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VOLUME 4 - APPENDIX 2
N.H. WETLANDS BUREAU STANDARD DREDGE & FILL APPLICATION

Granite Reliable Power Wind Park

Granite Reliable Power, LLC

Columbia, Dummer, Millsfield, Ervings Location, Odell, & Dixville, New Hampshire

STANDARD DREDGE & FILL PERMIT APPLICATION
FOR THE
GRANITE RELIABLE POWER WIND PARK
FOR
GRANITE RELIABLE POWER, LLC

JULY 2008

DATE OF PRINT
JUL 11 2008
HORIZONS ENGINEERING

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Littleton, NH 03561
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PROJECT NUMBER 07198
Horizons Engineering, LLC.

TABLE OF CONTENTS

COVER LETTER

SECTION 1

Standard Dredge & Fill Application w/ Fee Sheet
Summary of Wetland Impacts

SECTION 2

USGS Site Locus Map
Tax Maps
Abutters List / Sample Abutter Letter / Certified Mail Receipts

SECTION 3

NH Division of Historical Resources Project Review
NH Natural Heritage Bureau Project Review
NH Fish & Game Department Correspondence
US Fish 7 Wildlife Service Correspondence

SECTION 4

Wetland Impact Photographs

SECTION 5

NHDES Preliminary Mitigation Agreement Form
Compensatory Mitigation Area Assessment Prepared by Lobdell Associates, Inc.
Vernal Pool Report / Vernal Pool Inventory / Documentation Forms Prepared by Lobdell Associates, Inc.
Wetland Delineation Data Sheets Prepared by Lobdell Associates, Inc.

horizons Engineering PLLC

Project No. 07198
July 11, 2008

New Hampshire Department of Environmental Services
Wetlands Bureau
Post Office Box 95
6 Hazen Drive
Concord, New Hampshire 03302
(603) 271-2147

Subject: Standard Dredge and Fill Permit Application
Granite Reliable Power Wind Park, Coos County, New Hampshire

To whom it may concern:

On behalf of Granite Reliable Power, LLC (GMO Renewable Resources, LLC and Bayroot LLC c/o Wagner Forest Management, Ltd. as landowners) an application is hereby made for a Dredge and Fill Permit for a proposed wind park in Dummer, Millsfield, Ervings Location, Odell, Columbia and Dixville, New Hampshire.

The following information is provided as per Env Wt 302.04, "Requirements for Application Evaluation":

1) *The need for the proposed impact*;
The proposed wetland impacts are needed for the construction and operation of a wind park to provide alternative electrical energy. The impacts are associated with the upgrade of existing access roads, the construction of new access roads, and the construction of related project components such as turbine sites, laydown area and equipment staging areas, electrical transmission corridors, substation, and switchyard.

2) *The alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site;*
The proposed project has been designed to minimize wetland impact to the extent practicable. Avoidance and minimization of impacts were considered from the onset of project design. Initially, turbine strings were proposed on the western ridgelines of the Phillips Brook watershed but were deleted from the project to minimize crossings of Phillips Brook and other sensitive areas. The project will utilize approximately 20 miles of existing logging roads and trails to reduce the amount of new road construction and associated impacts. The existing roads will be upgraded to accommodate the hauling vehicles necessary to deliver and install the turbine components. New culverts and temporary and permanent erosion control measures will be employed on both the existing and new roads to protect water quality.

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3) *The type/classification of the wetlands involved*;
Wetlands on the project were delineated by a large team of New Hampshire Certified Wetland Scientists using the three-parameter approach (soil, vegetation, hydrology) described in the 1987 Manual (Environmental Laboratory 1987) as required by the US Army Corps of Engineers and the New Hampshire Department of Environmental Services. Mr. Ray Lobdell of Lobdell & Associates, Inc. assisted in the coordination of the effort and has sealed the existing conditions plans prepared by Horizons Engineering. Please see the Functions and Values section of the application for a further discussion of the wetlands involved.

4) *The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters*;
Because of the sheer size of the project, the impacted wetlands vary considerably, as do their connectivity. In general, the wetlands, intermittent, and perennial streams drain to either Phillips Brook or the Androscoggin River.

5) *The rarity of the wetland, surface water, sand dunes, or tidal buffer areas*;
Wetlands that are proposed to be disturbed are not associated with any tidal buffer zone. Many of the wetlands along the existing road alignments (and portions of the new alignments) have been previously disturbed by the long history of forestry on the properties. The wetlands types affected by the proposed work are common in northern hardwood and spruce-fir matrix forests in northern New Hampshire. There are impacts to wetlands at the higher elevations that are not as common in New Hampshire. Please see the Functions and Values Assessment section of the application for further discussion.

6) *The surface area of the wetlands that will be impacted*;
A table of the total surface area of wetlands to be impacted by the project is appended to the Standard Dredge & Fill Permit application.

7) *The impacts on plants, fish, and wildlife including:*
a. Rare, special concern species;
b. State and federally listed threatened and endangered species;
c. Species at the extremities of their ranges;
d. Migratory fish and wildlife; and
e. Exemplary natural communities identified by the New Hampshire natural heritage program in the Department of Resources and Economic Development.

The proposed project is expected to impact rare or concerned species, state listed threatened, or exemplary natural communities identified by the NH Natural Heritage Bureau. A search of the NHNHB database resulted in comments from the NHNHB dated June 24, 2008 identifying a number of plant, animal and natural communities of concern (see NH Natural Heritage Bureau Project Review section). The application includes a mitigation proposal that will address concerns regarding these impacts.

8) *The impact of the proposed project on public commerce, navigation and recreation*;
The proposed project will not impact navigation. Public commerce is not expected to be negatively impacted. A positive impact to commerce is expected with the economic stimulus associated with project construction and operation and the electric energy to be generated by the project upon completion. Recreation is not expected to be negatively impacted as the land is privately held, access is restricted, and existing recreational access (e.g. hiking, hunting, fishing, snowmobile and ATV use) will be affected by the proposed project.

9) *The extent to which a project interferes with the aesthetic interests of the general public...;*
The proposed project is not expected to interfere with the aesthetic interests of the general public. The project is located on two large undeveloped tracts of land. Sound studies done to date indicate that the turbines will not be audible from abutting properties. The turbines will be visible from several locations (e.g. Millsfield Pond) but will be located some distance away (10,000 feet from Millsfield Pond) and will appear quite small relative to the horizon and surrounding ridge lines.

10) *The extent to which a project interferes with or obstructs public rights of passage or access..;*
The proposed project will not interfere with or obstruct any public rights of passage. The project will be constructed entirely on private property.

11) *The impact upon abutting owners pursuant to RSA 482-A:11...;*
The proposed project will not negatively impact abutting landowners. While the turbines will be visible from a distance, the turbines, access roads, and associated uses (i.e. switchyard, substation, etc.) will be located on private property and not visible from abutting parcels.

12) *The benefit of the project to the health, safety, and well being of the general public*;
The proposed project has been designed to so as to not affect the health and safety of the general public. The project is expected to benefit the well being of the general public by providing needed renewable electric generating capacity.

13) *The impact of the proposed project on quantity or quality of surface and groundwater....;*
The project includes the construction of turbine pads, access roads, and accessory uses that will have wetland impact and some impact on water quality. To the extent practicable, these impacts will be minimized through the use of existing logging roads and by designing the drainage system to closely mirror pre-existing conditions. Provisions for temporary and permanent erosion control, including the use of stone lining, erosion control fabric, appropriately sized culverts and stream crossings, treatment swales, and easily maintained Best Management Practices (BMPs) have been specified on the construction plans to minimize impacts to surface waters.

14) *The potential of a proposed project to cause or increase flooding, erosion, or sedimentation*;
The project is not expected to measurably increase post-development runoff (or the potential for increased flooding) due to the size of the watersheds and the relatively small disturbance areas. The proposed stormwater treatment and erosion and sediment control measures will minimize the potential for the project to cause or increase erosion or sedimentation. The re-use of existing logging roads will include the upgrade of these roads and the incorporation of BMPs such as treatment swales and stone lining that are not currently in place.

15) *The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards;*
The proposed project is not known to reflect or redirect currents 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 wetland complex is located on two very large lots, all controlled by the applicant through easement. No other project of similar nature is being contemplated on the parcels.

17) *The impact of the proposed work on the values and functions of the total wetland or wetland complex;*
Please refer to the Functions and Values Assessment section of the application.

18) *The impact upon the value of the sites included in the latest published edition of the Nation Register of Natural Landmarks, or sites eligible for such publication;*
The proposed project is not expected to impact any sites included in the National Register of Natural Landmarks

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; and*
The proposed project will not impact any areas named 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.

20) *The degree to which a project redirects water from one watershed to another.*
The proposed project does not propose to redirect water from one watershed to another.

Sincerely,

Stephen M. LaFrance, P.E.
President
Horizons Engineering, L.L.C.

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horizons Engineering PLLC

SECTION 1

Standard Dredge & Fill Application w/fee sheet

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

DEPARTMENT OF ENVIRONMENTAL SERVICES
WETLANDS BUREAU
29 Hazen Drive PO Box 95
Concord, NH 03302-0095
Phone: (603) 271-2147 Fax: (603) 271-6588
web site: www.des.nh.gov/wetlands email: wetmail@des.state.nh.us

STANDARD DREDGE AND FILL APPLICATION

Application for filling, dredging, or constructing structures under RSA 482-A and RSA 485-A:17

GENERAL INSTRUCTIONS: Type or print clearly; missing information will delay processing of your application!

1. NAME OF OWNER: Granite Reliable Power, LLC

   MAILING ADDRESS: 8 Railroad Avenue, Essex, Connecticut 06426

   TELEPHONE: 860-581-5010 FAX: 860-767-7041 EMAIL: howardw@noblepower.com

2. LOCATION OF PROPOSED CONSTRUCTION:

   Vicinity of Dummer Pond Road (Street/road/highway) — Dummer, Odell, Ervings Location, Millsfield, Dixville, (Town/City)

   TAX MAP: Columbia Tax Parcels 425-6 & 424-2, Ervings Location Tax Parcel 1623-1, Odell Tax Parcel 1620-1.1, Millsfield Tax Parcels 1623-14 & 1620-2, 1623-13, Dummer Tax Parcel R-1-1, R-1-2, Dixville 1626-1

3. Obtain Name of Waterbody from U.S. Geological Survey Map. If Waterbody is Unnamed, place an "X" in the appropriate box.
   ☐ IN, OR ☒ ADJACENT TO: Phillips Brook Watershed
   ( ) Unnamed tributary to: Millsfield Pond, Phillips Brook
   ( ) Unnamed Pond (X) Unnamed stream (X) Unnamed wetland ( ) Tidal Buffer Zone

4. Mark appropriate box(es) to indicate landform type(s): ( ) Salt Marsh; ( ) Tidal water; ( ) Sand dune; ( ) Bog; ( ) Freshwater marsh; ( ) Swamp; () Wet meadow; ( ) River; (X) Perennial stream; (X) Seasonal stream; ( ) Lake; ( ) Upland (tidal buffer zone only); (x) Other: vernal pools

5. Provide a description of your proposed project. Granite Reliable Power, LLC is proposing a wind power project in the Phillips Brook watershed. Approximately 33 turbines are envisioned in three turbine strings along the eastern ridgeline.

6. Explain the need for the proposed project and how it has been designed to minimize impact to areas within the DES Wetlands Bureau's jurisdiction. (use separate sheet if necessary). See response(s) in cover letter.

7. AUTHORIZED AGENT: Stephen LaFrance, Horizons Engineering, L.L.C.

   MAILING ADDRESS: 34 School Street (Street/Road/Box #) — Littleton (Town/City) — N.H. (State) — 03561 (Zip code)

   TELEPHONE: (603) 444-4111 FAX: (603) 444-1343 EMAIL: slafrance@horizonsengineering.com

For Internal Use
Fee received: _____ File # _____
check# amount init date

Rev 08/19/03a/2007 fee

8. Area and/or linear impact of proposed work within DES Wetlands Bureau jurisdiction (e.g., lakes, ponds, streams, wetlands, sand dunes, tidal buffer zone, etc.).
   a. Estimated area to be dredged: 0 sq. ft.
   b. Volume of material to be removed from public waters: 0 cu. yds.
   c. Is proposed disposal site for dredged material located in wetlands (no)?
   d. Estimated area to be filled: 558,144 sq. ft.
   e. Estimated total area (in DES Wetlands Bureau jurisdiction) of all proposed work: sq. ft.
   f. Estimated excavation and/or filling within the upland portion of the Tidal Buffer Zone: 0 sq. ft.
   g. If a channel is to be constructed, or a culvert or a bridge is to be installed, indicate the length of flow through the project area: 14,958 ft. (total intermittent and perennial stream impact)
   h. If the project involves shoreline, indicate the average length of shoreline frontage:____ft.
   i. If dock or similar structure: length:_____ft.; width:_____ft.; total surface area of structures:_____sq. ft.
   j. If wall, rip-rap, beach, or similar project, indicate the proposed shoreline impact in: linear feet_____, square feet_____.

9. **FILING FEE: A check or money order payable to the DES Wetlands Bureau shall accompany the application.** The minimum fee is $200. MINOR and MAJOR IMPACT PROJECTS are charged at the rate of: $0.20 per square foot of requested impact (if less than 1,000 square feet of impact is proposed, the minimum fee of $200 applies). All applications for SHORELINE STRUCTURES shall include a base fee of $200. In addition, MINOR and MAJOR IMPACT SHORELINE PROJECTS shall include fees charged at the rate of: $0.20 per square foot for requested dredge or fill impacts; $1.00 per square foot for requested seasonal docking structure; and $2.00 per square foot for requested permanent docking structure. **All fees are based on the originally requested impacts, not the final approved impact.**

APPLICANT SIGNATURE. SIGNATURE BELOW CERTIFIES THAT:

1.) All abutters have been identified in accordance with the definition given in the general instructions sheet;
2.) The applicant has notified all abutters by CERTIFIED MAIL;
3.) The applicant has read, and provided, the REQUIRED INFORMATION outlined in rule Env-Wt 302.04 and listed on the "Checklist for Preparing a Standard Dredge & Fill Application";
4.) The applicant has read and understands Rule Env-Wt 302.03 and has chosen the least impacting alternative;
5.) The applicant has submitted a copy of the application materials to the NH State Historic Preservation Officer;
6.) The applicant authorizes the local Conservation Commission, if any, to inspect the site in order to provide comment to the department, pursuant to RSA 482-A:11.
7.) The applicant has reviewed the information to be submitted and that the information is, to his/her knowledge, true and accurate;
8.) The applicant understands that the willful submission of falsified or misrepresentative information to the New Hampshire Department of Environmental Services is a criminal act punishable by law.

