

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

SUPPLEMENTAL DIRECT TESTIMONY OF DENNIS W. MAGEE

**IN SUPPORT OF THE
APPLICATION OF NORTHERN PASS TRANSMISSION LLC
AND PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
D/B/A EVERSOURCE ENERGY
FOR A CERTIFICATE OF SITE AND FACILITY TO CONSTRUCT A NEW HIGH
VOLTAGE TRANSMISSION LINE AND RELATED FACILITIES IN NEW
HAMPSHIRE**

April 17, 2017

1 **Q. Please state your name and business address.**

2 A. My name is Dennis W. Magee. My business address is 25 Nashua Road,
3 Bedford, NH, 03110.

4 **Q. Who is your current employer and what position do you hold?**

5 A. I am employed by Normandeau Associates, Inc., as a Senior Principal
6 Scientist/Senior Consultant in the Wetlands/Terrestrial Group.

7 **Q. What is the purpose of your supplemental testimony?**

8 A. The first purpose of my supplemental testimony is to provide additional
9 information that has been developed since I prepared my Pre-filed Direct Testimony dated
10 October 16, 2015, regarding the potential impacts of the Northern Pass Project (“Northern Pass”
11 or the “Project”), as proposed by Northern Pass Transmission LLC (“NPT”) and Public Service
12 Company of New Hampshire d/b/a Eversource Energy (“PSNH”) (collectively the “Applicants”)
13 on rare plants and rare or exemplary natural communities. I also respond to several issues
14 identified in the testimony of experts and other witnesses proffered by intervenors and Counsel
15 for the Public. I conclude with an affirmation of my opinion that the Project will not have a
16 substantial negative effect on rare plants and rare or exemplary natural communities.

17 **Q. Have the Applicants conducted any additional analysis since the submission**
18 **of your Pre-Filed Direct Testimony on October 16, 2015?**

19 A. Yes, Normandeau scientists have conducted additional site surveys and analyses,
20 and provided additional information to agencies regarding rare plants and rare or exemplary
21 natural communities.

22 **Q. Please summarize the additional Normandeau studies and analyses**
23 **regarding rare plants and rare or exemplary natural communities.**

24 A. Normandeau scientists have:

- 25 • Conducted botanical surveys on the proposed mitigation sites in order to address
26 specific questions raised by New Hampshire Department of Environmental
27 Services (“NHDES”) and New Hampshire Natural Heritage Bureau (“NHNHB”);
- 28 • Performed additional surveys of two potential Exemplary Natural Communities
29 along the new overhead route and provided the data to the NHNHB at its request;
30 and

- 1 • Working with Project design engineers, shifted the design location of several
2 proposed work pads and access roads to further minimize impacts in Concord and
3 Pembroke to *Lupinus perennis* and avoid a patch of *Asclepias tuberosa*, and
4 provided the revised plans to NHHNB and NHDES.

5 **Q. Where are the results of the studies or analyses documented?**

6 A. The reports and memos related to botanical surveys on the mitigation parcels were
7 submitted to the NHDES as part of the final compensatory mitigation report on December 14,
8 2016 (App. Ex. 72), and to NHHNB in a letter dated January 30, 2017. The additional survey of
9 potential exemplary natural communities was provided directly to NHHNB on January 30, 2017.
10 See the update to Appendix 48, Regulatory Agency Consultation Summary Table on the
11 Applicants' Track 2 Exhibit List. Maps showing the relocation of construction work in relation
12 to protected plant locations are confidential, and were provided directly to the NHHNB on
13 January 30, 2017. Copies of the documents provided to NHHNB, as well as other meeting notes
14 and e-mails with the agency, are included in the update to Appendix 48 on the Applicants' Track
15 2 Exhibit List.

16 **Q. Have the Applicants done other work with respect to rare plants and rare or**
17 **exemplary natural communities?**

18 A. Yes. Normandeau scientists have:

- 19 • Provided the draft restoration planting table and seed mixes to NHHNB
20 for their review and comment on January 9, 2017 (see update to Appendix
21 48 on the Applicants' Track 2 Exhibit List);
- 22 • Provided plant impact avoidance and minimization notes as plan sheet
23 notes for NHHNB review on January 30, 2017 (see update to Appendix 48
24 on the Applicants' Track 2 Exhibit List);
- 25 • Provided the Pine Barrens ROW Vegetation Management Plan to
26 NHHNB for review and comment on November 1, 2016 and to NHDES
27 on December 14, 2016 as an attachment to the final compensatory
28 mitigation plan (see App. Ex. 72); and

- 1 • Continued consultation meetings with NHNHB to answer questions and
2 provide updated information (see update to Appendix 48 on the
3 Applicants' Track 2 Exhibit List).

