Samsung Renewable Energy Inc. and

Pattern Renewable Holdings Canada ULC

7B Natural Heritage Site Investigation Report

For

Armow Wind Project

Summary of Report Revisions

Section of Report	Report Submission: August, 2012	Report Submission: September, 2012	Report Submission: November, 2012
5.1 – Table 2.	- Wetland assessment dates	Added: - Wetland IDs for survey dates with wetland assessments - Additional survey dates	
5.2	- General description of ANSIs	Added: - Descriptions of Greenock Swamp Life Science ANSI and Glammis Bog Life Science ANSI	
5.4		Added: - Paragraph including survey dates range and summary survey methods	
5.6.1			Added: - Reference to Significant Wildlife Habitat Technical Guide
5.6.1 – Table 4.	- References to OMNR Significant Wildlife Habitat Technical Guide and OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG	Added: - Updated 'Methods' column for habitats Removed: - All references to OMNR Significant Wildlife Habitat Technical Guide	Updated: - 'Criteria' and 'Methods' columns for habitats
5.6.2 – Table 5.	- References to OMNR Significant Wildlife Habitat Technical Guide and OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG	Added: - Updated 'Methods' column for habitats Removed: - All references to OMNR Significant Wildlife Habitat Technical Guide	Updated: - 'Criteria' and 'Methods' columns for habitats
5.6.3 – Table 6.	- References to OMNR Significant Wildlife Habitat Technical Guide and OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG	Removed: - All references to OMNR Significant Wildlife Habitat Technical Guide	
5.6.3 – Table 7.		Added - Reference to OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG (2012)	
5.6.4 – Table 8.	- References to OMNR Significant Wildlife Habitat Technical Guide and OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG	Removed: - All references to OMNR Significant Wildlife Habitat Technical Guide	

Section of Report	Report Submission: August, 2012	Report Submission: September, 2012	Report Submission: November, 2012
5.6.4 – Figures 2-19.		Updated: - Figures	
6.1 – Table 9.		Updated: - Figure reference numbers	
6.2 – Table 10.		Added: - Several new woodlands Updated: - ELC communities, Functions column - Inclusion communities not mapped	
6.2 – Figures 20-36.		Updated: - Figures	
6.3			Updated: - Wetland assessment details
6.3 – Table 11.		Added: - New wetland Removed: - Several wetlands Updated: - Several communities have been complexed - ELC communities, 'Distance to Project Components' column - Inclusion communities not mapped	Updated: - 'Distance to Project Components' column
6.4 – Table 12.		Updated: - 'Size' column, ELC communities, 'Distances to Project Components' column	
6.5.1	- References to OMNR Significant Wildlife Habitat Technical Guide and OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG	Removed: - All references to OMNR Significant Wildlife Habitat Technical Guide	
6.5.1 – Table 13.		Removed: - Several habitats Updated: - 'Rationale' column	
6.5.2	- References to OMNR Significant Wildlife Habitat Technical Guide and OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG	Removed: - All references to OMNR Significant Wildlife Habitat Technical Guide	
6.5.2 – Table 14.		Updated: - 'Rationale' column	Updated: - 'Rationale' column

Section of Report	Report Submission: August, 2012	Report Submission: September, 2012	Report Submission: November, 2012
6.5.3	- References to OMNR Significant Wildlife Habitat Technical Guide and OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG	Removed: - All references to OMNR Significant Wildlife Habitat Technical Guide	
6.5.3 – Table 15.		Updated: - 'Rationale' column	
6.5.4	- References to OMNR Significant Wildlife Habitat Technical Guide and OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG	Removed: - All references to OMNR Significant Wildlife Habitat Technical Guide	
6.5.5	- References to OMNR Significant Wildlife Habitat Technical Guide and OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG	Removed: - All references to OMNR Significant Wildlife Habitat Technical Guide Updated: - Number of candidate habitats - Habitat mapping	
6.5.5 – Table 16.		Added: - New candidate habitats	Updated: - Number of candidate habitats - 'Criteria Rationale' column - 'Size' column - 'Distance to Project Location' column - Figure references
6.5.5 – Table 17.		Added: - Generalized descriptions for new habitats Updated: - Criteria Rationale column	Updated: - 'Criteria Rationale' column
7.0 – Table 18.		Added: - New woodlands, wetlands, wildlife habitats - New generalized habitats Removed: - Individual wetlands which have been complexed Updated: - Distances for wetlands which have been complexed	Updated: - 'Distance to Closest Turbine' column - 'Distance to Closest Other Project' column - 'Distance to Project Infrastructure with an Operational Effect' column
7.0 – Table 19.		Updated: - Number of wetlands, habitats, woodlands	
7.0			Added: - Rationale for when specific significant wildlife habitat studies will be conducted

Section of Report	Report Submission: August, 2012	Report Submission: September, 2012	Report Submission: November, 2012
7.0 – Table 20.		Updated: - 'Status Based on Site Investigation' column	
8.0		Updated: - New references	

Chapter II

Natural Heritage
Site Investigation Report

ARMOW WIND PROJECT
Natural Heritage Site Investigation Report

Prepared for:
Golder Associates Ltd.
2390 Argentia Road
Mississauga, ON L5N 5Z7

Project No. 1275 Date: October 2012

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

ARMOW WIND PROJECT
Natural Heritage Site Investigation Report

Project Team:

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Andrew Ryckman	Project Manager/Biologist
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Tara Brenton	Terrestrial and Wetland Biologist
Andrew Dean	Terrestrial and Wetland Biologist
Christy Humphrey	Terrestrial and Wetland Biologist
Jessica Walker	Terrestrial and Wetland Biologist
Kaitlin Powers	Terrestrial and Wetland Biologist
Katherine St. James	Terrestrial and Wetland Biologist
Ken Burrell	Terrestrial and Wetland Biologist
Nathan Miller	Terrestrial and Wetland Biologist
Patrick Deacon	Terrestrial and Wetland Biologist
Sophie Gibbs	Terrestrial and Wetland Biologist
William Graham Wright	Terrestrial and Wetland Biologist
Shawn MacDonald	GIS Technician

Report submitted on October 26, 2012

Andrew G. Ryckman

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Appendix I: Site Investigation Field Notes

1.0 Project Description

The Armow Wind Project (the "Project") is an up to 180 megawatt (MW) commercial wind energy generation facility located substantially on leased privately owned lands in the Municipality of Kincardine, Bruce County, Ontario. The Project is being developed by SP Armow Wind Ontario GP Inc., in its capacity as general partner of SP Armow Wind Ontario LP (the "Proponent"). The Proponent is a joint venture limited partnership owned by affiliates of Pattern Renewable Holdings Canada ULC ("Pattern") and Samsung Renewable Energy Inc. ("Samsung").

Natural Resource Solutions Inc. (NRSI) was retained in August 2011 by Golder Associates Ltd., on behalf of the Proponent, to conduct a natural environment resource assessment in accordance with the Renewable Energy Approval (REA) Regulation. This assessment includes a records review, site investigation, evaluation of significance, and impact assessment of any potentially significant natural features at a proposed 180MW wind energy generating facility in Bruce County, within the Municipality of Kincardine, Ontario. The analysis of the natural heritage features and biological factors affecting the proposed site is one issue being considered. Other factors, such as water bodies, land ownership, social impacts, and cultural impacts are also being assessed by other team members, and will be addressed under separate covers as outlined by the REA Regulation.

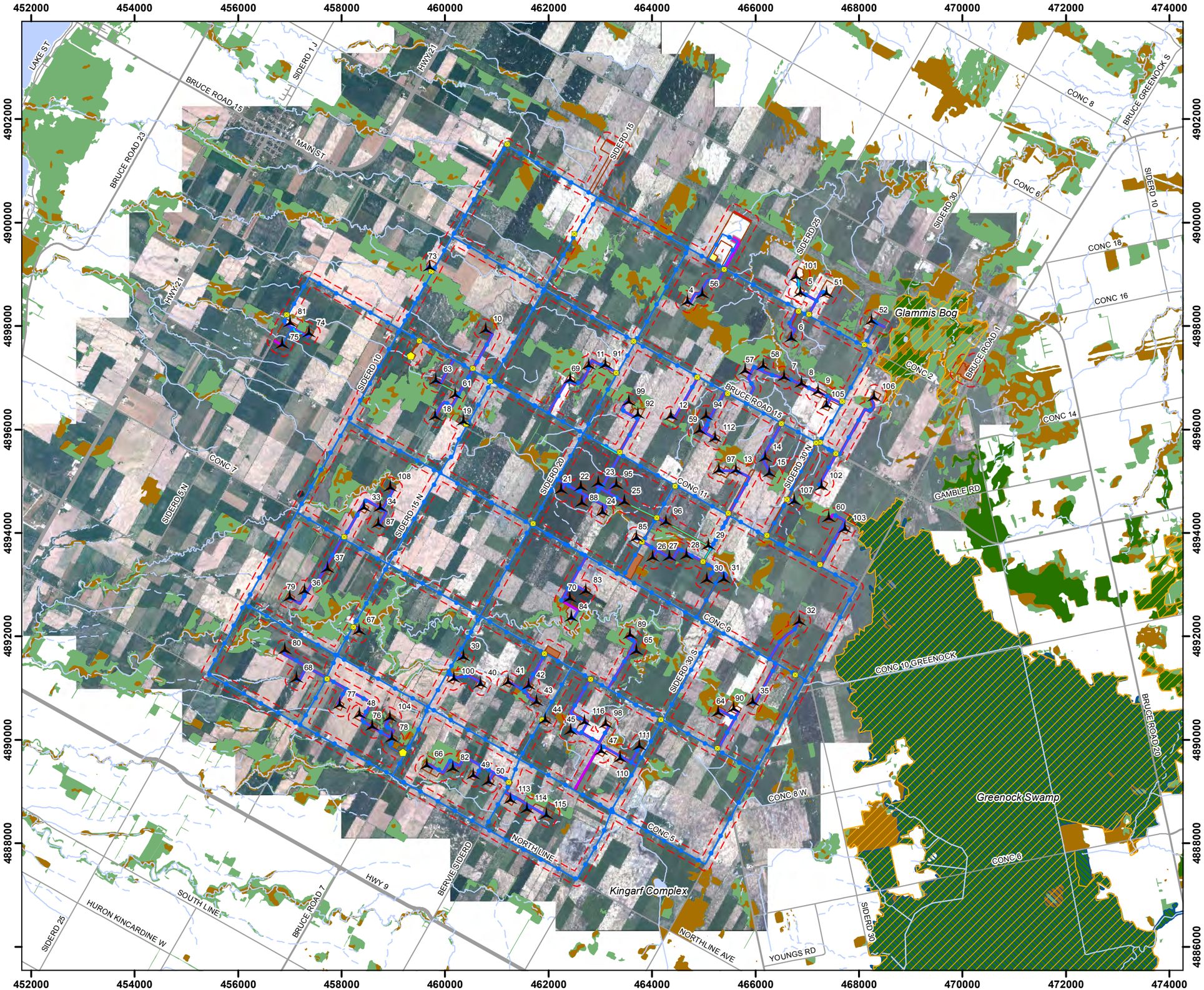
The Armow Wind Project, proposed by the Proponent, is located in the southwest end of Bruce County, within the Township of Kincardine. The general project area is roughly bordered by Bruce Road 20 to the north, Highway 9 to the south, Bruce Road 1 to the east, and Highway 21 to the west. This wind energy generating facility is proposed to be 180MW in size, consisting of up to 99 operational wind turbines, as well as supporting infrastructure and development activities.

As identified in the REA Regulation, the proposed layout of these features is collectively referred to as the 'project location'. In accordance with Section 25 of the Renewable Energy Approval (REA) Regulation (O. Reg. 359/09 of the Environmental Protection Act), NRSI has conducted a thorough records review of available background resources to identify any potentially significant natural features within 120m of the project location.

This includes areas within 120m of turbine blade tip as well as any areas that may be used as temporary lay-down areas, crane pads, access roads, substation locations, permanent meteorological (MET) towers, and connector, distribution, and transmission lines. For the purposes of this report, NRSI will refer to the areas within 120m of the project location as the 'project area'.

The Armow Wind Project area is dominated by agricultural fields, including rotational corn, wheat and soy crops, hayfields and pastureland. The project area also consists of natural features such as woodlands, wetlands and valleylands. Several wildlife habitats, including seasonal concentration areas, specialized wildlife habitats and habitats for species of conservation concern are also located within the project area.

As part of this project, NRSI has considered all aspects relating to provincially Threatened and Endangered species; however, since these species are addressed as part of the *Endangered Species Act* (2007), they have not been discussed within any of these Natural Heritage Assessment 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 *Approval and Permitting Requirements Document (APRD)* to be submitted to the Ministry of Natural Resources (MNR) under a separate cover, where necessary.



Path: X:\1275_ArmowWF\NRSI_1275_RR_Fig1_ProjectAreaNaturalFeatures_72K_2012_07_24_SWM.mxd

Figure 1

Armow Wind Project

Project Area and Natural Features

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody
- ANSI, Life Science
- Deer Wintering Area
- Provincially Significant Wetland
- Non-Provincially Significant Wetland
- Wooded Area

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Data provided by MNR© Copyright: Queen's Printer Ontario.
Imagery provided by Golder Associates, 2011.

Project: 1275
Date: July-24-12

NAD83 - UTM Zone 17
Size: 11x17"
1:72,000

0 1 2 3 4 5 kms

N

2.0 REA Requirements

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

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

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

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

(a) an area of natural and scientific interest (ANSI) (earth science)
(b) an ANSI (life science)
(c) a coastal wetland
(d) a northern wetland
(e) a southern wetland
(f) a valleyland
(g) a wildlife habitat, or
(h) a woodland.

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

1. A summary of any corrections to the report prepared under subsection 25 (3) and the determinations made as a result of conducting the site investigations under subsection (1).

2. Information relating to each natural feature identified in the records review and in the site investigations, including the type, attributes, composition and function of the feature.
3. A map showing
   a) the boundaries mentioned in clause (1) (c)
   b) the location and type of each natural feature identified in relation to the project location, and
   c) the distance mentioned in clause (1) (d).
4. The dates and times of the beginning and completion of the site investigation.
5. The duration of the site investigation.
6. The weather conditions during the site investigation.
7. A summary of methods used to make observations for the purposes of the site investigation.
8. The name and qualifications of any person conducting the site investigation.
9. Field notes kept by the person conducting the site investigation.

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

3.0 Staff Roles

The requirements of the REA process indicate that the name and qualifications of all staff participating in the site investigation should be included. As a result, the qualifications and roles of all staff participating in the site investigations at the Armow Wind Project have been outlined in the following sections.

Andrew G. Ryckman, B.Sc.
Andrew is a Terrestrial and Wetland Biologist with 7 years of environmental experience. He routinely manages the natural heritage aspects of renewable energy projects, with specific expertise relating to bats and herpetofauna. Andrew is certified in Ecological Land Classification (2010), and has successfully completed a Bat Conservation International (BCI) Acoustic Monitoring Workshop (2008).

Andrew's role in the Armow Wind Project was to act as the project manager, overseeing all aspects of the Natural Heritage Assessment, including all associated field work and reporting. He was also the main contact point for agency staff. Andrew assisted with the preparation of this report, and worked with other staff to compile the records review and site investigation within the Armow Wind Project area.

Pamela Tucciarone, B.Sc.
Pamela has more than 3 years of practical work experience. She has experience mapping vegetation communities, conducting vegetation inventories and wildlife habitat assessments for birds, bats, herpetofauna and mammals. She also has experience conducting tree inventories, risk assessments, implementing integrated pest management practices, and environmental monitoring. She has more than 2 years of experience detecting the presence of the emerald ash borer and delineating the extent of its infestation. Pamela is a Certified Arborist (2011) and is certified in the Northeastern Ecological Land Classification system for Ontario (2011). Pamela routinely participates and coordinates field investigations and reporting for wind and solar power projects throughout Ontario.

Pamela conducted Ecological Land Classification and wildlife habitat assessment surveys within the project area. Pamela also assisted with the preparation of this Natural Heritage Assessment report.

Tara Brenton, B.Sc.
Tara Brenton is a biologist with 7 years experience working on a variety of environmental projects. Tara specializes in characterizing terrestrial and wetland resources, managing a wide range of projects that encompass inventories of flora and fauna, impact assessment and mitigations, as well as management prescriptions with a focus on restoration. Tara is Certified Arborist, is certified in the Ecological Land Classification System for southern Ontario, as well as the Ontario Wetland Evaluation System (OWES).

Tara worked with staff to identify and verify the boundaries of the wetlands, and assisted in overseeing the wetland aspect of this project.

Andrew M. Dean, B.E.S
Andrew has almost 2 years of experience in the environmental industry, working in both the non-profit and private sectors. His areas of expertise includes vegetation mapping and vascular plant inventories, with experience conducting bat assessments and post-construction mortality monitoring at wind energy facilities. Andrew is trained in the Ecological Land Classification (ELC) system for Southern Ontario and has experience assisting with the OMNR Wetland Evaluation Systems.

Andrew conducted Ecological Land Classification, wetland assessments and wildlife habitat assessment surveys within the project area.

Christy L. Humphrey, B.E.S.
Christy has more than 3 years of environmental consulting experience, working on a variety of projects tasks. Her areas of expertise are vegetation mapping and floral inventories, but she has experience conducting bird and bat assessments, amphibian studies, and other fauna assessments. Christy is certified in both the Ecological Land Classification (ELC) for Southern Ontario (2010) and Northeastern Ecological Land Classification (2010), and participated in the Ontario MNR Bat Monitoring Workshop for Wind Power Projects (2010).

Christy conducted Ecological Land Classification, wetland assessments and wildlife habitat assessment surveys within the project area. She also assisted with the preparation of this Natural Heritage Assessment report.

Jessica R. Walker, B.E.S
Jessica is a Terrestrial and Wetland Biologist with over 2 years of working the in the environmental field. Jessica has completed her Bachelor of Environmental Studies and is a candidate for a Masters of Environmental Studies (2012) at the University of Waterloo. Her Masters research involves mapping suitable habitat for the yellow-breasted chat (*Icteria virens virens*) in the Anders Field Complex in Point Pelee National Park. Jessica has routinely conducted ecological assessments and collected field information on vegetation, birds, amphibians, and other wildlife species throughout Ontario.

Jessica conducted Ecological Land Classification and wildlife habitat assessment surveys within the project area.

Kaitlin Powers, B.E.S
Kaitlin is a Terrestrial and Wetland Biologist with over 2 years experience working as an environmental technician in both public and private sectors. As a graduate in Environment and Resources Studies from the University of Waterloo, Kaitlin specialized her studies in ecological restoration and is a member of the Society for Ecological Restoration of Ontario (SERO). She is certified in Ecological Land Classification (ELC) for Northeastern Ontario (2011) and has been involved in completing ELC surveys, wildlife habitat assessments, bat

monitoring, migratory bird and reptile surveys, as well as assisting in wetland evaluations.

Kaitlin conducted Ecological Land Classification and wildlife habitat assessment surveys within the project area.

Katherine St. James, M.Sc.
Katherine is a Terrestrial and Wetland Biologist with more than 3 years of experience working in the environmental field. She specializes in environmental sciences, ecology, and bio-geographical studies, and completed her master's research on potential barrier effects on salamander populations. During her master's research and consulting experience, Katherine has routinely conducted ecological assessments and collected field information on vegetation, birds, amphibians, and other wildlife species throughout Ontario.

Katherine conducted Ecological Land Classification and wildlife habitat assessment surveys within the project area.

Ken Burrell, B.E.S.
Ken is a terrestrial and wetland biologist who has 6 years of experience working on a variety of environmental projects. He specializes in bird ecology but has over 4 years of experience conducting floral inventories and wildlife studies focused on amphibians, reptiles, bats, and mammals. Ken has worked on multiple stages for a variety of renewable energy projects, primarily focusing on wind power. He is also certified in the Northeastern Ecological Land Classification system for Ontario (2011).

Ken conducted wildlife habitat assessment surveys within the project area.

Nathan G. Miller, M.Sc.
Nathan graduated from the University of Guelph with a B.Sc. in Wildlife Biology and a M.Sc. in Integrative Biology. Research for Nathan's M.Sc. focused on the migration and conservation of the monarch butterfly throughout Canada and the United States. Nathan also has extensive experience conducting research on a wide range of wildlife species including birds, mammals, herpetofauna, insects and plants acquired while working as a naturalist for the Ministry of Natural Resources in Algonquin Park and an environmental consultant. Nathan is also certified in the Ecological Land Classification (ELC) system for Ontario.

Nathan conducted Ecological Land Classification and wildlife habitat assessment surveys within the project area.

Patrick Deacon, B.E.S.
Patrick is a Terrestrial Biologist with 4 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.

Patrick conducted Ecological Land Classification, wetland assessments and wildlife habitat assessment surveys within the project area.

Sophie Gibbs, B.Sc.
Sophie is a Terrestrial and Wetland Biologist with over 2 years of practical work experience, both in a field and lab setting. She holds a keen interest in all aspect of natural history, but specializes in avian ecology and plant identification. With NRSI, Sophie has routinely conducted ecological assessments, and collected field data on vegetation, birds, bats, amphibians, and reptiles in Ontario.

Sophie conducted Ecological Land Classification and wildlife habitat assessment surveys within the project area.

William Graham Wright, B.E.S.
Graham is a Terrestrial and Wetland Biologist and a recent graduate of the University of Waterloo with a Bachelor of Environmental Studies. He has a combined year of experience working both as a field technician and as an Information Officer working with protected areas and Species At Risk in Ontario. He has also participated in various terrestrial and aquatic environmental monitoring projects.

Graham conducted Ecological Land Classification and wildlife habitat assessment surveys within the project area.

Shawn MacDonald B.A., GIS-AS
Shawn has more than 3 years experience in renewable energy mapping and asset management systems. As a Geographic Information Systems (GIS) Analyst, Shawn specializes in projects relating to wind, solar and hydro electric power. Shawn has a variety of project and field experience using GIS, GPS and AutoCAD technology throughout all stages of a renewable energy project. This experience is not limited to renewable energy alone as Shawn has been involved in a number of projects relating to terrestrial and aquatic habitat mapping, environmental restoration and spatial/3D analysis.

Shawn is the primary GIS technician for the Armow Wind Project. He reviewed and collected all available background and site investigation mapping resources to compile into project mapping for the Armow Wind Project.

4.0 Summary of Records Review

In accordance with the REA Regulation, an area of at least 120m beyond the project location was examined for natural heritage features, including Areas of Natural and Scientific Interest (ANSI), wetlands, woodlands, valleylands, and wildlife habitat. Numerous agencies were contacted to compile a comprehensive records review, including the Ministry of Natural Resources (MNR) and Saugeen Valley Conservation Authority. NRSI also utilized numerous background review sources, such as the Biodiversity Explorer, Ontario Breeding Bird Atlas (OBBA), Ontario Herpetofauna Atlas, and the Atlas of the Mammals of Ontario. The comprehensive results of the records review have been summarized in Table 1 below.

Table 1. Summary of Records Review for the Armow Wind Project

Criteria	Result
1. Within 120m of a Provincial Park or Conservation Reserve	The Armow Wind Project location is not within 120m of a Provincial Park or Conservation Reserve.
2. In a Natural Feature	The results of this records review indicate that project locations (i.e. disturbance area, cabling, access roads etc…) of the Armow Wind Project are located in and within 120m of natural features. A total of 32 woodlands overlap with the project location. These woodlands are expected to consist of deciduous forest with vegetation associations that are representative of this region of southwestern Ontario. A total of 8 wetlands overlap with the project location. These wetlands are expected to consist of deciduous swamp with vegetation associations that are representative of this region of southwestern Ontario. No known PSWs overlap with the project location. The Glammis Bog Life Science ANSI also overlaps with the project location. The extent to which project locations overlap natural areas is variable and will be further examined and addressed in the site investigation phase of the project.
3. Within 50m of a ANSI-ES	There are no Earth Science (ES) ANSIs located within 50m of the project location.
4. Within 120m of a Natural Feature	
• ANSI-LS	There are two Provincially Significant Life Science ANSIs found within 120m of the project location: Greenock Swamp and Glammis Bog. The Glammis Bog Life Science ANSI also overlaps with the project location.
• Coastal Wetland	No coastal wetlands are found within 120m of the project location.

Criteria	Result
• Northern Wetland	No northern wetlands are found within 120m of the project location.
• Southern Wetland	A total of 89 wetlands have been identified within 120m of the Armow Wind Project location, including two PSWs, Greenock Swamp and Glammis Bog. In addition, 8 of these wetlands overlap with the project location. The presence/absence of all wetlands, as well as distances to project locations, will be confirmed during the site investigation.
• Valleyland	No valleylands have been identified within 120m of the project location.
• Wildlife Habitat	A total of 39 wildlife habitats have been identified within 120m of the Armow Wind Project location. These wildlife habitats include seasonal concentration areas (3), rare vegetation communities and specialized wildlife habitats (4), habitats for species of conservation concern (1), as well as S1-S3, Special Concern and SH Species and Communities (31). A total of 153 woodlands have been identified within 120m of the Armow Wind Project location, and 32 of these woodlands are located within the project location. These woodlands have the potential to provide several types of candidate Significant Wildlife Habitat (SWH). A total of 89 wetlands have been identified within 120m of the Armow Wind Project location, and 8 of these wetlands are located within the project location. These wetlands have the potential to provide several types of candidate Significant Wildlife Habitat (SWH). Several linear features, including treed fencerows and naturalized drains, have been identified within 120m of the project location. These features have the potential to act as SWH, specifically providing animal movement corridors and/or habitat for species of conservation concern. In addition, several other wildlife habitats, including seasonal concentration areas, rare vegetation communities and specialized wildlife habitats, and habitats for species of conservation concern, have the potential to be present within 120m of the project location. All of these wildlife habitats should be examined during the site investigation phase and/or the evaluation of significance phase of this project to identify other habitat features and identify the significance of each natural feature.
• Woodland	A total of 153 woodlands have been identified during the records review process, each within 120m of the project location, with 32 of these woodlands located within the project location. Basemapping indicates that these woodlands range in size from 0.13 ha to 5,730 ha, which includes one large PSW, Greenock Swamp (5,730ha). These woodlands are expected to be primarily dominated by mid-aged to mature deciduous tree species; however, young woodlands, treed plantations, or occasional coniferous woodlands may also be present within 120m of the project location.

5.0 Site Investigation Methodology

Comprehensive site investigations to document the environmental and biological characteristics of the Armow Wind Project were undertaken in accordance with the REA Regulation and the requirements of the MNR. These site-specific field investigations focused on vegetation community mapping to support and build on the information collected during the records review phase of this project. The results of these site investigations will be used to identify and map the boundaries of the natural features within 120m of the project location. Information collected at this stage will be used to evaluate the significance of features in a subsequent report.

5.1 Survey Dates

In accordance with the REA Regulation, NRSI recorded dates, times, duration, and weather conditions during each site investigation. This information has been summarized in Table 2 below. Detailed descriptions of staff roles and qualifications can be found in Section 3.0 of this report, and detailed field forms have been appended to this report.

Table 2. Summary of Site Investigations at the Armow Wind Project

Date	Purpose	Time	Duration	Weather Conditions			Staff
				Temperature (°C)	Cloud Cover	Beaufort Wind Scale	
September 14, 2011	• Ecological Land Classification (ELC) • Candidate Wildlife Habitat Assessment	13:20-14:20	1hr	17	80%	2-5	Katherine St. James, Jessica Pang
September 15, 2011	• ELC • Candidate Wildlife Habitat Assessment	9:40-18:15	8hr 35min	7-14	50-90%	2-5	Katherine St. James, Jessica Pang
September 16, 2011	• ELC • Candidate Wildlife Habitat Assessment	8:45-12:30	3hr 45min	18	0-5%	2	Katherine St. James, Jessica Pang
September 20, 2011	• ELC • Candidate Wildlife Habitat Assessment	12:30-17:45	5hr 15min	15-18	30-70%	1-2	Andrew Dean, Pamela Tucciarone
September 21, 2011	• ELC • Candidate Wildlife Habitat Assessment	9:30-19:43	10hr 13min	15-18	5-100%	1-4	Andrew Dean, Pamela Tucciarone
September 22, 2011	• ELC • Candidate Wildlife Habitat Assessment	9:00-15:15	6hr 15min	15-18	80-90%	2-3	Andrew Dean, Pamela Tucciarone
October 4, 2011	• ELC • Candidate Wildlife Habitat Assessment	17:36-19:36	2hr	18	0%	1	Sophie Gibbs, Mitch Ellah
October 5, 2011	• ELC • Wetland Assessment (WET-009, 016) • Candidate Wildlife Habitat Assessment	8:40-18:10	9hrs 35min	15-23	0-40%	1-4	Sophie Gibbs, Mitch Ellah, Christy Humphrey, Kim Watson
October 6, 2011	• ELC • Wetland Assessment (WET-011, 016, 022, 037) • Candidate Wildlife Habitat Assessment	9:00-17:00	8hr	11-23	0-40%	1-3	Sophie Gibbs, Mitch Ellah, Christy Humphrey, Kim Watson

Date	Purpose	Time	Duration	Weather Conditions			Staff
				Temperature (°C)	Cloud Cover	Beaufort Wind Scale	
October 7, 2011	• ELC • Wetland Assessment (WET-011, 012, 031, 032)	8:40-17:00	8hr 20min	12-22	0%	1-3	Christy Humphrey, Kim Watson
October 12, 2011	• ELC • Wetland Assessment (WET-039)	12:00-17:00	5hr	17-19	100%	3	Patrick Deacon, Kim Watson
October 13, 2011	• ELC • Wetland Assessment (WET-022, 024, 025) • Candidate Wildlife Habitat Assessment	8:42-16:50	8hr 8min	14-17	90-100%	2-3	Patrick Deacon, Kim Watson Sophie Gibbs, Mitch Ellah
October 14, 2011	• ELC • Wetland Assessment (WET-018, 025, 026) • Candidate Wildlife Habitat Assessment	7:50-16:00	8hr 10min	12-16	95-100%	2-5	Patrick Deacon, Kim Watson Sophie Gibbs, Mitch Ellah
October 17, 2011	• ELC	14:25-15:25	1hr	5	100%	3	Christy Humphrey, Kim Watson
October 19, 2011	• ELC • Candidate Wildlife Habitat Assessment	17:00-18:00	1hr	9	100%	4-8	Graham Wright, Mitch Ellah
October 20, 2011	• ELC • Candidate Wildlife Habitat Assessment	10:20-18:00	7hr 40min	9-11	100%	1-4	Graham Wright, Mitch Ellah
October 21, 2011	• ELC • Candidate Wildlife Habitat Assessment	9:15-12:55	3hr 40min	7-8	100%	2-3	Graham Wright, Mitch Ellah
October 25, 2011	• ELC • Wetland Assessment (WET-017, 018, 019)	12:10-16:45	4hr 35min	10-11	100%	2	Christy Humphrey, Kim Watson
October 26, 2011	• ELC • Wetland Assessment (WET-014, 036)	9:00-17:00	8hr	6	100%	3	Kim Watson, Christy Humphrey

Date	Purpose	Time	Duration	Weather Conditions			Staff
				Temperature (°C)	Cloud Cover	Beaufort Wind Scale	
October 27, 2011	• ELC • Wetland Assessment (WET-003, 004, 007) • Candidate Wildlife Habitat Assessment	8:30-18:10	9hr 40min	0-5	75-100%	2-4	Kim Watson, Christy Humphrey, Kaitlin Powers, Jessica Walker
October 28, 2011	• ELC • Wetland Assessment (WET-007, 012, 026, 031) • Candidate Wildlife Habitat Assessment	8:45-17:00	8hr 15min	1-8	40- 100%	1-3	Christy Humphrey, Kim Watson. Kaitlin Powers, Jessica Walker
November 1, 2011	• ELC • Wetland Assessment (WET-013)	12:45-17:00	4hr 12min	7-12	10-75%	2-3	Andrew Dean, Patrick Deacon
November 2, 2011	• ELC • Wetland Assessment (WET-015, 016)	9:30-19:30	10hr	7-13	0-90%	2-4	Patrick Deacon, Andrew Dean
November 3, 2011	• ELC • Wetland Assessment (WET-020, 021, 039, 043) • Candidate Wildlife Habitat Assessment • ANSI Assessment	10:50-18:30	7hr 40min	5-8	50 - 100%	2-4	Patrick Deacon, Andrew Dean, Christy Humphrey, Nathan Miller
November 4, 2011	• ELC • Wetland Assessment (WET-004, 006) • Candidate Wildlife Habitat Assessment	8:00-17:00	9hr	-1-8	5-50%	0-3	Christy Humphrey, Nathan Miller
November 5, 2011	• ELC • Wetland Assessment (WET-001, 002, 012) • Candidate Wildlife Habitat Assessment	14:30-16:10	1hr 40min	10	5%	3-4	Christy Humphrey
November 10, 2011	• ELC	14:20-17:40	3hr 20min	8	75%	1	Patrick Deacon, Nathan Miller

Date	Purpose	Time	Duration	Weather Conditions			Staff
				Temperature (°C)	Cloud Cover	Beaufort Wind Scale	
November 11, 2011	• ELC • Wetland Assessment (WET-031)	12:00-16:30	4hr 30min	1	95%	2	Patrick Deacon, Nathan Miller
November 17, 2011	• ELC • Candidate Wildlife Habitat Assessment	11:00-16:10	5hr 10min	-1-3	40-100%	3-4	Nathan Miller, Andrew Dean
November 18, 2011	• ELC • Candidate Wildlife Habitat Assessment • ANSI Assessment	8:20-15:30	7hr 10min	1-2	40-100%	2-6	Nathan Miller, Andrew Dean
November 23, 2011	• ELC Valleyland Assessment • Candidate Wildlife Habitat Assessment	14:30-15:50	1hr 20min	1	90%	2	Patrick Deacon
November 24, 2011	• ELC • Wetland Assessment (WET-002, 005, 008, 009, 010, 028) • Candidate Wildlife Habitat Assessment	9:00-18:00	9hr	2-6	100%	2-3	Patrick Deacon, Blair Baldwin
November 29, 2011	• ELC • Wetland Assessment (WET-020) • Candidate Wildlife Habitat Assessment	13:00-17:00	4hr	1-3	90-100%	1-4	Andrew Dean, Patrick Deacon
December 1, 2011	• ELC • Candidate Wildlife Habitat Assessment	15:15-16:15	1hr	1	60%	3	Jessica Walker, Andrew Dean
December 2, 2011	• ELC • Wetland Assessment (WET-024, 036) • Candidate Wildlife Habitat Assessment	8:30-15:50	7hr 20min	-2-1	85-95%	1- 3	Andrew Dean, Jessica Walker

Date	Purpose	Time	Duration	Weather Conditions			Staff
				Temperature (°C)	Cloud Cover	Beaufort Wind Scale	
December 7, 2011	• ELC • Wetland Assessment (WET-019) • Candidate Wildlife Habitat Assessment	14:30-16:50	2hr 20min	-1	70-80%	1-2	Andrew Dean, Heather Wright
December 8, 2011	• ELC • Wetland Assessment (WET-026, 030, 035) • Valleyland Assessment • Candidate Wildlife Habitat Assessment	8:30-17:20	8hr 50min	-1-1	50-95%	3-5	Andrew Dean, Heather Wright
December 9, 2011	• ELC • Wetland Assessment (WET-004, 034, 040, 042) • Candidate Wildlife Habitat Assessment • ANSI Assessment	8:30-17:53	9hr 23min	-1-0	50-100%	1-3	Andrew Dean, Heather Wright
January 8, 2012	• ELC • Wetland Assessment (WET-010, 023, 033, 041)	12:40-16:30	3hr 50min	-3- -1	60-95%	2	Christy Humphrey
March 13, 2012	• Candidate Wildlife Habitat Assessment	14:15-17.15	3 hr	13-14	0-20%	2-5	Andrew Dean, Nathan Miller
March 14, 2012	• Candidate Wildlife Habitat Assessment	9:10-5:15	8 hr 5min	5-19	0-20%	2-5	Andrew Dean, Nathan Miller
May 29, 2012	• Candidate Wildlife Habitat Assessment	14:15-1540	6hr 42min	19-23	20-100%	2-5	Pamela Tucciarone, Tara Lessard, Jason Kerr, Tianna Burke
May 30, 2012	• Candidate Wildlife Habitat Assessment	8:50-18:13	12hr 49min	14-21	0-100%	2-3	Pamela Tucciarone, Tara Lessard, Jason Kerr, Tianna Burke
May 31, 2012	• Candidate Wildlife Habitat Assessment	9:25-18:20	12hr 6min	12-15	75-80%	1-3	Pamela Tucciarone, Tara Lessard,

Date	Purpose	Time	Duration	Weather Conditions			Staff
				Temperature (°C)	Cloud Cover	Beaufort Wind Scale	
							Jason Kerr, Tianna Burke
June 7, 2012	• Candidate Wildlife Habitat Assessment	9:00-16:46	7hr 16min	14-19	5-95%	2	Erin Pettit, Blair Baldwin
June 8, 2012	• Candidate Wildlife Habitat Assessment	15:25-16:23	1hr 2min	22	20%	4	Blair Baldwin, Jason Kerr
August 10, 2012	• ELC • Wetland Assessment (WET-025) • Candidate Wildlife Habitat Assessment	10:13-15:07	4hr 54min	16	100%	3	Christy Humphrey, Whitney Moore

5.2 Areas of Natural and Scientific Interest

Areas of Natural and Scientific Interest are identified, characterized, delineated, and evaluated by the Ministry of Natural Resources. NRSI has reviewed mapping of these 2 Life Science ANSIs found within the project area as part of the records review.

The provincially significant Greenock Swamp Life Science ANSI is characterized by deciduous and mixed swamp communities, and also provides a good representation of fen and bog communities, comprising one of the largest and diverse swamp forests in southwestern Ontario (Dougan & Associates and North-South Environmental Inc. 2009).

The provincially significant Glammis Bog LS ANSI primarily consists of moraines, specifically kame moraines, which are largely covered by deciduous forests (OMNR 2010). Depressions found in the Glammis Bog ANSI encompass significant acid bog and swamp communities (Dougan & Associates and North-South Environmental Inc. 2009).

NRSI has conducted site investigations on November 3, 18, and December 9, 2011 (listed in Section 5.1 above) that focused on reviewing the boundaries identified by the MNR. These ANSIs were studied through the application of ELC methods to confirm the boundaries of these natural features. Although site investigations were conducted during a time of year when plants are difficult to identify, the boundaries of the natural features were clearly apparently by observing changes in land use through the application of ELC mapping. Although NRSI may suggest revisions to the woodland or any wildlife habitat associated with this feature, the mapping of ANSIs is the responsibility of the MNR and will not be adjusted based on field work conducted by NRSI.

5.3 Woodlands

According to the Natural Heritage Assessment Guide for Renewable Energy Projects (OMNR 2011a), a “woodland”, as defined in the REA Regulation, is “*a treed area, woodlot or forested area, other than a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees, that is located south and east of the Canadian Shield.*” The NHA Guide suggests that the ELC definition for “forest”

(>60% tree cover) can be used to help identify woodlands in addition to the definition in the Guide.

To assist in the identification of woodlands within the project area, NRSI biologists have conducted detailed Ecological Land Classification (ELC) mapping of all vegetation communities within the project area. This ELC mapping was completed using the 2009 draft revisions to the ELC manual (Lee et al 1998). ELC polygons were delineated during site investigations and through visual observations of vegetation communities. These observations were compared with available aerial photography to finalize boundaries. Although some vegetation characteristics were obtained from natural area reports, no previous ELC mapping was available or used during these surveys.

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

ELC vegetation community codes assigned to polygons were based on the second approximation of ELC codes. Any natural features classified as forested communities (>60% canopy cover) are considered to be woodlands, and any natural features classified as savannahs or woodlands were roughly compared to the criteria above to assess if they meet the criteria for woodlands. All woodlands have been delineated at the dripline using site-specific field evaluations combined with the use of detailed aerial photography. As many of the woodlands within the Armow Wind Project area are large in size, there were instances where ELC community boundaries extended outside of the project area. ELC communities located more than 120m from the project location, but

found within identified woodlands have been determined by NRSI biologists using detailed aerial photography.

The NHA Guide (OMNR 2011a) also identifies that wooded areas bisected by an opening 20m or less from crown edges are considered to be single woodlands; however, any developed opening is not included in the area of the woodland. This criterion has been used to identify the boundary of single woodlands which at any point are located within 120m of the project location.

For properties where site-specific access could not be obtained, NRSI biologists conducted ELC mapping from the closest observable point (i.e. roadside, neighbouring property, etc.) and compared this to a detailed review of aerial photographs to characterize the polygon to the lowest level possible. Where this alternative methodology had to be employed, it is clearly indicated in Table 10 for each identified woodland, as well as the ELC field data sheets found in Appendix I of this report.

For any woodlands identified within the project area, ecological characteristics were compared to the evaluation criteria for significant woodlands, as described in Table 8 of the Natural Heritage Assessment Guide for Renewable Energy Projects (OMNR 2011a) to determine woodland form and function. These evaluation criteria include three broad categories: woodland size, ecological functions, and uncommon characteristics. The general evaluation criteria for describing woodland form and function have been summarized in Table 3 below.

Table 3. Woodland Evaluation Criteria for Describing Woodland Form and Function (OMNR 2011a)

Evaluation Criteria for Describing Woodland Form and Function	
Woodland Size Criteria	Woodland Cover
Ecological Functions Criteria	Woodland Interior
	Proximity to Other Woodlands
	Linkages
	Water Protection
	Woodland Diversity
Uncommon Characteristics Criteria	Woodland Characteristics

5.4 Wetlands

Wetlands include habitats that are seasonally or permanently covered by shallow water and display the presence of specific soil types and vegetation communities (OMNR 2011a). Preliminary wetland identifications were made through the implementation of ELC mapping to identify lowland forests, wetlands, or other habitat types that may function as wetlands (reference ELC methods in Section 5.3).

In addition to the detailed ELC methods described above, soil sampling (using soil augers) was also conducted in suspect wetlands to confirm the moisture regime, and vegetation inventories were used to identify the presence and abundance of wetland indicator species. The general characteristics of these habitats were then compared to the Ontario Wetland Evaluation System (OWES) manual to confirm their wetland status (OMNR 2002). Any communities identified as wetlands were delineated using site-specific field investigations combined with the use of detailed aerial photography. In accordance with OWES, wetland boundaries were delineated where 50% of the plant community consisted of upland species, and data collected included wetland type, site type, presence of inflows/outflows, vegetation community delineation, number and types of forms (>25% cover), dominant species, dominant form, and soil type. In order to ensure accuracy of the information obtained, the delineated wetland boundary and field notes were reviewed by OWES-certified staff.

In potential wetlands (fresh-moist or lowland communities) where site access or right-of-entry could not be obtained, NRSI biologists conducted ELC mapping to the highest level possible from the nearest observation point, such as roadside or property boundary. Where possible, species composition within the canopy, subcanopy, understory and groundcover was obtained from the roadside or nearest property boundary, and the 50% wetland vegetation rule was applied in order to delineate wetland boundaries. Full polygon delineations were conducted through a combination of roadside assessment results and aerial photograph interpretation. In instances where borderline wetlands were present and species composition was unclear, NRSI has assumed these features to be wetlands in absence of appropriate habitat characteristics (assuming no direct overlap with project location). Instances where site access could

not be obtained are clearly identified in Table 11for each identified wetland, as well as on the completed field data forms that have been included in Appendix I of this report.

Site investigations for wetlands were conducted from October-December 2011, as well as in January and August 2012. Although it is sometimes difficult to identify vegetation to the species level from November to January, the mild winter from 2011-2012 resulted in field conditions that allowed for distinction between lowland and upland plant species and NRSI biologists were able to use the 50% vegetation rule to delineate the wetland boundary during this time.

5.5 Valleylands

In accordance with the Natural Heritage Assessment Guide (OMNR 2011a), valleylands are considered to occur in a valley or other depression, with flowing or standing water present for a portion of the year. The identification of these features is largely based on geomorphology and aquatic resources. Preliminary valleyland identifications were made through the implementation of ELC mapping to identify and delineate ecological features such as community and species diversity, or habitat value, which may be common to valleys. Site-specific field investigations were used to delineate potential valleylands based on physical characteristics (locating the stable top-of-bank for well-defined valleys) and aquatic resource protection areas. Any areas identified as valleylands were delineated using site-specific field investigations combined with the use of detailed aerial photography. Detailed assessments of valley depth and width were obtained from elevation contours available through Land Information Ontario. For properties where site-specific access could not be obtained, NRSI biologists used detailed aerial photography and elevation contours available through Land Information Ontario to conduct alternative site investigations.

5.6 Wildlife Habitat

The identification of wildlife habitat within the project area uses the definitions used in the Natural Heritage Assessment Guide (OMNR 2011a) and Significant Wildlife Habitat Technical Guide (SWHTG) (OMNR 2000), which generally includes areas where plants and animals live, with adequate food, water, shelter, and space to sustain their populations (OMNR 2011a).

Candidate wildlife habitat assessments took place during ELC surveys so that as vegetation communities were delineated, surveys could be conducted for wildlife habitat features that are associated with the identified vegetation community. These surveys were delivered through areas searches for habitat features and through recording wildlife observations (i.e. visual sightings, vocalizations, tracks etc.) of specific species. Habitat features for which area searches were performed include, but are not limited to: nests, snags, fallen logs, tree cavities, cliffs/banks, caves, burrows, dens, rock piles/stone walls, organics piles, karst, old foundations, vernal pools/woodland ponds, sand, and fine sandy gravel. The timing of when these preliminary candidate wildlife habitat assessments were conducted is found in Table 2. Sites that were identified as requiring further study were revisited during a time of year appropriate for the specific type of wildlife habitat being assessed.

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

5.6.1 Seasonal Concentration Areas

Wildlife seasonal concentration areas are defined as areas where animals occur in relatively high densities annually to support a specific aspect of their life cycle (OMNR 2011a). These areas are generally relatively small in size, particularly when compared to areas used by these species during other times of the year. NRSI has reviewed the list of seasonal concentration areas, including avian stopover and staging areas, raptor winter feeding areas, colonial nesting bird habitat, deer yards, reptile hibernacula, etc., as identified in the Significant Wildlife Habitat Technical Guide (SWHTG), including Appendix Q, and the Significant Wildlife Habitat (SWH) Ecoregion 6E Criterion Schedule Addendum (OMNR 2012a) and compared site-specific wildlife inventory in conjunction with vegetation mapping in order to identify candidate significant wildlife habitat.

The general characteristics used to identify candidate seasonal concentration areas are outlined in Table 4 below. This table includes all seasonal concentration areas identified

in the SWHTG and its appendices (OMNR 2000), using criteria of significance from the Ecoregion 6E Criterion Schedule Addendum (OMNR 2012a).

Table 4. General Characteristics Used to Identify Candidate Seasonal Concentration Areas

Candidate Seasonal Concentration Area	Criteria	Methods
Waterfowl Stopover and Staging Area (Terrestrial)	• Fields with sheet water during Spring (mid-March to May) or annual spring melt water flooding found in any of the following Community Types: Meadow (ME), Thicket (TH)[1]. • A 100-300m radius buffer around habitat has been considered the candidate SWH[1]. • Candidate habitats should be large enough to support flooding and large numbers of waterfowl during spring or fall migration[2].	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Surveys of field conditions were conducted in mid-March 2012 for a subset of candidate habitats to gather information on seasonal flooding of suitable fields. • An assessment of spring flooding will be conducted prior to the first evaluation of significance study for the remaining habitats in mid-March to late May 2013. If there is sheet water present in any of these candidate habitats, an evaluation of significance survey will be undertaken to determine seasonal use. Details of the survey methodology can be found in the Evaluation of Significance (EOS) report.
Waterfowl Stopover and Staging Area (Aquatic)	• The following Community Types: Meadow Marsh (MAM), Shallow Marsh (MAS), Shallow Aquatic (SA), Deciduous Swamp (SWD)[1]. • The combined area of the ELC ecosites and a 100m radius area is the SWH[1]. • Habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water)[1].	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • An assessment of spring flooding will be conducted prior to the first evaluation of significance study for this habitat in mid-March to late May 2013. If there is sheet water present in any of these candidate habitats, an evaluation of significance survey will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.
Shorebird Migratory Stopover Area	• Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats found in any of the following Community Types: Shoreline (SH), Sand Dune (SB), and Meadow Marsh (MAM)[1].	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area.

Candidate Seasonal Concentration Area	Criteria	Methods
	• The area of significant shorebird habitat includes the mapped ELC shoreline ecosite plus a 100m radius area[1]. • Does not include sewage treatment ponds (CVI_3) and storm water ponds (CVI_3)[1]. • Shoreline wetlands include riverine and lacustrine site types[3].	
Raptor Winter Feeding and Roosting Areas	• Presence of fields and woodlands. i.e. at least one of the following Community Types: Forest (FO), Treed Swamp (SWD, SWM, SWC), in addition to one of the following Community Types: Meadow (ME), Thicket (TH), Savannah (SV), Woodland (WO) (<60% cover) that are >20ha and provide roosting, foraging and resting habitats for wintering raptors[1].	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Habitat size has been determined using GIS mapping.
Bat Hibernacula	• Caves, mine shafts, underground foundations, Karsts or one of the following Community Types: Crevice (CCR), Cave (CCA)[1]. • The area includes 1000m radius around the entrance of the hibernaculum[1]. • Does not include buildings[1].	• Known sites Identified by OMNR and based on topography. • Potential sites based on MNDM abandoned mines locations • Potential sites based on karst topography
Bat Maternity Colonies	• Any of the following Community Types: Deciduous Forest (FOD), Mixed Forest (FOM), Deciduous Treed Swamp (SWD), Mixed Treed Swamp (SWM) with ≥10 wildlife trees per hectare, measured at ≥25cm diameter at breast height (dbh)[1,4]. • Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH)[1]. • Maternity roosts are not found in caves and mines in Ontario[1]. • The area of the habitat includes the entire woodland or the forest stand ELC Ecosite containing the maternity colonies[1] • If the wildlife tree density is ≥10 snags per hectare of trees ≥25 cm dbh, then the site is a candidate for maternity colony roosts[1]. • Female bats prefer wildlife trees in early stages of decay, class 1-3 or class 1 or 2.[1] • Northern Myotis prefer contiguous tracts of older forest cover for foraging and roosting in snags and trees[1]. • Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred[1].	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Wildlife tree density was calculated by randomly selecting plots within a candidate natural feature. Ten plots were selected for natural features ≤10ha, with one plot being added for each hectare over 10ha to a maximum of 35 plots. These sampling plots were 12.6m radius (0.05ha) plots. The number of wildlife trees ≥25cm dbh were counted in each plot. The wildlife tree density of these plots was then extrapolated to the natural feature[4].
Turtle-Over-wintering Habitat	• Over-wintering areas are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen, and generally utilize the same habitat as their core habitat[1]. • These habitats are found in the following Community Types: Swamp (SW), Marsh (MA), Open Water (OA), Shallow Water (SA), Open	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Assessment of permanency of water body, proximity to core habitats, level of disturbance in

Candidate Seasonal Concentration Area	Criteria	Methods
	Fen (FEO), Open Bog (BOO)[1]. • The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH[1].	potential habitats. • Water permanency was assessed during wetland delineation surveys (open water types).
Reptile Hibernacula (Snakes)	• Hibernation occurs in sites located below frost lines in burrows, rock crevices, broken and fissured rock, wetlands such as conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover[1]. • Any ecosite in central Ontario other than very wet ones, The following Community Types may be directly related to snake hibernacula: Talus (TA), Rock Barren (RB), Crevice (CCR), Cave (CCA), and Alvar (RBOA1, RBSA1, RBTA1)[1]. • The feature in which the hibernacula is located plus a 30m buffer is the SWH[1].	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • During area searches associated with ELC mapping, NRSI biologists documented any potential hibernation sites that may provide habitat below the frost line.
Colonial-Nesting Bird Breeding Habitat (Bank and Cliff)	• Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, or barns found in any of the following Community Types: Meadow (ME), Thicket (TH), Savannah (SV), Bluff (BL), Cliff (CL)[1]. • A colony identified as SWH will include a 50m radius habitat area from the peripheral nests[1].	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • During area searches associated with ELC mapping, NRSI biologists also assessed polygons for suitable nesting habitat and nest holes.
Colonial-Nesting Bird Breeding Habitat (Tree/Shrubs)	• Any of the following Community Types: Mixed Swamp (SWM), Deciduous Swamp (SWD), Coniferous Treed Fen (FETC1)[1]. • The edge of the colony and a minimum 300m area of habitat or extent of the Forest Ecosite containing the colony or any island <15ha with a colony is the SWH[1].	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • During area searches associated with ELC mapping, NRSI biologists also conducted area searches for stick/bowl nests within suitable habitats.
Colonial-Nesting Bird Breeding Habitat (Ground)	• Any rocky island or peninsula within a lake or large river, close proximity to watercourses in open fields or pastures with scattered trees or shrubs found in any of the following Community Types: Meadow Marsh (MAM), Shallow Marsh (MAS), Meadow (ME), Thicket (TH), Savannah (SV)[1]. • The edge of the colony and a minimum 150m area of habitat, or the extent of the ELC ecosites containing the colony or any island <3ha with a colony is the SWH[1].	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • During area searches associated with ELC mapping, NRSI biologists also characterized agricultural lands for the suitability of nesting habitat.
Winter Deer Yards	• Habitats are identified by the OMNR[1]	

[1]: OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG (2012)
[2]: Boos (pers. comm. 2010)
[3]. OMNR Ontario Wetland Evaluation System (2002)
[4]. OMNR Bat and Bat Habitats: Guidelines for Wind Power Projects (2011c)

5.6.2 Rare Vegetation Communities and Specialized Wildlife Habitat

This wildlife habitat type includes provincially rare vegetation communities, as well as those which are rare in the planning area. It also includes areas supporting species with very specific habitat requirements, those with high diversity, and those providing habitat to greatly enhance survival of a species (OMNR 2011a). NRSI has reviewed the list of rare vegetation communities, including alvars, tallgrass prairies, sand barrens, and old-growth forests as identified in the SWHTG and summarized in the Ecoregion 6E Criterion Schedule Addendum and compared results from the vegetation community mapping using ELC code assignment to identify rare vegetation communities within the Armow Wind Project area. The general characteristics used to identify candidate rare vegetation communities and specialized wildlife habitats are outlined in Table 5 below.

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

Rare Vegetation Communities and Candidate Specialized Wildlife Habitats	Criteria[1]	Methods
Cliffs and Talus Slopes	• Any of the following Community Types: TAO (Open Talus), TAS (Shrub Talus), TAT (Treed Talus), CLO (Open Cliff), CLS (Shrub Cliff), CLT (Treed Cliff).	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area
Sand Barrens	• Any of the following Community Types: SBO1 (Open Sand Barren Ecosite), SBS1 (Shrub Sand Barren Ecosite), SBT1 (Treed Sand Barren Ecosite). • Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics)	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area.
Alvars	• Any of the following Community Types: ALO1(Open Alvar Rock Barren Ecosite), ALS1 (Alvar Shrub Rock Barren Ecosite), ALT1 (Treed Alvar Rock Barren Ecosite), FOC1 (Dry Pine Calcareous Shallow Coniferous Forest Ecosite), FOC2 (Dry Cedar Calcareous Shallow Coniferous Forest Ecosite), CUM2 (Bedrock Cultural Meadow Ecosite), CUS2 (Bedrock Cultural Savannah Ecosite), CUT2-1 (Common Juniper Cultural Alvar Thicket Type), CUW2 (Bedrock Cultural Woodland Ecosite) that are >0.5ha in size • Site must not be dominated by exotic	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area.

Rare Vegetation Communities and Candidate Specialized Wildlife Habitats	Criteria[1]	Methods
	or introduced species (<50% vegetative cover exotics).	
Old-growth or Mature Forest Stands	• Stands ≥30ha or with ≥10ha interior habitat in any of the following Community Types: FOD (Deciduous Forest), FOM (Mixed Forest), FOC (Coniferous Forest). • If dominant trees species of the ecosite are >140 years old, then stand is SWH. • The area of Forest Ecosites combined to make up the stand is the SWH. • The stand will have experienced no recognizable forestry activities.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Habitat size and extent of interior habitat were determined using GIS mapping.
Savannahs	• Any of the following Community Types: TPS1 (Dry-Fresh Tallgrass Mixed Savanna Ecosite), TPS2 (Fresh-Moist Tallgrass Deciduous Savanna Ecosite), TPW1 (Dry-Fresh Black Oak Tallgrass Deciduous Woodland Ecosite), TPW2 (Fresh-Moist Tallgrass Deciduous Woodland Ecosite), CUS2 (Bedrock Cultural Savannah Ecosite). • These communities must be restored or natural. • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics).	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area.
Tall-grass Prairies	• Any of the following Community Types: TPO1 (Dry Tallgrass Prairie Ecosite), TPO2 (Fresh-Moist Tallgrass Prairie Ecosite). • These communities must be restored or natural. • Area of the ELC Ecosite is the SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area.
Other Rare Vegetation Communities	• Provincially rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG • Rare vegetation communities may include beaches, fens, forest, marsh, barrens, dunes and swamps	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area.
Waterfowl Nesting Area	• Upland habitats of any kind located adjacent to (≤120m) any PSW or the following wetland Community Types: Meadow Marsh (MAM), Shallow Marsh (MAS), Shallow Aquatic (SA), Bedrock Thicket (RBS), Mineral Thicket Swamp (SWT), or Mineral Deciduous Swamp (SWD). • Wetland is >0.5ha or cluster of 3 or more smaller wetlands within 120m	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Proximity of upland habitat to wetland habitat, and determination of wetland size have been confirmed through GIS mapping. • An assessment of spring flooding will be conducted prior to the first

Rare Vegetation Communities and Candidate Specialized Wildlife Habitats	Criteria[1]	Methods
	of each other where waterfowl nesting occurs. • Upland areas should be at least 120m wide. • Wood ducks and Hooded Mergansers utilize large diameter trees for nesting (>40cm dbh).	evaluation of significance study for this habitat in mid-March to late May 2013. In addition, upland habitat will be examined for suitable nesting habitat (i.e. shrubland/grassland or suitable cavity nesting trees in upland areas >40cm dbh). If suitable habitat exists within any of these candidate habitats, an evaluation of significance survey will be undertaken to determine breeding presence. Details of the survey methodology can be found in the EOS report.
Bald Eagle and Osprey Nesting, Foraging, and Perching Habitat	• Any of the following Community Types: Forest (FO), or Swamp (SW) that are immediately adjacent to rivers, lakes, ponds, and wetlands. • Nests may be located in dead trees over water along forested shorelines, islands or structures. • Nests on man-made objects are not SWH. • Active osprey nest plus 300m radius or extent of contiguous forest stand is the SWH. The maintenance of undisturbed shoreline with large trees in this SWH is important. • Active bald eagle nest plus 400-800m radius around the nest is the SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • During area searches of this habitat, NRSI biologists looked for large, suitable, trees, or the presence of stick nests within suitable treed habitats.
Woodland Raptor Nesting Habitat	• Any of the following Community Types: Forest (FO), Treed Swamp (SW), Coniferous Plantation (TAGM1) that are >30ha with 10ha of interior habitat. • Interior habitat is 200m from the forest edge.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Habitat size, interior habitat, and edge buffer were all determined through GIS mapping.
Turtle Nesting Habitat	• Exposed mineral soil (sand or gravel) areas <100m from or within the following Community Types: Mineral or Organic Meadow Marsh (MAM), Shallow Marsh (MAS), Shallow Aquatic (SA), Open Bog (BOO), Open Fen (FEO). • A radius of 30-100m around the nesting area has been considered the candidate SWH. • Travel routes from wetland to nesting area are to be considered within the SWH.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Area searches for suitable habitat, or evidence of use (e.g. raided nests in suitable nesting substrate) in the vicinity of identified ELC Community Types.
Seeps and Springs	• Locations where groundwater comes to surface, often in forested headwater areas. • Any forested area (with <25%	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area.

Rare Vegetation Communities and Candidate Specialized Wildlife Habitats	Criteria[1]	Methods
	meadow, field, or pasture) within the headwaters of a stream or river system may have seeps or springs. • The area of an ELC forest ecosite containing the seeps/springs is the SWH. • Presence of a site with 2 or more seeps/springs should be considered SWH.	
Amphibian Breeding Habitat (Woodland)	• Any of the following Community Types: Forests (FO), Treed Swamps (SW), in addition to wetlands/lakes/ponds found within or adjacent to (<120m) the woodland. • The habitat is the woodland (ELC polygons) and wetland (ELC polygons) combined.	• Area searches for suitable habitat, conducted during ELC mapping and wetland delineation. • Initial surveys were conducted for a subset of woodlands in March 2012 to gather information on vernal pooling within woodlands. Vernal pool permanency for the remaining woodlands was determined through an examination of local topography, habitat community, and vegetation species present. An assessment for vernal pools will be conducted within these remaining woodlands prior to the first evaluation of significance survey for this habitat in mid-March 2013. If there are vernal pools present in any of these candidate habitats, an evaluation of significance survey will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report. • An assessment of vernal pool permanency will be conducted over the course of the evaluation of significance studies for this habitat. • Proximity to other features was determined through GIS mapping
Amphibian Breeding Habitat (Wetland)	• Any of the following Community Types: Swamp (SW), Marsh (MA), Fen (FE), Bog (BO), Open Water (OA), Shallow Aquatic (SA), including vernal pools, that are >500m2 or 25m in diameter, and located >120m from woodlands. • The ELC ecosite wetland area and the shoreline are the SWH.	• Area searches for suitable habitat, conducted during ELC mapping and wetland delineation. • Characterization of structural features (width and depth if depression is prominent, presence of shrubs and logs, level of disturbance in the area) • Water permanency was assessed during wetland delineation surveys (open water types) • Habitat size and proximity to other habitats were determined through GIS mapping.

[1]: OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG (2012)

5.6.3 Habitats of Species of Conservation Concern

Habitats of species of conservation concern are those habitats that have been identified as important in maintaining long-term, viable populations of these species. The habitat characteristics for species of conservation concern have been summarized in Table 6 below, while individual criteria for species of conservation concern are found in Table 7. The presence of these habitat characteristics was investigated during project area surveys in order to determine whether habitat for species of conservation concern is present within 120m of the project location.

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

Candidate Habitat for Species of Conservation Concern	Criteria[1]	Methods
Marsh Bird Breeding Habitat	• All wetland habitats with shallow water and emergent aquatic vegetation. • May include any of the following Community Types: Meadow Marsh (MAM), Shallow Aquatic (SA), Open Bog (BOO), Open Fen (FEO), or for Green Heron: SW (Swamp), MA (Marsh) and Meadow (ME) Community Types.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • During ELC mapping and area searches, NRSI biologists documented the presence of any potential nesting locations.
Woodland Area-sensitive Bird Breeding Habitat	• Habitats where interior forest (at least 200m from the forest edge) breeding birds are breeding. • These include any of the following Community Types: Forest (FO), Treed Swamp (SW) that are mature (>60 years old) and >30ha.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Woodland size and interior forest calculations were determined through GIS mapping.
Open Country Bird Breeding Habitat	• Grassland areas > 30ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years, in the following Community Type: Meadow (ME), Perennial Cover Crop (OAGM2), Open Pasture (OAGM4).	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Habitat size was determined through GIS mapping.
Shrub/Early Successional Bird Breeding Habitat	• Oldfield areas succeeding to shrub and thicket habitats >10ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years, in the following Community Types: Thickets (TH), Savannahs (SV), Woodlands (WO).	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area. • Habitat size was determined through GIS mapping.
Terrestrial Crayfish	• Any of the following Community Types: MAM (Meadow Marsh), MAS (Shallow Marsh) of any size.	• Habitat identification occurred through the detailed ELC mapping that was conducted throughout the project area.
Special Concern and Rare Wildlife Species	• All Special Concern and Provincial Rare (S1-S3, SH) plant and animal species element occurrences within a	• Area searches to determine candidate habitat for any identified species or communities, conducted during ELC

Candidate Habitat for Species of Conservation Concern	Criteria[1]	Methods
	1 or 10km grid.	mapping.

[1]: OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG (2012)

Table 7. Criteria for Species of Conservation Concern Identified Near the Armow Wind Project Area

Species	Habitat Criteria	Survey Methodology
Vegetation		
Tuberous Indian-plantain (*Arnoglossum plantagineum)*	• Open sunny areas in wet, calcareous meadows or shoreline fens, specifically along Lake Huron[1]. • Blooms July-August[2.]	• Area searches for suitable tuberous Indian-plantain habitat (ME, FE) were conducted in conjunction with ELC mapping. • Searches for evidence of tuberous Indian-plantain occurred throughout each polygon in September-January while conducting vegetation inventories. • Distinguished post flowering from all other species by thick and firm parallel veined oval basal leaves, and an angled stem marked by fine parallel lines[2].
Great Lakes Sand Reed (*Calamovilfa longifolia* var. *magna)*	• Habitat consists of active sand dunes, open sand planes and forest openings on stabilized sand dunes[3].	• Area searches for suitable great lakes sand reed habitat (SB) were conducted in conjunction with ELC mapping. • Searches for evidence of great lakes sand reed occurred throughout each polygon while conducting vegetation inventories. • Easily distinguished post-flowering from other species by tufts of hairs that are found at the base of the lemma, and by villous lower sheaths and overall plant height (sometimes over 2m)[4].
Common Stiff Sedge (*Carex tetanica)*	• Moist grasslands, sandy shores, ditches, prairies and seepages[3]	• Area searches for suitable common stiff sedge habitat (ME, SH) were conducted in conjunction with ELC mapping. • Searches for evidence of common stiff sedge occurred throughout each polygon while conducting vegetation inventories. • Difficult to distinguish from other sedge species post-flowering.
Ram's-head Lady's-slipper (*Cypripedium arietinum)*	• Cedar woodlands on limestone plains, in wooded fens and on sandy sites[3] • Blooms May-June[2]	• Area searches for suitable rams-head lady's-slipper habitat (WOC, FE) were conducted in conjunction with ELC mapping. • Searches for evidence of rams-head lady's-slipper occurred throughout each polygon in September-January while conducting vegetation inventories. • Distinguished from other species post-flowering by lower 2-3 leaves clasping scales, while 3-5 leaves above the middle are stalkless. Leaves are lance-like and often folded[2].
Beaked Spike-rush (*Eleocharis rostellata)*	• Fens and shores[3]	• Area searches for suitable beaked spike rush habitat (FE, SH) were conducted in conjunction with ELC mapping.

Species	Habitat Criteria	Survey Methodology
		• Searches for evidence of beaked spike rush occurred throughout each polygon while conducting vegetation inventories. • Distinguished from other species by flattened culms often arching and rooting at the tips[4].
Great Lakes Wild Rye (*Elymus lanceolatus* ssp. *psammophilus)*	• Grows on Great Lakes sand dunes[3]	• Area searches for suitable Great Lakes wild rye habitat (SB) were conducted in conjunction with ELC mapping. • Searches for evidence of Great Lakes wild rye occurred throughout each polygon while conducting vegetation inventories. • Distinguished from other species by having more villous lemmas and more glaucous foliage[4].
Stiff Gentian (*Gentianella quinquefolia)*	• Moist soil, roadsides, stream banks, edges of woods and prairie habitats[3] • Blooms August-October[2]	• Area searches for suitable stiff gentian habitat (WO, FO, SW, ME) were conducted in conjunction with ELC mapping. • Searches for evidence of stiff gentian occurred throughout each polygon in September-January while conducting vegetation inventories. • Difficult to distinguish from other from other Gentian species post-flowering.
Eastern Green-violet (*Hybanthus concolor)*	• Rich, wet-mesic floodplain forests and mesic forests over limestone[3] • Blooms May-June[2]	• Area searches for suitable eastern green-violet habitat (FO) were conducted in conjunction with ELC mapping. • Searches for evidence of eastern green-violet occurred throughout each polygon while conducting vegetation inventories. • Distinguished from other species by height (12”-40”) and widely elliptical, sharply pointed leaves[2].
Oswego-tea (*Monarda didyma)*	• Moist woods, swampy thickets and roadsides[3]	• Area searches for suitable Oswego tea habitat (FO, WO, SWT) were conducted in conjunction with ELC mapping. • Searches for evidence of Oswego tea occurred throughout each polygon while conducting vegetation inventories. • Distinguished from other species by a square stem and opposite leave with a one seeded nutlet[2].
Arrow-arum (*Peltandra virginica)*	• An aquatic plant that can be found in shallow waters in streams, rivers and marshes[3]	• Area searches for suitable arrow-arum habitat (MAS, SA) were conducted in conjunction with ELC mapping. • Searches for evidence of arrow-arum occurred throughout each polygon while conducting vegetation inventories. • Distinguished from other species by arrow-shaped pinnately-veined leaves and a fruit cluster of brown berries[2].
Tubercled Orchid (*Platanthera flava)*	• Grows in wet, sandy or peaty open sites[3] • Blooms from June-September[2]	• Area searches for suitable tubercled orchid habitat (MA, SBO) were conducted in conjunction with ELC mapping. • Searches for evidence of tubercled orchid occurred throughout each polygon while conducting vegetation inventories. • Distinguished from other species by lance-like to linear leaves that occur only along the stem of

Species	Habitat Criteria	Survey Methodology
		the plant[2].
Large Round-leaved Orchid (*Platanthera macrophylla)*	• Can be found in moist, mixed woods[3]	• Area searches for suitable large round-leaved orchid habitat (FOM, SWM, WOM) were conducted in conjunction with ELC mapping. • Searches for evidence of large round-leaved orchid occurred throughout each polygon while conducting vegetation inventories. • Distinguished from other species by its large leaves that lay flat on the ground[4].
Hill's Pondweed (*Potamogeton hillii)*	• An aquatic species that is found in highly alkaline waters of ditches, beaver ponds and slow moving, cold waters[3]	• Area searches for suitable Hill's pondweed habitat (OA, SA) were conducted in conjunction with ELC mapping. • Searches for evidence of Hill's pondweed occurred throughout each polygon while conducting vegetation inventories. • Distinguished from other species by its dry seed with low, sharp sides and dorsal ridges[2].
Low Nutrush (*Scleria verticillata)*	• Occurs in moist-sandy meadows and shores[3]	• Area searches for suitable low nutrush habitat (ME, SB, SH) were conducted in conjunction with ELC mapping. • Searches for evidence of low nutrush occurred throughout each polygon while conducting vegetation inventories. • Difficult to distinguish from other from other sedge species post-flowering.
Prairie Dropseed (*Sporobolus heterolepis)*	• Prefers moist to dry limestone plains and calcareous shores[3] • Blooms August-September[2]	• Area searches for suitable prairie dropseed habitat (ME, SHOR1) were conducted in conjunction with ELC mapping. • Searches for evidence of prairie dropseed occurred throughout each polygon while conducting vegetation inventories. • Distinguished from other species by spherical mature grain that splits the palea. Plants have a musky smell in hot and humid weather[4].
Birds		
Short-eared Owl (*Asio flammeus)*	• Habitat consists of 75-100ha of contiguous grasslands, open areas or meadows that are grassy or bushy, and nests on the ground[3]	• Habitat for this species is covered under the consideration of Raptor Winter Feeding and Roosting Areas.
Redhead (*Aythya americana)*	• Habitat consists of cattail or bulrush marshes, fens, lakes, and ponds[3] • Nesting is generally within 2m of the water's edge, though they can be found nesting considerably further than this[3]	• Habitat for this species is covered under the consideration of Waterfowl Stopover and Staging Areas (Aquatic).
Canvasback (*Aythya valisneria)*	• Prefers deep permanent bodies of water for feeding and courtship and often uses large marshes for breeding[3]	• Habitat for this species is covered under the consideration of Waterfowl Stopover and Staging Areas (Aquatic).
Rough-legged Hawk (*Buteo lagopus)*	• Overwintering habitat is characterized by the presence of fields and	• Habitat for this species is covered under the consideration of Raptor Winter Feeding and Roosting Areas.

Species	Habitat Criteria	Survey Methodology
	woodlands. i.e. at least one of the following Community Types: Forest (FO), Treed Swamp (SWD, SWM, SWC), in addition to one of the following Community Types: Meadow (ME), Thicket (TH), Savannah (SV), Woodland (WO) (<60% cover) that are >20ha[1]	
Black Tern (*Chlidonias niger)*	• Shallow waters in >20ha coastal or inland marshes, or marshy edges of rivers, lakes or ponds[3]	• Habitat for this species is covered under the consideration of Marsh Bird Breeding Habitat.
Olive-sided Flycatcher (*Contopus cooperi)*	• Semi-open, conifer forests, often spruce dominated, near bodies of water including rivers, lakes and ponds[3]	• Habitat identification occurred through the detailed ELC mapping (FOC, OA) that was conducted throughout the project.
Common Nighthawk (*Chordeiles minor)*	• Open areas with little to no ground vegetation, such as logged or burned-over areas, forest clearings, rock barrens, peat bogs, lakeshores, and mine tailings[3]	• Habitat identification occurred through the detailed ELC mapping (ME, OAGM4, OAGM2, FO, RB, BO, SH) that was conducted throughout the project.
Bald Eagle (*Haliaeetus leucocephalus)*	• Large continuous areas of deciduous or mixed woods around large lakes or rivers and requires 255ha areas of open woodlands with tall trees for nesting, shelter, feeding as well as roosting[3]	• Habitat for this species is covered under the consideration of Bald Eagle and Osprey Nesting, Foraging and Perching Habitat.
Red-headed Woodpecker (*Melanerpes erythrocephalus)*	• Open, deciduous forest with little understory[3] • Can be found in fields or pastures, orchards, small woodlots or forest edges[3] • Habitats contain a higher density of dead trees, which they commonly use for nesting and perching[5] • Require a tree with a diameter at breast height of at least 40 cm for tree cavity nesting and require around 4ha for territory[3]	• Area searches within suitable habitat (FO/WO/ME/SW/AG) for large (>40cm dbh) cavity trees were conducted in conjunction with ELC mapping, with snag size class analysis documented on ELC data sheets. • Based on the generalist nature of this species, specific breeding habitat for this species is often difficult to identify. This species will be considered when development is proposed within woodland edges; otherwise it will not be delineated.
Canada Warbler (*Wilsonia canadensis)*	• An interior forest species that prefers dense, mixed coniferous and deciduous forest with a closed canopy and wet bottomlands consisting of cedar or alder[3] • Prefer locations with shrubby undergrowth in cool moist mature woodlands[3]	• Habitat for this species is covered under the consideration of Woodland Area-sensitive Bird Breeding Habitat.

Species	Habitat Criteria	Survey Methodology
	• The Canada warbler usually requires forested areas of at least 30ha in size[3]	
Golden-winged Warbler (*Vermivora chrysoptera)*	• Early successional habitat such as shrubby grassy abandoned fields, small deciduous trees bordered by low woodland or swamp[3] • Also may be found in alder bogs, deciduous damp woods, shrubbery clearings in deciduous woods with saplings and grasses, or brier-woodland edges[3] • Require more than 10 ha of continuous habitat[3]	• Habitat for this species is covered under the consideration of Shrub/Early Successional Bird Breeding Habitat.
Mammals		
Little Brown Bat (*Myotis lucifuga*)	• Uses caves, quarries, tunnels, hollow trees or buildings for roosting[3] • Winters in humid caves[3] • Maternity sites in dark warm areas such as attics and barns[3] • Feeds primarily in wetlands, and forest edges[3]	• Habitat for this species is covered under the consideration of Bat Hibernacula as well as Bat Maternity Colonies.
Tricoloured Bat (*Perimyotis subflavus*)	• Open woods near water[3] • Roosts in trees, cliff crevices, buildings or caves[3] • Hibernates in damp, draft-free warm caves, mines or rock crevices[3]	• Habitat for this species is covered under the consideration of Bat Hibernacula as well as Bat Maternity Colonies.
Reptiles		
Common Snapping Turtle (*Chelydra serpentina serpentina*)	• Permanent or semi-permanent fresh water marshes, swamps, bogs or rivers and streams with soft muddy banks or bottoms[3] • Soft soil or clean, dry sand are used for nesting. May use man-made structures such as gravel road shoulders[6]. • Home range of around 28ha is require[3].	• Habitat for this species has been determined through the consideration of Turtle Nesting and Over-wintering Habitat.
Eastern Milksnake (*Lampropeltis t. triangulum*)	• Farmlands, meadows, hardwood or aspen stands, pine forests with brushy or woody cover[3] • May also be found in river bottoms or bog woods[3] • Often hides under logs, stones, boards or in outbuildings[3] • This species will often use	• Habitat for this species has been determined through the consideration of Snake Hibernacula.

Species	Habitat Criteria	Survey Methodology
	communal sites[3].	
Eastern Ribbonsnake (Great Lakes population) (*Thamnophis sauritus septentrionalis*)	• Sunny grassy areas with low dense vegetation near bodies of shallow permanent quiet water[3] • Also found in wet meadows, grassy marshes or sphagnum bogs or borders of ponds, lakes or streams[3] • Hibernates in groups[3]	• Habitat for this species has been determined through the consideration of Snake Hibernacula.
Insects		
Hungerford's Crawling Water Beetle (*Brychius hungerfordi)*	• The distribution of the Hungerford's crawling water beetle is limited to only three rivers within Ontario, all within Bruce County, and includes the Rankin, the North Saugeen and the Saugeen Rivers[7] • Habitat for this species includes medium-sized streams with moderate to fast flow, good stream aeration, cool (15°C-25°C) temperatures, inorganic substrate, and alkaline water conditions[7]	• Area searches for suitable Hungerford's crawling water beetle were conducted in conjunction with ELC mapping and aquatic habitat assessments.
Clamp-tipped Emerald (*Somatochlora tenebrosa)*	• Prefers shady forest streams up to 2m wide, that are often partly dry and occasionally boggy or swampy[8]	• Area searches for suitable clamp-tipped emerald habitat were conducted in conjunction with ELC mapping and aquatic habitat assessments.

[1]: White (2002)
[2]: University of Wisconsin. n.d
[3]: OMNR Significant Wildlife Habitat Technical Guide (2000)
[4]: Michigan Flora Online. 2011
[5]: Ontario Ministry of Natural Resources. 2008. Species at Risk in Ontario – Red-headed Woodpecker.
[6]: Ontario Ministry of Natural Resources. 2009. Species at Risk in Ontario (SARO).
[7]: Committee on the Status of Endangered Wildlife In Canada. 2011d.
[8]: Dunkle, S.W. 2000.

