

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

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

SUPPLEMENTAL
PRE-FILED DIRECT TESTIMONY OF RAYMOND LOBDELL

ON BEHALF OF THE SOCIETY FOR THE PROTECTION OF
NEW HAMPSHIRE FORESTS

APRIL 17, 2017

1 **Q: Have you reviewed Applicants’ response to the NHDES Progress Report of**
2 **May 16, 2016, and the March 1, 2017, decision by NHDES recommending approval with**
3 **conditions?**

4 A. Yes, I have reviewed them relative to wetland issues.

5 **Q: Did the plan recommended by NHDES vary significantly from the plan**
6 **submitted in their original wetlands application in terms of its wetland impacts?**

7 A. No. The wetland impacts originally proposed have been reduced from 6,170,053
8 square feet to 6,098,016 square feet, only about a one percent decrease in wetland impacts.

9 **Q: Is there still the possibility of additional wetland impacts?**

10 A: Yes. In proposed Conditions #22 and #23 of the above NHDES decision, it states
11 that any additional laydown areas or work pads that impact wetlands will need permitting. The
12 Applicants indicate that the contractor may identify additional project areas that need permitting.

13 **Q: You stated in your original testimony that, in your opinion, the project was**
14 **not the least-impacting alternative to wetlands and surface waters. Has your opinion**
15 **changed?**

16 A. No, the least impacting-alternative still remains the alternative of burying the
17 remaining above-ground portions along highway rights of way.

18 **Q: What could the Applicants have done to significantly reduce wetland**
19 **impacts?**

20 A: Well, in Item #1 of the May 16, 2016, Progress Report, NHDES asked why the
21 line could not be buried along the Route 3 right of way from Pittsburg to Northumberland which
22 would avoid “most of the significant wetland and wildlife impacts in Coos County.” The
23 Applicants’ response was not to provide an alternative plan for burying the line along Route 3,

1 but to say, basically, that burial was not practicable. However, Applicants have shown that
2 burying the line can nearly eliminate all wetland impacts. As I stated in my initial pre-filed
3 testimony, burying the line reduces the impacts from over 90,000 square feet per mile in Section
4 N2 to less than 100 square feet per mile in Section UG, the buried section. Burying just Section
5 N2 could potentially reduce the impacts by over 40 percent, and burying the entire northern
6 section to Route 302 in Bethlehem could potentially reduce the impacts by 50 percent.

7 **Q: Did Applicants submit an impact assessment of an alternative design to**
8 **address the question raised by DES for a Route 3 right of way alternative?**

9 A: Not that I am aware of, and I was disappointed that DES did not require the
10 detailed assessment of the Route 3 alternative that they originally asked for. Applicants
11 responded to the DES request, in part, by stating, "...The applicant is not required to include an
12 impact assessment of an alternative project on a site it cannot access, or in another state with
13 different laws, or for a different design that is not practicable." First, since Applicants are using
14 NHDOT rights of way to bury the line in Section UG, I would assume they can use the NHDOT
15 rights of way in other parts of the state. Secondly, looking at alternative designs is often done
16 during the wetland permit review process. For example, consider a proposed large residential
17 subdivision with many proposed roads. Several alternate layouts are often done to show the
18 least-impacting alternative. It may involve replacing a long loop road with two dead ends with
19 cul de sacs or having two entrances instead of one. All of this requires impact assessments of the
20 alternatives to arrive at the least-impacting project. This could have been done in this case.

21 **Q: Why should we be so concerned about the importance of wetlands? Aren't**
22 **wetlands just swamps that are wasteland and should filled in?**

1 A: There was a time in our history when wetlands were considered wasteland, but
2 that time has passed. It has long been established that wetlands are one of our most important and
3 productive ecosystem components. For that reason, wetlands were one of the first natural
4 resources offered regulatory protection in New Hampshire nearly 50 years ago. Why? Well,
5 besides containing, acre for acre, a disproportionally higher number of plant and animal species
6 compared to uplands, wetlands serve a variety of ecological functions including improving and
7 maintaining water quality by trapping sediment, filtering out pollutants, and removing excess
8 nutrients. They can reduce downstream flooding, recharge ground and surface waters, provide
9 wildlife and aquatic habitat, and stabilize shorelines. Wetlands provide scenic vistas, hiking,
10 canoeing, hunting, fishing, and educational values. For all of these reasons, wetlands should be
11 protected and impacts to them avoided or minimized, which is what the law requires.

