



## Cedar Point II Wind Energy Centre 2017 Wildlife Behaviour Monitoring

Natural Resource Solutions Inc. (NRSI) was retained to conduct post-construction wildlife monitoring at the operational Cedar Point II Wind Energy Centre (Cedar Point II WEC) located within the Town of Plympton-Wyoming, Township of Warwick, and the Municipality of Lambton Shores, in Lambton County, Ontario. This wind energy project has a total nameplate capacity of 100MW and consists of 46 turbines. This document provides an executive summary of the methods and results of the second year of post-construction wildlife monitoring conducted at the Cedar Point II WEC in 2017.

### Methods

NRSI biologists conducted post-construction wildlife behaviour monitoring at the Cedar Point II WEC following methods approved by the Ministry of Natural Resources and Forestry (MNRF) as part of the project's Natural Heritage Assessment (NHA), associated pre-construction report, and Environmental Effects Monitoring Plan (EEMP) (Stantec 2013a, 2013b, 2013c). As outlined in these documents, 17 provincially significant wildlife habitats required post-construction surveys in 2017:

- Two (2) Amphibian Breeding Habitats (Woodland) (ABW-06, ABW-07); and
- 15 Habitats for Bird Species of Conservation Concern (Wood Thrush) (*Hylocichla mustelina*) (WOTH-03, WOTH-06, WOTH-10, WOTH-18, WOTH-19, WOTH-23, WOTH-26, WOTH-30, WOTH-32, WOTH-45, WOTH-47, WOTH-48, WOTH-52, WOTH-55, WOTH-56).

These habitats were identified to be provincially significant in the NHA and associated pre-construction report, which were completed prior to the construction of the project. Provincial significance of habitats was identified based on criteria established by the MNRF, or otherwise approved by the MNRF if no specific provincial criteria already exists.

Post-construction monitoring was not required at one (1) Amphibian Breeding Habitat (Woodland) (ABW-57) and two (2) Habitats for Bird Species of Conservation Concern (Wood Thrush) (WOTH-58, WOTH-62) because infrastructure that was proposed to be built near these habitats was not constructed.

As per the Environmental Impact Study (EIS) report of the NHA and the EEMP (Stantec 2013a, 2013c), the following methods were implemented for the monitoring study:

- Amphibian surveys were conducted during the spring:
  - Egg mass surveys targeting salamanders, newts and frogs (once in each of March and April); and
  - Calling anuran (frog) surveys (once in each of April, May, and June).
- Point count surveys for breeding Wood Thrush were conducted three (3) times between May and July.

## Results

### Amphibian Woodland Breeding Habitats

The results of the post-construction amphibian breeding (woodland) surveys completed by NRSI in 2017, in comparison with the baseline data collected in 2012 and 2013, are outlined below:

Feature ID	Pre-Construction Results (2012/2013)	Post-Construction Results (2017)
ABW-06	<b>Significant</b> ≥20 combined individuals of 4 frog species	<b>Significant</b> ≥20 combined individuals of 2 frog species
ABW-07	<b>Significant</b> ≥20 combined individuals of 3 frog species	<b>Significant</b> ≥20 combined individuals of 3 frog species

Both significant amphibian woodland breeding habitats continue to meet the provincial standards for significance based on post-construction monitoring surveys conducted in 2017.

### Significant Bird Habitat Surveys

The results of the post-construction Habitat for Species of Conservation Concern (Wood Thrush) surveys completed by NRSI in 2017, in comparison with the baseline data collected in 2012 and 2013, are outlined below:

Feature ID	Pre-Construction Results (2012/2013)	Post-Construction Results (2017)
WOTH-03	<b>Significant</b> 1 observation of Wood Thrush	<b>Significant</b> 2 observations of Wood Thrush
WOTH-06	<b>Significant</b> 3 observations of Wood Thrush	<b>Significant</b> 17 observations of Wood Thrush
WOTH-10	<b>Significant</b> 7 observations of Wood Thrush	<b>Significant</b> 13 observations of Wood Thrush
WOTH-18	<b>Significant</b> 5 observations of Wood Thrush	<b>Significant</b> 6 observations of Wood Thrush
WOTH-19	<b>Significant</b> 1 observation of Wood Thrush	<b>Significant</b> 9 observations of Wood Thrush
WOTH-23	<b>Significant</b> 4 observations of Wood Thrush	<b>Significant</b> 15 observations of Wood Thrush
WOTH-26	<b>Significant</b> 4 observations of Wood Thrush	<b>Significant</b> 4 observations of Wood Thrush
WOTH-30	<b>Significant</b> 1 observation of Wood Thrush	<b>Significant</b> 7 observations of Wood Thrush
WOTH-32	<b>Significant</b> 6 observations of Wood Thrush	<b>Significant</b> 27 observations of Wood Thrush
WOTH-45	<b>Significant</b> 3 observations of Wood Thrush	<b>Significant</b> 3 observations of Wood Thrush
WOTH-47	<b>Significant</b> 2 observations of Wood Thrush	<b>Significant</b> 8 observations of Wood Thrush
WOTH-48	<b>Significant</b> 3 observations of Wood Thrush	<b>Significant</b> 5 observations of Wood Thrush
WOTH-52	<b>Significant</b> 1 observation of Wood Thrush	<b>Significant</b> 4 observations of Wood Thrush
WOTH-55	<b>Significant</b> 7 observations of Wood Thrush	<b>Significant</b> 10 observations of Wood Thrush
WOTH-56	<b>Significant</b> 10 observations of Wood Thrush	<b>Significant</b> 14 observations of Wood Thrush

All significant bird breeding habitats continue to meet the established standards for significance based on post-construction monitoring surveys conducted in 2017.

### **Additional Monitoring Commitments**

Post-construction wildlife monitoring conducted by NRSI in 2017 represents the second year of monitoring conducted at the Cedar Point II WEC.

The results of the 2017 post-construction surveys have indicated that no potential displacement or avoidance effects have been observed at significant wildlife habitats for significant amphibian breeding (woodland) habitats or Wood Thrush habitats.

Additional post-construction surveys will be conducted for one (1) additional year in 2018 at the following habitats, in accordance with the EIS of the NHA and EEMP (Stantec 2013a, 2013c):

- Amphibian Woodland Breeding Habitats (ABW-06, ABW-07); and
- Habitat for Species of Conservation Concern (Wood Thrush) (WOTH-03, WOTH-06, WOTH-10, WOTH-18, WOTH-19, WOTH-23, WOTH-26, WOTH-30, WOTH-32, WOTH-45, WOTH-47, WOTH-48, WOTH-52, WOTH-55, WOTH-56).