

**March 9, 2018**



**Amherst Island Wind Project**

**Supplementary Spring  
Blanding's Turtle Mitigation  
Protocol**

March 9, 2018

Prepared for:

Windlectric Inc.

Prepared by:

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Reviewed and Approved by:

Dr. Ronald J. Brooks

## 1.0 Introduction

This Protocol has been developed at the request of the Approvals Branch of the Ministry of Environment and Climate Change (MOECC) to provide an extra layer of mitigation for Blanding's Turtles during the Spring construction of the access roads and erection of the turbines for the Amherst Island Wind Project (hereafter referred to as the "Project").

## 2.0 Current Turtle Mitigation Measures

Windlectric obtained a Renewable Energy Approval (REA# 7123-9W9NH2) for the Project on August 24, 2015. Construction of the Project began in 2017 and has continued into 2018. The various mitigation measures protective of Blanding's Turtles that have been implemented to date are described in the Species at Risk (SAR) Report, Natural Heritage Assessment and Environmental Impact Study (NHA/EIS), Renewable Energy Approval (REA), and the Wildlife Mitigation Appendix to the Traffic Management Plan (collectively, the "Current Mitigation Measures").

*The SAR Report includes the following mitigation:*

- *Vegetation clearing, road construction and site preparation for Project components to occur between October 15 and April 30, outside the active season for turtles. Where some of these activities are unavoidable during this period, a qualified biologist is on site every day during construction to pre-scan for the presence of turtles;*
- *Awareness and sensitivity training for all persons entering the site;*
- *Restricting traffic to daylight hours and reduced speed limits on the relevant Project access roads to 30 km/hr;*
- *General wetland mitigation around vegetation removal, dust, potential spills; and*
- *Recording and reporting any turtle species at risk observations.*

*The NHA/EIS includes:*

- *Delineation of the limits of wetlands prior to construction by a qualified biologist coupled with awareness training to construction workers regarding respecting wetland boundaries;*
- *The implementation of a sediment and erosion control plan, including erecting silt fencing adjacent to the wetlands (a measure that is very effective in preventing turtle movement);*
- *Implementation of dust suppression;*
- *Vehicle refueling or washing and chemical storage located more than 30m from wetlands; and*

- *Re-vegetation of disturbed areas as soon as possible following construction.*

*The REA includes:*

- *Installation of silt fence prior to construction at the limits of construction for all staging areas, access roads, turbines foundations and laydown areas. As noted above, this fencing will act as an effective barrier to turtles that might inadvertently enter work sites (condition H3. (4));*
- *Conducting any in-water works in a manner that protects sensitive species (which would include turtle species at risk) and their habitats (condition H14);*
- *Providing training to all facility personnel entering the site about species at risk and avoidance / mitigation measure requirements (condition L2); and*
- *Imposing speed limits on access roads restricted to 15 km/hr during construction (and operation) of the Project (condition R1).*

*The Wildlife Mitigation Appendix to the Traffic Management Plan (a copy of which is attached as Exhibit "I") picks up and particularizes some of the specific requirements noted above. Those include:*

- *In areas adjacent to water features (including water crossings, ponds and seasonally flooded areas), road construction and site preparation will occur between October 31st and May 1st to avoid sensitive periods for amphibians, fish and reptiles;*
- *Barrier fencing (including silt fencing or other appropriate fencing) will be installed along other public roads in locations of water crossings, or where roads are in proximity to ponds or areas of temporary flooding;*
- *Speeds of Project traffic will be restricted, with signage to reinforce awareness, in areas of water-crossings, ponds or areas of seasonal flooding;*
- *To reduce the potential risk of wildlife collision, use of any public roads by Project related vehicles during dusk and night hours will be limited to the extent possible. To accomplish this, delivery of Project components, equipment and materials, as well as aggregate delivery, will be scheduled outside of the dusk and nighttime hours; and*
- *Driver awareness and sensitivity training will be conducted.*

*The Wildlife Mitigation Appendix also provides for the avoidance of significant construction – turbine erection and access road construction - in proximity to the resident wetlands complex from May 1 (the commencement of potential activity for turtles outside their resident wetlands) through October. This extra measure of risk mitigation applies with respect to the four southern-most turbines (36, 3, 9 and 11) and their access roads (collectively the "Southernmost Turbine Work") because of their relative proximity to the Coastal Marsh Wetlands, which is the overwintering (hibernation) and resident wetlands for Blanding's Turtles on the Island.*

### 3.0 Approvals Branch Request for Spring Mitigation Enhancement

The Protocol set out in the sections that follow was prepared at the request of the MOECC Approvals Branch to provide an additional layer of protection for the Blanding's Turtles through the Spring period. Section 4.0 describes the additional proposed measures with respect to the Southernmost Turbine Work, closest to the Coastal Marsh Wetlands. Section 5.0 describes the proposed additional measures with respect to the erection of turbines and construction of access roads on the rest of the Island (hereafter referred to as the "Rest of Island Turbine Work").

