

March 22, 2017

Mr. David Keddell
U.S. Army Corps of Engineers, New England District
Permits and Enforcement Branch "C"
Regulatory Division
696 Virginia Road
Concord, Massachusetts 01742-2751

Re: Joint Application of Northern Pass Transmission, LLC and Public Service Company of New Hampshire d/b/a Eversource Energy: Secondary Impact Compensatory Mitigation Calculation

Dear Mr. Keddell:

Normandeau has discovered that the methods we used for calculating the total area required for compensatory mitigation of secondary impacts from forested wetland conversion in the expanded Northern Pass ROW in Pembroke resulted in an under-reporting of the proposed tree clearing in forested wetlands. In Pembroke, there is a 1.5 mile stretch of expanded ROW that is approximately 45 feet wide. This expansion of the ROW was made after wetlands were first delineated in the adjacent existing ROW, where most wetlands were classified as shrub or emergent due to their location in an existing, cleared/maintained ROW. Wetland boundaries were later extended into the expanded (uncleared) ROW, but in most cases, the dominant wetland cover type was not changed, as the area of forested wetland in the total ROW was still lower than the contiguous shrub or emergent area. However, the forested portions of these wetlands overlap the LIDAR-generated clearing polygons and will need to be cut. We manually reviewed the wetland plan sheets to recalculate the area of forested wetland conversion in Pembroke, and also confirmed that there were no other locations along the existing or new Northern Pass ROW where a similar error would have occurred. The increase in the forest conversion impact area for Pembroke is 83,749 sf. The total area of secondary impacts in Pembroke included in the October 2015 application was 319 sf, and the recalculated area is 84,068 sf. This revised total relates only to the extent of compensatory mitigation under federal permit requirements for secondary impact; we are proposing no additional impacts to state or federal jurisdictional wetlands.

The regulatory guidance we received for addressing secondary impacts of forested wetland conversion requires mitigation of 15% to 20% of the cleared area, depending on whether the clearing is for new ROW or along existing ROW. Using 20% for this Pembroke forest conversion area, the total mitigatable area (all secondary and permanent impacts) in Pembroke is now 23,217 sf. This brings the total of mitigatable impacts in the Merrimack River watershed (including impacts in the six other municipalities in the watershed) to 60,152 sf (1.38 acres). The proposed mitigation for impacts in the Merrimack River watershed is the preservation of Site Z3-The Brush Road Forest Site in Pembroke, an 87 acre well-managed forest with wetlands, streams, and vernal pools. This Site greatly exceeds state and federal mitigation ratios or multipliers for permanent and secondary impacts in the Merrimack River watershed, including the new total explained above.

Thank you again for your review and consideration of these materials. If you have questions or comments, please do not hesitate to contact me directly at (603) 637-1150 or at lcarbonneau@normandeau.com.

Sincerely,



Lee E. Carbonneau
As agent for Northern Pass Transmission, LLC.
Senior Principal Scientist
Normandeau Associates, Inc.

Attach.

Cc: Lori Sommer, NHDES
Craig Rennie, NHDES
Mark Kern, USEPA
Ammy Heiser, Chair, Pembroke Conservation Commission
Pamela G. Monroe, SEC Administrator
Kevin F. McCune, Eversource

Table 1. Preservation and ARM Fund Payments for Impacts by Primary HUC 8 Watershed
(Revised, February 2017)**

Project Town/City	Total Impacts for Mitigation (SF)	ARM Fund Equivalent of Total Impacts	Preservation Sites in Same Watershed	Impact to Preservation ratio (actual acres) or ARM Fund Amount
Merrimack River Watershed				
Allenstown	6,987	\$25,959.02	Z3	1:63 (1.38:87)
Canterbury	7,869	\$28,625.53	Z3	
Concord	8,972	\$41,174.36	Z3	
Londonderry	8,794	\$42,451.01	Z3	
Northfield	3,816	\$13,944.70	Z3	
Pembroke	23,217	\$92,527.62	Z3	
Chester	497	\$1,932.21	Mostly Z3	
Total	60,152	\$246,614.45		
Pemigewasset Watershed				
Ashland	2,755	\$10,819.73	None	\$308,944.25
Bridgewater	23,776	\$93,448.00	None	
Bristol	17,297	\$67,641.20	None	
Franklin	17,164	\$65,247.22	Minimal	
Hill	2,781	\$9,904.02	None	
New Hampton	16,836	\$61,884.08	None	
Total	80,609	\$308,944.25		
Piscataqua-Salmon Falls Watershed				
Deerfield	69,953	\$262,852.69	Minimal	\$263,589.45
Raymond	179	\$736.76	None	
Total	70,132	\$263,589.45		
Upper Androscoggin Watershed				
Dixville	346,063	\$1,215,869.25	None	\$2,634,800.30
Dummer	175,600	\$616,957.45	Minimal	
Millsfield	228,259	\$801,973.60	None	
Total	749,922	\$2,634,800.30		

Project Town/City	Total Impacts for Mitigation (SF)	ARM Fund Equivalent of Total Impacts	Preservation Sites in Same Watershed	Impact to Preservation ratio (actual acres) or ARM Fund Amount
Upper Connecticut Watershed				
Clarksville	42,871	\$150,848.12	A,B,C,E,K,N	1:182 (8.4:1,530)
Lancaster	21,976	\$78,647.66	A,B,C,E,K,N	
Northumberland	23,961	\$84,692.61	A,B,C,E,K,N	
Pittsburg	112,193	\$395,383.65	A,B,C,E,K,N	
Stark	16,638	\$58,547.36	A,B,C,E,K,N	
Stewartstown	146,318	\$517,577.73	A,B,C,E,K,N	
TOTAL	363,957	\$1,285,697.13		
Waits Watershed				
Bethlehem	22,816	\$80,634.12	none	\$171,946.59
Dalton	3,136	\$11,170.81	none	
Whitefield	22,355	\$80,141.66	Minimal	
Total	48,307	\$171,946.59		
Total ARM Fund amount (without preservation):		\$4,911,592.17	Total ARM Fund amount (with Preservation of 1,621 Acres)*:	\$3,379,280.59

* Not including the Project ROW/Transition stations or the Pine Barrens site.

** With the additional forest conversion secondary impacts added for Pembroke, as described in the attached letter.