12 **Q: Are some wetlands more important than others?**

13 A: While all wetlands are important, some wetlands can have more functional value
14 than others. A large number of methods have been devised to assess these functions and values.

15 **Q: You stated that wetlands with very poorly drained/organic soils are generally**
16 **more important. Why?**

17 A: They are the wettest of the wet. There are two main types of wetland, or hydric,
18 soils—mineral and organic. Organic soils are classified as very poorly drained and have layers of
19 organic material in various states of decomposition, such as peat, mucky peat, herbaceous
20 material, and woody material that may be many feet deep. Mineral soils are generally poorly
21 drained and have layers consisting primarily of sand, silt, or clay. Generally speaking, the
22 organic soils are saturated for a longer period of the year and are likely the wetlands with surface
23 water. They often function at a higher level than wetlands with mineral soils and are more

1 diverse with more vegetative communities and wetland plant species. Wetlands with organic
2 soils are generally ranked at a higher functional value than mineral soil wetlands. For example,
3 the USDA-Natural Resource Conservation Service, when ranking sites for funding under their
4 Wetland Reserve Easement Program in New Hampshire, give wetlands with organic soils a
5 higher rank than mineral soils for the carbon-retention function. Additionally, the State of New
6 Hampshire recognizes the importance of organic soils in requiring any wetland designated as
7 prime to consist of at least 50% very poorly drained soils. Env-Wt 701(b) (2). Wetlands with
8 organic soils are also more sensitive to disturbance and harder to restore.

9 **Q: In their May 16, 2016, data request, NHDES asked in Item #12 for “detailed**
10 **restoration/planting plans for temporary wetland, stream and vernal pool impact areas.”**
11 **In their response, did the Applicants adequately address your concerns about restoring**
12 **these wetlands?**

13 A: No. While they did provide additional restoration narrative, restoration notes with
14 BMPs, and a plant and seed mix list, Applicants provided neither site-specific restoration plans
15 nor detailed existing topographic, soil, and hydrologic information for each restoration site. This
16 is important if the wetlands are to be restored to their pre-construction condition.

17 **Q: Will not the conditions proposed by DES insure wetland restoration?**

18 A: Proposed Condition #32 states, in part, “The contractor shall regrade temporary
19 wetland impacts to pre-construction conditions.” However, we do not know what the pre-
20 construction conditions are with no individual site plans. Additionally, Condition #33 states,
21 “The Permittee or Permittee’s contractor shall properly restore and monitor the temporary
22 wetland impact areas. If monitoring reveals that restoration has failed, remedial measures shall

1 be done to re-establish wetland functions.” However, if all the temporary roads are removed,
2 remedial action may be very difficult without re-constructing access to the wetland.

3 **Q: As part of the restoration plans, Applicants are proposing to remove all**
4 **access roads. Will this eliminate all future impacts to the restored wetlands?**

5 A: No. The wetlands maybe re-impacted during routine maintenance. Also, the
6 access roads will most likely need to be re-constructed during de-commissioning. Additionally,
7 even though the access roads will be removed, it may be many years before vegetation has re-
8 established itself and this period before vegetation has re-established itself most likely will
9 encourage recreational ATV and other off-road vehicles use on the right of way which could lead
10 to rutting and severe damage to restored wetlands.

11 **Q: Is not the keeping of ATVs and other land uses off the right of way the**
12 **responsibility of the landowner and not the Applicants?**

13 A: That’s a legal question I cannot answer. However, if thousands of dollars of
14 damage is done by ATVs to wetlands temporarily impacted and restored under this project, will
15 regulators require landowners to restore them at their own cost? If someone does not restore
16 them, then the wetlands impacts become permanent.

17 **Q: What would you recommend to insure temporarily impacted wetlands are**
18 **completely restored?**

19 A: Well, the easiest way is to not impact them in the first place by burying the line in
20 highway rights of way.

21 **Q: In your review of this project have you actually done wetland or soil field**
22 **work in the Eversource right of way or at other project locations?**

1 A: No, field work was beyond my scope of work. My work consisted mainly of
2 reviewing information provided to regulators by Eversource as part of their application process.

3 **Q: How can you review and assess a project without observing it in the field?**

4 A: My starting point was to review the wetlands and soils information provided by
5 Applicants to see if it was complete and included the information necessary to accurately assess
6 the wetland impacts of the project and that avoidance and minimization are maximized. I have
7 pointed out where I thought the information was incomplete or where I felt additional
8 clarification was needed to make that determination.

