DEVINE MILLIMET

ATTORNEYS AT LAW

GEORGE DANA BISBEE
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June 7, 2017

VIA FEDERAL EXPRESS

12 JUN '17 PM12:59

Pamela Monroe
Administrator, Site Evaluation Committee
21 S. Fruit St., Suite 10
Concord, NH 03301

Re: Northern Pass Transmission, LLC Applications for Soil Test Pits in Pittsburg and Deerfield

Dear Ms. Monroe:

Enclosed are two standard dredge and fill wetland applications for soil test pits and one Shoreland Permit by Notification for soil test pits recently submitted to the Department of Environmental Services ("DES") by Normandeau Associates, Inc. ("Normandeau") on behalf of Northern Pass Transmission, LLC. I am also including the cover letters from Normandeau to DES that accompanied each application. Note that the Permit by Notification was approved by DES and that approval was emailed to you by DES on Tuesday, June 6.

We are enclosing one hard copy and one thumb drive of the above-referenced documents.

Please do not hesitate to contact me if you have any questions.

Sincerely,

George Dana Bisbee

Enclosures

NORMANDEAU ASSOCIATES
Environmental Consultants

May 31, 2017

Mr. Craig Rennie
Wetlands Bureau
NH Department of Environmental Services
PO Box 95 – Hazen Drive
Concord, NH 03302

RE: Northern Pass Transmission, LLC. Wetland Applications for Soil Test Pits – Deerfield Substation expansion area

Dear Mr. Rennie:

On behalf of Northern Pass Transmission LLC, Normandeau Associates, Inc. is submitting this standard dredge and fill wetland application for soil test pits at the Deerfield Substation expansion area for the Northern Pass Transmission Project. This work is necessary for final design of this facility, including stormwater control features. One application fee check for $468.20 is also attached.

We appreciate your review of this application. Please feel free to contact me if you have any questions or require additional information.

Sincerely,

Lee E. Carbonneau

Lee Carbonneau
As Agent for Northern pass Transmission, LLC.
Senior Principal Scientist
Normandeau Associates, Inc.

Attach.

Cc. Jerry P. Fortier, Northern Pass Transmission, LLC.
Kevin McCune – Eversource Energy

Standard NHDES Wetland Permit Application
Soil Test Pits - Substation Expansion Site

Northern Pass Transmission Project
Deerfield, NH

Prepared for
Northern Pass Transmission, LLC and Public
Service Company of New Hampshire
d/b/a Eversource Energy
Energy Park
780 Commercial Street
Manchester, NH 03101

Prepared by
Normandeau Associates, Inc.
25 Nashua Road
Bedford, NH 03110

May 2017

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WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau
Land Resources Management

Check the status of your application: www.des.nh.gov/onestop

RSA/Rule: RSA 482-A/ Env-Wt 100-900

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to Guidance Document A for instructions.

☒ Standard Review (Minimum, Minor or Major Impact) ☐ Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:

If mitigation is required a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if Mitigation is Required, please refer to the Determine if Mitigation is Required Frequently Asked Question.

Mitigation Pre-Application Meeting Date: Month: **05** Day: **26** Year: **2016**

☒ N/A - Mitigation is not required

3. PROJECT LOCATION:

Separate wetland permit applications must be submitted for each municipality that wetland impacts occur within.

ADDRESS: **Cate Road** TOWN/CITY: **Deerfield**

TAX MAP: **408** BLOCK: LOT: **49** UNIT:

USGS TOPO MAP WATERBODY NAME: ☒ NA STREAM WATERSHED SIZE: ☒ NA

LOCATION COORDINATES (If known): **43.14N, 71.19W** ☒ Latitude/Longitude ☐ UTM ☐

4. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

Northern Pass proposes to excavate two test pits on parcel 408-49 in Deerfield, New Hampshire to examine subsurface soil conditions which are needed for final design of Northern Pass project elements. Test pits are excavated with a backhoe or small excavator which accesses the test pit locations following a path specified on the plans, removing as little vegetation as possible. There are no permanent impacts associated with this work.

5. SHORELINE FRONTAGE:

☒ NA This does not have shoreline frontage. SHORELINE FRONTAGE:

Shoreline frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line.

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required and, if required, the status of the application.

To determine if other Land Resources Management Permits are required, refer to the Land Resources Management Web Page.

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	☐ YES ☒ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED
Individual Sewerage Disposal per RSA 485-A:2	☐ YES ☒ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED
Subdivision Approval Per RSA 485-A	☐ YES ☒ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED
Shoreland Permit Per RSA 483-B	☐ YES ☒ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB **15** - **0611** .

b. ☐ Designated River the project is in ¼ miles of: _____ ; and date a copy of the application was sent to the Local River Management Advisory Committee: Month: __ Day: __ Year: ____

☒ N/A

8. APPLICANT INFORMATION (Desired permit holder)

LAST NAME, FIRST NAME, M.I.: **Northern Pass Transmission LLC, c/o Jerry P. Fortier; PSNH dba Eversource Energy**

TRUST / COMPANY NAME: **Northern Pass Transmission LLC**	MAILING ADDRESS: **780 North Commercial St**

TOWN/CITY: **Manchester**	STATE: **NH**	ZIP CODE: **03101**

EMAIL or FAX: **Jerry.fortier@Eversource.com**	PHONE: **603 669-4000**

ELECTRONIC COMMUNICATION: By initialing here: **JPF**, I hereby authorize NHDES to communicate all matters relative to this application electronically

9. PROPERTY OWNER INFORMATION (If different than applicant)

LAST NAME, FIRST NAME, M.I.: **Public Service Co. of New Hampshire c/o Kevin F. McCune**

TRUST / COMPANY NAME: **Eversource Energy Service Corporation as agent for PSNH d/b/a Eversource**	MAILING ADDRESS: **780 North Commercial Street**

TOWN/CITY: **Manchester**	STATE: **NH**	ZIP CODE: **03101**

EMAIL or FAX: **kevin.mccune@eversource.com**	PHONE: **339-987-7020**

ELECTRONIC COMMUNICATION: By initialing here **KFM**, I hereby authorize NHDES to communicate all matters relative to this application electronically

10. AUTHORIZED AGENT INFORMATION

LAST NAME, FIRST NAME, M.I.: **Carbonneau, Lee, E.**	COMPANY NAME: **Normandeau Associates, Inc.**

MAILING ADDRESS: **25 Nashua Road**

TOWN/CITY: **Bedford**	STATE: **NH**	ZIP CODE: **03110**

EMAIL or FAX: **lcarbonneau@normandeau.com**	PHONE: **603-637-1150**

ELECTRONIC COMMUNICATION: By initialing here **LEC**, I hereby authorize NHDES to communicate all matters relative to this application electronically

11. PROPERTY OWNER SIGNATURE:

See the Instructions & Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for NHPA 106 compliance.
8. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not

⇨ **See attached signature page** Property Owner Signature	Print name legibly	/ / Date

MUNICIPAL SIGNATURES

12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

⇨	Print name legibly	Date

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

⇨ Town/City Clerk Signature	Kevin J. Barry Print name legibly	Dover Town/City	5/31/17 Date

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

14. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is complete.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.		TEMPORARY Sq. Ft. / Lin. Ft.	
Forested wetland	0	☐ ATF	633	☐ ATF
Scrub-shrub wetland	0	☐ ATF	1,708	☐ ATF
Emergent wetland	0	☐ ATF	0	☐ ATF
Wet meadow	0	☐ ATF	0	☐ ATF
Intermittent stream	0	☐ ATF	0	☐ ATF
Perennial Stream / River	0 / 0	☐ ATF	0 / 0	☐ ATF
Lake / Pond	0 / 0	☐ ATF	0 / 0	☐ ATF
Bank - Intermittent stream	0 / 0	☐ ATF	0 / 0	☐ ATF
Bank - Perennial stream / River	0 / 0	☐ ATF	0 / 0	☐ ATF
Bank - Lake / Pond	0 / 0	☐ ATF	0 / 0	☐ ATF
Tidal water	0 / 0	☐ ATF	0 / 0	☐ ATF
Salt marsh	0	☐ ATF	0	☐ ATF
Sand dune	0	☐ ATF	0	☐ ATF
Prime wetland	0	☐ ATF	0	☐ ATF
Prime wetland buffer	0	☐ ATF	0	☐ ATF
Undeveloped Tidal Buffer Zone (TBZ)	0	☐ ATF	0	☐ ATF
Previously-developed upland in TBZ	0	☐ ATF	0	☐ ATF
Docking - Lake / Pond	0	☐ ATF	0	☐ ATF
Docking - River	0	☐ ATF	0	☐ ATF
Docking - Tidal Water	0	☐ ATF	0	☐ ATF
TOTAL	0 / 0		2341 / 0	

15. APPLICATION FEE: See the Instructions & Required Attachments document for further instruction

☐ Minimum Impact Fee: Flat fee of $ 200

☐ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking)	**2341** sq. ft.	X	$0.20 =	$ **468.20**
Temporary (seasonal) docking structure:	**0** sq. ft.	X	$1.00 =	$ **0**
Permanent docking structure:	**0** sq. ft.	X	$2.00 =	$ **0**
Projects proposing shoreline structures (including docks) add $200 =				$ **0**
Total =				$ **468.20**
The Application Fee is the above calculated Total or $200, whichever is greater =				$ **468.20**

Additional Detail for Sections 8, 9 and 11 on NH DES Wetlands Permit Application Form

1. Eversource Energy Service Corporation, as duly authorized agent for
   Northern Pass Transmission LLC
   Jerry P. Fortier
   Director, Transmission Business Operations
   780 North Commercial Street
   Manchester, NH 03101
   Tel: 603-669-4000
   Jerry.Fortier@eversource.com

   By Jerry P. Fortier, duly authorized

2. Eversource Energy Service Corporation, as duly authorized agent for
   Renewable Properties, Inc.
   Kevin F. McCune
   780 North Commercial Street
   Manchester, NH 03101
   Phone: 339-987-7020
   Kevin.mccune@eversource.com

   By Kevin F. McCune, duly authorized

Northern Pass Soil Test Pits for Seasonal High Water Table Investigation
Project Description and Construction Sequence
Deerfield Substation Expansion Area – Deerfield, NH

Northern Pass proposes to excavate and examine two soil test pits at the Deerfield Substation expansion site to examine subsurface soil and geological conditions which are needed for final design of Northern Pass project elements. Test pits are excavated with a small excavator or backhoe which accesses the test pit locations following a path specified on the plans. The route for the excavator was determined by a contractor in the field based on topography and avoidance of potential obstructions such as large trees, boulders, stone walls, and sensitive resources (previously delineated and mapped) such as wetlands and streams. The goal is to provide safe and efficient access while minimizing wetland and stream crossings and removing as little vegetation as possible.

The access path for the excavator will be approximately 15-feet wide and there is a 60-foot radius around each test pit for an equipment work area and temporary soil stockpile. Existing access paths that were mowed, cut and matted for geotechnical borings in fall 2016 will be followed to minimize temporary impacts. Some additional upland clearing may be required along the access route or at the test pit sites. There are two wetlands in the existing ROW and one wetland within the forested portion of the site that must be temporarily crossed to access the work site for the two test pits.

Excavation of Test pit TP 601 will disturb approximately 266 sf of upland and TP 602 will disturb approximately 414 sf of uplands. The test pits are not located in wetlands. There are no permanent impacts associated with this work. The work is expected to take a week or less.

Construction Sequence

- Verify that the reflagged wetland boundaries along the drilling access route (completed in August 2016) are still visible and if necessary, replace missing wetland boundary flags;
- Hand cut any additional trees and brush along the equipment access path and test pit radius as necessary (2015 acoustic monitoring indicates no Northern Long-eared Bats are present at the worksite)
- If mowing of the access path is necessary, deploy environmental monitor to walk ahead of mower searching for state-listed turtles and/or snakes (if appropriate based on season) for relocation to a safe, nearby site and mow access route
- Establish other BMPs, if required, including any appropriate silt fence, straw bales, filtration basins, etc. Timber mats will be used if necessary
- Mobilize clean excavation equipment and deploy environmental monitor to walk ahead of motorized equipment searching for state-listed turtles and/or snakes in the access path (if appropriate based on season) for relocation to a safe, nearby site, and notify NHF&G
- Deploy monitor to check E&S controls and wetland crossings
- Excavate test pits and record data
- Refill and tamp test pits upon completion, with reserved topsoil going in last
- Remove all equipment and materials and clean up any materials, seed disturbed areas
- De-mobilize and clean equipment

Appendix A
Copy of Application Check

NORMANDEAU ASSOCIATES, INC.
25 Nashua Road, Bedford, NH 03110-5527
(603) 472-5191 (603) 472-7052 fax

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

100776
CHECK DATE
May 25, 2017

PAY Four Hundred Sixty Eight and 20/100 Dollars

AMOUNT
468.20

TO Treasurer, State of New Hampshire
ATT: NHDES
P.O. Box 95
Concord, NH 03302-0095

Pamela S Hall MP
TWO SIGNATURES REQUIRED OVER [illegible]00

Security Check features included. Details on back.

⑈100776⑈ ⑆211070175⑆ 1104114302⑈

EMILY BUSINESS FORMS 800.392.6018 VISION

NORMANDEAU ASSOCIATES, INC. 25 Nashua Road, Bedford, NH 03110-5527

100776

Check Date: 5/25/2017

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
Deerfield wetland	5/24/2017	2440218	468.20			468.20
Treasurer, State of New Hampshire		TOTAL	468.20			468.20
Citizens MA Checking	117	70697				

Appendix B
Pre-Application Meeting Report

Northern Pass Transmission (NPT) Project

NHDES Progress Report Follow-up Meeting – NHDES Offices,

Concord, NH May 26, 2016

2:00 PM to 3:30 PM

Attendees:
Collis Adams – NHDES
Lori Sommer – NHDES
Craig Rennie – NHDES
Kevin McCune – Eversource
Lee Carbonneau – Normandeau
Jake Tinus - Burns & McDonnell
Dana Bisbee – Devine Millimet

Dana Bisbee explained that the point of our request for the meeting was to discuss the progress report and seek clarification on certain questions pertaining the wetlands application. He pointed out that NPT intends to ask for a meeting with Ridge Mauck and Gregg Comstock regarding the Alteration of Terrain and §Section 401 Water Quality Certification applications, respectively. Dana explained that the overall SEC schedule had now been extended by the SEC to September 2017 and but that the deadline for the final progress reports from DES (and other agencies) is still set for August 15, 2016.

Next, as follows, Dana led the discussion regarding clarification of specific questions as they pertain to the wetlands permit application.

Additional Data Requirements

Question 1) It appears that the transmission line could buried along the NH Route 3 right-of-way (ROW) from Pittsburg to Northumberland to avoid creating a new 32 mile ROW that runs cross- country in a southeasterly direction, almost to the Androscoggin River, only to eventually return due west to the Connecticut River valley. The Route 3 alternative would avoid most of the significant wetland and wildlife impacts in Coos County; therefore, DES review found that this portion of the project does not avoid and minimize wetland impacts to the greatest extent practicable per RSA 482-A and NH Administrative Rule Env-Wt 302.03 and Env-Wt 302.04. Please provide revised plans that consider and utilize the NH Route 3 alternative from Pittsburg to Northumberland.

Discussion: Dana explained that he had reached out to Collis Adams for clarification of this question as it seems to indicate that DES has already arrived at a finding. Collis explained that as confirmed by email with Dana that it was not the intention of DES to indicate a finding in the question as it is posed. Rather, DES is asking NPT to clarify its attempts at avoidance and minimization during the route selection process resulting in the route that was presented in the application. Further, Collis explained that what they are seeking is information about the practicability of the proposed route as any decision made by DES needs to be defensible.

Dana questioned if DES was seeking permit plans for the Route 3 alternative, including mapping of natural

resources. Craig indicated that the rule requires evidence for practicability and this could involve plans and calculations to illustrate the practicability of the chosen route. Further, in considering the Draft EIS, Craig said that the document talks about overall project costs but it does not break costs out specifically for the Route 3 option which would involve underground installation. Similarly, the Draft EIS does not break out wetlands impacts and wildlife impacts for this option. DES assumes that the Route 3 option, since it involves undergrounding, is the option that is least impacting as this is the case for the section of underground that avoids impacts through the White Mountain National Forest (WMNF). Craig indicated that the WMNF underground portion of the project would involve a "simple" review due to the lack of resource impacts.

Using an example of box stores, Dana asked if DES would require additional analysis for alternate sites in entirely different locations. Lori Sommer indicated that yes, in the past, DES had asked for applicants to consider alternate sites that would involve less impacts and mentioned the WalMart distribution center in Raymond. Collis confirmed this, and said this is the approach when the applicant has not yet secured the property needed for the project and meets early with NHDES to discuss their project.

Question 2) Per Rule Env-Wt 302.04(a) (2) the applicant is required to demonstrate by plan and example that the proposed alternative is the one with the least impact to wetlands or surface waters. It is not clear how the proposed 32 mile new ROW in Coos County avoids surrounding wetlands on a landscape scale when the wetland impact plans only represent wetlands located within the ROW. DES finds that the proposed 32 mile ROW in Coos County is not an alternative with the least impact to wetlands or surface waters.

Discussion: Lee Carbonneau summarized the analysis that was performed to arrive at the proposed route. She said that initially Burns & McDonnell had performed desktop analysis for a potential route noting its constraints and limitations. When the selected route was abandoned due to public sentiment, Normandeau assisted in selection of a new route with desktop modeling and analyses of approximately 40 different segments which had considered many factors including natural resources, population centers, conservation lands, proximity to ridgelines, etc. She explained that the project had produced "spaghetti maps" showing a number of alternative routes that were eventually weeded out leading to the current route but this specific information was not included in detail in the application. This review informed the property rights acquisition efforts. The current route was sited within the constraints of the Projects property rights, and has a mid-level landscape position. This route seeks to avoid as much as possible both valleys, where wetlands, riparian habitats, and highest ranked habitat are more frequently encountered, and ridgetops, which have other sensitive resources.

Collis emphasized that what DES is seeking with this question is that from a broad landscape perspective, how did NPT arrive at the proposed alternative as the one with the least amount of impact to wetlands and surface waters? Lee explained that not a lot of specific field data was collected outside of the proposed route. Lori said that it would be helpful to have a spreadsheet created that would show the impacts for wetlands, streams, vernal pools, etc. broken out by the various routes or route segments. Craig indicated

that it is not clear what forced the route east toward the Wagner Forest land, then back west from Dummer Pond. NPT needs to explain what was done to eliminate the different route segments as it is necessary for DES to have this information to understand how NPT had arrived at its' current route.

Question 3) It appears that the new section of ROW in Coos County comes within close proximity to several areas of the Granite Reliable Wind Farm. Cumulative impacts to wetland complexes and stream systems need to be further addressed and evaluated as required under Rule Env- Wt 302.04(a)(16) and (17).

Dana asked for clarification with respect cumulative impacts along the project route. He explained that the NPT project team was not able to collect a great deal of information outside of the immediate project corridor due primarily to a lack of access to these areas. Dana mentioned that the SEC project maps had been updated to include estimated resources outside of the project corridor. Referencing a table that Normandeau had produced, Lee indicated that the project team has some idea of the percentage of wetlands, streams, etc. that are affected by the project directly within the mapped project area but that outside of the limits of the investigations this would be difficult to do. Craig explained that with this question, DES is really asking for a more limited analysis, i.e., that of wetland complexes and stream systems that are in close proximity or common to both NPT and the Granite Reliable Wind Farm. Lori indicated that much data has been generated for the wind farm project as it has already been permitted, and DES is asking that NPT compare that data with the proposed NPT impact data to further explain cumulative impacts in the wetland systems that are shared by the projects.

Question 7) There appears to be a change in use on some forestry access roads, as well as some ATV and snow machine trails, that will require additional permitting. See Rule Env-Wt 303.04(g)(l), which states "access shall not be used for subdivision, development, or other land conversion to non-forestry uses ...". Please include in the wetland application any additional wetland impact areas where this change in use occurs. In addition, existing stream crossings may need to be upgraded to meet the stream crossing standards of Chapter Env-Wt 900.

Dana explained that the NPT team did not fully understand the question and how it applies to NPT in that the forestry access roads are primarily for access to the ROW. Lee explained that NPT has presented information about access roads in the permit application. This information includes details about wetland crossings which would involve temporary impacts, largely from matting. No permanent impacts were expected as the roads that are indicated for access are those that appeared substantial enough to contain equipment and would not require a lot of modification. Jake Tinus added that now that the contractor is on board, walkdowns are expected to occur later this summer to take a closer look at project access, amongst other issues. At that time, culverts that require modifications could be identified. Further, Jake stated that the project has agreed to comply with the stream crossing rules in the application which would require approvals for upgraded stream crossings wherever they are identified. Craig said that any crossing that didn't go through a permitting process on the Bayroot/Wagner property previously would need to be looked at. Dana explained that it is common for the SEC to consider small changes and delegate the responsibility for review to the DES.

Craig explained the Granite Reliable Wind Farm project faced a similar situation whereby the paper company that owned the land was actively using the roads for temporary access and has obtained a number of

Forestry PBNs over the years. When the Granite Reliable project came along, it was required to upgrade certain culverts for a change in use and comply with the stream crossing rules. Essentially, the wind farm applicant performed an assessment of the culverts that would require upgrades and submitted that to DES ahead of the final progress report. Craig recalled that the number of culverts that required upgrading was limited to perhaps 6 or 8 for the whole project. DES said that they would expect that a similar analysis be performed for NPT this summer and provided to them prior to issuance of their final report to the SEC. No assessment of wetland fill would be required; the survey can be limited to culverts where stream rules apply.

Question 10) Review of the Deerfield Substation plans finds that most of the proposed wetland impacts are for two stormwater ponds; 9,037 square feet and 19,196 square feet respectively. Impacts to naturally-occurring wetlands for stormwater treatment and attenuation are typically not allowed. It appears that the substation could be shifted further southwest to avoid these wetland areas. Also, the stormwater ponds could be reconfigured to further reduce impacts.

Dana explained that NPT had endeavored to avoid impacting wetlands at the Deerfield Substation site but that it is limited in size and constrained by wetlands. A similar situation exists at Transition Station #1 and Transition Station #5 sites. Craig pointed out that there is a DOT Alteration of Terrain rule that states that impacts to wetlands by detention basins and stormwater appurtenances is not allowed unless the Wetlands Bureau allows it. Dana inquired if a rule waiver could be sought with the AoT program. Craig indicated that we could try but he stated that DES is basically asking if NPT can reduce the size of the basins to remove them from the wetlands. Jake reiterated that the transition station sites are limited in size and that shifting the development at the sites would not likely result in any reduction in impacts. Craig indicated that in DES' view, runoff from gravel pads in substations is virtually non-existent and that perhaps the design engineers can look at some of their assumptions for CN values which could help reduce the size of the stormwater features. Jake indicated that additional geotechnical investigations are slated for later this summer which would provide additional information to the engineers. Lori said there is chance that the permit could be denied for these impacts so the team does need to take a look at this issue. Further, as has been the case in two recent projects, the Corps of Engineers could say also say no. Jake said that he would be speaking soon with the engineers about these points made for the three sites.

