Appendices

Appendix A

NEP's Principal Directors and Officers

■

Company Name	Company status	Company type	Country	Country Region	Incorporated	Main Office address
New England Power Company	Active	Corporation	United States	Massachusetts	04/27/1916	40 Sylvan Road, Waltham MA 02451, United States

Appointments

Appointed person	Appointment category	Appointed as	Date of event
Gerwatowski, Ronald T.	Board Positions	Director	07/29/2011
Nigloschy, Stephen	Board Positions	Director	08/19/2013
Wynter, Rudolph L.	Board Positions	Director	04/01/2013
Wynter, Rudolph L.	Officers	President	04/01/2013
Bruckner, John	Officers	Senior Vice President	03/14/2013
Gerwatowski, Ronald T.	Officers	Senior Vice President	04/01/2013
Jordan, Marie	Officers	Senior Vice President	03/14/2013
Schlaff, Raymond C	Officers	Senior Vice President and Chief Procurement Officer	12/01/2009
Owyang, Colin	Officers	Senior Vice President and Clerk	01/26/2009
White, Bradley B.	Officers	Vice President	10/26/2011
Campbell, David H.	Officers	Vice President	04/02/2012
DeRosa, Charles V.	Officers	Vice President	06/11/2012
Flannery, James P.	Officers	Vice President	04/01/2013
Klimas, Karen	Officers	Vice President	07/29/2013
Turrini, Ross	Officers	Vice President	02/04/2009
Warren, Cheryl A.	Officers	Vice President	04/02/2012
Nigloschy, Stephen	Officers	Vice President and Chief Financial Officer	08/19/2013
McConnachie, Christopher	Officers	Vice President and Treasurer	08/19/2013
White, Bradley B.	Officers	Controller	04/01/2013
Bonar, David Charles	Officers	Assistant Treasurer	08/29/2008
Cooper, Malcolm Charles	Officers	Assistant Treasurer	04/02/2012
Lynch, Lorraine	Officers	Assistant Treasurer	08/19/2013
Das, Reshmi	Officers	Assistant Clerk	04/02/2012
McAllister, Timothy E.	Officers	Assistant Clerk	06/09/2008
Meehan, James P.	Officers	Assistant Clerk	06/09/2008

Appendix B

PSNH & TransCanada Authorization Letters

February 4, 2014

Thomas S. Burack, Chairman
Site Evaluation Committee
N.H. Department of Environmental Services
29 Hazen Drive
Concord, NH 03302-0095

Wetlands Program
NHDES Wetlands Bureau
29 Hazen Drive; PO Box 95
Concord, NH 03302-0095

Re: Docket 2013-_____: Application of New England Power Company d/b/a National Grid, for a Certificate of Site and Facility for an Energy Facility for Construction of a New 230 kV Tap Line in Littleton, New Hampshire

Re: Authorization of New England Power Company

To Whom It May Concern:

The undersigned, as current owner of premises in the Town of Littleton, Grafton County, State of New Hampshire, located off Foster Hill Road, depicted on the tax map of the Town of Littleton as Map 41, Lot 8, hereby authorizes New England Power Company and its successors, and their employees, agents, and consultants (collectively, the "Applicant") to seek permits and approvals necessary for the construction and installation of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road (the "Project"). The undersigned specifically authorizes the Applicant to file and submit all applications and supporting documentation necessary to obtain a Standard Dredge and Fill Permit from the NHDES Wetlands Bureau, a Certificate of Site and Facility from the NH Site Evaluation Committee, and to represent at any hearing or meeting before the NH Site Evaluation Committee in connection with the Project that the Applicant is authorized to construct the Project.

Very truly yours,

PUBLIC SERVICE OF NEW HAMPSHIRE

By: _____
Name: CHRISTOPHER J. ALLWARDEN
Title: SENIOR COUNSEL, LEGAL
Duly Authorized

TransCanada
In business to deliver

110 Turnpike Road, Suite 300
Westborough, Massachusetts 01581

January 24, 2014

Ms. Judith Faye White
Littleton Town Clerk
125 Main Street, Suite 200
Lebanon, NH 03561

Re: Authorization Given to New England Power Company

Dear Ms. White:

The undersigned, as current owner of premises in the Town of Littleton, Grafton County, State of New Hampshire, located off Foster Hill Road, depicted on the tax map of the Town of Littleton as Map 29, Lot 8, hereby authorizes New England Power Company and its employees, agents, and consultants (collectively, the "Applicant") to seek all permits and approvals from the Town of Littleton necessary for the construction and installation of a new tap line to be constructed and owned by New England Power Company, extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road (the "Project"). The undersigned further authorizes the Applicant to file and submit any applications and supporting documentation necessary and required for the Project, including, without limitation, NHDES Wetlands Bureau Standard Dredge and Fill Application, Wetland Permit Application, Certificate of Site and Facility Application to the NH Site Evaluation Committee, site plan review, and building permit application. This authorization in no way limits or modifies New England Power Company's obligations and liability to TransCanada Hydro Northeast Inc. ("TransCanada") under agreements presently existing between them, at law, equity or otherwise. TransCanada makes no representation or warranty with respect to any such applications or supporting documentation submitted by the Applicant as to (i) its truth, completeness, or accuracy, nor (ii) compliance with applicable laws and regulations.

Very truly yours,

TRANSCANADA HYDRO NORTHEAST INC.

By: _____
Name: Jasmin Bertovic
Title: Vice President

By: _____
Name: Michael E. Hachey
Title: Vice President

Appendix C

NEP's Audited Balance Sheets

New England Power Company

Financial Statements

For the years ended March 31, 2013 and March 31, 2012

NEW ENGLAND POWER COMPANY

TABLE OF CONTENTS

Independent Auditor's Report

To the Shareholders and Board of Directors of New England Power Company:

We have audited the accompanying financial statements of New England Power Company, which comprise the balance sheets as of March 31, 2013 and March 31, 2012, and the related statements of income, comprehensive income, cash flows, capitalization and changes in shareholders' equity for the years then ended.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

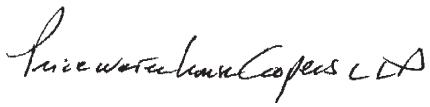
Our responsibility is to express an opinion on the financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of New England Power Company at March 31, 2013 and March 31, 2012, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

The Company engages in significant transactions with Massachusetts Electric Company and The Narragansett Electric Company, related parties.



October 17 , 2013

NEW ENGLAND POWER COMPANY
BALANCE SHEETS
(in thousands of dollars)

	March 31, 2013	March 31, 2012
ASSETS		
Current assets:		
Cash and cash equivalents	**$ 2,746**	$ 23,707
Accounts receivable	**49,406**	41,532
Accounts receivable from affiliates	**25,542**	10,803
Materials and supplies	**4,364**	4,306
Regulatory assets	**15,418**	15,006
Current portion of deferred income tax assets	**1,103**	-
Prepaid taxes	**248**	9,749
Other current assets	**100**	470
Total current assets	**98,927**	105,573
Equity investments	**1,870**	2,088
Property, plant, and equipment, net	**1,685,132**	1,543,387
Deferred charges and other assets:		
Regulatory assets	**156,745**	155,772
Goodwill	**337,614**	337,614
Other deferred charges	**11,368**	9,667
Total deferred charges and other assets	**505,727**	503,053
Total assets	**$ 2,291,656**	$ 2,154,101

The accompanying notes are an integral part of these financial statements.

NEW ENGLAND POWER COMPANY
BALANCE SHEETS
(in thousands of dollars)

	March 31, 2013	March 31, 2012
LIABILITIES AND CAPITALIZATION		
Current liabilities:		
Accounts payable	**$ 34,619**	$ 39,005
Accounts payable to affiliates	**58,625**	16,204
Taxes accrued	**7,872**	-
Customer deposits	**729**	729
Interest accrued	**159**	99
Regulatory liabilities	**3,642**	-
Intercompany money pool	**147,629**	48,987
Current portion of accrued Yankee nuclear plant costs	**12,808**	12,486
Current portion of purchased power obligations	**2,521**	2,521
Current portion of deferred income tax liabilities	**-**	1,338
Other current liabilities	**7,408**	6,180
Total current liabilities	**276,012**	127,549
Deferred credits and other liabilities:		
Regulatory liabilities	**67,927**	81,170
Deferred income tax liabilities	**385,846**	352,485
Postretirement benefits	**10,056**	14,273
Accrued Yankee nuclear plant costs	**10,820**	16,342
Purchased power obligations	**614**	3,015
Environmental remediation costs	**8,238**	3,338
Other deferred liabilities	**22,797**	38,797
Total deferred credits and other liabilities	**506,298**	509,420
Capitalization:		
Shareholders' equity	**1,098,996**	1,106,799
Long-term debt	**410,350**	410,333
Total capitalization	**1,509,346**	1,517,132
Total liabilities and capitalization	**$ 2,291,656**	$ 2,154,101

The accompanying notes are an integral part of these financial statements.

NEW ENGLAND POWER COMPANY
STATEMENTS OF INCOME
(in thousands of dollars)

	Years Ended March 31,	
	2013	2012
Operating revenues	**$ 381,668**	$ 362,538
Operating expenses:		
Purchased electricity	**61,968**	62,130
Contract termination and nuclear shutdown charges	**16,695**	16,419
Operations and maintenance	**99,398**	92,366
Depreciation and amortization	**41,822**	39,755
Other taxes	**30,335**	28,164
Total operating expenses	**250,218**	238,834
Operating income	**131,450**	123,704
Other income and (deductions):		
Interest on long-term debt	**(2,899)**	(4,301)
Other interest, including affiliate interest	**784**	(3,990)
Other income, net	**8,637**	6,920
Total other income and (deductions), net	**6,522**	(1,371)
Income before income taxes	**137,972**	122,333
Income taxes:		
Current	**21,168**	(2,737)
Deferred	**32,850**	51,531
Income tax expense	**54,018**	48,794
Net income	**$ 83,954**	$ 73,539

The accompanying notes are an integral part of these financial statements.

NEW ENGLAND POWER COMPANY
STATEMENTS OF COMPREHENSIVE INCOME
(in thousands of dollars)

	Years Ended March 31,	
	2013	2012
Operating revenue:		
Net income	**$ 83,954**	$ 73,539
Other comprehensive income (loss):		
Unrealized gains on securities, net of $164 and $297 tax expense	**254**	460
Reclassification of gains into net income, net of $73 and $136 tax benefit	**(113)**	(211)
Other comprehensive income	**141**	249
Comprehensive income	**$ 84,095**	$ 73,788

The accompanying notes are an integral part of these financial statements.

NEW ENGLAND POWER COMPANY
STATEMENTS OF CASH FLOWS
(in thousands of dollars)

	Year Ended March 31,	
	2013	2012
Operating activities:		
Net income	**$ 83,954**	$ 73,539
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	**41,822**	39,755
Provision for deferred income taxes	**32,850**	51,531
Income from equity investments	**(152)**	(70)
Allowance for funds used during construction	**(8,662)**	(7,942)
Pension and other postretirement expense	**5,023**	4,023
Pension and other postretirement contributions	**(7,619)**	(3,627)
Amortization of debt issuance costs	**930**	754
Changes in operating assets and liabilities:		
Accounts receivable	**(7,874)**	(3,033)
Materials and supplies	**(58)**	188
Accounts payable and accrued expenses	**8,609**	(845)
Prepaid taxes and taxes accrued	**17,373**	11,847
Accounts receivable from/payable to affiliates, net	**23,972**	(15,832)
Accrued Yankee nuclear plant costs	**(5,200)**	(58,567)
Other liabilities	**(15,036)**	(15,779)
Regulatory assets and liabilities, net	**(11,379)**	23,388
Environmental remediation costs	**4,900**	(23)
Other, net	**(355)**	(2,225)
Net cash provided by operating activities	**163,098**	97,082
Investing activities:		
Capital expenditures	**(183,899)**	(173,572)
Changes in intercompany money pool	**-**	107,038
Cost of removal and other	**(11,195)**	(8,713)
Net cash used in investing activities	**(195,094)**	(75,247)
Financing activities:		
Dividends to National Grid USA	**(95,000)**	(60,000)
Dividends paid on preferred stock	**(67)**	(67)
Parent loss tax allocation	**3,169**	1,358
Affiliated money pool borrowing and receivables/payables, net	**102,933**	48,987
Net cash provided by (used in) financing activities	**11,035**	(9,722)
Net (decrease) increase in cash and cash equivalents	**(20,961)**	12,113
Cash and cash equivalents, beginning of period	**23,707**	11,594
Cash and cash equivalents, end of period	**$ 2,746**	$ 23,707
Supplemental disclosures:		
Interest paid	**$ 3,282**	$ 3,912
Income taxes paid to (refunded from) Parent	**7,730**	(344)
State income taxes paid	**2,145**	1,372
Significant non-cash items:		
Capital-related accruals included in accounts payable	**12,935**	18,828

The accompanying notes are an integral part of these financial statements.

NEW ENGLAND POWER COMPANY
STATEMENTS OF CAPITALIZATION
(in thousands of dollars)

			March 31,	
			2013	2012
Total shareholders' equity			**$ 1,098,996**	$1,106,799
Long-term debt:	Interest Rate	Maturity Date		
Pollution control revenue bonds				
Connecticut Development Authority	Variable	October 15, 2015	**38,500**	38,500
Massachusetts Development Finance Agency 1	Variable	March 1, 2018	**79,250**	79,250
Business Finance Authority of the State of New Hampshire	Variable	November 1, 2020	**135,850**	135,850
Business Finance Authority of the State of New Hampshire	Variable	November 1, 2020	**50,600**	50,600
Massachusetts Development Finance Agency 2	Variable	October 1, 2022	**106,150**	106,150
Unamortized discount			**-**	(17)
Total long-term debt			**410,350**	410,333
Total capitalization			**$ 1,509,346**	$1,517,132

The accompanying notes are an integral part of these financial statements.

Appendix D

NHDES Standard Dredge & Fill Permit Application

NHDES Wetlands Bureau - Standard Dredge and Fill Application

New 230kV Tap Line From C203 Transmission Line

Littleton,
New Hampshire

Prepared for **New England Power Company d/b/a National Grid**
Waltham, Massachusetts

Prepared by ***VHB*/Vanasse Hangen Brustlin, Inc.**
Bedford, New Hampshire

NHDES Wetlands Bureau - Standard Dredge and Fill Application

New 230kV Tap Line from C203 Transmission Line

Littleton, New Hampshire

Prepared for **New England Power d/b/a National Grid**
40 Sylvan Road
Waltham, Massachusetts 02451

Prepared by **VHB/Vanasse Hangen Brustlin, Inc.**
Transportation, Land Development, Environmental Services
6 Bedford Farms Drive, Suite 607
Bedford, New Hampshire 03110-6532
603 644 0888

February 2014

VHB Transportation | Land Development | Environmental | Energy

Creating results for our clients and benefits for our communities.

February 6, 2014

Ref: 52281.00

Ms. Judith Faye White
Littleton Town Clerk
125 Main Street, Suite 200
Lebanon, NH 03561

Re: NHDES Wetlands Bureau Standard Dredge and Fill Application
New 230kV Tap Line from C203 Transmission Line, Littleton, NH

Dear Ms. White:

On behalf of New England Power Company d/b/a National Grid (the Applicant), we are submitting the enclosed NHDES Wetlands Bureau Standard Dredge and Fill Permit Application for the proposed construction of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road. The proposed C203 Tap Line will be 0.2 miles in length and will consist of installation of three new wood H-frame structures and one three-pole dead-end structure and associated overhead conductors and line. New buswork within the existing Littleton Substation will also be required to accommodate the additional power supply.

Construction of the proposed C203 Tap Line will provide an additional power source to a second autotransformer installed within the existing Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont.

Construction of the new tap line will permanently impact approximately 64 square feet of jurisidictional wetlands as a result of installation of the new structures. In addition a total of approximately 46,805 square feet of temporary wetland impacts will result from timber matting around where new structures are to be installed in wetlands and where equipment access is needed across wetland areas for construction purposes. Refer to the attached Wetland Permit Application for additional information regarding proposed construction methods, timeline, and wetland impact avoidance and minimization.

This submittal is being made in accordance with the requirements of RSA 482-A. Note, however, that the proposed tap line project will be reviewed as part of an *Application for a Certificate of Site and Facility to the New Hampshire Site Evaluation Committee* (NHSEC); comments on the proposal should therefore be made under the procedures contained in RSA 162-H, rather than the process normally used for RSA 482-A applications. A complete NHSEC Application filing will be provided to the town shortly.

Vanasse Hangen Brustlin, Inc.
6 Bedford Farms Drive, Suite 607
Bedford, New Hampshire 03110-6532
603.644.0888 ▪ FAX 603.644.2385
www.vhb.com

VHB Transportation | Land Development | Environmental | Energy

Creating results for our clients and benefits for our communities.

In accordance with the RSA 482-A, please find the original and four copies of the Application. Also enclosed, you will find a check in the amount of $9,373.80 made payable to Treasurer-State of NH for the permit fee. Additionally, a check in the amount of $20.00 made payable to the Town of Littleton is enclosed to cover local administrative fee ($10.00) and postage fees associated with sending the permit and plans to NHDES ($10.00).

Please do not hesitate to contact me if you have questions at (603) 644-0888 or pwalker@vhb.com.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
Director of Environmental Services

PJW/KPW/as

Enclosures

cc: Joshua B. Holden, National Grid
Patrick Quigley, National Grid
Mark Reilly, National Grid
Barry Needleman, McLane Law
NHDES Wetlands Bureau
VHB File

Vanasse Hangen Brustlin, Inc.
6 Bedford Farms Drive, Suite 607
Bedford, New Hampshire 03110-6532
603.644.0888 ▪ FAX 603.644.2385
www.vhb.com

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Standard Dredge and Fill Application Form

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF ENVIRONMENTAL SERVICES
LAND RESOURCES MANAGEMENT
WETLANDS BUREAU
29 Hazen Drive, PO Box 95, Concord, NH 03302-0095
Phone: (603) 271-2147 Fax: (603) 271-6588
http://des.nh.gov/organization/divisions/water/wetlands

PERMIT APPLICATION

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

1. REVIEW TIME:
Indicate your Review Time below. Refer to Guidance Document A for instructions.

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

2. PROJECT LOCATION:
Separate applications must be filed with each municipality that jurisdictional impacts will occur in.

ADDRESS: **266 Foster Hill Road**			TOWN/CITY: **Littleton**
TAX MAP: **Map 41 & Map 29**	BLOCK: **NA**	LOT: **Lots 8**	UNIT: **NA**
USGS TOPO MAP WATERBODY NAME: ☒ NA		STREAM WATERSHED SIZE: ☒ NA	
LOCATION COORDINATES (If known): **825471.185, 415256.779 (ROW Start)** ☐ Latitude/Longitude ☐ UTM ☒ State Plane			

3. 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.

The proposed project consists of construction of a new 230kV tap line from the existing C203 transmission line in Littleton, New Hampshire to Public Service of New Hampshire's (PSNH) Littleton Substation, located at 266 Foster Hill Road, Littleton, NH. The Littleton Substation is owned by PSNH, but the existing C203/D204 transmission lines are owned, operated and maintained by New England Power (NEP). The existing ROW from the Littleton Substation to the C203/D204 main line ROW corridor is approximately 500 feet in width. There are four existing transmission lines within the ROW; the 230kV D204 tap line, the 115kV PSNH Q195 tap line, the Vermont Electric Power Company K60 - St. Johnsbury #29 115-kV transmission line (VELCO K60), and the 34.5kV Littleton Municipal line. Most of the existing cleared ROW consists of emergent and scrub-shrub wetland. An existing gravel access path located along the western edge of the tap ROW provides access to the C203/D204 main line. The gravel access road varies in width from 8 to 16 feet. (Refer to Figure 1 - USGS Project Location Map).

4. RELATED PERMITS, ENFORCEMENT, EMERGENCY AUTHORIZATION, SHORELAND, ALTERATION OF TERRAIN, ETC…

NA

5. 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 **13** - **0543** .

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

6. APPLICANT INFORMATION (Desired permit holder)			
LAST NAME, FIRST NAME, M.I.: **Joshua Holden**			
TRUST / COMPANY NAME: **New England Power Company d/b/a National Grid**	MAILING ADDRESS: **40 Sylvan Road**		
TOWN/CITY: **Waltham**		STATE: **MA**	ZIP CODE: **02451**
EMAIL or FAX: **Joshua.Holden@nationalgrid.com**	PHONE: **781-907-3648**		
ELECTRONIC COMMUNICATION: By initialing here: JH, I hereby authorize DES to communicate all matters relative to this application electronically			
7. PROPERTY OWNER INFORMATION (If different than applicant)			
LAST NAME, FIRST NAME, M.I.: **See attached.**			
TRUST / COMPANY NAME:	MAILING ADDRESS:		
TOWN/CITY:		STATE:	ZIP CODE:
EMAIL or FAX:	PHONE:		
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize DES to communicate all matters relative to this application electronically			
8. AUTHORIZED AGENT INFORMATION			
LAST NAME, FIRST NAME, M.I.: **Peter J. Walker**	COMPANY NAME: **Vanasse Hangen Brustlin, Inc.**		
MAILING ADDRESS: **6 Bedford Farms Drive, Suite 607**			
TOWN/CITY: **Bedford**		STATE: **NH**	ZIP CODE: **03110**
EMAIL or FAX: **pwalker@vhb.com**	PHONE: **603-644-0888**		
ELECTRONIC COMMUNICATION: By initialing here PJW, I hereby authorize DES to communicate all matters relative to this application electronically			

9. 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 copy of the application materials to the NH State Historic Preservation Officer.
8. I authorize DES 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 DES correspondence. DES will not forward returned mail.

Property Owner Signature	Print name legibly	Date
Joshua Holden	Joshua Holden	1/30/2014

MUNICIPAL SIGNATURES

10. 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.

⇨ Authorized Commission Signature	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. The Conservation Commission signature should be obtained prior to the submittal of the original application and four copies to the town/city clerk for mailing to the DES.
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.

11. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 1991), I hereby certify that the applicant has filed five application forms, five detailed plans, and five USGS location maps with the town/city indicated below and I have received and retained certified postal receipts (or copies) for all abutters identified by the applicant.

⇨ Town/City Clerk Signature	Print name legibly	Town/City	Date
Judith F. White	Judith F. White	Littleton	2/6/14

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I(d):

1. For applications where "Expedited Review" is checked on page 1, accept the application for mailing only if the Conservation Commission signature has been sought;
2. Collect the postal receipts demonstrating that all abutters and the Local Advisory Committee were sent proper notice;
3. Collect any administrative fees, not to exceed $10 plus the cost of postage by certified mail (RSA 482-A:3,I).
4. IMMEDIATELY sign the original application and four copies in the signature space provided above;
5. Retain one copy of the application form, one complete set of attachments and the postal receipts demonstrating that all abutters and the Local River Advisory Committee were notified and make them reasonably accessible to the public;
6. 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 in accordance with RSA 482-A:3, I; and
7. IMMEDIATELY send the ORIGINAL application form, one complete set of attachments and filing fee, by CERTIFIED MAIL to the NHDES Wetlands Bureau at the address indicated on page 1 of this application. (DO NOT HOLD FOR CONSERVATION COMMISSION SIGNATURE).

12. 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.