9 **Q: The NHDES did not require Applicants to amend their wetland functional-**
10 **value assessment to include the entire wetland, not just the area of the wetland within the**
11 **right of way, as you recommended in your original pre-filed testimony. Do you still think**
12 **this should be done?**

13 A: Yes. It seems to me the purpose of the wetland assessment is to establish the
14 functions and values of the wetlands related to the project. If you have a 100-acre wetland and
15 you assess only one acre or 1%, the odds of assessing it incorrectly are high. Put another way,
16 using Applicants' approach you could have one hundred individual assessments of one acre each
17 for a one-hundred-acre wetland with 100 different results for the same wetland. I believe each
18 wetland has only one set of functions and values, and the functions and values have to be
19 assessed for the wetland as a whole.

20 **Q: Are you suggesting that each wetland be field delineated in its entirety?**

21 A: No. Most of the required information can be obtained from aerial photos, existing
22 maps, and existing reports.

1 **Q: So you disagree with Applicants' conclusions about the functions and values**
2 **of the wetland within the project area?**

3 A: Yes, I believe their list of "High Quality Wetlands" shows far too few wetlands to
4 be of high quality. For example, the right of way passes through three of Northumberland's most
5 valuable wetlands, ranging in size from 176 to over 1000 acres, according to the November,
6 2006, report by Watershed to Wildlife, Inc., "Functional Assessment of Wetlands throughout
7 Northumberland". The irregular boundary of these wetlands cross into the right of way 14 times
8 and are identified as 14 separate wetlands in the applicants' assessment. Of these 14 functional
9 assessments by the applicants, less than 1/3rd are ranked as "High Quality", even though the three
10 wetland complexes are all ranked as highly functional in the town-wide assessment.

11 **Q: You stated in your original testimony that you felt Applicants used the**
12 **Highway Methodology incorrectly. Do you still feel that way after reviewing the revised**
13 **application?**

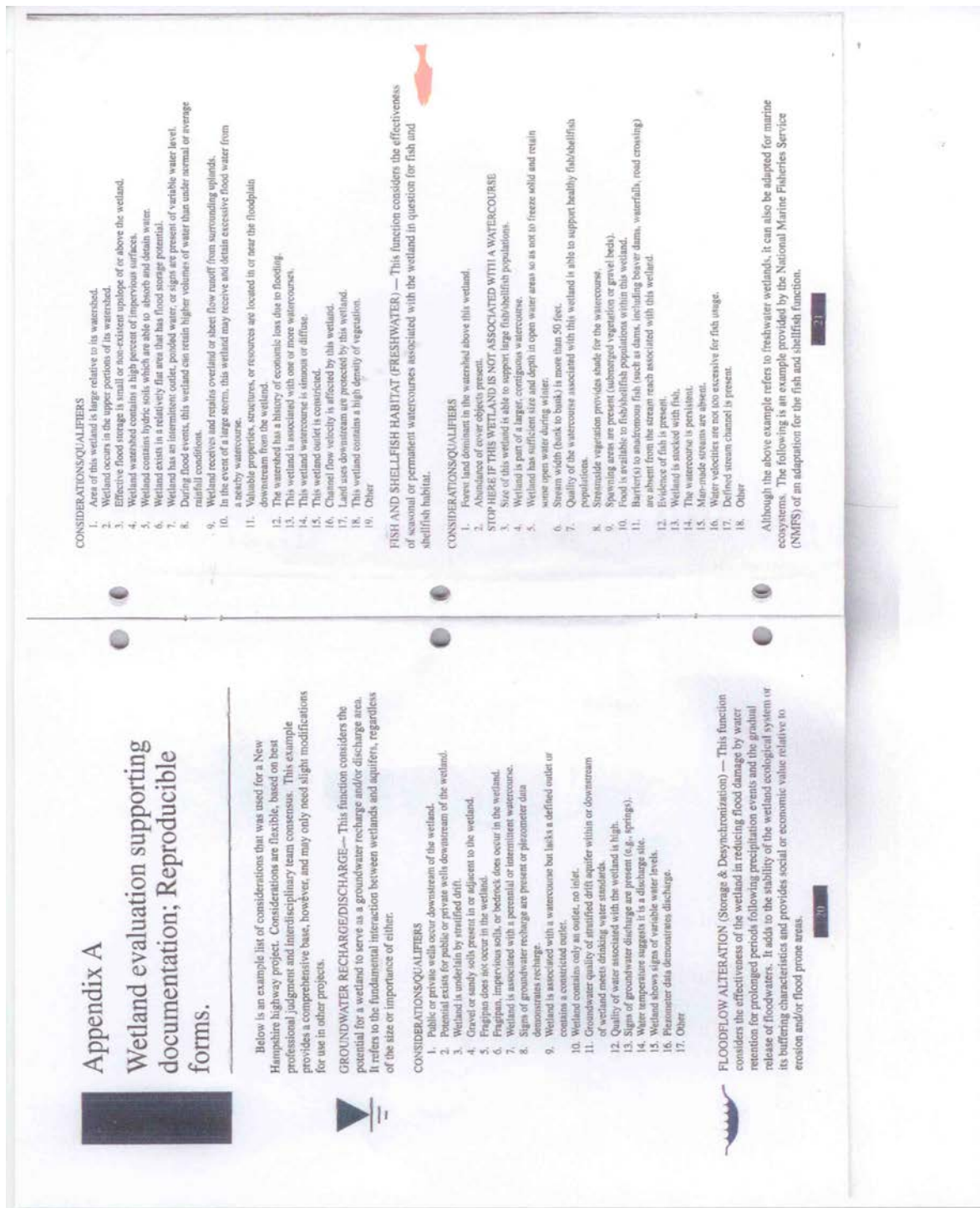
14 A: Yes, for several reasons:

15 1. The applicants still only assessed and evaluated the wetlands in the right of way.
16 Some of the wetlands involved are over 100 acres in size. Many of the rationales listed by the
17 Corps for determining individual functions and values require looking at not just the remainder
18 of the wetland but also the entire watershed in which the wetland exists. *Highway Methodology*,
19 Appendix A. (See Exhibit A). Certain rationales related to flooding, water quality, and wildlife,
20 for example, require examining the entire wetland and watershed.

21 2. Applicants developed their own data sheet instead of using the data sheet
22 provided within the Corps Methodology. (See Exhibit B). Their data sheet, unlike the Corps'
23 data sheet in the publication, does not provide any rationale for why the wetland being evaluated

1 has the functions and values Applicants assigned them. They should have referenced the
2 important rationales from the extensive list provided for each function. They provided no
3 rationales for why each wetland has or does not have certain functions and values.

4 3. The USACE Methodology publication states that in no case should arbitrary
5 weighting be applied to wetland functions or should dissimilar functions be ranked. Applicants
6 assigned 1 point for each function and 2 points for primary functions and then added together all
7 of the functions and values. If the resulting number exceeded 14, it was called a “High Quality”
8 wetland. The Highway Method specifically rejects this kind of adding together different
9 functions and coming up with one number for the wetland. Wetlands can be High Quality even if
10 only one function is present. One example would be the presence of an endangered species.





Northern Pass Project

Wetlands Functions & Values Data Sheet

Wetland ID: <u>SK65</u>		Date: <u>06/24/13</u>	Initials: <u>ACS, WSA</u>
Number of Flags: <u>46</u>		Town: <u>Stark</u>	Project: <u>NP</u>
Wetland: <u>Open</u> / Closed Notes: <u>1/46, 9/10, 39/40</u>		2 Photos: #'s: <u>2 (WSA)</u>	
Open Water Component?: Y / <u>N</u>			
Wetland Associated w/ Stream?: <u>Y</u> / N If Yes, ID: <u>SK66S</u>		Type: P / <u>D</u> / E	
Vernal Pool Identified?: Y / <u>N</u> If Yes, ID: _____		GPS Unit/Tech Initials: <u>Red / AJ</u> Complete: <u>Y</u> / N	
Cowardin Classes (Dominant(%)/others (%)) : <u>PSS1/EM1B 50/50</u>			

Water Regime		Special Modifiers
A- Temp. flooded	F- Semipermanently flooded	b- Beaver
<u>B- Saturated</u>	G- Intermittently exposed	d- Partially drained/ditched
C- Seasonally flooded	H- Permanently flooded	f- farmed
E- Seasonally flooded/ saturated	J- Intermittently flooded	h- diked/impounded
	K- Artificially flooded	i- artificial
		<u>x- excavated</u>
		s- spoil

Functions and Values:			
F/V:	Suitable		Principal (Check)
	Y	N	
Groundwater Recharge/Discharge	<u>X</u>		<u>X</u>
Floodflow Alteration		<u>X</u>	
Fish/Shellfish Habitat		<u>X</u>	
Sed/Tox Retention	<u>X</u>		
Nutrient Removal	<u>X</u>		
Sed/Shore Stabilization	<u>X</u>		
Production Export		<u>X</u>	
Wildlife Habitat	<u>X</u>		
Recreation		<u>X</u>	
Educate/Science Value		<u>X</u>	
Uniqueness/Heritage		<u>X</u>	
Visual Qual/Aesthetic		<u>X</u>	
End/Threatened Species		<u>X</u>	
Other:			

