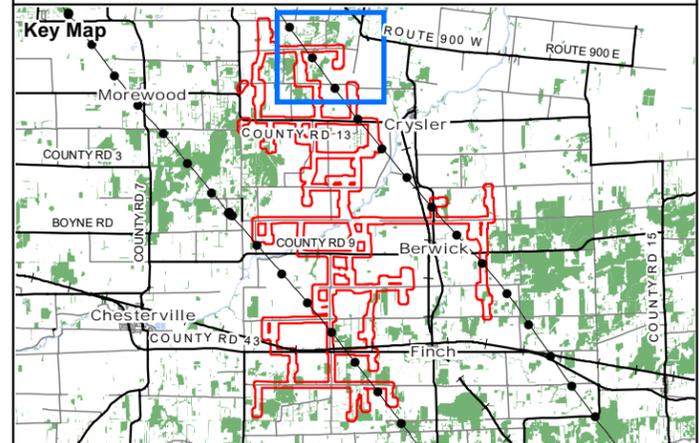
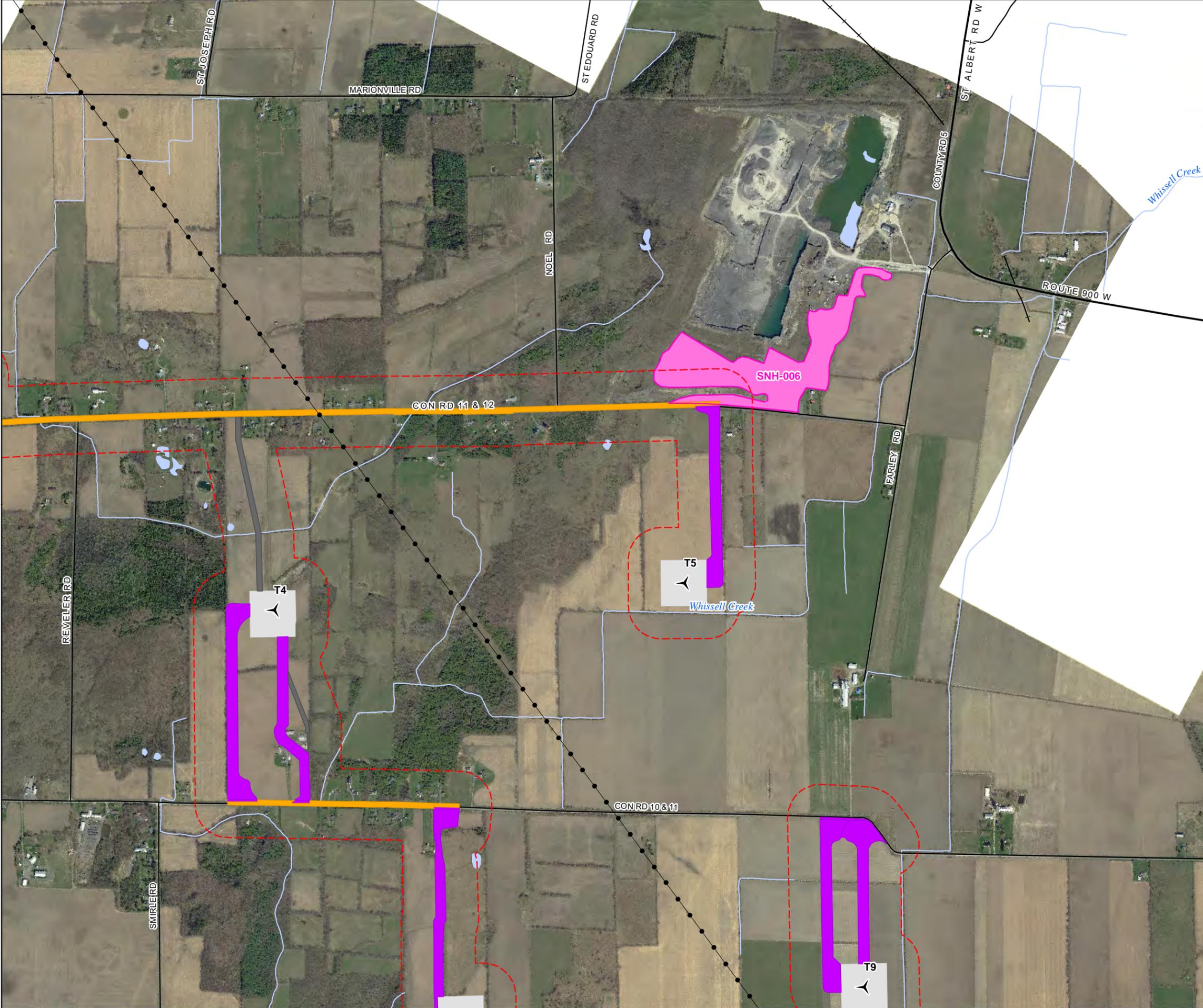


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Project: 1756 Date: July 10, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# 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 Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- Proposed Turbine Laydown, Access Road, Collection Line

**Treated As Significant Seasonal Concentration Areas\***

- Snake Hibernaculum (SNH)

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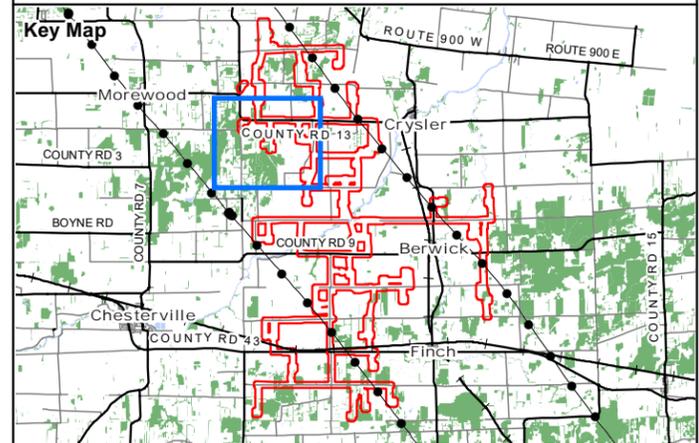
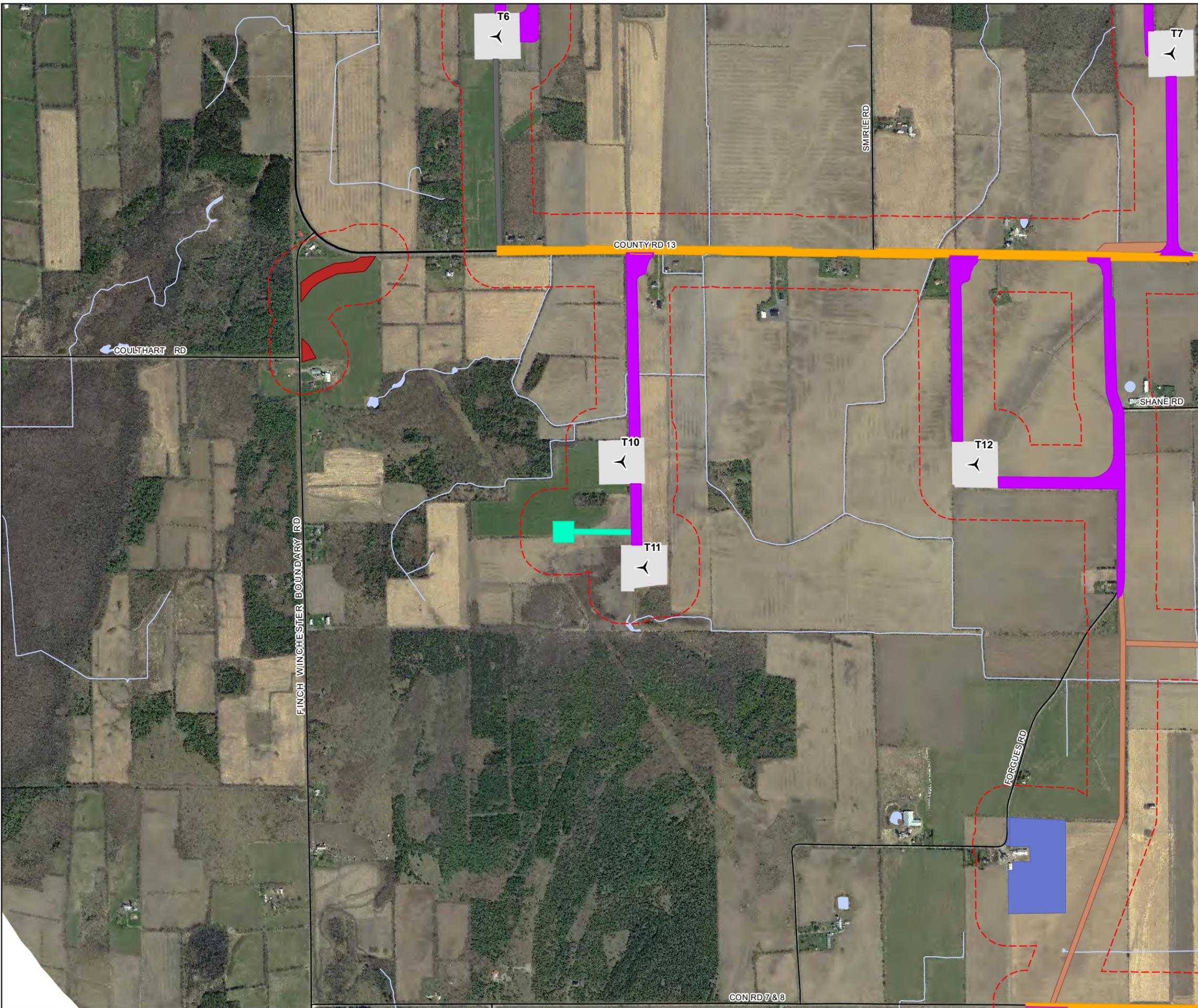


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Project: 1756 Date: July 10, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Significant Seasonal Concentration Areas



### Legend

- 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
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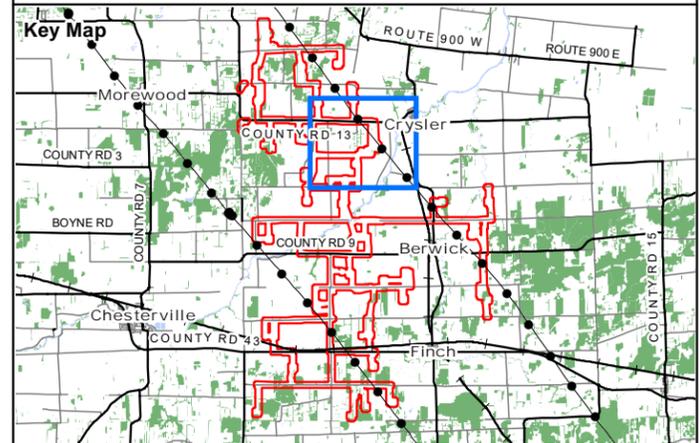


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Project: 1756 Date: July 10, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Significant Seasonal Concentration Areas



**Legend**

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

**Significant Seasonal Concentration Areas**

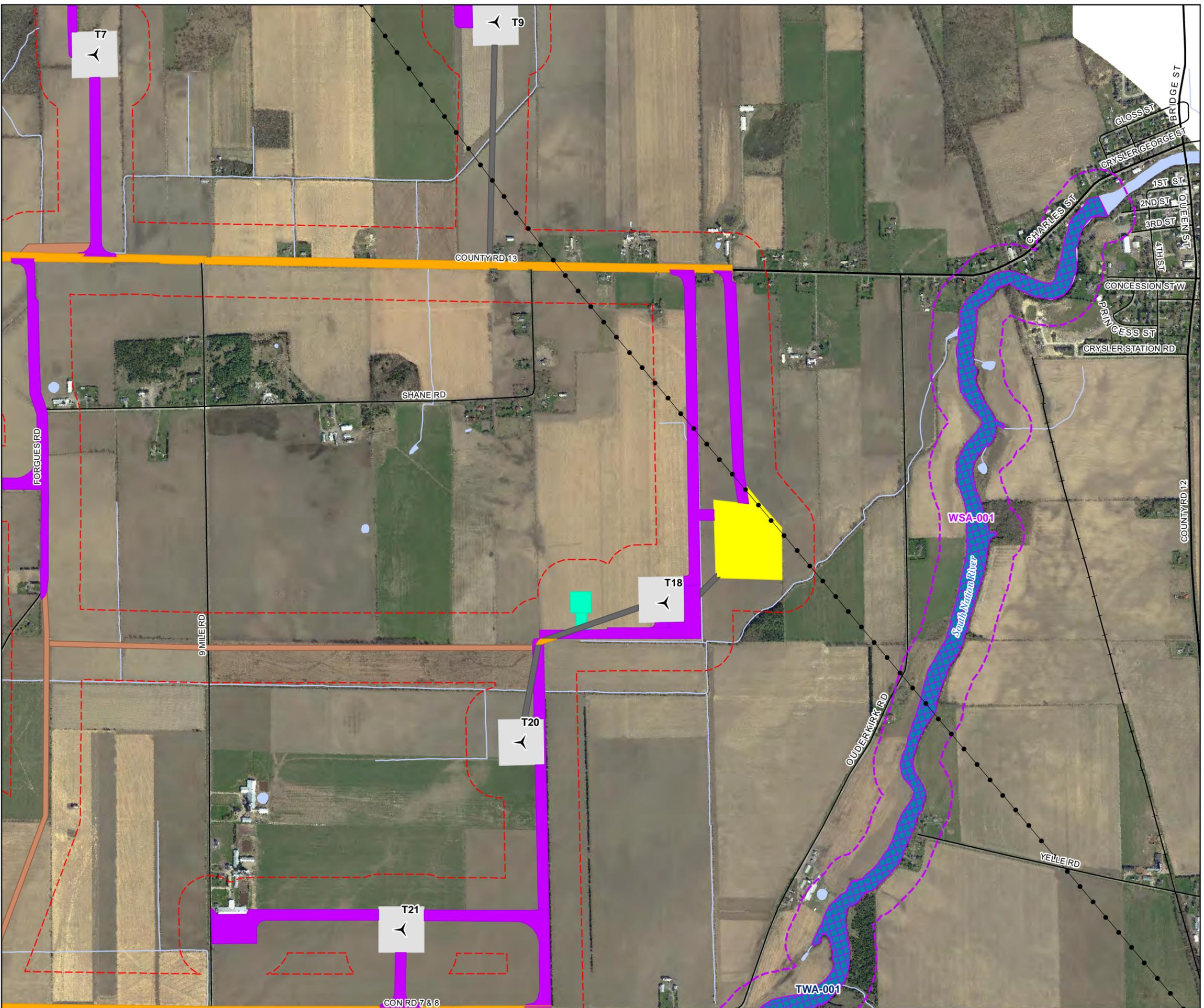
- Waterfowl Stopover and Staging Area (Aquatic) (WSA)
- Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer
- Treated As Significant Seasonal Concentration Areas\*
- Turtle Wintering Area (TWA)

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.



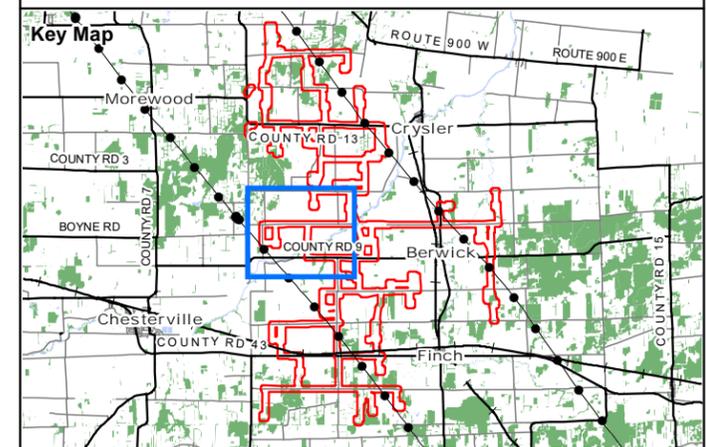
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Project: 1756 Date: July 10, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	



# Nation Rise Wind Farm

## Significant Seasonal Concentration Areas



**Legend**

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- 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 Temporary Turning Radius
- Proposed Crane Path
- 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 Significant Seasonal Concentration Areas\***

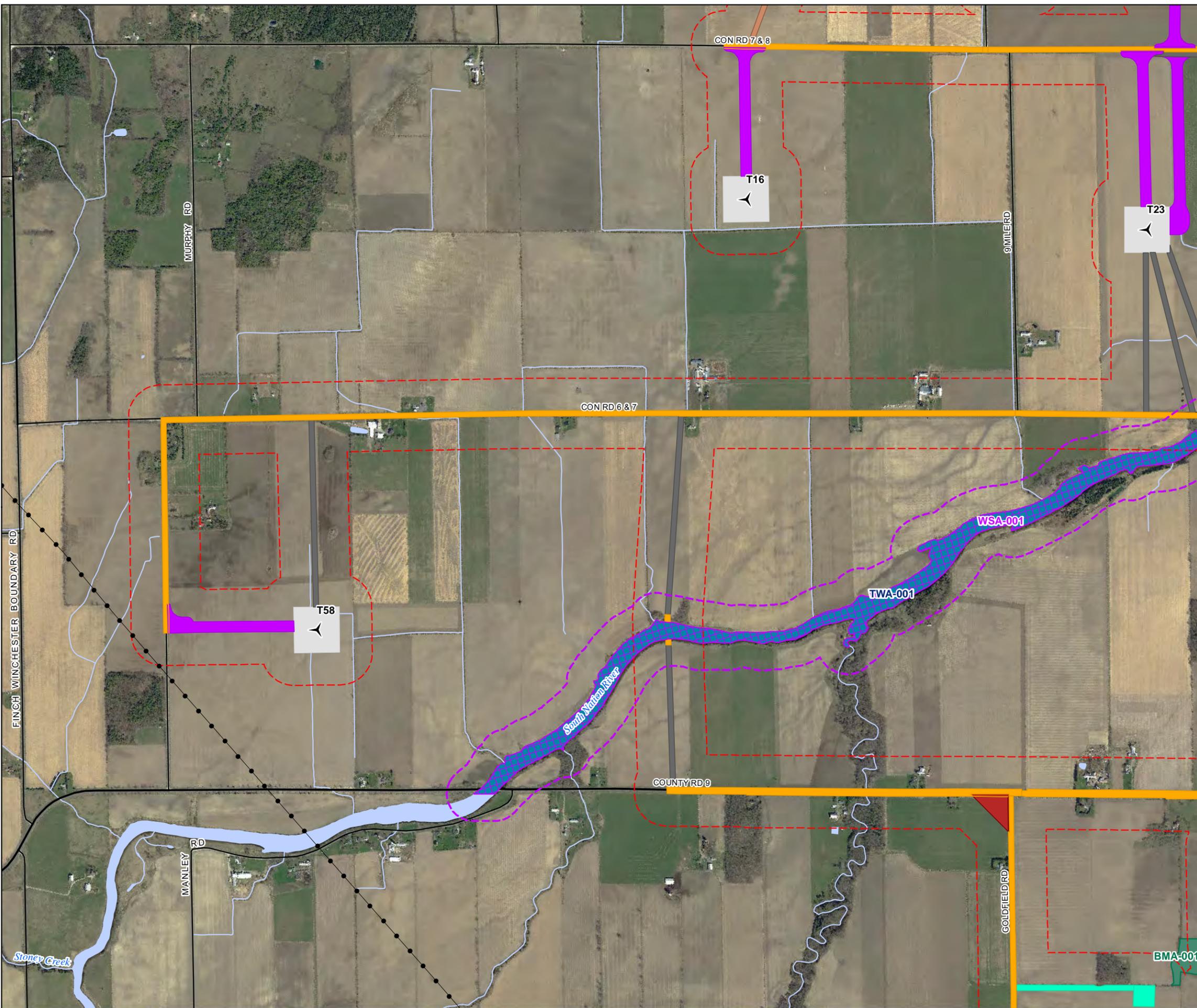
- Turtle Wintering Area (TWA)
- Bat Maternity Colony (BMA)

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.



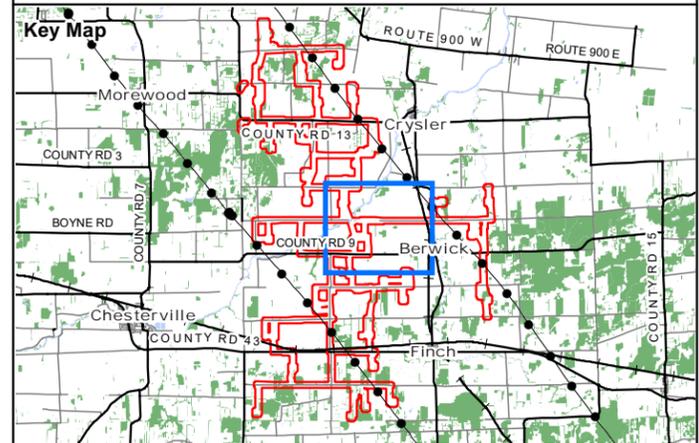
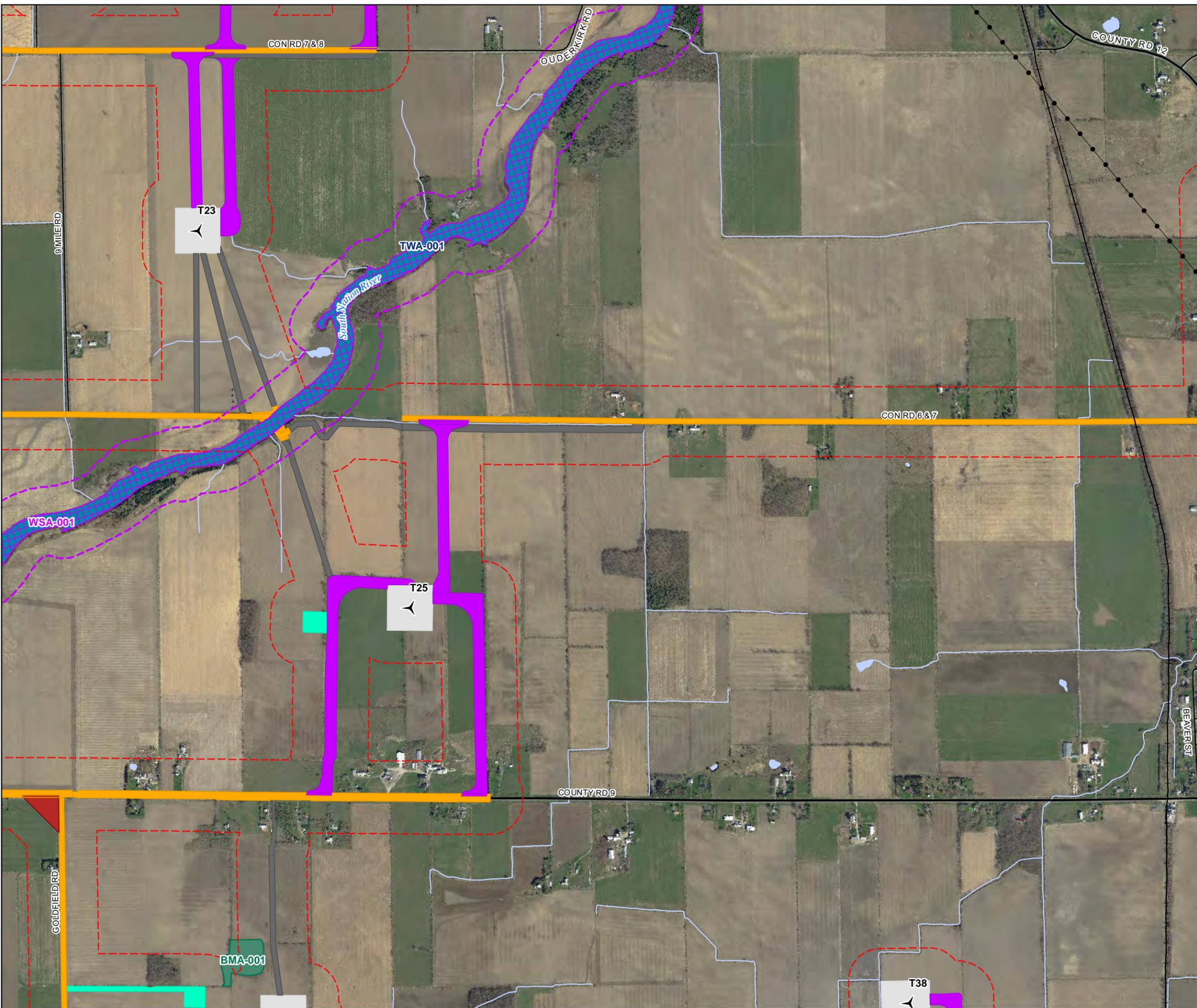
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Project: 1756 Date: July 10, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	



# Nation Rise Wind Farm

## Significant Seasonal Concentration Areas



**Legend**

- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- 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 Temporary Turning Radius
- 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 Significant 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.

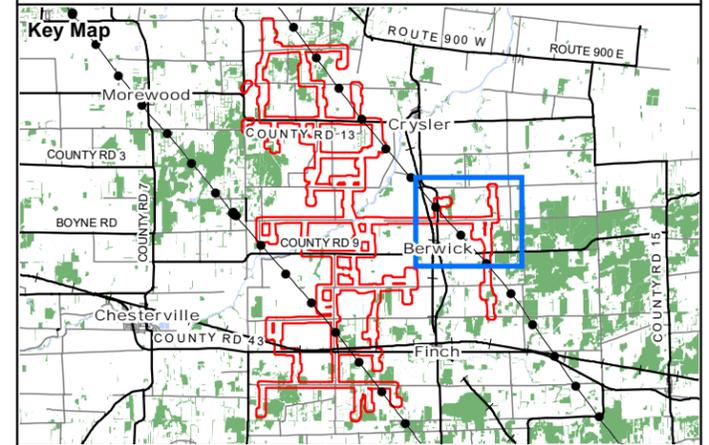


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Project: 1756 Date: July 10, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# 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 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.  
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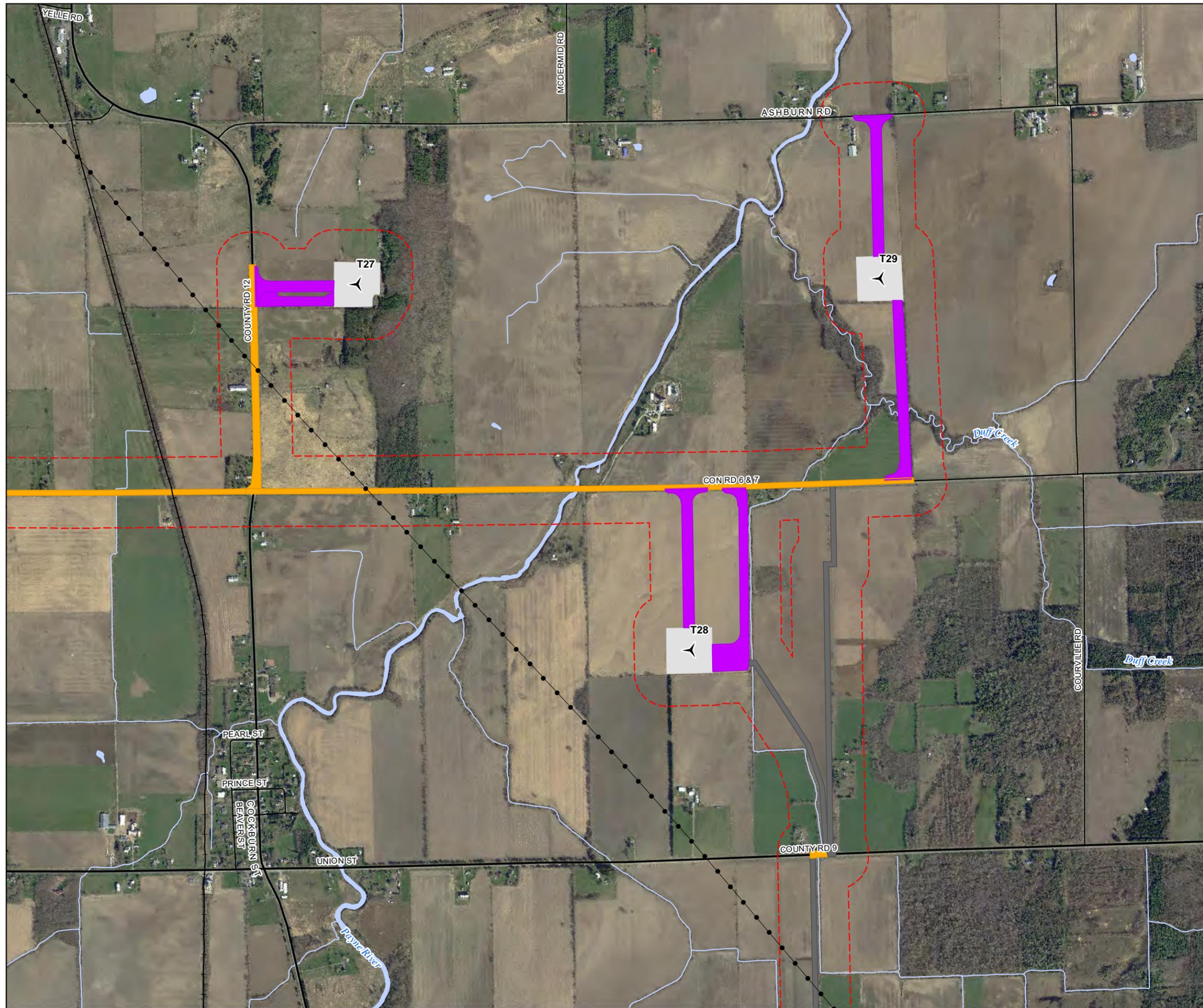


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Project: 1756  
 Date: July 10, 2017

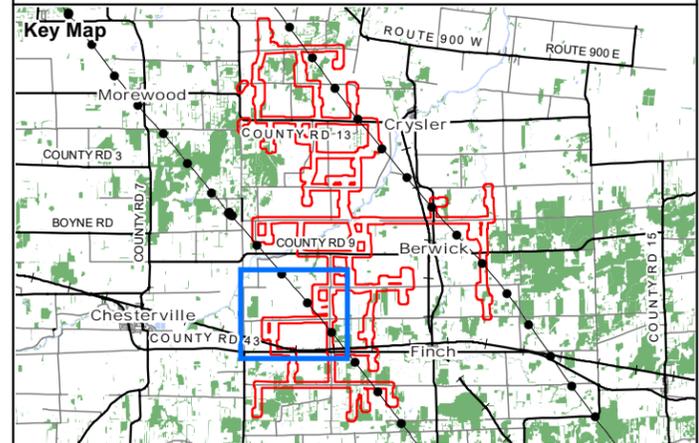
NAD83 - UTM Zone 18  
 Size: 11x17"  
 1:14,000

0 200 400 600 800 Meters



# Nation Rise Wind Farm

## Significant Seasonal Concentration Areas



**Legend**

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

**Treated As Significant Seasonal Concentration Areas\***

- Bat Maternity Colony (BMA)

**Project Components**

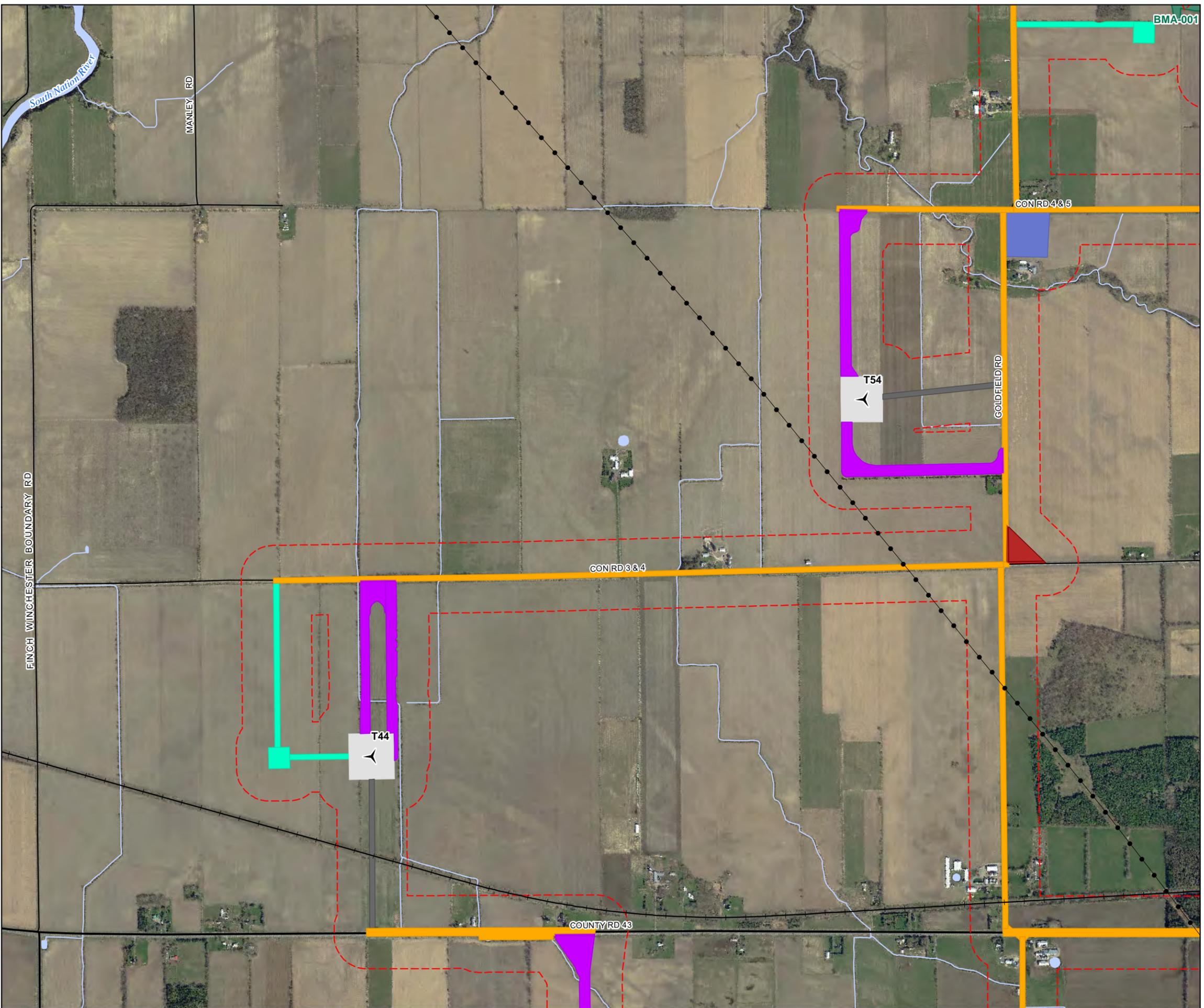
- Project Area
- Proposed Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- Proposed Turbine Laydown, Access Road, Collection Line
- Proposed Laydown
- Proposed Temporary Turning Radius
- Proposed Meteorological 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.  
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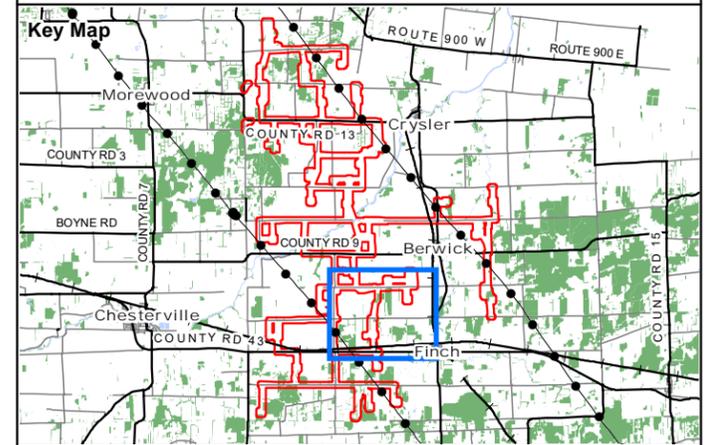
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Project: 1756 Date: July 10, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	



# Nation Rise Wind Farm

## Significant Seasonal Concentration Areas



### Legend

- Utility Line
  - Railway
  - Primary Road
  - Secondary Road
  - ~ Permanent Watercourse (LIO)
  - Open Water (LIO)
  - Treated As Significant Seasonal Concentration Areas\***
  - Bat Maternity Colony (BMA)
- 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 Crane Path
  - Proposed Meteorological Tower Footprint and Access Road

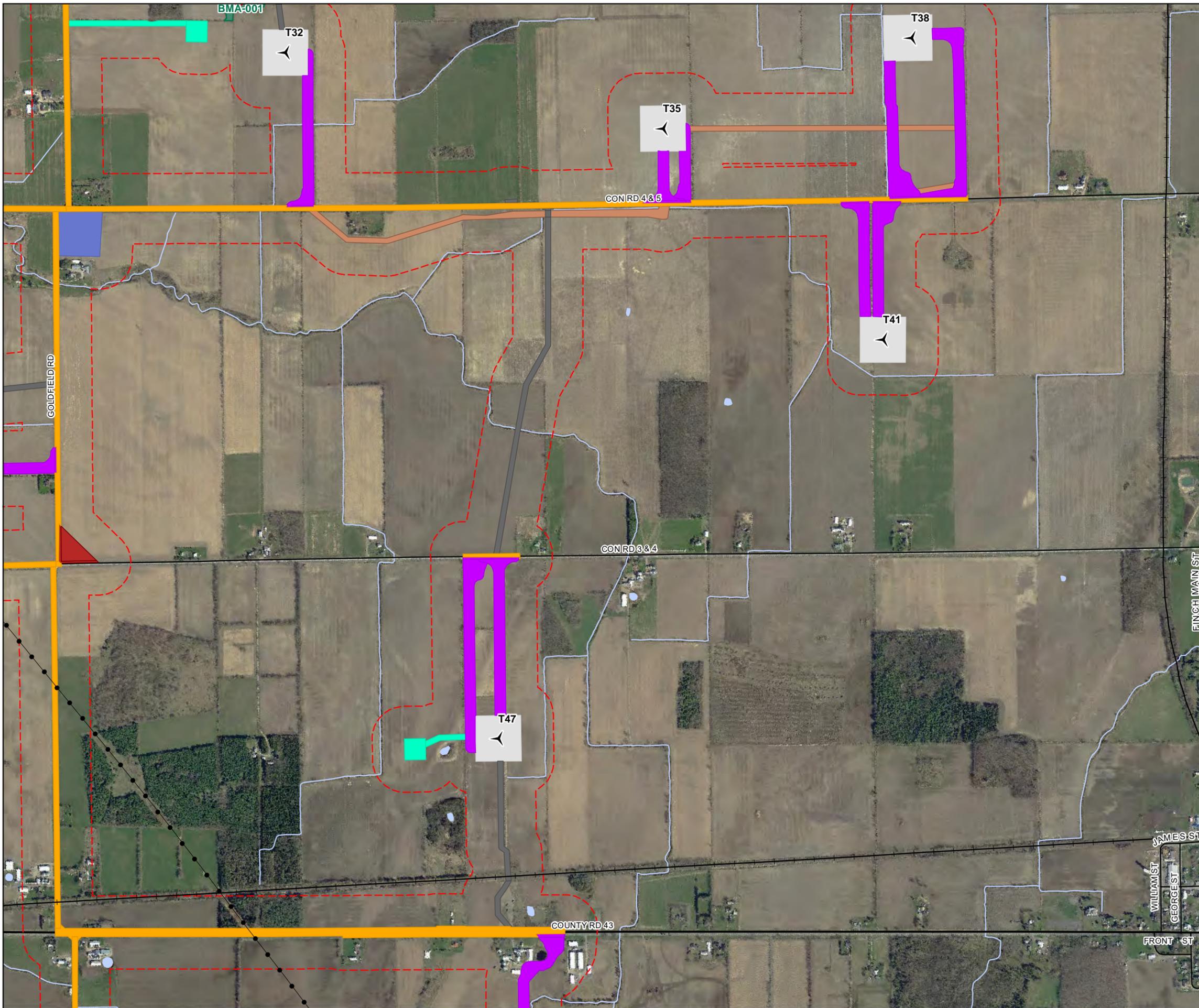
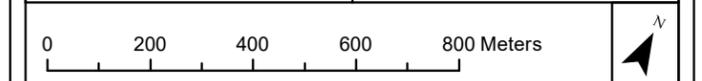
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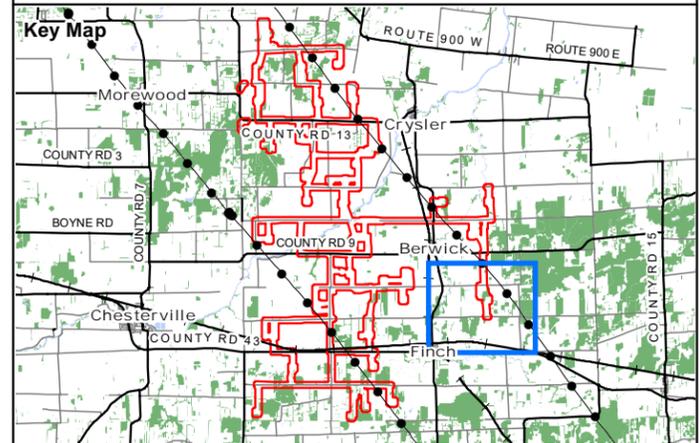
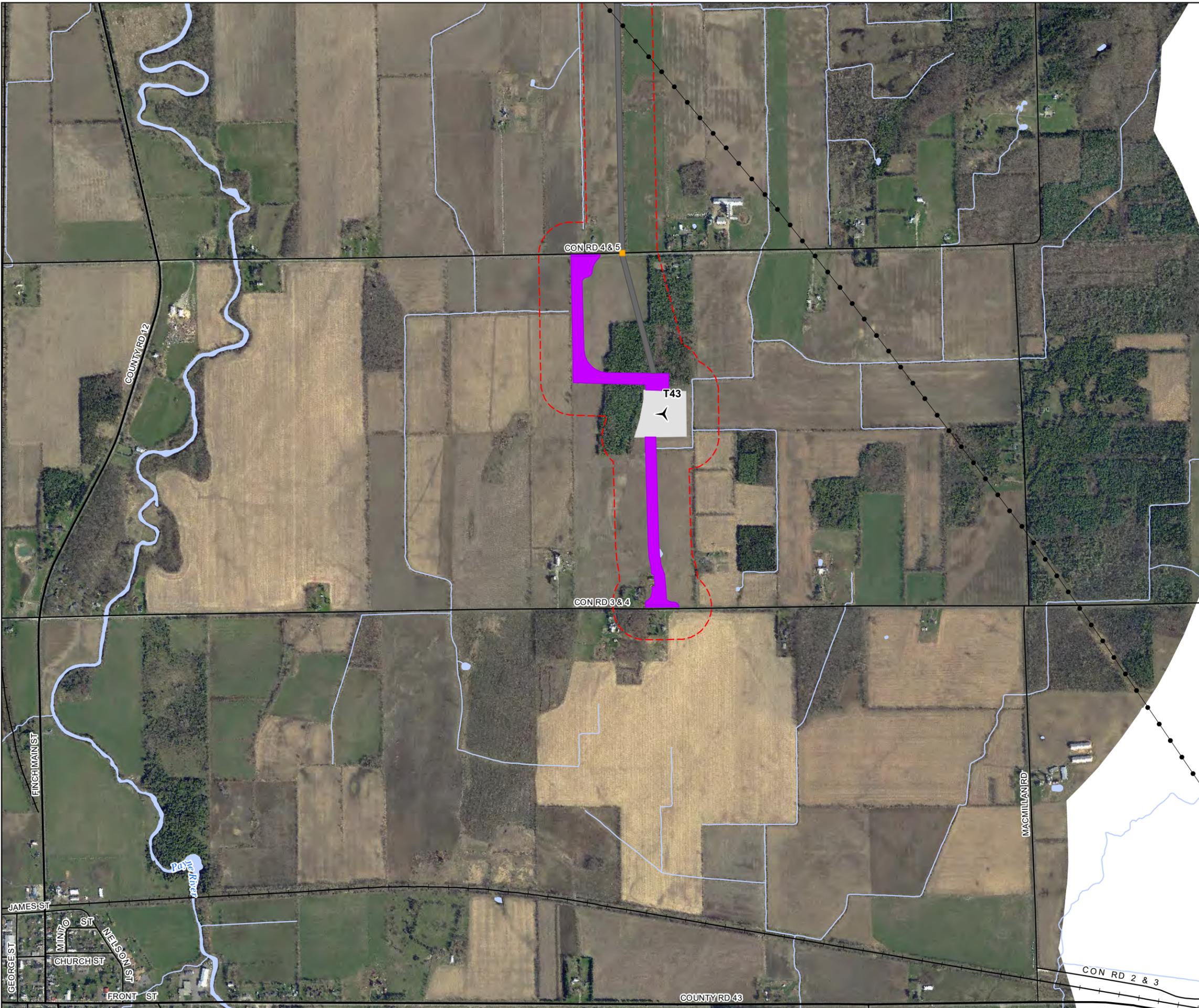
Project: 1756  
Date: July 10, 2017

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



# 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 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.  
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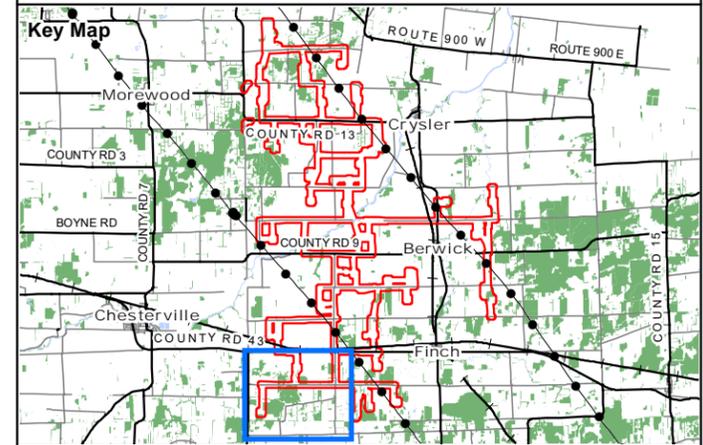


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Project: 1756 Date: July 10, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# 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 Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- Proposed Turbine Laydown, Access Road, Collection Line
- Treated As Significant Seasonal Concentration Areas\***
- 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.  
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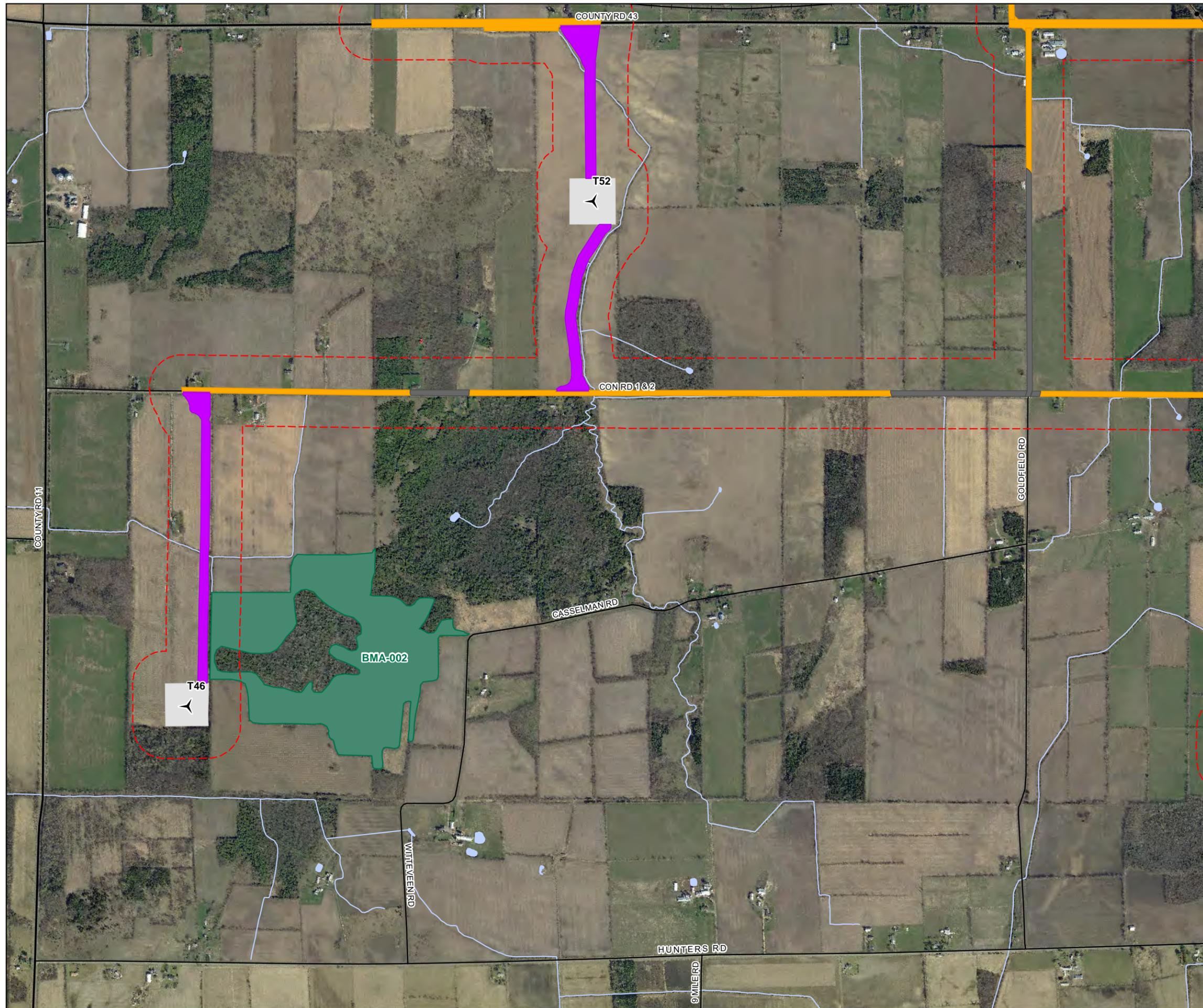


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Project: 1756  
 Date: July 10, 2017

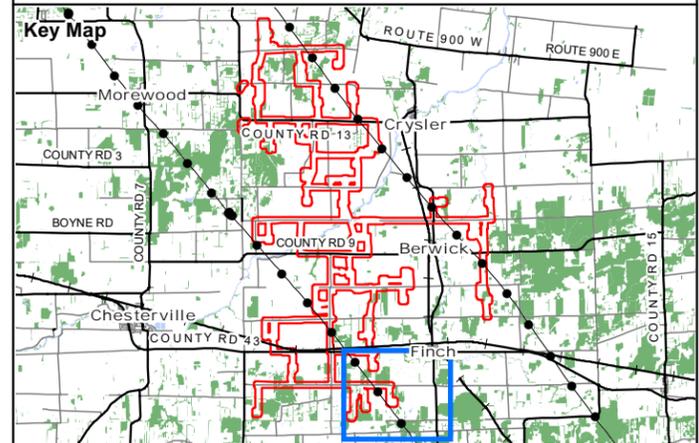
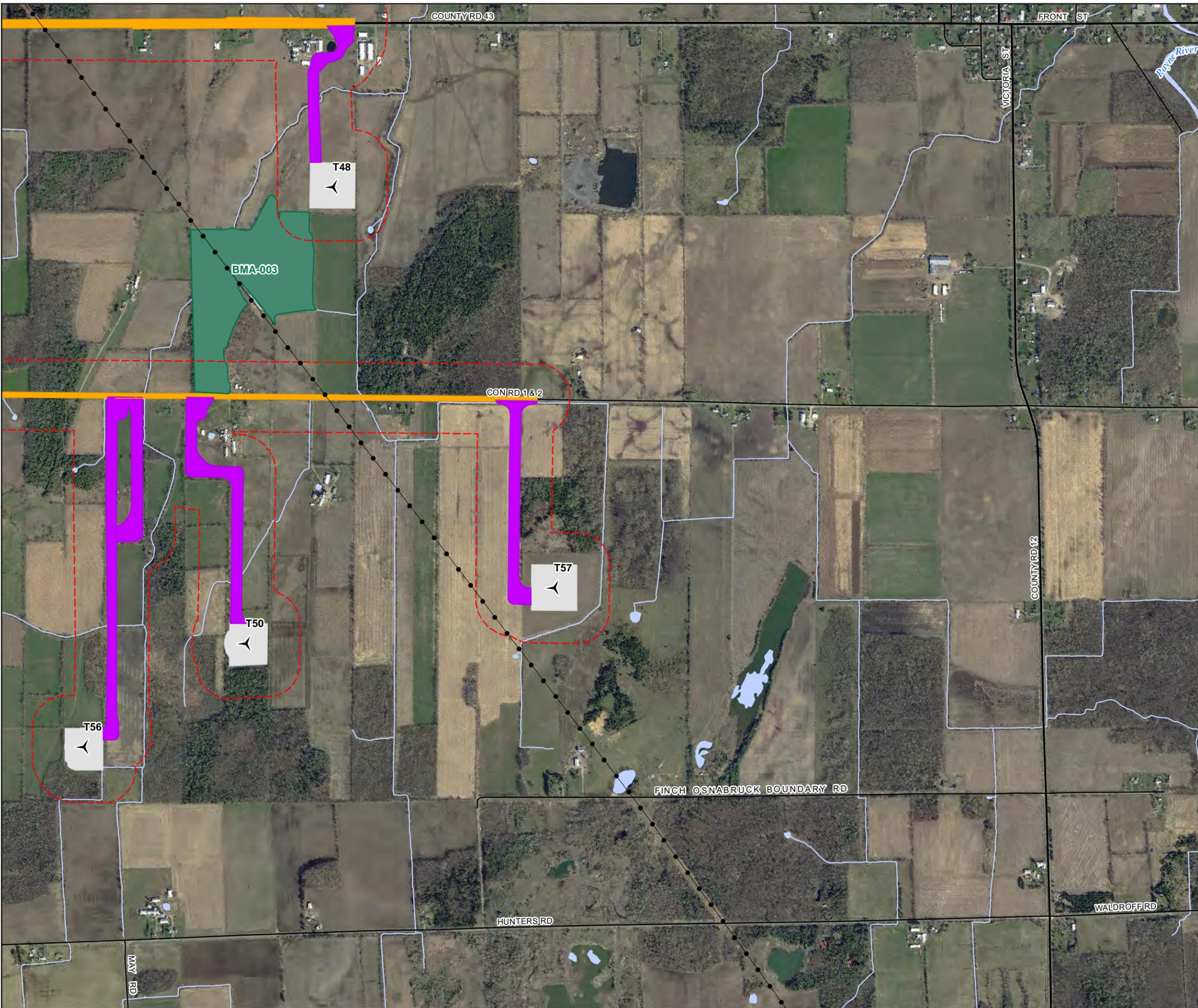
NAD83 - UTM Zone 18  
 Size: 11x17"  
 1:14,000

0 200 400 600 800 Meters



# 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 Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- ▭ Proposed Turbine Laydown, Access Road, Collection Line

**Treated As Significant Seasonal Concentration Areas\***

- 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.  
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Project: 1756 Date: July 10, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

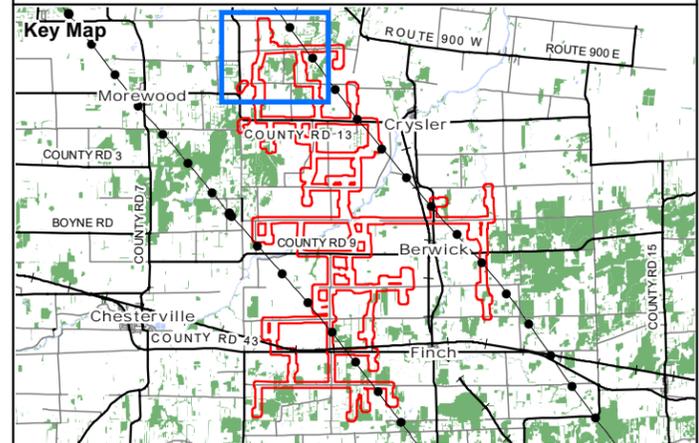
**Maps 4-1 to 4-12**

**Significant Rare Vegetation Communities and Specialized Wildlife Habitats**

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# Nation Rise Wind Farm

## Significant Rare Vegetation Communities & Specialized Wildlife Habitat



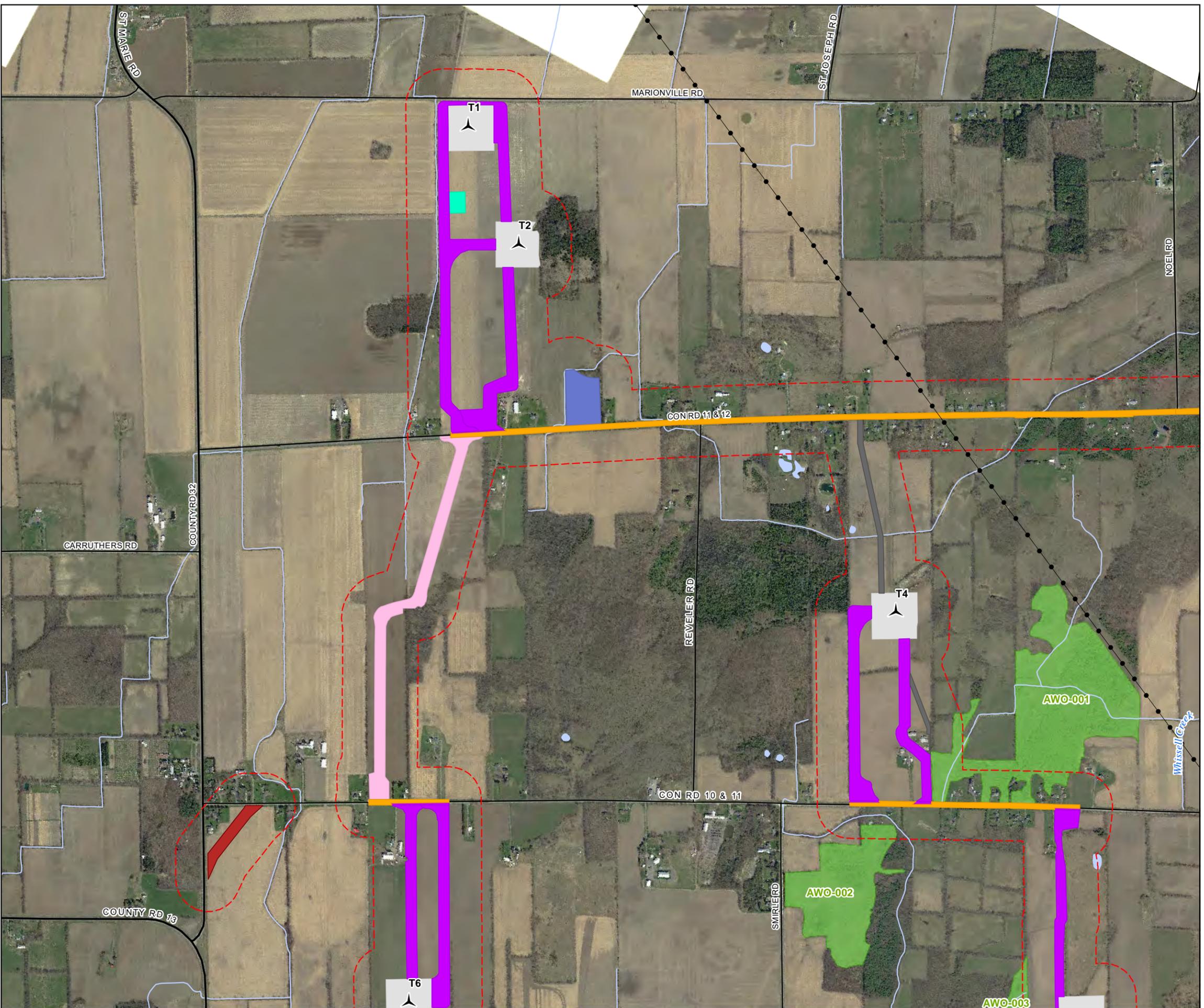
- Legend**
- Utility Line
  - Primary Road
  - Secondary Road
  - ~ Permanent Watercourse (LIO)
  - Open Water (LIO)
  - Project Components**
  - Project Area
  - Proposed Turbine
  - Proposed Access Road and Collection System
  - Proposed Above/Underground Collection System
  - Proposed Underground 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
  - Treated As Significant Specialized Wildlife Habitats\***
  - Amphibian Breeding Habitat (Woodland) (AWO)

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.