	Granite Reliable Power, LLC	July 7, 2008
signature of owner	**print owner name**	**date**
_____	Stephen LaFrance	July 7, 2008
signature of authorized agent (if applicable)	**print agent name**	**date**

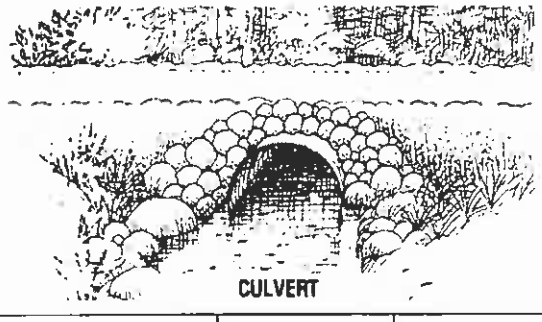
TOWN CLERK SIGNATURE. I hereby certify that the applicant has filed five applications, five sets of supporting materials with the town/city of:_____as required by Chapter 482-A:3, and I have received and retained certified postal receipts (or copies) for all abutters identified by the applicant.

_____ _____
signature of town/city clerk **date**

Calculating the Appropriate Application Fee to be Submitted with a Standard Dredge and Fill Application

Worksheet A

Use this worksheet for a project with no construction or modification of docking facilities.



For Minor and Major Impact Projects:		Fee calculation rate and square feet of impact	Fee (subtotals and total)
1	Minimum application fee		$200
	OR		
2a	Total area of impacts to wetland and other jurisdictional areas (excluding surface water) as measured in square feet	558,144	
2b	Multiply line 2a by the fee per square foot of impact to wetlands, bank or jurisdictional area	x $0.20	
2c	Fee for impacts to wetlands, bank or other jurisdictional area(s)		$111,628.80
3	Which has the larger amount, line 1 or 2c? Circle it.		2c
4	Required Fee: Enter the larger amount of 1 OR 2c.		$111,628.80

Note: Do not double-count impact areas.

Summary of Wetland Impacts

GRANITE RELIABLE POWER, LLC
GRANITE RELIABLE POWER WIND PROJECT
WETLANDS BUREAU DREDGE & FILL PERMIT APPLICATION
SUMMARY OF WETLAND IMPACTS
July-08

Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
5-1				PF01/4B	666
5-2				PF01/4B	930
5-3				PF01/4B	271
5-4				PF01/4B	542
5-5				PF01/4B	792
5-6				PF01B	1,756
5-7				PEMA1A	2,491
6-1				?WETLAND/DITCH	346
7-1	PF02/1				643
7-2				?WETLAND	108
10-1				PF01	301
12-1				PSS1	505
12-2	DITCH				135
12-3				?WETLAND	396
13-1				PF01C	300
14-1	DITCH				218
15-1	DITCH				282
15-2	DITCH				140
16-1				?WETLAND/DITCH	757
16-2				?WETLAND/DITCH	663
17-1	DITCH				127
17-2	R4SB4	73			
17-3	R4SB3	80			
17-4				PF01E	325
17-5	DITCH				413
18-1				PF01E	194
18-2	DITCH				497
18-3	R4SB7	11			
18-4	DITCH				213
19-1	R4SB3	62			
19-2	PF01	55			
20-1	CULVERT	41			
20-2	R4SB3	62			
20-3				PF01	833
20-4	R4SB3	22			
21-1	R45B2	100			
21-2	DITCH				192
21-3	DITCH				1,267
22-1				PSS1	1,136
22-2	DITCH				316
22-3	R4SB5	44			
22-4	DITCH				261
22-5	R4SB3	43			
22-6				PSS1	193
22-7	DITCH				173
22-8	R4SB3	93			
23-1	R4SB3	76			
23-2	DITCH				1,107
23-3				PSS1	39
23-4				PSS1	192
23-5	R4SB5	38			
24-1	DITCH				1,254

GRANITE RELIABLE POWER, LLC
GRANITE RELIABLE POWER WIND PROJECT
WETLANDS BUREAU DREDGE & FILL PERMIT APPLICATION
SUMMARY OF WETLAND IMPACTS
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Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
24-2	R4SB5	37			
24-3	DITCH				1,312
24-4	DITCH				121
24-5	R4SB2	38			
24-6				WETLAND	194
24-7	DITCH				1,180
24-8	DITCH				864
24-9	R4SB9	13		PFOV4M	27
25-1	DITCH				122
25-2	R4SB2	28			400
25-3	R4SB5	39			228
25-4	DITCH				557
25-5	DITCH				373
25-6	DITCH				86
25-7	R4SB4	37			197
25-8	DITCH				91
25-9	R4SB2	12			122
25-10	R4SB4	44			171
26-1	R4SB2	16			320
26-2	R4SB4	43			186
26-3				RF01/1B	191
26-4	R4SB2	75			435
26-5	DITCH				643
26-6	R4SB3	44			191
26-7	DITCH				786
26-8	R4SB3	40			264
26-9	R4SB3	47			169
26-10	DITCH				326
26-11	DITCH				244
26-12	DITCH				22
27-1	DITCH				467
27-2	DITCH				334
27-3				WETLAND	8,951
28-1				PFO1Y	12,349
29-1	DITCH				232
29-2	R4SB3	36			260
29-3	R4SB3	38			232
29-4	DITCH				77
30-1	R4SB4X	40			
30-2	R4SB3	40			
30-3	R4SB3	38			
30-4	R4SB3	40			
31-1	DITCH				811
31-2				PFO1Y	307
31-3	DITCH				971
31-4	DITCH				322
31-5	DITCH				830
31-6				WETLAND	779
31-7				PFO1Y	271
31-8	R3UB1		592	PFO1Y	1,517
31-9				PFO1Y	61
31-10	DITCH				388

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Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
32-1				PFOY4	45
32-2				PFO1/4Y	293
32-3	R4SB3			PFO1Y	285
32-4				PFO1/4Y	2,373
32-5				PFO1/4Y	964
33-1				PEM1B & PF01/4B& PEM1/PSSI ED	155
33-2				PF01/4B	493
33-2				PFO1/4B & PEM1/PSSI ED	563
33-4				PFO1/4B	1,038
33-5				PEM1/PSSI ED	41
33-6	R4SB3	46			
33-7				PEM1/PSSI ED	121
33-8				PFO1/4B	745
33-9				PEM1/PSSI ED	108
33-10				PFO1/4B	106
33-11				PEM1/PSSI ED	245
33-12				PEM1/PSSI ED	586
33-13				PFO1/4B	160
34-1	R4SB3D	36		PFO1/4B	
34-2	R4SB3	41		PEM1/PSSI B	
34-3				PSS1/PEM1 E	68
34-4				PFO1/4B	147
35-1				PEM1BD	282
35-2				PEM1B	337
35-3				PEM1B	438
35-4	R4SB3D	74			
35-5	R4SB3	47		PSS1/PEM1	
35-6	R4SB3	30			156
35-7	R4SB3	59			
35-8	R4SB3	34			
35-9	R4SB3	58		PFO1/4B	
38-1				PSS1	154
38-2				PSS1	84
38-3				PSS1/POW1	38
38-4	?STREAM CHANNEL	13		PSS4/1	51
38-5				PSS4/1	103
39-1				PFO4/1	389
39-2	DITCH				80
39-3				POW PF04/1	68
39-4				PSS1	444
39-5	DITCH				47
40-1				PFO/PEM	272
40-2	R4SB3	72		PFO4/4J	
40-3	DITCH				88
40-4				PFO	327
41-1	R3RB2		193		
41-2	DITCH				209
41-3				PFO & PFO1E	414
41-4				PFO1E	44
41-5	R4SB7	5		PSS1/4E PFO	2,611
42-1				PFO1/4E	345
42-2				PFO1/4E	2,303

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Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
42-3				PFO1/4E	31
42-4				PFO1/4E	181
42-5				PFO PEM1/SS	205
42-6					
42-6				PEM1	96
42-7	R4SB5	87		PFO1/4E	
43-1				PFO1E	392
43-2				PFO1E	36
43-3				PFO1B	94
43-4				PFO1B	247
43-5	R43SB3D			PFO1B	628
43-6	R4SB3D	81			
43-7	R4SB3D	66			
43-8	R4SB3D	45		PFO1/EM1B	
43-9	R4SB3D	22			
43-10	R4SB3D	56		PFO1/EM1	
44-1	R4SB3	74			
44-2	R4SB3D	36			
44-3	R4SB3 & R4SB3D	187			
44-4	R4SB3D	14		PEM1B	
44-5	R4SB3	50		PEM1B/PSS1BX	
44-6	R4SB3D	131			
45-1				PFO114B	629
45-2	R3U1B		64		
45-3	R4SB3	44			
45-4				WETLAND	145
45-5				PSS1B	863
45-6	R4SB2	70		PFO1/4B	70
45-7	R4SB2D	22			
45-8	R4SB2	10		PFO1B	
45-9	R4SB2	5		PFO4	
45-10	R4SB2D	48			
46-1	R4SB2D	55			
46-2	R4SB2	47			
46-3	R4SB2D	24			
46-4	R4SB2D	81			
46-5	R4SB2	30			118
46-6	R4SB2	39			
46-7	R4SB2D	41			
46-8	R4SB2	46			
46-9	R4SB2D				885
46-10	R4SB2	50			
47-1	R4SB5C	81			
47-2	STREAM CHANNEL	14			
47-3				WETLAND	213
47-4	STREAM CHANNEL	16			
47-5	DITCH	37			
47-6	STREAM CHANNEL	39			
48-1	STREAM CHANNEL	105			
48-2				WETLAND	238
48-3	DITCH	165			
48-4	DITCH	70			

GRANITE RELIABLE POWER, LLC
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WETLANDS BUREAU DREDGE & FILL PERMIT APPLICATION
SUMMARY OF WETLAND IMPACTS
July-08

Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
48-5				PSS1/PEM1	53
48-6				PSS1/PEM1	347
48-7	DITCH	40			
49-1		71		PSS1	
49-2	R4SB5	53		PSS1/PEM1	
49-3				PSS1	116
49-4				PSS1	5,632
50-1	R4SB5	40			405
50-2				PSS4/1	510
50-3				PSS1/4 PEM1	463
50-4				PSS1/4 PEM1	340
50-5				PSS1/4 PEM1	339
50-6				PSS1/4 PEM1	430
51-1				PSS1/4 PEM1	604
51-2	R4SB3	55		PSS4	577
52-1				PEM1/PSS4	77
52-2	R4SB3	50			452
52-3				PEM1/PSS1	487
53-1	R4SB5	43			446
53-2	R3U1B		177		670
54-1				PSS1/PEM1	113
54-2	DITCH			PSS4/1	490
54-3	DITCH			PSS4/1	400
54-4	DITCH			PSS1	546
54-5	DITCH			PSS4/1	430
54-6				PSS4/1	23
54-7				PSS1	41
55-1	STREAM	63		PEM1	857
55-2	DITCH	161		PSS1/PEM1	616
55-3				PSS1/PEM1	126
55-4	STREAM	58		PSS4/1	1,228
56-1				PFO4E	157
56-2	DITCH	47			
56-3				PFO4E	114
56-4				PFO4E	1,123
56-5				PFO4E	257
57-1	R3RB2		76	PFO4E	598
57-2	R3RB2		71	WETLAND	476
57-3	R3RB2		42	WETLAND	200
57-4	R3RB2		62	WETLAND	548
57-5	R3RB2 & R4SB3F	73	123	WETLAND	1,563
57-6	R3RB2		36	WETLAND	204
57-7	R3RB2		39		117
58-1				PSS1	375
58-2	DITCH			PFO1B	1,052
58-3	R3RB2		47	PSS1	280
58-4				PFO1B	72
58-5	R3RB2		155	WETLAND	2,504
58-6	R4SB5	195			
58-7	R3RB2		63	PSS4/1	532
58-8		22		PSS4/1	47
58-9				PSS4/1	119

GRANITE RELIABLE POWER, LLC
GRANITE RELIABLE POWER WIND PROJECT
WETLANDS BUREAU DREDGE & FILL PERMIT APPLICATION
SUMMARY OF WETLAND IMPACTS
July-08

Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
58-10				WETLAND	102
59-1				PSS4/1	937
59-2				PSS4/1	1,496
59-3	R4SB5	75			218
59-4	R4SB5	62		PSS4/1	1,035
59-5	R4SB5	60			253
59-6				PSS4/1	1,570
59-7				PSS4/1	565
59-8				PSS4/1	159
59-9				PSS4/1	211
60-1				PEM1/PSS1	155
60-2	R4SB5	176		PEM1/PSS1	1,974
60-3				WETLAND	287
60-4				WETLAND	213
60-5				WETLAND	1,258
60-6	DITCH				670
60-7				WETLAND	1,398
61-1				PSS1/PEM1	1,330
61-2				WETLAND	572
61-3				PSS1/PEM1	5,698
61-4				WETLAND	6
61-5				PSS1/PEM1	1,937
61-6	DITCH				432
62-1				PSS1/PEM1	2,725
62-2		120		PSS1/PEM1	754
62-3		47		PSS1/PEM1	557
62-4	CULVERT/DITCH				735
62-5	R4SB5	179		PFO1/4B	844
63-1	R4SB5	175			517
63-2				WETLAND	19
63-3	R4SB4	214			948
63-4	CULVERT/DITCH	90			561
63-5	CULVERT/DITCH	64			584
63-6	CULVERT/DITCH	243			1,137
63-7	R4SB3	219			649
64-1	R4SB3	67			667
64-2	R4SB3	168			505
64-3	R4SB3	112			630
64-4	R4SB4	324			1,639
64-5	DITCH	52			110
64-6	STREAM CHANNEL	51			678
65-1	DITCH	52			154
65-2	DITCH	211			308
65-3	DITCH	54			161
65-4	STREAM CHANNEL/DITCH	63			1,249
65-5	STREAM CHANNEL	49			1,403
65-6	DITCH	244			733
65-7	STREAM CHANNEL	16			102
65-8	DITCH	261			781
66-1	R4SB5	100			444
66-2	R4SB5	112			335
66-3	R4SB5	179			514

