

**ATTACHMENT 1**  
**SPECIES OF CONCERN ASSESSMENT**

TRC  
14 Gabriel Drive  
Augusta, ME 04330

## Memorandum

**To:** Carol Henderson  
New Hampshire Fish and Game Department

**From:** Dana Valteau  
Environmental Specialist

**Subject:** Antrim Wind Energy Project – Biological Assessment

**Date:** May 11, 2016

**CC:** Kim Tuttle, New Hampshire Fish and Game; Jack Kenworthy, Antrim  
Wind Energy

**Project No.:** 182878.2014

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### Introduction

The following provides a biological assessment of potential adverse impacts from the Antrim Wind Energy Project (“Antrim Project” or “Project”) on two Special Concern (SC) wildlife species and a species at risk with known habitats within the Town of Antrim, New Hampshire. The ebony boghaunter and wood turtle are listed as SC per the list of “Wildlife Species of Special concern” by the NH Fish & Game Department (March 12, 2009). The marsh wren is not formally listed as SC, rather it is considered a species at risk and listed within the “NH Wildlife Action Plan”.

Approximately 96% of the Project area is forested with three exceptions being roads, a utility corridor, and clearcut/cleared field. Forested communities include a variety mixed coniferous and hardwood forest and hardwood dominated communities as documented in the “Natural Community Assessment” prepared by TRC (revised July 2015). The wetland and stream delineation of the Project site documented that virtually all the wetlands are forested systems and are isolated unless connected by small shallow streams (Wetland Delineation Report 2015). Five scrub-shrub wetlands were delineated within the utility corridor and a sixth one was documented as a naturalized borrow pit. Nine perennial and intermittent streams were documented within the relatively steep Project terrain. The width of the streams was narrow being between 1-4 feet and shallow, less than 6 inches of flowing water.

### Species Habitat and Potential Effects

#### **Ebony boghaunter (*Williamsonia fletcheri*)**

*Habitat and range:* Habitats used by the ebony bog haunter are largely restricted to wetland habitats containing extensive floating to suspended sphagnum often adjacent to coniferous and

mixed forested woodlands. Adults are known to use the forested habitats to hunt and roost. Breeding and larval habitats include dwarf shrub fens, graminoid fens, and sphagnum filled pools. Range is local and widely scattered in distribution.

*Project habitats:* The highly specific habitat used by the ebony boghaunter was not documented within the Antrim Project area. The natural community assessment, wetland and stream delineation, and vernal pool survey provided a complete assessment of habitat and sphagnum bog habitat was not identified. Development of the project will not alter any potential boghaunter habitat, as such it is unlikely that there will be any adverse impacts.

### **Wood turtle (*Glyptemys insculpta*)**

*Habitat and range:* Wood turtles use specific aquatic and a variety of terrestrial habitats. Slow to moderate flowing rivers and large streams with sandy to gravelly substrates and muddy banks provide the aquatic habitat. Terrestrial habitats are used extensively during the summer often within 1,000 feet of the aquatic habitat, including floodplains, meadows, woodlands, fields, and forested and shrub wetlands. The range of the wood turtle is scattered throughout the State, except regions of high elevation.

*Project habitats:* A necessary component of the life cycle of the wood turtle are riverine habitats that were not found on the Antrim Project. None of the nine streams provides the necessary depth, flow, and size to serve as suitable habitat. Without this aquatic habitat it is unlikely that any wood turtles will be found on site.

### **Marsh wren (*Cistothorus palustris*)**

*Habitat and range:* Marsh wrens use herbaceous wetlands characterized by robust growths of graminoids in freshwater, brackish, and saltwater habitats. The range is scattered throughout the central portions of the State and coastal and riverine habitats along the State boundaries. The Town of Antrim is within the southwest portion of the interior distribution.

*Project habitats:* There are no graminoid dominate wetlands within the Project. All wetlands, except the few documented as scrub-shrub, are forested and will not provide suitable marsh wren habitat and it is unlikely that there will be any adverse effects to this species from the Project.

### **Summary**

Each of the species evaluated have specific habitat needs which are all nonexistent within the Project site. Development of the project will not alter any potential habitat for these species, as such it is unlikely that there will be any adverse impacts.