



Nation Rise Wind Farm 2021 Significant Wildlife Habitat Monitoring

Natural Resource Solutions Inc. (NRSI) was retained to conduct post-construction wildlife monitoring at the operational Nation Rise Wind Farm, located within the Township of North Stormont and the United Counties of Stormont, Dundas and Glengarry, Ontario. This wind energy project has a generating capacity of 100MW and consists of 29 turbines. The purpose of this fact sheet is to provide an executive summary of the methods and results of the first year of post-construction Significant Wildlife Habitat monitoring that was conducted at the Nation Rise Wind Farm in 2021.

Methods

NRSI biologists conducted post-construction Significant Wildlife Habitat monitoring at the Nation Rise Wind Farm following methods approved by the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR) as part of the project's Natural Heritage Assessment (NHA; NRSI 2017), associated pre-construction monitoring report (NRSI 2019), and Environmental Effects Monitoring Plan (EEMP; NRSI 2017). As outlined in these documents, seven provincially Significant Wildlife Habitats required post-construction monitoring in 2021:

- Six Monarch (*Danaus plexippus*) Habitats (Species of Conservation Concern; MONA-001 through MONA-006); and
- One Savannah Habitat (SAV-001).

These habitats were identified to be provincially significant in the Environmental Impact Study (EIS) report of the NHA (NRSI 2017) and/or the associated pre-construction monitoring report (NRSI 2019), which were completed prior to the construction of the project. Provincial significance of the habitats was identified based on criteria established, or otherwise approved, by the NDMNR.

As per the EIS report of the NHA (NRSI 2017) and the EEMP (NRSI 2017), the following methods were implemented for the post-construction monitoring:

- Standardized area searches for Monarch were conducted at each Monarch habitat three times from late June to early August; and
- One standardized area search for indicator plant species was conducted within the Savannah habitat within the period of July to September.

Results

The results of the post-construction Savannah and Monarch monitoring conducted in 2021, in comparison with the baseline data collected in 2017, are outlined below. All six of the Monarch habitats continue to meet the established standards for significance based on post-construction monitoring conducted in 2021. The Savannah habitat continues to be treated as significant, based on post-construction monitoring conducted in 2021.

| Feature ID | Pre-construction Monitoring Results (2017) | Post-construction Monitoring Results (2021) |
|-------------------------|---|---|
| Savannah Habitat | | |
| SAV-001 | <p>Treated as Significant</p> <ul style="list-style-type: none"> Indicator species were not observed within the habitat where site access was granted | <p>Treated as Significant</p> <ul style="list-style-type: none"> Indicator species were not observed within the habitat where site access was granted |
| Monarch Habitat | | |
| MONA-001 | <p>Significant</p> <ul style="list-style-type: none"> Four observations of Monarchs | <p>Significant</p> <ul style="list-style-type: none"> Five observations of Monarchs |
| MONA-002 | <p>Significant</p> <ul style="list-style-type: none"> Eight observations of Monarchs | <p>Significant</p> <ul style="list-style-type: none"> Eleven observations of Monarchs |
| MONA-003 | <p>Significant</p> <ul style="list-style-type: none"> Twenty-eight observations of Monarchs | <p>Significant</p> <ul style="list-style-type: none"> Thirteen observations of Monarchs |
| MONA-004 | <p>Significant</p> <ul style="list-style-type: none"> Twenty-two observations of Monarchs | <p>Significant</p> <ul style="list-style-type: none"> Nine observations of Monarchs |
| MONA-005 | <p>Significant</p> <ul style="list-style-type: none"> Thirty-one observations of Monarchs | <p>Significant</p> <ul style="list-style-type: none"> Four observations of Monarchs |
| MONA-006 | <p>Significant</p> <ul style="list-style-type: none"> Five observations of Monarchs | <p>Significant</p> <ul style="list-style-type: none"> Five observations of Monarchs |

Discussion

Post-construction Significant Wildlife Habitat monitoring conducted by NRSI biologists in 2021 represents the first and only required year of post-construction monitoring for Monarch habitats, in accordance with the EIS report of the NHA (NRSI 2017). All six monitored habitats (MONA-001 through MONA-006) have been confirmed to meet provincial standards for significance based on the results of 2021 monitoring. Restricted access to one Monarch habitat (MONA-005), as imposed by the landowner, may explain, in part, the decrease in Monarch activity observed at this habitat during the 2021 monitoring season, despite the habitat continuing to meet the criteria for being significant.

Post-construction Significant Wildlife Habitat monitoring conducted by NRSI biologists in 2021 represents the first of three years of post-construction monitoring of the Savannah habitat. Although the indicator species were not observed within the Savannah habitat where site access was granted, a conservative approach was taken to treat the habitat as significant since portions of the contiguous habitat could not be surveyed due to restricted access, as imposed by the landowner. The presence of indicator species also could not be verified during baseline monitoring in 2017 as site access was restricted, as imposed by the landowner, in portions of the habitat. The monitoring results, and approach to treating as significant, were consistent between the baseline monitoring (2017) and the first year of operational monitoring (2021), resulting in no measurable

change from baseline conditions. The significance of this habitat will be re-assessed again after the completion of post-construction monitoring in 2023 and 2025.

Additional Monitoring Commitments

Post-construction monitoring is complete for the six Monarch habitats (MONA-001 through MONA-006). Post-construction monitoring is required to be conducted for two additional years (2023 and 2025) for the Savannah habitat (SAV-001). In addition, the first year of post-construction monitoring is required to be conducted at each of the following habitats at the Nation Rise Wind Farm in 2022:

- Waterfowl Stopover and Staging Area (WSA-001);
- Turtle Wintering Area (TWA-001);
- Amphibian Breeding Habitats (AWO-011, -016, -018, and -023);
- Open Country Bird Breeding Habitat (OCB-001);
- Eastern Wood-Pewee Habitats (EAWP-004, -008, -009, -010, -013, and -015);
and
- Wood Thrush Habitats (WOTH-004 and -005).