GRANITE RELIABLE POWER, LLC
GRANITE RELIABLE POWER WIND PROJECT
WETLANDS BUREAU DREDGE & FILL PERMIT APPLICATION
SUMMARY OF WETLAND IMPACTS
July-08

Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
66-4	R3? STREAM CHANNEL		161		2,864
66-5				PFO1Y	1,295
66-6	DITCH	115			343
67-1				PFO1Y	611
67-2				PFO1Y	871
67-3				PFO1Y	207
67-4				PFO1Y	165
67-5				PFO1Y	618
67-6				PFO1Y	1,010
68-1		154		PFO4Y	459
68-2				PFO4Y	546
68-3				PFO4Y	5,117
68-4		231		PFO4Y	693
68-5				PFO4Y	592
68-6		141		PFO4Y	423
68-7				PFO4Y	1,323
68-8				PFO1Y	2,044
68-9				PFO1Y	180
68-10				PFO1Y	1,233
68-11				PFO4Y	471
68-12				PFO4Y	822
68-13				PFO1Y	2,146
69-1		24		PFO4Y	89
69-2		35		PFO1Y	571
69-3	DITCH	67			261
69-4	DITCH	141			422
69-5				PFO1Y	1,141
69-6		52		PFO4Y	617
69-7				PFO4Y	4,775
69-8				PFO4Y	2,099
70-1		88		PFO4Y	2,493
70-2	CULVERT				489
70-3				PFO4Y	677
70-4				PFO1EX & PFO4Y	688
71-1				PFO4E	445
71-2		121		PFO4Y	464
71-3		121		PFO4Y	613
71-4	R4SB3	25		PFO4E	2,862
71-5	R4SB3	22		PFO4E	580
71-6				PFO4Y	2,666
71-7				PFO4Y	508
71-8				PEM1YX	630
71-9				PEM1YX	1,390
71-10				PFO4E	931
71-11				PEM1EX	45
71-12	R4SB3	60		PFO4E	916
71-13				PFO4E	4,352
71-14	R4SB3	59			352
72-1	R4SB3	47			473
72-2				PFO4Y	1,567
72-3	R4SB3	34			443
72-4				PFO4Y	955

GRANITE RELIABLE POWER, LLC
GRANITE RELIABLE POWER WIND PROJECT
WETLANDS BUREAU DREDGE & FILL PERMIT APPLICATION
SUMMARY OF WETLAND IMPACTS
July-08

Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
72-5		49		PFO4E	468
72-6	R4SB3	59		PFO1Y	561
72-7		149		PFO4E	530
72-8	R4SB3	47		PFO1E	519
73-1	DITCH	81			242
73-2	DITCH	219			657
73-3				WETLAND	185
73-4				WETLAND	623
73-5				WETLAND	161
73-6				WETLAND	343
73-7				WETLAND	77
73-8				WETLAND	61
73-9	DITCH	950			2,849
73-10				WETLAND	913
74-1				WETLAND	293
74-2	DITCH				63
74-3	DITCH				138
74-4	DITCH				591
74-5	DITCH				408
74-6	DITCH				448
74-7	DITCH/WETLAND				517
74-8	DITCH				638
74-9	DITCH				520
75-1	DITCH				207
75-2				WETLAND	335
75-3	DITCH				278
75-4	DITCH				363
75-5	DITCH				183
75-6				WETLAND	164
75-7	DITCH/WETLAND				1,088
75-8	DITCH				1,223
75-9				WETLAND	605
75-10	DITCH				184
75-11	DITCH				416
75-12				WETLAND	1,243
76-1				WETLAND	179
76-2	DITCH				165
76-3	WETLAND/STREAM CHANNEL	64			1,117
76-4				WETLAND	255
76-5				WETLAND & CULVERT	242
76-6				WETLAND	10
76-7	DITCH				55
76-8	DITCH/WETLAND				1,658
77-1	DITCH				1,075
77-2	DITCH				890
77-3	DITCH/WETLAND				255
77-4				WETLAND	86
77-5	DITCH				314
77-6				WETLAND	78
77-7	DITCH				241
77-8	STREAM CHANNEL				54
77-9				WETLAND	133

GRANITE RELIABLE POWER, LLC
GRANITE RELIABLE POWER WIND PROJECT
WETLANDS BUREAU DREDGE & FILL PERMIT APPLICATION
SUMMARY OF WETLAND IMPACTS
July-08

Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
77-10				WETLAND	491
77-11	DITCH				226
77-12	DITCH/WETLAND				248
78-1	DITCH				533
78-2				WETLAND	167
78-3				WETLAND	759
78-4				WETLAND	1,189
78-5				WETLAND	379
78-6				WETLAND	280
78-7				WETLAND	787
78-8	DITCH				183
78-9				WETLAND	1,650
78-10				WETLAND	282
79-1				WETLAND	84
79-2				WETLAND	433
79-3				WETLAND	416
79-4	DITCH				627
80-1				WETLAND	1,290
80-2	DITCH				820
80-3				WETLAND	1,256
80-4				WETLAND	2,129
80-5				WETLAND	803
80-6				WETLAND	266
80-7	DITCH				110
80-8	DITCH				67
80-9				WETLAND	346
80-10	DITCH				110
83-1				WETLAND	7,005
83-2				WETLAND	5,251
84-1				PEM	201
85-1				PEM1E	1,549
85-2				PEM1	199
86-1				PEM1E	185
87-1				PFO1/4E & EM1	4,092
87-2				WETLAND	93
87-3				WETLAND	2,463
87-4				WETLAND	5,230
97-1	STREAM CHANNEL	49			432
97-2	STREAM CHANNEL	52			417
97-3	CULVERT	30			298
97-4	STREAM CHANNEL	96			632
97-5	STREAM CHANNEL	24			118
97-6	STREAM CHANNEL/DITCH	22			91
97-7				WETLAND	269
98-1		68		STREAM CHANNEL/WETLAND	410
98-2		52		STREAM CHANNEL/WETLAND	315
99-1	STREAM CHANNEL	16			162
99-2		48		WETLAND	1,367
100-1				WETLAND	5,257
100-2				WETLAND	1,975
100-3		39		STREAM CHANNEL/WETLAND	232
100-4		56		STREAM CHANNEL/WETLAND	348

GRANITE RELIABLE POWER, LLC
GRANITE RELIABLE POWER WIND PROJECT
WETLANDS BUREAU DREDGE & FILL PERMIT APPLICATION
SUMMARY OF WETLAND IMPACTS
July-08

Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
100-5				WETLAND	2,266
102-1				PFO1/4E&F	11,324
103-1				PFO4E	2,861
104-1				PFO4E	2,704
104-2		179		PF4OE	1,538
104-3				PF4OE	485
104-4	STREAM CHANNEL	65			610
104-5				PFO4Y	4,195
104-6				PFO4Y	4,642
104-7				PFO4Y	16
105-1				PFO4Y	1,573
105-2				PFO4Y	8,459
105-3				PFO4Y	5,576
105-4				PFO4Y	683
105-5				PFO4Y	10,112
105-6				PFO4Y	6,038
105-7				PFO4Y	6,836
105-8				PFO4Y	2,037
105-9				PFO4Y	446
105-10				PFO4Y	1,621
105-11				WETLAND	8,162
105-12				WETLAND	937
106-1				WETLAND	4,383
106-2				WETLAND	967
106-3				WETLAND	4,910
106-4				WETLAND	3,371
106-5				WETLAND	1,845
106-6				WETLAND	921
106-7				WETLAND	138
106-8				WETLAND	4,114
106-9				PFO4/SS4E	1,620
106-10				PFO4/SS4E	20,043
106-11				PSS4	6,801
106-12				PSS4	113
106-13				PSS4	1,811
106-14				PSS4	2,234
106-15				PFO4/5E	6,665
106-16				PFO4E	1,089
106-17				PFO4C/E	56
107-1				PF40C/E	7,487
107-2				PSS4E	5,194
117-1				PFO1E	2,407
117-2				PFO4E	1,051
117-3	DITCH				802
117-4				PFO4E	815
117-5				PFO4E	1,176
117-6	R4SB3	62		PFO4E	360
117-7	DITCH				317
117-8				PFO4E	756
117-9	R4SB3	52		PFO4E	510
117-10				PEM1YX	344
117-11				PFO4Y	527

GRANITE RELIABLE POWER, LLC
GRANITE RELIABLE POWER WIND PROJECT
WETLANDS BUREAU DREDGE & FILL PERMIT APPLICATION
SUMMARY OF WETLAND IMPACTS
July-08

Impact #	Stream Classification	R4 Impact (lf)	R3 Impact (lf)	Wetland Classification	Impact (sf)
117-12				PFO4E	663
118-1				PFO4E	3,155
118-2				PEM1YX	629
118-3				PEM1YX	606
118-4				PFO4E	1,875
118-5				PEM1YX	213
118-6	R4SB3J	52		PFO4E	1,229
118-7	DITCH				254
118-8				PFO4E	450
119-1				WETLAND	110
119-2				WETLAND	199
119-3	R4SB3J	54		PFO4E	3,876
119-4	DITCH				350
119-5				PFO4Y	1,466
120-1				PFO4Y	10,106
120-2				PFO4E	9,349
120-3				PFO4E	361
120-4	DITCH				272
120-5				PFO4E	1,977
120-6				PFO4E	1,572
120-7	DITCH				225
120-8				PFO4E	8,347
122-1				PFO4B	2,322
122-2				PFO4B	2,624
123-1	R4SB3D	8		PFO4B	3,292
123-2				PUB	829
123-3				P404B	2,014
123-4				PFO4B	1,680
123-5				PBO4B	6,325
125-1				WETLAND	2,336
125-2				WETLAND	7,279
127-1				WETLAND	84
127-2				WETLAND	305
127-3				WETLAND	3,408
127-4				WETLAND	607
129-1				WETLAND	598
129-2				WETLAND	106
129-3				WETLAND	194
129-4				WETLAND	1,536
129-5				WETLAND	1,734
129-6				WETLAND	2,850
129-7				WETLAND	2,355
131-1				WETLAND	1,468
131-2				WETLAND	830
131-3				WETLAND	109
131-4				WETLAND	8,652
131-5				WETLAND	484
totals		13,057	1,901		558,144

horizons Engineering LLC

SECTION 2

USGS Site Locus

SCALE IN FEET

horizons Engineering Inc

34 School Street
Littleton, NH 03561
Phone 603 444 4111 - Fax 603 444 1343

GRANITE RELIABLE POWER, LLC.

PHILLIPS BROOK WIND POWER PROJECT

COOS COUNTY, NEW HAMPSHIRE

PRELIMINARY OVERALL EXHIBIT

NO	DATE	REVISION DESCRIPTION	ENG	ENG

DATE FEB 2018	PROJECT # 6700
ENGIN'D BY: PLB	DRAWN BY: PLB
CHECK'D BY: SPL	ARCHIVE # M__

SHEET 1 OF 1

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Tax Maps

THIS MAP IS FOR ASSESSMENT PURPOSES IT IS NOT VALID FOR LEGAL DESCRIPTION OR CONVEYANCE

THE HORIZONTAL DATUM IS THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM

PHOTOGRAPHY DATE N/A

COMPLETION DATE JUNE 1, 1990

PRODUCED BY
CARTOGRAPHIC ASSOCIATES, INC.
MUNICIPAL MAPPING CONSULTANTS
P.O. BOX 267 LITTLETON, NH 03561

LEGEND

AREA CALCULATED	AcC	RECORD DIMENSION	100
AREA SURVEYED	Ac	RIGHT OF WAY	R/W
COMMON OWNERSHIP	OR	SCALED DIMENSION	100'S
EXEMPT PROPERTY	E	SUBDIVISION LOT NO	2
MATCH LINE	M.L.	WETLANDS	
WATER	W		
LOT & RANGE	1/45		

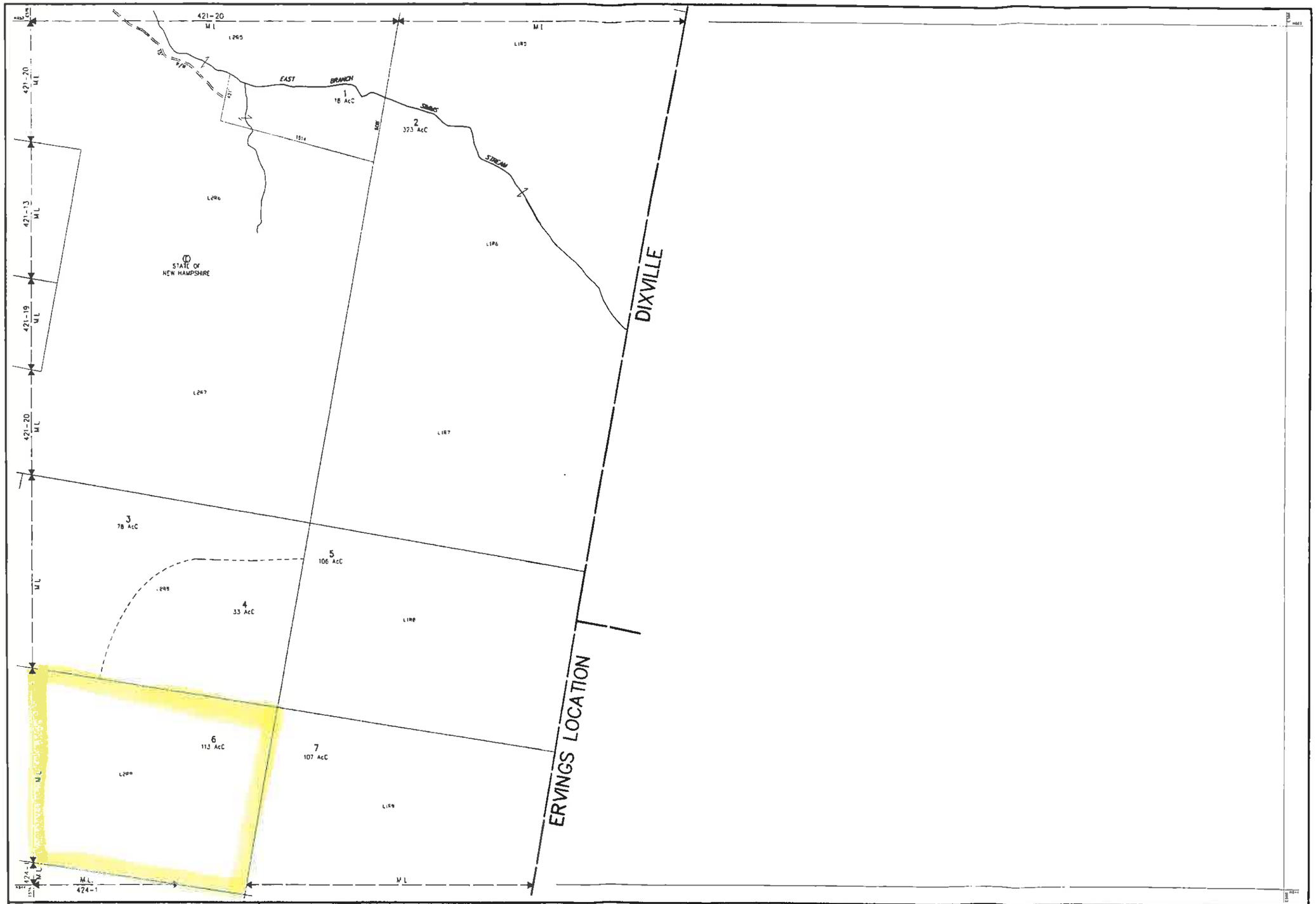
SCALE 1" = 400'
FEET 0 400 800 1200
METERS 0 121.92 243.84 365.76