After-the-fact (ATF): work completed prior to receipt of this application by DES. Check box to indicate ATF.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.		TEMPORARY Sq. Ft. / Lin. Ft.	
Forested wetland	43 Sq. Ft.	☐ ATF	26,900 Sq. Ft.	☐ ATF
Scrub-shrub wetland	21 Sq. Ft.	☐ ATF	19,905 Sq. Ft.	☐ ATF
Emergent wetland	NA	☐ ATF	NA	☐ ATF
Wet meadow	NA	☐ ATF	NA	☐ ATF
Intermittent stream	NA	☐ ATF	NA	☐ ATF
Perennial Stream / River	NA / NA	☐ ATF	NA / NA	☐ ATF
Lake / Pond	NA / NA	☐ ATF	NA / NA	☐ ATF
Bank - Intermittent stream	NA / NA	☐ ATF	NA / NA	☐ ATF
Bank - Perennial stream / River	NA / NA	☐ ATF	NA / NA	☐ ATF
Bank - Lake / Pond	NA / NA	☐ ATF	NA / NA	☐ ATF
Tidal water	NA / NA	☐ ATF	NA / NA	☐ ATF
Salt marsh	NA	☐ ATF	NA	☐ ATF
Sand dune	NA	☐ ATF	NA	☐ ATF
Prime wetland	NA	☐ ATF	NA	☐ ATF
Prime wetland buffer	NA	☐ ATF	NA	☐ ATF
Undeveloped Tidal Buffer Zone (TBZ)	NA	☐ ATF	NA	☐ ATF
Previously-developed upland in TBZ	NA	☐ ATF	NA	☐ ATF
Docking - Lake / Pond	NA	☐ ATF	NA	☐ ATF
Docking - River	NA	☐ ATF	NA	☐ ATF
Docking - Tidal Water	NA	☐ ATF	NA	☐ ATF
TOTAL	64 / NA		46,805 / NA	

13. 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)	**46,869** sq. ft.	X	$0.20 =	$ **9,373.80**
Temporary (seasonal) docking structure:	**NA** sq. ft.	X	$1.00 =	$
Permanent docking structure:	**NA** sq. ft.	X	$2.00 =	$
Projects proposing shoreline structures (including docks) add $200 =				$
Total =				$ **9,373.80**
The Application Fee is the above calculated Total or $200, whichever is greater =				$ **9,373.80**

Supplemental Information Regarding Property Ownership

The Project requires New England Power Company (NEP) to obtain additional easement rights on land owned by TransCanada and PSNH (Tax Map 29, Lot 8 and Map 41, Lot 8, respectively). NEP has requested the expansion of the width of NEP's current easement on TransCanada's property by approximately 200 feet to accommodate the construction, reconstruction, installation, repair, replacement, maintenance, operation and patrolling of the proposed tap line. TransCanada is reviewing the request and has indicated its intent to grant the additional easement rights requested, subject only to negotiating the legal agreement. Additionally, New England Forestry Foundation Inc. (NEFF), grantee of a conservation easement on the parcel owned by TransCanada in 2008 has consented to NEP's use of the expanded area for utility purposes. PSNH has consented to construction of the Project and the process of obtaining additional easement on their property is currently underway. Refer to the attached Letters of Authorization.

February 4, 2014

Thomas S. Burack, Chairman
Site Evaluation Committee
N.H. Department of Environmental Services
29 Hazen Drive
Concord, NH 03302-0095

Wetlands Program
NHDES Wetlands Bureau
29 Hazen Drive; PO Box 95
Concord, NH 03302-0095

Re: Docket 2013-_____: Application of New England Power Company d/b/a National Grid, for a Certificate of Site and Facility for an Energy Facility for Construction of a New 230 kV Tap Line in Littleton, New Hampshire

Re: Authorization of New England Power Company

To Whom It May Concern:

The undersigned, as current owner of premises in the Town of Littleton, Grafton County, State of New Hampshire, located off Foster Hill Road, depicted on the tax map of the Town of Littleton as Map 41, Lot 8, hereby authorizes New England Power Company and its successors, and their employees, agents, and consultants (collectively, the "Applicant") to seek permits and approvals necessary for the construction and installation of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road (the "Project"). The undersigned specifically authorizes the Applicant to file and submit all applications and supporting documentation necessary to obtain a Standard Dredge and Fill Permit from the NHDES Wetlands Bureau, a Certificate of Site and Facility from the NH Site Evaluation Committee, and to represent at any hearing or meeting before the NH Site Evaluation Committee in connection with the Project that the Applicant is authorized to construct the Project.

Very truly yours,

PUBLIC SERVICE OF NEW HAMPSHIRE

By: _____
Name: CHRISTOPHER J. ALLWARDEN
Title: SENIOR COUNSEL, LEGAL
Duly Authorized

TransCanada
In business to deliver

110 Turnpike Road, Suite 300
Westborough, Massachusetts 01581

January 24, 2014

Ms. Judith Faye White
Littleton Town Clerk
125 Main Street, Suite 200
Lebanon, NH 03561

Re: Authorization Given to New England Power Company

Dear Ms. White:

The undersigned, as current owner of premises in the Town of Littleton, Grafton County, State of New Hampshire, located off Foster Hill Road, depicted on the tax map of the Town of Littleton as Map 29, Lot 8, hereby authorizes New England Power Company and its employees, agents, and consultants (collectively, the "Applicant") to seek all permits and approvals from the Town of Littleton necessary for the construction and installation of a new tap line to be constructed and owned by New England Power Company, extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road (the "Project"). The undersigned further authorizes the Applicant to file and submit any applications and supporting documentation necessary and required for the Project, including, without limitation, NHDES Wetlands Bureau Standard Dredge and Fill Application, Wetland Permit Application, Certificate of Site and Facility Application to the NH Site Evaluation Committee, site plan review, and building permit application. This authorization in no way limits or modifies New England Power Company's obligations and liability to TransCanada Hydro Northeast Inc. ("TransCanada") under agreements presently existing between them, at law, equity or otherwise. TransCanada makes no representation or warranty with respect to any such applications or supporting documentation submitted by the Applicant as to (i) its truth, completeness, or accuracy, nor (ii) compliance with applicable laws and regulations.

Very truly yours,

TRANSCANADA HYDRO NORTHEAST INC.

By: _____
Name: Jasmin Bertovic
Title: Vice President

By: _____
Name: Michael E. Hachey
Title: Vice President

USACE PGP – Appendix B
Secondary Impacts Checklist

■

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.
3. See PGP, GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

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 See bullet 1 below.	
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 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?		N/A
2.7 What is the size of the proposed impervious surface area?		N/A
2.8 What is the % of the impervious area (new and existing) to the overall project site?		N/A
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 See bullet 2 below.	
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 property(s)?		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?		
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..
`

1. The Connecticut River is located within one-mile of the proposed project site and is listed as impaired for pH on the NHDES Website.

2. The New Hampshire Natural Heritage Bureau (NHNHB) was consulted regarding the occurrence of rare plant, animal or natural communities within vicinity of the proposed Project. NHNHB indicated historical records of rare plants, exemplary natural communities, and a vertebrate species in a response memo dated February 20, 2013, prompting additional consultation with the agency. Follow up field surveys were conducted by VHB on three separate occasions in July, August and September 2013 to determine presence/absence of species listed in the NHNHB report. None of the listed species were found during the course of the follow up field investigations. Based on this finding, Melissa Coppola of the NHNHB determined that the project would have no impact on state-listed plant species (Refer to NHNHB's Memo dated January 27, 2014 in Appendix C of the Application Narrative).

Further consultation with the New Hampshire Fish and Game Department (NHF&G) occurred in relation to the bald eagle as listed on the NHNHB report. The NHNHB report indicated that Bald Eagles have been recorded along the Connecticut River associated with the Moore Dam located approximately ½ mile north of the Project Area. Based on the location of the project site and distance from the Connecticut River and the lack of suitable wintering habitat within the Project Area, VHB concluded that the proposed project should not result in significant adverse impacts to Bald Eagles. Kim Tuttle of the NHF&G concurred with this assessment (Refer to NHF&G Response Letter in Appendix C of the Application Narrative).

The Project was reviewed for the presence of federally-listed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's (USFWS) New England Field Office website. (http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm). Based on the information currently available, it was determined that no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the USFWS are known to occur in the Project Area. Preparation of a biological assessment or further consultation with the USFWS under Section 7 of the Endangered Species Act is not required. Refer to Appendix C of the Application Narrative for USFWS correspondence.

Review Criteria
Administrative Rule Env-Wt 302.04(a)

Review Criteria
Administrative Rule Env-Wt 302.04(a)

Documentation that the Project complies with the requirements contained in Env-Wt 302.04(a) of the New Hampshire Code of Administrative Rules is provided below:

(1) The need for the proposed impact.

The proposed C203 Tap Line Project involves construction of a new 0.2 mile long tap line extending south from the existing C203 overhead transmission line to the Public Service of New Hampshire's (PSNH) Littleton Substation in Littleton, New Hampshire. Construction of this new tap line will provide an additional power source to a second autotransformer installed within the Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont. The proposed C203 Tap Line installation will consist of installation of three new wood H-frame structures and one three-pole dead end structure immediately north of the Littleton Substation. New buswork within the existing Substation will also be required to accommodate the additional power supply.

(2) The alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

New England Power (NEP) evaluated alternatives to the Project as it is presently proposed. One alternative design option was evaluated, as well as the 'no action' alternative. The no action alternative was dismissed on the basis of not meeting the Project purpose and need of ensuring reliable electric transmission service to New Hampshire and Vermont. The alternative design that was eliminated was rejected on the basis of being both technically and economically impracticable to implement, and also because environmental impacts were considered to be more significant from a functional perspective. The rationale for eliminating the alternative design and adopting the proposed design is further described in **Section 10.0** of the Application Narrative.

(3) The type and classification of the wetlands involved.

Wetlands within the Project Area were delineated by VHB Wetland Scientists in June, July, and August of 2013. Wetlands were delineated using alpha-numerically coded pink flagging tape. Wetlands were classified following the *Classification of*

Wetlands and Deepwater Habitats of the United States (Cowardin et al., 1979, revised 1985). A single large wetland complex occupies most of the Project Area. This wetland is comprised of several wetland classifications including palustrine forested (PFO), palustrine scrub-shrub (PSS), palustrine emergent (PEM), and limited palustrine open water (POW). One intermittent and one perennial stream channel also exist on the Project Area and are associated with the wetland complex. Refer to **Figure 2** of the attached Application Narrative.

The interior portion of the delineated wetland includes a large PEM/POW complex. The open water component of the wetland is limited in extent (less than approximately 100 meters at its widest point) and is slowly growing in with emergent vegetation. Emergent vegetation within the PEM interior of the wetland is dominated by broad-leaved cattail and hydrophytic graminoids. The POW component of the wetland exhibits a permanently flooded to semi-permanently flooded hydroperiod, while the PEM components include semi-permanently flooded, seasonally flooded, and saturated areas.

The remaining portions of the wetland within the existing, maintained electric transmission right-of-way (ROW) exhibit a PSS and PEM cover type that has previously been converted from a PFO cover type. These portions of the wetland contain commonly observed shrubs, saplings, and herbaceous and emergent vegetation typically found within maintained utility ROW environments.

Outside of the existing, maintained transmission ROW, PFO components are present within the wetland boundary. The majority of the proposed Project's wetland impacts will be within these PFO wetlands.

Invasive species noted within the delineated wetland boundary and in adjacent upland areas include glossy buckthorn and purple loosestrife. Glossy buckthorn was noted to occur in at least two large, dense stands, and is also scattered throughout the Project Area.

Project wetlands are further described in **Section 4.0** of the Application Narrative in terms of hydrology, dominant vegetation and wetland functions and values.

(4) The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

The Project Area is located on a long north facing slope, with the highest site elevations located at the southern end of the Project Area. This topographic setting creates an overall hydrologic flow direction of south to north, towards the Connecticut River. Major hydrologic inputs to the wetland system include seepage and discharge from groundwater perched above shallow, dense glacial till soil layers or bedrock as the groundwater migrates from south to north along surface contours, and direct precipitation inputs. Surface water inputs from streams to the west of the Project Area are also present in those locales.

Due to the nature of the proposed Project, which includes primarily temporary wetland impacts as a result of the use of matting during construction, and the relatively small amount of permanent wetland impact related to the installation of the three new wood H-frame structures and three-pole dead end structure (approximately 64 square feet), the proposed Project is not considered to have a major influence on wetland or surface water quality.

Unnamed perennial and intermittent stream channels run adjacent and perpendicular to the Project Area. The Connecticut River is located approximately 0.5 miles away to the north. None of these waterways will be crossed or impacted by the proposed Project work. Refer to **Section 5.0** of the Application Narrative for more information.

(5) The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

The wetlands and surface waters intersecting the Project Area are not considered rare or unusual. The wetlands and banks of surface waters within the Project Area were found to exhibit only common plant species that are characteristic to forested wetlands and landscapes typically associated with partially cleared and maintained electrical line ROWs in New Hampshire.

The New Hampshire Natural Heritage Bureau (NHNHB) was consulted regarding the occurrence of rare plant, animal or natural communities within vicinity of the proposed Project. NHNHB indicated historical records of rare plants, an exemplary natural community and bald eagles in the vicinity of the Project Area in a response memo dated February 20, 2013, and recommended coordination with New Hampshire Fish and Game Department to further determine the status and location of the species in relation to the proposed Project Area.

Refer to **Question 7** below for further information on rare plant, animal and natural community correspondence.

(6) The surface area of the wetlands that will be impacted.

Wetland impacts were minimized to the maximum extent practicable during the design phase of the proposed Project. A total of 64 square feet of permanent wetland impact will result from the proposed Project associated with the installation of three new wood H-frame structures and a 3-pole dead end structure required to construct the proposed C203 Tap Line.

In addition to permanent wetland impacts, a total of 46, 805 square feet of temporary wetland impacts will result from timber matting around where new structures are to be installed in wetlands, and where equipment access is needed across wetland areas for construction purposes. Refer to **Section 9.0** of the Application Narrative for a further breakdown of temporary and permanent impacts.

(7) The impact on plants, fish, and wildlife including: rare, special concern species; state and federally listed threatened and endangered species; species at the extremities of their ranges; migratory fish and wildlife; and exemplary natural communities identified by the New Hampshire natural heritage program.

As mentioned previously, only common plant species were observed within the Project Area during the course of wetland delineations by VHB Wetland Scientists in June, July and August of 2013. The New Hampshire Natural Heritage Bureau (NHNHB) was consulted regarding the occurrence of rare plant, animal or natural communities within vicinity of the proposed Project. NHNHB indicated historical records of rare plants, exemplary natural communities, and bald eagles in a response memo dated February 20, 2013, prompting additional consultation with the agency. Follow up field surveys were conducted by VHB on three separate occasions in July, August and September 2013 to determine presence/absence of rare plant species and exemplary natural communities listed in the NHNHB report. None of the listed species or communities were found during the course of the follow up field investigations. Based on this finding, Melissa Coppola of the NHNHB determined that the project would have no impact on state-listed plant species (Refer to NHNHB's Memo dated January 27, 2014 in **Appendix C**).

Further consultation with the New Hampshire Fish and Game Department (NHF&G) occurred in relation to the bald eagle as listed on the NHNHB report. The NHNHB report indicated that Bald Eagles have been recorded along the Connecticut River associated with the Moore Dam located approximately ½ mile north of the Project Area. Based on the location of the Project and distance from the Connecticut River and the lack of suitable wintering habitat within the Project Area, VHB concluded that the proposed Project should not result in significant adverse impacts to Bald Eagles. Kim Tuttle of the NHF&G concurred with this assessment (Refer to NHF&G Response Letter in **Appendix C**).

The Project was reviewed for the presence of federally-listed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's (USFWS) New England Field Office website. (http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm). Based on the information currently available, it was determined that no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the USFWS are known to occur in the Project Area. Preparation of a biological assessment or further consultation with the USFWS under Section 7 of the Endangered Species Act is not required. Refer to **Appendix C** for USFWS correspondence.

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

The proposed C203 Tap Line will provide much needed additional power to a second autotransformer located within the Littleton Substation. This additional

power will address much warranted electric reliability needs resultant of increasing demand in both New Hampshire and Vermont. This improvement will benefit local and regional businesses and infrastructure.

There will be no negative impact on public navigation resulting from the proposed Project since it will not affect wetlands or waterways utilized for these purposes.

The Project will be located within an expanded area of an existing electric utility easement ROW that is currently utilized for the transmission of high voltage electricity. There are a number of community recreational resources associated with the Fifteen Mile Falls Recreation Area that are located approximately ½ mile or more from the Site; specifically, the Moore Dam, Moore Dam Visitor Center, and the Boat Launch at the Moore Dam. Given that these resources are located at least ½ mile from the Project Area and located on the opposite side of Interstate 93, the Project will not result in any adverse impacts to such community resources.

In addition to the recreational resources previously mentioned, there is a snowmobile trail that currently follows the existing gravel access road located on the west side of the existing D204 Tap line. The snowmobile trail then continues west along the C203/D204 transmission line corridor to Route 135 (Monroe Road) in Littleton. The Project will not adversely affect snowmobile access around the Littleton Substation and would not result in any impacts to the snowmobile trail itself. NEP discussed the Project with the Vermont Association of Snow Travelers, which indicated that it did not maintain any trails on the ROW or in the vicinity.

(9) The extent to which a project interferes with the aesthetic interests of the general public.

A visual impact study was conducted by VHB for the Project and a report was submitted as part of the Site Evaluation Committee (SEC) Application. The Project is not expected to interfere with the aesthetic interests of the general public. The Project is located adjacent to an existing 500-foot wide cleared electrical utility ROW. As proposed, 135 feet of tree clearing along the 0.2 mile C203 Tap Line ROW will take place prior to the installation of the three new wood H-frame structures, three-pole dead end structure, and overhead tap line; however, the design of the proposed C203 Tap Line closely mimics the adjacent D204 Tap Line and it is not anticipated to significantly alter the appearance from what presently exists today. Furthermore, the Project is not located where it is viewed readily by the general public.

(10) The extent to which a project interferes with or obstructs public rights of passage or access.

As previously mentioned, the Project would be located within an expanded area of an existing electric utility easement ROW that is currently utilized for the transmission of high voltage electricity with limited access to the general public. Currently, a locked access gate is located at the entrance to the PSNH Littleton

Substation off of a rural residential roadway which will be the main access point to the new C203 Tap Line ROW. The Project will not adversely affect snowmobile access around the Littleton Substation and will not result in any impacts to an existing snowmobile trail. NEP discussed the Project with the Vermont Association of Snow Travelers, which indicated that it did not maintain any trails on the ROW or in the vicinity.

A portion of the Project will be located on property owned by TransCanada (Tax Map 29, Lot 8) that is part of a conservation easement granted to the New England Forestry Foundation Inc. (NEFF) in 2008. The proposed Project requires additional easement rights on a portion of this conservation land which will not interfere or obstruct with any current public rights of passage or access. NEFF has consented to NEP's construction of the proposed Project. The Project is also located on a parcel (Tax Map 41, Lot 8) owned by PSNH which currently contains the Littleton Substation and existing overhead transmission lines to which the public currently has no access other than the previously mentioned snowmobile trail.

(11) The impact upon abutting owners pursuant to RSA 482-A:11, II.

The proposed Project is located on two parcels identified as Map 29, Lot 8 and Map 41, Lot 8 on the Town of Littleton Tax Maps. The Project parcels abut ten (10) property owners. All abutters immediately adjacent and contiguous to the parcels on which the Project will take place were notified of the proposed Project via certified mail. Tax maps depicting the Project and abutter parcels as well as a list of abutters and certified mail receipts are provided in **Appendix E**.

The visual impact study conducted by VHB and submitted as part of the SEC application included an analysis of visual impacts on abutting properties resulting from the proposed Project. The study concluded that the constructed Project will not be visible from abutting properties.

The Project requires NEP to obtain additional easement rights on land owned by TransCanada and PSNH (project parcels referenced above). NEP has requested the expansion of the width of NEP's current easement on TransCanada's property by approximately 200 feet to accommodate the construction, reconstruction, installation, repair, replacement, maintenance, operation and patrolling of the proposed tap line. TransCanada is reviewing the request and has indicated its intent to grant the additional easement rights requested, subject only to negotiating the legal agreement. Additionally, NEFF (grantee of conservation easement as outlined in our response to criterion Env-Wt 302.04 (a) (10) above) has consented to NEP's use of the expanded area for utility purposes. PSNH has consented to construction of the Project and the process of obtaining additional easement rights on their property is currently underway.

(12) The benefit of a project to the health, safety, and well being of the general public.

The proposed Project would improve the health, safety and well being of the general public by enhancing the reliability of the existing electric utility infrastructure in New Hampshire and Vermont. The proposed Project will provide much needed additional power to a second autotransformer in the Littleton Substation designed to address current reliability needs resultant of increasing demand in both New Hampshire and Vermont.

(13) The impact of a proposed project on quantity or quality of surface and ground water.

Due to the nature of the proposed Project impacts, which involve primarily temporary impacts associated with the use of matting during construction and only 64 square feet of permanent wetland impact from the installation of the new wood utility pole structures, the proposed Project will not impact the quantity or quality of surface and ground water. Appropriate erosion controls will be implemented during construction to eliminate the potential of sediment from entering adjacent wetlands and/or surface waters.

Field survey demonstrated that there are no streams located within the proposed construction footprint. Therefore, no work is proposed within the banks or beds of any surface water and no streams will be crossed during construction.

Two small stream resources are located outside of the construction footprint to the south and west. There would be no measurable indirect impacts to these streams such as an increase in water temperature or sedimentation as a result of the proposed Project. This conclusion is based on the fact that a forested buffer of at least 50 feet will be maintained, and the fact that the cleared area drains to the east into the ROW and away from the existing streams.

Refer to **Section 5.0** of the Application Narrative for more information.

(14) The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

According to Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Maps (FIRM), produced for Grafton County, none of the proposed Project Area within the Town of Littleton lies within the 100-year floodplain associated with the Connecticut River (Refer to **Figure 4**). Since the Project is located outside of the floodplain, there will be no increase in flooding, erosion, or sedimentation at this location.

(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.

Since there is no work being proposed within large open bodies of water or flowing streams, installation of the proposed C203 Tap Line will not redirect current or wave energy.

(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.

The land immediately surrounding the Project Area is made up of several large parcels owned by PSNH, the State of New Hampshire, and TransCanada. Apart from the existing utility infrastructure associated with the existing ROW, the majority of the land immediately surrounding the Project Area is undeveloped forest. As previously mentioned, the property owned by TransCanada is part of a conservation easement granted to NEFF in 2008. Further non-utility development of this land in the future is not allowed under the terms of the conservation easement. Therefore, alterations to wetlands on this easement property will not occur in the future, eliminating the potential for cumulative wetland impacts.

Other abutting properties located further away from the proposed Project (to the south) consist of residential and agricultural land. It is difficult to predict future development or alterations of these properties and their current relationship to the subject wetland complex beyond the boundaries delineated in relation to the proposed Project. However, it can be determined based on the small amount of permanent impact proposed (64 square feet), and the distance between the proposed Project and these properties, that this Project would not be of significant contribution to any future cumulative impacts.

(17) The impact of the proposed project on the values and functions of the total wetland or wetland complex.

Since the proposed Project involves vegetated wetlands, the capacity to perform water quality and hydrologic functions such as groundwater discharge or recharge, flood flow alteration, sediment/toxicant/pathogen retention, and nutrient removal exists. These functions appear to be limited based on the geomorphic setting, lack of a contributing watercourse and lack of adjacency to a waterbody, and general lack of erosion, sediment, pollution, or excess nutrient sources within the drainage area. Based on these limiting factors, the proposed scope of work will not significantly impact water quality and hydrologic functions performed by the Project Area's wetlands.

Wildlife habitat is provided by the forested, scrub-shrub, emergent and open water components of the wetland complex subject to the proposed Project. However, the sloping forested components of the wetland where the majority of the Project

impacts will occur are not significantly different in their general habitat characteristics relative to adjacent forested uplands. The most valuable wildlife habitat functions of the Project Area's wetlands are provided by the emergent-open water wetland complex towards the interior of the wetland which will not be impacted by the proposed Project.

Fish or shellfish habitat, if present, would be limited to the perennial stream at the extreme northwestern corner of the Project Area, and open water components of the wetland interior. Neither the perennial stream nor the open water habitat will be impacted by the proposed Project.

Production export functions are limited to those related to the ability of the wetland to provide food sources for wildlife. The limited production export functions will not be significantly affected by the proposed Project. Food sources used by wildlife will shift from those found in forested settings to those found in scrub-shrub habitat settings as a result of tree removal related to Project construction.

Lastly, Recreation, educational/scientific value, uniqueness/heritage, visual quality/aesthetics, and threatened and endangered species habitat are not functions and values performed by the Project Area's wetlands.

Refer to **Section 4.0** of the Application Narrative for greater detail.