5.6.4 Animal Movement Corridors

Animal movement corridors are typically considered linear features that connect 2 or more significant, or otherwise ecologically important, habitats. These features are important for several reasons, including promoting genetic flow, protection from predators, and connectivity to habitats required for breeding, foraging, and/or hibernating.

The MNR has identified a significant deer wintering area, located in the Greenock Swamp PSW. This deer wintering area is located within 120m of the project location, including wind turbines and access roads. According to the SWH Ecoregion 6E Criterion Schedule Addendum (OMNR 2012a), projects where deer wintering areas have been identified by the OMNR as SWH have the potential to also contain deer movement corridors. White-tailed deer (*Odocoileus virginianus*) congregate in certain locations, called yards, for the winter. This allows them access to food and cover from predators when the snow is deep, as the conifers where they congregate reduce snow depths on the ground in these areas. The Significant Wildlife Habitat Technical Guide Decision Support System (OMNR 2011b) identifies that movement to yards occurs individually, usually in mid-December when snow begins to accumulate. Deer begin to leave these yards when snow starts to melt in the spring, usually in early April. Functional deer yards must have a history of use, barrier-free movement to and from the yard, and suitable areas of cover, food, and adjacent natural lands (OMNR 2011b). Movement corridors should provide protection as deer move through unfamiliar territories, or allow passage into feeding areas during the winter (OMNR 2011b).

Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local amphibian populations. According to the SWH Ecoregion 6E Criterion Schedule Addendum (OMNR 2012a), amphibian movement corridors, which are used between breeding and summer habitat, must be determined when wetland amphibian breeding habitat has been confirmed as SWH. NRSI has used the presence of any candidate wetland amphibian breeding habitats located within 120m from the project location, as outlined in Section 5.6.2 (Table 5), to identify amphibian movement corridors within 120m of the project location. In the event that significant amphibian breeding habitat is present within 120m of the project location, further investigation of the presence of amphibian movement corridors will be completed.

NRSI conducted a site investigation on all survey dates (listed in Section 5.1 above) that focused on identifying animal movement corridors within 120m of the Armow Wind Project location. NRSI has reviewed the criteria for identifying animal movement corridors, as identified in the SWH Ecoregion 6E Criterion Schedule Addendum (OMNR 2012a), and compared site-specific wildlife inventory with vegetation mapping and aerial

photography. The general characteristics used to identify animal movement corridors within 120m of the project location are outlined in Table 8.

Table 8. General Characteristics Used to Identify Animal Movement Corridors

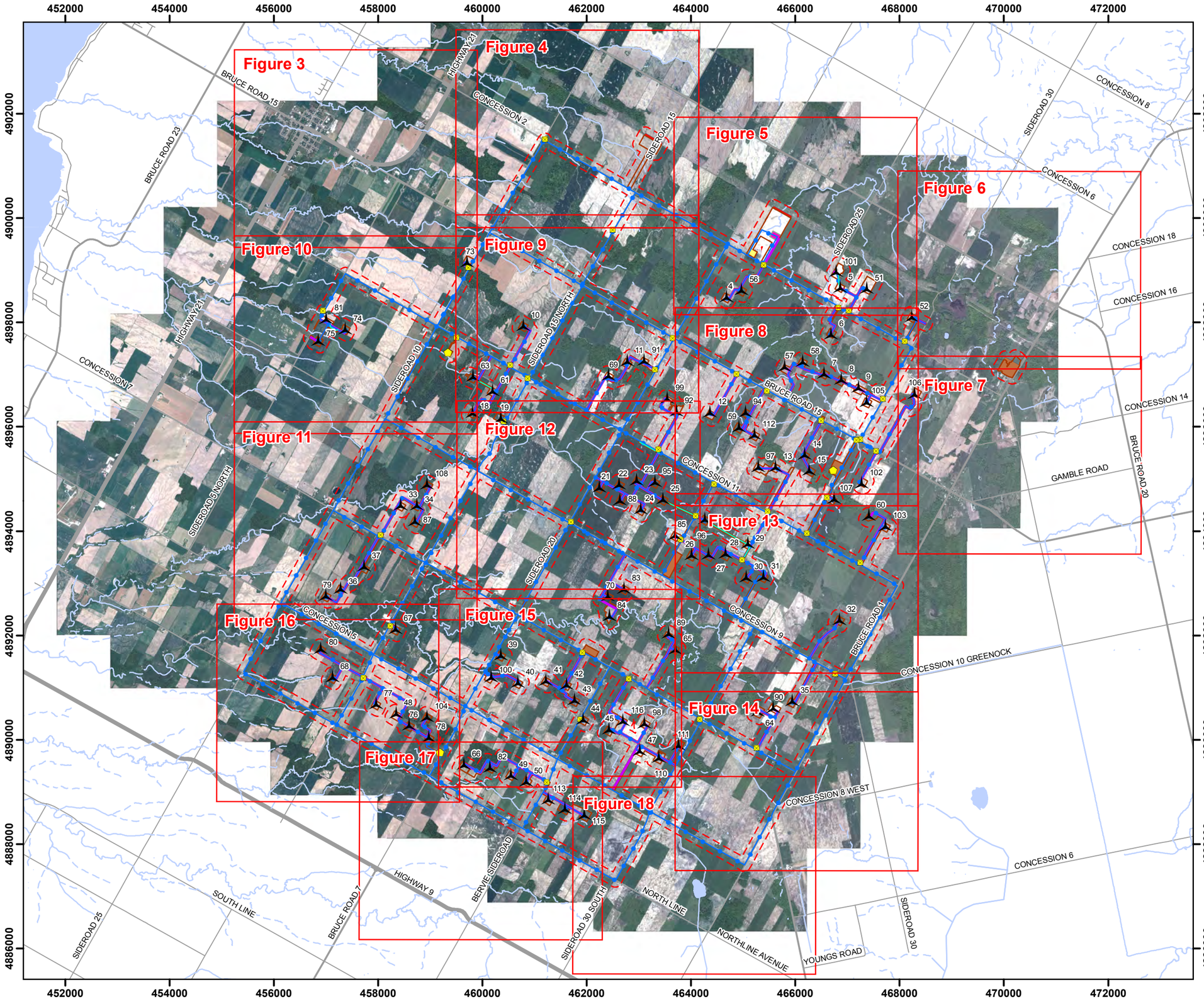
Wildlife Habitat Type	Criteria[1]	Methods
Deer Movement Corridors	• Corridors may be found in all forested ecosites. They usually follow riparian areas, woodlots, ravines or ridges. • Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway.	• Significant deer habitat identified by the OMNR.
Amphibian Movement Corridors	• Corridors may be found in all ecosites associates with water. • Corridors should consist of native vegetation, roadless areas, and no gaps such as fields, waterways or bodies. • Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway.	• Significant amphibian breeding habitat to be examined for amphibian movement corridors. • The width and presence of gaps along potential corridors were determined using GIS mapping.

[1]: OMNR Significant Wildlife Habitat Ecoregion 6E Criterion Schedule: Addendum to SWHTG (2012)

Figure 2

Armow Wind Project

Vegetation Communities - Key Map



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Legend

- Map Extent
- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody

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Project: 1275
Date: August 23, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:72,000

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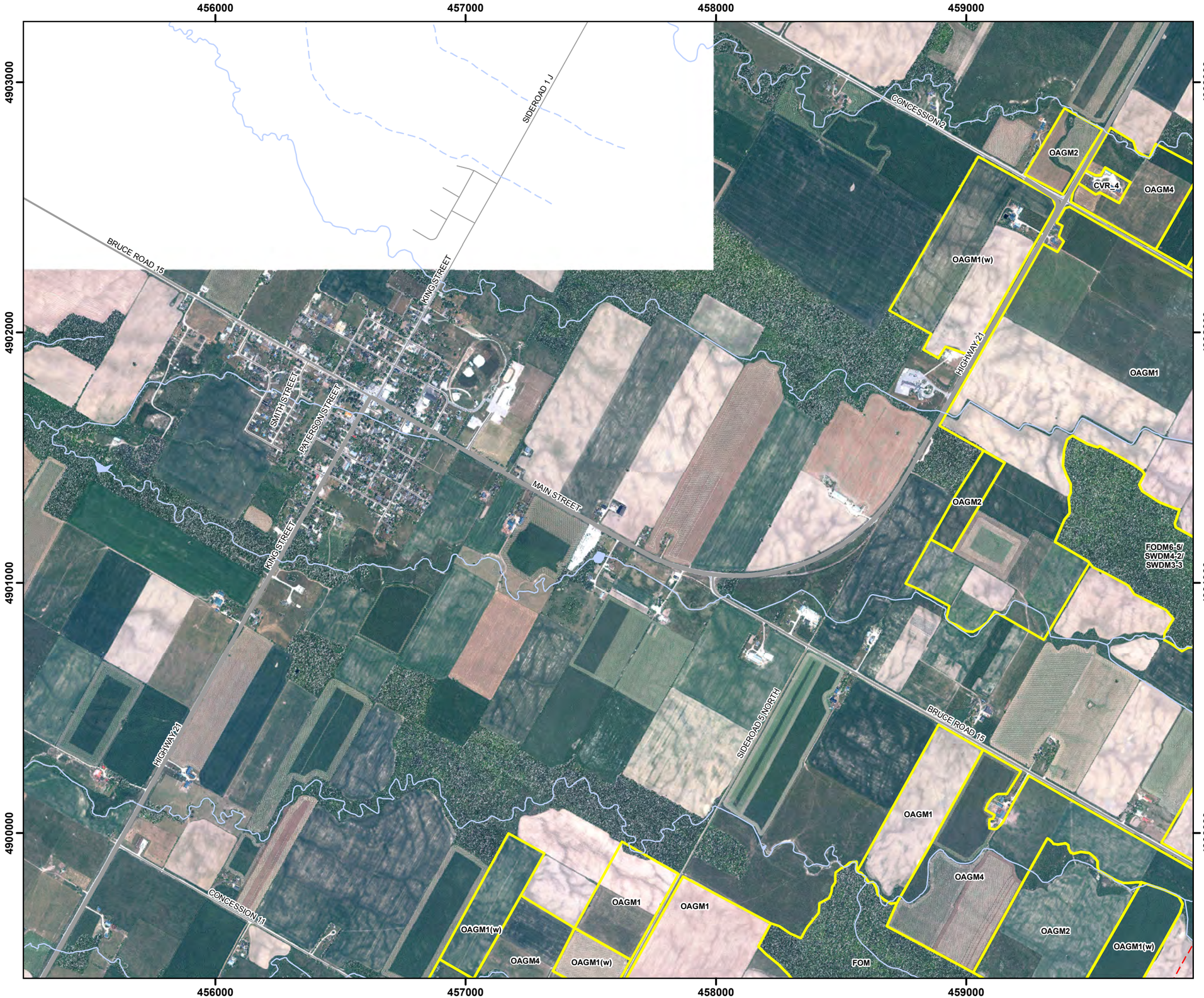
Figure 3

Armow Wind Project

Vegetation Communities



Legend

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Project: 1275 Date: August 23, 2012	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

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Figure 4

Armow Wind Project

Vegetation Communities

Legend

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Project: 1275 Date: August 23, 2012	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

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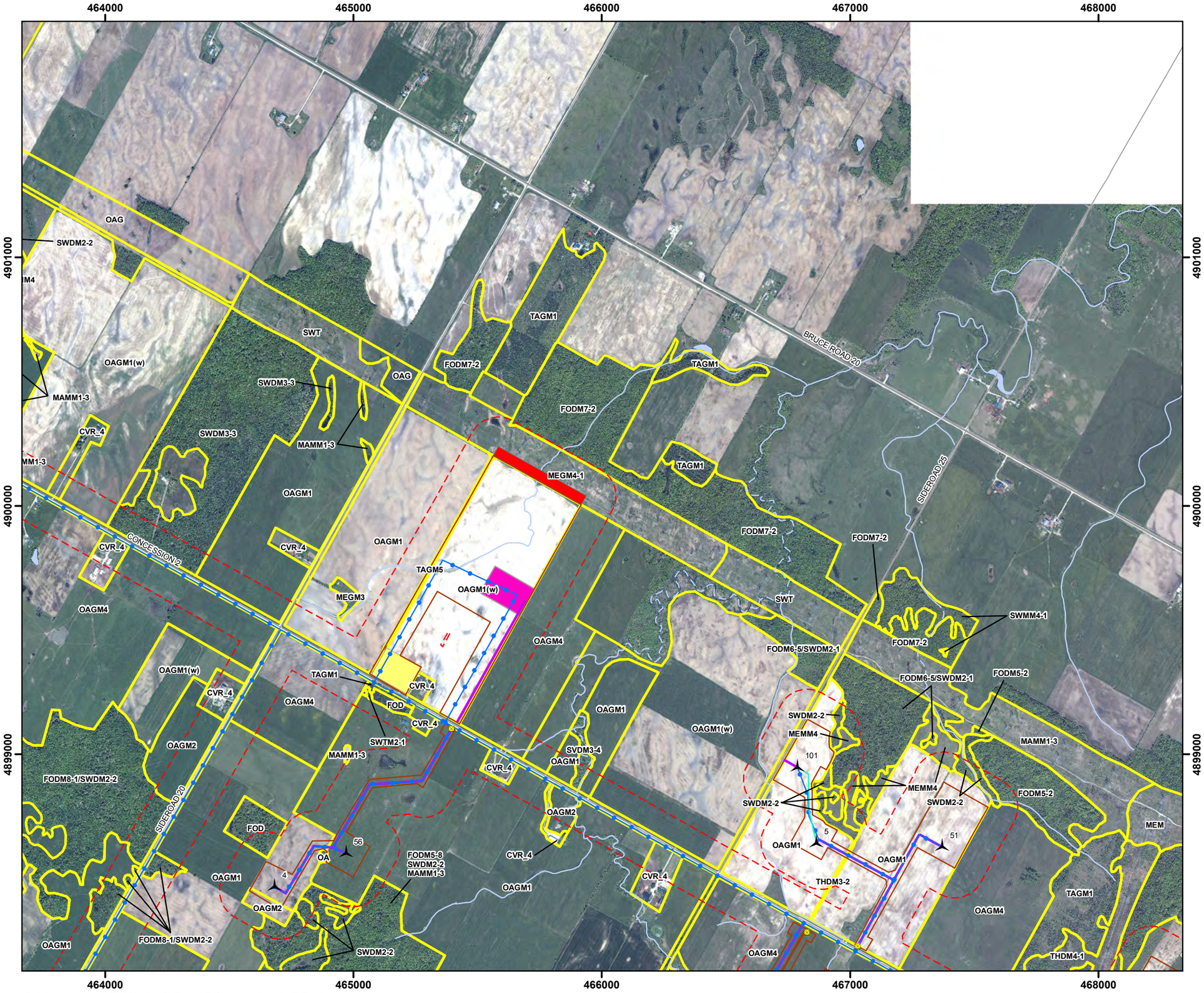
Figure 5

Armow Wind Project

Vegetation Communities



Legend

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Date: August 23, 2012

NAD83 - UTM Zone 17
Size: 11x17"
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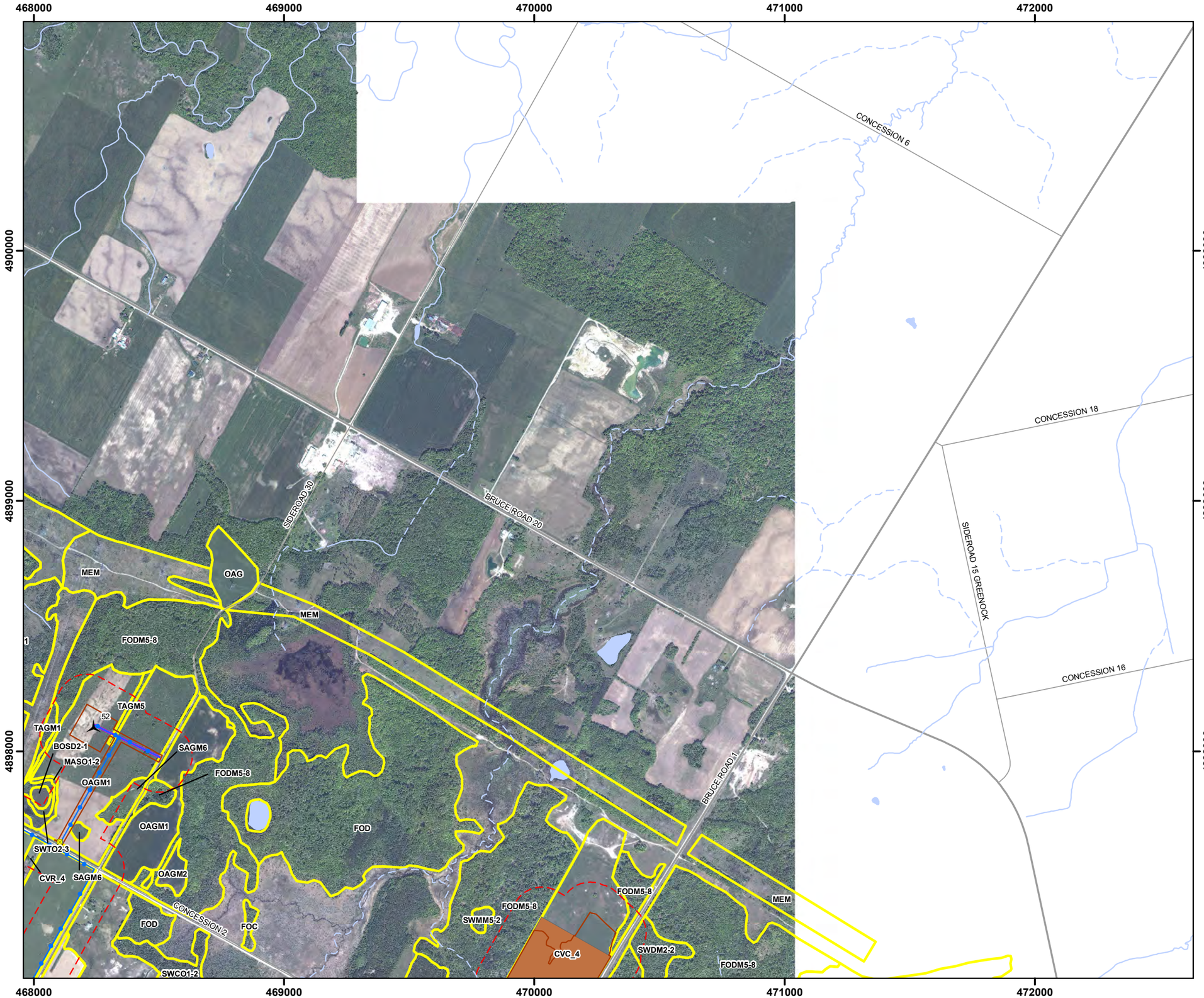
Figure 6

Armow Wind Project

Vegetation Communities



Legend

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Size: 11x17"
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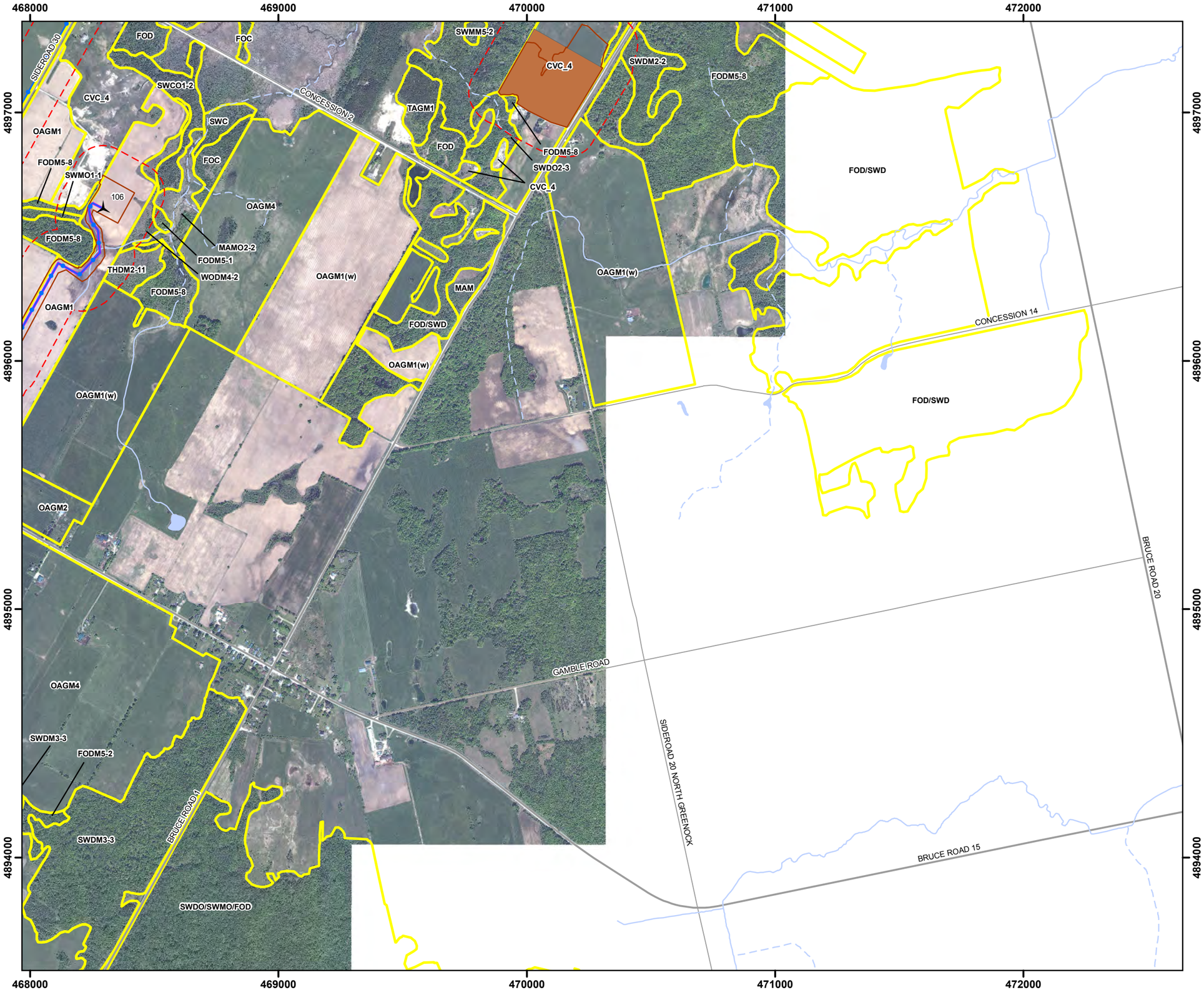
Figure 7

Armow Wind Project

Vegetation Communities



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Legend

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Date: August 23, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 200 400 600 800 Meters

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Figure 8

Armow Wind Project

Vegetation Communities

Legend

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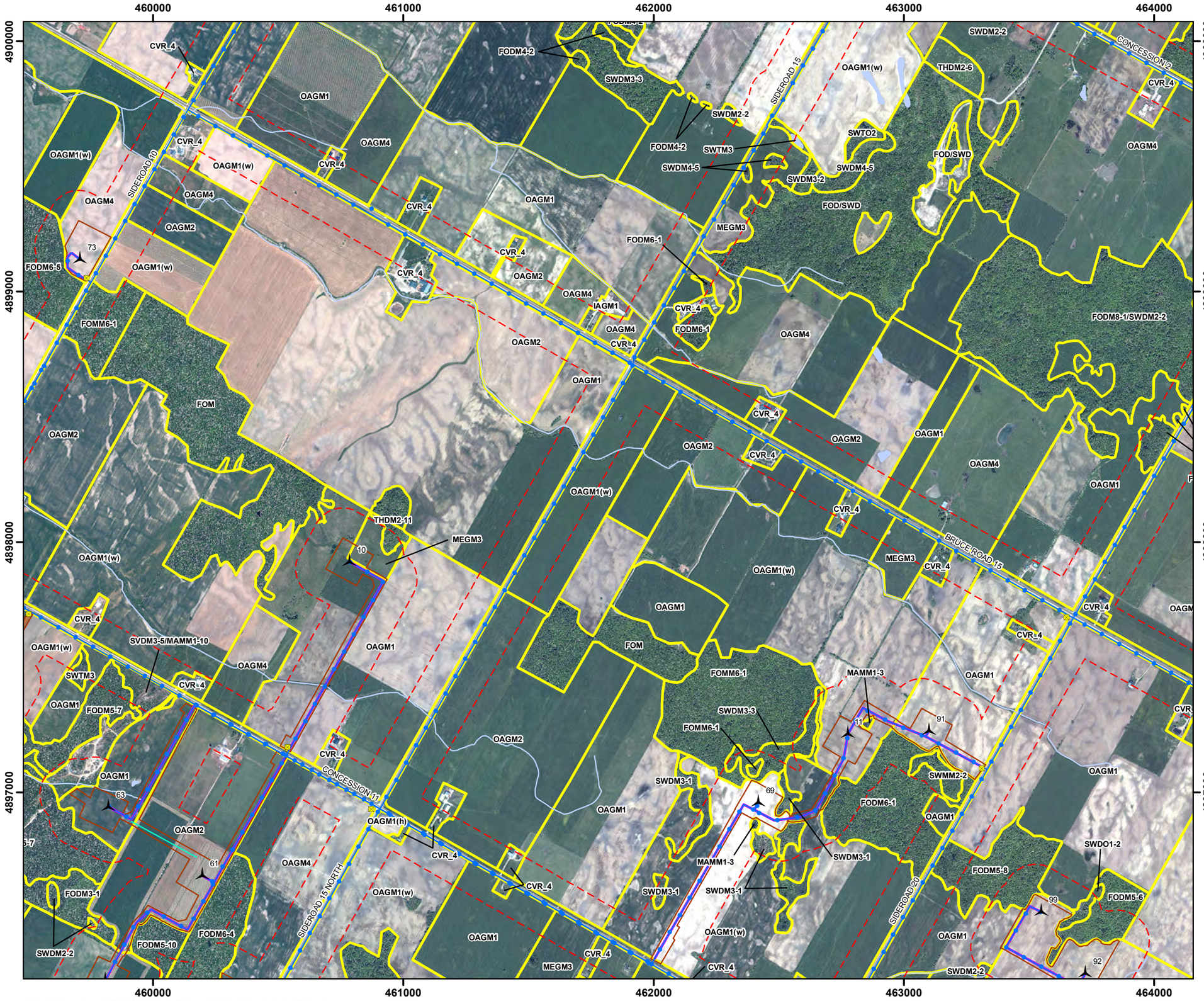
Figure 9

Armow Wind Project

Vegetation Communities



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Project: 1275 Date: August 23, 2012	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

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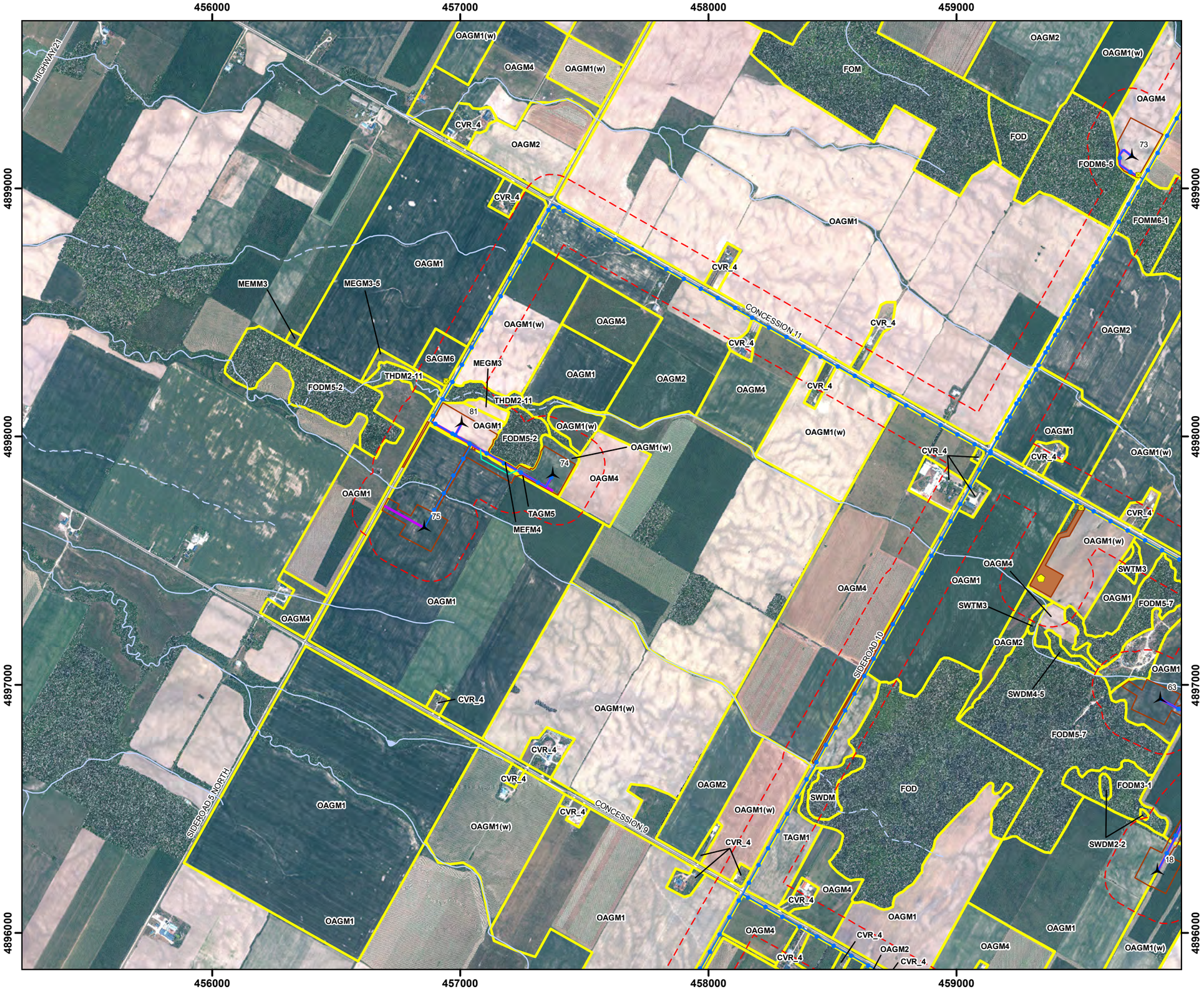
Figure 10

Armow Wind Project

Vegetation Communities



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0 200 400 600 800 Meters

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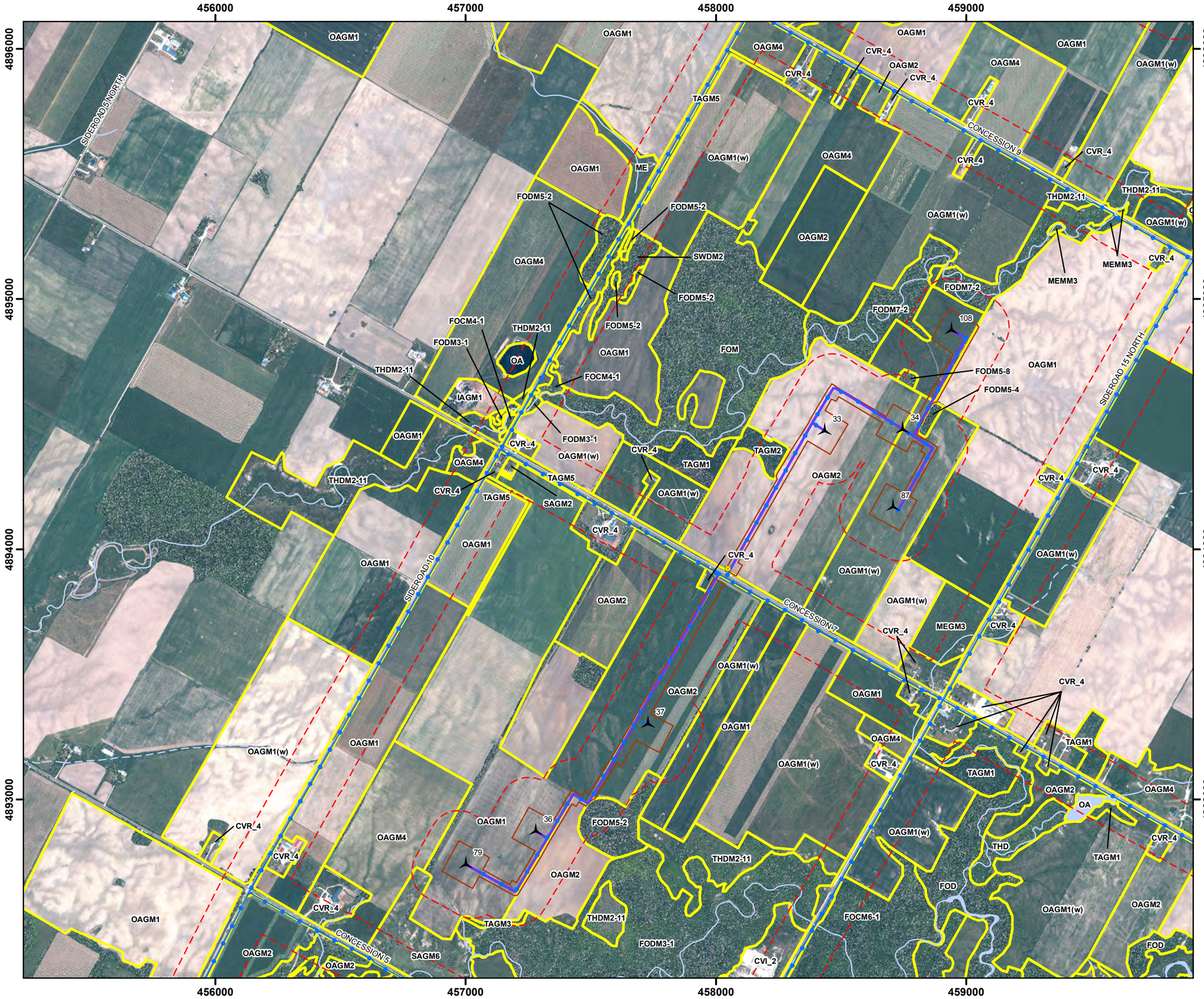
Figure 11

Armow Wind Project

Vegetation Communities



Legend

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NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 200 400 600 800 Meters

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Figure 12

Armow Wind Project

Vegetation Communities

Legend

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Date: August 27, 2012

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Size: 11x17"
1:15,000

0 200 400 600 800 Meters

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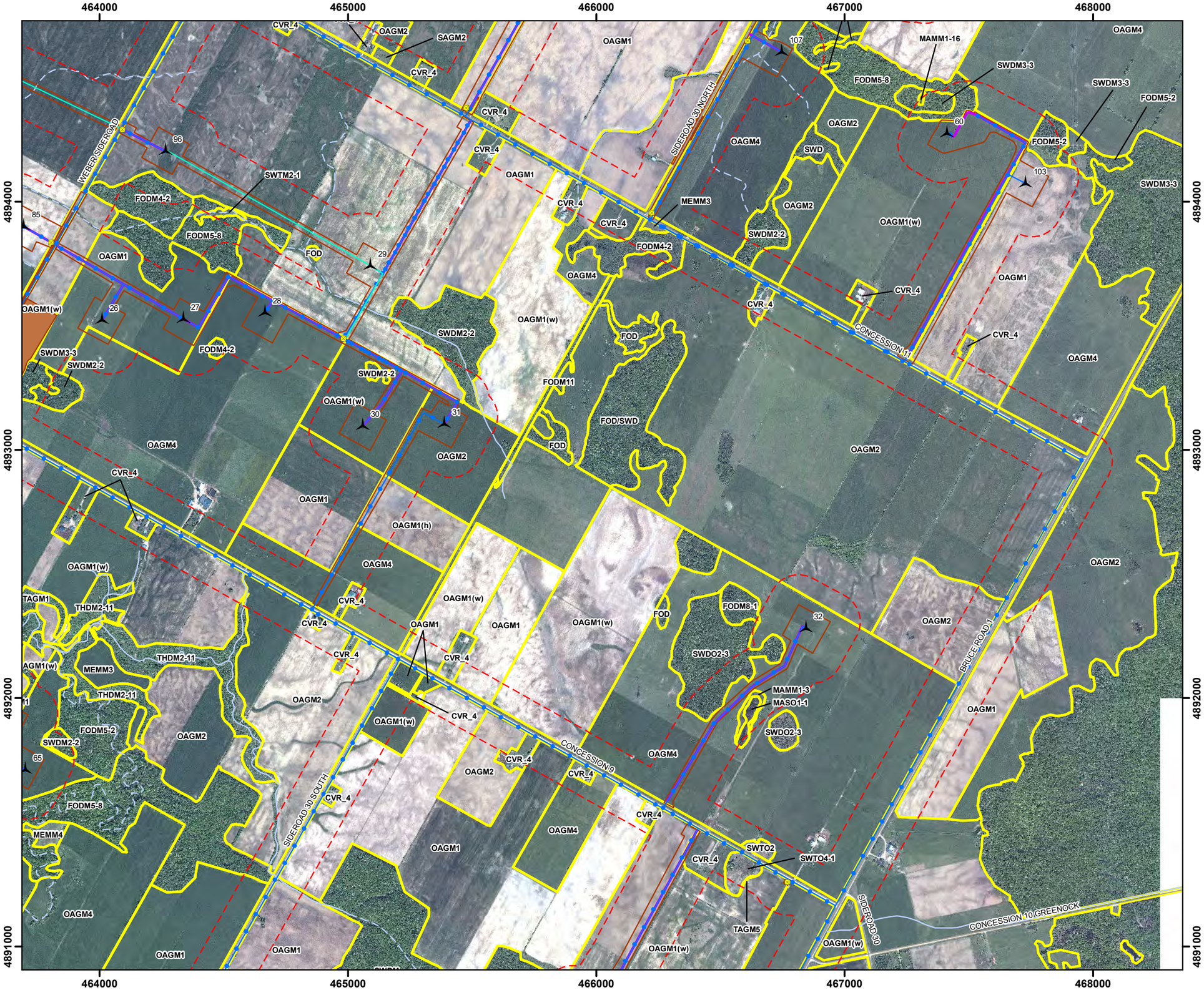
Figure 13

Armow Wind Project

Vegetation Communities



Legend

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NAD83 - UTM Zone 17
Size: 11x17"
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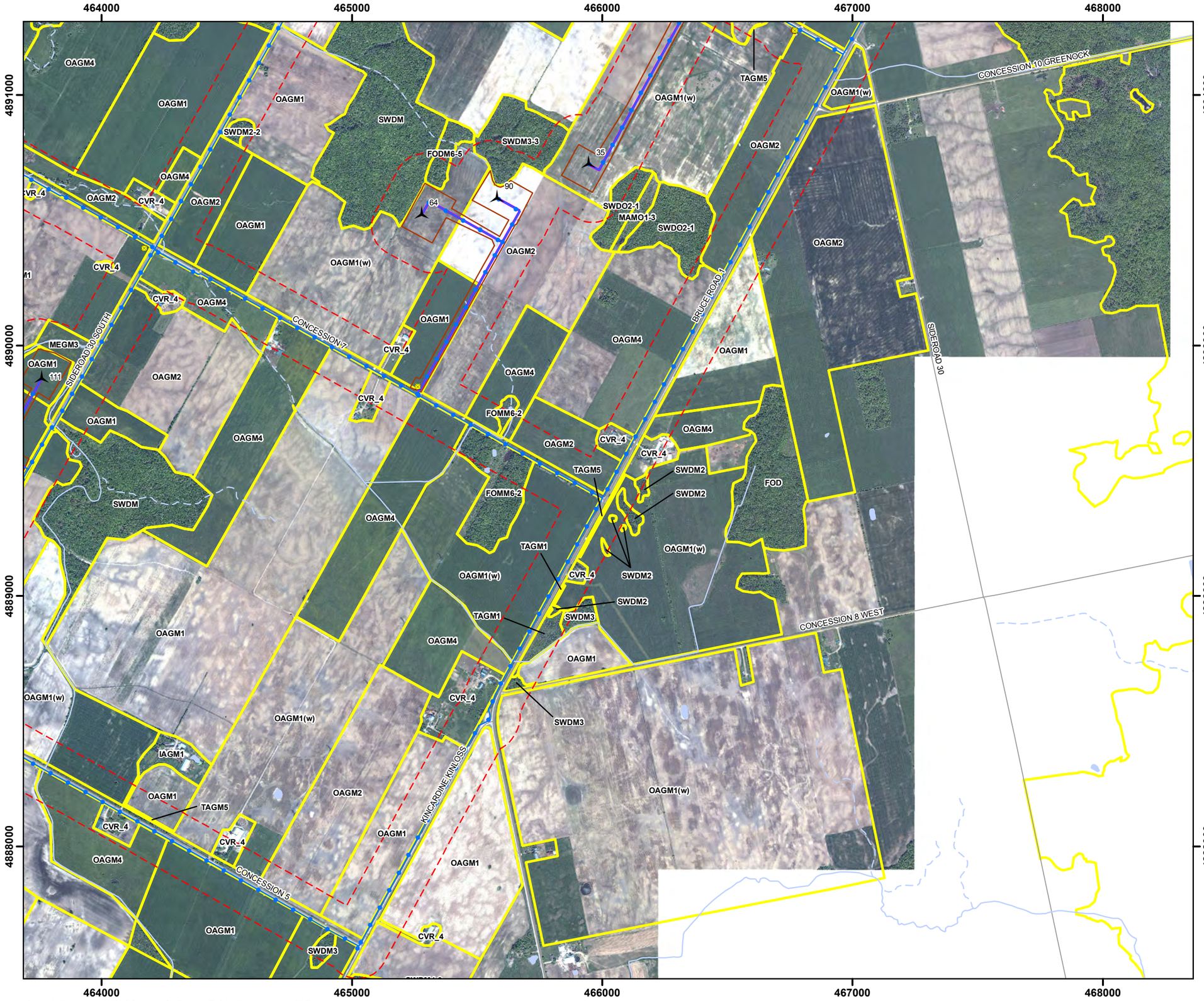
Figure 14

Armow Wind Project

Vegetation Communities



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NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

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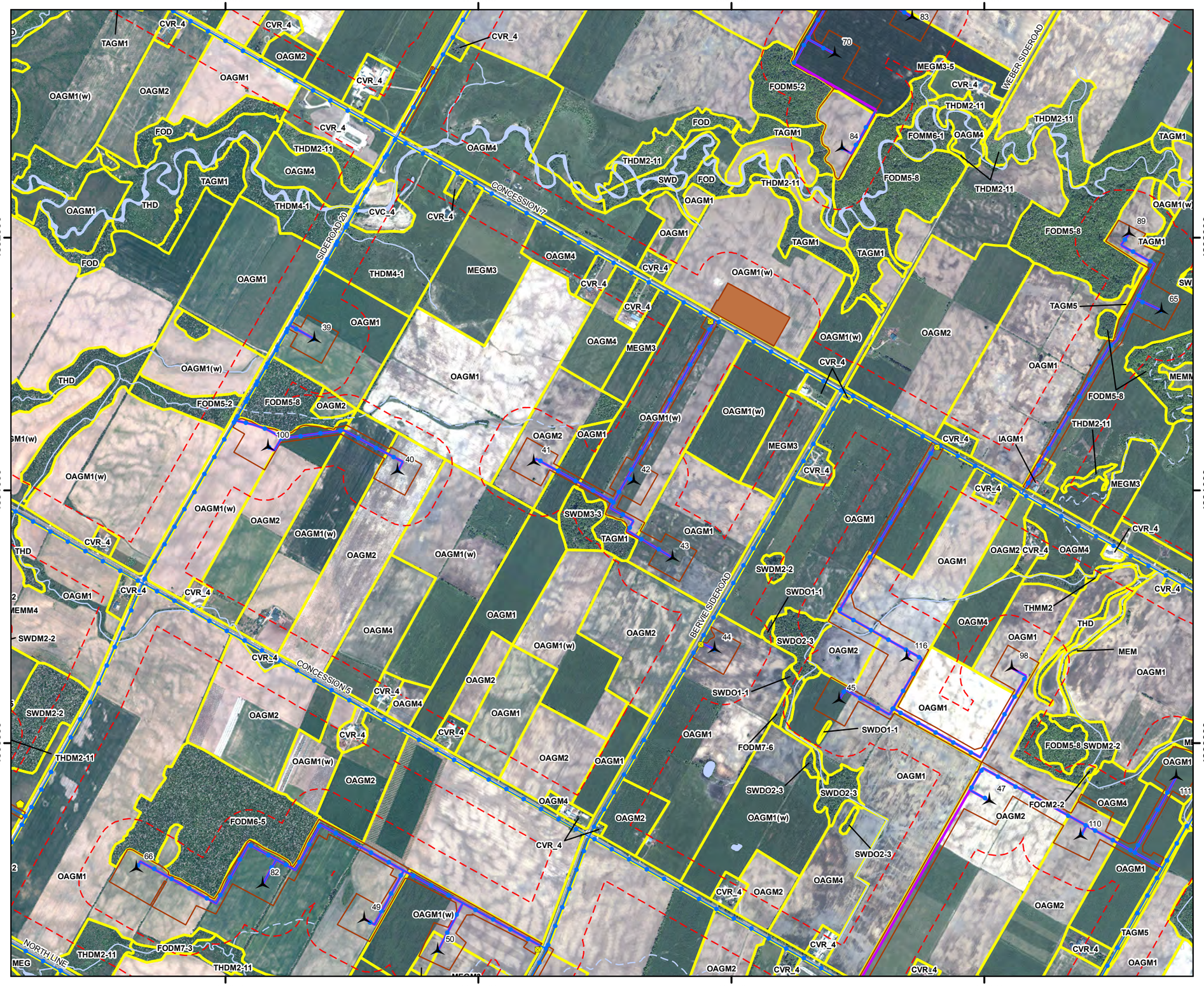
Figure 15

Armow Wind Project

Vegetation Communities



Legend

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NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 200 400 600 800 Meters

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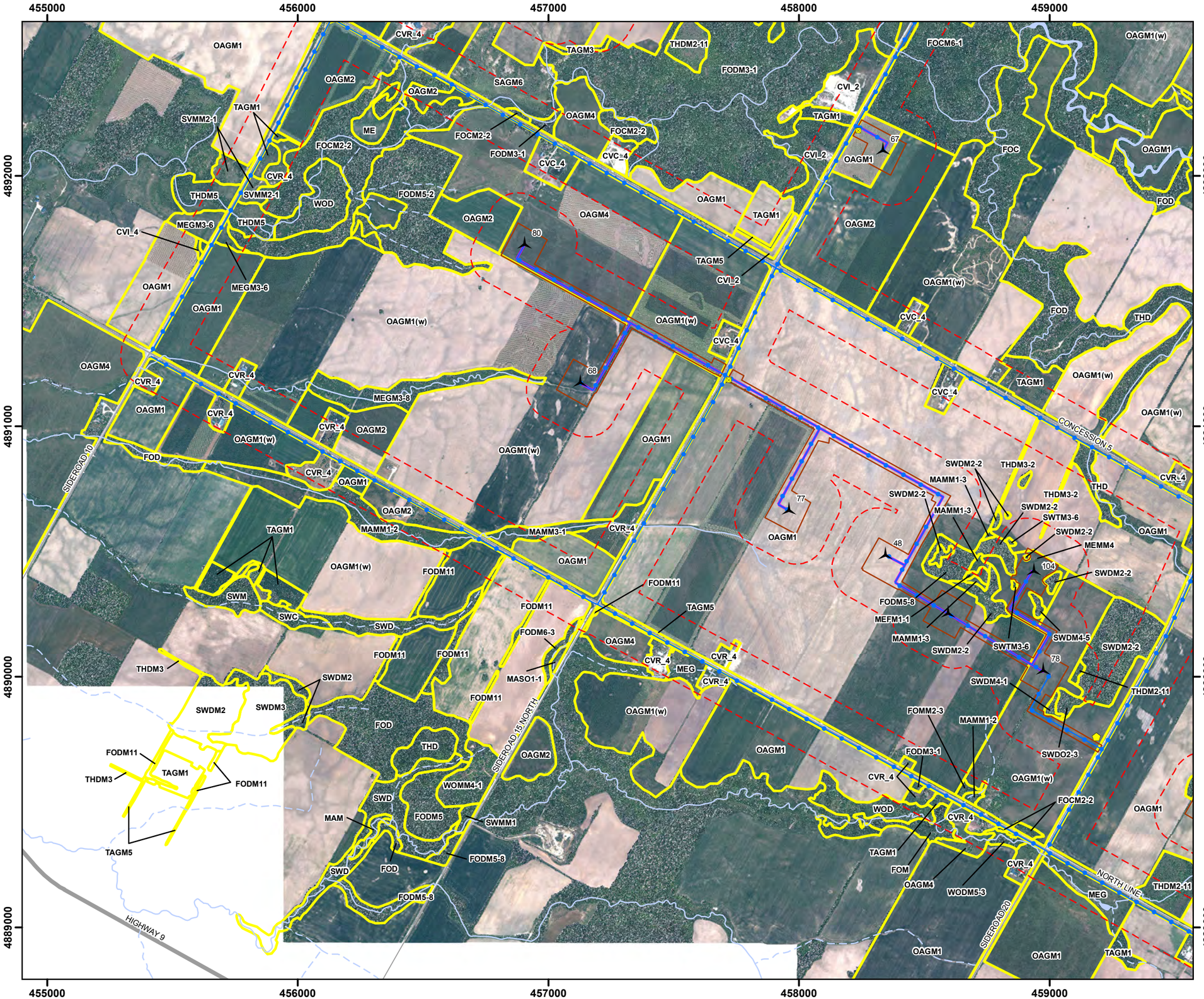
Figure 16

Armow Wind Project

Vegetation Communities



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Legend

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NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 200 400 600 800 Meters

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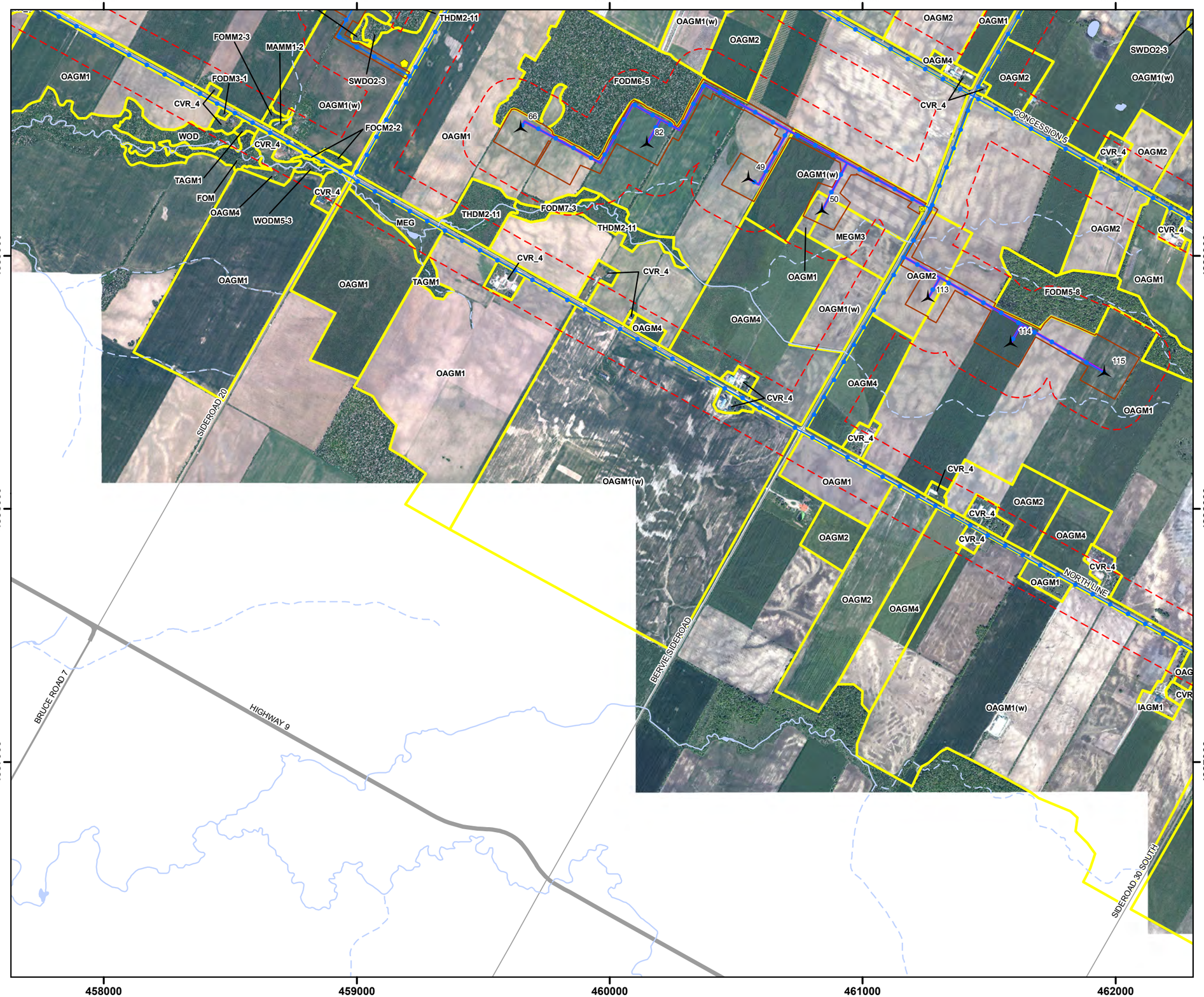
Figure 17

Armow Wind Project

Vegetation Communities



Legend

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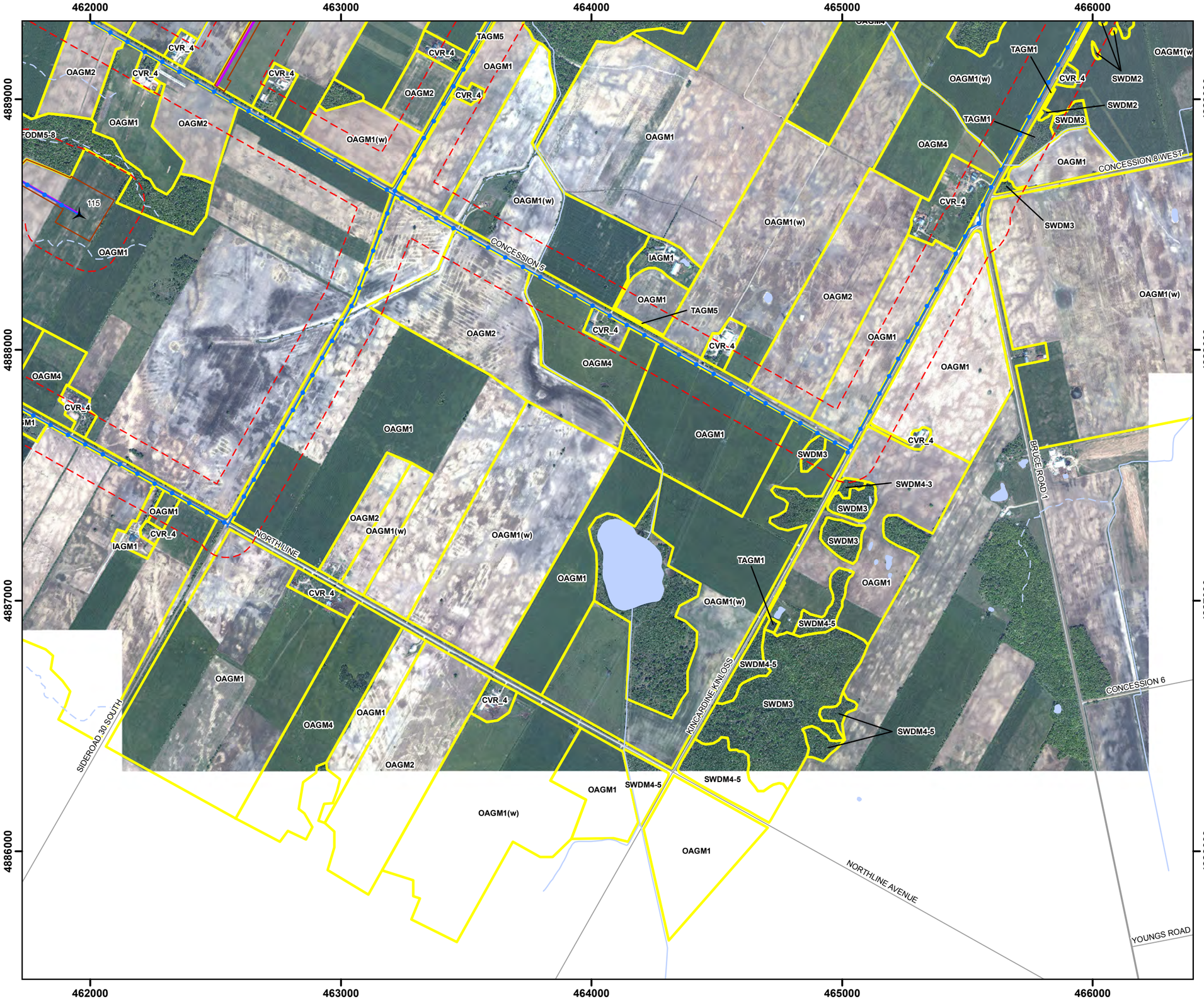
Figure 18

Armow Wind Project

Vegetation Communities



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
- Ecological Land Classification
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody

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Project: 1275
Date: August 23, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 200 400 600 800 Meters

N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig3-18_ELC_15K_2012_08_23_ELF.mxd

Figure 19

Armow Wind Project

Vegetation Communities

Project: 1275	Date: August 23, 2012

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(BOSD2-1) Leatherleaf Shrub Kettle Bog Type
(CVC_4) Extraction (pits, quarries, oil and gas)
(CVI_2) Disposal and Recycle
(CVI_4) Power Generation
(CVR_4) Rural Property
(FOC) Coniferous Forest
(FOCM2-2) Dry – Fresh White Cedar Coniferous Forest Type
(FOCM4-1) Fresh – Moist White Cedar Coniferous Forest Type
(FOCM6-1) Dry – Fresh White Pine Naturalized Coniferous Plantation Type
(FOD) Deciduous Forest
(FODM11) Naturalized Deciduous Hedge-row Ecosite
(FODM3-1) Dry – Fresh Poplar Deciduous Forest Type
(FODM4-2) Dry – Fresh White Ash – Hardwood Deciduous Forest Type
(FODM5) Dry – Fresh Sugar Maple Deciduous Forest Ecosite
(FODM5-1) Dry – Fresh Sugar Maple Deciduous Forest Type
(FODM5-10) Dry – Fresh Sugar Maple – White Birch – Poplar Deciduous Forest Type
(FODM5-2) Dry – Fresh Sugar Maple – Beech Deciduous Forest Type
(FODM5-4) Dry – Fresh Sugar Maple – Ironwood Deciduous Forest Type
(FODM5-6) Dry – Fresh Sugar Maple – Basswood Deciduous Forest Type
(FODM5-7) Dry – Fresh Sugar Maple – Black Cherry Deciduous Forest Type
(FODM5-8) Dry – Fresh Sugar Maple – White Ash Deciduous Forest Type
(FODM6-1) Fresh – Moist Sugar Maple – Lowland Ash Deciduous Forest Type
(FODM6-3) Fresh – Moist Sugar Maple – Yellow Birch Deciduous Forest Type
(FODM6-4) Fresh – Moist Sugar Maple – White Elm Deciduous Forest Type
(FODM6-5) Fresh – Moist Sugar Maple – Hardwood Deciduous Forest Type
(FODM7-2) Fresh – Moist Green Ash – Hardwood Lowland Deciduous Forest Type
(FODM7-3) Fresh – Moist Willow Lowland Deciduous Forest Type
(FODM7-6) Fresh – Moist Black Ash – Hardwood Lowland Deciduous Forest Type
(FODM8-1) Fresh – Moist Poplar Deciduous Forest
(FOM) Mixed Forest
(FOMM2-3) Dry – Fresh White Pine – Hardwood Mixed Forest Type
(FOMM6-1) Fresh – Moist Sugar Maple – Hemlock Mixed Forest Type
(FOMM6-2) Fresh – Moist Hemlock – Hardwood Mixed Forest Type
(IAGM1) Agricultural Buildings
(MAM) Meadow Marsh
(MAMM1-16) Mixed Graminoid Graminoid Mineral Meadow Marsh Type
(MAMM1-2) Cattail Graminoid Mineral Meadow Marsh Type
(MAMM1-3) Reed-canary Grass Graminoid Mineral Meadow Marsh Type
(MAMM1-9) Narrow-leaved Sedge Graminoid Mineral Meadow Marsh Type
(MAMM3-1) Mixed Mineral Meadow Marsh Type
(MAMO1-3) Reed-canary Grass Graminoid Organic Meadow Marsh Type
(MAMO2-2) Joe Pye Weed Forb Organic Meadow Marsh Type
(MASO1-1) Cattail Organic Shallow Marsh Type
(MASO1-2) Bulrush Organic Shallow Marsh Type
(ME) Meadow
(MEFM1-1) Goldenrod Forb Meadow Type
(MEFM4) Fresh – Moist Forb Meadow Ecosite
(MEG) Graminoid Meadow
(MEGM3) Dry – Fresh Graminoid Meadow Ecosite
(MEGM3-5) Smooth Brome Graminoid Meadow Type
(MEGM3-6) Orchard Grass Graminoid Meadow Type
(MEGM3-8) Reed Canary Grass Graminoid Meadow Type
(MEGM4-1) Open Graminoid Meadow Type
(MEM) Mixed Meadow
(MEMM3) Dry – Fresh Mixed Meadow Ecosite
(MEMM4) Fresh – Moist Mixed Meadow Ecosite
(OA) Open Water
(OAG) Open Agriculture
(OAGM1(h)) Annual Row Crops – Hay
(OAGM1(w)) Annual Row Crops – Wheat
(OAGM1) Annual Row Crops
(OAGM2) Perennial Cover Crops
(OAGM4) Open Pasture
(SAGM2) Orchard
(SAGM6) Shrub Pasture
(SVDM3-4) Hawthorn Deciduous Savanna Type
(SVMM2-1) Dry - Fresh Hawthorn - White Cedar Mixed Savanna Type
(SWC) Coniferous Swamp
(SWCO1-2) White Cedar – Conifer Organic Coniferous Swamp Type
(SWD) Deciduous Swamp
(SWDM) Mineral Deciduous Swamp
(SWDM2) Ash Mineral Deciduous Swamp Ecosite
(SWDM2-2) Green Ash Mineral Deciduous Swamp Type
(SWDM3) Maple Mineral Deciduous Swamp Ecosite
(SWDM3-1) Red Maple Mineral Deciduous Swamp Type
(SWDM3-2) Silver Maple Mineral Deciduous Swamp Type
(SWDM3-3) Swamp Maple Mineral Deciduous Swamp Type
(SWDM4) Mineral Deciduous Swamp Ecosite
(SWDM4-1) Willow Mineral Deciduous Swamp Type
(SWDM4-2) White Elm Mineral Deciduous Swamp Type
(SWDM4-3) White Birch – Poplar Mineral Deciduous Swamp Type
(SWDM4-5) Poplar Mineral Deciduous Swamp Type
(SWDO1-1) Black Ash Organic Deciduous Swamp Type
(SWDO1-2) Green Ash Organic Deciduous Swamp Type
(SWDO2-1) Red Maple Organic Deciduous Swamp Type
(SWDO2-3) Swamp Maple Organic Deciduous Swamp Type
(SWM) Mixed Swamp
(SWMM1) White Cedar Mineral Mixed Swamp Ecosite
(SWMM2-2) Swamp Maple – Conifer Mineral Mixed Swamp Type
(SWMM4-1) Green Ash – Hemlock Mineral Mixed Swamp Type
(SWMM5-2) Tamarack – Hardwood Mineral Mixed Swamp Type
(SWMO1-1) White Cedar – Hardwood Organic Mixed Swamp Type
(SWT) Thicket Swamp
(SWTM2-1) Red-osier Dogwood Mineral Deciduous Thicket Swamp Type
(SWTM3) Willow Mineral Deciduous Thicket Swamp Ecosite
(SWTM3-3) Slender Willow Mineral Deciduous Thicket Swamp Type
(SWTM3-6) Mixed Willow Mineral Deciduous Thicket Swamp Type
(SWTO2) Willow Organic Deciduous Thicket Swamp Ecosite
(SWTO2-3) Slender Willow Organic Deciduous Thicket Swamp Type
(SWTO4-1) Red-osier Organic Deciduous Thicket Swamp Type
(TAGM1) Coniferous Plantation
(TAGM2) Mixed Plantation
(TAGM3) Deciduous Plantation
(TAGM5) Fencerow
(THD) Deciduous Thicket
(THDM2-11) Hawthorn Deciduous Shrub Thicket Type
(THDM2-6) Buckthorn Deciduous Shrub Thicket Type
(THDM3) Dry – Fresh Deciduous Hedgerow Thicket Ecosite
(THDM3-2) Native Shrub Deciduous Hedgerow Thicket Type
(THDM4-1) Native Deciduous Regeneration Thicket Type
(THDM5) Fresh – Moist Deciduous Thicket Ecosite
(THMM2) Fresh – Moist Mixed Thicket Ecosite
(WOD) Deciduous Woodland
(WODM4-2) White Ash Deciduous Woodland Type
(WODM5-3) Fresh – Moist Manitoba Maple Deciduous Woodland Type
(WODM5-4) Fresh – Moist Hawthorn / Apple Deciduous Woodland Type
(WOMM4-1) Hawthorn / Apple Deciduous Woodland Type

6.0 Site Investigation Results

6.1 Areas of Natural and Scientific Interest

Two provincially significant Life Science (LS) ANSIs have been identified within 120m of the Armow Wind Project location. The Greenock Swamp ANSI is primarily situated east of the Municipality of Kincardine. The project location is located within 120m of this ANSI at the northwestern point. The project is not proposed to be located in this ANSI. The Glammis Bog ANSI is bordered by Bruce Road 20 to the north, Bruce Road 15 to the south, Bruce Road 1 to the east, and Sideroad 30 to the west. The project location is located within 120m of this ANSI at the southern and eastern points. Small portions of the Glammis Bog ANSI are part of an adjacent aggregate operation, and do not contain the natural characteristics and vegetation associated with the remainder of the ANSI. The project overlaps with a small portion of this ANSI, entirely within the portion that is already disturbed by aggregate operations. The project locations that overlap with this ANSI include a staging area and the disturbance area around this staging area.

The composition, attributes, functions, and distance to project locations are found in Table 9 below. This information was collected during the site investigation for each ANSI within the project area, as well as through the detailed records review. An evaluation of significance is not required for these 2 ANSIs as the MNR has already identified that both are provincially significant. The location of the Greenock Swamp ANSI is shown on Figures 25, 31 and 32. The location of the Glammis Bog ANSI is shown on Figures 24-26. Ecological Land Classification mapping of these ANSIs are shown on Figures 2-19.

Table 9. Summary of ANSIs within 120m of the Armow Wind Project

Name of ANSI	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure	EOS Required (Y/N)
Greenock Swamp ANSI-LS[1]	8548.49	One of the largest forested wetland swamps in southern Ontario. Good representation of fen and bog communities. Four wetland types: bog (0.02%), swamp (96.30%), marsh (3.60%) and fen (0.08%). Wetlands comprise majority of ANSI with occasional moraines. ANSI includes 10 lakes. 10 general vegetation communities present: lowland deciduous forest (78%), mixed swamp forest (13%), fen (0.1%), lake vegetation (2%) upland deciduous forest (6%) upland mixed forest (1%). Almost 1000 species of biota (exclusive of non-	One of the largest continuous stretches of forest and swamp in southwestern Ontario. Likely exhibits a greater diversity of vascular plants than in any other ANSI in Grey-Bruce. <u>Community Types</u> Primarily lowland deciduous forest and deciduous swamp dominated by silver maple (*Acer saccharinum*) and red maple (*Acer rubrum*), and green/red ash (*Fraxinus pennsylvanica*) to a lesser extent. Areas of mixed swamp also exist, dominated by eastern white cedar (*Thuja occidentalis*) and red maple (OMNR 2010a). <u>Plants</u> 680 vascular flora species recorded, including 22 species of orchid. 71 regionally rare vascular flora species recorded. 8 federally and provincially rare vascular flora also recorded: Hill's pondweed (*Potamogeton hillii*), rigid sedge (*Carex tetanica*), beaked spike-rush (*Eleocharis rostellata*), arrow arum (*Peltandra virginica*), large round-leaved orchid (*Platanthera orbiculata* var. *macrophylla*), green violet (*Hybanthus concolor*), ginseng (*Panax quinquefolius*), and Oswego tea (*Monarda didyma*)	• Very large natural feature • Provides interior habitat • Highly diverse • Uncommon characteristics recorded • Provides water protection • Provides significant habitat for many plant, avian, herpetofauna and mammal species, including federally, provincially and regionally significant species	WT – 105 (T103) AR – 7 CB – 7 CA – 7 BU – >120	**25, 31, 32**	**No (EIS Required)**

Name of ANSI	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure	EOS Required (Y/N)
		resident birds) are known to occur in the ANSI.	<u>Herpetofauna</u> 17 herpetofauna species recorded, including high numbers of snapping turtle (*Chelydra serpentina*). <u>Mammals</u> 20 mammal species recorded. Contains a provincially significant active deer yard. <u>Birds</u> 90-100 species of breeding birds recorded, including nationally, provincially and regionally significant species. 6-10 identified barred owl (*Strix varia*) territories recorded, which is very notable for Southern Ontario. Provides nesting habitat for Great Blue Heron (*Ardea herodias*). Highly significant as a migratory passerine and/or shorebird stopover area as recorded in the wetland evaluation. <u>Fish</u> 20 fish species recorded.				
Glammis Bog ANSI-LS[2]	252.26	Probably represents the most significant open acid bog resulting from natural succession filling in a lake, in Bruce County, and possibly in all of Grey-Bruce. 5 individual wetlands.	Diverse wetland habitat, including an open acid quaking bog mat. It is in excellent condition, with no obvious disturbance, regardless of its proximity to the hydro corridor that crosses it in the north end. Greatest diversity and bulk of rare plants in Bruce County.	• Large natural feature • Provides interior habitat • Highly diverse • Uncommon characteristics recorded • Provides water protection	WT – 120 AR – 116 CB – 116 CA – Overlapping BU – >120	**24, 25, 26**	**No (EIS Required)**

Name of ANSI	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure	EOS Required (Y/N)
		Three wetland types: bog (30%), swamp (60%), and marsh (10%). Landscape consists of kame moraine hills with wet depressions among them. 5 general vegetation communities present. Small portions of this ANSI are part of an adjacent aggregate operation, and do not contain the natural characteristics and vegetation associated with the remainder of the ANSI. The project overlaps with a small portion of this ANSI, entirely within the portion that is already disturbed by aggregate operations. .	<u>Community Types</u> Kame moraines which dot the area are largely covered by deciduous forests dominated by sugar maple (*Acer saccharum*). Bog communities are largely dominated by heath and sedge species, while the swamp communities are dominated by white cedar, red maple, yellow birch (*Betula alleghaniensis*) and tamarack (*Larix laricina*)[3]. <u>Plants</u> Five of the seven dominant vascular herbs found within the bog are rare in Bruce County. 2 provincially rare species recorded: white fringed-orchid (*Platanthera blephariglottis var. blephariglottis*) and large round-leaved orchid (*Platanthera orbiculata var. macrophylla*). 23 regionally rare plants have been identified to exist in the Glammis Bog, most of these are associated specifically with the bog community. Six orchid species are present including all three genera of pink bog orchid. <u>Mammals</u> Winter cover is of local significance for white-tailed deer. <u>Birds</u>	• Provides significant habitat for many species, including federally, provincially and regionally significant species			

Name of ANSI	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure	EOS Required (Y/N)
			Provides nesting habitat for great blue heron (*Ardea herodias*).				

[1]: OMNR Greenock Swamp – ANSI "A Life Science Inventory Part II: Inventory Report" (1994)
[2]: OMNR Glammis Bog – ANSI "A Reconnaissance Level Life Science Inventory" (1990)
[3]: OMNR Biodiversity Explorer (2010)

Legend
WT: Wind Turbine
AR: Access Road
CB: Cabling
CA: Construction Activity/Temporary Infrastructure/Balance of Operations
BU: Building/Transformer Station/Distribution Station

6.2 Woodlands

During the site investigation, NRSI biologists identified 99 woodlands are located within 120m of the Armow Wind Project location. This is a change from the records review, as available basemapping indicated a total of 153 woodlands within 120m of the Armow Wind Project location. Many of these woodlands were counted as individual woodlands during the records review; however, under the definition of a woodland in the NHA Guide (OMNR 2011a), wooded areas bisected by an opening 20m or less from crown edges are considered to be single woodlands. As such, site investigations have confirmed that some of these individually identified woodlands have been identified as part of the same woodland. The project location does not overlap with any of these woodlands. Most of the woodlands within the project area are dominated by deciduous trees in forest and swamp communities, and range in size from <0.1ha to 5093.06ha.

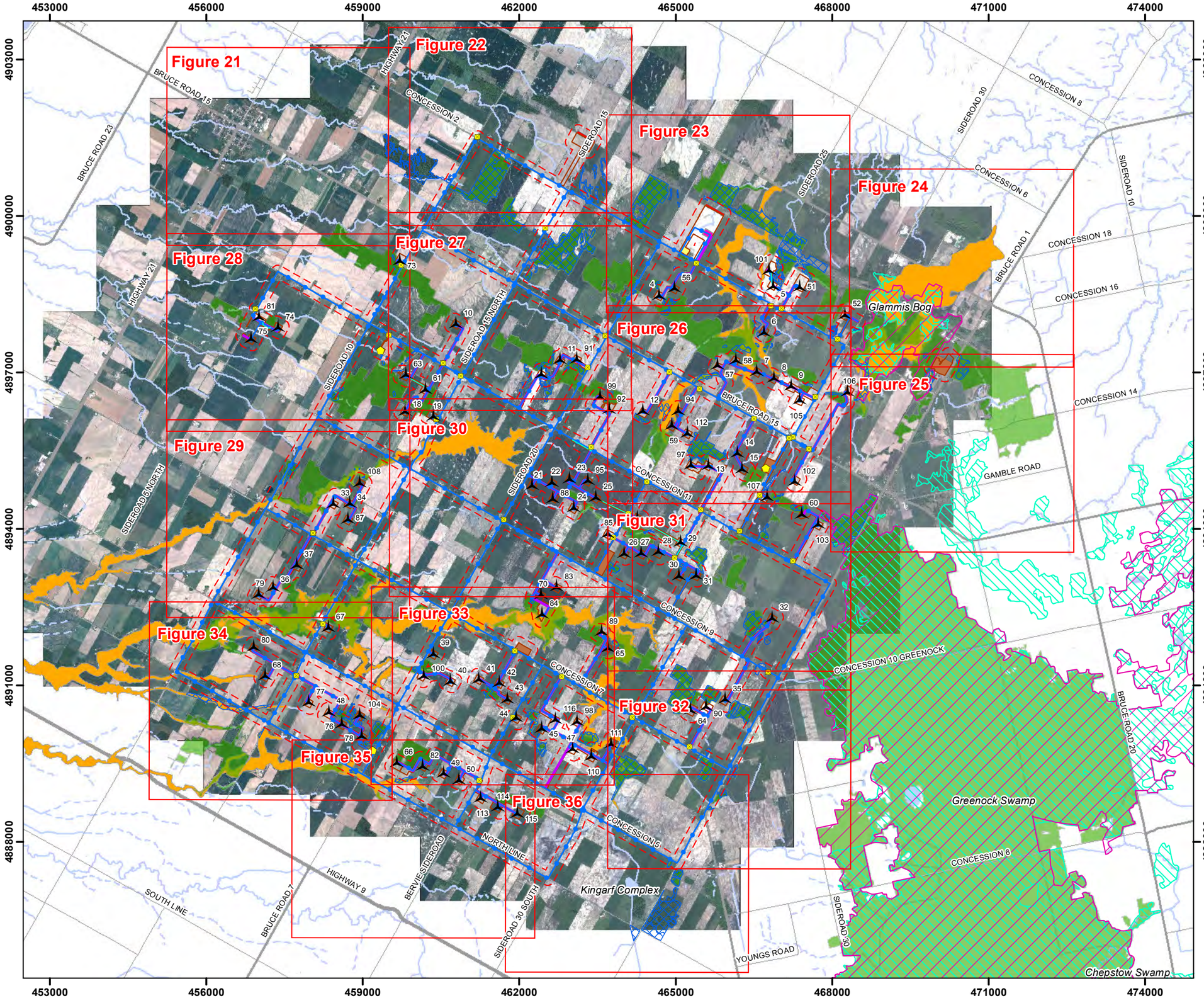
The records review indicated that the access road from turbine T9 to turbine T105 overlapped with the south end of woodland WOD-032. NRSI biologists confirmed during the site investigation that the woodland boundary for woodland WOD-032 has changed, and the access road no longer overlaps with this woodland. This change has been reflected in the mapping of woodlands prepared by NRSI following the completion of the site investigation.

The size, composition, attributes, functions, and distance to project locations are found in Table 10 below. Ecological Land Classification mapping of these woodlands are shown on Figures 2-19. The boundary and location of all potentially significant woodlands are shown on Figures 20-36.