REVISED TO APRIL 1, 2008

PROPERTY MAPS
COLUMBIA
NEW HAMPSHIRE

INDEX DIAGRAM
421 425
422
423

MAP NO.
424



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PHOTOGRAPHY DATE N/A

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PRODUCED BY
CARTOGRAPHIC ASSOCIATES, INC.
MUNICIPAL MAPPING CONSULTANTS
P O BOX 267 LITTLETON, NH 03561

LEGEND

AREA CALCULATED AcC
AREA SURVEYED Ac
COMMON OWNERSHIP / OR /
EXEMPT PROPERTY Ⓔ
MATCH LINE M1
WATER —W—
LOT & RANGE L1R3
RECORD DIMENSION 100'
RIGHT OF WAY R/W
SCALED DIMENSION 100'S
SUBDIVISION LOT NO ②
WETLANDS

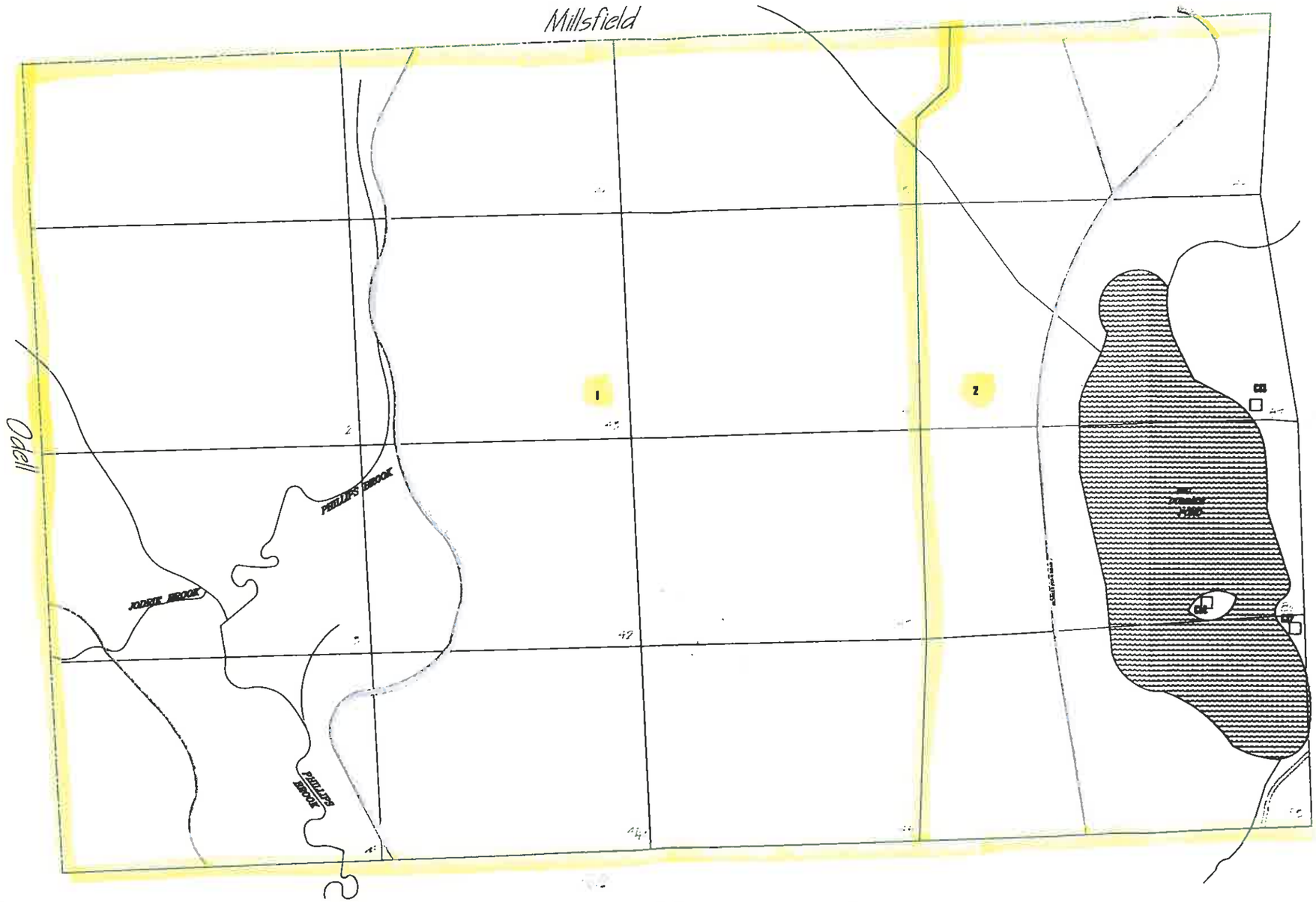
SCALE 1" = 400'
FEET 0 400 800 1200
METERS 0 121.92 243.84 365.76

REVISED TO APRIL 1, 2008

PROPERTY MAPS
COLUMBIA
NEW HAMPSHIRE

INDEX DIAGRAM
420 426
421
422 424

MAP NO.
425



Legend

- Parcel Border
- Adjacent Map Border
- Elevation — 125.3'
- Right-Of-Way
- Parcel Boundary
- Parcel Boundary (water)
- Town Land
- Paved Road
- Unpaved Road
- Private Road
- Range & Lot Line
- Camp/Bn Land

400 0 400 800 1200 1600

Scale

(in feet)

N

TAX MAP

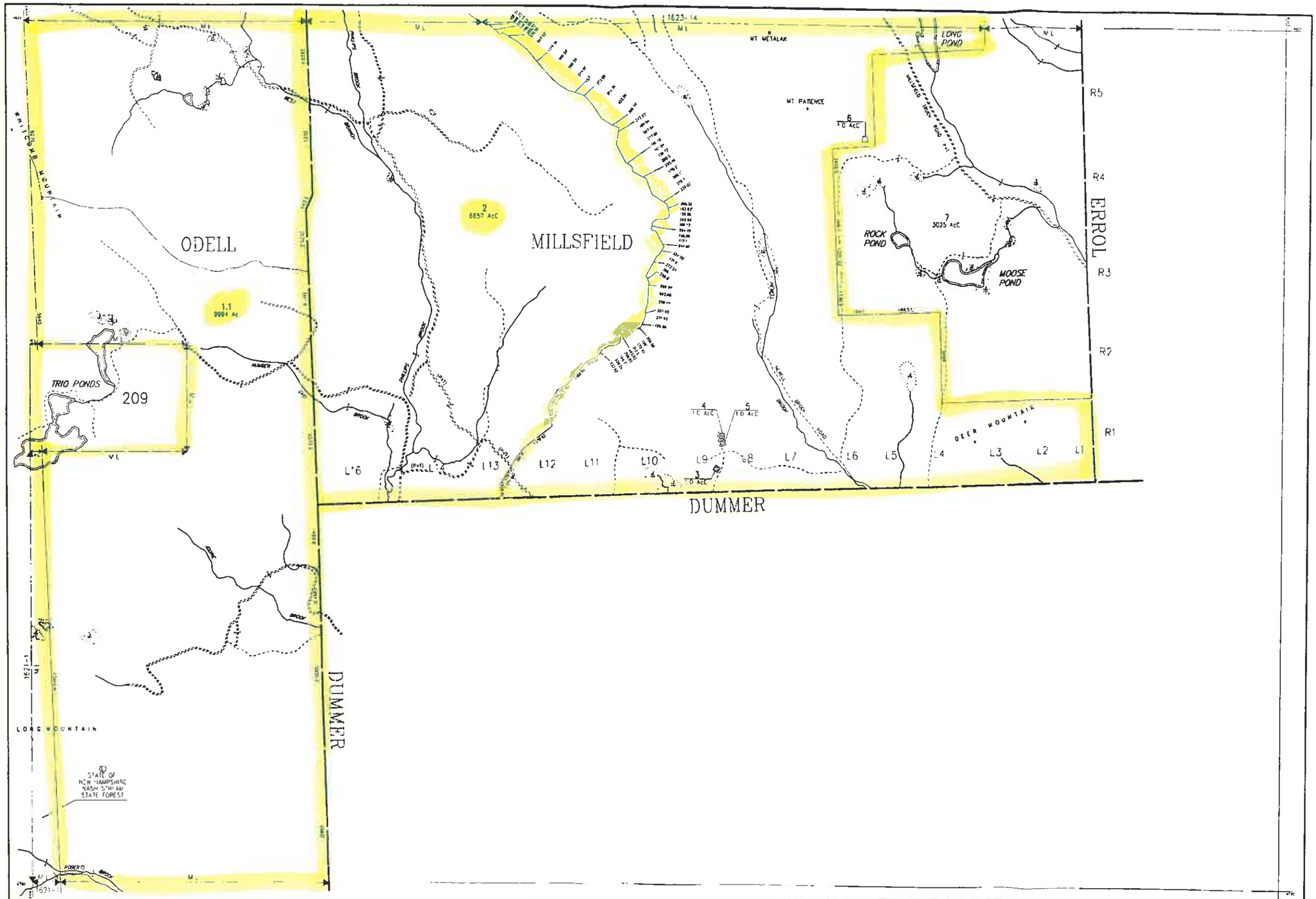
Town of Dummer

COOS COUNTY

NEW HAMPSHIRE

April 1, 2005

R1



THIS MAP IS FOR ASSESSMENT PURPOSES IT IS NOT VALID FOR LEGAL DESCRIPTION OR CONVEYANCE

THE HORIZONTAL DATUM IS THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM

COMPLETION DATE MAY 13, 1992

PRODUCED IN 1992 BY
CARTOGRAPHIC ASSOC. INC.
PROFESSIONAL CONSULTANTS
MUNICIPAL MAPPING - GIS - LAND SURVEYING
11 PLEASANT STREET LITTLETON NEW HAMPSHIRE 03561
(603)444-6768 - (800)122-4540 - FAX (603)444-1366

LEGEND

PUBLIC ROAD
PRIVATE ROAD (PVT)
TRAIL OR UNIMPROVED ROAD
WILDERNESS AREA BOUNDARY
AREA SURVEYED
AREA CALCULATED
RECORD DIMENSION
SCALED DIMENSION
MATCH LINE
Ac SURFACE WATER
AcC WETLANDS
TAX EXEMPT PROPERTY
SUBDIVISION LOT NO
LEASE LAND
RIGHT OF WAY
RANGE/LOT
COMMON OWNERSHIP

SCALE 1" = 1600'
FEET 800 0 1600 2400 3200 4800
METERS 400 0 400 800 1200

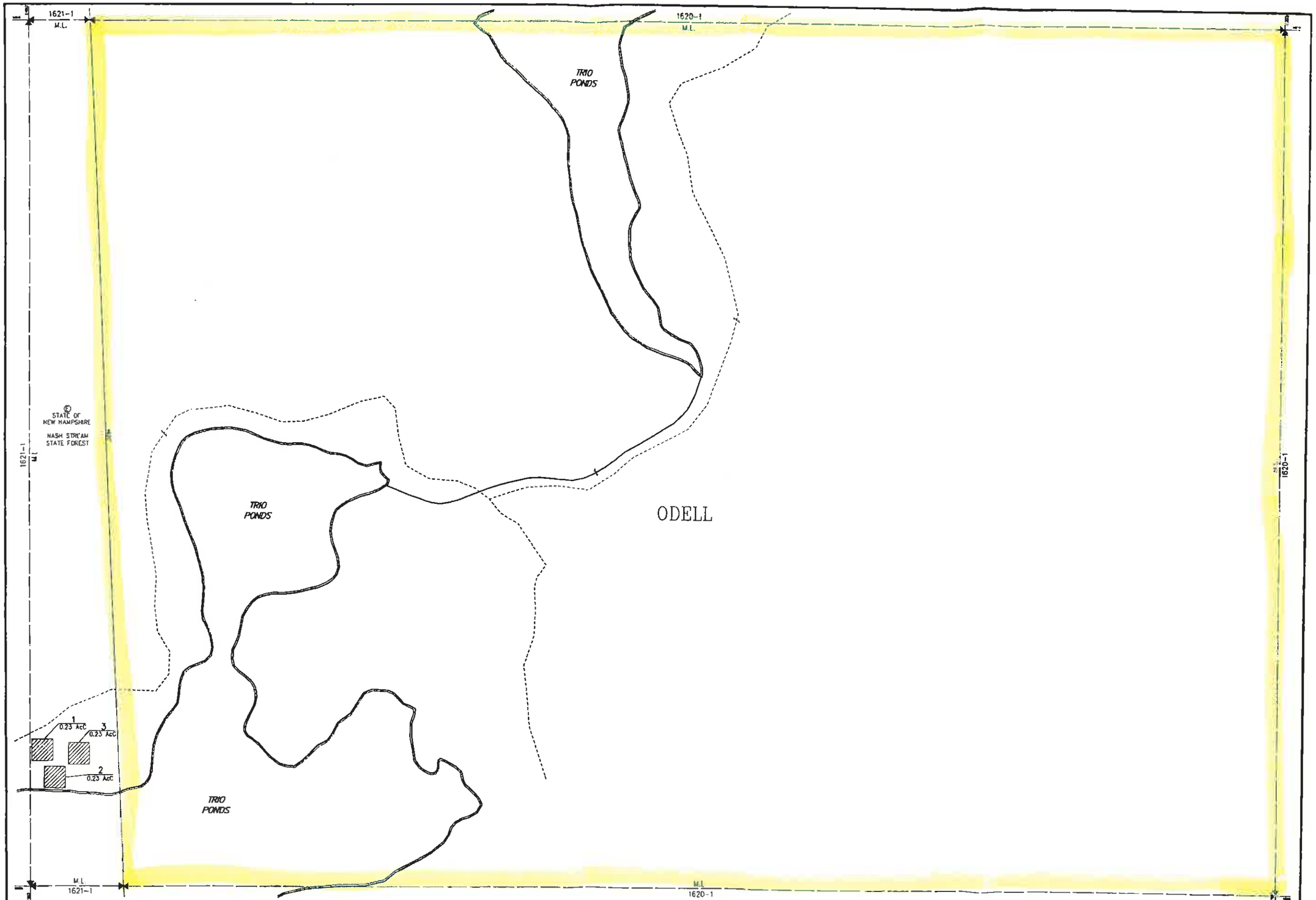
REVISED TO APRIL 1, 2008

PROPERTY MAPS
COOS COUNTY
UNINCORPORATED PLACES
NEW HAMPSHIRE

INDEX DIAGRAM

1622	1623	1624
1621		1619
1616	1617	1618

MAP NO.
1620



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THE HORIZONTAL DATUM IS THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM.