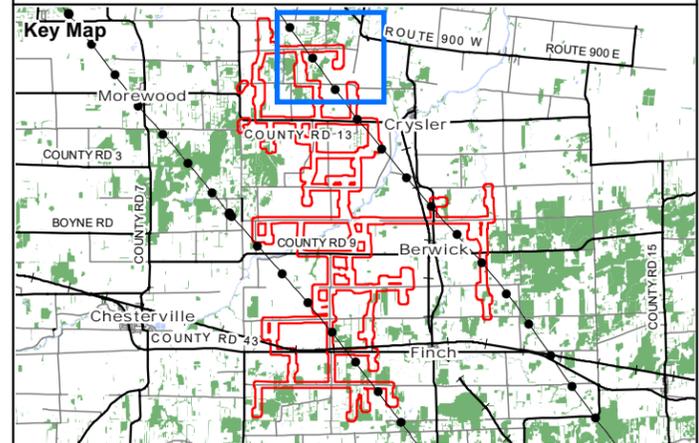
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Project: 1756 Date: June 20, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	



# Nation Rise Wind Farm

## Significant Rare Vegetation Communities & Specialized Wildlife Habitat



**Legend**

- Utility Line
- Railway
- Primary Road
- Secondary Road
- ~ Permanent Watercourse (LIO)
- Open Water (LIO)
- ▭ Treated As Significant Rare Vegetation Communities\*
  - ▭ Alvar (ALV)
- ▭ Treated As Significant Specialized Wildlife Habitats\*
  - ▭ Amphibian Breeding Habitat (Woodland) (AWO)

**Project Components**

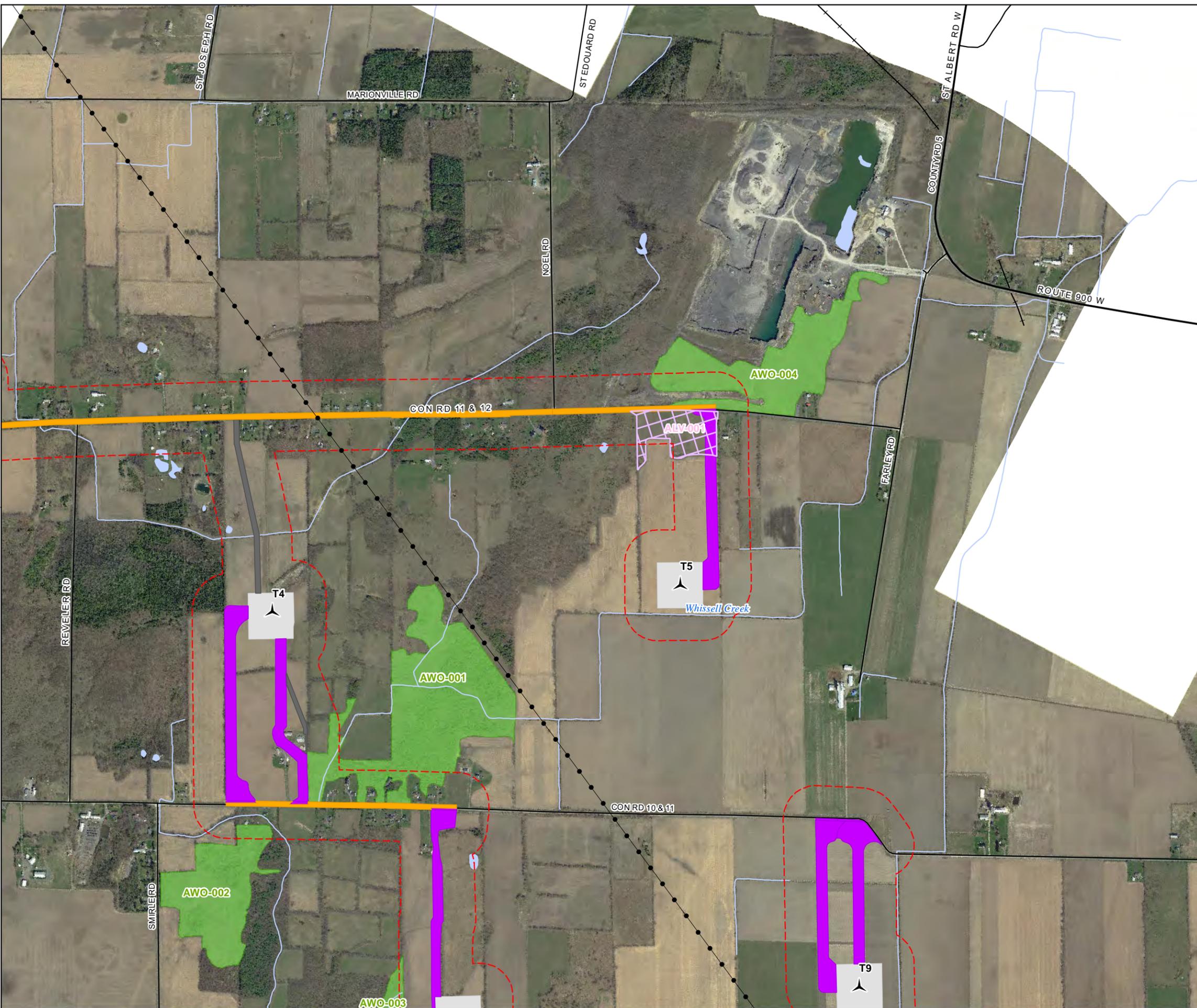
- ▭ Project Area
- ▲ Proposed Turbine
- ▭ Proposed Access Road and Collection System
- ▭ Proposed Above/Underground Collection System
- ▭ Proposed Underground Collection System
- ▭ Proposed Turbine Laydown, Access Road, Collection Line

The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.  
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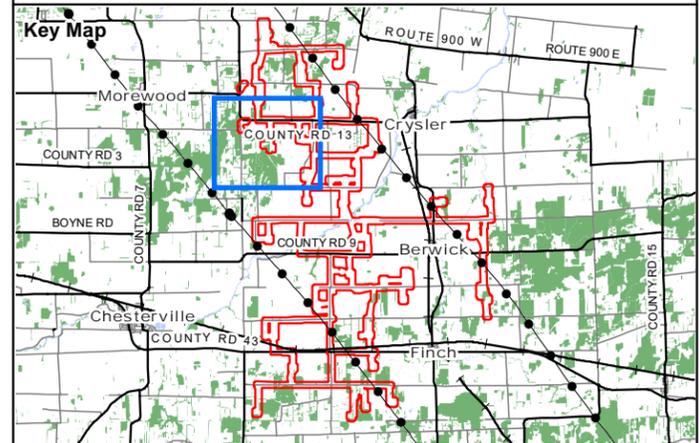
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Project: 1756 Date: June 20, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000



# Nation Rise Wind Farm

## Significant Rare Vegetation Communities & Specialized Wildlife Habitat



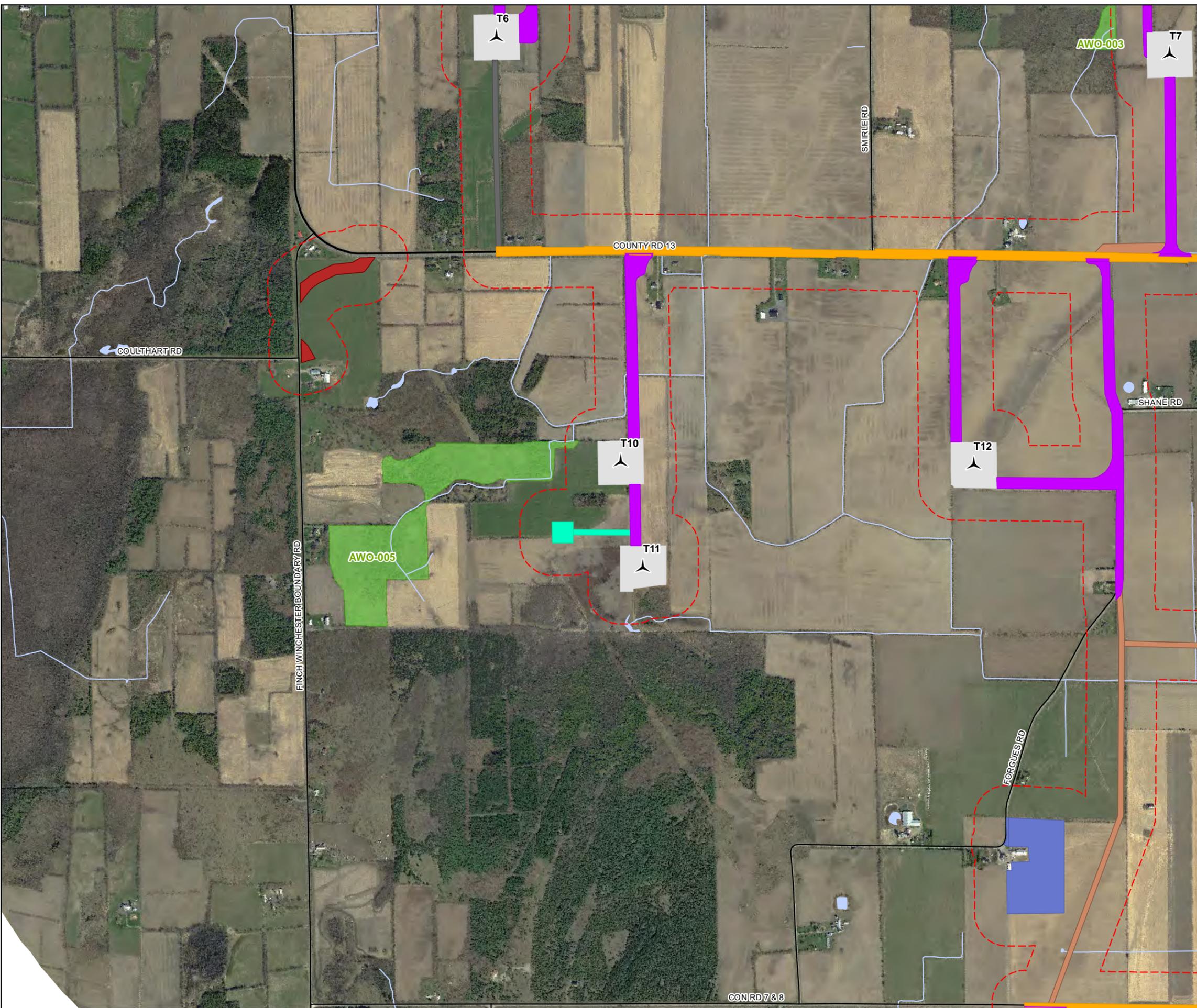
- Legend**
- Primary Road
  - Secondary Road
  - Permanent Watercourse (LIO)
  - Open Water (LIO)
  - Project Area
  - Proposed Turbine
  - Proposed Access Road and Collection System
  - Proposed Above/Underground Collection System
  - Proposed Underground Collection System
  - Proposed Turbine Laydown, Access Road, Collection Line
  - Proposed Laydown
  - Proposed Temporary Turning Radius
  - Proposed Crane Path
  - Proposed Meteorological Tower Footprint and Access Road
  - Treated As Significant Specialized Wildlife Habitats\***
    - Amphibian Breeding Habitat (Woodland) (AWO)

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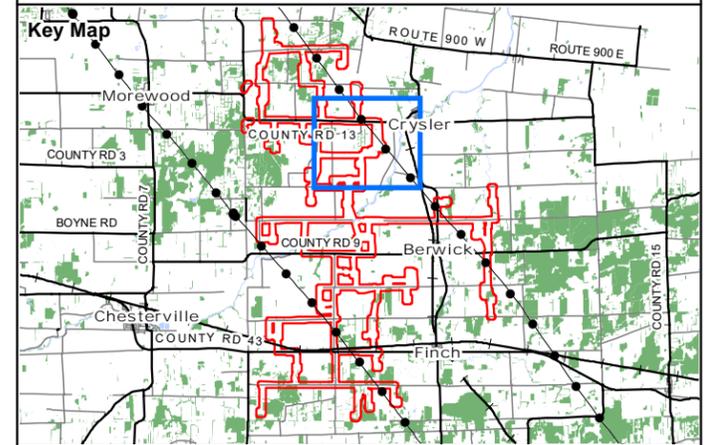


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Project: 1756 Date: June 20, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000



# Nation Rise Wind Farm Significant Rare Vegetation Communities & Specialized Wildlife Habitat



### Legend

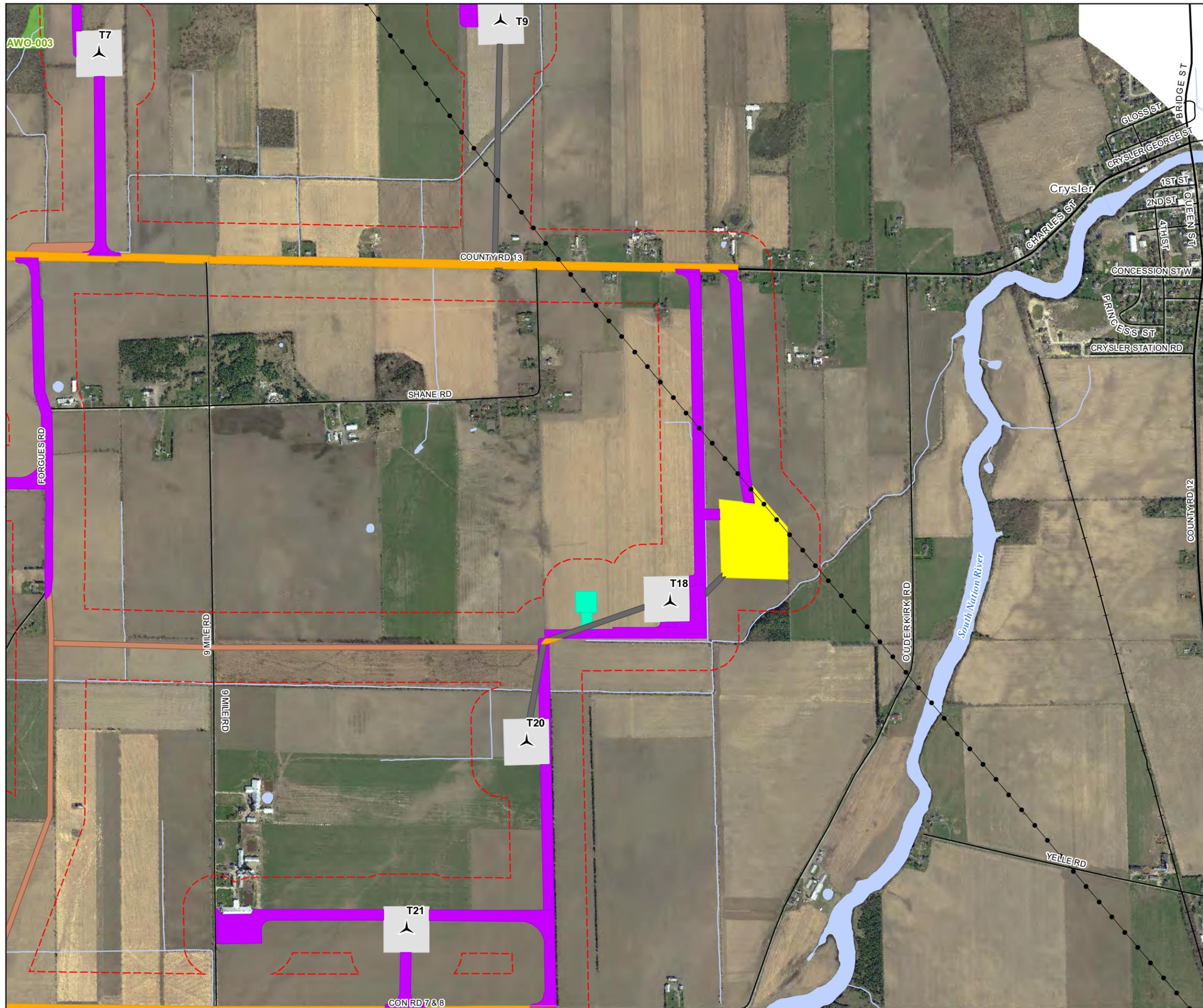
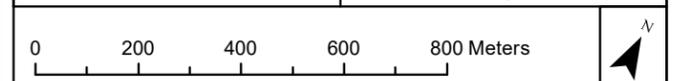
- Utility Line
- Railway
- Primary Road
- Secondary Road
- ~ Permanent Watercourse (LIO)
- Open Water (LIO)
- Project Components**
- Project Area
- Proposed Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- Proposed Turbine Laydown, Access Road, Collection Line
- Proposed Crane Path
- Proposed Meteorological Tower Footprint and Access Road
- Proposed Substation
- Treated As Significant Specialized Wildlife Habitats\***
- Amphibian Breeding Habitat (Woodland) (AWO)

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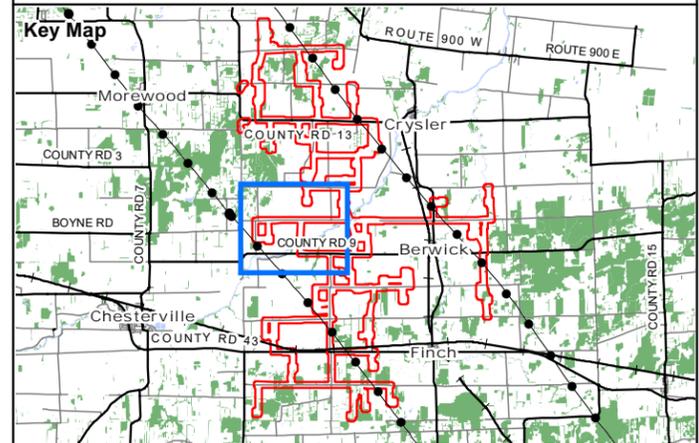
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Project: 1756  
 Date: June 20, 2017  
 NAD83 - UTM Zone 18  
 Size: 11x17"  
 1:14,000



# Nation Rise Wind Farm

## Significant Rare Vegetation Communities & Specialized Wildlife Habitat



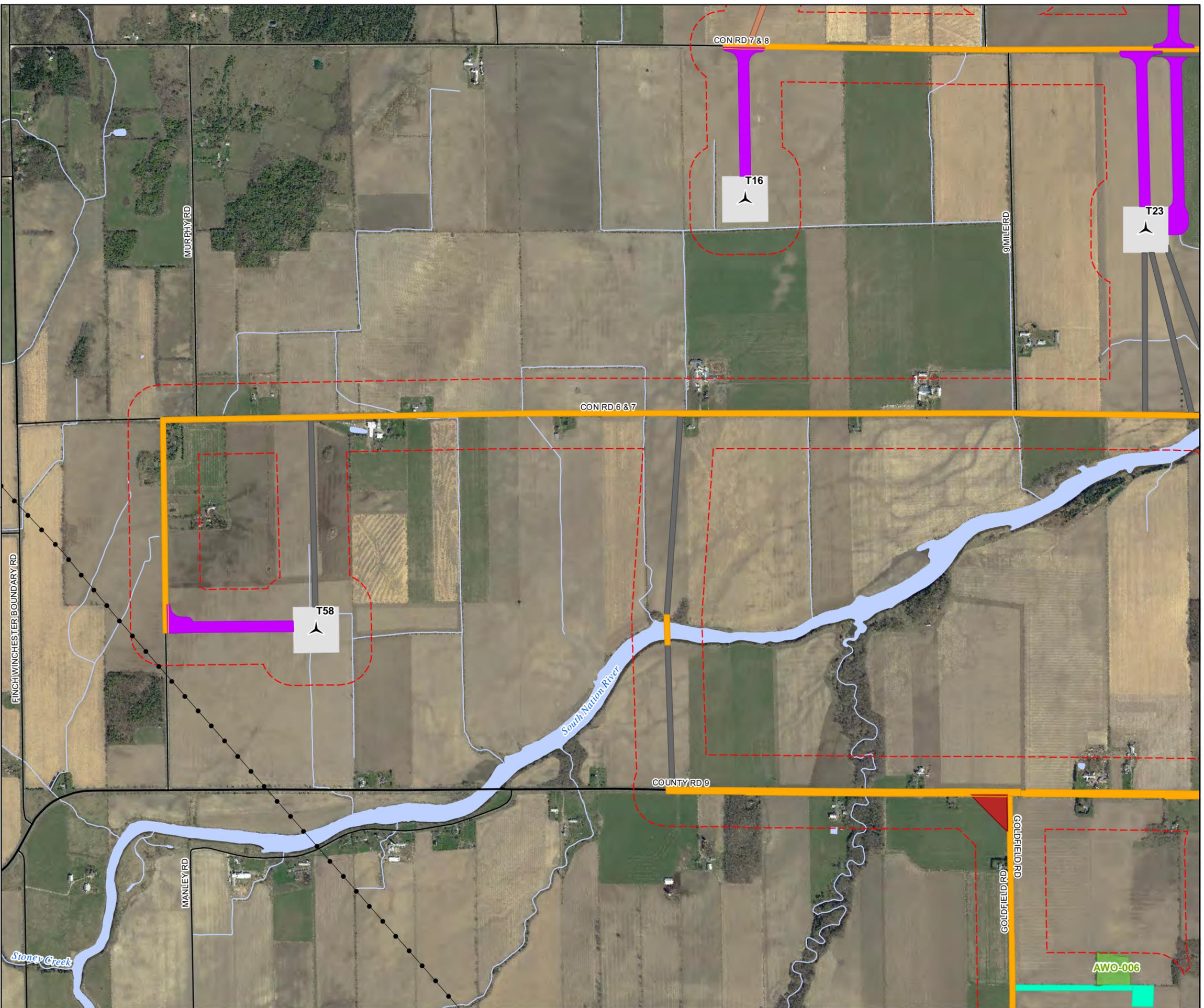
- Legend**
- Utility Line
  - Primary Road
  - Secondary Road
  - ~ Permanent Watercourse (LIO)
  - ~ Open Water (LIO)
  - ▭ Project Area
  - ▲ Proposed Turbine
  - Proposed Access Road and Collection System
  - Proposed Above/Underground Collection System
  - Proposed Underground Collection System
  - Proposed Turbine Laydown, Access Road, Collection Line
  - Proposed Temporary Turning Radius
  - Proposed Crane Path
  - Proposed Meteorological Tower Footprint and Access Road
  - Treated As Significant Specialized Wildlife Habitats\*
    - Amphibian Breeding Habitat (Woodland) (AWO)

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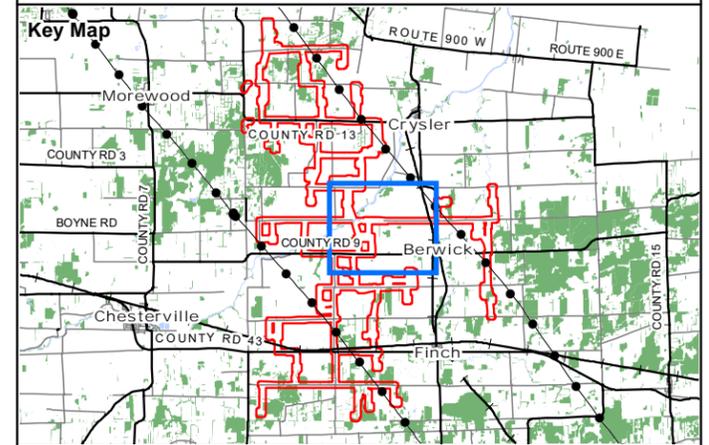


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Project: 1756 Date: June 20, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	



# Nation Rise Wind Farm Significant Rare Vegetation Communities & Specialized Wildlife Habitat



### Legend

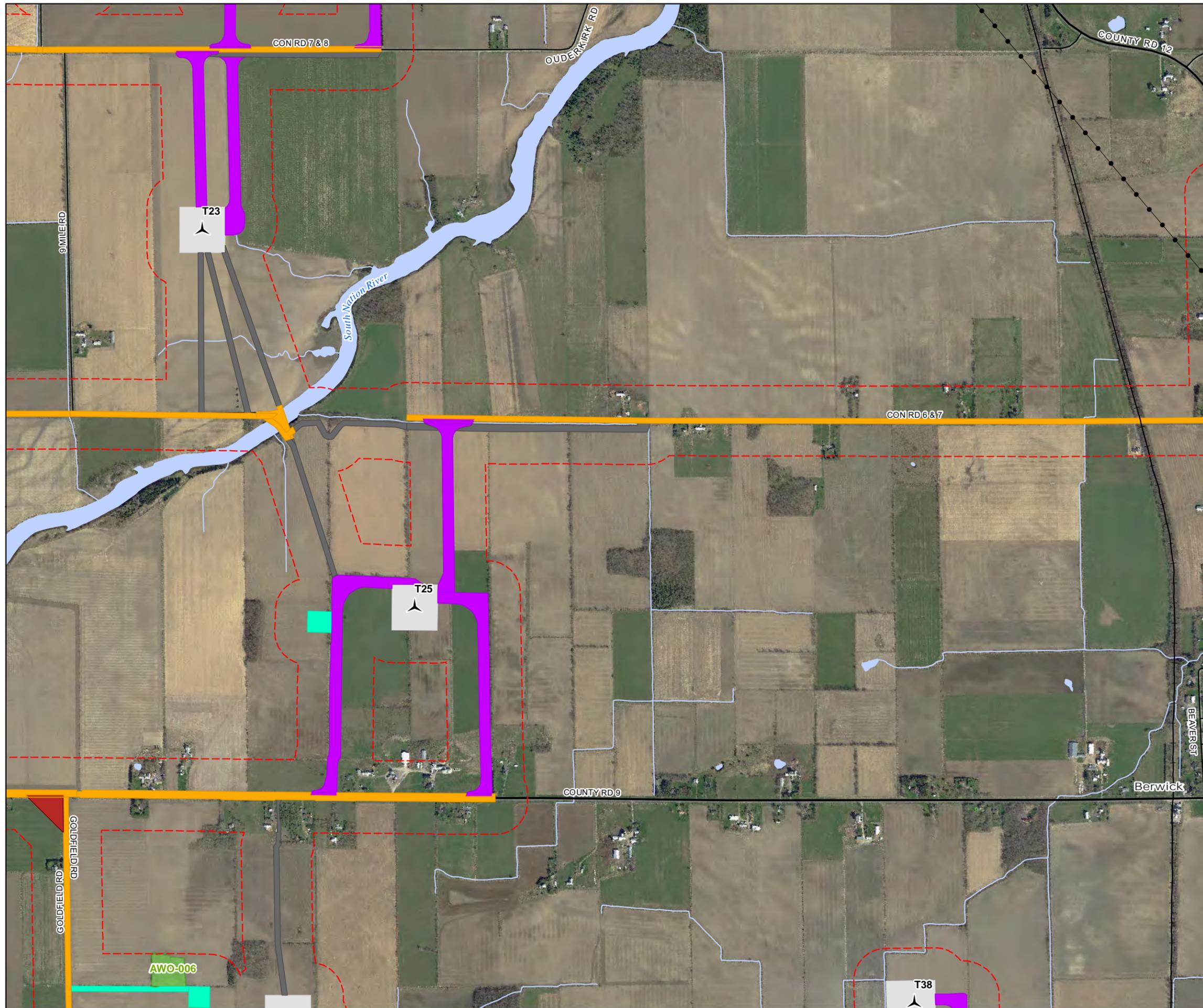
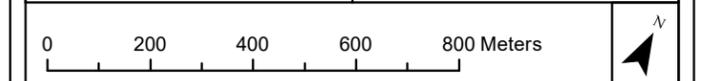
- Utility Line
- Railway
- Primary Road
- Secondary Road
- ~ Permanent Watercourse (LIO)
- Open Water (LIO)
- Project Components**
- Project Area
- Proposed Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- Proposed Turbine Laydown, Access Road, Collection Line
- Proposed Temporary Turning Radius
- Proposed Meteorological Tower Footprint and Access Road
- Treated As Significant Specialized Wildlife Habitats\***
- Amphibian Breeding Habitat (Woodland) (AWO)

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.

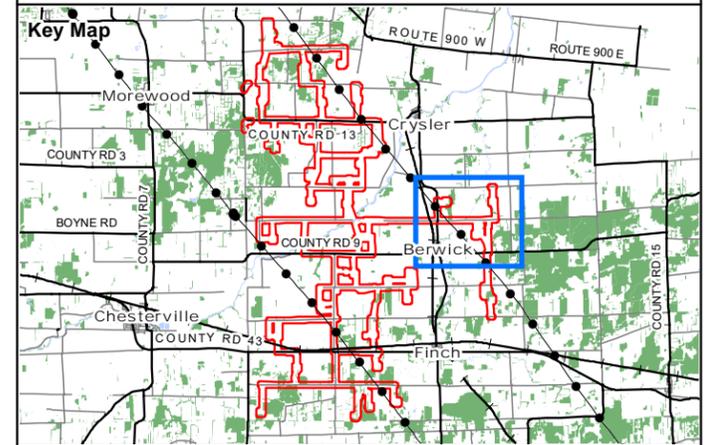


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Project: 1756  
 Date: June 20, 2017  
 NAD83 - UTM Zone 18  
 Size: 11x17"  
 1:14,000



# Nation Rise Wind Farm Significant Rare Vegetation Communities & Specialized Wildlife Habitat



### Legend

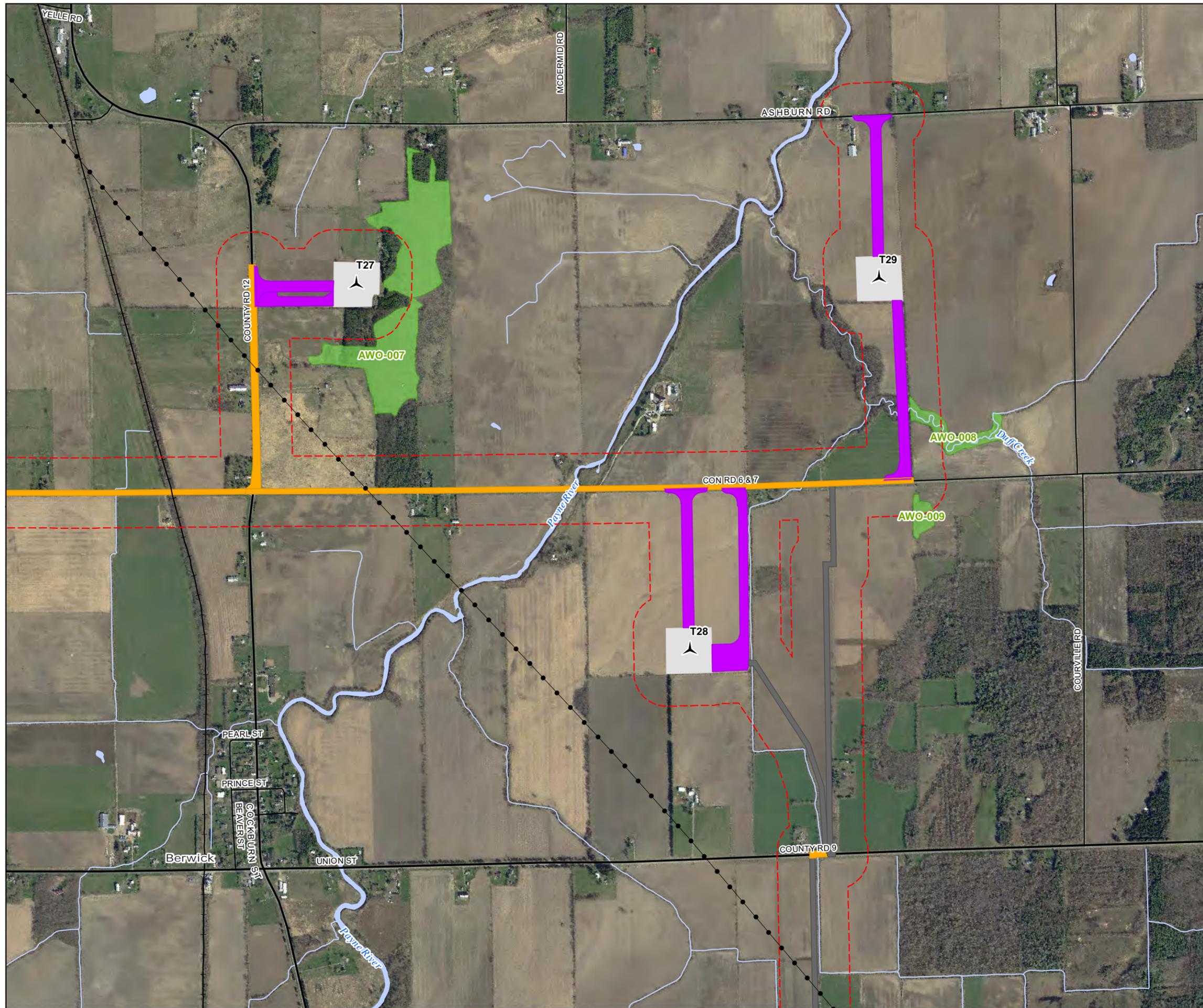
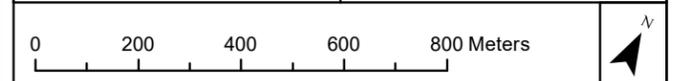
- Utility Line
- Railway
- Primary Road
- Secondary Road
- ~ Permanent Watercourse (LIO)
- Open Water (LIO)
- Project Components**
- Project Area
- Proposed Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- Proposed Turbine Laydown, Access Road, Collection Line
- Treated As Significant Specialized Wildlife Habitats\***
- Amphibian Breeding Habitat (Woodland) (AWO)

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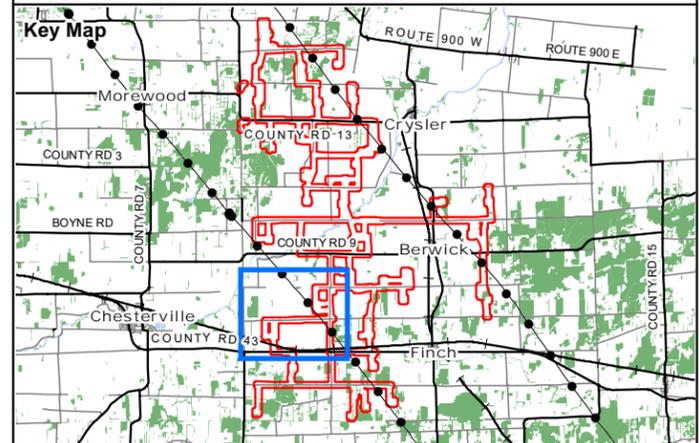


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Project: 1756 Date: June 20, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
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# Nation Rise Wind Farm Significant Rare Vegetation Communities & Specialized Wildlife Habitat

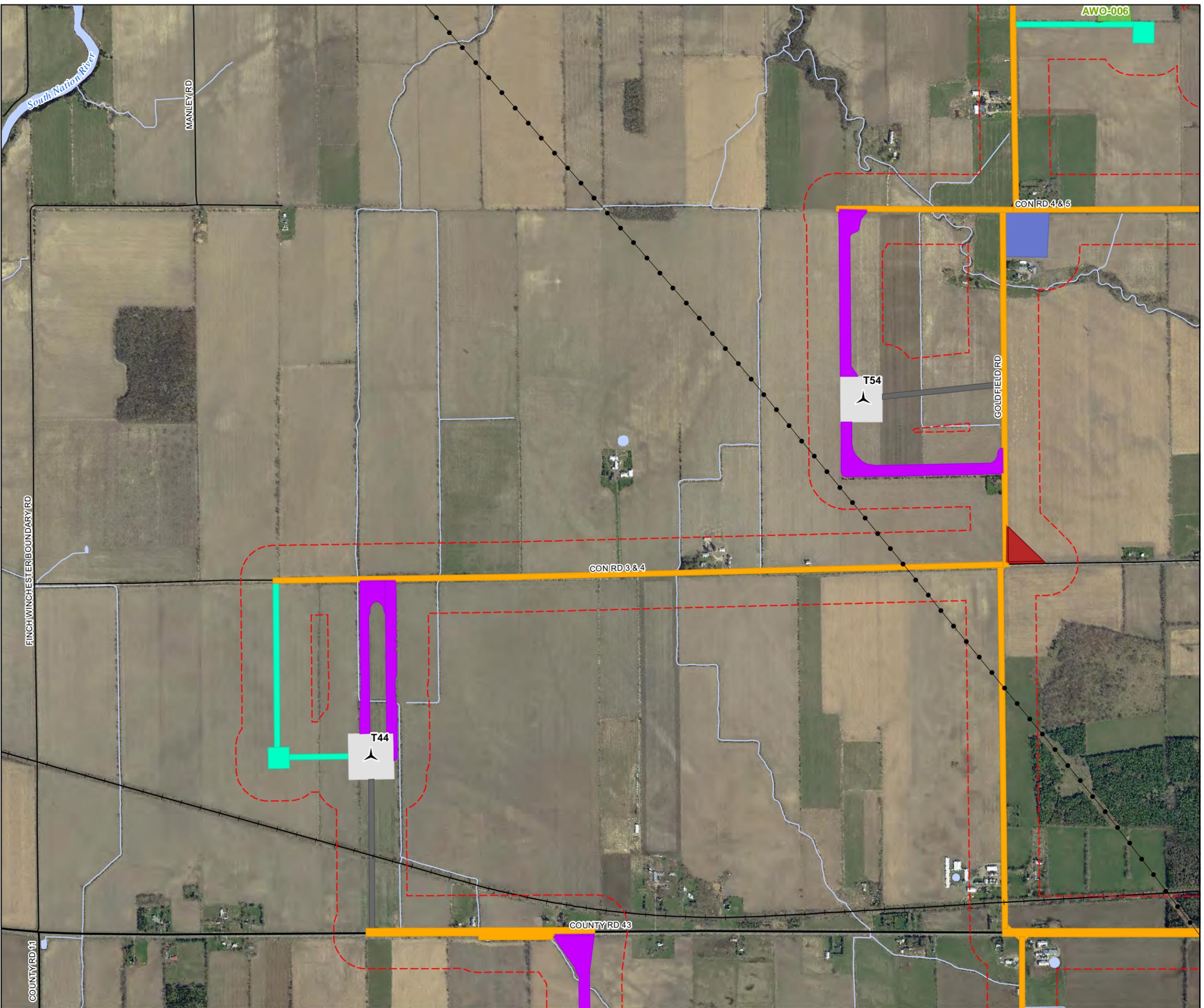
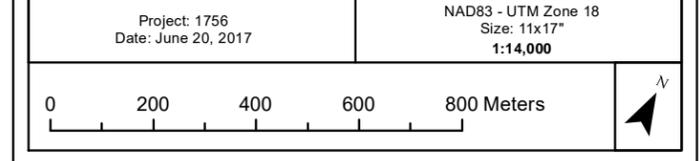


- Legend**
- Utility Line
  - Railway
  - Primary Road
  - Secondary Road
  - ~ Permanent Watercourse (LIO)
  - Open Water (LIO)
  - Project Components**
  - Project Area
  - Proposed Turbine
  - Proposed Access Road and Collection System
  - Proposed Above/Underground Collection System
  - Proposed Underground Collection System
  - Proposed Turbine Laydown, Access Road, Collection Line
  - Proposed Laydown
  - Proposed Temporary Turning Radius
  - Proposed Meteorological Tower Footprint and Access Road
  - Treated As Significant Specialized Wildlife Habitats\***
  - Amphibian Breeding Habitat (Woodland) (AWO)

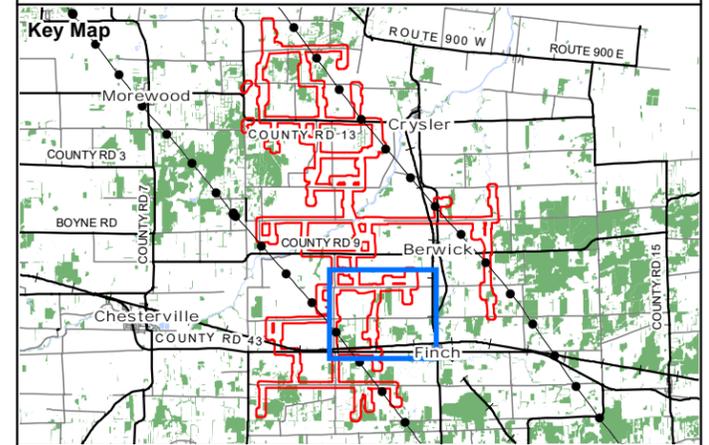
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# Nation Rise Wind Farm Significant Rare Vegetation Communities & Specialized Wildlife Habitat



### Legend

- Utility Line
  - Railway
  - Primary Road
  - Secondary Road
  - ~ Permanent Watercourse (LIO)
  - ~ Open Water (LIO)
  - ▲ 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 Crane Path
  - █ Proposed Meteorological Tower Footprint and Access Road
- Treated As Significant Rare Vegetation Communities\***
- ▨ Tallgrass Prairie
- Treated As Significant Specialized Wildlife Habitats\***
- █ Amphibian Breeding Habitat (Woodland) (AWO)

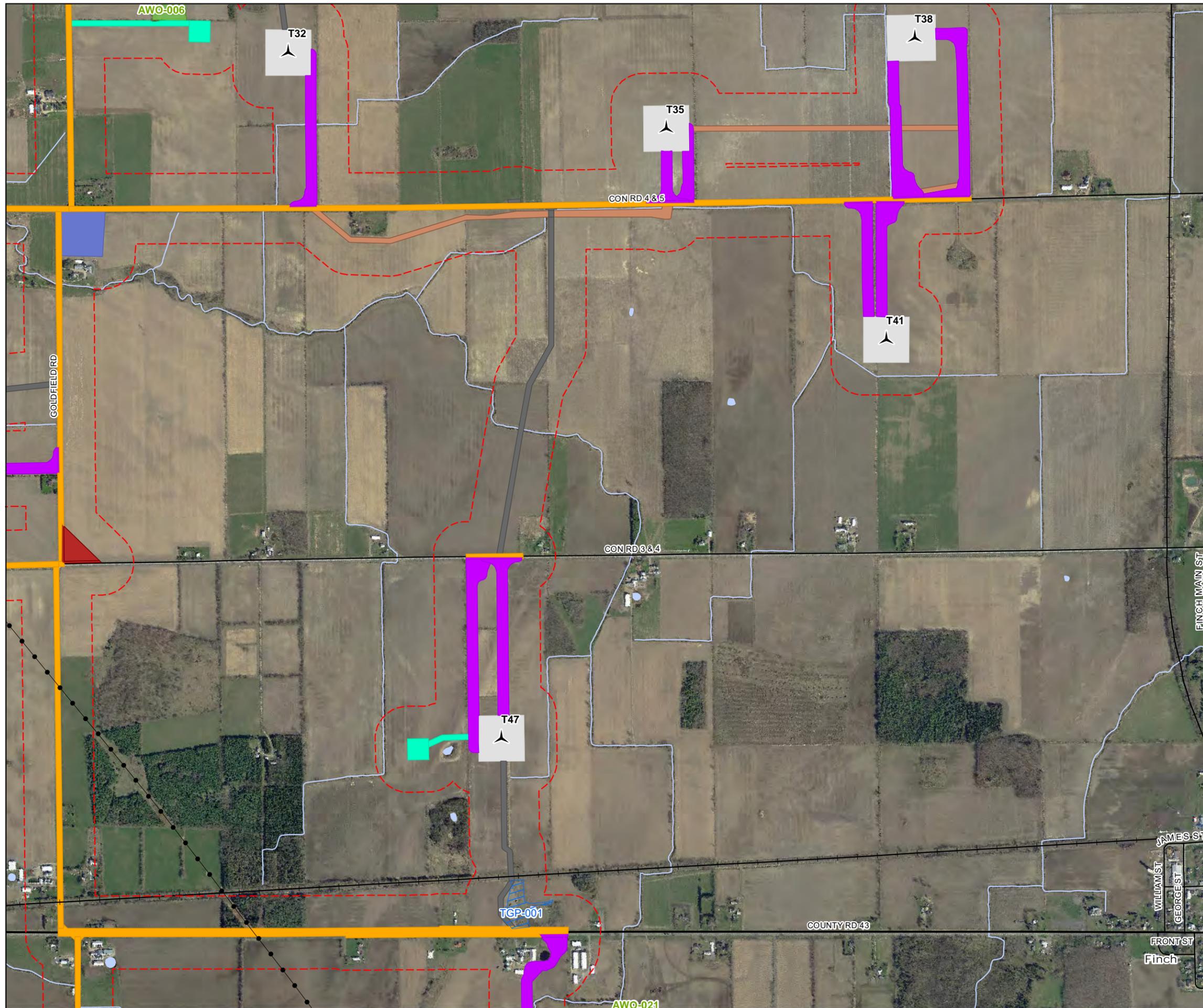
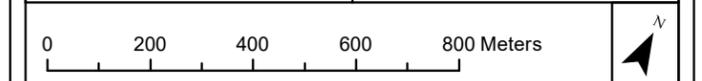
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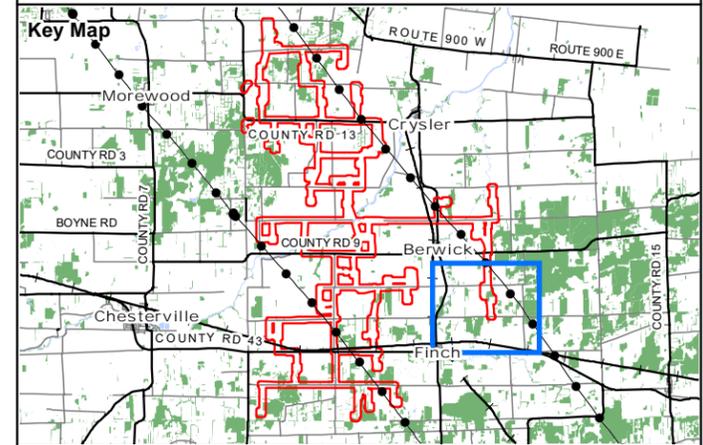
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Project: 1756  
Date: June 20, 2017

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



# Nation Rise Wind Farm Significant Rare Vegetation Communities & Specialized Wildlife Habitat



### Legend

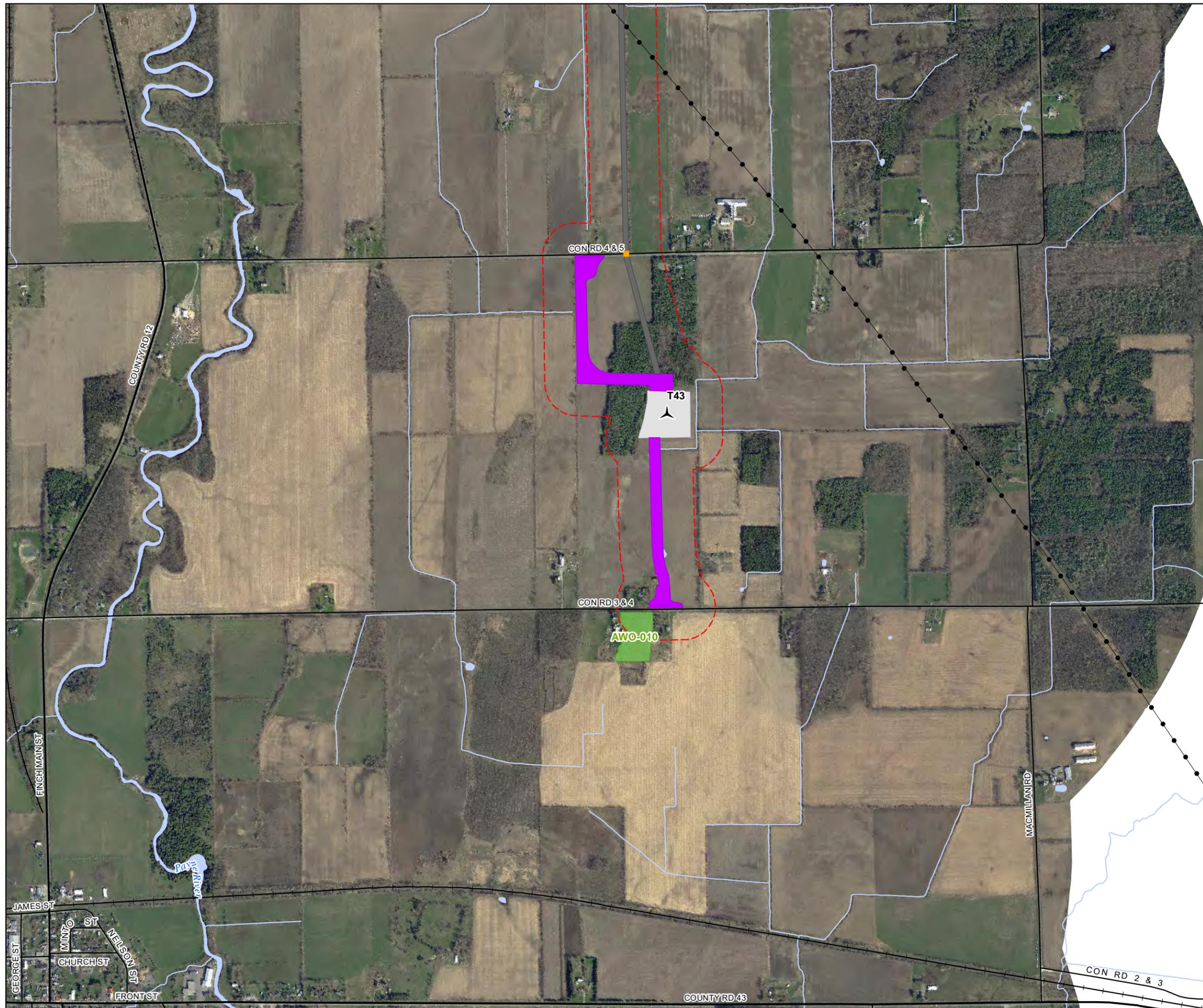
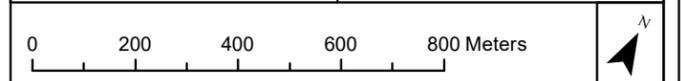
- Utility Line
- Railway
- Primary Road
- Secondary Road
- ~ Permanent Watercourse (LIO)
- ~ Open Water (LIO)
- Project Components**
- ▭ Project Area
- ▲ Proposed Turbine
- █ Proposed Access Road and Collection System
- █ Proposed Above/Underground Collection System
- █ Proposed Underground Collection System
- █ Proposed Turbine Laydown, Access Road, Collection Line
- Treated As Significant Specialized Wildlife Habitats\***
- █ Amphibian Breeding Habitat (Woodland) (AWO)