Figure 20

Armow Wind Project

Woodlands, Wetlands and Valleylands - Key Map



Legend

- Map Extent
- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
- Wetland
- Valleyland
- Woodlands
- ANSI, Life Science
- Provincially Significant Wetland
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody

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Imagery provided by: Golder Associates, 2011

Project: 1275
Date: September 12, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:72,000

0 1 2 3 4 5 Kms

N

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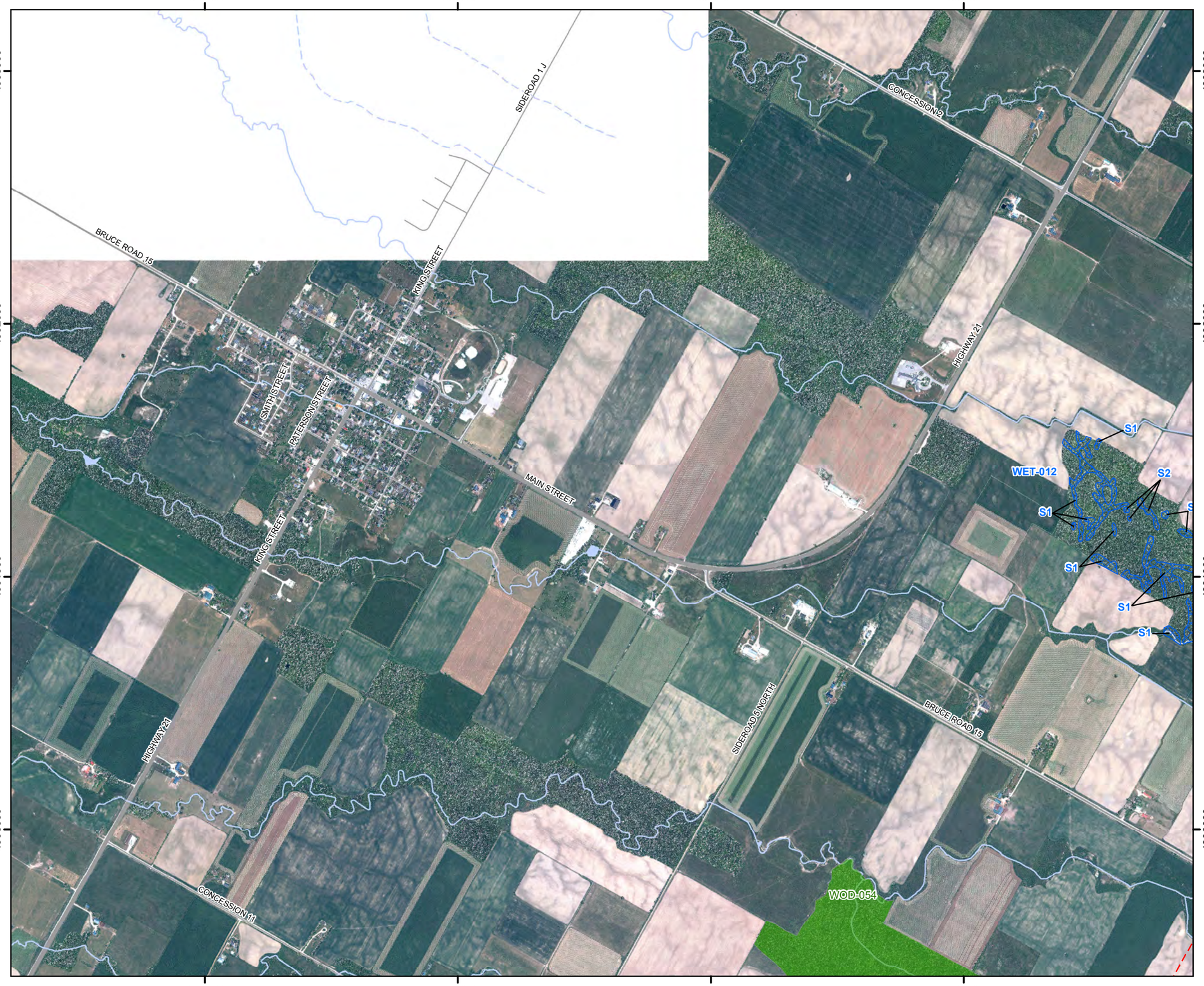
Figure 21

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
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Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
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0 250 500 750 1,000 m

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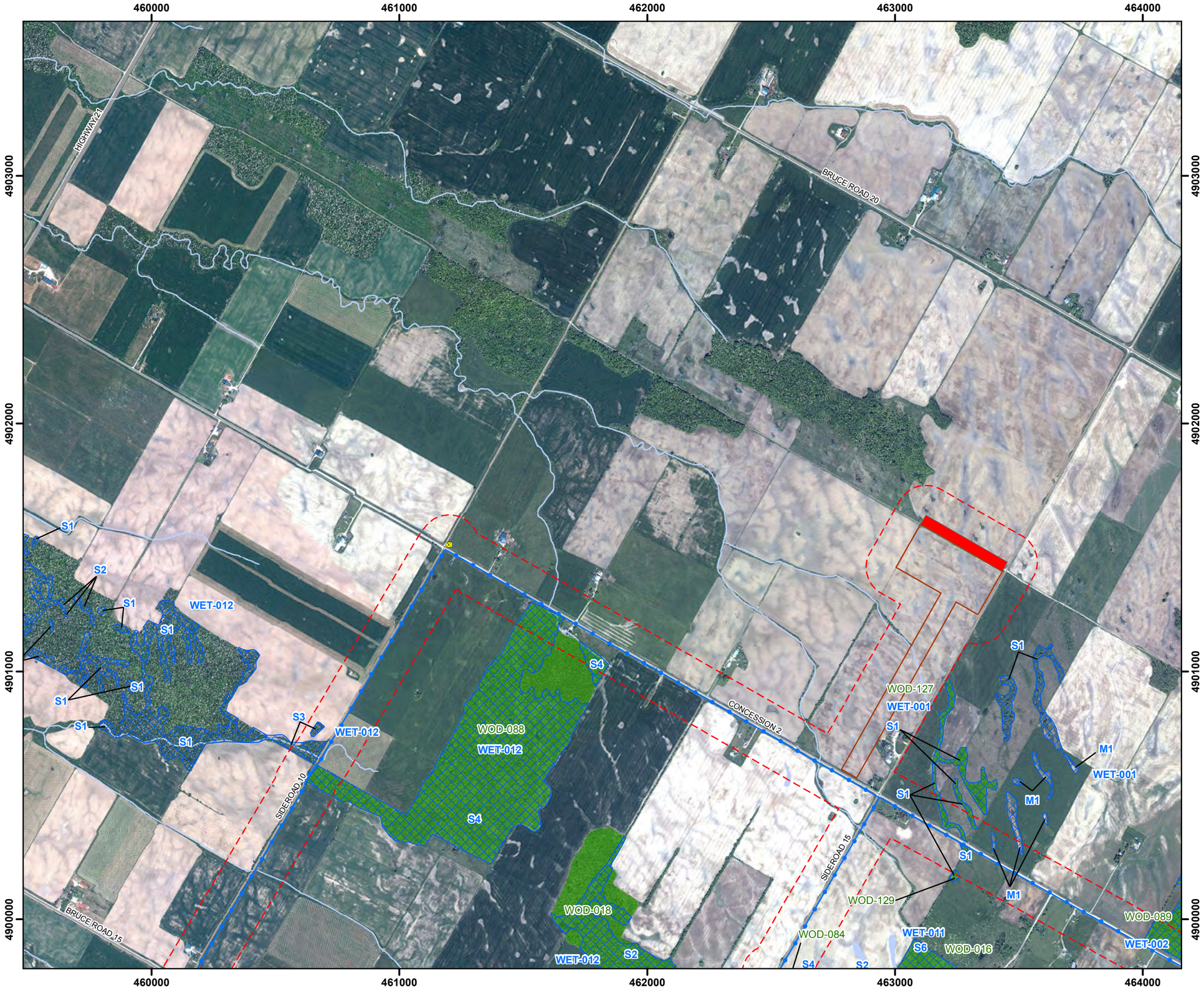
Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Figure 22

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
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Imagery provided by: Golder Associates, 2011

Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

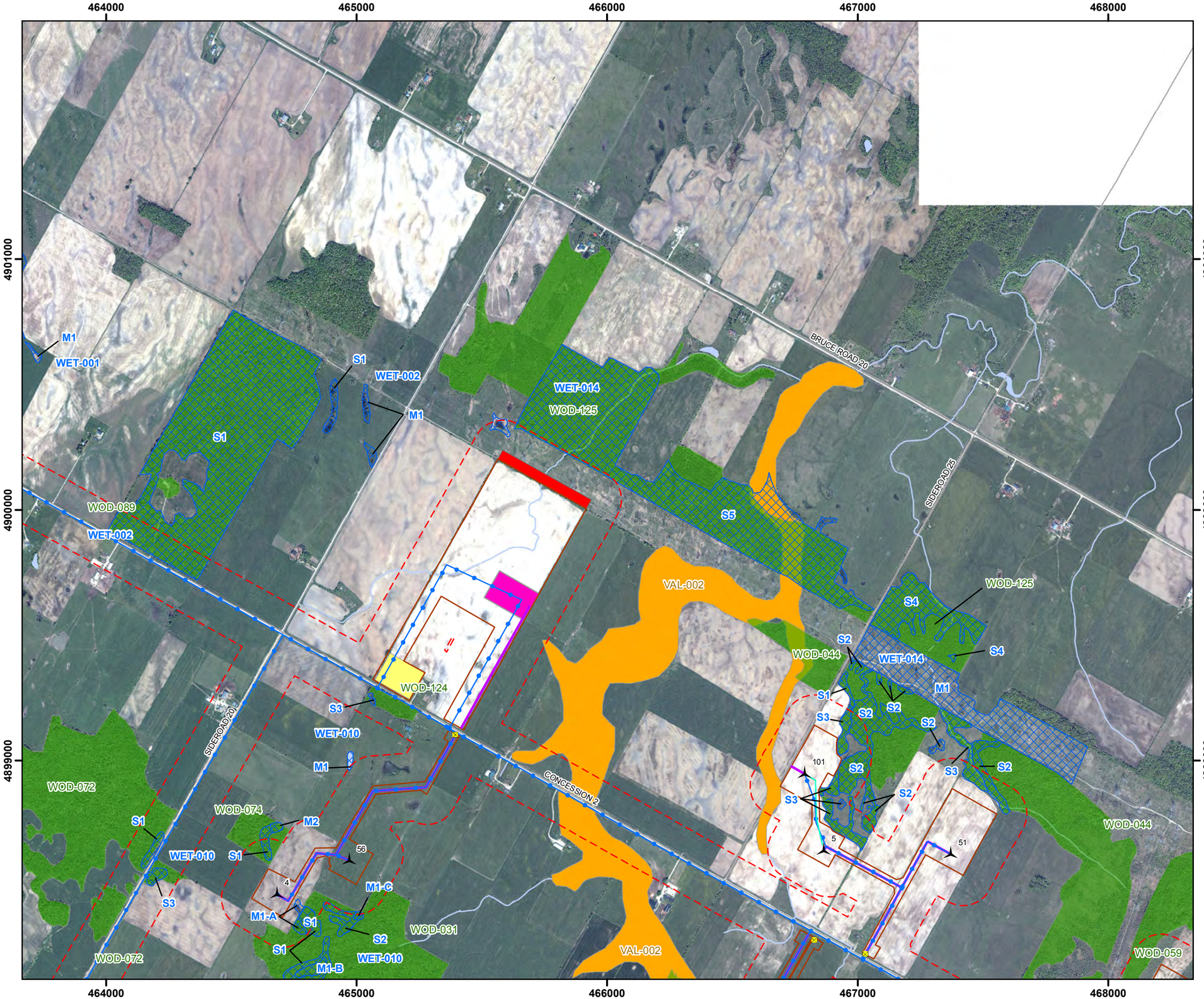
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Figure 23

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
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- Watercourse (Intermittent)
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Imagery provided by: Golder Associates, 2011

Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

N

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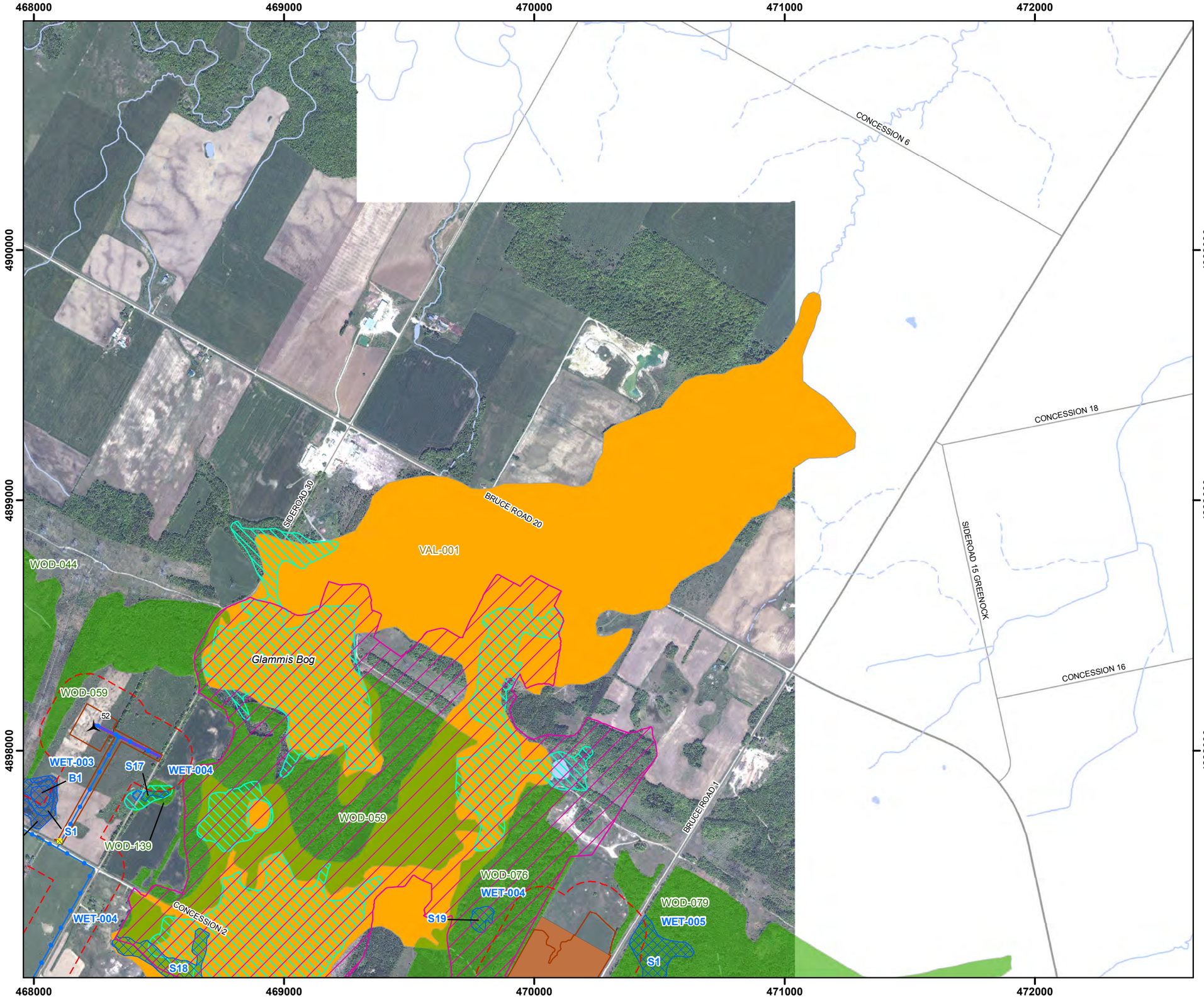
Figure 24

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
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Imagery provided by: Golder Associates, 2011

Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

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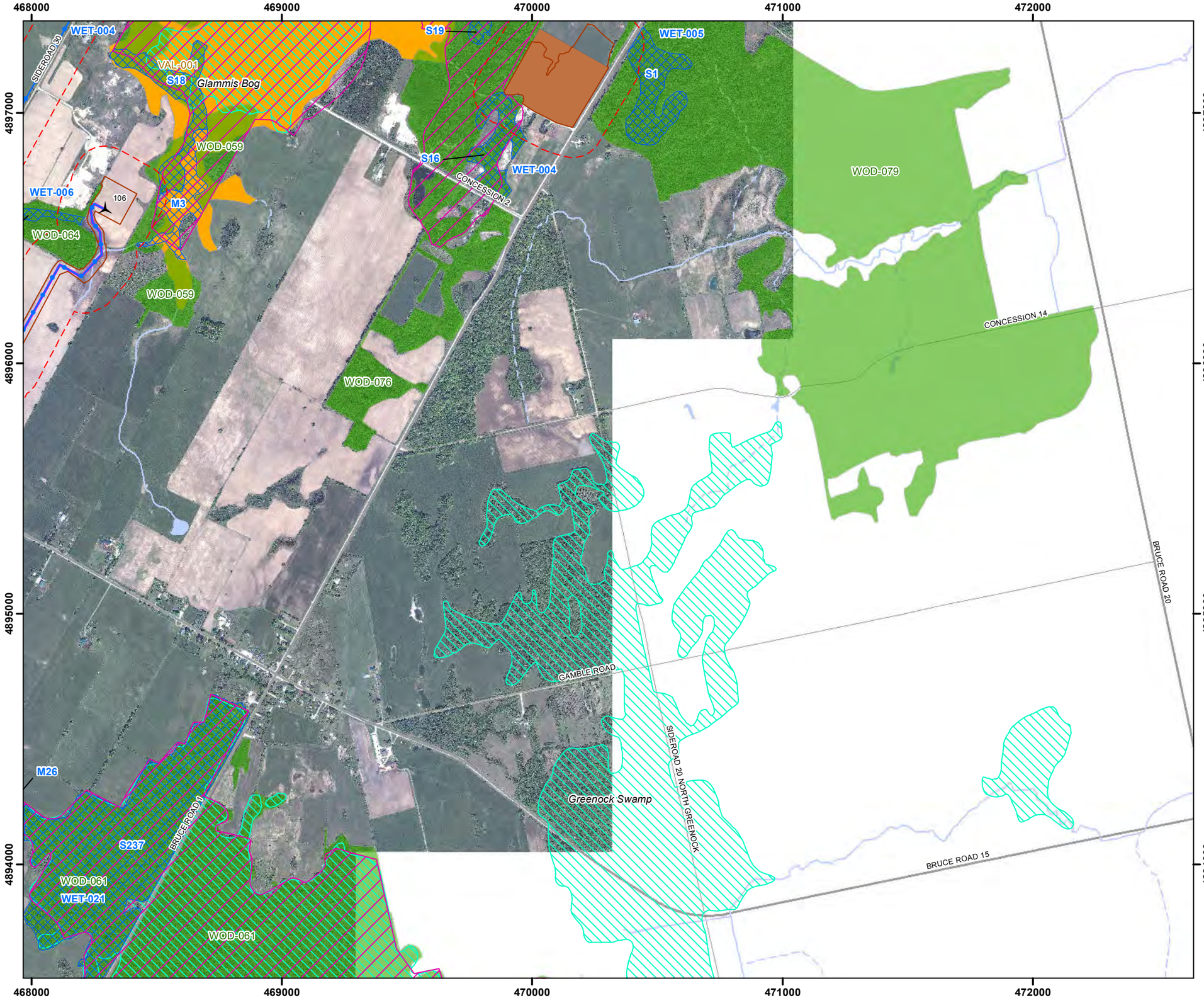
Figure 25

Armow Wind Project

Woodlands, Wetlands and Valleylands



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Legend

- Project Area (120m)
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Imagery provided by: Golder Associates, 2011

Project: 1275 Date: September 19, 2012	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

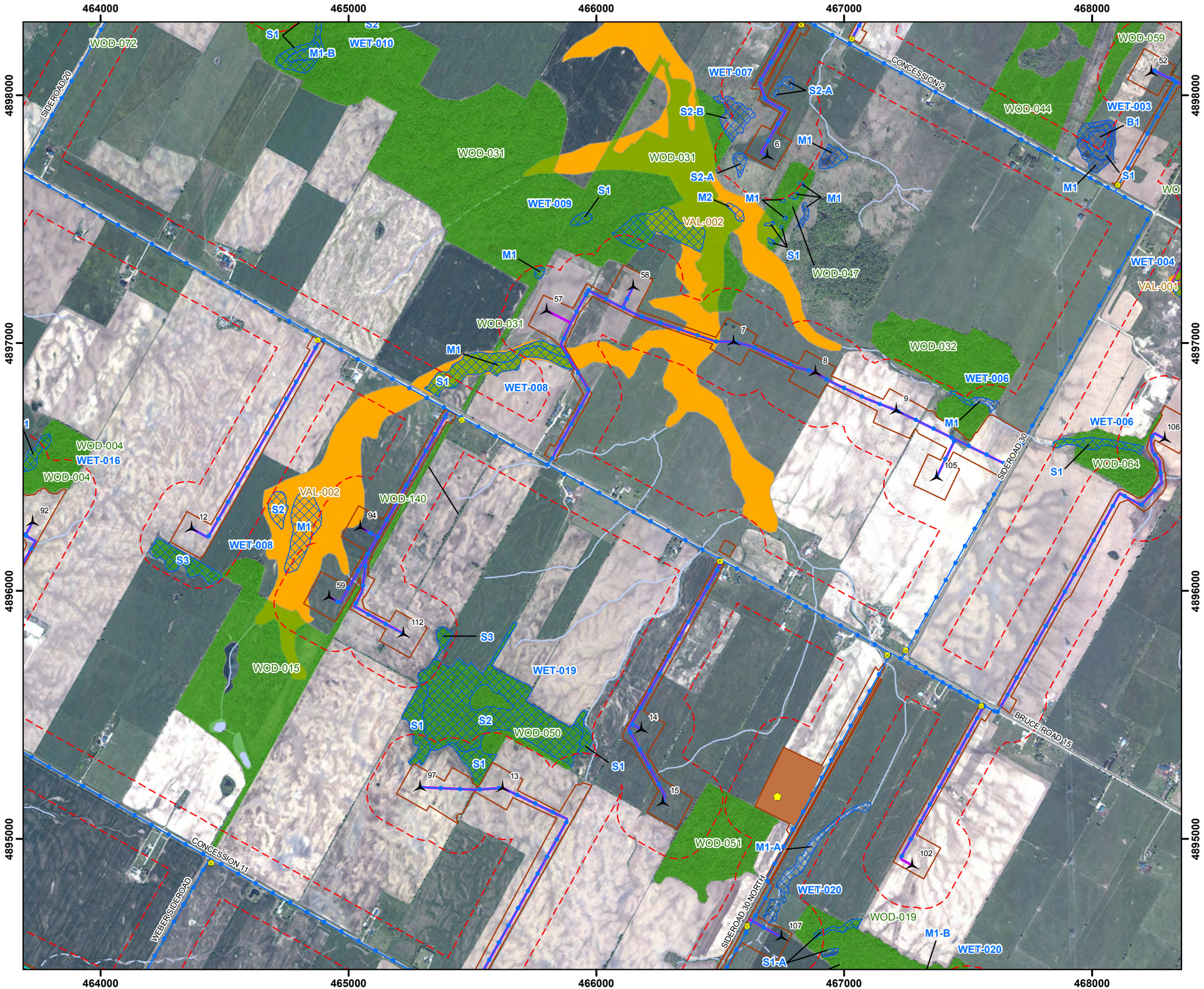
0 250 500 750 1,000 m

N

Figure 26

Armow Wind Project

Woodlands, Wetlands and Valleylands



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Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
- Wetland
- Valleyland
- Woodlands
- ANSI, Life Science
- Provincially Significant Wetland
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody

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Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

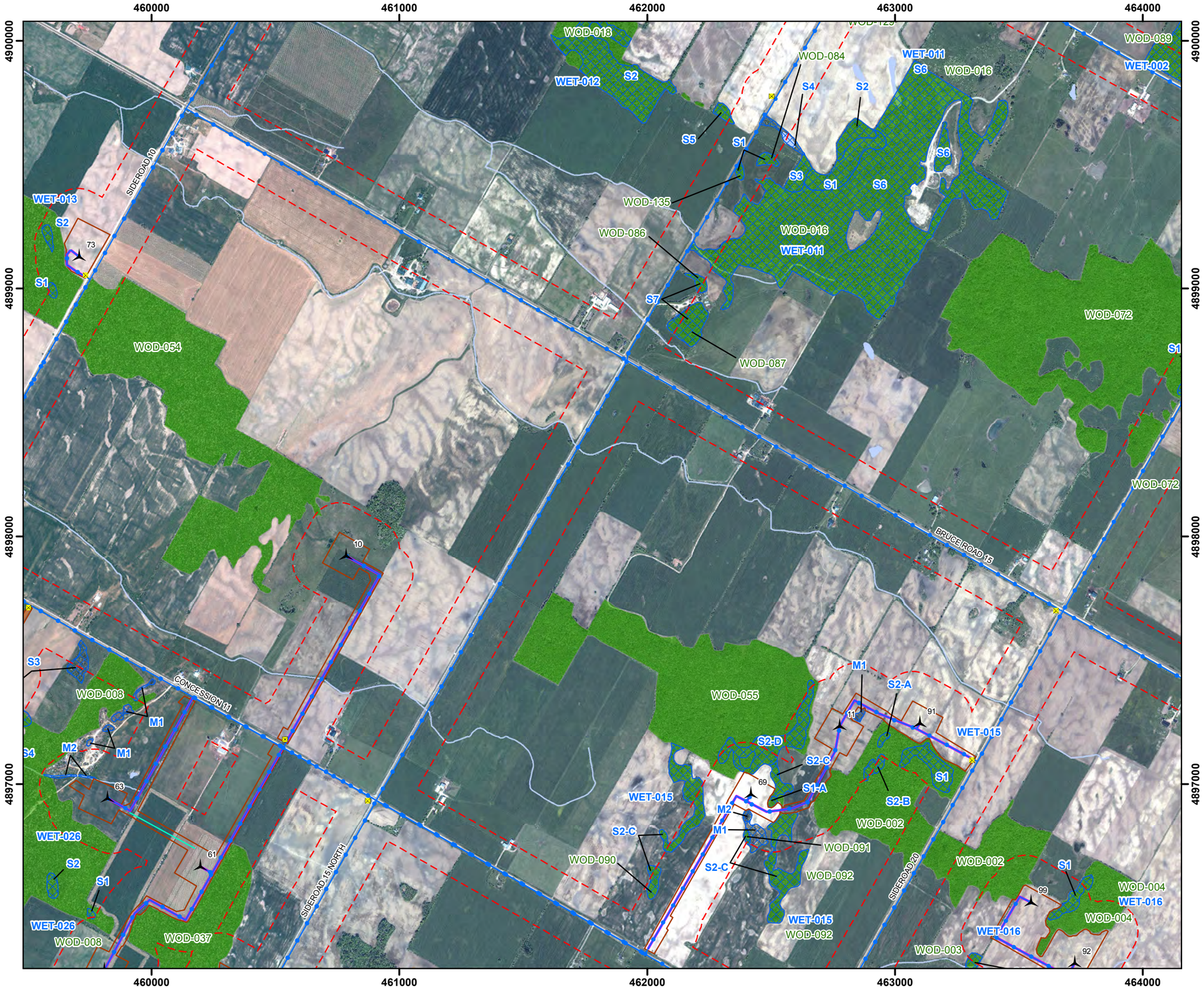
0 250 500 750 1,000 m

N

Figure 27

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
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Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

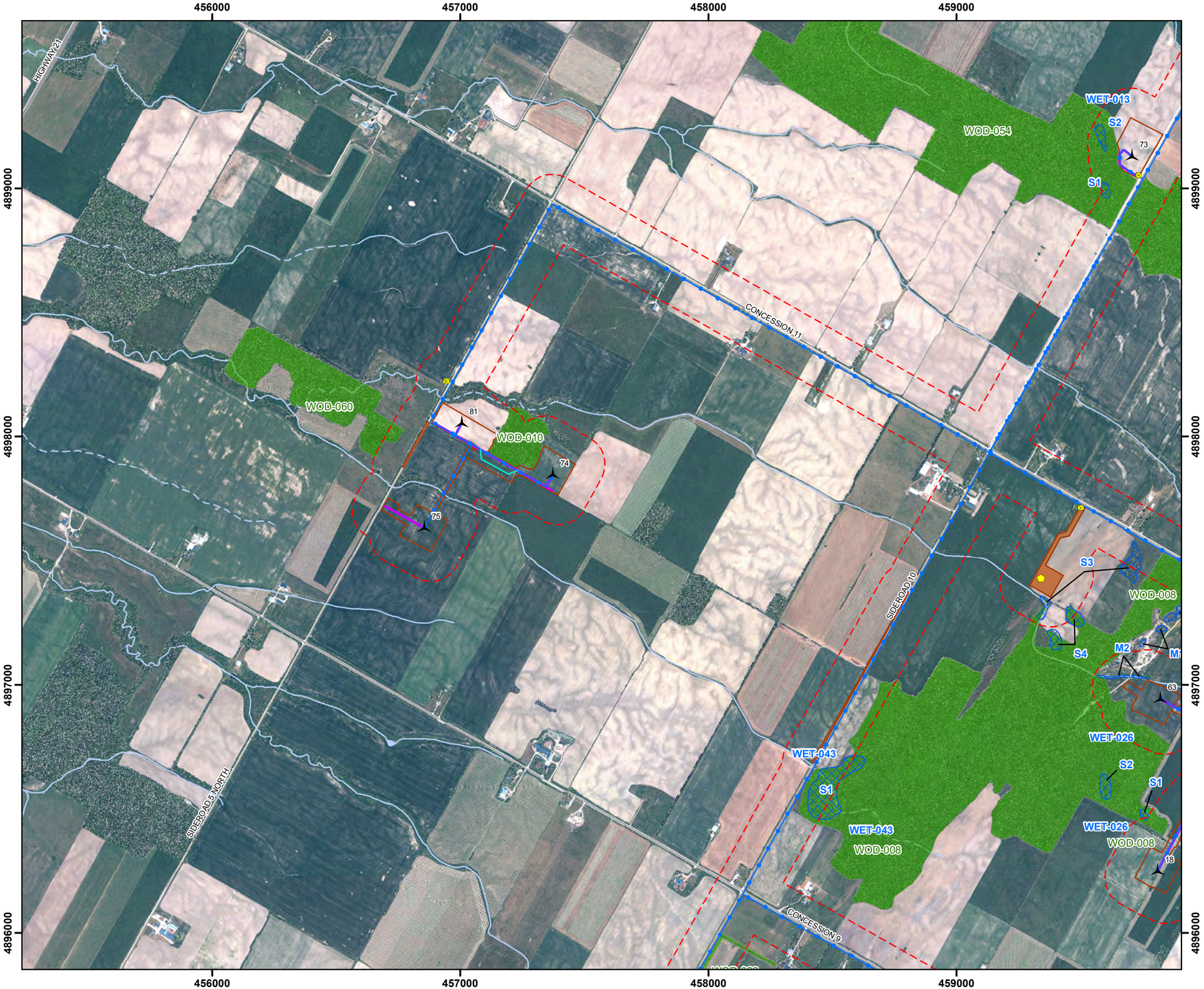
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Figure 28

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
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Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

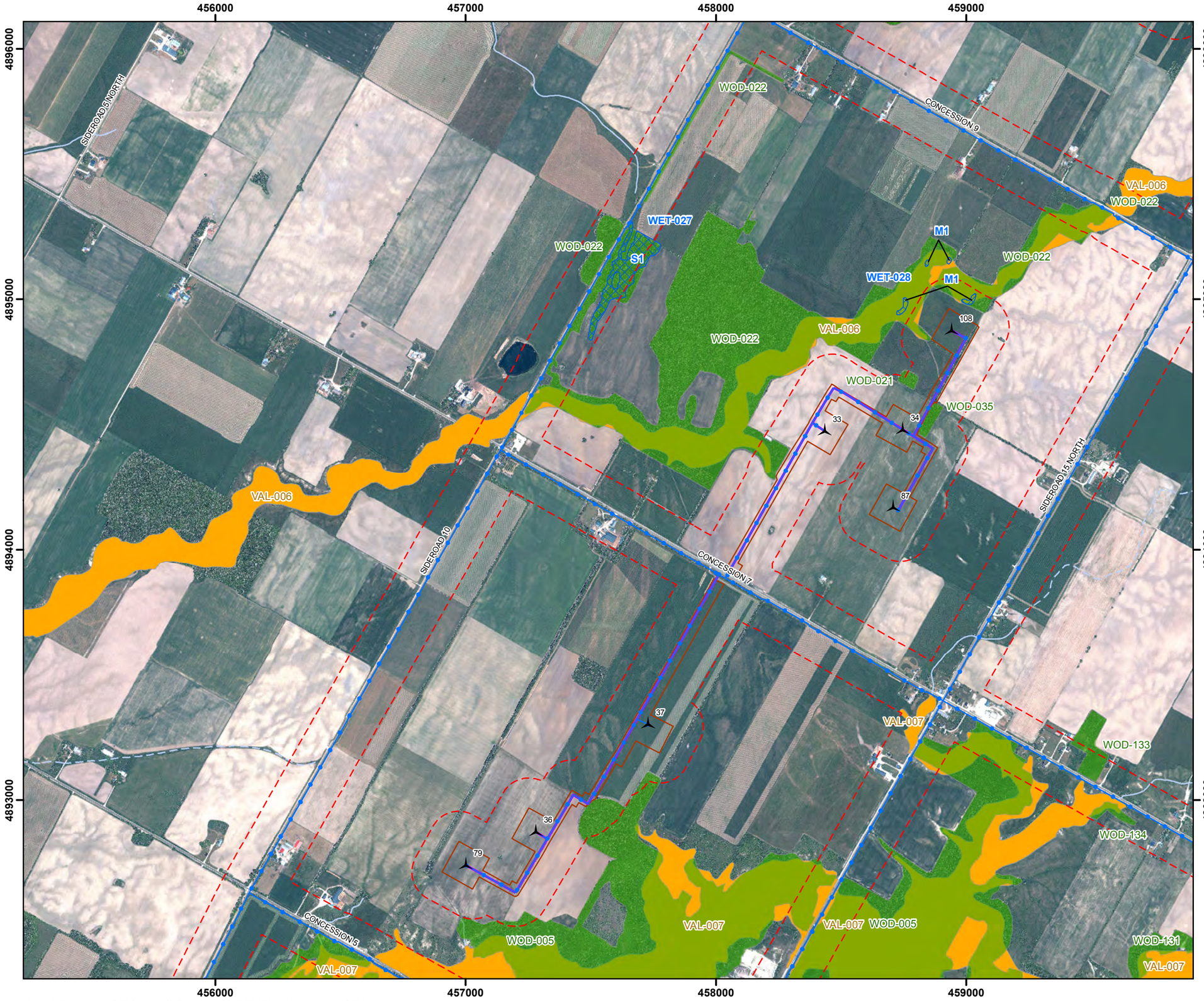
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Figure 29

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
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- Access Road
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Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

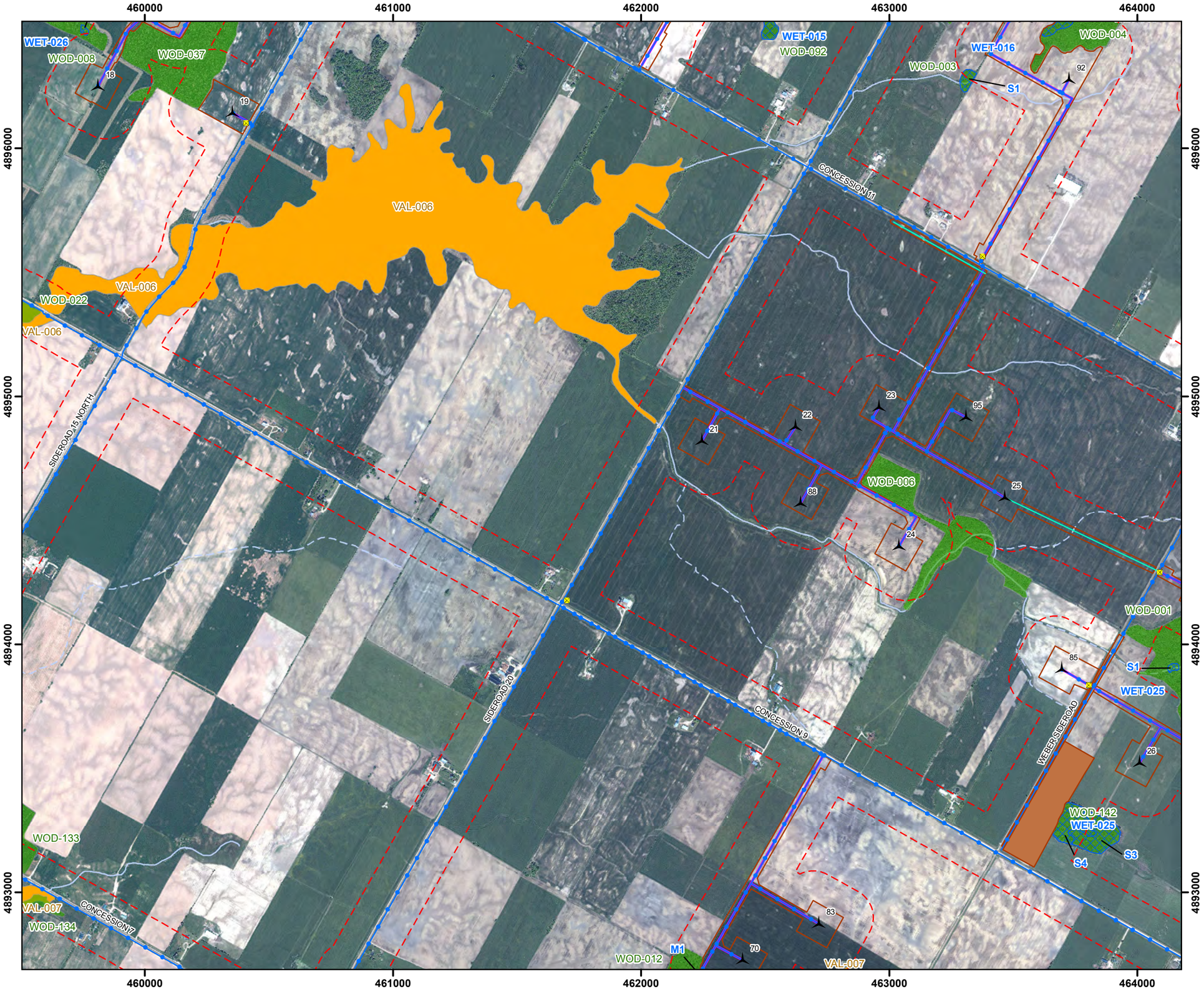
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Figure 30

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
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Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Figure 31

Armow Wind Project

Woodlands, Wetlands and Valleylands

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
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Project: 1275
Date: September 12, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

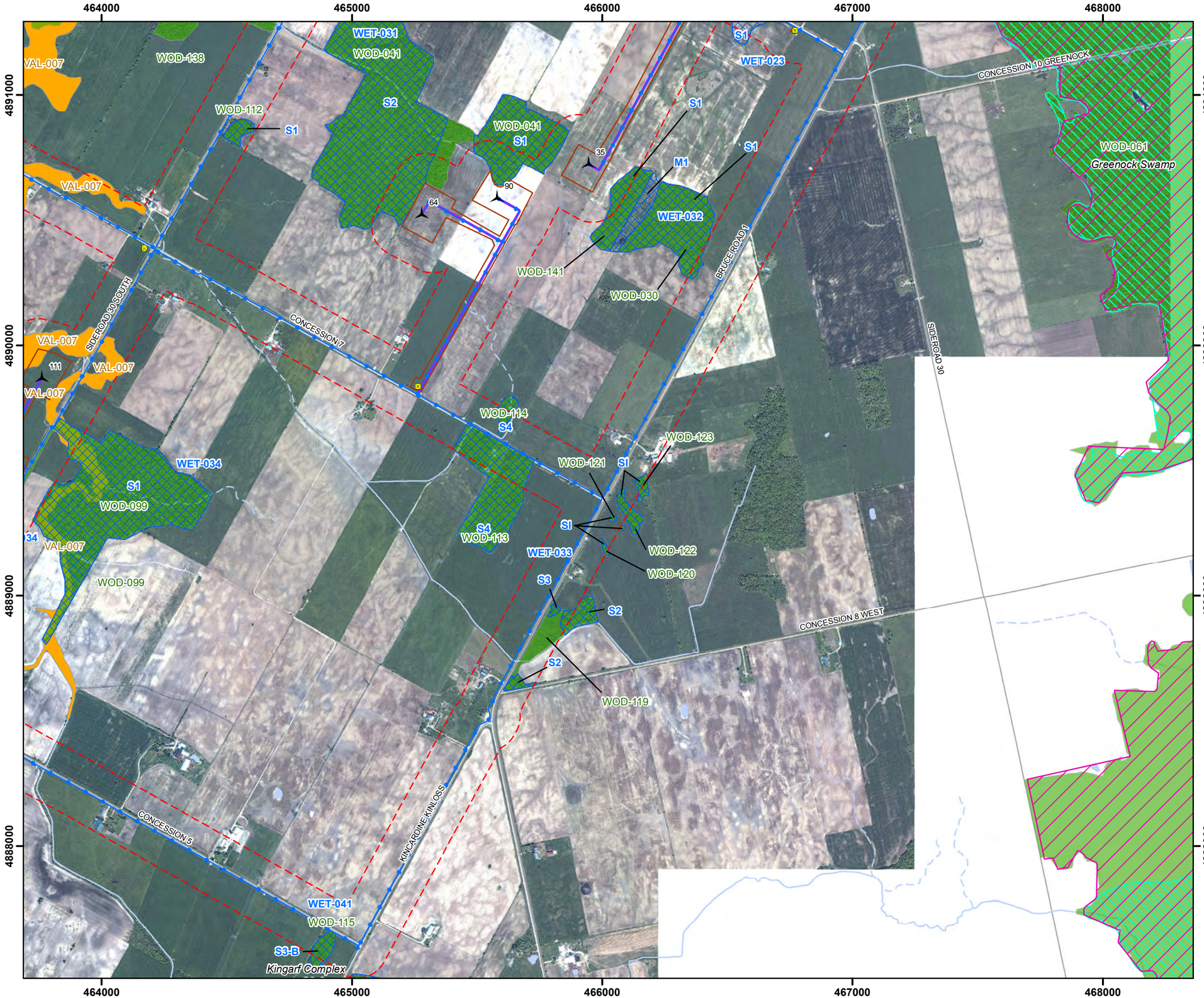
0 250 500 750 1,000 m

N

Figure 32

Armow Wind Project

Woodlands, Wetlands and Valleylands



Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
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Project: 1275 Date: August 27, 2012	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

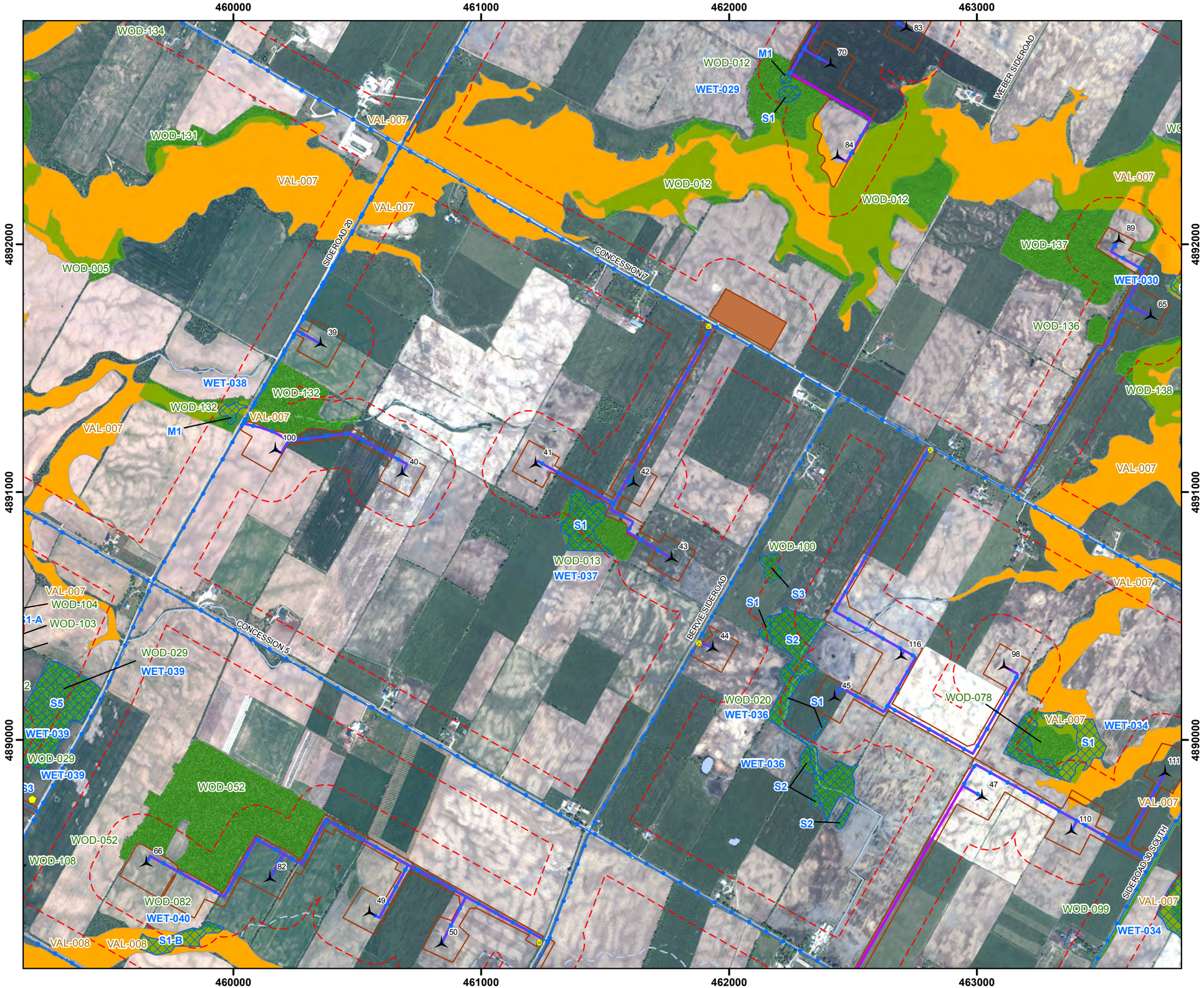
0 250 500 750 1,000 m

N

Figure 33

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
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- Access Road
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Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

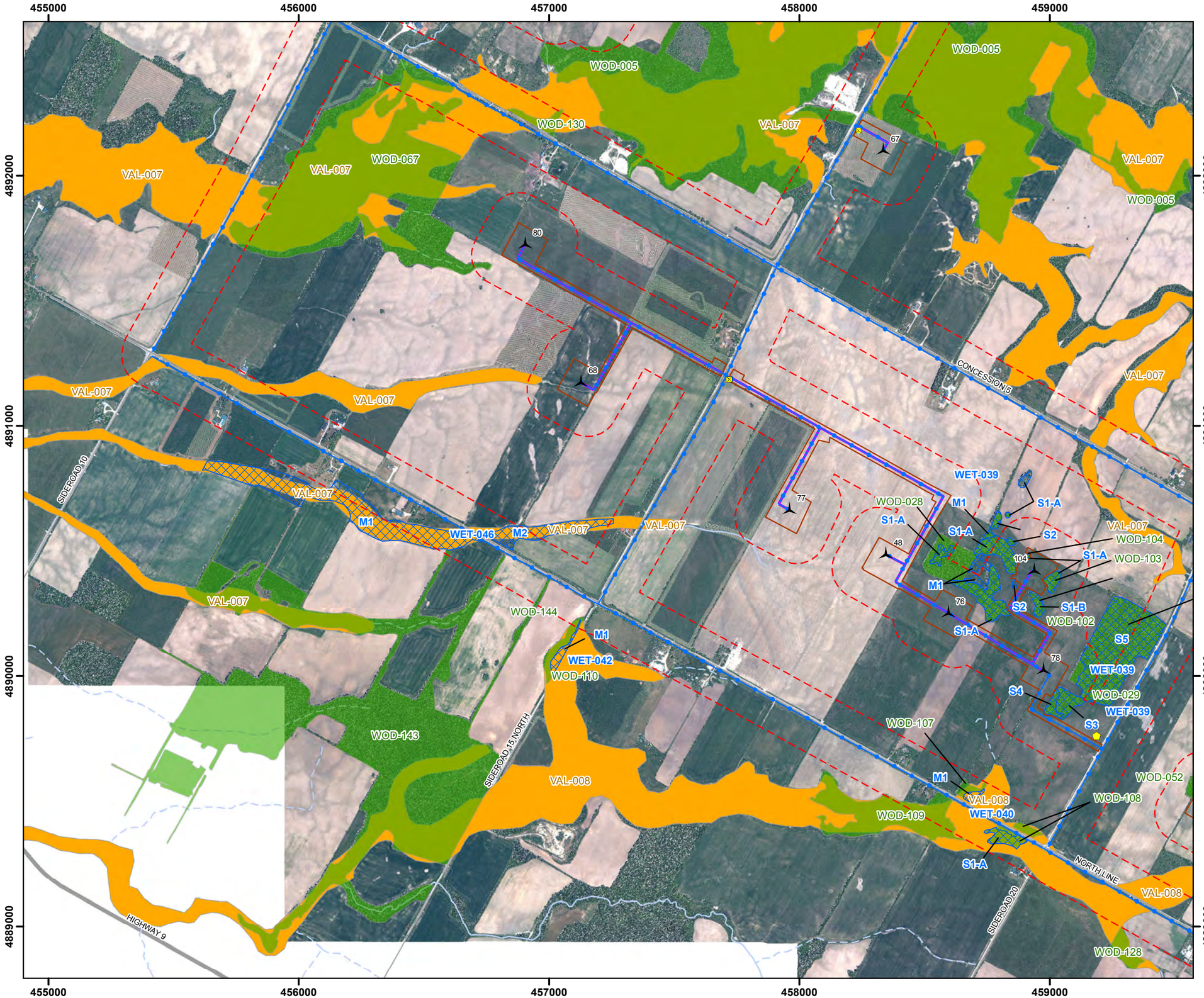
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Figure 34

Armow Wind Project

Woodlands, Wetlands and Valleylands



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
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Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

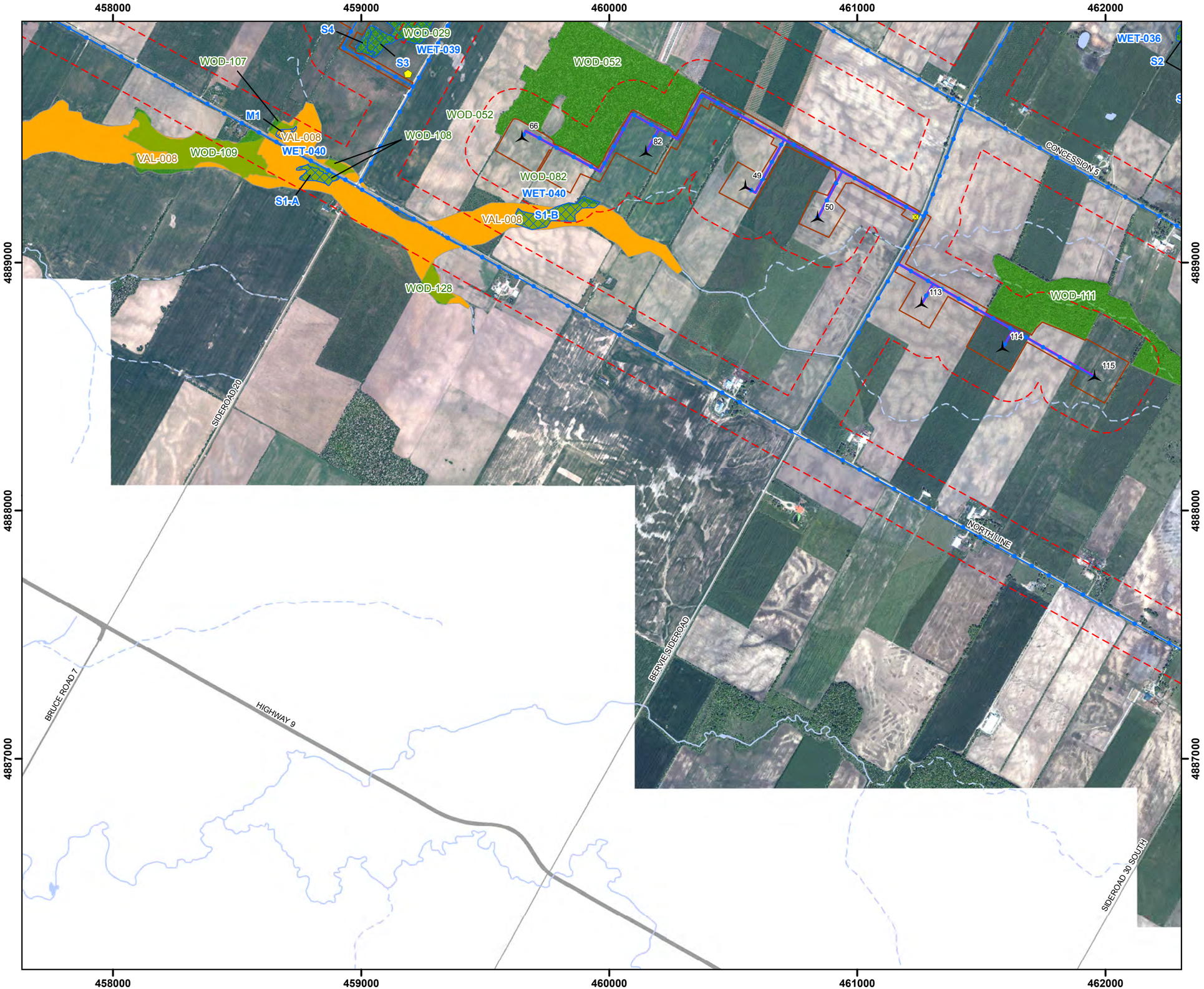
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Figure 35

Armow Wind Project

Woodlands, Wetlands and Valleylands



Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
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Project: 1275 Date: August 27, 2012	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

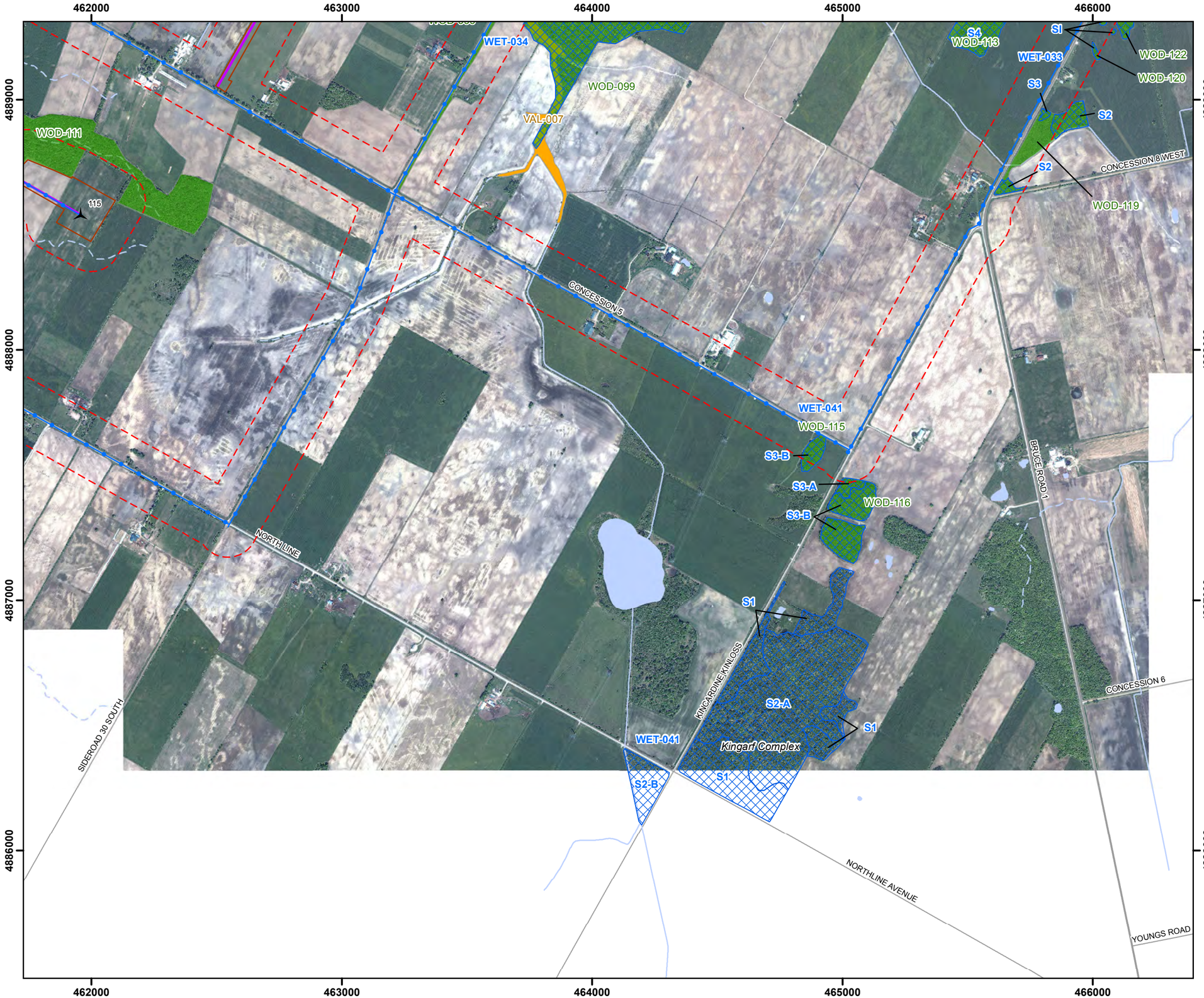
0 250 500 750 1,000 m

N

Figure 36

Armow Wind Project

Woodlands, Wetlands and Valleylands



Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig21-36_WOD_WET_VAL_15K_2012_08_09_SWM.mxd

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
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Imagery provided by: Golder Associates, 2011

Project: 1275 Date: August 27, 2012	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

0 250 500 750 1,000 m

N

Table 10. Summary of Woodlands within 120m of the Armow Wind Project

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
WOD-001[1] Woodland	16.19	FODM4-2 FODM5-8 SWDM2-2*	Dry-Fresh White Ash Hardwood Deciduous Forest with a sparse canopy, dominated by white ash (*Fraxinus americana*) and American basswood (*Tilia americana*). Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by white ash, red maple (*Acer rubrum*) and sugar maple (*Acer saccharum)*, and includes some American basswood. Green Ash Mineral Deciduous Swamp with occasional green ash (*Fraxinus pennsylvanica*), Freeman's maple (*Acer X freemanii*) and red maple.	• Large woodland • Provides some interior habitat • In close proximity to WOD-096 • Provides water protection • Diverse woodland	WT – 45 (T96) AR – 4 CB – 3 CA – 4 BU – >120	**30, 31**	**Yes**
WOD-002[2] Woodland	29.32	FODM5-8 FOMM6-1	Dry-Fresh Sugar Maple-White Ash Deciduous Forest with abundant white ash, and occasional species such as sugar maple, American basswood, and white elm (*Ulmus americana*). Fresh-Moist Sugar Maple-Hemlock Mixed Forest with abundant sugar maple and occasional species such as American beech (*Fagus grandifolia*), eastern hemlock (*Tsuga canadensis*) and white ash. Upland tree species (sugar maple, American beech) represent >50% of all tree species found within this community. Based on the 50% wetland vegetation rule, this	• Large woodland • Provides some interior habitat • May provide linkages between WOD-055, and WOD-092 • Diverse woodland	WT – 8 (T99) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**27**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			community has not been identified as a wetland.				
		SWMM2-2	Swamp Maple-Conifer Mineral Mixed Swamp dominated by red maple, Freeman's maple and eastern hemlock.				
		SWDM2-2*	Green Ash Mineral Deciduous Swamp dominated by green ash.				
		SWDM3-1*	Red Maple Mineral Deciduous Swamp dominated by red maple and Freeman's maple.				
WOD-003$_1$ Woodland	0.39	SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by green ash.	• Provides water protection	WT – >120 AR – 84 CB – 84 CA – 84 BU – >120	**27, 30**	**Yes**
WOD-004$_2$ Woodland	6.56	FODM5-6	Dry-Fresh Sugar Maple-Basswood Deciduous Forest dominated by sugar maple with some basswood and white elm in the canopy.	• Diverse woodland	WT – 34 (T99) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**26, 27, 30**	**Yes**
		SWDO1-2*	Green Ash Organic Deciduous Swamp dominated by green ash.				
WOD-005$_2$ Woodland	133.58	FODM5-2	Dry-Fresh Sugar Maple-Beech Deciduous Forest dominated by sugar maple and American beech, with some white elm and red maple.	• Large woodland • Contains interior habitat • Provides water protection • Diverse woodland	WT – 55 (T67) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**29, 33, 34**	**Yes**
		FOCM6-1	Dry-Fresh White Pine Naturalized Coniferous Plantation dominated by white pine (*Pinus strobus*), white ash				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			and white elm.				
		TAGM3	Deciduous Plantation dominated by trembling aspen (*Populus tremuloides*) and Eastern white cedar (*Thuja occidentalis*).				
		TAGM1	Coniferous Plantation dominated by white pine and white spruce (*Picea glauca*).				
		FODM3-1	Dry-Fresh Poplar Deciduous Forest dominated by trembling aspen and ash species.				
		FOC	Coniferous Forest				
		FOD	Deciduous Forest				
WOD-006$_1$ Woodland	8.70	FODM5-6	Dry-Fresh Sugar Maple-Basswood Deciduous Forest with equal abundance of American basswood and white ash, with some sugar maple and American beech.	• Provides water protection for one watercourse • Diverse woodland	WT – 70 (T24) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**30**	**Yes**
		FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple and white ash, with occasional American basswood and American beech.				
WOD-008$_2$ Woodland	94.85	FODM5-7	Dry-Fresh Sugar Maple-Black Cherry Deciduous Forest dominated by sugar maple and black cherry (*Prunus serotina)*, with smaller numbers of white birch (*Betula papyrifera)* and	• Large woodland • Provides interior habitat • Provides water protection function	WT – 71 (T63) AR – 28 CB – 2 CA – 21 BU – >120	**27, 28, 29, 30**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			trembling aspen.	for two watercourses			
		FODM3-1	Dry-Fresh Poplar Deciduous Forest dominated by trembling aspen with smaller numbers of American basswood, sugar maple, and white birch.	• Diverse woodland			
		SWDM2-2*	Green Ash Mineral Deciduous Swamp with abundant green ash, and occasional trembling aspen.				
		SWDM4-5	Poplar Mineral Deciduous Swamp with abundant trembling aspen as well as occasional white elm and green ash.				
		SWDM	Mineral Deciduous Swamp dominated by ash species or white elm.				
		FOD	Deciduous Forest				
WOD-009$_1$ Woodland	14.15	FODM8-1 SWDO2-3	Fresh-Moist Poplar Deciduous Forest dominated by sugar maple, trembling aspen and white ash. Swamp Maple Organic Deciduous Swamp, dominated by Freeman's maple and red maple.	• Provides some interior habitat • Diverse woodland	WT – 57 (T32) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**31**	**Yes**
WOD-010$_1$ Woodland	3.85	FODM5-2	Dry-Fresh Sugar Maple-Beech Deciduous Forest dominated by sugar maple with some American beech.	• Diverse woodland	WT – 28 (T74) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**28**	**Yes**
WOD-012$_2$ Woodland	45.90	TAGM1	Coniferous Plantation dominated by white pine, with occasional other	• Large woodland • Provides interior	WT – 1 (T84) AR – >0.1	**30, 33**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			species such as Norway spruce (*Picea abies*) and common apple (*Malus sylvestris*).	habitat • Provides water protection • Diverse woodland	CB – >0.1 CA – >0.1 BU – >120		
		FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple, with other species such as white ash, American beech and hop hornbeam (*Ostrya virginiana*).				
		FODM5-2	Dry-Fresh Sugar Maple-Beech Deciduous Forest dominated by sugar maple and American beech.				
		FOMM6-1	Fresh-Moist Sugar Maple-Hemlock Mixed Forest with abundant sugar maple, occasional eastern hemlock and rare numbers of American beech. Upland species (sugar maple, eastern hemlock, common burdock (*Arctium minus* ssp. *minus*), red raspberry (*Rubus idaeus* ssp. *idaeus*) represent >50% of all species found within this community. Based on the 50% wetland vegetation rule, this community has not been identified as a wetland.				
		FOD	Deciduous Forest				
		SWD	Deciduous Swamp				
WOD-013$_1$ Woodland	5.19	TAGM1	Coniferous Plantation dominated by white spruce.	• None	WT – 91 (T42) AR – >0.1 CB – >0.1 CA – >0.1	**33**	**Yes**
		SWDM3-3	Swamp Maple Deciduous Mineral				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			Swamp with abundant green ash, Freeman's maple, and white elm in lesser numbers.		BU – >120		
WOD-015$_2$ Woodland	28.99	SWDM2-2 FODM5-2 TAGM1 FODM11 FOD	Green Ash Mineral Deciduous Swamp with abundant green ash, and in lesser numbers, white elm and trembling aspen. Cattle use the woodlot, and appear to forage on the understory vegetation. Dry-Fresh Sugar Maple-Beech Deciduous Forest dominated by sugar maple with some American beech. Coniferous Plantation dominated by white spruce. Naturalized Deciduous Hedgerow with abundant white elm and occasional white ash. A former municipal road runs through the center of this hedgerow. An additional Deciduous Forest has been identified in this woodland; however, it is not located within 120m of the project location.	• Large woodland • Provides water protection for two watercourses • Diverse woodland .	WT – 22 (T59) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**26**	**Yes**
WOD-016$_2$ Woodland	51.19	SWDM3-3 SWDM4-5	Swamp Maple Deciduous Swamp dominated by Freeman's maple and green ash, with occasional other species such as trembling aspen and white elm. Poplar Mineral Deciduous Swamp	• Large woodland • Provides interior habitat • In close proximity to WOD-084, 086, 087 (hard to tell from map)	WT – >120 AR – >120 CB – 3 CA – >120 BU – >120	**22, 27**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			dominated by Freeman's maple and trembling aspen, with occasional other species such as green ash and white elm.	• May provide linkage function between the aforementioned woodlands • Provides water protection for one watercourse • Diverse woodland			
		SWDM3-2	Silver Maple Mineral Deciduous Swamp dominated by Freeman's maple and silver maple.				
		SWDM2-2	Green Ash Mineral Deciduous Swamp Type dominated by green ash and Freeman's maple.				
		FOD	Deciduous Forest				
		SWD	Deciduous Swamp				
WOD-018$_2$ Woodland	15.46	SWDM3-3	Swamp Maple Mineral Deciduous Swamp dominated by Freeman's maple with abundant trembling aspen and occasional green ash in the canopy.	• Contains a small amount of interior habitat	WT – >120 AR – >120 CB – 94 CA – >120 BU – >120	**22, 27**	**Yes**
		FODM4-2	Dry-Fresh White Ash Hardwood Deciduous Forest dominated by white ash, with occasional other species such as trembling aspen and American beech.				
WOD-019$_2$ Woodland	13.29	FODM5-8/ SWDM3-3 Complex	Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple, white ash and American basswood. This community is part of a complex with a Swamp Maple Mineral Deciduous Swamp dominated by Freeman's maple and green ash.	• Diverse woodland	WT – 2 (T60) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**26, 31**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
WOD-020$_1$ Woodland	9.13	FODM7-6 SWDO2-3 SWDO1-1	Fresh-Moist Black Ash Hardwood Lowland Deciduous Forest with abundant black ash (*Fraxinus nigra*) and occasional green ash. <u>Soil Profile</u> Position 4: SiC to 67cm (augering not possible to further depths). 0.5cm organics. Mottles at 11cm, Gleys at 15cm MR 6 Wetland species (black ash, green ash) represent >50% of all species found within this community. Based on the 50% wetland vegetation rule and the soil profile described above, this community has been considered as a wetland. Swamp Maple Organic Deciduous Swamp dominated by Freeman's maple. Black Ash Organic Deciduous Swamp dominated by black ash and green ash.	• Provides water protection • Diverse woodland	WT – 77 (T45) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**33, 35**	**Yes**
WOD-021$_1$ Woodland	0.40	FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest with occasional white ash, American basswood, sugar maple, and white elm.	• None	WT – 114 (T34) AR – 66 CB – 66 CA – 66 BU – >120	**29**	**Yes**
WOD-022$_2$ Woodland	74.17	FODM5-2	Dry-Fresh Sugar Maple-Beech Deciduous Forest dominated by sugar	• Large woodland • Provides interior	WT – 37 (T108)	**29, 30**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			maple, American beech and black cherry.	habitat • Provides water protection • Diverse woodland	AR – 1 CB – 1 CA – 1 BU – >120		
		FODM3-1*	Dry-Fresh Poplar Deciduous Forest dominated by trembling aspen and ash sp.				
		FOCM4-1*	Fresh-Moist White Cedar Coniferous Forest dominated by white cedar. Site access was not granted for this community, and as such, ELC was conducted from the roadside and soil augering was not possible. The topography in which this community is situated, however, indicates that this community is not a wetland, as it is located within a relatively steep valley slope. As such, this community has not been considered as a wetland.				
		FODM7-2	Fresh-Moist Green Ash-Hardwood Lowland Deciduous Forest dominated by green ash, with occasional other species such as white elm and white ash. <u>Soil Profile</u> Core 1,Mid-Slope (Position 3): fSL to 31cm over L to 49cm over coarse fragments. Mottles at 26cm , no Gley. 0.5cm Organics. MR 5. Core 2, Floodplain (Position 6): fSCL to 45cm over CL to 80cm over coarse fragments.				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			Mottles at 21cm, Gley at 50cm. Water Table at 61cm. No Organics. MR 6 Core 1 best represents the soils present within this community as it was taken mid-slope. Core 2 was taken within the creek floodplain itself, which attributes to the hydric soils present (MR 6). As such, based on the soils obtained within this community, and using the core best representative of this community (Core 1), NRSI has not considered this community as a wetland.				
		TAGM2	Mixed Plantation dominated by white pine and white ash.				
		SWDM2	Ash Mineral Deciduous swamp dominated by ash species.				
		TAGM1	Coniferous Plantation				
		FOM	Mixed Forest.				
WOD-023$_1$ Woodland	9.94	SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by green ash, Freeman's maple and white elm.	• Contains some interior habitat • Provides water protection for one watercourse	WT – 69 (T31) AR – 14 CB – 14 CA – 14 BU – >120	**31**	**Yes**
WOD-024$_1$ Woodland	0.48	SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by green ash with occasional red maple. This forest has been historically cleared of	• None	WT – >120 AR – 4 CB – 4 CA – 4	**31**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			undergrowth, resulting in excessive groundcover species growth.		BU – >120		
WOD-025$_1$ Woodland	0.42	FODM4-2	Dry-Fresh White Ash-Hardwood Deciduous Forest dominated by white ash, red maple and trembling aspen. Cattle grazing is apparent throughout this community.	• None	WT – 94 (T27) AR – 60 CB – 60 CA – 52 BU – >120	**27**	**Yes**
WOD-028$_1$ Woodland	5.98	FODM5-8 SWDM2-2 SWDM4-5	Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by white ash, trembling aspen, and sugar maple. Green Ash Mineral Deciduous Swamp dominated by green ash. Poplar Mineral Deciduous Swamp dominated by trembling aspen and green ash.	• In close proximity to other woodlands (WOD-102, 103, 104)	WT – 21 (T104) AR – 1 CB – 1 CA – 1 BU – >120	**34**	**Yes**
WOD-029$_1$ Woodland	9.86	SWDM2-2 SWDO2-3 SWDM4-1	Green Ash Mineral Deciduous Swamp dominated by green ash and trembling aspen. Swamp Maple Organic Deciduous Swamp dominated by Freeman's maple and green ash. Willow Mineral Deciduous Swamp dominated by crack willow (*Salix fragilis*).	• Provides some interior habitat	WT – 42 (T78) AR – 91 CB – 2 CA – 2 BU – >120	**33, 34, 35**	**Yes**
WOD-030$_1$ Woodland	7.54	SWDO2-1	Red Maple Organic Deciduous Swamp dominated by red maple, Freeman's maple, black ash, trembling	• Contains some interior habitat • Diverse woodland	WT – >120 AR – >120 CB – 88	**32**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			aspen and balsam poplar (*Populus balsamifera ssp. balsamifera*).		CA – >120 BU – >120		
WOD-031$_2$ Woodland	111.08	FODM4-2 FODM6-1 FODM5-8 FODM7-2	Dry-Fresh White Ash Hardwood Deciduous Forest dominated by white ash, with occasional other species such as American beech and sugar maple. The southeastern extent of this community is heavily used by cattle, as trampling, cattle dung, and minimal understory was identified. Fresh-Moist Sugar Maple–Hardwood Deciduous Forest dominated by green ash, and occasional species such as white elm, sugar maple, white ash and hop hornbeam. Dry-Fresh Sugar Maple-White Ash Deciduous Forest with abundant sugar maple, and occasional species such as American beech, eastern hemlock, white elm, white ash and black cherry. Fresh-Moist Green Ash Hardwood Lowland Deciduous Forest dominated by green ash and white elm. Wetland species (green ash, red-osier dogwood (*Cornus stolonifera*) represent >50% of all species found within this community. Based on the 50% wetland vegetation rule, this community has been identified as a wetland.	• Large woodland • Provides interior habitat • Provides water protection • Diverse woodland	WT – 38 (T57) AR – 1 CB – 1 CA – 1 BU – >120	**23, 26**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
		WODM5-4	Fresh-Moist Hawthorn/Apple Deciduous Woodland dominated by hawthorn sp. Only trembling aspen and white ash are found in rare amounts in the canopy. Upland tree species (sugar maple, white ash) represent >50% of all species found within this community. Based on the 50% wetland vegetation rule, this community has not been identified as a wetland.				
		FODM5-8/ SWDM2-2 Complex	Dry-Fresh Sugar Maple-White Ash Deciduous Forest with abundant sugar maple and white ash, and occasional American basswood. This community is part of a complex with a Green Ash Mineral Deciduous Swamp dominated by green ash, trembling aspen, red maple and Freeman's maple.				
		FODM11	Naturalized Deciduous Hedgerow.				
WOD-032$_2$ Woodland	15.21	FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple, white ash, American elm and basswood.	• Provides water protection for one watercourse • Diverse woodland	WT – 109 (T9) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**26**	**Yes**
WOD-035$_1$ Woodland	0.60	FODM5-4	Dry-Fresh Sugar Maple–Ironwood Deciduous Forest dominated equally by hop hornbeam, American basswood, American beech, and sugar maple.	• Diverse woodland	WT – 11 (T34) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**29**	**Yes**
WOD-037$_1$	13.92	FODM5-10	Dry–Fresh Sugar Maple–White Birch–	• Provides water	WT – 15 (T61)	**27, 30**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
Woodland		FODM6-4	Poplar Deciduous Forest dominated by sugar maple, with smaller numbers of trembling aspen, white elm, and American beech. Fresh-Moist Sugar Maple-White Elm Deciduous Forest dominated by sugar maple, as well as white elm, white ash, and hop hornbeam. Upland tree species (sugar maple, white ash, hop hornbeam) represent >50% of all species found within this community. Based on the 50% wetland vegetation rule, this community has not been identified as a wetland.	protection to one watercourse • Diverse woodland	AR – >0.1 CB – >0.1 CA – >0.1 BU – >120		
WOD-041$_2$ Woodland	40.67	FODM6-5 SWDM3-3	Fresh-Moist Sugar Maple-Hardwood Deciduous Forest with abundant sugar maple, and occasional other species such as white elm, white ash and American beech. Upland tree species (sugar maple, white ash, American beech) represent >50% of all tree species found within this community. Based on the 50% wetland vegetation rule, this community has not been identified as a wetland. Swamp Maple Mineral Deciduous Swamp with abundant Freeman's maple and occasional other species such as green ash, white ash, and	• Large woodland • Contains interior habitat • Provides water protection to one watercourse • Diverse woodland	WT – >0.1 (T64) AR – 50 CB – 50 CA – >0.1 BU – >120	**31, 32**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			white elm. Mineral Deciduous Swamp				
		SWDM					
WOD-044$_2$ Woodland	54.81	FODM6-5/ SWDM2-1 Complex	Fresh-Moist Sugar Maple – Hardwood Deciduous Forest dominated by sugar maple, with smaller numbers of red maple, white elm, trembling aspen, and American basswood. This community was identified as part of a Black Ash Mineral Deciduous Swamp complex dominated by black ash, with smaller numbers of white elm. <u>Soil Profile (FODM6-5)</u> Position 4: vfSL to 1cm, over F to 22cm, over vfSL to 60cm, over SiC to 88cm (auguring not possible to further depths). Mottles at 29cm, Gleys at 60cm. 22.5cm Organics, MR 5. Based on the soil profile described above, and since upland tree species (sugar maple, white ash, hop hornbeam, American beech, American basswood) represent >50% of all tree species found within this community, this community has not been identified as a wetland.	• Large woodland • Provides some interior habitat • May provide a linkage function between WOD-059 and WOD-125 • Provides water protection • Diverse woodland	WT – 33 (T101) AR – 31 CB - 1 CA – 1 BU – >120	**23, 24, 26,**	**Yes**
		SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by green ash and trembling aspen. This community was identified within the complex described above.				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
		FODM5-2 TAGM1	Dry-Fresh Sugar Maple – Beech Deciduous Forest with abundant sugar maple, and occasional other species such as white ash, black cherry, trembling aspen, and American beech. Coniferous Plantation				
WOD-047$_1$ Woodland	3.96	TAGM1	Coniferous Plantation dominated by white pine.	• In close proximity to WOD-031 • May provide water protection • May provide linkage function • Uncommon characteristics	WT – 45 (T6) AR – 96 CB – 96 CA – 42 BU – >120	**26**	**Yes**
WOD-050$_2$ Woodland	21.56	FODM6-5	Fresh-Moist Sugar Maple-Hardwood Deciduous Forest with abundant sugar maple, and occasional other species such as black cherry, white elm, American beech and eastern hemlock. <u>Soil Profile</u> Position 3: CL to 22cm, over C to 38cm, over C to 110cm. Mottles at 38cm, Gleys at 38cm. 1cm organics. MR 5. Based on the soil profile described above, and since upland tree species (sugar maple, black cherry, American beech) represent >50% of all tree species found within this community, this community has not been identified	• Large woodland • Provides some interior habitat • Provides some water protection • Diverse woodland	WT – 35 (T13) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**26**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			as a wetland. Green Ash Mineral Deciduous Swamp dominated by green ash and trembling aspen. Swamp Maple Mineral Deciduous Swamp dominated by Freeman's maple.				
WOD-051$_2$ Woodland	12.48	FODM5-8	Dry-Fresh Sugar Maple–White Ash Deciduous Forest dominated by sugar maple, white ash and basswood.	• May provide some interior habitat • Diverse woodland	WT – 65 (T15) AR – 116 CB – 29 CA – 1 BU – >120	**26**	**Yes**
WOD-052$_2$ Woodland	24.34	FODM6-5	Fresh-Moist Sugar Maple-Hardwood Deciduous Forest with abundant sugar maple and white elm, and occasional other species such as trembling aspen, black cherry, and American beech. <u>Soil Profile</u> Core 1, Position 5: SiL to 13cm, over SiCL to 37cm, over SiC to 120cm. Mottles at 16cm, Gleys at 39cm, Water table at 23cm. 2cm organics MR 6. Core 2, Position 4: SCL to 80. Mottles at 55cm, Gleys at 76cm. Water table at 12cm. 20cm organics. MR 4. Although soil profiles were obtained in	• Large woodland • Provides interior habitat • Diverse woodland	WT – 6 (T66) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**33, 34, 35**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			simple slope types, the general terrain within this community has been classified as a complex slope type. Two soil profiles have indicated both hydric and non-hydric substrates; however, since upland tree species (sugar maple, white ash, American beech, black cherry) represent >50% of all tree species found within this community, this community has not been identified as a wetland.				
WOD-054$_2$ Woodland	98.67	FODM6-5 FOMM6-1	Fresh-Moist Sugar Maple – Hardwood Deciduous Forest dominated by sugar maple, with smaller numbers of white ash, American beech, and black cherry. <u>Soil Profile</u> Position 4, SiL to 16cm, over SiC to 80cm. Mottles at 15cm, no Gley. Organics to 3cm. MR 5. Based on the soil profile described above, and since upland tree species (sugar maple, white ash, American beech, black cherry) represent >50% of all tree species found within this community, this community has not been identified as a wetland. Fresh-Moist Sugar Maple-Hemlock Mixed Forest dominated by sugar maple, American beech, and	• Large woodland • Contains interior habitat • Provides water protection for two watercourses • Diverse woodland	WT – 9 (T73) AR – 1 CB – 1 CA – 1 BU – >120	**21, 27, 28**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			occasional other species such as eastern hemlock and white elm. Upland tree species (sugar maple, American beech, white ash) represent >50% of all tree species found within this community. Based on the 50% wetland vegetation rule, this community has not been identified as a wetland.				
		FOM	Mixed Forest				
		FOD	Deciduous Forest				
WOD-055$_2$ Woodland	42.84	FOMM6-1	Fresh-Moist Sugar Maple–Hemlock Mixed Forest dominated by sugar maple, with smaller numbers of American beech, eastern hemlock, and white elm. Upland tree species (sugar maple, American beech) represent >50% of all tree species found within the FOMM6-1 community. Based on the 50% wetland vegetation rule, this community has not been identified as a wetland.	• Large woodland • Contains interior habitat • Diverse woodland	WT – 23 (T69) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**27**	**Yes**
		SWDM3-3	Swamp Maple Mineral Deciduous Swamp dominated by Freeman's maple.				
		SWDM3-1	Red Maple Mineral Deciduous Swamp dominated by red maple and green ash, with smaller numbers of				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			Freeman's maple.				
		SWDM2-2*	Green Ash Mineral Deciduous Swamp dominated by green ash and red maple.				
		FOM	Mixed Forest				
WOD-059$_2$ Woodland	106.26	FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest with abundant sugar maple and occasional other species such as white ash and American beech.	• Large woodland • Provides interior habitat • In close proximity to WOD-044 and WOD-076 • May provide linkages between WOD-076, WOD-064 and WOD-044 • Provides water protection • Diverse woodland • Contains uncommon characteristics	WT – 69 (T52) AR – 58 CB – 58 CA – 58 BU – >120	**23, 24, 25, 26**	**Yes**
		WODM4-2	White Ash Deciduous Woodland dominated by pin cherry (*Prunus pensylvanica*), white ash, sugar maple, common apple, and white elm.				
		WODM5-1*	Fresh-Moist Poplar Deciduous Woodland dominated by Poplar species (*Populus spp.*)				
		FODM5-1	Dry-Fresh Sugar Maple Deciduous Forest dominated by sugar maple and American beech.				
		SWCO1-2	White Cedar–Conifer Organic Coniferous Swamp dominated by white cedar and tamarack (*Larix laricina*).				
		TAGM1	Coniferous Plantation.				
		FOM	Mixed Forest.				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
		FOD FOC	Deciduous Forest. Coniferous Forest.				
WOD-060$_3$ Woodland	12.84	FODM5-2	Dry-Fresh Sugar Maple–Beech Deciduous Forest dominated by sugar maple, with smaller numbers of American beech, white ash, and black cherry.	• Provides water protection for two watercourses • Diverse woodland	WT – >120 AR – >120 CB – 114 CA – 66 BU – >120	**28**	**Yes**
WOD-061$_2$ Woodland	5093.06	FODM5-2 FODM4-2* SWDM3-3 SWDO SWMO FOD	Dry-Fresh Sugar Maple – Beech Deciduous Forest dominated by sugar maple, with smaller numbers of American beech, black cherry, and white ash. Dry-Fresh White Ash – Hardwood Deciduous Forest inclusion dominated by white ash and trembling aspen. Swamp Maple Mineral Deciduous Swamp dominated by Freeman's maple and red maple. Organic Deciduous Swamp located outside of project area. Organic Mixed Swamp located outside of project area. Deciduous Forest located outside of project area.	• Very large woodland • Provides interior habitat • In close proximity to other woodlands and habitats • Provides a linkage function • Provides water protection • Diverse woodland • Contains uncommon characteristics	WT – 58 (T103) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**25, 31, 32**	**Yes**
WOD-064$_2$ Woodland	6.28	FODM5-8	Dry-Fresh Sugar Maple – White Ash Deciduous Forest dominated by sugar maple, with smaller numbers of white	• Provides water protection • Diverse woodland	WT – 8 (T106) AR – >0.1 CB – >0.1	**25, 26**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			ash, black cherry, and American beech.		CA – >0.1 BU – >120		
		SWMO1-1	White Cedar-Hardwood Organic Mixed Swamp dominated by white cedar and yellow birch.				
WOD-067$_2$ Woodland	39.12	FODM5-2	Dry-Fresh Sugar Maple – Beech Deciduous Forest dominated by sugar maple, American beech, and white ash.	• Large woodland • Provides interior habitat • Provides water protection • Diverse woodland	WT – 104 (T80) AR – 90 CB – 2 CA – 54 BU – >120	**34**	**Yes**
		TAGM1	Coniferous Plantation dominated by red pine (*Pinus resinosa*) and the occasional white spruce.				
		FOCM2-2	Dry Fresh White Cedar Coniferous Forest with the occasional white cedar and white ash.				
		WOD	Deciduous Woodland				
WOD-072$_3$ Woodland	52.95	FODM8-1/ SWDM2-2 Complex	Fresh-Moist Poplar Deciduous Forest dominated by poplar species and ash species. A Green Ash Mineral Deciduous Swamp complex has been identified within this community. Within the project area, two small green ash swamp polygons have been identified and attributes are described below	• Large woodland • Provides interior habitat	WT – >120 AR – >120 CB – 3 CA – >120 BU – >120	**23, 26, 27**	**Yes**
		SWDM2-2	Green Ash Mineral Deciduous Swamp located adjacent to the roadside. Dominated by green ash, white elm,				