COMPLETION DATE: MAY 13, 1992

PRODUCED IN 1992 BY
CARTOGRAPHIC ASSOC. INC.
PROFESSIONAL CONSULTANTS
MUNICIPAL MAPPING – GIS – LAND SURVEYING
12 PLEASANT STREET, P.O. BOX 267, LITTLETON, NEW HAMPSHIRE 03561
(603)444-6768 – 1(800)322-4540 – FAX (603)444-1368

LEGEND

PUBLIC ROAD
PRIVATE ROAD (PVT)
TRAIL OR UNIMPROVED ROAD
WILDERNESS AREA BOUNDARY
AREA SURVEYED ..... Ac
AREA CALCULATED ..... AcC
RECORD DIMENSION ..... 100'
SCALED DIMENSION ..... 100'S
MATCH LINE
SURFACE WATER
WETLANDS
TAX EXEMPT PROPERTY ..... E
SUBDIVISION LOT NO. 3
LEASE LAND
RIGHT OF WAY
RANGE/LOT L13
COMMON OWNERSHIP ..... OR

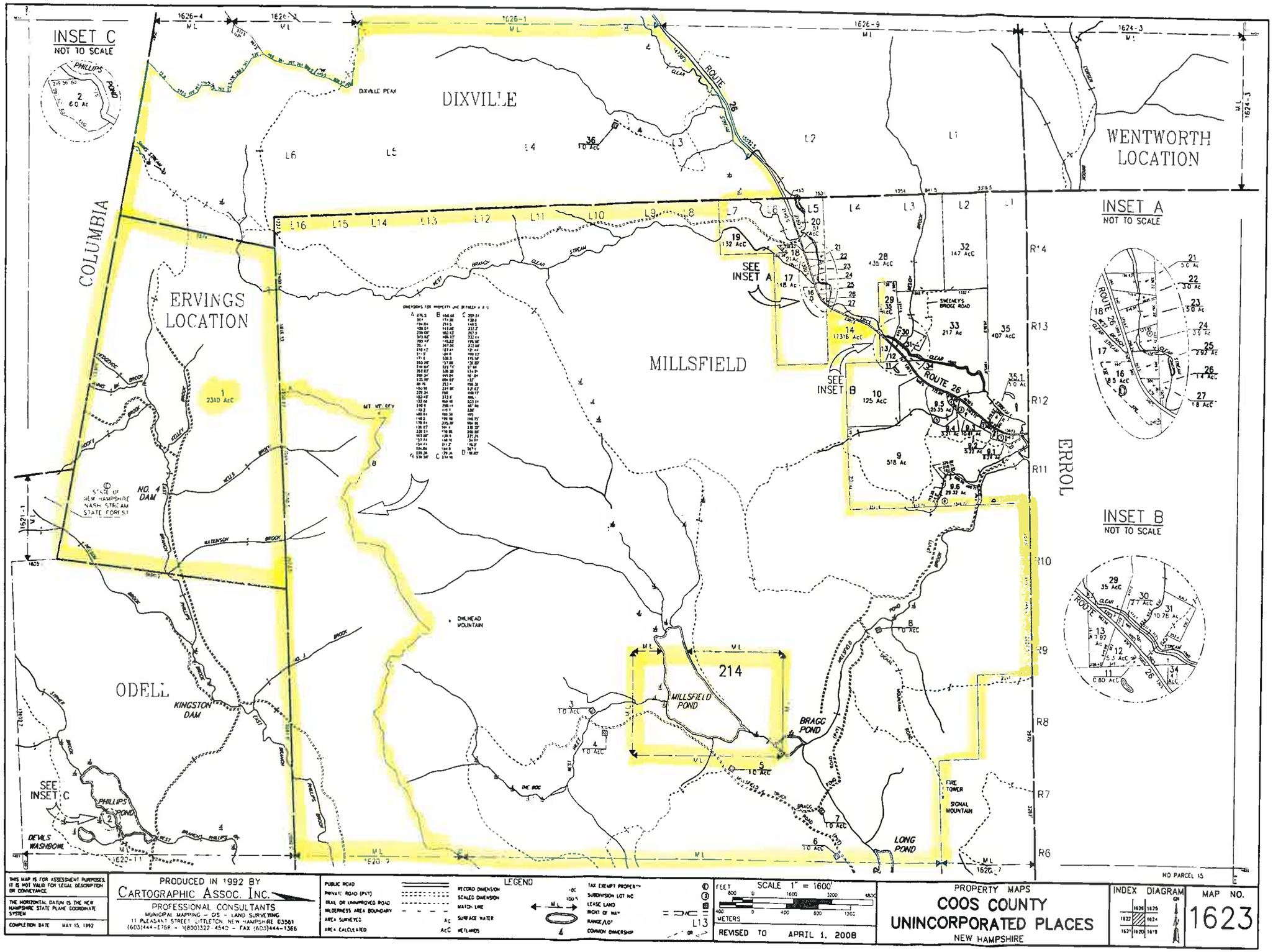
FEET SCALE 1" = 200'
100 0 200 400 600
50 0 50 100 150
METERS

REVISED TO: APRIL 1, 2004

PROPERTY MAPS
COOS COUNTY UNINCORPORATED PLACES
NEW HAMPSHIRE

INDEX DIAGRAM
1621
208
1620
207

MAP NO.
209



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

THE HORIZONTAL DATUM IS THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM

COMPLETION DATE MAY 15, 1992

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(603)444-6768 – 1(800)327-4540 – FAX (603)444-1386

LEGEND

PUBLIC ROAD
PRIVATE ROAD (PVT)
TRAIL OR UNIMPROVED ROAD
WILDERNESS AREA BOUNDARY
AREA SURVEYED — AC
AREA CALCULATED — ACC
RECORD DIMENSION
SCALED DIMENSION
MATCH LINE
SURFACE WATER
WETLANDS
TAX EXEMPT PROPERTY
SUBDIVISION LOT NO
LEASE LAND
RIGHT OF WAY
RANGE/LOT
COMMON OWNERSHIP

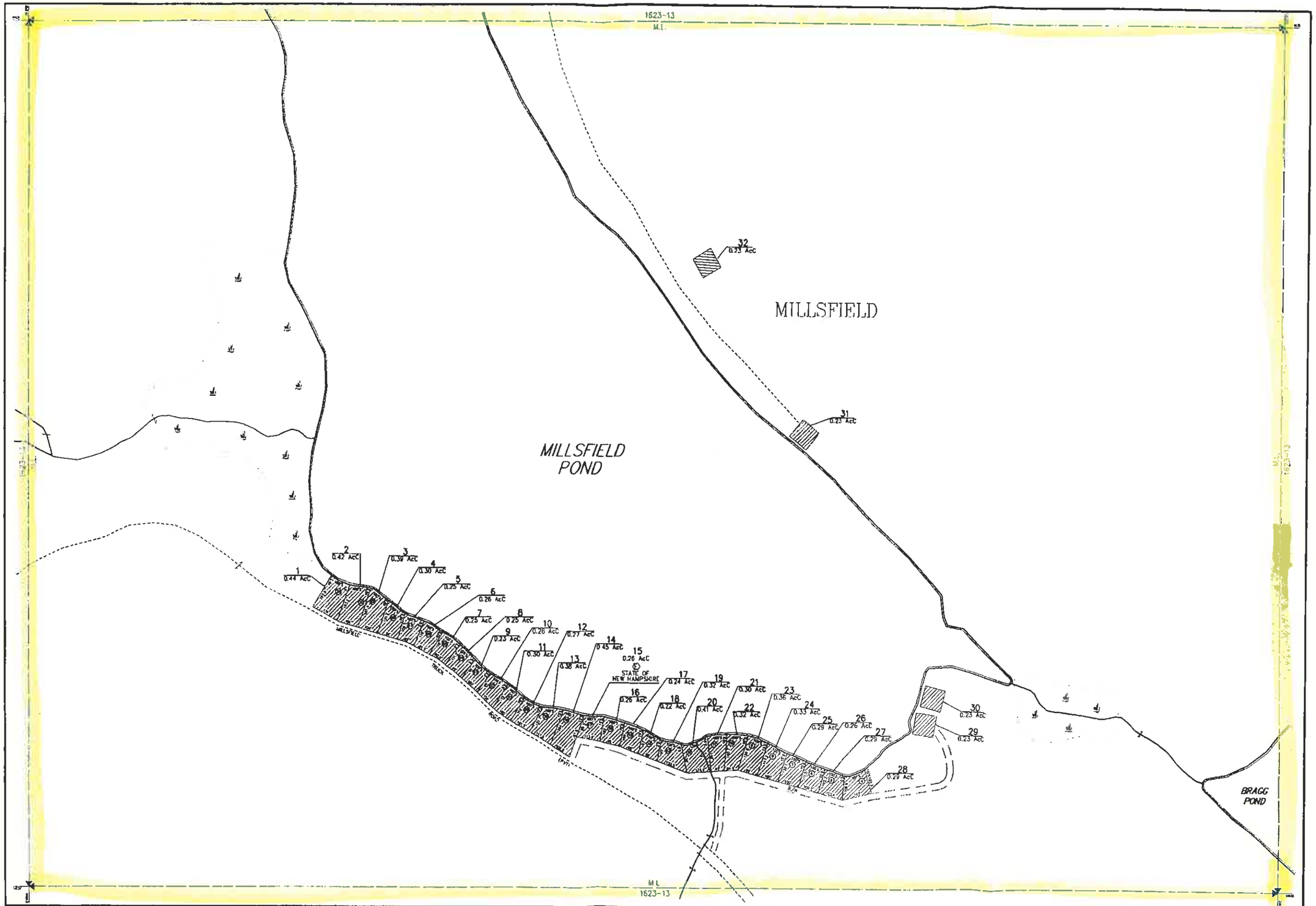
SCALE 1" = 1600'
FEET 800 0 1600 3200 4800
METERS 400 0 400 800 1200

REVISED TO APRIL 1, 2008

PROPERTY MAPS
COOS COUNTY
UNINCORPORATED PLACES
NEW HAMPSHIRE

INDEX DIAGRAM

MAP NO. 1623



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(603)444-6768 ~ 1(800)322-4340 ~ FAX (603)444-1366

LEGEND

PUBLIC ROAD		RECORD DIMENSION	100
PRIVATE ROAD (PVT)		SCALED DIMENSION	100'S
TRAIL OR UNIMPROVED ROAD		MATCH LINE	M.L.
WILDERNESS AREA BOUNDARY		SURFACE WATER	
AREA SURVEYED	Ac	WETLANDS	
AREA CALCULATED	AcC		

TAX EXEMPT PROPERTY	E
SUBDIVISION LOT NO	2
LEASE LAND	
RIGHT OF WAY	
RANGE/LOT	L13
COMMON OWNERSHIP	CR

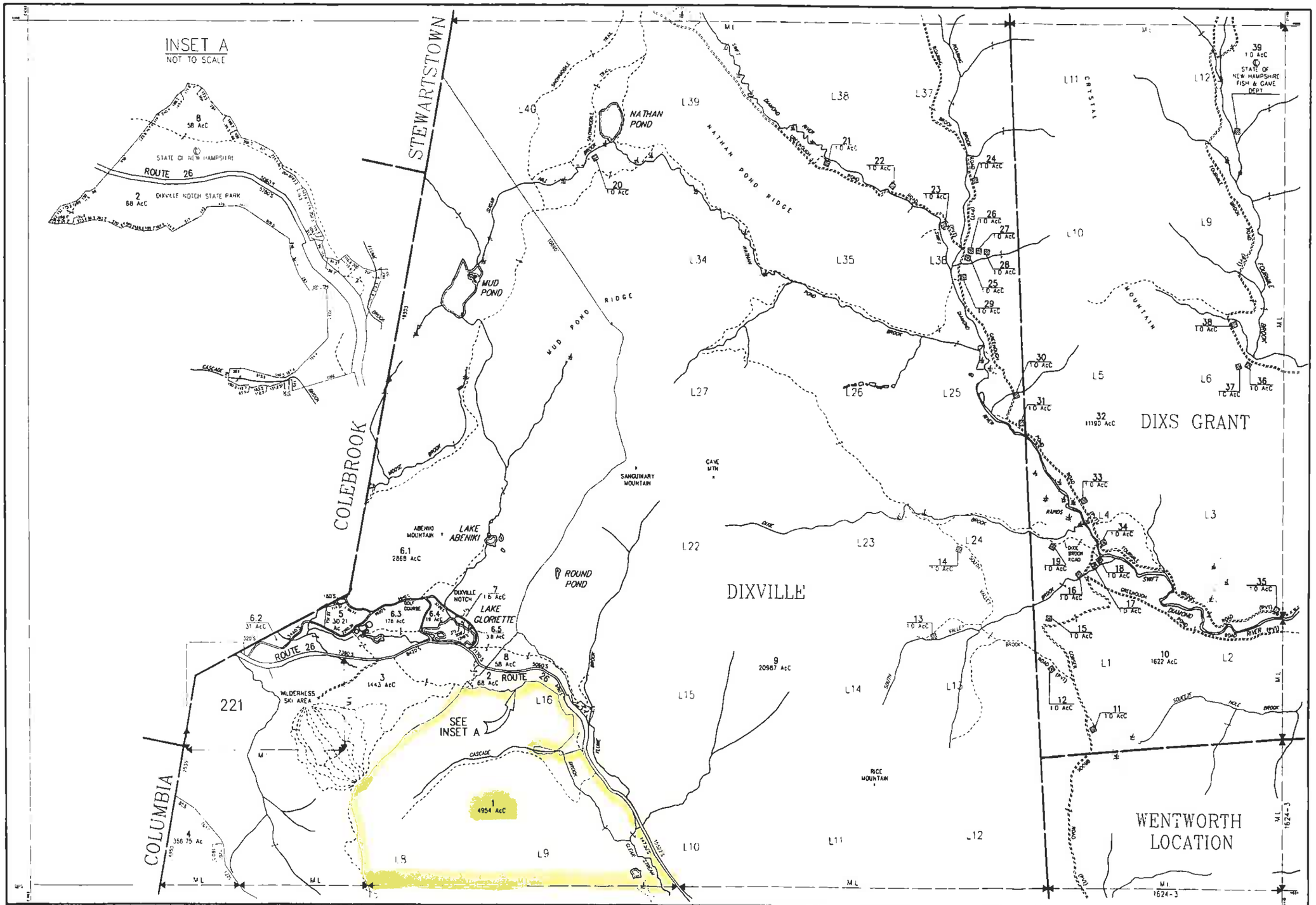
SCALE 1" = 200'
FEET 100 0 200 400 600
METERS 50 0 50 100 150

