

## Grand Bend Wind Farm Post-Construction Monitoring Results Year 1- 2017

Grand Bend Wind GP Inc. as general partner for and on behalf of Grand Bend Limited Partnership, operates a 100 MW wind facility located north of Grand Bend, Ontario. Renewable Energy Approval (REA) (Number 5186-9HBJXR) was issued by the Ministry of the Environment (now the Ministry of the Environment and Climate Change or “MOECC”) on June 26, 2014 prepared under Ontario Regulation 359/09 of the *Environmental Protection Act*. The REA was amended on March 24, 2015 and again on July 17, 2017. The project is classified as a Class 4 Wind facility under the Regulation. The Grand Bend Wind Farm (“the Project”) is located in Huron County, spanning the lower-tier municipalities of Bluewater and Huron South. Portions of the transmission line also traverse the municipality of Huron East and municipality of West Perth in Perth County.

The basic project components includes 40 turbines (Siemens SWT-3.0-113 direct drive wind turbine generators limited to produce 2.48 MW turbines each, with a total name plate capacity of 100 MW), turbine access roads, a 36 kV electrical collection system, substation, a parts and storage (office / maintenance) building, a new buried transmission line within municipal road right-of-ways along Sararas Road, Rodgerville Road, and Road 183 with connection to the provincial power grid at the 230 kV transmission line south of the Seaforth Transformer Station.

The following is a summary of the results from the Post-Construction Year 1 Monitoring Program:

- The corrected total estimate for birds at the Project site in 2017 (from May 1 to October 31) is 10.08 birds per turbine per year. This estimate is **below** the provincial threshold of annual bird mortality of 14 birds per turbine per year.
- The corrected total estimate for all raptors at the Project site in 2017 (from May 1 to November 30) is 0.89 raptors per turbine per year. This estimate is **above** the provincial threshold of annual raptor mortality of 0.2 raptors per turbine per year (all raptors). Given that there were no provincially tracked raptors found during the monitoring program, raptor mortalities did not exceed the threshold of 0.1 raptors per turbine per year for provincially tracked raptors.
- There were no single mortality events recorded during the monitoring period for birds or raptors. The highest number of birds recorded at any one turbine during a single mortality monitoring survey was 2, and the highest number of birds (including raptors) recorded at multiple turbines was 3.

- Bat mortalities were recorded in every month of the monitoring program except May and November. The corrected total estimated mortality rate for bats at the Project site in 2017 (from May 1 to October 31) is 27.85 bats per turbine per year. This estimate is **above** the annual bat mortality threshold of 10 bats per turbine per year, averaged across the Project site.
- A total of 5 different species of bats were recorded at the Project site. Hoary Bat represented the most common bat species recorded and represented 40% of all bat carcasses; Silver-haired Bat was the second-most common bat species and represented 19% of all bat carcasses recorded. Big Brown Bat and Eastern Red Bat represented 15% and 14% of all bat carcasses recorded, respectively. Little Brown Myotis represented the least common bat species and represented 2% of all bat carcasses recorded. An additional 10% of bat species recorded were not identified to species due to advanced stage of decomposition of carcass or missing body parts required for identifying to bat species (i.e., tragus, forearm length, teeth).