Notes:
side slope seep, fairly disturbed,
some pit mound on northern edge

Dominant Plants:	
Tree: _____	
Sapling/Shrub: <u>Red Maple, Spruce, Alder, Silky Dogwood</u>	
Herb/Seedling: <u>Sorrel, Cinnamon, Intery, NY, Fern, Carex</u>	
<u>Solidago rigida</u>	
Woody Vine: _____	
Invasives: _____	
Soils:	
Texture: Organic (<u>Loamy</u>) Sandy Silty Clayey	
If mineral - Parent Material: <u>Till</u> Alluvium Other _____	
Restrictive Layer? <u>Y</u> N if Yes, Depth (inches) <u>3-8 in</u>	
Sketch Map:	

☐ Enrich./Calc. Seepage Swamp
 ☐ Floodplains/FP Forest
 ☐ Peatland (bogs & fens)
 ☐ Freshwater Marsh
 ☐ Unique Basin Swamp/Marsh, which often include:
 ☐ Black Ash
 ☐ Silver Maple
 ☐ Vegetated Shallow

Rev 7

NPT_DIS 042044

Example of Normandeau Wetland Functions-Value Evaluation Form

Wetland ID: WD1-1
Latitude 44° 44' 34.856 Longitude 71° 44' 24.856
Prepared by: UDC, JGL Date 12-7-07
Wetland Impact: Fill Area 4.9 AC
Evaluation based on: Field ☒ Office ☒
Corps manual wetland delineation completed? Y ☒ N ☐

Total area of wetland 11.2 ac. Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No
Adjacent land use Forest, Residential Distance to nearest roadway or other development 0'
Dominant wetland systems present POW, FFO, FLE Contiguous undeveloped buffer zone present Yes
Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid
How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Function/Value	Suitability Y N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	X	2, 6, 7, 8, 10, 11, 12, 13		A layer of organic silt blankets the thin glacial till topsoil in this area, thus wetland is an expanse of groundwater discharge.
Floodflow Alteration	X	2, 3, 4, 5, 6, 7, 13, 14		Water flow constricted by culverts, some detention occurring in this ponded, well-saturated area. <i>Portion of wetland at impact area does not store floodwater.</i>
Fish and Shellfish Habitat	X	1, 5, (6), 9, 10, 14, 15, 16, 17		Culverts restrict access, wetland is relatively small, fisheries site # 1.5.
Sediment/Toxicant Retention	X	3, 4, 5, 6, 7, 8, 9, 10, 12		Sediments can drop out in the ponded section.
Nutrient Removal	X	2, 3, 5-15		Potential for sediment and nutrient removal exists, logging activities have occurred adjacent to wetland.
Production Export	X	1, 2, 4, 5, 6, 7, 9, 10, 12, 14		Cowflow is constricted, little transport occurs via wildlife, wetland is predominantly attenuating wetlands.
Sediment/Shoreline Stabilization	X	4, 6, 9, 10, 12, 13, 14, 15		Low flow velocities.
Wildlife Habitat	X	1, 2, 4, 5, 6, 7, 8, (12), 16, 17, 18, 19, 21	X	Escapes for minor road, this wetland is well buffered, and directly connected to the trap River. Good amphibian habitat.
Recreation	X	2, 4, 5, 6, 8, 9, 10		Wetland is easily accessible, and has some potential to function as educational and recreational area.
Educational/Scientific Value	X	2, 3, 5, 6, 9, 10, 11, 12, 15		Potential for pond study to occur. No known educational use.
Uniqueness/Heritage	X	7, (14), 17, 18, 20, 22, 23	X	Prehistoric archaeological sensitive areas adjacent to wetlands. <i>Archaeologic artifacts found adjacent to wetland by local archaeologist.</i>
Visual Quality/Aesthetics	X	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12		Direct view of wetland exists from roadway. Open water contrasts with surrounding forest land.
ES Endangered Species Habitat	X	None		None found or known to occur here.
Other				

Notes: *Additional vegetation species noted at 5.2.4-10.5 Wetland Delineation field visit (Refer to Wetland Delineation Form).* Phase II wetland assessment is relatively indicative of functions and values present at impact area.
* Refer to backup list of considerations.