The Protocol was developed by Andrew Taylor – a wildlife specialist at Stantec with significant Blanding's Turtle expertise - in consultation with Canada's leading Blanding's Turtle expert, Dr. Ronald J. Brooks.

Dr. Brooks is a Professor Emeritus of Integrative Biology at the University of Guelph. He obtained a B.Sc. degree (1963) and M.Sc. degree (1966) in Zoology from the University of Toronto, and a PhD. (1970) in Zoology from the University of Illinois. Dr. Brooks is well known for his particular expertise in Blanding's Turtles. He was co-chair of the Amphibians, Reptiles and Turtle Species Specialist Subcommittee of COSEWIC (Committee on the Status of Endangered Wildlife in Canada) from 1995 to 2012, and oversaw the production of and edited the 2005 COSEWIC Assessment and Update Status Report on Blanding's Turtle. From 2008 to 2013, he was a member of COSSARO (Committee on the Status of Species at Risk in Ontario) and participated in the decision that led to the current listing of Blanding's Turtle in Ontario. Dr. Brooks has authored two books, 16 chapters in other books, 233 papers in refereed journals and approximately 250 technical reports. He was awarded the Michael Rankin Distinguished Herpetologist Award from the Canadian Society of Herpetologists in 2006 for his lifetime achievement in the study of amphibians and reptiles in Canada.

Mr. Taylor and Dr. Brooks have been familiar with the Project for years, and each has previously concluded that the Project is not a material threat to the Blanding's Turtle on the Island, particularly with the Current Mitigation Measures in place. Although their view remains that further mitigation is unnecessary, they have developed the Protocol described below to respond to the MOECC request to add another layer of protection through the Spring period.

## 4.0 Southernmost Turbine Work

As noted above, the resident wetland on the Island for Blanding's Turtle is the Coastal Marsh Wetlands in the southwest corner of the Island. The majority of the Blanding's turtle sightings on the Island have been concentrated in and around the Coastal Marsh Wetlands, where they would expect to be encountered.

Given the location of the Project components in this area, and the Current Mitigation measures noted above, there is a negligible risk of harm to any turtles as a result of construction of the Project.

In order to address the request of the MOECC Approvals Branch, the additional layer of mitigation measures described below is proposed for the Southernmost Turbine Work.

### 4.1 ACCESS ROAD CONSTRUCTION AND TURBINE ERECTION

#### a) Expedited Construction

While unavoidable risks (like unexpected weather events) are an inherent part of complex construction projects, the Southernmost Turbine Work will be expedited as much as possible, with a view to completing it as far in advance of May 1 as possible. As noted above, as part of the Current Mitigation, the Wildlife Mitigation Appendix specifically provides for the avoidance of significant construction – turbine erection and access road construction - in proximity to the resident wetlands complex from May 1 (the commencement of potential activity for turtles outside their resident wetlands) through October.

#### b) Dedicated Biological Inspector

Windlectric will retain a full-time, on-site dedicated independent biological inspector (the "IBI") – through Stantec - for the portions of the Project location where the Southernmost Turbine Work will occur, starting April 1<sup>st</sup>. From this date on, the IBI will be on-site at each location where the work is being conducted, each day that any turbine erection or access road construction is being undertaken. The IBI and his/her team (which will include as many trained members as necessary) will be responsible for ensuring the implementation of the mitigation measures below.

#### c) Additional Exclusionary Fencing

The Wildlife Mitigation Appendix to the Traffic Management Plan already includes exclusionary fencing along public roads, where they intersect or run adjacent to water crossings, ponds or seasonally flooded areas. It is proposed to enhance the exclusionary fencing by installing it along the entire length of 3<sup>rd</sup> Concession Road that will be used by Project construction traffic. The additional fencing will be placed along public lands where possible. For any portions of fencing that would need to cross private land, permission will be sought from the owners. Where such permission cannot be obtained, those unfenced stretches will be used as potential wildlife crossing points, and clearly marked as such with temporary high visibility signage posted for the public nearby, and training of construction drivers to slow down and exercise particular caution as they approach and pass the signage.

The additional exclusionary fencing will be installed and inspected prior to April 1<sup>st</sup>, 2018, and monitored thereafter. Specifications for barrier fencing will follow best practices, including for example, Best Practices Technical Note – Reptile and Amphibian Exclusion Fencing (MNR 2013). The fencing will extend along the entire length of the south side of the road, with the ends of the fencing curved to direct turtles away from the road.

The fencing will be inspected daily, with repairs made as required.

**d) Resident Wetland Monitoring**

The commencement of Blanding's Turtles slow emergence from hibernation is dependent on weather and ice-thaw conditions, which are variable from year to year. Blanding's Turtles will not be able to emerge from under the ice until it has broken up into an open water condition. Once the wetlands are in a sufficiently open water condition, the turtles will start to emerge on warm, sunny days to bask (a process which itself is a slow one, as the turtle's core temperature takes time to rise).

