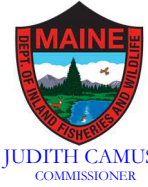




JANET T. MILLS  
GOVERNOR

STATE OF MAINE  
DEPARTMENT OF  
INLAND FISHERIES & WILDLIFE  
284 STATE STREET  
41 STATE HOUSE STATION  
AUGUSTA ME 04333-0041



JUDITH CAMUSO  
COMMISSIONER

June 28, 2019

Mr. Michael Carey  
Development Manager  
SWEB Development USA, LLC  
6080 Young Street, Suite 106  
Halifax, NS B3K 5L2

**RE: Proposed Silver Maple Wind Project - Clifton, Maine**

Dear Mr. Carey,

I am writing to follow up on our June 12, 2019, pre-application meeting for the proposed Silver Maple Wind Project in Clifton, Maine. The Maine Department of Inland Fisheries and Wildlife (MDIFW) appreciates the opportunity to meet with you and your colleagues to discuss the proposed project, relevant natural resource issues, and siting, design, and operational measures to avoid/minimize potential impacts. MDIFW and the SWEB Development USA, LLC Project Team (SWEB) have had several previous communications and MDIFW provided preliminary information on wildlife and fisheries resources in the project vicinity in a letter dated June 8, 2019. The following summary of the issues discussed at our June 12<sup>th</sup> meeting is intended to help facilitate future discussions as may be necessary and to help ensure that the issues are ultimately resolved.

Based on information provided, and as discussed, the proposed Silver Maple Wind Project will consist of a 20 megawatt, 5-turbine expansion of the existing 5-turbine Mt. Pisgah Wind project in Clifton, Maine.

1. Bats. In both the letter and meeting described above, MDIFW discussed the current status of bat populations in Maine and typical turbine curtailment recommendations as referenced in MDIFW's Maine Wind Power Preconstruction Recommendations and Turbine Curtailment Recommendations to Avoid/Minimize Bat Mortality (Wind Power) Guidance (March 5, 2018). We also discussed site-specific provisions recently enacted by two projects, one of which received an Incidental Take Permit (ITP) for bats based on its more protective measures. We explored the operational practices, post-construction monitoring scenarios, and other relevant factors for those two projects to provide possibilities for consideration by SWEB.

At the June 12<sup>th</sup> meeting, we discussed the presence of rocky outcrops, talus and steep slopes, and a potential bat maternity roost tree near the project site as described in SWEB's November 8, 2018 report. We also discussed that winter activity has been confirmed for little brown bats (*Myotis lucifugus*) and eastern small-footed bats (*M. leibii*) at Eagle Bluff in Dedham, located approximately 2.5 miles away. These bats are categorized as Endangered and Threatened Species respectively, pursuant to the Maine Endangered Species Act (12 M.R.S., §12801 et. seq.). Based on the above, MDIFW anticipates that other at-risk bat species are also likely present in the vicinity. It is MDIFW's position that the only adequate protection for bats at wind power facilities at this time is seasonal

curtailment of turbines under appropriate conditions, though continuing research may lead to other avoidance measures in the future. As discussed, MDIFW's Wind Power Guidance describes general turbine curtailment recommendations and notes that the presence of habitats such as those described above in proximity "*may increase risks and thus possibly necessitate additional safeguards, such as extended timeframes (earlier and/or later) and/or higher wind speeds*" for curtailment.

MDIFW's Wind Power Guidance recommends acoustic bat monitoring "*to determine whether talus slopes, rocky outcrops, or similar features are in use as hibernacula or maternity roost sites by Myotis bats.*" As the presence of *Myotis* has been confirmed in nearby features, acoustic monitoring will not be necessary. However, additional protective measures, such as those described, will likely be recommended. SWEB indicated that it intends to draft a turbine curtailment strategy for MDIFW's consideration. As indicated, MDIFW is available to address additional questions related to the above issues, ITPs, etc., as necessary.

2. Migrating Songbirds. At the June 12<sup>th</sup> meeting, MDIFW noted that the proposed Silver Maple Wind Project site is within the boundaries of what has been designated as the Downeast Coastal Plain. Noting that the boundaries are general and that conditions across this region are not necessarily uniform, MDIFW intends to clarify this relationship. The significance of this issue, as noted in MDIFW's Avian Resources in Maine's Coastal Plain (Avian Resources) Guidance (March 5, 2018) is that, "*The concentration of migratory birds in the coastal plain is greater than in other areas of Maine and the seasonal and daily movement patterns are unique for represented guilds, creating a very complex dynamic.*" Pre-construction nocturnal radar data collected at three proposed wind project sites located within a range of approximately 10-27 miles of Silver Maple Wind (Apex Downeast Wind (pre-application), Weaver Wind (recently permitted), and Bull Hill Wind (operating)), indicated that the area has among the highest spring and fall passerine migration rates in New England, as well as low migrating bird flight heights relative to turbine heights. Further, during its initial years of operation, the nearby Bull Hill Wind reported twice the number of bird fatalities / turbine as other facilities in Maine. And, the Downeast Coastal Plain region is prone to weather conditions that push migrating birds to lower flight heights.