(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 would be no impact to Registered Landmarks as none are located on or within the vicinity of the proposed Project. The closest Registered Landmark is Franconia Notch located approximately 13 miles southeast of the Project Area.

(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 would be no impact to these named national resources as none are located within the Project limits. The Connecticut River is a designated National River and is also designated under the New Hampshire Rivers Management and Protection Program; however, it is located approximately 0.5 miles to the north and northeast of the Project Area. The Pemigewasset National Wilderness Area associated with the White Mountain National Forest (WMNF) is located approximately 16 miles southeast of the Project Area.

(20) The degree to which a project redirects water from one watershed to another.

No alterations of surface waters or drainage patterns are proposed and therefore no water will be redirected from one watershed to another as a result of the proposed Project.

Application Narrative

- Introduction
- Site Description
- Proposed Project Description
- Existing Conditions
- Project Wetlands and Vernal Pools
- Surface Waters & Drainage Patterns
- Floodplains and Floodways
- Rare, Threatened, and Endangered Species
- Cultural Resources
- Proposed Wetland Impacts
- Mitigation Measures
- Shoreland Water Quality Protection Act

Application Narrative

Although the proposed C203 Tap Line is relatively short and has a relatively small footprint, it will be reviewed by the NH Site Evaluation Committee ("NHSEC") under NH RSA 162-H, relative to energy facility siting because the new facility exceeds 200kV. In preparation for filing an application with the NHSEC, Vanasse Hangen Brustlin, Inc. (VHB) is submitting a Standard Dredge and Fill Permit Application on behalf of New England Power Company d/b/a National Grid ("NEP" or "the Applicant") in accordance with New Hampshire Revised Statutes Annotated (RSA) Chapter 482-A, Fill and Dredge in Wetlands, and Wetland Bureau Code of Administrative Rules, Chapters Env-Wt 100 through Env-Wt 900.

Proposed permanent wetland impacts total only 64 square feet for the installation of new utility pole structures. Temporary wetland impacts totaling 46,805 square feet would result from the use of swamp matting to access each new structure location and to create a stable work platform during structure installation. The Project is therefore classified as a Major Project under NHDES Wetland Rules (Env-Wt 303.02) because total wetland impacts exceed 20,000 square feet.

1.0 Introduction

The Application Narrative describes current site conditions (including adjacent regulated wetland resources) and the proposed electric utility work. The proposed work involves both temporary and permanent wetland impacts related to crossing wetlands located within and adjacent to an existing utility right-of-way (ROW) and installation of utility structures for a new tap line. The attached appendices include: project permitting plans showing existing conditions and the proposed construction activities, evidence of agency and local advisory committee coordination, and representative site photographs. Additionally, demonstration that the Project complies with the provisions contained in the NHDES Wetland Rules is documented in further detail within this narrative.

2.0 Site Description and Existing Conditions

The existing Littleton Substation is located at 266 Foster Hill Road in Littleton, New Hampshire off of Exit 44 on Interstate 93 (Styles Bridge Highway). The existing C203 transmission line runs adjacent to the existing D204 line which runs east to west from the Moore Substation in Littleton, NH to Comerford Substation in Monroe, NH. The Littleton Substation is owned by Public Service of New Hampshire (PSNH) but the

existing C203/D204 transmission lines are owned, operated, and maintained by NEP. An existing cleared tap ROW associated with the D204 line currently extends from the Littleton Substation to the C203/D204 main line ROW corridor and is approximately 500 feet in width. There are four (4) existing transmission lines within the existing D204 tap ROW; the 230kV D204 tap line, the 115kV PSNH Q195 tap line, the Vermont Electric Power Company K60 - St. Johnsbury #29 115-kV transmission line (VELCO K60), and the 3315 34.5kV Littleton Municipal line. Most of the existing cleared ROW consists of emergent and scrub-shrub wetland vegetation. An existing gravel access road located along the western edge of the D204 tap ROW provides access south to the C203/D024 main line. The gravel access road varies in width from 8 to 16 feet (Refer to **Figure 1**).

The existing D204 Tap Line consists of four (4) wood structures. The structure configuration consists of one (1) 3-pole wood tap structure, two (2) wood H-frame suspension structures, and one (1) wood H-frame deadend structure. The existing poles heights range from 40 feet to 75 feet depending on the structure configuration.

According to Natural Resources Conservation Service (NRCS) digital GIS soil data distributed by NH GRANIT, the proposed Project Area is comprised of a variety of soil map units including Greenwood mucky peat, Peru fine sandy loam, and Peacham and Ossipee soils. Refer to **Figure 3** and associated tables for NRCS Mapped Soils for Littleton, New Hampshire.

3.0 Proposed Project Description

The proposed Project involves construction of a new 0.2 mile long C203 Tap Line extending south from the existing C203 overhead transmission line to the Littleton Substation. The 0.2 mile long tap line will be composed of four new wood transmission structures. The structures include one (1) 3-pole wood terminal deadend structure (Structure #1), two (2) wood H-frame suspension structures (Structure #2 & 3), and one (1) wood H-frame dead end structure (Structure #4). In order to address aesthetic concerns, structure spacing and pole sizes for the proposed C203 tap have been designed to closely mimic the adjacent D204 tap line. Therefore the proposed tap contains the same number of structures in the same configuration. New pole heights for Structures 1 through 4 consist of 35', 70', 80' and 80', respectively. New overhead conductors will be strung and the new tap line will terminate at a new bus structure located within the existing Littleton Substation. During the construction phase of the Project contractors will need to travel along the existing C203/D204 transmission line to ground the main line.

The proposed Project Area is approximately 3.5 acres in size and requires approximately 135 feet of new ROW width. The ROW width will need to be extended west so that the edge of the ROW is 100' from the centerline of the proposed C203 tap line. Tree clearing will be required to the edge of the ROW and will amount to a width of approximately 135' along the entire length of the tap ROW.

The extra ROW width is necessary to meet the current required horizontal clearances established for electric transmission lines. Refer to **Appendix A** for locations and extent of proposed work.

3.1 Proposed Access Route to ROW

The existing ROW is accessible from 266 Foster Hill Road. An existing gravel access driveway extends off of Foster Hill Road north to the Littleton Substation. An existing gravel access road located at the northwest gate of the Littleton Substation provides access to the tap ROW and the C203/D204 main line ROW. The existing gravel access road will be utilized to install the proposed C203 tap line. Temporary swamp mat spurs will be installed off of the existing gravel road to allow construction of the new structures. Temporary work platforms, consisting of timber matting, will be installed surrounding each structure location during installation.

3.2 Proposed Construction Methods

Tree clearing along the western edge of the Project ROW, as previously described, will occur prior to mobilization of utility construction crews. Tree clearing impacts will be minimized within Project wetlands to extent practicable to accommodate new structures and standard safety clearances. Upon completion of clearing activities and prior to accessing the Project ROW with construction equipment, crews will install erosion and sediment control barriers in accordance with NHDES guidance manuals and as dictated by site conditions.. Selected Best Management Practices (BMPs) may include straw wattles, silt fence, wood chip/compost berms/tubes and/or other approved BMPs. Ground-based crews will approach each new pole location through the proposed access as indicated on the Project plans. Wooden swamp mats, typically with dimensions of 4 feet wide by 16 feet long, will be used as necessary in all areas where wetlands will be crossed to gain access to each new pole location. Construction work platforms (100'x100') will be utilized for pole installation at proposed Structures 2, 3, and 4. A slightly larger construction platform is required for the installation of the 3-pole wood terminal dead-end structure (Structure #1) and to allow room for staging of wire reels during overhead wire installation. If frozen ground conditions and snow cover are present, mats may not be necessary in some areas thereby reducing the overall total temporary wetland impact square footage as calculated in this permit application. Temporary pole laydown areas will be staged in upland locations surrounding the existing Littleton Substation. During Project construction, control of the spread of invasive species that are currently found within the ROW will be managed in accordance with NHDES guidance manuals. Refer to **Section 4.0** for further details on invasive species present within the Project ROW.

All matting and other construction debris will be removed upon completion of the proposed work. Stabilization of the surrounding Project Area and restoration of all disturbed areas will be completed as soon as possible. Due to the timing (winter season) and limited impacts of the proposed work, it is anticipated that minimal

restoration will be needed and that natural re-colonization of wetlands within the Project will occur during the spring/summer of 2014 during vegetative growth periods. VHB will revisit the ROW during this time period to assure restoration.

Refer to **Appendix A** for location of existing wetlands and utility poles, proposed new pole locations, proposed access routes and temporary wetland crossings.

3.3 Property Ownership and Abutters

The proposed Project is located on two parcels identified as Map 29, Lot 8 and Map 41, Lot 8 on the Town of Littleton Tax Maps. The Project parcels abut ten (10) property owners. All abutters immediately adjacent and contiguous to the parcels on which the Project will take place were notified of the proposed Project via certified mail. Tax maps depicting the Project and abutter parcels as well as a list of abutters and certified mail receipts are provided in **Appendix E**.

The Project requires NEP to obtain additional easement rights on land owned by TransCanada and PSNH (project parcels referenced above). NEP has requested the expansion of the width of NEP's current easement on TransCanada's property by approximately 200 feet to accommodate the construction, reconstruction, installation, repair, replacement, maintenance, operation and patrolling of the proposed tap line. TransCanada is reviewing the request and has indicated its intent to grant the additional easement rights requested, subject only to negotiating the legal agreement. Additionally, NEFF (grantee of conservation easement as outlined in our response to criterion Env-Wt 302.04 (a) (10)) has consented to NEP's use of the expanded area for utility purposes. PSNH has consented to construction of the Project and the process of obtaining additional easement on their property is currently underway.

4.0 Project Wetlands

The following section provides a summary of the wetland delineation methodology and a description of wetlands in the Project vicinity relative to landscape position, observed plant species, soils, hydrology, functions and values, and other characteristics. Photographs of the referenced wetlands are found in **Appendix B.**

4.1 Wetlands Delineation and Assessment

Wetlands within the Project Area were delineated by VHB wetland scientists in June, July, and August of 2013. Wetlands were delineated using alpha-numerically coded pink flagging tape.

Wetland delineations were performed in accordance with the *Corps of Engineers Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (January

2012). The *Corps of Engineers Wetland Delineation Manual* presents a three parameter approach involving indicators of hydrophytic vegetation, hydric soils, and hydrology. The Regional Supplement presents wetland indicators, delineation guidance and other information that is specific to the Northcentral and Northeast region of the United States.

The *Northcentral-Northeast 2012 Final Regional Wetland Plant List* and the *2012 National Wetland Plant List* published by the U.S. Army Corps of Engineers, the *Field Indicators of Hydric Soils in the United States, Version 7.0* published by the Natural Resources Conservation Service, and the *Field Indicators for Identifying Hydric Soils in New England, Version 3* published by the New England Interstate Water Pollution Control Commission were also used as technical references during the wetland field investigations. Soils were evaluated using a Dutch style auger. Wetlands were classified following the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979, revised 1985.) Functions and values were assessed using the *Highway Methodology Workbook Supplement* (USACOE, 1999).

4.2 Wetlands Description

A single large wetland complex occupies most of the Project Area. This wetland includes palustrine forested (PFO), palustrine scrub-shrub (PSS), palustrine emergent (PEM), and limited palustrine open water (POW) components. One intermittent and one perennial stream channel associated with the wetland complex exist to the west of the Project Area (refer to **Figure 2**). The wetland's geomorphic, hydrologic, soil, and vegetation characteristics are described below.

The Project Area is located on a long north facing slope, with the highest site elevations located at the southern end of the Project Area. This topographic setting creates an overall hydrologic flow direction of south to north, towards the Connecticut River. Major hydrologic inputs to the wetland system include seepage and discharge from groundwater perched above shallow, dense glacial till soil layers or bedrock as the groundwater migrates from south to north along surface contours, and direct precipitation inputs. Surface water inputs from streams to the west of the Project Area are also present in those locales.

Natural Resource Conservation Service (NRCS) soil mapping identifies glacial till soils and organic soil deposits as being predominant within the Project vicinity. Better drained glacial till soils with drainage classifications ranging from somewhat excessively drained to moderately well drained that have been mapped by the NRCS in the vicinity include the Tunbridge-Lyman-Rock Outcrop complex, Berkshire loam, and Peru fine sandy loam. NRCS soil mapping also identifies wetter areas within the Project vicinity, including Lyme and Moosilauke soils, Peacham and Ossippee soils, and Greenwood mucky peat. These soils have formed in glacial till, glacial till with overlying organic deposits, or organic soil materials, and have drainage classifications ranging from somewhat poorly drained to very poorly drained. The

onsite wetland delineations confirmed the glacial till site setting and the presence of poorly and very poorly drained hydric soils within the delineated wetland boundary. Organic surface horizons or soils formed entirely within organic materials are present within the PEM and POW interior portions of the wetland.

The interior portion of the delineated wetland includes a large PEM/POW complex. The open water component of the wetland is limited in extent (less than approximately 300 feet at its widest point) and is slowly growing in with emergent vegetation. Emergent vegetation within the PEM interior of the wetland is dominated by broad-leaved cattail and hydrophytic graminoids. The POW component of the wetland exhibits a permanently flooded to semi-permanently flooded hydroperiod, while the PEM components include semi-permanently flooded, seasonally flooded, and saturated areas.

The remaining portions of the wetland within the existing, maintained electric transmission ROW exhibit a PSS and PEM cover type. Commonly observed shrubs that are typical to such settings include speckled alder, meadowsweet, arrowwood, species of willow, and glossy buckthorn. Occasional saplings include gray birch, red maple, eastern hemlock, and quaking aspen. Common herbaceous and emergent vegetation includes: species of golden rod and aster, fringed sedge, woolgrass, bladder sedge, soft rush, sensitive fern, tussock sedge, broad-leaved cattail, cinnamon fern, reed canary grass, and jewelweed. The hydroperiod within the PSS/PEM components of the wetland is generally saturated to seasonally saturated, with small seasonally flooded inclusions.

Outside of the existing, maintained transmission ROW, PFO components are present within the wetland boundary. The majority of the proposed Project's wetland impacts will be within these PFO wetlands. Red maple and balsam fir are prevalent overstory and understory tree species. Other trees and saplings include black and red spruce, eastern hemlock, and green ash. Typical herbaceous species include cinnamon fern, sensitive fern, jewelweed, and horsetail species. The hydroperiod within the PFO components of the wetland is generally saturated to seasonally saturated, with small seasonally flooded inclusions.

Invasive species noted within the delineated wetland boundary and in adjacent upland areas include glossy buckthorn and purple loosestrife. Glossy buckthorn was noted to occur in at least two large, dense stands, and is also scattered throughout the Project Area.

4.3 Wetland Function and Values

The following provides a general presentation of the functions and values of wetlands within the Project Area. The functions and values presented below are based on a descriptive, best professional judgment approach, with reference to the methodology recommended by the U.S. Army Corps of Engineers New England

District - *The Highway Methodology Workbook Supplement: Wetland Functions and Values - A Descriptive Approach*. Thirteen wetland functions and values are recognized under the USACE methodology:

- Groundwater Recharge/Discharge;
- Floodflow Alteration (Storage & Desynchronization);
- Fish and Shellfish Habitat;
- Sediment/Toxicant Pathogen Retention;
- Nutrient Removal/Retention/Transformation;
- Production Export (Nutrient);
- Sediment/Shoreline Stabilization;
- Wildlife Habitat;
- Recreation (Consumptive & Non-Consumptive);
- Educational/Scientific Value;
- Uniqueness/Heritage;
- Visual Quality/Aesthetics; and
- Threatened or Endangered Species Habitat.

The USACE Highway Methodology provides a list of considerations and qualifiers that are used to assess the occurrence of each function or value, followed by a subjective determination of Principal Functions and Values, with documentation of supporting rationale on standard forms. The list of considerations and qualifiers has been used in the function and values assessment of wetlands in the Project Area, although a narrative approach is employed in lieu of the standard forms.

As vegetated wetlands, the capacity to perform water quality and hydrologic functions such as groundwater discharge or recharge, floodflow alteration, sediment/toxicant/pathogen retention, and nutrient removal exists. The sloping, glacial till geomorphic setting allows for shallow groundwater discharge into the on-site wetlands, but limits groundwater recharge functions due to the presence of shallow dense soil horizons or bedrock that limit deep infiltration. The flatter PEM/POW interior of the wetland may contribute to floodflow alteration by detaining surface runoff from surrounding slopes during precipitation events, but the ability to perform this function is constrained by a lack of a contributing watercourse and a lack of adjacency to a waterbody. Pollutant retention or removal functions may occur within the wetland, but a general lack of erosion, sediment, pollution, or excess nutrient sources within the drainage area limits water quality functions. The proposed scope of work will not significantly impact water quality and hydrologic functions performed by the Project Area's wetlands.

Wildlife habitat is provided by the forested, scrub-shrub, emergent and open water components of the wetland. However, the sloping forested components of the wetland where the majority of the Project impacts will occur are not significantly different in their general habitat characteristics relative to adjacent forested uplands. Forested habitat is also ubiquitous within the Project vicinity. The most valuable wildlife habitat functions of the Project Area's wetlands are provided by the

emergent-open water wetland complex towards the interior of the wetland. The PEM-POW component of the wetland provides a small area of habitat that may be used by waterfowl and wading birds, and is less common within the Project vicinity. The PEM-POW habitat components of the wetland with the potential to provide these functions will not be impacted by the proposed Project.

Fish or shellfish habitat, if present, would be limited to the perennial stream to the northwest of the Project Area, and open water components of the wetland interior. The perennial stream has the potential to provide coldwater fishery habitat, although the stream is small and occupies a steep gradient. The open water within the wetland interior may provide warmwater fish habitat, but the small size of the open water area is not likely to support a significant population of fish. Neither the perennial stream nor the open water habitat will be impacted by the proposed Project.

Production export functions are limited to those related to the ability of the wetland to provide food sources for wildlife. No other production export functions are provided. The limited production export functions will not be significantly affected by the proposed Project. Food sources used by wildlife will shift from those found in forested settings to those found in scrub-shrub habitat settings as a result of tree removal related to Project construction.

Recreation, educational/scientific value, uniqueness/heritage, visual quality/aesthetics, and threatened and endangered species habitat are not functions and values performed by the Project Area's wetlands.

See **Appendix A** and **Section 9.0** for further detail regarding specific wetland impacts that will occur as a result of the proposed Project.

4.4 Vernal Pools

Vernal pool habitat may be provided by depressions within the Project Area that fill with water on at least a seasonal basis. While the potential for such features exists within the Project Area, no vernal pools were identified during field investigations.

One open water area is present within the interior of the large wetland system present on-site, which may potentially provide vernal pool breeding habitat. However, the open water area appears to be flooded on a permanent to semi-permanent basis and provides good habitat for species known to predate upon vernal pool amphibians and their egg masses, such as green frogs, bull frogs, turtles, and potentially even fish. This type of ponded or open water habitat does not generally provide favorable vernal pool habitat characteristics due to the high risk of predation.

5.0 Surface Waters & Drainage Patterns

The general hydrology of the Project Area was previously described in **Section 4.0** above. The Connecticut River is located approximately ½ mile to the north and will not be impacted by the proposed project.

There are no streams within the proposed construction footprint. Two small stream resources are located near the project, as described below.

Unnamed Intermittent Stream

An unnamed intermittent stream channel is located outside (to the southwest) of the proposed construction footprint (Refer to **Figure 2**). The channel is approximately 2 to 4 feet wide and flows south to north through forested wetland before dissipating within the wetland (i.e., infiltrating & terminating) to the southwest of proposed Structure 4 as shown on **Figure 2**. This channel will not be crossed during construction of the proposed Project, nor will the Project result in any impacts to the bed or banks of this channel. The distance between the proposed edge of tree clearing associated with the new C203 tap line ROW and the mapped centerline of this intermittent channel varies from 15 feet to 70 feet from south to north.

Unnamed Perennial Stream

An unnamed first order perennial stream channel exists to the west of the proposed construction footprint. The channel varies in width from 4 to 8 feet, contains cobble/boulder substrate, and flows south to north eventually traversing across the existing C203/D204 main line ROW corridor to the northwest of the Project footprint (Refer to **Figure 2**). Again, this channel will not be crossed during construction of the proposed Project, nor will the Project result in any impacts to the bed or banks of this channel. The distance between the proposed edge of tree clearing associated with the new C203 tap line ROW and eastern bank of this channel is approximately 90 feet at its closest point to the west of proposed Structure 3.

Potential Stream Impacts

There are no direct impacts to surface waters. No surface waters would be crossed or directly impacted in any way as a result of the proposed Project.

There should be no measurable indirect impacts to these streams such as an increase in water temperature or sedimentation as a result of the proposed Project. This conclusion is based on the fact that a forested buffer typically 50 to 100 feet or greater will be maintained, and the fact that the cleared area drains to the east into the ROW and away from the existing streams.

6.0 Floodplains and Floodways

According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Program Flood Insurance Rate Map (DFIRM) produced for Grafton County, the proposed Project Area lies outside of the 100-year floodplain associated with the Connecticut River in Littleton, NH (Refer to **Figure 4**). There will be no impacts to floodplains or floodways as a result of construction of the proposed Project.

7.0 Rare, Threatened and Endangered Species

Only common plant species were observed along the Project ROW during the course of wetland delineations by VHB Wetland Scientists in June, July, and August of 2013. The New Hampshire Natural Heritage Bureau (NHNHB) was consulted regarding the occurrence of rare plant, animal or natural communities within vicinity of the proposed Project. NHNHB indicated historical records of rare plants, an exemplary natural community and bald eagles in the vicinity of the Project Area in a response memo dated February 20, 2013, and recommended coordination with New Hampshire Fish and Game Department to further determine the status and location of the species in relation to the proposed Project Area. Follow up field surveys were conducted by VHB on three separate occasions in July, August and September 2013 to determine presence/absence of species listed in the NHNHB report. None of the listed species were found during the course of the follow up field investigations. Based on this finding, Melissa Coppola of the NHNHB determined that the project would have no impact on state-listed plant species (Refer to NHNHB's Memo dated January 27, 2014 in **Appendix C**).

Further consultation with the New Hampshire Fish and Game Department (NHF&G) occurred in relation to the bald eagle as listed on the NHNHB report. The NHNHB report indicated that Bald Eagles have been recorded along the Connecticut River associated with the Moore Dam located approximately ½ mile north of the Project Area. Based on the location of the Project site and distance from the Connecticut River and the lack of suitable wintering habitat within the Project Area, VHB concluded that the proposed Project should not result in significant adverse impacts to Bald Eagles. Kim Tuttle of the NHF&G concurred with this assessment (Refer to NHF&G Response Letter in **Appendix C**).

The Project was reviewed for the presence of federally-listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's (USFWS) New England Field Office website (http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm). Based on the information currently available, it was determined that no federally-listed or proposed, threatened or endangered species or critical habitats under the jurisdiction of the USFWS are known to occur in the direct Project Area. Preparation of a

biological assessment or further consultation with the USFWS under Section 7 of the Endangered Species Act is not required. Documented correspondence is provided in **Appendix C.**

8.0 Cultural Resources

8.1 Above-ground Historic Resources

A site file review at the New Hampshire Division of Historic Resources (NHDHR) was completed on July 23, 2013. The results of the site file review did not indicate any known above-ground historical resources present on the Project Area. The field review indicated that there is one property, the house at 290 Foster Hill Road, that lies south of the Project Area and is the closest building over 50 years old to the Project Area. The existing northerly view from this house towards the Project Area reveals no visibility of the existing substation and electrical transmission lines. This is largely due to dense evergreen and deciduous tree cover located along the northern perimeter of a mowed field to the north of the house and the existing topography. Since the new tap line will be constructed adjacent to the current D204 Tap Line and will mimic the D204 Tap Line in structure and height there will be no view of the new transmission line from this location.

The house, which appears to date to the mid-19th century, has not been inventoried or listed in the National or State Registers. It is an east-facing 5-bay, central entrance shingle-sided cape with a side gable roof that contains a long shed-roofed dormer in the front slope of the roof. A date of "1848" is affixed in the simple pediment above the central entrance. The rectangular form of the house is intact, with a small open porch in a 1-story gabled addition along the north side and northwest corner of the house. The house has cornerboards and gable returns with a simple wood frieze. The window sash is mainly 6/6, with some 2/2; a small number of casement windows and paired windows in the front dormer suggest early 20th century alterations to the house. Two narrow brick chimneys, one offset from the center of the front slope and one offset in the rear, do not appear to be original. The property contains no outbuildings; its setting is open, with a few large mature trees close to the house.