The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.  
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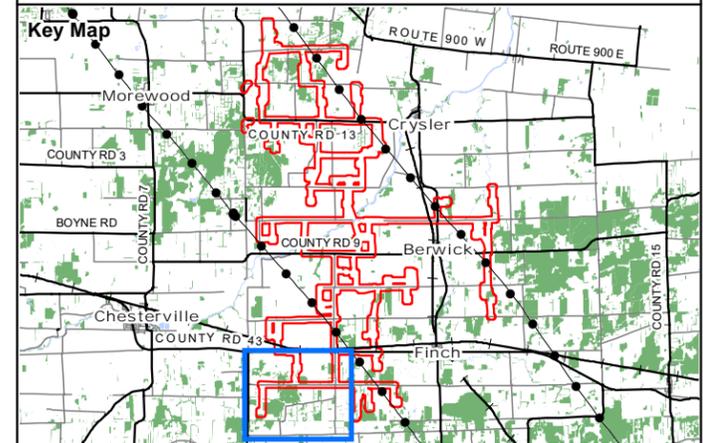
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Project: 1756 Date: June 20, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
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# Nation Rise Wind Farm

## Significant Rare Vegetation Communities & Specialized Wildlife Habitat



**Legend**

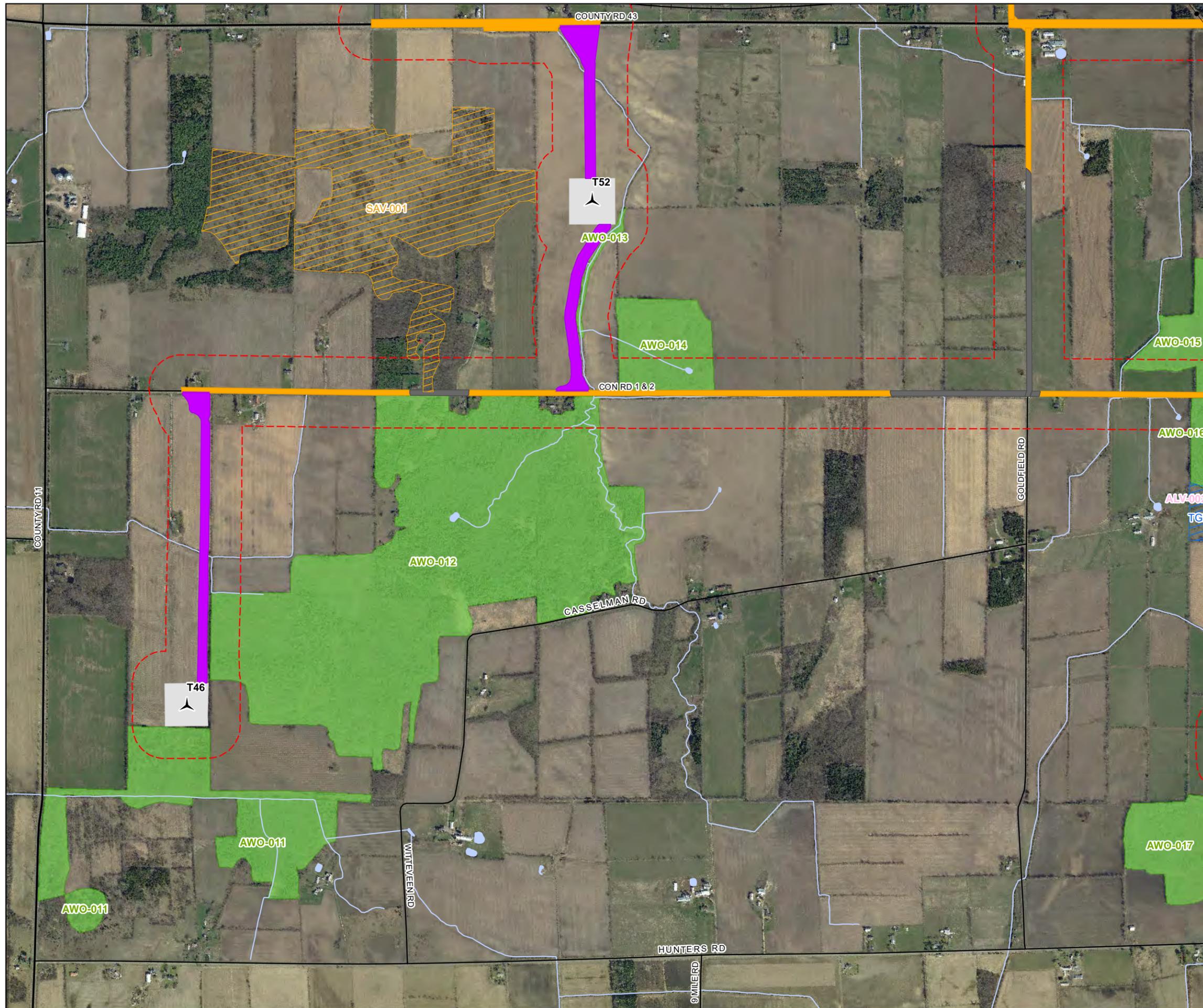
- Utility Line
  - Railway
  - Primary Road
  - Secondary Road
  - Permanent Watercourse (LIO)
  - Open Water (LIO)
  - Project Area
  - ▲ Proposed Turbine
  - Proposed Access Road and Collection System
  - Proposed Above/Underground Collection System
  - Proposed Underground Collection System
  - Proposed Turbine Laydown, Access Road, Collection Line
- 
- Treated As Significant Rare Vegetation Communities\***
- Savannah
  - Tallgrass Prairie
- Treated As Significant Specialized Wildlife Habitats\***
- Amphibian Breeding Habitat (Woodland) (AWO)

The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.  
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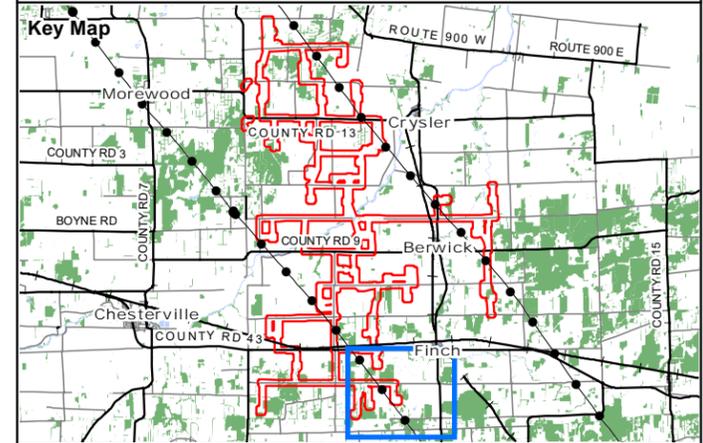
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Project: 1756 Date: June 20, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000



# Nation Rise Wind Farm

## Significant Rare Vegetation Communities & Specialized Wildlife Habitat



### Legend

- Utility Line
- Railway
- 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
- Significant Rare Vegetation Communities**
- Old Growth Forest (OGF)
- Significant Specialized Wildlife Habitats**
- Amphibian Breeding Habitat (Woodland) (AWO)
- Treated As Significant Rare Vegetation Communities\***
- Alvar (ALV)
- Tallgrass Prairie
- Treated As Significant Specialized Wildlife Habitats\***
- Amphibian Breeding Habitat (Woodland) (AWO)

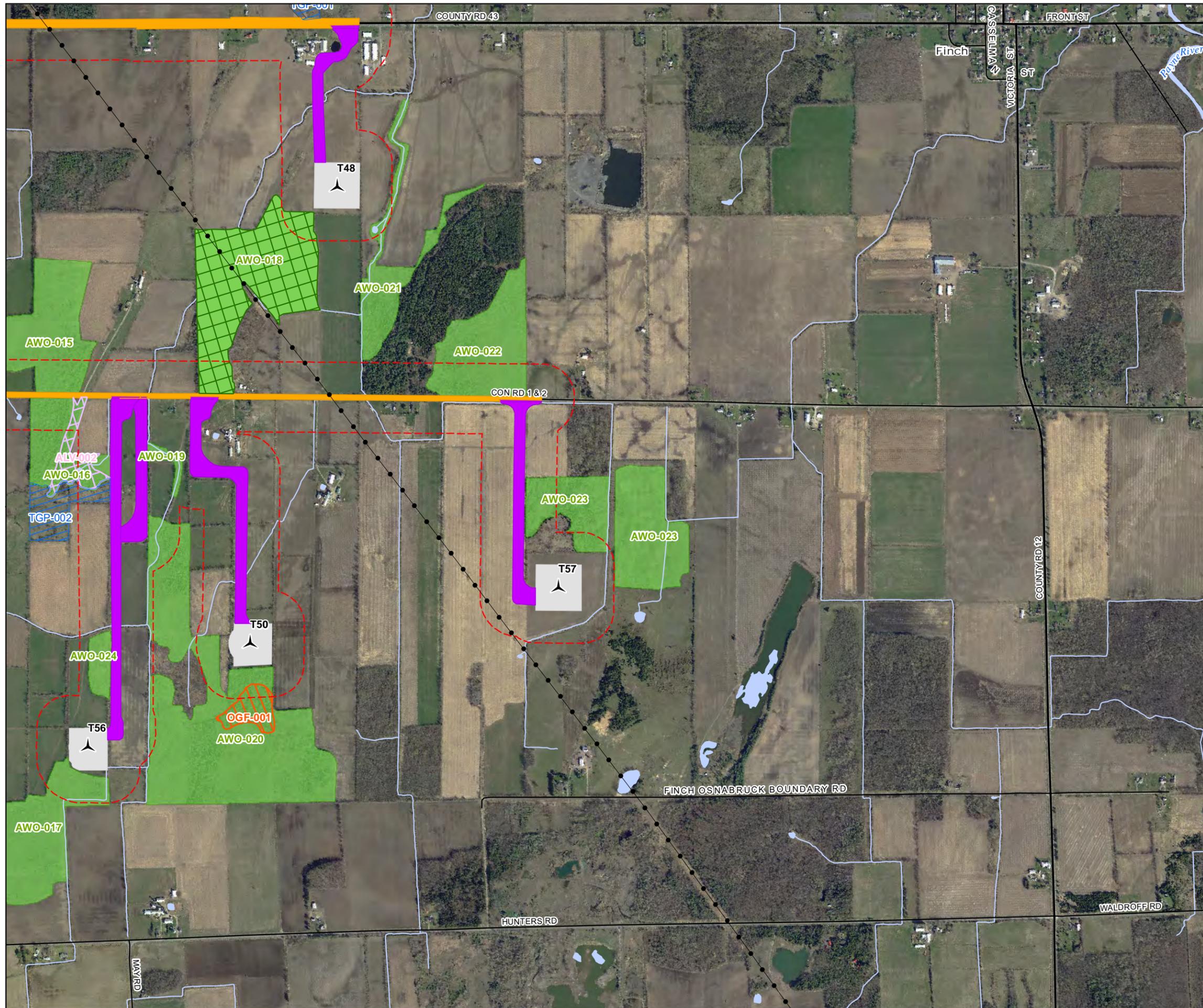
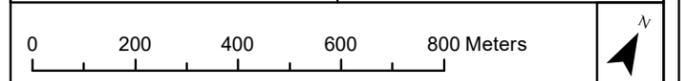
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Project: 1756  
 Date: June 20, 2017

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

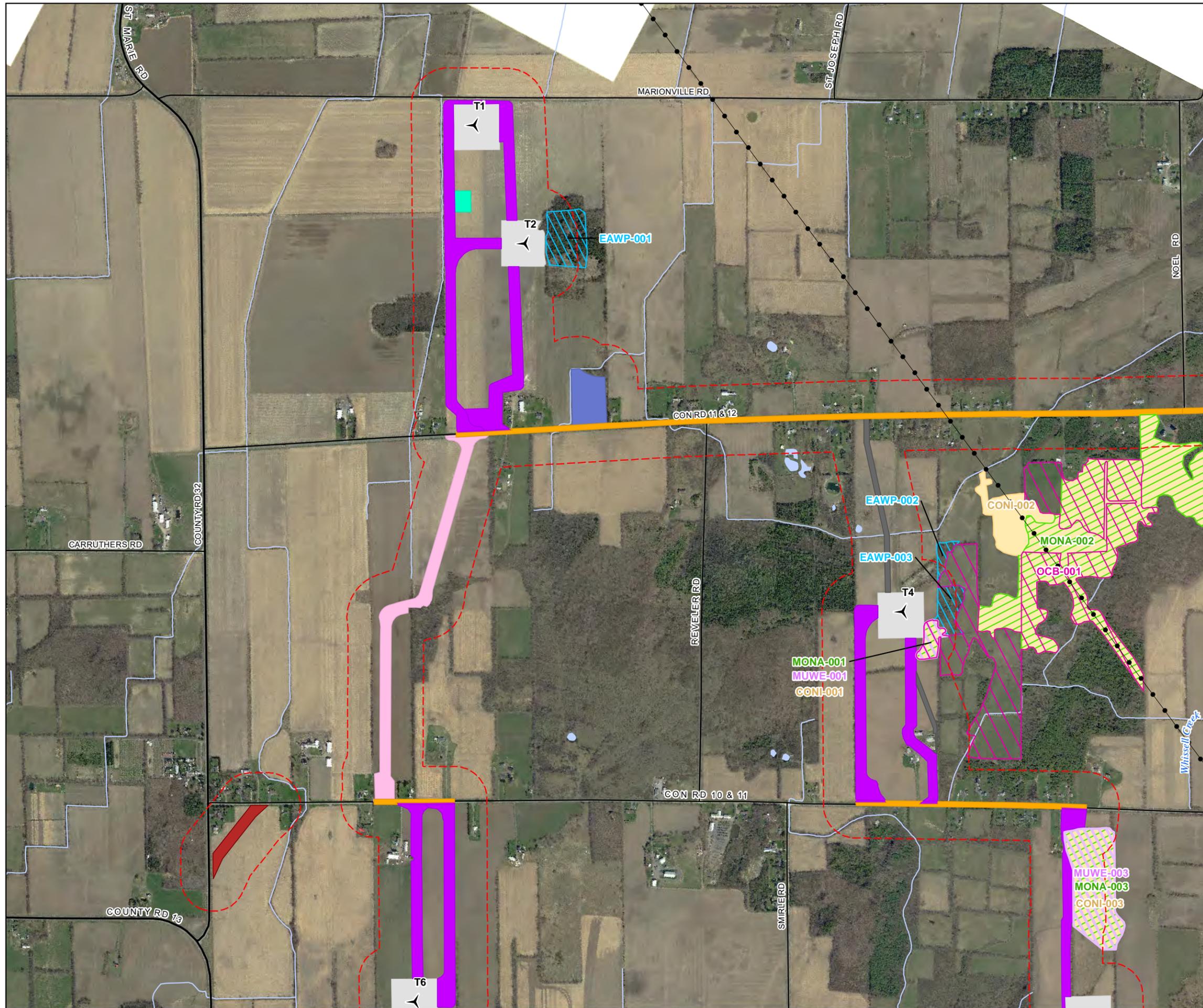
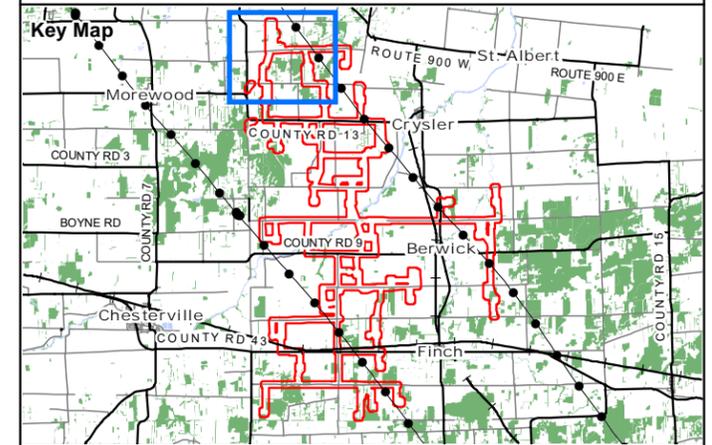


**Maps 5-1 to 5-12**  
Significant Habitats for Species of Conservation Concern

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# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



**Legend**

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- 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 Area
- Proposed Temporary Turning Radius
- Proposed Temporary Access Road for Construction
- Proposed Meteorological Tower Footprint and Access Road

**Treated As Significant Habitats for Species of Conservation Concern\***

- Eastern Wood-Pewee (EAWP)
- Open Country Bird Breeding Habitat (OCB)
- Common Nighthawk (CONI)
- Mühlenberg's Weissia (MUWE)
- Monarch (MONA)

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.

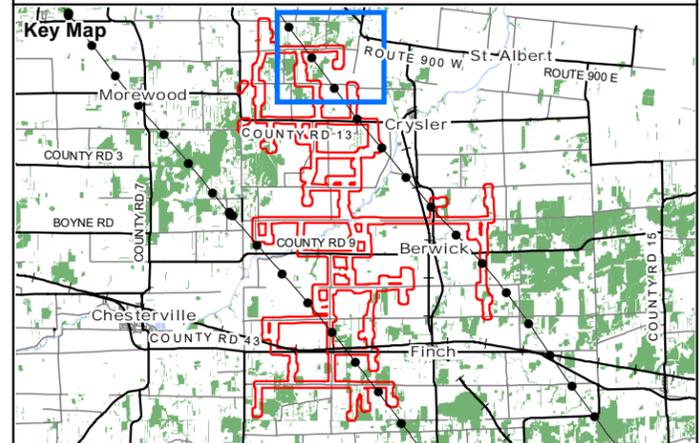


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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



**Legend**

- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- Proposed Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- Proposed Turbine Laydown, Access Road, Collection Line

**Treated As Significant Habitats for Species of Conservation Concern\***

- Eastern Wood-Pewee (EAWP)
- Open Country Bird Breeding Habitat (OCB)
- Common Nighthawk (CONI)
- Mühlenberg's Weissia (MUWE)
- Monarch (MONA)

**Project Components**

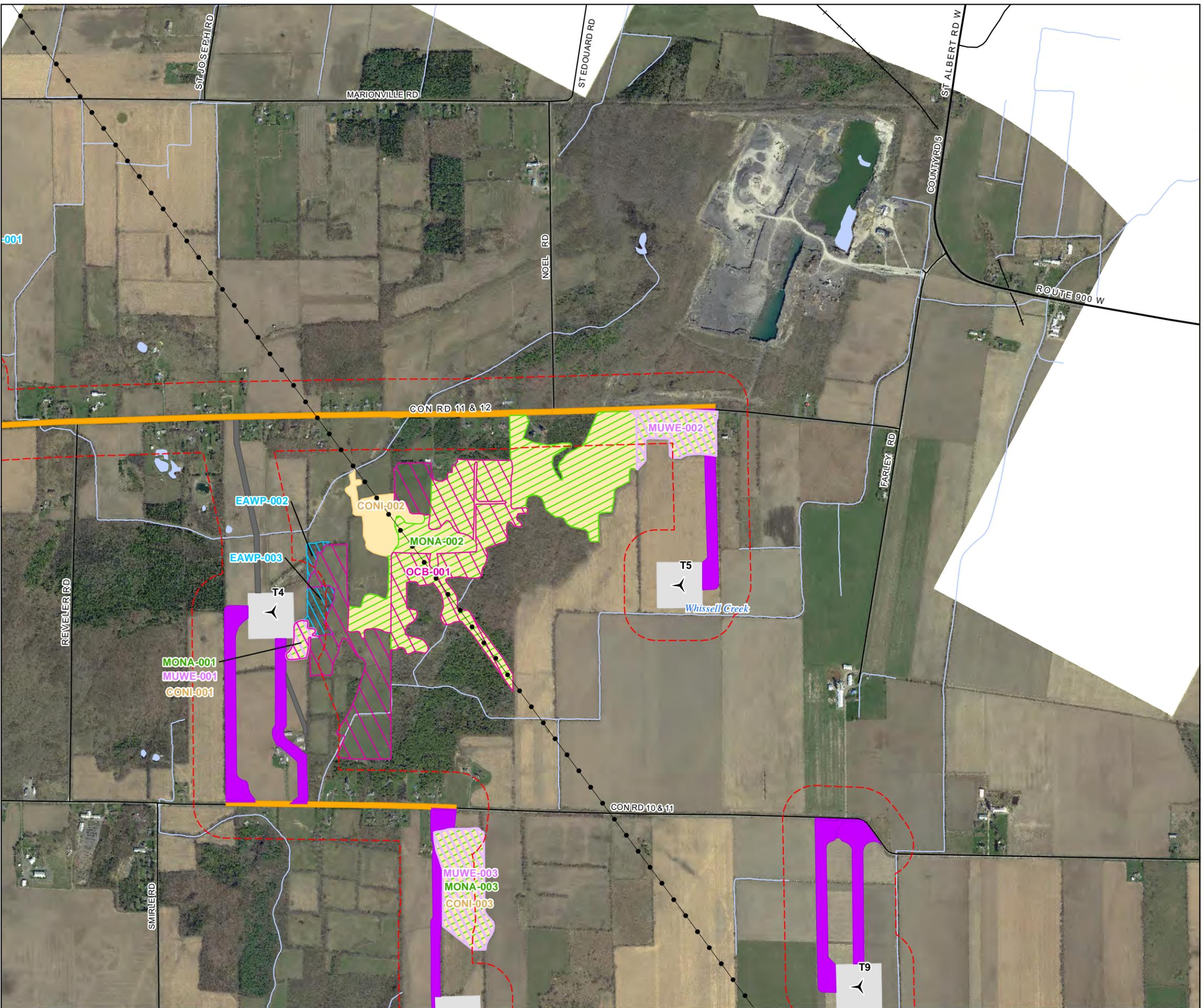
- Project Area

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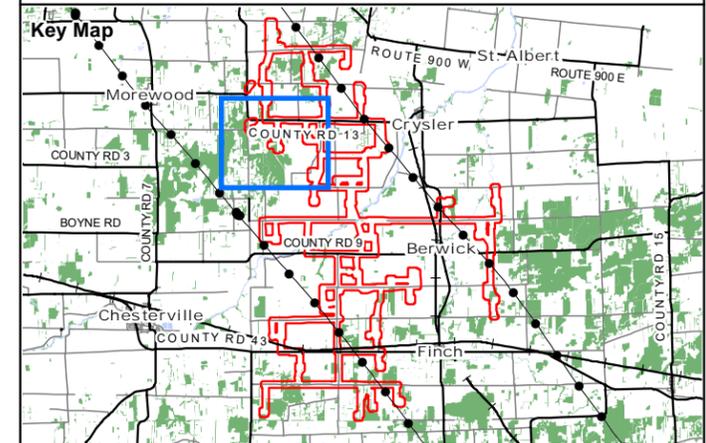
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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	



# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



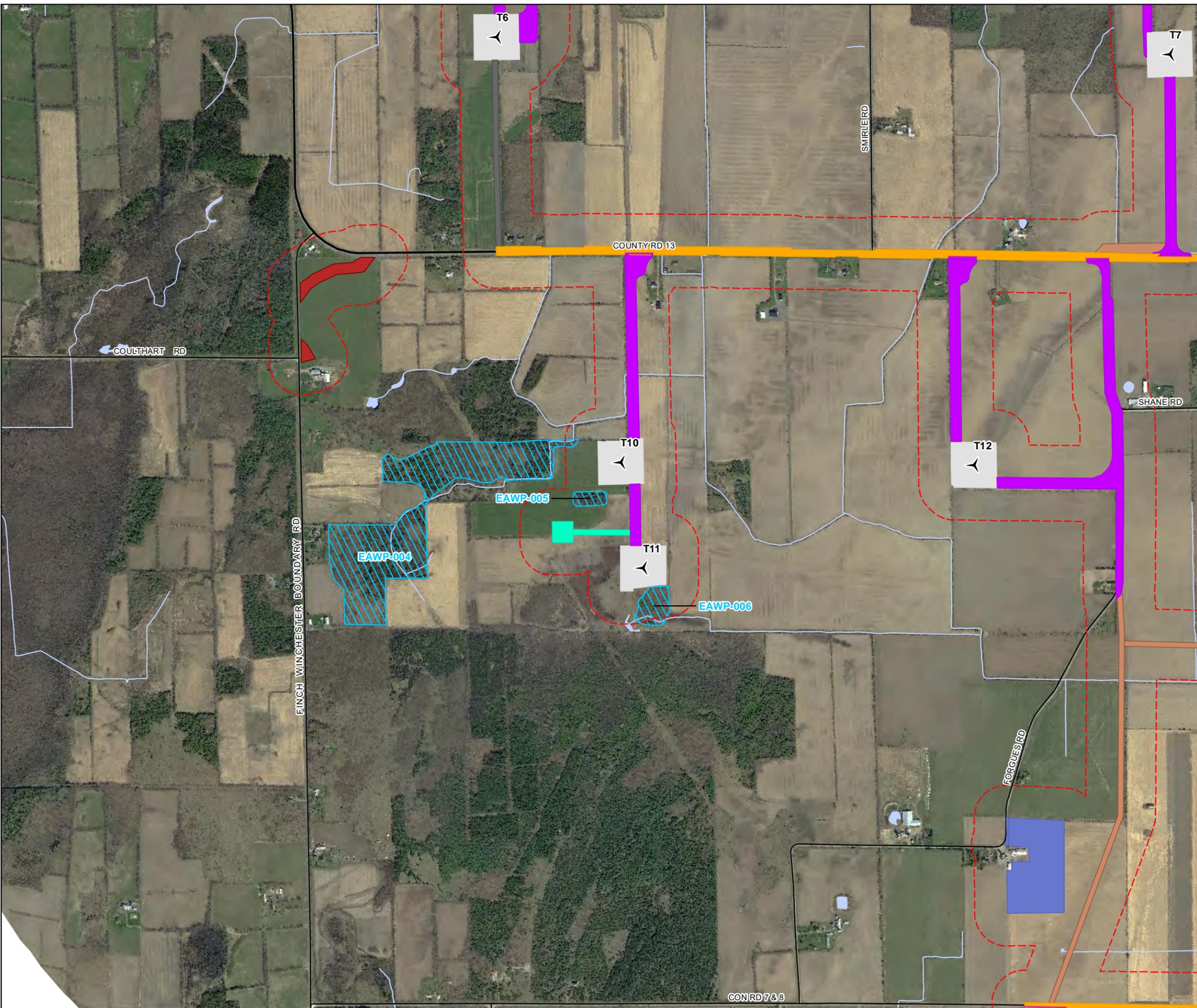
- Legend**
- Primary Road
  - Secondary Road
  - ~ Permanent Watercourse (LIO)
  - Open Water (LIO)
  - Project Area
  - ⊙ Proposed Turbine
  - Proposed Access Road and Collection System
  - Proposed Above/Underground Collection System
  - Proposed Underground Collection System
  - Proposed Turbine Laydown, Access Road, Collection Line
  - Proposed Laydown
  - Proposed Temporary Turning Radius
  - Proposed Crane Path
  - Proposed Meteorological Tower Footprint and Access Road
- Treated As Significant Habitats for Species of Conservation Concern\***
- Eastern Wood-Pewee (EAWP)

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.



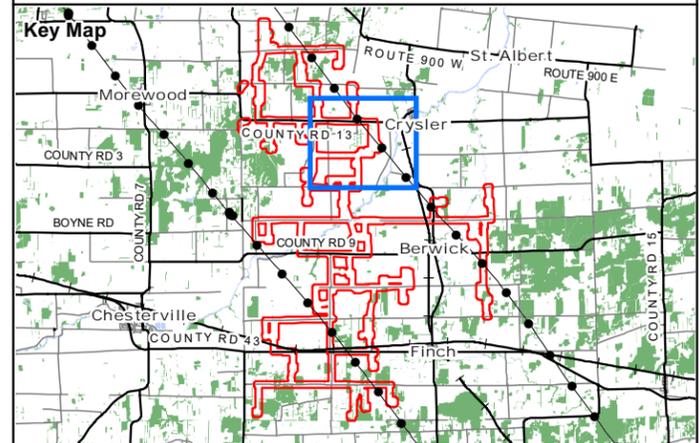
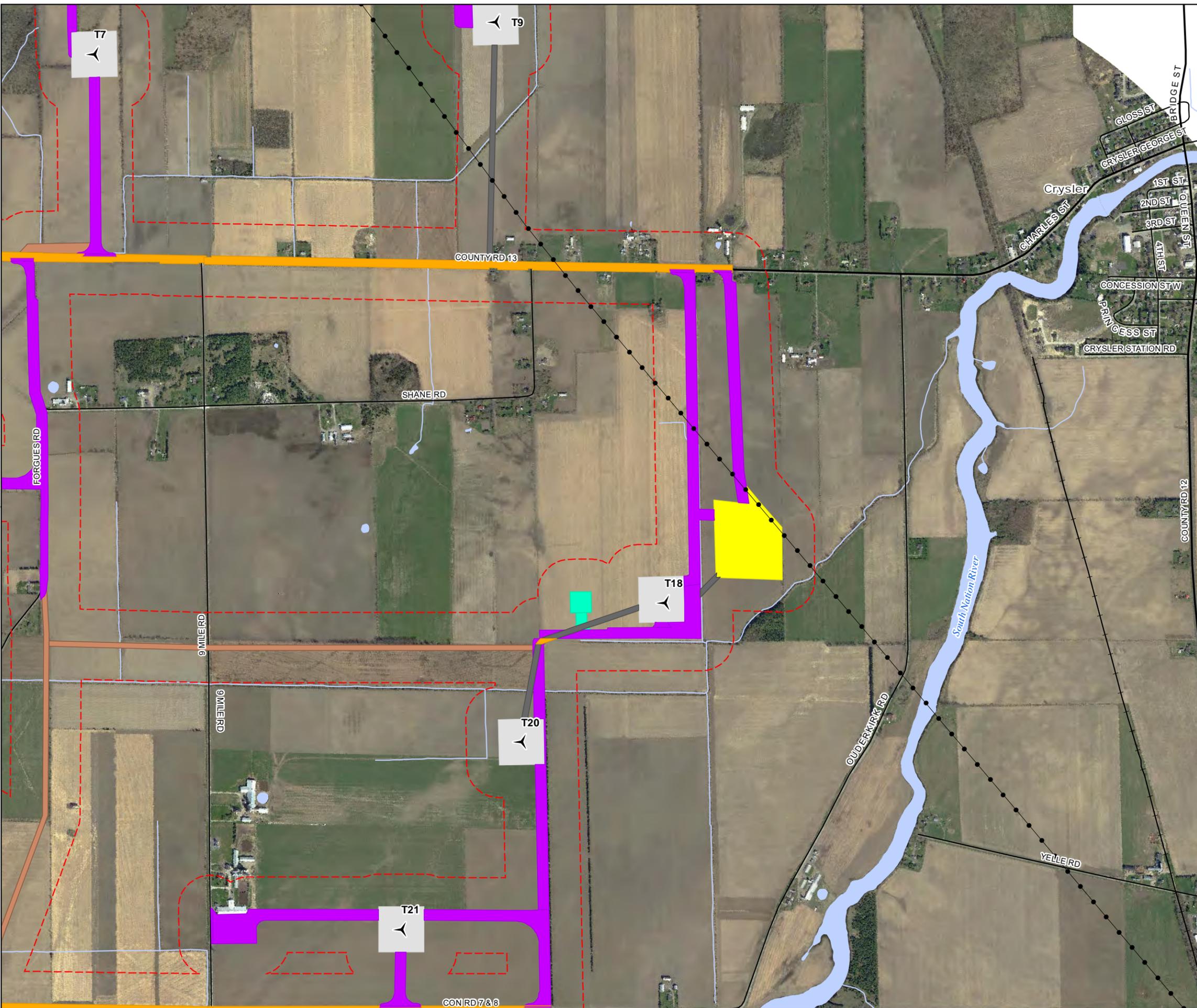
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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	



# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



### Legend

- Utility Line
- Railway
- 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

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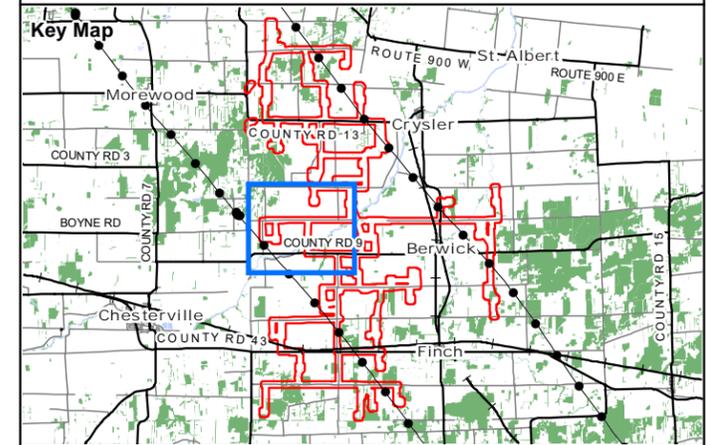


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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



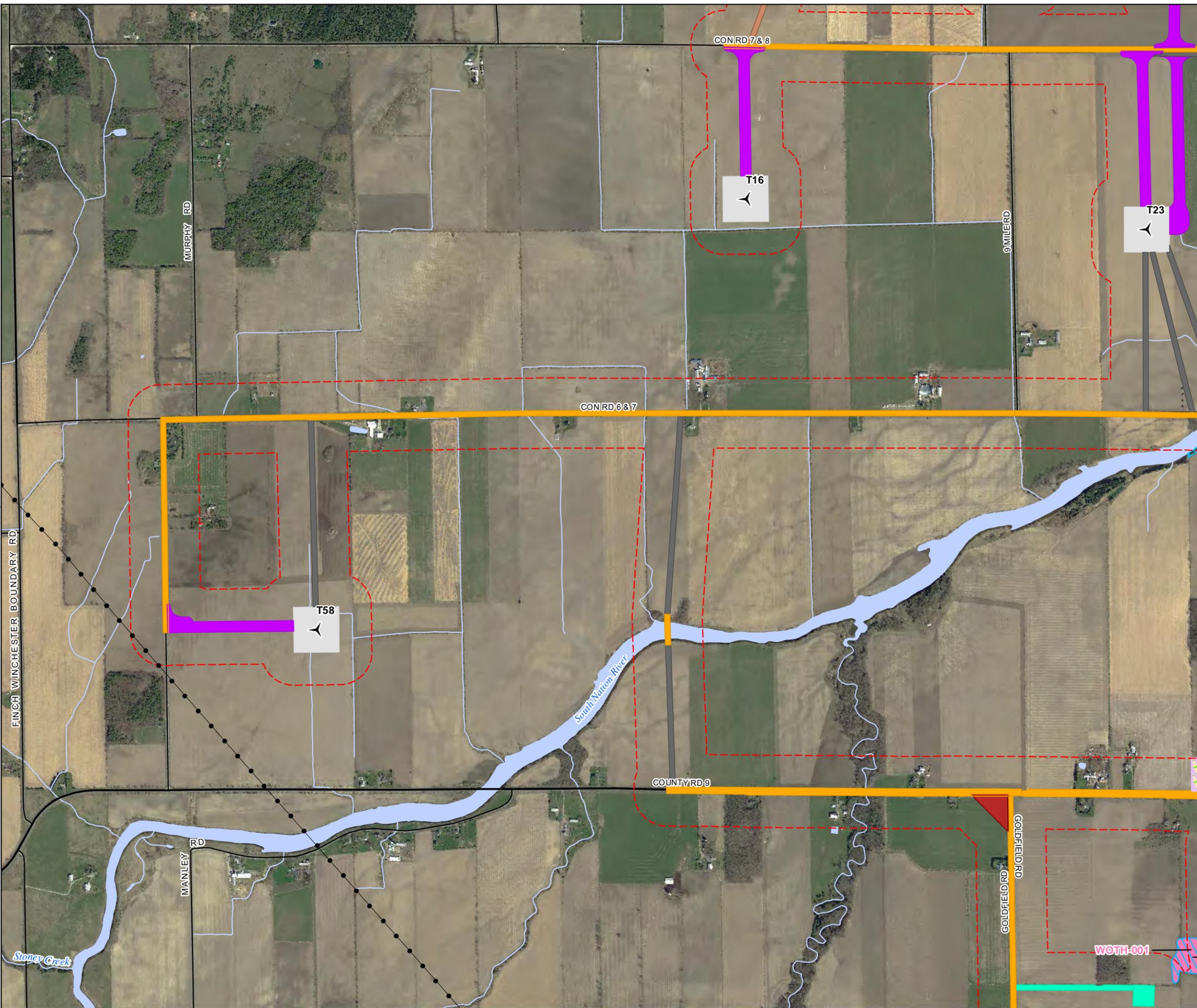
- Legend**
- Utility Line
  - Primary Road
  - Secondary Road
  - ~ Permanent Watercourse (LIO)
  - ~ Open Water (LIO)
  - ▭ Project Area
  - ▲ Proposed Turbine
  - Proposed Access Road and Collection System
  - Proposed Above/Underground Collection System
  - Proposed Underground Collection System
  - Proposed Turbine Laydown, Access Road, Collection Line
  - Proposed Temporary Turning Radius
  - Proposed Crane Path
  - Proposed Meteorological Tower Footprint and Access Road
- Treated As Significant Habitats for Species of Conservation Concern\***
- ▭ Eastern Wood-Pewee (EAWP)
  - ▭ Common Nighthawk (CONI)
  - ▭ Wood Thrush (WOTH)
  - ▭ Mühlenberg's Weissia (MUWE)
  - ▭ Monarch (MONA)

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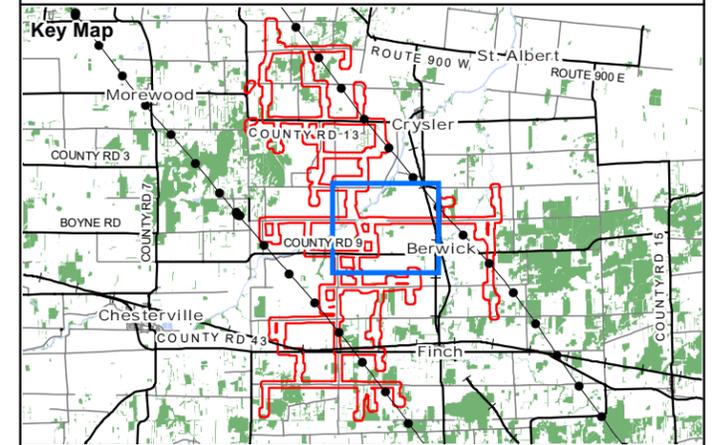
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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	



# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



### Legend

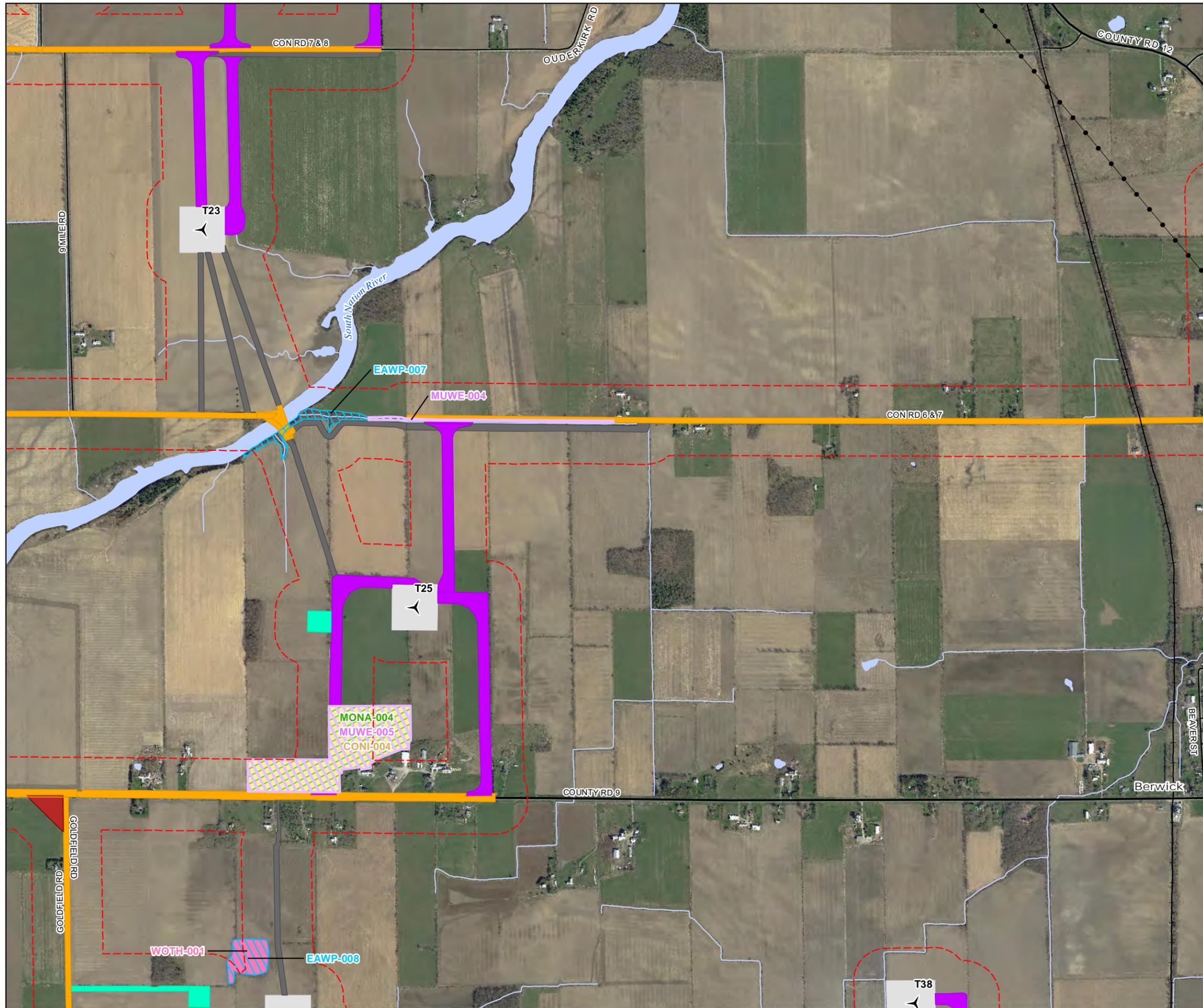
- Utility Line
  - Railway
  - Primary Road
  - Secondary Road
  - Permanent Watercourse (LIO)
  - Open Water (LIO)
  - Project Area
  - ▲ Proposed Turbine
  - Proposed Access Road and Collection System
  - Proposed Above/Underground Collection System
  - Proposed Underground Collection System
  - Proposed Turbine Laydown, Access Road, Collection Line
  - Proposed Temporary Turning Radius
  - Proposed Meteorological Tower Footprint and Access Road
- 
- #### Treated As Significant Habitats for Species of Conservation Concern\*
- Eastern Wood-Pewee (EAWP)
  - Common Nighthawk (CONI)
  - Wood Thrush (WOTH)
  - Mühlenberg's Weissia (MUWE)
  - Monarch (MONA)

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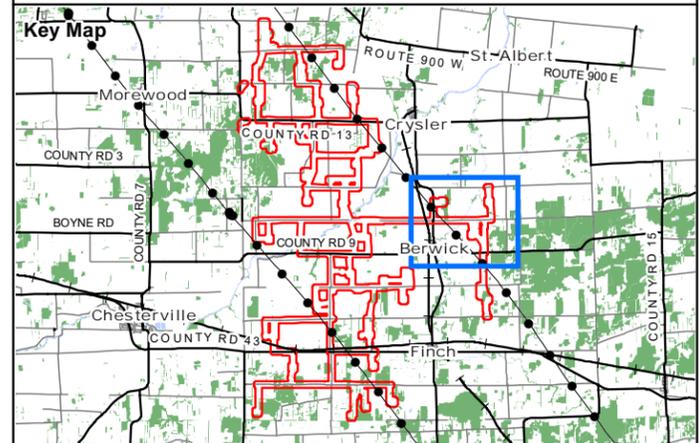
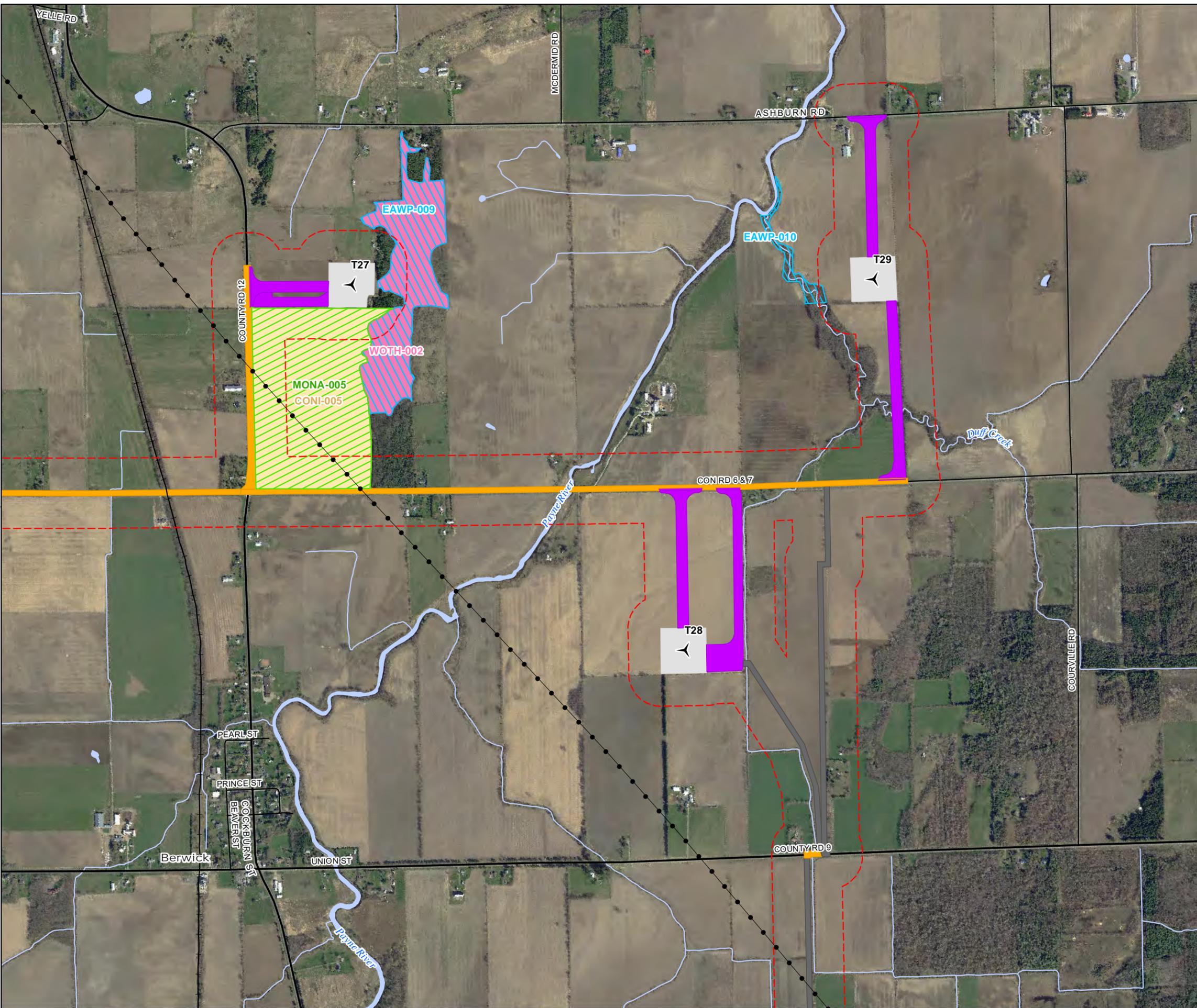
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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	



# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



**Legend**

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

**Treated As Significant Habitats for Species of Conservation Concern\***

- Eastern Wood-Pewee (EAWP)
- Common Nighthawk (CONI)
- Wood Thrush (WOTH)
- Monarch (MONA)

**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 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.

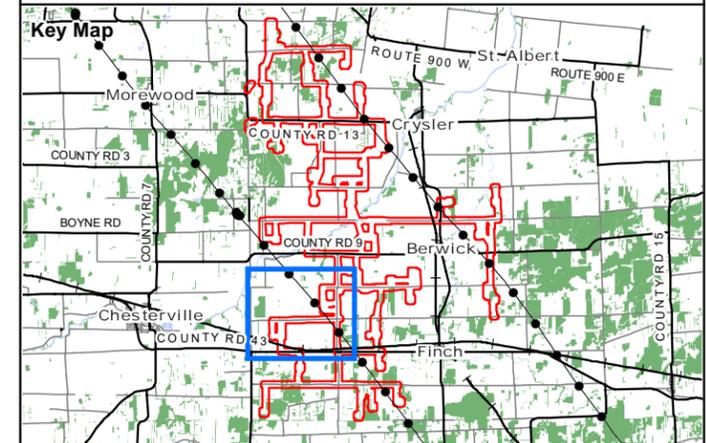
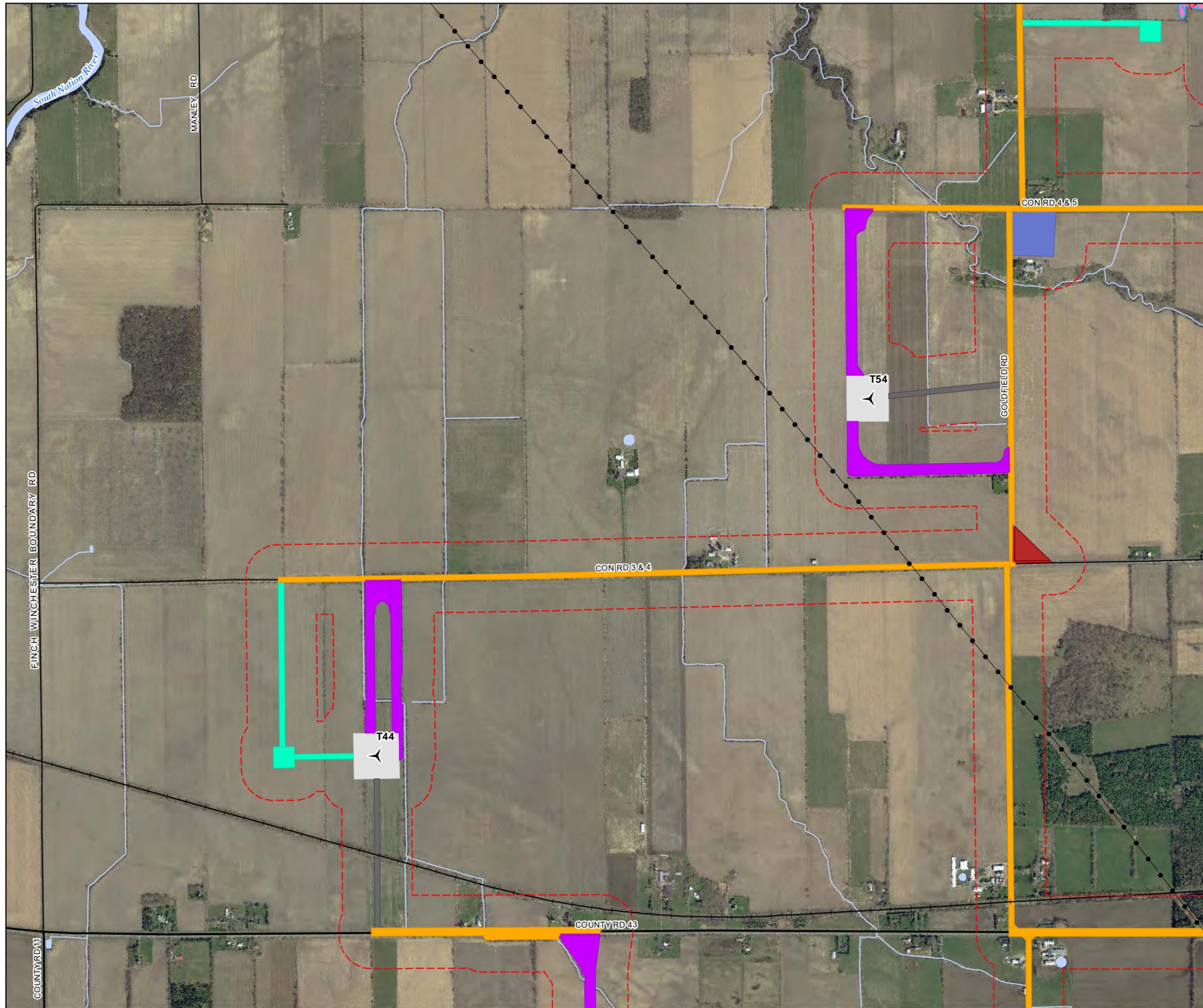


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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000

# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



- Legend**
- Utility Line
  - Railway
  - Primary Road
  - Secondary Road
  - ~ Permanent Watercourse (LIO)
  - Open Water (LIO)
- Treated As Significant Habitats for Species of Conservation Concern\***
- Eastern Wood-Pewee (EAWP)
  - Wood Thrush (WOTH)
- 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 Area
  - Proposed Temporary Turning Radius
  - 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 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.