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			and red maple.				
WOD-074$_3$ Woodland	3.33	FOD SWDM2-2*	Deciduous Forest Green Ash Mineral Deciduous Swamp dominated by ash sp. and lesser amounts of maple sp.	• None	WT – 69 (T4) AR – 120 CB – 120 CA – 16 BU – >120	**23**	**Yes**
WOD-076$_2$ Woodland	59.46	FODM5-8 SWDO2-3 TAGM1 FOD SWMM5-2 FOD/SWD Complex	Dry-Fresh Sugar Maple – White Ash Deciduous Forest dominated by sugar maple, white ash, white birch, and American beech. This comprises a small section of WOD-076 on the south part of the woodland. This consists of a Swamp Maple Organic Deciduous Swamp dominated by Freeman's maple, green ash, white elm, and trembling aspen. Coniferous Plantation identified outside of project area. Deciduous Forest identified outside of project area. Tamarack-Hardwood Mineral Mixed Swamp dominated by populous species and tamarack. Deciduous Forest and Deciduous Swamp complex identified outside of project area.	• Large woodland • Provides interior habitat • In close proximity to WOD-059 and WOD-079 • May provide a linkage function • Provides water protection • Diverse woodland • Contains uncommon characteristics	WT – >120 AR – >120 CB – >120 CA – >0.1 BU – >120	**24, 25**	**Yes**
WOD-078$_3$ Woodland	7.93	FODM5-8	Dry-Fresh Sugar Maple – White Ash Deciduous Forest dominated by sugar	• Contains some interior habitat	WT – >120 AR – 76	**33**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			maple, white ash, and basswood in the canopy.	• Provides water protection • Diverse woodland	CB – 76 CA – 27 BU – >120		
		SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by green ash and trembling aspen.				
		FOCM2-2*	Dry-Fresh White Cedar Coniferous Forest dominated by white cedar.				
WOD-079$_2$ Woodland	185.72	FODM5-8	Dry-Fresh Sugar Maple – White Ash Deciduous Forest dominated by sugar maple, white ash, white birch, and American beech.	• Large woodland • Provides interior habitat • Provides water protection for a single water course • Diverse woodland	WT – >120 AR – >120 CB – >120 CA – >0.1 BU – >120	**24, 25**	**Yes**
		SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by green ash, Freeman's maple, and white cedar.				
		FOD/SWD Complex	Deciduous Forest and Deciduous Swamp complex identified outside of project area.				
WOD-082$_1$ Woodland	1.80	FODM7-3	Fresh-Moist Willow Lowland Deciduous Forest with abundant green ash, and occasional other species such as willow sp. (*Salix sp.*) and white elm. Wetland species (green ash, willow species) represent >50 of all tree species found within this community. Based on the 50% wetland vegetation rule, this community has been identified as a wetland.	• Provides water protection	WT – >120 AR – 76 CB – 76 CA – 40 BU – >120	**33, 35**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
WOD-084$_3$ Woodland	0.36	SWDM4-5	Poplar Mineral Deciduous Swamp with equal abundance of Freeman's maple and trembling aspen.	• In close proximity to WOD-016	WT – >120 AR – >120 CB – 60 CA – >120 BU – >120	**27**	**Yes**
WOD-086$_3$ Woodland	0.35	FODM6-1	Fresh-Moist Sugar Maple Lowland Ash Deciduous Forest dominated by ash and maple spp. Site access was not granted for this community, and as such, ELC was conducted from the roadside and soil augering was not possible. As this community is dominated by ash species and maple species, which cannot be regarded as wetland or upland indicators, this community has been assumed to be a wetland in the absence of appropriate habitat characteristics.	• In close proximity to WOD-016 • May provide linkage between WOD-016 and WOD-087 • Diverse woodland	WT – >120 AR – >120 CB – 37 CA – >120 BU – >120	**27**	**Yes**
WOD-087$_3$ Woodland	1.73	FODM6-1	Fresh-Moist Sugar Maple Lowland Ash Deciduous Forest dominated by ash and maple spp. Site access was not granted for this community, and as such, ELC was conducted from the roadside and soil augering was not possible. As this community is dominated by ash species and maple species, which cannot be regarded as wetland or upland indicators, this community has been assumed to be a wetland in the absence of appropriate habitat characteristics.	• In close proximity to WOD-086 • Diverse woodland	WT – >120 AR – >120 CB – 79 CA – >120 BU – >120	**27**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
WOD-088$_3$ Woodland	44.37	SWDM4-2 TAGM1	White Elm Mineral Deciduous Swamp dominated by white elm and green ash. Coniferous Plantation dominated by white pine and occasional green ash.	• Large woodland • Provides some interior habitat • Provides water protection for two watercourses	WT – >120 AR – >120 CB – 2 CA – >120 BU – >120	**22**	**Yes**
WOD-089$_3$ Woodland	38.78	SWDM3-3	Swamp Maple Mineral Deciduous Swamp with an abundance of Freeman's maple and occasional green ash, trembling aspen and white elm.	• Large woodland • Provides interior habitat	WT – >120 AR – >120 CB – 23 CA – >120 BU – >120	**22, 23, 27**	**Yes**
WOD-090$_1$ Woodland	0.52	SWDM3-1	Red Maple Mineral Deciduous Swamp with an abundance of red maple and green ash.	• None	WT – >120 AR – 67 CB – 67 CA – 67 BU – >120	**27**	**Yes**
WOD-091$_1$ Woodland	0.11	SWDM3-1	Swamp Maple Mineral Deciduous Swamp with abundant red maple and green ash.	• In close proximity to WOD-092 • May provide linkage between WOD-092 and WOD-055	WT – 88 (T69) AR – 71 CB – 71 CA – 71 BU – >120	**27**	**Yes**
WOD-092$_2$ Woodland	2.88	SWDM3-1 SWDM2-2*	Red Maple Mineral Deciduous Swamp comprised of an abundance of red maple and green ash. Green Ash Deciduous Mineral Swamp inclusion with abundant green ash and red maple.	• Close proximity to WOD-091 • May provide a linkage between WOD-091 and WOD-002 • Provides some water protection	WT – 87 (T69) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**27, 30**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
WOD-095$_3$ Woodland	5.36	SWDM2-2 SWD	Green Ash Mineral Deciduous Swamp consisting of abundant green ash and occasional Freeman's maple. Deciduous Swamp	• None	WT – >120 AR – >120 CB – 23 CA – >120 BU – >120	**31**	**Yes**
WOD-096$_2$ Woodland	0.20	FOD	Deciduous Forest	• None	WT – >120 AR – >120 CB – >120 CA – 22 BU – >120	**31**	**Yes**
WOD-099$_3$ Woodland	25.11	SWDM	Deciduous Swamp consisting of green ash and Freeman's maple.	• Large woodland • Contains some interior habitat • Provides water protection	WT – >120 AR – 15 CB – 1 CA – 16 BU – >120	**32, 33, 36**	**Yes**
WOD-100$_1$ Woodland	0.73	SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by green ash.	• None	WT – >120 AR – >120 CB – 50 CA – >120 BU – >120	**33**	**Yes**
WOD-102$_1$ Woodland	0.35	SWDM4-5	Poplar Mineral Deciduous Swamp with abundant trembling aspen and occasional green ash and balsam poplar.	• In close proximity to WOD-103 • May provide a linkage between WOD-028, WOD-103 and WOD-104	WT – 32 (T104) AR – 7 CB – 7 CA – 1 BU – >120	**34**	**Yes**
WOD-103$_1$ Woodland	0.37	SWDM2-2	Green Ash Mineral Deciduous Swamp with abundant green ash and occasional balsam poplar.	• In close proximity to WOD-102 • May provide a linkage between WOD-028, WOD-102 and WOD-104	WT – 1 (T104) AR – 52 CB – 52 CA – >0.1 BU – >120	**34**	**Yes**
WOD-104$_1$	0.04	SWDM2-2	Green Ash Mineral Deciduous Swamp	• In close proximity	WT – 1 (T104)	**34**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
Woodland			with abundant green ash and occasional balsam poplar.	to WOD-028 • May provide a linkage between WOD-028, WOD-102 and WOD-103	AR – 30 CB – 30 CA – >0.1 BU – >120		
WOD-107$_1$ Woodland	0.38	FOMM2-3	Dry-Fresh White Pine – Hardwood Mixed Forest dominated by hawthorn species and white pine.	• In close proximity to WOD-109 • Diverse woodland	WT – >120 AR – >120 CB – 20 CA – >120 BU – >120	**34, 35**	**Yes**
WOD-108$_3$ Woodland	1.19	WODM5-3 FOCM2-2	Fresh-Moist Manitoba Maple Deciduous Woodland dominated by Manitoba maple (*Acer negundo*) and ash species. Site access was not granted for this community, and as such, ELC was conducted from the roadside and soil augering was not possible. As this community is dominated by Manitoba maple, ash species and eastern white cedar, which cannot be regarded as wetland or upland indicators, this community has been assumed to be a wetland in the absence of appropriate habitat characteristics. Dry-Fresh White Cedar Conifer Forest dominated by white cedar and white spruce.	• Provides water protection	WT – >120 AR – >120 CB – 2 CA – >120 BU – >120	**34, 35**	**Yes**
WOD-109$_1$ Woodland	7.47	FOM	Mixed Forest dominated by white spruce, black locust (*Robinia pseudo-acacia*), white pine, and white ash.	• In close proximity to WOD-107 • May provide a linkage between	WT – >120 AR – >120 CB – 5 CA – >120	**34, 35**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
		WOD TAGM1	Deciduous Woodland Coniferous Plantation	WOD-107 and WOD-108 • Provides water protection • Diverse woodland	BU – >120		
WOD-110$_1$ Woodland	0.90	FODM6-3 FODM11	Fresh-Moist Sugar Maple-Yellow Birch Deciduous Forest with abundant white ash and occasional yellow birch and sugar maple. Upland tree species (sugar maple, white ash) represent >50% of all tree species found within this community. Based on the 50% wetland vegetation rule, this community has not been identified as a wetland. Naturalized Deciduous Hedgerow with abundant black locust and occasional red maple.	• Provides water protection • Diverse woodland	WT – >120 AR – >120 CB – 67 CA – >120 BU – >120	**34**	**Yes**
WOD-111$_2$ Woodland	16.60	FODM5-8	Dry-Fresh Sugar Maple – White Ash Deciduous Forest dominated by sugar maple, white ash, American basswood, and American beech.	• Provides water protection • Diverse woodland	WT – 51 (T114) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**35, 36**	**Yes**
WOD-112$_3$ Woodland	0.76	SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by green ash.	• None	WT – >120 AR – >120 CB – 16 CA – >120 BU – >120	**32**	**Yes**
WOD-113$_3$ Woodland	8.82	FOMM6-2	Fresh-Moist Hemlock-Hardwood Mixed Forest with abundant ash species and lesser amounts of American beech and eastern hemlock.	• In close proximity to WOD-114 • Provides some water protection	WT – >120 AR – >120 CB – 3 CA – >120	**32, 36**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			Site access was not granted for this community, and as such, ELC was conducted from the roadside and soil augering was not possible. As this community is dominated by ash species, which cannot be regarded as a wetland or upland indicator, as well as eastern hemlock, which occasionally occurs in wetlands, this community has been assumed to be a wetland in the absence of appropriate habitat characteristics.		BU – >120		
WOD-114$_3$ Woodland	0.76	FOMM6-2	Fresh-Moist Hemlock-Hardwood Mixed Forest with abundant ash species and lesser amounts of American beech and eastern hemlock. Site access was not granted for this community, and as such, ELC was conducted from the roadside and soil augering was not possible. As this community is dominated by ash species, which cannot be regarded as a wetland or upland indicator, as well as eastern hemlock, which occasionally occurs in wetlands, this community has been assumed to be a wetland in the absence of appropriate habitat characteristics.	• Provides some water protection	WT – >120 AR – >120 CB – 17 CA – >120 BU – >120	**32**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
WOD-115$_3$ Woodland	0.88	SWDM3	Maple Mineral Deciduous Swamp Ecosite with the occasional soft maple sp. and ash sp. and lesser amounts of trembling aspen.	• None	WT – >120 AR – >120 CB – >0.1 CA – >120 BU – >120	**32, 36**	**Yes**
WOD-116$_3$ Woodland	4.52	SWDM4-3 SWDM3	White Birch-Poplar Mineral Deciduous Swamp with an abundance of white birch and ash sp. with the occasional balsam poplar and white elm. Maple Mineral Deciduous Swamp Ecosite containing an abundance of soft maple and ash sp. with trembling aspen occurring occasionally.	• In close proximity to WOD-118 • May provide a linkage function between WOD-118 and WOD-115	WT – >120 AR – >120 CB – 104 CA – >120 BU – >120	**36**	**Yes**
WOD-119$_3$ Woodland	3.50	SWDM3 TAGM1 SWDM2	Maple Mineral Deciduous Swamp Ecosite dominated by soft maple sp. with occasional ash sp. Coniferous Plantation dominated by white spruce with occasional white pine. A small Ash Mineral Deciduous Swamp Ecosite comprised of ash sp. with the occasional white elm.	• Provides some water protection • Diverse woodland	WT – >120 AR – >120 CB – 20 CA – >120 BU – >120	**32, 36**	**Yes**
WOD-120$_3$ Woodland	0.12	SWDM2	Ash Mineral Deciduous Swamp Ecosite dominated by ash species.	• None	WT – >120 AR – >120 CB – 76 CA – >120 BU – >120	**32, 36**	**Yes**
WOD-121$_3$ Woodland	0.06	SWDM2	Ash Mineral Deciduous Swamp Ecosite dominated by ash species.	• None	WT – >120 AR – >120 CB – 62 CA – >120 BU – >120	**32**	**Yes**
WOD-122$_3$	0.81	SWDM2	Ash Mineral Deciduous Swamp	• May provide a	WT – >120	**32, 36**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
Woodland			Ecosite dominated by ash species.	linkage between WOD-123 and WOD-120	AR – >120 CB – 48 CA – >120 BU – >120		
WOD-123_3 Woodland	0.38	SWDM2	Ash Mineral Deciduous Swamp Ecosite dominated by ash sp.	• None	WT – >120 AR – >120 CB – 80 CA – >120 BU – >120	**32**	**Yes**
WOD-124_3 Woodland	1.20	TAGM1 FOD	Coniferous Plantation dominated by white pine with occasional Scot's pine (*Pinus sylvestris*) and sugar maple. Deciduous Forest	• Provides some water protection • Diverse woodland	WT – >120 AR – >120 CB – 1 CA – 18 BU – 23	**23**	**Yes**
WOD-125_3 Woodland	68.45	FODM7-2 SWMM4-1	Fresh-Moist Green Ash Hardwood Lowland Deciduous Forest dominated by green ash and poplar sp.. This community has been identified in 3 locations within this woodland. Site access was not granted for these communities, and as such, ELC was conducted from the roadside and soil augering was not possible. As this community is dominated by ash species and poplar species, which cannot be regarded as wetland or upland indicators, these communities have been assumed to be wetlands in the absence of appropriate habitat characteristics. Green Ash – Hemlock Mineral Mixed Swamp inclusion dominated by green ash, eastern hemlock, poplar sp. and black spruce.	• Large woodland • Provides interior habitat • Provides water protection	WT – >120 AR – >120 CB – >120 CA – >120 BU – 97	**23**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
		FOD/SWD Complex TAGM1	Deciduous Forest and Deciduous Swamp Complex. Coniferous Plantation				
WOD-126$_3$ Woodland	26.97	FODM4-2 FOD FOD/SWD Complex FODM11	Dry - Fresh White Ash - Hardwood Deciduous Forest dominated by ash sp. Deciduous Forest Deciduous Forest and Deciduous Swamp Complex Naturalized Deciduous Hedgerow	• Large woodland • Provides interior habitat	WT – >120 AR – >120 CB – >0.1 CA – 12 BU – >120	**31**	**Yes**
WOD-127$_3$ Woodland	3.24	SWDM2-2	Green Ash Mineral Deciduous Swamp with abundant green ash and occasional balsam poplar.	• Provides some water protection	WT – >120 AR – >120 CB – 3 CA – >120 BU – >120	**22**	**Yes**
WOD-128$_3$ Woodland	1.05	TAGM1	Coniferous Plantation	• Provides water protection	WT – >120 AR – >120 CB – 113 CA – >120 BU – >120	**35**	**Yes**
WOD-129$_3$ Woodland	0.11	SWDM2-2	Green Ash Mineral Deciduous Swamp with abundant green ash and balsam poplar.	• Provides some water protection	WT – >120 AR – >120 CB – 105 CA – >120 BU – >120	**22**	**Yes**
WOD-130$_3$ Woodland	0.85	FODM3-1	Dry – Fresh Poplar Deciduous Forest Type dominated by trembling aspen and ash species.	• None	WT – >120 AR – >120 CB – 20 CA – >120	**34**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
		FOCM2-2*	Dry – Fresh White Cedar Coniferous Forest inclusion dominated by eastern white cedar.		BU – >120		
WOD-131$_3$ Woodland	4.30	FOD	Deciduous Forest	• None	WT – >120 AR – >120 CB – 109 CA – >120 BU – >120	**33**	**Yes**
WOD-132$_2$ Woodland	10.65	FODM5-2 FODM5-8	Dry-Fresh Sugar Maple-Beech Deciduous Forest with abundant sugar maple and occasional other species such as American beech and white ash. Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple with occasional other species such as white ash and American beech.	• Some interior habitat • Diverse woodland	WT – 24 (T100) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**33**	**Yes**
WOD-133$_3$ Woodland	2.29	TAGM1	Coniferous Plantation dominated by white pine.	• Provides water protection	WT – >120 AR – >120 CB – 17 CA – >120 BU – >120	**29, 30**	**Yes**
WOD-134$_3$ Woodland	0.69	TAGM1	Coniferous Plantation dominated by Scot's pine and white spruce.	• None	WT – >120 AR – >120 CB – 15 CA – >120 BU – >120	**29, 30**	**Yes**
WOD-135$_3$ Woodland	0.19	SWDM4-5	Poplar Mineral Deciduous Swamp with equal abundance of Freeman's maple and trembling aspen.	• May be in close proximity to WOD-016 and WOD-084 • May act as a	WT – >120 AR – >120 CB – 3 CA – >120 BU – >120	**27**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
				linkage between WOD-016 and WOD-084			
WOD-136$_2$ Woodland	0.78	FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest with abundant sugar maple and white ash.	• May act as a linkage between WOD-137 and WOD-138 • Diverse woodland	WT – >120 AR – 2 CB – 2 CA – 2 BU – >120	**33**	**Yes**
WOD-137$_2$ Woodland	21.14	FODM5-8 TAGM1	Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple, and with abundant white ash and occasional hop hornbeam. Coniferous Plantation	• Provides water protection • Diverse woodland	WT – 4 (T89) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**31, 33**	**Yes**
WOD-138$_2$ Woodland	36.35	FODM5-8 FOMM3* FODM5-2 SWDM2-2*	Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple, with other species such as white ash, American beech and hop hornbeam. Dry – Fresh Hardwood – Hemlock Mixed Forest Ecosite dominated by eastern hemlock, with occasional other species such as American beech and sugar maple. Dry-Fresh Sugar Maple-Beech Deciduous Forest dominated by sugar maple and American beech. Green Ash Mineral Deciduous Swamp dominated by green ash, and occasional other species such as white elm and Freeman's maple.	• Provides water protection • Diverse woodland	WT – 64 (T65) AR – 52 CB – 17 CA – 38 BU – >120	**31, 32, 33**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
		FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple and white ash.				
WOD-139$_3$ Woodland	1.16	FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest with occasional white ash and sugar maple.	• In close proximity to WOD-059 • Provides water protection	WT – >120 AR – 70 CB – 70 CA – 70 BU – >120	**24**	**Yes**
WOD-140$_1$ Woodland	1.43	FODM11	Naturalized Deciduous Hedgerow with abundant white elm and occasional white ash. A former municipal road runs through the center of this hedgerow.	• None	WT – 50 (T94) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**26**	**Yes**
WOD-141$_2$ Woodland	3.28	SWDO2-1	Red Maple Organic Deciduous Swamp dominated by red maple, Freeman's maple, black ash, trembling aspen and balsam poplar.	• Diverse woodland • Provides some water protection	WT – 82 (T35) AR – 66 CB – 66 CA – 58 BU – >120	**32**	**Yes**
WOD-142$_1$ Woodland	3.51	SWDM3-3 SWDM2-2	Swamp Maple Deciduous Swamp with abundant Freeman's maple and green ash, with rare sweet cherry and white elm. Green Ash Mineral Deciduous Swamp dominated by green ash, with occasional Freeman's maple, white elm and trembling aspen.	• Provides some water protection	WT - >120 AR - >120 CB - >120 CA - >0.1 BU - >120	**30, 31**	**Yes**
WOD-143$_3$ Woodland	66.95	FODM11 WOMM4-1	Naturalized Deciduous Hedgerow with occasional sugar maple and white ash, along with rare occurrences of white elm. Fresh-Moist White Cedar-Hardwood	• Large woodland • Interior habitat • Located in close proximity to VAL-008 • May provide water	WT - >120 AR - >120 CB - 10 CA - >120 BU - >120	**34**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required
			Mixed Woodland with occasional white ash, white cedar, English hawthorn (*Crataegus monogyna*), trembling aspen and rare occurrences of black cherry.	protection			
		FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest with abundant white ash and occasional sugar maple, basswood, white elm and trembling aspen, along with rare occurrences of hemlock.				
		SWMM1-1	White Cedar–Hardwood Mineral Mixed Swamp with abundant green ash and occasional white elm and white cedar.				
WOD-144$_3$ Woodland	0.61	FODM11	Naturalized Deciduous Hedgerow with occasional sugar maple and white ash, along with rare occurrences of white elm.	• Diverse woodland • Proximity to WOD-143	WT - >120 AR - >120 CB - 3 CA - >120 BU - >120	**34**	**Yes**

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

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

Legend
WT: Wind Turbine
AR: Access Road
CB: Cabling
CA: Construction Activity/Temporary Infrastructure/Balance of Operations
BU: Building/Transformer Station/Distribution Station

6.3 Wetlands

During the site investigation, NRSI biologists identified 41 potential wetlands located within 120m of the Armow Wind Project location. This is a change from the records review, as available basemapping indicated a total of 89 wetlands within 120m of the Armow Wind Project location. Many of these wetlands were counted as individual wetlands during the records review; however, some of these wetlands identified during the site investigations have been grouped into complexes based on localized catchment basins, as well as characteristic and functional similarities. As such, site investigations have confirmed that some of these individual identified wetlands have been identified as part of a wetland complex. The project is not proposed to be located within the boundaries of any wetlands. The wetlands identified in the project area include individual wetlands, as well as wetland complexes, and range in size from 0.3ha to 8947.6ha. These wetlands typically represent headwater wetlands, most often characterized by green ash (*Fraxinus pennsylvanica*), silver maple (*Acer saccharinum*), and/or Freeman's maple (*Acer x freemanii*) mineral deciduous swamps. In addition, two PSW complexes, Greenock Swamp and Glammis Bog, have also been identified within 120m of the project location. Ecological Land Classification (ELC) mapping of all wetlands within the project area are shown on Figures 2-19. The location of each wetland or wetland complex identified during the site investigations is shown on Figures 20-36.

Much of the project area is represented by relatively flat land and often contains heavy soils, typically represented by silty clay, sandy clay, or clay loams. These conditions appear to have resulted in the formation of many poorly drained areas, and minor variations in topography have allowed for the formation of a widespread, complex mosaic of largely isolated wetlands. This is particularly true in the eastern portion of the project area, between the origins of several creeks draining into Lake Huron and the Greenock Swamp and Glammis Bog PSWs. Streams and rivers are abundant in the western portion of the project area. Some wetlands are riverine; however, much of the landscape continues to be represented by this complex of wetlands.

Each of these wetlands will be treated as significant. While many of these wetlands could be considered to be one (or more) large, single wetland complexes located within

the headwaters of many streams draining into Lake Huron, identifying the composition and attributes of these small wetland units becomes more difficult, and less practical, when they are considered all together. As a result, wetlands identified during the site investigations have been grouped into smaller complexes based on localized catchment basins, and where wetlands within these were characteristically and functionally similar. Some wetlands were treated as single wetlands where the characteristics of neighbouring unidentified wetlands were unknown, or if there was uncertainty in the similarity of wetland functions.

Most of the wetlands within the Armow Wind Project area represent isolated or palustrine mineral deciduous swamps as described above; however, several notable wetlands have been identified. Wetland WET-003 is 26.59ha in size is located immediately west of the Glammis Bog (Figures 24, 26). This wetland is also characterized by a small bog; however, it has not been included in the Glammis Bog PSW complex as it belongs to an adjacent catchment basin. This wetland can be described as a small kettle bog, formed in a hole, created by a large block of melting ice during glacial periods. As a result of the continual presence of water within this hole, organic material has filled in the centre and has left a transitional peatland, characterized almost exclusively by a thick carpet of several *Sphagnum* moss species and a solid layer of leatherleaf (*Chamaedaphne calyculata*). Concentric rings of slender willow (*Salix petiolaris*) thicket swamp and American great bulrush (*Schoenoplectus tabernaemontani*) marsh radiate from the central peatland. This community has been characterized as a Leatherleaf Shrub Kettle Bog (BOSD2-1), a provincially rare vegetation community, and is further discussed under Section 6.5.5 Summary of Wildlife Habitats. .

Wetland WET-004 is part of the Glammis Bog PSW complex (Figures 24-26). Small portions of the southern and easternmost wetland units of the complex are located within 120m of the project location. A small portion of the westernmost wetland unit of the complex is located just outside the project area. These wetland units are either contiguous to the previously delineated Glammis Bog PSW complex or are located in the same immediate catchment basin and within 750m of the previously delineated complex.

As a result, these wetland units have been considered as part of the Glammis Bog complex, and identified as wetland WET-004.

WET-021 represents the Greenock Swamp PSW complex (Figure 25, 31). Small portions of the westernmost wetland units of the complex are located within 120m of the project location. No new wetland units have been added to this complex. As such, the boundary of this wetland has not been modified as a result of the site investigation.

The size, composition, attributes, and function of all wetlands identified within 120m of the project location have been described in Table 11 below. Functions listed for each wetland are those that are expected to conservatively receive half or more of the total points available for each functional component as per the Appendix C approach to the Ontario Wetland Evaluation System (OWES), although a specific evaluation was not completed at this stage in the process.

Table 11. Summary of Wetlands within 120m of the Armow Wind Project

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
WET-001$_3$ Wetland	7.56ha	Wetland Complex SWDM2-2 Green Ash Mineral Deciduous Swamp MAMM1-3 Reed Canary Grass Graminoid Mineral Meadow Marsh	<u>Wetland Types</u> 80% Swamp 20% Marsh <u>Vegetation Communities</u> **Two forms:** **S1** deciduous trees (*Fraxinus pennsylvanica*), tall shrubs (*Salix* sp.) **M1** narrow-leaved emergents (*Phalaris arundinacea*), robust emergents (*Typha angustifolia*) <u>Soils</u> 100% mineral (sandy loam[1]) <u>Site Type</u> 100% Isolated	• Primary productivity • Interspersion – edge habitats with higher diversity • Flood attenuation • Groundwater recharge	WT – >120 AR – >120 CB – 3 CA – >120 BU – >120	**22, 23**	**Yes**
WET-002$_3$ Wetland	39.35ha	Wetland Complex MAMM1-3 Reed Canary Grass Graminoid Mineral Meadow Marsh SWDM3-3 Swamp Maple Mineral Deciduous Swamp	<u>Wetland Types</u> 99% Swamp 1% Marsh <u>Vegetation Communities</u> **One form:** **M1** narrow-leaved emergents (*Phalaris arundinacea*), **Two forms:** **S1** deciduous trees (*Acer x freemanii*), tall shrubs	• Primary productivity • Flood attenuation • Groundwater recharge	WT – >120 AR – >120 CB – 23 CA – >120 BU – >120	**22, 23, 27**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			(*Viburnum cassinoides*) <u>Soils</u> 100% mineral (sandy loam[1]) <u>Site Type</u> 100% Isolated				
WET-003$_1$ Wetland	2.46ha	Individual Wetland MASO1-2 Bulrush Organic Shallow Marsh Type SWTO2-3 Slender Willow Organic Deciduous Thicket Swamp BOSD2-1 Leatherleaf Shrub Kettle Bog	<u>Wetland Types</u> 43% Marsh 35% Swamp 22% Bog <u>Vegetation Communities</u> **One form:** **M1** robust emergents (*Schoenoplectus tabernaemontani*) **Two forms:** **S1** tall shrubs (*Salix petiolaris*), low shrubs (*Chamaedaphne calyculata*) **B1** low shrubs (*Chamaedaphne calyculata*), mosses (*Sphagnum* spp.) <u>Soils</u> 100% organic (humic and fibric) <u>Site Type</u> 100% Isolated	• Open water habitat • Flood attenuation • Long-term nutrient trap • Groundwater recharge	WT – >120 AR – >120 CB – 25 CA – 56 BU – >120	**24, 26**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
WET-004$_2$ Wetland	Size of existing PSW: 79.3ha^3 (S1-S16, M1-W2, B1-B2) Size of additional communities: 15.76ha	Wetland Complex Includes previously identified and now complexed wetlands of the Glammis Bog PSW Described wetland communities: SWTM2-1 Red Osier Dogwood Mineral Deciduous Thicket Swamp SWCO1-2 White Cedar-Conifer Organic Coniferous Swamp SWMM5-2 Tamarack – Hardwood Mineral Mixed Swamp MAMO2-2 Joe Pye Weed Forb Organic Meadow Marsh Type SWDO2-3 Swamp Maple Organic Deciduous Swamp	<u>Wetland Types Described</u> 72% Swamp 28% Marsh <u>Vegetation Communities Described</u> **One form:** **S17** tall shrubs (*Cornus stolonifera*) **S18** coniferous trees (*Thuja occidentalis*) **Two forms:** **S19** deciduous trees (*Populus* sp.), coniferous trees (*Larix laricina*) **Three forms:** **M3** dead trees (*Thuja occidentalis, Ulmus americana*), herbs (*Eupatorium maculatum* ssp. *maculatum*, *Eupatorium perfoliatum*), narrow-leaved emergents (*Phalaris arundinacea*) **S16** deciduous trees (*Acer x freemanii*, *Fraxinus pennsylvanica*), low shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*) <u>Soils Described</u> Mineral – sandy loam	Existing PSW Functions as per Appendix C: • Open water habitat • Flood attenuation • Long-term nutrient trap • Habitat for provincially significant animal species, plant species • Habitat for regionally significant species (*Drosera intermedia, Solidago caesia, Platanthera blephariglottis* var. *blephariglottis*) • Nesting of colonial waterbirds: great blue heron (within last 5 years) • Winter cover for wildlife: local significance for deer • Waterfowl production: local significance	WT – >120 AR – 118 CB - 118 CA – >0.1 BU – >120	**24, 25, 26**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			(S17)[1], sandy loam/loam (S19)[1], gSiC (S16) Organic – mesic (S18), organic (M3)[1] <u>Site Types Described</u> 6% Isolated (S17, S19) 94% Palustrine (S16, S18, M3)				
WET-005$_3$ Wetland	6.44ha	Individual Wetland SWDM2-2 Green Ash Mineral Deciduous Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Types</u> **S1** deciduous trees (*Acer* sp., *Fraxinus* sp.), narrow-leaved emergents (*Carex lacustris*) <u>Soils</u> 100% mineral (loam[1]) <u>Site Type</u> 100% Palustrine	• Primary productivity • Habitat connectivity • Flood attenuation • Groundwater recharge	WT – >120 AR – >120 CB – >120 CA – 63 BU – >120	**24, 25**	**Yes**
WET-006$_2$ Wetland	1.48ha	Wetland Complex SWMO1-1 White Cedar-Hardwood Organic Mixed Swamp MAMM1-3* Reed Canary Grass Graminoid Mineral Meadow Marsh	<u>Wetland Type</u> 73% Swamp 27% Marsh <u>Vegetation Communities</u> **One form:** **M1** narrow-leaved emergents (*Phalaris arundinacea*) **Six Forms:**	• Primary productivity • Habitat connectivity • Flood attenuation • Short-term water quality improvement • Long-term nutrient trap • Ground water recharge	WT – 97 (T106) AR – 12 CB – 12 CA – 9 BU – >120	**25, 26**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			S1 deciduous trees (*Betula allegheniensis*), coniferous trees (*Thuja occidentalis*), herbs (*Eupatorium maculatum* ssp. *maculatum*, *Onoclea sensibilis*), narrow-leaved emergents (*Poa palustris*), robust emergents (*Typha latifolia*), moss sp. Soils 73% organic (mesic) 27% mineral (clay loam[1]) Site Type 100% Palustrine				
WET-007$_2$ Wetland	3.40ha	Wetland Complex MAMM1-9 Narrow-leaved Sedge Graminoid Mineral Meadow Marsh Type MAMM2-3* Purple-stemmed Aster Mineral Meadow Marsh Type SWTM2-2* Silky Dogwood Mineral Deciduous Thicket Swamp SWTM3-3 Slender Willow	Wetland Types 61% Swamp 39% Marsh Vegetation Communities **One form:** **M1** narrow-leaved emergents (*Carex* sp.) **Two forms:** **M2** herbs (*Symphyotrichum puniceum*), narrow-leaved emergents (*Phalaris arundinacea*) **S1** tall shrubs (*Cornus amomum* ssp. *obliqua*), moss sp.	• Primary productivity • Interspersion - edge habitats with higher diversity • Flood attenuation • Groundwater recharge	WT – 34 (T6) AR – 16 CB – 16 CA – 5 BU – >120	**26**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Mineral Deciduous Thicket Swamp	**S2-A** tall shrubs (*Salix petiolaris*), narrow-leaved emergents (*Juncus* sp.) **S2-B** tall shrubs (*Salix petiolaris, Cornus amomum* ssp. *obliqua*), narrow-leaved emergents (*Scirpus atrovirens*) Soils 100% mineral (SiC) Site Type 91% Isolated 9% Riverine				
WET-008$_2$ Wetland	9.67ha	Wetland Complex MAMM1-3 Reed Canary Grass Graminoid Mineral Meadow Marsh FODM7-2 Fresh-Moist Green Ash-Hardwood Lowland Deciduous Forest (SWDM2-2) SWDM2-2 Green Ash Mineral Deciduous Swamp MAMM1-16 Mixed Graminoid	Wetland Types 58% Swamp 42% Marsh Vegetation Communities **One form:** **M1** narrow-leaved emergents (*Phalaris arundinacea*) **S1** deciduous trees (*Fraxinus pennsylvanica*) **Two forms:** **S2** tall shrubs (*Salix* sp.), narrow-leaved emergents (*Phalaris arundinacea*) **Three forms:**	• Primary productivity • Nutrient accumulation (productivity) • Flood attenuation • Short-term water quality improvement • Shoreline Erosion Control • Groundwater Recharge	WT – 49 (T12) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**26**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Mineral Meadow Marsh SWTM3 Willow Mineral Deciduous Thicket Swamp	**S3** deciduous trees (*Fraxinus pennsylvanica*), tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*) <u>Soils</u> 100% mineral (variable alluvial soils[1] , CL/SiL/SiCL[1], SiCL over SiC) <u>Site Type</u> 100% Riverine				
WET-009$_1$ Wetland	5.14ha	Wetland Complex SWTM2-1 Red-osier Dogwood Mineral Deciduous Thicket Swamp MAMM1-3 Reed Canary Grass Graminoid Mineral Meadow Marsh FODM6-1 Fresh-Moist Sugar Maple-Lowland Ash Deciduous Forest Type (or SWDM2-2)	<u>Wetland Types</u> 97% Swamp 3% Marsh <u>Vegetation Communities</u> **One form:** **M1** narrow-leaved emergents (*Phalaris arundinacea*) **S1** tall shrubs (*Cornus stolonifera*) **Two forms:** **S2** deciduous trees (*Fraxinus pennsylvanica*), herbs (*Waldsteinia fragarioides*, *Symphyotrichum lateriflorum*)	• Primary productivity • Flood attenuation • Groundwater recharge	WT – 82 (T57) AR – >120 CB – >120 CA – 69 BU – >120	**26**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			<u>Soils</u> 100% mineral (SiC, SiL over CL, SiL over SiC) <u>Site Type</u> 100% Isolated				
WET-010$_2$ Wetland	5.21ha	Wetland Complex MAMM1-3 Reed Canary Grass Graminoid Mineral Meadow Marsh MAMM1-16* Mixed Graminoid Mineral Meadow Marsh SWDM2-2 Green Ash Mineral Deciduous Swamp SWTM2-1* Red Osier Dogwood Mineral Deciduous Thicket Swamp	<u>Wetland Types</u> 78% Swamp 22% Marsh <u>Vegetation Communities</u> **One form:** **M1-A** narrow-leaved emergents (*Phalaris arundinacea*) **M1-B** narrow-leaved emergents (*Carex lacustris*) **M1-C** narrow-leaved emergents (*Carex lupulina*, *Carex bebbiana*) **S1** deciduous trees (*Fraxinus pennsylvanica*) **S3** tall shrubs (*Cornus stolonifera*) **Two Forms:** **S2** deciduous trees (*Fraxinus pennsylvanica*), herbs (*Symphyotrichum lateriflorum*)	• Primary productivity • Interspersion – edge habitats with higher diversity • Flood attenuation • Groundwater recharge	WT – 29 (T4) AR – 12 CB – 3 CA – 12 BU – >120	**23, 26**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			<u>Soils</u> 100% mineral (SiCL) <u>Site Type</u> 100% Isolated				
WET-011$_2$ Wetland	54.74ha	Wetland Complex SWTO2 S2 Willow Organic Deciduous Thicket Swamp FODM6-1 Fresh-Moist Sugar Maple Lowland Ash Deciduous Forest (SWDM2-2) SWDM3-2 S3 Swamp Maple Mineral Deciduous Swamp SWDM2-2 S5 Green Ash Mineral Deciduous Swamp SWTM3 S4 Willow Mineral Deciduous Thicket Swamp SWDM4-5 S1 Poplar Mineral	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **One form:** **S2** tall shrubs (*Salix petiolaris, Salix lucida*) **S7** deciduous trees (*Fraxinus* sp.) **Two forms:** **S3** deciduous trees (*Acer x freemanii*, *Acer saccharinum*), narrow-leaved emergents (*Phalaris arundinacea*, *Carex hystericina*) **Three forms:** **S5** deciduous trees (*Fraxinus pennsylvanica, Acer x freemanii*), tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*) **S4** tall shrubs (*Salix alba, Cornus stolonifera*), narrow-	• Primary productivity • Flood attenuation • Groundwater recharge	WT – >120 AR – >120 CB – 3 CA – 82 BU – >120	**22, 27**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Deciduous Swamp SWD Deciduous Swamp (likely to be mixed with a complex of uplands)	leaved emergents (*Phalaris arundinacea*), robust emergents (*Typha angustifolia, typha latifolia*) **Four forms:** **S1** deciduous trees (*Acer x freemanii, Populus tremuloides*), tall shrubs (*Cornus stolonifera, Viburnum cassinoides*), herbs (*Equisetum hyemale, Rubus pubescens*), moss sp. **No. Forms Unknown:** **S6** (identified wetlands likely contiguous to further wetlands on properties for which access was not granted) dominant form: deciduous trees <u>Soils</u> 98% mineral (SiL over Si, sandy loam and clay loam[1])) 2% organic (fibric) <u>Site Type</u> 7% Isolated 93% Palustrine				
WET-012$_2$ Wetland	65.04ha	Wetland Complex SWDM3-3 Swamp Maple	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u>	• Primary productivity • Interspersion – edge habitats with higher diversity	WT – >120 AR – >120 CB - 2 CA – >120	**21, 22, 27**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Mineral Deciduous Swamp SWDM4-2 White Elm Mineral Deciduous Swamp SWTM3-6 Mixed Willow Mineral Deciduous Thicket Swamp Type	**One form:** **S2** deciduous trees (*Acer x freemanii*) **S4** deciduous trees (*Ulmus americana*) **Two forms:** **S3** tall shrubs (*Salix* sp., *Salix eriocephala*), narrow-leaved emergents (*Phalaris arundinacea*) **Three forms:** **S1** deciduous trees (*Ulmus americana*), tall shrubs (*Cornus stolonifera*), herbs (*Onoclea sensibilis*) <u>Soils</u> 100% mineral (CL, SiC, silt loam[1]) <u>Site Type</u> 22% Isolated 78% Palustrine	• Flood attenuation • Groundwater recharge	BU – >120		
WET-013[1] Wetland	0.45ha	Wetland Complex SWTM2-1* Red Osier Dogwood Mineral Deciduous Thicket Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **Two forms:** **S1** tall shrubs (*Cornus stolonifera*), herbs (*Onoclea sensibilis, Boehmeria cylindrica*)	• Primary productivity • Flood attenuation • Groundwater recharge	WT – 59 (T73) AR – 45 CB – 45 CA – 45 BU – >120	**27, 28**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			S2 tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Scirpus cyperinus*) <u>Soils</u> 100% mineral (SiCL) <u>Site Type</u> 100% Isolated				
WET-014$_2$ Wetland	67.51ha	Wetland Complex MAMM1-3 Reed Canary Grass Graminoid Mineral Meadow Marsh FODM7-2 Fresh-Moist Green Ash-Hardwood Lowland Forest (SWDM2-2) SWMM4-1 Green Ash-Hemlock Mineral Mixed Swamp SWDM2-2 Green Ash Mineral Deciduous Swamp SWDM2-1	<u>Wetland Types</u> 79% Swamp 21% Marsh <u>Vegetation Communities</u> **One form:** **M1** narrow-leaved emergents (*Phalaris arundinacea*) **S5** deciduous trees (*Fraxinus pennsylvanica*) **Two forms:** **S4** deciduous trees (*Fraxinus* sp.), coniferous trees (*Picea mariana*, *Tsuga canadensis*) **Three forms:** **S3** deciduous trees (*Fraxinus pennsylvanica*), tall shrubs (*Cornus stolonifera*), narrow-leaved	• Primary productivity • Interspersion – edge habitats with higher diversity • Flood attenuation • Short-term pollutant uptake • Groundwater recharge	WT – 33 (T101) AR – 1 CB – 1 CA – 1 BU – >120	**23**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Black Ash Mineral Deciduous Swamp SWTM2-1* Red Osier Dogwood Mineral Deciduous Thicket Swamp	emergents (*Phalaris arundinacea*) **Four forms:** **S1** dead deciduous trees (*Ulmus americanus*), tall shrubs (*Cornus stolonifera*), herbs (*Onoclea sensibilis*), narrow-leaved emergents (*Carex crinita*) **S2** deciduous trees (*Fraxinus nigra*), tall shrubs (*Cornus stolonifera*), herbs (*Onoclea sensibilis*), narrow-leaved emergents (*Poa palustris*) Soils 100% mineral (SiC, clay loam[1]) Site Type 1% Isolated 44% Palustrine 55% Riverine				
WET-015[1] Wetland	13.43ha	Wetland Complex SWDM2-2* Green Ash Mineral Deciduous Swamp SWDM3-1* Red Maple Mineral Deciduous Swamp	Wetland Types 93% Swamp 7% Marsh Vegetation Communities **One form:** **S2-A** deciduous trees (*Fraxinus pennsylvanica*)	• Primary productivity • Interspersion – edge habitats with higher diversity • Flood attenuation • Groundwater recharge	WT – 12 (T69) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**27, 30**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		SWMM2-2 Swamp Maple – Conifer Mineral Mixed Swamp SWDM3-2 Swamp Maple Mineral Deciduous Swamp MAMM1-3 Reed Canary Grass Graminoid Mineral Meadow Marsh	**S2-B** deciduous trees (*Acer rubrum, Acer x freemanii*) **S2-C** deciduous trees (*Acer rubrum*) **S2-D** deciduous trees (*Acer x freemanii*) **M1** narrow-leaved emergents (*Phalaris arundinacea*) **Two forms:** **S1** deciduous trees (*Acer rubrum, Acer x freemanii)*, coniferous trees (*Tsuga canadensis*) **M2** deciduous trees (*Fraxinus pennsylvanica*), narrow-leaved emergent (*Phalaris arundinacea*) <u>Soils</u> 100% mineral (SiC over SiCL) <u>Site Type</u> 100% Isolated				
WET-016$_1$ Wetland	1.30ha	Wetland Complex SWDM2-2 Green Ash Mineral Deciduous Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **Two forms:**	• Primary productivity • Flood attenuation • Short-term water quality improvement • Long-term nutrient	WT – 34 (T99) AR – 84 CB – 84 CA – >0.1 BU – >120	**26, 27, 30**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		SWDO1-2 Green Ash Organic Deciduous Swamp Type	**S1** deciduous trees (*Fraxinus pennsylvanica*), herbs (*Symphyotrichum lanceolatum*) **Four forms:** **S2** deciduous trees (*Fraxinus pennsylvanica*), tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*), moss sp. <u>Soils</u> 29% mineral (L over SiCL) 71% organic (mesic) <u>Site Type</u> 29% Palustrine 71% Isolated	trap • Groundwater recharge			
WET-019$_2$ Wetland	18.90ha	Individual Wetland SWDM2-2 Green Ash Mineral Deciduous Swamp SWDM3-3 Swamp Maple Mineral Deciduous Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **Three forms:** **S1** deciduous trees (*Fraxinus pennsylvanica*), tall shrubs (*Cornus stolonifera*), herbs (*Symphyotricum laterifolium*) **S3** deciduous trees (*Acer x freemanii*), tall shrubs (*Viburnum cassinoides*), low shrubs (*Cornus stolonifera*)	• Primary productivity • Flood attenuation • Short-term water quality improvement • Groundwater recharge	WT – 35 (T13) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**26**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Four forms: **S2** deciduous trees (*Acer x freemanii*), herbs (*Onoclea sensibilis*), narrow-leaved emergents (*Poa palustris*), moss sp. <u>Soils</u> 100% mineral (SiC) <u>Site Type</u> 100% Palustrine				
WET-020$_2$ Wetland	7.90ha	Wetland Complex SWDM3-3 Swamp Maple Mineral Deciduous Swamp SWDM2-2 Green Ash Mineral Deciduous Swamp MAMM1-3 Reed Canary Grass Graminoid Mineral Meadow Marsh	<u>Wetland Types</u> 79% Swamp 21% Marsh <u>Vegetation Communities</u> **One form:** **S1-A** deciduous trees (*Acer x freemanii*) **S1-B** deciduous trees (*Fraxinus pennsylvanica*) **M1-A** narrow-leaved emergents (*Phalaris arundinacea*) **M1-B** narrow-leaved emergents (*Carex lupulina, Phalaris arundinacea*) **Two forms:** **S2** deciduous trees (*Acer x*	• Primary productivity • Interspersion – edge habitats with higher diversity • Flood attenuation • Open water habitat • Groundwater recharge	WT – 21 (T107) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**26, 31**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			freemanii, Fraxinus pennsylvanica), herbs (*Fragaria virginiana, Symphyotrichum lateriflorum*) <u>Soils</u> 100% mineral (SiC, clay loam[1]) <u>Site Type</u> 79% Isolated 21% Palustrine				
WET-021[2] Wetland	Size of PSW: 8947.6ha[4] (S1-S236, M1-M32, F1-F4, B1) Identified Communities are Included in this size	Wetland Complex Includes existing communities of the Greenock Swamp PSW Described wetland communities: SWDM3-3 Swamp Maple Mineral Deciduous Swamp MAMM1-3* Reed Canary Grass Graminoid Mineral Meadow Marsh	<u>Wetland Types Described</u> Swamp Marsh <u>Vegetation Communities Described</u> **One form:** **S237** deciduous trees (*Acer x freemanii*) **M26** narrow-leaved emergents (*Phalaris arundinacea*) <u>Soils Described</u> Mineral (clay loam) <u>Site Types Described</u> Palustrine	Existing PSW Functions as per Appendix C: • Wetland size • Primary productivity • Diversity of vegetation • Habitat connectivity • Interspersion – edge habitats with higher diversity • Flood attenuation • Long-term nutrient trap • Groundwater recharge • Habitat for provincially significant animal species, plant species • Habitat for regionally significant species	WT – 101 (T103) AR – 8 CB – 8 CA – 8 BU – >120	**25, 31**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
				• Nesting of colonial waterbirds: great blue heron (within last 5 years) • Winter cover for wildlife: regional significance for deer • Waterfowl production: local significance • Migratory passerine and/or shorebird stopover area: high significance • Significance for fish spawning and rearing: present (smallmouth bass, largemouth bass, pike, walleye)			
WET-022$_1$ Wetland	14.98ha	Wetlands Complex SWDO2-3 Swamp Maple Organic Deciduous Swamp MASO1-1 Cattail Organic Shallow Marsh MAMM1-3 Reed Canary Mineral Meadow Marsh	<u>Wetland Types</u> 91% Swamp 9% Marsh <u>Vegetation Types</u> **One form:** **S2** deciduous trees (*Acer x freemanii*, *Acer rubrum*) **M2** narrow-leaved emergents (*Phalaris arundinacea*) **Two forms:** **S1** deciduous trees (*Acer x freemanii*), robust emergents (*Typha latifolia*)	• Primary productivity • Flood attenuation • Long-term nutrient trap • Groundwater recharge	WT – 57 (T32) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**31**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			M1 robust emergent (*Typha latifolia*), free-floating (*Lemna* sp.) Soils 100% organic (mesic, humic) Site Type 100% Isolated				
WET-023$_3$ Wetland	2.32ha	Wetland Complex SWTO4-1 Red-osier Organic Deciduous Thicket Swamp SWTO2 Willow Organic Deciduous Thicket Swamp	Wetland Types 100% Swamp Vegetation Communities **Two forms:** **S1** tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*) **Three forms:** **S2** tall shrubs (*Salix* sp.), narrow-leaved emergents (*Phalaris arundinacea*), robust emergents (*Typha angustifolia*) Soils 100% organic (estimated based on isolated, depressional, and known organic soils at similar wetlands <400m away – soils map indicates these	• Primary productivity • Flood attenuation • Long-term nutrient trap • Groundwater recharge	WT – >120 AR – >120 CB – 1 CA – >120 BU – >120	**31, 32**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			wetlands were not organic when surveys identified them as such[1]) Site Type 100% Isolated				
WET-024[1] Wetland	10.42ha	Wetland Complex SWDM2-2 Green Ash Mineral Deciduous Swamp	Wetland Types 100% Swamp Vegetation Communities **Two forms:** **S2** deciduous trees (*Fraxinus pennsylvanica*); narrow-leaved emergents (*Phalaris arundinacea, Bromus inermis* ssp. *inermis*) **Three forms:** **S1** deciduous trees (*Fraxinus pennsylvanica*, *Acer x freemanii*), herbs (mixed), narrow-leaved emergents (*Phalaris arundinacea*) Soils 100% Mineral (fSC, SiC) Site Type 95% Palustrine 5% Isolated	• Primary productivity • Habitat connectivity • Short-term water quality improvement • Groundwater recharge	WT – 69 (T31) AR – 4 CB – 4 CA – 4 BU – >120	**31**	**Yes**
WET-025[1] Wetland	4.14ha	Wetland Complex SWDM2-2	Wetland Types 100% Swamp	• Primary productivity • Habitat connectivity • Flood Attenuation	WT - >120 AR - >120 CB - >120	**30, 31**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Green Ash Mineral Deciduous Swamp SWTM2-1 Red-osier Dogwood Mineral Deciduous Thicket Swamp SWDM3-3 Swamp Maple Mineral Deciduous Swamp	<u>Vegetation Communities</u> **Two forms:** **S1** deciduous trees (*Fraxinus pennsylvanica*), narrow-leaved emergents (*Phalaris arundinacea*) **S2** tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Carex lacustris*) **S3** deciduous trees (*Fraxinus pennsylvanica*), herbs (*Solanum dulcamara*) **<u>Three forms:</u>** **S4** deciduous trees (*Acer* x *freemanii, Fraxinus pennsylvanica*), low shrubs (*Rubus occidentalis*), herbs (*Symphyotrichum lateriflorum*) <u>Soils</u> 100% mineral (SiCL over SiC, SiC) <u>Site Type</u> 85% isolated 15% Palustrine	• Short-term water quality improvement • Groundwater recharge	CA - >0.1 BU - >120		
WET-026$_2$ Wetland	2.84ha	Wetland Complex SWDM2-2 Green Ash Mineral	<u>Wetland Types</u> 78% Swamp 22% Marsh	• Primary productivity • Interspersion – edge habitats with higher diversity	WT – 41 (T63) AR – 91 CB – 16 CA – 2	**27, 28, 29, 30**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Deciduous Swamp MAMM1-3* Reed Canary Grass Graminoid Mineral Meadow Marsh SWDM4-5 Poplar Mineral Deciduous Swamp MAMM1-10 Horsetail Graminoid Mineral Meadow Marsh SWTM3 Willow Mineral Deciduous Thicket Swamp	<u>Vegetation Communities</u> **One form:** **S1** deciduous trees (*Fraxinus pennsylvanica*) **M2** narrow-leaved emergents *(Phalaris arundinacea*) **Two forms:** **S4** deciduous trees (*Populus tremuloides, Fraxinus pennsylvanica*), low shrubs (*Cornus stolonifera*) **M1** narrow-leaved emergents (*Equisetum variegatum, Carex granularis*), herbs (*Parnassia glauca*) **Three forms:** **S2** deciduous trees (*Fraxinus nigra*), tall shrubs (*Lindera benzoin*), herbs (*Onoclea sensibilis*) **S3** tall shrubs (*Salix* sp.), low shrubs (*Salix sp., Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*) <u>Soils</u> 100% mineral (cS/LcS over SiC, mSL over C, SiC)	• Flood attenuation • Groundwater recharge	BU – >120		

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Site Type 68% Isolated 32% Palustrine				
WET-027$_3$ Wetland	3.13ha	Individual Wetland SWDM2 Ash Mineral Deciduous Swamp	Wetland Types 100% Swamp Vegetation Communities **One form:** **S1** deciduous trees Soils 100% mineral (loam or sandy loam[1]) Site Type 100% Palustrine	• Primary productivity • Flood attenuation • Groundwater recharge	WT – >120 AR – >120 CB – 3 CA – >120 BU – >120	**29**	**Yes**
WET-028$_1$ Wetland	0.30ha	Wetland Complex MAMM1-3* Reed Canary Grass Graminoid Mineral Meadow Marsh	Wetland Types 100% Marsh Vegetation Communities **One form:** **M1** narrow-leaved emergents (*Phalaris arundinacea*) Soils 100% mineral (fSCL over CL) Site Type 100% Riverine	• Primary productivity • Nutrient accumulation (productivity) • Habitat connectivity • Short-term water quality improvement • Shoreline Erosion Control	WT – 71 (T108) AR – >120 CB – >120 CA – 50 BU – >120	**29**	**Yes**
WET-029$_1$ Wetland	0.58ha	Wetland Complex	Wetland Types 76% Swamp	• Primary productivity • Flood attenuation	WT – 112 (T70) AR – 2	**33**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		MAMM1-3* Reed Canary Grass Graminoid Mineral Meadow Marsh SWTM2-1* Red-osier Dogwood Mineral Deciduous Thicket Swamp	24% Marsh <u>Vegetation Communities</u> **One form:** **M1** narrow-leaved emergents (*Phalaris arundinacea*) **Three forms:** **S1** tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*), herbs (*Symphyotrichum* sp.) <u>Soils</u> 100% mineral (SiC) <u>Site Type</u> 100% Isolated	• Short-term water quality improvement • Groundwater recharge	CB – 2 CA – 2 BU – >120		
WET-030$_1$ Wetland	0.87ha	Individual Wetland SWDM2-2 Green Ash Mineral Deciduous Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **Three forms:** **S1** deciduous trees (*Fraxinus pennsylvanica*), tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*) <u>Soils</u> 100% mineral (SiCL)	• Primary productivity • Flood attenuation • Short-term water quality improvement • Groundwater recharge	WT – 85 (T65) AR – >120 CB – >120 CA – 56 BU – >120	**31, 33**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Site Type 100% Palustrine				
WET-031$_2$ Wetland	39.17ha	Wetland Complex SWDM3-3 Swamp Maple Mineral Deciduous Swamp SWDM2-2 Green Ash Mineral Deciduous Swamp SWDM Mineral Deciduous Swamp	Wetland Types 100% Swamp Vegetation Communities **One form:** **S1** deciduous trees (*Acer x freemanii*, *Fraxinus pennsylvanica*) **S2** deciduous trees (estimated *Acer x freemanii, Fraxinus pennsylvanica*). Appears to be highly interspersed with uplands (not readily distinguishable by air photo). Soils 100% mineral (SiCL) Site Types 98% Palustrine 2% Isolated	• Primary productivity • Flood attenuation • Short-term water quality improvement • Groundwater recharge	WT – >0.1 (T64) AR – 50 CB – >0.1 CA – >0.1 BU – >120	**31, 32**	**Yes**
WET-032$_1$ Wetland	12.40ha	Individual Wetland SWDO2-1 Red Maple Organic Deciduous Swamp MAMO1-3 Reed Canary Graminoid Organic Meadow	Wetland Types 87% Swamp 13% Marsh Vegetation Communities **Four forms:** **M1** low shrubs (*Rosa palustris*), narrow-leaved emergents (*Phalaris*	• Primary productivity • Flood attenuation • Long-term nutrient trap • Groundwater recharge • Habitat for locally rare species (*Glyceria canadensis*[2] – M1)	WT – 82 (T35) AR – 66 CB – 66 CA – 58 BU – >120	**32**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Marsh	*arundinacea*), robust emergents (*Typha latifolia*), moss sp. **Five forms:** **S1** deciduous trees (*Acer rubrum, Fraxinus nigra*), tall shrubs (*Ilex verticillata*), herbs (*Osmunda regalis* var. *spectabilis*, *Osmunda cinnamomea*), narrow-leaved emergents (*Phalaris arundinacea, Carex hystericina*), moss (moss sp., *Sphagnum* sp.) Soils 100% organic (fibric, mesic, and humic layers) Site Type 100% Isolated				
WET-033$_3$ Wetland	12.71ha	Wetland Complex SWDM2 Ash Mineral Deciduous Swamp SWDM3 Maple Mineral Deciduous Swamp FOMM6-2 Fresh-Moist Hemlock-Hardwood	Wetland Types 100% Swamp Vegetation Communities **One form:** **S3** deciduous trees (*Fraxinus* sp.) **Two forms:** **S2** deciduous trees (soft maple sp.), tall shrubs (*Cornus stolonifera*)	• Primary productivity • Habitat connectivity • Groundwater recharge	WT – >120 AR – >120 CB – 3 CA – >120 BU – >120	**32, 36**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Mixed Forest (SWMM4 Ash Mineral Mixed Swamp)	**S4** deciduous trees (*Fraxinus* sp.), coniferous trees (*Tsuga canadensis*) **Three forms:** **S1** deciduous trees (*Fraxinus* sp.), tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*) Soils 100% mineral (silt loam, clay loam[1]) Site Type 82% Isolated 18% Palustrine				
WET-034$_3$ Wetland	28.59ha	Wetland Complex SWDM2-2 Green Ash Mineral Deciduous Swamp SWDM Mineral Deciduous Swamp	Wetland Type 100% Swamp Vegetation Communities **One form:** **S1** deciduous trees (*Fraxinus pennsylvanica, Acer x freemanii*) Soils 50% organic[1] 50% mineral (clay loam[1]) Site Type 100% Palustrine	• Primary productivity • Habitat connectivity • Flood attenuation • Short-term water quality improvement • Long-term nutrient trap • Groundwater recharge	WT – >120 AR – 76 CB – 3 CA – 32 BU – >120	**32, 33, 36**	**Yes**
WET-036$_1$ Wetland	9.86ha	Wetland Complex	Wetland Types 100% Swamp	• Primary productivity • Flood attenuation	WT – 43 (T45) AR – >0.1	**33, 35**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		SWDO2-3 Swamp Maple Organic Deciduous Swamp SWDO1-1 Black Ash Organic Deciduous Swamp SWDM2-2 Green Ash Mineral Deciduous Swamp	<u>Vegetation Communities</u> **One form:** **S3** deciduous trees (*Fraxinus pennsylvanica*) **Two forms:** **S2** deciduous trees (*Acer x freemanii*), herbs (*Symphyotrichum lateriflorum*) **Four forms:** **S1** deciduous trees (*Fraxinus nigra*), tall shrubs (*Cornus stolonifera*), herbs (*Symphyotrichum lateriflorum*), narrow-leaved emergents (*Phalaris arundinacea*) <u>Soils</u> 93% organic mesic 7% mineral (clay loam[1]) <u>Site Type</u> 93% Palustrine 7% Isolated	• Short-term water quality improvement • Long-term nutrient trap • Groundwater recharge	CB – >0.1 CA – >0.1 BU – >120		
WET-037$_1$ Wetland	3.01ha	Individual Wetland SWDM3-3 Swamp Maple Mineral Deciduous Swamp	<u>Wetland Types</u> 100% Swamp <u>Vegetation Communities</u> **Four forms:** **S1** deciduous trees (*Acer x freemanii*, *Fraxinus pennsylvanica*), tall shrubs	• Primary productivity • Flood attenuation • Groundwater recharge	WT – 91 (T42) AR – 2 CB – 2 CA – 2 BU – >120	**33**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			(*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*), moss sp. Soils 100% mineral (CL over SiCL) Site Type 100% Isolated				
WET-038$_3$ Wetland	0.47ha	Individual Wetland MAMM1-3* Reed Canary Grass Graminoid Mineral Meadow Marsh	Wetland Types 100% Marsh Vegetation Communities **Two forms:** **M1** narrow-leaved emergents (*Phalaris arundinacea*), herbs (*Solidago* sp.) Soils 100% mineral (bottomland)[1] Site Type 100% Riverine	• Primary productivity • Nutrient accumulation (productivity) • Habitat connectivity • Short-term water quality improvement • Shoreline erosion control	WT – >120 AR – 37 CB – 17 CA – 36 BU – >120	**33**	**Yes**
WET-039$_1$ Wetland	14.84ha	Wetland Complex MAMM1-3 Reed-canary Grass Graminoid Mineral Meadow Marsh SWDO2-3 Swamp Maple Organic Deciduous Swamp	Wetland Types 96% Swamp 4% Marsh Vegetation Communities **One form:** **M1** narrow-leaved emergents (*Phalaris arundinacea*) **S3** deciduous trees (*Acer x*	• Primary productivity • Interspersion – edge habitats with greater diversity • Flood attenuation • Groundwater recharge	WT – 1 (T104) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**33, 34, 35**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		SWDM2-2 Green Ash Mineral Deciduous Swamp SWDM4-5 Poplar Mineral Deciduous Swamp SWTM3-6 Mixed Willow Mineral Deciduous Thicket Swamp SWDM4-1 Willow Mineral Deciduous Swamp	*freemanii*, *Fraxinus pennsylvanica*) **Two forms:** **S5** deciduous trees (*Populus tremuloides*, *Fraxinus pennsylvanica*), tall shrubs (*Lindera benzoin*) **Three forms:** **S1 -A** deciduous trees (*Fraxinus pennsylvanica*), tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*) **S1-B** deciduous trees (*Populus tremuloides*), tall shrubs (*Cornus stolonifera*), narrow-leaved emergents (*Phalaris arundinacea*) **S4** deciduous trees (*Salix fragilis*), herbs (*Polygonum* sp.), narrow-leaved emergent (*Leersia oryzoides*), broad-leaved emergent (*Polygonum persicaria*) **Four forms:** **S2** tall shrubs (*Salix petiolaris*, *Salix lucida*), herbs (*Symphyotrichum lateriflorum*), narrow-leaved emergents (*Phalaris*				

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			arundinacea), moss sp. Soils 91% mineral (vfSCL over vfS, vfS over C) 9% organic humic Site Type 100% Isolated				
WET-040$_1$ Wetland	2.65ha	Wetland Complex MAMM1-2 Cattail Graminoid Mineral Meadow Marsh WODM5-3 Fresh-Moist Manitoba Maple Deciduous Woodland (SWDM3-4) FODM7-3 Fresh-Moist Willow Lowland Deciduous Forest (SWDM4-1)	Wetland Types 20% Marsh 80% Swamp Vegetation Communities **One form:** **S1-A** deciduous trees (*Acer negundo*) **S1-B** deciduous trees (*Fraxinus pennsylvanica*, *Salix* sp.) **Two forms:** **M1** narrow-leaved emergents (*Phalaris arundinacea*), robust emergents (*Typha angustifolia*) Soils 100% mineral (CL over SiC) Site Types 20%Palustrine 80% Riverine	• Primary productivity • Nutrient accumulation • Habitat connectivity • Short-term water quality improvement • Shoreline erosion control	WT – >120 AR – 76 CB – 2 CA – 40 BU – >120	**33, 34, 35**	**Yes**
WET-041$_3$	Size of	Wetland Complex	Wetland Type	• Primary productivity	WT – >120	**32, 36**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Wetland	identified wetlands: 44.14ha	Includes previously identified wetlands of the Kingarf Complex wetlands SWDM4-3 White Birch-Poplar Mineral Deciduous Swamp SWDM3 Maple Mineral Deciduous Swamp SWDM4-5 Poplar Mineral Deciduous Swamp	100% Swamp <u>Vegetation Communities</u> **One form:** **S3-A** deciduous trees (*Fraxinus* sp., *Betula papyrifera*) **S3-B** deciduous trees (soft maple sp., *Fraxinus* sp.) **Two forms:** **S2-A** deciduous trees (soft maple sp.), tall shrubs (*Cornus stolonifera*) **S2-B** deciduous trees (*Populus balsamifera*, *Ulmus americana*), tall shrubs (*Viburnum cassinoides*) **Three forms:** **S1** deciduous trees (*Populus balsamifera*, *Fraxinus* sp.), tall shrubs (*Cornus stolonifera, Viburnum cassinoides*), narrow-leaved emergent (*Phalaris arundinacea*) <u>Soils</u> 100% organic[5] <u>Site Types</u> 94% Isolated 6% Palustrine (note: 65% isolated, 35%	• Flood attenuation • Long-term nutrient trap • Groundwater recharge	AR – >120 CB – >0.1 CA – >120 BU – >120		

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			palustrine for wetland evaluation[5])				
WET-042$_3$ Wetland	0.39ha	Individual Wetland MASO1-1 Cattail Organic Shallow Marsh	Wetland Types 100% Marsh Vegetation Communities **One form:** **M1** robust emergents (*Typha latifolia*) Soils 100% organic (presence of seep, permanently saturated area) Site Type 100% Riverine	• Primary productivity • Nutrient accumulation (productivity) • Habitat connectivity • Flood attenuation • Short-term water quality improvement • Shoreline erosion control	WT – >120 AR – >120 CB – 88 CA – >120 BU – >120	**34**	**Yes**
WET-043$_3$ Wetland	2.77ha	Individual Wetland SWDM Mineral Deciduous Swamp	Wetland Types 100% Swamp Vegetation Communities **One form:** **S1** deciduous trees (*Fraxinus* sp. or *Ulmus americana*) Soils 100% mineral (clay loam[1]) Site Type 100% Palustrine	• Primary productivity • Groundwater recharge	WT – >120 AR – >120 CB – 27 CA – 40 BU – >120	**28**	**Yes**
WET-046$_3$ Wetland	10.69ha	Wetland Complex MAMM1-2 Cattail Graminoid Mineral Meadow	Wetland Types 100% Marsh Vegetation Communities **One form:**	• Primary productivity • Short-term water quality improvement • Groundwater recharge	WT - >120 AR - >120 CB - >0.1 CA - >120 BU - >120	**34**	**Yes**

Feature ID	Size	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		Marsh MAMM3-1 Mixed Mineral Meadow Marsh	**M1** robust emergents (*Typha latifolia*) **Two forms:** **M2** narrow-leaved emergents (*Phalaris arundinacea*), herbs (*Symphyotrichum* sp.) Soils 100% mineral (clay loam[1]) Site Type 100% Palustrine				

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

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

Superscripts:
1: Hoffman and Richards 1954: Soil Survey of Bruce County.
2: Bruce-Grey Plant Committee 2010
3: Hill 1986: Glammis Bog OMNR Wetland Evaluation Data Record
4: Robinson et al. 1989: Greenock Swamp OMNR Wetland Evaluation Data Record
5: OMNR 2012b: Biodiversity Explorer Natural Areas Reports: Kingarf Complex- Wetland

Legend
WT: Wind Turbine
AR: Access Road
CB: Cabling
CA: Construction Activity/Temporary Infrastructure/Balance of Operations
BU: Building/Transformer Station/Distribution Station

6.4 Valleylands

During the site investigations, NRSI biologists identified 5 valleylands located in and within 120m of the Armow Wind Project location. This is a change from the records review, as no records pertaining to valleylands were received from the Saugeen Valley Conservation Authority, and background information from the OMNR indicated that valleylands are unknown from the project area. The project is proposed within 120m of 5 valleylands, and overlapping with the boundaries of 2 of these 5 valleylands. The valleylands where project components are proposed to overlap are located within agricultural fields, and minimal vegetation removal, if any, is expected.

The valleylands within the project area range in size from 119.18ha to 652.19ha, and contain tributaries that connect to the Saugeen River near Paisley, headwaters of the North Penetangore River, and a watercourse that flows westward towards Inverhuron, where it enters Lake Huron. Due to the large extent that many of these valleylands cover, site access was limited within each of the identified valleylands during the site investigations.

Table 12 below describes each of these 5 valleylands as a whole, and includes size, composition, attributes, functions and distance to project locations. Ecological Land Classification mapping of these valleylands are shown on Figures 2-19. The boundary and location of each valleyland is shown on Figures 20-36.