Question 20) All wetland areas along the 192 mile corridor are required to be field delineated and classified in accordance with Env-Wt 301.01 and Env-Wt 301.02. Have these requirements been met or did some of the wetland areas get interpreted and identified from aerial photographs?

Lee responded to this question that yes, all wetlands, except for one small area on the Franklin Converter Terminal site had been field delineated. The Franklin wetland was photo-interpreted but would be delineated as soon as possible.

Question 30) The application states that calcium rich bedrock occurs within the towns of Dummer, Millsfield, Dixville, Stewartstown, Clarksville, and Pittsburg. With the higher possibility of rare plants occurring in these areas, botanists should be retained to re-survey these areas prior to construction to ensure that additional rare plants are avoided.

Dana asked for clarification of this question. Craig explained that DES is asking about construction activities and scheduling to avoid impacts. Further, DES would like NPT to perform an additional survey prior to construction of the areas of rare plants to capture any changes in location and distribution. Lee explained that NPT had coordinated with NHNHB to develop a survey work plan which was followed by Normandeau. They feel that their survey identified rare plants, and NP has already committed to resurveying those locations prior to construction. However, there are no plans to resurvey locations where no rare plants were found. Jake added that the project is currently working on limitations mapping for the construction activities that will help the contractors avoid and minimize impacts to sensitive plant and animal species and exemplary natural communities. Craig suggested we make our plans clear in our response.

Wetland Mitigation Comments

Question 31) Per Env-Wt 806.05(a) and (b), the DES shall not issue a permit until the applicant has paid the full amount of the mitigation payment. With the New Hampshire Site Evaluation Committee (SEC) application process, the DES recommends that the mitigation payment shall be provided within 120 days of the date of a favorable decision by the SEC and issuance of a decision by the Army Corps of Engineers.

Dana inquired about the timing of the mitigation payment. To make it easier for NPT, Lori asked NPT to consider making payments according to construction activities and where they are occurring. Kevin McCune said that it is quite likely that construction will occur in any number of areas so that might be difficult to assess where appropriate. Lori suggested quarterly payments might be appropriate in this case.

Question 36) The information in the baseline reports submitted with the application materials may need to be supplemented with additional information depending on the parcel and final easement holder. The DES can provide an example final baseline documentation report (BDR) to be the template used for the final documents. The BDR is signed upon recordation of the conservation easement and a final signed copy submitted to DES.

Lori suggested that the baseline reports could be embellished. She will send an example BDR to Lee that the project should follow as this will help DES administratively.

Draft Project Specific Permit Conditions

Condition 28) All seed mixes and plantings used for restoration activities shall be reviewed and approved by the NH Natural Heritage Bureau (NHB) prior to their use.

Lee asked if this applies to the entire project. Craig indicated that this really applies to restoration of high- elevation areas as those areas have different grass species which will be necessary to be successful.

Follow-up Action Items:

- Lee to prepare spreadsheet showing impacts for wetlands, streams, vernal pools, etc. broken out by the various routes or route segments.Lee to inquire with Curt Thalken regarding whether the ACOE has a rule or policy against building stormwater basins in wetlands.
- Jake needs to speak with Sam and PAR for developing a plan for assessing stream crossings as to whether or not they will need to be upgraded to enable the development activities. The crossing areas need to be identified by parcel and location.
- Jake to speak with the team about requests by DES to consider site reconfiguration on the Deerfield Substation, Transition Station #1 and Transition Station #5 site to avoid stormwater features in wetlands.

Appendix C
NHDES Wetlands Permit Application - Attachment A Minor and Major – 20 Questions

WETLANDS PERMIT APPLICATION – ATTACHMENT A
MINOR AND MAJOR - 20 QUESTIONS

Water Division/ Wetlands Bureau/ Land Resources Management

Check the Status of your application: www.des.nh.gov/onestop

RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:
1. The need for the proposed impact.
The proposed soil test pits are required to identify the seasonal high water table in accordance with the requirements of the NHDES Alteration of Terrain Bureau. "Test pit explorations" at the Deerfield Substation are required as part of the Project Specific Conditions, specifically Condition #1, included as part of a letter from the NHDES to the New Hampshire Site Evaluation Committee containing the DES Final Decision, dated March 1, 2017. Page 1 of the DES Final Decision Letter and the Alteration of Terrain conditions are included following these 20 Questions for reference. These data will inform the final stormwater design for the Deerfield Substation Expansion of the Northern Pass Transmission Project.
2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.
The contractors responsible for the soil test pits have reviewed the field conditions on the site and mapped out a safe and efficient access route and work pad arrangement for each test pit location that also minimizes new impacts to wetlands, streams and vegetation. Where appropriate, timber matting and/or construction mats will be used to cross wetlands, and existing access paths will be used.

3. The type and classification of the wetlands involved.
The affected wetlands in the ROW include palustrine scrub-shrub and/or emergent wetlands with deciduous and persistent vegetation that are seasonally saturated (PSS1/EM1E and PSS1E). The wetland in the forested section of the parcel that must be crossed is a previously disturbed palustrine forested wetland with an intermittent stream.
4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.
The wetlands that will be temporarily affected by this work are hydrologically connected to similar wetlands and small drainages on the landscape, but are not immediately adjacent to large perennial streams, rivers, ponds or lakes.
5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.
The wetlands on this site are a common type and widespread in the region.
6. The surface area of the wetlands that will be impacted.
The soil test pits themselves will not impact wetlands, however the access route to the test pit locations will require temporary crossing of 2,341 square feet of shrub/emergent and forested wetland. The impacts will result from the placement of timber mats to access upland test pit locations. All of the impacted locations are within the existing access path for the previous geotechnical borings.

7. The impact on plants, fish and wildlife including, but not limited to:
   a. Rare, special concern species;
   b. State and federally listed threatened and endangered species;
   c. Species at the extremities of their ranges;
   d. Migratory fish and wildlife;
   e. Exemplary natural communities identified by the DRED-NHB; and
   f. Vernal pools.

The proposed soil test pit excavations will not affect vernal pools, exemplary natural communities, threatened or endangered plant species, or fisheries resources. All impacts to wildlife habitats are temporary and limited to narrow pathways across wetlands and uplands. There may be state-listed blandings turtles, spotted turtles, black racers or other sensitive reptiles in the work area. If the work is conducted between April 15 and October 31, an environmental monitor will be present to insure that turtles and snakes are not accidentally crushed by digging equipment. A survey for Northern Long-eared bats performed in 2015 following USFWS protocols indicates that no bats are present in the project area. No long term loss of wildlife habitat is expected.

8. The impact of the proposed project on public commerce, navigation and recreation.

The soil test pit excavations are taking place on privately-owned property that currently has no recreational uses, no commercial enterprise, and no navigational waters. The project will not impede access to any other properties or public uses.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

Since the work involves temporary access and disturbance of a narrow corridor in existing ROW and within the woods, it is not expected to have an effect on the aesthetic interests of the general public. The work will be completed within a week and no structures or materials will remain.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.
The work is limited to temporary disturbance on private property that is not an access path to any public properties.
11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.
The work is very limited in scope and location, is temporary, and will not affect abutting property owners, aside from the sound of the excavation equipment which will be temporary.
12. The benefit of a project to the health, safety, and well being of the general public.
The test pits will allow final design of transmission-related facilities based on site-specific information that will confirm assumptions used in the preliminary design. Ultimately, the transmission-related facilities that are built will benefit the public by providing lower cost, low carbon energy to the regional grid.

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.
All impacts are temporary. The excavation of soil test pits and placement of construction mats will follow all applicable Best Management Practices, and will not affect drainage patterns or the quality or quantity of surface or groundwater on the site, entering the site, or leaving the site.
14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.
The work will be conducted using all applicable Best Management Practices, including erosion and sedimentation controls. There will be no permanent structures or drainage changes that would increase flooding.
15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.
The work is not being conducted in or adjacent to surface waters where currents or waves could occur.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.
There will be no permanent impacts associated with the soil test pits, so there would be no cumulative impacts if all abutting landowners performed similar investigations.
17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.
The temporary wetland impacts associated with the soil test pits will have brief and minimal impacts to wetland functions and values in the footprint of the disturbed area, which will not extend to the wetland complex, and will not have long-term impacts on wetland functions and values on or off the site. Temporary vegetation disturbance and displacement of wildlife in the immediate vicinity of the work is expected during the excavation process, which will last only about a week. Vegetation will rebound/resprout.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.
There are no Natural Landmarks in the vicinity of the proposed geotechnical investigations.
19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.
There will be no impacts to the value of any protected lands near the proposed project site.
20. The degree to which a project redirects water from one watershed to another.
The proposed test pits will not redirect water from one watershed to another.

Additional comments

The State of New Hampshire
Department of Environmental Services

Clark B. Freise, Assistant Commissioner

March 1, 2017

Pamela G. Monroe, Administrator
New Hampshire Site Evaluation Committee
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: Joint Application of Northern Pass Transmission, LLC and Public Service Company of New Hampshire d/b/a Eversource Energy
Site Evaluation Committee (SEC) Docket No. 2015-06

Dear Ms. Monroe:

This letter is to notify you that the NH Department of Environmental Services (DES) Water Division staff have completed their technical review of the application and have made a final decision on the parts of the application that relate to DES permitting or regulatory authority relative to a Wetland permit, Alteration of Terrain permit, 401 Water Quality Certificate, and Shoreland permits. DES recommends approval of the application with the conditions that are enclosed with this letter.

This concludes DES review of the project which we hope will assist the SEC to complete its project evaluation process and render a final decision. If you have any questions, please contact me at 271-2951 or email at: Rene.Pelletier@des.nh.gov

Sincerely,

Rene Pelletier, PG
Assistant Director
Water Division

cc: Michael J. Iacopino, Counsel SEC
ec: Robert P. Clark, Eversource, Applicant
Kevin F. McCune, Eversource, Applicant
Lee Carbonneau, Normandeau Associates, Inc.
George Dana Bisbee, Devine Millimet
Clark Freise, Asst. Commissioner, DES
Gene Forbes, Water Division Director, DES
David Keddell, ACOE
Mark Kern, EPA
Amy Lamb, NHB
Carol Henderson, NHFG

NORTHERN PASS, NHSEC DOCKET #2015-06
ALTERATION OF TERRAIN BUREAU
MARCH 1, 2017 FINAL DECISION

RECOMMEND APPROVAL WITH THE FOLLOWING PERMIT CONDITIONS:

PROJECT SPECIFIC CONDITIONS:

1. In order to confirm data obtained from test borings, the basis for current stormwater design assumptions, prior to construction activities at Transition Stations 2, 3, and 6, the Deerfield Substation, the Scobie Pond Substation Expansion, and the Franklin Converter Station, the Permittee shall perform test pit explorations at proposed stormwater treatment facilities and provide to DES the estimated seasonal high water table elevation at each proposed stormwater treatment facility location. Based upon the results of the explorations, proposed stormwater treatment facilities shall be modified, if necessary, to meet applicable design requirements of Env-Wq 1500.
2. In order to confirm data obtained from test borings, the basis for current stormwater design assumptions, prior to construction activities at Transition Station 1, the Permittee shall perform test pit explorations at the proposed wet pond/detention basin facility and provide to DES the estimated seasonal high water table elevation at the facility location, and, if necessary, a hydrologic budget to demonstrate a permanent pool can be sustained at the facility. Based upon the results of the explorations and the hydrologic budget, the proposed stormwater treatment facility shall be modified, if necessary, to meet applicable design requirements of Env-Wq 1500.
3. Activities shall not cause or contribute to any violations of the surface water quality standards established in Administrative Rule Env-Wq 1700
4. Revised plans shall be submitted for an amendment approval prior to any changes in construction details or sequences. The DES must be notified in writing within ten days of a change in ownership.
5. The DES must be notified in writing prior to the start of construction and upon completion of construction. Forms are available at: http://des.nh.gov/organization/divisions/water/aot/categories/forms.htm.
6. All activities shall comply with the plans and information provided with the Alteration of Terrain application submitted as part of the application to the New Hampshire Site Evaluation Committee on October 19, 2015, and with the revised and new plan sheets submitted by the Permittee on December 14, 2016 and January 25, 2017, and the conditions provided herein. Any proposed modifications which may affect surface water quality or quantity, shall receive DES approval prior to implementation.
7. All activities shall comply with Best Management Practices (BMP) identified in the application, and subsequently incorporated in any DES approvals.
8. No construction activities shall occur on the project after expiration of the approval unless the approval has been extended by the New Hampshire Energy Facility Site Evaluation Committee (SEC).
9. The Permittee shall identify to DES all laydown areas, and off-right-of-way access roads not currently identified for review prior to their construction, if DES permit requirements are triggered.
10. The Permittee shall comply with requirements of the EPA NPDES Construction General Permit (CGP) including, but not limited to, preparation and implementation of a Stormwater Pollution

Prevention Plan (SWPPP) and inspection, maintenance and reporting of construction activity. A copy of the SWPPP and/or construction inspection and maintenance logs shall be provided to DES within seven days (or other timeframe acceptable to DES) of receiving a request from DES.

11. Removal of vegetation within 50 feet of all surface waters (including wetlands) shall be minimized to the maximum extent practicable to reduce the potential for erosion and deposition of material into the surface waters, to protect rare, threatened and endangered species and habitats and to minimize the potential for increases in water temperature increases that could be harmful to aquatic life. Limits of clearing will be clearly marked in the field prior to construction to prevent inadvertent excursion of clearing beyond what is necessary.
12. This permit does not relieve the Permittee from the obligation to obtain other local, state or federal permits that may be required (e.g., from US EPA, US Army Corps of Engineers, etc.). Projects disturbing over 1 acre may require a federal stormwater permit from EPA. Information regarding this permitting process can be obtained at: http://des.nh.gov/organization/divisions/water/stormwater/construction.htm.
13. The smallest practicable area shall be disturbed during construction activities.
14. Unless otherwise authorized by DES, the Permittee shall keep erosion control supplies on the site at all times during construction to facilitate an immediate response to any construction related erosion issues on the site.

Appendix D
Wetland Data Sheets and Function & Value Assessments

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Northern Pass Wetlands Functions & Values Data Sheet

Wetland ID: DF. 7 **Date:** 7/9/2010 **Initials:** RSG

Number of Flags: 113 + 56X + 314 + 307 = (230) **Town:** DEERFIELD

Wetland: (Open) / Closed Notes: c 29 **2 Photos: #'s:** RSG/MRC

Cowardin Classes (Dominant(%)/others (%)): PSS/EM/OB/FO/SS 1E

Open Water Component?: Y / (N)

Wetland Associated w/ Stream?: (Y) / N If Yes, ID: SEE BELOW ~~Type: P / I / E~~

Vernal Pool Identified?: Y / (N) If Yes, ID: _____ GPS Complete: Y / N

Functions and Values:

F/V:	Suitable Y	Suitable N	Principal (Check)
Groundwater Rech/Disch.	X		
Floodflow Alteration	X		
Fish/Shellfish Habitat	X		
Sed/Tox Retention	X		
Nutrient Removal	X		
Sed/Shore Stabilization	X		
Wildlife Habitat	X		
Recreation		X	
Educate/Science Value	X		
Uniqueness/Heritage	X		
Visual Qual/Aesthetic	X		
End/Threatened Species		X	
Other:			

Notes:

- PORTIONS ARE DISTURBED (#'S 78-95)
- THIS WETLAND INCLUDES 2 NWI MAPPED FEATURES.

Dominant Plants:

Tree: TSUGA CAN., FRAX PENN., ACER RUBRUM

Sapling/Shrub: TYPHA LAT., SPIREA TOM. LAT., ULMUS AMER., ACER RUBRUM

Herb/Seedling: ONOCLEA SEN., OSMUNDA REG., CIN., CLAY., REED CANARY, CANADA MAY., CORNUS CAN., JOE PYE WEED

Woody Vine: GRAPE

Invasives: PURPLE LOOSE STRIFE

Soils:

Texture: (Organic) (Loamy) (Sandy) Silty Clayey

If mineral - Parent Material: Till (Alluvium) Other _____

Restrictive Layer? (Y) N if Yes, Depth (inches) _____

↳ AT TIMES, COBBLES AT VARYING DEPTHS

STREAMS:

DF. 8. S: INT, 3 FLAGS, #2 C CULVRT, #3 C WET

DF. 10. S: INT, 30 FLAGS

DF. 11. S: INT, 18 FLAGS

DF. 12. S: EPHEM., 2 FLAGS, #2 C CULVRT, #2 C DF. 11. S

DF. 14. S: INT., 8 FLAGS

DF. 10B. S: EPHEM., 3 FLAGS

DF. 10A. S: PERE. 6 FLAGS OPEN C BOTH ENDS

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Northern Pass Wetlands Functions & Values Data Sheet

Wetland ID: DF-13 **Date:** 7/9/10 **Initials:** MRC

Number of Flags: 11 **Town:** Deerfield - S/S

Wetland: Open / Closed Notes: #11 close to #1 **2 Photos: #'s:** MRC 1. South 2. East

Cowardin Classes (Dominant(%)/others (%)): PSS1 90 - PEM1 10

Open Water Component?: Y / N

Wetland Associated w/ Stream?: Y / N If Yes, ID: _____ Type: P / I / E

Vernal Pool Identified?: Y / N If Yes, ID: _____ GPS Complete: Y / N JET

Functions and Values:

F/V:	Suitable Y	Suitable N	Principal (Check)
Groundwater Rech/Disch.	X		
Floodflow Alteration		X	
Fish/Shellfish Habitat		X	
Sed/Tox Retention	X		
Nutrient Removal			
Sed/Shore Stabilization			
Wildlife Habitat			
Recreation			
Educate/Science Value			
Uniqueness/Heritage			
Visual Qual/Aesthetic			
End/Threatened Species			
Other:			

Notes:
Hillside seep to cleared/disturbed area. Drains w/in ROW. & adjacent to Deerfield S/S.

Dominant Plants:
Tree: _____
Sapling/Shrub: Alnus Am., Prunus serot., Pot. pop., Acer rub, Spirea lat., Spirea tom., Salix sp.
Herb/Seedling:
Scirpus cyperinus, J. effusus, C. crinita
~~Woody Vine:~~ _____
Invasives: _____

Soils:
Texture: Organic Loamy Sandy Silty Clayey
If mineral - Parent Material: Till Alluvium Other _____
Restrictive Layer? Y N if Yes, Depth (inches) 0-12"
Boulder/cobble/Gravel

Appendix E
Natural Heritage Bureau (NHB) Review

New Hampshire Natural Heritage Bureau
DRED - Division of Forests & Lands
172 Pembroke Road, Concord, NH 03301
(603) 271-2214

To: Lee Carbonneau, Normandeau Associates, Inc.

From: Amy Lamb, Ecological Information Specialist

Date: October 5, 2015

Subject: Northern Pass Pre-Application Meeting Summary (NHB15-0611)

On March 30, 2015, Melissa Coppola issued a NH Natural Heritage Bureau (NHB) memo (NHB15-0611) to Normandeau Associates, Inc. that listed Threatened and Endangered species populations that will potentially be impacted by the proposed Northern Pass project. Since that date, NHB and Normandeau have met on several occasions to discuss project impacts, avoidance and minimization measures, route changes, and the remaining survey work to be completed.

This memo summarizes the most recent pre-application meeting, which took place on October 1, 2015. This meeting was held in order to review current rare plant and natural community information, refine avoidance and minimization measures, and determine additional steps to be taken in preparation for permit application submittal at the end of October, 2015.

The meeting resulted in the following determinations regarding data and documentation:

- NHB last provided digital data to Normandeau in February of 2015, and will continue to provide any new data (i.e., new plant surveys within the project area) as they become available.
- Normandeau will provide the final reports on Vegetation and Threatened and Endangered species to NHB upon completion.
- Normandeau will provide NHB a table summarizing the anticipated impacts to all rare plants and exemplary natural communities within the selected corridor. This table will distinguish between the different types of impacts and their resulting (long-term) effects on rare plants and exemplary natural communities.

- Any reports that are filed as publicly available information will not contain specific locations of rare plants; this information will be restricted to an appendix and treated as confidential, and will be removed from publicly available reports.
- The rare plant avoidance and minimization measures that the applicant has proposed were developed in consultation with NHB. NHB will provide additional species-specific avoidance and minimization guidance during the permit review period. This will consist of a table with prioritized actions for each species.
- As any new areas for access, staging, etc. become known, Normandeau (or any subsequent contractor) will conduct rare plant surveys in the areas and provide the results to NHB.
- Normandeau identified Lee Carbonneau as the point person for future Natural Heritage communications, and the NHB point person will be Amy Lamb.

The meeting also resulted in the determination of several measures to avoid and minimize impacts to Natural Heritage resources during construction:

- Meetings will be held among contractors, environmental monitors, and inspectors, prior to contractors working in or near areas where listed plants are located, that will include making contractors aware of sensitive areas and the appropriate best management practices for each area.
- Plans that are provided to contractors will contain a color-coded bar indicating the extent of a sensitive area; no further information will be revealed on such plans.
- Normandeau (or any subsequent contractor) will have "Sensitive Area" signs installed around rare plant populations and exemplary natural communities to alert work crews to their presence.
- It was agreed that it is critical that environmental monitors have the power and authority to stop work immediately if they become aware that any action will violate agreed-upon BMPs.
- NHB will make a recommendation to NHDES regarding qualifications of Environmental Monitors, to be included as a permit condition.

NHB and Normandeau will continue to communicate as the project progresses, in particular as any route changes or new impacts to rare plants become known.

Northern Pass Survey Findings
Substation Expansion Site, Deerfield NH
RPR #15-0611

Northern Pass has coordinated with the NH Natural Heritage Bureau (NH NHB) since 2010 to obtain information on known locations of rare species and exemplary natural communities within a half mile of the Northern Pass Project. Normandeau Associates was provided with a digital data set for known locations. Based on the information provided by NHNHB and additional desktop research, Normandeau Associates prepared and implemented a work plan for field surveys for rare plant and natural community surveys. This work plan was approved by the NH NHB.

Within a half mile of the south and west sides of the Deerfield Substation Expansion Site, NHB identified an osprey nest (no longer present at this location) and the state-endangered Blanding's turtle (*Emydoidea blandingii*). To protect any Blanding's turtles (or any other reptiles) that may be present on the site during work that occurs between April 15 and October 31, an environmental monitor will be present while the drill rig is moving around to insure that no turtles are crushed by equipment.

NHB also identified the Jefferson's salamander (*Ambystoma jeffersonianum)* and a black gum swamp outside of the ½ mile buffer from the Deerfield substation. The geotechnical investigations will not impact any vernal pools that might support Jefferson's salamanders, and will not require any impacts to black gum swamps.