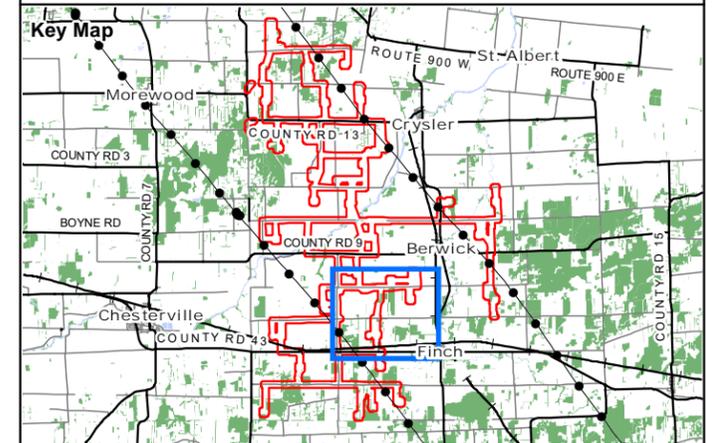


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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



### Legend

- |                             |  |
|-----------------------------|--|
| ● Utility Line              | Treated As Significant Habitats for Species of Conservation Concern* |
| — Railway                   | Eastern Wood-Pewee (EAWP)  |
| — Primary Road              | Common Nighthawk (CONI)  |
| — Secondary Road            | Wood Thrush (WOTH)   |
| Permanent Watercourse (LIO) | Monarch (MONA)   |
| Open Water (LIO)            |  |

### Project Components

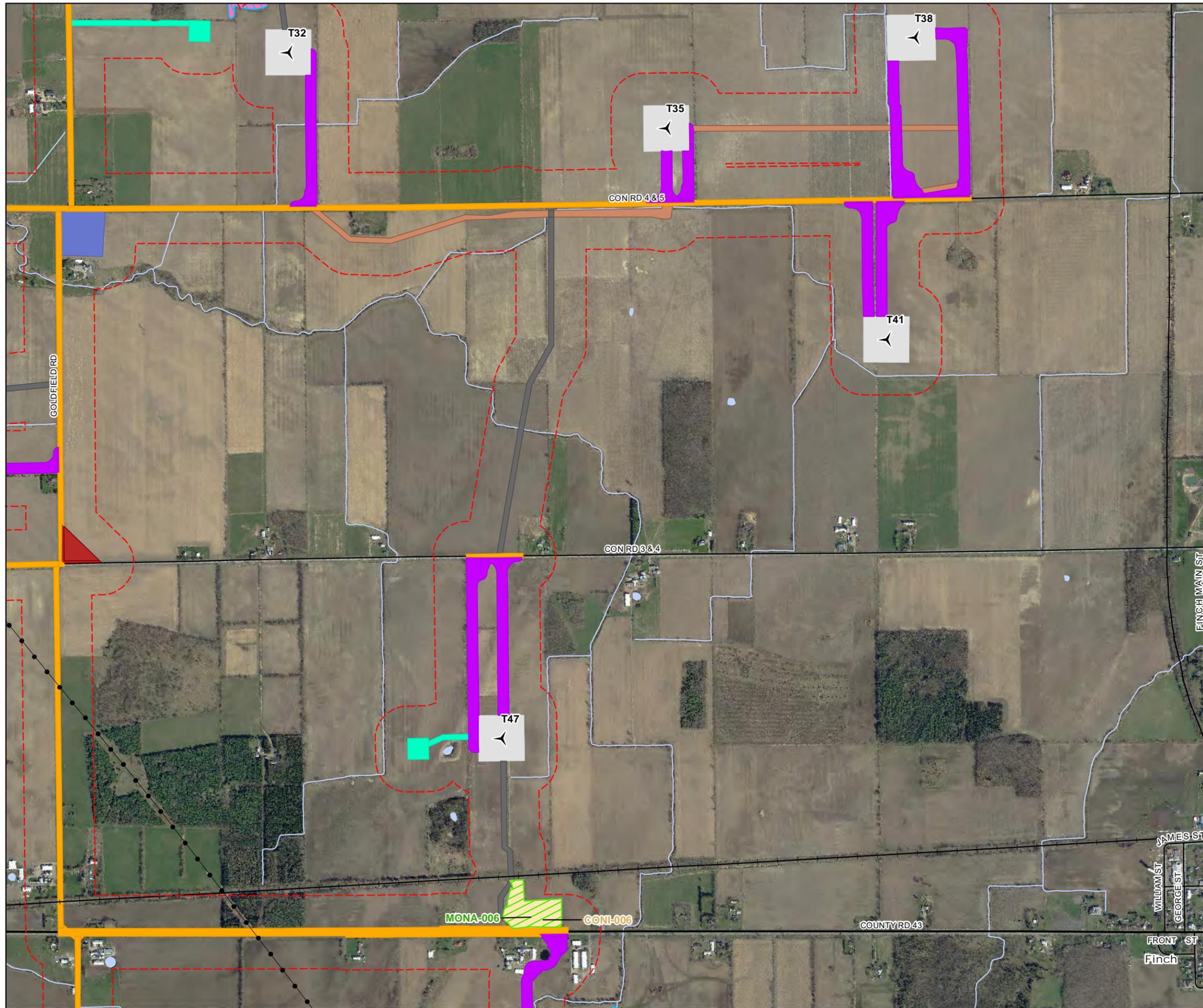
- Project Area
- Proposed Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- Proposed Turbine Laydown, Access Road, Collection Line
- Proposed Laydown
- Proposed Temporary Turning Radius
- Proposed Crane Path
- 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 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.



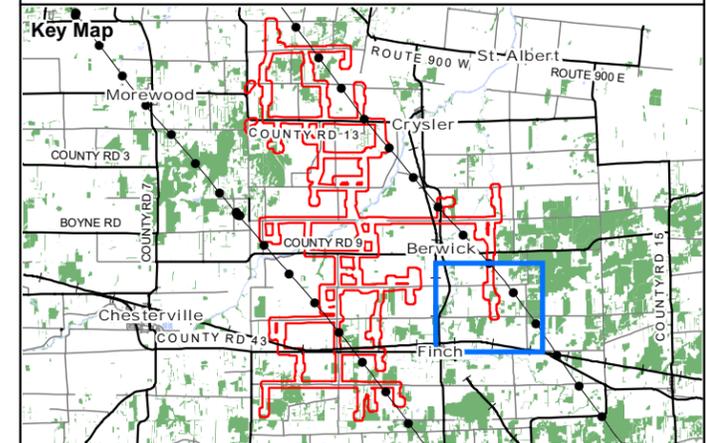
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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000



# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



**Legend**

- Utility Line
- Railway
- 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

**Treated As Significant Habitats for Species of Conservation Concern\***

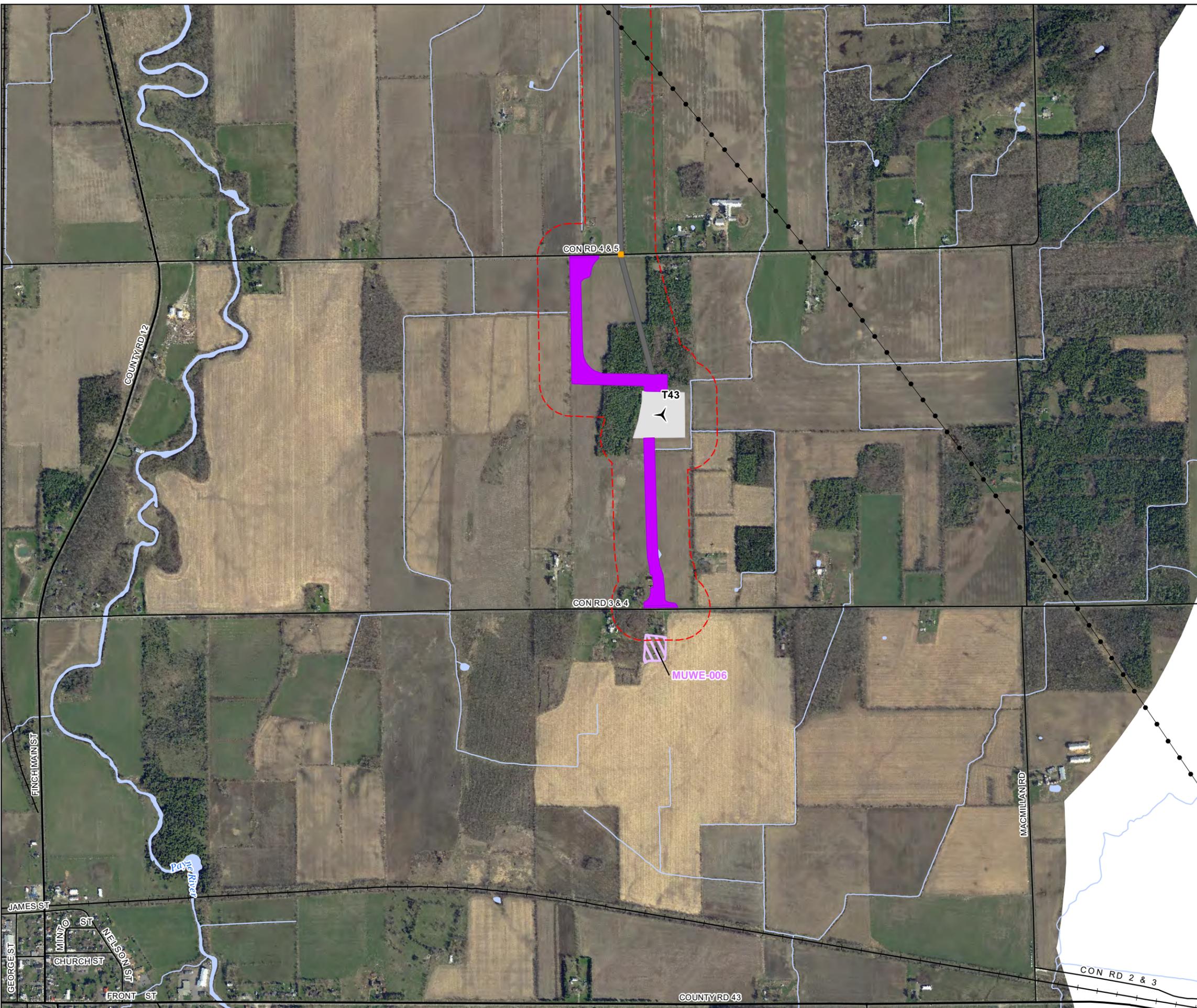
- Mühlenberg's Weissia (MUWE)

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.



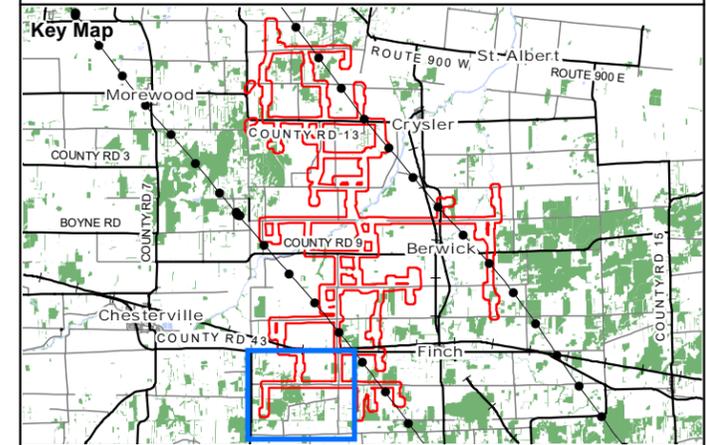
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Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	



# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



### Legend

- Utility Line
  - Railway
  - Primary Road
  - Secondary Road
  - Permanent Watercourse (LIO)
  - Open Water (LIO)
  - 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
- Treated As Significant Habitats for Species of Conservation Concern\***
- ▨ Eastern Wood-Pewee (EAWP)
  - ▨ Wood Thrush (WOTH)
  - ▨ Mühlenberg's Weissia (MUWE)

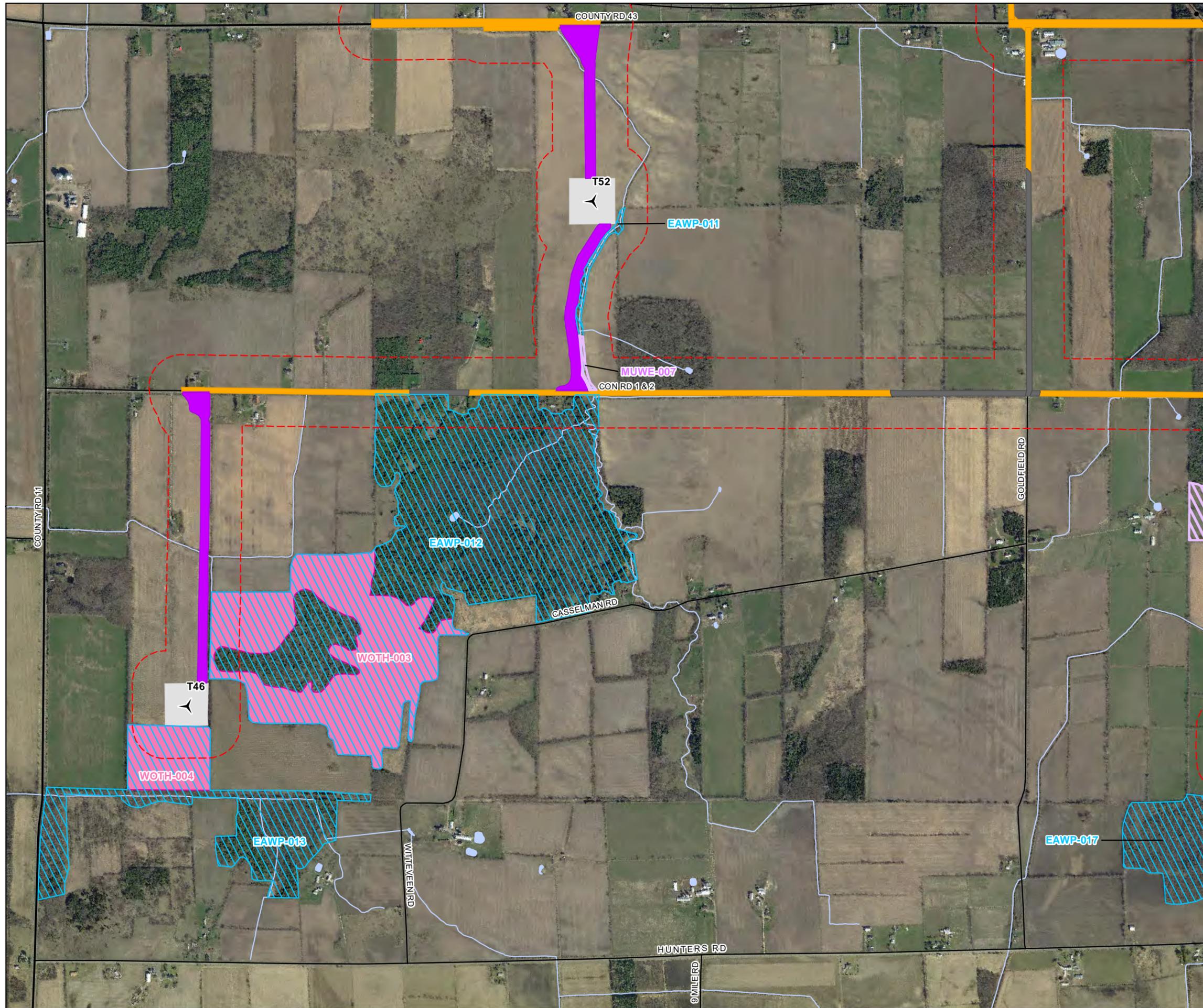
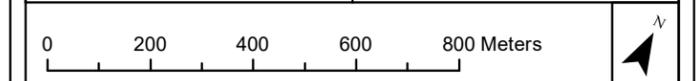
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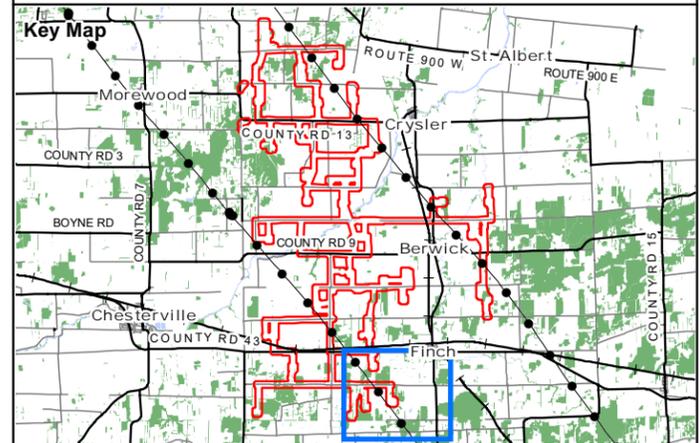
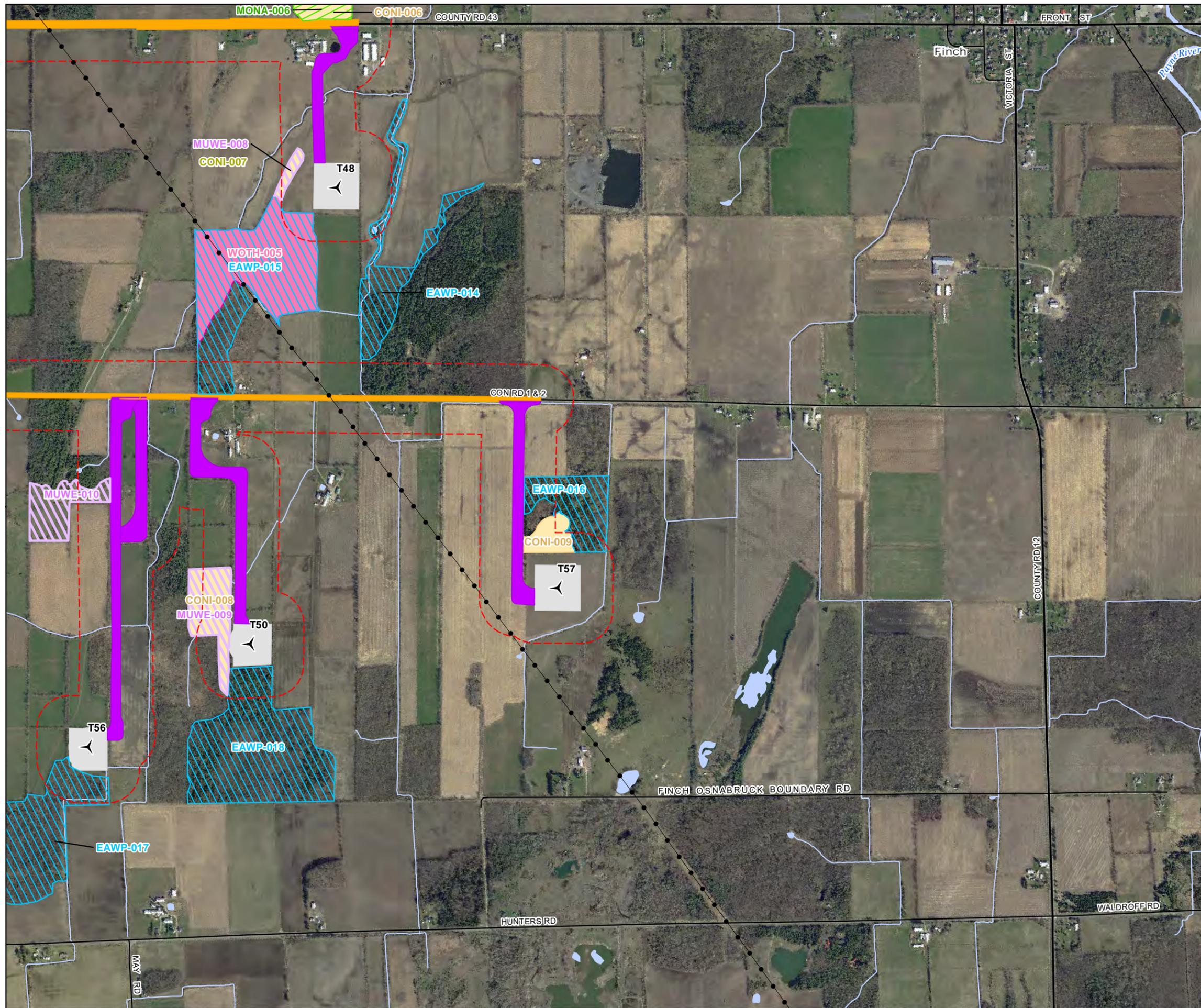
Project: 1756  
 Date: May 17, 2017

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



# Nation Rise Wind Farm

## Significant Habitats for Species of Conservation Concern



**Legend**

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

**Treated As Significant Habitats for Species of Conservation Concern\***

- Eastern Wood-Pewee (EAWP)
- Common Nighthawk (CONI)
- Wood Thrush (WOTH)
- Mühlenberg's Weissia (MUWE)
- Monarch (MONA)

The distances from the project location to significant wildlife habitats are outlined within the body of the report in Table 10.  
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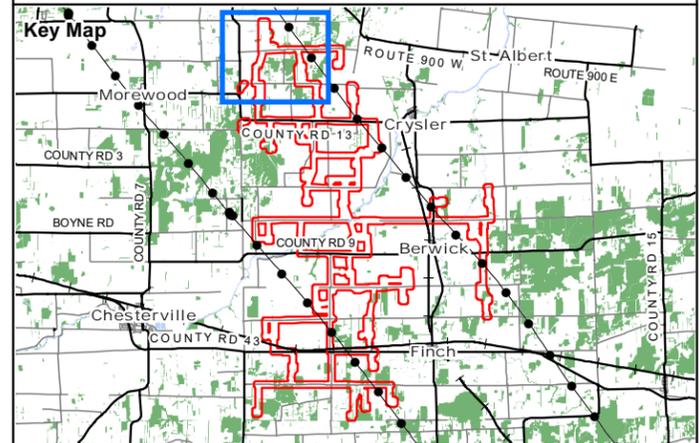
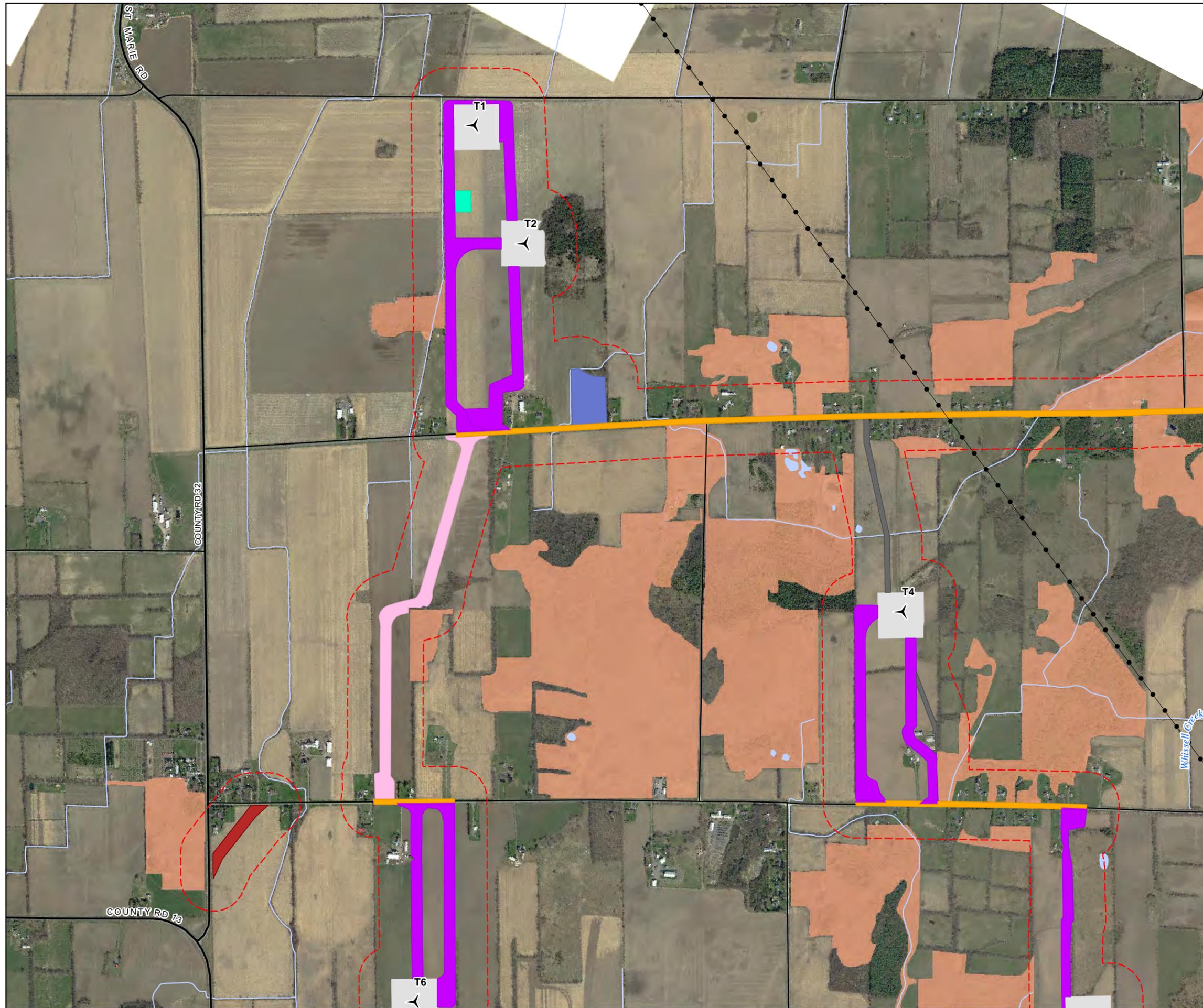
Project: 1756 Date: May 17, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

**Maps 6-1 to 6-12**  
Generalized Significant Wildlife Habitats

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# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



- 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
- 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).

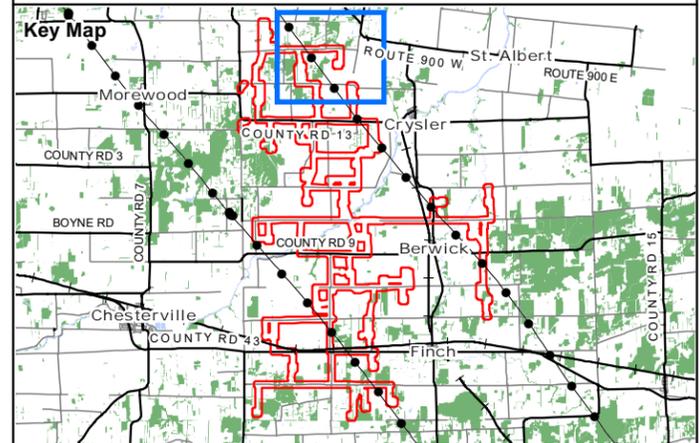
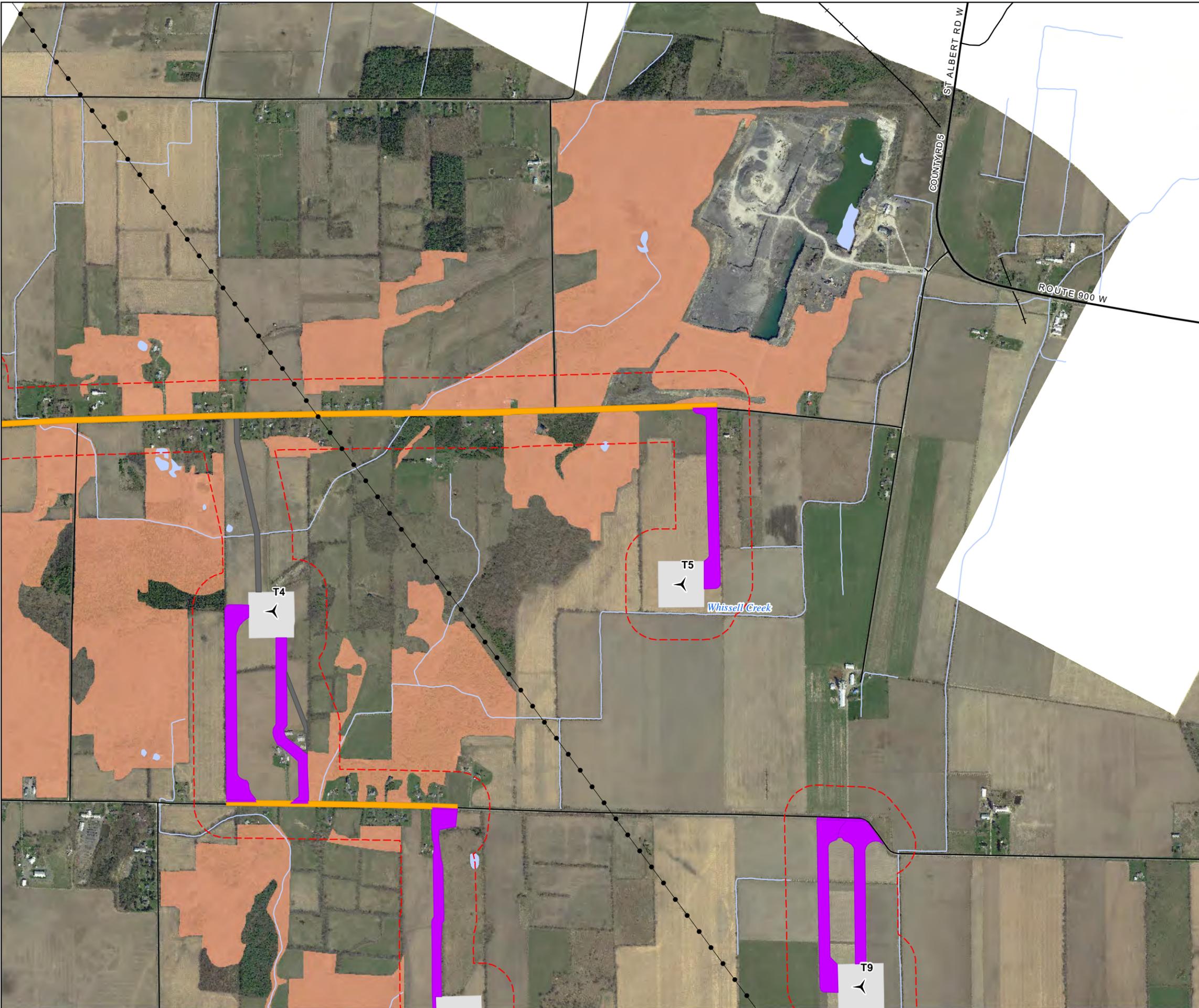


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



**Legend**

- Utility Line
- Railway
- 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

**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).

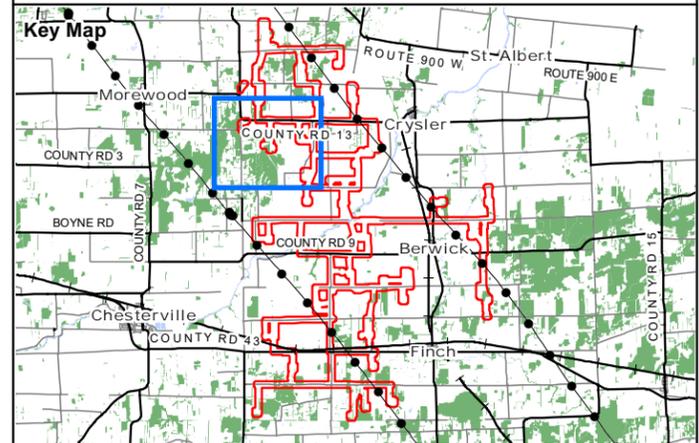
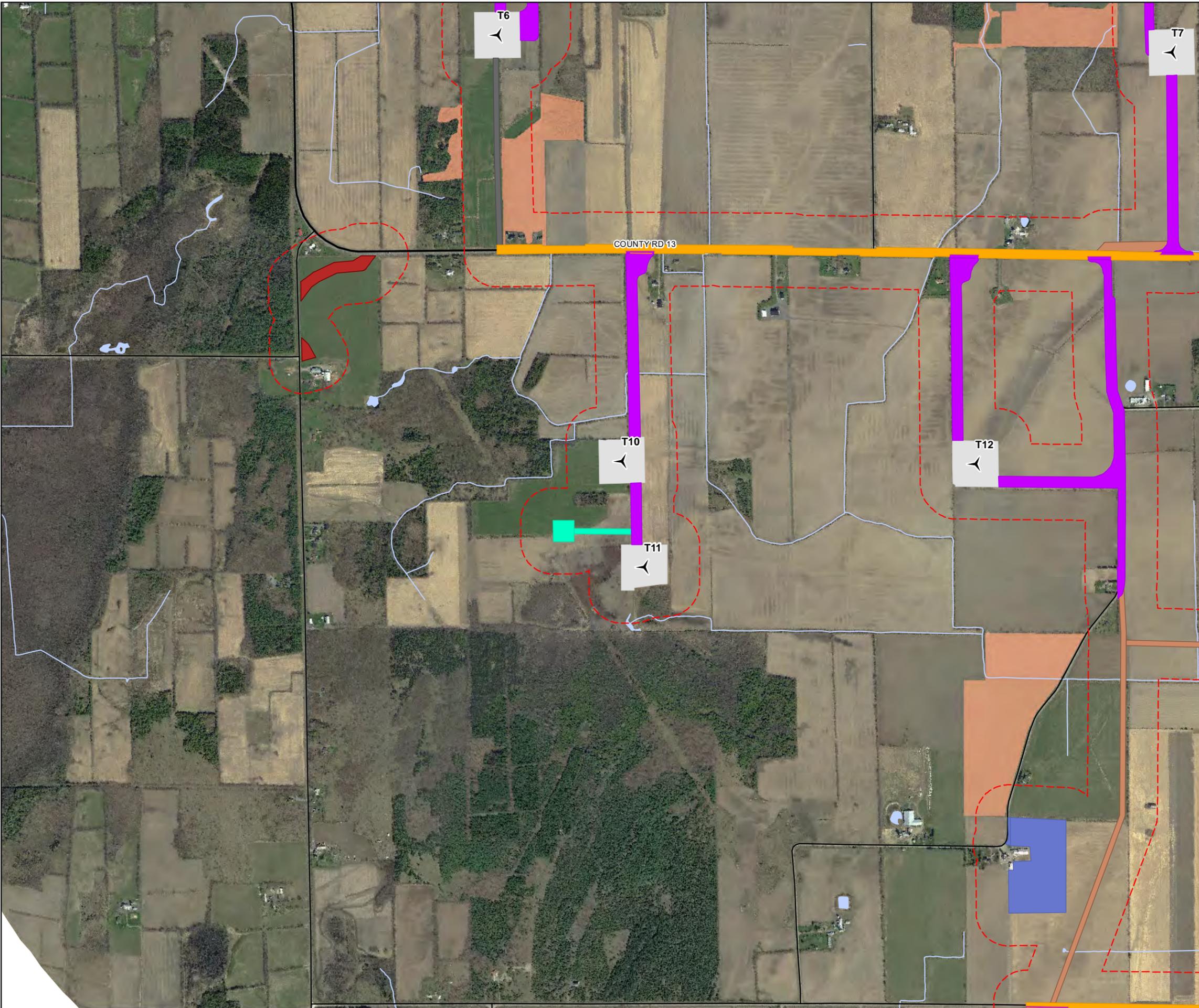


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



- Legend**
- Primary Road
  - Secondary Road
  - ~ Permanent Watercourse (LIO)
  - ~ Open Water (LIO)
  - 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 Crane Path
  - Proposed Meteorological Tower Footprint and Access Road
- 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).

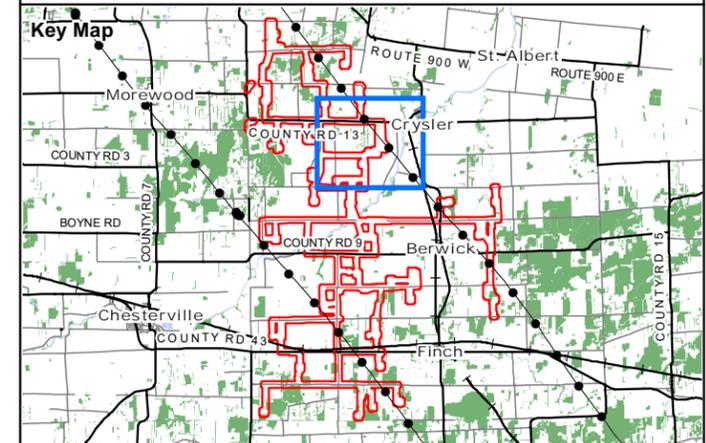
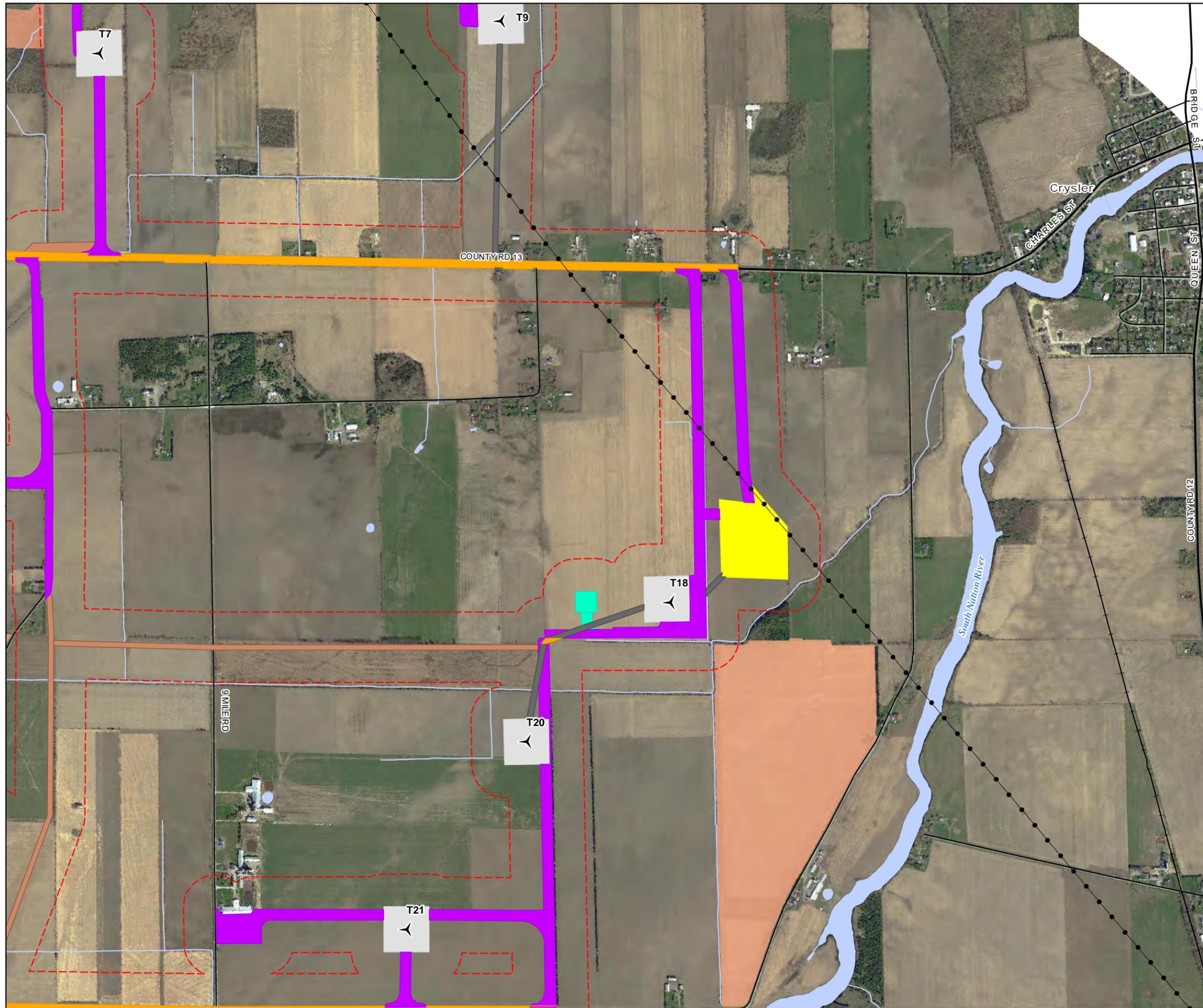


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



- Legend**
- Utility Line
  - Railway
  - 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
- 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).

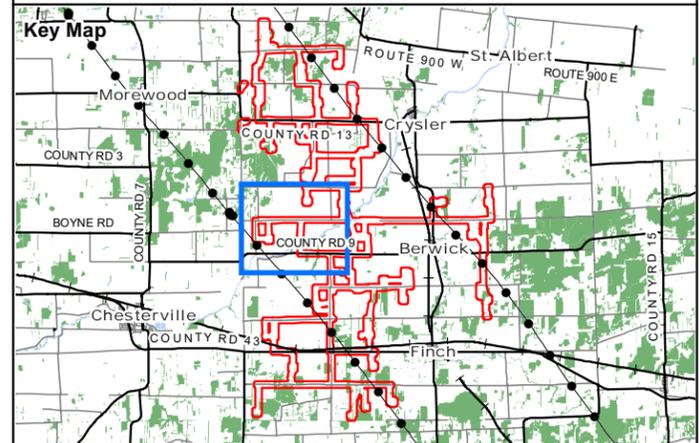
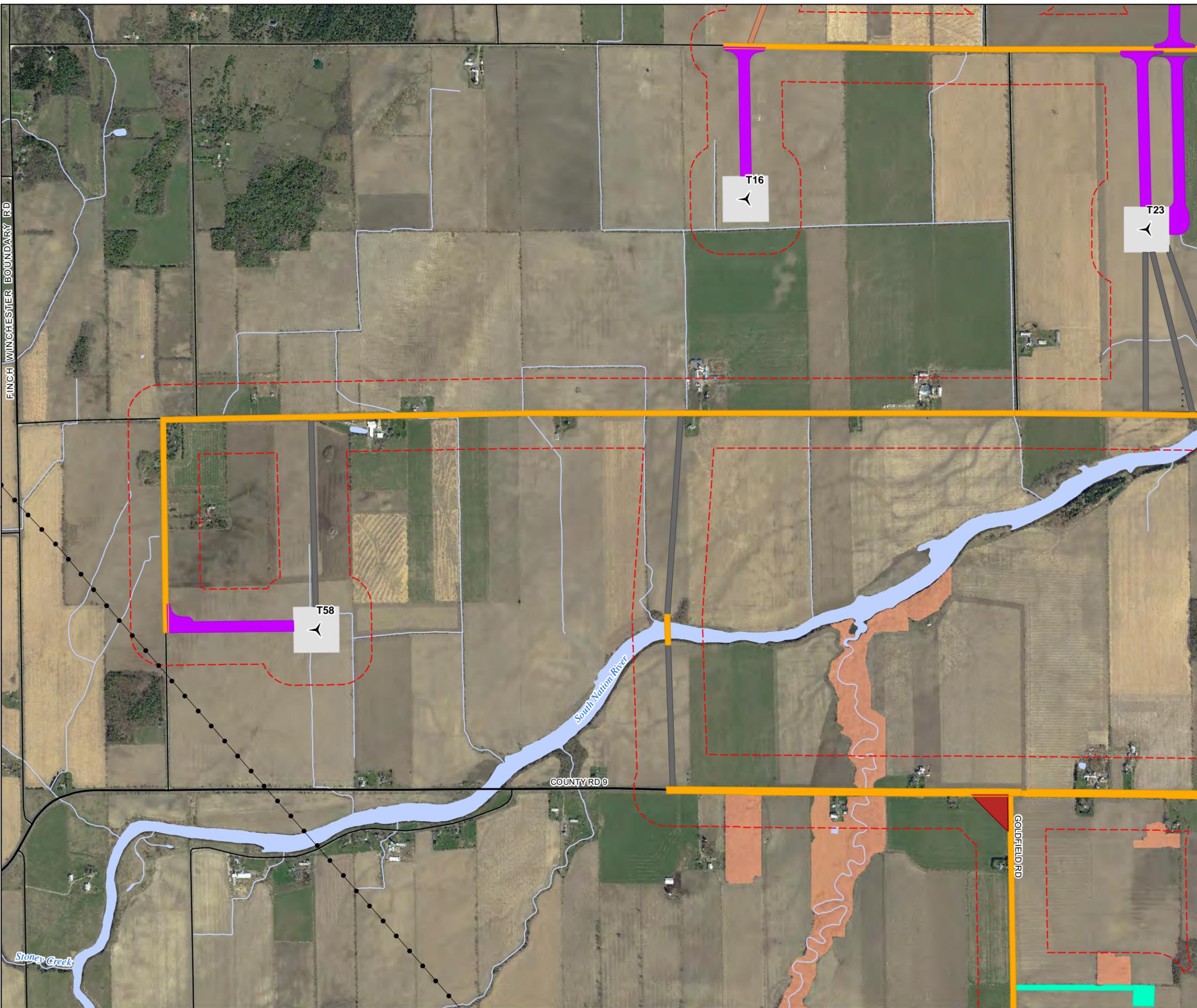


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



- 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 Temporary Turning Radius
  - Proposed Crane Path
  - Proposed Meteorological Tower Footprint and Access Road
- 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).

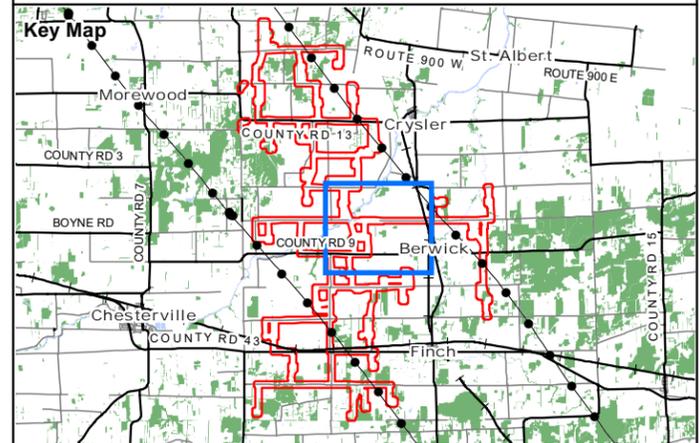
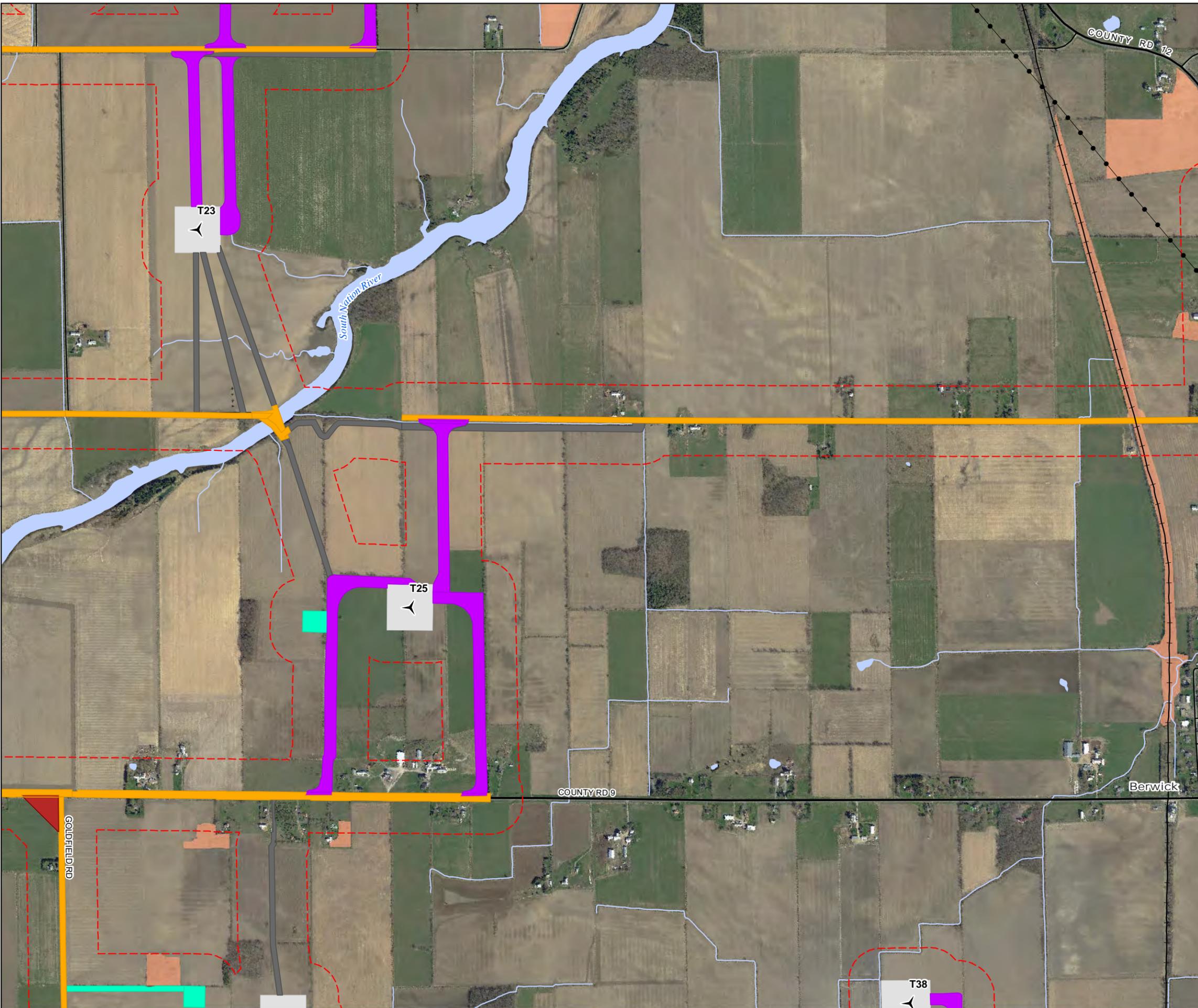


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



- Legend**
- Utility Line
  - Railway
  - 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 Temporary Turning Radius
  - Proposed Meteorological Tower Footprint and Access Road
- 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).