8.2 Archaeological Resources

Since the Project involves ground disturbing activities, and because preliminary review of the Project indicated that the Project Area is within an area considered sensitive for archaeological resources, a combined Phase IA-IB sensitivity assessment and intensive archaeological investigation was completed by Independent Archaeological Consulting, LLC (IAC). The Phase 1A-1B investigation found that much of the Project Area is upland with steady 6 percent slope that is comprised of wetland with thin, hummocky soil. One small area within the Area of Potential Effect

(APE) was identified as sensitive for Pre-Contact archaeological resources. IAC conducted Phase I testing in this location with three shovel test pits, but found no cultural resources. IAC recommended no further archaeological investigations in a final report submitted as part of a Request for Project Review submitted to NHDHR.

In response, the NHDHR found that the proposed Project would result in "No Potential to cause Effects." Refer to their Determination of Effect Memo dated November 12, 2013 in **Appendix D.**

9.0 Proposed Wetland Impacts

As previously stated, the proposed Project has been carefully designed to minimize impacts to jurisdictional wetland areas to the maximum extent practical.
All four (4) proposed structures will be located within a wetland resource area, along the western portion of the existing tap line ROW.

A total of 64 square feet of wetlands would be permanently filled to install utility poles. A total of nine poles will be installed within wetlands, associated with four new structures. The foundation diameter of each proposed pole will be 36 inches in diameter or approximately 7.1 square feet.

Additionally, a total of 46,805 square feet of temporary wetland impact will result from the use of timber matting to access each new structure location and to create a stable work platform during structure installation. Total temporary impacts include: 3,680 square feet (230 linear feet) of swamp mat access between proposed Structures 3 and 4,730 square feet (46 linear feet) of swamp mat access between Structures 1 and 2; temporary 100' X 100' work platforms installed surrounding Structures 2, 3 and 4 accounting for 26,900 square feet; and a slightly larger work platform installed surrounding Structure #1 (to allow room for staging of wire reels during overhead wire pulls) accounting for 15,495 square feet of temporary impact.

In addition to the direct wetland impacts under the jurisdiction of RSA 482-A, conversion of forested wetlands to scrub-shrub wetlands is necessary to construct the proposed Project. Up to 90,135 square feet of forested wetlands would be cleared. This clearing would be associated with the extension of the tap line ROW along the western edge of the Project ROW. The clearing will allow for the installation of the pole structures, and is also required to meet the vegetation horizontal clearance requirements. Note that clearing will be conducted in a manner as to not disturb the soil surface. There would be no grubbing or grading, and proper BMPs would be used during clearing activities to prevent excess rutting. Grubbing will be required at the proposed new structure locations.

See **Appendix A** for proposed locations of wetland impacts.

10.0 Alternatives Analysis

NEP evaluated alternatives to the Project as it is presently proposed. One alternative design option was evaluated, as well as the 'no action' alternative. The no action alternative was dismissed on the basis of not meeting the Project purpose and need of ensuring reliable electric transmission service to New Hampshire and Vermont. The alternative design that was eliminated was rejected on the basis of being both technically and economically impracticable to implement, and also because environmental impacts were considered to be more significant from a functional perspective. The rationale for eliminating the alternative design and adopting the proposed design is described below.

10.1 Technical and Economic Considerations

In 2010 NEP completed a Conceptual Engineering Report (CER), which evaluated two locations on the northern side of the Littleton Substation to construct the C203 tap line. One route referred to as the "Western Alternative", and which constitutes the proposed Project design, is located to the west of the existing D204 tap line. The second design option, identified as the "Eastern Alternative", would extend from the north face of the substation on the eastern side of the existing Q-195 tap line.

The CER determined that the abundance of transmission lines located on the eastern side of the existing tap ROW does not leave sufficient space to build the Eastern Alternative. Conversely, the CER concluded that the western side of the tap ROW does have adequate space to construct the Western Alternative.

In addition to the CER's conclusions regarding the availability of space within the tap ROW, the layout of the existing Littleton Substation presents additional technical and economic constraints to adopting the Eastern Alternative. The equipment layout within the existing substation footprint does not facilitate the interconnection of a new tap line on the eastern side of the substation. In order to accommodate a tap interconnection on the eastern side of the Littleton Substation, the substation footprint would need to be expanded, which would create additional areas of site disturbance and wetland impacts. Expansion of the substation footprint and the associated substation equipment reconfiguration would also result in a substantial and unjustifiable increase in the Project cost.

10.2 Environmental Considerations

From an environmental constraints perspective, both the Western and Eastern Alternatives would impact wetland resources. The alignment for the Eastern Alternative would cross the wetter emergent and scrub-shrub wetland habitat of the wetland interior. By comparison, the alignment for the Western Alternative is located entirely in forested wetland habitat with a drier seasonally saturated to saturated hydroperiod. Although a larger acreage of forested wetland conversion to scrub-

shrub/emergent wetland will be required to construct the Western Alternative, the Western Alternative is less environmentally impacting from the perspectives of both constructability and wetland functional impacts.

With regard to environmental construction constraints, the emergent marsh at the lower portion of the slope along the Eastern Alternative alignment has a substantially wetter hydroperiod and soft soils with a high organic matter content. Soils with a high organic matter content have lower bearing capacity, and are prone to substantial rutting and soil structural damage from heavy construction equipment. More extensive matting would be needed along the eastern alternative due to these soil conditions and a lack of an existing established access way. In summary, the Eastern Alternative presents a risk of more difficult conditions for equipment operation and with that, a greater potential for damage to wetland resources. From a functional perspective the Eastern Alternative would cross or be located adjacent to the more functionally valuable seasonally flooded to semi-permanently flooded palustrine emergent marsh and the associated waterfowl and wading bird habitat located at the interior of the wetland system in the Project Area. By comparison, the Western Alternative will impact saturated forested wetlands that provide forest habitat with habitat characteristics that are generally comparable to adjacent forested uplands, which are ubiquitous in Project Area. Accordingly, the Eastern Alternative would result in a greater level of impact to more functionally significant wetlands as compared to the Western Alternative.

In summary, when environmental impacts and technical and economic considerations are considered together, the proposed Western Alternative design presents the least environmentally impacting practicable alternative for meeting the Project purpose and need.

11.0 Mitigation Measures

The Project proposes only 64 square feet of permanent impact and therefore no compensatory mitigation is required under Env-Wt 302.03. However unavoidable Project impacts to wetlands related to temporary construction access and work platform impacts, and permanent fill related to pole placement will be mitigated using several measures. These measures include the use of established access ways and construction timber matting, use of erosion and sediment controls, restoration of temporarily disturbed wetlands, and invasive species management. Each of these are discussed below.

11.1 Use of Existing Access Ways and Construction Mats

Pole installation sites will be reached by construction equipment using an existing access road running along the western side of the existing electric transmission ROW

to the extent it is possible to do so. While some equipment travel will be necessary across wetlands, use of the existing dirt and gravel upland access roads to reach the work site will minimize impacts associated with equipment travel through wetlands.

Where the existing access road cannot be used to reach the pole installation sites and wetlands must be crossed, equipment mats will be installed to create a solid travelling surface. The use of equipment mats reduces the impact of driving heavy equipment through saturated wetland soils by dispersing the equipment weight, preventing the formation of ruts, and preventing conditions that are conducive to soil erosion.

11.2 Erosion and Sediment Control and Wetland Restoration

Erosion and sediment controls will be used during construction. Prior to accessing the Project ROW, crews will install erosion and sediment control barriers in accordance with NHDES guidance manuals and as dictated by site conditions. Selected Best Management Practices (BMPs) may include straw wattles, silt fence, wood chip/compost berms/tubes and/or other approved BMPs. A sufficient supply of these materials will be kept nearby to facilitate repair or replacement of barriers. Erosion controls will be inspected and maintained throughout the duration of Project activities and will not be removed until all Project work is complete and the Project Area is stabilized in accordance with NHDES *Chapter Wt 303.04 (af)*.

Due to the timing of the proposed Project and measures being taken to minimize impacts, it is anticipated that minimal restoration will be needed and that natural re-colonization of wetlands within the Project ROW will occur during the spring/summer vegetative growth periods. VHB will revisit the ROW during this time period to assure restoration. If necessary, an approved wetland seed mix outlined in NHDES guidance manuals, such as New England Wet-Mix or New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites(or equivalent/readily available seed mixes), will be applied to any areas where cover is slow to develop. Additionally, straw or weed-free hay will be applied in conjunction with seed.

11.3 Invasive Species Management Plan

Invasive plant species are present within the Project Area. During construction, contractors will be required to deliver clean equipment to the Project Area. All machinery entering and leaving any area containing invasive plants along the Project ROW will be inspected for foreign plant matter (stems, flowers, roots, etc.) and soil embedded in the tracks or wheels. If foreign plant matter/soil is present, the operator shall remove the plant material and soil from the machine using hand tools.

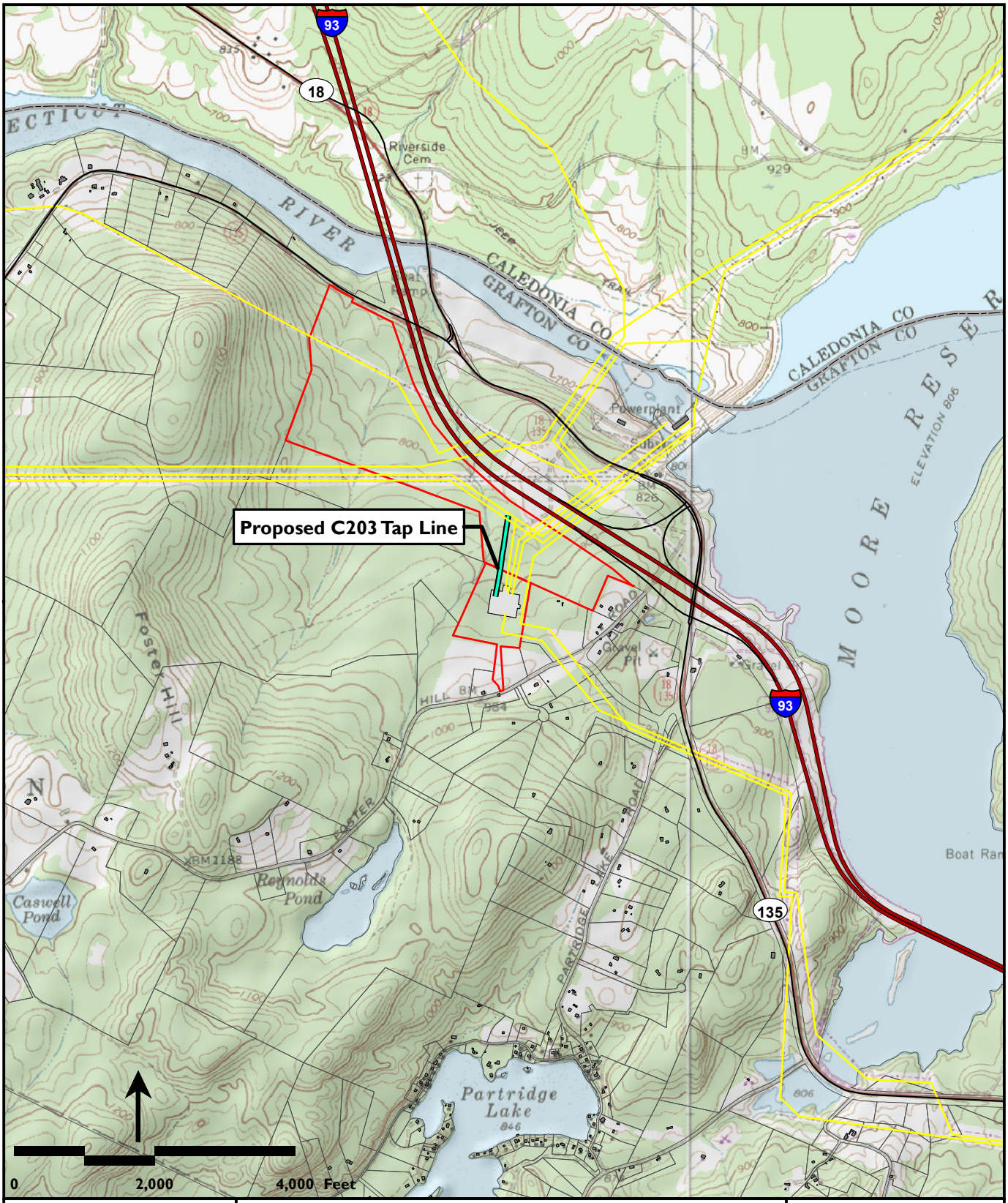
Swamp mats will also be cleaned before transporting them on-site or relocating them from one area of the ROW to another. Compressed air or water is typically used as a cleaning agent to remove seeds or root matter from mats.

12.0 Shoreland Water Quality Protection Act

Shoreland Permits are required by NHDES for projects within the protected shoreland (250 ft from the reference line of a jurisdictional river or stream) that involves new construction or construction that modifies the footprint of existing impervious surfaces, using mechanized equipment to either excavate, remove or form a cavity within the ground and filling any areas with rocks, soil, gravel or sand. Due to the location of the proposed Project, there are no impacts proposed within protected shoreland area and therefore a Shoreland Permit is not required.

Figures

Project: File: nhbedata\projects\52281.00 C203 Tap Project\GIS\Project\FinalFigures\USGS_ProjectLocation.mxd
Last Updated 1/16/2014 1:27:58 PM & Revisions: DEA



Legend
- Existing Transmission Line
- Proposed C203 Tap Line
- Project Parcels
- Assessor's Tax Parcels
- Littleton Substation

NEW C203 230KV TAP LINE

Figure 1 - USGS Site Location Map
Foster Hill Road
Littleton, New Hampshire

nationalgrid

VHB
Vanasse Hangen Brustlin, Inc.

THIS DOCUMENT IS INTENDED FOR GENERAL PLANNING & INFORMATION PURPOSES ONLY. ALL MEASUREMENTS & LOCATIONS ARE APPROXIMATE

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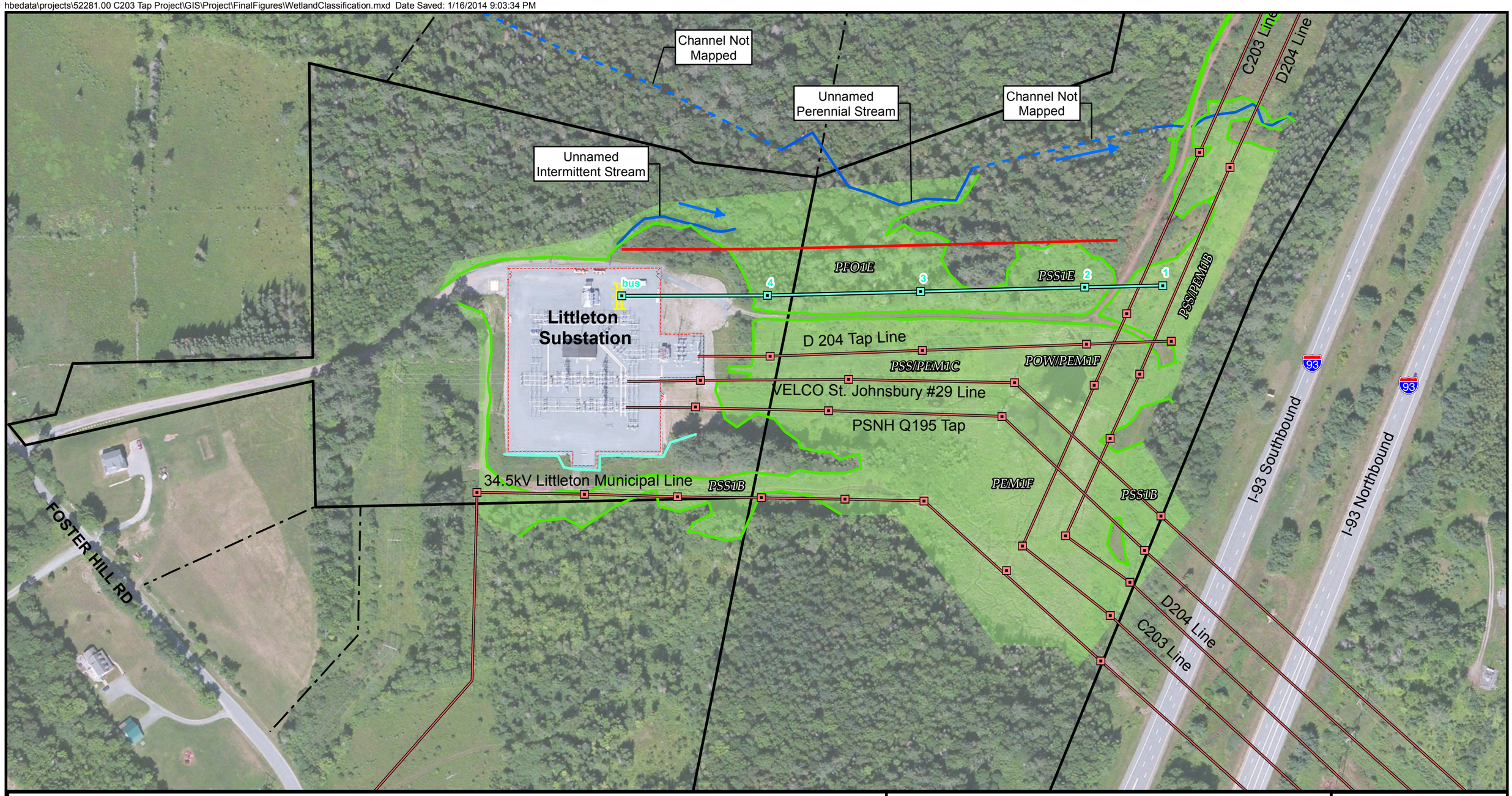

- Proposed C203 Tap Structure
- Existing Structure
- Proposed C203 Tap Line
- Existing Transmission Line
- Proposed ROW/Edge of Tree Clearing
- Existing Fence Line
- bus
- Delineated Wetland Edge
- Wetland Resource Area
- Ditch
- Stream
- Stream Channel Not Mapped
- Property Line
- Abutter Property Line

Source:
NGRID T-SHEETS
Existing Survey, VHB

0 200 400 Feet

NEW C203 New 230 kV Tap Line

Figure 2 Project Area Wetlands Map
Foster Hill Road
Littleton, New Hampshire

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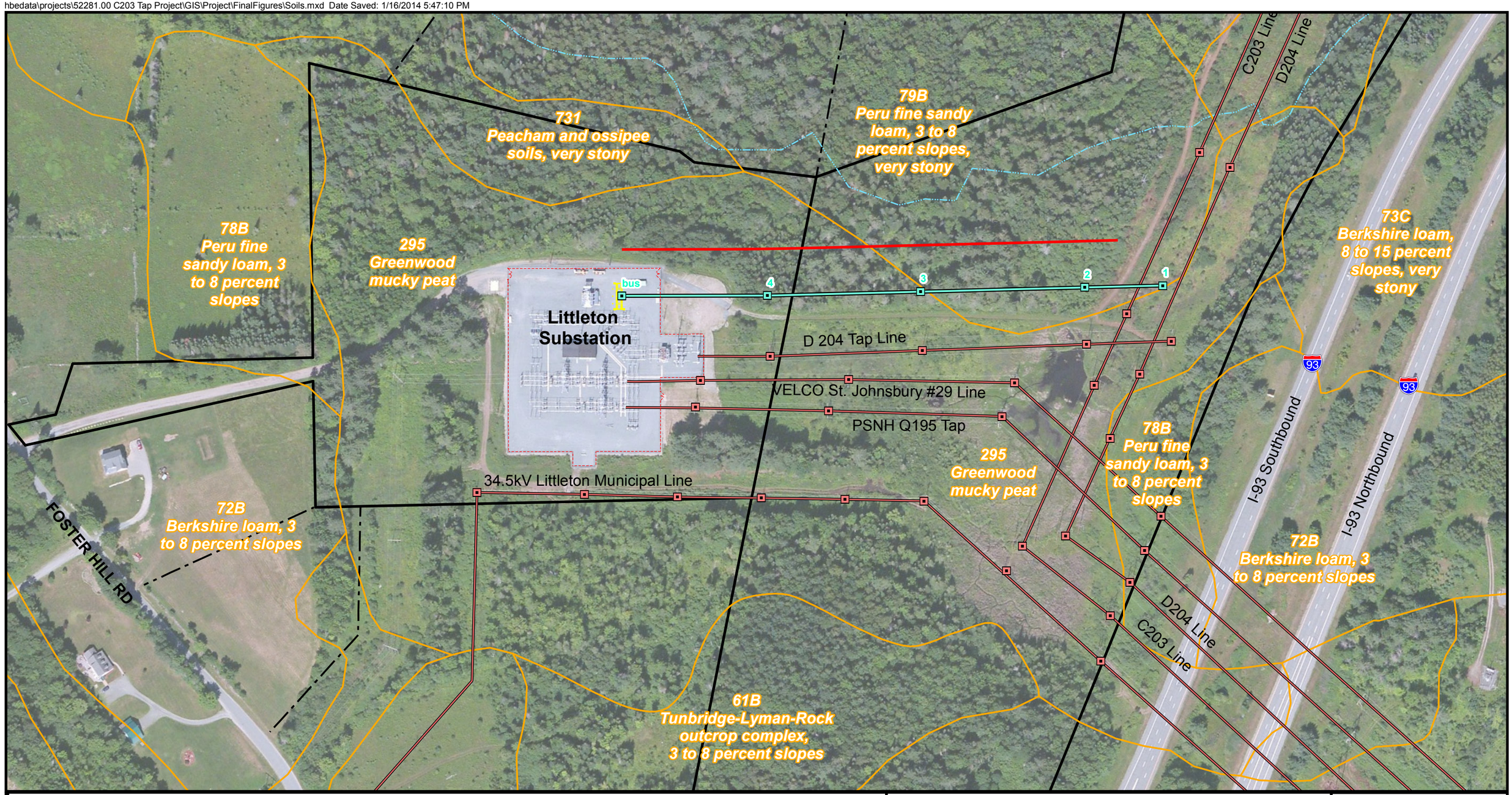

Proposed C203 Tap Structure
Existing Structure
Proposed C203 Tap Line
Existing Transmission Line
Proposed ROW/Edge of Tree Clearing
Existing Fence Line
bus
Property Line
Abutter Property Line

NRCS Grafton County Soil Survey
Soils Units
River/Stream (USGS)

Source:
NGRID T-SHEETS
Existing Survey, VHB

0 200 400 Feet

NEW C203 230 kV Tap Line

Figure 3 NRCS Mapped Soils
Foster Hill Road
Littleton, New Hampshire

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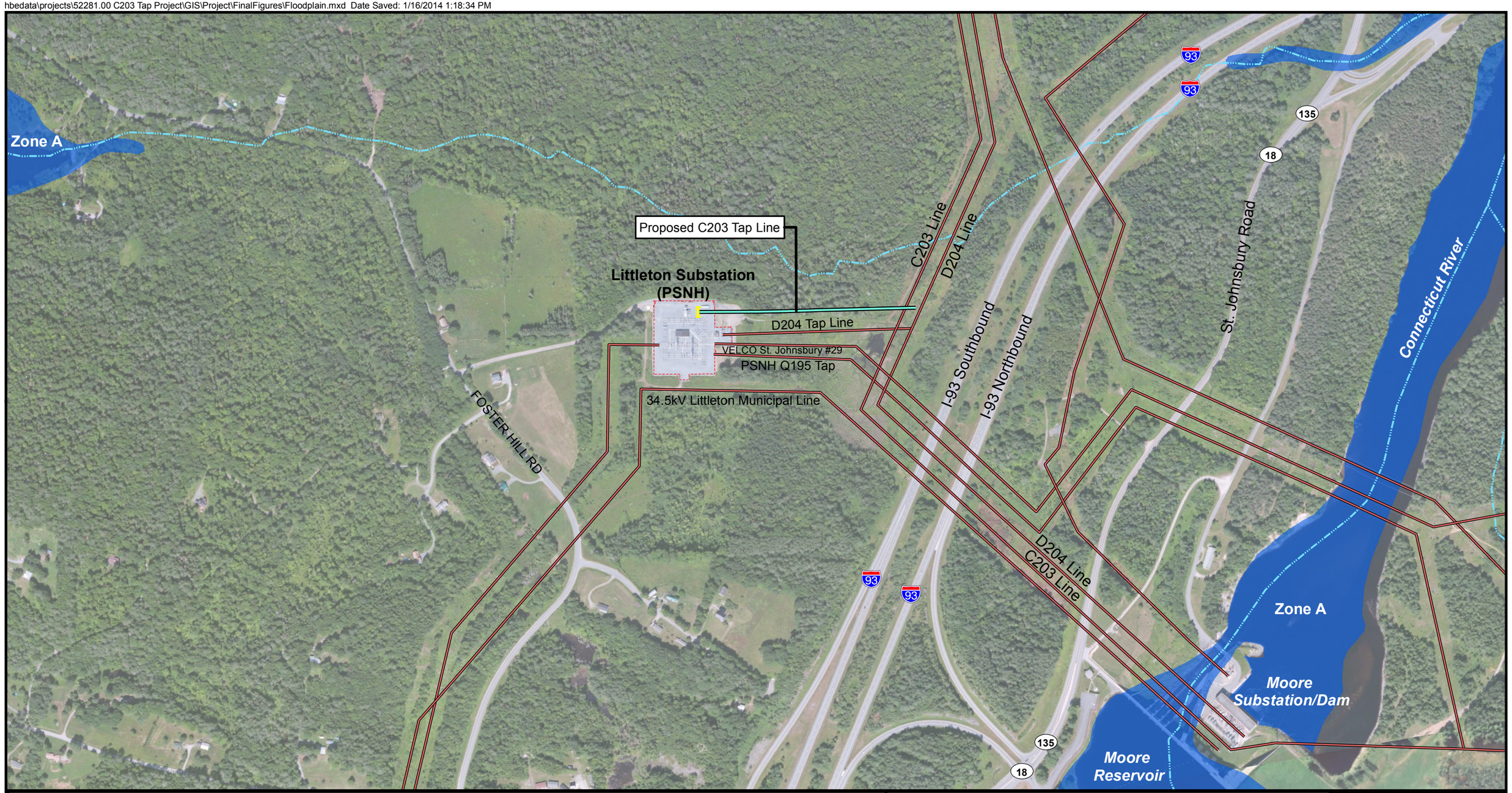
Vanasse Hangen Brustlin, Inc.