Based on the above factors, MDIFW expressed concerns during project review that the adjacent Weaver Wind project would likely experience relatively consistent annual avian mortality at levels at or above the highest reported in Maine, as well as the potential for occasional larger mortality events when atmospheric conditions, timing of migration, and low altitude flight place large numbers of birds in jeopardy. Longroad Energy, the developer of the Weaver Wind project, worked with the Department and designed a study to determine if these concerns could be quantified and addressed through facility operational practices. Ultimately, the Department determined that the study was unlikely to provide statistically valid results, that Longroad Energy had demonstrated due diligence in avoiding and minimizing adverse impacts to migrating songbirds, and that efforts should focus on whether suitable mitigation for potential impacts could be developed through habitat conservation. For conservation to be deemed as adequate and appropriate mitigation of anticipated and potential impacts to songbirds from Weaver Wind, MDIFW determined that it must involve land acquisition commensurate with the scale of the project, habitat development, and active habitat management of a sufficient quality and quantity of land for stop-over and nesting habitat for land-bird migrants in the Downeast Coastal Plain. Such conditions were established and the project was permitted by the Maine Department of Environmental Protection in 2019.

As noted in the Avian Resources Guidance, MDIFW believes that sufficient data has been collected to indicate significant use patterns and adverse risks for migrating birds in this area. Thus, the Department does not recommend additional nocturnal radar data in the coastal plain itself as revalidation at this time. However, as discussed at the June 12<sup>th</sup> meeting, given its location “on the side” of the designated Downeast Coastal Plain, it may be advantageous to Silver Maple Wind to conduct nocturnal radar monitoring to determine if the proposed project site experiences similar elevated numbers and lower flight heights of migrating songbirds. MDIFW’s concerns for potential impacts to migratory songbirds from wind energy development in the Downeast coastal plain remain and, as discussed, need to be addressed by Silver Maple Wind. Both SWEB and MDIFW intend to further explore the geographic area associated with these concerns. The proposed Silver Maple Wind Project is significantly smaller than the other wind projects described and is located further west. If it is determined that mitigation is necessary to offset substantial impacts to migrating songbirds, recommendations will likely be commensurate with the scale of the project.

In general, as an operational practice to minimize risk to nocturnal migrants, we recommend that the turbine lighting be flashing white strobe lights with a maximum off period between flashes. This type of lighting is far less attractive to migratory birds than continuous or pulsating, incandescent red or white lights. Consistent with recommendations for other wind projects, we also recommend the use of an Aircraft Detection Lighting System (ADLS), which maintains that turbines be unlit until the ADLS radars detect nearby aircraft, at which time the lighting system is triggered to illuminate until the aircraft is out of radar range. This will provide for the same type of lighting system as Longroad Energy has planned for the wind turbines at the recently permitted Weaver Wind project.

3. Upland Sandpiper (UPSA). As noted in MDIFW’s Avian Resource Guidance, “*Concerns with migratory birds in the coastal plain involve passerines and shorebirds that are migrating through Maine at different times and from different directions.*” “*In addition to those that migrate through, other shorebirds breed in Maine’s coastal plain and are present through the spring, summer and fall, with localized behavioral patterns that put them at significant risk*” during the June-September breeding season. Upland sandpipers, a State Threatened species, have been documented in meaningful numbers in suitable habitats within the Downeast Coastal Plain. UPSA nest only on the ground and use both native and cultivated grasslands for nesting sites. As noted during the June 12<sup>th</sup> meeting, an approximately 50-acre blueberry field with the potential to provide UPSA habitat is located on Woodchuck Hill Road less than 0.5 miles from the proposed project site. MDIFW notes that this field may be on the edge of suitable habitat but, it needs to be investigated to determine if the habitat supports these rare grassland birds. MDIFW’s Charlie Todd indicated that he hopes to visit the field to make this determination.

As background, UPSA are protected under the Maine Endangered Species Act and, as such, are afforded special protection against activities that may cause “Take” (kill or cause death), “harassment” (create injury or significantly disrupt normal behavior patterns), and other adverse actions. MDIFW has significant concerns with potential direct impacts (collision, habitat loss) and indirect impacts (habitat displacement) to UPSA from wind energy facilities based on the proximity to confirmed habitats. These concerns are unique to this area of the state based on the significance of the Downeast Coastal Plain to UPSA, as well as habitat preferences and behavioral traits of this species. The blueberry barrens of Downeast Maine are widely acknowledged to support the largest numbers of breeding UPSA in the Northeast.

After assessment of the habitat, MDIFW and SWEB can further discuss concerns as well as methods to avoid and/or minimize potential impacts to this species, if necessary.