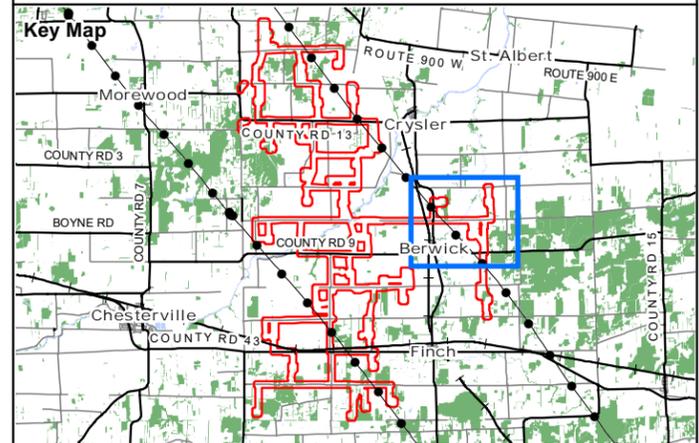
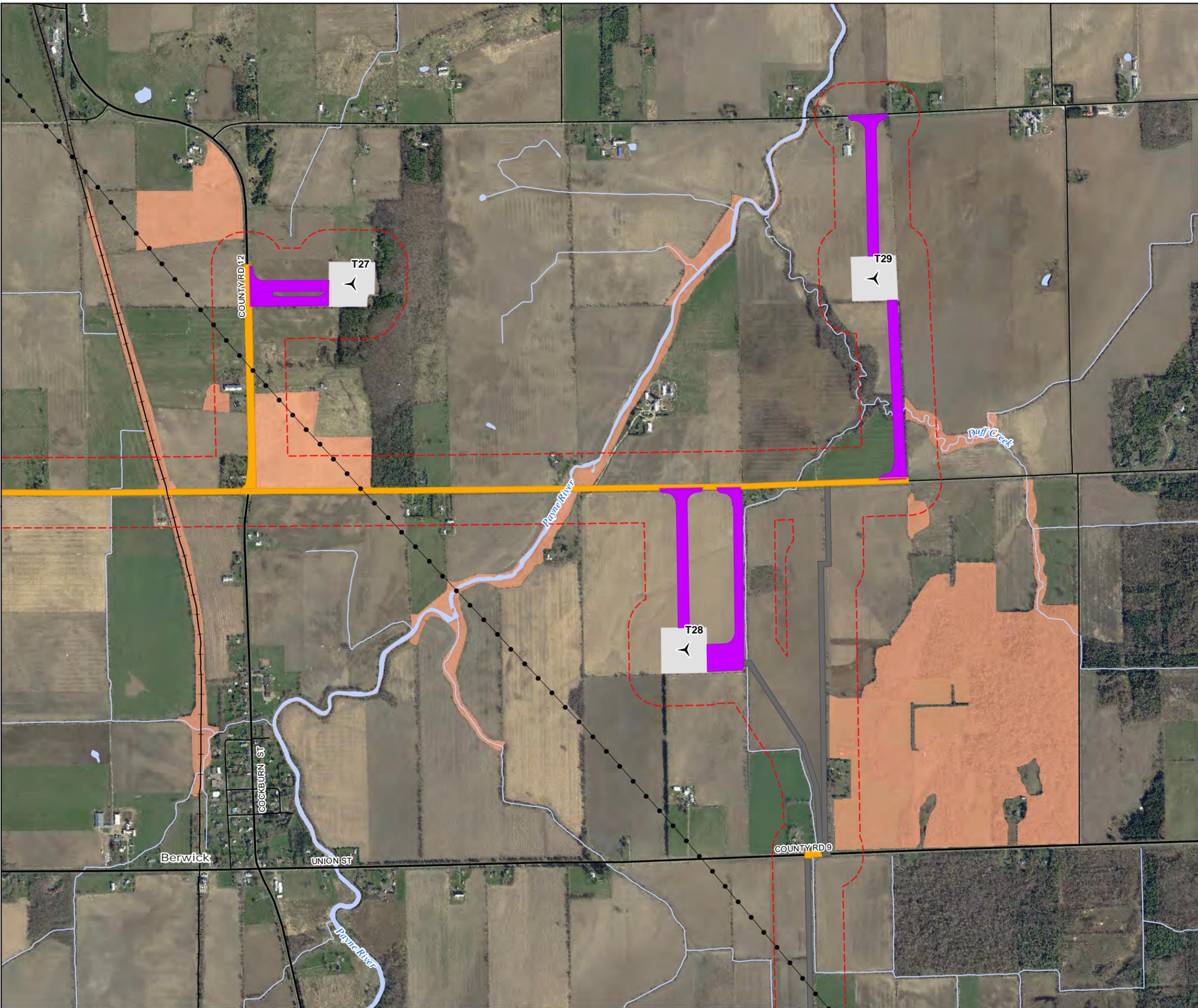


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



**Legend**

- Utility Line
- Railway
- 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

**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).

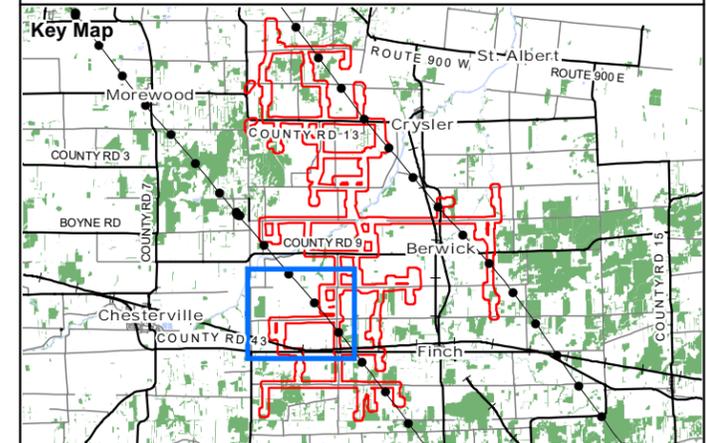
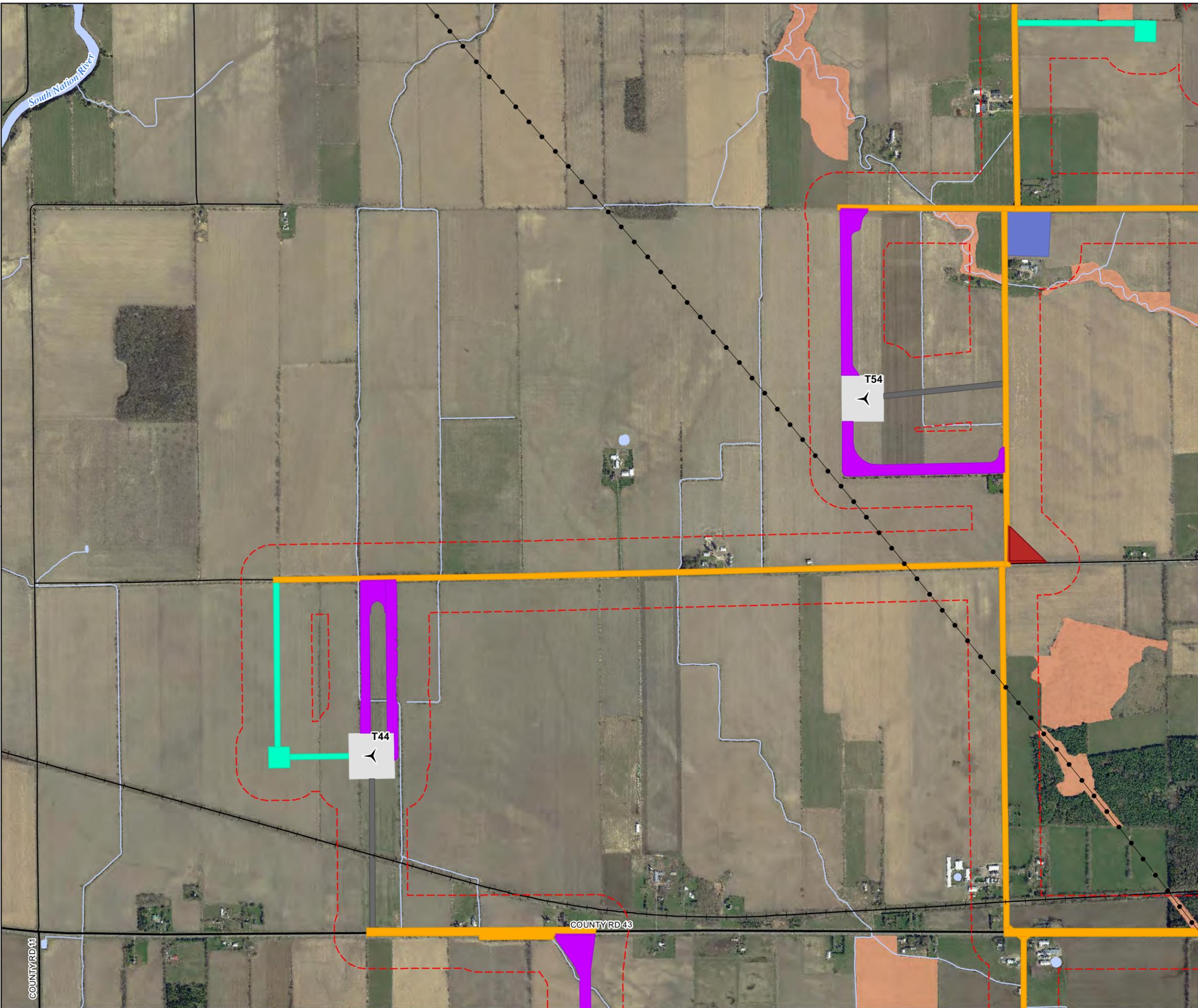


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



- Legend**
- Utility Line
  - Railway
  - 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 Meteorological Tower Footprint and Access Road
- 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).

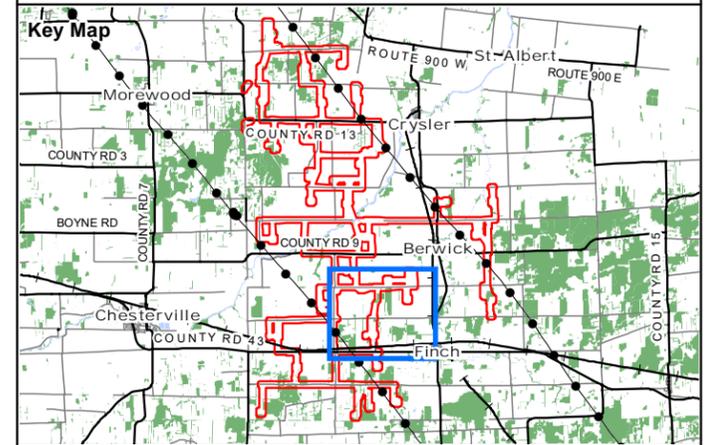


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



### Legend

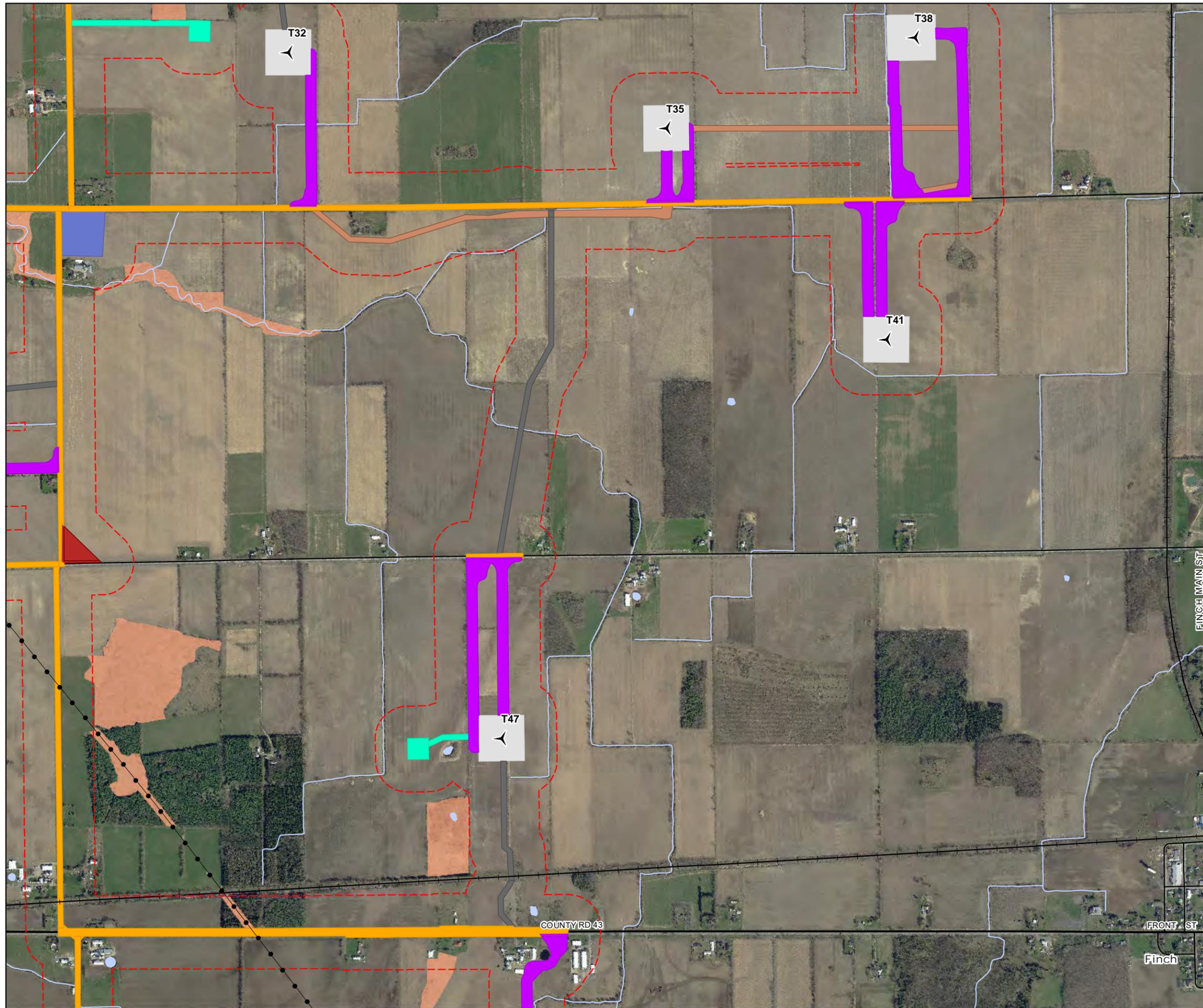
- Utility Line
- Railway
- Primary Road
- Secondary Road
- ~ Permanent Watercourse (LIO)
- Open Water (LIO)
- Project Components**
- Project Area
- Proposed Turbine
- Proposed Access Road and Collection System
- Proposed Above/Underground Collection System
- Proposed Underground Collection System
- Proposed Turbine Laydown, Access Road, Collection Line
- Proposed Laydown
- Proposed Temporary Turning Radius
- Proposed Crane Path
- Proposed Meteorological Tower Footprint and Access Road
- 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).



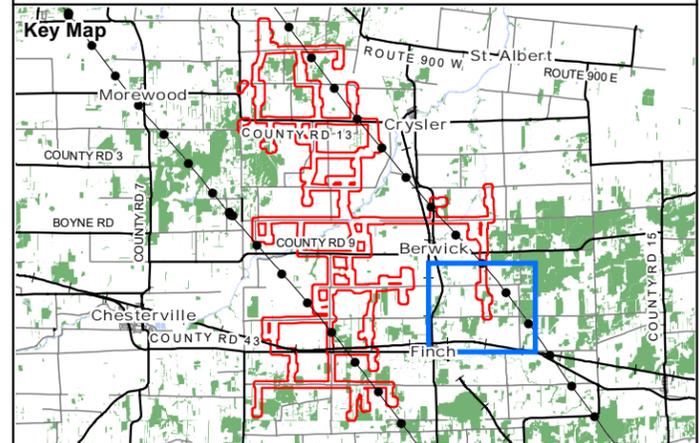
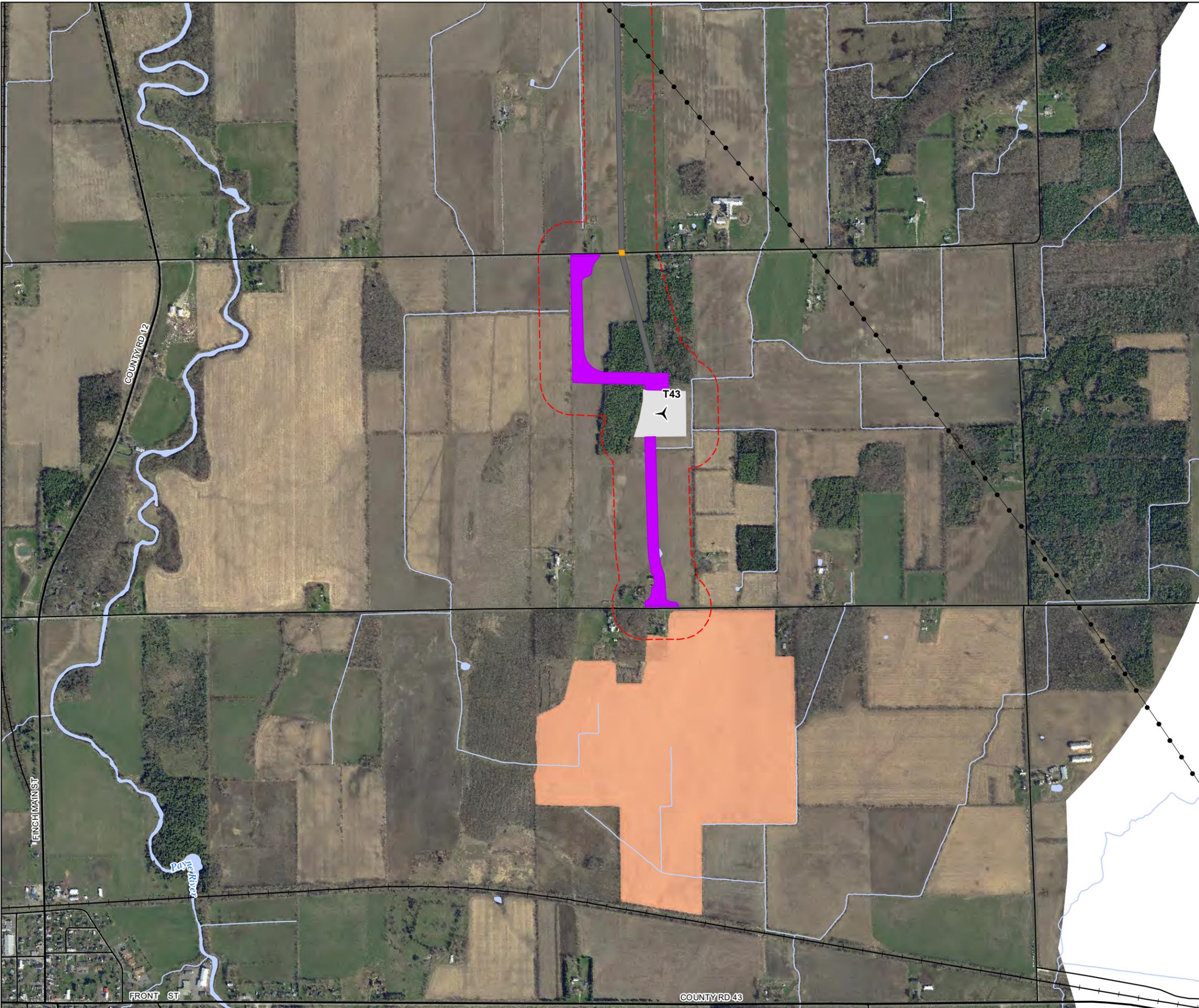
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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	



# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



- Legend**
- Utility Line
  - +— Railway
  - 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
- 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).

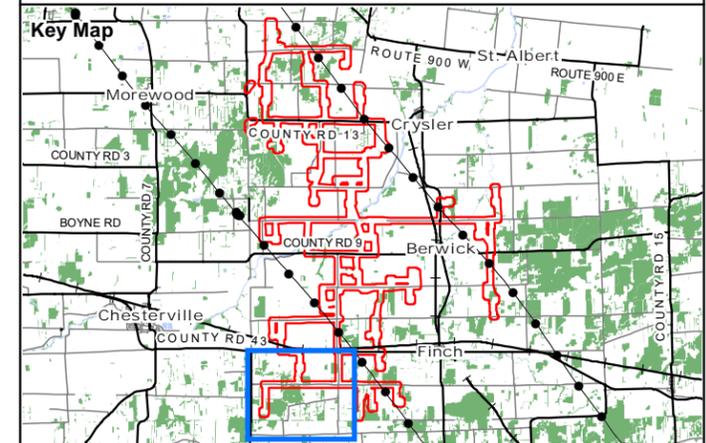
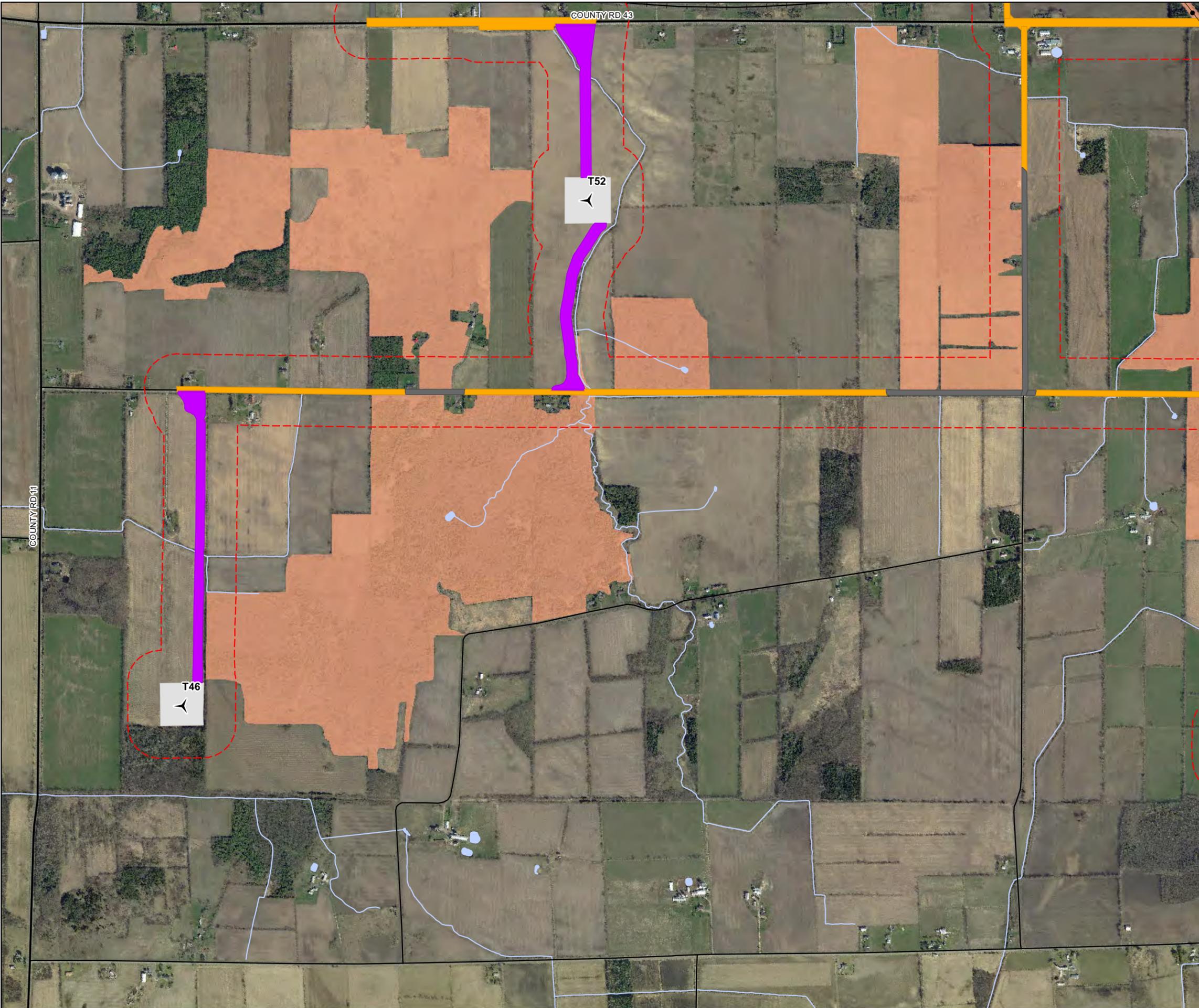


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



- Legend**
- Utility Line
  - Railway
  - 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
- 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).

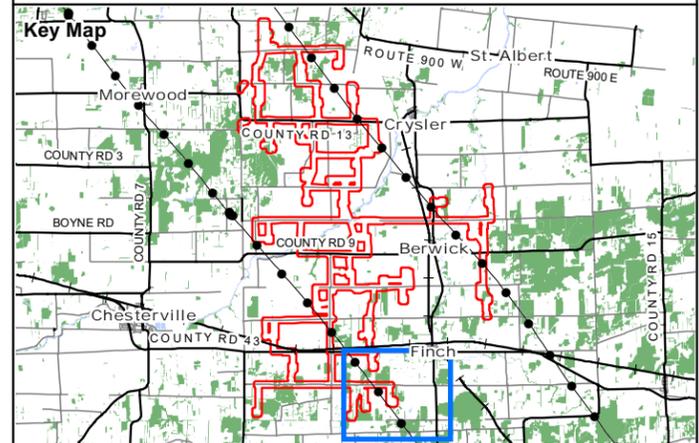
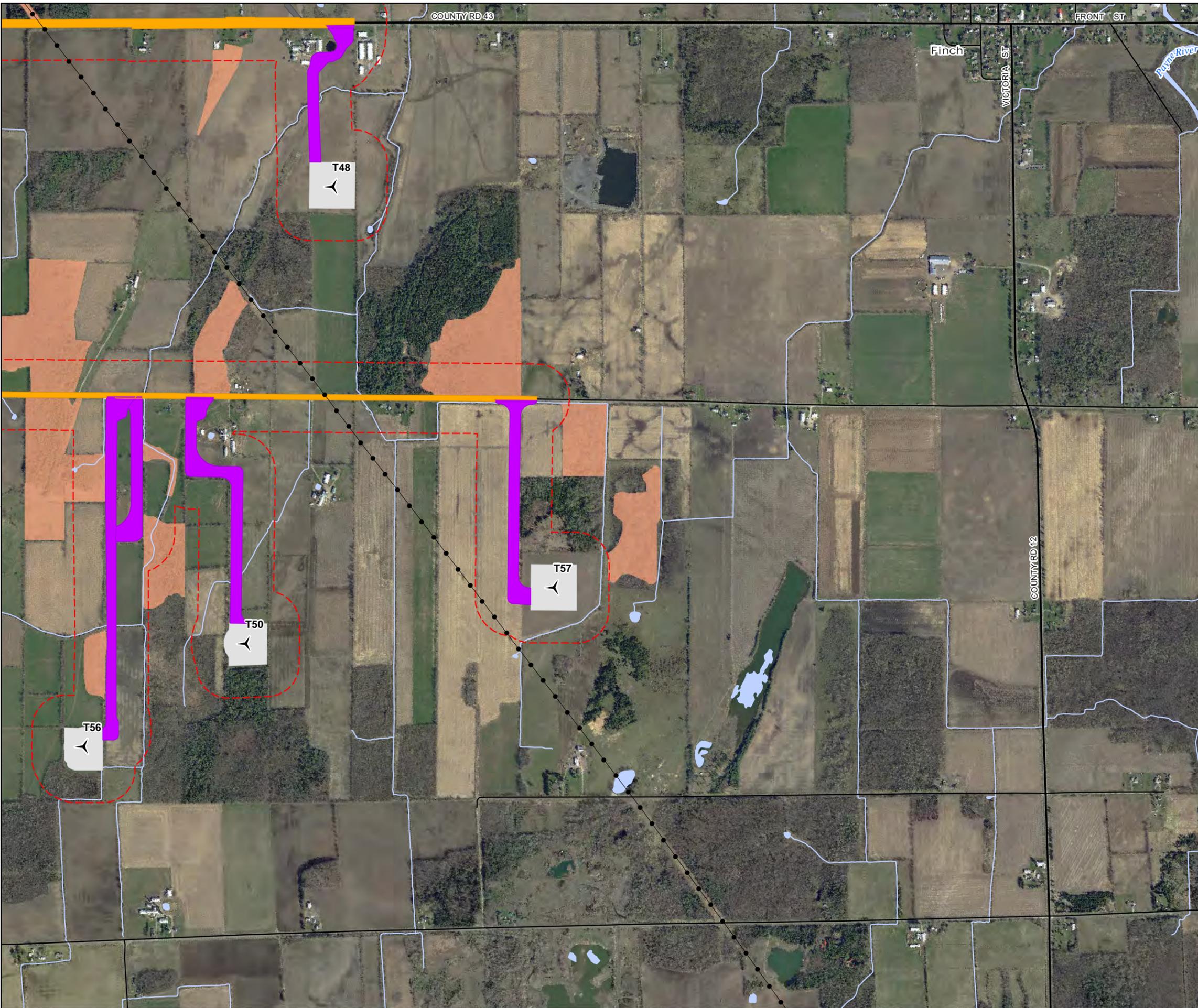


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Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

# Nation Rise Wind Farm

## Generalized Significant Wildlife Habitat



- Legend**
- Utility Line
  - Railway
  - 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
- 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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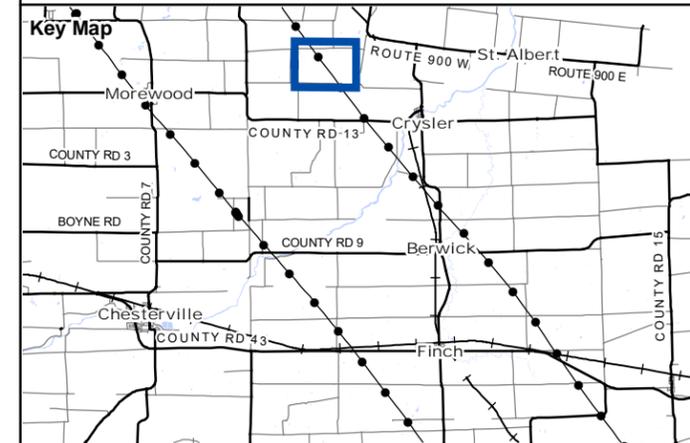
Project: 1756 Date: May 5, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

**Appendix I**  
Raptor Wintering Area Evaluation of Significance Field Notes

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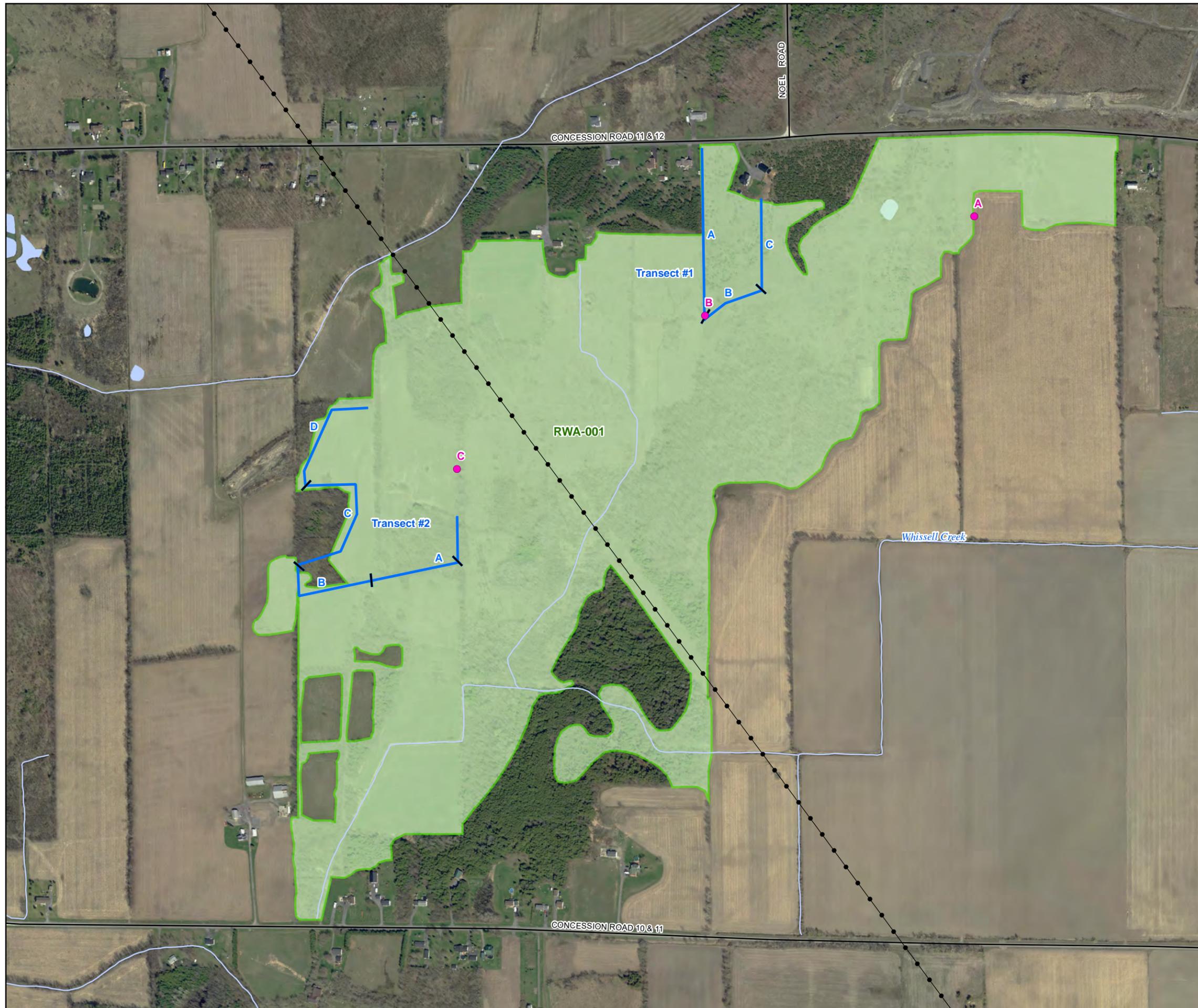
# Nation Rise Wind Farm

## Raptor Wintering Area Survey Results (RWA-001)



### Legend

- Raptor Wintering Area (RWA)
- Transect Route
- Point Count
- Utility Line
- Secondary Road
- ~ Permanent Watercourse (LIO)
- ☪ Open Water (LIO)



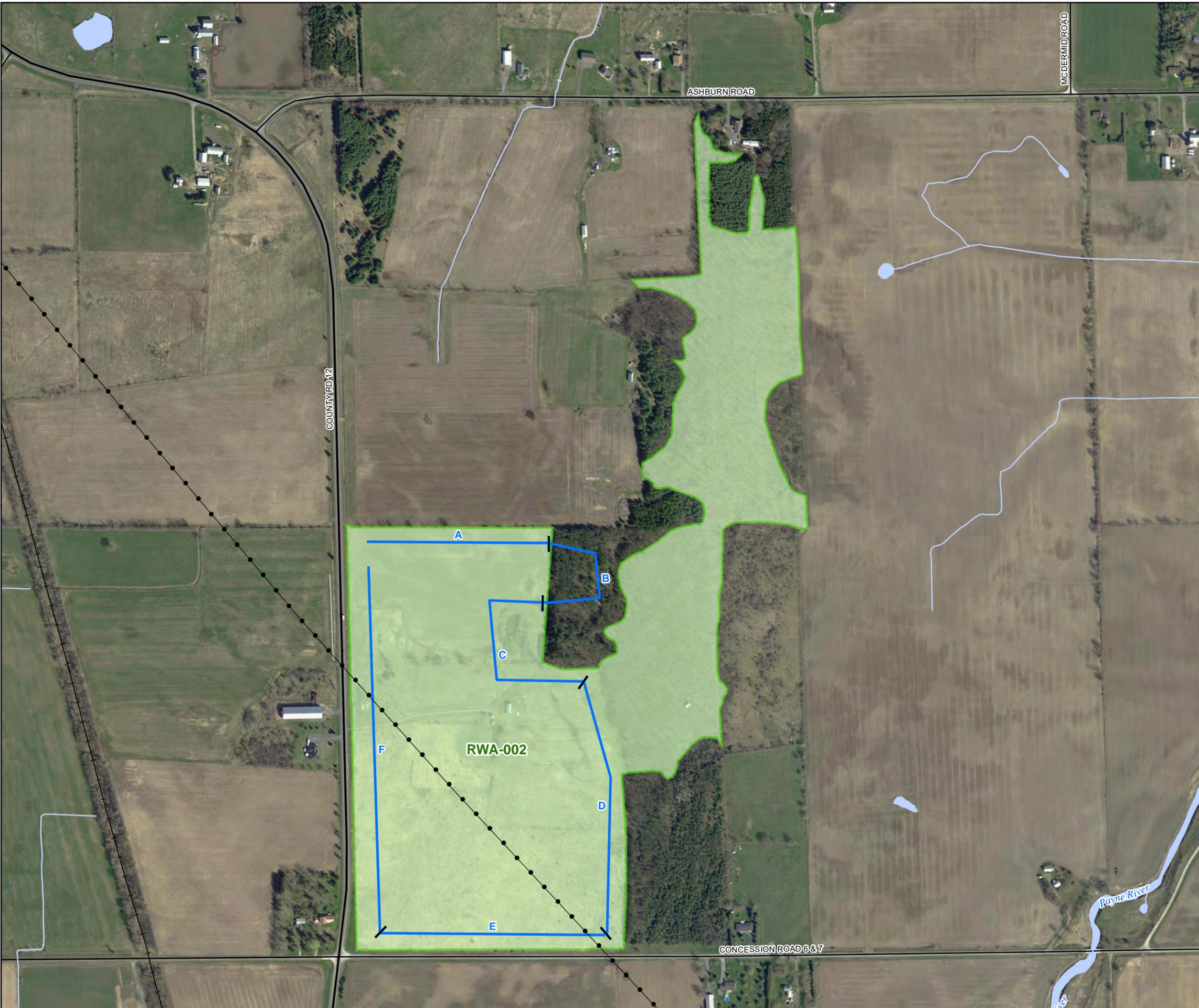
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Project: 1756  
Date: March 21, 2017

NAD83 - UTM Zone 18  
Size: 11x17"  
1:7,000

0 200 400 Meters





# Nation Rise Wind Farm

## Raptor Wintering Area Survey Results (RWA-002)



### Legend

- Raptor Wintering Area (RWA)
- Transect Route
- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)



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Project: 1756 Date: March 21, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:6,000

# BIRD TRANSECT

Project Name NATION REI

Project # 1756

Habitat RWA 11 (RWA-001)

Transect Route 1-A 1-B 1-C

Length .63 km 32 min Survey  spring migration  breeding  fall migration  winter  daytime/raptor

UTM Start 18T 0483347 5007774 UTM End 18T 0483388 - 5007770

Date (dd/mm/yy) 10/01/17

Start Time: 0930 End Time: 1032 Obs. J. BARBER K. BUNNELL

Weather Air Temp. -6 °C Wind Speed 2 Wind Direction SE (from)

Cloud Cover 100 % 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 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 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



# BIRD TRANSECT

Project Name Nation Rise

Project # B 1756

Habitat RWA-11 (RWA-001)

Transect Route 2D-2C-2B-2A

Length 0.93 km  
5 26 min

Survey  spring migration

breeding  fall migration

winter

daytime/  
raptor

UTM Start 18T 0482997 5007124

UTM End 18T 0483190 - 5007085

Date (dd/mm/yy) 10/01/17

Start Time: 1228

End Time: 1254

Obs. KGB, J. Barber

## Weather

Air Temp. -3 °C

Wind Speed 1

Wind Direction SE (from)

Cloud Cover 100 %

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 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 drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrge branches move; 7=lrge trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted



# AVIAN POINT COUNT FORM

Project Name NATION RISE WP

Project # 1756

Habitat RWA II (RWA-001)

Point Count ID RWA/IA (RWA-001 A)

Date (dd/mm/yy)

10/01/17

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM 18T 048 3816 5067947

Start Time:

0840

End Time:

0910

Obs.

J. BRASER K. BURRILL

## Weather

Air Temp.

-6 °C

Wind Speed

2-3

Wind Direction S (from)

Cloud Cover

100 %

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 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 drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lg branches move; 7=lg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted



# AVIAN POINT COUNT FORM

Project Name NATION RISE WP

Project # 1758

Habitat RWA-11 (RWA-001)

Point Count ID RWA-11B (RWA-001B)

Date (dd/mm/yy) 10/01/

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM 18T 0483462 5007551

Start Time: 0941

End Time: 1011

Obs. J. BANGOR K. BANGOR

## Weather

Air Temp. -5 °C

Wind Speed 2

Wind Direction SE (from)

Cloud Cover 100 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name Nation Rise WEC

Project # 1758

Habitat RWA-11C (RWA-001)

Point Count ID RW 11 - C (RWA-001C)

Date (dd/mm/yy) 10/01/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM 18T 0483189-5007085

Start Time: 1254

End Time: 1324

Obs. J BARBER K. BUNNELL

## Weather

Air Temp. -3 °C

Wind Speed 1

Wind Direction SE (from)

Cloud Cover 100 %

Cloud Height

High

Med

Low

Precipitation NO NB

Visibility

High

Med

Low

**Height Category:** 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 evidence as applicable

**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



# BIRD TRANSECT

Project Name NATIONS RISE WP

Project # 1756

Habitat RW A - 42 (RWA-002)

Transect Route E-D-C-B-A-F

Length 2.2 km  
min

Survey  spring migration  breeding  fall migration  winter  daytime/raptor

UTM Start 187 0490838 5003744

UTM End \_\_\_\_\_

Date (dd/mm/yy) 10/01/17

Start Time: 1105

End Time: 1155

Obs. J. BARBER K. BERRILL

Weather  
Air Temp. -4 °C

Wind Speed 2

Wind Direction SE (from)

Cloud Cover 100 %

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 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 drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lg branches move; 7=lg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted



# BIRD TRANSECT

Project Name NATION RISE WP

Project # 1756

Habitat RWA-11B (AWA-001)

Transect Route C-B-A

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 20/01/17

Start Time: 10:30

End Time: 11:25

Obs. J BARBER J. BANNOX

## Weather

Air Temp. 2 °C

Wind Speed 1

Wind Direction E (from)

Cloud Cover 100 %

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 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 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

(RWA-001)

Habitat: RW11-B

Transect Route: C-B-A

Date: 20/01/17

Project #: 1756

Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLACK-CAPPED CHICKADEE	10:40	1	C	Y	FORAGING	1	0/H	/	20	/
WHITE-BREASTED NUTHATCH	10:40	1	C	Y	FORAGING	1	0/H	/	20	/
BLUE JAY	10:35	2	C	Y	FORAGING	1	0/H	/	20	/
DARK-EYED JUNCO	10:35	1	C	Y	FORAGING	1	0/H	/	20	/
MOURNING DOVE	10:32	4	C	Y	FORAGING	1	0/H	/	20	/
AMERICAN ROBIN	11:20	1	A	Y	FORAGING	1	0/H	/	20	/
SHARP-SHINNED HAWK	12:40	1	C	Y	FLYING	1	90	270	30	1

# BIRD TRANSECT

Project Name MAIWA RISE WP

Project # 1756

Habitat RWA-11 C (RWA-001)

Transect Route D-C-B-A

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration

breeding  fall migration

winter

daytime/  
raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 20/01/17

Start Time: 0931

End Time: 0942

Obs. J. BARBER J. BANNON

## Weather

Air Temp. 2 °C

Wind Speed 1

Wind Direction E (from)

Cloud Cover 100 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE Project # 1756  
Habitat RWA-11 A (RWA-001) Point Count ID A (RWA-001A)

Date (dd/mm/yy) 20/01/17 Survey  spring migration  breeding  fall migration  winter  daytime/raptor  
UTM \_\_\_\_\_

Start Time: 1130 End Time: 1200 Obs. J. BARBER

**Weather**  
Air Temp. 1 °C Wind Speed 1 Wind Direction E (from)  
Cloud Cover 100 % Cloud Height High  Med  Low   
Precipitation LIGHT MIST / SHOT WGT SNOW FLURRY Visibility High  Med  Low

**Height Category:** 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 evidence as applicable  
**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



# AVIAN POINT COUNT FORM

Project Name NATIONS RISE WP

Project # 1756

Habitat RWA 11-B (RWA-001)

Point Count ID B (RWA-001B)

Date (dd/mm/yy) 20/01/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 1049

End Time: 1119

Obs. J BARBER J BANNON

## Weather

Air Temp. 2 °C

Wind Speed 1

Wind Direction E (from)

Cloud Cover 100 %

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 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 drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lg branches move; 7=lg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted



# AVIAN POINT COUNT FORM

Project Name NATION RISK WP

Project # 1756

Habitat RWALL - C (RWA-001)

Point Count ID RWALL C (RWA-001C)

Date (dd/mm/yy) 20/01/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 0943

End Time: 1013

Obs. J BANISTER J BANISTER

## Weather

Air Temp. 2 °C

Wind Speed 1

Wind Direction E (from)

Cloud Cover 100 %

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 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 drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lg branches move; 7=lg trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted

(RWA-001)

Habitat: RWA II C

Point Count ID: C

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
BLACK CAPPED CHICK	0943	2	N	FORAGING	0	/	90	200	/
COMMON ROBIN	0944		Y	FLYING	1	270	360	300	1
WHITE BREASTED NUTHATCH	0950		Y	FORAGING	0	/	360	200	/
AMERICAN ROBIN	0951		Y	HEARD/FORAGING	0	/	90	100	/
PLEASANT WOODPECKER	0957		Y	HEARD	1	/	90	300	/
Hairy woodpecker	1000		Y	HEARD/FORAGING	0	/	360	200	/
COMMON ROBIN	1003	1	Y	FLYING	1	270	360	400	1
COMMON ROBIN	1005	5	Y	FLYING	2	270	360	400	1

# BIRD TRANSECT

Project Name NATION RISE WP

Project # 1756

Habitat RWA - 42 (RWA-002)

Transect Route E-D-C-B-A-F

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration  breeding  fall migration  winter  daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 20/01/17

Start Time: 0810

End Time: 0855

Obs. J. BARBER J. BANNON

## Weather

Air Temp. 1 °C

Wind Speed 1

Wind Direction E (from)

Cloud Cover 100 %

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 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 drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrge branches move; 7=lrge trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted



# BIRD TRANSECT

Project Name NATION RISE WP

Project # 1786

Habitat RWA-11B (RWA-001)

Transect Route A-B-C

Length 15 km  
min

Survey  spring migration  breeding  fall migration  winter  daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 26/01/17

Start Time: 0925

End Time: 1010

Obs. J. BARBER N. MILLER

## Weather

Air Temp. 1 °C

Wind Speed 1

Wind Direction NW (from)

Cloud Cover 100 %

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 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 drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrge branches move; 7=lrge trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted

(RWA-00)

Habitat: RWA-11 B

Transect Route: A-B-C

Date: 26/01/17

Project #: 1756

Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
ACCIPITER SP.	0928	1	A	Y	FLYING	1	270	360	200	1
NOCTUENA CAMPANULA	1008	1	C	Y	FORAGING	Ø	Ø/H	360	50	1
DOWNY WOODPECKER	1008	1	C	Y	FORAGING	Ø	Ø/H	360	50	1

# BIRD TRANSECT

Project Name NATION RISE WP

Project # 1756

Habitat RW11A - C (RWA-001)

Transect Route D-C-B-A

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration

breeding  fall migration

winter

daytime/  
raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 26/01/17

Start Time: 0829

End Time: 0841

Obs. J. BARBER N. MILLER

## Weather

Air Temp. 1 °C

Wind Speed 1

Wind Direction NW (from)

Cloud Cover 100 %

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 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 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

(RWA-001)

Habitat: RWA 11 C

Transect Route: D-C-B-A

Date: 26/01/17

Project #: 1756

Species	Time	# of Birds	Transect Segment	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLACK-CAPPED CHICKADEE	0829	3	D	Y	FORAGING	1	/	360	100	/
BLUE JAY	0830	4	D	Y	PERCHING	1	/	180	300	/
AMERICAN ROBIN	0831	10	D	Y	FORAGING	1	/	180	300	/
DOWNY WOODPECKER	0831	1	D	Y	FORAGING	1	/	270	50	/
AMERICAN CROW	0835	2	C	Y	PERCHING	1	/	90	150	/

# AVIAN POINT COUNT FORM

Project Name NATION RISE WP

Project # 1756

Habitat RWA 11-19 (RWA-001)

Point Count ID A (RWA-001A)

Date (dd/mm/yy) 26/01/17

Survey  spring migration  breeding  fall migration  winter  daytime/raptor

UTM \_\_\_\_\_

Start Time: 1025 End Time: 1055

Obs. J. BARBER N. MILLER

## Weather

Air Temp. 1 °C

Wind Speed 1

Wind Direction N (from)

Cloud Cover 100 %

Cloud Height High  Med  Low

Precipitation LIGHT RAIN

Visibility High  Med  Low

**Height Category:** 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 evidence as applicable

**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

(RWA-001)

Habitat: RWA 11-A

Point Count ID: A

Date: 26/01/17

Project #: 1756

Species	Time	# of Birds	Obs. in Habitat?	Behaviour	Height Category	Flight Direction (°)	Direction from Obs. (°)	Dist. from Obs. (m)	Passes
BLUE JAY	1026	6	N	PERCHED	1	/	180	500	/
BLACK CAPPED CHICK.	1026	1	X	FORAGING	1	/	270	300	/
AMERICAN CROW	1026	5	N	PERCHED	2	/	180	400	/
NORTHERN FLICKER	1049	1	N	PERCHED	1	/	180	400	/

# AVIAN POINT COUNT FORM

Project Name NATION RISE WP

Project # 1758

Habitat RWA-11 B (RWA-001)

Point Count ID B (RWA-001B)

Date (dd/mm/yy) 26/01/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 0932 End Time: 1002

Obs. J BARBER N MILLER

## Weather

Air Temp. 1 °C

Wind Speed 1

Wind Direction NW (from)

Cloud Cover 100 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NAI/OO RISE WP

Project # 1756

Habitat RW11-C (RWA-001)

Point Count ID C (RWA-001C)

Date (dd/mm/yy) 26/01/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 0840

End Time: 0911

Obs. J. BOMBER N. MILLER

## Weather

Air Temp. 1 °C

Wind Speed 1

Wind Direction NW (from)

Cloud Cover 100 %

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 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 drifts; 2=wind felt on face; 3=leaves move; 4=sm.branches move; 5=sm.trees move; 6=lrq branches move; 7=lrq trees move; 8=twigs break off, hard to walk; 9=light structural damage; 10=trees uprooted



# BIRD TRANSECT

Project Name NAT<sup>ION</sup> RISE WP

Project # 1756

Habitat RWA 42 (RWA-002)

Transect Route E-D-C-B-A-F

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration

breeding  fall migration

winter

daytime/  
raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 26/01/17

Start Time: 1109

End Time: 1145

Obs. J. BANBER N. MILLER

## Weather

Air Temp. 1 °C

Wind Speed 1

Wind Direction NW (from)

Cloud Cover 100 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE WFP

Project # 1756

Habitat RWA-11B (RWA-001)

Transect Route A-B-C

Length 16 km  
16 min

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 31/01/2017

Start Time: 1011

End Time: 1057

Obs. J BARBER

## Weather

Air Temp. -17 °C

Wind Speed 1

Wind Direction E (from)

Cloud Cover 5 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE WP

Project # 1756

Habitat RWA-11C (RWA-001)

Transect Route D-C-B-A

Length 11 km  
11 min

Survey  spring migration  breeding  fall migration  winter  daytime/raptor

UTM Start \_\_\_\_\_ UTM End \_\_\_\_\_

Date (dd/mm/yy) 31/01/17

Start Time: 0919 End Time: 0930 Obs. J. BARBER

Weather  
Air Temp. -17 °C

Wind Speed 1

Wind Direction E (from)

Cloud Cover 0 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE WP

Project # 1756

Habitat RWA-11A (RWA-001)

Point Count ID 11A (RWA-001A)

Date (dd/mm/yy) 31/01/17 Survey  spring migration  breeding  fall migration  winter  daytime/raptor

UTM \_\_\_\_\_

Start Time: 1110 End Time: 1140

Obs. J. BARBER

## Weather

Air Temp. -17 °C Wind Speed 1 Wind Direction E (from)

Cloud Cover 20 % 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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE

Project # 1786

Habitat RWA-11B (RWA-CUB)

Point Count ID 11B (RWA-CUB)

Date (dd/mm/yy) 31/01/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 1022

End Time: 1052

Obs. J. BARBER

## Weather

Air Temp. -17 °C

Wind Speed 1

Wind Direction E (from)

Cloud Cover 10 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE WP

Project # 1756

Habitat RWA-11C (RWA-001)

Point Count ID 11C (RWA-001C)

Date (dd/mm/yy) 31/01/17

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 0930 End Time: 1000

Obs. J. BARBER

## Weather

Air Temp. -17 °C

Wind Speed 1

Wind Direction E (from)

Cloud Cover 0 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE WPP

Project # 1756

Habitat RWA-42 (RWA-002)

Transect Route E-D-C-B-A-F

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration  breeding  fall migration  winter  daytime/raptor

UTM Start \_\_\_\_\_ UTM End \_\_\_\_\_

Date (dd/mm/yy) 31/01/17

Start Time: 0810 End Time: 0850 Obs. J. BARBER

## Weather

Air Temp. -19 °C Wind Speed 1 Wind Direction E (from)

Cloud Cover 0 % 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 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 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



# BIRD TRANSECT

Project Name NATION RISE WP

Project # 1756

Habitat RWA-11B (RWA-001)

Transect Route A-B-C

Length 18 km  
18 min

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 09/02/17

Start Time: 1512

End Time: 1600

Obs. J. BRADEN K. BURRELL

## Weather

Air Temp. -12 °C

Wind Speed 2

Wind Direction NW (from)

Cloud Cover 60 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE WP

Project # 1756

Habitat RWA-11C (RWA-001)

Transect Route D-C-B-A

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 09/02/17

Start Time: 1415

End Time: 1428

Obs. J. BARBER K. BURRELL

## Weather

Air Temp. -12 °C

Wind Speed 3

Wind Direction NW (from)

Cloud Cover 60 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATIONS RISE WP

Project # 1756-6

Habitat RWA-11 (RWA-001)

Point Count ID RWA-11A (RWA-001A)

Date (dd/mm/yy) 10/02/17

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 0808

End Time: 0838

Obs. J BARBER K BURPELL

## Weather

Air Temp. -16 °C

Wind Speed 3

Wind Direction NW (from)

Cloud Cover 0 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE

Project # 1756

Habitat RWA-11B (RWA-001)

Point Count ID 11B (RWA-001B)

Date (dd/mm/yy) 09/02/17

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 1523

End Time: 1553

Obs. J. BAUBER K. BURRILL

## Weather

Air Temp.

-12 °C

Wind Speed

2

Wind Direction

NW

(from)

Cloud Cover

66 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE

Project # 1756

Habitat RWA-11C (RWA-001)

Point Count ID 11C (RWA-001C)

Date (dd/mm/yy) 09/02/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time:

1428

End Time:

1458

Obs.

J. BARBOR K. BURRILL

## Weather

Air Temp.