Appendix F
U.S. Army Corps of Engineers (ACOE)
New Hampshire Programmatic General Permit (PGP)
Appendix B – Corps Secondary Impacts

US Army Corps of Engineers®
New England District

Programmatic General Permit (PGP)
Appendix B - Required Information and Corps Secondary Impacts Checklist

In order for the Corps of Engineers to properly evaluate your application, applicants must submit the following information along with the DES Wetlands Bureau application or permit notification forms. Some projects may require more information. For a more comprehensive checklist, go to www.nae.usace.army.mil/regulatory,"Forms/Publications" and then "Application and Plan Guideline Checklist." Check with the Corps at (978) 318-8832 for project-specific requirements. For your convenience, this Appendix B is also attached to the State of New Hampshire DES Wetlands Bureau application and Permit by Notification forms.

All Projects:

- Corps application form (ENG Form 4345) as appropriate.
- Photographs of wetland/waterway to be impacted.
- Purpose of the project.
- Legible, reproducible black and white (no color) plans no larger than 11"x17" with bar scale. Provide locus map and plan views of the entire property.
- Typical cross-section views of all wetland and waterway fill areas and wetland replication areas.
- In navigable waters, show mean low water (MLW) and mean high water (MHW) elevations. Show the high tide line (HTL) elevations when fill is involved. In other waters, show ordinary high water (OHW) elevation.
- On each plan, show the following for the project:
- Vertical datum and the NAVD 1988 equivalent with the vertical units as U.S. feet. Don't use local datum. In coastal waters this may be mean higher high water (MHHW), mean high water (MHW), mean low water (MLW), mean low lower water (MLLW) or other tidal datum with the vertical units as U.S. feet. MLLW and MHHW are preferred. Provide the correction factor detailing how the vertical datum (e.g., MLLW) was derived using the latest National Tidal Datum Epoch for that area, typically 1983-2001.
- Horizontal state plane coordinates in U.S. survey feet based on the [insert state grid system] for the [insert state] [insert zone] NAD 83.
- Show project limits with existing and proposed conditions.
- Limits of any Federal Navigation Project in the vicinity of the project area and horizontal State Plane Coordinates in U.S. survey feet for the limits of the proposed work closest to the Federal Navigation Project;
- Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below the ordinary high water in inland waters and below the high tide line in coastal waters.
- Delineation of all waterways and wetlands on the project site, including vernal pools:
- Use Federal delineation methods and include Corps wetland delineation data sheets. See GC 2; Endnotes 1, 6, 7 and 15 in Appendix A; and www.nero.noaa.gov/hcd for eelgrass survey guidance.
- Appendix A, (e) Moorings, contains eelgrass survey requirements for the placement of moorings.
- For activities involving discharges of dredged or fill material into waters of the U.S., include a statement describing how impacts to waters of the U.S. are to be avoided and minimized, and either a statement describing how impacts to waters of the U.S. are to be compensated for (or a conceptual or detailed mitigation plan) or a statement explaining why compensatory mitigation should not be required for the proposed impacts. Please contact the Corps for guidance.

US Army Corps of Engineers®
New England District

New Hampshire Programmatic General Permit (PGP)
Appendix B - Corps Secondary Impacts Checklist (for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.h		X
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org, specifically the book Natural Community Systemsof New Hampshire.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		X
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	0 sqft	
2.7 What is the size of the proposed impervious surface area?	0 sqft	
2.8 What is the % of the impervious area (new and existing) to the overall project	0%	
3. Wildlife	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB	X	

3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.	X	
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the PGP, GC 21?	N/A	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?	N/A	
5. Historic/Archaeological Resources		
For a minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review**)** shall be sent to the NH Division of Historical Resources as required on Page 5 of the PGP**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.
** If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.
`

ACOE, NH PGP
Appendix B – Corps Secondary Impacts (Narrative)

1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water?

The Project area is not within the 1 mile buffer of an impaired water (see attached figure).

2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?

The proposed access route will cross an un-named intermittent streams and test pits will be located within 200 feet of two un-named intermittent streams. No permanent impacts to these water bodies will occur as a result of the proposed soil test pits.

2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?

Yes. All wetland crossings will utilize either temporary timber mats or brush mats, as needed to prevent rutting or compaction of wetland soils.

2.6-2.8 What is the size of the existing impervious surface area? What is the size of the proposed impervious surface area? What is the % of the impervious area (new and existing) to the overall project site?

No impervious surface exists currently in the soil test pit area, although there is an existing substation on the same parcel. No impervious surfaces will be created from the soil test pit excavations.

3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)

The NHNHB reported Blanding's turtles and an osprey nest in the vicinity of the Deerfield substation expansion area. The osprey nest was not near the work area and appears to be gone. There may also be state-listed Blandings turtles, black racers or other sensitive reptiles in the work area. If the work is conducted between April 15 and October 31, an environmental monitor will be present to insure that turtles and snakes are not accidentally crushed by mechanical equipment. The Environmental Monitor will search the path of the excavator for turtles and snakes and relocate any that are found (and any other terrestrial wildlife in the path) to a nearby safe location outside of the work area, and notify NHF&G. A survey for Northern Long-eared bats performed in 2015 following USFWS protocols indicates that no bats are present in the project area. No long term loss of wildlife habitat is expected.

*5. For a minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) shall be sent to the NH Division of Historical Resources as required on Page 5 of the PGP***

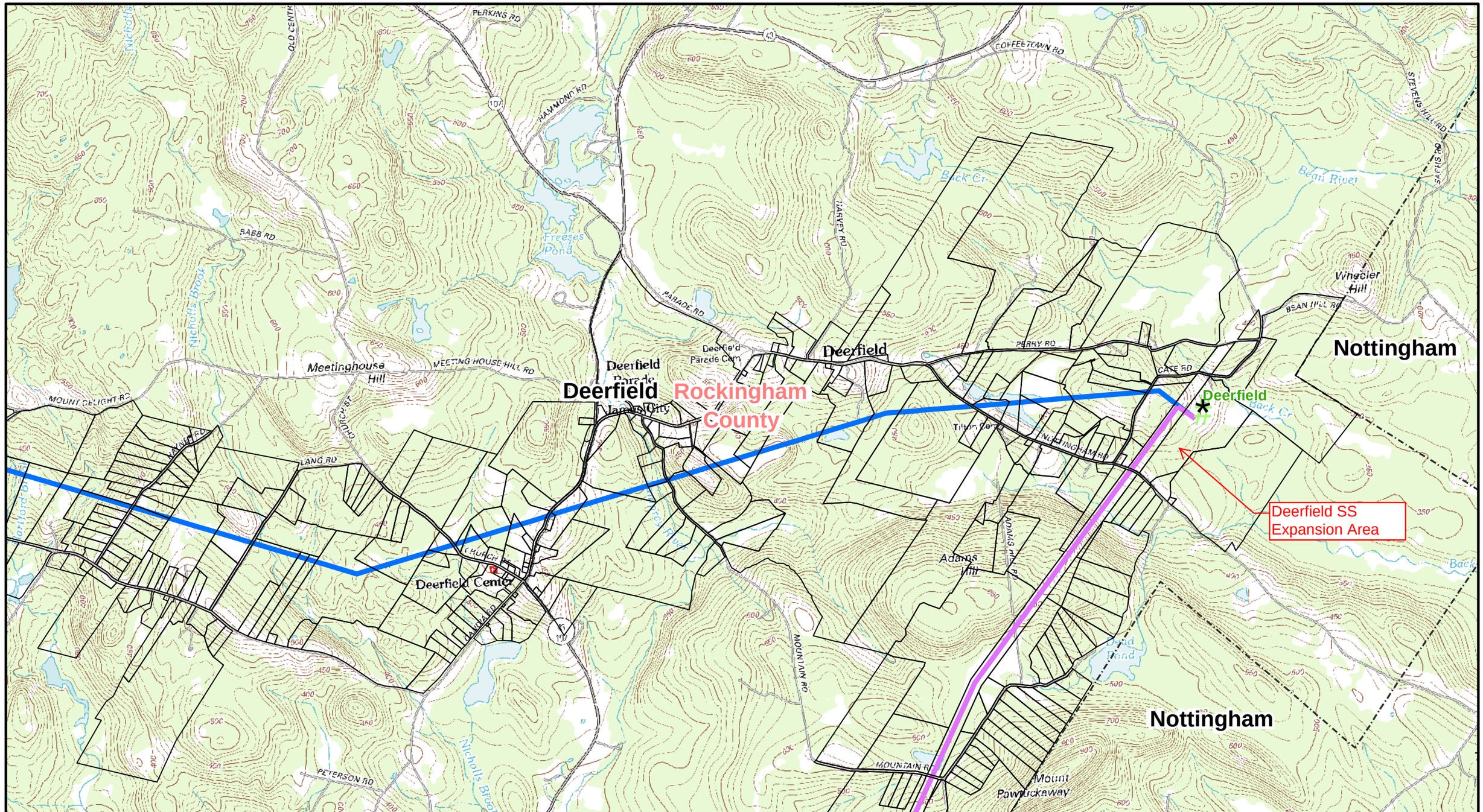
RPR # 1448
A report describing archeological survey at the Deerfield Substation expansion site was prepared and submitted by Victoria Bunker to the New Hampshire Division of Historical Resources (NHDHR)[1]. The survey report was

[1] NORTHERN PASS HVDC TRANSMISSION PROJECT Results of Phase I-A and Phase I-B Archeological Survey; Proposed Expansion of Deerfield Substation, Proposed Expansion of Scobie Pond Substation
And AC System Transmission Line Upgrades (PSNH 373 Line); Deerfield, Candia, Raymond, Chester, Auburn, Derry and Londonderry, NH. Addendum to: Results of Phase I-A Archeological Survey AC System Transmission Line Upgrades (PSNH 373 Line) Deerfield, Candia, Raymond, Chester, Auburn, Derry and Londonderry, NH. NHDHR #RPR 1448. Prepared by Victoria Bunker, PhD April 2014.

subsequently approved by the NHDHR. The Phase I-A walkover survey revealed five locations of sensitivity for pre-contact Native American archeological resources on the site and three features (stone walls/berms) of the post-contact European-American agrarian landscape, two of which overlapped zones of pre-contact Native American sensitivity. Phase I-B subsurface sampling was completed to address zones of pre-contact Native American resource sensitivity and to define any archeological correlates with post-contact European-American stone components. The field strategy at the Deerfield Substation included subsurface sampling in 8 m grids and offset transects supplemented by judgmental test placement to address specific features or landforms. No archeological components were associated with the post-contact European-American stone wall and berm features, and no artifacts were recovered. These occurrences are not considered archeological, but represent elements of the former agrarian landscape at the property. No artifacts were recovered in any tests in pre-contact sensitivity areas. No cultural features were encountered in any tests.

Based on the results of subsurface sampling and prevalent conditions, no further archeological survey was recommended for the proposed Deerfield Substation expansion area.

Appendix G
U.S. Geological Survey (USGS) Topographic Map



INDEX MAP

Legend

- Proposed Route (Overhead)
- Proposed Route (Underground)
- Deerfield to Scobie Pond Route
- Proposed Converter Terminal
- Existing Substation to be Upgraded
- Parcels
- Proposed Transition Station
- Municipal Boundary

Sources : USGS Topo, Burns & McDonnell

The Northern Pass Transmission Line Project
Proposed Route

Map 48 of 53

USGS Quads : Gossville, Northwood, Candia, Pawtuckaway

0 2,000 4,000 Feet

1:24,000

Date: 10/6/2015

THE NORTHERN PASS℠

Appendix H
Site Photos

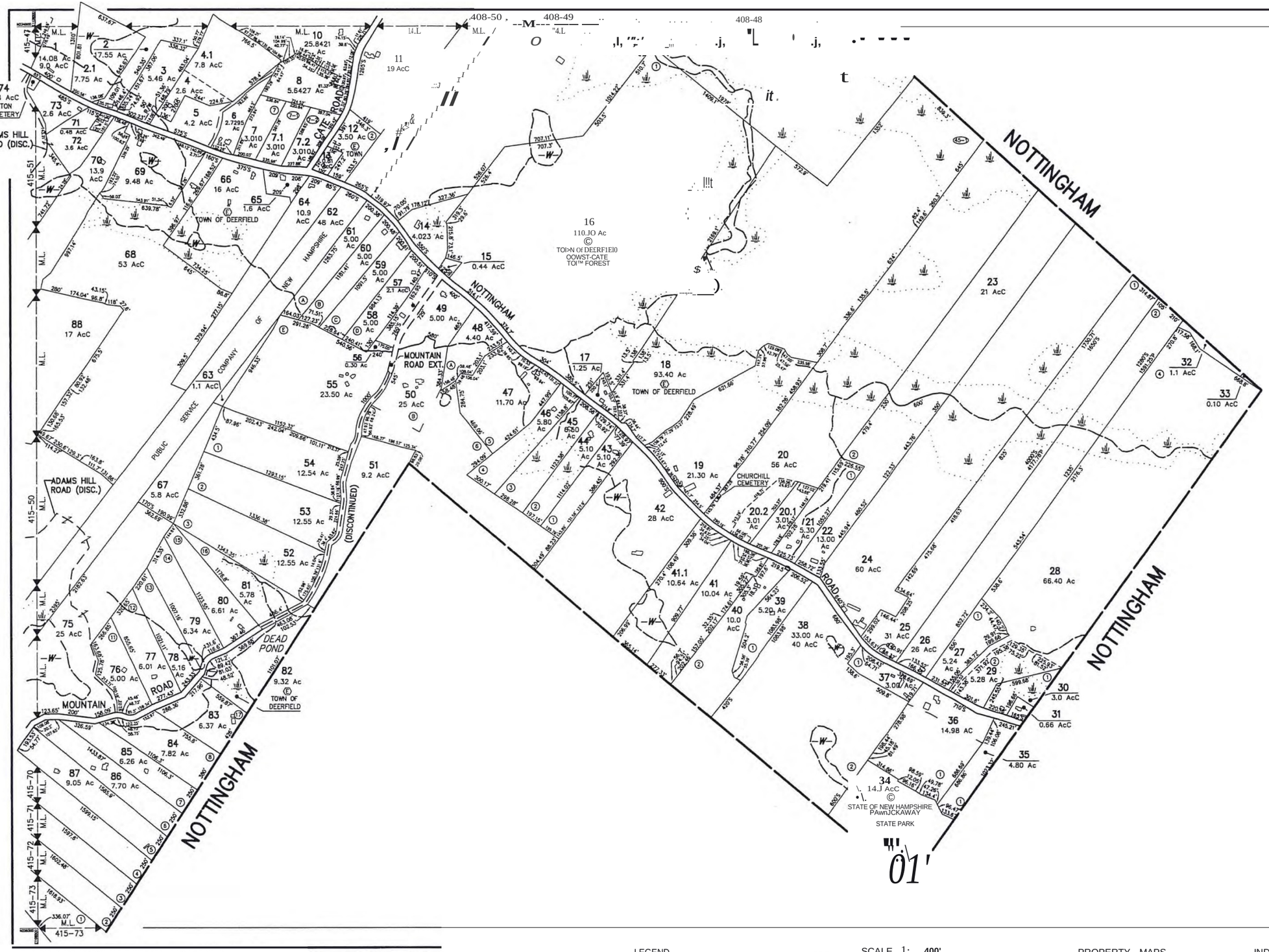
12/2/2016. Photo 1. ROW access road to the Deerfield Substation expansion area test pit locations.

11/22/2016. Photo 2. Wetland crossing on existing ROW immediately after geotechnical work in 2016. The wetland will be crossed in this location again for soil test pits.

11/16/2016. Photo 3. Wetland crossing in the wooded portion of the site to access the soil test pits, at the previous crossing for geotechnical work in 2016.

4/27/2015. Photo 4. Deerfield Substation expansion area, looking southeast. Work will be near, but not in, the wetland in the center of the photo.

Appendix I
Tax Map



THIS I.CAP IS FOR ASSESSMENT PURPOSES. IT IS NOT VALID FOR LEGAL DESCRIPTION OR CONVEYANCE .

THE HORIZONTAL DATUM IS THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM.
PHOTOGRAPHY DATE: APRIL 27, 1997

COMPI.ETION DATE: SEPTEMBER 1, 1998

PRODUCED IN 1998 BY
CAI Technologies

11 PI.EASAHTSTR.EET , Lmu:TON, NHCWirl
I100.322.4540 - WWW .CA.J.T'E01 CXW

LEGEND

ARC> SUPJOTED NIEA CAlCOULATED .ACC

RIJE.OOUNSZOI SCALED DIMENSION WATOI UME .loo"

WA.IER .

DIMPT. PROPERTY SUEDMSICH LOT NO. .©

BUILDING .

RIGHT OF WAY/ACCESS . OR

COMMON OWNERSHIP .

WETLANDS .

SCALE 1· 400'

FEIT 200 0 000

METERS 100 0 100 200

PROPERTY MAPS

DEER FIELD

NO PARCEL 9

INDEX DIAGRAM MAP NO.

409 408
418 417

416

Appendix J
Abutter Notification (Notification Letters and Certified Mail Receipts)

NORMANDEAU ASSOCIATES
Environmental Consultants

ABUTTER NOTIFICATION OF WETLANDS PERMIT APPLICATION

Via Certified Mail

May 26, 2017

Martha Anne Etal Curry
15 Banks Road
Swampscott, MA, 01907

Re: Wetland Permit Application for Soil Test Pits for the Northern Pass Transmission Project

Dear Sir or Madam:

This letter is to inform you that Northern Pass Transmission LLC. has submitted a wetlands permit application to excavate soil test pits on a property that abuts your property. Under state law RSA 482-A:3 I (d)(1), the Project is required to notify you about the application, which proposes the excavation of test pits at two locations on the property to acquire information that is necessary for the final design of Northern Pass Project components. Once it is filed, the permit application, including plans that show the proposed test pit locations, will be available for viewing at the City or Town Clerk's Office in the city/town where the proposed project is located or at the NHDES offices by scheduling a file review by calling (603) 271- 8876 or online at http://www4.egov.nh.gov/DES/FileReview/.

If you have questions, you may contact Northern Pass at 800 286-7305 or at info@northernpass.us.

Sincerely,

Lee E. Carbonneau

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

NORMANDEAU ASSOCIATES
Environmental Consultants

ABUTTER NOTIFICATION OF WETLANDS PERMIT APPLICATION

Via Certified Mail

May 26 , 2017

Town of Deerfield
PO Box 159
Deerfield, NH, 03037

Re: Wetland Permit Application for Soil Test Pits for the Northern Pass Transmission Project

Dear Sir or Madam:

This letter is to inform you that Northern Pass Transmission LLC. has submitted a wetlands permit application to excavate soil test pits on a property that abuts your property. Under state law RSA 482-A:3 I (d)(1), the Project is required to notify you about the application, which proposes the excavation of test pits at two locations on the property to acquire information that is necessary for the final design of Northern Pass Project components. Once it is filed, the permit application, including plans that show the proposed test pit locations, will be available for viewing at the City or Town Clerk's Office in the city/town where the proposed project is located or at the NHDES offices by scheduling a file review by calling (603) 271- 8876 or online at http://www4.egov.nh.gov/DES/FileReview/.

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Sincerely,

Lee E. Carbonneau

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

NORMANDEAU ASSOCIATES
Environmental Consultants

ABUTTER NOTIFICATION OF WETLANDS PERMIT APPLICATION

Via Certified Mail

May 26, 2017

Philip Bilodeau
140 Nottingham Road
Deerfield, NH, 03037

Re: Wetland Permit Application for Soil Test Pits for the Northern Pass Transmission Project

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Sincerely,

Lee E. Carbonneau

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

NORMANDEAU ASSOCIATES
Environmental Consultants

ABUTTER NOTIFICATION OF WETLANDS PERMIT APPLICATION

Via Certified Mail

May 26, 2017

Shaina Lopes
13 Cate Road
Deerfield, NH, 03037

Re: Wetland Permit Application for Soil Test Pits for the Northern Pass Transmission Project

Dear Sir or Madam:

This letter is to inform you that Northern Pass Transmission LLC. has submitted a wetlands permit application to excavate soil test pits on a property that abuts your property. Under state law RSA 482-A:3 I (d)(1), the Project is required to notify you about the application, which proposes the excavation of test pits at two locations on the property to acquire information that is necessary for the final design of Northern Pass Project components. Once it is filed, the permit application, including plans that show the proposed test pit locations, will be available for viewing at the City or Town Clerk's Office in the city/town where the proposed project is located or at the NHDES offices by scheduling a file review by calling (603) 271- 8876 or online at http://www4.egov.nh.gov/DES/FileReview/.