Table 12. Summary of Valleylands within 120m of the Armow Wind Project Location

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
VAL-001 Valleyland	292.57	Tributary connecting to Saugeen River near Paisley <u>ELC Community Types:</u> CVC_4 FOC FOD FODM5-1 FODM5-8 MAMO2-2 MEM OAG OAGM1 OAGM4 SWC SWCO1-2 THDM2-11 WODM4-2	Valley is approximately 125m across (crest to crest) south of Concession Road 2. Elevation in this section of the valley ranges from 280masl at slope crest to 275masl at valley bottom; a maximum depth of approximately 5m. The watercourse flows northward through the Glammis Bog where the valley opens into wetland habitat at an approximate elevation 270masl. The portion of the valley within the project area is comprised largely of natural cover including forest and wetland communities associated with the Glammis Bog.	• Surface water function • Degree of naturalness • Linkage function	WT – >120 AR – >120 CB – >120 CA – 90 BU – >120	**24, 25, 26**	**Yes**
VAL-002 Valleyland	138.94	Tributary connecting to Saugeen River near Paisley. <u>ELC Community Types:</u> CVR_4 FODM11 FODM4-2 FODM5-2 FODM5-8 FODM5-8/	Valley width ranges from approximately 90m to 140m across (crest to crest) with valley depth ranging from 2m to a maximum of approximately 5m. At Bruce Road 15, valley elevation ranges from 285masl at slope crest to 280masl at valley bottom. The portion of the valley within the project area has both forested and agricultural components making natural cover mixed along the length of	• Surface water function • Degree of naturalness	WT – Overlapping (T94) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**23, 26**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		SWDM2-2/ MAMM1-3/ MAMM1-16 FODM6-1 FODM6-5/ SWDM2-1 FODM7-2 MAMM1-16 MAMM1-3 MEGM3 MEGM4-1 OAGM1 OAGM1(w) OAGM2 OAGM4 SWT SWTM3 SWDM3-4 TAGM1 WODM5-4	the valleyland.				
VAL-006 Valleyland	207.30	<u>ELC Community Types:</u> CVR_4 FOCM4-1 FOD FODM3-1 FODM7-2 FOM IAGM1 MEMM3 OAGM1 OAGM1(w) OAGM2 OAGM4 TAGM1 TAGM2	Valley width ranges from approximately 100m to 250m across (crest to crest) with valley depth ranging from approximately 2m to a maximum of 9m. At Sideroad 10, valley elevation ranges from 265masl at slope crest to 256masl at valley bottom. Connecting with VAL-007 and VAL-008, the watercourse flows westward through Kincardine where it enters Lake Huron at the Kincardine Harbour. Surrounding land use varies greatly from agricultural fields with minimal riparian vegetation to areas of natural cover including wetland and forest habitats.	• Surface water function • Degree of naturalness • Restored ecological function	WT – 50 (T108) AR – 30 CB – 2 CA – 18 BU – >120	**29, 30**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		THDM2-11					
VAL-007 Valleyland	652.19	Headwaters of North Penetangore River <u>ELC Community Types</u> CVC_4 CVI_2 CVR_4 FOC FOCM2-2 FOCM6-1 FOD FODM11 FODM3-1 FODM5-2 FODM5-8 FOMM6-1 IAGM1 MAMM3-1 ME MEGM3 MEGM3-5 MEGM3-6 MEM MEMM3 MEMM4 OA OAGM1 OAGM1(w) OAGM2 OAGM4 SAGM6	Valley width ranges from approximately 50m to 480m across (crest to crest) with valley depth ranging from approximately 2m to a maximum of 25m. At Sideroad 15, valley elevation ranges from 265masl at slope crest to 240masl at valley bottom. Connecting with VAL-006 and VAL-008, the watercourse flows westward through Kincardine where it enters Lake Huron at the Kincardine Harbour. Surrounding land use varies greatly from agricultural fields with minimal riparian vegetation to areas of natural cover including wetland and forest habitats. The portion of the valley at Concession Road 5 has a maximum width of approximately 250m with a maximum depth of 24m. The wetted width of the watercourse at this location is 5.4m with a maximum depth of 0.6m. Turbidity is low. Shrub Pasture (SAGM6) dominates the slopes while much of the bottomland portion is Fresh-Moist Graminoid Meadow (MEGM4). The portion of the valley north of Concession Road 7 has a maximum width of approximately 300m with a maximum depth of 22m. The wetted width of the watercourse at this location is 3.2m to 7.7m with a maximum depth of 0.2m to 0.8m. Turbidity is low to medium. The valley slopes are a mix of Dry-Fresh Sugar Maple-Beech Deciduous Forest (FODM5-2) and	• Surface water function • Degree of naturalness • Linkage function • Restored ecological function	WT – Overlapping (T84) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**29-34, 36**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		SVMM2-1 SWC SWD SWDM SWDM2-2 TAGM1 TAGM5 THD THDM2-11 THDM4-1 THDM5 THMM2 WOD	Coniferous Plantation (TAGM1). The bottomland is predominantly Annual Row Crops (OAGM1). The portion of the valley south of Concession Road 9 has a maximum width of approximately 250m with a maximum depth of 10m. The wetted width of the watercourse at this location is 7.9m with a maximum depth of 0.8m. Turbidity is low. The valley slopes are predominantly Hawthorn Deciduous Shrub Thicket (THDM2-11) with Dry-Fresh Mixed Meadow (MEMM3) and Annual Row Crops (OAGM1) comprising the bottomland portion of the valley.				
VAL-008 Valleyland	119.85	<u>ELC Community Types:</u> CVR_4 FOCM2-2 FOD FODM11 FODM5 FODM5-8 FODM6-3 FODM7-3 FOM FOMM2-3 MAM MAMM1-2 MASO1-1 MEG OAGM1 OAGM1(w)	Valley width ranges from approximately 40m to 250m across (crest to crest) with valley depth ranging from approximately 2m to a maximum of 9m. At Sideroad 15, valley elevation ranges from 251masl at slope crest to 242masl at valley bottom. Connecting with VAL-006 and VAL-007, the watercourse flows westward through Kincardine where it enters Lake Huron at the Kincardine Harbour. Surrounding land use varies greatly from agricultural fields with minimal riparian vegetation to areas of natural cover including wetland and forest habitats.	• Surface water function • Degree of naturalness	WT - >120 AR - 92 CB - 3 CA - 52 BU - >120	**34, 35**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Closest Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		OAGM2 OAGM4 SWD SWMM1 TAGM1 THD THDM2-11 WOD WODM5-3 WOMM4-1					

Legend
WT: Wind Turbine
AR: Access Road
CB: Cabling
CA: Construction Activity/Temporary Infrastructure/Balance of Operations
BU: Building/Transformer Station/Distribution Station

6.5 Wildlife Habitat

As part of the REA process, NRSI biologists have conducted site investigations to identify the presence of wildlife habitat within 120m of the Armow Wind Project location. For the purposes of this series of Natural Heritage Assessment reports, NRSI has separated the discussion on wildlife habitat into four broad categories, following the Significant Wildlife Habitat Technical Guide (OMNR 2000). These four categories are seasonal concentration areas, rare vegetation communities and specialized wildlife habitats, habitats of species of conservation concern, and animal movement corridors. Each of these broad wildlife habitat categories are outlined in detail below.

6.5.1 Seasonal Concentration Areas

NRSI has reviewed the results of the site investigation conducted within 120m of the Armow Wind Project location and compared it to habitat criteria for seasonal concentration areas found within the Significant Wildlife Habitat Technical Guide and its appendices (OMNR 2000), as well as the SWH Ecoregion 6E Criterion Schedule Addendum (OMNR 2012a). A summary of candidate seasonal concentration areas that do not occur within the Armow Wind Project area can be found in Table 13 below. Seasonal concentration areas that are found within 120m of the project location can be found in Table 16 and mapped on Figures 37-53. Generalized wildlife habitats that are found within 120m of the project location can be found in Table 17 and mapped on Figures 71-87.

Table 13. Summary of Seasonal Concentration Areas Not Requiring Specific Evaluation of Significant Surveys

Seasonal Concentration Areas	Present Within 120m of Project Location	Rationale	Carried Forward to Summary and EOS
Bat Hibernacula	No	No mine shafts, underground foundations, Karsts or Crevice (CCR), or Cave (CCA) Community Types were identified within 120m of the project location.	**No**
Turtle Over-wintering Habitat	No	Several Swamp (SW), Marsh (MA), and Open Water (OA) Community Types have been identified within 120m of the project location. According to the 2012 SWH Ecoregion 6E Criterion Schedule Addendum, these community types must contain water that is deep enough not to freeze and have soft mud substrates. In addition, over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate dissolved oxygen (OMNR 2012a). The community types identified within 120m of the project	**No**

Seasonal Concentration Areas	Present Within 120m of Project Location	Rationale	Carried Forward to Summary and EOS
		location, however, lack water permanency, are of insufficient size, or only contain the presence of shallow water (allowing habitat to freeze). As such, candidate turtle over-wintering habitat has not been identified within 120m of the project location.	
Colonial-Nesting Bird Breeding Habitat (Bank and Cliff)	No	Bank Swallow/Northern Rough-winged Swallow: No Meadow (ME), Thicket (TH), or Savannah (SV) Community Types contain eroding banks, sandy hills, borrow pits, steep slopes or sand piles within 120m of the project location. Cliff Swallow: No Meadow (ME), Thicket (TH), or Savannah (SV) Community Types contain cliff faces, bridge abutments, silos, or barns within 120m of the project location.	**No**

6.5.2 Rare Vegetation Communities and Specialized Wildlife Habitat

NRSI has reviewed the results of the site investigation conducted within 120m of the Armow Wind Project location and compared it to habitat criteria for rare vegetation communities and specialized wildlife habitats found within the Significant Wildlife Habitat Technical Guide and its appendices (OMNR 2000), as well as in the SWH Ecoregion 6E Criterion Schedule Addendum (OMNR 2012a). A summary of rare vegetation communities and specialized wildlife habitats that do not occur within the Armow Wind Project area can be found in Table 14 below. Specialized wildlife habitats that are found within 120m of the project location can be found in Table 16 and mapped on Figures 54-70. Generalized wildlife habitats that are found within 120m of the project location can be found in Table 17 and mapped on Figures 71-87.

Table 14. Summary of Rare Vegetation Communities and Specialized Wildlife Habitat Not Requiring Specific Evaluation of Significance Surveys

Wildlife Habitat	Present Within 120m of Project Location	Rationale	EOS Required (Y/N)
Cliffs and Talus Slopes	No	No metamorphic/granitic cliffs or limestone/dolostone/sandstone cliffs have been identified within 120m of the project location. None of the Talus Slope Community Types outlined in Table 5 have been identified within 120m of the project location.	**No**
Sand Barrens	No	No Sand Barren Community Types outlined in Table 5 have been identified within 120m of the project location.	**No**
Alvars	No	None of the Alvar Community Types outlined in Table 5 have been identified within 120m of the project location.	**No**
Savannahs	No	None of the Savannah Community Types outlined in Table 5 have been identified within 120m of the project location.	**No**
Tall-grass Prairies	No	None of the Tall-grass Prairie Community Types outlined in Table 5 have been identified within 120m of the project location.	**No**
Other Rare Vegetation Communities	No	A provincially rare vegetation community has been identified in 3 locations within WOD-047 and is part of the WET-007 Complex. This community has been identified as a Silky Dogwood Mineral Deciduous Thicket Swamp (SWTM2-2). This community, however, is located more than 120m from the project location, and will not be carried forward to the evaluation of significance.	**No**
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	No	Several Forest (FO) and Deciduous Swamp (SWD) Community Types located within 120m of the project location have been identified directly adjacent to the North Penetangore River. The site investigation confirmed that no osprey or bald eagle stick nests were identified within any of these community types. As such, no bald eagle and osprey nesting, foraging and perching habitats have been identified within 120m of the project location.	**No**
Turtle Nesting Habitat	No	Exposed sand/sandy gravel was identified less than 120m from the access road associated with turbine T63, and was identified in and within 100m of a Horsetail Graminoid Mineral Meadow Marsh (MAMM1-10) community (WET-026). The site investigations confirmed that there is no permanent open water present within this wetland community or anywhere in the general vicinity. In addition, the site investigations confirmed that there is no evidence of use of this area by turtles. As such, this area has not been considered a candidate turtle nesting habitat. Five raided turtle nests (painted or snapping turtle) were identified on a dirt road within the project area, approximately 100m from the access road associated with turbine T32. This dirt road contains silty clay/silty clay loam soil conditions, is located within a cattle pasture, and is presumably only used by the landowner as there is gated access. These	**No**

Wildlife Habitat	Present Within 120m of Project Location	Rationale	EOS Required (Y/N)
		raided turtle nests were located within 100m of two Cattail Organic Shallow Marsh (MASO1-1) Communities and one Reed Canary Mineral Meadow Marsh (MAMM1-3) (WET-022 Complex). The site investigations confirmed that exposed sand/sandy gravel was not identified within 100m of these communities or in close proximity to where the raided turtle nests were identified. This site represents a high level of predation/degree of threat (raided nests), high degree of disturbance (located on a dirt road in a cattle pasture), small habitat size (small individual communities) and lacks suitable substrate. As such, this area has not been considered a candidate turtle nesting habitat. No other Meadow Marsh (MAM) Community Types located within 120m of the project location contained exposed sand or gravel within 100m of these communities.	
Seeps and Springs	No	One seep has been identified within 120m of the project location. This seep, however, is not located in a forested area within the headwaters of a stream or river system. As such, this feature has not been considered a candidate significant seep. No other seeps or springs were identified within 120m of the project location.	**No**

6.5.3 Habitat of Species of Conservation Concern

NRSI has reviewed the results of the site investigation conducted within 120m of the Armow Wind Project location and compared it to habitat criteria for habitats of species of conservation concern found within the Significant Wildlife Habitat Technical Guide and its appendices (OMNR 2000) and in the SWH Ecoregion Criteria Schedules Addendum (OMNR 2012a). Each of the four habitats of species of conservation concern have been encountered within the Armow Wind Project area and will all be carried forward to the Evaluation of Significance. These habitats can be found in Table 16 and mapped on Figures 54-70. Generalized wildlife habitats that are found within 120m of the project location can be found in Table 17 and mapped on Figures 71-87.

In conjunction with habitat for species of conservation concern, NRSI biologists have also reviewed the specific habitat considerations of several species of conservation concern that are known to occur within the vicinity of the Armow Wind Project. Habitats for Special Concern and Provincially Rare (S1-S3 and SH) plant and animal species that do not occur within the Armow Wind Project area can be found in Table 15 below. Habitats that will be carried forward to the evaluation of significance are found in Table 16 and mapped on Figures 54-70. Generalized wildlife habitats that are found within 120m of the project location can be found in Table 17 and mapped on Figures 71-87.

Table 15. Summary of Habitats for Special Concern Species, and S1-S3 and SH Species Not Requiring Specific Evaluation of Significance Surveys

Species/Vegetation Community	Habitat Present within 120m of Project Location	Rationale	EOS Required (Y/N)
Vegetation			
Tuberous Indian-plantain	No	There are no wet, calcareous meadows or shoreline fens within the project area.	**No**
Great Lakes Sand Reed	No	There are no active sand dunes, open sand planes or forest openings on stabilized sand dunes within the project area.	**No**
Common Stiff Sedge	Yes	Habitat is present within 120m of the project location in the form of moist grasslands, wet roadside ditches, and seepages. The records review has indicated that this species was identified during the Greenock Swamp wetland evaluation in 1986. This species was not observed in candidate habitat within 120m of the project location during ELC area searches by using distinguishing features to differentiate between similar species.	**No**
Ram's-head Lady's-slipper	No	There are no cedar woodlands on limestone plains, wooded fens, or sandy sites within the project area.	**No**
Beaked Spike-rush	No	There are no fens or shores located within the project area.	**No**
Great Lakes Wild Rye	No	There are no sand dunes located within the project area.	**No**
Stiff Gentian	Yes	Habitat is present within 120m of the project location in the form of moist soils associated with roadsides, stream banks and the edges of woodlands; however, this species was not observed in candidate habitat within 120m of the project location during ELC area searches by using distinguishing features to differentiate between similar species.	**No**
Eastern Green-violet	No	There are no rich, wet-mesic floodplain forests within 120m of the project location. The records review has indicated that this species was identified during the Greenock Swamp wetland evaluation in 1986. This species was not observed within 120m of the project location during ELC area searches by using distinguishing features to differentiate between similar species.	**No**
Oswego-tea	Yes	Habitat is present within 120m of the project location in the form of moist woods, swampy thickets and roadsides. The records review has indicated that this species was identified during the Greenock Swamp wetland evaluation in 1986. This species was not observed in candidate habitat within 120m of the project location during ELC area searches by using distinguishing features to differentiate between similar species.	**No**
Arrow-arum	Yes	Habitat is present within 120m of the project location in the form of shallow streams and marshes. The records review has indicated that this species was identified during the Greenock Swamp wetland evaluation in 1986. This species was not observed in candidate habitat within 120m of the project location during ELC area searches by using distinguishing features to differentiate between similar species.	**No**
Tubercled Orchid	Yes	Habitat is present within 120m of the project location in the form of wet open areas and	**No**

Species/Vegetation Community	Habitat Present within 120m of Project Location	Rationale	EOS Required (Y/N)
		marshes. The records review has indicated that this species was identified during the Greenock Swamp wetland evaluation in 1986. This species was not observed in candidate habitat within 120m of the project location during ELC area searches by using distinguishing features to differentiate between similar species.	
Large Round-leaved Orchid	Yes	Habitat is present within 120m of the project location in the form of moist, mixed woods. The records review has indicated that this species was identified during the Greenock Swamp wetland evaluation in 1986 and the Glammis Bog wetland evaluation in 1989. This species was not observed in candidate habitat within 120m of the project location during ELC area searches by using distinguishing features to differentiate between similar species.	**No**
Hill's Pondweed	Yes	Habitat is present within 120m of the project location in the form of alkaline water within ditches. The records review has indicated that this species was identified during the Greenock Swamp wetland evaluation in 1986. This species was not observed in candidate habitat within 120m of the project location during ELC area searches by using distinguishing features to differentiate between similar species.	**No**
Low Nutrush	No	There are no moist-sandy meadows or shores located within the project area.	**No**
Prairie Dropseed	No	There are no dry limestone plains or calcareous shores located within the project area.	**No**
Insects			
Hungerford's Crawling Water Beetle	Yes	Habitat is present within 120m of the project location in the form of moderate-fast flowing sections of the Penetangore River along the western section of the project area. This species is limited to only three rivers within Ontario, all within Bruce County, and includes the Rankin, the North Saugeen and the Saugeen Rivers. This species was not observed in candidate habitat within 120m of the project location during ELC area searches or aquatic habitat assessments by using distinguishing features to differentiate between similar species. As such, critical habitat for this species has not been identified for this species within the project area.	**No**
Clamp-tipped Emerald	Yes	Habitat is present within 120m of the project location in the form of shaded forest streams and streams flowing out of boggy or swampy areas within the Glammis bog and Greenock Swamp PSWs. This species was not observed in candidate habitat within 120m of the project location during ELC area searches or aquatic habitat assessments by using distinguishing features to differentiate between similar species. As such, critical habitat for this species has not been identified for this species within the project area.	**No**

6.5.4 Animal Movement Corridors

An assessment of available linkage areas surrounding the deer wintering area found within the Greenock Swamp indicates that the most abundant and largest apparent corridors to and from the area are found on the east and south sides. These apparent linkages are fairly extensive, particularly in comparison to the availability of potential corridors on the western side, within which the project is proposed to be located. Criteria for confirmed deer movement corridors indicate that corridors should be unbroken by roads or residential areas. In addition, they should be at least 200m wide, and contain gaps <20m in width (OMNR 2012a). According to these criteria, there are no potential movement corridors found on the west side of the Greenock Swamp (and therefore none found within 120m of the project location). This is due to the presence of Bruce County Road 1, as well as gaps in forested canopy cover which are significantly greater than 20m. There are also no watercourses which connect the Greenock Swamp to any forested areas in the vicinity of the project area. The only portion of the wintering area found west of Bruce County Road 1 contains a gap between the nearest adjacent forest cover of greater than 200m. As a result, there are no areas which would meet the requirements for a deer movement corridor associated with the significant wintering area found in the Greenock Swamp, and therefore, none are identified as Candidate Deer Movement Corridors.

NRSI has used the presence of any candidate wetland amphibian breeding habitats located within 120m from the project location, as outlined in Section 5.6.2 (Table 5) to identify amphibian movement corridors within 120m of the project location. In the event that significant amphibian breeding habitat is present within 120m of the project location, further investigation of the presence of amphibian movement corridors will be completed as part of the evaluation of significance phase of this project.

6.5.5 Summary of Wildlife Habitats

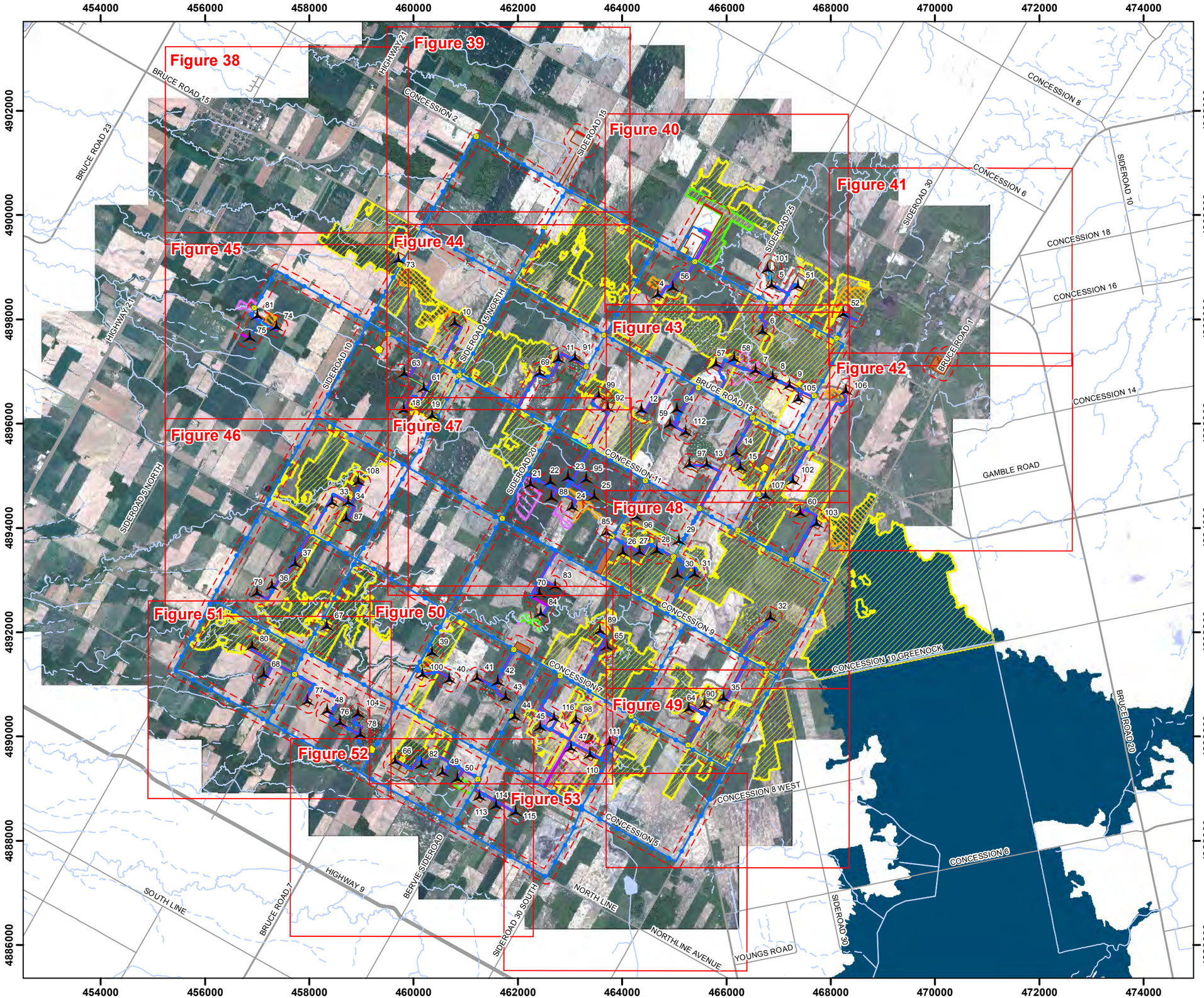
NRSI has reviewed the results of the site investigation conducted within 120m of the Armow Wind Project location and compared it to habitat criteria for seasonal concentration areas, rare vegetation communities and specialized wildlife habitats, species of conservation concern, and animal movement corridors found within the Significant Wildlife Habitat Technical Guide and its appendices (OMNR 2000), and in the

SWH Ecoregion 6E Criterion Schedule Addendum (OMNR 2012a). A total of 173 candidate significant wildlife habitats which may be affected by the operation of the Armow Wind Project (OMNR 2011a) have been identified within 120m of the project location. In addition, several additional wildlife habitats have been assumed to be present within 120m of the project location where components will not have operational effects. These habitats have been treated as significant, and mitigation measures for potential negative environmental effects to these generalized candidate significant wildlife habitats from construction activities will be discussed in the Environmental Impact Study. The locations and boundaries of the 173 candidate significant wildlife habitats that will be carried forward to the evaluation of significance are found in Table 16 and mapped on Figures 37-70. Generalized wildlife habitats that are found within 120m of the project location can be found in Table 17 and mapped on Figure 71-87.

Figure 37

Armow Wind Project

Seasonal Concentration Areas Key Map



Legend

- Map Extent
- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
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Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
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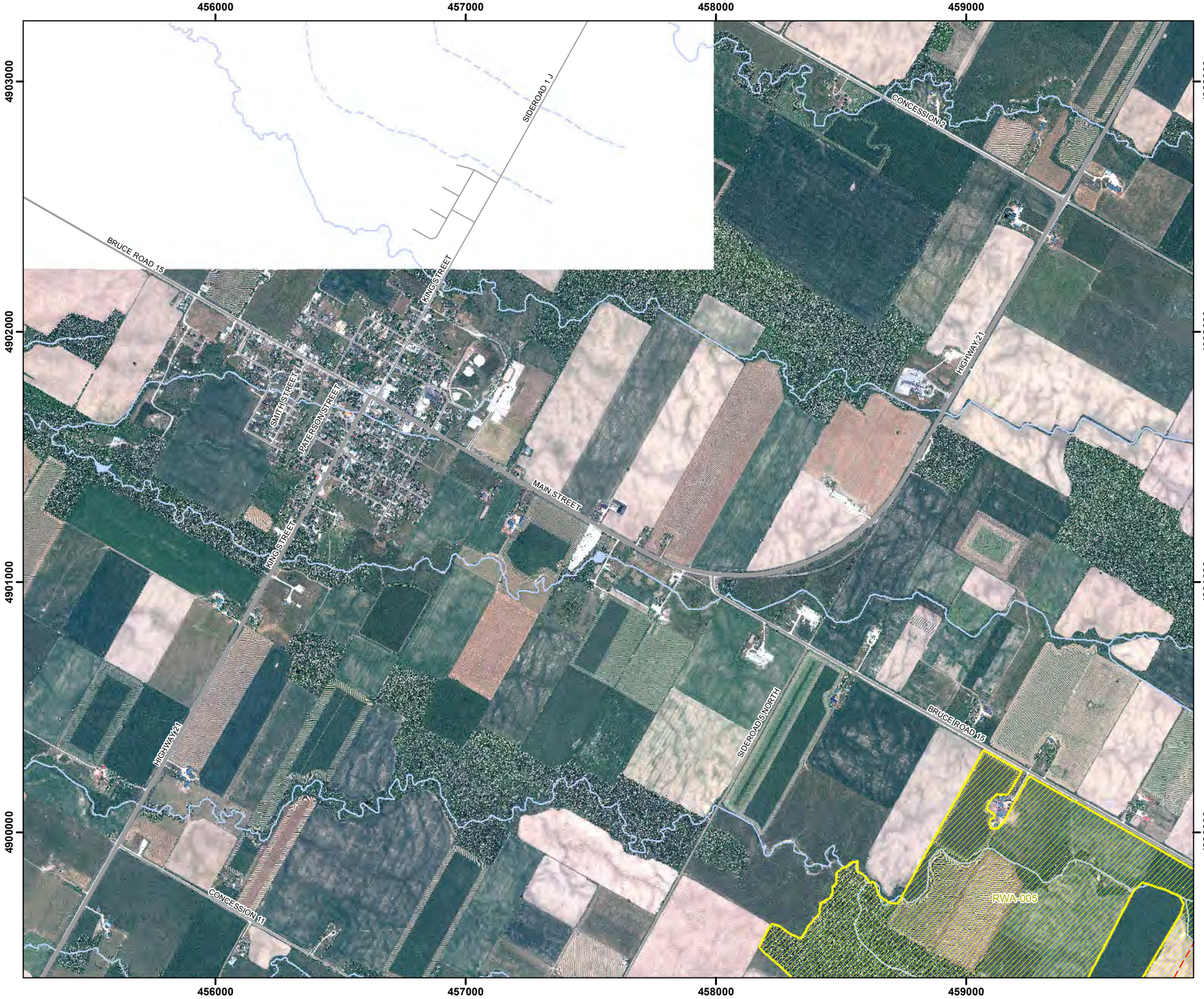
Figure 38

Armow Wind Project

Seasonal Concentration Areas



Legend

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Figure 39

Armow Wind Project

Seasonal Concentration Areas

Legend

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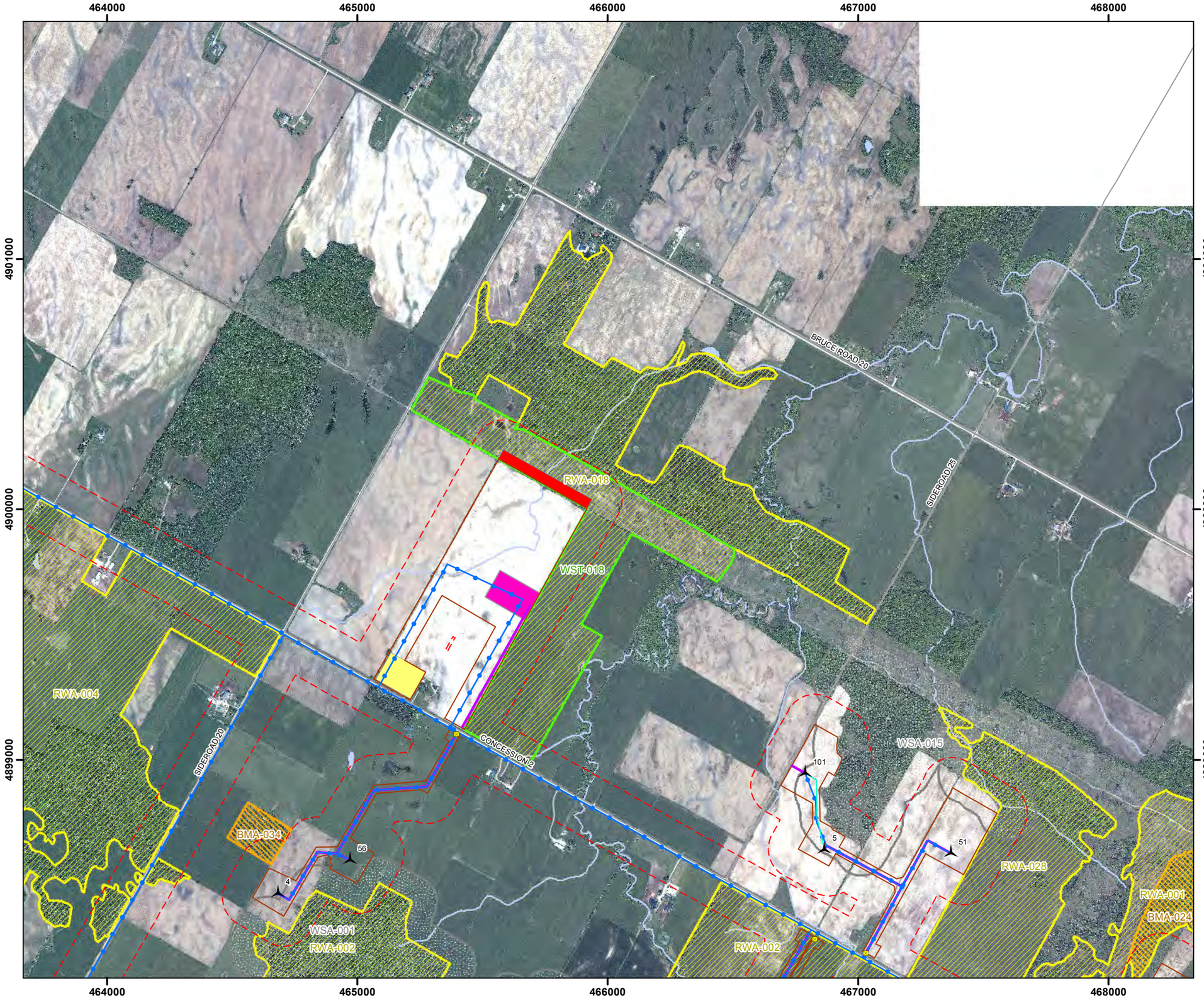
Figure 40

Armow Wind Project

Seasonal Concentration Areas



Legend

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NAD83 - UTM Zone 17
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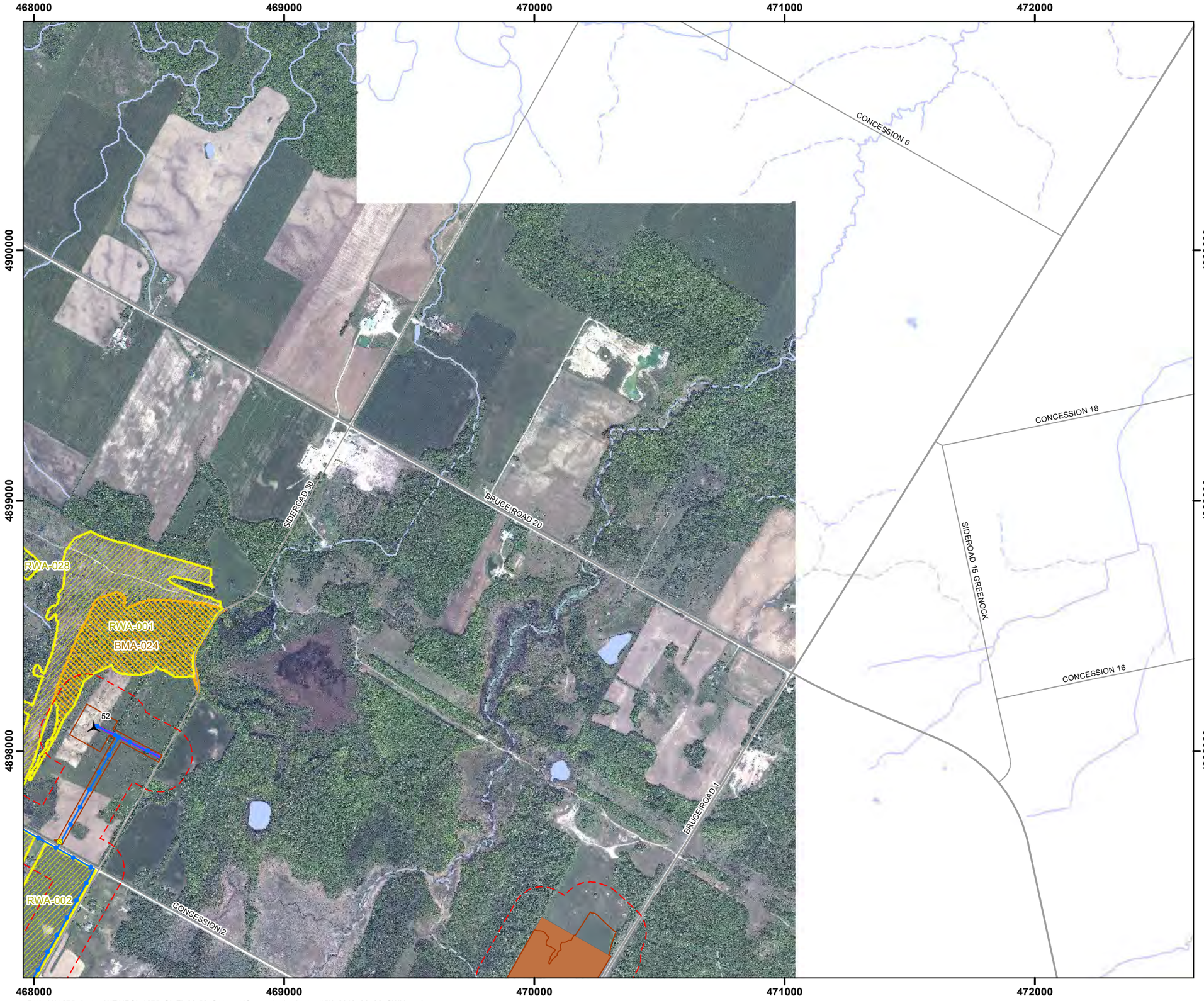
Figure 41

Armow Wind Project

Seasonal Concentration Areas



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Project: 1275 Date: August-27-12	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

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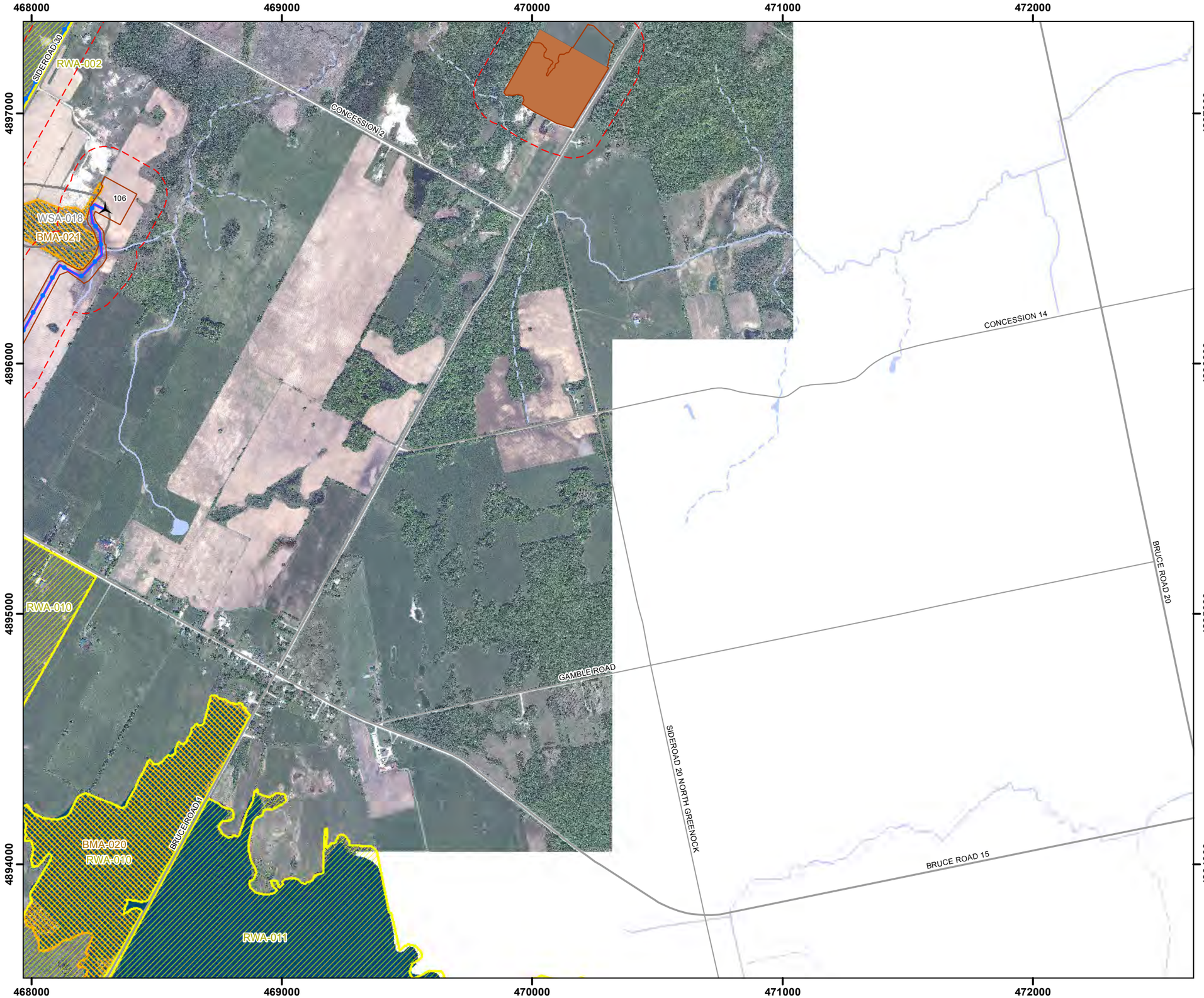
Figure 42

Armow Wind Project

Seasonal Concentration Areas



Legend

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Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
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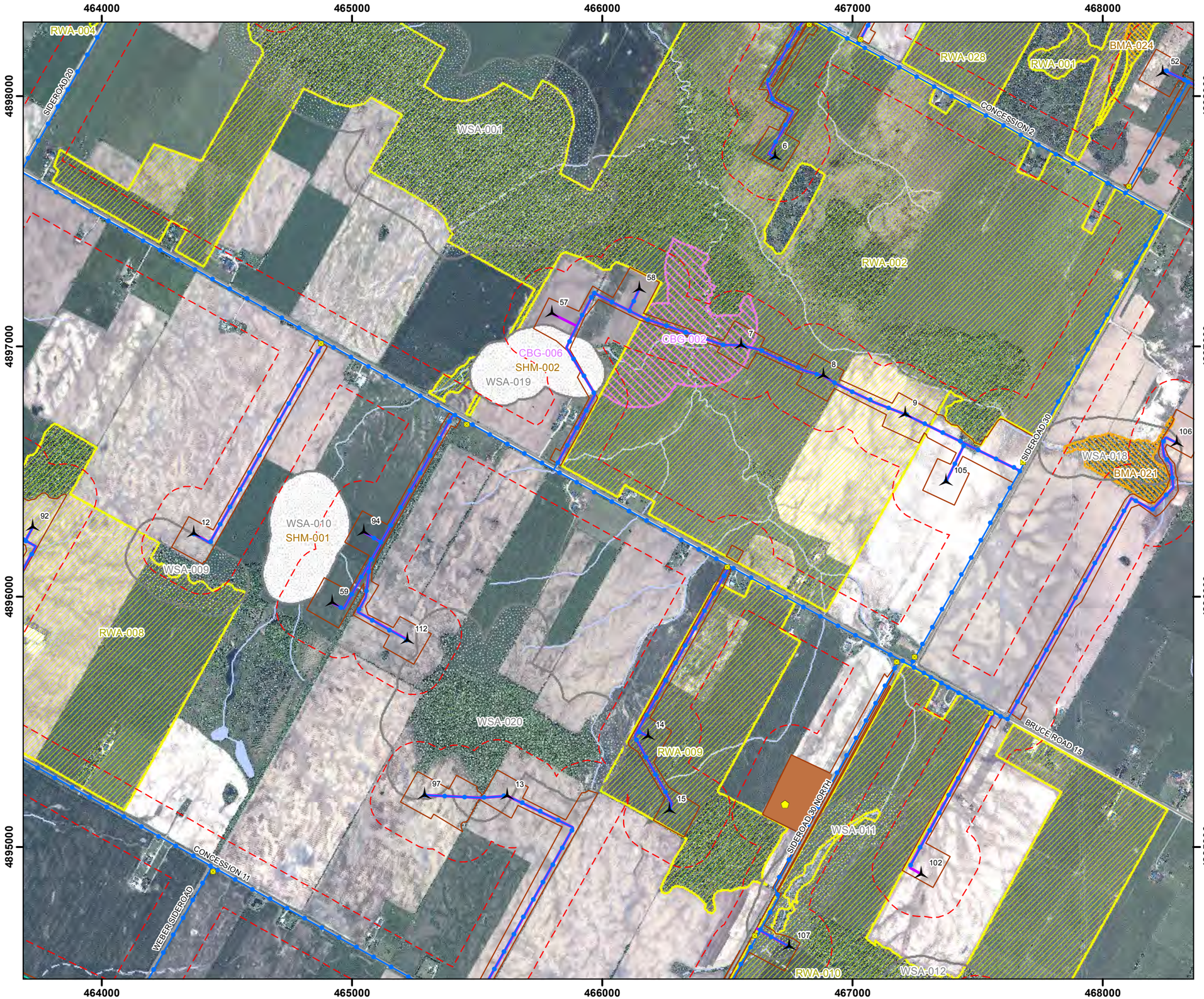
Figure 43

Armow Wind Project

Seasonal Concentration Areas



Legend

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NAD83 - UTM Zone 17
Size: 11x17"
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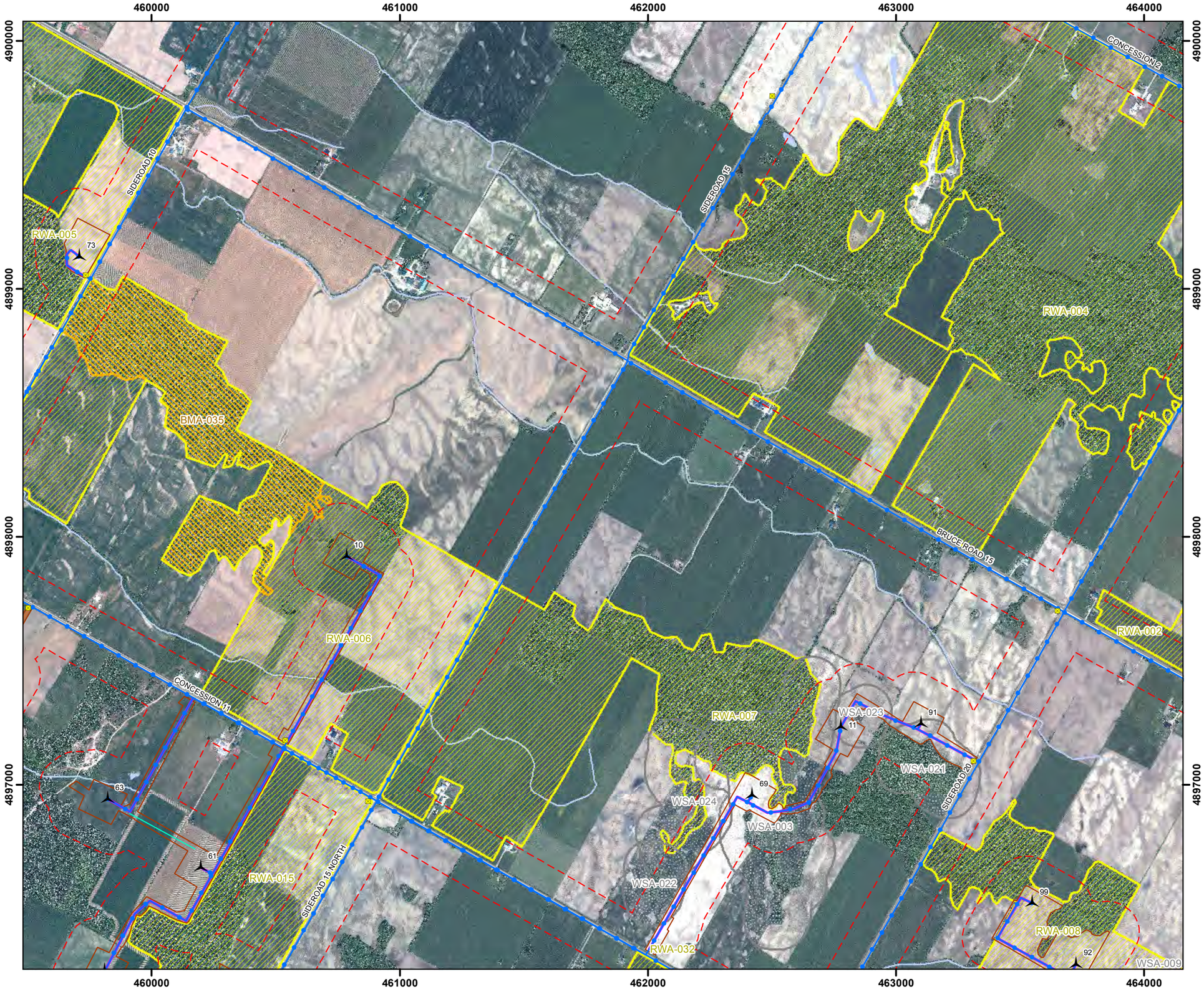
Figure 44

Armow Wind Project

Seasonal Concentration Areas



Legend

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NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

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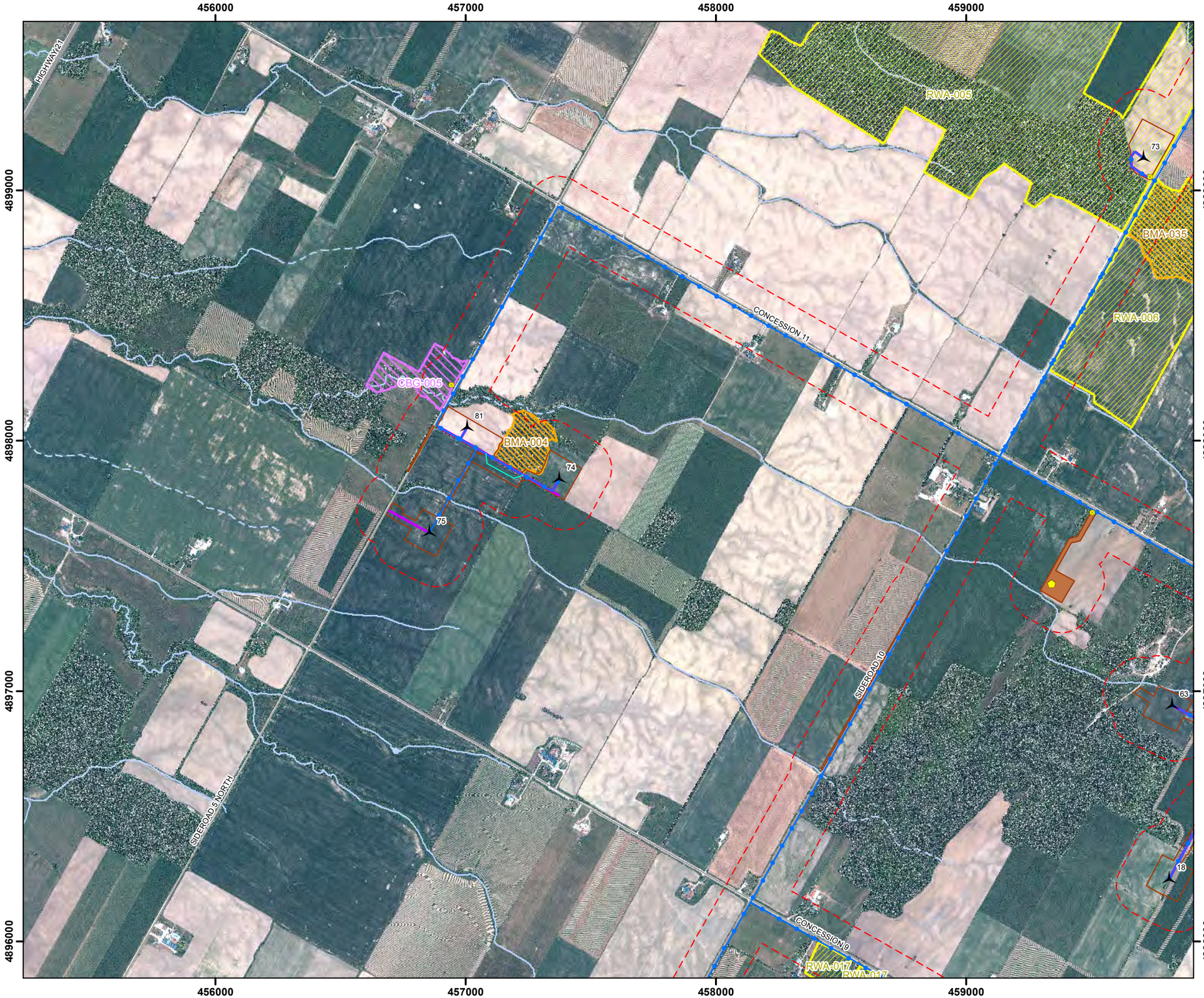
Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig38-53_SeasonalConcentrationAreas_15K_2012_08_23_SWM.mxd

Figure 45

Armow Wind Project

Seasonal Concentration Areas



Legend

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Project: 1275
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NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

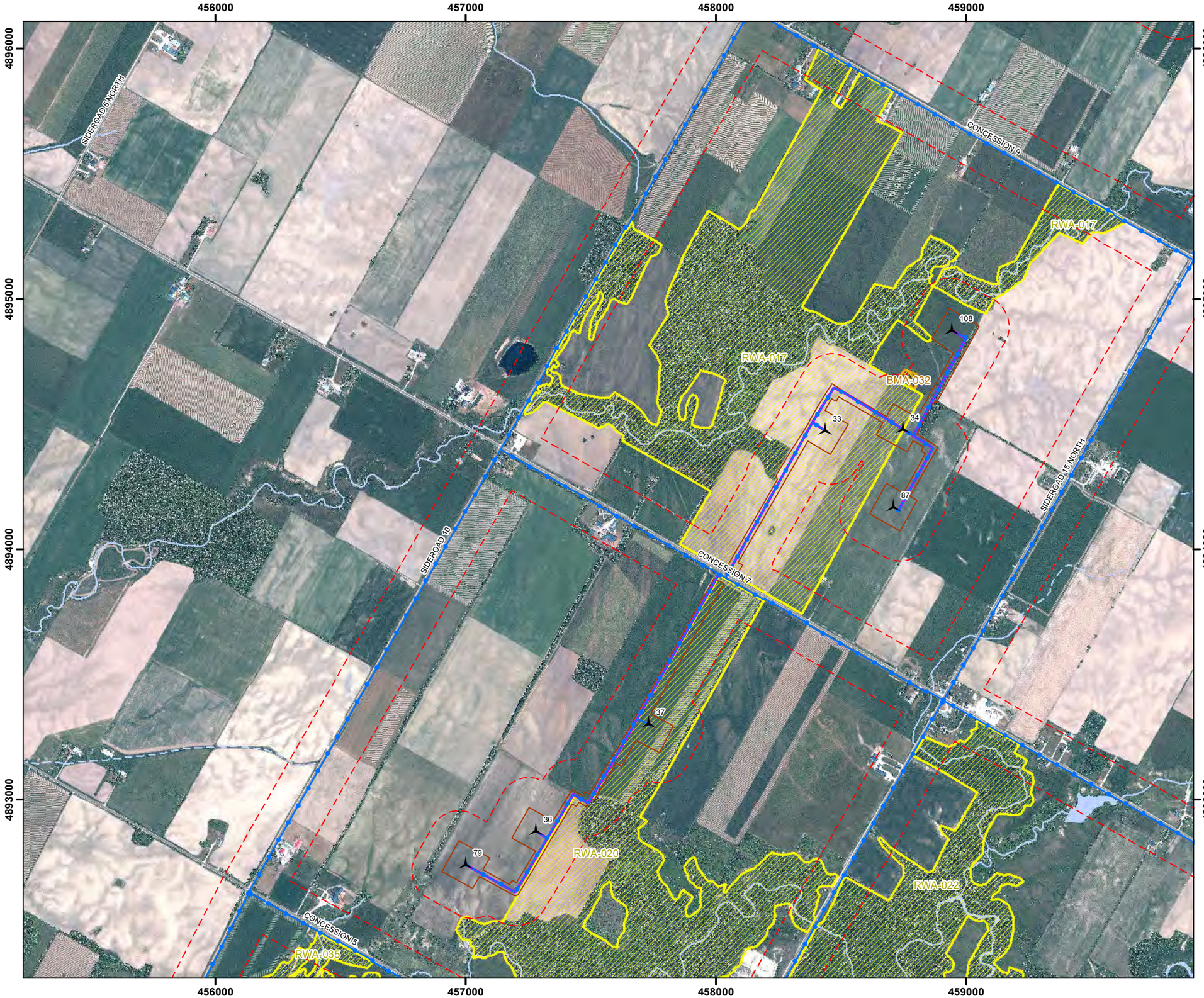
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig38-53_SeasonalConcentrationAreas_15K_2012_08_23_SWM.mxd

Figure 46

Armow Wind Project

Seasonal Concentration Areas



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody
- Waterfowl Stopover and Staging Area (WST)
- Waterfowl Stopover and Staging Area (WSA)
- Shorebird Migratory Stopover Area (SHM)
- Raptor Winter Feeding and Roosting Areas (RWA)
- Bat Maternity Colony (BMA)
- Colonial-Nesting Bird Breeding Habitat (Ground) (CBG)
- Colonial Nesting Bird Breeding Habitat (CBT)
- Winter Deer Yard

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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

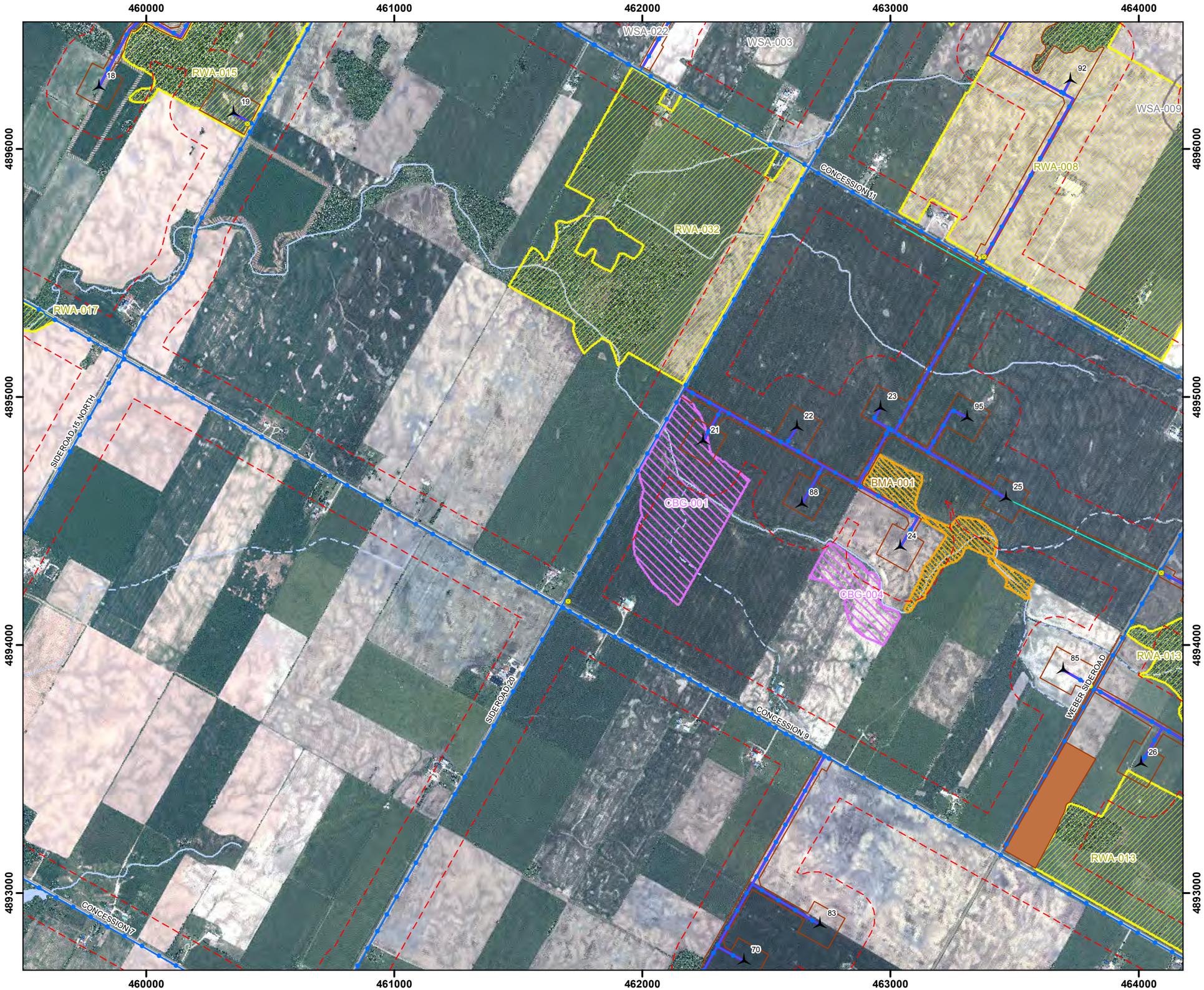
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig38-53_SeasonalConcentrationAreas_15K_2012_08_23_SWM.mxd

Figure 47

Armow Wind Project

Seasonal Concentration Areas



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
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- Access Road
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig38-53_SeasonalConcentrationAreas_15K_2012_08_23_SWM.mxd

Figure 48

Armow Wind Project

Seasonal Concentration Areas

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

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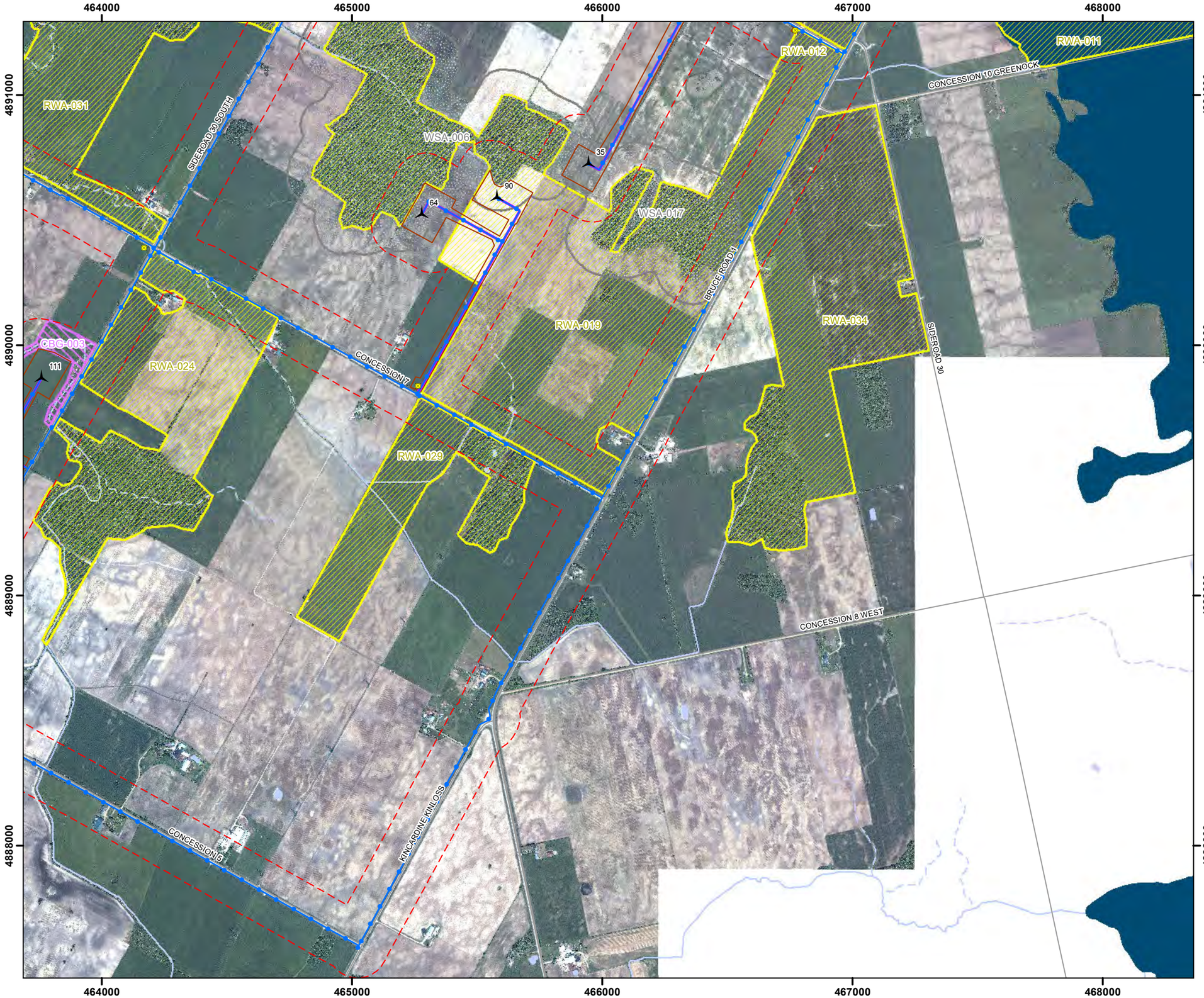
Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig38-53_SeasonalConcentrationAreas_15K_2012_08_23_SWM.mxd



Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig38-53_SeasonalConcentrationAreas_15K_2012_08_23_SWM.mxd

Figure 49

Armow Wind Project

Seasonal Concentration Areas

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

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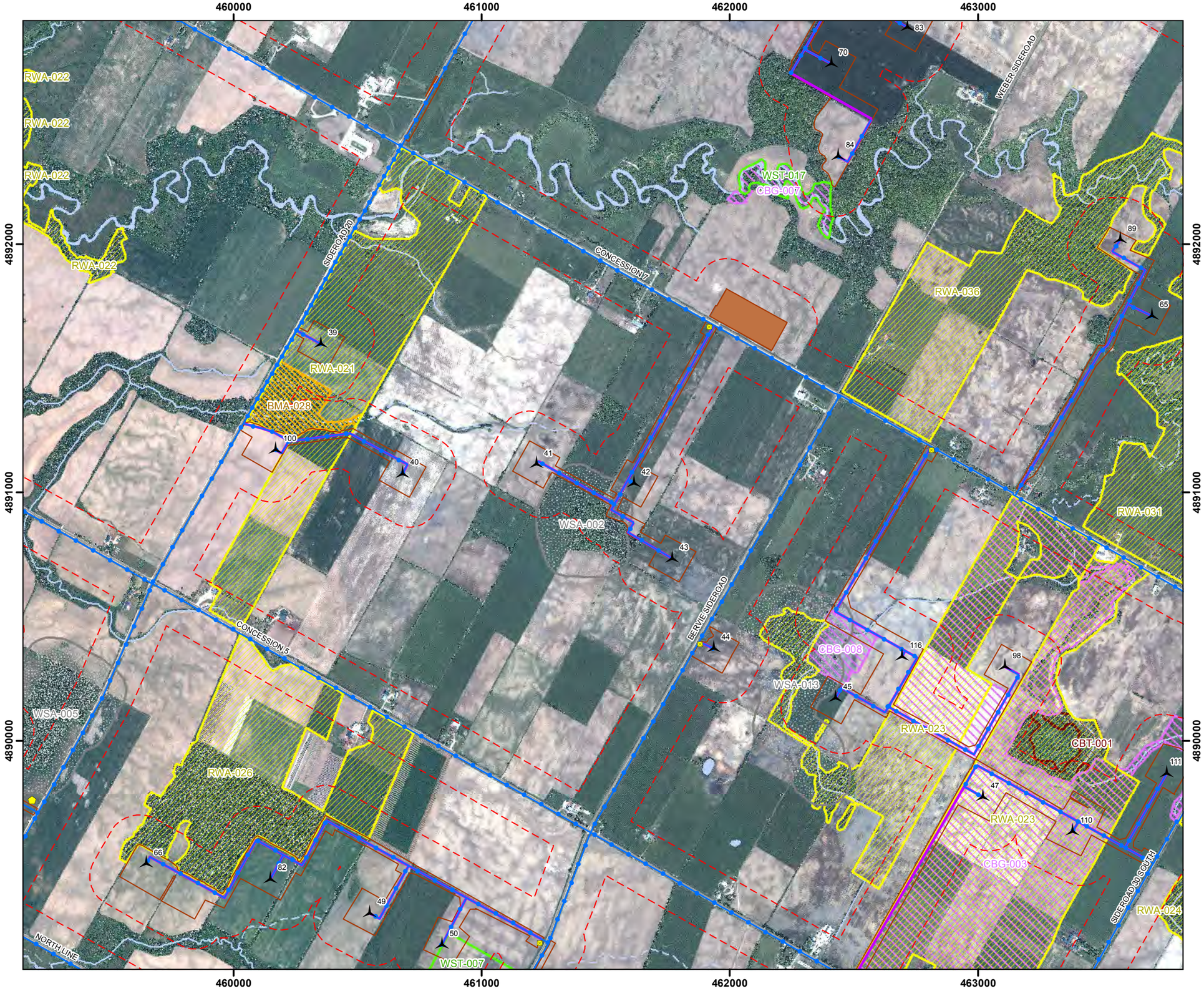
Figure 50

Armow Wind Project

Seasonal Concentration Areas



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

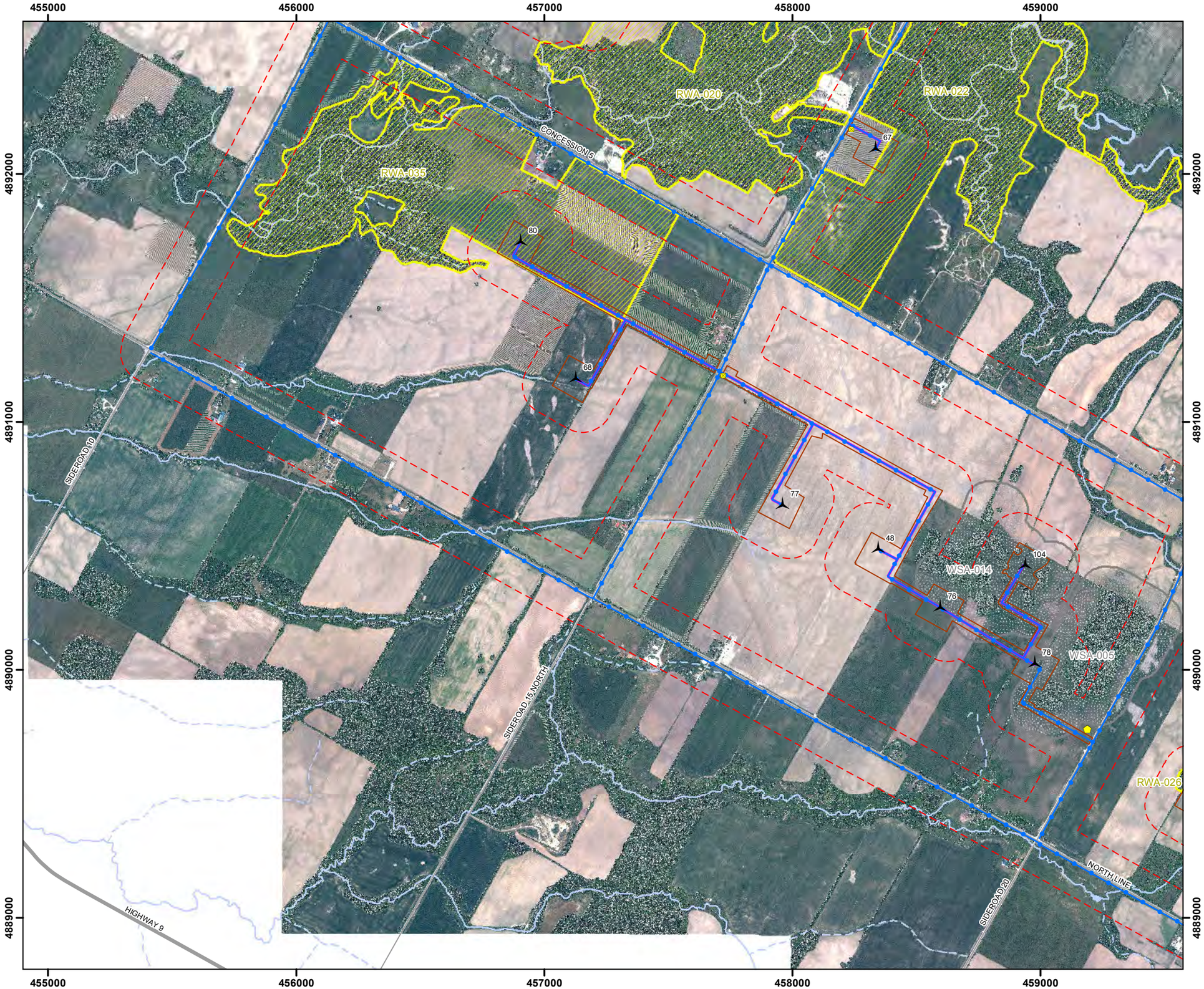
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig38-53_SeasonalConcentrationAreas_15K_2012_08_23_SWM.mxd

Figure 51

Armow Wind Project

Seasonal Concentration Areas



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Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

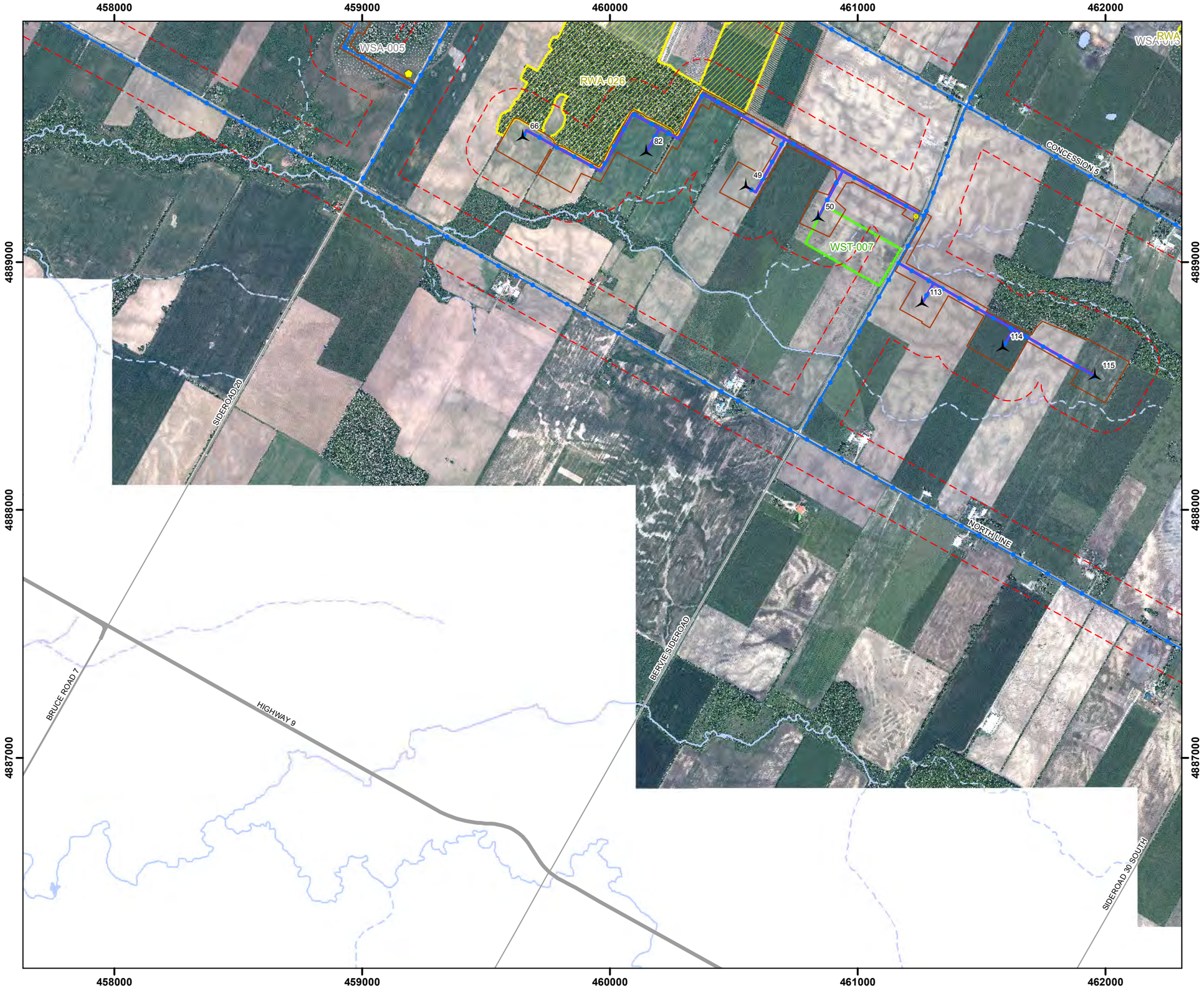
0 250 500 750 1,000 m

N

Figure 52

Armow Wind Project

Seasonal Concentration Areas



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

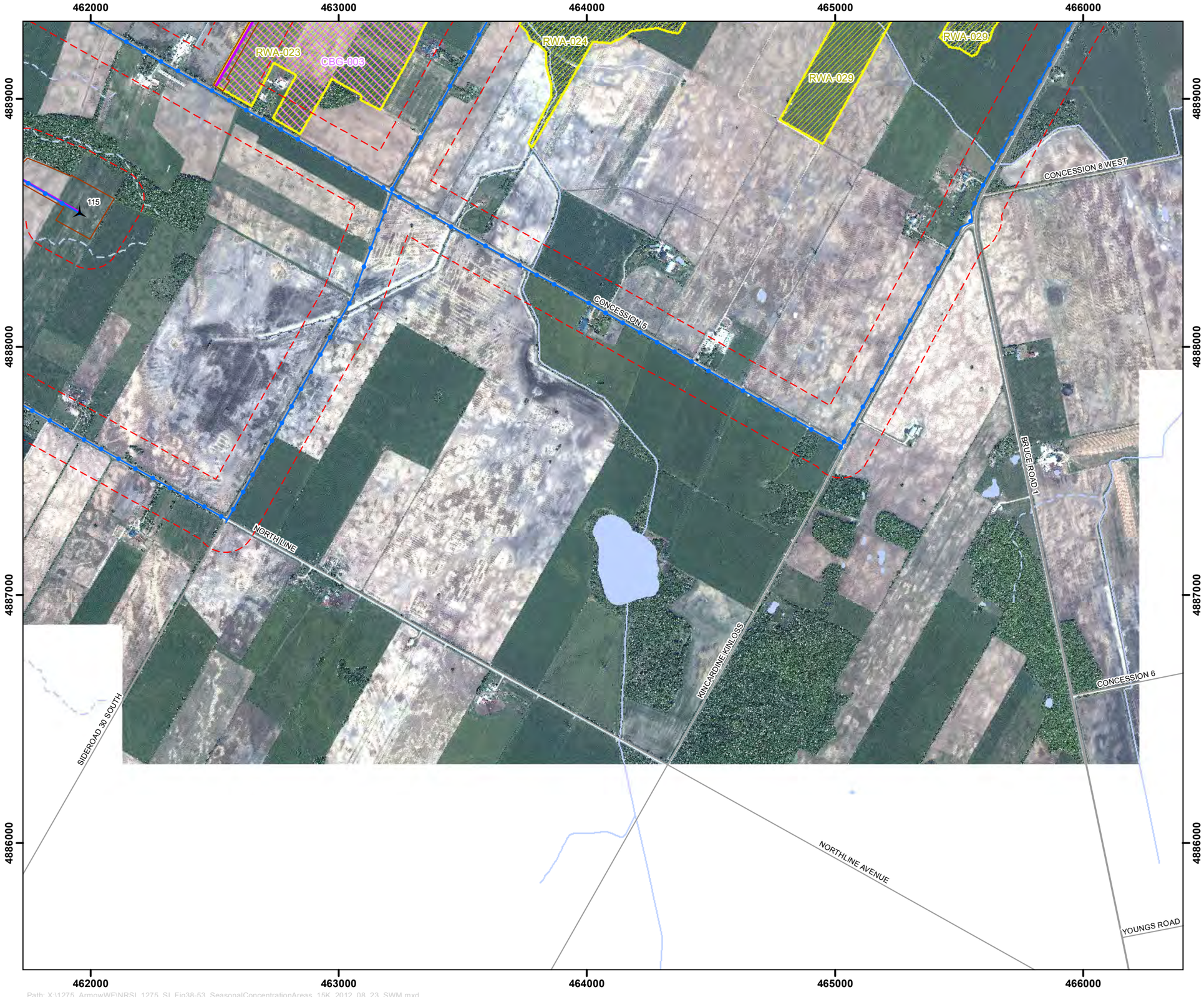
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig38-53_SeasonalConcentrationAreas_15K_2012_08_23_SWM.mxd