-12 °C

Wind Speed

3

Wind Direction

NW

(from)

Cloud Cover

60 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE WP

Project # 1756

Habitat RWA 42 (RWA-002)

Transect Route E-D-C-B-A-F

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 09/02/17

Start Time: 1320

End Time: 1353

Obs. J. BARBER R. BURRELL

## Weather

Air Temp. -12 °C

Wind Speed 3

Wind Direction NW (from)

Cloud Cover 60 %

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 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 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



# BIRD TRANSECT

Project Name NATIONS RISE WP

Project # 1756

Habitat RWA - 11B (RWA-001)

Transect Route C-B-A

Length 20 km  
min

Survey  spring migration  breeding  fall migration  winter  daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 14/02/17

Start Time: 1000

End Time: 1050

Obs. J BARBER N. MILLER

Weather  
Air Temp. -9 °C

Wind Speed 1

Wind Direction SE (from)

Cloud Cover 100 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE WP

Project # 1756

Habitat RWA-11C (RWA-001)

Transect Route A-B-C-D

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 14/02/17

Start Time: 0903

End Time: 0914

Obs. J. BARBER N. MILLER

## Weather

Air Temp. -9 °C

Wind Speed 1

Wind Direction SE (from)

Cloud Cover 100 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE WP

Project # 1756

Habitat RWA-11A (RWA-001)

Point Count ID 11A (RWA-001A)

Date (dd/mm/yy) 14/02/17

Survey  spring migration

breeding  fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 1059 End Time: 1129

Obs. J. BARBER N. MILLER

## Weather

Air Temp. -9 °C

Wind Speed 0

Wind Direction SE (from)

Cloud Cover 90 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATIONS RISE

Project # 1756

Habitat RWA-11B (RWA-001)

Point Count ID 11B (RWA-001B)

Date (dd/mm/yy) 14/02/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 1012 End Time: 1042

Obs. J. BONBER N. MILLER

## Weather

Air Temp. -9 °C

Wind Speed 1

Wind Direction SE (from)

Cloud Cover 100 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE

Project # 1756

Habitat RWA-11C (RWA-001)

Point Count ID 11C (RWA-001C)

Date (dd/mm/yy) 14/02/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 0914

End Time: 0944

Obs. J. BAMBER N. MILLER

## Weather

Air Temp. -9 °C

Wind Speed 1

Wind Direction SE (from)

Cloud Cover 100 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE

Project # 1756

Habitat RWA 42 (RWA-002)

Transect Route E-D-C-B-A-F

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  spring migration

breeding  fall migration

winter

daytime/  
raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 14/02/17

Start Time: 0800hrs

End Time: 0840hrs

Obs. J. BARBER N. MILLOR

## Weather

Air Temp. -11 °C

Wind Speed 1

Wind Direction SE (from)

Cloud Cover 100 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE

Project # 1756

Habitat RWA EIB

Transect Route ABC

Length 15 km  
min

Survey  breeding  fall migration  winter  daytime/  
spring migration migration raptor

UTM Start \_\_\_\_\_ UTM End \_\_\_\_\_

Date (dd/mm/yy) 22/02/17

Start Time: 1000 End Time: 1045

Obs. J. BARBER

Weather  
Air Temp. 2 °C

Wind Speed 1

Wind Direction S (from)

Cloud Cover 100 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE

Project # 1756

Habitat RWA-11C

Transect Route D-C-B-A

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey   breeding  fall migration  winter  daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 22/02/17

Start Time: 0904

End Time: 0917

Obs. J BARBER

## Weather

Air Temp. 2 °C

Wind Speed 1

Wind Direction S (from)

Cloud Cover 100 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE

Project # 1756

Habitat RWA-11A

Point Count ID 11A

Date (dd/mm/yy) 22/02/17

Survey

spring migration

breeding

fall migration

winter

daytime/  
raptor

UTM \_\_\_\_\_

Start Time: 1105

End Time: 1135

Obs. J. BARBER

## Weather

Air Temp. 2 °C

Wind Speed 1

Wind Direction S (from)

Cloud Cover 100 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE

Project # 1756

Habitat RWA - 11B

Point Count ID 11B

Date (dd/mm/yy) 22/02/17

Survey  spring migration

breeding

fall migration

winter

daytime/  
raptor

UTM \_\_\_\_\_

Start Time: 1007

End Time: 1037

Obs. J. BARBER

## Weather

Air Temp. 2 °C

Wind Speed 1

Wind Direction S (from)

Cloud Cover 100 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE

Project # 1756

Habitat RWA-11C

Transect Route D-C-B-A

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey   breeding  fall migration  winter  daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 22/02/17

Start Time: 0904

End Time: 0917

Obs. J BARBER

## Weather

Air Temp. 2 °C

Wind Speed 1

Wind Direction S (from)

Cloud Cover 100 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE

Project # 1756

Habitat RWA-42

Transect Route E-D-C-B-A-F

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey   breeding  fall migration  winter  daytime/raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 22/02/17

Start Time: 0810

End Time: 0840

Obs. J. BARBER

## Weather

Air Temp. 2 °C

Wind Speed 1

Wind Direction S (from)

Cloud Cover 100 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE

Project # 1756

Habitat RWA 11B

Transect Route A-B-C

Length 15 km  
15 min

Survey  breeding  fall migration  winter  daytime/raptor  
 spring migration

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 27/02/17

Start Time: 1130

End Time: 1215

Obs. J. BARBER

Weather  
Air Temp. 4 °C

Wind Speed 3

Wind Direction W (from)

Cloud Cover 100 %

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 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 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







# AVIAN POINT COUNT FORM

Project Name NATION RISE Project # 1756  
Habitat RWA IIA Point Count ID IIA

Date (dd/mm/yy) 27/02/17 Survey  breeding  fall  winter  daytime/  
spring migration migration raptor

UTM \_\_\_\_\_

Start Time: 1235 End Time: 1305 Obs. J. GANBER

**Weather**  
Air Temp. 4 °C Wind Speed 3 Wind Direction W (from)  
Cloud Cover 90 % 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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE

Project # 1756

Habitat RWA-11B

Point Count ID 11B

Date (dd/mm/yy) 27/02/17

Survey

spring migration

breeding

fall

migration

winter

daytime/  
raptor

UTM \_\_\_\_\_

Start Time: 1137

End Time: 1207

Obs. J. BARBER

Weather  
Air Temp. 4 °C

Wind Speed 3

Wind Direction W (from)

Cloud Cover 100 %

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 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 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



# AVIAN POINT COUNT FORM

Project Name NATION RISE

Project # 1756

Habitat RWA-11C

Point Count ID MC

Date (dd/mm/yy) 27/02/17

Survey  spring migration

breeding

fall migration

winter

daytime/raptor

UTM \_\_\_\_\_

Start Time: 1051

End Time: 1121

Obs. J. BARBER

Weather  
Air Temp. 4 °C

Wind Speed 3

Wind Direction W (from)

Cloud Cover 100 %

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 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 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



# BIRD TRANSECT

Project Name NATION RISE

Project # 1756

Habitat RWA 4Z

Transect Route E-D-C-B-A-F

Length \_\_\_\_\_ km  
\_\_\_\_\_ min

Survey  breeding  fall migration  winter  daytime/  
spring migration raptor

UTM Start \_\_\_\_\_

UTM End \_\_\_\_\_

Date (dd/mm/yy) 27/02/17

Start Time: 0938

End Time: 1012

Obs. J. BARBER

Weather  
Air Temp. 4 °C

Wind Speed 4

Wind Direction SW (from)

Cloud Cover 90 %

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 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 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



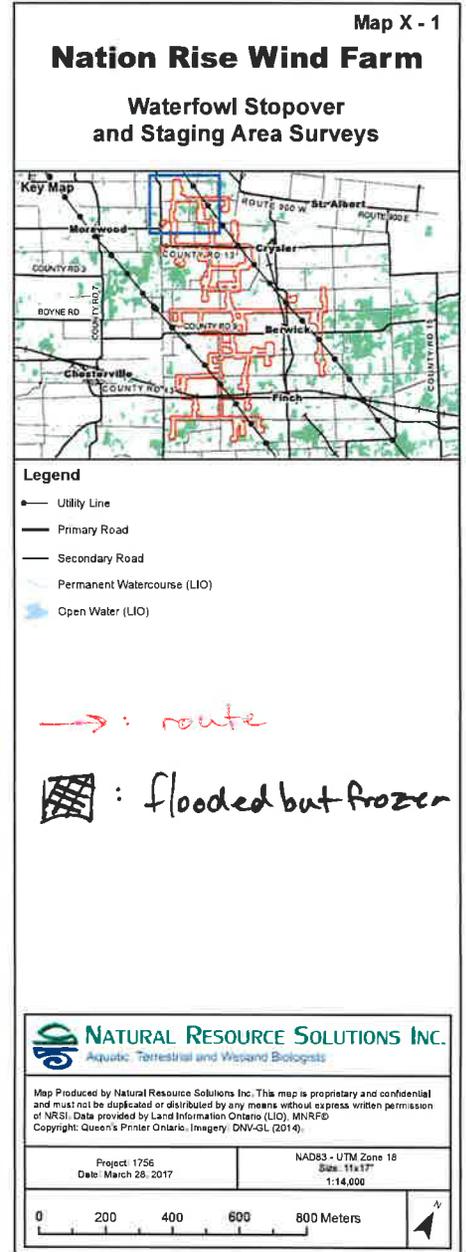
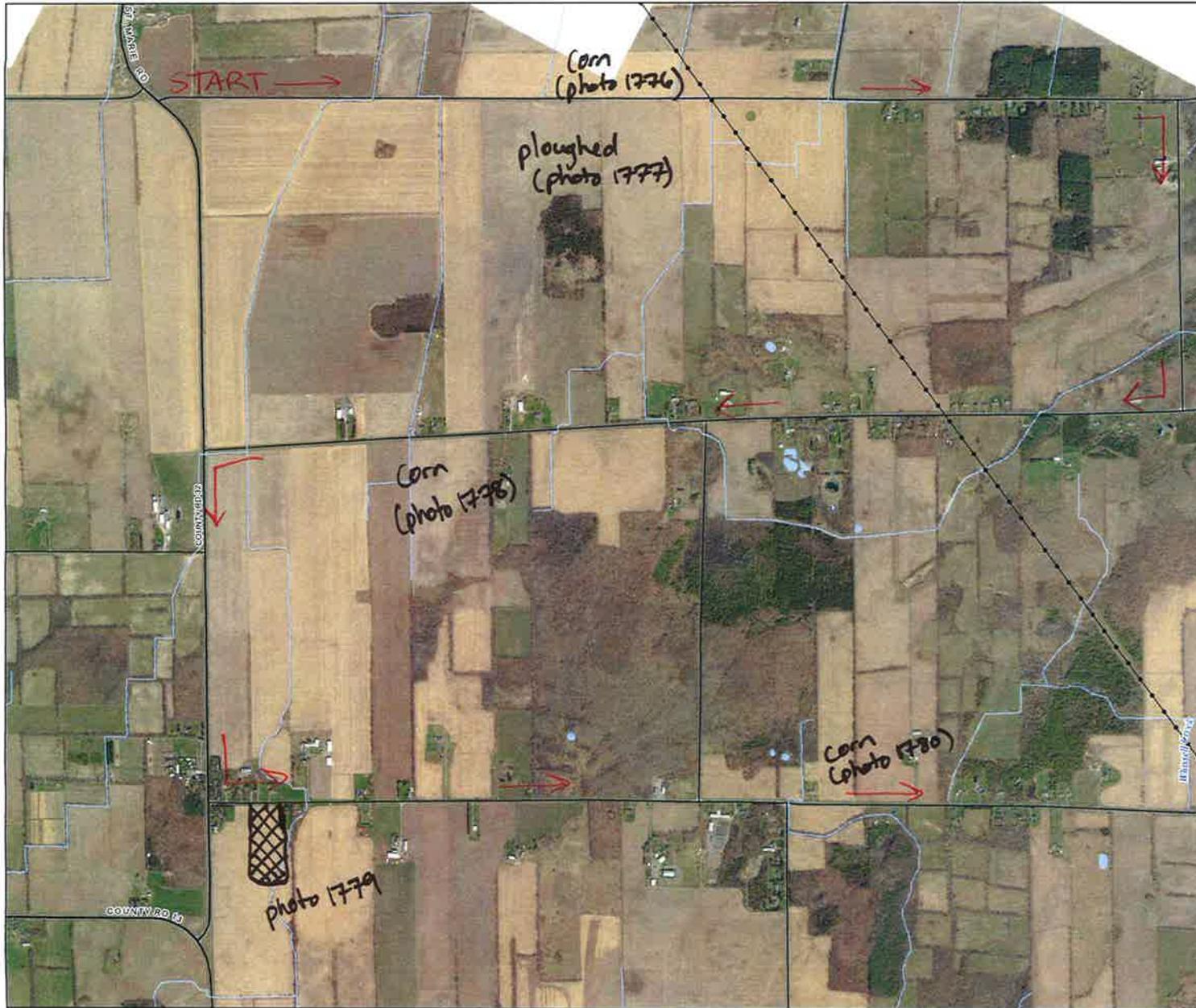
**Appendix II**

Waterfowl Stopover and Staging Area Evaluation of Significance Field Notes

March 2, 2017

J. Barber

fields mostly snow/iced over w̄ crops poking through



March 2, 2017

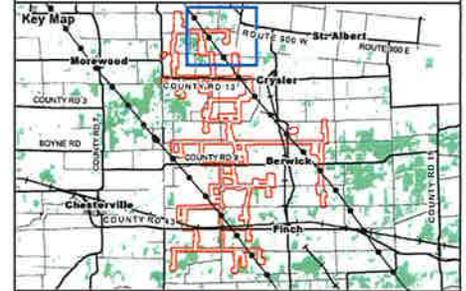
J. Barber



Map X - 2

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→ : Route

① : sighting

▨ : flooded but frozen

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Project: 1756  
Date: March 28, 2017

NADE83 - UTM Zone 18  
Scale: 1:14,000

0 200 400 600 800 Meters



March 2, 2017

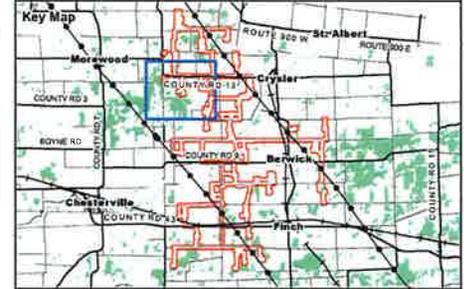
J. Barber



Map X - 3

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→: Route

①: Sighting

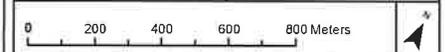
▨: flooded area

▩: flooded but frozen

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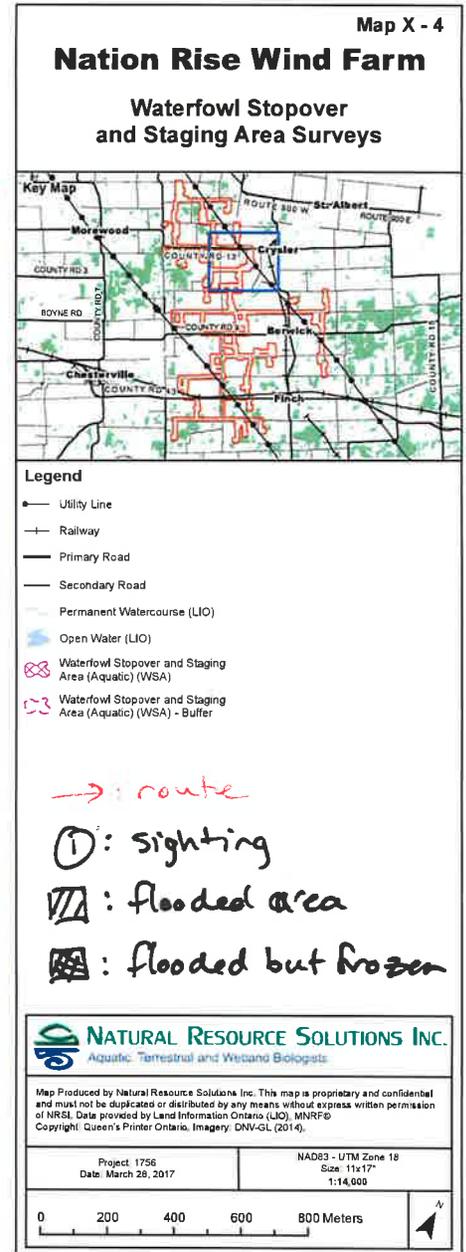
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Project: 1750  
Date: March 29, 2017  
NAD83 - UTM Zone 18  
Size: 11x17"  
Scale: 1:14,000



March 2, 2017

J. Barber



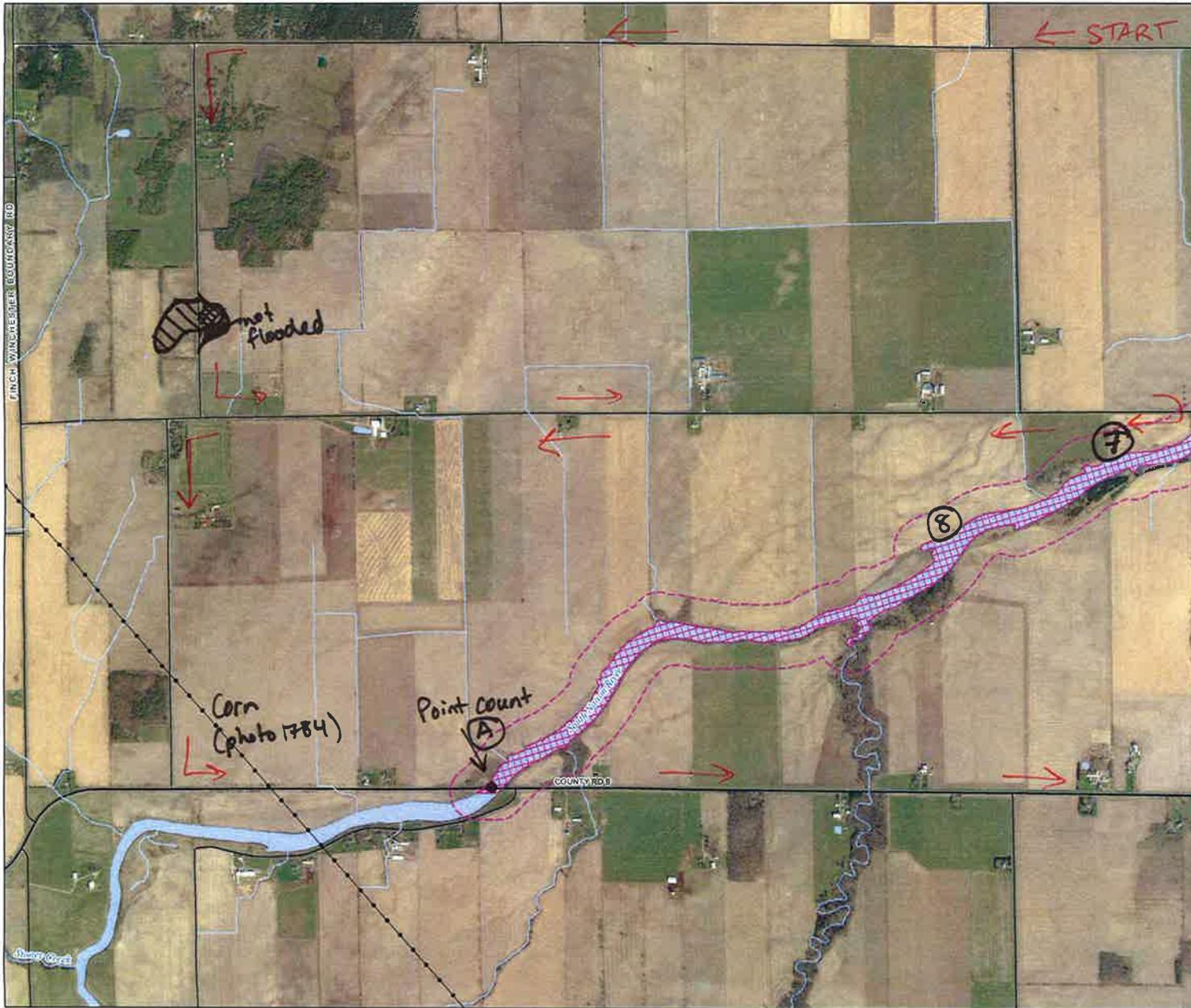
~1km S ↓  
 ~800 snow geese  
 flying West @ 09:55

↓ 400m  
 ⑤

↓ to map X 6

March 2, 2017

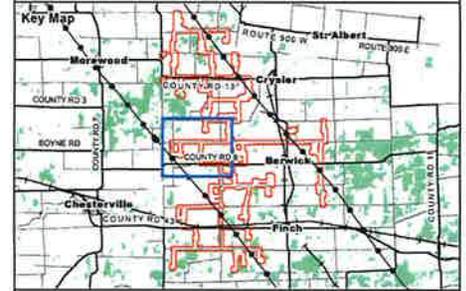
J. Barber



Map X - 5

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- ⊗ Waterfowl Stopover and Staging Area (Aquatic) (WSA)
- ⊕ Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer

→ : Route

① : sighting

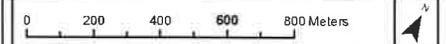
⊗ : flooded area

⊕ : flooded but frozen

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Project: 1756  
Date: March 28, 2017  
NAD83 - UTM Zone 18  
Scale: 11x17"  
1:14,000



March 2, 2017

J. Barber



Map X - 6

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- ⊗ Waterfowl Stopover and Staging Area (Aquatic) (WSA)
- ⊞ Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer

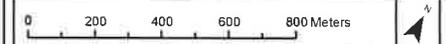
→ : Route

Ⓣ : Sighting

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Project: 1756  
Date: March 28, 2017  
NADE83 - UTM Zone 18  
Size: 11x17"  
Scale: 1:14,000



March 2, 2017

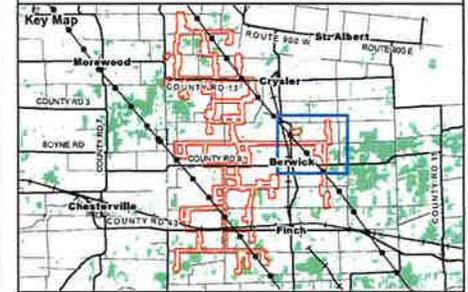
J. Barber



Map X - 7

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→: Route

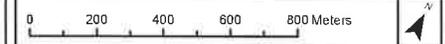
⑩: Sighting

▨: flooded but frozen

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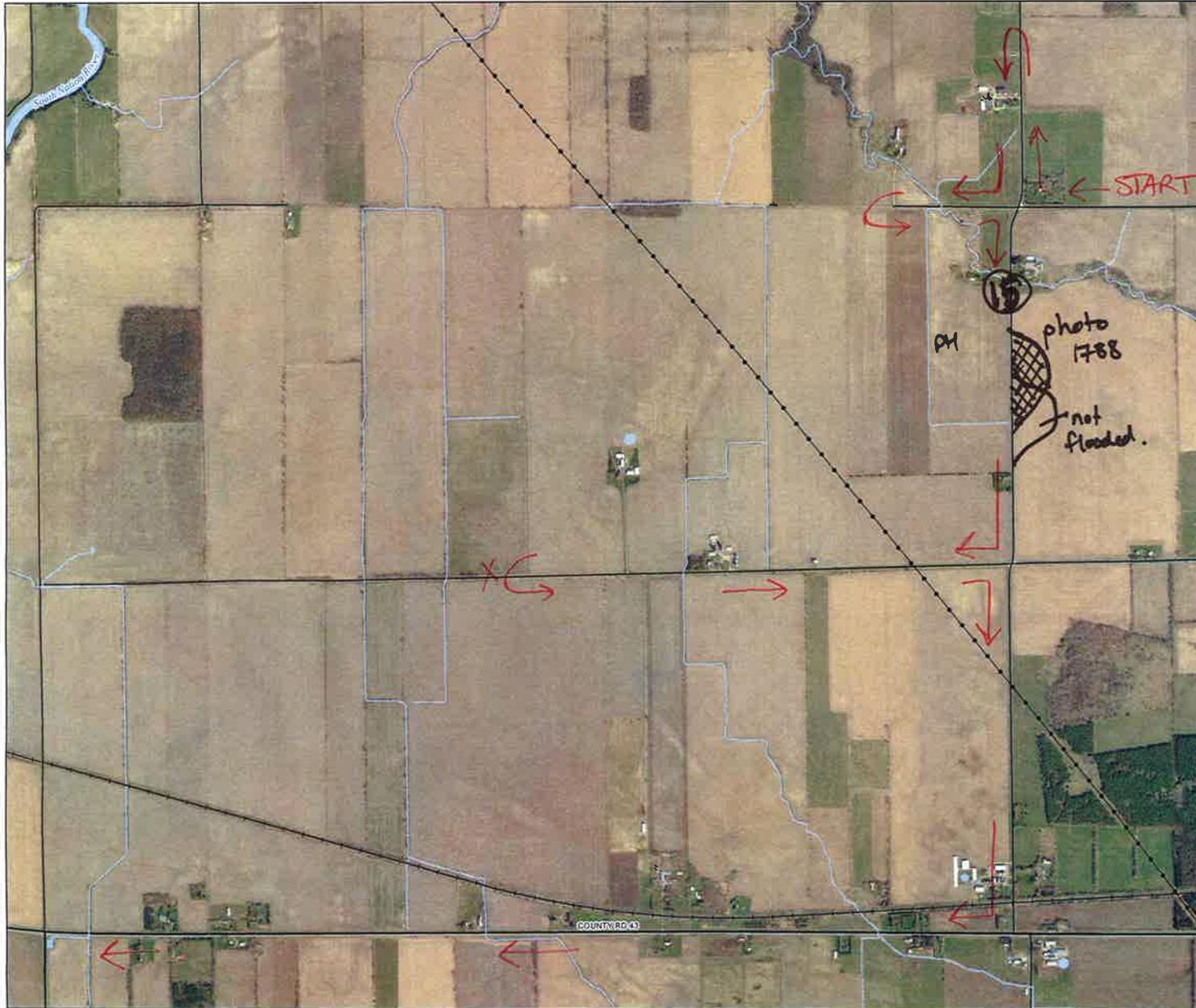
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Project: 1756  
Date: March 28, 2017  
NADES - UTM Zone 18  
Size: 11x17"  
1:14,000



March 2, 2017

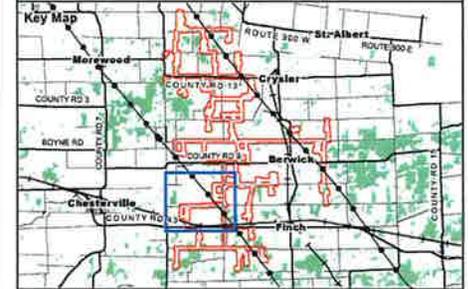
J. Barber



Map X - 8

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

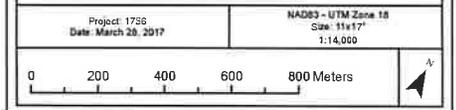
→ : Route

① : Sighting

▨ : flooded but frozen



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March 2, 2017

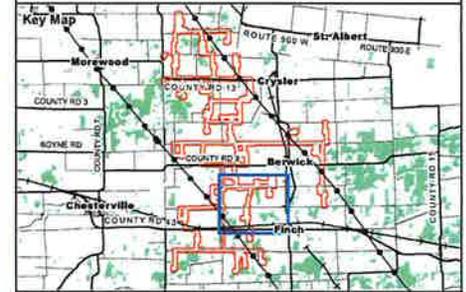
J. Barber



Map X - 9

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→ : Route

① : Sighting

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Project: 1756  
Date: March 28, 2017

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

0 200 400 600 800 Meters



March 2, 2017

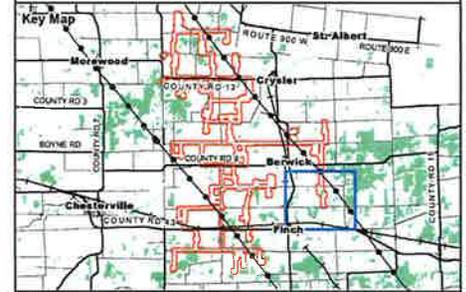
J. Barber



Map X - 10

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→ : Route

① : Sighting

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Project: 1756  
Date: March 28, 2017

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

0 200 400 600 800 Meters



⑪

March 2, 2017

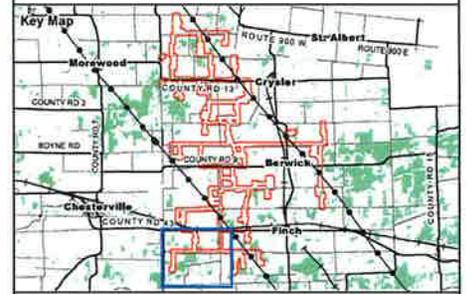
J. Barber



Map X - 11

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

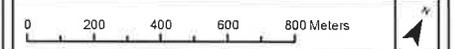
- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)

→ : Route

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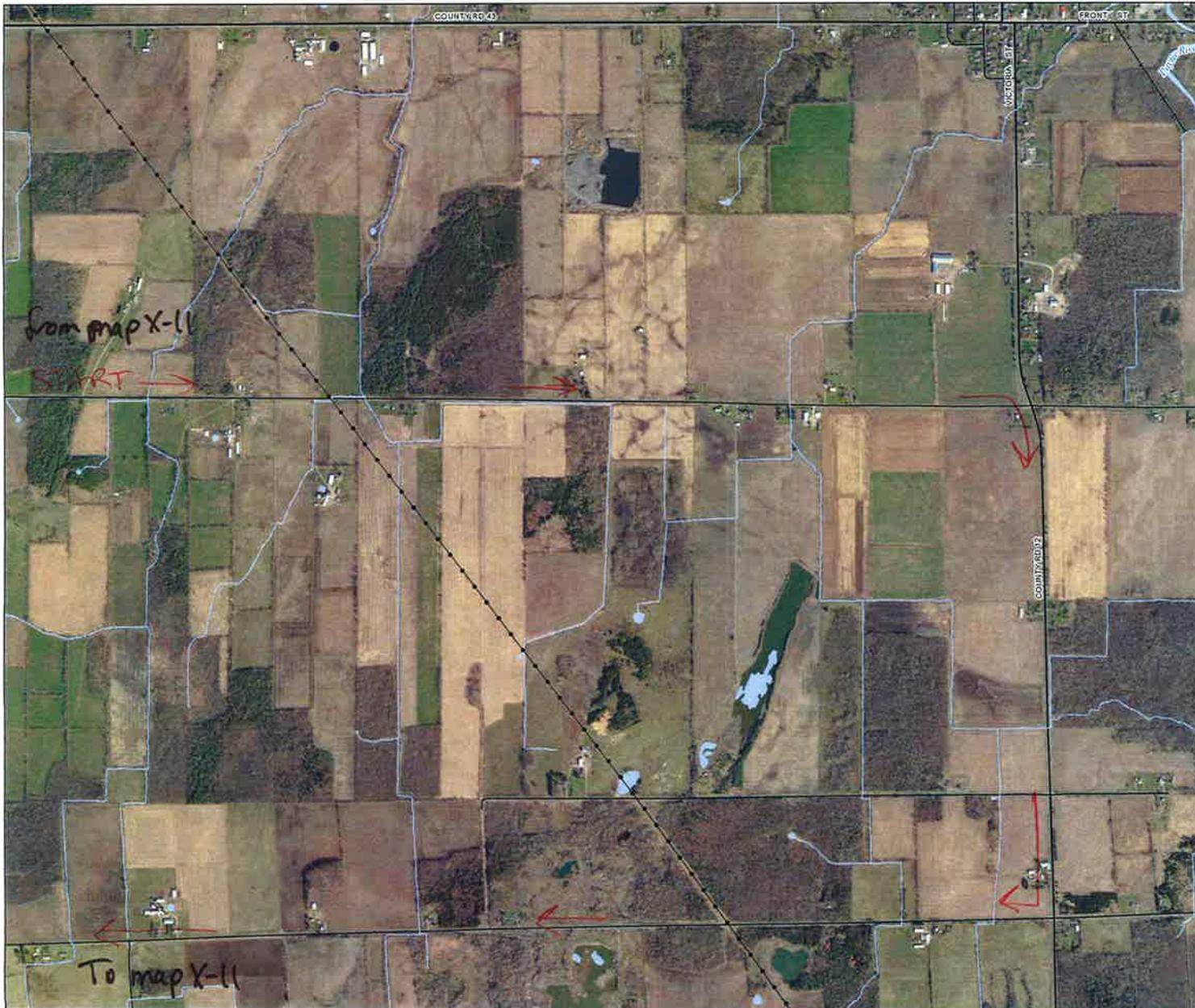
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Project 1756  
Date: March 28, 2017  
NADES - UTM Zone 18  
Size: 11x17"  
1:14,000



March 2, 2017

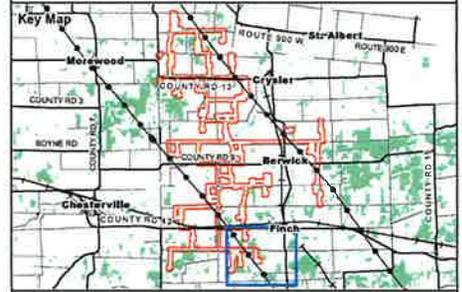
J. Barber



Map X - 12

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

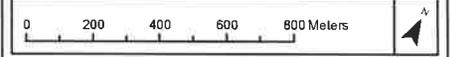
- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)

→: Route



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Project: 1756  
Date: March 28, 2017  
NAD83 - UTM Zone 18  
Size: 11x17"  
1:14,000



Nation Rise NP  
March 2, 2017

#1756  
J. Barber

## Waterfowl Survey - driving transects

-10°C

wind NW 30 km/hr

Sun/cloud but blowing snow

Start time = 08:25' End time = 14:25

Map X-2 (09:15)

① - Canada goose (2) photo: 1781

② - Canada goose (1)

Map X-4 (09:30)

③ - Canada goose (185) on river  
photo DSC - 8632

④ - Canada goose (475) on riverbank  
= Cackling goose (2) photo: 8639

- ⑤ - Canada goose (1800)  
~400m south of map X-4  
(on map X-6) photo: 8655

Map X-3

- ⑥ - Canada goose (3) fly-over

Map X-5 (10:50)

- ⑦ - Snow goose (65) - Field N of river  
- Canada goose (350) - Flying low over river  
- Snow goose (250) - In air flying W  
south of river

- ⑧ - Canada goose (~300) - on N bank  
of river

Map X-6 (12:20)

- ⑨ - Canada goose (45) - Flying W over field

Map X-7 (13:00)

- ⑩ - Canada goose (26) in river,  
\* good potential for more waterfowl  
here on upcoming surveys.

Nation Rise WP  
March 2, 2017

#1756  
J. Barber

Waterfowl survey

Map X-10 (13:40)

- (11) (south side of 43 - flooded river)  
- Canada goose (275)

Map X-9 (~~14:00~~) (13:50)

- (12) - Canada goose (650) - flying south  
(13) - Canada goose (65) - flying south  
(14) - Snowgoose (525) - flying SE  
photo: 8699

Map X-8

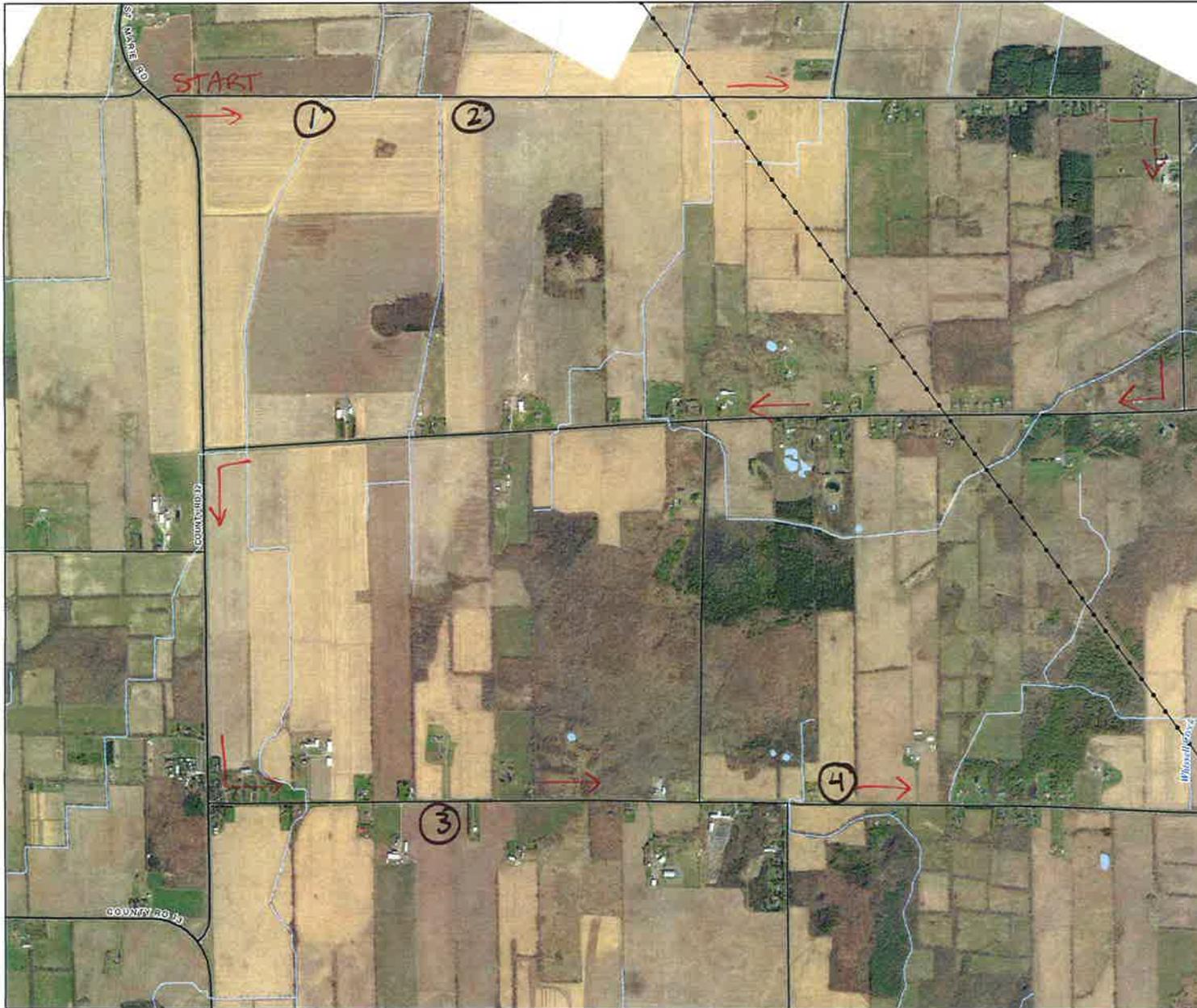
- (15) - snowgoose (3) low flying west  
photo OSC - 8703  
- Canada goose (45) flying NE





Mar 8, 2017

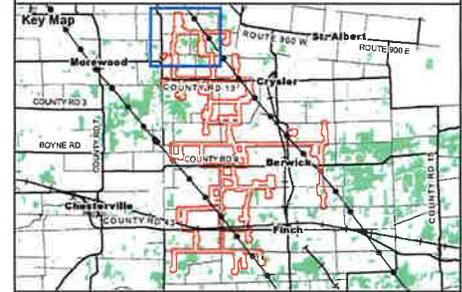
J. Barber



Map X - 1

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

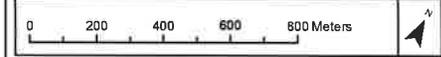
→: Route

①: Sighting



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Project: 1756  
Date: March 28, 2017  
NAD83 - UTM Zone 18  
Size: 11x17"  
1:14,000



Mar 8, 2017

J. Barber

09:05

+5°C



Map X - 2

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys

**Legend**

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

→ : Route

① : Sighting

▨ : Flooded but frozen

---

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Project: 1756 Date: March 28, 2017	NAD83 - UTM Zone 18 Scale: 1:14,000 1:14,000
---------------------------------------	--

Mar. 8, 2017

J. Barber

11:05

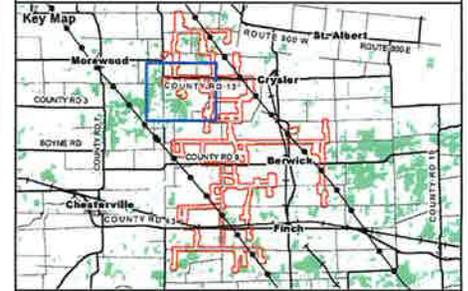
+7°C



Map X - 3

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

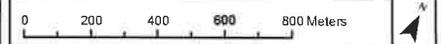
→ : Route

▨ : flooded area



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Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
1:14,000	



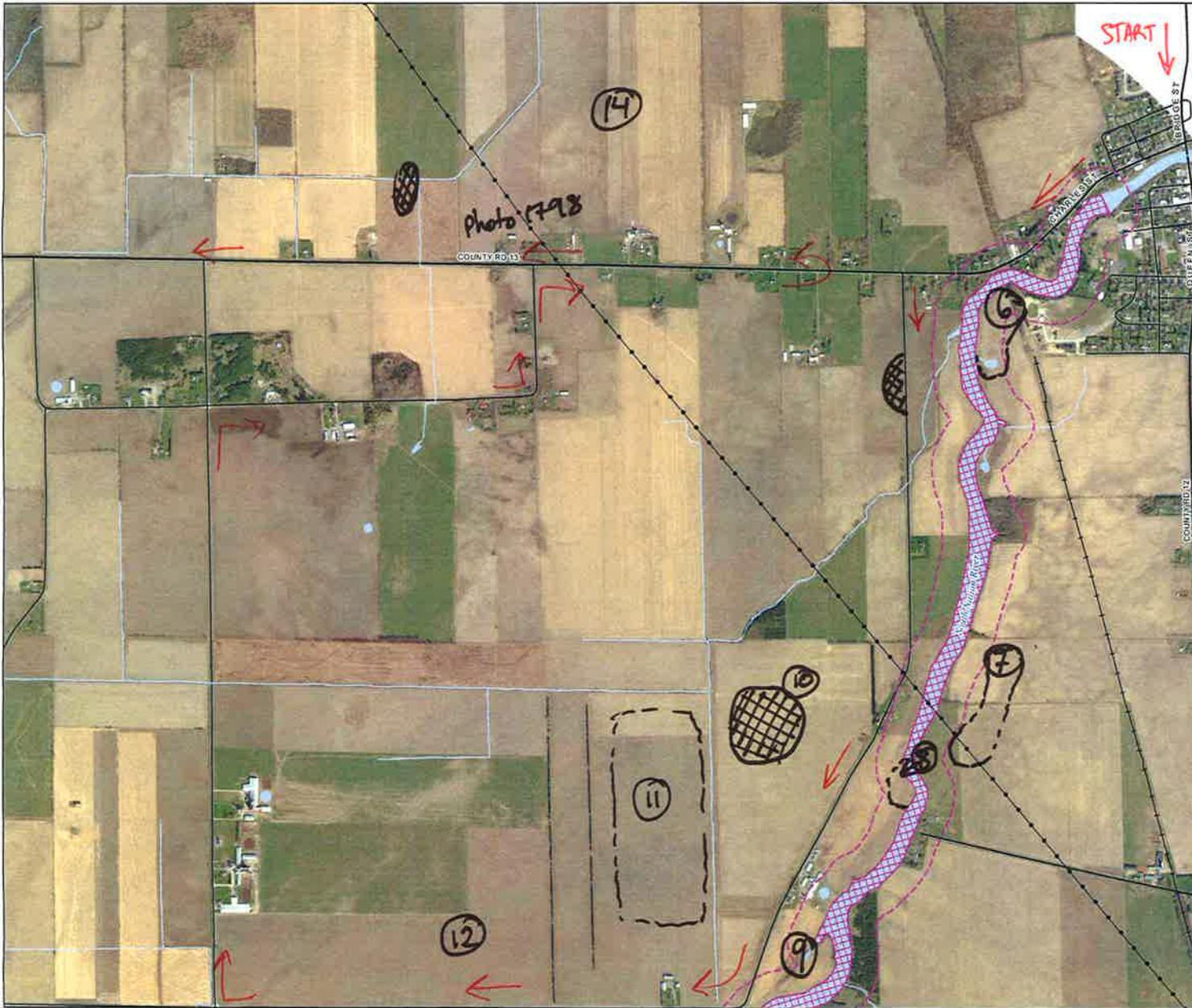
to map X-5

Mar 8, 2017

J. Barber

09:40

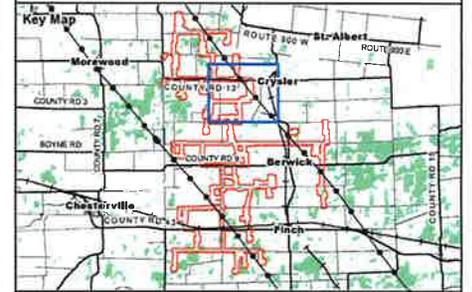
+6 °C



Map X - 4

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- Waterfowl Stopover and Staging Area (Aquatic) (WSA)
- Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer

→ : Route

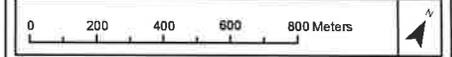
① : Sighting

⊠ : flooded but frozen

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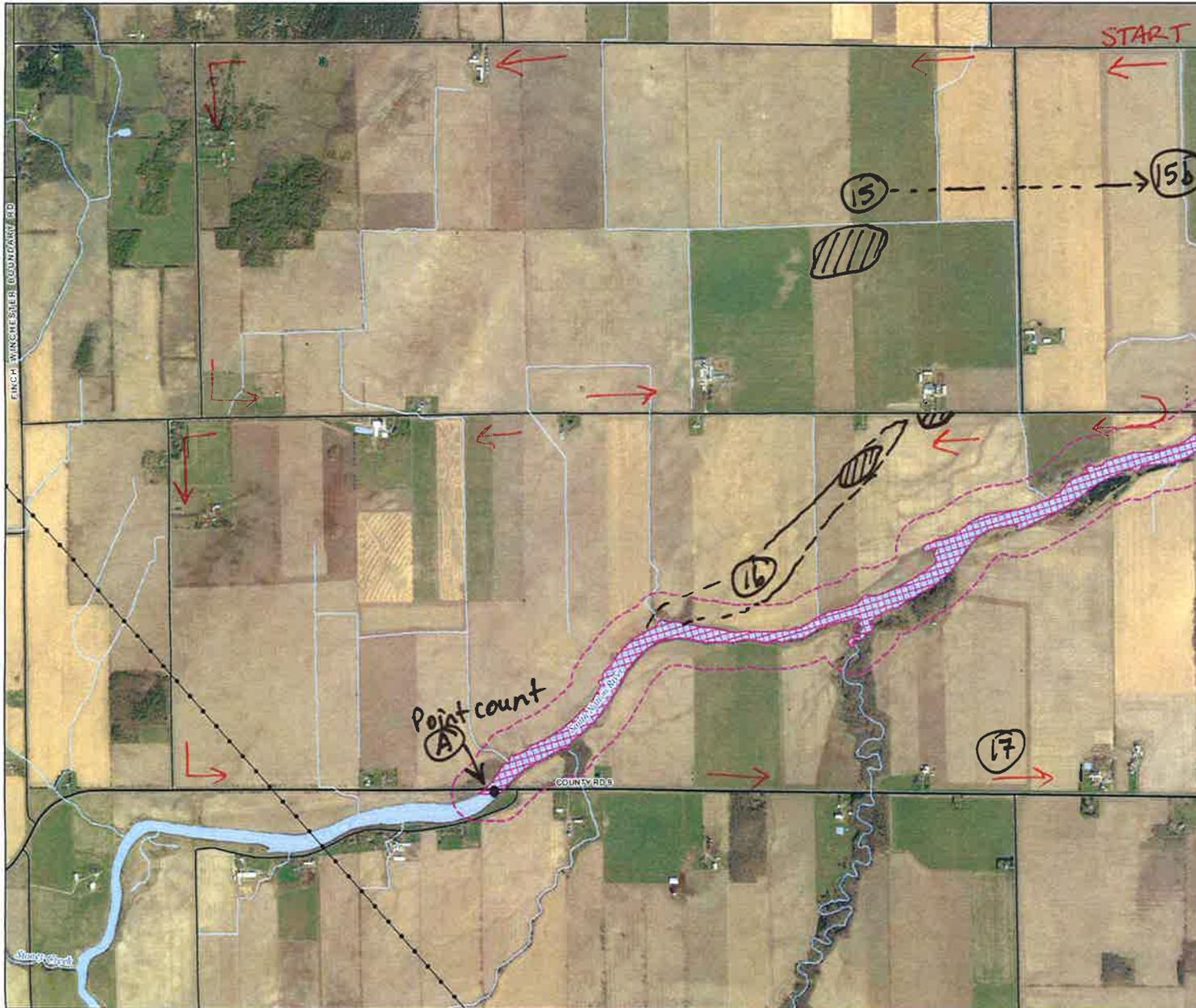
Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
	1:14,000



Mar. 8, 2017

J. Barber

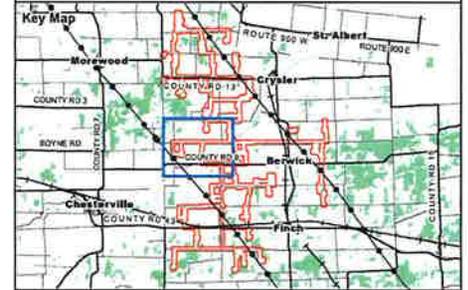
11:25



Map X - 5

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- Waterfowl Stopover and Staging Area (Aquatic) (WSA)
- Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer

→ : Route

⓪ : sighting

▨ : flooded area



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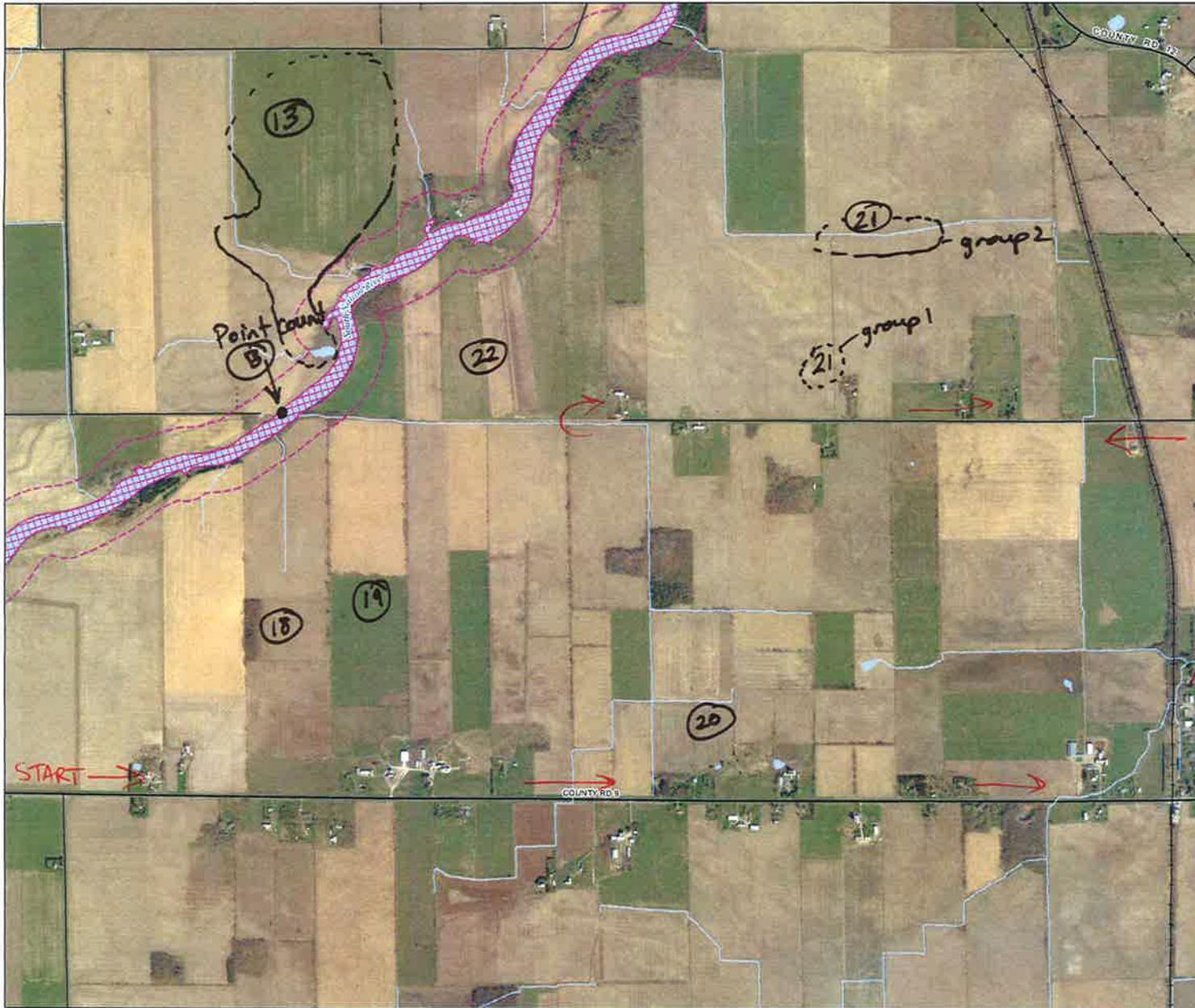
Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Scale: 1:14,000
0 200 400 600 800 Meters	
N	

Mar 8, 2017

J. Barber

13:10

wind 5-6 SW  
+9°C 65% CE



Map X - 6

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- ⊗ Waterfowl Stopover and Staging Area (Aquatic) (WASA)
- ⊕ Waterfowl Stopover and Staging Area (Aquatic) (WASA) - Buffer

→ : Route

① : sighting

ⓑ : point count location



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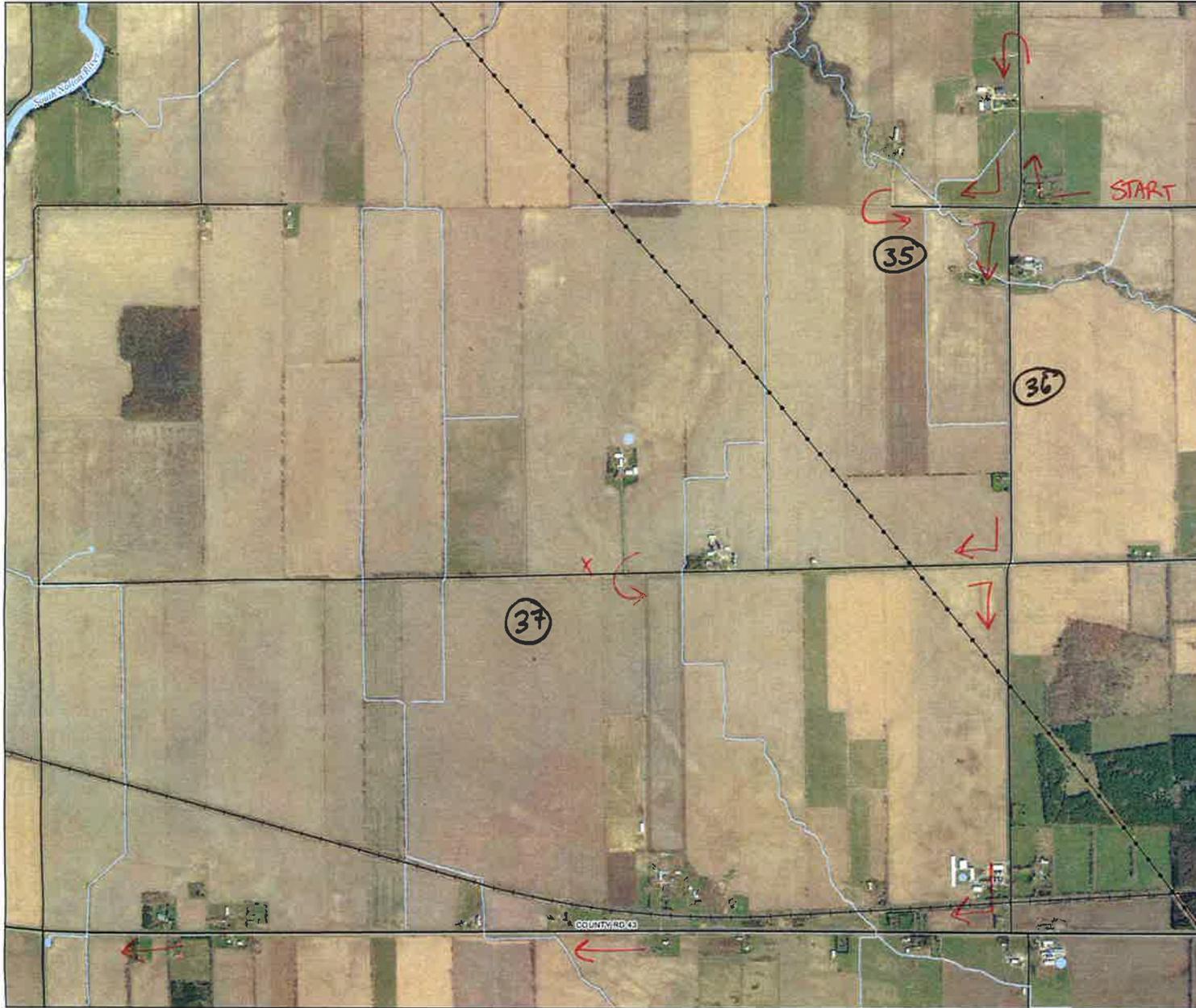
Project: 1756 Date: March 28, 2017	NAD83 - UTM Zone 18 Size: 11x17" Scale: 1:14,000
0 200 400 600 800 Meters	
N	