Proposed C203 Tap Line
Existing Transmission Line
Existing Fence Line
bus

FEMA Digital Flood Insurance Rate Map (DFIRM) Grafton County
100-Yr Floodplain (Flood Hazard Zone A)
River/Stream (USGS)

Source:
NGRID T-SHEETS
VHB, NHGRANIT

0 500 1,000 Feet

NEW C203 230 kV Tap Line

Figure 4 FEMA Floodplain Map
Foster Hill Road
Littleton, New Hampshire

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Vanasse Hangen Brustlin, Inc.

Appendices A through E

- Appendix A – Wetland Impact Plans
- Appendix B – Representative Site Photographs
- Appendix C – Natural Resource Agency Correspondence
- Appendix D – Cultural Resource Agency Correspondence
- Appendix E –Abutter/Town Tax Maps & Notifications

Appendix A

Wetland Impact Plans

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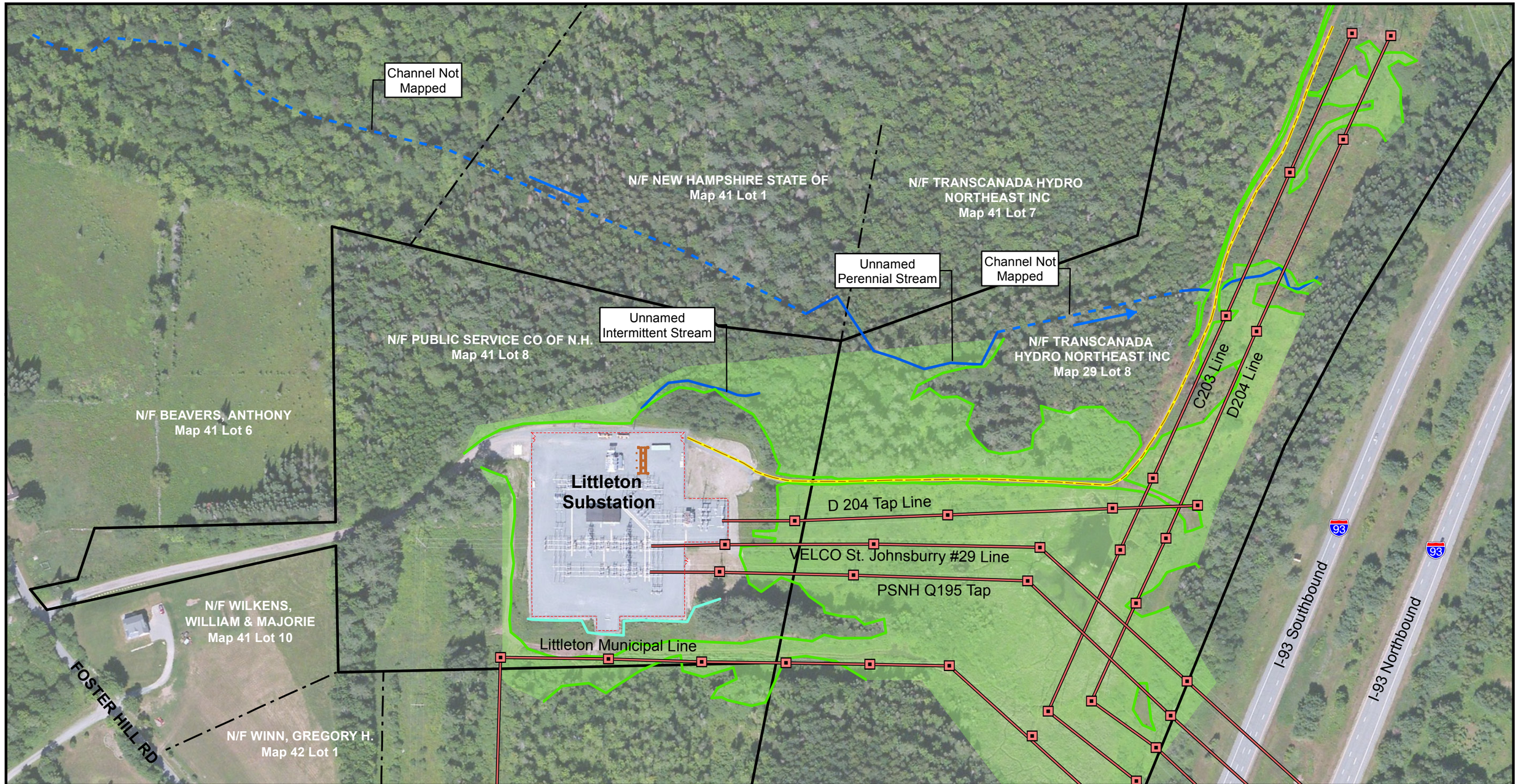

Existing Structure
Existing Transmission Line
Existing Fence Line
bus
Existing Access
Delineated Wetland Edge
Wetland Resource Area
Ditch
Stream
Stream Channel Not Mapped
Property Line
Abutter Property Line

Source:
NGRID T-SHEETS
Existing Survey, VHB

0 200 400 Feet

C203 New 230 kV Tap Line

Project Area Existing Conditions
Littleton Substation
Foster Hill Road
Littleton, New Hampshire
January 16, 2014

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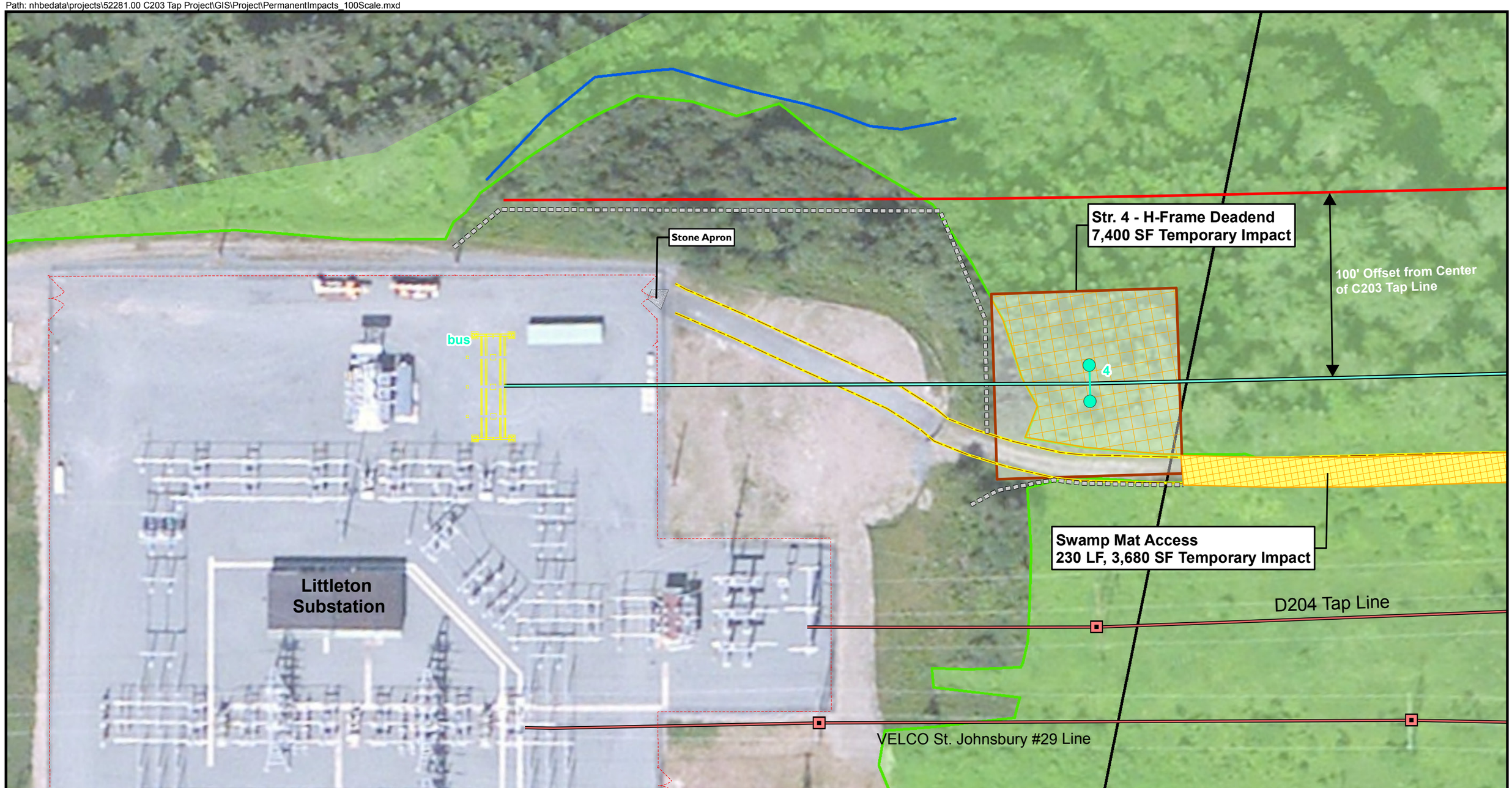

- Proposed Pole
- Existing Structure
- Proposed C203 Tap Line
- Existing Transmission Line
- Proposed ROW/Edge of Tree Clearing
- Existing Fence Line
- Proposed BUS
- Property Line
- Abutter Property Line
- Delineated Wetland Edge
- Wetland Resource Area
- Ditch
- Stream
- Proposed Access Road
- Construction Work Platform (100'x100')
- Swamp Mat
- Proposed Erosion Control Barrier
- Stone Apron

Source:
NGRID T-SHEETS
Existing Survey, VHB

0 50 100 Feet

NEW C203 230 kV Tap Line

Temporary Wetland Impacts
Foster Hill Road
Littleton, New Hampshire
Sheet 1 of 2

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Swamp Mat Access
730 SF Temporary Impact

Str. 3 - H-Frame Suspension W/
SW in Suspension
9,990 SF Temporary Impact

Str. 2 - H-Frame Suspension W/
SW Deadended
9,510 SF Temporary Impact

C203 Line

D204 Line

Str. 1 - 3-Pole Terminal Deadend
15,495 SF Temporary Impact

Proposed C203 Tap Line Offset
125' From Centerline of Existing D204 Tap Line

D204 Tap Line

VELCO St. Johnsbury #29 Line

- Proposed Pole
- Existing Structure
- Proposed C203 Tap Line
- Existing Transmission Line
- Proposed ROW/Edge of Tree Clearing
- Existing Fence Line
- Proposed BUS
- Property Line
- Abutter Property Line
- Delineated Wetland Edge
- Wetland Resource Area
- Ditch
- Stream
- Proposed Access Road
- Construction Work Platform (100'x100')
- Swamp Mat
- Proposed Erosion Control Barrier
- Stone Apron

Source:
NGRID T-SHEETS
Existing Survey, VHB

0 50 100 Feet

NEW C203 230 kV Tap Line

Temporary Wetland Impacts
Foster Hill Road
Littleton, New Hampshire
Sheet 2 of 2

nationalgrid

VHB
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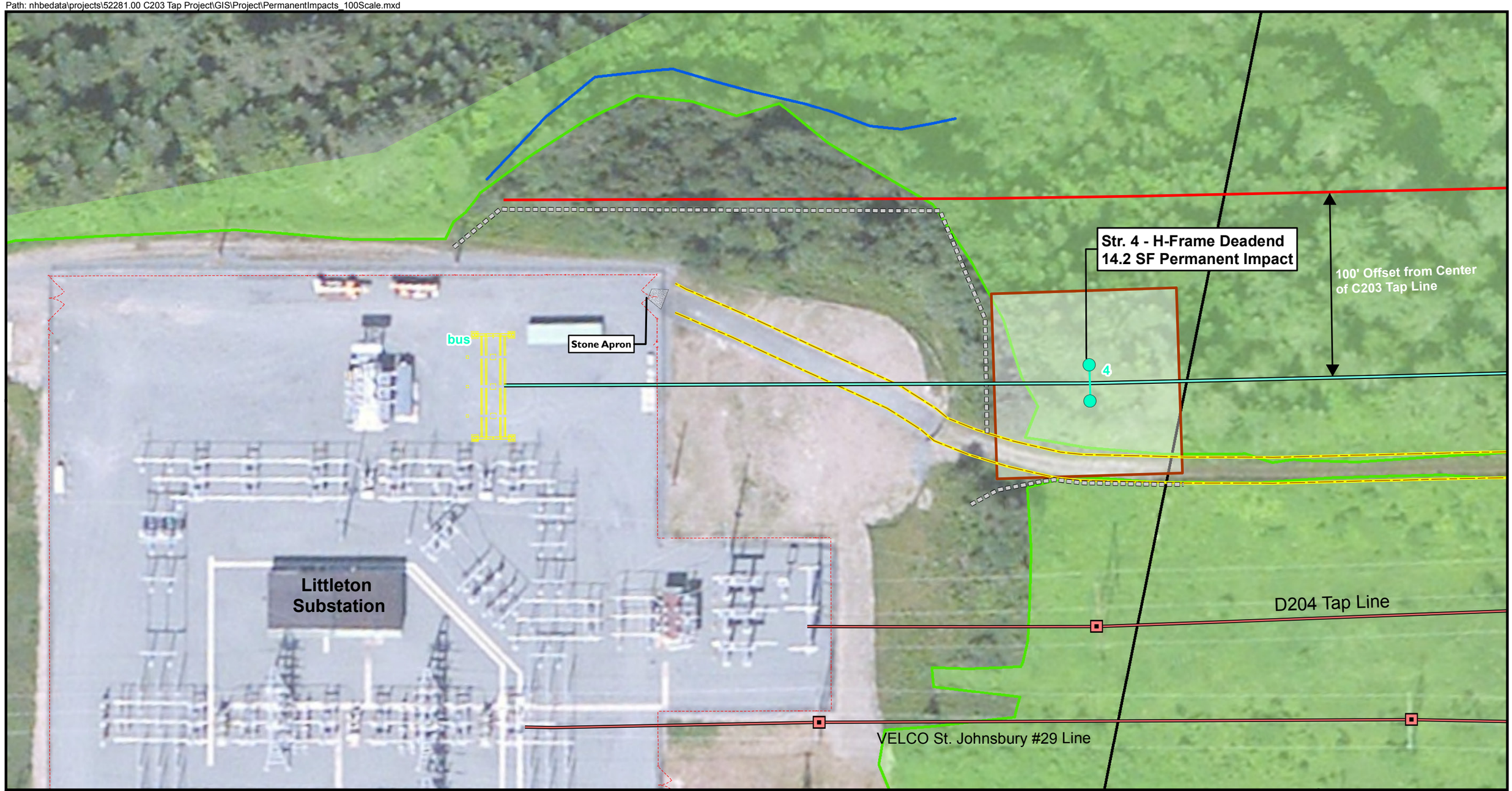

- Proposed Pole
- Existing Structure
- Proposed C203 Tap Line
- Existing Transmission Line
- Proposed ROW/Edge of Tree Clearing
- Existing Fence Line
- Proposed BUS
- Property Line
- Abutter Property Line
- Delineated Wetland Edge
- Wetland Resource Area
- Ditch
- Stream
- Proposed Access Road
- Construction Work Platform (100'x100')
- Proposed Erosion Control Barrier
- Stone Apron

Source: NGRID T-SHEETS, Existing Survey, VHB

0 50 100 Feet

NEW C203 230 kV Tap Line

Permanent Wetland Impacts
Foster Hill Road
Littleton, New Hampshire
Sheet 1 of 2
January 16, 2014

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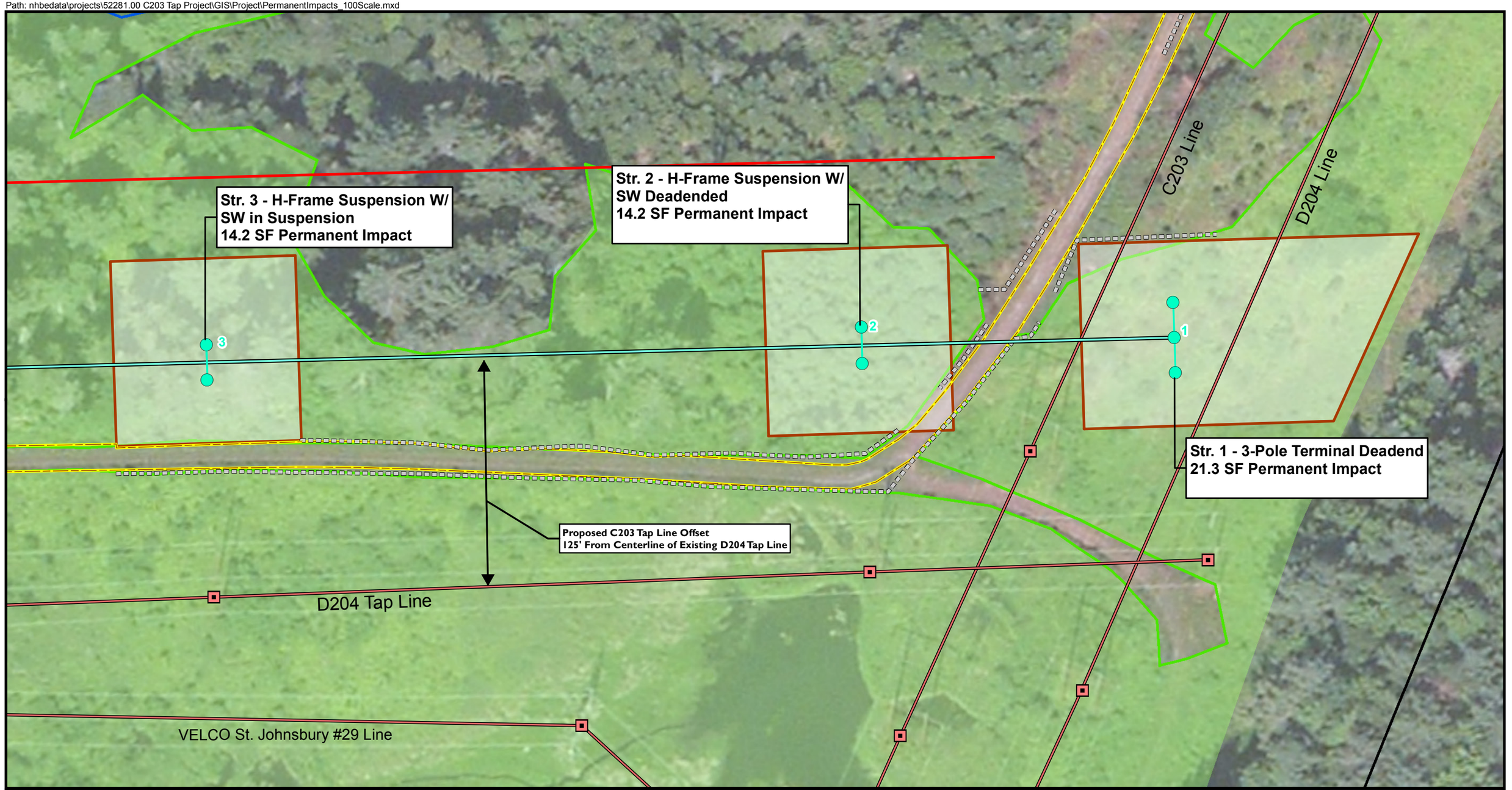

- Proposed Pole
- Existing Structure
- Proposed C203 Tap Line
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- Proposed ROW/Edge of Tree Clearing
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- Wetland Resource Area
- Ditch
- Stream
- Proposed Access Road
- Construction Work Platform (100'x100')
- Proposed Erosion Control Barrier
- Stone Apron

Source:
NGRID T-SHEETS,
Existing Survey, VHB

0 50 100 Feet

NEW C203 230 kV Tap Line

Permanent Wetland Impacts
Foster Hill Road
Littleton, New Hampshire
Sheet 2 of 2
January 16, 2014

nationalgrid

VHB
Vanasse Hangen Brustlin, Inc.

Appendix B

Representative Site Photographs

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Representative Site Photographs
New 230kV Tap Line Project to C203 Transmission Line
Littleton, New Hampshire

Photo 1: View of the project Site facing north taken from Littleton Substation.

Photo 2: View of the forested wetland adjacent to the limits of the existing right-of-way.

Representative Site Photographs
New 230kV Tap Line Project to C203 Transmission Line
Littleton, New Hampshire

Photo 3: View south along existing access road along the western edge of existing right-of-way.

Photo 4: View southwest towards Littleton Substation from Interstate 93.

Appendix C

Natural Resource Agency Correspondence

■

NEW HAMPSHIRE NATURAL HERITAGE BUREAU
DRED - DIVISION OF FORESTS & LANDS
PO BOX 1856 -- 172 PEMBROKE ROAD, CONCORD, NH 03302-1856
(603) 271-2214

To: Pete Walker, VHB

From: Melissa Coppola, NHB-Environmental Information Specialist

Date: January 27, 2014

Subject: NHB13-0543

This memo is a follow-up to NHB13-0543 which had indicated an exemplary natural community and three state-threatened plant species in the vicinity of the proposed Tap Line in Littleton, NH. Although there were no known records on the parcel in question, this particular area of the state is known to have harbor rare plant species. Therefore, the Natural Heritage Bureau (NHB) requested species specific surveys to determine the true presence/absence of species on the site and from that data determine potential for impacts.

Based on the information provided (survey methodology and results), NHB does not expect impacts to state-listed plant species. Critical to this determination are the following:

- No rare species were located during the multiple survey efforts
- The surveyors did locate the nearby known populations and thus can confirm identification of these species and timed surveys correctly
- No suitable habitat for the target species was found within the project footprint

Should you have any further questions, contact me at 603-271-2215 ext. 323 or at Melissa.Coppola@dred.state.nh.us.