Figure 53

Armow Wind Project

Seasonal Concentration Areas



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
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Project: 1275 Date: August-27-12	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

0 250 500 750 1,000 m

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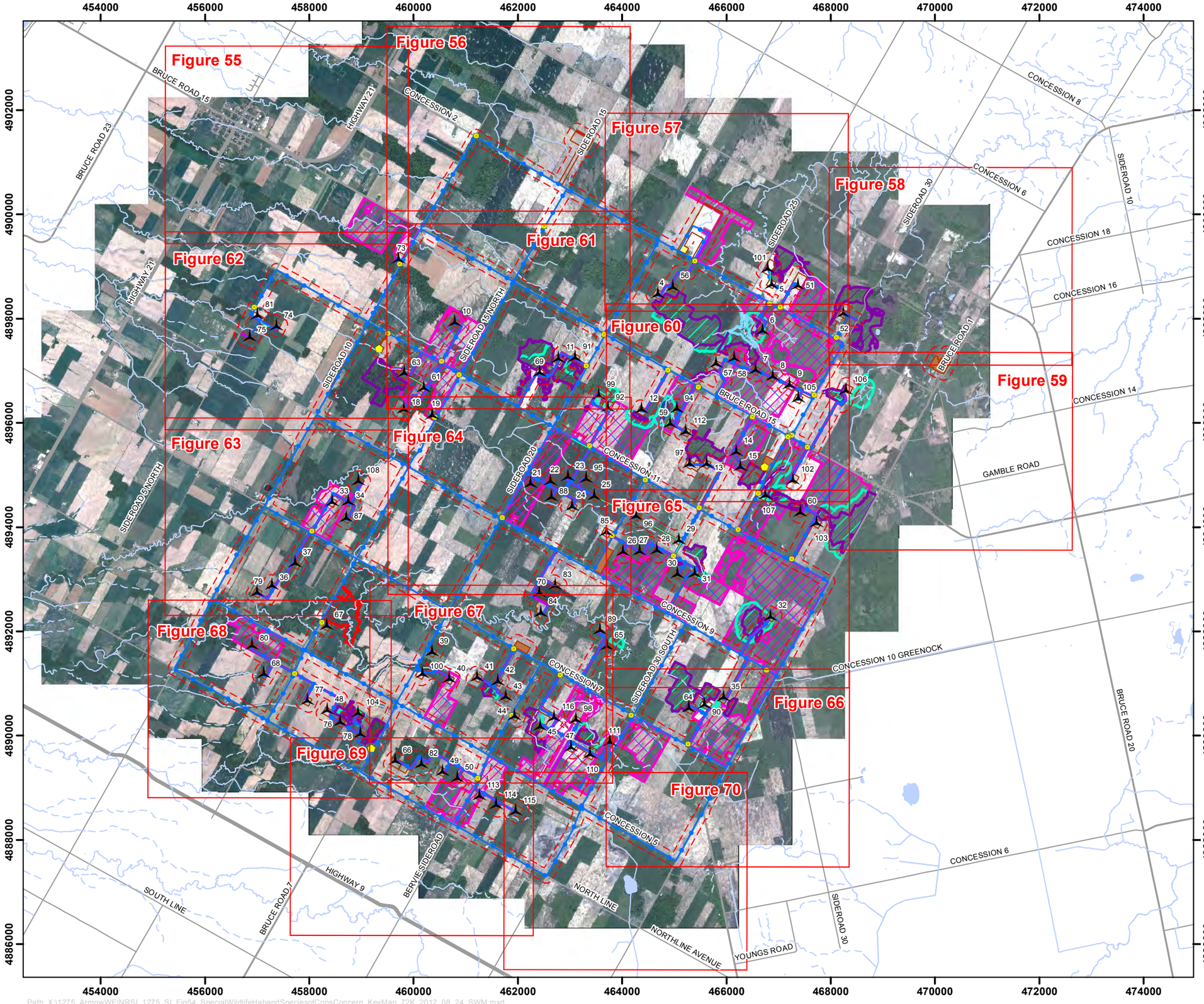
Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig38-53_SeasonalConcentrationAreas_15K_2012_08_23_SWM.mxd

Figure 54

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern Key Map



Legend

- Map Extent
- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody
- Shrub/early Successional Bird Breeding Habitat (SSB)
- Olive-sided Flycatcher Habitat (OSF)
- Amphibian Breeding Habitat - Woodland (AWO)
- Marsh Breeding Bird Habitat (MBB)
- Waterfowl Nesting Area (WFN)
- Open Country Bird Breeding Habitat (OCB)
- Common Nighthawk Habitat (CNH)

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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:72,000

0 1 2 3 4 5 kms

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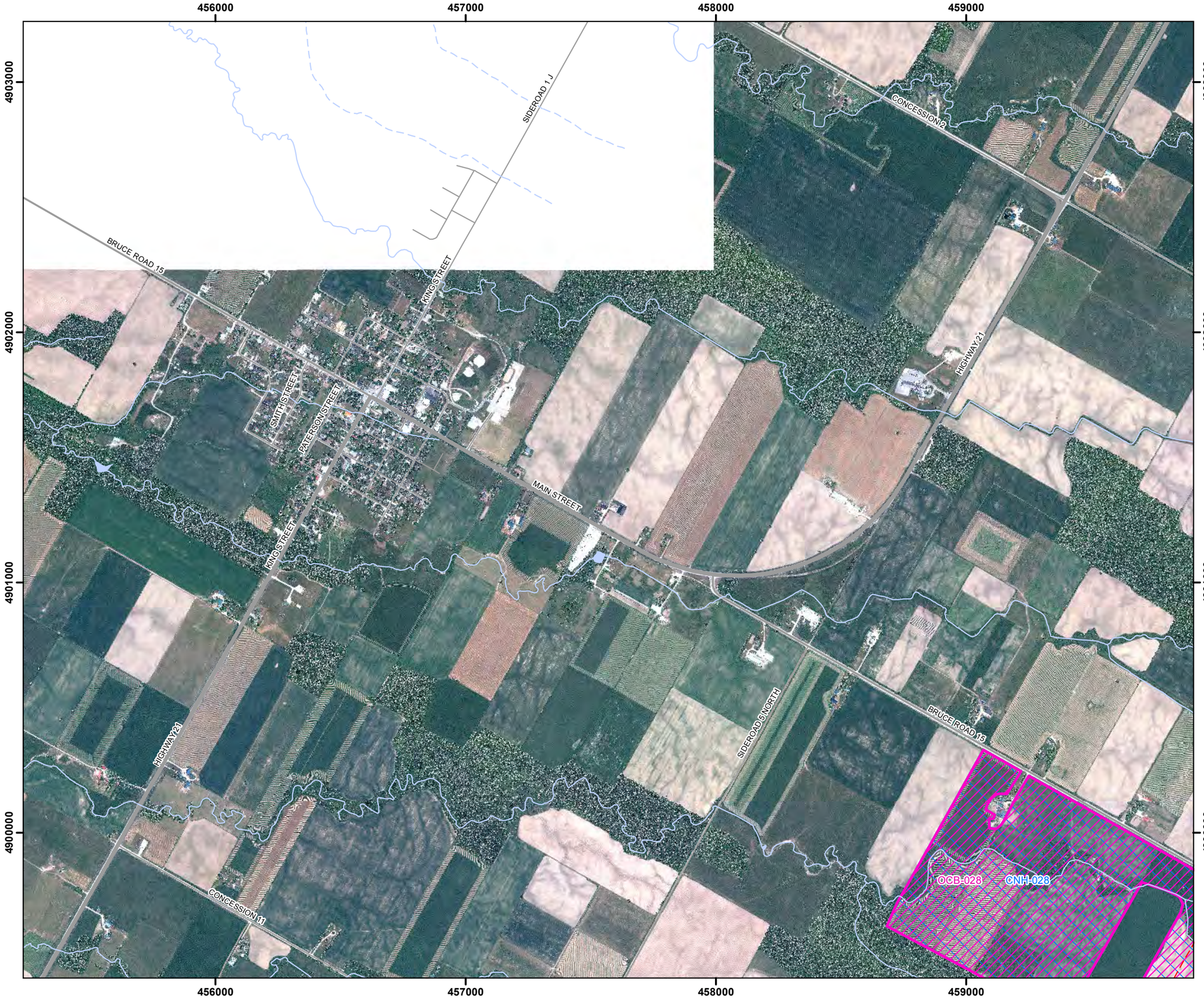
Figure 55

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig55-70_SpecialWildlifeHabandSpeciesofConsConcern_15K_2012_08_23_SWM.mxd

Figure 56

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

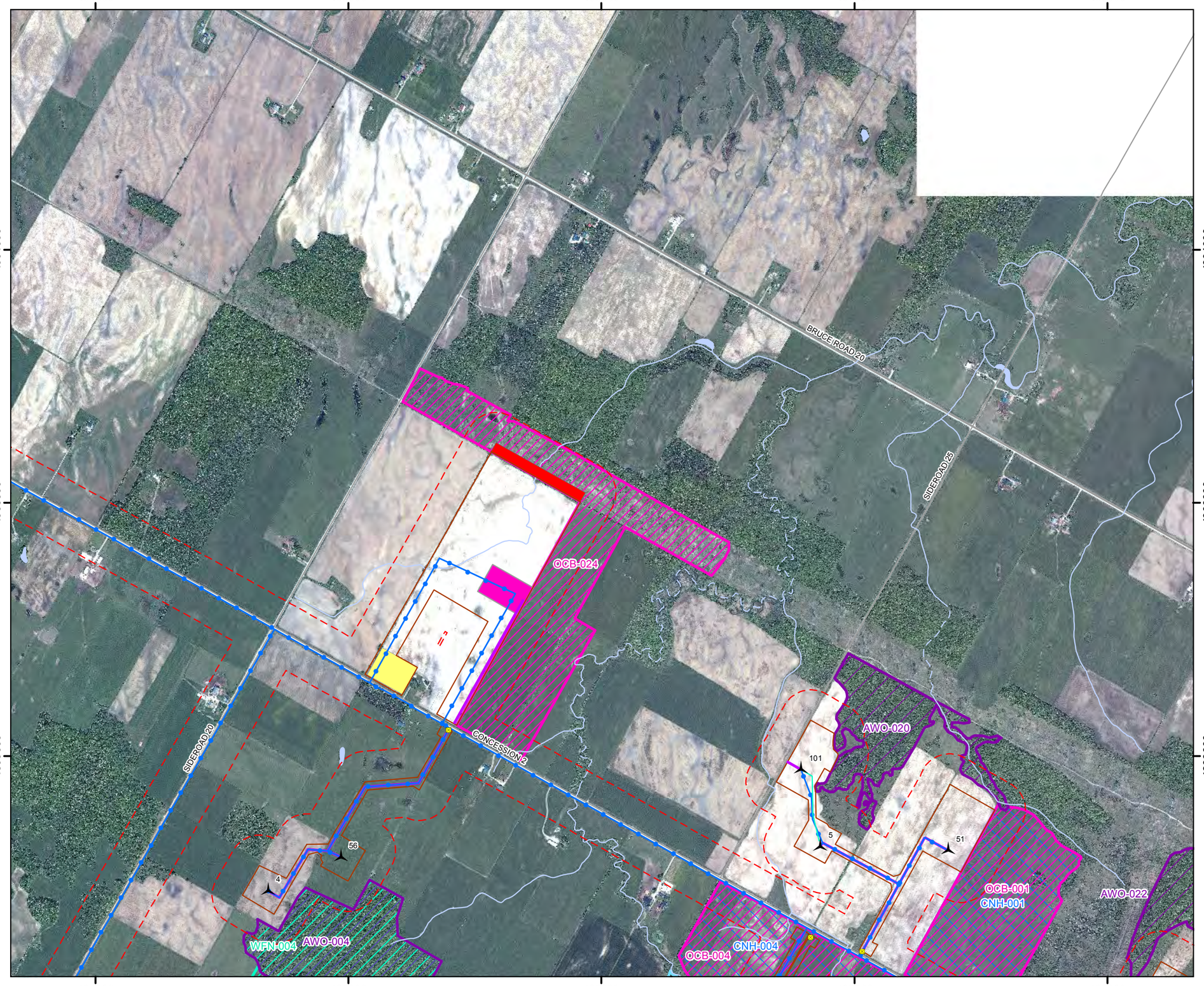
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig55-70_SpecialWildlifeHabandSpeciesofConsConcern_15K_2012_08_23_SWM.mxd

Figure 57

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

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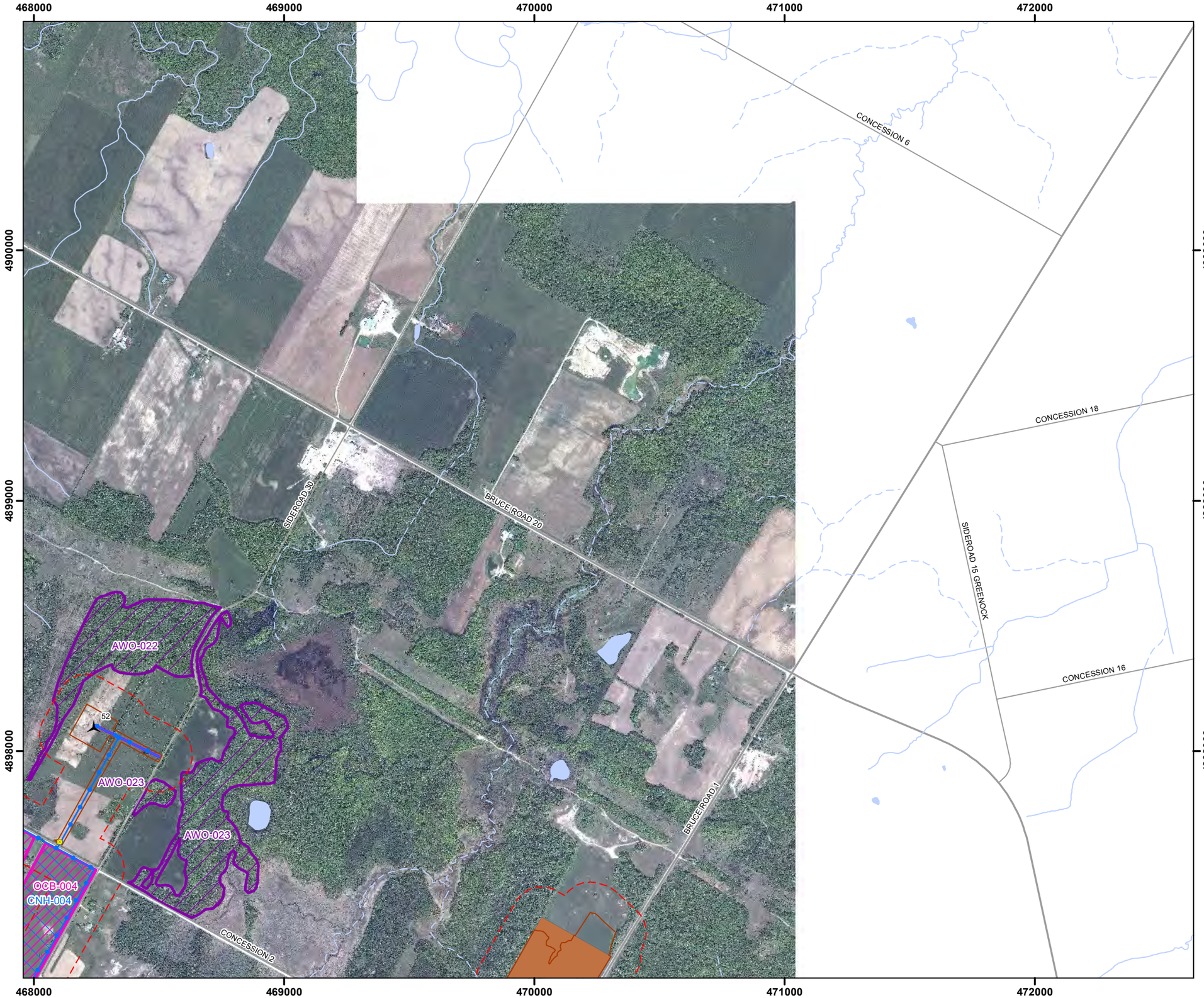
Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig55-70_SpecialWildlifeHabandSpeciesofConsConcern_15K_2012_08_23_SWM.mxd

Figure 58

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

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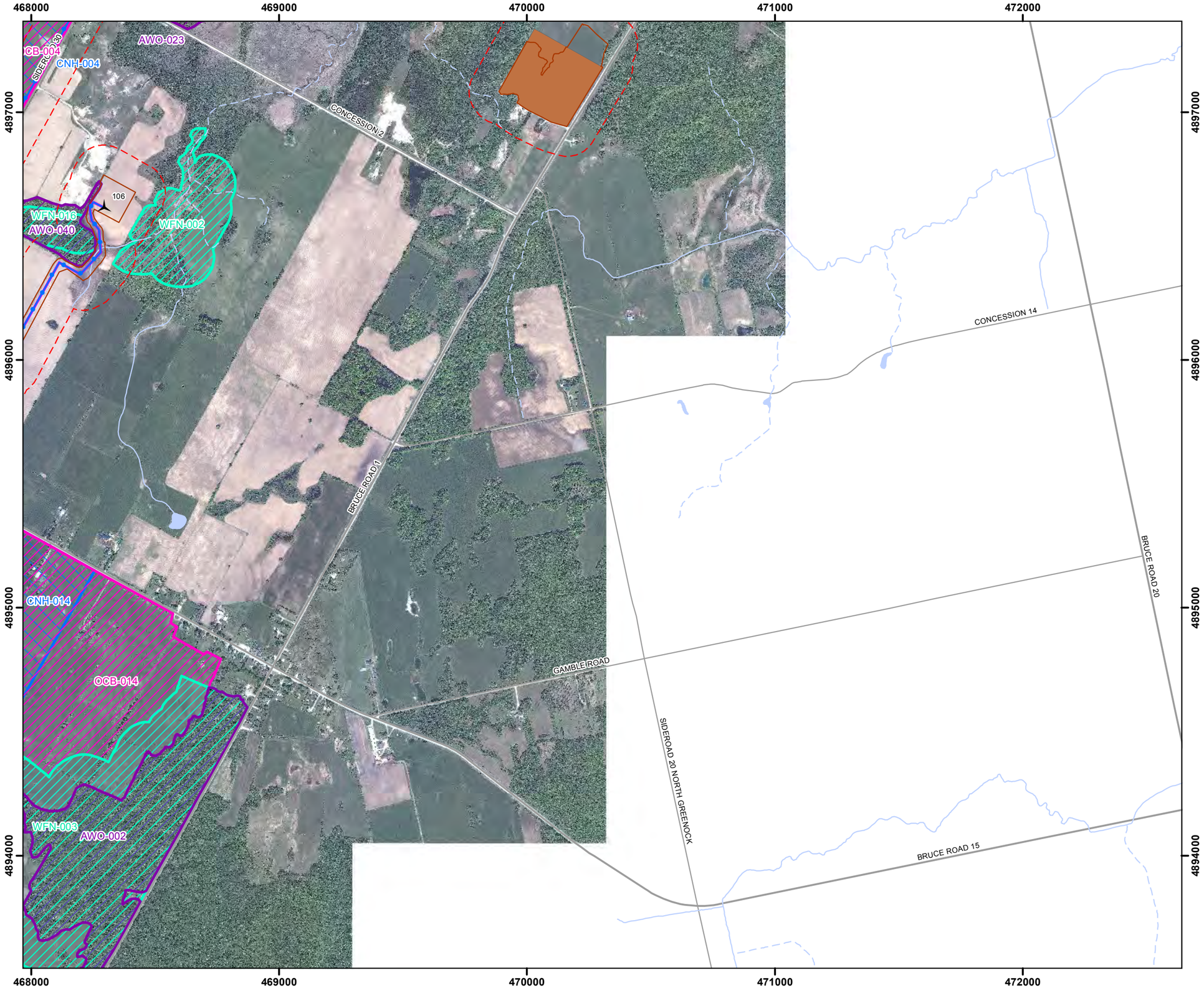
Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig55-70_SpecialWildlifeHabandSpeciesofConsConcern_15K_2012_08_23_SWM.mxd

Figure 59

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
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- Cabling
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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 1,000 m

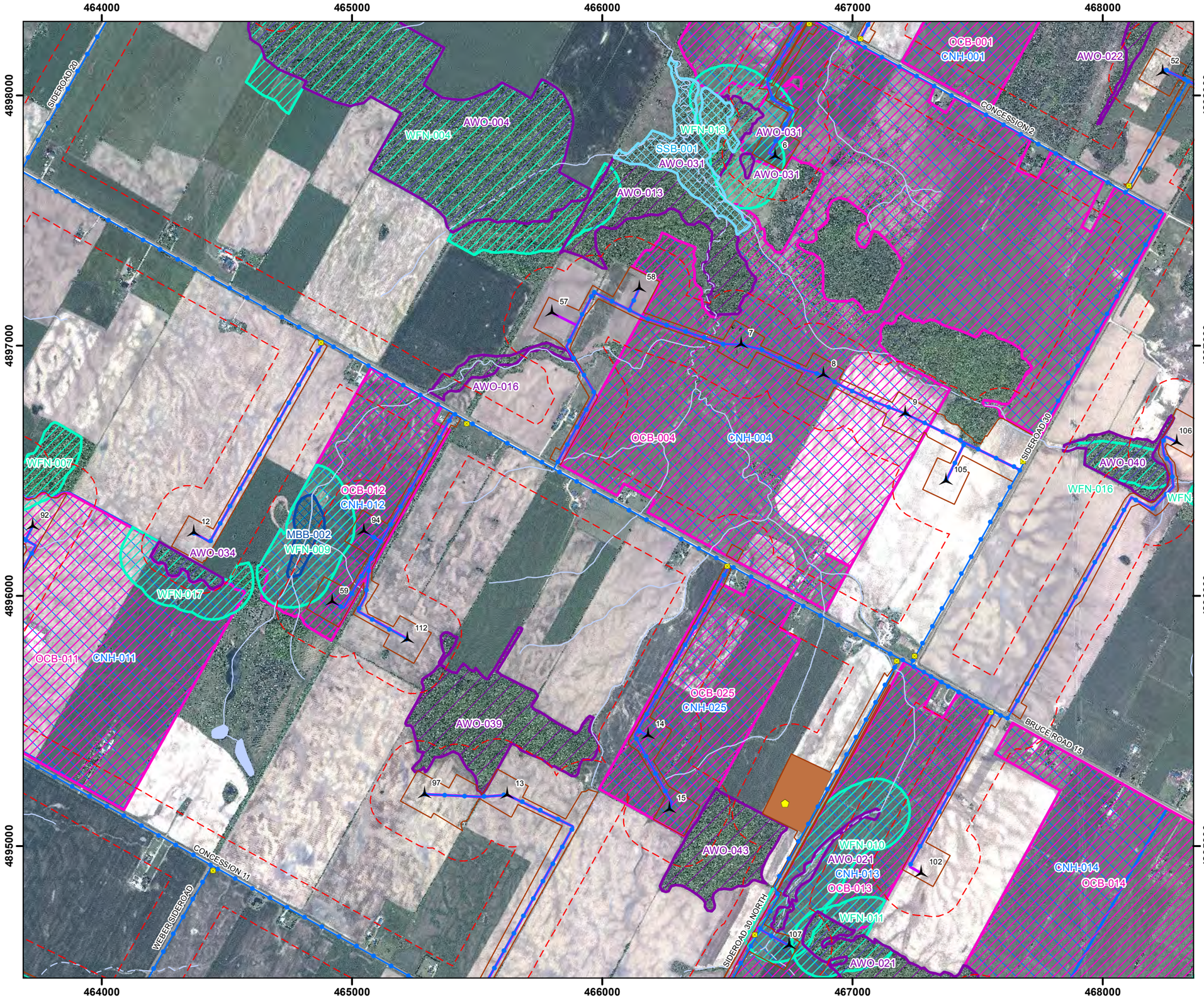
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig55-70_SpecialWildlifeHabandSpeciesofConsConcern_15K_2012_08_23_SWM.mxd

Figure 60

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody
- Shrub/early Successional Bird Breeding Habitat (SSB)
- Olive-sided Flycatcher Habitat (OSF)
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- Marsh Breeding Bird Habitat (MBB)
- Waterfowl Nesting Area (WFN)
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- Common Nighthawk Habitat (CNH)

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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
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0 250 500 750 1,000 m

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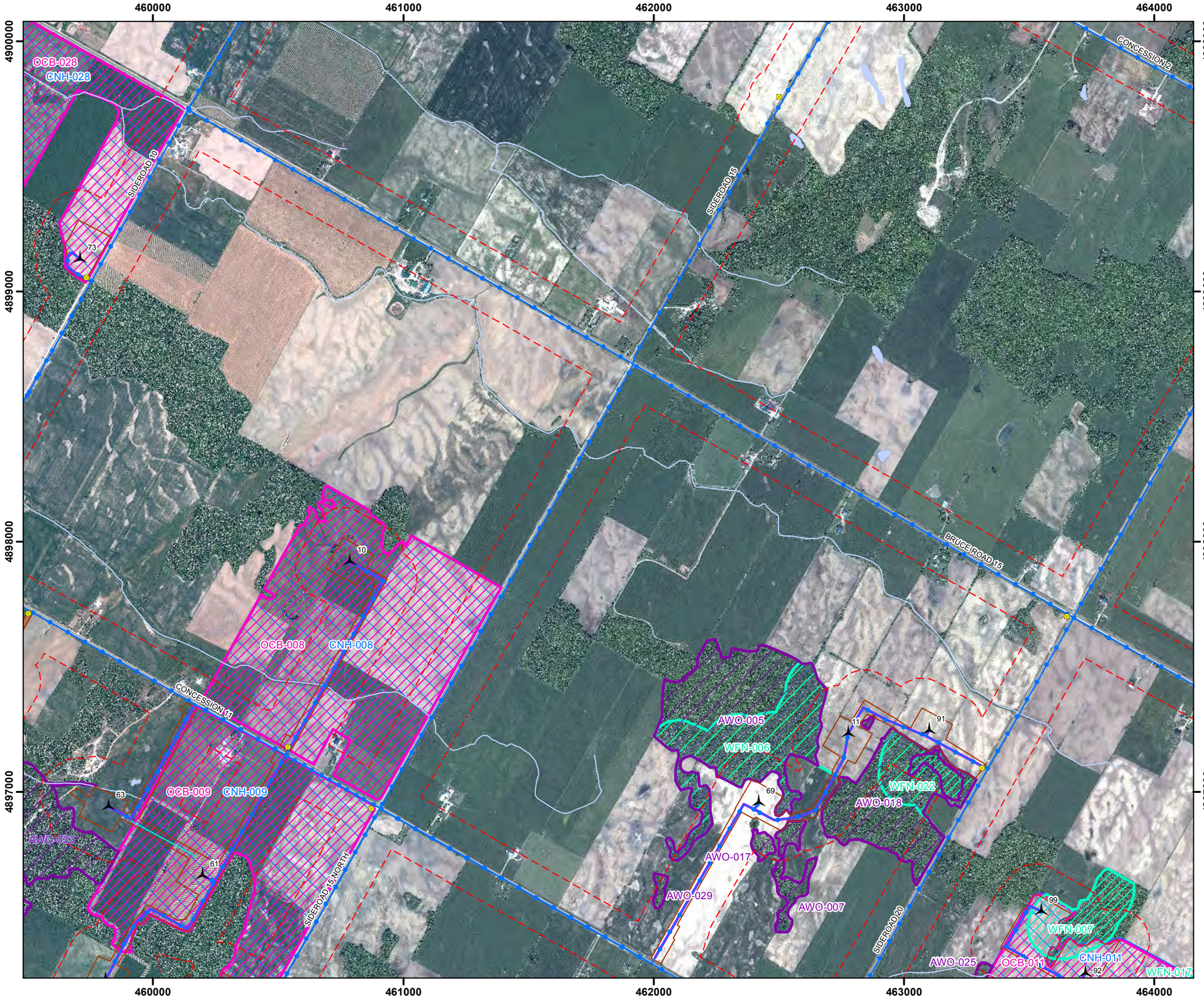
Figure 61

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

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NAD83 - UTM Zone 17
Size: 11x17"
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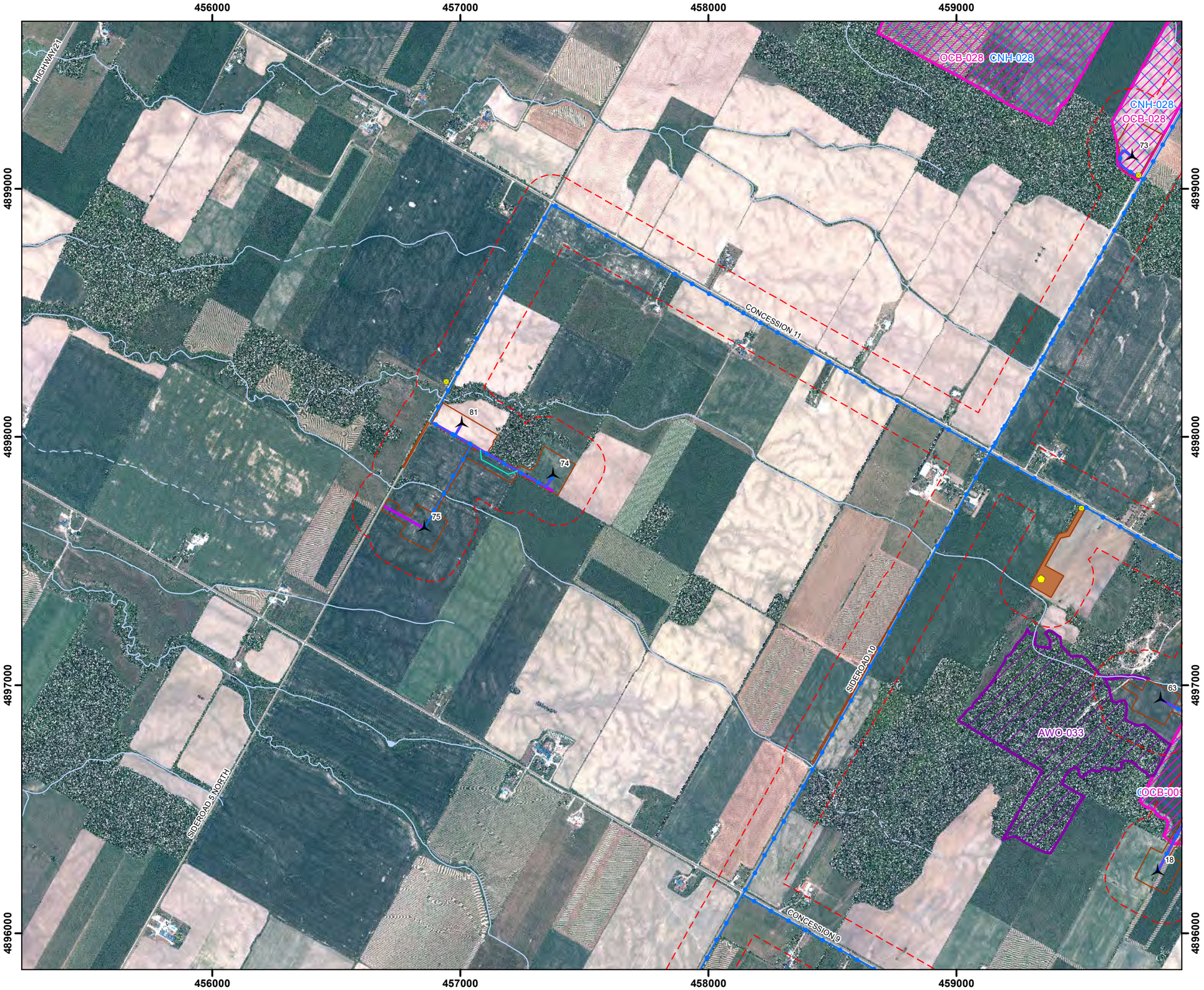
Figure 62

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

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Date: August-27-12

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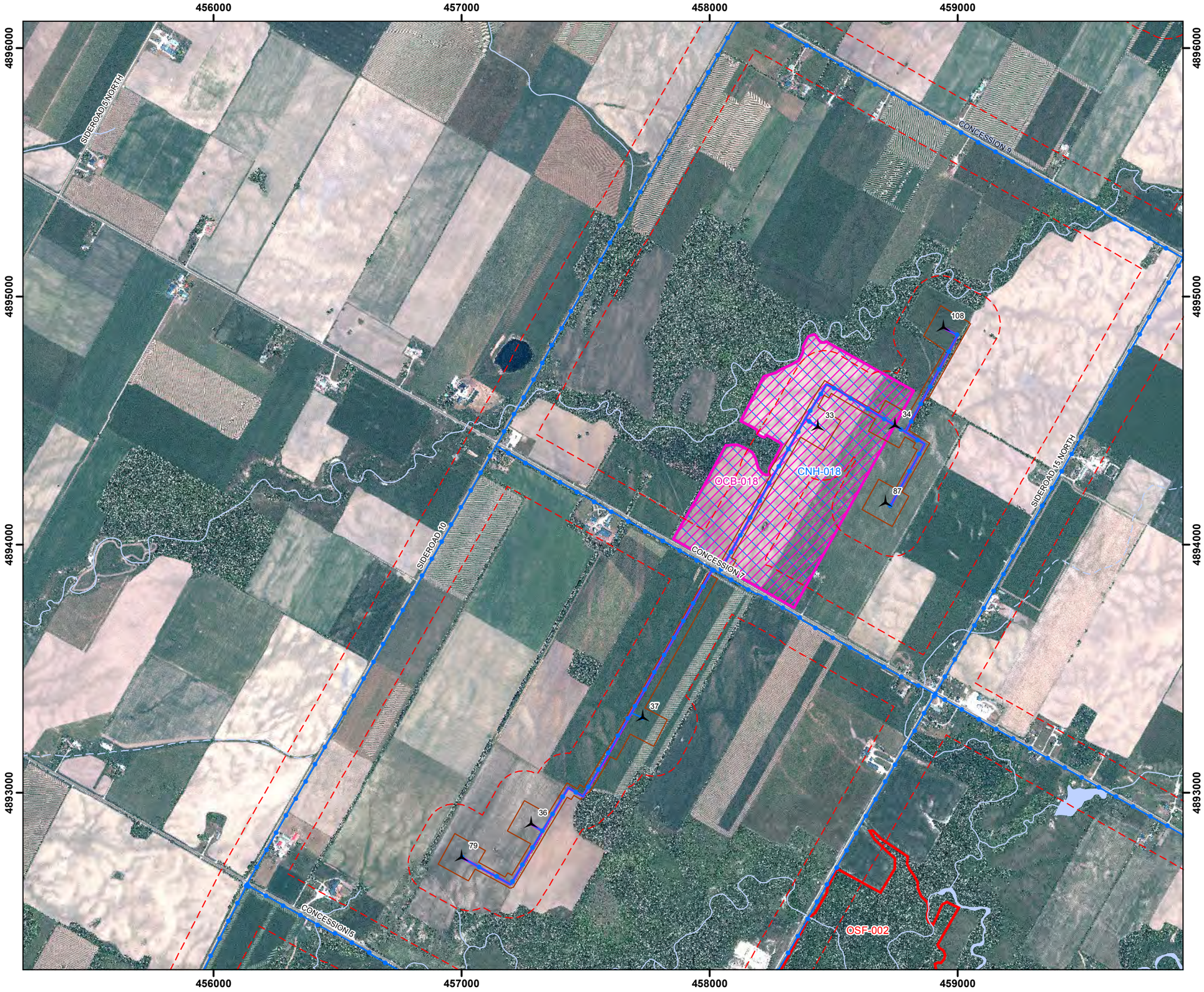
Figure 63

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

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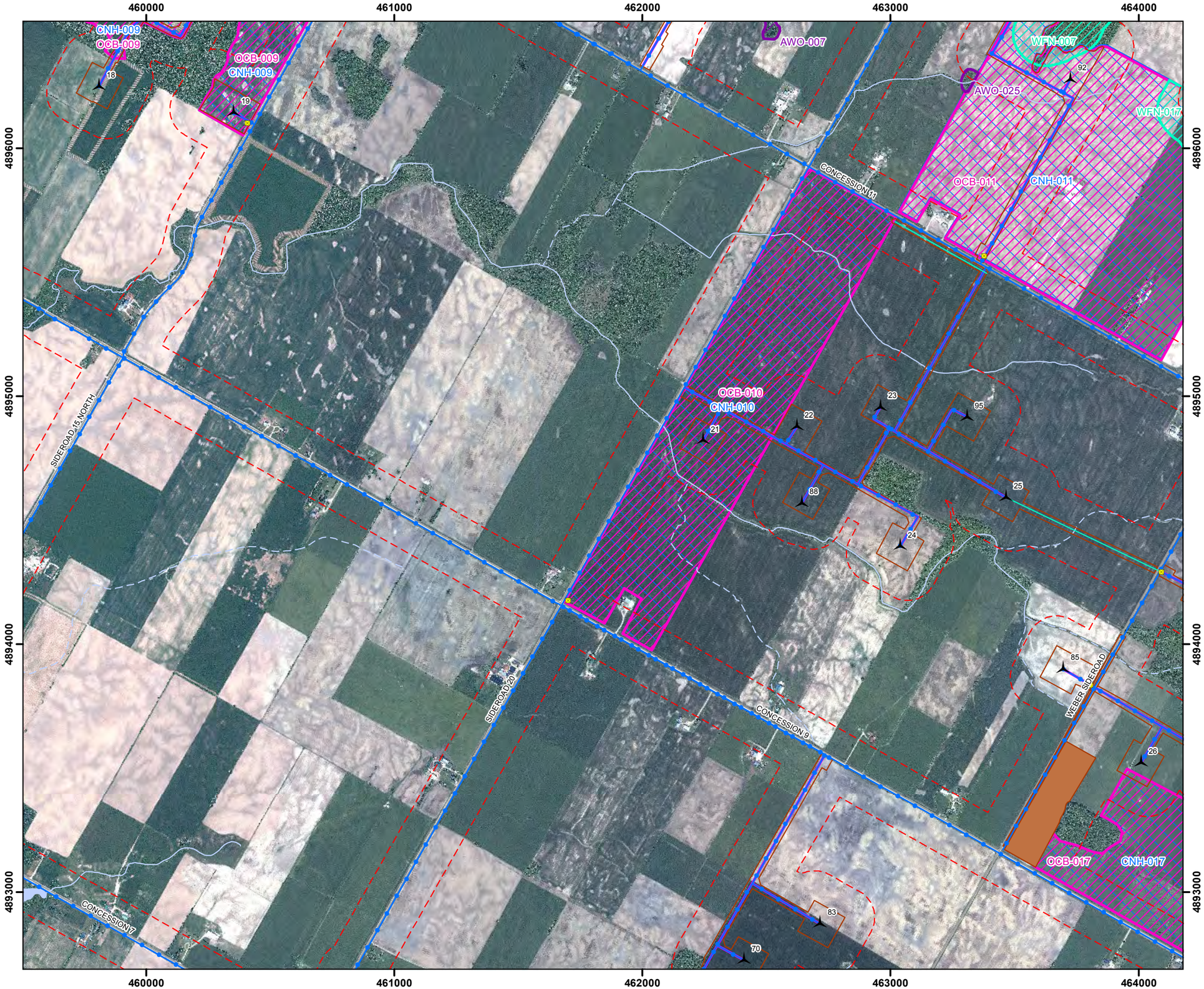
Figure 64

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



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Legend

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Project: 1275
Date: August-27-12

NAD83 - UTM Zone 17
Size: 11x17"
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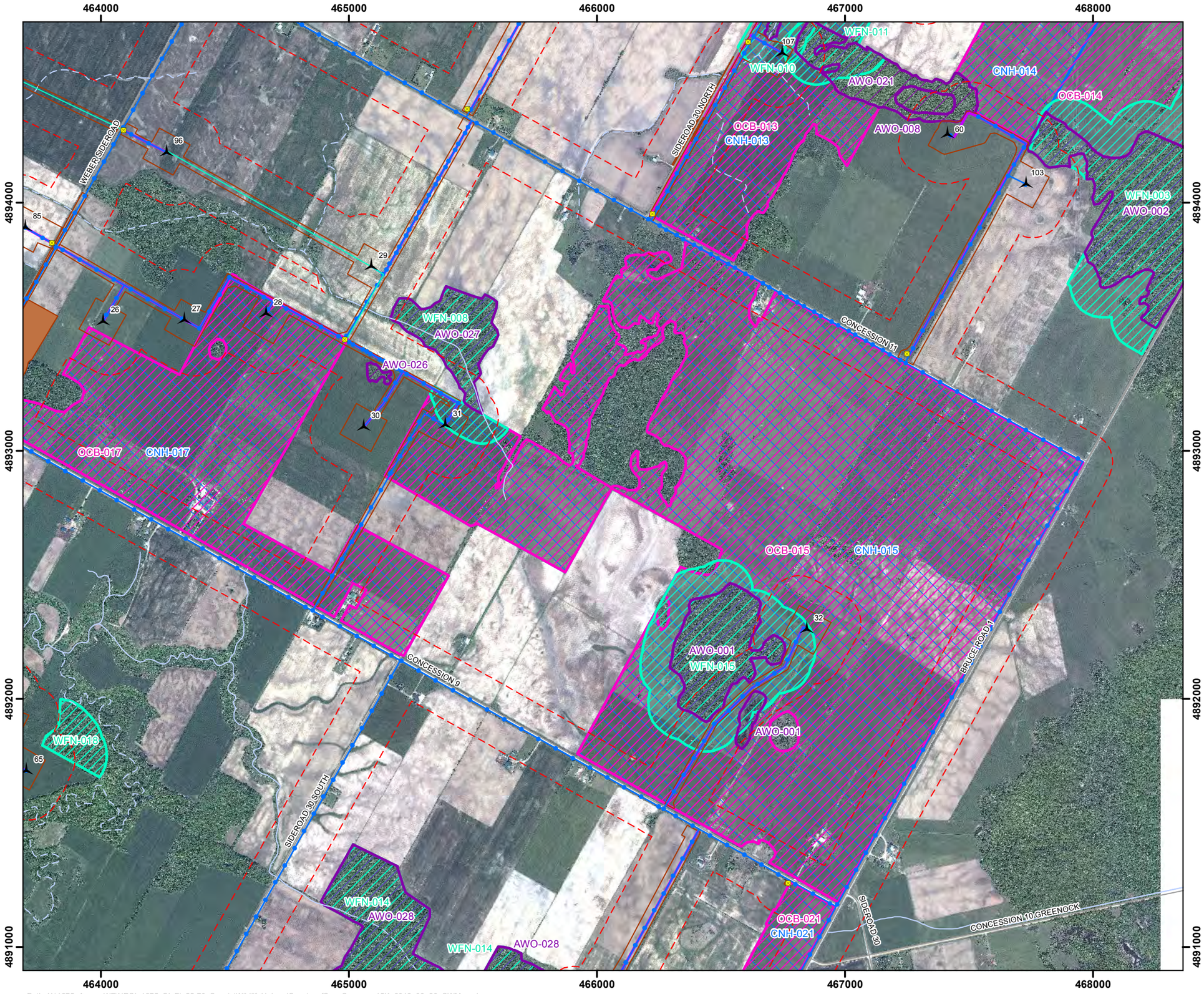
Figure 65

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

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- Proposed Turbine (L12 Rev1)
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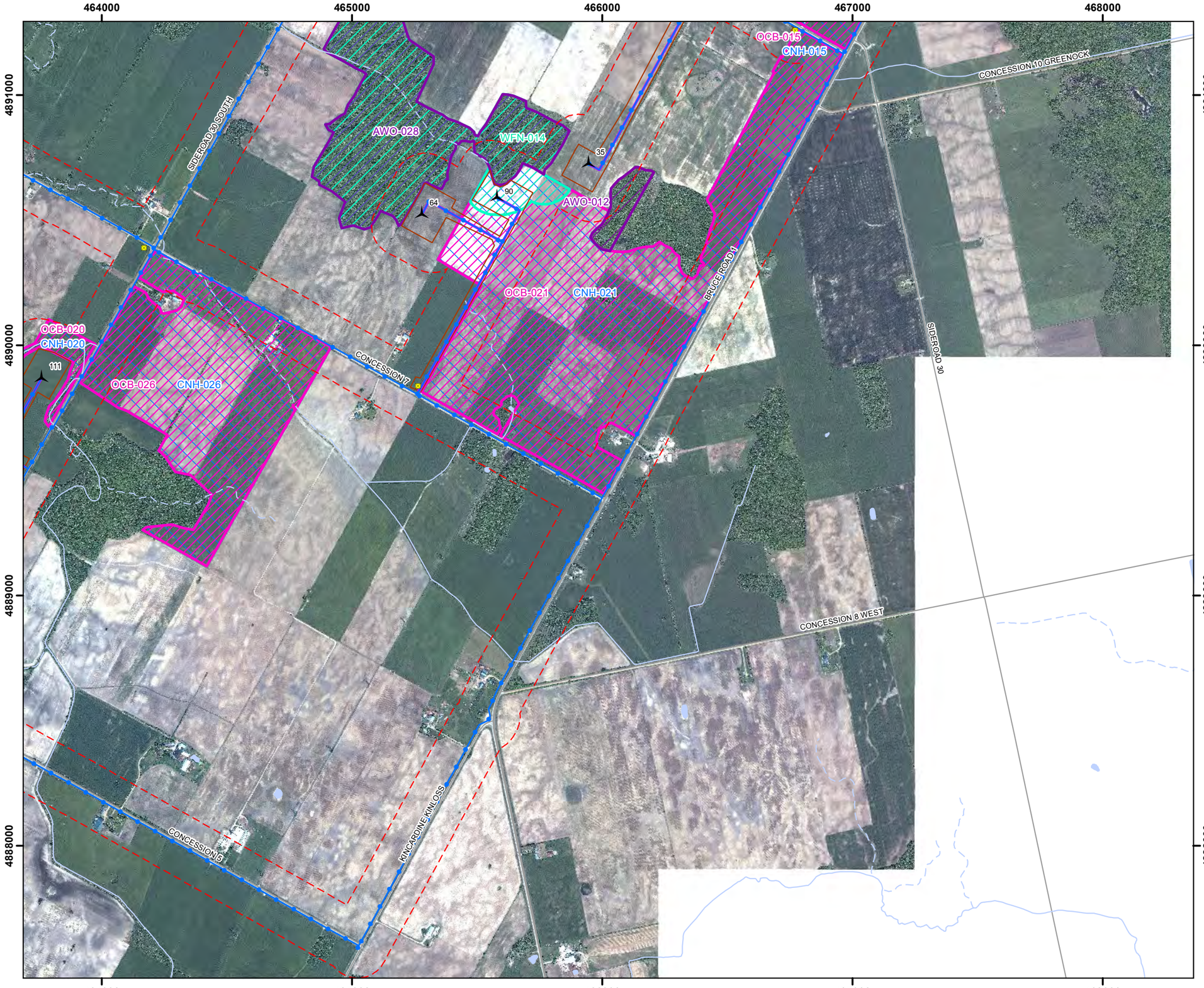
Figure 66

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

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Size: 11x17"
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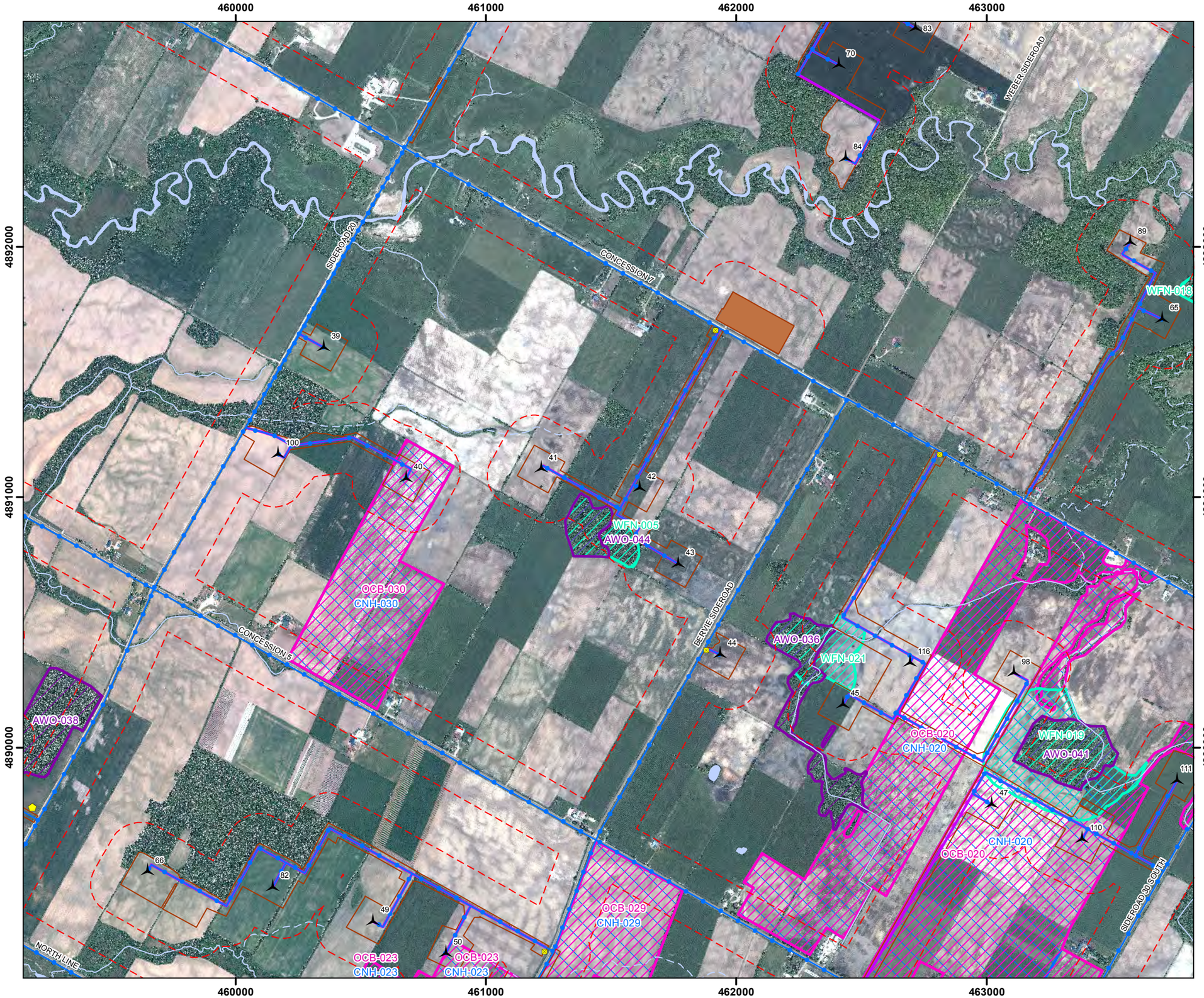
Figure 67

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

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Project: 1275
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NAD83 - UTM Zone 17
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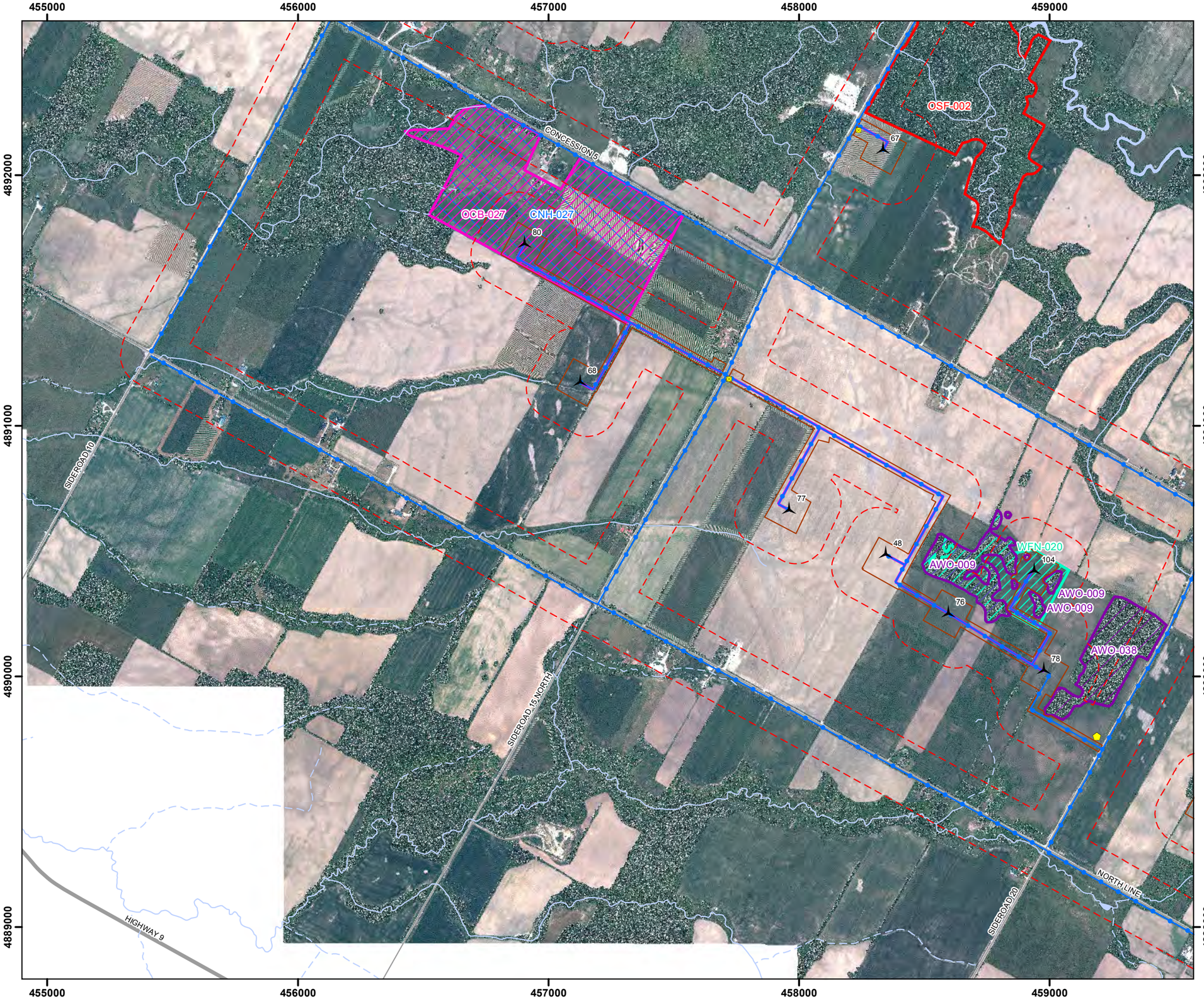
Figure 68

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

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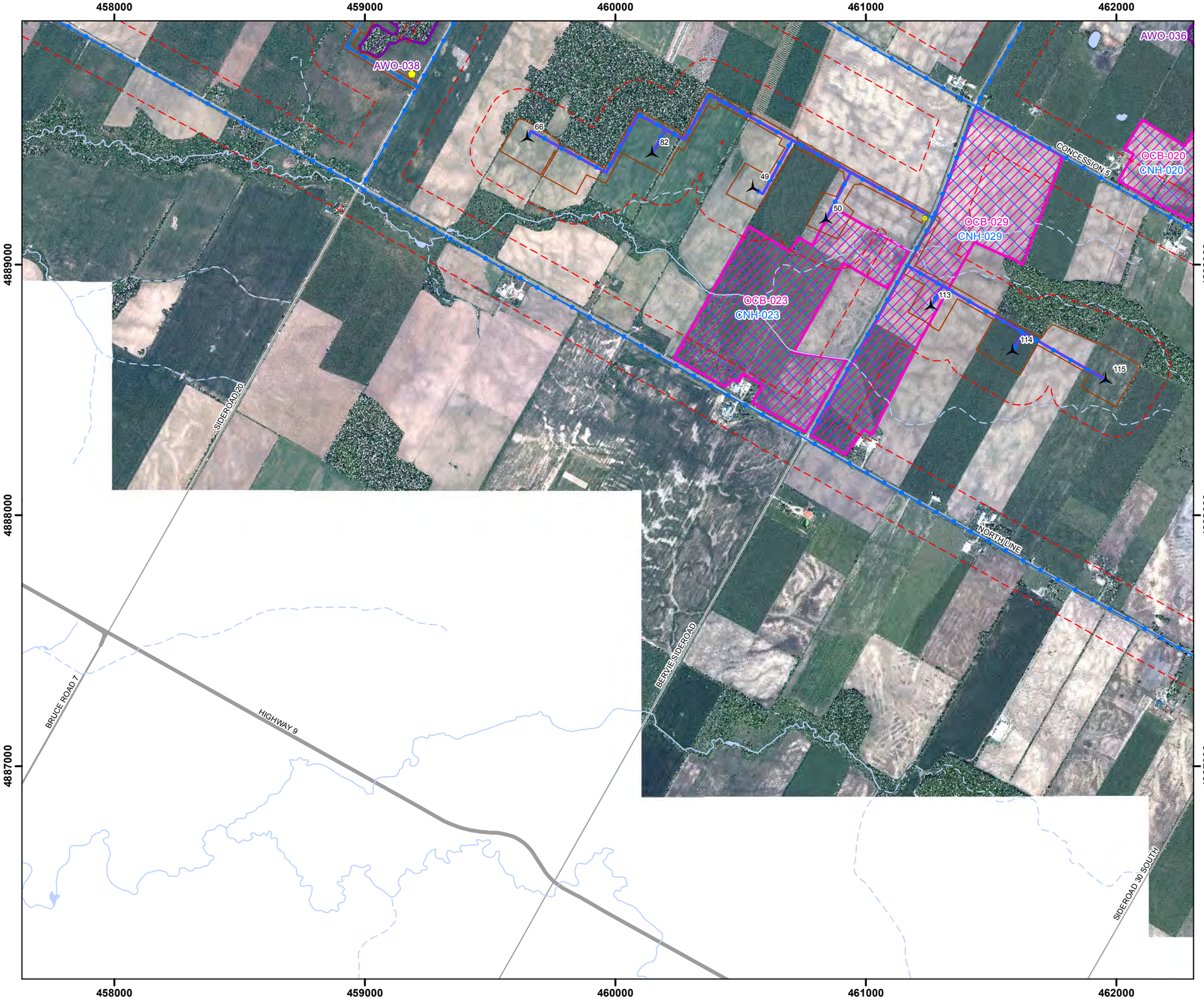
Figure 69

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

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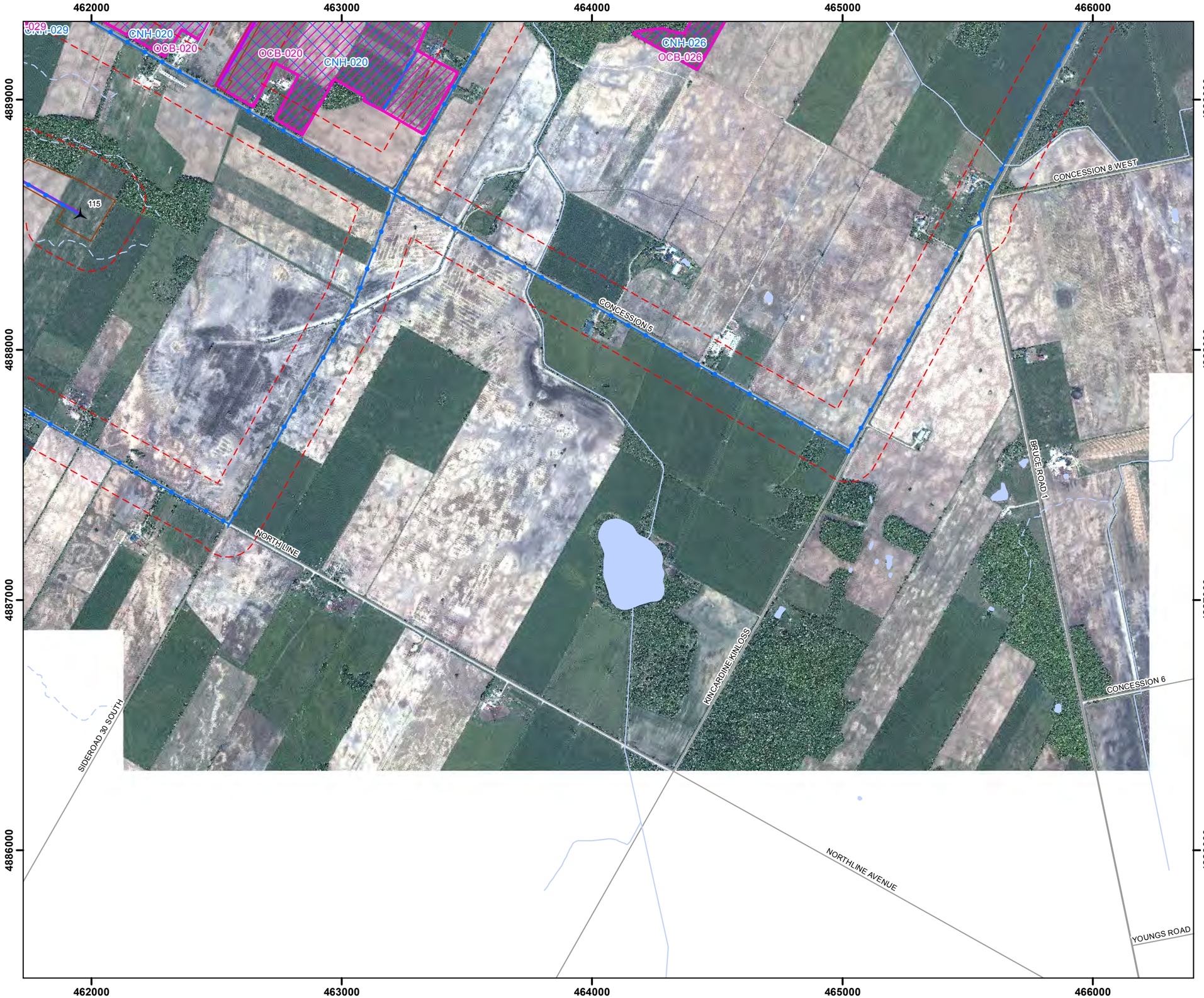
Figure 70

Armow Wind Project

Specialized Wildlife Habitats and Habitats for Species of Conservation Concern



Legend

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NAD83 - UTM Zone 17
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1:15,000

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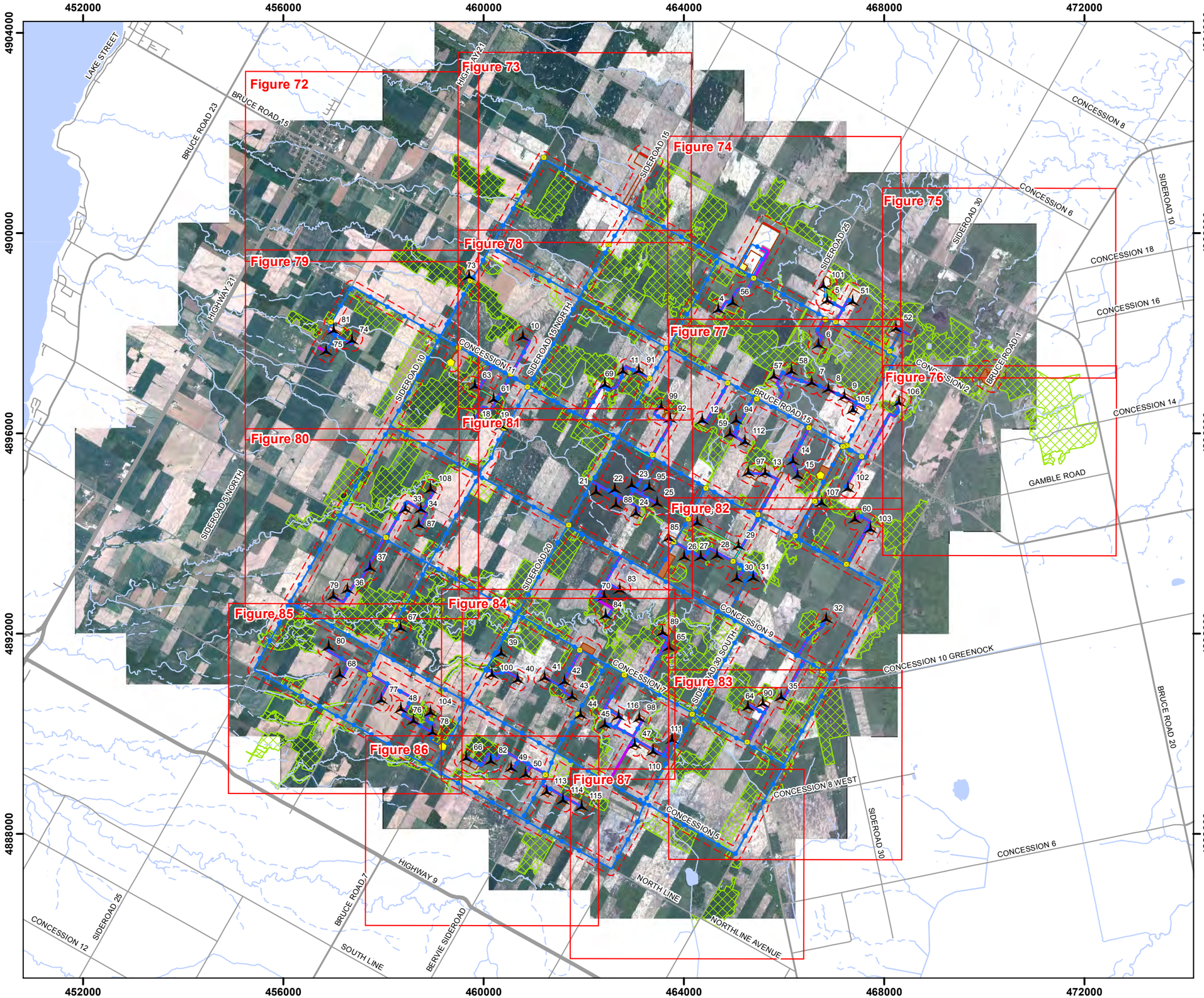
Figure 71

Armow Wind Project

Generalized Wildlife Habitat Key Map



Legend

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- Junction Box
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- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
- Map Extent
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody
- Generalized Wildlife Habitat

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Project: 1275
Date: August 27, 2012

NAD83 - UTM Zone 17
Size: 11x17"
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Figure 72

Armow Wind Project

Generalized Wildlife Habitat

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
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- Interconnect Area
- Highway
- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody
- Generalized Wildlife Habitat

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Project: 1275
Date: August 27, 2012/

NAD83 - UTM Zone 17
Size: 11x17"
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Figure 73

Armow Wind Project

Generalized Wildlife Habitat

Legend

- Project Area (120m)
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- Waterbody
- Generalized Wildlife Habitat

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Project: 1275
Date: August 27, 2012/

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 Meters

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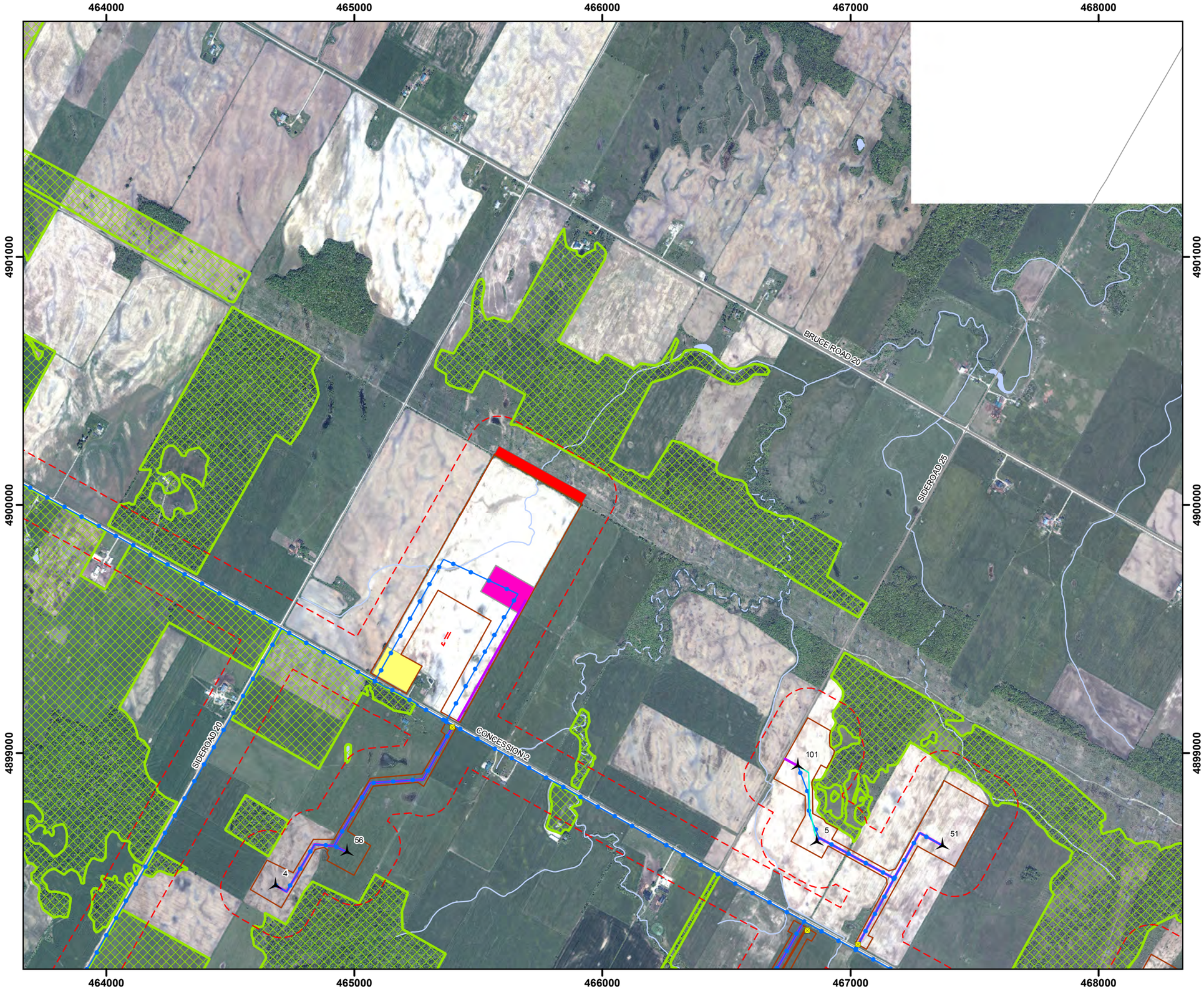
Figure 74

Armow Wind Project

Generalized Wildlife Habitat



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- Waterbody
- Generalized Wildlife Habitat

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NAD83 - UTM Zone 17
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0 250 500 750 Meters

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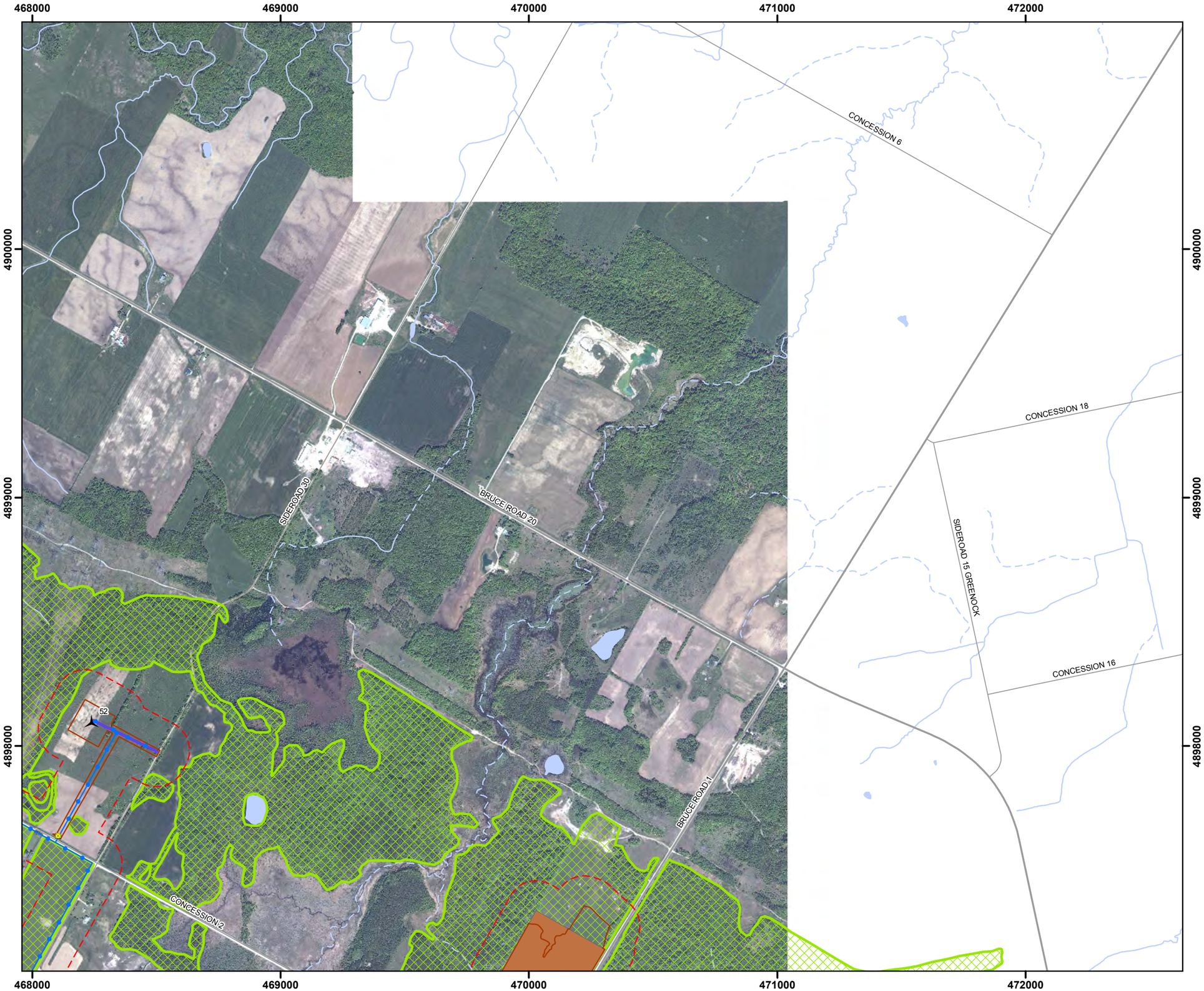
Figure 75

Armow Wind Project

Generalized Wildlife Habitat



Legend

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- Primary Road
- Secondary Road
- Watercourse (Permanent)
- Watercourse (Intermittent)
- Waterbody
- Generalized Wildlife Habitat

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Project: 1275 Date: August 27, 2012/	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

0 250 500 750 Meters

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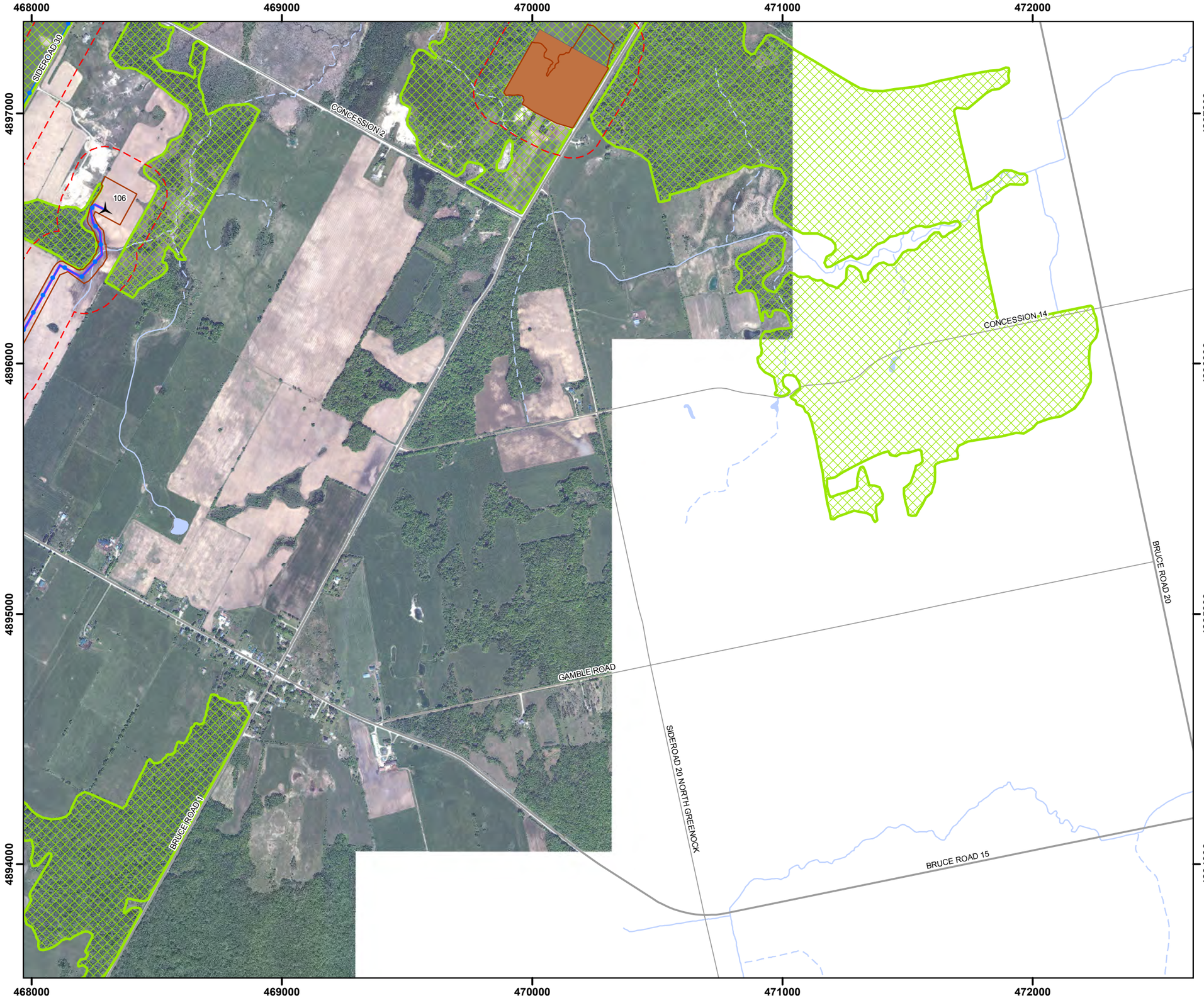
Figure 76