Mar. 8, 2017  
J. Barber

15:45

+9°C wind 6-7 SW



Map X - 8

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys

**Legend**

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

→ : Route

① : Sighting

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Project: 1756	NAD83 - UTM Zone 18
Date: March 26, 2017	Size: 11x17"
	1:14,000

Mar. 8, 2017

J. Barber

14:50

+10°C

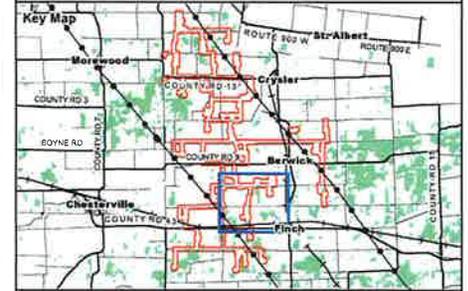
wind 6-7 SW



Map X - 9

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→ : Route

○ : sighting

▨ : flooded area



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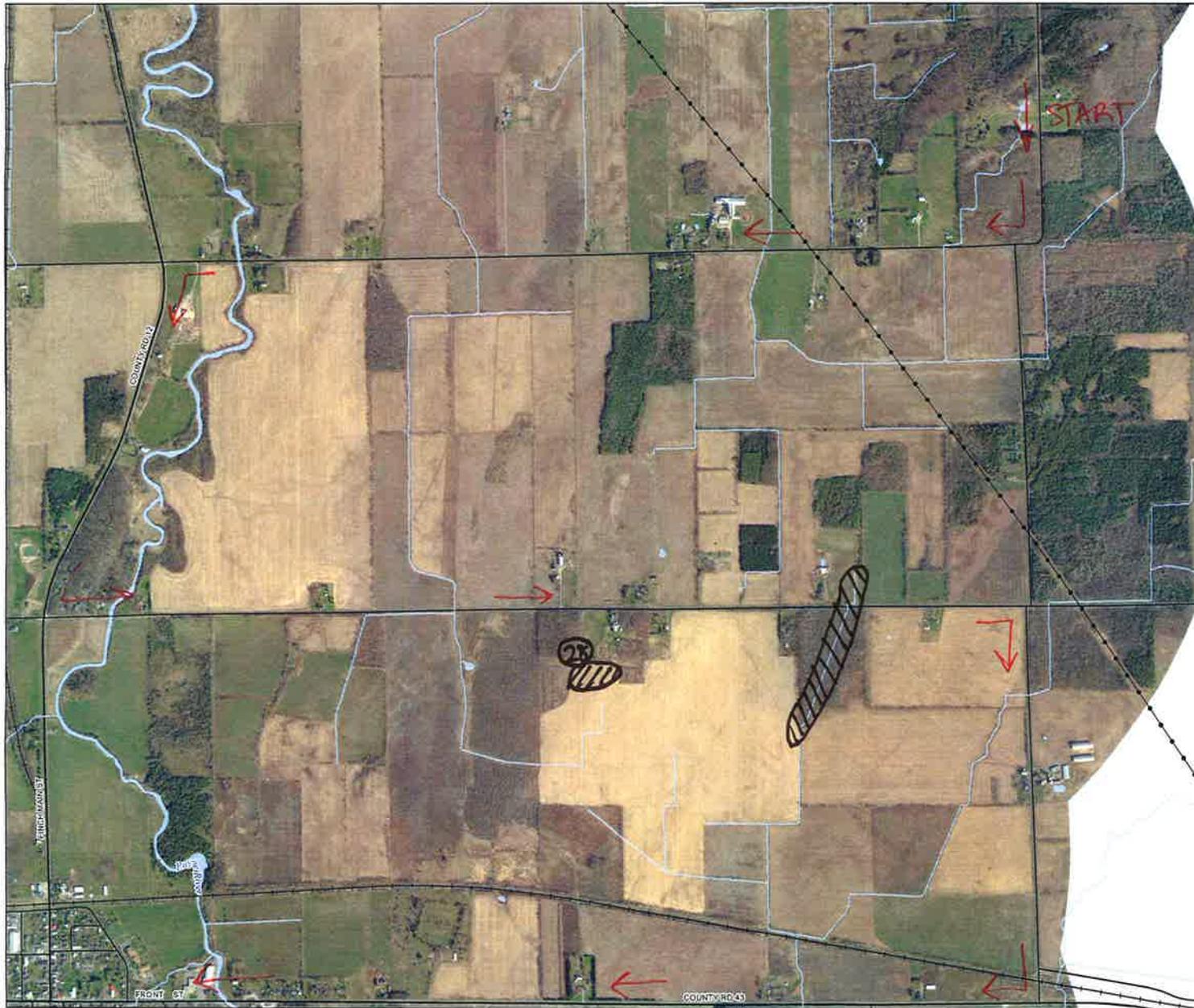
Project: 1756	NADES - UTM Zone 18
Date: March 26, 2017	Scale: 1:14,000
0 200 400 600 800 Meters	
N	

Mar. 8, 2017

J. Barber

14:30

+10°C

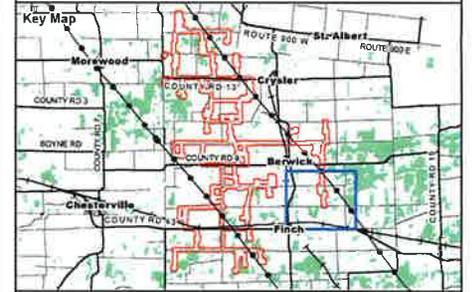


29

Map X - 10

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

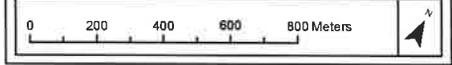
- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)

- : Route
- ① : sighting
- ▨ : flooded area

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Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
	Scale: 1:14,000



Mar 8, 2017

J. Barber

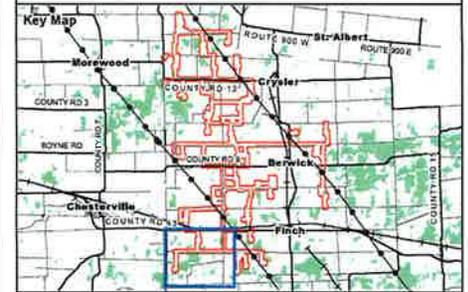
16:05



Map X - 11

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→ : Route

① : sighting

▨ : flooded area

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Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
	Scale: 1:14,000

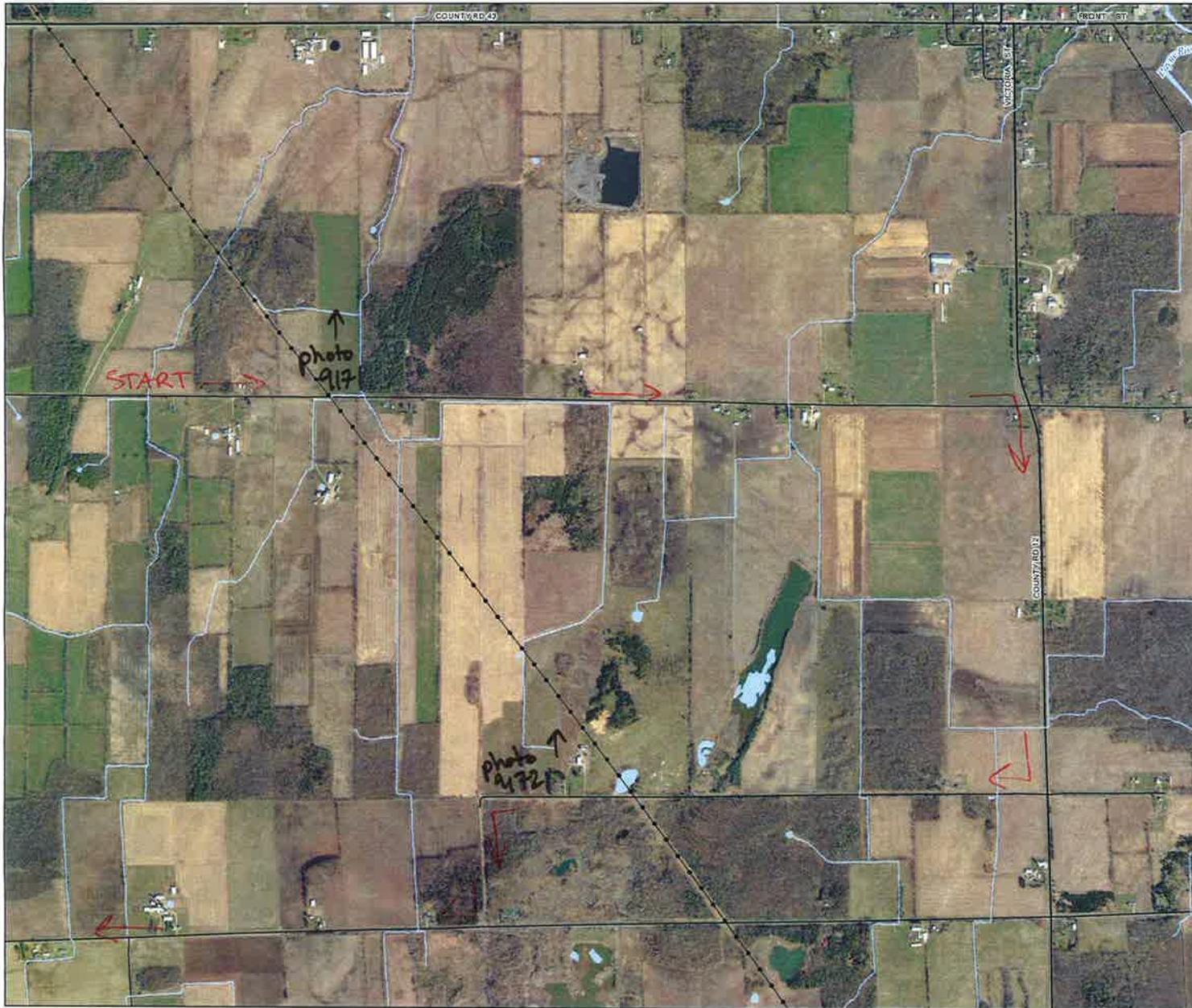


from map X-12

Mar. 8, 2017

J. Barber

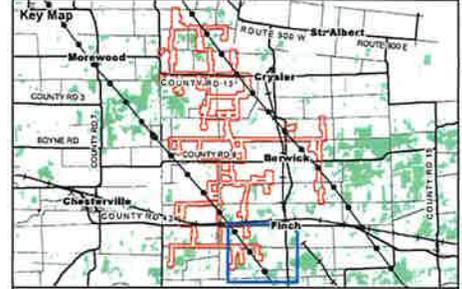
16:15



Map X - 12

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→: Route



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Project: 1750	NAD83 - UTM Zone 18
Date: March 28, 2017	Scale: 1:14,000
0 200 400 600 800 Meters	

Nation Rise WP  
March 8, 2017

#1756  
J. Barber

Waterfowl surveys - driving transects.

+4°C

wind 20 km/h SW  
20% cloud

Start time = 08:15

End time = 16:30

Map X-1 (08:15)

- ① - Canada goose (~1200) - 9 groups flying low south  
- Snow goose (18) - flying low south

- ② - Canada goose (225) - flyover  
- Snow goose (65) - flyover

- ③ - Canada goose (600) - 8 groups fly-over  
(09:00) NW

- ④ - Canada goose (450) - flyover to N  
- Snow goose (175) - flyover heading  
E

Map X-2 (09:05)

- ⑤ a+b - snow goose (2200) } foraging in
- Canada goose (2800) / corn field
- (approx.  $\frac{1}{2}$  of flock moving from position a  $\rightarrow$  b while scanning).
- photo 8887
- Northern pintail (1)

Map X-4 (09:40)

- ⑥ - Canada goose (~6000) lining E bank of S.N river, continuously arriving
- (09:50)
- ⑦ - Canada goose (~3500) in corn field on E side of river, approx. 300m from river
- Snow goose (1)
- ⑧ - Canada goose (800) on west bank of river (within buffer)
- Hooded merganser  $\sigma^7$  (in river)
- Mallard (4)

Nation Rise WP  
March 8, 2017

#1756  
J. Barber

Map X-4

- ⑨ - Northern pintail (4) - landed @ ⑧  
- Snow goose (~10,000) } flew in  
- Canada goose (~5,000) } low from south and  
photo 8923 } 1/2 landed @ ⑦,  
1/2 continued N

⑩ - Canada goose (250) in field

⑪ - Canada goose (2500) foraging throughout corn field

⑫ - Canada goose (1500) } spread  
- Snow goose (150) } across corn field

Map X-6 ~~W~~

⑬ - Canada goose (9000) } spread across  
- Snow goose (350) } field foraging

Map X-4 (11:00)

(14) - Snow goose (600) foraging in corn field

Map X-5 (11:25)

(15) - Canada goose (~3,000) originally  
- Snow goose (~550) in corn field,  
then moved en masse to

(15b)

(16) - Canada goose (12,000) - 1 giant band (see map) foraging in corn field

- Snow geese (125) - few SN60 in flock.

(17) - Canada goose (575) foraging in corn field

Map X-6 (13:10)

(18) - Canada goose (2200) 1 km N of rd.

Nation Rise W/P  
March 8, 2017

#1756  
J. Barber

Map X-6

(19) - Canada goose (320) ~1 km N of Rd.

(20) - Canada goose (900) foraging in corn field

(22) - Canada goose (5500) } possibly some  
- Snow goose (125) } of same geese  
from (13)

(21) - Canada goose (2500) 2 groups foraging  
- Snow goose (1)

Map X-7 (13:40)

(23) - Canada goose (600) - foraging along riverbank & associated field

(24) - Canada goose (75)

(25) \*900m N of road, so off map, but notable:

- Snow goose (6000)

- Canada goose (5000)

Pg. 5 of 7

Map X-7

(26) - Canada goose (60)

(14:25)

(27) - Canada goose (1800)

Map X-10 (14:40)

(28) - Canada goose (6) - in flooded area

(29) - Canada goose (175) S side of 43  
on stream bank

Map X-9

(30) - Canada goose (520) } in flooded  
- Northern pintail (27) } area, photo 9095

(31) - Canada goose (750)  
- Snow goose (125)

(32) - Canada goose (275)

(33) - Canada goose (475)  
- Snow goose (225)  
- Northern pintail (14)

Nation Rise WP

#1756

March 8, 2017

J. Barber

Map X-9 (15:30)

- (34) - Canada goose (3200) photos: 9159  
- snow goose (65) 9133  
- Northern pintail (32)  
- American wigeon (1)

Map X-8 (15:50)

- (35) - Canada goose (65) - foraging in corn field  
(36) - Canada goose (225) ~200m from road - corn field  
(37) - Canada goose (125)

Map X-11 ~~(15:50)~~ (16:05)

- (38) - Canada goose (50)





21-Mar-2017

J. Barber

09:10

+1°C

Light wet snow  
wind 1 SW

100% cc



Map X - 1

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→: Route

①: Sighting

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Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Scale: 1:14,000
0 200 400 600 800 Meters	

21-Mar-2017 J-Barber

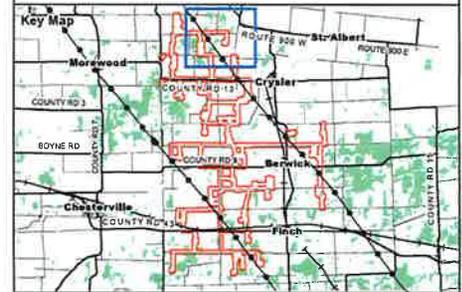
09:45



Map X - 2

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



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

→: Route

①: sighting



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Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
	1:14,000

0 200 400 600 800 Meters

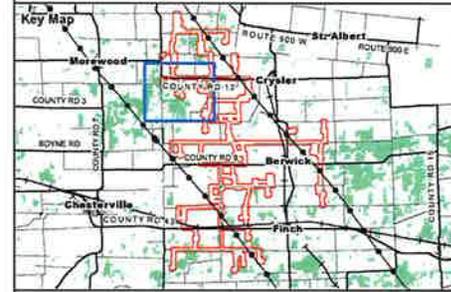
21-Mar-2017 J. Barber 10:25

+32°C 100% ce



Map X - 3

### Nation Rise Wind Farm Waterfowl Stopover and Staging Area Surveys



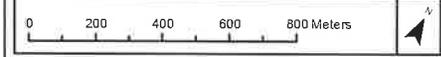
- Legend**
- Primary Road
  - Secondary Road
  - Permanent Watercourse (LIC)
  - Open Water (LIC)

→ : Route



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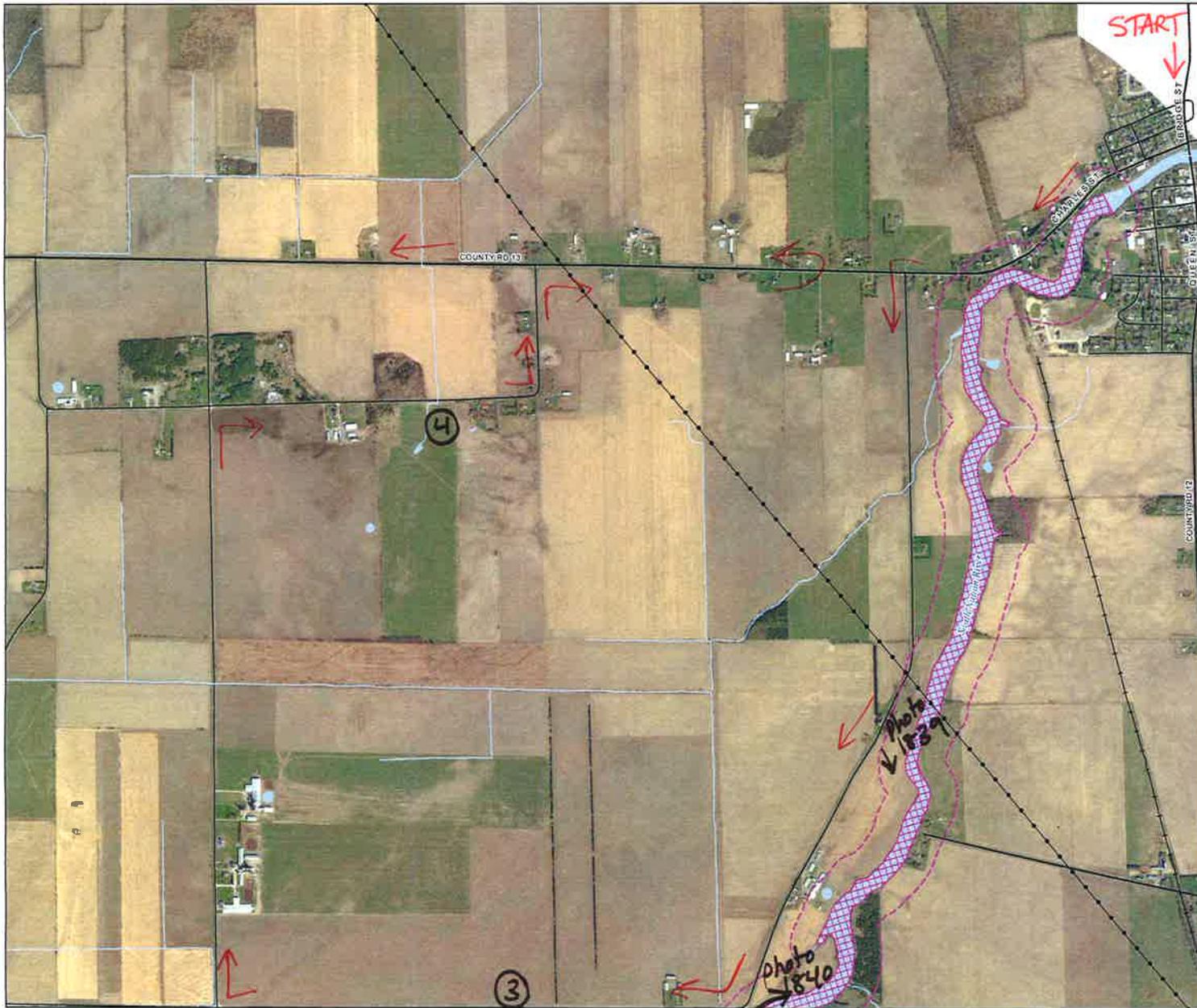
Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
	1:14,000



to map X-5

21-Mar-2017 J. Barber

10:00



Map X - 4

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys

**Legend**

- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- ▨ Waterfowl Stopover and Staging Area (Aquatic) (WSA)
- ⊞ Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer

→ : Route

① : Sighting

---

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<small>Project: 1756 Date: March 28, 2017</small>	<small>NAD83 - UTM Zone 18 Size: 11x17" 1:14,000</small>
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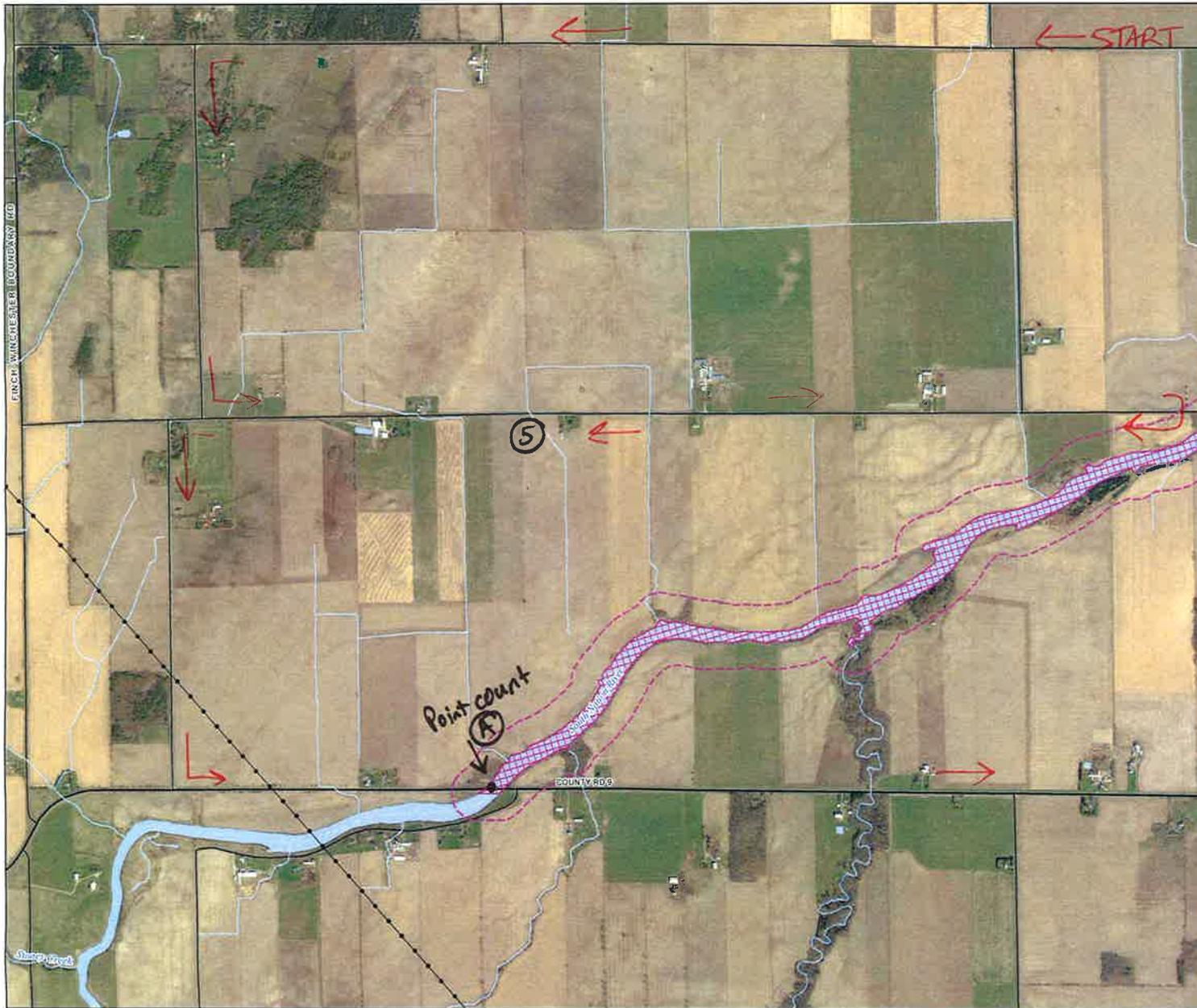
21-Mar-2017

J. Barber

10:45

+2°C

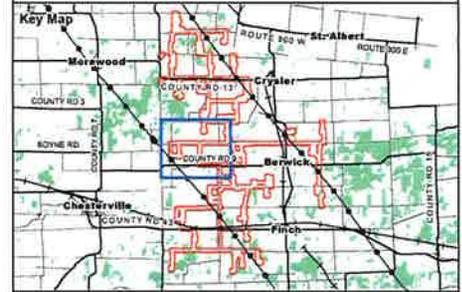
95% cc



Map X - 5

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse (LIQ)
- Open Water (LIQ)
- ▨ Waterfowl Stopover and Staging Area (Aquatic) (WASA)
- - - Waterfowl Stopover and Staging Area (Aquatic) (WASA) - Buffer

→ : Route

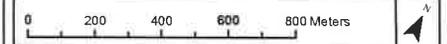
① : sighting

Ⓐ : point count location



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Project: 1756	NAD83 - UTM Zone 18
Date: March 26, 2017	Size: 11x17"
	1:14,000



21-Mar-2017

J. Barber

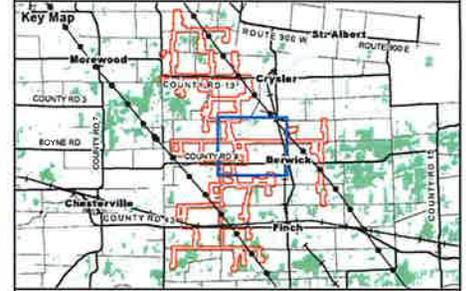
100% cc  
+3°C occasional light rain shower



Map X - 6

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- ⊞ Waterfowl Stopover and Staging Area (Aquatic) (WSA)
- ⊞ Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer

→ : Route

ⓑ : point count location



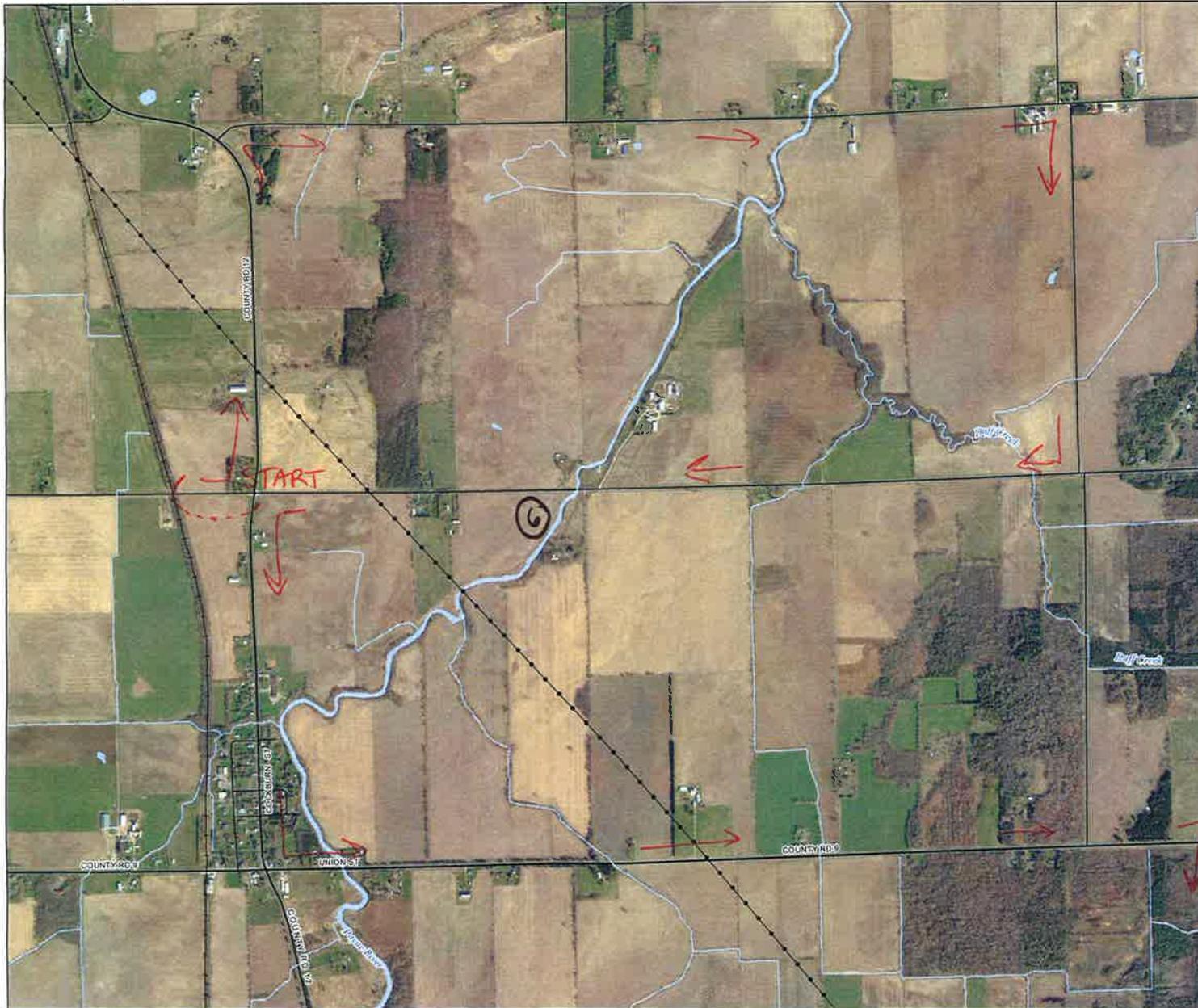
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Project 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
	1:14,000



21-Mar-2017  
J. Barber

12:20



Map X - 7  
**Nation Rise Wind Farm**  
Waterfowl Stopover  
and Staging Area Surveys



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

→ : Route  
ⓐ : Sighting

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Project: 1756 Date: March 28, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
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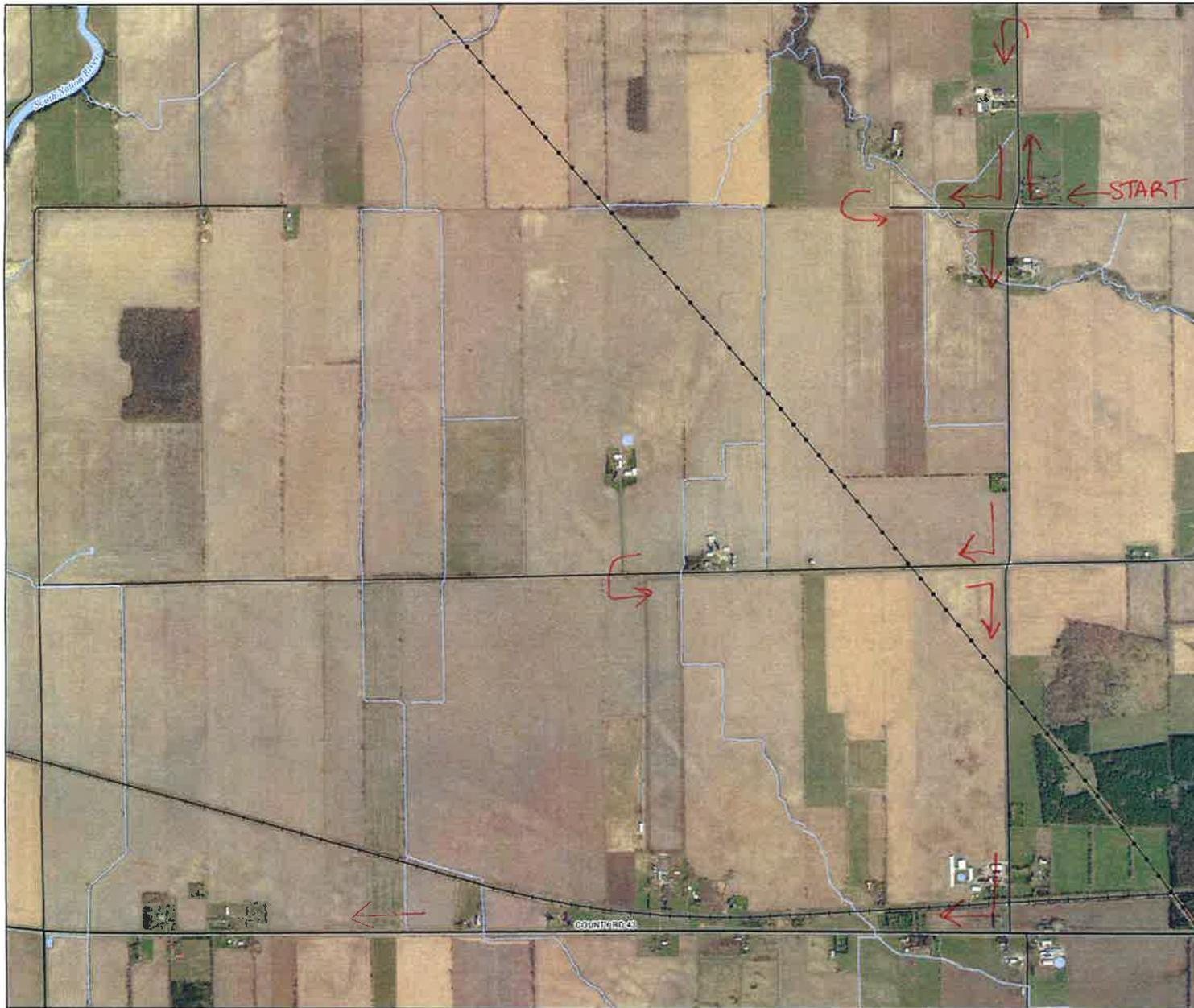
0 200 400 600 800 Meters

to map  
X-10

21-Mar-2017

J. Barber

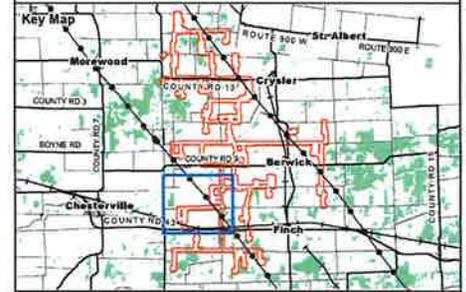
13:25



Map X - 8

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

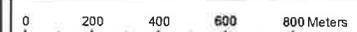
→: Route



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Copyright: Queen's Printer Ontario, Imagery: DNV-GL (2014).

Project 1756  
Date: March 28, 2017

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



21-Mar-2017 J. Barber 13:00



Map X - 9

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys

**Legend**

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

→ : Route

① : Sighting

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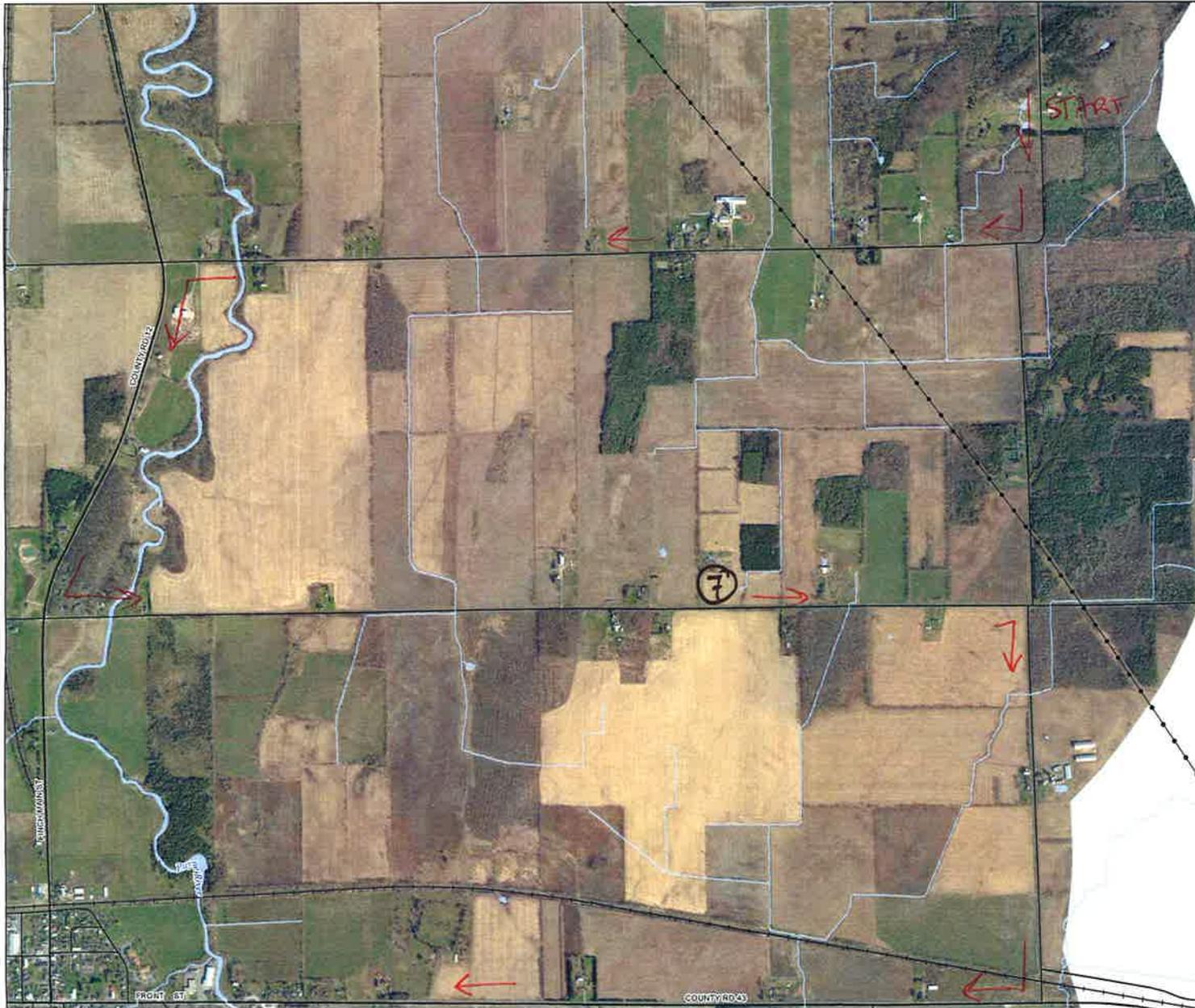
Project 1756 Date March 28, 2017	NA83 - UTM Zone 18 Size 11x17" 1:14,000
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21-Mar-2017  
J. Barber

12:40

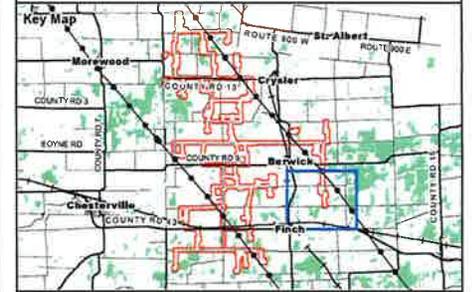
+3°C 100% CC wind: 1 SW



Map X - 10

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→ : Route

⑦ : sighting



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Project: 1756 Date: March 28, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	

21-Mar-2017

J. Barber

13:46

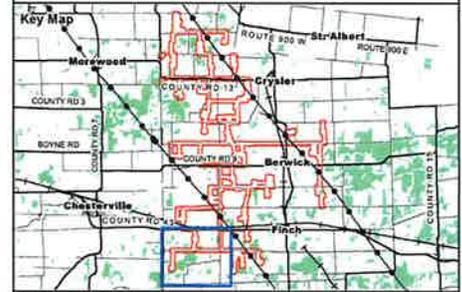
+4°C 100% CC



Map X - 11

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

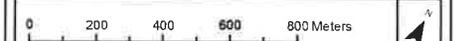
→ : Route

① : sighting

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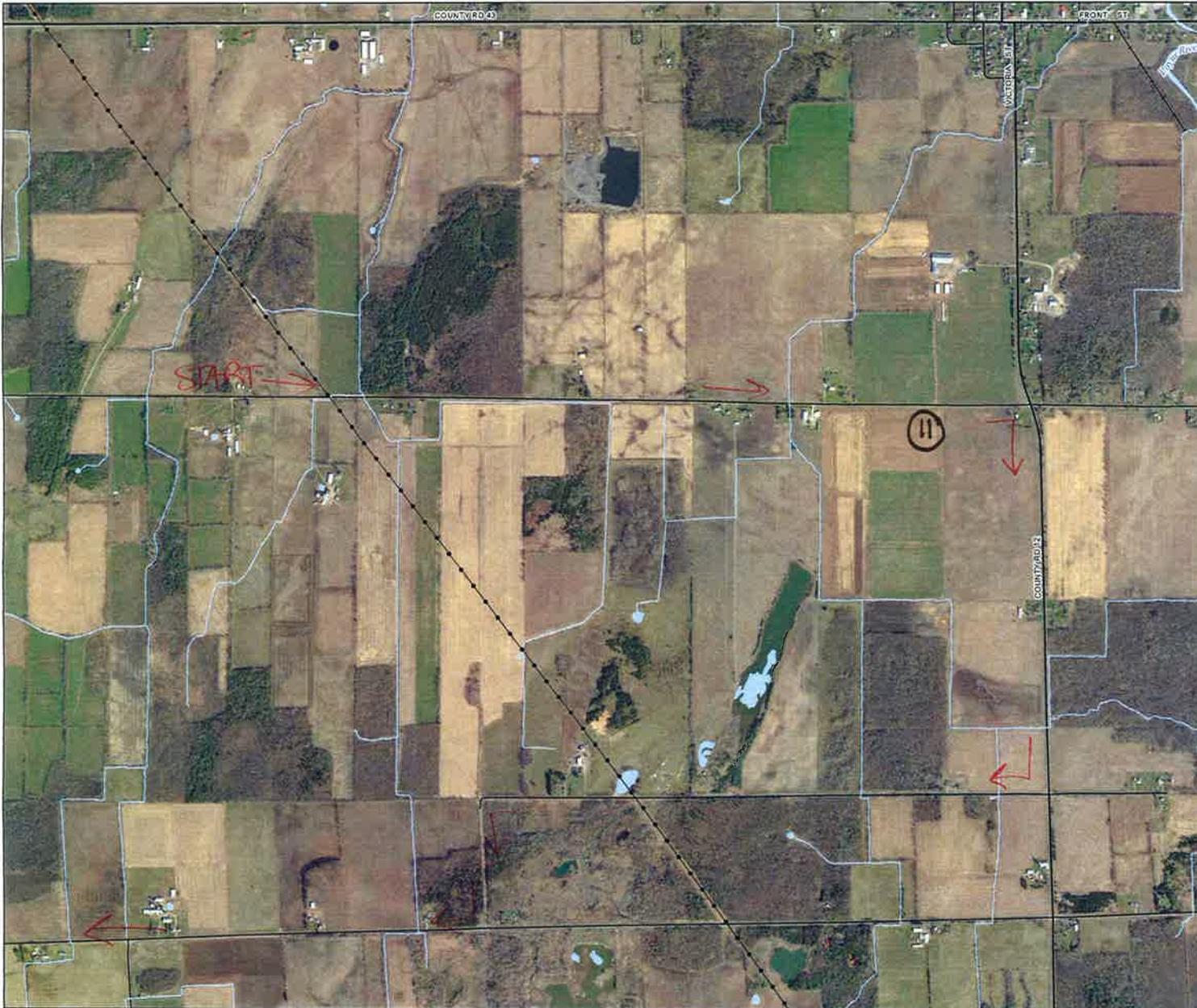
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Date: March 29, 2017	Size: 11x17"
	Scale: 1:14,000



21-Mar-2017

13:50

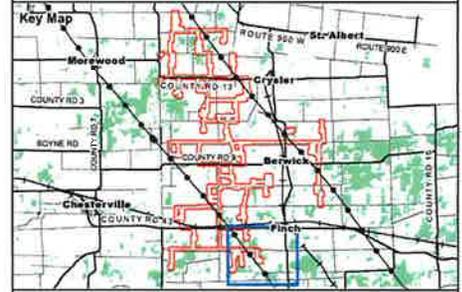
J. Barber



Map X - 12

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→: Route.

①: Sighting



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Project: 1755	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
1:14,000	

0 200 400 600 800 Meters



Map X-5 (10:45)	Map X-11 (14:05)
⑤ - Canada goose (2)	⑫ - Canada goose (650)
Map X-7 (12:20)	+ 1200 fly-over
⑥ - Canada goose (25)	- Snow goose (175) + 200 flyover
Map X-10 (12:50)	
⑦ - Canada goose (125)	
Map X-9 (13:00)	
⑧ - Canada goose (475)	
⑨ - Canada goose (600)	
- Snow goose (150)	
⑩ - Canada goose (60)	
Map X-12 (13:50)	
⑪ - Canada goose (225)	



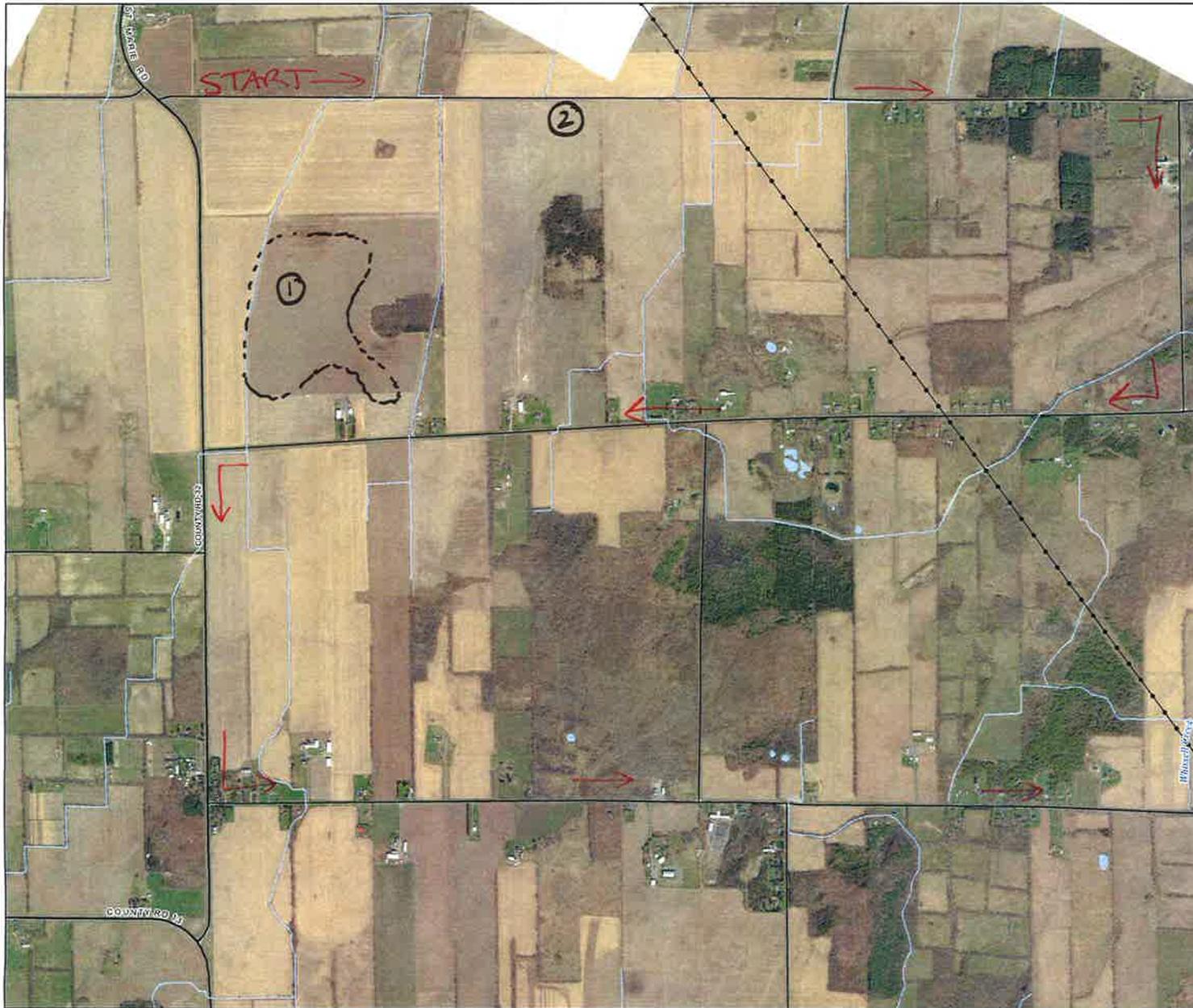


29-Mar-2017

J. Barber

08:00

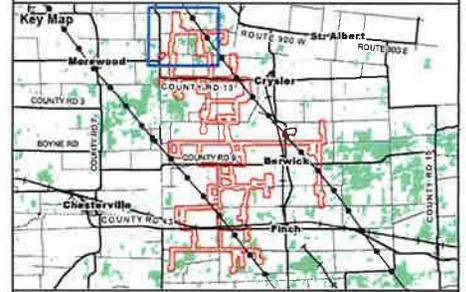
+2°C, wind 2 NW 100% CC no precip.