4 **Q. Has the NHNHB signed off on the Applicants' avoidance and minimization**
5 **measures (AMMs)?**

6 A. Yes it has. In fact, both NHNHB and NHDES have concurred with the
7 recommended AMMs arrived at after consultation with NHNHB.

8 **Q. Do you have any additional information that is responsive to testimony from**
9 **Counsel for the Public's consultant Arrowwood Environmental about the Project's**
10 **potential impacts on RTE plant species and natural communities?**

11 A. Yes, and this information is presented below by topic.

12 **Avoidance and Minimization Measures (AMMs)** – A repeated comment in the
13 Arrowwood testimony on plant species is that the AMMs to avoid impacts to protected species
14 are insufficient. Subsequent to the date of its testimony, however, the Project finalized its
15 proposed plant AMMs, and, as noted above, the NHNHB and NHDES have concurred in what
16 Northern Pass has proposed. These AMMs are extensive, providing for reflagging of listed plant
17 populations prior to construction, protective fencing, seasonal work restrictions, soil protection
18 measures, invasive species controls, and additional species-specific methods and restoration
19 monitoring requirements.

20 **Arrowwood Methodology Assessment** – Section 6.5.1.a of Arrowwood's assessment
21 contains a number of inaccuracies and misrepresentations of Normandeau's methodology. Parts
22 of the methodology were apparently not understood and are, thus, misstated in the Arrowwood
23 report. Following are clarifications of the specific issues presented in Section 6.5.1a.

24 At p. 84 of its report, Arrowwood inaccurately describes the survey area. While the
25 searches at each ROW segment with an element (listed species) occurrence within one mile of
26 the corridor prioritized the high and medium ranking species, those ranked low, as well as all
27 other listed species that are not known element occurrences for this Project, also were searched at
28 each location. Element occurrences beyond one mile for State listed species and five miles for
29 federally-listed species also were included in the searches. These survey distances are part of
30 Normandeau's agency-approved work plans. In addition, searches for species were conducted

1 along the off ROW access roads. Accordingly, a full rare plant survey was in fact conducted at
2 each area that received a field visit.

3 The methodology Normandeau used for its plant surveys was approved by the resource
4 agencies and the extent of the survey area was fully appropriate. Rare plants have a higher
5 probability of occurring near other known populations of that species, which is a reasonable
6 assumption for sampling adjacent ROW segments. Searching near known locations is a
7 reasonable and typical approach for sampling adjacent ROW segments. In addition, however,
8 Normandeau also conducted searches in other habitat areas that may support rare plants and
9 conducted additional surveys at locations of new element occurrences provided by NHNHB.
10 Searches were conducted for all State and federally listed species at each site visit location; the
11 searches were conducted during spring, summer and fall to coincide with optimal search times
12 for the various species.

13 With particular reference to the Small Whorled Pogonia, Arrowwood has suggested that
14 surveying within 5 miles of known occurrences is inadequate. That is not accurate.
15 Normandeau's survey protocol called for a survey for this species for any area in the Project
16 corridor that lies within 5 miles of a known occurrence. This is a reasonable, even conservative,
17 methodology. Arrowwood acknowledges that most propagation occurs in close proximity to
18 existing locations. (Arrowwood's report at p. 99 states that "most seeds do fall near the parent
19 plant"). And, as with all species, NHNHB approved the survey methodology.

20 That Arrowwood found the five Indeterminate plant species and one Watch species found
21 in an independent inventory (listed on p. 85 of its report) is not surprising. The list of State
22 Watch and Indeterminate species is voluminous, and occurrences of species in these categories
23 throughout the state are widespread and common.

24 **Butterfly Milkweed** – Arrowwood suggests that the Project has failed to minimize
25 impacts to the one population of this species found. Since submission of my previous testimony
26 on October 16, 2015, Normandeau scientists worked with Project engineers to shift work pads
27 and access roads to completely avoid impacts to this population of Butterfly Milkweed. As
28 noted above, the documentation of this design change on plans with rare plant communities was
29 provided to NHNHB in a confidential email. It is included in the update to Appendix 48 on the
30 Applicants' Track 2 Exhibit List.

1 **Spiked Needlegrass and Licorice Goldenrod** – Arrowwood states in their report at pp.
2 91 and 94 that the Applicants’ AMMs for these two species are inadequate, but, as stated above,
3 the AMMs have since been revised and fully accepted by the state resource agencies. Moreover,
4 Arrowwood acknowledges that these two species both require open, disturbed conditions,
5 produce seeds that are wind disseminated, and build up a seed bank in the soil, all of which make
6 them very tolerant and disturbance resistant, and readily able to revegetate an area following a
7 disturbance. Given the proposed AMMs and the disturbance-tolerant nature of these species, the
8 Project will not adversely affect these species.