Armow Wind Project

Generalized Wildlife Habitat



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
- Crane Walk
- Cabling
- Access Road
- Disturbance Area
- Potential Operations Building
- Substation
- Staging Area
- Interconnect Area
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Project: 1275
Date: August 27, 2012/

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 Meters

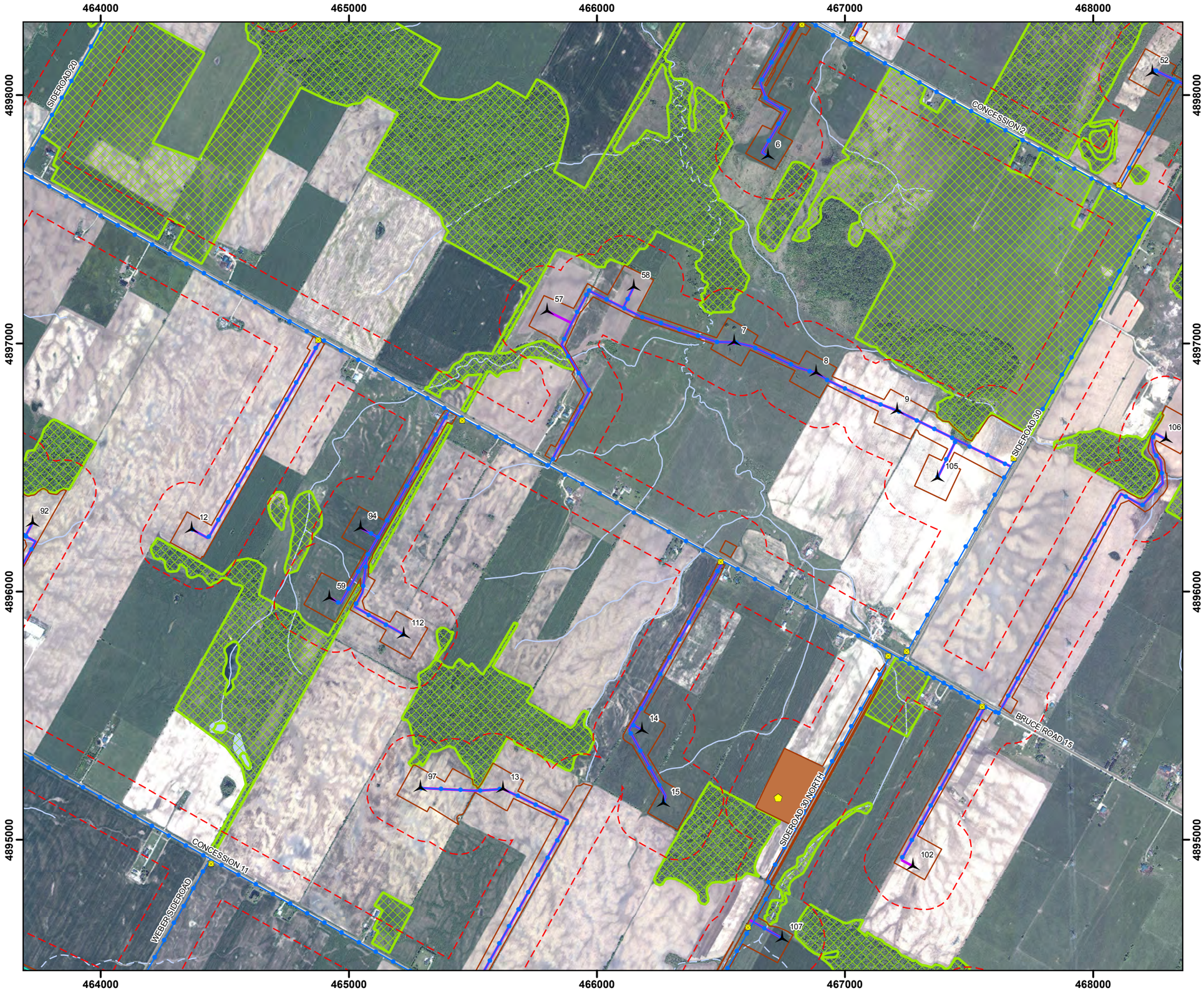
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig72-87_GeneralizedHabitat_15K_2012_08_27_ELF.mxd

Figure 77

Armow Wind Project

Generalized Wildlife Habitat



Legend

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Project: 1275
Date: August 27, 2012/

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 Meters

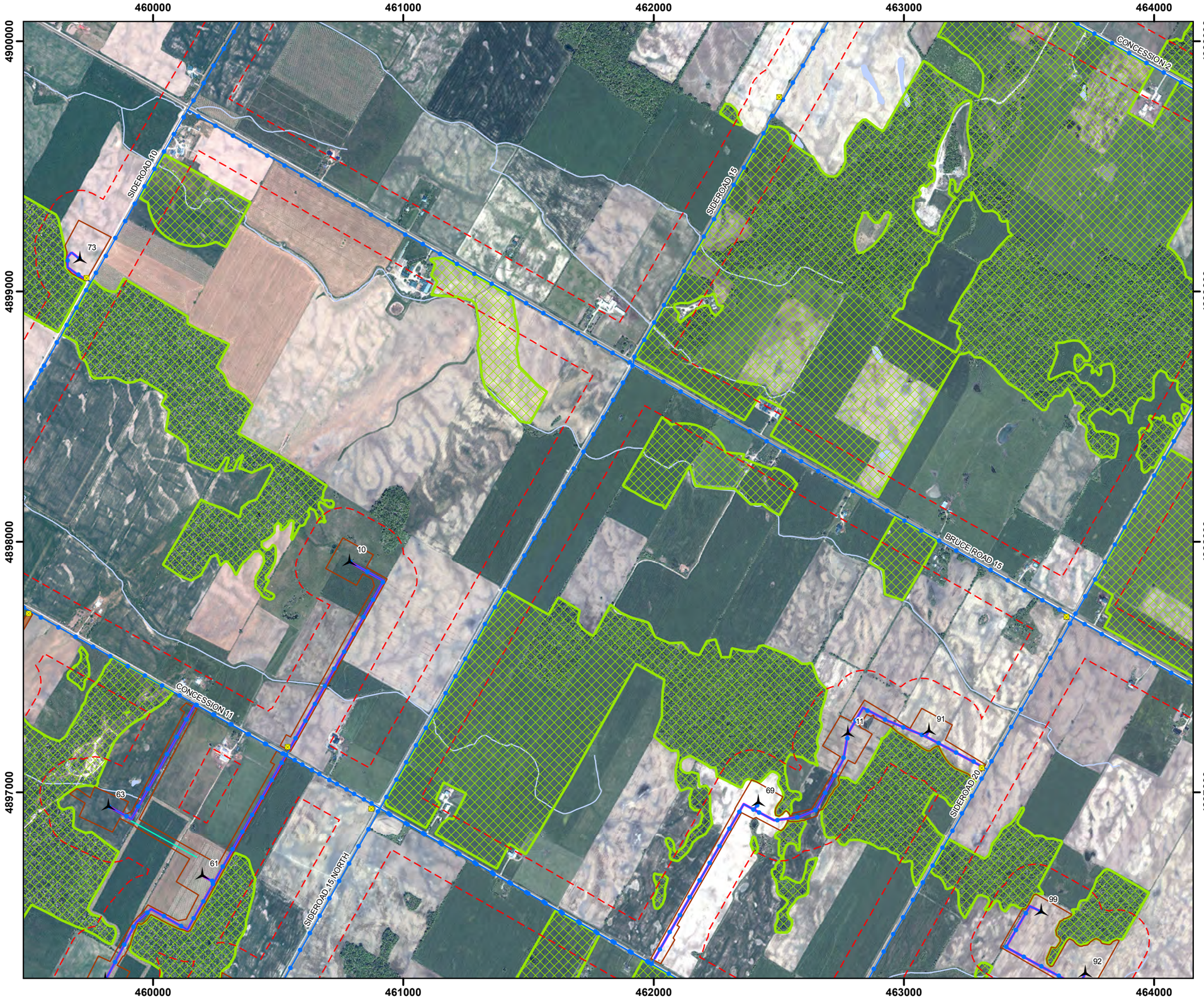
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig72-87_GeneralizedHabitat_15K_2012_08_27_ELF.mxd

Figure 78

Armow Wind Project

Generalized Wildlife Habitat



Legend

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Project: 1275 Date: August 27, 2012/	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

0 250 500 750 Meters

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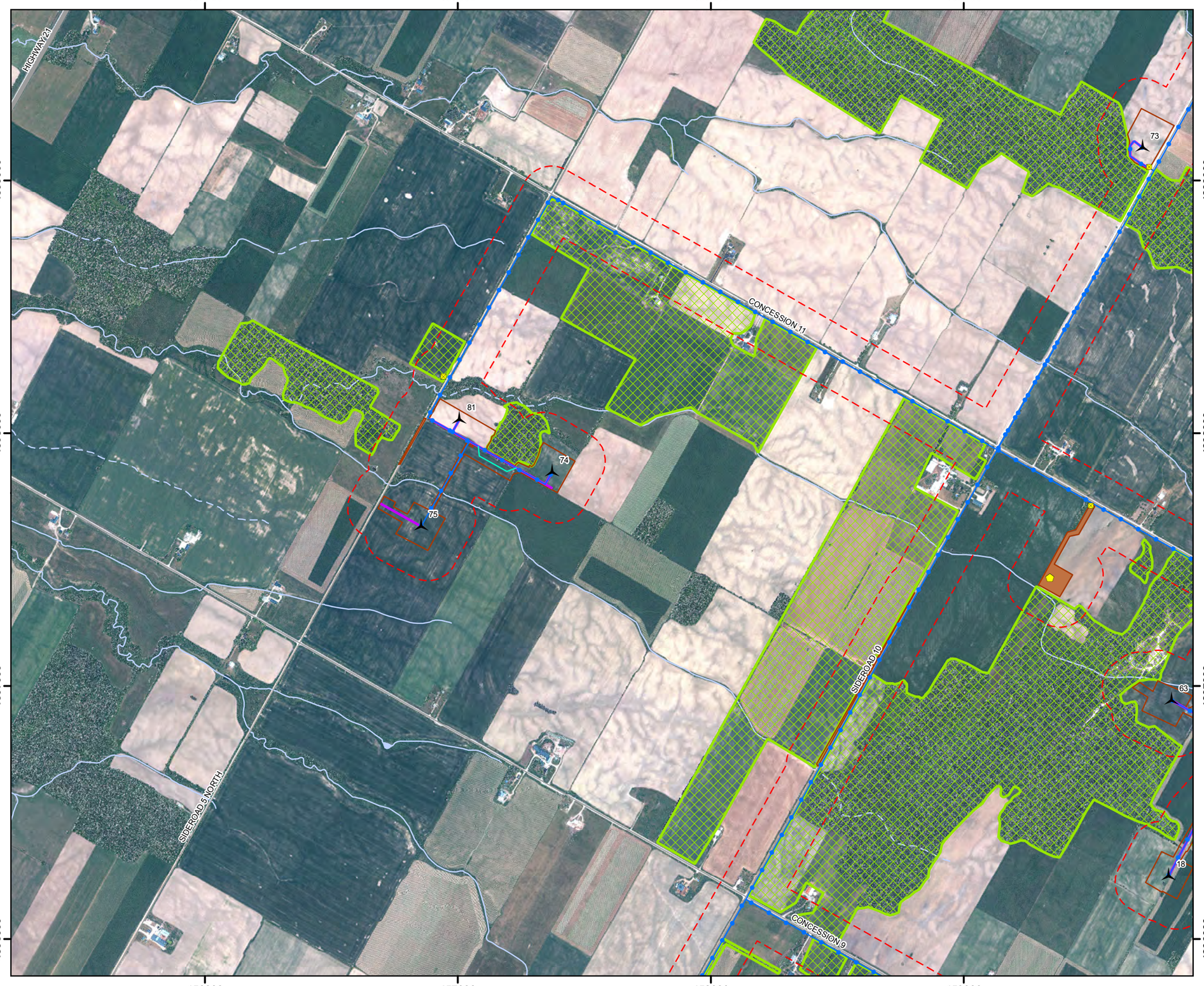
Figure 79

Armow Wind Project

Generalized Wildlife Habitat



Legend

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Project: 1275 Date: August 27, 2012/	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

0 250 500 750 Meters

N

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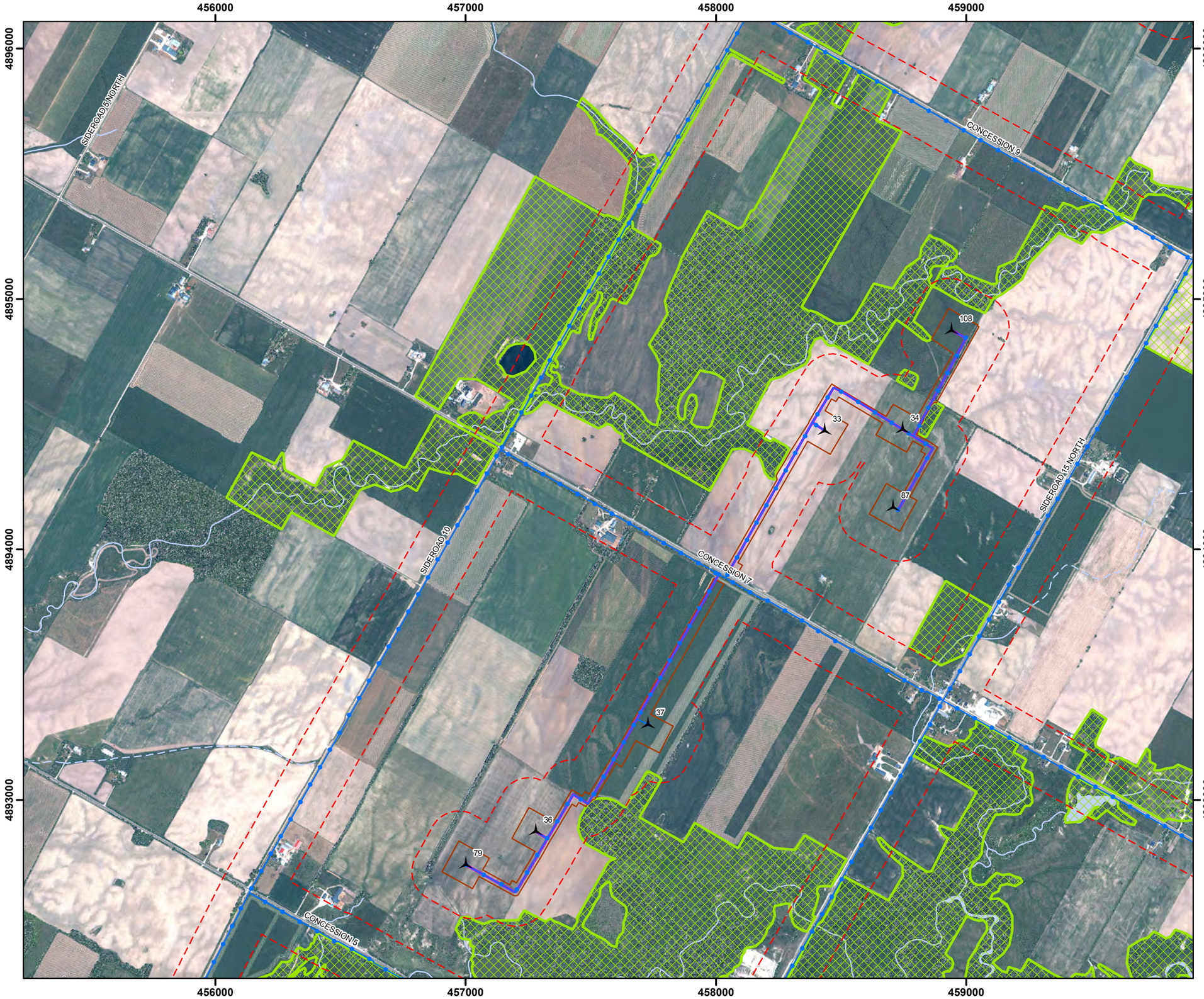

Figure 80

Armow Wind Project

Generalized Wildlife Habitat

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
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Project: 1275
Date: August 27, 2012/

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 Meters

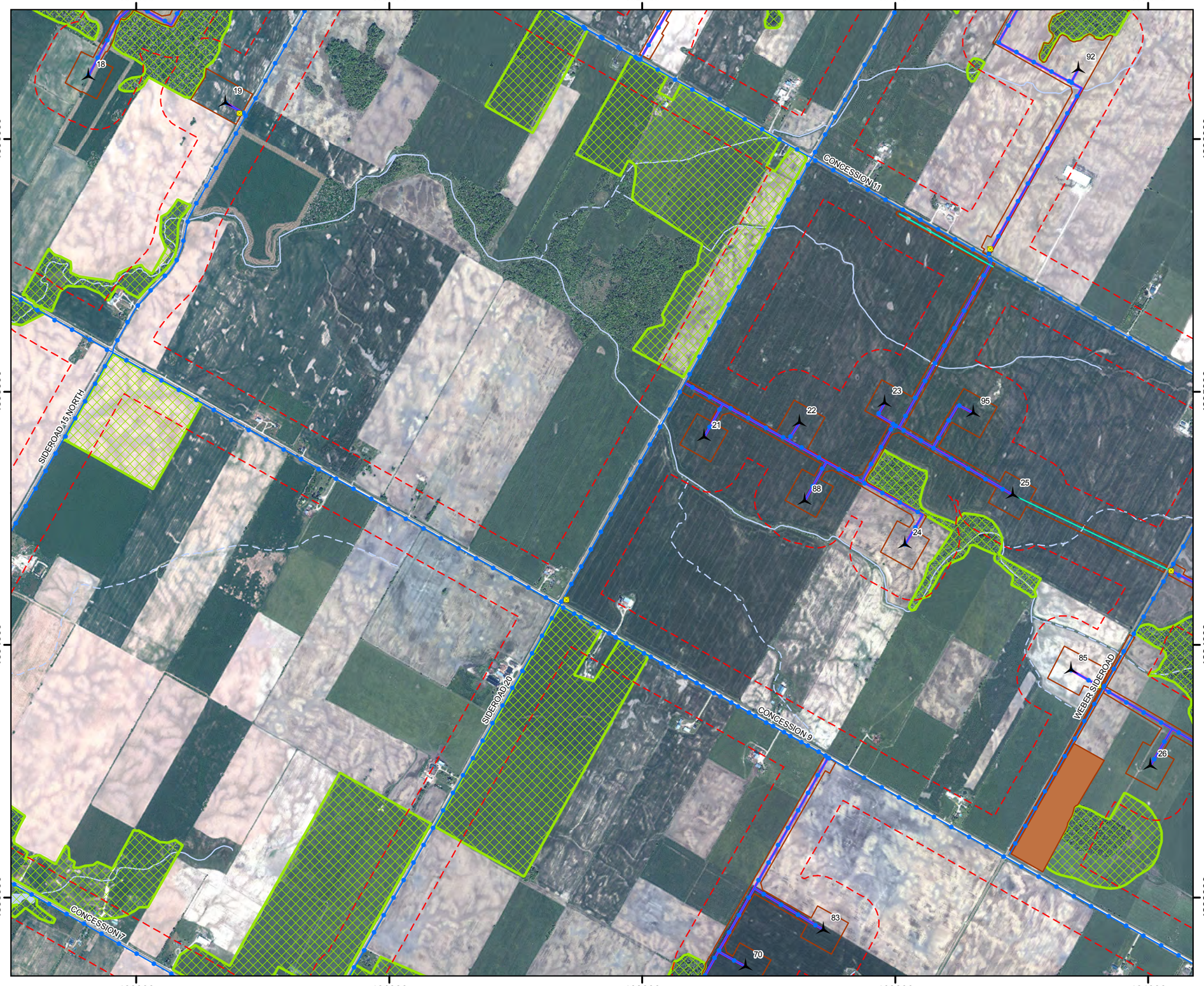
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig72-87_GeneralizedHabitat_15K_2012_08_27_ELF.mxd

Figure 81

Armow Wind Project

Generalized Wildlife Habitat



Legend

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Project: 1275
Date: August 27, 2012/

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 Meters

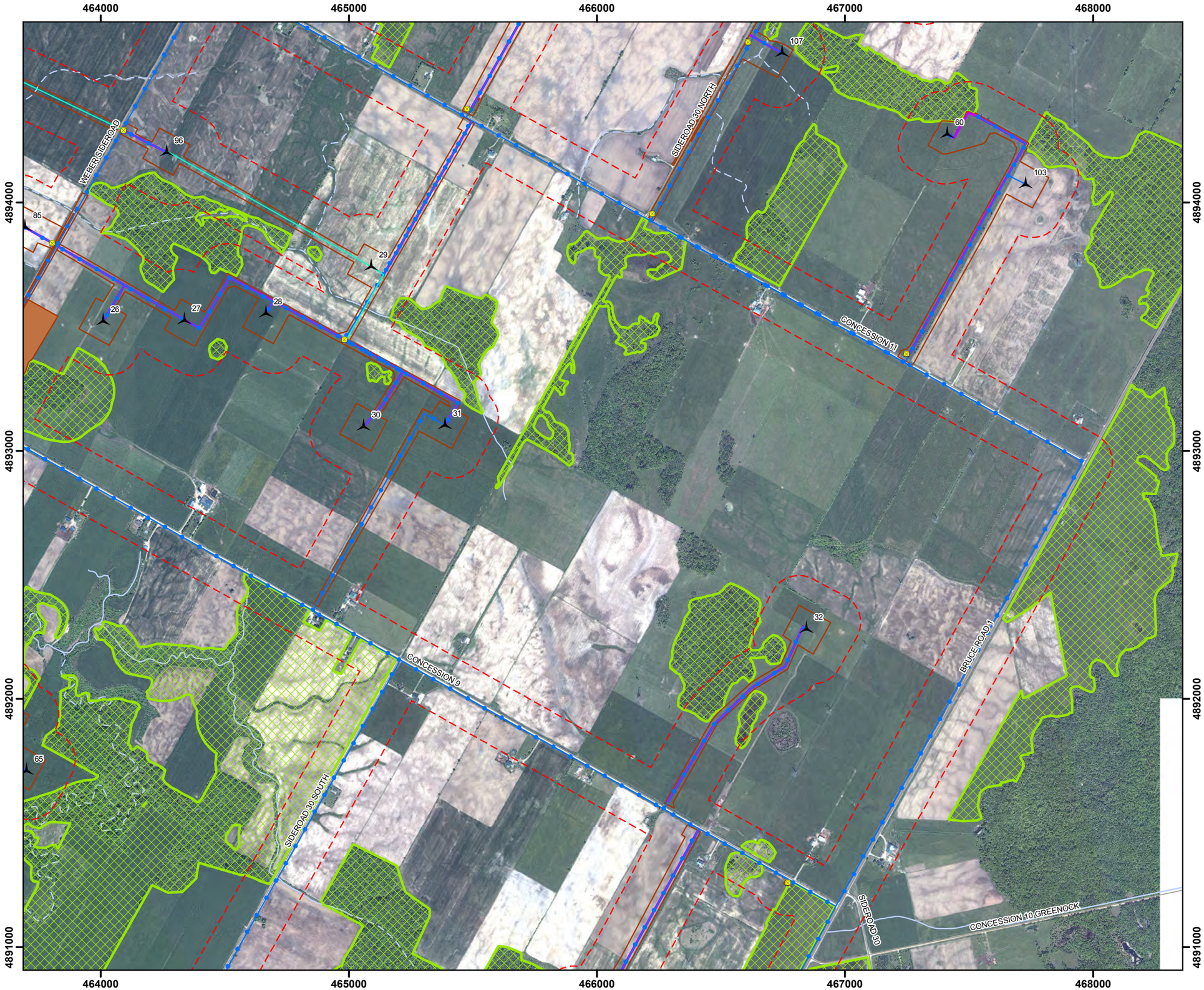
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig72-87_GeneralizedHabitat_15K_2012_08_27_ELF.mxd

Figure 82

Armow Wind Project

Generalized Wildlife Habitat



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Date: August 27, 2012/

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 Meters

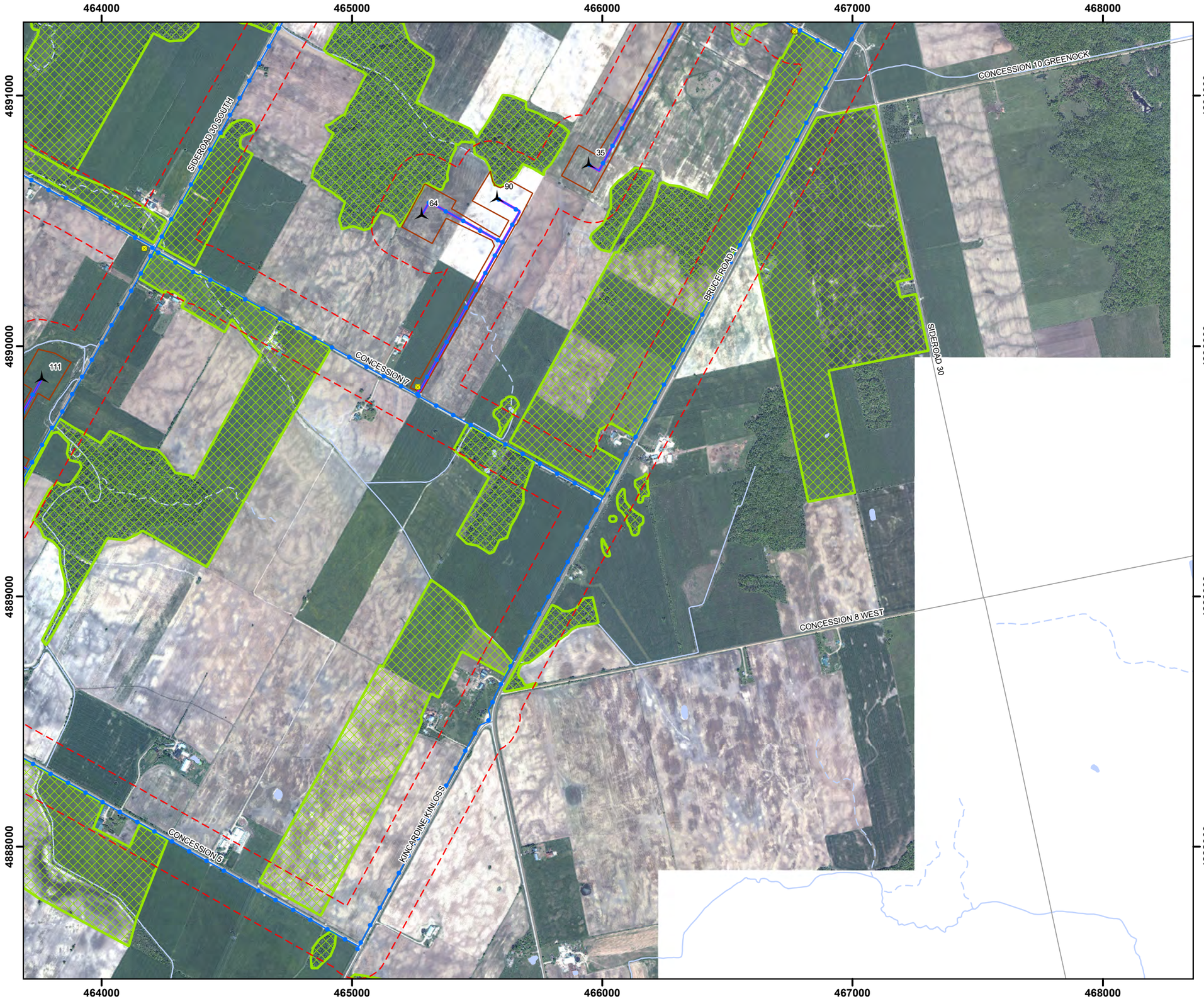
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig72-87_GeneralizedHabitat_15K_2012_08_27_ELF.mxd

Figure 83

Armow Wind Project

Generalized Wildlife Habitat



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Project: 1275 Date: August 27, 2012/	NAD83 - UTM Zone 17 Size: 11x17" **1:15,000**

0 250 500 750 Meters

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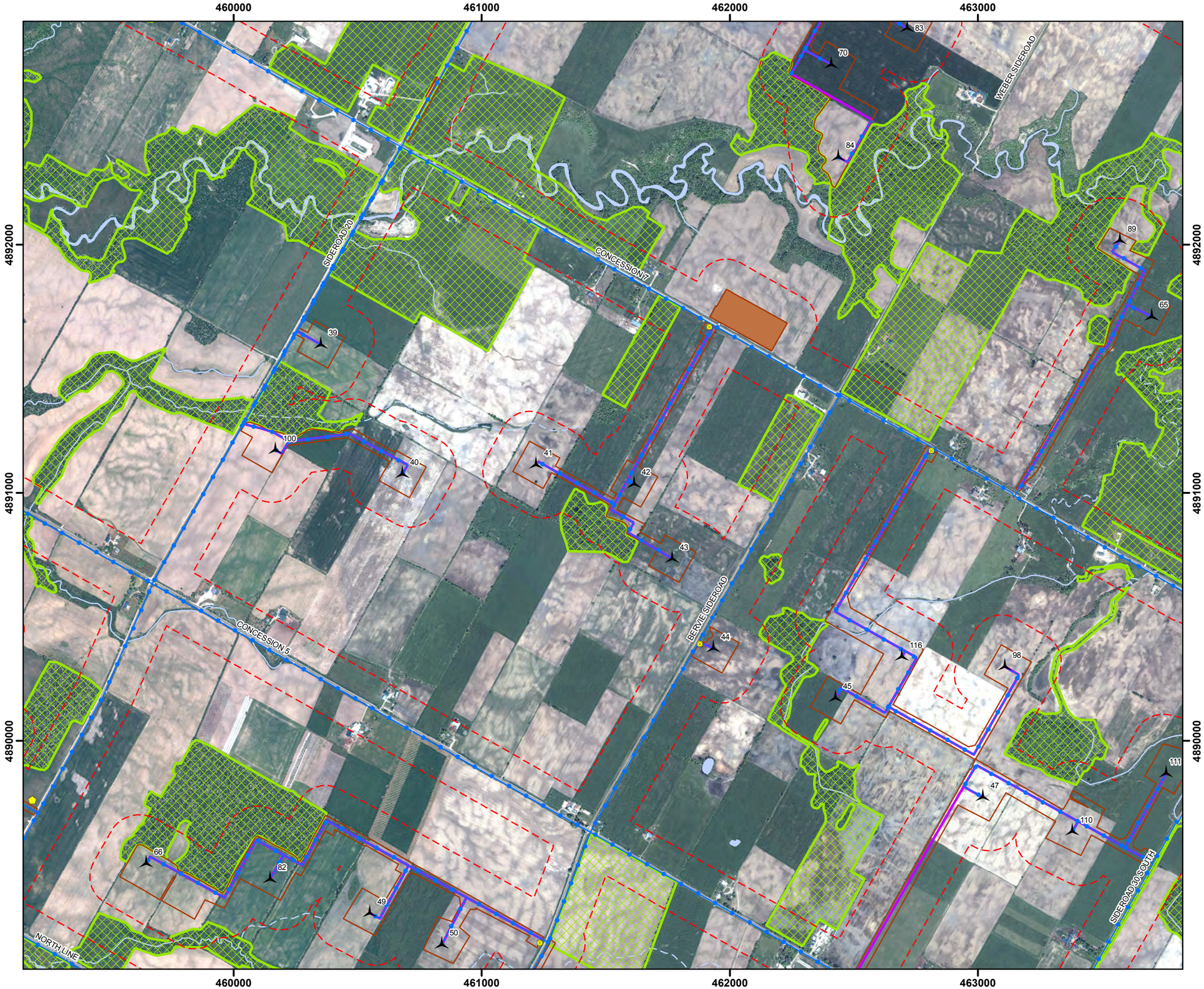

Figure 84

Armow Wind Project

Generalized Wildlife Habitat

Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
- MET Tower
- Junction Box
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Date: August 27, 2012/

NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 Meters

N

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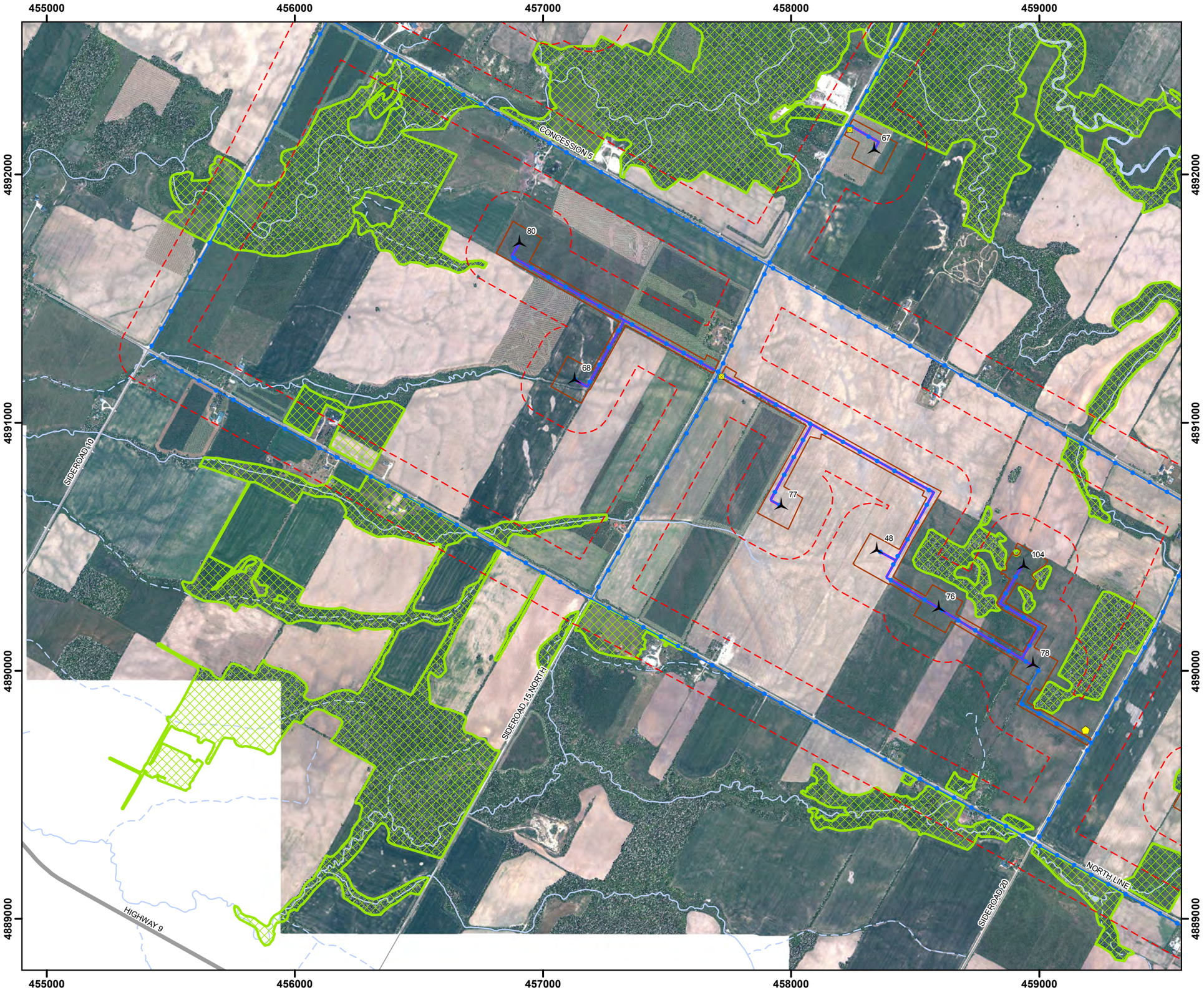
Figure 85

Armow Wind Project

Generalized Wildlife Habitat



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NAD83 - UTM Zone 17
Size: 11x17"
1:15,000

0 250 500 750 Meters

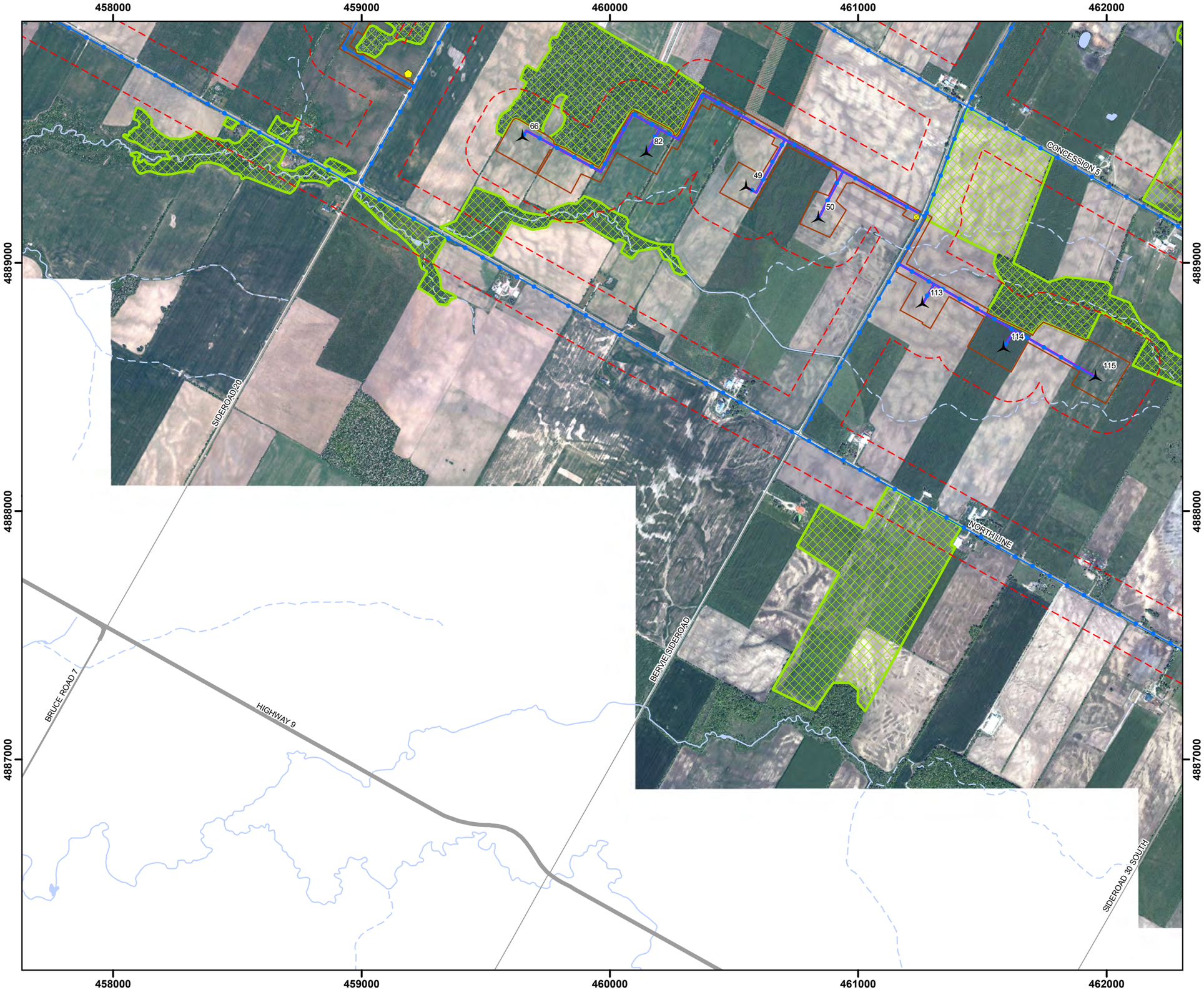
N

Path: X:\1275_ArmowWF\NRSI_1275_SI_Fig72-87_GeneralizedHabitat_15K_2012_08_27_ELF.mxd

Figure 86

Armow Wind Project

Generalized Wildlife Habitat



Legend

- Project Area (120m)
- Proposed Turbine (L12 Rev1)
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1:15,000

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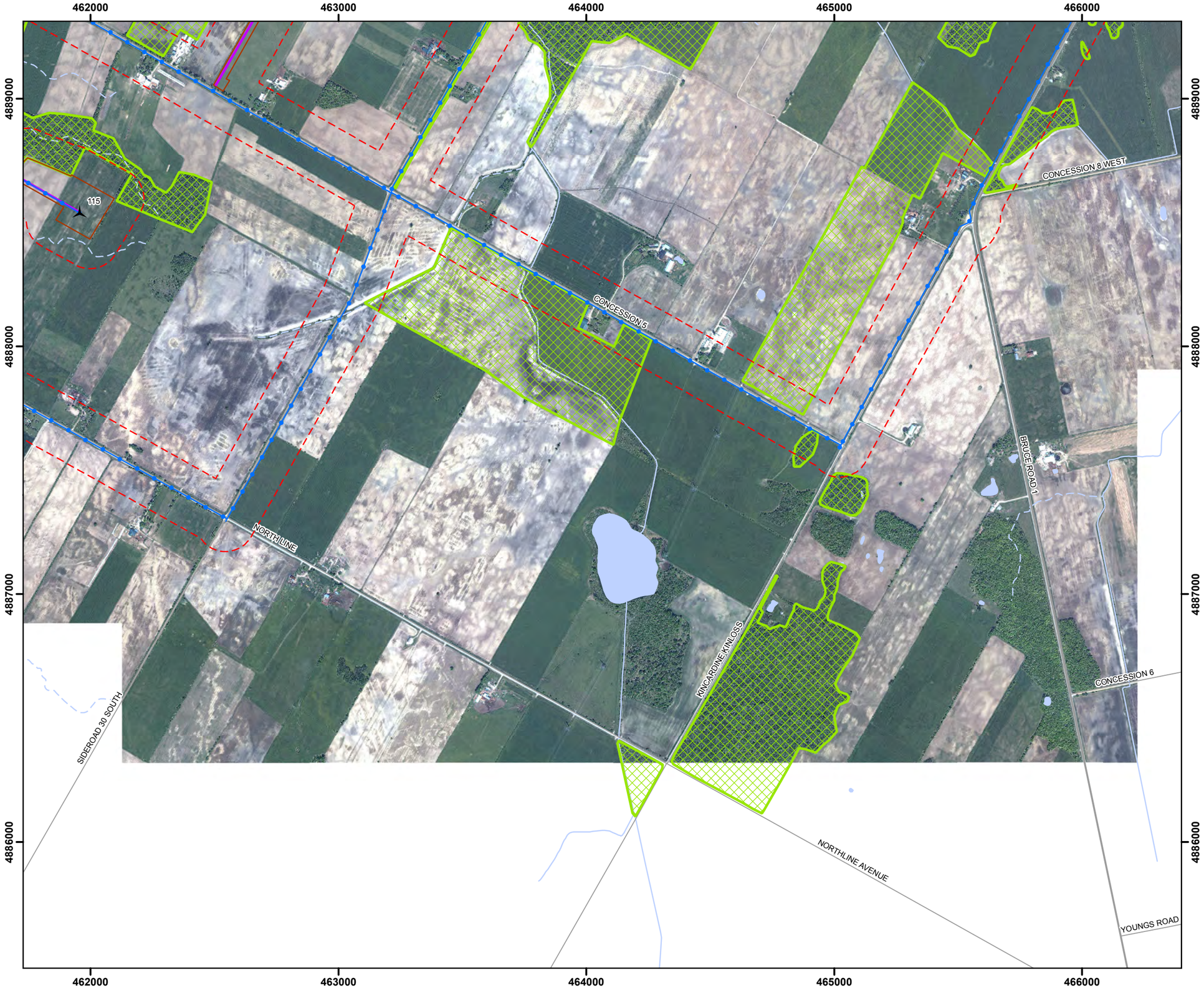

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Figure 87

Armow Wind Project

Generalized Wildlife Habitat

Legend

- Project Area (120m)
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Date: August 27, 2012/

NAD83 - UTM Zone 17
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1:15,000

0 250 500 750 Meters

N

Table 16. Summary of Candidate Significant Wildlife Habitats Identified within 120m of the Armow Wind Project

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Seasonal Concentration Areas								
Waterfowl Stopover and Staging Area (Terrestrial)	Several Meadow (ME) and Thicket (TH) Community Types have been identified within 120m of the project location; however, most of these fields do not contain sheet water. As such, these fields have not been identified as candidate terrestrial waterfowl stopover and staging areas. One candidate terrestrial waterfowl stopover and staging area containing sheet water has been identified within 120m of the project location. An additional two candidate terrestrial waterfowl stopover and staging areas potentially containing sheet water have been identified within 120m of the project location. These three candidate habitats are discussed below.							
WST-007 Waterfowl Stopover and Staging Area (Terrestrial)	6.01	MEGM3	Dry-Fresh Graminoid Meadow Ecosite	May provide foraging and resting habitat for migrating waterfowl.	Annual spring melt water flooding found within candidate field	WT – Overlapping (T50) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**50, 52**	**Yes**
WST-017 Waterfowl Stopover and Staging Area (Terrestrial)	3.37	THDM2-11	Hawthorn Deciduous Shrub Thicket Type	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (spring flooding during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, Evaluation of Significance (EOS) surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 56(T84) AR – 103.4 CB – 103.4 CA – >0.1 BU – >120	**50**	**Yes**
WST-018 Waterfowl Stopover and Staging Area (Terrestrial)	47.62	MEGM4-1 OAGM4	Open Graminoid Meadow Type Open Pasture	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (spring flooding during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If	WT – >120m AR – >0.1 CB – >0.1 CA – >0.1 BU – Overlapping	**40**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
					spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.			
Waterfowl Stopover and Staging Area (Aquatic)	Several Meadow Marsh (MAM) and Deciduous Swamp (SWD) Community Types have been identified within 120m of the project location. According to the 2012 SWH Ecoregion 6E Criterion Schedule Addendum, these community types must contain an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water). A total of 23 candidate aquatic waterfowl stopover and staging areas have been identified within 120m of a project component that will have an operational impact and are discussed below. Habitats meeting these criteria that are located within 120m of a project component that will not have an operational impact are discussed in Table 17 and mapped on Figures 71-87.							
WSA-001 Waterfowl Stopover and Staging Area (Aquatic)	110.25	FODM5-8/ SWDM2-2/ MAMM1-3 SWDM2-2 Complex FOD FODM11 FODM4-2 OA OAGM1 OAGM2 OAGM4	Dry – Fresh Sugar Maple – White Ash Deciduous Forest / Green Ash Mineral Deciduous Swamp Type / Reed-canary Grass Graminoid Mineral Meadow Marsh Complex Green Ash Mineral Deciduous Swamp Type Deciduous Forest Naturalized Deciduous Hedgerow Dry - Fresh White Ash -	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T4) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**40, 43**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Hardwood Deciduous Forest Open Water Annual Row Crops Perennial Cover Crops Open Pasture					
WSA-002 Waterfowl Stopover and Staging Area (Aquatic)	14.21	SWDM3-3 OAGM1 OAGM2 TAGM1	Swamp Maple Mineral Deciduous Swamp Annual Row Crops Perennial Cover Crops Coniferous Plantation	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T42) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**50**	**Yes**
WSA-003 Waterfowl Stopover and Staging Area (Aquatic)	42.53	MAMM1-3 SWDM3-1 FODM6-1 OAGM1	Reed-canary Grass Graminoid Mineral Meadow Marsh Red Maple Mineral Deciduous Swamp Fresh – Moist	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine	WT – Overlapping (T69) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**44, 47**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Sugar Maple – Lowland Ash Deciduous Forest Annual Row Crops		seasonal use. Details of the survey methodology can be found in the EOS report.			
WSA-004 Waterfowl Stopover and Staging Area (Aquatic)	29.23	SWDM2-2 OAGM1 OAGM2	Green Ash Mineral Deciduous Swamp Type Annual Row Crops Perennial Cover Crops	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T31) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**48**	**Yes**
WSA-005 Waterfowl Stopover and Staging Area (Aquatic)	28.27	SWDM2-2 SWDM4-1 SWDO2-3 OAGM1 THDM2-11	Green Ash Mineral Deciduous Swamp Type Willow Mineral Deciduous Swamp Swamp Maple Organic Deciduous Swamp Annual Row Crops	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T78) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**50, 51, 52**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Hawthorn Deciduous Shrub Thicket					
WSA-006 Waterfowl Stopover and Staging Area (Aquatic)	83.38	SWDM SWDM3-3 FODM6-5 OAGM1 OAGM2	Mineral Deciduous Swamp Swamp Maple Mineral Deciduous Swamp Fresh – Moist Sugar Maple – Hardwood Deciduous Forest Annual Row Crops Perennial Cover Crops	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T64) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**49**	**Yes**
WSA-007 Waterfowl Stopover and Staging Area (Aquatic)	32.52	SWDO2-3 MAMM1-3 MASO1-1 FOD FODM8-1 OAGM4	Swamp Maple Organic Deciduous Swamp Cattail Organic Shallow Marsh Reed-canary Grass Graminoid Mineral Meadow Marsh Deciduous Forest	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T32) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**48**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Fresh – Moist Poplar Deciduous Forest Open Pasture					
WSA-009 Waterfowl Stopover and Staging Area (Aquatic)	12.52	SWDM2-2 FOD OAGM1 OAGM2 OAGM4	Green Ash Mineral Deciduous Swamp Deciduous Forest Annual Row Crops Perennial Cover Crops Open Pasture	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T12) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**43, 47**	**Yes**
WSA-010 Waterfowl Stopover and Staging Area (Aquatic)	13.65	MAMM1-16 SWTM3 FOD OAGM1 OAGM4	Mixed Graminoid Mineral Meadow Marsh Willow Mineral Deciduous Thicket Swamp Deciduous Forest Annual Row Crops Open Pasture	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 8 (T94) AR – 58 CB – 58 CA – Overlapping BU – >120	**43**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
WSA-011 Waterfowl Stopover and Staging Area (Aquatic)	19.22	MAMM1-3 FODM5-8 OAGM1 OAGM2 OAGM4	Reed-canary Grass Graminoid Mineral Meadow Marsh Dry – Fresh Sugar Maple – White Ash Deciduous Forest Annual Row Crops Perennial Cover Crops Open Pasture	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T107) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**43, 48**	**Yes**
WSA-012 Waterfowl Stopover and Staging Area (Aquatic)	10.92	SWDM3-3 MAMM1-16 FODM5-8 OAGM1 OAGM2 OAGM3	Swamp Maple Mineral Deciduous Swamp Mixed Graminoid Mineral Meadow Marsh Dry – Fresh Sugar Maple – White Ash Deciduous Forest Annual Row Crops Perennial Cover Crops	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T60) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**43, 48**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Open Pasture					
WSA-013 Waterfowl Stopover and Staging Area (Aquatic)	27.68	SWDO1-1 SWDO2-3 FODM7-6 OAGM1 OAGM2 OAGM4	Black Ash Organic Deciduous Swamp Swamp Maple Organic Deciduous Swamp Fresh - Moist Black Ash - Hardwood Lowland Deciduous Forest Annual Row Crops Perennial Cover Crops Open Pasture	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T45) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**50, 52**	**Yes**
WSA-014 Waterfowl Stopover and Staging Area (Aquatic)	27.08	SWDM2-2 SWDM4-5 SWTM3-6 MAMM1-2 MEFM1-1 FODM5-8 MEMM4 OAGM1 THDM3-2	Green Ash Mineral Deciduous Swamp Poplar Mineral Deciduous Swamp Mixed Willow Mineral Deciduous	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the	WT – Overlapping (T104) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**51**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Thicket Swamp Cattail Graminoid Mineral Meadow Marsh Goldenrod Forb Meadow Dry – Fresh Sugar Maple – White Ash Deciduous Forest Fresh - Moist Mixed Meadow Ecosite Annual Row Crops Native Shrub Deciduous Hedgerow Thicket		survey methodology can be found in the EOS report.			
WSA-015 Waterfowl Stopover and Staging Area (Aquatic)	55.61	FODM6-5/ SWDM2-1 Complex MAMM1-3 SWDM2-2 SWT FODM5-2 MEMM4 OAGM1	Fresh – Moist Sugar Maple – Hardwood Deciduous Forest / Black Ash Mineral Deciduous Swamp Complex Reed-canary Grass Graminoid Mineral Meadow	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the	WT – Overlapping (T05, T101) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**40**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		OAGM4 THDM3-2	Marsh Green Ash Mineral Deciduous Swamp Thicket Swamp Dry – Fresh Sugar Maple – Beech Deciduous Forest Fresh - Moist Mixed Meadow Ecosite Annual Row Crops Open Pasture Native Shrub Deciduous Hedgerow Thicket		survey methodology can be found in the EOS report.			
WSA-017 Waterfowl Stopover and Staging Area (Aquatic)	31.03	MAMO1-3 SWDO2-1 OAGM1 OAGM2 OAGM4	Reed-canary Grass Graminoid Organic Meadow Marsh Red Maple Organic Deciduous Swamp	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be	WT – Overlapping (T35) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**49**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Annual Row Crops Perennial Cover Crops Open Pasture		undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.			
WSA-018 Waterfowl Stopover and Staging Area (Aquatic)	12.24	SWMO1-1 FODM5-8 OAGM1 OAGM4	White Cedar – Hardwood Organic Mixed Swamp Dry – Fresh Sugar Maple – White Ash Deciduous Forest Annual Row Crops Open Pasture	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T106) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**42, 43**	**Yes**
WSA-019 Waterfowl Stopover and Staging Area (Aquatic)	12.56	MAMM1-3 FODM11 FODM7-2 OAGM1	Reed-canary Grass Graminoid Mineral Meadow Marsh Naturalized Deciduous Hedgerow Fresh – Moist Green Ash - Hardwood Lowland Deciduous	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T57) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**43**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Forest Annual Row Crops					
WSA-020 Waterfowl Stopover and Staging Area (Aquatic)	55.29	SWDM2-2 SWDM3-3 FODM6-5 OAGM1 OAGM2	Green Ash Mineral Deciduous Swamp Swamp Maple Mineral Deciduous Swamp Fresh – Moist Sugar Maple – Hardwood Deciduous Forest Annual Row Crops Perennial Cover Crops	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T13, T97) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**43**	**Yes**
WSA-021 Waterfowl Stopover and Staging Area (Aquatic)	11.89	SWMM2-2 FODM6-1 OAGM1	Swamp Maple – Conifer Mineral Mixed Swamp Fresh – Moist Sugar Maple – Lowland Ash Deciduous Forest Annual Row Crops	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be	WT – Overlapping (T91) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**44**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
					found in the EOS report.			
WSA-022 Waterfowl Stopover and Staging Area (Aquatic)	7.12	SWDM3-1 OAGM1	Red Maple Mineral Deciduous Swamp Annual Row Crops	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – >120 AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**44, 47**	**Yes**
WSA-023 Waterfowl Stopover and Staging Area (Aquatic)	4.86	MAMM1-3 FODM6-1 OAGM1	Reed-canary Grass Graminoid Mineral Meadow Marsh Fresh – Moist Sugar Maple – Lowland Ash Deciduous Forest Annual Row Crops	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**44**	**Yes**
WSA-024 Waterfowl Stopover and Staging Area (Aquatic)	17.76	SWDM3-1 FOMM6-1 OAGM1	Red Maple Mineral Deciduous Swamp Fresh – Moist Sugar Maple – Hemlock Mixed	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If	WT – 44 (T69) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**44**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Forest Annual Row Crops		spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.			
WSA-025 Waterfowl Stopover and Staging Area (Aquatic)	10.02	MAMM1-3 MASO1-1 SWDO2-3 OAGM4	Reed-canary Grass Graminoid Mineral Meadow Marsh Cattail Organic Shallow Marsh Swamp Maple Organic Deciduous Swamp Open Pasture	May provide foraging and resting habitat for migrating waterfowl.	No studies completed to date; presumed significant; if candidate significant habitat (shallow water during mid-March to May) not observed in Spring 2013, no studies will be conducted and no significance of habitat. If spring flooding is present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – >120 AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**48**	**Yes**
Shorebird Migratory Stopover Area	Several Meadow Marsh (MAM) Community Types have been identified within 120m of the project location. According to the 2012 SWH Ecoregion 6E Criterion Schedule Addendum, these community types must contain un-vegetated muddy shorelines. A total of 2 candidate shorebird migratory stopover areas (riverine site types) have been identified within 120m of a project component that will have an operational impact and are discussed below.							
SHM-001 Shorebird Migratory Stopover Area	13.65	MAMM1-16 FOD OAGM1 OAGM4 SWTM3	Mixed Graminoid Mineral Meadow Marsh Deciduous Forest Annual Row Crops Open Pasture Willow Mineral Deciduous	May provide stopover habitat for migratory shorebirds.	Riverine wetland (contains shoreline)	WT – 8 (T94) AR – 58 CB – 58 CA – Overlapping BU – >120	**43**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Thicket Swamp Ecosite					
SHM-002 Shorebird Migratory Stopover Area	12.56	MAMM1-3 FODM7-2 FODM11 OAGM1	Reed-canary Grass Graminoid Mineral Meadow Marsh Fresh – Moist Green Ash - Hardwood Lowland Deciduous Forest Naturalized Deciduous Hedgerow Annual Row Crops	May provide stopover habitat for migratory shorebirds.	Riverine wetland (contains shoreline)	WT – Overlapping (T57) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**43**	**Yes**
Raptor Winter Feeding and Roosting Areas	Several Meadow (ME), Thicket (TH), and Woodland (WO) Community Types (>15ha) have been identified in combination with Forest (FO), and Treed Swamp (SWD, SWM), Community Types (>5ha) within 120m of the project location. As such, a total of 29 habitats have been identified as candidate raptor winter feeding and roosting areas and are discussed below.							
RWA-001 Raptor Winter Feeding and Roosting Areas	38.36	FODM5-8 MEM THDM4-1	Dry-Fresh Sugar Maple – White Ash Deciduous Forest dominated by sugar maple, with smaller numbers of white ash, and American beech. This woodland (WOD-059) is located adjacent to Mixed	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – 69 (T52) AR – 117 CB – 24 CA – 46 BU – >120	**40, 41, 43**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Meadow and Native Deciduous Regeneration Thicket Communities >15ha.					
RWA-002 Raptor Winter Feeding and Roosting Areas	440.94	FODM5-8 FODM4-2 FODM5-8/ SWDM2-2 Complex with FOD FODM11 FODM6-1 TAGM1 SAGM6 WODM5-4 OAGM2 OAGM4 FODM5-8/ SWDM2-2/ MAMM1-3/ MAMM1-16	Dry-Fresh Sugar Maple-White Ash Deciduous Forest with abundant sugar maple, and occasional species such as American beech, eastern hemlock, white elm, white ash and black cherry Dry-Fresh White Ash Hardwood Deciduous Forest dominated by white ash, with occasional other species such as American beech and sugar maple. The southeastern extent of this community is heavily used by cattle, as trampling, cattle	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT - Overlapping (T6,T7,T8,T9) AR - Overlapping CB - Overlapping CA - Overlapping BU - >120	**40, 41, 42, 43, 44**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			dung, and minimal understory was identified. Dry-Fresh Sugar Maple-White Ash Deciduous Forest with abundant sugar maple and white ash, and occasional American basswood. This community is part of a Green Ash Mineral Deciduous Swamp complex with abundant green ash. Deciduous Forest Naturalized Deciduous Hedgerow Fresh-Moist Sugar Maple–Lowland Ash Deciduous Forest dominated by green ash, and occasional					

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			species such as white elm, sugar maple, white ash and hop hornbeam. Coniferous Plantation dominated by white pine. Dry-Fresh Sugar Maple-White Ash Deciduous Forest with abundant sugar maple and white ash, and occasional American basswood. This community is part of a complex with a Green Ash Mineral Deciduous Swamp dominated by green ash, trembling aspen, red maple and Freeman's maple, as well as a Reed-canary Grass Graminoid Mineral Meadow Marsh and a Mixed Graminoid					

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Graminoid Mineral Meadow Marsh. These woodlands (WOD-031, WOD-032)are located adjacent to Shrub Pasture, Fresh-Moist Hawthorn/Apple Deciduous Woodland, Perennial Cover Crop, and Open Pasture Communities that are >15ha.					
RWA-004 Raptor Winter Feeding and Roosting Areas	281.87	FODM8-1 SWDM2-2 Complex SWDM3-3/ SWDM4-5 FODM6-1 FOD/SWD Complex THDM2-6 OAGM4 OAGM2 FODM8-1/ SWDM2-2	Fresh-Moist Poplar Deciduous Forest complex with Green Ash Mineral Deciduous Swamp dominated by green ash, white elm, and red maple. Swamp Maple Deciduous Swamp dominated by Freeman's maple and green ash,	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT - >120 AR - >120 CB - >0.1 CA - >120 BU - >120	**39, 40, 44**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			with occasional other species such as trembling aspen and white elm. This community is part of a Poplar Mineral Deciduous Swamp complex dominated by Freeman's maple and trembling aspen, with occasional other species such as green ash and white elm. Fresh-Moist Sugar Maple Lowland Ash Deciduous Forest dominated by ash and maple spp. Deciduous Forest and Deciduous Swamp Complex. Fresh-Moist Poplar Deciduous Forest					

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			dominated by poplar species and ash species. A Green Ash Mineral Deciduous Swamp complex has been identified within this community. These woodlands (WOD-016, WOD-072, WOD-086, WOD-087) are located adjacent to Buckthorn Deciduous Shrub Thicket, Open Pasture and Perennial Cover Crop Communities >15ha.					
RWA-005 Raptor Winter Feeding and Roosting Areas	136.41	FODM6-5 FOM FOD OAGM4 OAGM2	Fresh-Moist Sugar Maple – Hardwood Deciduous Forest dominated by sugar maple, with smaller numbers of white ash, American beech, and black cherry.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T73) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**38, 39, 44, 45**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Mixed Forest Deciduous Forest This woodland (WOD-054) is located adjacent to Open Pasture and Perennial Cover Crop Communities >15ha.					
RWA-006 Raptor Winter Feeding and Roosting Areas	147.55	FOMM6-1 FOM THDM2-11 MEGM3 OAGM2 OAGM4	Fresh-Moist Sugar Maple-Hemlock Mixed Forest dominated by sugar maple, American beech, and occasional other species such as eastern hemlock and white elm. Mixed Forest. This woodland (WOD-054) is located adjacent to Fresh Gramninoid Meadow, Thicket, Open Pasture and Perennial Cover Crop >15ha.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT - Overlapping AR - Overlapping CB - Overlapping CA - Overlapping BU - >120	**44, 45**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
RWA-007 Raptor Winter Feeding and Roosting Areas	94.27	FOM FODM6-1/ SWDM3 OAGM2	Mixed Forest Fresh-Moist Sugar Maple-Hemlock Mixed Forest with abundant sugar maple and occasional species such as American beech, eastern hemlock and white ash. This community is part of a Maple Mineral Deciduous Swamp complex dominated by green ash, Freeman's maple and silver maple. This woodland (WOD-055) is located adjacent to Perennial Cover Crops >15ha.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – 24 (T69) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**44**	**Yes**
RWA-008 Raptor Winter Feeding and Roosting Areas	132.13	FODM5-6 FODM6-1/ SWDM3 OAGM2 OAGM4	Dry-Fresh Sugar Maple-Basswood Deciduous Forest dominated by sugar maple with some basswood and white elm in the canopy.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T92, T99) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**43, 44, 47**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Fresh-Moist Sugar Maple-Hemlock Mixed Forest with abundant sugar maple and occasional species such as American beech, eastern hemlock and white ash. This community is part of a Maple Mineral Deciduous Swamp complex dominated by green ash, Freeman's maple and silver maple. These woodlands (WOD-015, WOD-004, WOD-002) are located adjacent to Perennial Cover Crop and Open Pasture Communities >15ha.					
RWA-009 Raptor Winter Feeding and Roosting Areas	52.55	FODM5-6 OAGM2 OAGM4	Dry-Fresh Sugar Maple–White Ash Deciduous Forest dominated by	May provide roosting, foraging, winter cover and feeding for	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T14, T15) AR – Overlapping CB – Overlapping CA – Overlapping	**43**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			sugar maple, white ash and basswood. This woodland (WOD-051) is located adjacent to Open Pasture and Perennial Cover Crop >15ha.	wintering raptors.		BU – >120		
RWA-010 Raptor Winter Feeding and Roosting Areas	218.23	SWDM2-2 SWDM3-3 FODM5-2 FODM5-8 SWD OAGM2 OAGM4	Green Ash Mineral Deciduous Swamp consisting of abundant green ash and occasional Freeman's maple. Swamp Maple Mineral Deciduous Swamp dominated by Freeman's maple and red maple. Dry-Fresh Sugar Maple – Beech Deciduous Forest dominated by sugar maple, with smaller numbers of	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T107) AR - Overlapping CB - Overlapping CA - Overlapping BU - >120	**42, 43, 48**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			American beech, black cherry, and white ash. Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple, white ash and American basswood. Deciduous Swamp These woodlands (WOD-019, WOD-061, WOD-095) are located adjacent to Perennial Cover Crop and Open Pasture Communities >15ha.					
RWA-011 Raptor Winter Feeding and Roosting Areas	624.25	SWDO/ SWMO/ FOD OAGM2	Organic Deciduous Swamp, Organic Mixed Swamp, Deciduous Forest Complex. This woodland (WOD-061) is located adjacent	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – >120 AR – > 120 CB – 27 CA – >120 BU – >120	**48**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			to Perennial Cover Crops >15ha.					
RWA-012 Raptor Winter Feeding and Roosting Areas	371.93	SWDO2-3 SWDM2-2 FODM8-1 FODM4-2 FODM11 FOD/SWD FOD MEMM3 OAGM2 OAGM4	Swamp Maple Organic Deciduous Swamp, dominated by Freeman's maple and red maple. Green Ash Deciduous Swamp Fresh-Moist Poplar Deciduous Forest dominated by sugar maple, trembling aspen and white ash. Dry - Fresh White Ash - Hardwood Deciduous Forest dominated by ash sp. Naturalized Deciduous	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T31, T32) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**48, 49**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Hedgerow Deciduous Forest/Deciduous Swamp Deciduous Forest Dry-Fresh Mixed Meadow These woodlands (WOD-023, WOD-009, WOD-126) are located adjacent to Perennial Cover Crop and Open Pasture Communities >15ha.					
RWA-013 Raptor Winter Feeding and Roosting Areas	114.27	FODM4-2 OAGM4	Dry-Fresh White Ash-Hardwood Deciduous Forest dominated by white ash, red maple and trembling aspen. Cattle grazing is apparent throughout this community. These woodlands	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T26, T28) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**47, 48**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			(WOD-001, WOD-025) are located adjacent to an Open Pasture >15ha.					
RWA-015 Raptor Winter Feeding and Roosting Area	44.99	FODM6-4 FODM5-10 OAGM4	Dry–Fresh Sugar Maple–White Birch–Poplar Deciduous Forest dominated by sugar maple, with smaller numbers of trembling aspen, white elm, and American beech. Fresh-Moist Sugar Maple-White Elm Deciduous Forest dominated by sugar maple, as well as white elm, white ash, and hop hornbeam. This woodland (WOD-037) is located adjacent to Open Pasture >15ha.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T19) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**44, 47**	**Yes**
RWA-017 Raptor Winter Feeding and	154.61	FODM7-2 FODM5-2 MEMM3	Fresh-Moist Green Ash - Hardwood	May provide roosting, foraging, winter	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T33, T34) AR - Overlapping	**45, 46, 47**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Roosting Area		FOCM4-1 FODM3-1 OAGM2 OAGM4	Lowland Deciduous forest with occasional green ash, as well as white elm and white ash. Dry-Fresh Sugar Maple-Beech Deciduous Forest dominated by sugar maple with some American beech. Dry-Fresh Mixed Meadow Ecosite Fresh-Moist White Cedar Coniferous Forest dominated by white cedar. Fresh-Moist Hemlock Coniferous Forest Type This woodland (WOD-022) is located adjacent to Perennial Cover Crop and Open Pasture Communities	cover and feeding for wintering raptors.		CB - Overlapping CA – Overlapping BU – >120		

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			>15ha.					
RWA-018 Raptor Winter Feeding and Roosting Area	106.80	FODM7-2 FOD/SWD Complex OAGM4 MEGM4-1	Fresh-Moist Green Ash Hardwood Lowland Deciduous Forest dominated by green ash and poplar sp. Deciduous Forest and Deciduous Swamp Complex. This woodland (WOD-125) is located adjacent to Open Pasture and Open Graminoid Meadow Communities >15ha.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – >120 AR – >0.1 CB – >0.1 CA – >0.1 BU – Overlapping	**40**	**Yes**
RWA-019 Raptor Winter Feeding and Roosting Area	156.59	SWDO2-1 SWDM3-3 FOMM6-2 OAGM2 OAGM4	Red Maple Organic Deciduous Swamp dominated by red maple, Freeman's maple, black ash, trembling aspen and balsam poplar. .	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T90) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**48, 49**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Swamp Maple Mineral Deciduous Swamp with abundant Freeman's maple and occasional other species such as green ash, white ash, and white elm. Fresh-Moist Hemlock-Hardwood Mixed Forest with abundant ash species and lesser amounts of American beech and eastern hemlock. These woodlands (WOD-030, WOD-041, WOD-114, WOD-141) are located adjacent to Perennial Cover Crop and Open Pasture communities >15ha.					
RWA-020 Raptor Winter	99.68	FODM5-2 FODM3-1	Dry-Fresh Sugar Maple-Beech	May provide roosting,	Candidate field (>15ha) and combination with woodland is	WT – Overlapping (T37)	**46, 51**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Feeding and Roosting Area		FOCM2-2 OAGM4	Deciduous Forest dominated by sugar maple and American beech, with some white elm and red maple. Dry-Fresh Poplar Deciduous Forest dominated by trembling aspen with smaller numbers of American basswood, sugar maple, and white birch. Dry Fresh White Cedar Coniferous Forest with the occasional white cedar and white ash. This woodland (WOD-005) is located adjacent to Open Pasture >15ha.	foraging, winter cover and feeding for wintering raptors.	>20ha	AR – Overlapping CB – Overlapping CA – Overlapping BU – > 120		
RWA-021 Raptor Winter Feeding and Roosting Area	59.78	FODM5-8 MEGM3 THDM4-1 OAGM2	Dry-Fresh Sugar Maple-White Ash Deciduous Forest	May provide roosting, foraging, winter cover and	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T39, T100) AR – Overlapping CB – Overlapping	**50**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			dominated by sugar maple with occasional other species such as white ash and American beech. Native Deciduous Regeneration Thicket Type This woodland (WOD-132) is located adjacent to Dry - Fresh Graminoid Meadow Ecosite and Perennial Cover Crop Communities >15ha.	feeding for wintering raptors.		CA – Overlapping BU – > 120		
RWA-022 Raptor Winter Feeding and Roosting Area	87.42	FOCM6-1 FOC FOD OAGM2	Dry-Fresh White Pine Naturalized Coniferous Plantation Type dominated by white pine. Coniferous and Deciduous Forest Types This woodland (WOD-005) is located adjacent to Perennial Cover Crop	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT –Overlapping (T67) AR – 30 CB – 3 CA – Overlapping BU – > 120	**46, 50, 51**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			>15ha.					
RWA-023 Raptor Winter Feeding and Roosting Area	133.06	FODM5-8 SWDM2-2 SWDO2-3 FOCM2-2 OAGM2 OAGM4 MEGM3 THMM2 THD MEM	Dry-Fresh Sugar Maple – White Ash Deciduous Forest dominated by sugar maple, white ash, and basswood in the canopy. Green Ash Mineral Deciduous Swamp dominated by green ash and trembling aspen. Swamp Maple Organic Deciduous Swamp dominated by Freeman's maple. Dry-Fresh White Cedar Coniferous Forest. These woodlands (WOD-020, WOD-078) are located adjacent	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T47, T110) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**50, 53**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			to Perennial Cover Crop, Open Pasture, Dry - Fresh Graminoid Meadow Ecosite, Fresh - Moist Mixed Thicket Ecosite, Deciduous Thicket, and Mixed Meadow Communities >15ha.					
RWA-024 Raptor Winter Feeding and Roosting Area	59.95	SWDM3-3 OAGM4 OAGM2	Swamp Maple Deciduous Mineral Swamp with abundant green ash, Freeman's maple, and white elm in lesser numbers. This woodland (WOD-099) is located adjacent to Open Pasture and Perennial Cover Crop Communities >15ha.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – 102 (T111) AR – >120 CB – Overlapping CA – 72 BU – >120	**49, 50, 53**	**Yes**
RWA-026 Raptor Winter Feeding and Roosting Area	52.44	FODM6-5 OAGM2	Fresh-Moist Sugar Maple-Hardwood Deciduous Forest with abundant sugar	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – 7 (T66) AR – >0.1 CB – >0.1 CA – >0.1 BU – > 120	**50, 51, 52**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			maple and white elm, and occasional other species such as trembling aspen, black cherry, and American beech. This woodland (WOD-052) is located adjacent to Perennial Cover Crops >15ha.					
RWA-028 Raptor Winter Feeding and Roosting Area	44.33	FODM5-2 OAGM4 FODM6-5/ SWDM2-1	Dry-Fresh Sugar Maple – Beech Deciduous Forest with abundant sugar maple, and occasional other species such as white ash, black cherry, trembling aspen, and American beech. Fresh-Moist Sugar Maple – Hardwood Deciduous Forest dominated by sugar maple, with smaller numbers of red maple, white elm, trembling	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – 34 (T51) AR – 85 CB – 23 CA – >0.1 BU – > 120	**40, 41, 43**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			aspen, and American basswood. This community was identified as part of a Black Ash Mineral Deciduous Swamp complex dominated by black ash, with smaller numbers of white elm. This woodland (WOD-044) is located adjacent to a >15ha Open Pasture.					
RWA-029 Raptor Winter Feeding and Roosting Area	29.46	FOMM6-2 OAGM4	Fresh-Moist Hemlock-Hardwood Mixed Forest with abundant ash species and lesser amounts of American beech and eastern hemlock. This woodland (WOD-113) is located adjacent to Open Pasture >15ha.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – >120 AR – 20 CB – 3 CA – 20 BU – > 120	**49, 53**	**Yes**
RWA-031 Raptor Winter Feeding and	80.60	FODM5-8 FODM5-2 SWDM2-2	Dry-Fresh Sugar Maple-White Ash Deciduous	May provide roosting, foraging, winter	Candidate field (>15ha) and combination with woodland is >20ha	WT – 66 (T65) AR – 52 CB – 17	**48, 49, 50**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Roosting Area		MEMM4 MEGM3 OAGM4 OAGM2	Forest with abundant white ash, and occasional species such as sugar maple, American basswood, and white elm. Dry-Fresh Sugar Maple-Beech Deciduous Forest dominated by sugar maple and American beech, with some white elm and red maple. Green Ash Mineral Deciduous Swamp with abundant green ash, and occasional trembling aspen. *Fresh-Moist Mixed Meadow Ecosite* This woodland (WOD-138) is located adjacent to Open Pasture	cover and feeding for wintering raptors.		CA – 39 BU – >120		