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Sincerely,

Lee E. Carbonneau

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

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- ☐ Adult Signature Restricted Delivery $ $0.00

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City, State, ZIP+4® Deerfield NH 03037

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- ☐ Adult Signature Required $ $0.00
- ☐ Adult Signature Restricted Delivery $ $0.00

Postage $ $0.49
Total Postage and Fees $ $6.59

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05/26/2017

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City, State, ZIP+4® Deerfield, NH 03037

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- ☐ Return Receipt (electronic) $ $0.00
- ☐ Certified Mail Restricted Delivery $ $0.00
- ☐ Adult Signature Required $ $0.00
- ☐ Adult Signature Restricted Delivery $

Postage $0.49
$

Total Postage and Fees $6.59
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Postmark Here

USPS MANCHESTER NH BEDFORD BRANCH 03110 MAY 26 2017

05/26/2017

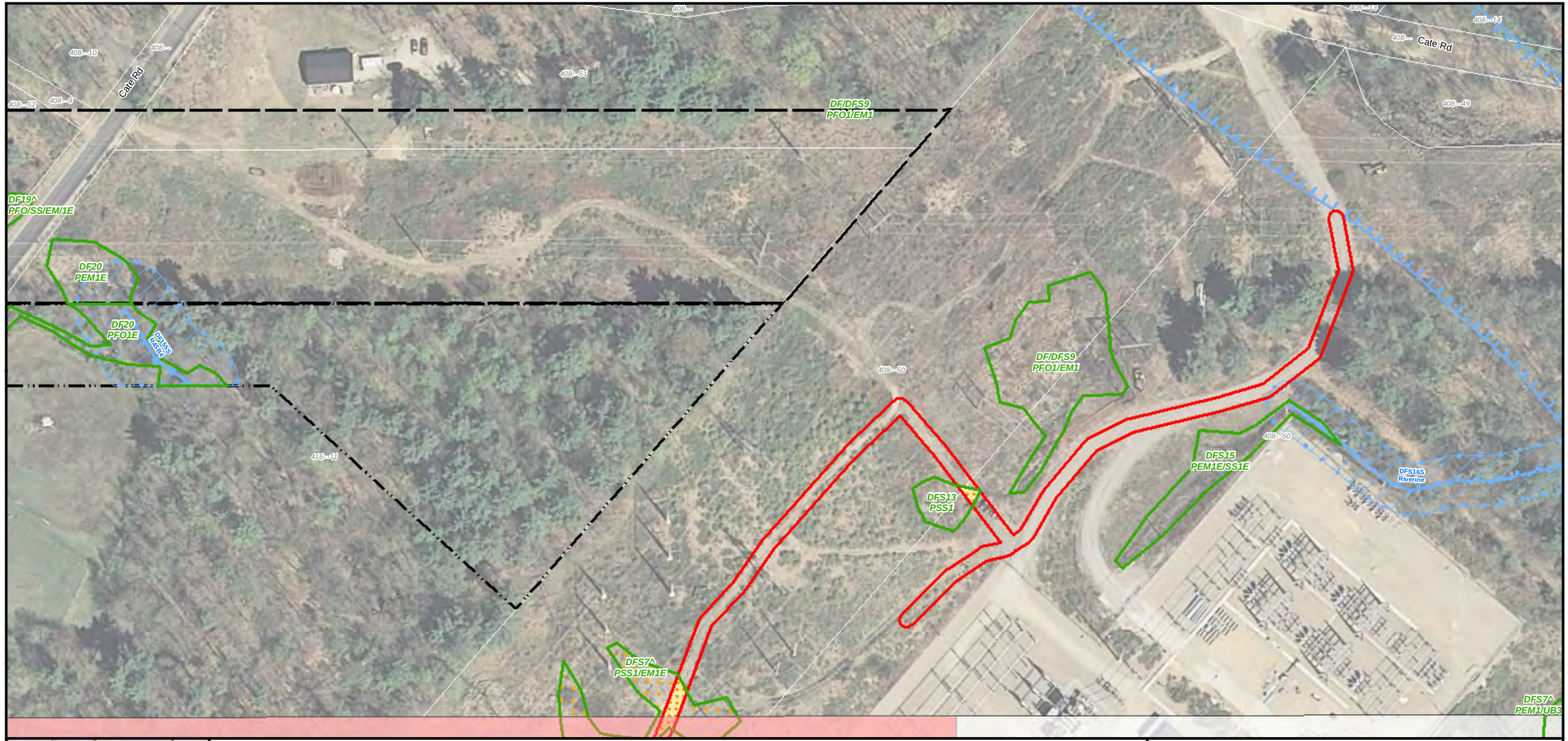
Sent To Martha A. E. Curry

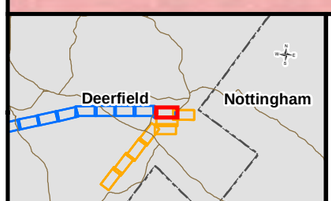
Street and Apt. No., or PO Box No. 15 Banks Road

City, State, ZIP+4® Swampscott, MA 01907

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

Appendix K
Project Plans





THE NORTHERN PASS

Existing Conditions

- Existing ROW
- 100-year Floodzone
- Wetlands
- USACE Reviewed Wetlands
- Vernal Pool
- 100' Buffer of Vernal Pools
- Stream Buffer (varies : 25',50', or 100')

Delineated Waterbodies

- Perennial
- Intermittent
- Ephemeral

Stream Centerlines

- Perennial
- Intermittent
- Ephemeral

- LiDAR 10' Contour
- LiDAR 2' Contour
- USGS 10' Contour
- USGS 2' Contour

Proposed Conditions

- Boring
- Boring Access
- Proposed New ROW
- Temporary Wetlands Matting
- Vegetation Clearing Areas
- Limit of Disturbance - Stations
- Test Pit

RTE Bars

- Animal
- Vegetation
- Both

0 25 50 100 Feet

1 inch equals 100 feet when printed at 11" x 17"

N W E S

STATE OF NEW HAMPSHIRE ADELE E. FOFILD No. 064 CERTIFIED WETLAND SCIENTIST 2/19/16

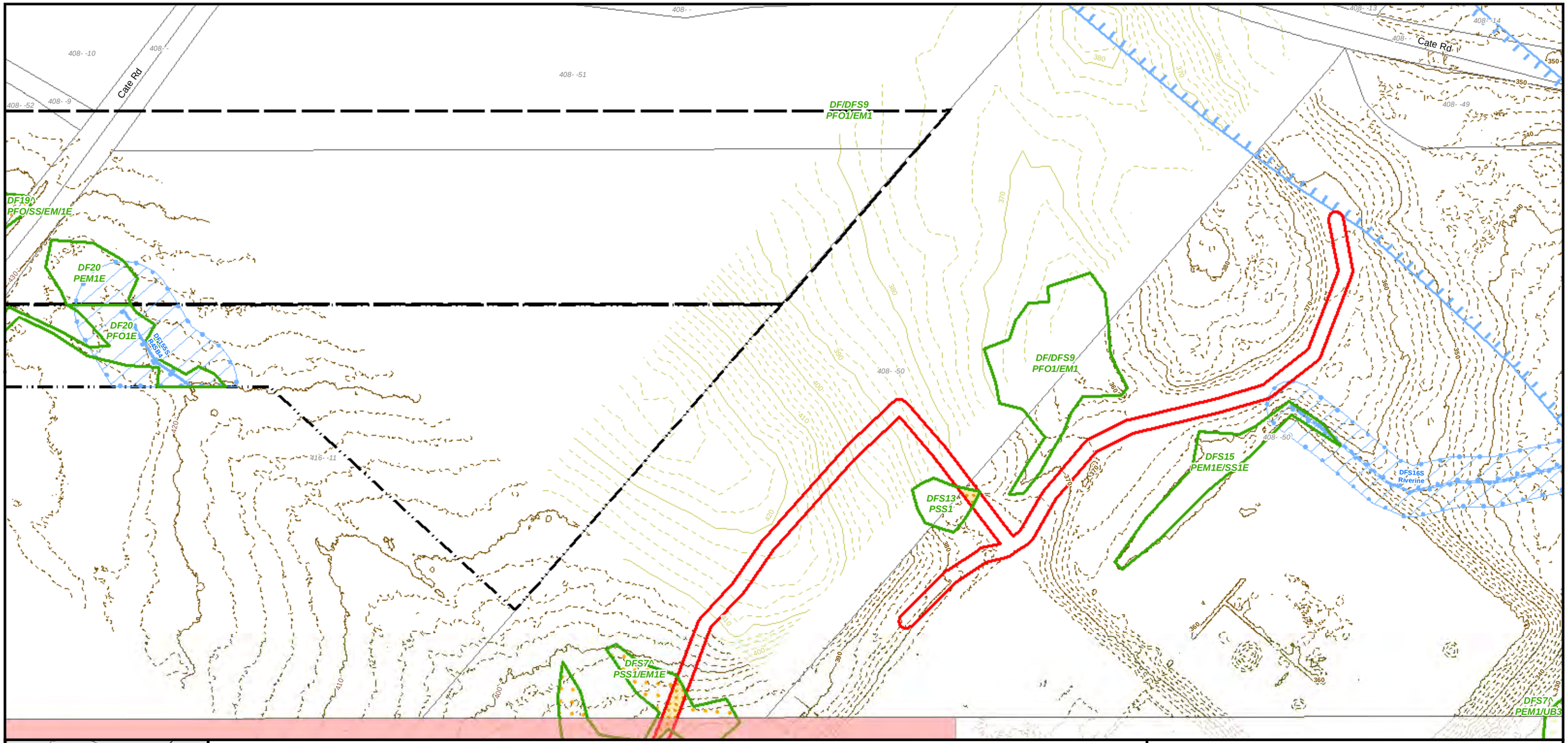
NHDES Wetlands & US Army Corps of Engineers Section 404/10 Permit Application Plans

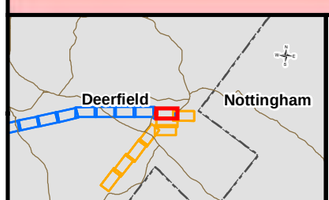
THE NORTHERN PASS PROPOSED ROUTE

Jurisdictional Impact Type and Amount			Extent of Clearing (sq ft)		
Wetland / Waterbody	Temporary Impact (sq ft)	Permanent Impact (sq ft)	In Forested Wetlands	Uplands Stream Buffer	Uplands Vernal Pool Buffer
DF/DFS9, PFO1/EM1	0	0			
DFS7^, PSS1/EM1E	0	0			
DFS13, PSS1	215	0			
DFS15, PEM1E/SS1E	0	0			
DFS16, Riverine	0	0			
DF19*, PFO/SS/EM/1E	0	0			
DF20, REM1E	0	0			
DF20, PFO1E	0	0			
DF155S, R4SB4	0	0			

Date: 5/11/2017 | * High Quality Wetland, ^ Corps Reviewed | Sheet 001

Sources: NH GRANIT, Normandeau; Cornerstone, Burns & McDonnell.





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- USACE Reviewed Wetlands
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- Stream Buffer (varies : 25',50', or 100')

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- Intermittent
- Ephemeral

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- LiDAR 2' Contour
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- USGS 2' Contour

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- Boring Access
- Proposed New ROW
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- Vegetation Clearing Areas
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THE NORTHERN PASS PROPOSED ROUTE

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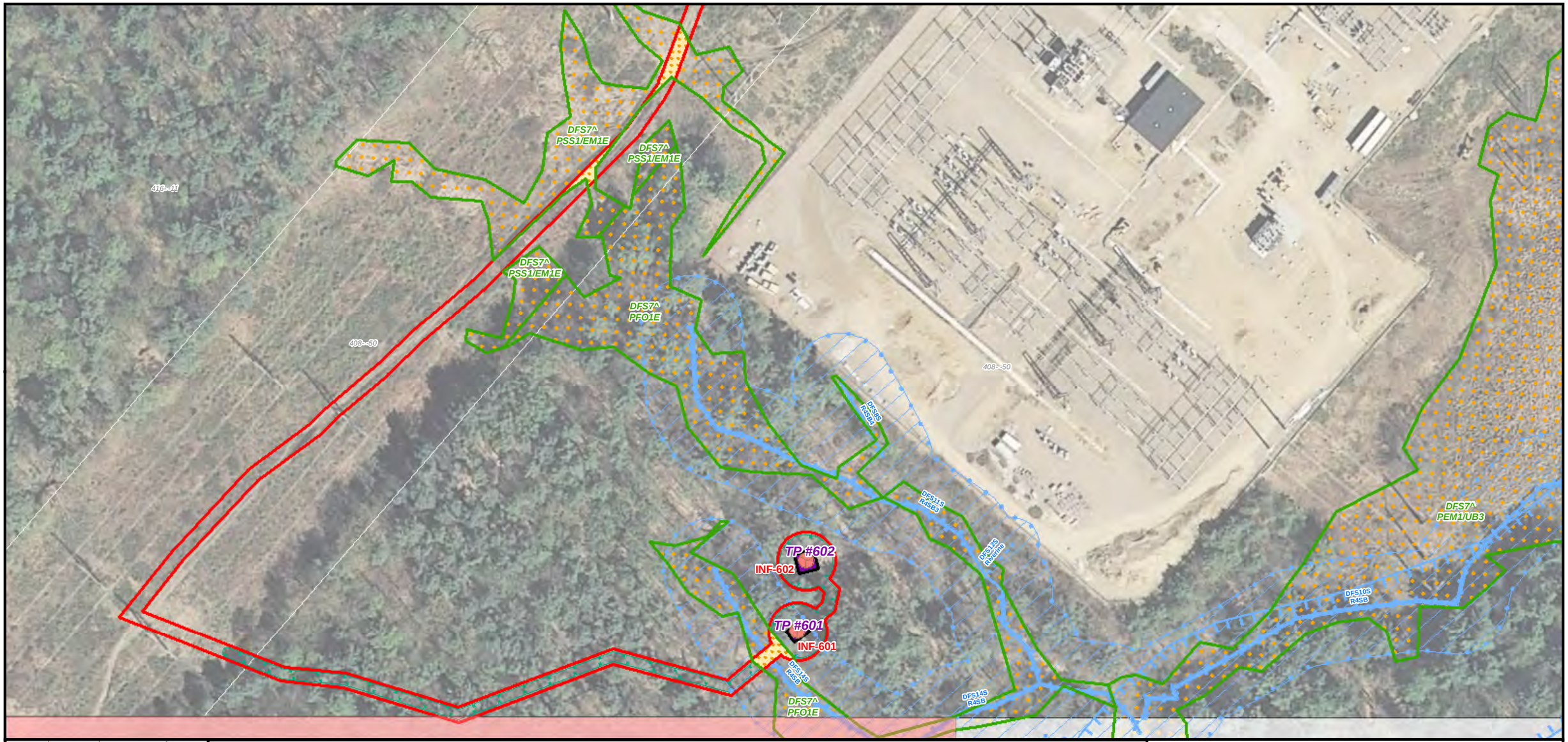
DFS7^, PSS1/EM1E	0	0			
DFS13, PSS1	215	0			
DFS15, PEM1E/SS1E	0	0			
DFS16, Riverine	0	0			
DF19^, PFO/SS/EM/1E	0	0			
DF20, REM1E	0	0			
DF20, PFO1E	0	0			
DF155S, R4SB4	0	0			

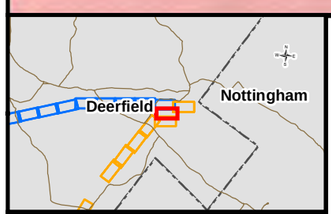
Date: 5/11/2017

* High Quality Wetland, ^ Corps Reviewed

Sheet 001

Sources: NH GRANIT, Normandeau; Cornerstone, Burns & McDonnell.





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- Vegetation Clearing Areas
- Test Pit

RTE Bars

- Animal
- Vegetation
- Both

0 25 50 100 Feet

1 inch equals 100 feet when printed at 11" x 17"

N W E S

STATE OF NEW HAMPSHIRE
ADELE E. HOFILLO
2/19/16
No. 064
CERTIFIED WETLAND SCIENTIST

NHDES Wetlands & US Army Corps of Engineers Section 404/10 Permit Application Plans

THE NORTHERN PASS PROPOSED ROUTE

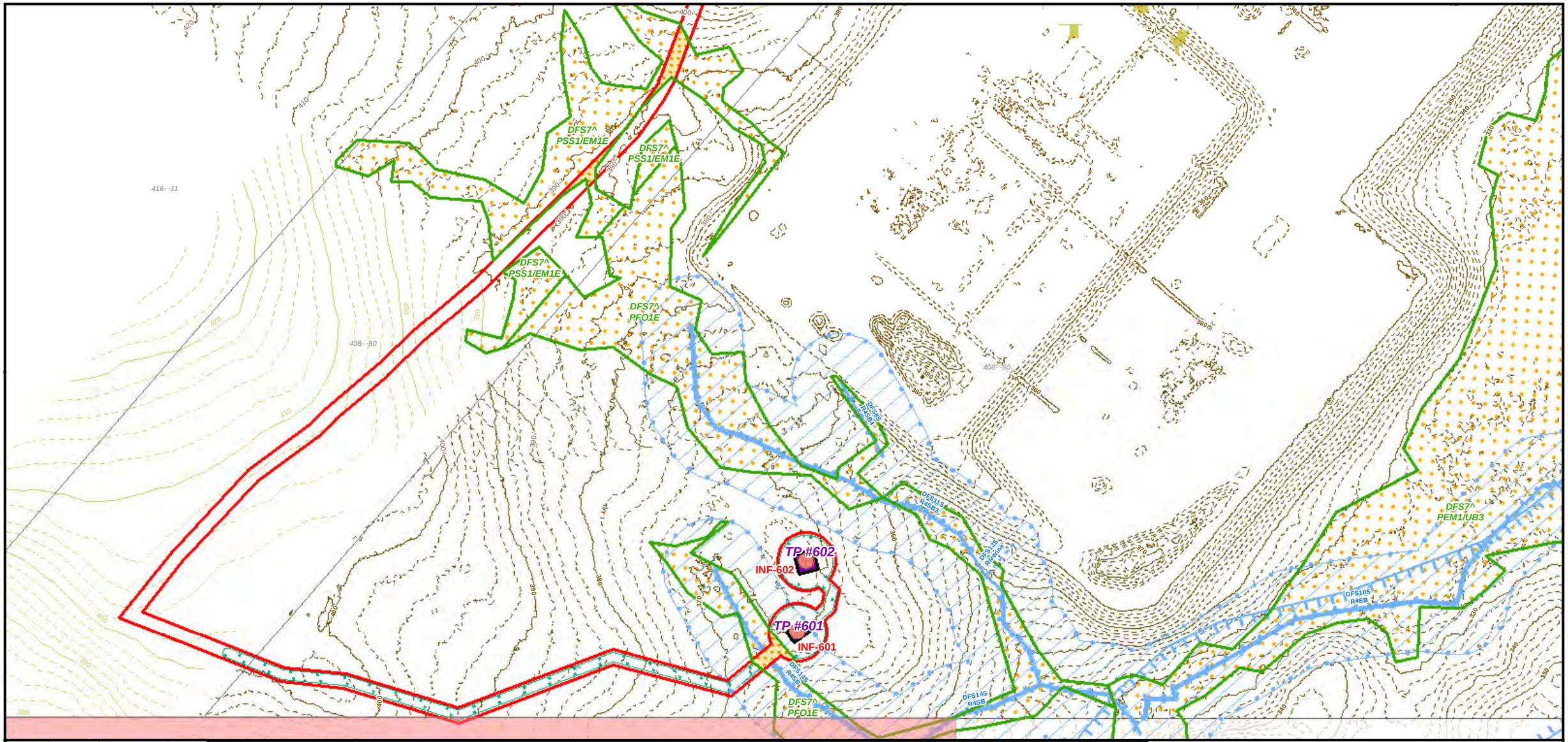
Jurisdictional Impact Type and Amount			Extent of Clearing (sq ft)		
Wetland / Waterbody	Temporary Impact (sq ft)	Permanent Impact (sq ft)	In Forested Wetlands	Uplands Stream Buffer	Uplands Vernal Pool Buffer
DFS7, PEM1/UB3	0	0			
DFS7, PF01E	633	0			
DFS7, PSS1/EM1E	1,493	0			
DFS10S, R4SB	0	0			
DFS11S, R4SB3	0	0			
DFS12S, Riverine	0	0			
DFS14S, R4SB	0	0	0	3,097	0
DFS8S, R4SB4	0	0			

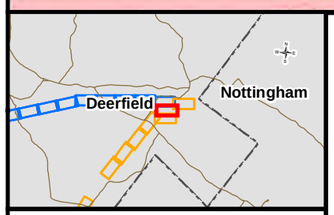
Date: 5/23/2017

* High Quality Wetland, ^ Corps Reviewed

Sheet 002

Sources: NH GRANIT, Normandeau; Cornerstone, Burns & McDonnell.





THE NORTHERN PASS

Existing Conditions

- Existing ROW
- 100-year Floodzone
- Wetlands
- USACE Reviewed Wetlands
- Vernal Pool
- 100' Buffer of Vernal Pools
- Stream Buffer (varies : 25',50', or 100')

Delineated Waterbodies

- Perennial
- Intermittent
- Ephemeral

Stream Centerlines

- Perennial
- Intermittent
- Ephemeral

- LiDAR 10' Contour
- LiDAR 2' Contour
- USGS 10' Contour
- USGS 2' Contour

Proposed Conditions

- Boring
- Boring Access
- Proposed New ROW
- Temporary Wetlands Matting
- Vegetation Clearing Areas
- Test Pit

RTE Bars

- Animal
- Vegetation
- Both

0 25 50 100 Feet

1 inch equals 100 feet when printed at 11" x 17"

N W E S

STATE OF NEW HAMPSHIRE
ADELE E. FOFILLO
5/19/16
No. 064
CERTIFIED WETLAND SCIENTIST

NHDES Wetlands & US Army Corps of Engineers Section 404/10 Permit Application Plans

THE NORTHERN PASS PROPOSED ROUTE

Jurisdictional Impact Type and Amount			Extent of Clearing (sq ft)		
Wetland / Waterbody	Temporary Impact (sq ft)	Permanent Impact (sq ft)	In Forested Wetlands	Uplands Stream Buffer	Uplands Vernal Pool Buffer
DFS7, PEM1/UB3	0	0			
DFS7, PF01E	633	0			
DFS7, PSS1/EM1E	1,493	0			
DFS10S, R4SB	0	0			
DFS11S, R4SB3	0	0			
DFS12S, Riverine	0	0			
DFS14S, R4SB	0	0	0	3,097	0
DFS8S, R4SB4	0	0			

Date: 5/23/2017

* High Quality Wetland, ^ Corps Reviewed

Sheet 002

Sources: NH GRANIT, Normandeau; Cornerstone, Burns & McDonnell.

June 6, 2017

Mr. Craig Rennie
Wetlands Bureau
NH Department of Environmental Services
PO Box 95 – Hazen Drive
Concord, NH 03302

RE: Northern Pass Transmission, LLC. Wetland Applications for Soil Test Pits – Pittsburg Transition Station #1

Dear Mr. Rennie:

On behalf of Northern Pass Transmission LLC, Normandeau Associates, Inc. is submitting this standard dredge and fill wetland application for soil test pits at Transition Station #1 in Pittsburg for the Northern Pass Transmission Project. This work is necessary for final design of this facility, including stormwater control features. One application fee check for $234.20 is also attached.

We appreciate your review of this application. Please feel free to contact me if you have any questions or require additional information.

Sincerely,

Lee Carbonneau
As Agent for Northern pass Transmission, LLC.
Senior Principal Scientist
Normandeau Associates, Inc.

Attach.

Cc. Jerry P. Fortier, Northern Pass Transmission, LLC.
Kevin McCune – Eversource Energy

Standard NHDES Wetland Permit Application
Soil Test Pits – Transmission Station #1
Northern Pass Transmission Project
Pittsburg, NH

Prepared for
Northern Pass Transmission, LLC and
Public Service Company of New Hampshire
d/b/a Eversource Energy
Energy Park
780 Commercial Street
Manchester, NH 03101

Prepared by
Normandeau Associates, Inc.
25 Nashua Road
Bedford, NH 03110

May 2017

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- Appendix E Natural Heritage Bureau (NHB) Review
- Appendix F U.S. Army Corps of Engineers (ACOE) New Hampshire Programmatic General Permit (PGP) Appendix B – Corps Secondary Impacts
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- Appendix H U.S. Geological Survey (USGS) Topographic Map
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WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau
Land Resources Management

Check the status of your application: www.des.nh.gov/onestop

RSA/Rule: RSA 482-A/ Env-Wt 100-900

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to Guidance Document A for instructions.

☒ Standard Review (Minimum, Minor or Major Impact) ☐ Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:

If mitigation is required a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if Mitigation is Required, please refer to the Determine if Mitigation is Required Frequently Asked Question.

Mitigation Pre-Application Meeting Date: Month: **05** Day: **26** Year: **2016**

☒ N/A - Mitigation is not required

3. PROJECT LOCATION:

Separate wetland permit applications must be submitted for each municipality that wetland impacts occur within.

