



Summerhaven Wind Energy Centre 2017 Bat Mortality Monitoring

Natural Resource Solutions Inc. (NRSI) conducted post-construction monitoring at the operational Summerhaven Wind Energy Centre (Summerhaven WEC or Project) near the Town of Nanticoke, in Haldimand County, Ontario. The Project has a generating capacity of 124.4MW and consists of 56 turbines. The purpose of this fact sheet is to provide a summary of the methods, analysis, and results of the fourth year of post-construction mortality monitoring that was conducted at the Summerhaven WEC in 2017.

Methods

NRSI biologists conducted bat mortality monitoring at the Summerhaven WEC following the Ministry of Natural Resources and Forestry (MNRF) guidelines (*Bats and Bat Habitats: Guidelines for Wind Power Projects*, July 2011) and the Project's Environmental Effects Monitoring Plan (EEMP) (Golder Associates 2012). The implemented monitoring program was approved by the MNRF. Per the MNRF guidelines and the EEMP, the following methods were implemented for the monitoring study:

- A subset of 18 turbines were searched twice weekly from May through October;
- Searches were conducted in circular areas with a 50m radius, centered at each turbine tower;
- Search plots were maintained to be generally free of crops, weeds, and debris for high visibility of potential mortalities;
- Searcher efficiency trials were conducted in each study season to assess the effectiveness of each searcher;
- Scavenger removal trials were conducted in each study season to assess the level of scavenging activity at the turbines.

Results

During the 2017 post-construction mortality monitoring at the Summerhaven WEC, a total of 31 bat mortalities were found within the search radius of the subset of 18 turbines. Bat mortalities consisted of both resident and migratory species.

Following the MNRF Guidelines, NRSI biologists inputted the searcher efficiency, scavenger removal, and percent area searched variables into the MNRF's estimated mortality equation to determine an estimated rate of bat mortality at the Summerhaven WEC of 2.35 bats/turbine/year. This is below the MNRF threshold of 10 bats/turbine/year. By comparison, the average bat mortality rate in Ontario is estimated at 17.15 ± 0.16 bats/turbine/year (*Bird Studies Canada Wind Energy Bird and Bat Monitoring Database, Summary Findings*, July 2017).