New Hampshire
Fish and Game Department

11 Hazen Drive, Concord, NH 03301-6500
Headquarters: (603) 271-3421
Web site: www.WildNH.com

TDD Access: Relay NH 1-800-735-2964
FAX (603) 271-1438
E-mail: info@wildlife.nh.gov

Glenn Normandeau
Executive Director

Peter,

The NHFG Nongame and Endangered Species Program has reviewed NHB13-0543 for the proposed New England Power Company (d/b/a National Grid) tap line from their existing 230kV C203 Line to the existing Littleton Substation. The NHB database check identified the state threatened bald eagle in the vicinity of the project. The total length of new line is 0.2 miles.

The ROW will be expanded approximately 135 feet to a total of approximately 585 feet wide to accommodate the new C203 tap line. Approximately 2.1 acres of forested area will be cleared to allow construction of the new Tap Line.

The area where the proposed line is located is directly adjacent and parallel to an already existing set of transmission lines. We agree with VHB that the habitat to be impacted, while close to areas where bald eagles occur, is not the type of habitat they prefer to use. There is a VT nest location that was last active in 2010; that site is approx. 2 mi NW of the project. In addition, there is an active BAEA nest located approx. 2 mi ENE in NH but also outside the area covered by the NHB database check map. However, we agree with VHB's overall assessment that this project would cause no significant adverse impact to bald eagles. Please feel free to call me if you have any questions regarding this review.

Sincerely,

Kim Tuttle

Kim Tuttle
Certified Wildlife Biologist
NH Fish and Game
Nongame and Endangered Species Program
603-271-6544

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
http://www.fws.gov/newengland

January 7, 2014

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Maria Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Memo

NH Natural Heritage Bureau
NHB Datacheck Results Letter

To: Erin Jacque, BSC Group, Inc.
33 Waldo Street
Worcester, MA 01608

From: Melissa Coppola, NH Natural Heritage Bureau
Date: 2/20/2013 (valid for one year from this date)
Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB13-0543 Town: Littleton Location: Tax Maps: 41-8/29-8
Description: Feasibility study for a potential new 230 kV tap line from the Littleton Substation to the C203 transmission line. Approximately 100 feet of new right-of-way width may be required to accommodate the new tap line. New England Power Company is evaluating alternatives at this time.

cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: This area is hotspot for rare plant species in the state. NHB would recommend surveys for specific rare plant species in this area prior to any construction. Please contact NHB for further details. Contact: mcoppola@dred.state.nh.us.

Natural Community	State[1]	Federal	Notes
Rich mesic forest*	--	--	Threats include logging, introduction of invasive species, and direct destruction due to development.

Plant species	State[1]	Federal	Notes
Bailey's Sedge (*Carex baileyi*)	T	--	As a resident of wetlands and peatlands, this species is susceptible to any changes to the wetland's hydrology (especially that which causes pooling), increased nutrient input from stormwater runoff, and sedimentation from nearby disturbances.
elk sedge (*Carex garberi*)	T	--	These wetland species, which occurs in bogs/fens/seeps, and wet meadows, would be threatened by changes to local hydrology, including increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance. It also occurs on river and streambanks, where the primary threats would be direct destruction of plants or their habitat.
fen grass-of-Parnassus (*Parnassia glauca*)	T	--	

Vertebrate species	State[1]	Federal	Notes
Bald Eagle (*Haliaeetus leucocephalus*)	T	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
PO Box 1856
Concord NH 03302-1856

been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

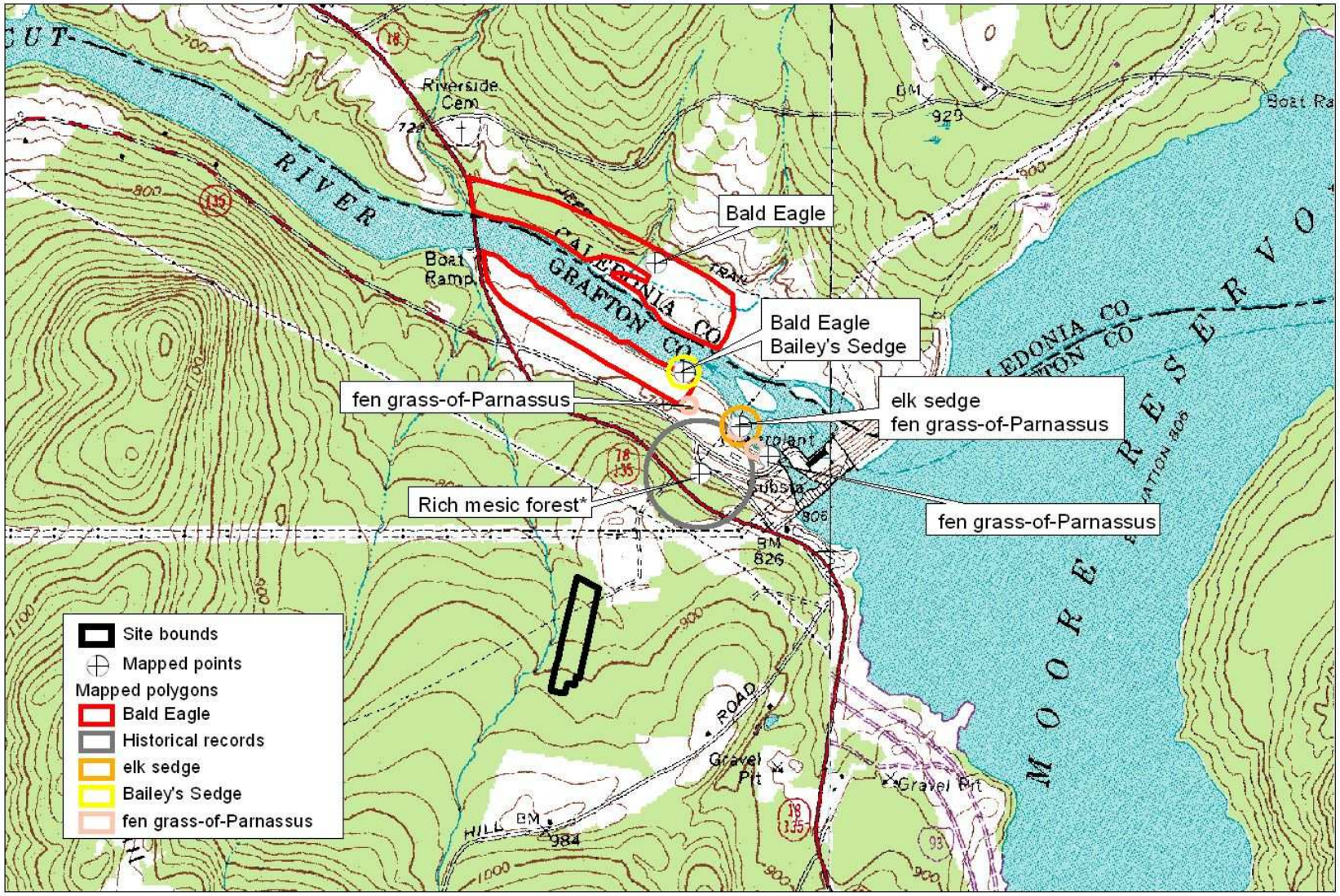
DRED/NHB
PO Box 1856
Concord NH 03302-1856

NHB13-0543

NH Natural Heritage Bureau

Known locations of rare species and exemplary natural communities

Note: Mapped locations are not always exact. Occurrences that are not in the vicinity of the project are not shown.



*Historical record

1:18000

Valid for one year from this date: 20 Feb 2013

New Hampshire Natural Heritage Bureau - Community Record

Rich mesic forest

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Not ranked (need more information)
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank: Historical records only - current condition unknown.
Comments on Rank:

Detailed Description: 1960: *Carpinus caroliniana* var. *virginiana* (musclewood) at northern limit. *Hepatica acutiloba* (sharp-lobed hepatica), *Dentaria* [*Cardamine*] *diphylla* (broad-leaved toothwort), *Caulophyllum thalictroides* (blue cohosh), *Allium tricoccum* (wild leek), *Carex peckii* (Peck's sedge), *Adiantum pedatum* (northern maidenhair fern), and *Dirca palustris* (leatherwood).

General Area: 1960: Second-growth, moderate sized *Fagus grandifolia* (American beech), *Betula lutea* [*alleghaniensis* (yellow birch)], *Acer saccharum* (sugar maple), and other hardwoods. Numerous rich site understory species.

General Comments: 1960: Could use another visit. Site previously known as "Littleton Dam Wildflower Area".

Management Comments:

Location

Survey Site Name: Moore Dam
Managed By: TransCanada CE

County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442008N, 0715247W
Size:	23.1 acres	Elevation:	760 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Moore Dam site. Connecticut River. Below dam, hardwood slope facing the river between Rte. 18 and the powerhouse access road.

Dates documented

First reported: 1960 Last reported: 1960

Steele, F. L. 1960. Field survey to Littleton Dam Wildflower Area, Date unknown.

New Hampshire Natural Heritage Bureau - Plant Record

Bailey's Sedge (*Carex baileyi*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Apparently secure but with cause for concern
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank:	Poor quality, condition and/or landscape context ('D' on a scale of A-D).
Comments on Rank:	Small group in unstable habitat.
Detailed Description:	1993: 30 ramets make up 5 genets in only a few clumps in a 1 square yard area. Plants were in immature fruit and were of normal vigor.
General Area:	1993: Plants grow on the riverbank of saturated clay/silt and alluvium substrate, near base of a ca. 20-degree north slope, in bright to semi-shade light. Other associated vegetation includes grasses.
General Comments:	
Management Comments:	1993: Potential threats include extreme flood events, erosion, etc.

Location

Survey Site Name:	Moore Dam		
Managed By:	TransCanada CE		
County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442019N, 0715249W
Size:	1.9 acres	Elevation:	650 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Take Rte. 135/18 to fishing access by I-93 bridge and follow trail upstream. Plants are not far below dam, [just above rocks at river's edge and base of slope.]

Dates documented

First reported:	1993-07-16	Last reported:	1993-07-16

Gilman, Arthur. 1993. Field survey to Moore Dam on July 16.

New Hampshire Natural Heritage Bureau - Plant Record

elk sedge (*Carex garberi*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank:	Fair quality, condition and/or landscape context ('C' on a scale of A-D).
Comments on Rank:	Small, artificial habitat.
Detailed Description:	1994: About 60 plants with fruit.
General Area:	1994: Disturbed calcareous roadside seep, not inundated. Associated species include *Equisetum arvense* (field horsetail), Salix sp. (willow), mosses, liverworts, *Carex flava* (yellow sedge), *Carex hystericina* (porcupine sedge), and *Tussilago farfara* (coltsfoot) nearby.
General Comments:	1994: Naturally seepy terrace has been altered by artificial fill (including road tar).
Management Comments:	

Location

Survey Site Name:	Moore Dam		
Managed By:	TransCanada CE		
County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442013N, 0715241W
Size:	2.8 acres	Elevation:	640 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Below Moore Dam. Small seep on right emerging from slumping, artificial-fill terrace slope 40 feet from bottom of fisherman's path. Plants at top of seep area.

Dates documented

First reported:	1994-06-14	Last reported:	1994-07-20

Sperduto, Dan. 1994. Field survey to Moore Dam on June 14.

Sperduto, D. & A. Gilman. 1995. Calcareous Fens and Riverside Seeps in New Hampshire. The New Hampshire Natural Heritage Program. Concord, NH.

New Hampshire Natural Heritage Bureau - Plant Record

fen grass-of-Parnassus (*Parnassia glauca*)

Legal Status		**Conservation Status**	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank:	Fair quality, condition and/or landscape context ('C' on a scale of A-D).
Comments on Rank:	Small population just below a dam. 1985 (C).
Detailed Description:	2009: Area 1: About 10 small clumps. Area 4: About 22 clumps in a 2 x 3 m area. 33% 2-4 in. in diameter, 67% 4-8 in. in diameter. Both areas, plants were healthy.2008: Area 3: Abundant.2004: Area 2: 100 vegetative plants observed. 1994: Area 1: ca. 46 plants observed. 1985: Area 1: ca. 60 plants observed, 80 percent mature, 20 percent seedlings. 1983: Area 1: ca. 30 plants observed. Evidence of seed capsules, of normal vigor. Observer mentioned flowering in 1982, but provided no documentation.1970: Specimen collected.
General Area:	2009: Riverside seep at base of dam. Area 1: adjacent to a patch of smooth scouring-rush (*Equisetum hyemale* ssp. *affine*). General area seriously encroached by coltsfoot (*Tussilago farfara*).2008: Area 3: Near brook.2004: Area 2: Both sides of an apparent water runoff. 1994: Area 1: Base of steep terrace slope above river. Associated species include *Equisetum hyemale* ssp. *affine* (smooth scouring-rush) and *Equisetum variegatum* (variegated horsetail). 1985: Area 1: SE slope with partial light, on lower dry-mesic slope. Low rich deciduous woods in gravelly, seepy area.
General Comments:	1985: Precarious site, converter station will be built. Herbicide application nearby.
Management Comments:	1983: This population could well be wiped out by construction.

Location

Survey Site Name:	Moore Dam		
Managed By:	TransCanada CE		
County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442010N, 0715237W
Size:	1.9 acres	Elevation:	760 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Moore Dam. By side of gravel access road to powerhouse. [October 2011 Deb Lievens recommends the following directions: Take 93 north to exit 44. Coming from the south, cross Rte. 135/18 to enter recreation area. From north head east. Park at Moore Station building. Descend on foot on station road. As you near the dam, look for a fisherman's trail down to the shore at the dam. Area 1 is below the dam. Area 2 is further down river.]2009: Take Rte. 93 to exit 44. Coming from the south, cross Rte. 135/18 to enter recreation area. From north, head east. Park at Moore Station building. Follow road behind building down the hill. Look for Pole 5 on the left. This will orient you to the power line you will need. Turn right with the road comes to a T at a paved road. Go to grassy area and head toward river. Grassy area runs into a bootleg trail to the river. Area 4 is on river bank just north of access (44.33686N, 71.87828W). Area 1 is just below the dam (44.33615N, 71.87702W). Can be reached by following fishermen's trail down to the dam. Alternatively, continue past recreation area to slight right at NH 18/St. Johnsbury Road. Enter at Moore Station, 2700 St. Johnsbury Road. Follow paved road upriver to gate. Continue on foot to grassy area.2008: Near the substation access road & Smith Brook. Near brook roughly 400 ft. from pylon (44.337635N, 71.880201W).1994: Area 1: Base of steep terrace slope above river and below road and just on southwest side of cement structure of dam. Probably near but not identical to previously reported site.1970: Littleton, under power line beside dirt road.

Dates documented

First reported: 1982 Last reported: 2009-07-05

Lievens, Deb and Alice Schori. 2009. Field survey to Moore Dam on July 5.

New Hampshire Natural Heritage Bureau - Animal Record

Bald Eagle (*Haliaeetus leucocephalus*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 1993: Observed right below the dam. Also some sightings at Wells River and Ammonoosuc River confluences. 1991: At least 1 bird has been observed at this location the last several years.
General Area:
General Comments:
Management Comments:

Location

Survey Site Name: Moore Dam
Managed By: TransCanada CE

County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442030N, 0715254W
Size:	48.2 acres	Elevation:	640 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: North and south of Moore Dam on the Connecticut River.

Dates documented

First reported: 198? Last reported: 1993

Martin, Chris. 2011. Identification of bald eagle wintering habitat based on decades of personal experience.

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.

Appendix D

Cultural Resource Agency Correspondence

■

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources
State Historic Preservation Office
Attention: Review & Compliance
19 Pillsbury Street, Concord, NH 03301-3570

RECEIVED
OCT 30 2013

DHR Use Only	
R&C #	5226
Log In Date	10/30/13
Response Date	11/12/13
Sent Date	11/13/13

Request for Project Review by the New Hampshire Division of Historical Resources

☒ This is a new submittal
☐ This is additional information relating to DHR Review & Compliance (R&C) #:

GENERAL PROJECT INFORMATION

Project Title **C203 New 230kV Tap at Littleton Substation**

Project Location **266 Foster Hill Road**

City/Town **Littleton** Tax Map **41** Lot # **8**

NH State Plane - Feet Geographic Coordinates: Easting **927112** Northing **667306**
(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact *(if applicable)* **US Army Corps of Engineers**
(Agency providing funds, licenses, or permits)
Permit Type and Permit or Job Reference # **Clean Water Act, Section 404**

State Agency and Contact *(if applicable)* **NH Site Evaluation Committee**

Permit Type and Permit or Job Reference # **Certificate of Site and Facility**

APPLICANT INFORMATION

Applicant Name **Joshua Holden, New England Power Company - National Grid USA**

Mailing Address **40 Sylvan Road** Phone Number **(781) 907-3648**

City **Waltham** State **MA** Zip **02451** Email **Joshua.Holden@nationalgrid.com**

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company **Peter Walker, VHB**

Mailing Address **6 Bedford Farms Drive** Phone Number **603-644-0888**

City **Bedford** State **NH** Zip **03110** Email **pwalker@vhb.com**

Thank You

This form is updated periodically. Please download the current form at www.nh.gov/nhdhr/review. *Please refer to the Request for Project Review Instructions for direction on completing this form.* Submit one copy of this project review form for each project for which review is requested. Include a self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at christina.st.louis@dcr.nh.gov or 603.271.3558.

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- ☒ Attach the relevant portion of a 7.5' USGS Map (photocopied or computer-generated) ***indicating the defined project boundary.*** *(See RPR Instructions and R&C FAQs for guidance.)*
- ☒ Attach a detailed narrative description of the proposed project.
- ☒ Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- ☒ Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Informative photo captions are requested.)*
- ☒ A DHR file review must be conducted to identify properties within or adjacent to the project area. Provide file review results in **Table 1** or within project narrative description. *(Blank table forms are available on the DHR website.)* File review conducted on **7/23/2013**.

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area? ☒ Yes ☐ No
If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s): **c. 1848**

- ☒ Photographs of ***each*** resource or streetscape located within the project area, with captions, along with a photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- ☐ If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.)

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☒ Yes ☐ No
If yes, submit all of the following information:

- ☒ Description of current and previous land use and disturbances.
- ☒ Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

DHR Comment/Finding Recommendation *This Space for Division of Historical Resources Use Only*

☐ Insufficient information to initiate review. ☐ Additional information is needed in order to complete review.

☑ No Potential to cause Effects ☐ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect

Comments: _____

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

Authorized Signature: _____ Date: 11-12-13

Appendix E

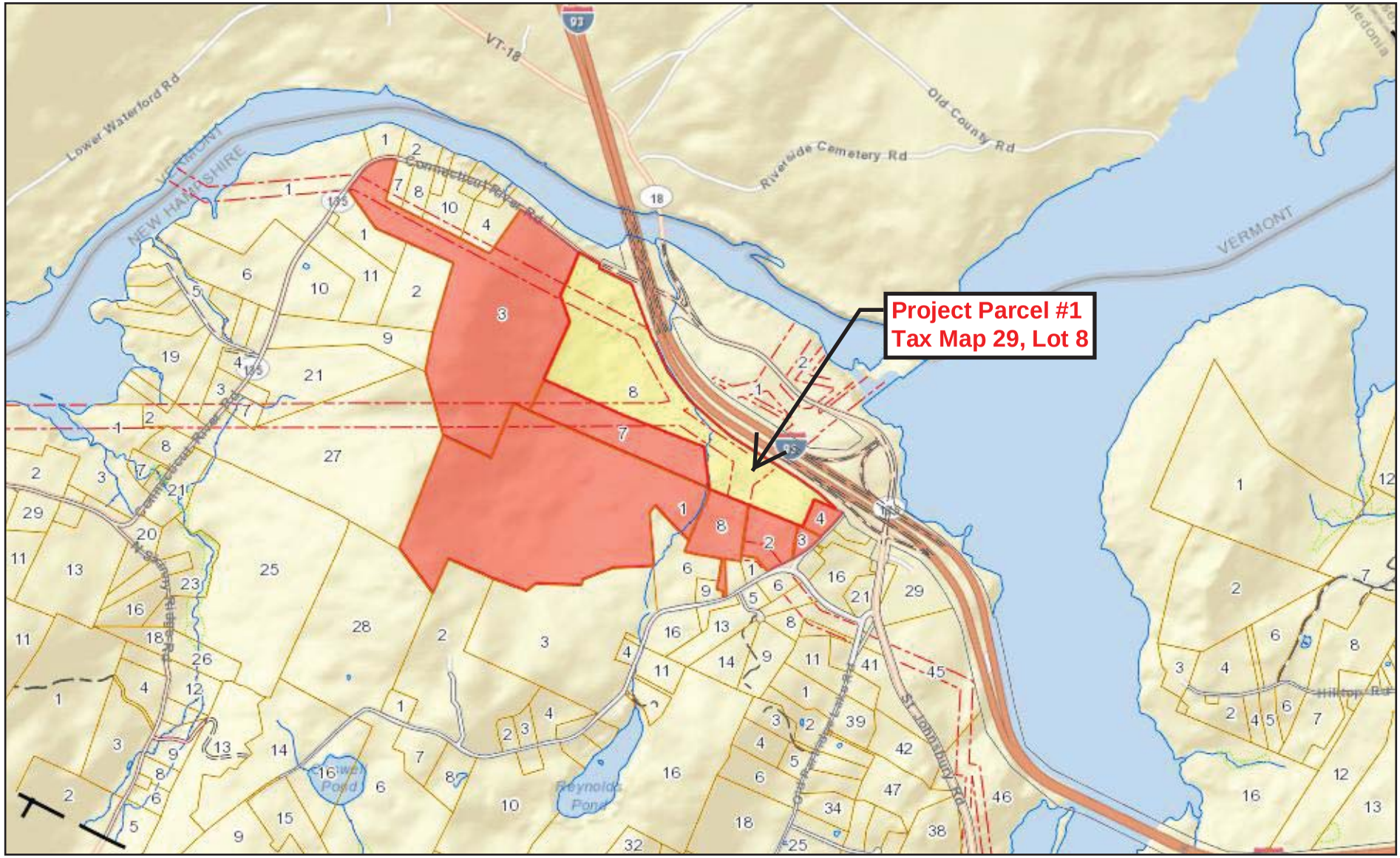
Abutter/Town Tax Maps & Notifications

■

Owner/Abutter List (Littleton, NEW HAMPSHIRE)

Owner/Abutter	Tax Map Number (map-block-lot)	Mailing Address
Public Service Co. of New Hampshire	42-2*	Tax Accounting PO Box 330 Manchester, NH 03105-330
TransCanada Hydro Northeast, Inc. C/O Mark Cleverdon-Property Tax	41-7*	Manager Property Tax Dept. 110 Turnpike Road Ste. 300 Westborough, MA 01581
Peter & Marion Wojtul	41-9	290 Foster Hill Road Littleton, NH 03561
Anthony M Beavers	41-6	58 Harvest Hill Lane Auburn, ME 04210
State Of New Hampshire	41-1	7 Hazen Drive Rm 100 PO Box 483 Concord, NH 03302-0483
Roy Margot & Linnea Poulsen	29-3	314 North Columbus Street Alexandria, VA 22314
Burton & Jacqueline Ingerson	42-4	85 Moore CT Littleton, NH 03561
William B & Marjorie E Wilkins	42-1	218 Foster Hill Road Littleton, NH 03561
Gregory H. & Bobbi Jo Winn	41-10	238 Foster Hill Road Littleton, NH 03561-3103
Kevin Santo	42-3	45 Moore CT Littleton, NH 03561

*Parcels 29-8 and 41-8 abut the project, but are owned by PSNH and TransCanada who are participating in the project along with National Grid. These companies have authorized National Grid to serve as their agent for purposes of this permit application. Additionally, these companies will be issuing expanded easement rights to National Grid prior to project construction. Therefore, these companies were not formally notified as abutters under RSA 482-A.