ADDRESS: **Old Canaan Road** TOWN/CITY: **Pittsburg**

TAX MAP: **A1** BLOCK: LOT: **28 & 29** UNIT:

USGS TOPO MAP WATERBODY NAME: ☒ NA STREAM WATERSHED SIZE: ☒ NA

LOCATION COORDINATES (If known): **45.02N, 71.47W** ☒ Latitude/Longitude ☐ UTM ☐

4. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

Northern Pass proposes to excavate 3 test pits on parcel A1-28 and 29 in Pittsburg, New Hampshire to identify the seasonal high water table in accordance with the requirements of the NHDES Alteration of Terrain Bureau. The data will inform the final stormwater design for Transition Station #1 associated with the Northern Pass Transmission Project. There are no permanent impacts associated with this work

5. SHORELINE FRONTAGE:

☒ NA This does not have shoreline frontage. SHORELINE FRONTAGE:

Shoreline frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line.

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required and, if required, the status of the application.

To determine if other Land Resources Management Permits are required, refer to the Land Resources Management Web Page.

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	☐ YES ☒ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED
Individual Sewerage Disposal per RSA 485-A:2	☐ YES ☒ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED
Subdivision Approval Per RSA 485-A	☐ YES ☒ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED
Shoreland Permit Per RSA 483-B	☐ YES ☒ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB **15** - **0611** .

b. ☒ Designated River the project is in ¼ miles of: **Connecticut River** ; and date a copy of the application was sent to the Local River Management Advisory Committee: Month: **5** Day: **26** Year: **2017**

☐ N/A

8. APPLICANT INFORMATION (Desired permit holder)

LAST NAME, FIRST NAME, M.I.: **Northern Pass Transmission, LLC c/o Jerry P. Fortier**

TRUST / COMPANY NAME: **Northern Pass Transmission, LLC** | MAILING ADDRESS: **780 North Commercial Street**

TOWN/CITY: **Manchester** | STATE: **NH** | ZIP CODE: **03101**

EMAIL or FAX: **Jerry.fortier@Eversource.com** | PHONE: **603-669-4000**

ELECTRONIC COMMUNICATION: By initialing here: **JPF**, I hereby authorize NHDES to communicate all matters relative to this application electronically

9. PROPERTY OWNER INFORMATION (If different than applicant)

LAST NAME, FIRST NAME, M.I.: **Renewable Properties, Inc. c/o Kevin McCune**

TRUST / COMPANY NAME: **Eversource Energy Service Corporation as agent for Renewable Properties, Inc.** | MAILING ADDRESS: **780 N. Commercial Street**

TOWN/CITY: **Manchester** | STATE: **NH** | ZIP CODE: **03101**

EMAIL or FAX: **Kevin.McCune@Eversource.com** | PHONE: **339-987-7020**

ELECTRONIC COMMUNICATION: By initialing here **KFM**, I hereby authorize NHDES to communicate all matters relative to this application electronically

10. AUTHORIZED AGENT INFORMATION

LAST NAME, FIRST NAME, M.I.: **Carbonneau, Lee, E.** | COMPANY NAME: **Normandeau Associates, Inc.**

MAILING ADDRESS: **25 Nashua Road**

TOWN/CITY: **Bedford** | STATE: **NH** | ZIP CODE: **03110**

EMAIL or FAX: **lcarbonneau@normandeau.com** | PHONE: **603-637-1150**

ELECTRONIC COMMUNICATION: By initialing here **LEC**, I hereby authorize NHDES to communicate all matters relative to this application electronically

11. PROPERTY OWNER SIGNATURE:

See the Instructions & Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for NHPA 106 compliance.
8. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not

See attached signature page Property Owner Signature	Print name legibly	/ / Date

MUNICIPAL SIGNATURES

12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

⇨	Print name legibly	Date

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

⇨ Marise Burns	Marise Burns	Pittsburg	06/01/17
Town/City Clerk Signature	Print name legibly	Town/City	Date

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

14. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is complete.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.		TEMPORARY Sq. Ft. / Lin. Ft.	
Forested wetland	0	☐ ATF	1171	☐ ATF
Scrub-shrub wetland	0	☐ ATF	0	☐ ATF
Emergent wetland	0	☐ ATF	0	☐ ATF
Wet meadow	0	☐ ATF	0	☐ ATF
Intermittent stream	0	☐ ATF	0	☐ ATF
Perennial Stream / River	0 / 0	☐ ATF	0 / 0	☐ ATF
Lake / Pond	0 / 0	☐ ATF	0 / 0	☐ ATF
Bank - Intermittent stream	0 / 0	☐ ATF	0 / 0	☐ ATF
Bank - Perennial stream / River	0 / 0	☐ ATF	0 / 0	☐ ATF
Bank - Lake / Pond	0 / 0	☐ ATF	0 / 0	☐ ATF
Tidal water	0 / 0	☐ ATF	0 / 0	☐ ATF
Salt marsh	0	☐ ATF	0	☐ ATF
Sand dune	0	☐ ATF	0	☐ ATF
Prime wetland	0	☐ ATF	0	☐ ATF
Prime wetland buffer	0	☐ ATF	0	☐ ATF
Undeveloped Tidal Buffer Zone (TBZ)	0	☐ ATF	0	☐ ATF
Previously-developed upland in TBZ	0	☐ ATF	0	☐ ATF
Docking - Lake / Pond	0	☐ ATF	0	☐ ATF
Docking - River	0	☐ ATF	0	☐ ATF
Docking - Tidal Water	0	☐ ATF	0	☐ ATF
TOTAL	0 / 0		1171 / 0	

15. APPLICATION FEE: See the Instructions & Required Attachments document for further instruction

☐ Minimum Impact Fee: Flat fee of $ 200

☒ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking)	**1,171** sq. ft.	X	$0.20 =	$ **234.20**
Temporary (seasonal) docking structure:	**0** sq. ft.	X	$1.00 =	$ **0**
Permanent docking structure:	**0** sq. ft.	X	$2.00 =	$ **0**
Projects proposing shoreline structures (including docks) add $200 =				$ **0**
Total =				$ **234.20**
The Application Fee is the above calculated Total or $200, whichever is greater =				$ **234.20**

Additional Detail for Sections 8, 9 and 11 on NH DES Wetlands Permit Application Form

1. Eversource Energy Service Corporation, as duly authorized agent for
   Northern Pass Transmission LLC
   Jerry P. Fortier
   Director, Transmission Business Operations
   780 North Commercial Street
   Manchester, NH 03101
   Tel: 603-669-4000
   Jerry.Fortier@eversource.com

   By Jerry P. Fortier, duly authorized

2. Eversource Energy Service Corporation, as duly authorized agent for
   Renewable Properties, Inc.
   Kevin F. McCune
   780 North Commercial Street
   Manchester, NH 03101
   Phone: 339-987-7020
   Kevin.mccune@eversource.com

   By Kevin F. McCune, duly authorized

Northern Pass Soil Test Pits for Seasonal High Water Table Investigation
Project Description and Construction Sequence
Transition Station #1 – Pittsburg, NH

Northern Pass proposes to excavate and examine three soil test pits at Transition Station 1 to examine subsurface soil and geological conditions which are needed for final design of Northern Pass project elements. Test pits are excavated with a small excavator or backhoe which accesses the test pit locations following a path specified on the plans. The route for the excavator was determined by a contractor in the field based on topography and avoidance of potential obstructions such as large trees, boulders, stone walls, and sensitive resources (previously delineated and mapped) such as wetlands and streams. The goal is to provide safe and efficient access while minimizing wetland and stream crossings and removing as little vegetation as possible.

The access path for the excavator will be approximately 15-feet wide and there is a 60-foot radius around each test pit for an equipment work area and temporary soil stockpile. Existing access paths that were cut and matted for geotechnical borings in fall 2016 will be followed to minimize impacts. Some additional clearing may be required along the access route or at the test pit sites. There is a wetland adjacent to two of the test pits that will have minor temporary impacts. The third test pit is located in an upland area where no wetland impacts are expected.

Excavation of test pits is expected to take a week or less. There are no permanent impacts associated with this work.

Construction Sequence

- Verify that the reflagged wetland boundaries along the drilling access route (completed in August 2016) are still visible and if necessary, replace missing wetland boundary flagging;
- Hand cut any additional trees and brush along the equipment access path and test pit radius as necessary (2015 acoustic monitoring indicates no Northern Long-eared Bats are present at the worksite)
- Establish other BMPs, if required, including any appropriate silt fence, straw bales, filtration basins, etc. Timber mats will be used if necessary
- Mobilize clean excavation equipment and deploy monitor to check on E&S controls and wetland crossings
- Excavate test pits and record data
- Refill and tamp test pits upon completion, with reserved topsoil going in last
- Remove all equipment and materials and clean up any materials, seed disturbed areas
- De-mobilize and clean equipment

Appendix A
Copy of Application Check

NORMANDEAU ASSOCIATES, INC.
25 Nashua Road, Bedford, NH 03110-5527
(603) 472-5191 (603) 472-7052 fax

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

100778
CHECK DATE
May 25, 2017

PAY Two Hundred Thirty Four and 20/100 Dollars

AMOUNT
234.20

TO Treasurer, State of New Hampshire
ATT: NHDES
P.O. Box 95
Concord, NH 03302-0095

Pamela S Hall MP
TWO SIGNATURES REQUIRED OVER $5000.00

Security Check features included. Details on back.

⑈100778⑈ ⑆211070175⑆ 1104114302⑈

EMILY BUSINESS FORMS 800.392.6018 VISION

NORMANDEAU ASSOCIATES, INC. 25 Nashua Road, Bedford, NH 03110-5527

100778

Check Date: 5/25/2017

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
Pitt wetland	5/24/2017	2440220	234.20			234.20
Treasurer, State of New Hampshire		TOTAL	234.20			234.20
Citizens MA Checking	119	70697				

Appendix B
Pre-Application Meeting Report

Northern Pass Transmission (NPT) Project NHDES Progress Report Follow-up Meeting – NHDES Offices, Concord, NH May 26, 2016 2:00 PM to 3:30 PM

Attendees: Collis Adams – NHDES Lori Sommer – NHDES Craig Rennie – NHDES Kevin McCune – Eversource Lee Carbonneau – Normandeau Jake Tinus -Burns & McDonnell Dana Bisbee – Devine Millimet

Dana Bisbee explained that the point of our request for the meeting was to discuss the progress report and seek clarification on certain questions pertaining the wetlands application. He pointed out that NPT intends to ask for a meeting with Ridge Mauck and Gregg Comstock regarding the Alteration of Terrain and §Section 401 Water Quality Certification applications, respectively. Dana explained that the overall SEC schedule had now been extended by the SEC to September 2017 and but that the deadline for the final progress reports from DES (and other agencies) is still set for August 15, 2016.

Next, as follows, Dana led the discussion regarding clarification of specific questions as they pertain to the wetlands permit application.

Additional Data Requirements

Question 1) It appears that the transmission line could buried along the NH Route 3 right-of-way (ROW) from Pittsburg to Northumberland to avoid creating a new 32 mile ROW that runs cross-country in a southeasterly direction, almost to the Androscoggin River, only to eventually return due west to the Connecticut River valley. The Route 3 alternative would avoid most of the significant wetland and wildlife impacts in Coos County; therefore, DES review found that this portion of the project does not avoid and minimize wetland impacts to the greatest extent practicable per RSA 482-A and NH Administrative Rule Env-Wt 302.03 and Env-Wt 302.04. Please provide revised plans that consider and utilize the NH Route 3 alternative from Pittsburg to Northumberland.

Discussion: Dana explained that he had reached out to Collis Adams for clarification of this question as it seems to indicate that DES has already arrived at a finding. Collis explained that as confirmed by email with Dana that it was not the intention of DES to indicate a finding in the question as it is posed. Rather, DES is asking NPT to clarify its attempts at avoidance and minimization during the route selection process resulting in the route that was presented in the application. Further, Collis explained that what they are seeking is information about the practicability of the proposed route as any decision made by DES needs to be defensible.

Dana questioned if DES was seeking permit plans for the Route 3 alternative, including mapping of natural resources. Craig indicated that the rule requires evidence for practicability and this could involve plans and calculations to illustrate the practicability of the chosen route. Further, in considering the Draft EIS, Craig said that the document talks about overall project costs but it does not break costs out specifically for the Route 3 option which would involve underground installation. Similarly, the Draft EIS does not break out wetlands impacts and wildlife impacts for this option. DES assumes that the Route 3 option, since it involves undergrounding, is the option that is least impacting as this is the case for the section of underground that avoids impacts through the White Mountain National Forest (WMNF). Craig indicated that the WMNF underground portion of the project would involve a “simple” review due to the lack of resource impacts.

Using an example of box stores, Dana asked if DES would require additional analysis for alternate sites in entirely different locations. Lori Sommer indicated that yes, in the past, DES had asked for applicants to consider alternate sites that would involve less impacts and mentioned the WalMart distribution center in Raymond. Collis confirmed this, and said this is the approach when the applicant has not yet secured the property needed for the project and meets early with NHDES to discuss their project.

Question 2) Per Rule Env-Wt 302.04(a) (2) the applicant is required to demonstrate by plan and example that the proposed alternative is the one with the least impact to wetlands or surface waters. It is not clear how the proposed 32 mile new ROW in Coos County avoids surrounding wetlands on a landscape scale when the wetland impact plans only represent wetlands located within the ROW. DES finds that the proposed 32 mile ROW in Coos County is not an alternative with the least impact to wetlands or surface waters.

Discussion: Lee Carbonneau summarized the analysis that was performed to arrive at the proposed route. She said that initially Burns & McDonnell had performed desktop analysis for a potential route noting its constraints and limitations. When the selected route was abandoned due to public sentiment, Normandeau assisted in selection of a new route with desktop modeling and analyses of approximately 40 different segments which had considered many factors including natural resources, population centers, conservation lands, proximity to ridgelines, etc. She explained that the project had produced "spaghetti maps" showing a number of alternative routes that were eventually weeded out leading to the current route but this specific information was not included in detail in the application. This review informed the property rights acquisition efforts. The current route was sited within the constraints of the Projects property rights, and has a mid-level landscape position. This route seeks to avoid as much as possible both valleys, where wetlands, riparian habitats, and highest ranked habitat are more frequently encountered, and ridgetops, which have other sensitive resources.

Collis emphasized that what DES is seeking with this question is that from a broad landscape perspective, how did NPT arrive at the proposed alternative as the one with the least amount of impact to wetlands and surface waters? Lee explained that not a lot of specific field data was collected outside of the proposed route. Lori said that it would be helpful to have a spreadsheet created that would show the impacts for wetlands, streams, vernal pools, etc. broken out by the various routes or route segments. Craig indicated that it is not clear what forced the route east toward the Wagner Forest land, then back west from Dummer Pond. NPT needs to explain what was done to eliminate the different route segments as it is necessary for DES to have this information to understand how NPT had arrived at its' current route.

Question 3) It appears that the new section of ROW in Coos County comes within close proximity to several areas of the Granite Reliable Wind Farm. Cumulative impacts to wetland complexes and stream systems need to be further addressed and evaluated as required under Rule Env-Wt 302.04(a)(16) and (17).

Dana asked for clarification with respect cumulative impacts along the project route. He explained that the NPT project team was not able to collect a great deal of information outside of the immediate project corridor due primarily to a lack of access to these areas. Dana mentioned that the SEC project maps had been updated to include estimated resources outside of the project corridor. Referencing a table that Normandeau had produced, Lee indicated that the project team has some idea of the percentage of wetlands, streams, etc. that are affected by the project directly within the mapped project area but that outside of the limits of the investigations this would be difficult to do. Craig explained that with this question, DES is really asking for a more limited analysis, i.e., that of wetland complexes and stream systems that are in close proximity or common to both NPT and the Granite Reliable Wind Farm. Lori indicated that much data has been generated for the wind farm project as it has already been permitted, and DES is asking that NPT compare that data with the proposed NPT impact data to further explain cumulative impacts in the wetland systems that are shared by the projects.

Question 7) There appears to be a change in use on some forestry access roads, as well as some ATV and snow machine trails, that will require additional permitting. See Rule Env-Wt 303.04(g)(l), which states "access shall not be used for subdivision, development, or other land conversion to non-forestry uses ...". Please include in the wetland application any additional wetland impact areas where this change in use occurs. In addition, existing stream crossings may need to be upgraded to meet the stream crossing standards of Chapter Env-Wt 900.

Dana explained that the NPT team did not fully understand the question and how it applies to NPT in that the forestry access roads are primarily for access to the ROW. Lee explained that NPT has presented information about access roads in the permit application. This information includes details about wetland crossings which would involve temporary impacts, largely from matting. No permanent impacts were expected as the roads that are indicated for access are those that appeared substantial enough to contain equipment and would not require a lot of modification. Jake Tinus added that now that the contractor is on board, walkdowns are expected to occur later this summer to take a closer look at project access, amongst other issues. At that time, culverts that require modifications could be identified. Further, Jake stated that the project has agreed to comply with the stream crossing rules in the application which would require approvals for upgraded stream crossings wherever they are identified. Craig said that any crossing that didn't go through a permitting process on the Bayroot/Wagner property previously would need to be looked at. Dana explained that it is common for the SEC to consider small changes and delegate the responsibility for review to the DES.

Craig explained the Granite Reliable Wind Farm project faced a similar situation whereby the paper company that owned the land was actively using the roads for temporary access and has obtained a number of Forestry PBNs over the years. When the Granite Reliable project came along, it was required to upgrade certain culverts for a change in use and comply with the stream crossing rules. Essentially, the wind farm applicant performed an assessment of the culverts that would require upgrades and submitted that to DES ahead of the final progress report. Craig recalled that the number of culverts that required upgrading was limited to perhaps 6 or 8 for the whole project. DES said that they would expect that a similar analysis be performed for NPT this summer and provided to them prior to issuance of their final report to the SEC. No assessment of wetland fill would be required; the survey can be limited to culverts where stream rules apply.

Question 10) Review of the Deerfield Substation plans finds that most of the proposed wetland impacts are for two stormwater ponds; 9,037 square feet and 19,196 square feet respectively. Impacts to naturally-occurring wetlands for stormwater treatment and attenuation are typically not allowed. It appears that the substation could be shifted further southwest to avoid these wetland areas. Also, the stormwater ponds could be reconfigured to further reduce impacts.

Dana explained that NPT had endeavored to avoid impacting wetlands at the Deerfield Substation site but that it is limited in size and constrained by wetlands. A similar situation exists at Transition Station #1 and Transition Station #5 sites. Craig pointed out that there is a DOT Alteration of Terrain rule that states that impacts to wetlands by detention basins and stormwater appurtenances is not allowed unless the Wetlands Bureau allows it. Dana inquired if a rule waiver could be sought with the AoT program. Craig indicated that we could try but he stated that DES is basically asking if NPT can reduce the size of the basins to remove them from the wetlands. Jake reiterated that the transition station sites are limited in size and that shifting the development at the sites would not likely result in any reduction in impacts. Craig indicated that in DES' view, runoff from gravel pads in substations is virtually non-existent and that perhaps the design engineers can look at some of their assumptions for CN values which could help reduce the size of the stormwater features. Jake indicated that additional geotechnical investigations are slated for later this summer which would provide additional information to the engineers. Lori said there is chance that the permit could be denied for these impacts so the team does need to take a look at this issue. Further, as has been the case in two recent projects, the Corps of Engineers could say also say no. Jake said that he would be speaking soon with the engineers about these points made for the three sites.

Question 20) All wetland areas along the 192 mile corridor are required to be field delineated and classified in accordance with Env-Wt 301.01 and Env-Wt 301.02. Have these requirements been met or did some of the wetland areas get interpreted and identified from aerial photographs?

Lee responded to this question that yes, all wetlands, except for one small area on the Franklin Converter

Terminal site had been field delineated. The Franklin wetland was photo-interpreted but would be delineated as soon as possible.

Question 30) The application states that calcium rich bedrock occurs within the towns of Dummer, Millsfield, Dixville, Stewartstown, Clarksville, and Pittsburg. With the higher possibility of rare plants occurring in these areas, botanists should be retained to re-survey these areas prior to construction to ensure that additional rare plants are avoided.

Dana asked for clarification of this question. Craig explained that DES is asking about construction activities and scheduling to avoid impacts. Further, DES would like NPT to perform an additional survey prior to construction of the areas of rare plants to capture any changes in location and distribution. Lee explained that NPT had coordinated with NHNHB to develop a survey work plan which was followed by Normandeau. They feel that their survey identified rare plants, and NP has already committed to resurveying those locations prior to construction. However, there are no plans to resurvey locations where no rare plants were found. Jake added that the project is currently working on limitations mapping for the construction activities that will help the contractors avoid and minimize impacts to sensitive plant and animal species and exemplary natural communities. Craig suggested we make our plans clear in our response.

Wetland Mitigation Comments

Question 31) Per Env-Wt 806.05(a) and (b), the DES shall not issue a permit until the applicant has paid the full amount of the mitigation payment. With the New Hampshire Site Evaluation Committee (SEC) application process, the DES recommends that the mitigation payment shall be provided within 120 days of the date of a favorable decision by the SEC and issuance of a decision by the Army Corps of Engineers.

Dana inquired about the timing of the mitigation payment. To make it easier for NPT, Lori asked NPT to consider making payments according to construction activities and where they are occurring. Kevin McCune said that it is quite likely that construction will occur in any number of areas so that might be difficult to assess where appropriate. Lori suggested quarterly payments might be appropriate in this case.

Question 36) The information in the baseline reports submitted with the application materials may need to be supplemented with additional information depending on the parcel and final easement holder. The DES can provide an example final baseline documentation report (BDR) to be the template used for the final documents. The BDR is signed upon recordation of the conservation easement and a final signed copy submitted to DES.

Lori suggested that the baseline reports could be embellished. She will send an example BDR to Lee that the project should follow as this will help DES administratively.

Draft Project Specific Permit Conditions

Condition 28) All seed mixes and plantings used for restoration activities shall be reviewed and approved by the NH Natural Heritage Bureau (NHB) prior to their use.

Lee asked if this applies to the entire project. Craig indicated that this really applies to restoration of high-elevation areas as those areas have different grass species which will be necessary to be successful.

Follow-up Action Items:

- Lee to prepare spreadsheet showing impacts for wetlands, streams, vernal pools, etc. broken out by the various routes or route segments.
- Lee to inquire with Curt Thalken regarding whether the ACOE has a rule or policy against building stormwater basins in wetlands.
- Jake needs to speak with Sam and PAR for developing a plan for assessing stream crossings as to whether or not they will need to be upgraded to enable the development activities. The crossing areas need to be identified by parcel and location.
- Jake to speak with the team about requests by DES to consider site reconfiguration on the Deerfield Substation, Transition Station #1 and Transition Station #5 site to avoid stormwater features in wetlands.