Map X - 1

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→ : Route

① : Sighting



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Project: 1756 Date: March 28, 2017	NAD83 - UTM Zone 18 Scale: 1:14,177 1:14,000
0 200 400 600 800 Meters	
N	

29-Mar-2017

J. Barber

08:35



Map X - 2

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys

**Legend**

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

→: Route

①: Sighting

---

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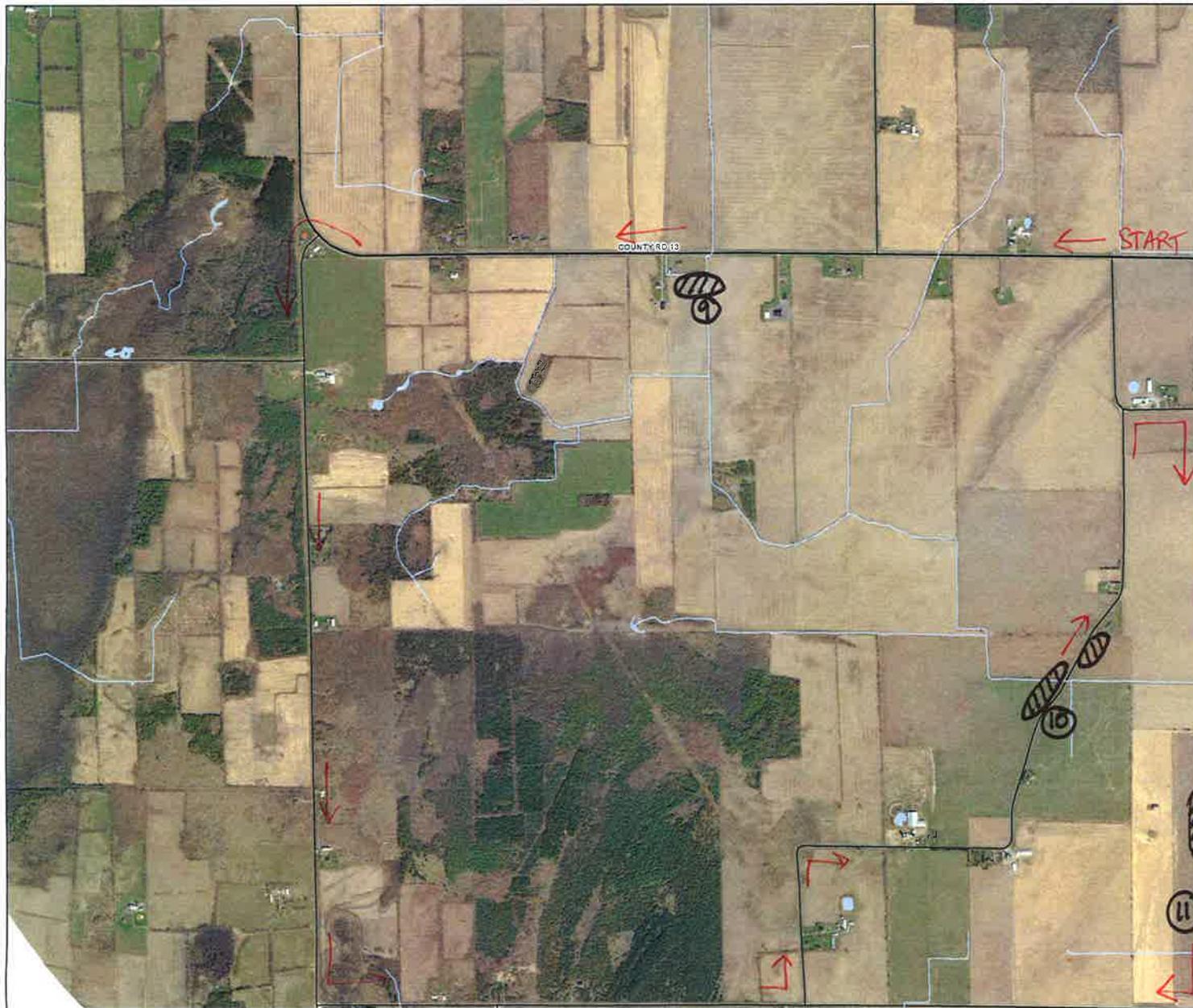
Project: 1756 Date: March 28, 2017	NAD83 - UTM Zone 18 Scale: 1:14,000
---------------------------------------	--

0 200 400 600 800 Meters

29-Mar-2017

J. Barber

09:40



Map X - 3

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys

**Legend**

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

→ : Route

① : Sighting

▨ : Flooded area

---

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Project: 1755 Date: March 29, 2017	NAD83 - UTM Zone 18 Size: 11x17" 1:14,000
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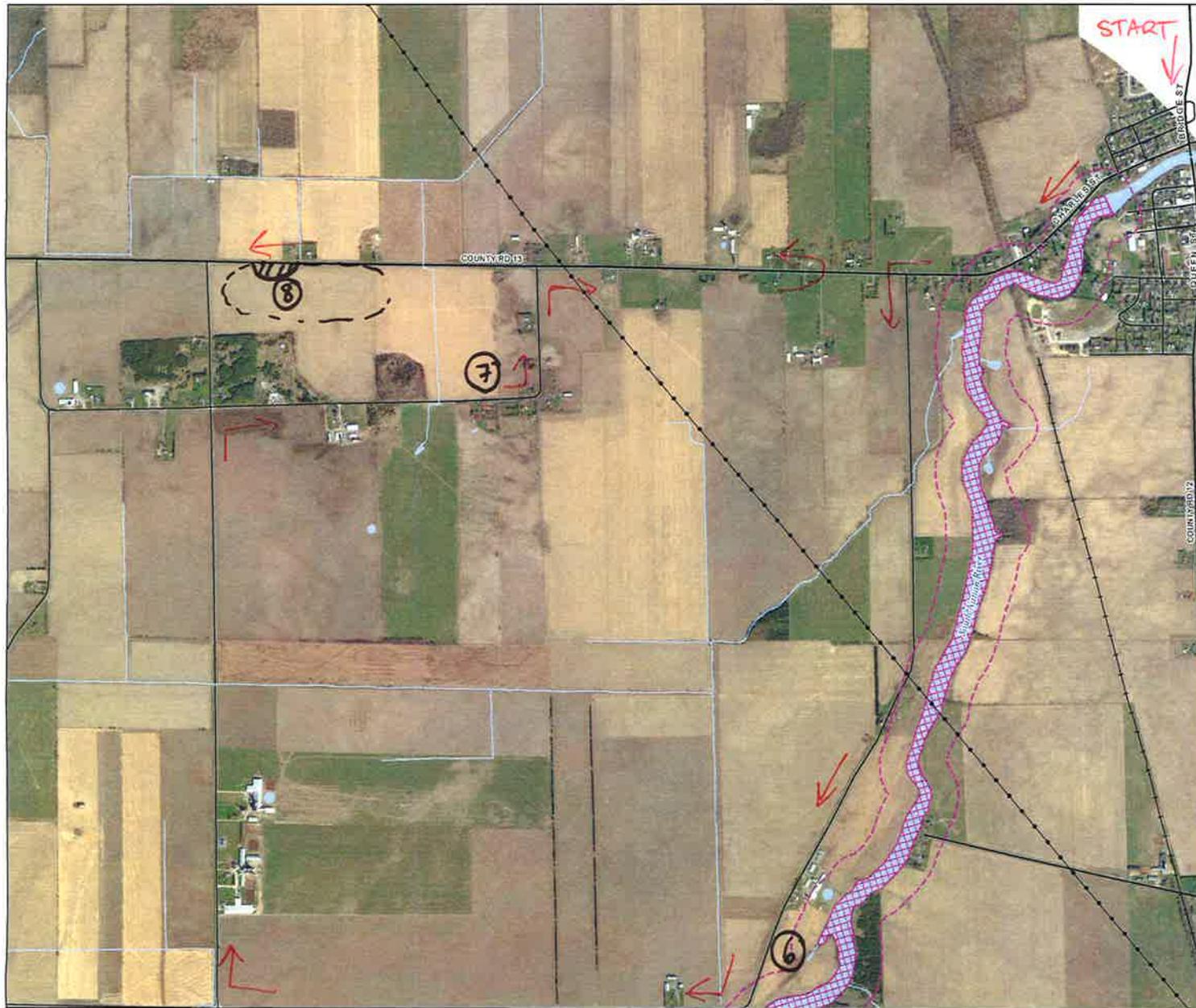
0 200 400 600 800 Meters

to map X-5

29-Mar-2017

J. Barber

08:55



Map X - 4

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys

**Legend**

- Utility Line
- Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- Waterfowl Stopover and Staging Area (Aquatic) (WSA)
- Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer

→ : Route

① : Sighting

▨ : flooded area

---

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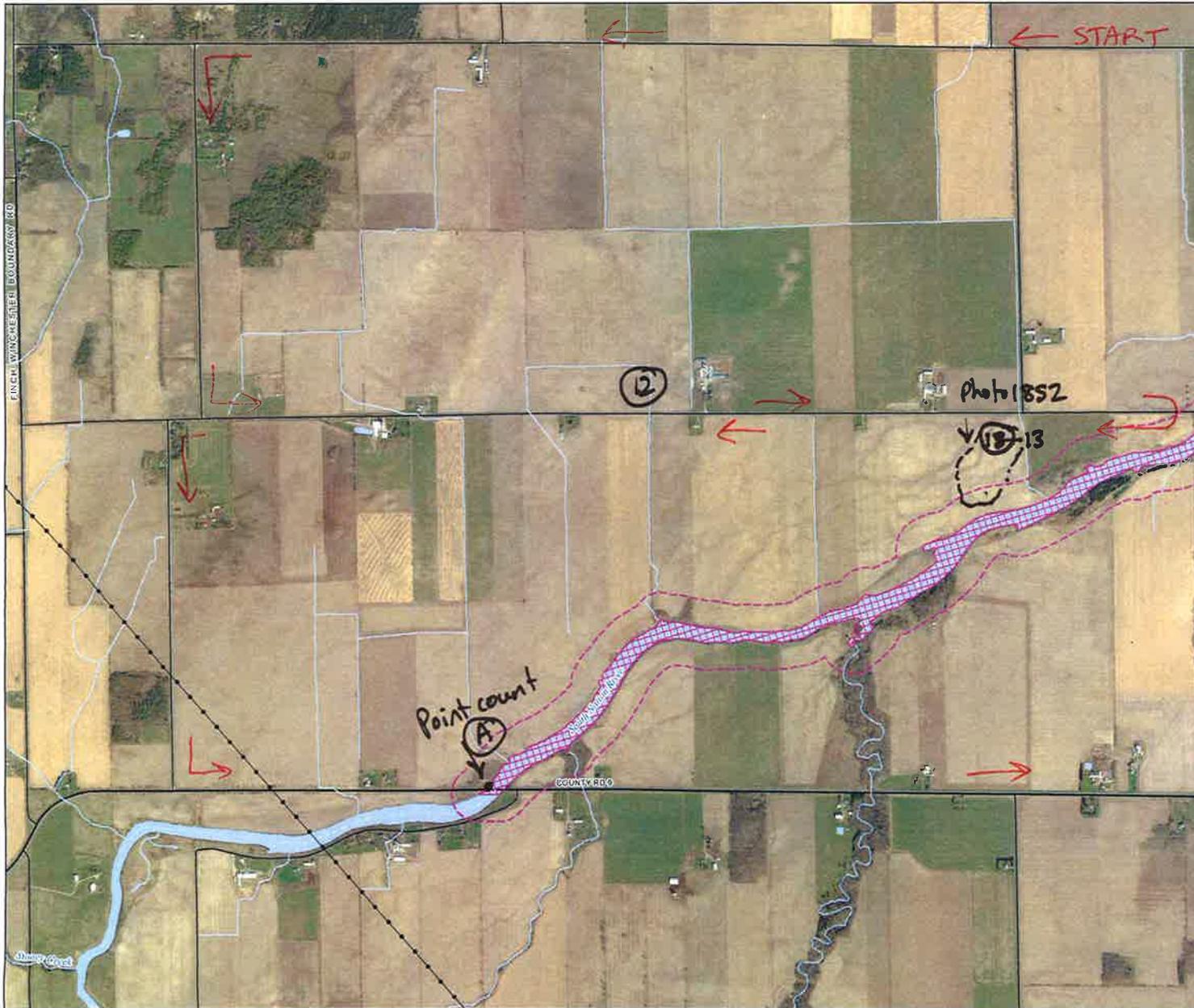
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<small>Project: 1756 Date: March 28, 2017</small>	<small>NAD83 - UTM Zone 18 Scale: 1:14,000</small>
---	--

29-Mar-2017

J. Barber

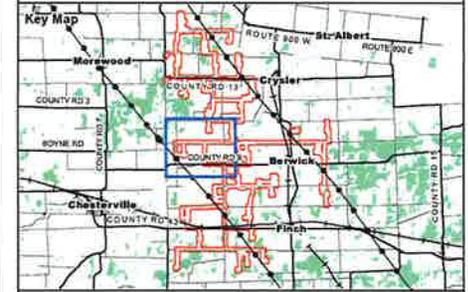
10:20



Map X - 5

### Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

- Utility Line
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- Waterfowl Stopover and Staging Area (Aquatic) (WSA)
- Waterfowl Stopover and Staging Area (Aquatic) (WSA) - Buffer

→ : Route

① : sighting

Ⓐ : point count location



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Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
	1:14,000
0 200 400 600 800 Meters	
N	

29-Mar-2017

J. Barber

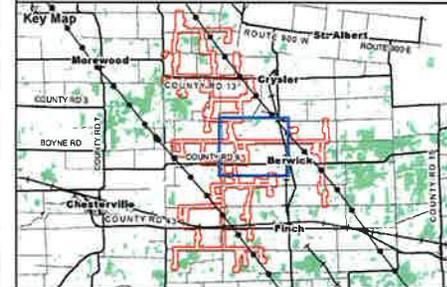
11:50



Map X - 6

### Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys



#### Legend

- Utility Line
- ⊢ Railway
- Primary Road
- Secondary Road
- Permanent Watercourse (LIO)
- Open Water (LIO)
- ⊞ Waterfowl Stopover and Staging Area (Aquatic) (WASA)
- ⊞ Waterfowl Stopover and Staging Area (Aquatic) (WASA) - Buffer

→ : Route

① : Sighting

ⓑ : point count location



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Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
	Scale: 1:14,000

0 200 400 600 800 Meters

29-Mar-2017

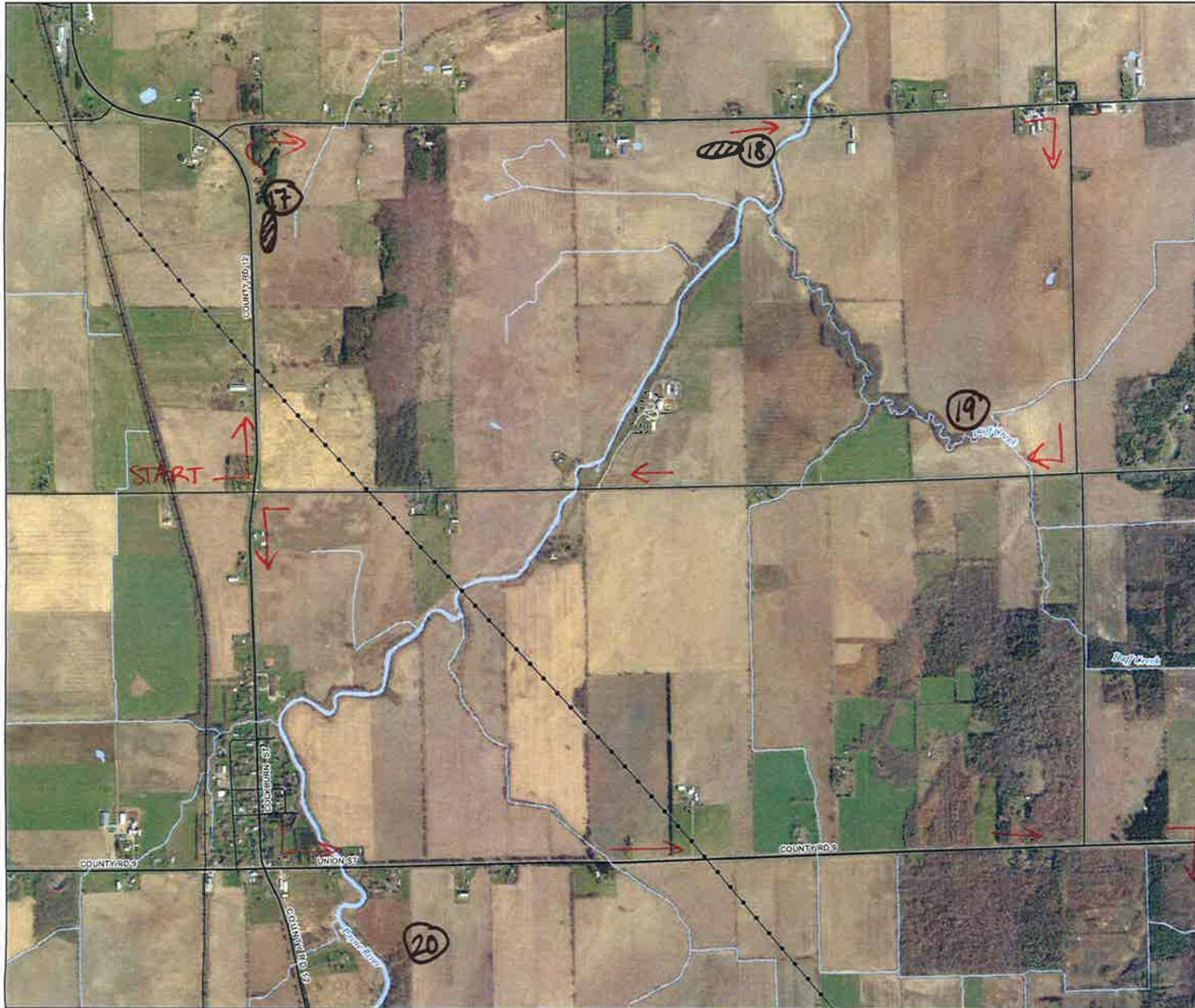
J. Barber

12:40

+5°C

Wind  
2NW

90% cc no precip.



Map X - 7

## Nation Rise Wind Farm

### Waterfowl Stopover and Staging Area Surveys

**Legend**

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

→ : Route

① : Sighting

▨ : flooded area

M.C. Hillen Rd

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Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
1:14,000	

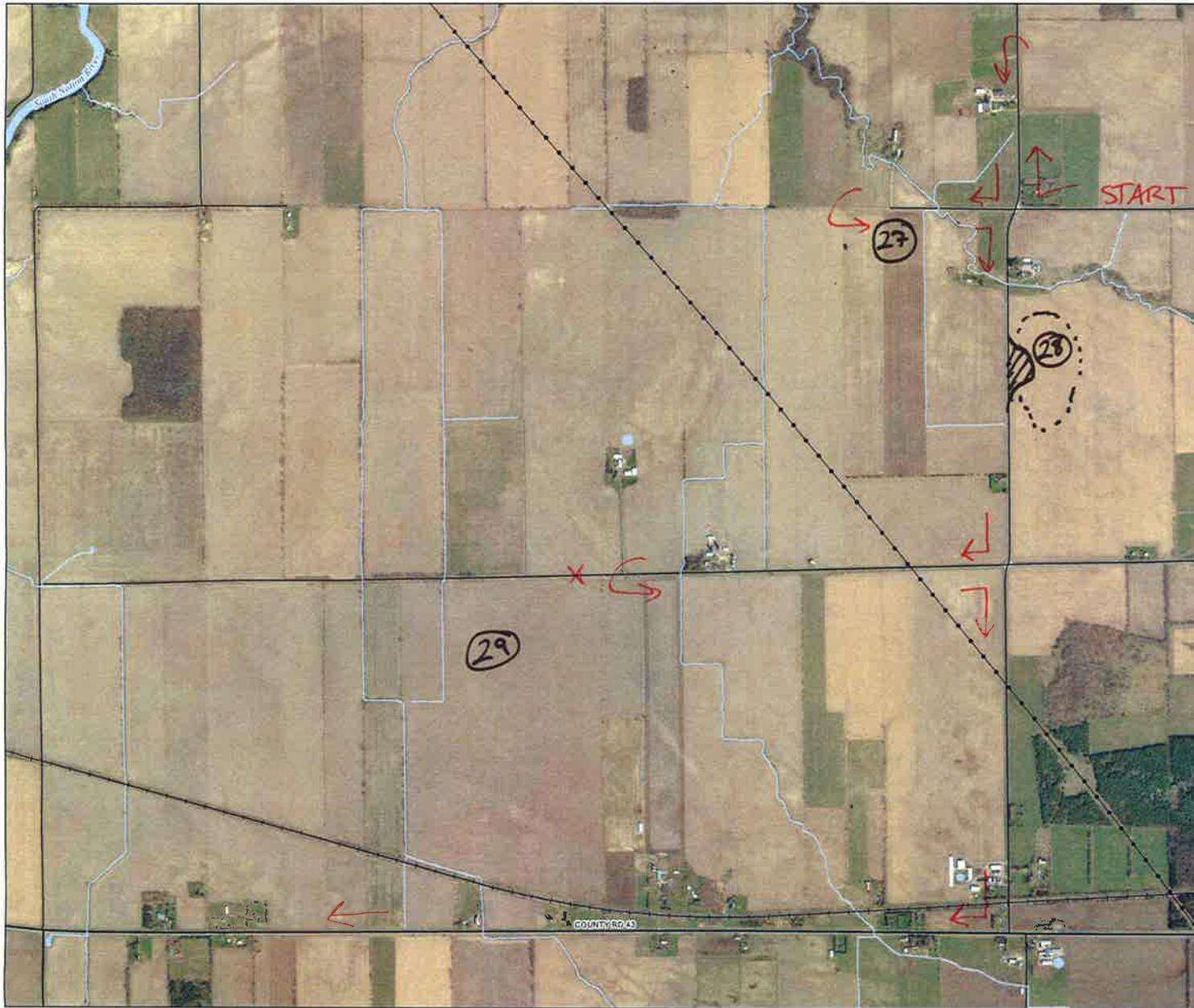
0    200    400    600    800 Meters

to map X-10

29-Mar-2017

J. Barber

13:45



Map X - 8

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys

**Legend**

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

→ : Route

① : Sighting

▨ : flooded area

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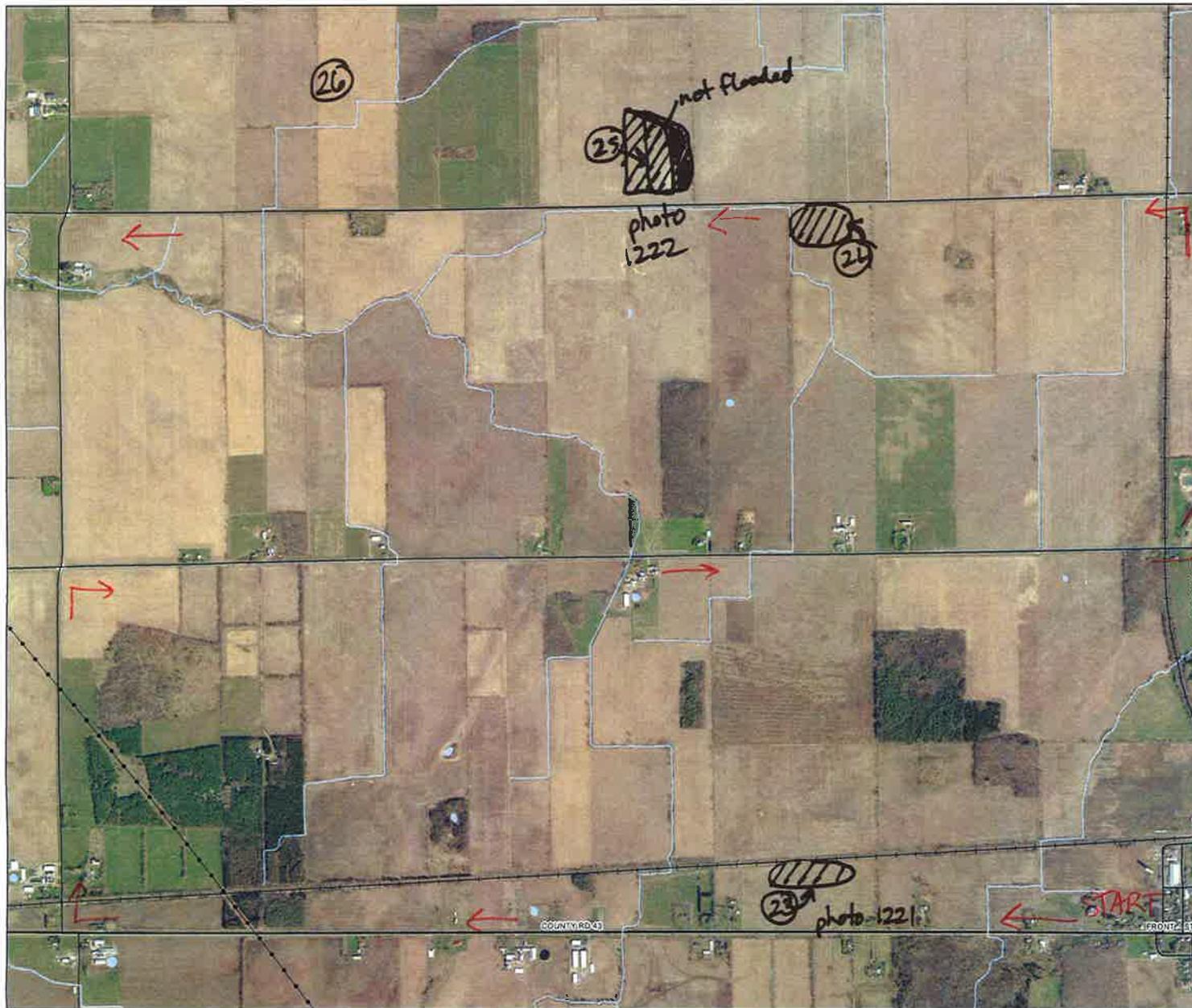
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Project: 1756	NAD83 - UTM Zone 18
Date: March 28, 2017	Size: 11x17"
	1:14,000

29-Mar-2017

J. Barber

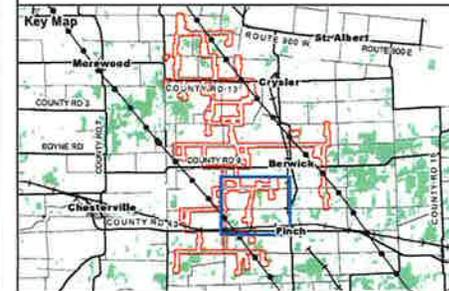
13:05



Map X - 9

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→ : Route

① : sighting

▨ : flooded area

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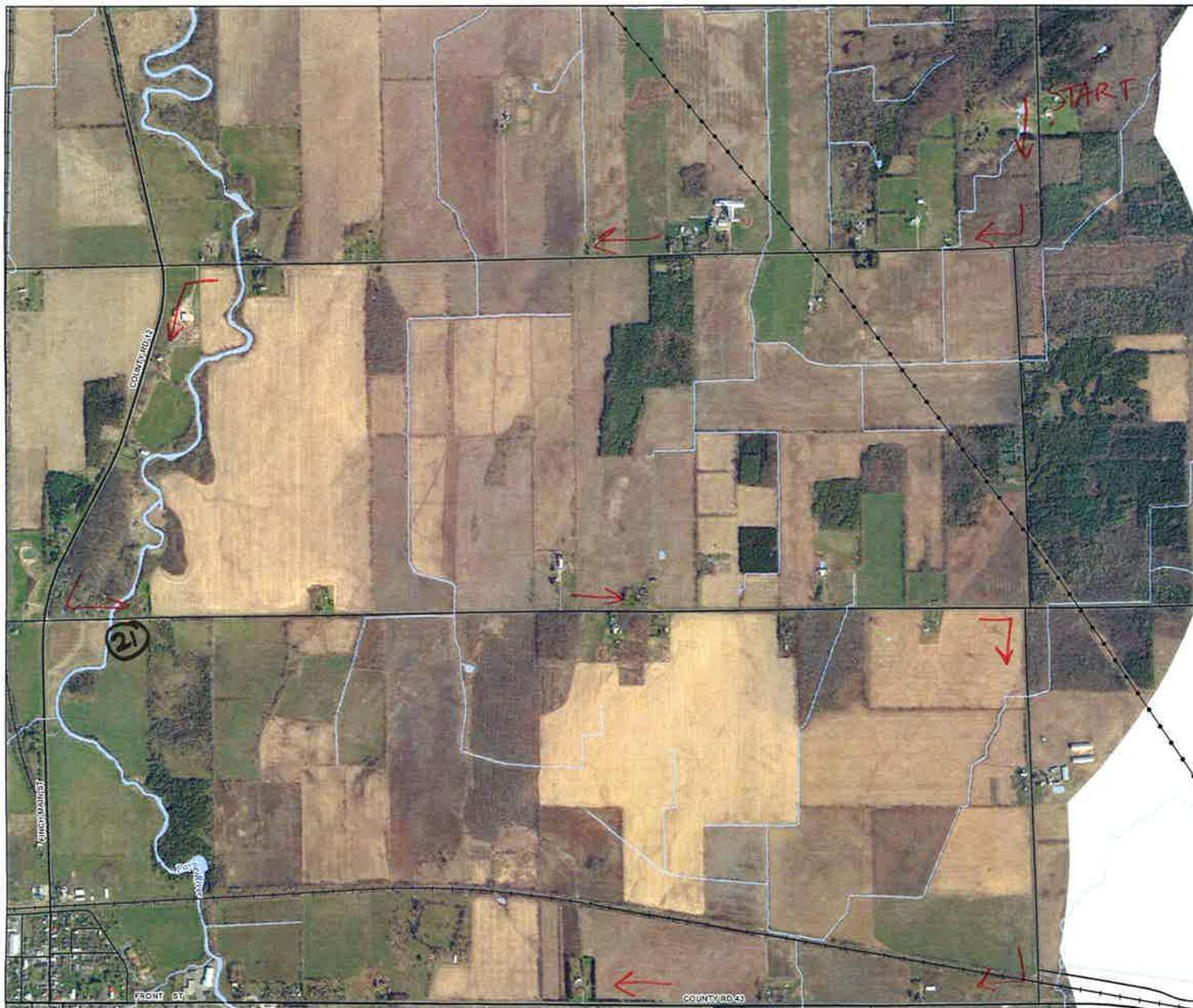
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Project: 1756 Date: March 20, 2017	NA83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

29-Mar-2017

J. Barber

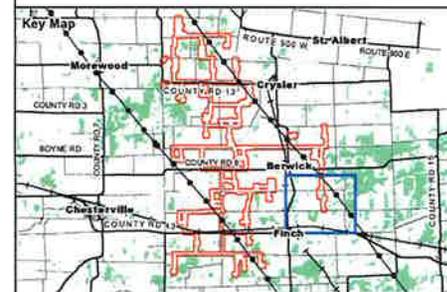
12:45



Map X - 10

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

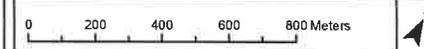
→: Route

①: sighting



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Project 1756	NAD83 - UTM Zone 18
Date March 28, 2017	Size 11x17"
	1:14,000



22

29-Mar-2017

J. Barber

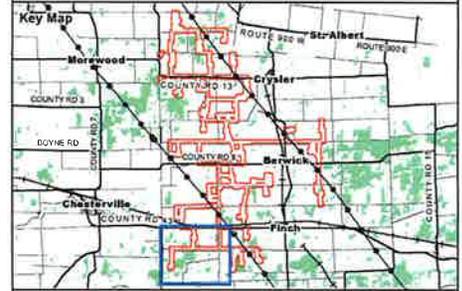
14:10



Map X - 11

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→ : Route

⊙ : Sighting



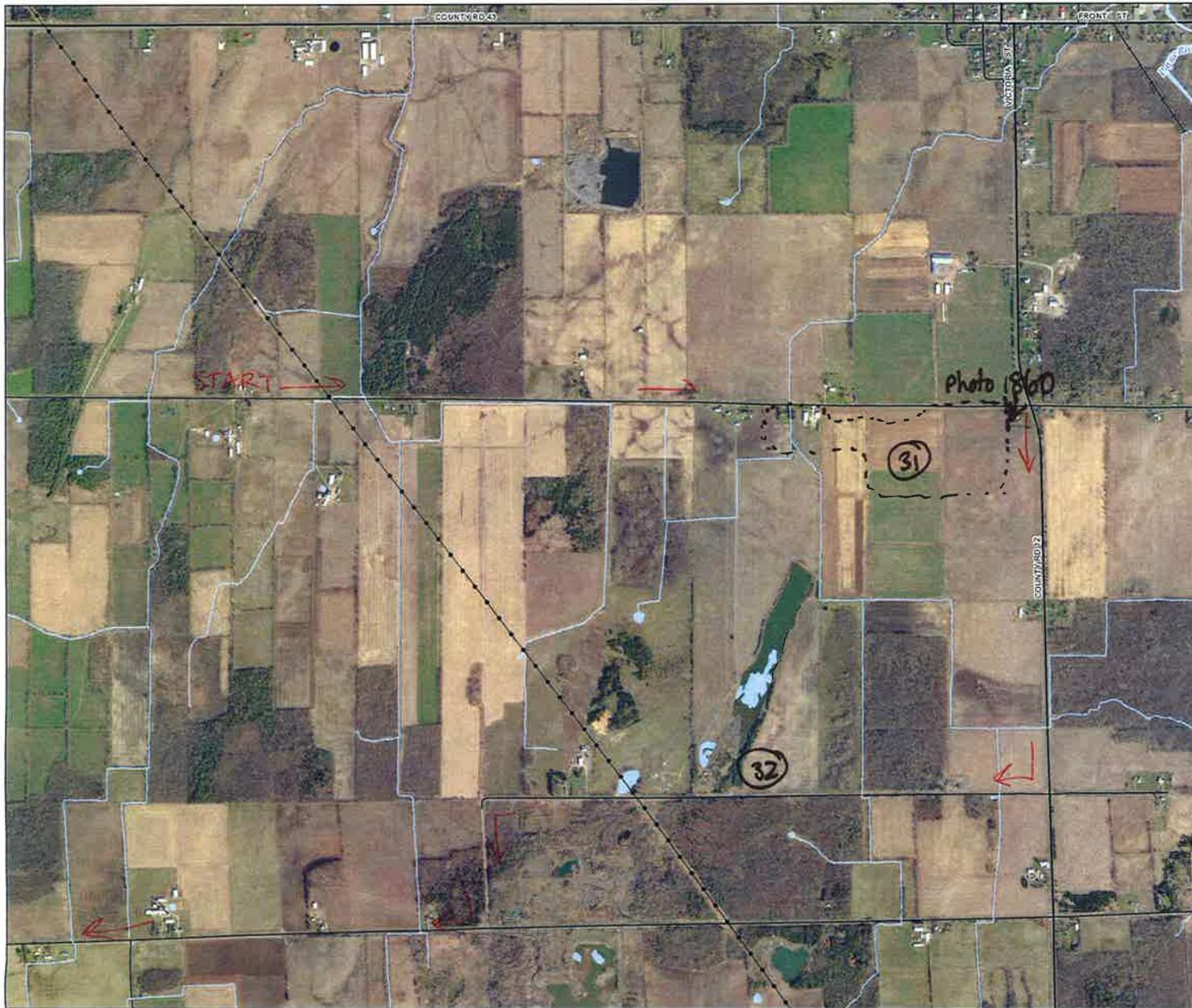
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Project: 1756	NADES3 - UTM Zone 18
Date: March 29, 2017	Scale: 1:14,000
0 200 400 600 800 Meters	

29-Mar-2017

J. Barber

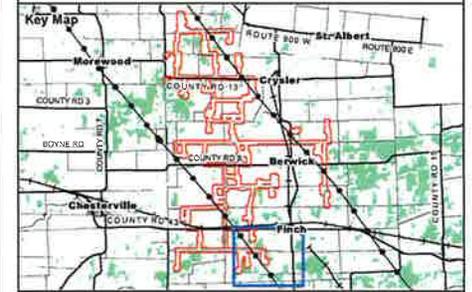
14:25



Map X - 12

### Nation Rise Wind Farm

#### Waterfowl Stopover and Staging Area Surveys



#### Legend

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

→: Route

①: sighting



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Project 1756 Date: March 28, 2017	NA83 - UTM Zone 18 Size: 11x17" 1:14,000
0 200 400 600 800 Meters	
N	

Nation Rise WP  
29 March, 2017

#1756

J. Barber

### Waterfowl Surveys - driving transects

+2°C

100% cc

Wind: 2 NW

no precip.

Start time = 0800

End time = 15:00

#### Map X-1 (08:00)

① - Snow goose (5200) } mixed flock,  
- Canada goose (800) } more arriving

② - Canada goose (125)

#### Map X-2

③ - Snow goose (125)  
- Canada goose (15)

④ - Snow goose (1500)  
- Canada goose (200)

Map X-2

- ⑤ - Snow goose (2200)
- Canada goose (250)

Map X-4 (08:55)

- ⑥ - Canada goose (25) - on riverbank
- ⑦ - Snow goose (150)
- ⑧ - Snow goose (2000) loose flock

Map X-3 (09:40)

- ⑨ - Snow goose (300)
- Canada goose (40)
- ⑩ - Snow goose (175)
- Canada goose (16)
- ⑪ - Snow goose (65)

Nation Rise WP  
29 March 2017

#1756  
J. Barber

Map X-5 (10:20)

(12) - Canada goose (140)

(10:35)

(13) - Canada goose (450) - approx. 150  
within 100m buffer

Map X-6 (11:50)

(14) - snow goose (2600)  
- Canada goose (450)

(15) - Canada goose (225)

(16) - Snow goose (550) + 2000 flyover  
@ 300m height  
- Canada goose (250) + 800 flyover

photo 1214

Map X-7 (12:10)

(17) - Canada goose (35) in flooded portion

(18) - Canada goose (480)  
- Northern pintail (9)

Pg. 3 of 6

Map X-7

(19) - Canada goose (600)

(20) - Canada goose (800)  
- Snow goose (125)

Map X-10 (12:45)

(21) - Canada goose (16)

(22) - Canada goose (115) - creek/flooded area  
just South of road

Map X-9 (13:05)

(23) - Canada goose (120) in small flooded  
area

(24) - Northern pintail (pair) (2)

- Canada goose (180)  
- Snow goose (40) } low flyover  
height 30m

(25) - Canada goose (225) in wet area

(26) - Canada goose (450)

- Snow goose (100)

Nation Rise WP

29 March, 2017

#1756

J. Barber

Map X-8 (13:45)

(27) - Canada goose (350)

(28) - Canada goose (300) thinly spread  
over corn.

(29) - Canada goose (350)  
- Snow goose (75)

Map X-11 (14:10)

(30) - Canada goose (1200) photo 1857

Map X-12~~3~~ (14:25)

(31) - Snow goose (6000) - massive flock  
w largest concentration in eastern  
portion of area (photo 1860)  
- Canada goose (225)

(32) - Canada goose (175)

Map X-11 (14:50)

- (33) - Canada goose (1100)
- Snow goose (350)

Keizer Air Line

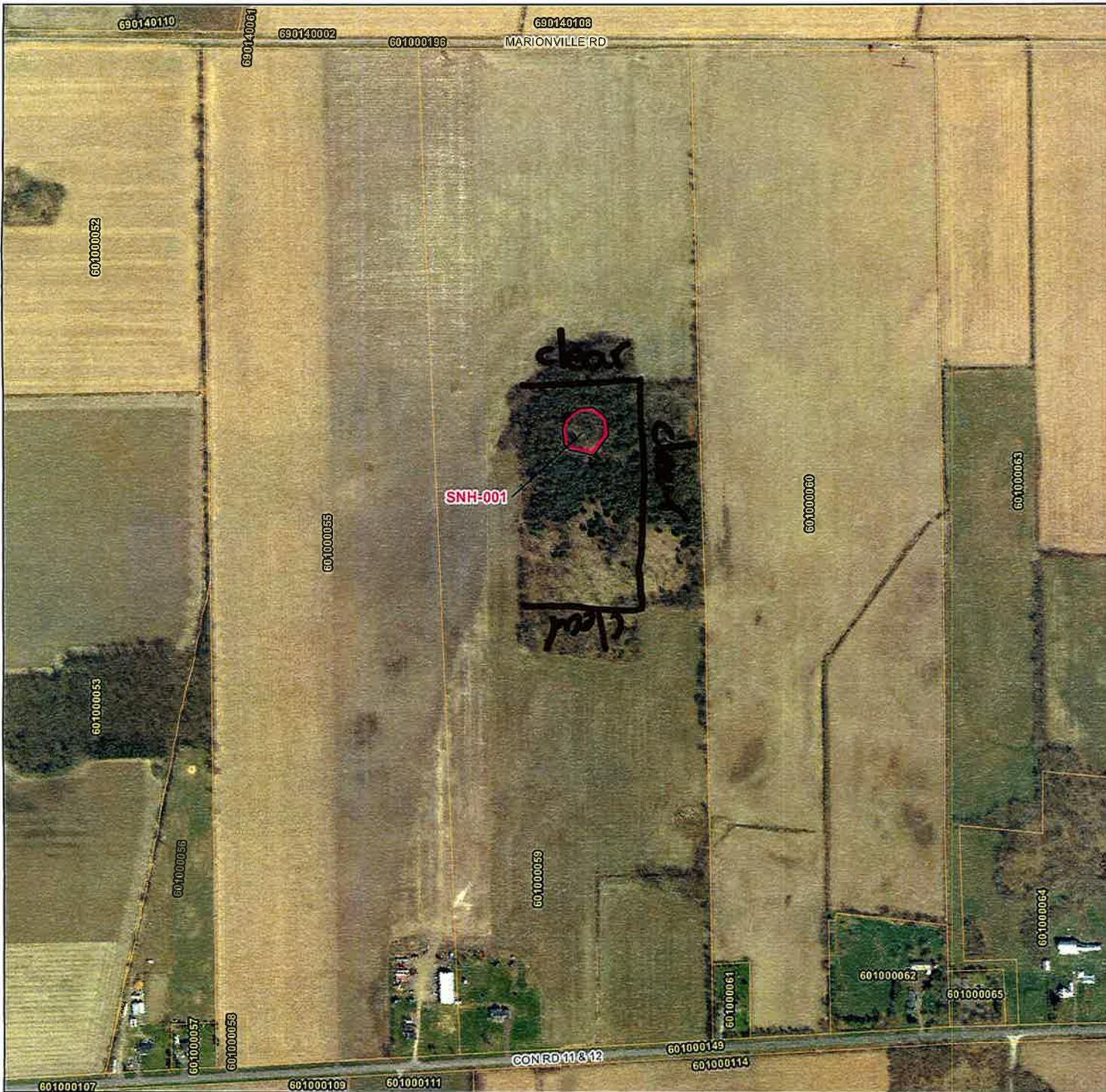
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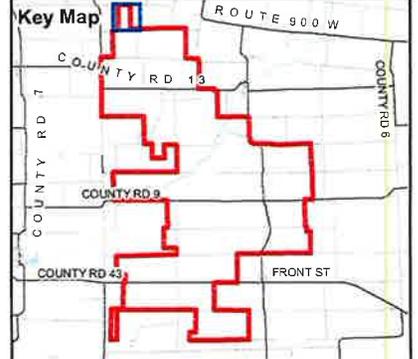
**Appendix III**  
Reptile Hibernacula Evaluation of Significance Field Notes

---



# Nation Rise Wind Project

SNH-001



## Legend

-  Snake Hibernaculum (SNH)
-  Parcel

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Project: 1756  
Date: April 21, 2017

NAD83 - UTM Zone 18  
Size: 6.5 x 11"  
1:6,500

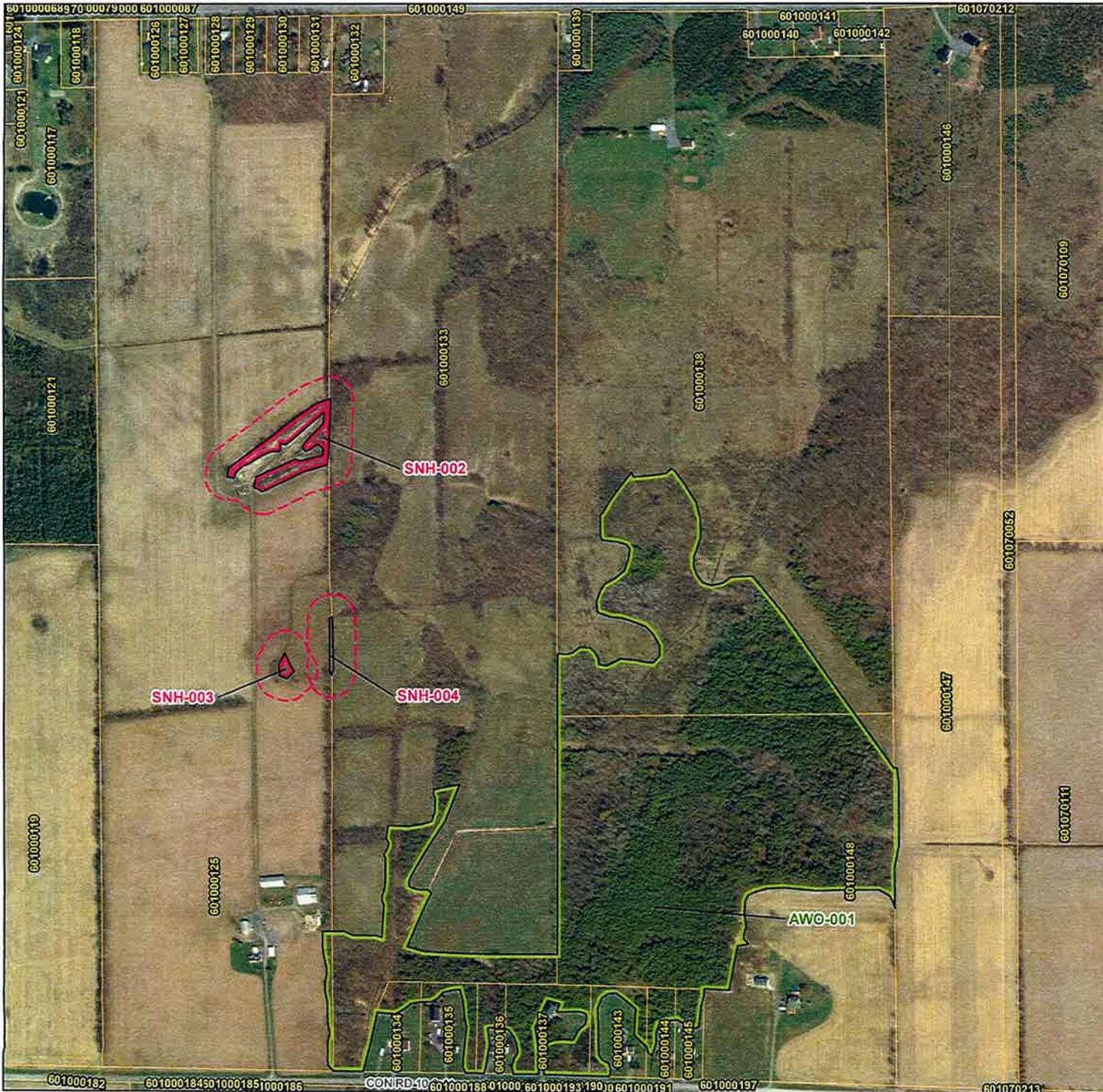






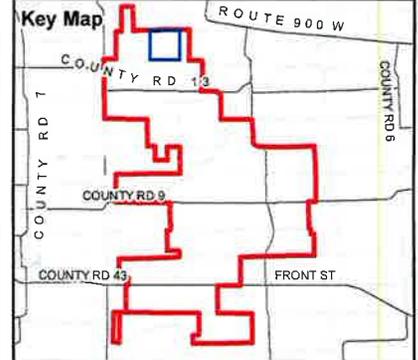






# Nation Rise Wind Project

SNH-002, SNH-003, SNH-004, AWO-001



## Legend

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

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Project: 1756 Date: April 20, 2017	NAD83 - UTM Zone 18 Size: 8.5 x 11" 1:7,250
	
	















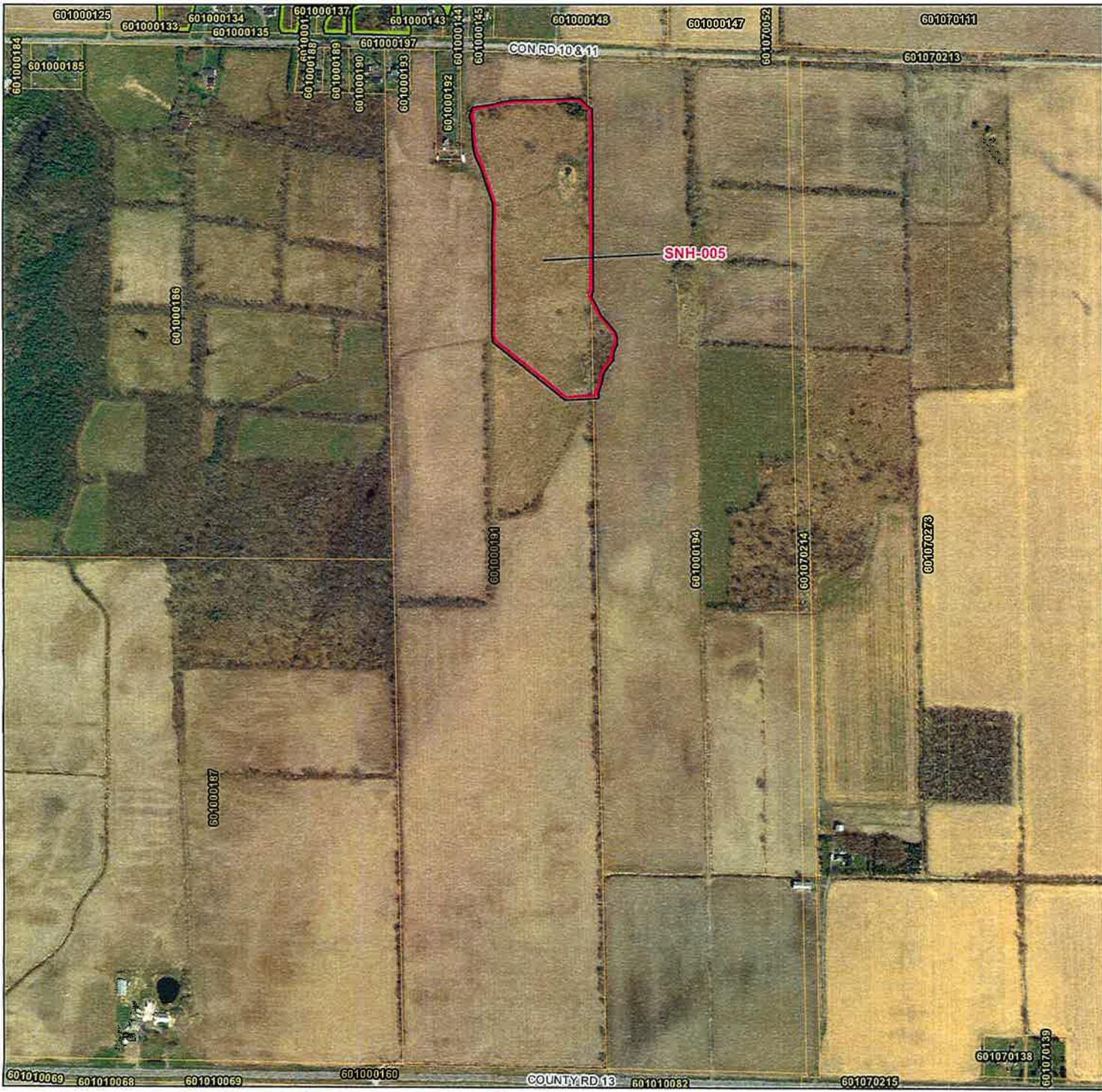












## Nation Rise Wind Project

SNH-005

**Key Map**

**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
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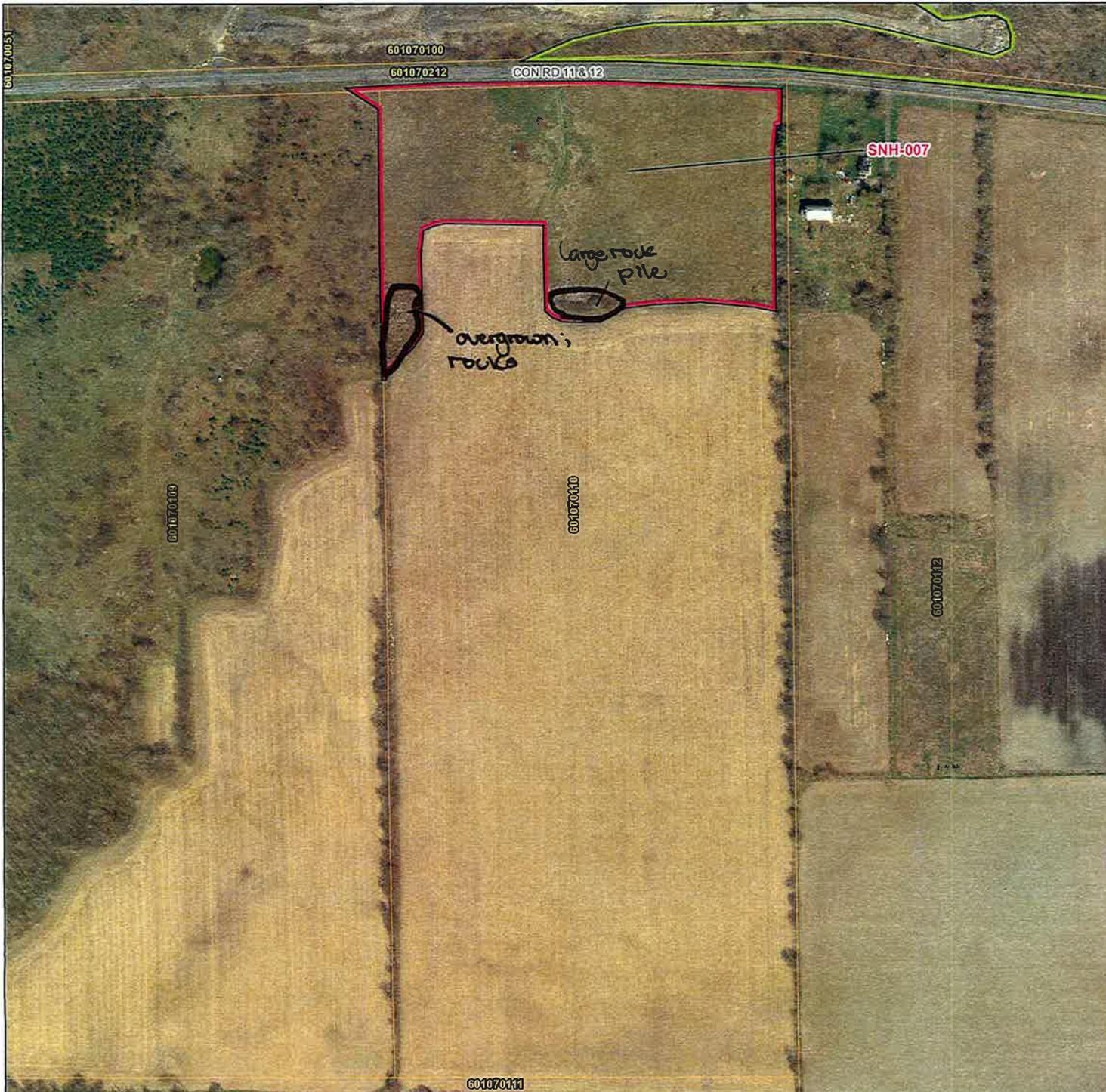
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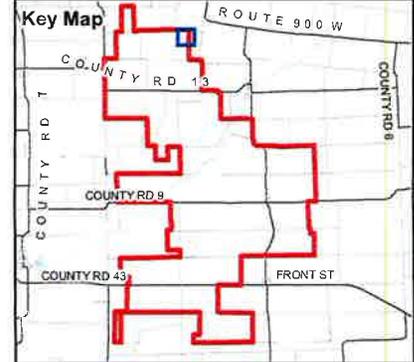






# Nation Rise Wind Project

SNH-007



## 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"  
 1:4,000







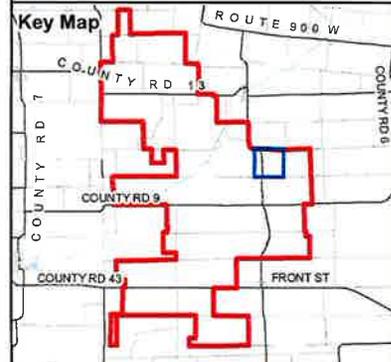






# Nation Rise Wind Project

SNH-008, AWO-007



## Legend

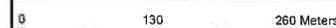
-  Amphibian Breeding Habitat (Woodland) (AWO)
-  Snake Hibernaculum (SNH)
-  Parcel
-  Railway

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Project: 1796  
Date: April 21, 2017

NAD83 - UTM Zone 18  
Size: 8.5 x 11"  
1:7,000







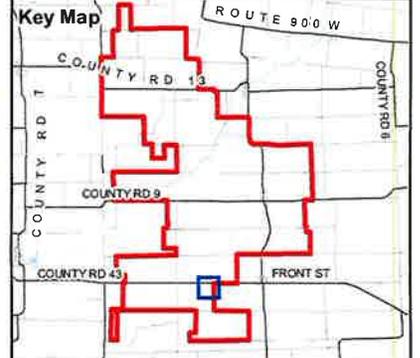






# Nation Rise Wind Project

SNH-009, SNH-010



## Legend

- Snake Hibernaculum (SNH)
- Parcel
- + Railway

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



601040063















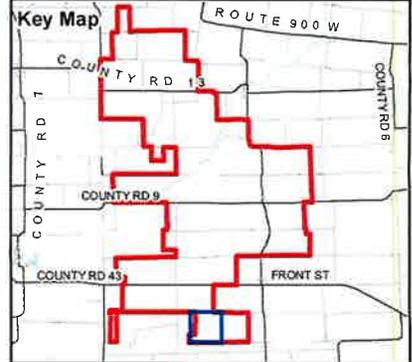


← Concession 132 →



# Nation Rise Wind Project

## AWO-020, SNH-011



### Legend

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

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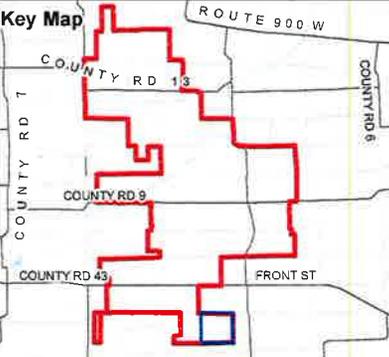






# Nation Rise Wind Project

AWO-023, SNH-012



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

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*Aquatic, Terrestrial and Wetland Ecologists*

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Project 1756	NAD83 - UTM Zone 18
Date: April 20, 2017	Size: 8.5 x 11"
	1:7,600











