

**STATE OF NEW HAMPSHIRE SITE EVALUATION COMMITTEE
SEC DOCKET NO. 2015-06**

**JOINT APPLICATION OF NORTHERN PASS TRANSMISSION LLC & PUBLIC
SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE ENERGY FOR A
CERTIFICATE OF SITE AND FACILITY**

Supplemental Environmental Pre- filed Testimony of Deerfield Abutters

Deerfield abutters file this Supplemental Environmental Pre- filed Testimony of Deerfield Abutters and state:

1. Jeanne Menard, Jo Anne Bradbury, Erick and Kathleen Berglund jointly file this additional information to support our testimony that the proposed Northern Pass Transmission project will have a permanent unreasonable adverse effect on the natural environment, specifically the endangered Blanding's Turtle.
2. The following concepts support the Deerfield Abutters' conclusions that NPT will have an unreasonable adverse effect on Blanding's Turtles given NPT's lack of sufficient BMPs:
 - a. Spatial ecology espouses that the protection of wetland habitat alone is insufficient to conserve many populations of freshwater turtles, including Blanding's Turtle. There must be greater protection of the species' entire migration and travel patterns to insure its survival. (Refsnider and Linck, 2012) (Miller and Blouin-Demers, 2011).
 - b. Core area protection calls for sufficiently large terrestrial buffer zones around wetlands, such that the entire extent of the females nesting-related travel is enclosed. (Congdon et al., 2011).
 - c. The increases in risks associated with terrestrial movements and human activity threatens adult population survivorship necessary to maintain the Blanding's Turtle population. (NH Wildlife Action Plan Appendix A- Reptiles 44), (Congdon, 2011).
 - d. Nest sites and resident wetland fidelity play important roles in the Blanding's Turtle migration patterns. (Congdon, et al, 2011).
 - e. Blanding's and Spotted Turtles have seasonally changing resource requirements for basking (to raise body temperature), food for growth and reproduction, terrestrial and aquatic sites for resting, hatchling dispersal, return trips to resident wetlands for overwintering. (Beaudry et al, 2009).
 - f. The cold-blooded Blanding's Turtles hibernate in cold, muddy bottoms of wetlands, typically vernal pools, to stay warm. Their metabolism slows so that little oxygen is needed, and they do not search for food. They may hibernate under vegetation, rather than the substrate, and on occasion they have been seen slowly swimming underneath the ice in areas where they overwinter. These hibernation habits make the Blanding's

Turtles vulnerable to crushing by construction during winter. (Nature Conservancy)

3. NH state regulators note the importance of protecting species (including Blanding's Turtles) that use large wetland complexes. (NH Wildlife Action Plan, App. A)

4. The pre-filed testimonies of Lee Carbonneau and Sarah Barnum, along with the Application appendices, lacked specific BMP for Blanding's Turtles. They further evidenced the need for ecology based research not utility based compromises to understand NPT right of way impacts and to address avoidance measures vital to protect this endangered species.

5. Sites noted above are located at:

Habitat Use and Movement Patterns of Blanding's Turtles (*Emydoidea blandingii*) in Minnesota, US: A landscape Approach to Species Conservation by Jeanine M. Refsnider and Madeleine H. Linck, Published 4/20/2012.

Spatial ecology and core-area protection of Blanding's Turtle (*Emydoidea blandingii*) by J.D. Congdon, O.M. Kinney, and R.D. Nagle. Published 11/4/2011.

Seasonally Dynamic habitat Use by Spotted (*Clemmys guttata*) and Blanding's Turtles (*Emydoidea blandingii*) in Maine by Frederic Beaudry, Phillip G. deMaynadier, and Malcolm L. Hunter Jr. Journal of Herpetology, Vol. 43, No. 4. pp. 636-645, 2009.

Spatial Ecology and Seasonal Activity of Blanding's Turtles (*Emydoidea blandingii*) in Ontario, Canada by Catherine S. Millar and Gabriel Blouin-Demers Journal of Herpetology, Vol 45, No. 3, pp. 370-378, 2011.

6. Deerfield Abutters reserve the right to filed additional supplemental testimony.

Respectfully Submitted

Jeanne M. Menard of Deerfield Abutters

April 16, 2017

cc: Distribution List