Appendix C
NHDES Wetlands Permit Application - Attachment A
Minor and Major – 20 Questions

WETLANDS PERMIT APPLICATION – ATTACHMENT A
MINOR AND MAJOR - 20 QUESTIONS

Water Division/ Wetlands Bureau/ Land Resources Management

Check the Status of your application: www.des.nh.gov/onestop

RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:
1. The need for the proposed impact.
The three proposed test pits (one in uplands, two in wetlands) are required to identify the seasonal high water table in accordance with the requirements of the NHDES Alteration of Terrain Bureau. NH DES Alteration of Terrain (AOT) program associated with their review of the Northern Pass Transmission AoT permit application materials (see Question 10 in attached NHDES meeting notes dated 05/26/16). In addition, "test pit explorations" at Transition Station #1 are required as part of the Project Specific Conditions, specifically Condition #2, included as part of a letter from the NHDES to the New Hampshire Site Evaluation Committee containing the DES Final Decision, dated March 1, 2017. Page 1 of the DES Final Decision Letter and the Alteration of Terrain conditions are included following these 20 Questions for reference.
2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.
The contractors responsible for the test pit excavations have reviewed the field conditions on the site and mapped out a safe and efficient access route and work pad arrangement for each test pit location that also minimizes impacts to wetlands, streams and vegetation.

3. The type and classification of the wetlands involved.
The affected wetlands on this site are palustrine forested wetlands, with a mix of hardwood and softwood cover, with a seasonally saturated hydrologic regime (PFO1/4E). This wetland is located on a seepage slope.
4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.
The wetlands that will be temporarily affected by this work are hydrologically connected to similar wetlands and small drainages on the landscape, but are not immediately adjacent to large perennial streams, rivers, ponds or lakes. The wetlands on site drain to a roadside ditch, cross under Old Canaan Road into an oxbow wetland that drains to the Connecticut River.
5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.
The geology of this site includes somewhat calcareous soils, and the wetlands support some plants that are uncommon in other portions of the state where acidic soils predominate. Although no state-listed or federally-listed threatened or endangered plants were observed, there are some watch list species within the site, which have been reported to the NHNHB. No watch list species will be impacted by the test pit work or access to these locations.
6. The surface area of the wetlands that will be impacted.
The test pit excavations will temporarily impact 1,171 square feet of forested wetlands. The impacts will result from two test pits excavated partly in wetlands. The pits will be filled in at the conclusion of the data collection. The impacted locations are within the footprint of a proposed transmission-related facility associated with the Northern Pass Project.

7. The impact on plants, fish and wildlife including, but not limited to:
   a. Rare, special concern species;
   b. State and federally listed threatened and endangered species;
   c. Species at the extremities of their ranges;
   d. Migratory fish and wildlife;
   e. Exemplary natural communities identified by the DRED-NHB; and
   f. Vernal pools.

The proposed test pits will not affect vernal pools, exemplary natural communities, threatened or endangered plant species, or fisheries resources. An acoustic survey for Northern Long-eared bats performed in 2015 following USFWS protocols indicates that this species is not present in the project area. Transient Canada lynx and American marten may periodically be on or near the site, but will not be harmed by the investigations. All impacts to wildlife habitats are temporary and limited to a narrow pathway across uplands, one upland test pit, and 442 sf of wetland tree clearing for excavation of two other test pits at the edge of a wetland, and no impacts to listed wildlife are anticipated. No long-term habitat loss for any wildlife species will result from the geotechnical borings.

8. The impact of the proposed project on public commerce, navigation and recreation.

The test pit excavations are taking place on privately-owned property that currently has no recreational uses, no commercial enterprise, and no navigational waters. The project will not impede access to any other properties or public uses.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

Since the work involves temporary access and disturbance of a narrow corridor between test pit locations previously cut for geotechnical borings, it is not expected to have an effect on the aesthetic interests of the general public. The work will be completed within a few days and no related materials will remain.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.
The work is limited to temporary disturbance on private property that is not an access path to any public properties.
11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.
The work is very limited in scope and location, is temporary, and will not affect abutting property owners, aside from the sound of the excavation equipment which will be temporary.
12. The benefit of a project to the health, safety, and well being of the general public.
The test pits will allow final design of transmission-related facilities with site-specific information that will confirm assumptions used in the preliminary design. Ultimately, the transmission-related facilities that are built will benefit the public by providing lower cost, low carbon energy to the regional grid.

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.
All impacts are temporary. The excavation of test pits will follow all applicable Best Management Practices, and will not affect drainage patterns or the quality or quantity of surface or groundwater on the site, entering the site, or leaving the site.
14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.
The work will be conducted using all applicable Best Management Practices, including erosion and sedimentation controls. There will be no permanent structures or drainage changes that would increase flooding.
15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.
The work is not being conducted in or adjacent to surface waters where currents or waves could occur. Test pits will be located in vegetated wetlands and uplands.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.
There will be no permanent impacts associated with the test pits, so there would be no cumulative impacts if all abutting landowners performed similar investigations.
17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.
The temporary wetland impacts associated with the geotechnical investigation will have brief and minimal impacts to wetland functions and values in the footprint of the disturbed area, which will not extend to the wetland complex, and will not have long-term impacts on wetland functions and values on or off the site. Temporary vegetation disturbance and displacement of wildlife in the immediate vicinity of the work is expected during the excavation process, which will last only a few days. The area will be stabilized and existing topsoil will be replaced, providing a native seed bank.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.
There are no Natural Landmarks in the vicinity of the proposed soil test pit investigations.
19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.
The site where the investigations will take place in Pittsburg is across Old Canaan Road from the Connecticut River, which is a Designated River under the New Hampshire Rivers Management and Protection Program and is also an American Heritage River. The soil test pit work will not affect the Connecticut River.
20. The degree to which a project redirects water from one watershed to another.

The proposed soil test pit investigations will not redirect watershed from one watershed to another.

Additional comments

See excerpt from March 1, 2017 DES Final Decision Letter, attached.

The State of New Hampshire
Department of Environmental Services

Clark B. Freise, Assistant Commissioner

March 1, 2017

Pamela G. Monroe, Administrator
New Hampshire Site Evaluation Committee
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: Joint Application of Northern Pass Transmission, LLC and Public Service Company of New Hampshire d/b/a Eversource Energy
Site Evaluation Committee (SEC) Docket No. 2015-06

Dear Ms. Monroe:

This letter is to notify you that the NH Department of Environmental Services (DES) Water Division staff have completed their technical review of the application and have made a final decision on the parts of the application that relate to DES permitting or regulatory authority relative to a Wetland permit, Alteration of Terrain permit, 401 Water Quality Certificate, and Shoreland permits. DES recommends approval of the application with the conditions that are enclosed with this letter.

This concludes DES review of the project which we hope will assist the SEC to complete its project evaluation process and render a final decision. If you have any questions, please contact me at 271-2951 or email at: Rene.Pelletier@des.nh.gov

Sincerely,

Rene Pelletier, PG
Assistant Director
Water Division

cc: Michael J. Iacopino, Counsel SEC
ec: Robert P. Clark, Eversource, Applicant
Kevin F. McCune, Eversource, Applicant
Lee Carbonneau, Normandeau Associates, Inc.
George Dana Bisbee, Devine Millimet
Clark Freise, Asst. Commissioner, DES
Gene Forbes, Water Division Director, DES
David Keddell, ACOE
Mark Kern, EPA
Amy Lamb, NHB
Carol Henderson, NHFG

NORTHERN PASS, NHSEC DOCKET #2015-06
ALTERATION OF TERRAIN BUREAU
MARCH 1, 2017 FINAL DECISION

RECOMMEND APPROVAL WITH THE FOLLOWING PERMIT CONDITIONS:

PROJECT SPECIFIC CONDITIONS:

1. In order to confirm data obtained from test borings, the basis for current stormwater design assumptions, prior to construction activities at Transition Stations 2, 3, and 6, the Deerfield Substation, the Scobie Pond Substation Expansion, and the Franklin Converter Station, the Permittee shall perform test pit explorations at proposed stormwater treatment facilities and provide to DES the estimated seasonal high water table elevation at each proposed stormwater treatment facility location. Based upon the results of the explorations, proposed stormwater treatment facilities shall be modified, if necessary, to meet applicable design requirements of Env-Wq 1500.
2. In order to confirm data obtained from test borings, the basis for current stormwater design assumptions, prior to construction activities at Transition Station 1, the Permittee shall perform test pit explorations at the proposed wet pond/detention basin facility and provide to DES the estimated seasonal high water table elevation at the facility location, and, if necessary, a hydrologic budget to demonstrate a permanent pool can be sustained at the facility. Based upon the results of the explorations and the hydrologic budget, the proposed stormwater treatment facility shall be modified, if necessary, to meet applicable design requirements of Env-Wq 1500.
3. Activities shall not cause or contribute to any violations of the surface water quality standards established in Administrative Rule Env-Wq 1700
4. Revised plans shall be submitted for an amendment approval prior to any changes in construction details or sequences. The DES must be notified in writing within ten days of a change in ownership.
5. The DES must be notified in writing prior to the start of construction and upon completion of construction. Forms are available at: http://des.nh.gov/organization/divisions/water/aot/categories/forms.htm.
6. All activities shall comply with the plans and information provided with the Alteration of Terrain application submitted as part of the application to the New Hampshire Site Evaluation Committee on October 19, 2015, and with the revised and new plan sheets submitted by the Permittee on December 14, 2016 and January 25, 2017, and the conditions provided herein. Any proposed modifications which may affect surface water quality or quantity, shall receive DES approval prior to implementation.
7. All activities shall comply with Best Management Practices (BMP) identified in the application, and subsequently incorporated in any DES approvals.
8. No construction activities shall occur on the project after expiration of the approval unless the approval has been extended by the New Hampshire Energy Facility Site Evaluation Committee (SEC).
9. The Permittee shall identify to DES all laydown areas, and off-right-of-way access roads not currently identified for review prior to their construction, if DES permit requirements are triggered.
10. The Permittee shall comply with requirements of the EPA NPDES Construction General Permit (CGP) including, but not limited to, preparation and implementation of a Stormwater Pollution

Prevention Plan (SWPPP) and inspection, maintenance and reporting of construction activity. A copy of the SWPPP and/or construction inspection and maintenance logs shall be provided to DES within seven days (or other timeframe acceptable to DES) of receiving a request from DES.

11. Removal of vegetation within 50 feet of all surface waters (including wetlands) shall be minimized to the maximum extent practicable to reduce the potential for erosion and deposition of material into the surface waters, to protect rare, threatened and endangered species and habitats and to minimize the potential for increases in water temperature increases that could be harmful to aquatic life. Limits of clearing will be clearly marked in the field prior to construction to prevent inadvertent excursion of clearing beyond what is necessary.
12. This permit does not relieve the Permittee from the obligation to obtain other local, state or federal permits that may be required (e.g., from US EPA, US Army Corps of Engineers, etc.). Projects disturbing over 1 acre may require a federal stormwater permit from EPA. Information regarding this permitting process can be obtained at: http://des.nh.gov/organization/divisions/water/stormwater/construction.htm.
13. The smallest practicable area shall be disturbed during construction activities.
14. Unless otherwise authorized by DES, the Permittee shall keep erosion control supplies on the site at all times during construction to facilitate an immediate response to any construction related erosion issues on the site.

Appendix D
Wetland Data Sheets and Function & Value Assessments

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Northern Pass Project

Wetlands Functions & Values Data Sheet

Wetland ID: PB1 **Date:** 06-27-13 **Initials:** EL

Number of Flags: 83 **Town:** Pittsburg **Project:** NPT

Wetland: Open / Closed Notes: 1, 10, 11, 20, 21, 32, 33, 39, 40, 56, 59, 66, 69 **Photos: #'s:** ✓

Open Water Component?: Y / N

Wetland Associated w/ Stream?: Y / N If Yes, ID: — Type: P / I / E

Vernal Pool Identified?: Y / N If Yes, ID: — GPS Unit/Tech Initials: Green VAT Complete: Y / N

Cowardin Classes (Dominant(%)/others (%)): PFO1/4E(80) PEM1E26

Water Regime

A- Temp. flooded
B- Saturated
C-Seasonally flooded
E- Seasonally flooded/ saturated
F- Semipermanently flooded
G- Intermittently exposed
H- Permanently flooded
J- Intermittently flooded
K- Artificially flooded

Special Modifiers

b- Beaver
d- Partially drained/ditched
f-farmed
h-diked/impounded
r- artificial
x- excavated
s- spoil

Functions and Values:

F/V:	Suitable Y	Suitable N	Principal (Check)
Groundwater Rech/Disch.	✓		✓
Floodflow Alteration	✓		
Fish/Shellfish Habitat		✓	
Sed/Tox Retention	✓		✓
Nutrient Removal		✓	
Sed/Shore Stabilization		✓	
Production Export	✓		
Wildlife Habitat	✓		✓
Recreation	✓		
Educate/Science Value	✓		
Uniqueness/Heritage		✓	
Visual Qual/Aesthetic	✓		
End/Threatened Species		✓	
Other:			

Notes:
Very large toe slope wetland flows down
- Many seeps

Dominant Plants:
Tree: Frax nig., Abie bal., Pse rub., Acr rub., Ulm. rub.
Sapling/Shrub: Salix spp., Spi lat.,
Herb/Seedling: Osm cla., Ono sen., Car cri., Cly. str.
Woody Vine:
Invasives: Phal. arun.,

Soils:
Texture: Organic Loamy Sandy Silty Clayey
If mineral - Parent Material: Till Alluvium Other
Restrictive Layer? Y N if Yes, Depth (inches)

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

Appendix E
Natural Heritage Bureau (NHB) Review

New Hampshire Natural Heritage Bureau
DRED - Division of Forests & Lands
172 Pembroke Road, Concord, NH 03301
(603) 271-2214

To: Lee Carbonneau, Normandeau Associates, Inc.

From: Amy Lamb, Ecological Information Specialist

Date: October 5, 2015

Subject: Northern Pass Pre-Application Meeting Summary (NHB15-0611)

On March 30, 2015, Melissa Coppola issued a NH Natural Heritage Bureau (NHB) memo (NHB15-0611) to Normandeau Associates, Inc. that listed Threatened and Endangered species populations that will potentially be impacted by the proposed Northern Pass project. Since that date, NHB and Normandeau have met on several occasions to discuss project impacts, avoidance and minimization measures, route changes, and the remaining survey work to be completed.

This memo summarizes the most recent pre-application meeting, which took place on October 1, 2015. This meeting was held in order to review current rare plant and natural community information, refine avoidance and minimization measures, and determine additional steps to be taken in preparation for permit application submittal at the end of October, 2015.

The meeting resulted in the following determinations regarding data and documentation:

- NHB last provided digital data to Normandeau in February of 2015, and will continue to provide any new data (i.e., new plant surveys within the project area) as they become available.
- Normandeau will provide the final reports on Vegetation and Threatened and Endangered species to NHB upon completion.
- Normandeau will provide NHB a table summarizing the anticipated impacts to all rare plants and exemplary natural communities within the selected corridor. This table will distinguish between the different types of impacts and their resulting (long-term) effects on rare plants and exemplary natural communities.

- Any reports that are filed as publicly available information will not contain specific locations of rare plants; this information will be restricted to an appendix and treated as confidential, and will be removed from publicly available reports.
- The rare plant avoidance and minimization measures that the applicant has proposed were developed in consultation with NHB. NHB will provide additional species-specific avoidance and minimization guidance during the permit review period. This will consist of a table with prioritized actions for each species.
- As any new areas for access, staging, etc. become known, Normandeau (or any subsequent contractor) will conduct rare plant surveys in the areas and provide the results to NHB.
- Normandeau identified Lee Carbonneau as the point person for future Natural Heritage communications, and the NHB point person will be Amy Lamb.

The meeting also resulted in the determination of several measures to avoid and minimize impacts to Natural Heritage resources during construction:

- Meetings will be held among contractors, environmental monitors, and inspectors, prior to contractors working in or near areas where listed plants are located, that will include making contractors aware of sensitive areas and the appropriate best management practices for each area.
- Plans that are provided to contractors will contain a color-coded bar indicating the extent of a sensitive area; no further information will be revealed on such plans.
- Normandeau (or any subsequent contractor) will have "Sensitive Area" signs installed around rare plant populations and exemplary natural communities to alert work crews to their presence.
- It was agreed that it is critical that environmental monitors have the power and authority to stop work immediately if they become aware that any action will violate agreed-upon BMPs.
- NHB will make a recommendation to NHDES regarding qualifications of Environmental Monitors, to be included as a permit condition.

NHB and Normandeau will continue to communicate as the project progresses, in particular as any route changes or new impacts to rare plants become known.

Appendix F
U.S. Army Corps of Engineers (ACOE)
New Hampshire Programmatic General Permit (PGP) Appendix B – Corps Secondary Impacts

US Army Corps of Engineers®
New England District

Programmatic General Permit (PGP)
Appendix B - Required Information and Corps Secondary Impacts Checklist

In order for the Corps of Engineers to properly evaluate your application, applicants must submit the following information along with the DES Wetlands Bureau application or permit notification forms. Some projects may require more information. For a more comprehensive checklist, go to www.nae.usace.army.mil/regulatory, "Forms/Publications" and then "Application and Plan Guideline Checklist." Check with the Corps at (978) 318-8832 for project-specific requirements. For your convenience, this Appendix B is also attached to the State of New Hampshire DES Wetlands Bureau application and Permit by Notification forms.

All Projects:

- Corps application form (ENG Form 4345) as appropriate.
- Photographs of wetland/waterway to be impacted.
- Purpose of the project.
- Legible, reproducible black and white (no color) plans no larger than 11"x17" with bar scale. Provide locus map and plan views of the entire property.
- Typical cross-section views of all wetland and waterway fill areas and wetland replication areas.
- In navigable waters, show mean low water (MLW) and mean high water (MHW) elevations. Show the high tide line (HTL) elevations when fill is involved. In other waters, show ordinary high water (OHW) elevation.
- On each plan, show the following for the project:
- Vertical datum and the NAVD 1988 equivalent with the vertical units as U.S. feet. Don't use local datum. In coastal waters this may be mean higher high water (MHHW), mean high water (MHW), mean low water (MLW), mean low lower water (MLLW) or other tidal datum with the vertical units as U.S. feet. MLLW and MHHW are preferred. Provide the correction factor detailing how the vertical datum (e.g., MLLW) was derived using the latest National Tidal Datum Epoch for that area, typically 1983-2001.
- Horizontal state plane coordinates in U.S. survey feet based on the [insert state grid system] for the [insert state] [insert zone] NAD 83.
- Show project limits with existing and proposed conditions.
- Limits of any Federal Navigation Project in the vicinity of the project area and horizontal State Plane Coordinates in U.S. survey feet for the limits of the proposed work closest to the Federal Navigation Project;
- Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below the ordinary high water in inland waters and below the high tide line in coastal waters.
- Delineation of all waterways and wetlands on the project site, including vernal pools:
- Use Federal delineation methods and include Corps wetland delineation data sheets. See GC 2; Endnotes 1, 6, 7 and 15 in Appendix A; and www.nero.noaa.gov/hcd for eelgrass survey guidance.
- Appendix A, (e) Moorings, contains eelgrass survey requirements for the placement of moorings.
- For activities involving discharges of dredged or fill material into waters of the U.S., include a statement describing how impacts to waters of the U.S. are to be avoided and minimized, and either a statement describing how impacts to waters of the U.S. are to be compensated for (or a conceptual or detailed mitigation plan) or a statement explaining why compensatory mitigation should not be required for the proposed impacts. Please contact the Corps for guidance.

US Army Corps of Engineers®
New England District

New Hampshire Programmatic General Permit (PGP)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	X	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed	X	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org, specifically the book Natural Community Systems of New Hampshire.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		X
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	0 SQFT	
2.7 What is the size of the proposed impervious surface area?	0 SQFT	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	0%	
3. Wildlife	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)		X
3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.		X

3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the PGP, GC 21?	N/A	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	X	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage? No loss of flood storage will take place.	X	
5. Historic/Archaeological Resources		
For a minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review**)** shall be sent to the NH Division of Historical Resources as required on Page 5 of the PGP**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.
** If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law..
`

ACOE, NH PGP
Appendix B – Corps Secondary Impacts (Narrative)

1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water?

The Project area is within the 1 mile buffer of the Connecticut River (See attached Figure). The Project will be taking many steps to protect water quality and insure that no further impact will occur to impaired waters.

All Project-related work in NH will follow the NHDES Stormwater Manual Volume 3 as well as the NHDES *Best Management Practices Manual for Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire*. NPT contractors are required to follow all appropriate procedures specified by state law and all permit conditions when they are issued for the Project.

2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?

One soil test pit will be located approximately 200 feet from the edge of the Connecticut River, on the far side of Old Canaan Road from the River. No temporary or permanent impacts to the Connectucut River will occur as a result of the proposed test pit.

2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?

Yes. Although equipment will not cross wetlands, temporary impacts associated with the excavation of two test pits will occur. The soil will be backfilled after the assessment is complete, and no changes in hydrology or other wetland functions are anticipated.

2.6 to 2.8 What is the size of the existing impervious surface area? What is the size of the proposed impervious surface area? What is the % of the impervious area (new and existing) to the overall project site?

No impervious surface exists currently on the project parcel, and none will be created.

3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)

The NHNHB identified no endangered species in the project area. A survey for Northern Long-eared bats performed in 2015 following USFWS protocols indicates that no bats are present in the project area. No long term loss of wildlife habitat is expected.

.

Northern Pass Archeological Survey Findings Transition Station #1, Pittsburg NH
RPR #1448

A report describing the archeological survey at the Transition Station #1 site was prepared and submitted by Victoria Bunker to the New Hampshire Division of Historical Resources (NHDHR)[1]. The survey report was subsequently approved by NHDHR. Transition Station #1 is located immediately north of Old Canaan Road in Pittsburg, NH, and is situated on an elevated landscape overlooking the Connecticut River. The terrain is uneven with steep slopes, wetlands, seasonal streams and bedrock outcrops. The area is heavily wooded with hemlock and birch along with ferns, tall grasses and shrubs. The Phase I-A walkover survey revealed the area exhibits prior disturbance and soil modifications associated with former logging activities and the construction of Old Canaan Road. One zone of archeological resource sensitivity was identified during the Phase I-A survey, and excavation of 24 Phase I-B subsurface tests was conducted, all of which were negative. No artifacts were recovered in any tests. Based on the results of subsurface sampling and prevalent conditions no further archeological survey was recommended for Transition Station #1.

[1] NORTHERN PASS HVDC TRANSMISSION PROJECT Results of Phase I-A and Phase I-B Archeological Survey; Transition Stations, Connecting Routes and Expanded Survey Areas, Stewartstown, Clarksville and Pittsburg, NH. NHDHR #RPR 1448. Prepared by Victoria Bunker, PhD April 2014.