The dedicated IBI and his/her team will monitor ice conditions in the Coastal Marsh Wetlands from the nearest accessible location to identify when an open water condition first materializes and when Blanding's Turtle start emerging from hibernation. Monitoring will begin April 1<sup>st</sup> and will continue on each day that turbine erection and access road construction is occurring until such date as the IBI determines that greater than 50% ice cover has receded from the wetland in question and the outdoor air temperature has exceeded 10 degrees Celsius. Commencing on that date, the further mitigation measures described in subsections (e) to (g) below will be implemented. Once such further mitigation has begun, it will be suspended on any day that the daytime air temperature high is below 5 degrees Celsius. While it is ongoing, the ice condition monitoring shall occur twice daily until such time as the biological inspector estimates that 50% of the ice cover has cleared.

**e) Construction Traffic Escorts and Reduced Speed Limit**

Further to the driver behaviour training in the Wildlife Mitigation Appendix to the Traffic Management Plan, starting on the date determined in accordance with subsection (d) above, a reduced speed limit of 30 km/hr will be respected by all oversized heavy equipment (i.e. major crane components) on 3<sup>rd</sup> Concession Road. Driver speeds will be monitored by spot radar checks by the IBI, and discipline for those not complying will be implemented. For movement of this oversized heavy equipment (i.e. major crane components), the IBI and his/her team will also escort the vehicles traveling along 3<sup>rd</sup> Concession Road by light vehicle (e.g. four-wheeled ATV or similar vehicle), travelling in front of the heavy equipment, scanning for wildlife on the road. In addition to wildlife scanning, this escort will provide 'pace car' – like speed control mitigation. Light vehicles (eg. ATVs) will also be used to help control the speed of all vehicles using the access roads.

**f) Daily Road Surveys by Dedicated Biological Inspector**

As the IBI is conducting daily inspections of the fencing along 3<sup>rd</sup> Concession Road, the IBI will also conduct road presence surveying for Blanding's Turtle, and identify and record any wildlife mortality.

**g) Response Protocol for Blanding's Turtle Observation**

In the event a Blanding's Turtle is observed within 20 metres of Project construction activities, Project related traffic within 20 metres of the turtle will be stopped, until the IBI has secured the scene and assessed risk to the turtle. Once the IBI arrives, he/she (or his/her trained representative, with oversight by the IBI) will, if necessary, move the turtle further away to ensure that it is in a safe location. Traffic and construction activities may recommence when the IBI determines there is no risk to the turtle or the turtle has moved away (or been removed) from the location. Until then, construction machinery/equipment must maintain a minimum operating distance of 20 metres from the turtle.

If a Blanding's Turtle is observed on a road or otherwise in harm's way, the observer shall not wait for the arrival of the IBI but should immediately move the turtle out of harm's way. All personnel who may reasonably be expected to make such an observation shall have received training in how to safely pick up a Blanding's Turtle, and where to relocate it to remove it from harm's way. That training will be conducted by the IBI prior to April 1.

All Blanding's Turtle encounters will be reported to MNR Peterborough district and the MOECC inspector by telephone within 24 hours (leaving a v-mail message if necessary).

## 5.0 Rest of Island Turbine Work

As noted above, the majority of Blanding's observations on the Island have been, as would be expected, close to the Coastal Marsh Wetlands, indicating the turtles are likely to be spending most of their time around them. The proposed turbine locations and access roads on the rest of the Island are located within agricultural areas and are much further away from Blanding's Turtle suitable aquatic habitat. Thus, any movements will generally be concentrated away from the proposed turbines and roads. Although nesting females, and potentially the occasional male, may make long distance movements, these are unlikely to intersect with proposed turbine or road locations because Blanding's Turtles prefer to travel through wetland or undeveloped terrestrial habitat and they tend to avoid moving extensive distances through open, agricultural landscapes. As a result of this, and the Current Mitigation Measures in place, the risk to Blanding's Turtle from the Rest of Island Turbine Work is considerably lower than the risk close to the Coastal Marsh Wetlands.

At the request of the MOECC, the additional layer of mitigation described below is proposed for the Rest of Island Turbine Work.



## **5.1 ACCESS ROAD CONSTRUCTION AND TURBINE ERECTION**

### **a) Expedited Construction**

While unavoidable risks (like unexpected weather events) are an inherent part of complex construction projects, the Rest of Island Turbine Work will be expedited with a view to completion as soon as possible before May 15, 2018.

### **b) Dedicated Independent Biological Inspector**

Commencing May 1, the IBI and his/her team will monitor the application of the Current Mitigation Measures to the Rest of Island Turbine Work to ensure these measures are being properly implemented.

### **c) Construction Traffic Escorts and Reduced Speed Limit**

Commencing May 1, the “Construction Traffic Escorts and Reduced Speed Limit” described above in Section 4.1(e) will be applied in respect of movement of oversized heavy equipment (i.e. major crane components).

### **d) Response Protocol for Blanding’s Turtle Observation**

Commencing May 1, in the event a Blanding’s Turtle is observed in an area where the Rest of Island Turbine Work is occurring, the IBI and his/her team will ensure the implementation of the response protocol for Blanding’s Turtle observations described above in Section 4.1(g).