4. Great Blue Heron (GBHE). The great blue heron is a Maine Species of Special Concern<sup>1</sup> due to an 82% decline in the coastal breeding population observed from 1983 to 2018. Since 2009, MDIFW has been monitoring the statewide population to determine if the decline seen along the coast is also occurring statewide. GBHEs build large stick nests in live, dead, or dying trees 8-100 feet or more above the ground, and may nest in uplands, wetlands, or on islands. GBHEs nest in groups and generally occupy colonies from April 1<sup>st</sup> thru August 15<sup>th</sup> (known as the Sensitive Nesting Period). During this time the birds can be extremely sensitive to disturbances caused by human intrusion, noise, and predators, and may even abandon a colony as a result. And, GBHE are at risk of direct impact from turbines during flight. Not all GBHE colonies have been mapped in Maine. As discussed and as noted in MDIFW's Wind Power Guidance, *"MDIFW recommends an aerial survey area within 4-miles of proposed project boundaries to look for new and existing colonies and level of use, and to include ridgeline sightings of herons during raptor survey work. Surveys should be conducted between May 1 and June 15 for projects in northern and Downeast Maine. Earlier timing may be warranted in central and southern regions of the state."* For all surveys, a goal is to determine if daily feeding flight paths from any colonies intersect with the project area.

As discussed at the June 12<sup>th</sup> meeting, MDIFW records indicate one GBHE nest near Floods Pond located south of, and in proximity to, the project site. We noted that the recommended GBHE survey dates were closing soon but, if aerial surveys are conducted promptly, it will be acceptable. Surveys are planned for June 28, 2019, with MDIFW's Charlie Todd as an aerial observer.

After assessment of the habitat, MDIFW and SWEB can further discuss concerns as well as methods to avoid and/or minimize potential impacts to this species, if necessary.

5. Deer Wintering Areas. As noted in MDIFW's June 8, 2019 letter, *"The project search area appears to intersect or is immediately adjacent to a Deer Wintering Area". "MDIFW recommends that development projects be designed to avoid losses or impacts to the continued availability of coniferous winter shelter. Any removal of vegetation should be conducted in such a way that improves the quality and vigor of the coniferous species providing this winter shelter."* MDIFW is available to further discuss concerns as well as methods to avoid and/or minimize potential impacts to this resource.
6. Significant Vernal Pools. As noted in MDIFW's June 8, 2019 letter, *"Based on the information provided in your letter, we do not anticipate impacts to Significant Vernal Pools as a result of your project. Should the project layout be revised in the future, please consult our Agency for the need for further surveys."* MDIFW recommends that the Recommended Performance Standards for Maine's Significant Vernal Pools in Overhead Utility ROW Projects (March 26, 2012) be followed while working in proximity to these resources.

---

<sup>1</sup> Special Concern species are defined by MDIFW as species that do not meet the criteria as Endangered or Threatened, but are particularly vulnerable and could easily become Endangered, Threatened, or Extirpated due to restricted distribution, low or declining numbers, specialized habitat needs or limits, or other factors.

7. Aquatic Resources. MDIFW reiterates its recommendations for 100-foot undisturbed vegetated buffers on all perennial and intermittent streams as well as standards for all new, modified, and replacement stream crossings, as provided in the June 8, 2019 letter and MDIFW's Wind Power Guidance. MDIFW is available to further discuss concerns as well as methods to avoid and/or minimize potential impacts to these resources. MDIFW recommends that the Recommended Performance Standards for Riparian Buffers in Overhead Utility ROW Projects (March 26, 2012) be followed while working in proximity to these resources.
8. Other Resource Surveys. As discussed during the June 12<sup>th</sup> meeting, based on the location and physical properties of the project site, MDIFW is not recommending surveys for bicknell thrush, northern bog lemmings, roaring brook mayflies, northern spring salamanders, golden eagles, Raptor Migration Surveys, or Breeding Bird Surveys.
9. Bald Eagles. Based on its current State status, MDIFW does not specifically request bald eagle surveys at this time. However, they continue to be protected under the federal Bald Eagle and Golden Eagle Protection Act (Eagle Act), as well as other federal laws. This MDIFW review provides no assurances to the applicant from liabilities related to the Eagle Act. The U.S. Fish and Wildlife Service, Division of Migratory Bird Management has sole authority for oversight and implementation of this law (<http://www.fws.gov/northeast/EcologicalServices/eagleact.html>). MDIFW recommends that SWEB contact the USFWS (Maine Field Office, Orland) on this issue.

MDIFW hopes that this information is of assistance to you in your project design. If you have any questions or concerns, please feel free to contact me at [robert.d.stratton@maine.gov](mailto:robert.d.stratton@maine.gov) or (207) 287-5659 or John Perry at [john.perry@maine.gov](mailto:john.perry@maine.gov) or (207) 287-5254. Please note, these comments should be considered preliminary until a formal application and final site plan for the project have been received and reviewed by our agency.

Sincerely,



Robert D. Stratton  
Environmental Program Manager  
Fisheries and Wildlife Program Support Section Supervisor  
Maine Department of Inland Fisheries & Wildlife

cc: John Perry, Charlie Todd, Josh Matijas, Carl Tugend (MDIFW)  
Jessica Damon, Jim Beyer (MDEP)  
Wende Mahaney (USFWS)  
Paul Fuller (Silver Maple Wind, Pisgah Wind)  
Tim Brochu (CES)