REVISED TO: APRIL 1, 2008

PROPERTY MAPS
COOS COUNTY UNINCORPORATED PLACES
NEW HAMPSHIRE

INDEX DIAGRAM
1623 1623 1623 1623

MAP NO. 214



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LEGEND

PUBLIC ROAD
PRIVATE ROAD (PVT)
TRAIL OR UNIMPROVED ROAD
WILDERNESS AREA BOUNDARY
AREA SURVEYED
AREA CALCULATED
RECORD DIMENSION
SCALED DIMENSION
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WETLANDS
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SUBDIVISION LOT NO
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SCALE 1" = 1600'
FEET 800 0 1600 3200 4800
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REVISED TO APRIL 1, 2008

PROPERTY MAPS
COOS COUNTY UNINCORPORATED PLACES
NEW HAMPSHIRE

INDEX DIAGRAM
1627 1628 1625 1623 1623 1624

MAP NO. 1626

Abutters List
Abutter Letters
Certified Mail Receipts

ABUTTERS LIST

Bayroot, LLC c/o Wagner Forest Management, Ltd PO Box 160 Lyme, NH 03768 *Tax Map 1626, Lot 1* *Dixville, NH*	Kennebec West Forest, LLC PO Box 320 Stratton, ME 04982 *Tax Map 1623, Lot 1* *Ervings Location, NH*	Bayroot, LLC c/o Wagner Forest Management, Ltd PO Box 160 Lyme, NH 03768 *Tax Map 1623, Lot 14* *Millsfield, NH*
Kennebec West Forest, LLC PO Box 320 Stratton, ME 04982 *Tax Map 1620, Lot 2* *Millsfield, NH*	Kennebec West Forest, LLC PO Box 320 Stratton, ME 04982 *Tax Map 1620, Lot 1.1* *Odell, NH*	Kennebec West Forest, LLC PO Box 320 Stratton, ME 04982 *Tax Map 424, Lot 2* *Columbia, NH*
Kennebec West Forest, LLC PO Box 320 Stratton, ME 04982 *Tax Map 425, Lot 6* *Columbia, NH*	Kennebec West Forest, LLC PO Box 320 Stratton, ME 04982 *Tax Map R1, Lot 1* *Dummer, NH*	Bayroot, LLC c/o Wagner Forest Management, Ltd PO Box 160 Lyme, NH 03768 *Tax Map R1, Lot 2* *Dummer, NH*
Allen Bouthillier & Gregory Stone 35 Hodge Rd Lancaster, NH 03584 *Tax Map 425, Lot 2* *Columbia, NH*	Gary D. Foss 692 Bungy Rd Columbia, NH 03576 *Tax Map 425, Lots 3 & 4* *Columbia, NH*	WELOG, INC. *25 Sunset Drive* *Colebrook, NH 03576* *Tax Map 425, Lot 5* *Columbia, NH*
Black Bear Cub, Inc. PO Box 320 Stratham, ME 04982 *Tax Map 425, Lot 7* *Tax Map 424 Lot 1* *Columbia, NH*	State of New Hampshire DRED PO Box 1856 Concord, NH 03302 *Tax Map 422, Lots 4 & 5* *Columbia, NH*	Alice D. Cote 8 B Street Hudson, NH 03051 *Tax Map 404, Lot 2* *Stark, NH*
Dorothy Perry 188 Sullivan Rd Stark, NH 03582 *Tax Map 404, Lot 3* *Stark, NH*	Charles Carpenter 653 Paris Rd Stark, NH 03582 *Tax Map 404, Lots 6 & 7* *Stark, NH*	Peter Johnson 215 Stoneham Rd Brookfield, NH 03872 *Tax Map 404, Lot 8* *Stark, NH*
	State of New Hampshire Nash Stream State Forest PO Box 1856 Concord, NH 03302 *Tax Map 406, Lot 4* *Stark, NH*	

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Jonathan & Katherine Frizzell 58 Spring Street Colebrook, NH 03576 *Tax Map 1623, Lot 036/1* *Dixville, NH*	State of New Hampshire DRED PO BOX 1856 Concord, NH 03302 *Tax Map 1626, Lot 2* *Dixville, NH*	Tillotson Corporation c/o Donald Vashaw One Cranberry Hill, Suite 105 Lexington, MA 02421 *Tax Map 1626, Lot 3* *Dixville, NH*
King's Arrow Realty Trust J. Cochrane & C. Chamberlain, Cotrs 33 Beecher Park Bangor, ME 04401 *Tax Map 1626, Lot 4* *Dixville, NH*	Bayroot, LLC c/o Wagner Forest Management, Ltd PO Box 160 Lyme, NH 03768 *Tax Map 1626, Lot 9* *Dixville, NH*	State of New Hampshire DRED PO Box 1856 Concord, NH 03302 *Tax Map 1621, Lot 1* *Odell, NH*
Timberland Trails, Inc. William Altenburg, President PO Box 1076 Conway, NH 03818-0000 *Tax Map 1620, Lots 1.22/1 & 002/1* *Millsfield, NH*	Millsfield Sportsmen Club c/o Paul L'Heureux 42 Dustin Street Berlin, NH 03570 *Tax Map 1620, Lot 003/1* *Millsfield, NH*	Andrew & Samuel Johnson 7 Wilbrod Avenue Dover, NH 03820 *Tax Map 1620, Lot 004/1* *Millsfield, NH*
Laurence A. Russo, Etal 16 Ledgewood Avenue Malrose, MA 02176 *Tax Map 1620, Lot 005/1* *Millsfield, NH*	Twitchell Heirs c/o Thomas Carney 501 Portland Street Rochester, NH 03867 *Tax Map 1620, Lot 007/1* *Millsfield, NH*	Debra Dingee Pauline Rand PO Box 265 Cornish Flat, NH 03746 *Tax Map 209, Lot 001/1* *Odell, NH*
Outing Club C/o Paul Beaton 181 Rumford Avenue Bryant Pond, ME 04219-6418 *Tax Map 209, Lot 003/1* *Odell, NH*	William & Joyce Eldridge 47 Jordan Drive Gorham, ME 04039-2198 *Tax Map 209, Lot 002/1* *Odell, NH*	Kennebec West Forest, LLC PO Box 320 Stratton, ME 04982 *Tax Map 1623, Lot 2* *Odell, NH*
Richard Campana 269 Lake Drive So. Hamilton, MA 01982 *Tax Map 1623, Lot 003/1* *Millsfield, NH*	David Campana 260 Hedding Road Epping, NH 03042 *Tax Map 1623, Lot 004/1* *Millsfield, NH*	Joseph & Debbie Martin 265 Norway Street Berlin, NH 03570-3813 *Tax Map 1623, Lot 005/1* *Millsfield, NH*

ABUTTERS LIST

Richard, Kathryn, and Mark Dickson PO Box 555 Canterbury, NH 03224 *Tax Map 1623, Lot 006/1* *Millsfield, NH*	J. Andrew Knowlton 83 Berry Road Loudon, NH 03307-1100 *Tax Map 1623, Lot 007/1* *Millsfield, NH*	Vernnont-Sters Camp 2007 Trust Stephen H. Russell, Trustee PO Box 6 Hinesburg, VT 05461 *Tax Map 1623, Lot 008/1* *Millsfield, NH*
Pond Brook Estates, LLC 13 Parsons Street Colebrook, NH 03576 *Tax Map 1623, Lots 9 & 9.6* *Millsfield, NH*	Lewis & Paula Sweatt PO Box 48 Errol, NH 03579 *Tax Map 1623, Lot 10* *Millsfield, NH*	Manuel & Ilene L. Franco 123 Timson Street Lynn, MA 01902 *Tax Map 1623, Lot 13* *Millsfield, NH*
Luc & Louise Cote PO Box 190 Errol, NH 03579 *Tax Map 1623, Lots 16 & 17* *Millsfield, NH*	Propan Realty, LLC Log Haven Campground PO Box 239 Errol, NH 03579 *Tax Map 1623, Lot 18* *Millsfield, NH*	Charle S. & Sonja M. Sheldon PO Box 11 Colebrook, NH 03576 *Tax Map 1623, Lot 19* *Millsfield, NH*
Thomas Claflin PO Box 124 Errol, NH 03579 *Tax Map 1623, Lot 26* *Millsfield, NH*	Shawn M. & Victoria L. Cote PO Box 256 Errol, NH 03579 *Tax Map 1623, Lot 27* *Millsfield, NH*	William J. Conley Michelle Burg Little 1248 Union Street Littleton, NH 03561 *Tax Map 214, Lot 001/1* *Millsfield, NH*
Scott R. Hodgdon Steven Kalway 15 Pig Lane Strafford, NH 03884-6635 *Tax Map 214, Lot 002/1* *Millsfield, NH*	Gary & Janine Gilbert 621 Milan Hill Road Milan, NH 03588 *Tax Map 214, Lot 003/1* *Millsfield, NH*	Walter F. & Jeannette Gilbert 76 Spring Street Berlin, NH 03570 *Tax Map 214, Lot 004/1* *Millsfield, NH*
Brad & Kathy Brodeur 2 Beech Hill Drive Londonderry, NH 03053 *Tax Map 214, Lot 005/1* *Millsfield, NH*	Howard Welch, Etal 829 S. Barnstead Road Center Barnstead, NH 03225 *Tax Map 214, Lot 006/1* *Millsfield, NH*	Thomas E. Kennedy, III 85 Virginia Avenue Haverhill, MA 01830 *Tax Map 214, Lot 007/1* *Millsfield, NH*

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Gene Meier PO Box 191 Campton, NH 03223-0191 *Tax Map 214, Lot 008/1* *Millsfield, NH*	Lloyd & Judy Paulding Jr. PO Box 114 Errol, NH 03579 *Tax Map 214, Lot 009/1* *Millsfield, NH*	Jesse & Kathleen Bushaw, Jr. 189 Lake Tarleton Road Warren, NH 03279 *Tax Map 214, Lot 010/1* *Millsfield, NH*
Bruce & Patricia Clattenburg 28 Eaton Road Pittsfield, NH 03263 *Tax Map 214, Lot 011/1* *Millsfield, NH*	Kenneth & Sandra McKenzie 338 Africa Road Alton, NH 03809 *Tax Map 214, Lot 012/1* *Millsfield, NH*	Keith & Verna Robie 21 Fox Run Piermont, NH 03779 *Tax Map 214, Lot 013/1* *Millsfield, NH*
Roger G. Nadeau 658 King Street Berlin, NH 03570 *Tax Map 214, Lot 014/1* *Millsfield, NH*	State of NH Fish & Game 11 Hazen Drive Concord, NH 03301 *Tax Map 214, Lot 015/1* *Millsfield, NH*	Adam Downs 118 Windsong Place Meredith, NH 03253 *Tax Map 214, Lot 016/1* *Millsfield, NH*
Joseph & Denise Martin 24 Argonne Street Berlin, NH 03570 *Tax Map 214, Lot 017/1* *Millsfield, NH*	Michael Gilbert Family Trust Michael & Diane Gilbert, Trustees 24 Twelfth Street Berlin, NH 03570 *Tax Map 214, Lot 018/1* *Millsfield, NH*	Brian R. & Gisele L. Mercier Carl & Lisa Mercier 16 Chase Brook Center Litchfield, NH 03052-2549 *Tax Map 214, Lot 019/1* *Millsfield, NH*
Norman B. Poirier, Sr. Norman B. Poirier, Jr. 23 Countryside Avenue Berlin, NH 03570 *Tax Map 214, Lot 020/1* *Millsfield, NH*	Thomas & Monique Martin 25 Harrington Avenue Berlin, NH 03570 *Tax Map 214, Lot 021/1* *Millsfield, NH*	Emile & Rita Croteau 2229 Riverside Drive Berlin, NH 03570 *Tax Map 214, Lot 022/1* *Millsfield, NH*
Richard & Irene Gagnon 40 Darby Lane Rochester, NH 03839 *Tax Map 214, Lot 023/1* *Millsfield, NH*	Leo Bergeron 620 Kent Street Berlin, NH 03570 *Tax Map 214, Lot 024/1* *Millsfield, NH*	Paul & Beverly Ingersoll 49 Gordon Avenue Berlin, NH 03570 *Tax Map 214, Lot 025/1* *Millsfield, NH*