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			and Perennial Cover Crop Communities >15ha.					
RWA-032 Raptor Winter Feeding and Roosting Area	75.27	FOD OAGM4 OAGM2	Deciduous Forest located adjacent to Open Pasture and Perennial Cover Crop Communities >15ha.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – >120 AR – 20 CB – 3 CA – 20 BU – > 120	**44, 47**	**Yes**
RWA-034 Raptor Winter Feeding and Roosting Area	75.33	FOD OAGM2	Deciduous Forest located adjacent to Perennial Cover Crops >15ha.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – >120 AR – >120 CB – 27 CA – >120 BU – > 120	**48, 49**	**Yes**
RWA-035 Raptor Winter Feeding and Roosting Area	82.83	FODM5-2 FOCM2-2 OAGM4 OAGM2	Dry-Fresh Sugar Maple – Beech Deciduous Forest dominated by sugar maple, American beech, and white ash. Dry Fresh White Cedar Coniferous Forest with the occasional white cedar and white ash. This woodland (WOD-067) is located adjacent	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – Overlapping (T80) AR – Overlapping CB – Overlapping CA – Overlapping BU – > 120	**46, 51**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			to an Open Pasture and Perennial Cover Crop >15ha.					
RWA-036 Raptor Winter Feeding and Roosting Area	51.17	FODM5-8 OAGM2	Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple and white ash, with occasional American basswood and American beech. This woodland (WOD-137) is located adjacent to Perennial Cover Crop > 15ha.	May provide roosting, foraging, winter cover and feeding for wintering raptors.	Candidate field (>15ha) and combination with woodland is >20ha	WT – 5 (T89) AR – >0.1 CB – 17 CA – >0.1 BU – > 120	**48, 50**	**Yes**
Bat Maternity Colonies	Several Forest (FOD), Mixed Forest (FOM), Deciduous Treed Swamp (SWD), and Mixed Treed Swamp (SWM) Community Types have been identified within 120m of a project component that will have an operational impact; however, many of these woodlands do not contain ≥10 wildlife trees per hectare, measured at ≥25cm dbh. As such, these have not been considered candidate bat maternity colonies. Where site access could be obtained, a total of 7 candidate bat maternity colonies containing ≥10 wildlife trees per hectare, measured at ≥25cm dbh, have been identified within 120m of a project component that will have an operational impact. Where site access could not be obtained, 2 candidate bat maternity colonies have been identified within 120m of a project component that will have an operational impact. These 9 habitats are discussed below. Habitats meeting these criteria that are located within 120m of a project component that will not have an operational impact are discussed in Table 17 and mapped on Figures 71-87.							
BMA-001 Bat Maternity Colony	8.70	FODM5-8 FODM5-6	Dry-Fresh Sugar Maple-Basswood Deciduous Forest with equal abundance of American basswood and	May provide roosting habitat and shelter for raising young.	Suitable number of snags/cavity trees (≥10snags/ha) to provide candidate habitat	WT – 70 (T24) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**47**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			white ash, with some sugar maple and American beech Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple and white ash, with occasional American basswood and American beech. These communities contain ≥10 snags/ha combined. Located in WOD-006.					
BMA-004 Bat Maternity Colony	3.85	FODM5-2	Dry-Fresh Sugar Maple-Beech Deciduous Forest dominated by sugar maple with some American beech. These communities contain ≥10 snags/ha combined.	May provide roosting habitat and shelter for raising young.	Suitable number of snags/cavity trees (≥10snags/ha) to provide candidate habitat	WT – 28 (T74) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**45**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Located in WOD-010.					
BMA-020 Bat Maternity Colony	42.79	FODM5-2 FODM4-2 SWDM3-3	Dry-Fresh Sugar Maple – Beech Deciduous Forest dominated by sugar maple, with smaller numbers of American beech, black cherry, and white ash. Dry-Fresh White Ash – Hardwood Deciduous Forest dominated by white ash and trembling aspen. Swamp Maple Mineral Deciduous Swamp dominated by Freeman's maple and red maple. These communities contain ≥10 snags/ha combined. Located in WOD-061.	May provide roosting habitat and shelter for raising young.	Suitable number of snags/cavity trees (≥10snags/ha) to provide candidate habitat	WT – 58 (T103) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**42, 48**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
BMA-021 Bat Maternity Colony	6.28	FODM5-8 SWMO1-1	Dry-Fresh Sugar Maple – White Ash Deciduous Forest dominated by sugar maple, with smaller numbers of white ash, black cherry, and American beech. White Cedar-Hardwood Organic Mixed Swamp dominated by white cedar and yellow birch. These communities contain ≥10 snags/ha combined. Located in WOD-064.	May provide roosting habitat and shelter for raising young.	Suitable number of snags/cavity trees (≥10snags/ha) to provide candidate habitat	WT – 8 (T103) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**42, 43**	**Yes**
BMA-024 Bat Maternity Colony	16.65	FODM5-8	Dry-Fresh Sugar Maple – White Ash Deciduous Forest dominated by sugar maple, with smaller numbers of white ash, and American beech.	May provide roosting habitat and shelter for raising young.	Suitable number of snags/cavity trees (≥10snags/ha) to provide candidate habitat	WT – 69 (T52) AR – 117 CB – 117 CA – 46 BU – >120	**40, 41, 43**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			This community contains ≥10 snags/ha. Located in WOD-059.					
BMA-028 Bat Maternity Colony	6.62	FODM5-2 FODM5-8	Dry-Fresh Sugar Maple-Beech Deciduous Forest with abundant sugar maple and occasional other species such as American beech and white ash. Dry-Fresh Sugar Maple-White Ash Deciduous Forest dominated by sugar maple with occasional other species such as white ash and American beech. This community contains ≥10 snags/ha. Located in WOD-132.	May provide roosting habitat and shelter for raising young.	Suitable number of snags/cavity trees (≥10snags/ha) to provide candidate habitat	WT – 24 (T100) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**50**	**Yes**
BMA-032 Bat Maternity Colony	0.40	FODM5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest with occasional white ash, American	May provide roosting habitat and shelter for raising young.	Suitable number of snags/cavity trees (≥10snags/ha) to provide candidate habitat	WT – 114 (T34) AR – 66 CB – 66 CA – 66 BU – >120	**46**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			basswood, sugar maple, and white elm. This community contains ≥10 snags/ha. Located in WOD-021.					
BMA-034 Bat Maternity Colony	3.33	SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by ash sp. and lesser amounts of maple sp. Located in WOD-074	May provide roosting habitat and shelter for raising young.	Not able to determine if habitat contains suitable number of snags/cavity trees as site access was not granted. As such, this feature has been presumed to be a candidate bat maternity colony	WT – 69 (T04) AR – 120 CB – 120 CA – 16 BU - >120	**40**	**Yes**
BMA-035 Bat Maternity Colony	43.13	FOMM6-1 FOM	Fresh-Moist Sugar Maple-Hemlock Mixed Forest dominated by sugar maple, American beech, and occasional other species such as eastern hemlock and white elm. Mixed Forest Located in WOD-054	May provide roosting habitat and shelter for raising young.	Not able to determine if habitat contains suitable number of snags/cavity trees as site access was not granted. As such, this feature has been presumed to be a candidate bat maternity colony	WT – 48 (T73) AR - 21 CB - 3 CA - 23 BU - >120	**44, 45**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Colonial-Nesting Bird Breeding Habitat (Tree/Shrub)	Several Mixed Swamp (SWM) and Deciduous Swamp (SWD) Community Types have been identified within 120m of the project location. During area searches associated with ELC mapping, NRSI biologists conducted area searches for nest bowls within these Community Types. Where site access was granted, site investigations confirmed that no old nests were observed within these habitats. Where site access could not be obtained, one candidate colonial-nesting bird breeding habitat (tree/shrub) has been identified within 120m of a project component that will have an operational impact and is discussed below.							
CBT-001 Colonial-Nesting Bird Breeding Habitat (Tree/Shrub)	4.75	SWDM2-2	Green Ash Mineral Deciduous Swamp dominated by green ash and trembling aspen. Located in WOD-078	May provide nesting habitat for colonial birds (tree/shrub).	Not able to determine if habitat contains nest bowls as site access was not granted. As such, this feature has been presumed to be a candidate colonial-nesting bird breeding habitat (tree/shrub)	WT - >120 AR - 76 CB - 94 CA - 32 BU - >120	**50**	**Yes**
Colonial-Nesting Bird Breeding Habitat (Ground)	Gulls/Terns: No rocky islands or peninsulas located within large lakes or rivers have been identified within 120m of the project location. Brewer's Blackbird: Several watercourses are located in close proximity to open fields or pastures with scattered trees or shrubs or in Meadow Marsh (MAM), Shallow Marsh (MAS), Meadow (ME), Thicket (TH), or Savannah (SV) Community Types within 120m of the project location. A total of 8 candidate colonial-nesting bird breeding habitats (ground) have been identified within 120m of a project component that will have an operational impact and are discussed below. Habitats meeting these criteria that are located within 120m of a project component that will not have an operational impact are discussed in Table 17 and mapped on Figures 71-87.							
CBG-001 Colonial-Nesting Bird Breeding Habitat (Ground)	21.29	OAGM4	Open Pasture	May provide nesting habitat for Brewer's blackbird.	Open fields or pastures with scattered trees or shrubs in close proximity to watercourses.	WT – Overlapping (T21) AR – Overlapping CB – Overlapping CA – Overlapping BU - >120	**47**	**Yes**
CBG-002 Colonial-Nesting Bird Breeding Habitat (Ground)	20.85	OAGM4 SAGM6	Open Pasture Shrub Pasture	May provide nesting habitat for Brewer's blackbird.	Open fields or pastures with scattered trees or shrubs in close proximity to watercourses.	WT – Overlapping (T07, T58) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**43**	**Yes**
CBG-003 Colonial-Nesting Bird	106.55	MEGM3 OAGM2 OAGM4	Dry - Fresh Graminoid Meadow Ecosite	May provide nesting habitat for Brewer's	Open fields or pastures with scattered trees or shrubs in close proximity to	WT – Overlapping (T47, T98, T110, T111, T116)	**49, 50, 53**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Breeding Habitat (Ground)		THD	Perennial Cover Crops Open Pasture Deciduous Thicket	blackbird.	watercourses.	AR – Overlapping CB – Overlapping CA – Overlapping BU – >120		
CBG-004 Colonial-Nesting Bird Breeding Habitat (Ground)	6.24	OAGM2	Perennial Cover Crops	May provide nesting habitat for Brewer's blackbird.	Open fields or pastures with scattered trees or shrubs in close proximity to watercourses.	WT – Overlapping (T24) AR – >120 CB – >120 CA – 73 BU – >120	**47**	**Yes**
CBG-005 Colonial-Nesting Bird Breeding Habitat (Ground)	4.80	MEGM3-5 SAGM6 THDM2-11	Smooth Brome Graminoid Meadow Shrub Pasture Hawthorn Deciduous Shrub Thicket	May provide nesting habitat for Brewer's blackbird.	Open fields or pastures with scattered trees or shrubs in close proximity to watercourses.	WT – Overlapping (T81) AR – 70 CB – 17 CA – 23 BU – >120	**45**	**Yes**
CBG-006 Colonial-Nesting Bird Breeding Habitat (Ground)	1.31	MAMM1-3	Reed-canary Grass Graminoid Mineral Meadow Marsh	May provide nesting habitat for Brewer's blackbird.	Open fields or pastures with scattered trees or shrubs in close proximity to watercourses.	WT – Overlapping (T81) AR – 70 CB – 17 CA – 23 BU – >120	**43**	**Yes**
CBG-007 Colonial-Nesting Bird Breeding Habitat (Ground)	3.69	THDM2-11	Hawthorn Deciduous Shrub Thicket	May provide nesting habitat for Brewer's blackbird.	Open fields or pastures with scattered trees or shrubs in close proximity to watercourses.	WT – Overlapping (T81) AR – 70 CB – 17 CA – 23 BU – >120	**50**	**Yes**
CBG-008 Colonial-	4.80	OAGM2	Perennial Cover Crops	May provide nesting habitat	Open fields or pastures with scattered trees or shrubs in	WT – Overlapping (T45)	**50**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Nesting Bird Breeding Habitat (Ground)				for Brewer's blackbird.	close proximity to watercourses.	AR – Overlapping CB – Overlapping CA – Overlapping BU – >120		
Candidate Specialized Wildlife Habitats								
Waterfowl Nesting Area	Several upland habitats adjacent to Meadow Marsh (MAM) and Deciduous Swamp (SWD) Community Types have been identified within 120m of the project location. According to the 2012 SWH Ecoregion 6E Criterion Schedule Addendum, a waterfowl nesting area extends 120m from a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5ha) wetlands within 120m of each individual wetland where waterfowl nesting is known to occur. In addition, upland areas should be at least 120m wide so that predators have difficulty finding nests. A total of 20 candidate waterfowl nesting areas have been identified within 120m of a project component that will have an operational impact and are discussed below. Habitats meeting these criteria that are located within 120m of a project component that will not have an operational impact are discussed in Table 17 and mapped on Figures 71-87.							
WFN-002 Waterfowl Nesting Area	16.14	MAMO2-2 THDM2-11 FODM5-8 OAGM4 FODM5-1 WODM4-2 FOC	Joe Pye Weed Forb Organic Meadow Marsh Hawthorn Deciduous Shrub Thicket Dry – Fresh Sugar Maple – White Ash Deciduous Forest Open Pasture Dry – Fresh Sugar Maple Deciduous Forest White Ash Deciduous Woodland	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands.	WT – 91 (T106) AR – 42 CB – 42 CA – 42 BU – >120	**59, 60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Coniferous Forest					
WFN-003 Waterfowl Nesting Area	64.54	SWDM3-3 FODM5-2 OAGM4	Swamp Maple Mineral Deciduous Swamp Dry – Fresh Sugar Maple – Beech Deciduous Forest Open Pasture	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands.	WT – 58 (T103) AR – 12 CB – 12 CA – 12 BU – >120	**59, 65**	**Yes**
WFN-004 Waterfowl Nesting Area	120.22	FODM5-8/ SWDM2-2/ MAMM1-3 Complex SWDM2-2 FODM4-2 FODM11 FOD OAGM4	Dry – Fresh Sugar Maple – White Ash Deciduous Forest / Green Ash Mineral Deciduous Swamp / Reed-canary Grass Graminoid Mineral Meadow Marsh Complex Green Ash Mineral Deciduous Swamp Dry - Fresh White Ash - Hardwood Deciduous Forest	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – 63 (T4) AR – 47 CB – 47 CA – 47 BU – >120	**57, 60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Naturalized Deciduous Hedgerow Deciduous Forest Open Pasture					
WFN-005 Waterfowl Nesting Area	17.10	SWDM3-3 TAGM1	Swamp Maple Mineral Deciduous Swamp Coniferous Plantation	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – 91 (T42) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**67**	**Yes**
WFN-006 Waterfowl Nesting Area	47.37	SWDM3-1 SWDM3-3 FOMM6-1	Red Maple Mineral Deciduous Swamp Swamp Maple Mineral Deciduous Swamp Fresh – Moist Sugar Maple – Hemlock Mixed Forest	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – 23 (T69) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**61**	**Yes**
WFN-007 Waterfowl Nesting Area	12.22	SWDO1-2 FODM5-6 OAGM2	Green Ash Organic Deciduous Swamp Dry – Fresh Sugar Maple – Basswood	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – Overlapping (T99) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**60, 61, 64**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Deciduous Perennial Cover Crops					
WFN-008 Waterfowl Nesting Area	33.74	SWDM2-2 OAGM2	Green Ash Mineral Deciduous Swamp Perennial Cover Crops	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – Overlapping (T31) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**65**	**Yes**
WFN-009 Waterfowl Nesting Area	16.58	MAMM1-16 FOD OAGM4	Mixed Graminoid Mineral Meadow Marsh Deciduous Forest Open Pasture	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – Overlapping (T59, T94) AR – 38 CB – 38 CA – Overlapping BU – >120	**60**	**Yes**
WFN-010 Waterfowl Nesting Area	23.35	MAMM1-3 FODM5-8 OAGM2 OAGM4	Reed-canary Grass Graminoid Mineral Meadow Marsh Dry – Fresh Sugar Maple – White Ash Deciduous Forest Perennial Cover Crops Open Pasture	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – Overlapping (T107) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**60, 65**	**Yes**
WFN-011 Waterfowl Nesting Area	10.48	SWDM3-3 FODM5-8	Swamp Maple Mineral Deciduous	May provide nesting habitat for local	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – Overlapping (T107) AR – 11	**60, 65**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		OAGM2 OAGM4	Swamp Dry – Fresh Sugar Maple – White Ash Deciduous Forest Perennial Cover Crops Open Pasture	waterfowl.		CB – 11 CA – Overlapping BU – >120		
WFN-013 Waterfowl Nesting Area	16.87	SWTM3-3 FODM5-8 MEGM3 OAGM4 SAGM6 WODM5-4	Slender Willow Mineral Deciduous Thicket Swamp Dry – Fresh Sugar Maple – White Ash Deciduous Forest Dry - Fresh Graminoid Meadow Ecosite Open Pasture Shrub Pasture Fresh - Moist Hawthorn / Apple Deciduous Woodland	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – Overlapping (T06) AR – Overlapping CB – Overlapping CA – Overlapping BU - >120	**60**	**Yes**
WFN-014 Waterfowl Nesting Area	91.22	SWDM SWDM3-3	Mineral Deciduous Swamp	May provide nesting habitat for local	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – Overlapping (T64, T90) AR – Overlapping	**65, 66**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		OAGM2 FODM6-5	Swamp Maple Mineral Deciduous Swamp Perennial Cover Crops Fresh – Moist Sugar Maple – Hardwood Deciduous Forest	waterfowl.		CB – Overlapping CA – >Overlapping BU – >120		
WFN-015 Waterfowl Nesting Area	37.03	MAMM1-3 MASO1-1 SWDO2-3 FOD FODM8-1 OAGM4	Reed-canary Grass Graminoid Mineral Meadow Marsh Cattail Organic Shallow Marsh Swamp Maple Organic Deciduous Swamp Deciduous Forest Fresh – Moist Poplar Deciduous Forest Open Pasture	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – Overlapping (T32) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**65**	**Yes**
WFN-016 Waterfowl	15.21	SWMO1-1	White Cedar – Hardwood	May provide nesting habitat	Upland habitat >120m wide and located ≤120m from	WT – 39 (T106) AR – >0.1	**59, 60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Nesting Area		FODM5-8	Organic Mixed Swamp Dry – Fresh Sugar Maple – White Ash Deciduous Forest	for local waterfowl.	PSW or other wetlands..	CB – >0.1 CA – >0.1 BU – >120		
WFN-017 Waterfowl Nesting Area	15.35	SWDM2-2 FOD OAGM2 OAGM4 TAGM1	Green Ash Mineral Deciduous Swamp Deciduous Forest Perennial Cover Crops Open Pasture Coniferous Plantation	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – 49 (T12) AR – 99 CB – 99 CA – 11 BU - >120	**60, 64**	**Yes**
WFN-018 Waterfowl Nesting Area	9.84	SWDM2-2 FODM5-2	Green Ash Mineral Deciduous Swamp Dry – Fresh Sugar Maple – Beech Deciduous Forest	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – 70 (T65) AR – 120.6 CB – 120.6 CA – 46 BU - >120	**65, 67**	**Yes**
WFN-019 Waterfowl Nesting Area	25.59	SWDM2-2 FOCM2-2 FODM5-8 MEM	Green Ash Mineral Deciduous Swamp	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – 25 (T47) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**67**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
		OAGM2 OAGM4 THD	Dry – Fresh White Cedar Coniferous Forest Dry – Fresh Sugar Maple – White Ash Deciduous Forest Mixed Meadow Perennial Cover Crops Open Pasture Deciduous Thicket					
WFN-020 Waterfowl Nesting Area	31.33	MAMM1-3 SWDM2-2 SWDM4-5 SWTM3-6 FODM5-8 MEFM4	Reed-canary Grass Graminoid Mineral Meadow Marsh Green Ash Mineral Deciduous Swamp Poplar Mineral Deciduous Swamp Mixed Willow Mineral Deciduous Thicket Swamp	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – Overlapping (T104) AR – Overlapping CB – Overlapping CA – Overlapping BU - >120	**68**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Dry – Fresh Sugar Maple – White Ash Deciduous Forest Fresh - Moist Forb Meadow Ecosite					
WFN-021 Waterfowl Nesting Area	19.63	SWDO1-1 SWDO2-3 OAGM2	Black Ash Organic Deciduous Swamp Swamp Maple Organic Deciduous Swamp Perennial Cover Crops	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – 12 (T45) AR – Overlapping CB – Overlapping CA – Overlapping BU - >120	**67**	**Yes**
WFN-022 Waterfowl Nesting Area	14.49	SWMM2-2 FODM6-1	Swamp Maple – Conifer Mineral Mixed Swamp Fresh – Moist Sugar Maple – Lowland Ash Deciduous Forest	May provide nesting habitat for local waterfowl.	Upland habitat >120m wide and located ≤120m from PSW or other wetlands..	WT – 18 (T91) AR - >0.1 CB - >0.1 CA - >0.1 BU - >120	**61**	**Yes**
Amphibian Breeding Habitat (Woodland)	Several Treed Swamp (SWD, SWM, SWC) and Forest (FO) Community Types have been identified within 120m of the project location. According to the 2012 SWH Ecoregion 6E Criterion Schedule Addendum, woodlands with permanent ponds or those containing water in most years (until mid-July) are more likely to be used as breeding habitat. A total of 33 candidate amphibian breeding habitats (woodland) have been identified within 120m of a project component that will have an operational impact and are discussed below. Habitats meeting these criteria that are located within 120m of a project component that will not have an operational impact are discussed in Table 17 and mapped on Figures 71-87.							
AWO-001	15.49	MASO1-1	Cattail Organic	May be used for	Candidate wetland containing	WT – >120	**65**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Amphibian Breeding Habitat (Woodland)		SWDO2-3 FODM8-1	Shallow Marsh dominated by broad-leaved cattail. Swamp Maple Organic Deciduous Swamp, dominated by Freeman's maple and red maple. Fresh-Moist Poplar Deciduous Forest dominated by sugar maple, trembling aspen and white ash.	egg laying, breeding and feeding habitat.	approximately 20% permanently flooded open water and several emergent vegetation species, located <120m from a woodland.	AR – 3 CB – 3 CA – 3 BU – >120		
AWO-002 Amphibian Breeding Habitat (Woodland)	43.13	SWDM3-3	Swamp Maple Mineral Deciduous Swamp dominated by Freeman's maple and red maple.	May be used for egg laying, breeding and feeding habitat.	Candidate wetland containing a complex of vernal pooling throughout the swamp (located within a woodland).	WT – 58 (T103) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**59, 65**	**Yes**
AWO-004 Amphibian Breeding Habitat (Woodland)	61.76	FODM8-1 MAMM1-2 MASO1-1 SWDO2-3	Fresh – Moist Poplar Deciduous Forest Cattail Graminoid Mineral Meadow Marsh Cattail Organic	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine	WT – 63 (T04) AR – 47 CB – 47 CA – 47 BU – >120	**57, 60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Shallow Marsh Swamp Maple Organic Deciduous Swamp		seasonal use. Details of the survey methodology can be found in the EOS report.			
AWO-005 Amphibian Breeding Habitat (Woodland)	30.69	FODM5-8/ SWDM2-2/ MAMM1-3 Complex SWDM2-2	Dry – Fresh Sugar Maple – White Ash Deciduous Forest / Green Ash Mineral Deciduous Swamp / Reed-canary Grass Graminoid Mineral Meadow Marsh Complex Green Ash Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 23 (T69) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**61**	**Yes**
AWO-007 Amphibian Breeding Habitat (Woodland)	2.88	SWDM3-1	Red Maple Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 87 (T69) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**61, 64**	**Yes**
AWO-008 Amphibian	1.93	MAMM1-16 SWDM3-3	Mixed Graminoid Mineral Meadow	May be used for egg laying,	No studies completed to date; presumed significant; if no	WT – 31 (T60) AR – 28	**65**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Breeding Habitat (Woodland)			Marsh Swamp Maple Mineral Deciduous Swamp	breeding and feeding habitat	significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	CB – 28 CA – 28 BU – >120		
AWO-009 Amphibian Breeding Habitat (Woodland)	7.32	SWDM2-2 FODM5-8 MAMM1-3 SWDM2-2 SWDM4-5 SWTM3-6	Green Ash Mineral Deciduous Swamp Dry – Fresh Sugar Maple – White Ash Deciduous Forest Reed-canary Grass Graminoid Mineral Meadow Marsh Green Ash Mineral Deciduous Swamp Poplar Mineral Deciduous Swamp Mixed Willow Mineral	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – Overlapping (T104) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**68**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Deciduous Thicket Swamp					
AWO-012 Amphibian Breeding Habitat (Woodland)	3.28	SWDO2-1	Red Maple Organic Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 82 (T35) AR – 66 CB – 66 CA – 58 BU – >120	**66**	**Yes**
AWO-013 Amphibian Breeding Habitat (Woodland)	15.58	FODM4-2	Dry - Fresh White Ash - Hardwood Deciduous Forest	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 72 (T07) AR – 79 CB – 79 CA – 24 BU – >120	**60**	**Yes**
AWO-016 Amphibian Breeding Habitat (Woodland)	2.90	FODM7-2	Fresh – Moist Green Ash - Hardwood Lowland Deciduous	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine	WT –71 (T57) AR – 2 CB – 2 CA – 2 BU – >120	**60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
					seasonal use. Details of the survey methodology can be found in the EOS report.			
AWO-017 Amphibian Breeding Habitat (Woodland)	0.77	SWDM3-1	Red Maple Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 59 (T69) AR – 37 CB – 37 CA – 37 BU – >120	**61**	**Yes**
AWO-018 Amphibian Breeding Habitat (Woodland)	16.94	FODM6-1 MAMM1-2	Fresh – Moist Sugar Maple – Lowland Ash Deciduous Forest Cattail Graminoid Mineral Meadow Marsh	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 14 (T11) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**61**	**Yes**
AWO-020 Amphibian Breeding Habitat (Woodland)	16.87	FODM6-5/ SWDM2-1 Complex SWDM2-2	Fresh – Moist Sugar Maple – Hardwood Deciduous Forest / Black Ash Mineral Deciduous Swamp Complex	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be	WT – 1 (T104) AR - >0.1 CB - >0.1 CA - >0.1 BU - >120	**57**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Green Ash Mineral Deciduous Swamp		undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.			
AWO-021 Amphibian Breeding Habitat (Woodland)	12.84	FODM5-8 MAMM1-3	Dry – Fresh Sugar Maple – White Ash Deciduous Forest Reed-canary Grass Graminoid Mineral Meadow Marsh	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 2 (T60) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**60, 65**	**Yes**
AWO-022 Amphibian Breeding Habitat (Woodland)	16.18	FODM5-8	Dry – Fresh Sugar Maple – White Ash Deciduous Forest	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 69 (T52) AR – 117 CB – 117 CA – 50 BU – >120	**57, 60**	**Yes**
AWO-023 Amphibian Breeding Habitat (Woodland)	21.85	FODM5-8	Dry – Fresh Sugar Maple – White Ash Deciduous Forest	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present,	WT – >120 AR – 90 CB – 90 CA –70 BU – >120	**58, 59**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
					EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.			
AWO-025 Amphibian Breeding Habitat (Woodland)	0.39	SWDM2-2	Green Ash Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – >120 AR – 84 CB – 84 CA – 84 BU – >120	**61, 64**	**Yes**
AWO-026 Amphibian Breeding Habitat (Woodland)	0.48	SWDM2-2	Green Ash Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – >120 AR – 4 CB – 4 CA – 4 BU – >120	**65**	**Yes**
AWO-027 Amphibian Breeding Habitat (Woodland)	9.94	SWDM2-2	Green Ash Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If	WT – 69 (T31) AR – 14 CB – 14 CA – 14 BU – >120	**65**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
					vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.			
AWO-028 Amphibian Breeding Habitat (Woodland)	40.67	FODM6-5 SWDM SWDM3-3	Fresh – Moist Sugar Maple – Hardwood Deciduous Forest Mineral Deciduous Swamp Swamp Maple Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – >0.1 (T64) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**65, 66**	**Yes**
AWO-029 Amphibian Breeding Habitat (Woodland)	0.52	SWDM3-1	Red Maple Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – >120 AR – 67 CB – 67 CA – 67 BU – >120	**61**	**Yes**
AWO-031 Amphibian Breeding Habitat (Woodland)	2.71	FODM5-8 SWTM3-3	Dry – Fresh Sugar Maple – White Ash Deciduous Forest	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be	WT – 34 (T06) AR – 65 CB – 65 CA – 5 BU – >120	**60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Slender Willow Mineral Deciduous Thicket Swamp		conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.			
AWO-033 Amphibian Breeding Habitat (Woodland)	32.98	FODM5-7 SWDM4-5	Dry – Fresh Sugar Maple – Black Cherry Deciduous Forest Poplar Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 41 (T63) AR – 91 CB – 91 CA – 2 BU – >120	**61, 62**	**Yes**
AWO-034 Amphibian Breeding Habitat (Woodland)	1.95	SWDM2-2	Green Ash Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 49 (T12) AR – 100 CB – 100 CA – 10 BU – >120	**60**	**Yes**
AWO-036 Amphibian Breeding Habitat	8.84	FODM7-6 SWDO1-1 SWDO2-3	Fresh - Moist Black Ash - Hardwood Lowland	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring	WT – 43 (T45) AR – >0.1 CB – >0.1 CA – >0.1	**67, 69**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
(Woodland)			Deciduous Forest Black Ash Organic Deciduous Swamp Swamp Maple Organic Deciduous Swamp		2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	BU – >120		
AWO-038 Amphibian Breeding Habitat (Woodland)	9.57	SWDM2-2 SWDM4-1 SWDO2-3	Green Ash Mineral Deciduous Swamp Willow Mineral Deciduous Swamp Swamp Maple Organic Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 42 (T78) AR – 93 CB – 2 CA – 2 BU – >120	**67, 68, 69**	**Yes**
AWO-039 Amphibian Breeding Habitat (Woodland)	21.58	FODM6-5 SWDM2-2 SWDM3-3	Fresh – Moist Sugar Maple – Hardwood Deciduous Forest Green Ash Mineral Deciduous Swamp Swamp Maple Mineral	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 35 (T13) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Deciduous Swamp					
AWO-040 Amphibian Breeding Habitat (Woodland)	6.28	FODM5-8 SWMO1-1	Dry – Fresh Sugar Maple – White Ash Deciduous Forest White Cedar – Hardwood Organic Mixed Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 8 (T106) AR – >0.1 CB – >0.1 CA – >0.1 BU – >120	**59, 60**	**Yes**
AWO-041 Amphibian Breeding Habitat (Woodland)	7.81	FOCM2-2 FODM5-8 SWDM2-2	Fresh White Cedar Coniferous Forest Dry – Fresh Sugar Maple – White Ash Deciduous Forest Green Ash Mineral Deciduous Swamp	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – >120 AR – 76 CB – 76 CA – 32 BU – >120	**67**	**Yes**
AWO-043 Amphibian Breeding Habitat (Woodland)	12.48	FODM5-8	Dry – Fresh Sugar Maple – White Ash Deciduous Forest	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present,	WT – 65 (T15) AR – 116 CB – 29 CA – 1 BU – >120	**60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
					EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.			
AWO-044 Amphibian Breeding Habitat (Woodland)	3.28	SWDM3-3	Swamp Maple Mineral Deciduous Swamp with abundant green ash, Freeman's maple, and white elm in lesser numbers.	May be used for egg laying, breeding and feeding habitat	No studies completed to date; presumed significant; if no significant habitat (vernal pools) observed in Spring 2013, no studies will be conducted and no significance of habitat. If vernal pools are present, EOS surveys will be undertaken to determine seasonal use. Details of the survey methodology can be found in the EOS report.	WT – 91 AR – 2 CB – 2 CA – 1 BU – >120	**67**	**Yes**
Habitat for Species of Conservation Concern								
Marsh Bird Breeding Habitat	Several Meadow Marsh (MAM) Community Types have been identified within 120m of the project location. According to the 2012 SWH Ecoregion 6E Criterion Schedule Addendum, these community types must contain shallow water with emergent aquatic vegetation. One candidate marsh bird breeding habitat has been identified within 120m of a project component that will have an operational impact and is discussed below. Habitats meeting these criteria that are located within 120m of a project component that will not have an operational impact are discussed in Table 17 and mapped on Figures 71-87.							
MBB-002 Marsh Bird Breeding Habitat	2.70	MAMM1-16	Mixed Graminoid Mineral Meadow Marsh	May be used for breeding or nesting habitat	Candidate wetland habitat containing shallow water with emergent aquatic vegetation.	WT – 108 (T94) AR – 120 CB – 120 CA – 89 BU – >120	**60**	**Yes**
Open Country Bird Breeding Habitat	Several Meadow (ME), Open Pasture (OAGM4), and Perennial Cover Crop (OAGM2) Community Types > 30ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years, have been identified within 120m of a project component that will have an operational impact. As such, a total of 22 habitats have been identified as candidate open country bird breeding habitats and are discussed below. Habitats meeting these criteria that are located within 120m of a project component that will not have an operational impact are discussed in Table 17 and mapped on Figures 71-87.							
OCB-001 Open Country Bird Breeding	30.65	OAGM4	Open Pasture	May be used for breeding, nesting or foraging	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not	WT – 39 (T51) AR – 85 CB – 23	**57, 60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Habitat				habitat	being actively used for farming	CA – >0.1 BU – >120		
OCB-004 Open Country Bird Breeding Habitat	262.22	OAGM4 OAGM2 MEGM3	Open Pasture Perennial Cover Crop Dry-Fresh Graminoid Meadow Ecosite	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T6, T7, T8, T9) AR – Overlapping CB – Overlapping CA – Overlapping BU – > 120	**57, 58, 59, 60**	**Yes**
OCB-008 Open Country Bird Breeding Habitat	77.96	OAGM4 OAGM2 MEGM3	Open Pasture Perennial Cover Crop Fresh Graminoid Meadow Ecosite	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T10) AR – Overlapping CB – Overlapping CA – Overlapping BU – > 120	**61**	**Yes**
OCB-009 Open Country Bird Breeding Habitat	67.09	OAGM4 OAGM2	Open Pasture Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T19, T61) AR – Overlapping CB – Overlapping CA – Overlapping BU – > 120	**61, 62, 64**	**Yes**
OCB-010 Open Country Bird Breeding Habitat	79.40	OAGM4	Open Pasture	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T21) AR – Overlapping CB – Overlapping CA – Overlapping BU – > 120	**64**	**Yes**
OCB-011 Open Country Bird Breeding Habitat	114.74	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T92, T99) AR – Overlapping CB – Overlapping CA – Overlapping BU – > 120	**60, 61, 64**	**Yes**
OCB-012 Open Country Bird Breeding Habitat	36.48	OAGM4	Open Pasture	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T59, T94) AR – Overlapping CB – Overlapping CA – Overlapping	**60**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
						BU – > 120		
OCB-013 Open Country Bird Breeding Habitat	77.63	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T107) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**60, 65**	**Yes**
OCB-014 Open Country Bird Breeding Habitat	95.27	OAGM4	Open Pasture	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – 92 (T60) AR – 2 CB – 2 CA – 2 BU – >120	**59, 60, 65**	**Yes**
OCB-015 Open Country Bird Breeding Habitat	314.04	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T31, T32) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**65, 66**	**Yes**
OCB-017 Open Country Bird Breeding Habitat	94.83	OAGM4	Open Pasture	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T28) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**64, 65**	**Yes**
OCB-018 Open Country Bird Breeding Habitat	51.72	OAGM2	Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T33, T34) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**63**	**Yes**
OCB-020 Open Country Bird Breeding Habitat	40.20	OAGM2 OAGM4 MEGM3	Fresh Graminoid Meadow Ecosite Perennial Cover Crop and Open Pasture	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T47, T110, T116) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**66, 67, 69, 70**	**Yes**
OCB-021	104.38	OAGM2	Open Pasture	May be used for	Candidate grassland area	WT – Overlapping	**65, 66**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Open Country Bird Breeding Habitat		OAGM4	Perennial Cover Crop	breeding, nesting or foraging habitat	>30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	(T90) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120		
OCB-023 Open Country Bird Breeding Habitat	36.43	OAGM4 MEGM3	Fresh Graminoid Meadow Ecosite Open Pasture	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T50) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**67, 69**	**Yes**
OCB-024 Open Country Bird Breeding Habitat	47.63	MEGM4-1 OAGM4	Open Graminoid Meadow Type Open Pasture	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – >120 AR – >0.1 CB – >0.1 CA – >0.1 BU – Overlapping	**57**	**Yes**
OCB-025 Open Country Bird Breeding Habitat	40.06	OAGM2 OAGM4	Perennial Cover Crop Open Pasture	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T14, T15) AR – Overlapping CB – Overlapping CA – Overlapping BU – > 120	**60**	**Yes**
OCB-026 Open Country Bird Breeding Habitat	57.16	OAGM4 OAGM2	Open Pasture Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – 103 (T111) AR – > 120 CB – Overlapping CA – 40 BU – > 120	**66, 70**	**Yes**
OCB-027 Open Country Bird Breeding Habitat	43.71	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T80) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**68**	**Yes**
OCB-028 Open Country Bird Breeding Habitat	80.91	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for	WT – Overlapping (T73) AR – Overlapping CB – Overlapping	**55, 56, 61, 62**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
					farming	CA – Overlapping BU – >120		
OCB-029 Open Country Bird Breeding Habitat	37.40	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T113) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**67, 69**	**Yes**
OCB-030 Open Country Bird Breeding Habitat	31.91	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, nesting or foraging habitat	Candidate grassland area >30ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – Overlapping (T40) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**67**	**Yes**
Shrub/Early Successional Bird Breeding Habitat	One Woodland (WO) Community Type >10ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years, has been identified within 120m of the project location. As such, this habitat has been identified as a candidate shrub/early successional bird breeding habitat and is discussed below.							
SSB-001 Shrub/Early Successional Bird Breeding Habitat	11.34	WODM5-4	Fresh-Moist Hawthorn/Apple Deciduous Woodland dominated by hawthorn sp.	May be used for breeding, nesting or foraging habitat	Candidate woodland >10ha in size, not Class 1 or 2 agricultural lands, and not being actively used for farming	WT – 104 (T6) AR – 71 CB – 71 CA – 68 BU – >120	**60**	**Yes**
Special Concern and Rare Wildlife Species								
Habitat for Olive-sided Flycatcher	One Coniferous Forest (FOC) Community Type near a body of water has been identified within 120m of the project location. As such, this habitat has been identified as a candidate habitat for olive-sided flycatcher and is discussed below.							
OSF-002 Habitat for Olive-sided Flycatcher	35.99	FOCM6-1 FOC	Dry-Fresh White Pine Naturalized Coniferous Plantation dominated by white pine, white ash and white elm.	May be used for foraging, nesting or perching habitat	Candidate conifer forest located near body of water	WT – 55 (T67) AR – 30 CB – 3 CA – 30 BU – >120	**63, 68**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
			Coniferous Forest					
Habitat for Common Nighthawk	Several open areas with little to no ground vegetation have been identified within 120m of a project component that will have an operational effect. As such, a total of 21 habitats have been identified as candidate habitats for common nighthawk and are discussed below. Habitats meeting these criteria that are located within 120m of a project component that will not have an operational impact are discussed in Table 17 and mapped on Figures 71-87.							
CNH-001 Habitat for Common Nighthawk	30.65	OAGM4	Open Pasture	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – 35 (T51) AR – 85 CB – >0.1 CA – >0.1 BU – >120	**57, 60**	**Yes**
CNH-004 Habitat for Common Nighthawk	262.22	OAGM4 OAGM2 MEGM3	Open Pasture Perennial Cover Crop Dry-Fresh Graminoid Meadow Ecosite	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T6, T7, T8, T9) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**57, 58, 59, 60**	**Yes**
CNH-008 Habitat for Common Nighthawk	77.96	OAGM4 OAGM2 MEGM3	Open Pasture, Perennial Cover Crop Fresh Graminoid Meadow Ecosite	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T10) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**61**	**Yes**
CNH-009 Habitat for Common Nighthawk	67.09	OAGM4 OAGM2	Open Pasture Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T19, T61) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**61, 62, 64**	**Yes**
CNH-010 Habitat for Common Nighthawk	79.40	OAGM4	Open Pasture	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T21) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**64**	**Yes**
CNH-011 Habitat for	114.74	OAGM2 OAGM4	Open Pasture Perennial Cover	May be used for breeding,	Candidate open area with little to no ground vegetation	WT – Overlapping (T92, T99)	**60, 61, 64**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
Common Nighthawk			Crop	foraging or nesting habitat		AR – Overlapping CB – Overlapping CA – Overlapping BU – >120		
CNH-012 Habitat for Common Nighthawk	36.48	OAGM4	Open Pasture	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T59, T94) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**60**	**Yes**
CNH-013 Habitat for Common Nighthawk	77.63	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T107) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**60, 65**	**Yes**
CNH-014 Habitat for Common Nighthawk	44.87	OAGM4	Open Pasture	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – 92 (T60) AR – 3 CB – 2 CA – 2 BU – >120	**59, 60, 65**	**Yes**
CNH-015 Habitat for Common Nighthawk	314.04	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T31, T32) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**65, 66**	**Yes**
CNH-017 Habitat for Common Nighthawk	94.83	OAGM4	Open Pasture	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T28) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**64, 65**	**Yes**
CNH-018 Habitat for Common Nighthawk	51.72	OAGM2	Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T33 T34) AR – Overlapping CB – Overlapping	**63**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
						CA – Overlapping BU – >120		
CNH-020 Habitat for Common Nighthawk	40.20	MEGM3 OAGM2 OAGM4	Fresh Graminoid Meadow Ecosite, Perennial Cover Crop Open Pasture	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T47, T110, T116) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**66, 67, 69, 70**	**Yes**
CNH-021 Habitat for Common Nighthawk	104.38	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T90) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**65, 66**	**Yes**
CNH-023 Habitat for Common Nighthawk	36.43	OAGM4 MEGM3	Fresh Graminoid Meadow Ecosite Open Pasture	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T50) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**67, 69**	**Yes**
CNH-025 Habitat for Common Nighthawk	40.06	OAGM2 OAGM4	Perennial Cover Crop Open Pasture	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T14, T15) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**60**	**Yes**
CNH-026 Habitat for Common Nighthawk	57.16	OAGM4 OAGM2	Open Pasture Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – 103 (T111) AR – >120 CB – Overlapping CA – 40 BU – >120	**66, 70**	**Yes**
CNH-027 Habitat for Common Nighthawk	43.71	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T80) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**68**	**Yes**

Feature ID	Size (ha)	Composition	Attributes	Functions	Criteria Rationale	Distance to Project Location (m)	Figure(s)	EOS Required (Y/N)
CNH-028 Habitat for Common Nighthawk	80.91	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T73) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**55, 56, 61, 62**	**Yes**
CNH-029 Habitat for Common Nighthawk	37.40	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T113) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**67, 69**	**Yes**
CNH-030 Habitat for Common Nighthawk	31.91	OAGM2 OAGM4	Open Pasture Perennial Cover Crop	May be used for breeding, foraging or nesting habitat	Candidate open area with little to no ground vegetation	WT – Overlapping (T40) AR – Overlapping CB – Overlapping CA – Overlapping BU – >120	**67**	**Yes**

Legend
WT: Wind Turbine
AR: Access Road
CB: Cabling
CA: Construction Activity/Temporary Infrastructure/Balance of Operations
BU: Building/Transformer Station/Distribution Station

Table 17. Summary of Generalized Candidate Significant Wildlife Habitats Identified within 120m of the Armow Wind Project

Wildlife Habitat	Present Within 120m of Project Location	Criteria Rationale	EOS Required (Y/N)
Seasonal Concentration Areas			
Waterfowl Stopover and Staging Area (Terrestrial)	Yes	Several Meadow (ME) and Thicket (TH) Community Types have been identified within 120m of a project component that that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Waterfowl Stopover and Staging Area (Aquatic)	Yes	Several Meadow Marsh (MAM) and Deciduous Swamp (SWD) Community Types have been identified within 120m of a project component that that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Bat Maternity Colonies	Yes	Several woodlands have been identified within 120m of a project component that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Reptile Hibernacula (Snakes)	Yes	No Talus (TA), Rock Barren (RB), Crevice (CCR), Cave (CCA), or Alvar (RBOA1, RBSA1, RBTA1) Community Types were identified within 120m of the project location. In addition, no burrows, rock crevices, or broken and fissured rock, occurring below frost lines were identified within 120m of the project location. Several rock and log piles have been identified within120m of the project location. Most of these features appear to be the result of agricultural field clearing, and visual assessments confirmed that these features do not extend below the frost line. As such, these features do not provide suitable habitat as snake hibernacula. An old barn foundation was identified during the site investigation within 120m of a project component that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines and access roads.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Colonial-Nesting Bird Breeding Habitat (Ground)	Yes	Several open fields or pastures with scattered trees or shrubs in close proximity to watercourses have been identified within 120m of a project component that that will not have an operational impact and will be carried	**Yes (Treat As Significant)** **Generalized Candidate**

Wildlife Habitat	Present Within 120m of Project Location	Criteria Rationale	EOS Required (Y/N)
		forward under generalized mitigation measures. Located >120m from wind turbines and access roads.	**Significant Wildlife Habitat**
Rare Vegetation Communities and Specialized Wildlife Habitats			
Old-growth or Mature Forest Stands	Yes	Several large (≥30ha) forest stands, or those that contain ≥10ha interior habitat with the following Community Types: FOD (Deciduous Forest), FOM (Mixed Forest), FOC (Coniferous Forest) have been identified within 120m of the project location. The project, however, will not have an operational effect on old-growth of mature forest stands, as the project location is not located within these habitats. As this habitat type is located within 120m of a project component that will not have an operational impact, it will be carried forward under generalized mitigation measures.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Other Rare Vegetation Communities	Yes	A provincially rare vegetation community has been identified in 1 location within 120m of the project location (WET-003). This community has been identified as a Leatherleaf Shrub Kettle Bog (BOSD2-1). This community has been identified within 120m of a project component that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from access roads	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Waterfowl Nesting Area	Yes	Several upland habitats adjacent to Meadow Marsh (MAM) and Deciduous Swamp (SWD) Community Types have been identified within 120m of a project component that that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Woodland Raptor Nesting Habitat	Yes	Within the project area, one woodland has been identified, containing Forest (FO) and Treed Swamp (SW) Community Types, that is >30ha with 10ha of interior habitat. The project, however, will not have an operational effect on woodland raptor nesting habitat, as the project is not located within this habitat. As this habitat type is located within 120m of a project component that will not have an operational impact, it will be carried forward under generalized mitigation measures.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Amphibian Breeding Habitat (Woodland)	Yes	Several Forest (FO) and Treed Swamp (SW) Community Types, in addition to wetlands found within or adjacent to (<120m) the woodland have been identified within 120m of	**Yes (Treat As Significant)** **Generalized**

Wildlife Habitat	Present Within 120m of Project Location	Criteria Rationale	EOS Required (Y/N)
		a project component that that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from access roads.	**Candidate Significant Wildlife Habitat**
Amphibian Breeding Habitat (Wetland)	Yes	One Swamp (SW) Community Type >500m^2 or 25m in diameter, >120m from woodlands, has been identified within 120m of a project component that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from access road.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Habitat for Species of Conservation Concern			
Marsh Bird Breeding Habitat	Yes	Several Marsh (MA) Community Types have been identified within 120m of a project component that that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Woodland Area-sensitive Bird Breeding Habitat	Yes	Several Forest (FO) and Treed Swamp (SW) Community Types have been identified within 120m of the project location that are mature (>60 years old), >30ha, and provides interior habitat. The project, however, will not have an operational effect on woodland area-sensitive bird breeding habitat, as the project is not located within these habitats. As this habitat type is located within 120m of a project component that will not have an operational impact, it will be carried forward under generalized mitigation measures.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Open Country Bird Breeding Habitat	Yes	Several grassland areas > 30ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years have been identified within 120m of a project component that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Shrub/Early Successional Bird Breeding Habitat	Yes	Several old field areas succeeding to shrub and thicket habitats >10ha, not Class 1 or Class 2 agricultural lands, with no row-cropping or intensive hay or livestock pasturing in the last 5 years, have been identified within 120m of a project component that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Terrestrial Crayfish	Yes	Several Meadow Marsh (MAM) and Shallow Marsh (MAS) Community Types have been	**Yes (Treat As**

Wildlife Habitat	Present Within 120m of Project Location	Criteria Rationale	EOS Required (Y/N)
		identified within 120m of the project location. The project, however, is not likely to have an operational effect on terrestrial crayfish habitat as the project is not located within any of these wetland habitats. As this habitat type is located within 120m of a project component that will not have an operational impact, it will be carried forward under generalized mitigation measures.	**Significant)** **Generalized Candidate Significant Wildlife Habitat**
Special Concern and Rare Wildlife Species			
Habitat for Olive-sided Flycatcher	Yes	One semi-open coniferous forest in close proximity to water bodies have been identified within 120m of a project component that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Habitat for Common Nighthawk	Yes	Several open areas with little to no ground vegetation have been identified within 120m of a project component that will not have an operational impact and will be carried forward under generalized mitigation measures. Located >120m from wind turbines.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**
Habitat for Red-headed Woodpecker	Yes	Habitat exists within project location in the form of woodland edges, fields, pastures and small woodlots; however, during ELC surveys, this species was not observed in any of the candidate habitat within 120m of the project location. Due to the generalist nature of this bird, this species and its habitat will be considered when development occurs within woodland edges; otherwise the habitat will not be delineated.	**Yes (Treat As Significant)** **Generalized Candidate Significant Wildlife Habitat**

7.0 Summary of Site Investigation

Comprehensive site investigations to document the environmental and biological characteristics of the Armow Wind Project were undertaken by NRSI biologists in accordance with the REA Regulation and the requirements of the MNR. These site-specific field investigations focused on vegetation community mapping to support and build on the information collected during the records review phase of this project. The results of these site investigations have been used to identify and map the boundaries of the natural features within 120m of the project location. A summary of candidate significant natural features identified through this site investigation are summarized in Table 18 below. This summary includes ANSIs, woodlands, wetlands, valleylands, and candidate significant wildlife habitats. This summary also includes whether an evaluation of significance is required for each of these natural features. A summary of corrections to the records review, based on the site investigation, can be found in Table 19, while a summary of corrections to the wildlife summary can be found in Table 20.

Table 18. Summary of Natural Features and Wildlife Habitat Site Investigation for the Armow Wind Project

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
ANSIs				
Greenock Swamp	105 (T103)	CA – 7 CB – 7	N/A	**No (Significance Confirmed)**
Glammis Bog	>120	CA – Overlapping	N/A	**No (Significance Confirmed)**
Woodlands				
WOD-001	45 (T96)	CB – 3	N/A	**Yes**
WOD-002	8 (T99)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-003	>120	AR – 84 CA – 84	N/A	**Yes**
WOD-004	34 (T99)	AR – >0.1 CB – >0.1 CA - >0.1	N/A	**Yes**
WOD-005	55 (T67)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
WOD-006	70 (T24)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-008	71 (T63)	CB – 2	N/A	**Yes**
WOD-009	57 (T32)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-010	28 (T74)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-012	1 (T84)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-013	91 (T42)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-015	22 (T59)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-016	>120	CB – 3	N/A	**Yes**
WOD-018	>120	CB – 94	N/A	**Yes**
WOD-019	2 (T60)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-020	77 (T45)	CA – >0.1 CB – >0.1 AR – >0.1	N/A	**Yes**
WOD-021	114 (T34)	AR – 66 CA – 66	N/A	**Yes**
WOD-022	37 (T108)	AR – 1 CB – 1 CA – 1	N/A	**Yes**
WOD-023	69 (T31)	AR – 14 CB – 14 CA – 14	N/A	**Yes**
WOD-024	>120	AR – 4 CB – 4 CA – 4	N/A	**Yes**
WOD-025	94 (T27)	CA – 52	N/A	**Yes**
WOD-028	21 (T104)	AR – 1 CB – 1 CA – 1	N/A	**Yes**
WOD-029	42 (T78)	CB – 2 CA – 2	N/A	**Yes**
WOD-030	>120	CB – 88	N/A	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
WOD-031	38 (T57)	AR – 1 CB – 1 CA – 1	N/A	**Yes**
WOD-032	109 (T9)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-035	11 (T34)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-037	15 (T61)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-041	>0.1 (T64)	CA – >0.1	N/A	**Yes**
WOD-044	33 (T101)	CB – 1 CA – 1	N/A	**Yes**
WOD-047	45 (T6)	CA – 42	N/A	**Yes**
WOD-050	35 (T13)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-051	65 (T15)	CA – 1	N/A	**Yes**
WOD-052	6 (T66)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-054	9 (T73)	AR – 1 CB – 1 CA – 1	N/A	**Yes**
WOD-055	23 (T69)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-059	69 (T52)	AR – 58 CB – 58 CA – 58	N/A	**Yes**
WOD-060	>120	CA – 66	N/A	**Yes**
WOD-061	58 (T103)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-064	8 (T106)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-067	104 (T80)	CB – 2	N/A	**Yes**
WOD-072	>120	CB – 3	N/A	**Yes**
WOD-074	69 (T4)	CA – 16	N/A	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
WOD-076	>120	CA – >0.1	N/A	**Yes**
WOD-078	>120	CA – 27	N/A	**Yes**
WOD-079	>120	CA – >0.1	N/A	**Yes**
WOD-082	>120	CA – 40	N/A	**Yes**
WOD-084	>120	CB – 60	N/A	**Yes**
WOD-086	>120	CB – 37	N/A	**Yes**
WOD-087	>120	CB – 79	N/A	**Yes**
WOD-088	>120	CB – 2	N/A	**Yes**
WOD-089	>120	CB – 23	N/A	**Yes**
WOD-090	>120	AR – 67 CB – 67 CA – 67	N/A	**Yes**
WOD-091	88 (T69)	AR – 71 CB – 71 CA – 71	N/A	**Yes**
WOD-092	87 (T69)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-095	>120	CB – 23	N/A	**Yes**
WOD-096	>120	CA – 22	N/A	**Yes**
WOD-099	>120	CB – 1	N/A	**Yes**
WOD-100	>120	CB – 50	N/A	**Yes**
WOD-102	32 (T104)	CA – 1	N/A	**Yes**
WOD-103	1 (T104)	CA – >0.1	N/A	**Yes**
WOD-104	1 (T104)	CA – >0.1	N/A	**Yes**
WOD-107	>120	CB – 20	N/A	**Yes**
WOD-108	>120	CB – 2	N/A	**Yes**
WOD-109	>120	CB – 5	N/A	**Yes**
WOD-110	>120	CB – 67	N/A	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
WOD-111	51 (T114)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-112	>120	CB – 16	N/A	**Yes**
WOD-113	>120	CB – 3	N/A	**Yes**
WOD-114	>120	CB – 17	N/A	**Yes**
WOD-115	>120	CB – >0.1	N/A	**Yes**
WOD-116	>120	CB – 104	N/A	**Yes**
WOD-119	>120	CB – 20	N/A	**Yes**
WOD-120	>120	CB – 76	N/A	**Yes**
WOD-121	>120	CB – 62	N/A	**Yes**
WOD-122	>120	CB – 48	N/A	**Yes**
WOD-123	>120	CB – 80	N/A	**Yes**
WOD-124	>120	CB – 1	N/A	**Yes**
WOD-125	>120	BU – 97	N/A	**Yes**
WOD-126	>120	CB – >0.1	N/A	**Yes**
WOD-127	>120	CB – 3	N/A	**Yes**
WOD-128	>120	CB – 113	N/A	**Yes**
WOD-129	>120	CB – 105	N/A	**Yes**
WOD-130	>120	CB – 20	N/A	**Yes**
WOD-131	>120	CB – 109	N/A	**Yes**
WOD-132	24 (T100)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-133	>120	CB – 17	N/A	**Yes**
WOD-134	>120	CB – 15	N/A	**Yes**
WOD-135	>120	CB – 3	N/A	**Yes**
WOD-136	>120	AR – 2 CB – 2 CA – 2	N/A	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
WOD-137	4 (T89)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-138	64 (T65)	CB – 17	N/A	**Yes**
WOD-139	>120	AR – 70 CB – 70 CA – 70	N/A	**Yes**
WOD-140	50 (T94)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WOD-141	82 (T35)	CA – 58	N/A	**Yes**
WOD-142	>120	CA – >0.1	N/A	**Yes**
WOD-143	>120	CB – 10	N/A	**Yes**
WOD-144	>120	CB – 3	N/A	**Yes**
Wetlands				
WET-001	>120	CB – 3	N/A	**Yes**
WET-002	>120	CB – 23	N/A	**Yes**
WET-003	>120	CB – 25	N/A	**Yes**
WET-004	>120	CA – >0.1	N/A	**Yes**
WET-005	>120	CA – 63	N/A	**Yes**
WET-006	97 (T106)	CA – 9	N/A	**Yes**
WET-007	34 (T6)	CA – 5	N/A	**Yes**
WET-008	49 (T12)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WET-009	82 (T57)	CA – 69	N/A	**Yes**
WET-010	29 (T4)	CB – 3	N/A	**Yes**
WET-011	>120	CB – 3	N/A	**Yes**
WET-012	>120	CB – 2	N/A	**Yes**
WET-013	59 (T73)	AR – 45 CB – 45 CA – 45	N/A	**Yes**
WET-014	33 (T101)	AR – 1 CA – 1	N/A	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
WET-015	12 (T69)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WET-016	34 (T99)	CA – >0.1	N/A	**Yes**
WET-019	35 (T13)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WET-020	21 (T107)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WET-021	101 (T103)	AR – 8 CB – 8 CA – 8	N/A	**Yes**
WET-022	57 (T32)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WET-023	>120	CB – 1	N/A	**Yes**
WET-024	69 (T31)	AR – 4 CB – 4 CA – 4	N/A	**Yes**
WET-025	>120	CA – >0.1	N/A	**Yes**
WET-026	41 (T63)	CA – 2	N/A	**Yes**
WET-027	>120	CB – 3	N/A	**Yes**
WET-028	71 (T108)	CA – 50	N/A	**Yes**
WET-029	112 (T70)	AR – 2 CB – 2 CA – 2	N/A	**Yes**
WET-030	85 (T65)	CA – 56	N/A	**Yes**
WET-031	>0.1 (T64)	CA – >0.1	N/A	**Yes**
WET-032	82 (T35)	CA – 58	N/A	**Yes**
WET-033	>120	CB – 3	N/A	**Yes**
WET-034	>120	CB – 3	N/A	**Yes**
WET-036	43 (T45)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WET-037	91 (T42)	AR – 2 CB – 2	N/A	**Yes**
WET-038	>120	OL – 17	N/A	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
WET-039	1 (T104)	AR – >0.1 CB – >0.1 CA – >0.1	N/A	**Yes**
WET-040	>120	CB – 2	N/A	**Yes**
WET-041	>120	CB – >0.1	N/A	**Yes**
WET-042	>120	CB – 88	N/A	**Yes**
WET-043	>120	CB – 27	N/A	**Yes**
WET-046	>120	CB – Overlapping	N/A	**Yes**
Valleylands				
VAL-001	>120	CA – 90	N/A	**Yes**
VAL-002	Overlapping (T94)	AR, CB, CA - Overlapping	N/A	**Yes**
VAL-006	50 (T108)	CB – 2	N/A	**Yes**
VAL-007	Overlapping (T84)	AR, CB, CA – Overlapping	N/A	**Yes**
VAL-008	>120	CB – 3	N/A	**Yes**
Wildlife Habitats				
WST-007	Overlapping (T50)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WST-017	56 (T84)	CA - >0.1m	WT – 56 (T84)	**Yes**
WST-018	>120	BU - Overlapping	BU - Overlapping	**Yes**
WSA-001	Overlapping (T4)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-002	Overlapping (T42)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-003	Overlapping (T69)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-004	Overlapping (T31)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-005	Overlapping (T78)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-006	Overlapping (T64)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-007	Overlapping (T32)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-009	Overlapping (T12)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-010	8 (T94)	CA – Overlapping	WT – 8	**Yes**
WSA-011	Overlapping (T107)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
WSA-012	Overlapping (T60)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-013	Overlapping (T45)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-014	Overlapping (T104)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-015	Overlapping (T05, 101)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-017	Overlapping (T35)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-018	Overlapping (T106)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-019	Overlapping (T57)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-020	Overlapping (T13, 97)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-021	Overlapping (T91)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-022	>120	AR, CB, CA – Overlapping	WT – >120	**Yes**
WSA-023	Overlapping (T11)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WSA-024	44 (T69)	AR, CB, CA – Overlapping	WT - 44	**Yes**
WSA-025	>120	AR, CB, CA – Overlapping	WT – >120	**Yes**
SHM-001	8 (T94)	CA – Overlapping	WT – 8	**Yes**
SHM-002	Overlapping (T57)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
RWA-001	69 (T52)	CB – 24	WT – 69 CB – 24	**Yes**
RWA-002	Overlapping (T6,T7,T8,T9)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-004	>120	CB – 2	WT – >120 CB – 2	**Yes**
RWA-005	Overlapping (T73)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-006	>120	CB - 3	WT – >120 CB – 3	**Yes**
RWA-007	24 (T69)	AR, CB, CA – >0.1	WT – 24 CB – >0.1	**Yes**
RWA-008	Overlapping (T92, T99)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-009	Overlapping (T14, T15)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-010	Overlapping (T107)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-011	>120	CB – 27	WT – >120 CB – 27	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
RWA-012	Overlapping (T31, T32)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-013	Overlapping (T26, T28)	AR, CB, CA – Overlapping	WT – Overlapping CB - Overlapping	**Yes**
RWA-015	Overlapping (T19)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA -017	Overlapping (T33, T34)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-018	>120	BU – Overlapping	WT – >120 CB – >0.1	**Yes**
RWA-019	Overlapping (T90)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-020	Overlapping (T37)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-021	Overlapping (T39, T100)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-022	Overlapping (T67)	CA – Overlapping	WT – Overlapping CB – 3	**Yes**
RWA-023	Overlapping (T47, T110)	AR, CB, CA – Overlapping	WT – Overlapping CB – Overlapping	**Yes**
RWA-024	102 (T111)	CB – Overlapping	WT – 102 CB – Overlapping	**Yes**
RWA-026	7 (T66)	AR – >0.1 CB – >0.1 CA – >0.1	WT – 7 CB – >0.1	**Yes**
RWA-028	34 (T51)	CA – >0.1	WT – 34 CB – 23	**Yes**
RWA-029	>120	CB – 3	WT – >120 CB – 3	**Yes**
RWA-031	66 (T65)	CB – 17	WT – 66 CB – 17	**Yes**
RWA-032	>120	CB - 3	WT – >120 CB – 3	**Yes**
RWA-034	>120	CB – 27	WT – >120 CB – 27	**Yes**
RWA-035	Overlapping (T80)	AR, CB, CA - Overlapping	WT – Overlapping CB - Overlapping	**Yes**
RWA-036	5 (T89)	AR – >0.1 CA – >0.1	WT – 5 CB – 17	**Yes**
BMA-001	70 (T24)	AR – >0.1 CB – >0.1 CA – >0.1	WT – 70	**Yes**
BMA-004	28 (T74)	AR – >0.1 CB – >0.1 CA – >0.1	WT – 28	**Yes**
BMA-020	58 (T103)	AR – >0.1 CB – >0.1 CA – >0.1	WT – 58	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
BMA-021	8 (T106)	AR – >0.1 CB – >0.1 CA – >0.1	WT – 8	**Yes**
BMA-024	69 (T52)	CA – 46	WT –69	**Yes**
BMA-028	24 (T100)	AR – >0.1 CB – >0.1 CA – >0.1	WT – 24	**Yes**
BMA-032	114	AR – 66 CA – 66	WT – 114	**Yes**
BMA-034	69	CA – 16	WT – 69	**Yes**
BMA-035	48 (T73)	CB – 3	WT – 48	**Yes**
CBT-001	>120	CA – 32	WT – >120 AR – 76	**Yes**
CBG-001	Overlapping (T21)	AR, CA, CB – Overlapping	WT – Overlapping AR – Overlapping	**Yes**
CBG-002	Overlapping (T07, 08)	AR, CA, CB – Overlapping	WT – Overlapping AR – Overlapping	**Yes**
CBG-003	Overlapping (T47, T98, T110, T111, T116)	AR, CA, CB – Overlapping	WT – Overlapping AR – Overlapping	**Yes**
CBG-004	Overlapping (T24)	CA – 73	WT – Overlapping AR - >120	**Yes**
CBG-005	Overlapping (T81)	CB – 17	WT – Overlapping AR – 70	**Yes**
CBG-006	Overlapping (T81)	CB – 17	WT – Overlapping AR – 70	**Yes**
CBG-007	Overlapping (T81)	CB – 17	WT – Overlapping AR – 70	**Yes**
CBG-008	Overlapping (T45)	AR, CA, CB – Overlapping	WT – Overlapping AR – Overlapping	**Yes**
Winter Deer Yard	100 (T103)	AR – 23 CB – 23 CA – 23	WT – 100 AR – 23 CB – 23 CA – 23 BU – >120	**No (Significance Confirmed)**
WFN-002	91 (T106)	AR – 42 CB – 42 CA – 42	WT – 91	**Yes**
WFN-003	58 (T103)	AR – 12 CB – 12 CA – 12	WT – 58	**Yes**
WFN-004	63 (T4)	AR, CB, CA – 47	WT – 63	**Yes**
WFN-005	91 (T42)	AR, CB, CA – >0.1	WT – 91	**Yes**
WFN-006	23 (T69)	AR, CB, CA – >0.1	WT – 23	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
WFN-007	Overlapping(T99)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WFN-008	Overlapping(T31)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WFN-009	Overlapping(T59, 94)	CA – Overlapping	WT – Overlapping	**Yes**
WFN-010	Overlapping(T107)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WFN-011	Overlapping(T107)	CA – Overlapping	WT – Overlapping	**Yes**
WFN-013	Overlapping(T6)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WFN-014	Overlapping(T64, 90)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WFN-015	Overlapping(T32)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WFN-016	39 (T106)	AR, CB, CA – >0.1	WT – 39	**Yes**
WFN-017	49 (T12)	CA – 11	WT – 49	**Yes**
WFN-018	70 (T65)	CA - 46	WT – 70	**Yes**
WFN-019	25 (T47)	AR, CB, CA – Overlapping	WT – 25	**Yes**
WFN-020	Overlapping (104)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
WFN-021	12 (T45)	AR, CB, CA – Overlapping	WT – 12	**Yes**
WFN-022	18 (T91)	AR, CB, CA – >0.1	WT – 18	**Yes**
AWO-001	>120	AR, CB, CA – 3	AR – 3	**Yes**
AWO-002	58 (T103)	AR – >0.1 CA – >0.1	AR – >0.1	**Yes**
AWO-004	63 (T04)	AR, CB, CA – 47	AR – 47	**Yes**
AWO-005	23 (T69)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-007	87 (T69)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-008	31 (T60)	AR, CB, CA – 28	AR – 28	**Yes**
AWO-009	Overlapping (T104)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-012	82 (T35)	AR, CB, CA – 66	AR – 66	**Yes**
AWO-013	72 (T07)	CA – 24	AR - 79	**Yes**
AWO-016	71 (T57)	AR, CB, CA – 2	AR – 2	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
AWO-017	59(T69)	AR, CB, CA – 37	AR – 37	**Yes**
AWO-018	14 (T11)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-020	1 (T104)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-021	2 (T60)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-022	69 (T52)	CB, CA – 46	AR – 103	**Yes**
AWO-023	>120	AR, CB, CA – 70	AR – 70	**Yes**
AWO-025	>120	AR, CB, CA – 84	AR – 84	**Yes**
AWO-026	>120	AR, CB, CA – 4	AR – 4	**Yes**
AWO-027	69 (T31)	AR, CB, CA – 14	AR – 14	**Yes**
AWO-028	>0.1 (T64)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-029	>120	AR, CB, CA – 67	AR – 67	**Yes**
AWO-031	37 (T06)	CA – 5	AR – 65	**Yes**
AWO-033	1 (T63)	CA – 2	AR – 91	**Yes**
AWO-034	49 (T12)	CA – 10	AR – 100	**Yes**
AWO-036	43 (t45)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-038	42 (T78)	CB, CA – 2	AR – 93	**Yes**
AWO-039	35 (T13)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-040	8 (T106)	AR, CB, CA – >0.1	AR – >0.1	**Yes**
AWO-041	>120	CA – 32	AR – 76	**Yes**
AWO-043	65 (T15)	CA – 1	AR – 116	**Yes**
AWO-044	91 (T42)	CA – 1	AR – 2	**Yes**
MBB-002	108 (T94)	CA – 1	WT – 65	**Yes**
OCB-001	39 (T51)	CA – >0.1	WT – 39	**Yes**
OCB-004	Overlapping (T6, T7, T8, T9)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-008	Overlapping (T10)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-009	Overlapping (T19, T61)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
OCB-010	Overlapping (T21)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-011	Overlapping (T92, T99)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-012	Overlapping (T59, T94)	AR ,CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-013	Overlapping (T107)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-014	92 (T60)	AR – 2 CB – 2 CA – 2	WT – 92	**Yes**
OCB-015	Overlapping (T31, T32)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-017	Overlapping (T28)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-018	Overlapping (T33, T34)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-020	Overlapping (T47, T110, T116)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-021	Overlapping (T90)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-023	Overlapping (T50)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-024	>120	BU – Overlapping	WT – >120	**Yes**
OCB-025	Overlapping (T14,T15)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-026	103 (T111)	CB – Overlapping	WT – 103	**Yes**
OCB-027	Overlapping (T80)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-028	Overlapping (T73)	AR, CB, CA Overlapping	WT – Overlapping	**Yes**
OCB-029	Overlapping (T113)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
OCB-030	Overlapping (T40)	AR, CB, CA – Overlapping	WT - Overlapping	**Yes**
SSB-001	104 (T6)	CA - 68	WT – 104	**Yes**
OSF-002	55 (T67)	CB - 3	WT – 55	**Yes**
CNH-001	39 (T51)	CB – >0.1 CA - >0.1	WT – 39	**Yes**
CNH-004	Overlapping (T6, T7, T8, T9)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-008	Overlapping (T10)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-009	Overlapping (T19, T61)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-010	Overlapping (T21)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
CNH-011	Overlapping (T92, T99)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-012	Overlapping (T59, T94)	AR ,CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-013	Overlapping (T107)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-014	92 (T60)	CB – 2 CA – 2	WT – 92	**Yes**
CNH-015	Overlapping (T31, T32)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-017	Overlapping (T28)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-018	Overlapping (T33, T34)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-020	Overlapping (T47, T110, T116)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-021	Overlapping (T90)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-023	Overlapping (T50)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-025	Overlapping (T14,T15)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-026	103 (T111)	CB – Overlapping	WT – 103	**Yes**
CNH-027	Overlapping (T80)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-028	Overlapping (T73)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-029	Overlapping (T113)	AR, CB, CA – Overlapping	WT – Overlapping	**Yes**
CNH-030	Overlapping (T40)	AR, CB, CA – Overlapping	WT - Overlapping	**Yes**
Generalized Wildlife Habitats				
Waterfowl Stopover and Staging area (Terrestrial)	N/A	N/A	WT – >120	**Generalized**
Waterfowl Stopover and Staging Area (Aquatic)	N/A	N/A	WT – >120	**Generalized**
Bat Maternity Colony	N/A	N/A	WT – >120	**Generalized**
Reptile Hibernaculum (Snakes)	N/A	N/A	WT – >120 AR – >120	**Generalized**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
Colonial-Nesting Bird Breeding Habitat (Ground)	N/A	N/A	WT – >120 AR – >120	**Generalized**
Old-growth or Mature Forest Stands	N/A	N/A	No development within habitat	**Generalized**
Other Rare Vegetation Communities	N/A	N/A	AR – >120	**Generalized**
Waterfowl Nesting Area	N/A	N/A	WT – >120	**Generalized**
Woodland Raptor Nesting Habitat	N/A	N/A	No development within habitat	**Generalized**
Amphibian Breeding Habitat (Woodland)	N/A	N/A	AR – >120	**Generalized**
Amphibian Breeding Habitat (Wetland)	N/A	N/A	AR – >120	**Generalized**
Marsh Breeding Bird Habitat	N/A	N/A	WT – >120	**Generalized**
Woodland Area-sensitive Bird Breeding Habitat	N/A	N/A	No development within habitat	**Generalized**
Open Country Bird Breeding Habitat	N/A	N/A	WT – >120	**Generalized**
Shrub/Early Successional Bird Breeding Habitat	N/A	N/A	WT – >120	**Generalized**
Terrestrial Crayfish	N/A	N/A	No development within habitat	**Generalized**
Habitat for Common Nighthawk	N/A	N/A	WT – >120	**Generalized**

Feature ID	Distance to Closest Turbine (from blade tip) (m)	Distance to Closest Other Project Infrastructure (m)	Distance to Project Infrastructure With an Operational Effect (m)	Evaluation of Significance Required
Habitat for Olive-sided Flycatcher	N/A	N/A	WT – >120	**Generalized**
Habitat for Red-headed Woodpecker	N/A	N/A	No development within habitat	**Generalized**

Table 19. Summary of Corrections to the Records Review for the Armow Wind Project

Criteria	Result	Changes Based on Site Investigation
1. Within 120m of a Provincial Park or Conservation Reserve	The Armow Wind Project location is not within 120m of a Provincial Park or Conservation Reserve.	**No changes.**
2. In a Natural Feature	The results of this records review indicate that project locations (i.e. disturbance area, cabling, access roads etc…) of the Armow Wind Project are located in and within 120m of natural features. A total of 32 woodlands overlap with the project location. These woodlands are expected to consist of deciduous forest with vegetation associations that are representative of this region of southwestern Ontario. A total of 8 wetlands overlap with the project location. These wetlands are expected to consist of deciduous swamp with vegetation associations that are representative of this region of southwestern Ontario. No PSWs overlap with the project location. The Glammis Bog Life Science ANSI also overlaps with the project location. The extent to which project locations overlap natural areas is variable and will be further examined and addressed in the site investigation phase of the project.	**Yes.** **There are no overlaps of woodlands with the project location.** **There are no overlaps of wetlands with the project location.** **Two valleylands overlap with project the location.** **The Glammis Bog Life Science ANSI overlaps with the project location.**
3. Within 50m of a ANSI-ES	There are no ANSIs-ES located within 50m of the project location.	**No changes.**
4. Within 120m of a Natural Feature		
ANSI-LS	There are two Provincially Significant Life Science ANSIs found within 120m of the project location: Greenock	**No changes.**

Criteria	Result	Changes Based on Site Investigation
	Swamp and Glammis Bog. In addition, the Glammis Bog ANSI overlaps with the project location.	
Coastal Wetland	No coastal wetlands are found within 120m of the project location.	**No changes.**
Northern Wetland	No northern wetlands are found within 120m of the project location.	**No changes.**
Southern Wetland	A total of 89 wetlands have been identified within 120m of the Armow Wind Project location, including two PSWs, Greenock Swamp and Glammis Bog. In addition, 8 of these wetlands are located within the project location. The presence/absence of all wetlands, as well as distances to project locations, will be confirmed during the site investigation.	**Yes.** **A total of 41 wetlands are located within 120m of the Armow Wind Project location. None of these wetlands overlap with the project location.**
Valleyland	No valleylands have been identified within 120m of the project location.	**Yes.** **A total of 5 valleylands are located within 120m of the project location. Two of these valleylands overlap with the project location.**
Wildlife Habitat	A total of 39 wildlife habitats have been identified within 120m of the Armow Wind Project location. These wildlife habitats include seasonal concentration areas (3), rare vegetation communities and specialized wildlife habitats (4), habitats for species of conservation concern (1), as well as S1-S3, Special Concern and SH Species and Communities (31). A total of 153 woodlands have been identified within 120m of the Armow Wind Project location, and 32 of these woodlands are located within the project location. These woodlands have the potential to provide several types of candidate Significant Wildlife Habitat (SWH). Several linear features, including treed fencerows and naturalized drains, have been identified within 120m of the project location. These features have the potential to act as SWH, specifically providing animal movement corridors and/or habitat for species of conservation concern. In addition, several other wildlife habitats, including seasonal concentration areas, rare vegetation communities and specialized wildlife habitats, and habitats for species of	**Yes.** **A total of 173 wildlife habitats have been identified within 120m of the Armow Wind Project location. These wildlife habitats include seasonal concentration areas (76), rare vegetation communities and specialized wildlife habitats (51), and habitats for species of conservation concern (46).** **A total of 99 woodlands have been identified within 120m of the Armow Wind Project location. In addition, 41 wetlands have been identified within 120m of the project location. No woodlands or wetlands overlap with the project location.**

Criteria	Result	Changes Based on Site Investigation
	conservation concern, have the potential to be present within 120m of the project location.. All of these wildlife habitats should be examined during the site investigation phase and/or the evaluation of significance phase of this project to identify other habitat features and identify the significance of each natural feature.	
Woodland	A total of 153 woodlands have been identified during the records review process, each within 120m of the project location, with 32 of these woodlands located within the project location. Basemapping indicates that these woodlands range in size from 0.13 ha to 5,730 ha, which includes one large PSW, Greenock Swamp (5,730ha). These woodlands are expected to be primarily dominated by mid-aged to mature deciduous tree species; however, young woodlands, treed plantations, or occasional coniferous woodlands may also be present within 120m of the project location.	**Yes.** **A total of 99 woodlands are located within 120m of the project location. None of these woodlands overlap with the project location. Woodlands range in size from 0.04ha to 5093.06ha.**

The following table lists candidate wildlife habitats that may be considered not significant depending on the results of Spring 2013 site investigation conditions. Most of these habitat types have been considered as candidate wildlife habitats, as many were examined in the field outside of the spring season. As such, these have been considered candidate wildlife habitats without knowing the specific site conditions. These habitats will be re-examined in the spring to determine if there is suitable wildlife habitat present, which will include an assessment of standing/sheet water, nesting habitat and general habitat characteristics. If suitable wildlife habitat is determined to be not present, no specific studies will be conducted and the habitats will be confirmed not significant.

Table 20. Summary of Corrections to the Wildlife Habitat Records Review for the Armow Wind Project

Wildlife Habitat	Present Within 120m of Project Location	Present Within Project Location	Carried Forward to Site Investigation (Y/N)	Status Based on Site Investigation
Waterfowl Stopover and Staging Areas (Terrestrial)	Unknown	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Waterfowl Stopover and Staging Areas (Aquatic)	Unknown	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Shorebird Migratory Stopover Areas	Yes	Unknown	**Yes**	**Carried forward as candidate SWHf**
Raptor Winter Feeding and Roosting Areas	Unknown	Unknown	**Yes**	**Carried forward as candidate SWH**
Bat Hibernacula	Unknown	Unknown	**Yes**	**Not carried forward**
Bat Maternity Colonies	Unknown	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Turtle-Over-wintering Habitat	Unknown	Unknown	**Yes**	**Not carried forward**
Reptile Hibernacula (snakes)	Unknown	Unknown	**Yes**	**Carried forward as generalized candidate SWH**
Colonial-Nesting Bird Breeding Habitat (bank and cliff)	Unknown	Unknown	**Yes**	**Not carried forward**
Colonial-Nesting Bird Breeding Habitat (tree/shrub)	Yes	Unknown	**Yes**	**Carried forward as candidate SWH**
Colonial-Nesting Bird Breeding Habitat (ground)	Unknown	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Winter Deer Yards	Yes	No	**Yes**	**EIS required**
Cliffs and Talus Slopes	Unknown	Unknown	**Yes**	**Not carried forward**
Sand Barrens	Unknown	Unknown	**Yes**	**Not carried forward**
Alvars	Unknown	Unknown	**Yes**	**Not carried forward**
Old-growth or Mature Forest Stands	Yes	Unknown	**Yes**	**Carried forward as generalized candidate SWH**
Savannahs	Unknown	Unknown	**Yes**	**Not carried forward**
Tall-grass Prairies	Unknown	Unknown	**Yes**	**Not carried forward**
Other Rare Vegetation Communities	Unknown	Unknown	**Yes**	**Carried forward as generalized candidate SWH**
Waterfowl Nesting Habitat	Yes	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Bald Eagle and	Unknown	Unknown	**Yes**	**Not carried forward**

Wildlife Habitat	Present Within 120m of Project Location	Present Within Project Location	Carried Forward to Site Investigation (Y/N)	Status Based on Site Investigation
Osprey Nesting, Foraging, and Perching Habitat				
Woodland Raptor Nesting Habitat	Unknown	Unknown	**Yes**	**Carried forward as generalized candidate SWH**
Turtle Nesting Habitat	Yes	Unknown	**Yes**	**Not carried forward**
Seeps and Springs	Unknown	Unknown	**Yes**	**Not carried forward**
Amphibian Breeding Habitat (woodland)	Unknown	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Amphibian Breeding Habitat (wetland)	Yes	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Marsh Bird Breeding Habitat	Yes	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Woodland Area Sensitive Breeding Birds	Unknown	Unknown	**Yes**	**Carried forward as generalized candidate SWH**
Open Country Breeding Bird Habitat	Unknown	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Shrub/Early Successional Bird Breeding Habitat	Unknown	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Terrestrial Crayfish	Unknown	Unknown	**Yes**	**Carried forward as generalized candidate SWH**
Special Concern and Rare Wildlife Species	Yes	Unknown	**Yes**	**Carried forward as candidate SWH and generalized candidate SWH**
Amphibian Movement Corridors	Unknown	Unknown	**Yes**	**Carried forward as candidate SWH**
Deer Movement Corridor	Unknown	Unknown	**Yes**	**Not carried forward**

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