9 **Wild Lupine** – This species also requires open, disturbed conditions, builds up a seed
10 bank in the soil and can spread by underground stems (rhizomes). Because Wild Lupine is a
11 species that is vital to Kbb propagation the Project has given focused consideration to this in the
12 Concord Pine Barrens area. Wild Lupine is, of course, included in the final approved AMMs.
13 Moreover, a ROW vegetation management plan within this Pine Barrens habitat was developed
14 in consultation with NHFG, USFWS and NHNHB.

15 Also, Normandeau scientists worked with Project engineers to shift work pads and access
16 roads to further reduce temporary impacts to Wild Lupine by an additional 1,677 square feet.
17 Plan sheets reflecting shifts to Wild Lupine and another listed plant species were submitted to
18 NHDES on January 25, 2017 (App. Ex. 74) and provided to NHNHB on January 30, 2017 (see
19 update to Appendix 48 on the Applicants’ Track 2 Exhibit List).

20 **Q. Do you also have any response to the testimony of David Publicover, an**
21 **expert presented (and employed) by the Appalachian Mountain Club (“AMC”) about the**
22 **Project’s potential impacts on RTE plant species and natural communities?**

23 A. Yes, I do. His testimony focuses largely on potential impacts to exemplary
24 natural communities, commenting largely on one northern hardwood seepage forest (“NHSF”),
25 and commenting generally on exemplary natural communities. On the latter topic, Dr. Publicover
26 states that, except for the one specific NHSF, impacts to exemplary natural communities are not
27 substantial negative effects on an individual basis. His further statement on p. 7 of his testimony
28 that the cumulative effects constitute an unreasonable adverse effect is without any foundational
29 analysis. To state merely that the Project may impact certain natural communities designated as

1 S3 by NHNH¹ does not constitute a “significant impact to the State’s overall bio-diversity”, as
2 he states on p. 7 of his testimony. Moreover, Dr. Publicover’s principal basis for claiming
3 unreasonable adverse effects to natural communities is his (and his employer’s) stated belief that
4 the northern section of the route should be placed underground.

5 He focuses largely on one exemplary natural community, the NHSF in the north section
6 of the route. Northern Pass concurs that there will be impact to this NHSF, and Normandeau
7 botanists recommended to NHNH that it be listed as an exemplary community. Dr.
8 Publicover’s statement that the NHNH lists 13 documented occurrences of NHSF in the State is
9 misleading. The list is of known occurrences that have been reported to the State; it is by no
10 means exhaustive.² This community type is common throughout northern NH and occurs in
11 many more than 13 locations. In addition, the 8 listed plant species that Normandeau found in
12 this exemplary community are either on the State Watch List or the Indeterminate List, neither of
13 which accords protection status.

14 At NHNH’s urging, Northern Pass re-examined two other possible exemplary S3
15 communities in the north section of the route. Based on Normandeau’s assessment, NHB found
16 that one of the two qualifies as exemplary. The other was found to have been recently logged,
17 and NHNH agreed in February of 2017 that the area should be not considered an exemplary
18 community. All of these locations are in regularly logged areas of the North Country.³

19 **Q. How do you take logging activity into account in your assessment of the**
20 **Project’s potential impacts to plants and natural communities?**

21 A. I am not an expert in the timber industry, but I know that the Project selected its
22 route for the north section of the route to minimize impacts to natural resources, including plant

¹ The S3 category connotes that the species or community is “Either very rare and local throughout its range (generally 21 to 100 occurrences) or found locally (even abundantly at some of its locations) in a restricted range, or vulnerable to extinction because of other factors” (Sperduto D.D. and W.F. Nichols. 2004. Natural Communities of New Hampshire. The New Hampshire Natural Heritage Bureau, Concord NH, UNH Cooperative Extension, Durham, NH.)

² Sperduto and Kimball (2011) where the authors state on p. 200 that NHSF’s are “common in the northern part of the state.” (Sperduto, D. and B. Kimball, 2011. The Nature of New Hampshire. University of New Hampshire Press.)

³ In fact, the Normandeau team became aware of recent logging at the site of the NHSF that Dr. Publicover discusses in his testimony and other locations nearby. See the April 5, 2017 e-mail to NHNH in the update to Appendix 48 included on the Applicants’ Track 2 Exhibit List.

1 species and natural communities. That led to the placement of 24 miles of the route in an active
2 commercial timber harvesting area. Furthermore, portions of the other eight miles of new
3 overhead lines in the northern section are also in areas subject to ongoing logging activity that
4 reduces the possible effect of the ROW clearing by the Project.

5 **Q. Has your opinion regarding whether this Project will have a substantial**
6 **negative effect on protected plant species and exemplary natural communities resources**
7 **changed?**

8 A. No, it has not.

9 **Q. Does this conclude your supplemental testimony?**

10 A. Yes.