Appendix G
Designated River Notification to the Local River Management Advisory Committee (LAC)

NORMANDEAU ASSOCIATES
Environmental Consultants

NOTIFICATION OF WETLAND PERMIT APPLICATION

Via Certified Mail

May 30, 2017

Mr. Edwin Mellett, Chair
Connecticut River Headwaters Local Advisory
Subcommittee
1165 Lost Nation Road
Groveton, NH 03582

RE: Wetland Permit Application - Soil Test Pits - Northern Pass Project, LLC

Dear Mr. Mellett,

Enclosed please find a copy of the Wetland Permit Application for soil test pit investigations at a property on Old Canaan Road in Pittsburg, NH that will be filed with the NH Department of Environmental Services (DES) on behalf of the Northern Pass Project. The project includes three test pits and equipment access, including two test pits partially located in wetlands, within 1/4 mile of the Connecticut River. Under state law, it is a requirement to provide the Local River Advisory Committees having jurisdiction over this waterbody with a copy of the wetland application by Certified mail, for review and comment. Please find attached a copy of the application.

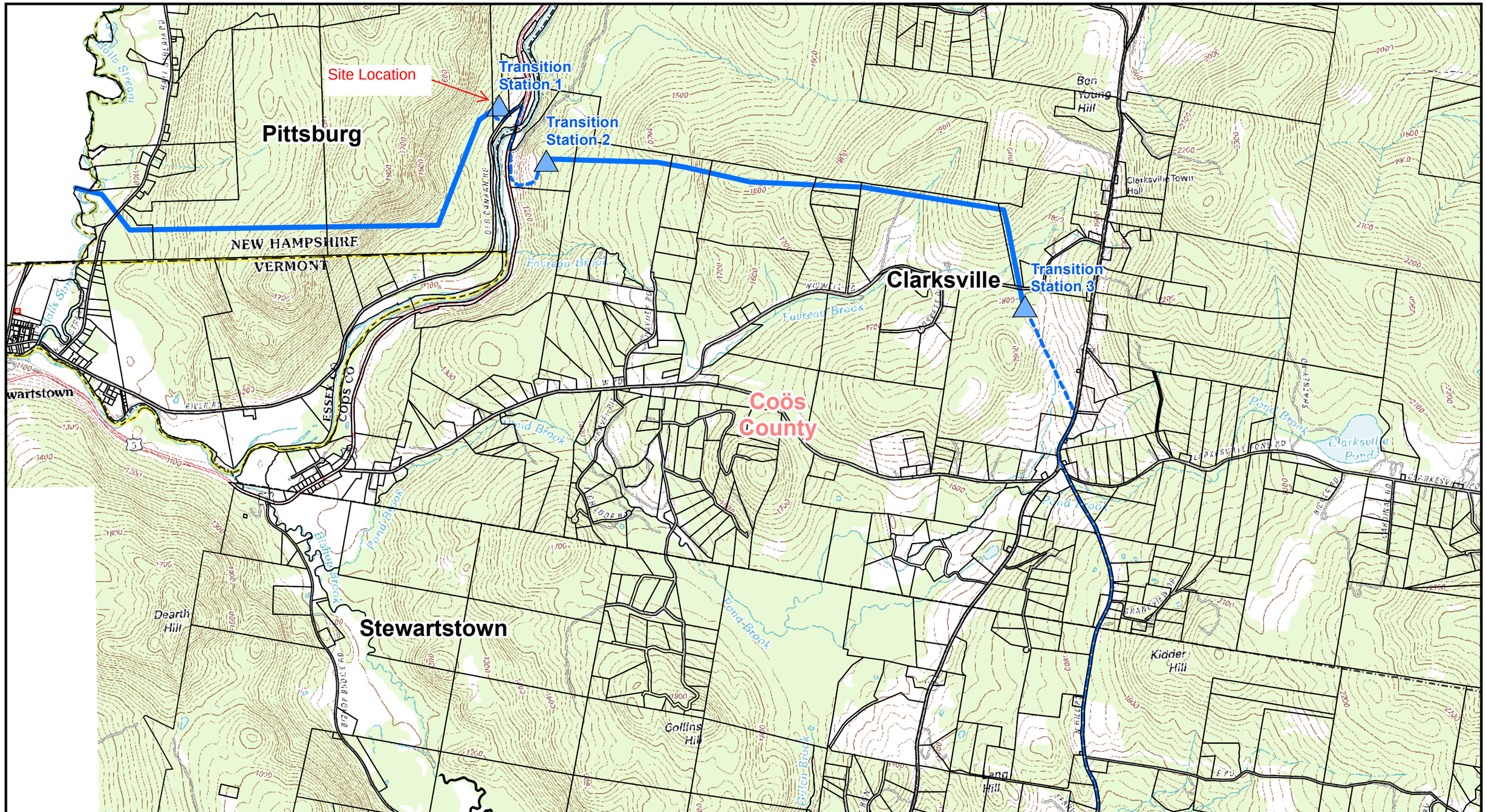
Sincerely,

Lee E. Carbonneau

Lee Carbonneau, PWS, CWS
As Agent for the Applicant

CC: NHDES (without attachments)

Appendix H
U.S. Geological Survey (USGS) Topographic Map



INDEX MAP

Legend

- Proposed Route (Overhead)
- Proposed Route (Underground)
- Deerfield to Scobie Pond Route
- Proposed Converter Terminal
- Existing Substation to be Upgraded
- Parcels
- Proposed Transition Station
- Municipal Boundary

Sources : USGS Topo, Burns & McDonnell

The Northern Pass Transmission Line Project
Proposed Route

Map 1 of 53

USGS Quads : Pittsburg OE E, Pittsburg, Lovering Mountain

N W E S

0 2,000 4,000 Feet

1:24,000

Date: 10/6/2015

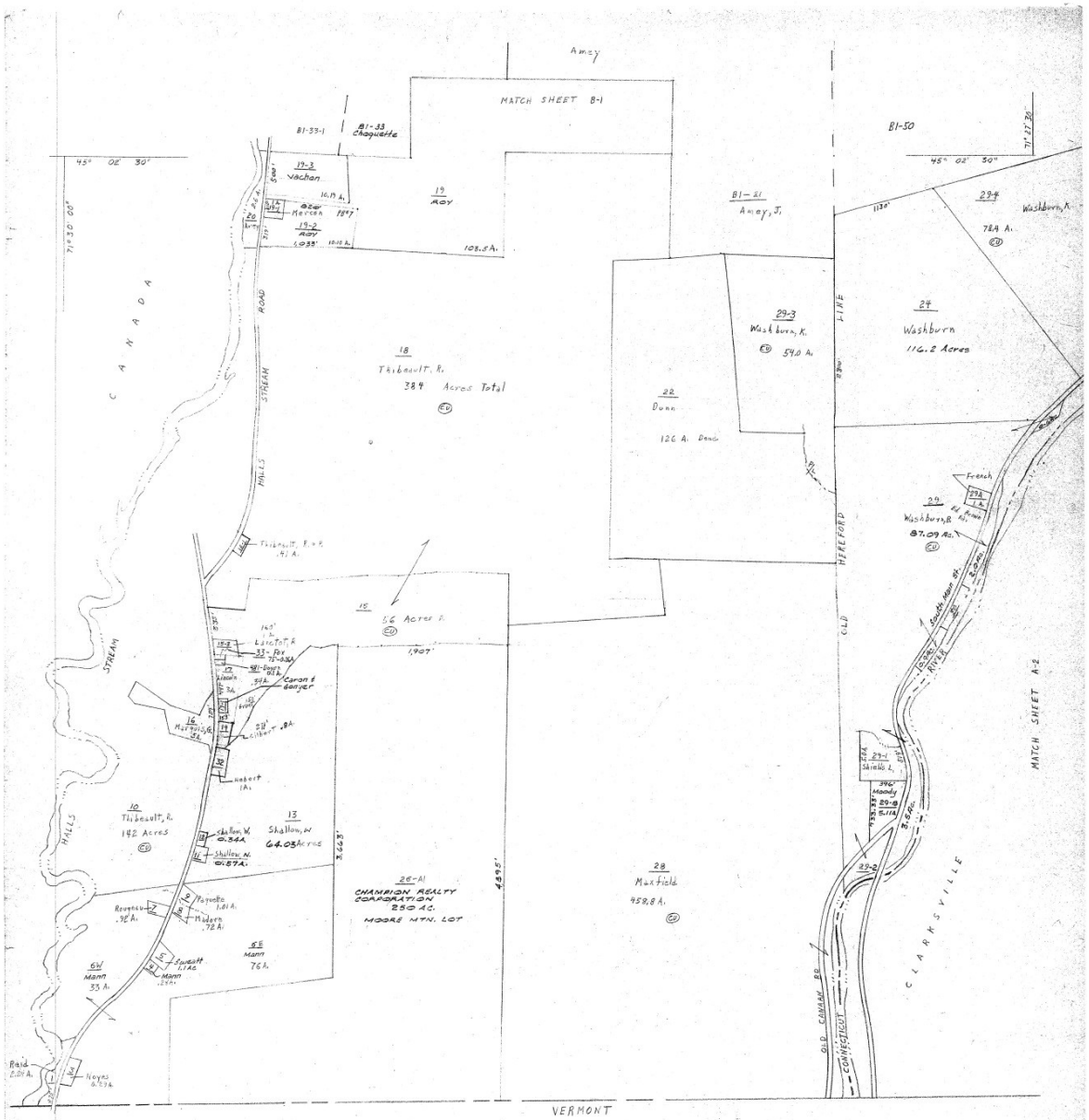
THE NORTHERN PASS℠

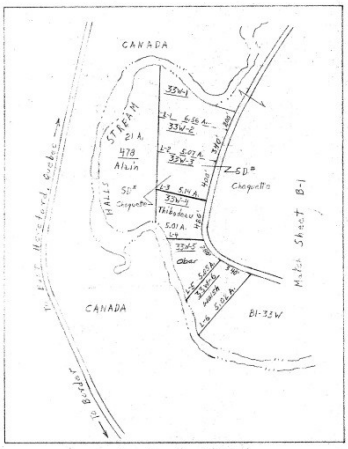
Appendix I
Site Photos

7/10/2012 Photo 1. Transition Station 1 looking northwest from Old Canaan Road, in the vicinity of the upland test pit location TP103.

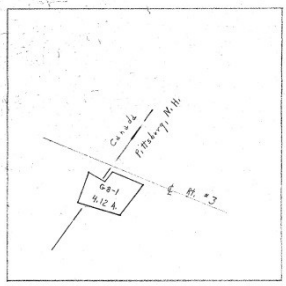
Photo 2. October 31, 2016. Test pit location TP103, being cleared by hand in 2016 for the previous geotechnical boring work in the same location.

Appendix J
Tax Map





Inset - Sheet "B"
Match To Sheet B-1



Inset for Sheet G8
U.S. Govt Property

Scale 1" = 500'

SHEET NO - A-1

Revised July 1990 J. Bradley
" Jan. 1992 " "
" Jan 2000 K. Dickson
" Apr. 2000 K. Dickson
" Mar. 2004 K. Dickson

Appendix K
Abutter Notification (Notification Letters and Certified Mail Receipts)

NORMANDEAU ASSOCIATES
Environmental Consultants

ABUTTER NOTIFICATION OF WETLANDS PERMIT APPLICATION

Via Certified Mail

May 26, 2017

Raymond E. Davis
20 Sunset Drive
Colebrook, NH, 03576

Re: Wetland Permit Application for Soil Test Pits for the Northern Pass Transmission Project

Dear Sir or Madam:

This letter is to inform you that Northern Pass Transmission LLC. has submitted a wetlands permit application to excavate test pits on several properties, one of which abuts your property. Under state law RSA 482-A:3 I (d)(1), the Project is required to notify you about the application, which proposes the excavation of three test pits at various locations on the property to acquire information that is necessary for the final design of Northern Pass Project components. Once it is filed, the permit application, including plans that show the proposed boring locations, will be available for viewing at the City or Town Clerk's Office in the city/town where the proposed project is located or at the NHDES offices by scheduling a file review by calling (603) 271- 8876 or online at http://www4.egov.nh.gov/DES/FileReview/.

If you have questions, you may contact Northern Pass at 800 286-7305 or at info@northernpass.us.

Sincerely,

Lee E. Carbonneau

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

NORMANDEAU ASSOCIATES
Environmental Consultants

ABUTTER NOTIFICATION OF WETLANDS PERMIT APPLICATION

Via Certified Mail

May 26, 2017

Bernard & Roberta Lacoy
555 South Main Street
Pittsburg, NH, 03592

Re: Wetland Permit Application for Soil Test Pits for the Northern Pass Transmission Project

Dear Sir or Madam:

This letter is to inform you that Northern Pass Transmission LLC. has submitted a wetlands permit application to excavate soil test pits on several properties, one of which abuts your property. Under state law RSA 482-A:3 I (d)(1), the Project is required to notify you about the application, which proposes the excavation of three test pits at various locations on the property to acquire information that is necessary for the final design of Northern Pass Project components. Once it is filed, the permit application, including plans that show the proposed boring locations, will be available for viewing at the City or Town Clerk's Office in the city/town where the proposed project is located or at the NHDES offices by scheduling a file review by calling (603) 271- 8876 or online at http://www4.egov.nh.gov/DES/FileReview/.

If you have questions, you may contact Northern Pass at 800 286-7305 or at info@northernpass.us.

Sincerely,

Lee E. Carbonneau

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

7017 0530 0000 9179 4074

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Certified Mail Fee $3.35
Extra Services & Fees (check box, add fee as appropriate) $2.75
- ☐ Return Receipt (hardcopy) $ $0.00
- ☐ Return Receipt (electronic) $ $0.00
- ☐ Certified Mail Restricted Delivery $ $0.00
- ☐ Adult Signature Required $ $0.00
- ☐ Adult Signature Restricted Delivery $

Postage $0.49
Total Postage and Fees $6.59

0108
05

Postmark Here
MANCHESTER NH BEDFORD BRANCH 03110 USPS MAY 26 2017

05/26/2017

Sent To: Raymond Davis
Street and Apt. No., or PO Box No.: 20 Sunset Dr.
City, State, ZIP+4®: Colebrook, NH 03576

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0530 0000 9179 4098

U.S. Postal Service™
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Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

PITTSBURG, NH 03592

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Extra Services & Fees (check box, add fee as appropriate) $2.75
- ☐ Return Receipt (hardcopy) $ $0.00
- ☐ Return Receipt (electronic) $ $0.00
- ☐ Certified Mail Restricted Delivery $ $0.00
- ☐ Adult Signature Required $ $0.00
- ☐ Adult Signature Restricted Delivery $

Postage $0.49
Total Postage and Fees $6.59

0108
05

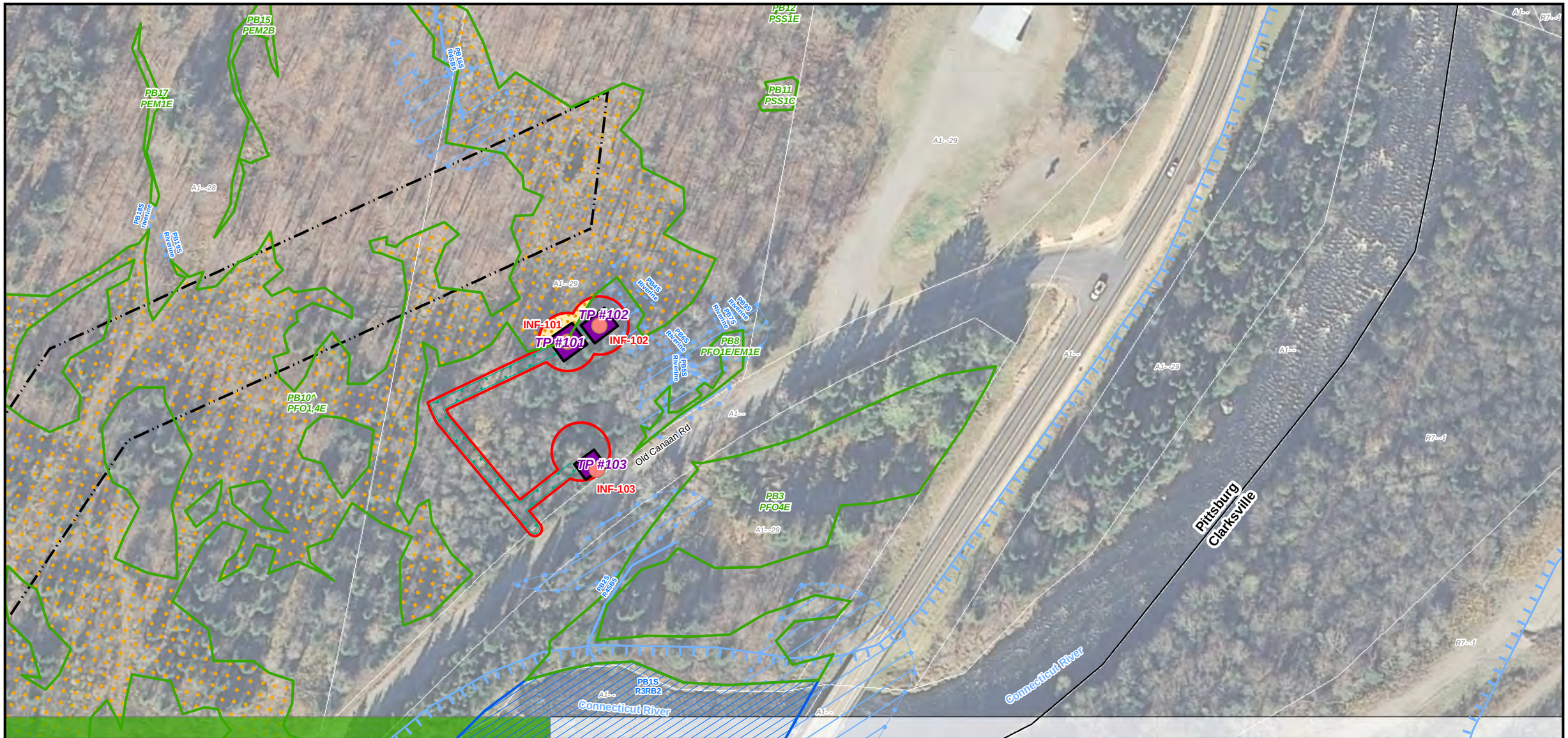
Postmark Here
MANCHESTER NH BEDFORD BRANCH 03110 USPS MAY 26 2017

05/26/2017

Sent To: Bernardq Roberta Lacoy
Street and Apt. No., or PO Box No.: 555 South Main St.
City, State, ZIP+4®: Pittsburg NH 03592

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

Appendix L
Project Plans



THE NORTHERN PASS

Existing Conditions

- Existing ROW
- 100-year Floodzone
- Wetlands
- USACE Reviewed Wetlands
- Vernal Pool
- 100' Buffer of Vernal Pools
- Stream Buffer (varies : 25',50', or 100')

Delineated Waterbodies

- Perennial
- Intermittent
- Ephemeral

Stream Centerlines

- Perennial
- Intermittent
- Ephemeral

- LiDAR 10' Contour
- LiDAR 2' Contour
- USGS 10' Contour
- USGS 2' Contour

Proposed Conditions

- Boring
- Boring Access
- Proposed New ROW
- Temporary Wetlands Matting
- Vegetation Clearing Areas
- Test Pit

RTE Bars

- Animal
- Vegetation
- Both

0 25 50 100 Feet

1 inch equals 100 feet when printed at 11" x 17"

N W E S

STATE OF NEW HAMPSHIRE
ADELE E. FOSILLO
No. 064
CERTIFIED WETLAND SCIENTIST
2/19/16

NHDES Wetlands & US Army Corps of Engineers Section 404/10 Permit Application Plans

THE NORTHERN PASS PROPOSED ROUTE

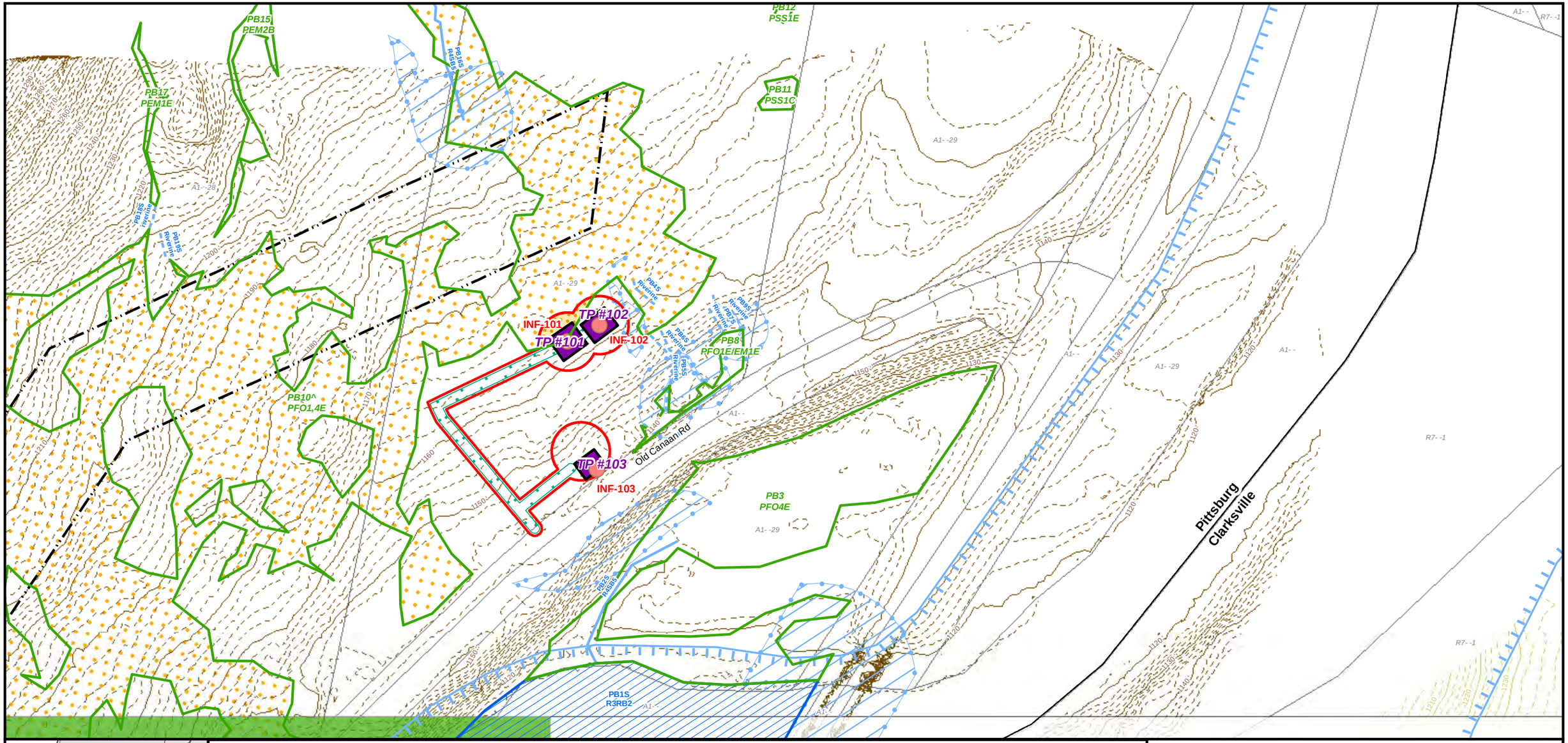
Jurisdictional Impact Type and Amount			Extent of Clearing (sq ft)		
Wetland / Waterbody	Temporary Impact (sq ft)	Permanent Impact (sq ft)	In Forested Wetlands	Uplands Stream Buffer	Uplands Vernal Pool Buffer
PB10, PF01, 4E	1,171	0			
PB15, PEM2B	0	0			
PB3, PF04E	0	0			
PB8, PF01E/EM1E	0	0			
PB16S, R4SB5	0	0	0	94	0
PB1S, R3RB2	0	0			
PB2S, R4SB5	0	0			
PB4S, Riverine	0	0			
PB5S, Riverine	0	0			
PB6S, Riverine	0	0			
PB7S, Riverine	0	0			
PB9S, Riverine	0	0			

Date: 5/23/2017

* High Quality Wetland, ^ Corps Reviewed

Sheet 001

Sources: NH GRANIT, Normandeau; Cornerstone, Burns & McDonnell.