ABUTTERS LIST

Roger Martineau Dr. Boyd Weston 39 Foxberry Drive New Boston, NH 03070 *Tax Map 214, Lot 026/1* *Millsfield, NH*	Phillip Dionne PO Box 295 Errol, NH 03579 *Tax Map 214, Lot 027/1* *Millsfield, NH*	Raymond & Pauline Bergeron 39 Countryside Avenue Berlin, NH 03570 *Tax Map 214, Lot 028/1* *Millsfield, NH*
Ralph C. Lyford II 429 Hammond Hill Road Plymouth, NH 03264 *Tax Map 214, Lot 029/1* *Millsfield, NH*	Bayroot, LLC c/o Wagner Forest Management, Ltd PO Box 160 Lyme, NH 03768 *Tax Map 214, Lot 30* *Millsfield, NH*	Millsfield Sportsmen Club c/o Paul L'Heureux 42 Dustin Street Berlin, NH 03570 *Tax Map 214, Lot 031/1* *Millsfiel, NH*
Scott & Elaine Riendeau 19 First Street Gorham, NH 03581 *Tax Map 214, Lot 032/1* *Millsfield, NH*	Stephen Woodward PO Box 368 Berlin, NH 03570 *Tax Map R9, Lot 1* *Tax Map R14, Lot 12* *Dummer, NH*	Bruce Faulkenham 20 Jack & Jill Trailer Park Dover, NH 03820 *Tax Map R16, Lot 1* *Dummer, NH*
Barry Kelley 220 Church St. Berlin, NH 03570 *Tax Map R16, Lot 5* *Dummer, NH*	Granite Reliable Power. LLC *8 Railroad Ave* *Essex, CT 06426* *Tax Map R16, Lot 11* *Dummer, NH*	Leo Laroche 104 York St. Apt #3 Berlin, NH 03570 *Tax Map R16, Lot 13* *Dummer, NH*
Charles W Carpenter, Jr. 653 Paris Rd Stark, NH 03582 *Tax Map R16, Lot 15* *Dummer, NH*	April P & John P Tluszcz 105 Poole St. Ludlow, MA 01056 *Tax Map R16, Lot 16* *Dummer, NH*	Larry Lizotte 10 Brown Road Deerfield, NH 03037 *Tax Map R13, Lot 12-B* *Errol, NH*
Merit Bean, Jr. RFD 1, Box 337 Phillips, ME 04966 *Tax Map R13, Lot 15* *Errol, NH*	Francis & Judith Keating III 29 Sunset Road Cambridge, MA 02138 *Tax Map R13, Lot 16* *Errol, NH*	Thomas Carney 501 Portland Street Rochester, NH 03867-2425 *Tax Map R13, Lot 3* *Errol, NH*

ABUTTERS LIST

KDRM, LLC PO Box 14 Danville, NH 03819 *Tax Map R4, Lot 1, Map R10, Lot 1, Map R6, Lot 2, Map R7, Lot 1* *Dummer, NH*	Richard Holland 693 Sixth Avenue Berlin, NH 03570 *Tax Map R3, Lot C7* *Dummer, NH*	Richard Bellanger 114 Washington Street Rochester, NH 03867 *Tax Map R3, Lot C8* *Dummer, NH*
Maurice Wheeler 397 Willard Street Berlin, NH 03570 *Tax Map R3, Lot C18* *Dummer, NH*	Katherine Treamer 843 Fifth Avenue Berlin, NH 03570 *Tax Map R4, Lot 2* *Dummer, NH*	Millsfield Sportsmen Club c/o Paul L'Heureux 42 Dustin Street Berlin, NH 03570 *Tax Map R4, Lot C17* *Tax Map R8, Lot C10* *Dummer, NH*
John Hertz 280 Wight Street Berlin, NH 03570 *Tax Map R4, Lot 3* *Dummer, NH*	Daniel Jolin PO Box 87 Milan, NH 03588 *Tax Map R4, Lot C15* *Dummer, NH*	Shawn Dumont 20 Arthur Street Berlin, NH 03570 *Tax Map R4, Lot C16* *Dummer, NH*
Holly Fonatine 7 Country Lane Gorham, NH 03581 *Tax Map R4, Lot C18* *Dummer, NH*	Roland Arsenault 286 Success Road Milan, NH 03588 *Tax Map R6, Lot C5* *Dummer, NH*	Dennis Croteau 700 Third Avenue, Apt. #3 Berlin, NH 03570 *Tax Map R6, Lot C4* *Dummer, NH*
John Joyal 1 Molly Lane Somersworth, NH 03878 *Tax Map R6, Lot C3* *Dummer, NH*	Donald LaPointe 194 Howard Street Berlin, NH 03570 *Tax Map R6, Lot C2* *Dummer, NH*	Larry Alonzo 370 Portland Street Berlin, NH 03570 *Tax Map R6, Lot C1* *Dummer, NH*
David Patry 544 Second Avenue Berlin, NH 03570 *Tax Map R6, Lot C6* *Dummer, NH*	James Ashworth 47 Cogswell Hill Road Canterbury, NH03244 *Tax Map R6, Lots 1 & 3* *Tax Map R7, Lot 2* *Tax Map R11, Lot 5* *Dummer, NH*	Leo Blanchette 9 McFarland Street Gorham, NH 03581 *Tax Map R8, Lot C11* *Dummer, NH*

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NHDES – Water Council 29 Hazen Drive, PO Box 95 Concord, NH 03302-0095 *Tax Map R10, Lot 2* *Dummer, NH*	Robert Rasmussen 148 Norway Street Berlin, NH 03570 *Tax Map R10, Lot C21* *Dummer, NH*	Charles Kalil PO Box 188 North Conway, NH 03860 *Tax Map R11, Lot 3* *Tax Map U1, Lot 46* *Dummer, NH*
Roger LaVerdiere 1227 NH Route 16 Dummer, NH 03588 *Tax Map R11, Lot 1* *Dummer, NH*	Town of Dummer 75 Hill Road Dummer, NH 03588 *Map R11, Lot 4, Map R14, Lot 1,* *Map U1, Lot 40, Map R18, Lot 3,* *Map R19, Lot 3* *Dummer, NH*	Louis Lanoire 6 Highland Street West Warwick, RI 03893 *Tax Map R14, Lot 13* *Dummer, NH*
Estate of Clayson Glover c/o Melody Glover 129 Hill Rad Dummer, NH 03588 *Tax Map R13, Lot 4* *Dummer, NH*	United State of America 11 New England Executive Park Burlington, MA 01803 *Tax Map R13, Lot 12* *Dummer, NH*	Margaret Dalphonse 62 Cascade Flats Gorham, NH 03581 *Tax Map R12, Lot 7* *Dummer, NH*
Nicholas Pichon 238 Dolly Road Contoocook, NH 03229 *Tax Map R12, Lot 9* *Dummer, NH*	Richard Tessier 1442 NH Route 16 Dummer, NH 03588 *Tax Map R12, Lots 1& 11* *Dummer, NH*	Ronald Dogopoulos 5 Blackstone Drive, Unit #2 Nashusa, NH 03063 *Tax Map R12, Lot 2* *Dummer, NH*
Paul Provencher 108 Winslow Road Weare, NH 03281 *Tax Map R12, Lot 3* *Dummer, NH*	Robert Ouellet 76 Main Street Errol, NH 03579 *Tax Map R12, Lots 4 & 5* *Dummer, NH*	Plum Creek Maine Timberlands 49 Mountain Avenue, PO Box 400 Fairfield, ME 04937 *Tax Map R12, Lots 6 & 12* *Dummer, NH*
Timothy Redin 47 Sessions Pond Hampden, MA 01306 *Tax Map R16, Lot 12* *Dummer, NH*	Eric Olson PO Box 252 Rindge, NH 03461 *Tax Map R17, Lots25, 38, 27* *Tax Map R18, Lots 4, 5, 6 & 7* *Dummer, NH*	William Woodward 7 Hills Avenue Concord, NH 03301 *Tax Map R19, Lot 1* *Dummer, NH*

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Romeo Bergeron PO Box 174 Milan, NH 03588 *Tax Map R19, Lots 2 & 7* *Dummer, NH*	Donald Lindh 42 Maxwell Street Manchester, NH 03102 *Tax Map R19, Lot C25* *Dummer, NH*	Paul Delisle 3 Horne Street Berlin, NH 03570 *Tax Map R19, Lot C26* *Dummer, NH*
Ed Batchelder 99 Kelley Pond Road New Hampton, NH 03256 *Tax Map R19, Lot 4* *Dummer, NH*	Pontook Operating, LP 100 International Drive, Suite 350 Portsmouth, NH 03801 *Map R19, Lot 8* *Dummer, NH*	Brian Corcoran PO Box 32 Milan, NH 03588 *Tax Map R19, Lot 9* *Dummer, NH*
Road Kings PO Box 23 Milan, NH 03588 *Tax Map R19, Lots 6 & 10* *Dummer, NH*	Robert Milton 269 High Stret Berlin, NH 03570 *Tax Map U1, Lot 1* *Dummer, NH*	Gary Bilodeau 29 Jericho Road Berlin, NH 03570 *Tax Map U1, Lot 2* *Dummer, NH*
George Cole 72 Conway Road Madison, NH 03847 *Tax Map U1, Lot 4* *Dummer, NH*	James Beamis 19 Beech Ridge Road Eliot, ME 03903 *Tax Map U1, Lot 41* *Dummer, NH*	Phillip Jacques 1 waters Edge Drive Hudson, NH 03051 *Tax Map U1, Lot 16* *Dummer, NH*
Donald Cheney PO Box 265 Milan, NH 03588 *Tax Map U2, Lot 17* *Dummer, NH*	Jill Fauteux 6 Cheshire Street Nashua, NH 03063 *Tax Map U2, Lot 20* *Dummer, NH*	Raymond Marcoux PO Box 192 Milton, NH 03851 *Tax Map U2, Lot 21* *Dummer, NH*
Norman Roy 203 Wight Street Berlin, NH 03570 *Tax Map U2, Lots 40 & 41* *Dummer, NH*		

Project No. 07198
July 10, 2008

Landowner
Address Line 1
Address Line 2
Tax Map ?? , Lot ?? (Town)

Subject: Granite Reliable Power, LLC - Granite Reliable Wind Park – NHDES Wetlands Bureau Dredge & Fill Permit Application

Dear Landowner:

Granite Reliable Power, LLC is proposing a wind park in Dummer, Ervings Location, Millsfield, Odell, and Dixville. This letter, sent to you by certified mail, is to provide notice to you as the owner of land abutting the proposed project that an application is being submitted to the New Hampshire Department of Environmental Services Wetlands Bureau for a Standard Dredge and Fill Permit for work on or within the banks of wetlands or surface waters on property of which you are an abutter. The work is expected to occur on one or more of the following tax maps and parcels: Columbia Tax Parcels 425-6 & 424-2, Dummer Tax Parcels R1-1 & R1-2, Ervings Location Tax Parcel 1623-1, Odell Tax Parcel 1620-1.1, Millsfield Tax Parcels 1623-14, & 1620-2 and Dixville Tax Parcel 1626-1.

A copy of the permit application will be available for your review at the NHDES Wetlands Bureau in Concord as well as the Town Offices in Dummer, and the Coos County Commissioners' Office in West Stewartstown.

Respectfully,

Jennifer Stonecipher
Environmental Project Manager
Horizons Engineering, LLC

T:\07198 Noble Power - Wetlands Permitting\DOCS\PERMITS\NHDES Wetlands Permit\abutter letters\07198SAMPLEAbutterLette.doc

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City, State, ZIP+4 Hinesburg, VT 05461

PS Form 3800, August 2006

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City, State, ZIP+4 Berlin NH 03570

PS Form 3800, August 2006 See Reverse for Instructions

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City, State, ZIP+4 Berlin, NH 03570

PS Form 3800, August 2006 See Reverse for Instructions

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Sent To Thomas & Monique Martin
Street, Apt. No.; or PO Box No. 25 Hamington Ave.
City, State, ZIP+4 Berlin, NH 03570

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

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Return Receipt Fee (Endorsement Required)	
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Sent To: Timberland Trails, Inc
Street, Apt. No.; or PO Box No.: PO Box 1076
City, State, ZIP+4: Conway, NH 03818

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7008 0150 0003 8818 3314

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Sent To: Kings Arrow Realty Trust
Street, Apt. No.; or PO Box No.: 33 Beecher Park
City, State, ZIP+4: Bangor, ME 04401

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7008 0150 0003 8818 3338

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Sent To: Millsfield Sportsmen Club % Paul L'Heureux
Street, Apt. No.; or PO Box No.: 42 Dustin St
City, State, ZIP+4: Berlin, NH, 03570

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7008 0150 0003 8818 3369

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Sent To: Twitchell Heirs % Thomas Carney
Street, Apt. No.; or PO Box No.: 501 Portland St.
City, State, ZIP+4: Rochester, NH 03867

PS Form 3800, August 2006 — See Reverse for Instructions

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 3444

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Sent To: J. Andrew Knowlton
Street, Apt. No.; or PO Box No.: 83 Berry Rd.
City, State, ZIP+4: Loudon, NH 03307-1100

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7008 0150 0003 8817 7849

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Sent To: April & John Tluszcz
Street, Apt. No.; or PO Box No.: 105 Poole Street
City, State, ZIP+4: Ludlow, MA 01056

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7008 0150 0003 8818 3499

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Sent To: Luc & Louise Cote
Street, Apt. No.; or PO Box No.: PO Box 190
City, State, ZIP+4: Errol, NH 03579

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7008 0150 0003 8818 3574

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Restricted Delivery Fee (Endorsement Required)	
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Sent To: Walter & Jeannette Gilbert
Street, Apt. No.; or PO Box No.: 76 Spring St
City, State, ZIP+4: Berlin, NH 03570

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 3598

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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
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Sent To: Howard Welch, Et al.
Street, Apt. No.; or PO Box No.: 829 S. Barnstead Rd
City, State, ZIP+4: Center Barnstead NH 03225

PS Form 3800, August 2006

7008 0150 0003 8818 3611

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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

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Sent To: Gene Meier
Street, Apt. No.; or PO Box No.: PO Box 191
City, State, ZIP+4: Campton NH 03223-0191

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8817 7597

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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

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Sent To: Kenneth & Sandra McKenzie
Street, Apt. No.; or PO Box No.: 328 Africa Rd
City, State, ZIP+4: Alton, NH 03809

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7008 0150 0003 8817 7733

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Total Postage & Fees	$ 3.12

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Sent To: Roger Martineau / Boyd Weston
Street, Apt. No.; or PO Box No.: 39 Foxberry Drive
City, State, ZIP+4: New Boston NH 03070