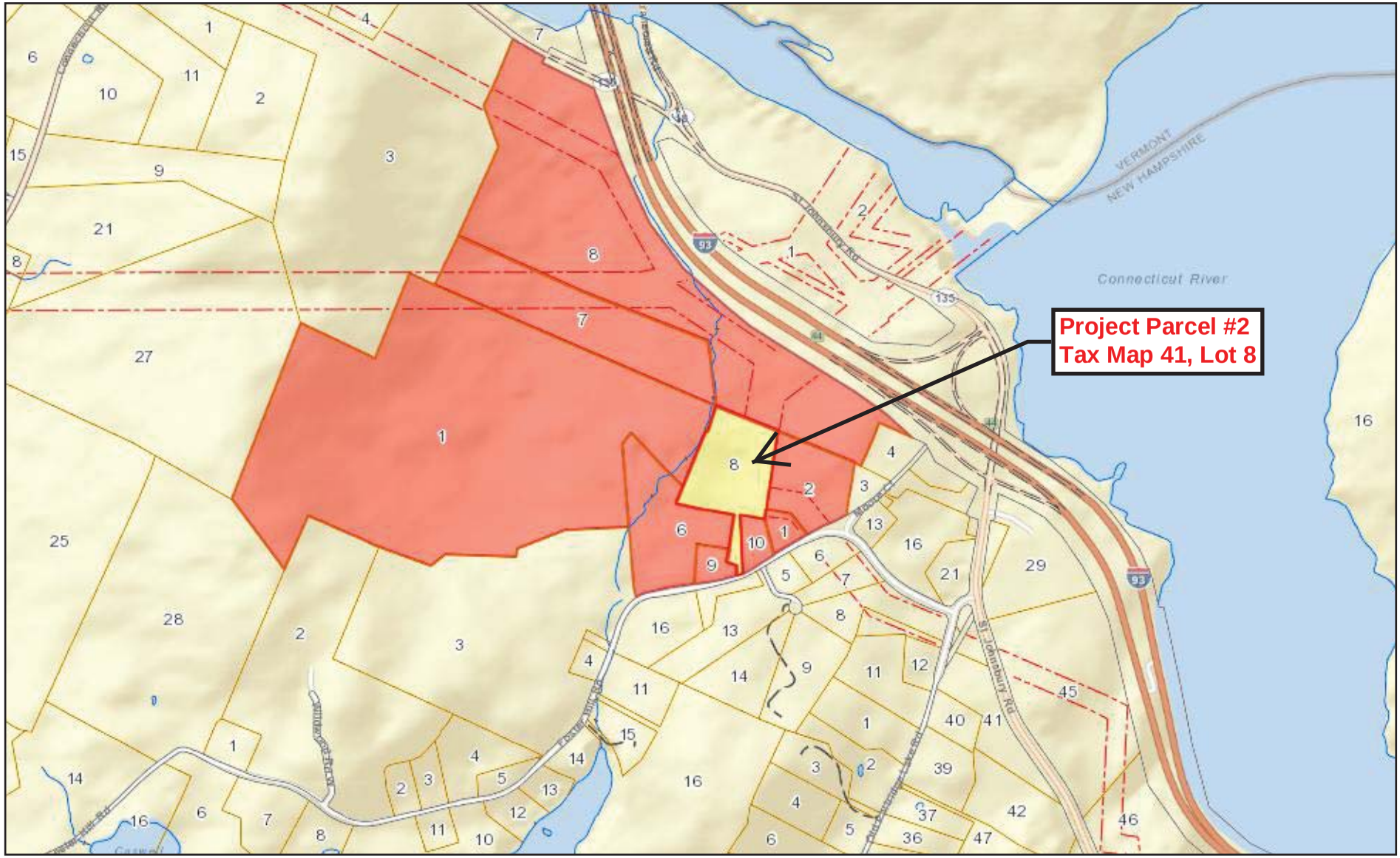


Abutters Map (Parcel 29-8)
Littleton, NH

1 Inch = 2398 Feet
January 16, 2014

www.cai-tech.com

Data shown on this map is provided for informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.



Abutters Map (Parcel 41-8)
Littleton, NH

1 Inch = 1538 Feet
January 16, 2014

www.cai-tech.com

Data shown on this map is provided for informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

VHB Transportation | Land Development | Environmental | Energy

January 29, 2014

Creating results for our clients and benefits for our communities.

Ref: 52281.00

Mr. Anthony Beavers
58 Harvest Hill Lane
Auburn, ME 04210

Tax Map: 41 Lot: 6

Re: NHDES Wetlands Bureau Standard Dredge and Fill Application
New 230kV Tap Line from C203 Transmission Line, Littleton, NH

Dear Property Owner:

Vanasse Hangen Brustlin, Inc. (VHB) has submitted a Standard Dredge and Fill Permit Application as part of an Application for a Certificate of Site and Facility to the New Hampshire Site Evaluation Committee on behalf of New England Power Company d/b/a National Grid (the Applicant) for the proposed construction of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road. The proposed project is located on two parcels identified as Tax Map 29, Lot 8 and Tax Map 41, Lot 8. The proposed C203 Tap Line will be 0.2 miles in length and will consist of installation of three new wood H-frame structures and one three pole dead-end structure and associated overhead conductors and line. New buswork within the existing Littleton Substation will also be required to accommodate the additional power supply. Construction of the proposed C203 Tap Line will provide an additional power source to a second autotransformer installed within the existing Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont.

You are receiving this notice because your above referenced-property is located adjacent to the proposed parcels to be impacted by the project for which an application for a Standard Dredge and Fill/Wetlands permit has been submitted. A copy of the permit application and proposed plans are on file at the NH Site Evaluation Committee offices located at the NH Department of Environmental Services, 6 Hazen Drive, Concord, NH and at the Littleton Town Hall. If you have any special concerns regarding the application, we recommend that you familiarize yourself with the submitted materials and then contact us at (603) 644-0888 or email pwalker@vhb.com.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
Director of Environmental Services

cc: VHB File

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Vanasse Hangen Brustlin, Inc.
6 Bedford Farms Drive, Suite 607
Bedford, New Hampshire 03110-6532
603.644.0888 ▪ FAX 603.644.2385
www.vhb.com

VHB Transportation | Land Development | Environmental | Energy

January 29, 2014

Creating results for our clients and benefits for our communities.

Ref: 52281.00

Mr. & Mrs. Burton Ingerson
85 Moore Ct.
Littleton, NH 03561

Tax Map: 42 Lot: 4

Re: NHDES Wetlands Bureau Standard Dredge and Fill Application
New 230kV Tap Line from C203 Transmission Line, Littleton, NH

Dear Property Owner:

Vanasse Hangen Brustlin, Inc. (VHB) has submitted a Standard Dredge and Fill Permit Application as part of an Application for a Certificate of Site and Facility to the New Hampshire Site Evaluation Committee on behalf of New England Power Company d/b/a National Grid (the Applicant) for the proposed construction of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road. The proposed project is located on two parcels identified as Tax Map 29, Lot 8 and Tax Map 41, Lot 8. The proposed C203 Tap Line will be 0.2 miles in length and will consist of installation of three new wood H-frame structures and one three pole dead-end structure and associated overhead conductors and line. New buswork within the existing Littleton Substation will also be required to accommodate the additional power supply. Construction of the proposed C203 Tap Line will provide an additional power source to a second autotransformer installed within the existing Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont.

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Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
Director of Environmental Services

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www.vhb.com

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January 29, 2014

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Ref: 52281.00

Mr. Roy Margot & Ms. Linnea Poulsen
314 N. Columbus Street
Alexandria, VA 22314

Tax Map: 29 Lot: 3

Re: NHDES Wetlands Bureau Standard Dredge and Fill Application
New 230kV Tap Line from C203 Transmission Line, Littleton, NH

Dear Property Owner:

Vanasse Hangen Brustlin, Inc. (VHB) has submitted a Standard Dredge and Fill Permit Application as part of an Application for a Certificate of Site and Facility to the New Hampshire Site Evaluation Committee on behalf of New England Power Company d/b/a National Grid (the Applicant) for the proposed construction of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road. The proposed project is located on two parcels identified as Tax Map 29, Lot 8 and Tax Map 41, Lot 8. The proposed C203 Tap Line will be 0.2 miles in length and will consist of installation of three new wood H-frame structures and one three pole dead-end structure and associated overhead conductors and line. New buswork within the existing Littleton Substation will also be required to accommodate the additional power supply. Construction of the proposed C203 Tap Line will provide an additional power source to a second autotransformer installed within the existing Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont.

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Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
Director of Environmental Services

cc: VHB File

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January 29, 2014

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Ref: 52281.00

Mr. Kevin Santo
45 Moore Ct.
Littleton, NH 03561

Tax Map: 42 Lot: 3

Re: NHDES Wetlands Bureau Standard Dredge and Fill Application
New 230kV Tap Line from C203 Transmission Line, Littleton, NH

Dear Property Owner:

Vanasse Hangen Brustlin, Inc. (VHB) has submitted a Standard Dredge and Fill Permit Application as part of an Application for a Certificate of Site and Facility to the New Hampshire Site Evaluation Committee on behalf of New England Power Company d/b/a National Grid (the Applicant) for the proposed construction of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road. The proposed project is located on two parcels identified as Tax Map 29, Lot 8 and Tax Map 41, Lot 8. The proposed C203 Tap Line will be 0.2 miles in length and will consist of installation of three new wood H-frame structures and one three pole dead-end structure and associated overhead conductors and line. New buswork within the existing Littleton Substation will also be required to accommodate the additional power supply. Construction of the proposed C203 Tap Line will provide an additional power source to a second autotransformer installed within the existing Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont.

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Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
Director of Environmental Services

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January 29, 2014

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Ref: 52281.00

State of New Hampshire
PO Box 483
Concord, NH. 03302

Tax Map: 41 Lot: 1

Re: NHDES Wetlands Bureau Standard Dredge and Fill Application
New 230kV Tap Line from C203 Transmission Line, Littleton, NH

Dear Property Owner:

Vanasse Hangen Brustlin, Inc. (VHB) has submitted a Standard Dredge and Fill Permit Application as part of an Application for a Certificate of Site and Facility to the New Hampshire Site Evaluation Committee on behalf of New England Power Company d/b/a National Grid (the Applicant) for the proposed construction of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road. The proposed project is located on two parcels identified as Tax Map 29, Lot 8 and Tax Map 41, Lot 8. The proposed C203 Tap Line will be 0.2 miles in length and will consist of installation of three new wood H-frame structures and one three pole dead-end structure and associated overhead conductors and line. New buswork within the existing Littleton Substation will also be required to accommodate the additional power supply. Construction of the proposed C203 Tap Line will provide an additional power source to a second autotransformer installed within the existing Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont.

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Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
Director of Environmental Services

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January 29, 2014

Ref: 52281.00

Mr. & Mrs. William Wilkins
218 Foster Hill Road
Littleton, NH 03561

Tax Map: 42 Lot: 1

Re: NHDES Wetlands Bureau Standard Dredge and Fill Application
New 230kV Tap Line from C203 Transmission Line, Littleton, NH

Dear Property Owner:

Vanasse Hangen Brustlin, Inc. (VHB) has submitted a Standard Dredge and Fill Permit Application as part of an Application for a Certificate of Site and Facility to the New Hampshire Site Evaluation Committee on behalf of New England Power Company d/b/a National Grid (the Applicant) for the proposed construction of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road. The proposed project is located on two parcels identified as Tax Map 29, Lot 8 and Tax Map 41, Lot 8. The proposed C203 Tap Line will be 0.2 miles in length and will consist of installation of three new wood H-frame structures and one three pole dead-end structure and associated overhead conductors and line. New buswork within the existing Littleton Substation will also be required to accommodate the additional power supply. Construction of the proposed C203 Tap Line will provide an additional power source to a second autotransformer installed within the existing Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont.

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VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
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\\vhb\proj\Bedford\52281.00 C203 Tap Project\docs\Permits\Standard Dredge and Fill Permit App\Final DRAFT_1-17-14\Appendices\Appendix E - Abutters\Abutter Letters w Address and Parcel\Abutter Letter_Wilkins.docx

Vanasse Hangen Brustlin, Inc.
6 Bedford Farms Drive, Suite 607
Bedford, New Hampshire 03110-6532
603.644.0888 ▪ FAX 603.644.2385
www.vhb.com

VHB Transportation | Land Development | Environmental | Energy

January 29, 2014

Creating results for our clients and benefits for our communities.

Ref: 52281.00

Mr. & Mrs. Gregory Winn
238 Foster Hill Road
Littleton, NH 03561

Tax Map: 41 Lot: 10

Re: NHDES Wetlands Bureau Standard Dredge and Fill Application
New 230kV Tap Line from C203 Transmission Line, Littleton, NH

Dear Property Owner:

Vanasse Hangen Brustlin, Inc. (VHB) has submitted a Standard Dredge and Fill Permit Application as part of an Application for a Certificate of Site and Facility to the New Hampshire Site Evaluation Committee on behalf of New England Power Company d/b/a National Grid (the Applicant) for the proposed construction of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road. The proposed project is located on two parcels identified as Tax Map 29, Lot 8 and Tax Map 41, Lot 8. The proposed C203 Tap Line will be 0.2 miles in length and will consist of installation of three new wood H-frame structures and one three pole dead-end structure and associated overhead conductors and line. New buswork within the existing Littleton Substation will also be required to accommodate the additional power supply. Construction of the proposed C203 Tap Line will provide an additional power source to a second autotransformer installed within the existing Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont.

You are receiving this notice because your above referenced-property is located adjacent to the proposed parcels to be impacted by the project for which an application for a Standard Dredge and Fill/Wetlands permit has been submitted. A copy of the permit application and proposed plans are on file at the NH Site Evaluation Committee offices located at the NH Department of Environmental Services, 6 Hazen Drive, Concord, NH and at the Littleton Town Hall. If you have any special concerns regarding the application, we recommend that you familiarize yourself with the submitted materials and then contact us at (603) 644-0888 or email pwalker@vhb.com.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
Director of Environmental Services

cc: VHB File

\\vhb\proj\Bedford\52281.00 C203 Tap Project\docs\Permits\Standard Dredge and Fill Permit App\Final DRAFT_1-17-14\Appendices\Appendix E - Abutters\Abutter Letters w Address and Parcel\Abutter Letter_Winn.docx

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Ref: 52281.00

Mr. & Mrs. Peter Wojtul
290 Foster Hill Road
Littleton, NH 03561

Tax Map: 41 Lot: 9

Re: NHDES Wetlands Bureau Standard Dredge and Fill Application
New 230kV Tap Line from C203 Transmission Line, Littleton, NH

Dear Property Owner:

Vanasse Hangen Brustlin, Inc. (VHB) has submitted a Standard Dredge and Fill Permit Application as part of an Application for a Certificate of Site and Facility to the New Hampshire Site Evaluation Committee on behalf of New England Power Company d/b/a National Grid (the Applicant) for the proposed construction of a new tap line extending south from the existing 230kV C203 overhead transmission line to the Littleton Substation located at 266 Foster Hill Road. The proposed project is located on two parcels identified as Tax Map 29, Lot 8 and Tax Map 41, Lot 8. The proposed C203 Tap Line will be 0.2 miles in length and will consist of installation of three new wood H-frame structures and one three pole dead-end structure and associated overhead conductors and line. New buswork within the existing Littleton Substation will also be required to accommodate the additional power supply. Construction of the proposed C203 Tap Line will provide an additional power source to a second autotransformer installed within the existing Littleton Substation. The new power source will address much warranted reliability needs resultant of increasing demand both in New Hampshire and Vermont.

You are receiving this notice because your above referenced-property is located adjacent to the proposed parcels to be impacted by the project for which an application for a Standard Dredge and Fill/Wetlands permit has been submitted. A copy of the permit application and proposed plans are on file at the NH Site Evaluation Committee offices located at the NH Department of Environmental Services, 6 Hazen Drive, Concord, NH and at the Littleton Town Hall. If you have any special concerns regarding the application, we recommend that you familiarize yourself with the submitted materials and then contact us at (603) 644-0888 or email pwalker@vhb.com.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
Director of Environmental Services

cc: VHB File

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City, State, ZIP+4 Auburn, ME 04210
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Mr. & Mr. Burton Ingerson
Street, Apt. No. or PO Box No. 85 Moore Ct.
City, State, ZIP+4 Littleton, NH 03561
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Mr. Roy Margot & Ms. Linnea Poulsen
Street, Apt. No. or PO Box No. 314 N. Columbus Street
City, State, ZIP+4 Alexandria, VA 22314
PS Form 380

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Sent To
Mr. Kevin Santo
Street, Apt. No. or PO Box No. 45 Moore Ct.
City, State, ZIP+4 Littleton, NH 03561
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State of New Hampshire
Street, Apt. No.; or PO Box No. PO Box 483
City, State, ZIP+4 Concord, NH 03302
PS Form 3800,

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Total Postage & Fees $ 3.78
Postmark Here
USPS MANCHESTER N.H. BEDFORD BRANCH 03110 JAN 29 2014
Sent To
Mr. & Mrs. William Wilkins
Street, Apt. No. or PO Box No. 218 Foster Hill Road
City, State, ZIP+4 Littleton, NH 03561
PS Form 380

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Sent To
Street, Apt. No. or PO Box No.
City, State, ZIP

Mr. & Mrs. Gregory Winn
238 Foster Hill Road
Littleton, NH 03561

PS Form 3800,

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Sent To
Street, Apt. or PO Box
City, State,

Mr. & Mrs. Peter Wojtul
290 Foster Hill Road
Littleton, NH 03561

PS Form 3

Appendix E

Threatened & Endangered Species Correspondence

NEW HAMPSHIRE NATURAL HERITAGE BUREAU
DRED - DIVISION OF FORESTS & LANDS
PO BOX 1856 -- 172 PEMBROKE ROAD, CONCORD, NH 03302-1856
(603) 271-2214

To: Pete Walker, VHB

From: Melissa Coppola, NHB-Environmental Information Specialist

Date: January 27, 2014

Subject: NHB13-0543

This memo is a follow-up to NHB13-0543 which had indicated an exemplary natural community and three state-threatened plant species in the vicinity of the proposed Tap Line in Littleton, NH. Although there were no known records on the parcel in question, this particular area of the state is known to have harbor rare plant species. Therefore, the Natural Heritage Bureau (NHB) requested species specific surveys to determine the true presence/absence of species on the site and from that data determine potential for impacts.

Based on the information provided (survey methodology and results), NHB does not expect impacts to state-listed plant species. Critical to this determination are the following:

- No rare species were located during the multiple survey efforts
- The surveyors did locate the nearby known populations and thus can confirm identification of these species and timed surveys correctly
- No suitable habitat for the target species was found within the project footprint

Should you have any further questions, contact me at 603-271-2215 ext. 323 or at Melissa.Coppola@dred.state.nh.us.

New Hampshire
Fish and Game Department

11 Hazen Drive, Concord, NH 03301-6500
Headquarters: (603) 271-3421
Web site: www.WildNH.com

TDD Access: Relay NH 1-800-735-2964
FAX (603) 271-1438
E-mail: info@wildlife.nh.gov

Glenn Normandeau
Executive Director

Peter,

The NHFG Nongame and Endangered Species Program has reviewed NHB13-0543 for the proposed New England Power Company (d/b/a National Grid) tap line from their existing 230kV C203 Line to the existing Littleton Substation. The NHB database check identified the state threatened bald eagle in the vicinity of the project. The total length of new line is 0.2 miles.

The ROW will be expanded approximately 135 feet to a total of approximately 585 feet wide to accommodate the new C203 tap line. Approximately 2.1 acres of forested area will be cleared to allow construction of the new Tap Line.

The area where the proposed line is located is directly adjacent and parallel to an already existing set of transmission lines. We agree with VHB that the habitat to be impacted, while close to areas where bald eagles occur, is not the type of habitat they prefer to use. There is a VT nest location that was last active in 2010; that site is approx. 2 mi NW of the project. In addition, there is an active BAEA nest located approx. 2 mi ENE in NH but also outside the area covered by the NHB database check map. However, we agree with VHB's overall assessment that this project would cause no significant adverse impact to bald eagles. Please feel free to call me if you have any questions regarding this review.

Sincerely,

Kim Tuttle

Kim Tuttle
Certified Wildlife Biologist
NH Fish and Game
Nongame and Endangered Species Program
603-271-6544

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
http://www.fws.gov/newengland

January 7, 2014

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Maria Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

VHB Transportation | Land Development | Environmental | Energy

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January 16, 2014

Ref: 52281.00

Ms. Melissa Coppola
NH Natural Heritage Bureau
NH Division of Forests and Lands
PO Box 1856
Concord, NH 03301

RE: New 0.2-mile, 230kV C203 Tap Line in Littleton, New Hampshire
New England Power Company d/b/a National Grid
NH Natural Heritage Bureau File ID: NHB13-0543

Dear Ms. Coppola:

New England Power Company d/b/a National Grid ("NEP") proposes to build a new tap line from their existing 230kV C203 Line to the existing Littleton Substation in Littleton, a distance of approximately 0.2 miles ("the C203 Tap Line" or "the Project"). Although the Project is relatively small, it will be reviewed by the NH Site Evaluation Committee ("NHSEC") under RSA 162-H, relative to energy facility siting because the new facility exceeds 200kV. In preparation for filing an application with the NHSEC, we seek your review of the Project relative to the potential for impacts to threatened and endangered plant species.

Your program provided an initial review memo on February 20, 2013. (See **NHB File ID: NHB13-0543**, attached.) Since that time, the Project design has advanced and field surveys for potential protected plant species have been conducted. This memo provides additional information on the Project and reports our field investigation findings. Specifically, we seek your concurrence that the Project would not cause adverse impacts to such state-listed plant species or exemplary natural communities.

Project Description

A "Tap Line" is a short segment of overhead electric transmission line that ties a transmission line into a substation. In this case, the new C203 Tap Line will connect NEP's existing 230kV C203 Line to the existing Littleton Substation, owned by Public Service Company of New Hampshire ("PSNH"). (See **Figure 1 – USGS Site Location Map**.) The Littleton Substation is located at 266 Foster Hill Road near Interstate 93 (Styles Bridges Highway). The existing C203 transmission line runs adjacent to the existing D204 line from the Moore Substation in Littleton to Comerford Substation in Monroe. The Littleton Substation is owned by PSNH, but the existing C203/D204 transmission lines are owned, operated, and maintained by NEP. As you can see from the Project location map, electric transmission corridors are unusually dense in this area due to the proximity of the hydroelectric facilities on the Connecticut River.

Vanasse Hangen Brustlin, Inc.
6 Bedford Farms Drive, Suite 607
Bedford, New Hampshire 03110-6532
603.644.0888 ▪ FAX 603.644.2385
www.vhb.com

The existing right-of-way ("ROW") at the Project Site is approximately 450 feet wide. Almost the entire ROW is currently cleared and consists of emergent and scrub-shrub wetland vegetation, except for a gravel access road located along the western edge of the ROW which provides access to the C203/D204 main line. The gravel access road varies in width from 8 to 16 feet.

The Project is relatively small, and will involve installation of four new wood transmission structures with new wire. The structures include one (1) 3-pole wood terminal deadend structure (Structure #1), two (2) wood H-frame suspension structures (Structure #2 & 3), and one (1) wood H-frame dead end structure (Structure #4). New overhead conductor will be installed and the line will terminate at a new bus bar located within the existing Littleton Substation (See **Figure 2 – Project Overview**).

The ROW will be expanded approximately 135 feet to a total of approximately 585 feet wide to accommodate the new C203 Tap Line. Tree clearing will be required to the edge of the new ROW. Thus, approximately 2.1 acres of forested area will be cleared to allow construction of the new C203 Tap Line. The proposed clearing area is currently northern hardwood-spruce-fir forested wetland. Dominant overstory species within this forest stand includes white pine (*Pinus strobus*), red spruce (*Picea rubens)*, red maple (*Acer rubrum*) and yellow birch (*Betula allegheniensis*). The forested wetland is part of the larger scrub-shrub wetland within the adjacent ROW.

Rare Plants in the Project Vicinity

The New Hampshire Natural Heritage Bureau ("NHNHB") reports that several state-threatened plant species have been recorded along the Connecticut River associated with the Moore Dam located approximately ½ mile north of the Project Site. As identified by the NHNHB, these species include:

- Bailey's Sedge (*Carex baileyi*), a state-threatened species – As a resident of wetlands and peatlands, this species is susceptible to any changes to the wetland's hydrology (especially that which causes pooling), increased nutrient input from stormwater runoff, and sedimentation from nearby disturbances.