THE NORTHERN PASS

Existing Conditions

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- Wetlands
- USACE Reviewed Wetlands
- Vernal Pool
- 100' Buffer of Vernal Pools
- Stream Buffer (varies : 25',50', or 100')

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- Perennial
- Intermittent
- Ephemeral

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- Perennial
- Intermittent
- Ephemeral

- LiDAR 10' Contour
- LiDAR 2' Contour
- USGS 10' Contour
- USGS 2' Contour

Proposed Conditions

- Boring
- Boring Access
- Proposed New ROW
- Temporary Wetlands Matting
- Vegetation Clearing Areas
- Test Pit

RTE Bars

- Animal
- Vegetation
- Both

0 25 50 100 Feet

1 inch equals 100 feet when printed at 11" x 17"

N W E S

STATE OF NEW HAMPSHIRE
ADELE E. FIORILLO
No. 064
CERTIFIED WETLAND SCIENTIST
2/19/16

NHDES Wetlands & US Army Corps of Engineers Section 404/10 Permit Application Plans

THE NORTHERN PASS PROPOSED ROUTE

Jurisdictional Impact Type and Amount			Extent of Clearing (sq ft)		
Wetland / Waterbody	Temporary Impact (sq ft)	Permanent Impact (sq ft)	In Forested Wetlands	Uplands Stream Buffer	Uplands Vernal Pool Buffer
PB10, PF01, 4E	1,171	0			
PB15, PEM2B	0	0			
PB3, PF04E	0	0			
PB8, PF01E/EM1E	0	0			
PB16S, R4SB5	0	0	0	94	0
PB1S, R3RB2	0	0			
PB2S, R4SB5	0	0			
PB4S, Riverine	0	0			
PB5S, Riverine	0	0			
PB6S, Riverine	0	0			
PB7S, Riverine	0	0			
PB9S, Riverine	0	0			

Date: 5/23/2017

* High Quality Wetland, ^ Corps Reviewed

Sheet 001

Sources: NH GRANIT, Normandeau; Cornerstone, Burns & McDonnell.

NORMANDEAU ASSOCIATES
Environmental Consultants

May 30, 2017

Ms. Darlene Forst
Wetlands Bureau – Shoreland Program
NH Department of Environmental Services
PO Box 95 – Hazen Drive
Concord, NH 03302

RE: Northern Pass Transmission, LLC. Shoreland Permit by Notification Application for Soil Test Pits

Dear Ms. Forst:

On behalf of Northern Pass Transmission LLC, Normandeau Associates, Inc. is submitting a Shoreland Permit by Notification (PBN) for soil test pits at the Transition Station #1 site in Pittsburg associated with the Northern Pass Transmission Project. This work is necessary for final design of this facility, including stormwater control features. A check for the $150.00 application fee is also attached.

We appreciate your review of this PBN. Please feel free to contact me if you have any questions or require additional information.

Sincerely,

Lee E. Carbonneau

Lee Carbonneau
As Agent for Northern pass Transmission, LLC.
Senior Principal Scientist
Normandeau Associates, Inc.

Attach.

Cc. Kevin McCune, Eversource Energy

Shoreland Permit by Notification-Soil Test Pits
Northern Pass
Connecticut River, Pittsburg, NH

Prepared for
Northern Pass Transmission, LLC and
Public Service Company of New Hampshire
d/b/a Eversource Energy
Energy Park
780 Commercial Street
Manchester, NH 03101

Prepared by
Normandeau Associates, Inc.
25 Nashua Road
Bedford, NH 03110

May 2017

SHORELAND PERMIT BY NOTIFICATION (PBN)

Water Division / Land Resources Management Bureau / Shoreland Program

RSA / Rule: RSA 483-B / ENV-Wq 1400

Administrative Use Only	Administrative Use Only	☐ PBN Accepted, Expires:	
		☐ PBN Rejected	Reviewer Initials:
		File #:	Admin Initials:
		Check #:	Amount:

This form is for construction, excavation, filing, or other activities that impact less than 1,500 square feet and add no more than 900 square feet of impervious area within a protected shoreland area, which have no impact on water quality, and follow department regulations. The square footage limits do not apply to special project types on page 2.

This form **cannot be used** for projects under the jurisdiction of RSA 482-A, the NH wetlands statute, including many projects within the water, on the bank or a water body, or within the 100 foot tidal buffer zone. This includes but is not limited to waterfront retaining walls, docks, wetlands, and beaches.

A. Project Site Information		RSA 483-B:5-b, I(a) ; Env-Wq 1406.17
Waterbody name: Connecticut River	Map: A1	Lot: 29
Address: Old Canaan Road	Block: N/A	Unit: N/A
Town/City: Pittsburg	State: NH	Zip code: 03592

B. Property Owner Information		Env-Wq 1406.17(a)(1,2), Env-Wq 1406.17(b)(1)
Name: Northern Pass LLC and Public Service Co. of NH d/b/a Eversource Energy (PSNH), c/o Kevin McCune	E-mail: kevin.mccune@eversource .com	
Address: 780 Commercial Street	Phone: 781-441-3808	
Town/City: Manchester	State: NH	Zip code: 03101

C. Agent Information		Env-Wq 1406.17(b)(2)
Name: Lee Carbonneau, Normandeau Associates	E-mail: lcarbonneau@normandeau.com	
Address: 25 Nashua Road	Phone: 603-637-1150	
Town/City: Bedford	State: NH	Zip code: 03110

D. Project Description Env-Wq 1406.17(b)(3, 4, 5)

A complete narrative description of **all** components of the proposed project must be listed here including all temporary and permanent impacts. Impacts include all construction, excavation, and filling within the protected Shoreland.

Northern Pass proposes to excavate and examine three soil test pits at Transition Station #1 to examine subsurface soil and geological conditions which are needed for final design of Northern Pass project elements. One pit is within the protected Shoreland area, approximately 200 feet from the reference line. Test pits are excavated with a small excavator or backhoe which accesses the test pit locations following a path specified on the plans. The access path for the excavator will be approximately 15-feet wide and there is a 60-foot radius around each test pit for an equipment work area and temporary soil stockpile. Temporary impacts are limited to the test pit itself and all areas will be restored following the end of work at the site. Existing access paths that were cut and matted for geotechnical borings in fall 2016 will be followed to further minimize impacts. These data will inform the final stormwater design for Transition Station #1 associated with the Northern Pass project.

Area of net change in impervious surface (in square feet): 0

Total area to be impacted (in square feet): 500

E. Standard Project Type and Fee		RSA 483-B:5-b, I(a) (1); RSA 483-B:5-b I. (b)
☒	This project impacts less than 1,500 square feet and adds no more than 900 square feet of additional impervious area.	The permit application fee is $100 plus $.10 per square foot of area affected by the proposed activities as listed at the bottom of section D. (e.g. 500 square feet of impacts equals a fee of $150) **Total fee*:** $150

F. Special Project Types and Fees		RSA 483-B:5-b, I(a)(2, 3); RSA 483-B:5-b, I(b)(1)
☐	This project is directly related to stormwater management improvements, erosion control, or environmental restoration or enhancement.	The fee for these project types is **$100***
☐	This is a project for maintenance, repairs, and improvements of public utilities, public roads, or public access facilities.	These project types are **fee exempt**.

Fee can be paid with check or money order made out to **Treasurer – State of NH or by cash.*

G. Required Attachments	RSA 483-B:5-b, I(a)
☒	This application includes: • **Plans** clearly and accurately depicting the work to be completed relative to the reference line of the jurisdictional waterbody, all property lines, and the limits of temporary impacts. • **Photographs** of the area to be impacted and the date the photos were taken.

H. Attachment Details			RSA 483-B:5-b, I(a)
☐	This project proposes an increase in impervious area; therefore the plans include dimensions, locations, and areas of all existing and proposed impervious areas.	The total proposed impervious area within the protected shoreland is:	
		☐	Between 15% and 20%, therefore the applicant certifies that the impervious area is not more than 20% as per Env-Wq 1406.10(a).
		☐	Between 20% and 30%, therefore the plans include a stormwater management system shall be implemented as per RSA 483-B:9, V(g)(2).
		☐	Greater than 30%, therefore the plans include a stormwater management system designed and certified by a professional engineer to account for all new development, and how the minimum vegetation point score is met as per RSA 483-B:9, V(g)(1,3).
☐	Pervious surfaces are included in this project, therefore the plans include the location and type of each surface, a cross-section of each type of pervious surface that shows the construction method, and specifications for how each type of pervious surface will be maintained.		
☐	Impacts are proposed between 50 and 150 feet of the reference line; therefore the plans include all areas to remain in an unaltered state within the Woodland Buffer as per RSA 483-B:9, V(b)(2)(A).		
☐	Impacts are proposed within 50 feet of the reference line, therefore the plans and photos show all impacted segments within this Waterfront Buffer including existing ground cover and trees.		
☐	Trees or saplings within 50 feet of the reference line will be removed; therefore the plans include how the point score will be met as per RSA 483-B:9, V(a)(2)(D). For more information on the point score and vegetation requirements see the NHDES Vegetation Maintenance Fact Sheet.		

J. Conditions and Certifications	Env-Wq 1406.18, 20

The signature below shall constitute certification that:

- The information provided is true, complete, and not misleading to the knowledge and belief of the signer and the signer is subject to the applicable penalties in RSA 641 Falsification In Official Matters.
- The signer understands that: any permit by notification obtained based on false, incomplete, or misleading information is not valid, an accepted Shoreland permit by notification shall not exempt the work proposed from other state, local, or federal approvals, and **incomplete notifications shall be rejected and the notification fee shall not be returned**.
- The signer accepts the responsibility for understanding and maintaining compliance with RSA 483-B and these rules and the project as proposed complies with the minimum standards established in RSA 483-B:9, V and will be constructed in strict accordance with the proposal.

The following conditions shall apply to all projects in the protected Shoreland, in addition to any project-specific conditions included pursuant to Env-Wq 1406.15 and regardless of whether a permit is obtained:

- Erosion and siltation controls shall be: installed prior to the start of work, be maintained throughout the project, remain in place until all disturbed surfaces are stabilized, appropriate to the size and nature of the project and to the physical characteristics of the site (including soil type, vegetative cover, and proximity to wetlands or surface waters).
- No person undertaking any activity in the protected Shoreland shall cause or contribute to, or allow the activity to cause or contribute to, any violations of the surface water quality standards established in Env-Ws 1700 or successor rules in Env-Wq 1700.
- Any fill used shall be clean sand, gravel, rock, or other suitable material.
- For any project where mechanized equipment will be used, orange construction fence shall be installed prior to the start of work at the limits of the temporary impact area as shown on the plans approved as part of a permit or accepted as part of a permit by notification, be maintained throughout the project, and remain in place until all mechanized equipment has been removed from the site.

Signature of owner: (*Agent may not sign on owner's behalf)*	**Date:** 5/24/17

Appendix A
Copy of Application Check

The application fee check is attached to the application, and an image of the check is included here.

NORMANDEAU ASSOCIATES, INC.
25 Nashua Road, Bedford, NH 03110-5527
(603) 472-5191 (603) 472-7052 fax

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

100777
CHECK DATE
May 25, 2017

PAY One Hundred Fifty and 00/100 Dollars

AMOUNT
150.00

TO Treasurer, State of New Hampshire
ATT: NHDES
P.O. Box 95
Concord, NH 03302-0095

Pamela S Hall MP
TWO SIGNATURES REQUIRED OVER $[illegible].00

Security Check features included. Details on back.

⑈100777⑈ ⑆211070175⑆ 1104114302⑈

EMILY BUSINESS FORMS 800.392.6018 VISION

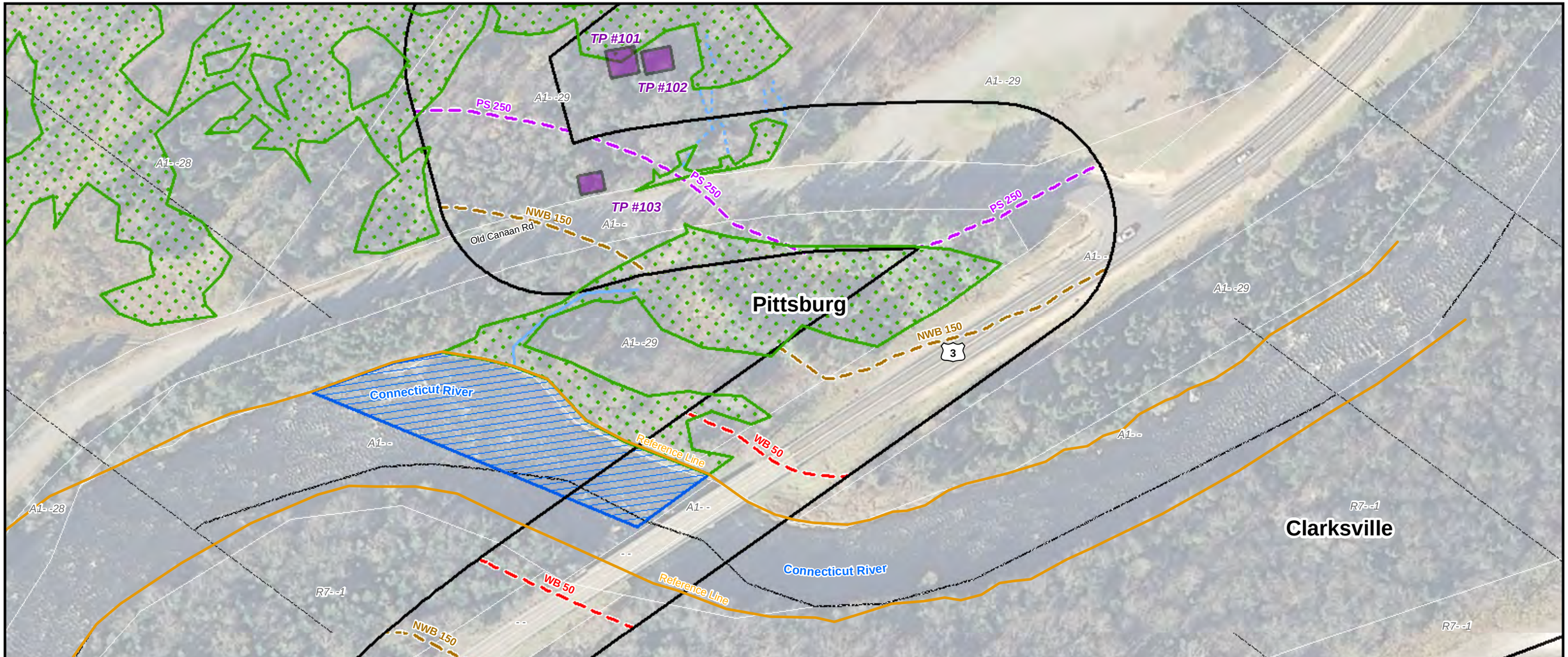
NORMANDEAU ASSOCIATES, INC. 25 Nashua Road, Bedford, NH 03110-5527

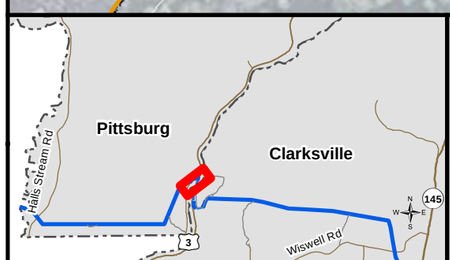
100777

Check Date: 5/25/2017

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
Pitt shoreline	5/24/2017	2440219	150.00			150.00
Treasurer, State of New Hampshire		TOTAL	150.00			150.00
Citizens MA Checking	118	70697				

Appendix B
Plan Set





THE NORTHERN PASS

- Delineated Wetlands
- Tax Parcels
- 10' Index Contour
- 2' Interval Contour
- USGS 10' Contour
- USGS 2' Contour
- Local Setbacks

Stream Centerlines
- Perennial
- Intermittent
- Ephemeral

Delineated Waterbodies
- Perennial
- Intermittent
- Ephemeral

- Off ROW and UG Reporting Extents
- Test Pit
- Delineated or Photointerpreted Reference Line

Shoreland Zones
- 50-foot Waterfront Buffer
- 150-foot Natural Woodland Buffer
- 250-foot Protected Shoreland

1 inch equals 100 feet when printed at 11" x 17"

0 25 50 100 Feet

Test Pit Locations

SWQPA Areas	Extent of Clearing (sq. ft.)	Construction Impacts (sq. ft.)		Impervious Surface (sq. ft.)	
	Clearing in Upland	Temporary	Permanent	Pre-Construction	Post - Construction
Waterfront Buffer (50')	0	0	0	7,109	7,109
Natural Woodland Buffer (150')	0	0	0	12,556	12,556
Protected Shoreland (250')	0	500	0	1,373	1,373
Total	0	500	0	21,037	21,037

May not sum to total due to rounding

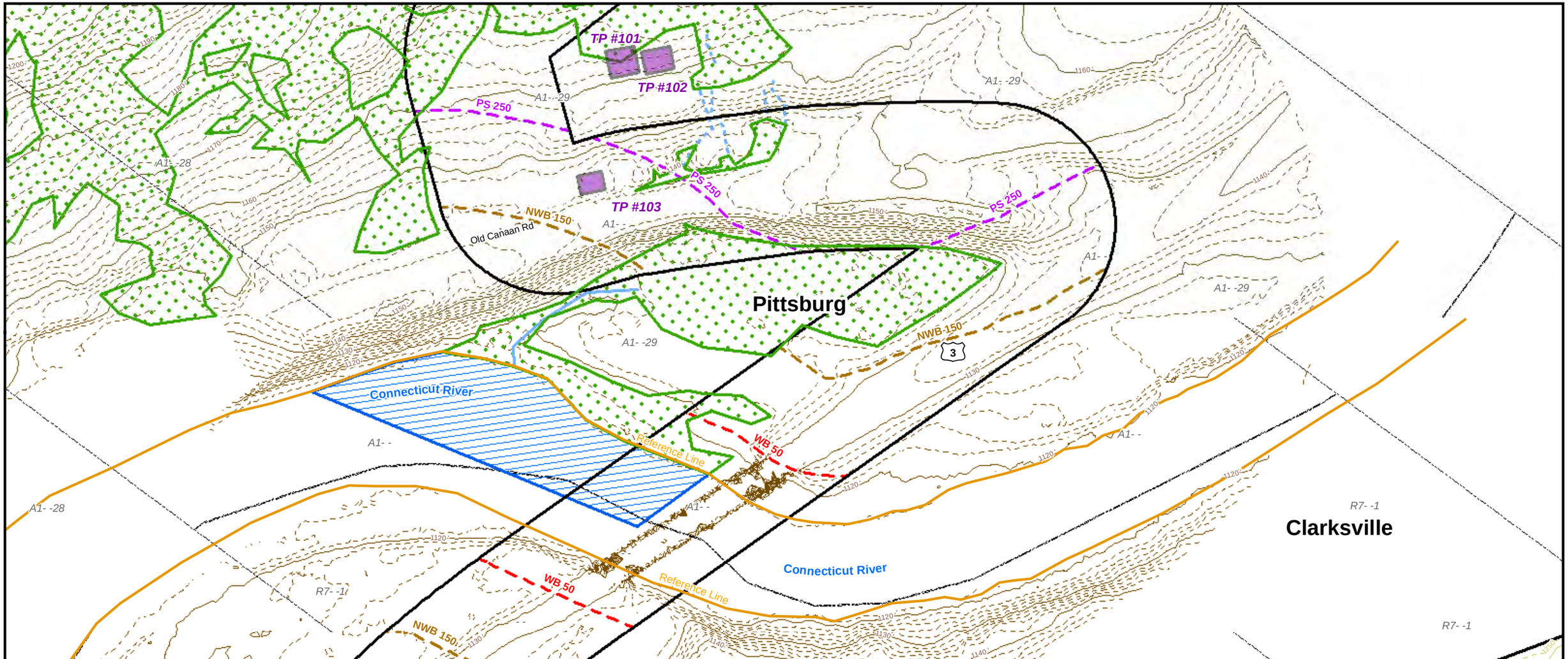
THE NORTHERN PASS PROPOSED ROUTE

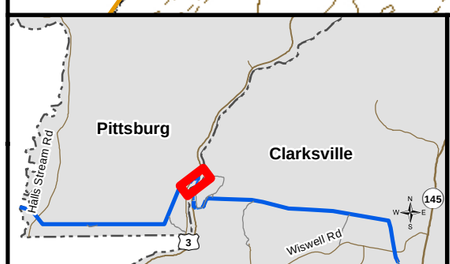
Connecticut River, Pittsburg

Date: 5/23/2017 DRAWN: LD

Sheet 001

Source: NHDOT 2010 and 2011 Aerials; New Hampshire GRANIT GIS Data; Coler & Colantonio; Normandeau; Burns & McDonnell.





THE NORTHERN PASS

Delineated Wetlands
Tax Parcels
10' Index Contour
2' Interval Contour
USGS 10' Contour
USGS 2' Contour
Local Setbacks

Stream Centerlines
Perennial
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THE NORTHERN PASS PROPOSED ROUTE | Connecticut River, Pittsburg

Date: 5/23/2017 | DRAWN: LD | *Sheet 001*

Source: NHDOT 2010 and 2011 Aerials; New Hampshire GRANIT GIS Data; Coler & Colantonio; Normandeau; Burns & McDonnell.

Appendix C
Photos

7/10/2012 Photo 1. Transition Station 1 looking northwest from Old Canaan Road, in the vicinity of the upland test pit location TP103.

Photo 2. October 31, 2016. Test pit location TP103, being cleared by hand in 2016 for the previous geotechnical boring work in the same location.