- Elk sedge (*Carex garberi*), a state-threatened species – This wetland species, which occurs in bogs/fens/seeps, and wet meadows, would be threatened by changes to local hydrology, including increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance. It also occurs on river and streambanks, where the primary threats would be direct destruction of plants or their habitat.

- Fen grass-of-Parnassus (*Parnassia glauca*), a state-threatened species. – This wetland species, which occurs in bogs/fens/seeps, and wet meadows, would be threatened by changes to local hydrology, including increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance. It also occurs on river and stream banks, where the primary threats would be direct destruction of plants or their habitat.

Field Review for Rare Plants

The NHNHB recommended pre-construction field surveys for the specific rare plants identified in their memorandum. Field reviews were conducted for the listed species on July 25, August 22 and September 24, 2013. Field reviews were conducted by Peter J. Walker. On July 25, Mr. Walker was accompanied by Sean Donohue, VHB Senior Environmental Scientist. The intent of conducting multiple site visits through the growing season was intended to minimize the chance that a particular species would not be observable due to phenological trends.

During each of these three visits, the entire Project Site was canvased for the presence of the listed species. (See **Figure 2,** which shows the limits of the total area surveyed.) During each site visit, a series of closely-spaced transects were walked to search for the three identified species, and to identify any areas of unique soil conditions or plant assemblages. The search transects were spaced at approximately 200-foot intervals within the Project footprint (i.e., the area subject to construction related work). Additionally, the area outside but adjacent to the construction footprint was also surveyed, but at an interval of approximately 500 feet. Transects were located based on review of recent color aerial photography of the site, and were adjusted in the field as needed to capture areas of distinct plant cover types.

The location of the search transects was intentionally varied among the three survey dates, but overlapped by approximately 50 percent. This search strategy was used to maximize density of the search effort and thereby maximize the chance that the subject plants would be found.

Additionally, on July 25, 2013 Mr. Walker visited the banks of the Connecticut River downstream of Moore Dam, north of the Project Site, an area characterized by NHNHB as a hotspot for rare plant species. Using coordinates and narrative location descriptions provided in the NHNHB review memorandum dated February 20, 2013, Mr. Walker attempted to re-locate the identified plant populations.

The results of these field inspections are as follows:

- None of the three identified plant species were found on the Project Site. Based on the search methods, we conclude that those plants are not present.

- Additionally, VHB did not observe any other rare or unusual plant species, plant assemblages, or edaphic conditions that would indicate a likelihood of the occurrence of other protected populations on the Project Site.

- VHB was able to observe fen grass-of-Parnassus and Bailey's sedge at the Moore Dam site at or near the locations provided by the NHNHB. VHB did not observe elk sedge at the Moore Dam site; the reported population of elk sedge appears to be in a location where a significant bank erosion event had recently occurred, and we believe that population may have been extirpated by the erosion event.

Conclusion

Based on the results of the field investigations described above, we conclude that protected species do not occur on the Project Site. The fact that identified species were observed at the Moore Dam site, but not on the Project Site, supports the conclusion that these species could have been observed on the Project Site if present. Additionally, the habitats where the protected species were observed (i.e., riverbank seep) do not occur on the Project Site.

We hope that this letter and the attached plans provide enough information for you to review the Project and its potential impacts. We are available to meet with you in Concord or at the Project Site if that would help facilitate your review. As always, please do not hesitate to call or write (603-644-0888 or pwalker@vhb.com) if you have any questions or require any additional information. Thank you for your assistance.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Peter J. Walker
Director, Environmental Services

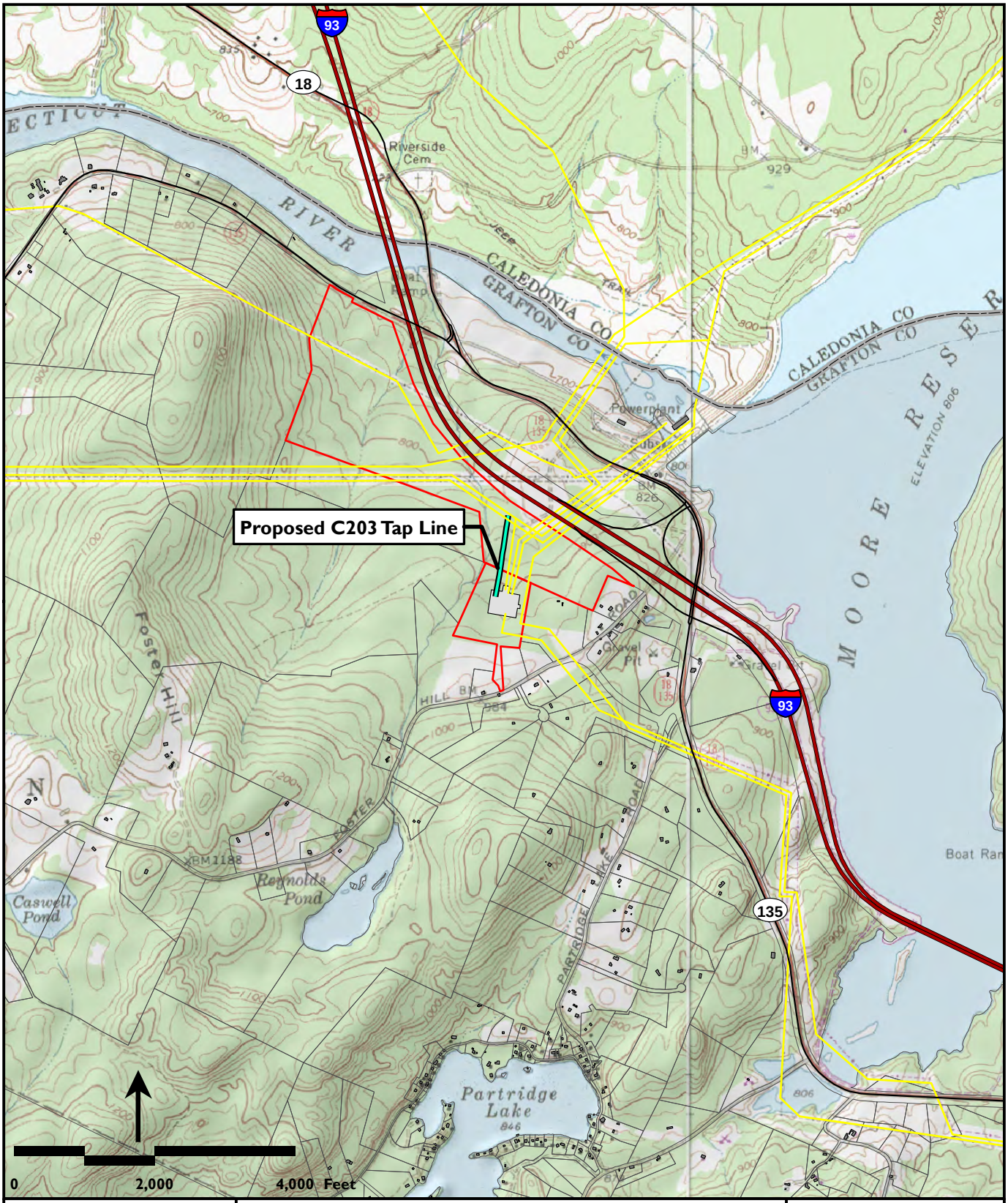
PJW/kb

Attachments:
Figure 1- USGS Site Location Map
Figure 2- Project Overview

cc: Joshua Holden, National Grid

\\nhbedata\PROJECTS\52281.00 C203 Tap Project\docs\Permits\NHB&USFWS\2014-01-16_Copola_RarePlants_FINAL.docx

Project: File: nhbedata\projects\52281.00 C203 Tap Project\GIS\Project\FinalFigures\USGS_ProjectLocation.mxd
Last Updated 1/15/2014 6:06:55 PM & Revisions: DEA



Legend
- Existing Transmission Line
- Proposed C203 Tap Line
- Project Parcels
- Assessor's Tax Parcels
- Littleton Substation

NEW C203 230KV TAP LINE

Figure 1 - USGS Site Location Map
Foster Hill Road
Littleton, New Hampshire

nationalgrid

VHB Vanasse Hangen Brustlin, Inc.

Path: \
hbedata\projects\52281.00 C203 Tap Project\GIS\Project\NHB\ConceptFigure.mxd

N/F NEW HAMPSHIRE STATE OF
Map 41 Lot 1

N/F TRANSCANADA HYDRO
NORTHEAST INC
Map 41 Lot 7

Rare Plant Survey Area

N/F TRANSCANADA
HYDRO NORTHEAST INC
Map 29 Lot 8

N/F PUBLIC SERVICE CO OF N.H.
Map 41 Lot 8

Proposed ROW Limit

C203 Line

D204 Line

N/F BEAVERS, ANTHONY
Map 41 Lot 6

bus

4

3

2

1

Littleton
Substation

D204 Tap Line

Existing ROW Limit

V.E.P.C.O. St. Johnsbury #29 Line

PSNH Q195 Tap

34.5kV Littleton Municipal Line

93

I-93 Southbound

I-93 Northbound

N/F WILKENS,
WILLIAM & MAJORIE
Map 41 Lot 10

FOSTER HILL RD

N/F WINN, GREGORY H.
Map 42 Lot 1

- Proposed C203 Tap Structure
- Existing Structure
- Proposed C203 Tap Line
- Existing Transmission Line
- Existing Easement Line
- Proposed ROW/Edge of Tree Clearing
- Existing Fence Line
- Proposed BUS
- Property Line
- Abutter Property Line
- Delineated Wetland Edge
- Wetland Resource Area
- Ditch
- Stream
- Existing Access Road
- Proposed Construction Work Platform (100'x100')
- Proposed Temporary Swamp Mat
- Proposed Erosion Control Barrier
- Stone Apron
- Rare Plant Survey Area

Source:
NGRID T-SHEETS,
Existing Survey,VHB

0 200 400 Feet

NEW C203 230 kV Tap Line

Figure 2 - Project Overview
Littleton Substation
Foster Hill Road
Littleton, New Hampshire
January 15, 2014

nationalgrid

VHB
Vanasse Hangen Brustlin, Inc.

Memo

NH Natural Heritage Bureau
NHB Datacheck Results Letter

To: Erin Jacque, BSC Group, Inc.
33 Waldo Street
Worcester, MA 01608

From: Melissa Coppola, NH Natural Heritage Bureau
Date: 2/20/2013 (valid for one year from this date)
Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB13-0543 Town: Littleton Location: Tax Maps: 41-8/29-8
Description: Feasibility study for a potential new 230 kV tap line from the Littleton Substation to the C203 transmission line. Approximately 100 feet of new right-of-way width may be required to accommodate the new tap line. New England Power Company is evaluating alternatives at this time.

cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: This area is hotspot for rare plant species in the state. NHB would recommend surveys for specific rare plant species in this area prior to any construction. Please contact NHB for further details. Contact: mcoppola@dred.state.nh.us.

Natural Community	State[1]	Federal	Notes
Rich mesic forest*	--	--	Threats include logging, introduction of invasive species, and direct destruction due to development.

Plant species	State[1]	Federal	Notes
Bailey's Sedge (*Carex baileyi*)	T	--	As a resident of wetlands and peatlands, this species is susceptible to any changes to the wetland's hydrology (especially that which causes pooling), increased nutrient input from stormwater runoff, and sedimentation from nearby disturbances.
elk sedge (*Carex garberi*)	T	--	These wetland species, which occurs in bogs/fens/seeps, and wet meadows, would be threatened by changes to local hydrology, including increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance. It also occurs on river and streambanks, where the primary threats would be direct destruction of plants or their habitat.
fen grass-of-Parnassus (*Parnassia glauca*)	T	--	

Vertebrate species	State[1]	Federal	Notes
Bald Eagle (*Haliaeetus leucocephalus*)	T	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
PO Box 1856
Concord NH 03302-1856

been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Resources and Economic Development
Division of Forests and Lands
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DRED/NHB
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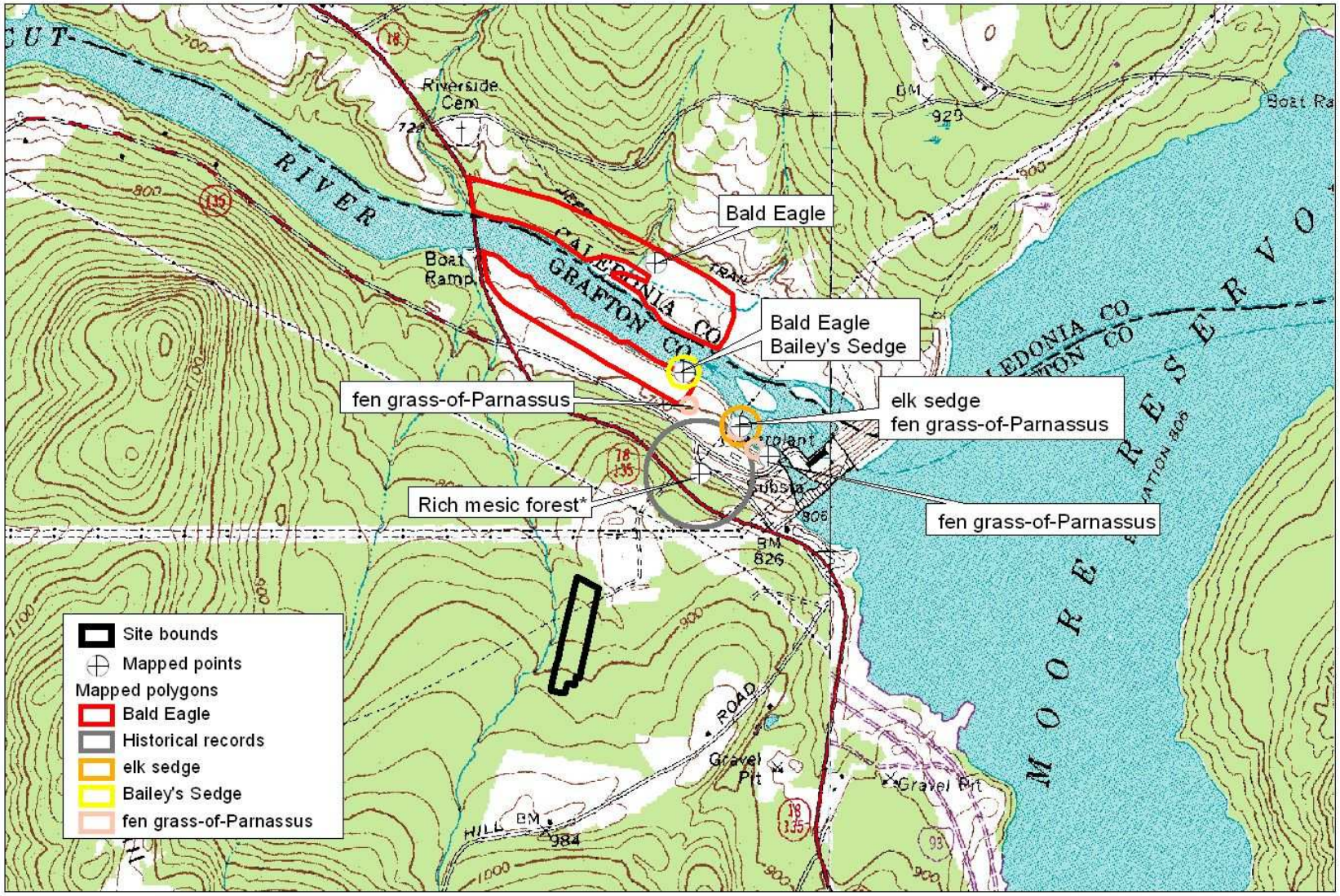
NHB13-0543

NH Natural Heritage Bureau

Known locations of rare species and exemplary natural communities

Note: Mapped locations are not always exact. Occurrences that are not in the vicinity of the project are not shown.



*Historical record

1:18000

Valid for one year from this date: 20 Feb 2013

New Hampshire Natural Heritage Bureau - Community Record

Rich mesic forest

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Not ranked (need more information)
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank:	Historical records only - current condition unknown.
Comments on Rank:	
Detailed Description:	1960: *Carpinus caroliniana* var. *virginiana* (musclewood) at northern limit. *Hepatica acutiloba* (sharp-lobed hepatica), *Dentaria* [*Cardamine*] *diphylla* (broad-leaved toothwort), *Caulophyllum thalictroides* (blue cohosh), *Allium tricoccum* (wild leek), *Carex peckii* (Peck's sedge), *Adiantum pedatum* (northern maidenhair fern), and *Dirca palustris* (leatherwood).
General Area:	1960: Second-growth, moderate sized *Fagus grandifolia* (American beech), *Betula lutea* [*alleghaniensis* (yellow birch)], *Acer saccharum* (sugar maple), and other hardwoods. Numerous rich site understory species.
General Comments:	1960: Could use another visit. Site previously known as "Littleton Dam Wildflower Area".
Management Comments:	

Location

Survey Site Name:	Moore Dam		
Managed By:	TransCanada CE		
County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442008N, 0715247W
Size:	23.1 acres	Elevation:	760 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Moore Dam site. Connecticut River. Below dam, hardwood slope facing the river between Rte. 18 and the powerhouse access road.

Dates documented

First reported:	1960	Last reported:	1960

Steele, F. L. 1960. Field survey to Littleton Dam Wildflower Area, Date unknown.

New Hampshire Natural Heritage Bureau - Plant Record

Bailey's Sedge (*Carex baileyi*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Apparently secure but with cause for concern
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank:	Poor quality, condition and/or landscape context ('D' on a scale of A-D).
Comments on Rank:	Small group in unstable habitat.
Detailed Description:	1993: 30 ramets make up 5 genets in only a few clumps in a 1 square yard area. Plants were in immature fruit and were of normal vigor.
General Area:	1993: Plants grow on the riverbank of saturated clay/silt and alluvium substrate, near base of a ca. 20-degree north slope, in bright to semi-shade light. Other associated vegetation includes grasses.
General Comments:	
Management Comments:	1993: Potential threats include extreme flood events, erosion, etc.

Location

Survey Site Name:	Moore Dam		
Managed By:	TransCanada CE		
County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442019N, 0715249W
Size:	1.9 acres	Elevation:	650 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Take Rte. 135/18 to fishing access by I-93 bridge and follow trail upstream. Plants are not far below dam, [just above rocks at river's edge and base of slope.]

Dates documented

First reported:	1993-07-16	Last reported:	1993-07-16

Gilman, Arthur. 1993. Field survey to Moore Dam on July 16.

New Hampshire Natural Heritage Bureau - Plant Record

elk sedge (*Carex garberi*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank:	Fair quality, condition and/or landscape context ('C' on a scale of A-D).
Comments on Rank:	Small, artificial habitat.
Detailed Description:	1994: About 60 plants with fruit.
General Area:	1994: Disturbed calcareous roadside seep, not inundated. Associated species include *Equisetum arvense* (field horsetail), Salix sp. (willow), mosses, liverworts, *Carex flava* (yellow sedge), *Carex hystericina* (porcupine sedge), and *Tussilago farfara* (coltsfoot) nearby.
General Comments:	1994: Naturally seepy terrace has been altered by artificial fill (including road tar).
Management Comments:	

Location

Survey Site Name:	Moore Dam		
Managed By:	TransCanada CE		
County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442013N, 0715241W
Size:	2.8 acres	Elevation:	640 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Below Moore Dam. Small seep on right emerging from slumping, artificial-fill terrace slope 40 feet from bottom of fisherman's path. Plants at top of seep area.

Dates documented

First reported:	1994-06-14	Last reported:	1994-07-20

Sperduto, Dan. 1994. Field survey to Moore Dam on June 14.

Sperduto, D. & A. Gilman. 1995. Calcareous Fens and Riverside Seeps in New Hampshire. The New Hampshire Natural Heritage Program. Concord, NH.

New Hampshire Natural Heritage Bureau - Plant Record

fen grass-of-Parnassus (*Parnassia glauca*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank:	Fair quality, condition and/or landscape context ('C' on a scale of A-D).
Comments on Rank:	Small population just below a dam. 1985 (C).
Detailed Description:	2009: Area 1: About 10 small clumps. Area 4: About 22 clumps in a 2 x 3 m area. 33% 2-4 in. in diameter, 67% 4-8 in. in diameter. Both areas, plants were healthy.2008: Area 3: Abundant.2004: Area 2: 100 vegetative plants observed. 1994: Area 1: ca. 46 plants observed. 1985: Area 1: ca. 60 plants observed, 80 percent mature, 20 percent seedlings. 1983: Area 1: ca. 30 plants observed. Evidence of seed capsules, of normal vigor. Observer mentioned flowering in 1982, but provided no documentation.1970: Specimen collected.
General Area:	2009: Riverside seep at base of dam. Area 1: adjacent to a patch of smooth scouring-rush (*Equisetum hyemale* ssp. *affine*). General area seriously encroached by coltsfoot (*Tussilago farfara*).2008: Area 3: Near brook.2004: Area 2: Both sides of an apparent water runoff. 1994: Area 1: Base of steep terrace slope above river. Associated species include *Equisetum hyemale* ssp. *affine* (smooth scouring-rush) and *Equisetum variegatum* (variegated horsetail). 1985: Area 1: SE slope with partial light, on lower dry-mesic slope. Low rich deciduous woods in gravelly, seepy area.
General Comments:	1985: Precarious site, converter station will be built. Herbicide application nearby.
Management Comments:	1983: This population could well be wiped out by construction.

Location

Survey Site Name:	Moore Dam		
Managed By:	TransCanada CE		
County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442010N, 0715237W
Size:	1.9 acres	Elevation:	760 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Moore Dam. By side of gravel access road to powerhouse. [October 2011 Deb Lievens recommends the following directions: Take 93 north to exit 44. Coming from the south, cross Rte. 135/18 to enter recreation area. From north head east. Park at Moore Station building. Descend on foot on station road. As you near the dam, look for a fisherman's trail down to the shore at the dam. Area 1 is below the dam. Area 2 is further down river.]2009: Take Rte. 93 to exit 44. Coming from the south, cross Rte. 135/18 to enter recreation area. From north, head east. Park at Moore Station building. Follow road behind building down the hill. Look for Pole 5 on the left. This will orient you to the power line you will need. Turn right with the road comes to a T at a paved road. Go to grassy area and head toward river. Grassy area runs into a bootleg trail to the river. Area 4 is on river bank just north of access (44.33686N, 71.87828W). Area 1 is just below the dam (44.33615N, 71.87702W). Can be reached by following fishermen's trail down to the dam. Alternatively, continue past recreation area to slight right at NH 18/St. Johnsbury Road. Enter at Moore Station, 2700 St. Johnsbury Road. Follow paved road upriver to gate. Continue on foot to grassy area.2008: Near the substation access road & Smith Brook. Near brook roughly 400 ft. from pylon (44.337635N, 71.880201W).1994: Area 1: Base of steep terrace slope above river and below road and just on southwest side of cement structure of dam. Probably near but not identical to previously reported site.1970: Littleton, under power line beside dirt road.

Dates documented

First reported: 1982 Last reported: 2009-07-05

Lievens, Deb and Alice Schori. 2009. Field survey to Moore Dam on July 5.

New Hampshire Natural Heritage Bureau - Animal Record

Bald Eagle (*Haliaeetus leucocephalus*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 1993: Observed right below the dam. Also some sightings at Wells River and Ammonoosuc River confluences. 1991: At least 1 bird has been observed at this location the last several years.
General Area:
General Comments:
Management Comments:

Location

Survey Site Name: Moore Dam
Managed By: TransCanada CE

County:	Grafton	USGS quad(s):	Lower Waterford (4407138)
Town(s):	Littleton	Lat, Long:	442030N, 0715254W
Size:	48.2 acres	Elevation:	640 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: North and south of Moore Dam on the Connecticut River.

Dates documented

First reported:	198?	Last reported:	1993

Martin, Chris. 2011. Identification of bald eagle wintering habitat based on decades of personal experience.

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.