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
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Sent To: Debra Dingee & Pauline Rand
Street, Apt. No.; or PO Box No.: PO Box 2165
City, State, ZIP+4: Cornish Flat, NH 03746

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7008 0150 0003 8818 3413

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Sent To: David Campana
Street, Apt. No.; or PO Box No.: 260 Hedding Rd
City, State, ZIP+4: Epping, NH 03042

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Sent To: Joseph & Denise Martin
Street, Apt. No.; or PO Box No.: 24 Argonne St.
City, State, ZIP+4: Berlin NH 03570

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Sent To: Tillotson Corp. % Donald Vashaw
Street, Apt. No.; or PO Box No.: 1 Cranberry Hill Suite 105
City, State, ZIP+4: Lexington, MA 02421

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horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 3437

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Sent To: Richard, Kathryn & Mark Dickson
Street, Apt. No.; or PO Box No.: PO Box 565
City, State, ZIP+4: Canterbury, NH 03224

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7008 0150 0003 8817 7627

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

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Sent To: State of NH - Fish & Game
Street, Apt. No.; or PO Box No.: 11 Hazen Dr.
City, State, ZIP+4: Concord NH 03301

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7008 0150 0003 8817 7696

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Sent To: Emile & Rita Croteau
Street, Apt. No.; or PO Box No.: 2229 Riverside Dr.
City, State, ZIP+4: Berlin NH 03570

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7008 0150 0003 8818 3529

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Sent To: Thomas Claflin
Street, Apt. No.; or PO Box No.: PO Box 124
City, State, ZIP+4: Errol, NH 03579

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horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
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Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

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Sent To Bruce & Patricia Clattenburg
Street, Apt. No.; or PO Box No. 28 Easton Rd
City, State, ZIP+4 Pittsfield, NH 03263

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Sent To William Conley & Michelle Little
Street, Apt. No.; or PO Box No. 1248 Union St
City, State, ZIP+4 Littleton NH 03561

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Sent To William & Joyce Eldridge
Street, Apt. No.; or PO Box No. 47 Jordan Dr.
City, State, ZIP+4 Gorham, ME 04039-2198

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7008 0150 0003 8818 3406

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Sent To Richard Campana
Street, Apt. No.; or PO Box No. 269 Lake Dr.
City, State, ZIP+4 S. Hamilton, MA 01982

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horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

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Sent To Jesse & Kathleen Bushaw, Jr.
Street, Apt. No.; or PO Box No. 189 Lake Tarleton Rd
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Street, Apt. No.; or PO Box No. 123 Timson St.
City, State, ZIP+4 Lynn, MA 01902

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Sent To Gary D. Foss
Street, Apt. No.; or PO Box No. 692 Bungy Rd
City, State, ZIP+4 Columbia, NH 03576

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Sent To Jonathan & Katherine Frizzell
Street, Apt. No.; or PO Box No. 58 Spring St.
City, State, ZIP+4 Colebrook, NH 03576

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horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
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Restricted Delivery Fee (Endorsement Required)	
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Sent To Gary & Janine Gilbert
Street, Apt. No.; or PO Box No. 621 Milan Hill Rd
City, State, ZIP+4 Milan, NH 03588

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Sent To Richard & Irene Gagnon
Street, Apt. No.; or PO Box No. 40 Darby Ln.
City, State, ZIP+4 Rochester, NH 03839

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Restricted Delivery Fee (Endorsement Required)	
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Sent To Michael Gilbert Family Trust
Michael & Diane Gilbert, Trustees
Street, Apt. No.; or PO Box No. 24 Twelfth St.
City, State, ZIP+4 Berlin, NH 03570

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Restricted Delivery Fee (Endorsement Required)	
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Sent To Phillip Dionne
Street, Apt. No.; or PO Box No. PO Box 295
City, State, ZIP+4 Errol NH 03579

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering inc
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 3345

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Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

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Sent To Andrew & Samuel Johnson
Street, Apt. No.; or PO Box No. 7 Wilbrod Avenue
City, State, ZIP+4 Dover, NH 03820

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8817 7634

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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
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Sent To Adam Downs
Street, Apt. No.; or PO Box No. 118 Windsong Pl.
City, State, ZIP+4 Meredith, NH 03253

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 3253

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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
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Sent To Alice D. Cote
Street, Apt. No.; or PO Box No. 8 B Street
City, State, ZIP+4 Hudson, NH 03051

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 3277

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Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
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Sent To Charles Carpenter
Street, Apt. No.; or PO Box No. 6053 Paris Rd
City, State, ZIP+4 Stark, NH 03582

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 3246

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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
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Sent To State of NH - DRED
Street, Apt. No.; or PO Box No. PO Box 1856
City, State, ZIP+4 Concord, NH 03302

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7008 0150 0003 8818 3475

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Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

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JUL 2008

Sent To Lewis & Paula Sweatt
Street, Apt. No.; or PO Box No. PO Box 48
City, State, ZIP+4 Errol, NH 03579

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 3260

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Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

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JUL 2008

Sent To Dorothy Perry
Street, Apt. No.; or PO Box No. 188 Sullivan Rd.
City, State, ZIP+4 Stark, NH 03582

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horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

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horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
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7008 0150 0003 8817 7603

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Sent To Raymond & Pauline Bergeron
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Street, Apt. No.; or PO Box No. 19 First Street
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34 School Street
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(603) 444-4111

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Street, Apt. No.; or PO Box No.: 85 Virginia Ave
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Street, Apt. No.; or PO Box No.: PO Box 11
City, State, ZIP+4: Colebrook, NH 03576

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Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
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Certified Mail Receipts
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horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

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Sent To: Barry Kelley
Street, Apt. No.; or PO Box No.: 220 Church Street
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Street, Apt. No.; or PO Box No.: 49 Gordon Ave
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34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
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Street, Apt. No.; or PO Box No. 620 Kent St.
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Street, Apt. No.; or PO Box No. 16 Ledgewood Ave.
City, State, ZIP+4 Malrose, MA 02176

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horizons Engineering inc

34 School Street
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(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
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Street, Apt. No.; or PO Box No.: 265 Norway St.
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Street, Apt. No.; or PO Box No.: Carl & Lisa Mercier
City, State, ZIP+4: ~~The Chase Brook Center~~ Litchfield, NH 03052-2549

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Street, Apt. No.; or PO Box No.: 429 Hammond Hill Road
City, State, ZIP+4: Plymouth NH 03264

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34 School Street
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(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
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Sent To: Francis & Judith Keating III
Street, Apt. No.; or PO Box No.: 29 Sunset Road
City, State, ZIP+4: Cambridge MA 02138

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Street, Apt. No.; or PO Box No.: 501 Portland Street
City, State, ZIP+4: Rochester NH 03867-2425

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Street, Apt. No.; or PO Box No.: 10 Brown Road
City, State, ZIP+4: Deerfield NH 03037

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Sent To: Merit Bean, Jr.
Street, Apt. No.; or PO Box No.: RFD 1 Box 337
City, State, ZIP+4: Phillips ME 04966

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horizons Engineering inc

34 School Street
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(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
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Sent To: Leo Laroche
Street, Apt. No.; or PO Box No.: 104 York Street Apt #3
City, State, ZIP+4: Berlin NH 03570

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Sent To: Ronald Dogopoulos
Street, Apt. No.; or PO Box No.: 5 Blackstone Dr. Unit #2
City, State, ZIP+4: Nashua NH 03063

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Sent To: Richard Holland
Street, Apt. No.; or PO Box No.: 693 Sixth Ave
City, State, ZIP+4: Berlin NH 03570

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Sent To: Robert Milton
Street, Apt. No.; or PO Box No.: 269 High St.
City, State, ZIP+4: Berlin NH 03570

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horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 4168

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For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To NH-DES - Water Council
Street, Apt. No.; or PO Box No. PO Box 95, 29 Hazen Dr.
City, State, ZIP+4 Concord, NH 03302-0095
PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 3970

U.S. Postal Service
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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To Katherine Treamer
Street, Apt. No.; or PO Box No. 843 Fifth Ave
City, State, ZIP+4 Berlin, NH 03570
PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 3956

U.S. Postal Service
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For delivery information visit our website at www.usps.com
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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To Norman Ray
Street, Apt. No.; or PO Box No. 203 Wight St
City, State, ZIP+4 Berlin, NH 03570
PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 7169

U.S. Postal Service
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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To Paul Delisle
Street, Apt. No.; or PO Box No. 3 Horne St
City, State, ZIP+4 Berlin, NH 03570
PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 7060

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To James Beamis
Street, Apt. No.; or PO Box No. 19 Beech Ridge Rd
City, State, ZIP+4 Eliot, ME 03903

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4137

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To Nicholas Pichon
Street, Apt. No.; or PO Box No. 238 Dolly Rd
City, State, ZIP+4 Contoocook, NH 03229

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8817 7931

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com

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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To Louis Lanoire
Street, Apt. No.; or PO Box No. 6 Highland St.
City, State, ZIP+4 West Warwick, RI 03893

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4182

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To Raymond Marcoux
Street, Apt. No.; or PO Box No. Po Box 192
City, State, ZIP+4 Milton NH 03851

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 7053

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To: Ed Batchelder
Street, Apt. No.; or PO Box No.: 99 Kelley Pond Rd
City, State, ZIP+4: New Hampton NH 03256

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 7046

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To: James Ashworth
Street, Apt. No.; or PO Box No.: 47 Cogswell Hill Rd
City, State, ZIP+4: Canterbury, NH 03244

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 7084

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To: Romeo Bergeron
Street, Apt. No.; or PO Box No.: PO Box 174
City, State, ZIP+4: Milan NH 03588

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 7077

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To: Richard Bellanger
Street, Apt. No.; or PO Box No.: 114 Washington St.
City, State, ZIP+4: Rochester NH 03867

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 7091

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Gary Bilodeau
Street, Apt. No.; or PO Box No.: 29 Jericho Rd
City, State, ZIP+4: Berlin NH 03570

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4069

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com

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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Holly Fontaine
Street, Apt. No.; or PO Box No.: 7 Country Lane
City, State, ZIP+4: Gorham, NH 03581

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 3994

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com

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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Maurice Wheeler
Street, Apt. No.; or PO Box No.: 397 Willard St.
City, State, ZIP+4: Berlin NH 03570

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 7107

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Leo Blanchette
Street, Apt. No.; or PO Box No.: 9 McFarland St.
City, State, ZIP+4: Gorham, NH 03581

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 7183

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com.

OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Town of Dummer
Street, Apt. No.; or PO Box No.: 75 Hill Rd
City, State, ZIP+4: Dummer, NH 03588

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4052

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com.

OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Estate of Clayson Glover % Melody Glover
Street, Apt. No.; or PO Box No.: 129 Hill Rd
City, State, ZIP+4: Dummer, NH 03588

PS Form 3800, August 2006

7008 0150 0003 8818 4106

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com.

OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Paul Provencher
Street, Apt. No.; or PO Box No.: 108 Winslow Rd
City, State, ZIP+4: Weare, NH 03281

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4038

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com.

OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: John Hertz
Street, Apt. No.; or PO Box No.: 280 Wight St
City, State, ZIP+4: Berlin, NH 03570

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 4014

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Phillip Jacques
Street, Apt. No.; or PO Box No.: 1 Waters Edge Dr.
City, State, ZIP+4: Hudson, NH 03051

PS Form 3800, August 2006 — See Reverse for Instructions

7008 0150 0003 8817 7917

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Charles Kalil
Street, Apt. No.; or PO Box No.: PO Box 188
City, State, ZIP+4: N. Conway, NH 03860

PS Form 3800, August 2006 — See Reverse for Instructions

7008 0150 0003 8818 4083

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: Timothy Redin
Street, Apt. No.; or PO Box No.: 47 Sessions Pond
City, State, ZIP+4: Hampden, MA 01306

PS Form 3800, August 2006 — See Reverse for Instructions

7008 0150 0003 8817 7900

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here

Sent To: John Joyal
Street, Apt. No.; or PO Box No.: 1 Molly Ln.
City, State, ZIP+4: Somersworth, NH 03878

PS Form 3800, August 2006 — See Reverse for Instructions

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 4120

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CERTIFIED MAIL RECEIPT
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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To Plum Creek Maine Timberlands
Street, Apt. No.; or PO Box No. 49 Mountain Ave., PO Box 400
City, State, ZIP+4 Fairfield, ME 04937

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8817 7894

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To Daniel Jolin
Street, Apt. No.; or PO Box No. PO Box 87
City, State, ZIP+4 Milan NH 03588

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 7121

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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For delivery information visit our website at www.usps.com
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Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To George Cole
Street, Apt. No.; or PO Box No. 72 Conway Rd
City, State, ZIP+4 Madison NH 03847

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4113

U.S. Postal Service
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OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To Pontook Operating, LP
Street, Apt. No.; or PO Box No. 100 International Dr. Suite 350
City, State, ZIP+4 Portsmouth, NH 03801

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 3963

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To Richard Tessler
Street, Apt. No.; or PO Box No. 1442 NH Rt. 116
City, State, ZIP+4 Dummer, NH 03588

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4090

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To Robert Rasmussen
Street, Apt. No.; or PO Box No. 148 Norway St.
City, State, ZIP+4 Berlin, NH 03570

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 7152

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To Margaret Dalphonse
Street, Apt. No.; or PO Box No. 62 Cascade Flats
City, State, ZIP+4 Gorham, NH 03581

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4076

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To Jill Fauteux
Street, Apt. No.; or PO Box No. 6 Chesire St.
City, State, ZIP+4 Nashua, NH 03063

PS Form 3800, August 2006 See Reverse for Instructions

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 3932

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To: Shawn Dumont
Street, Apt. No.; or PO Box No.: 20 Arthur St.
City, State, ZIP+4: Berlin, NH 03570

PS Form 3800, August 2006 — See Reverse for Instructions

7008 0150 0003 8818 7138

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To: Brian Corcoran
Street, Apt. No.; or PO Box No.: PO Box 32
City, State, ZIP+4: Milan NH 03588

PS Form 3800, August 2006 — See Reverse for Instructions

7008 0150 0003 8818 7145

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

Postmark Here JUL 11

Sent To: Dennis Croteau
Street, Apt. No.; or PO Box No.: 700 Third Ave Apt #3
City, State, ZIP+4: Berlin, NH 03570

PS Form 3800, August 2006 — See Reverse for Instructions

7008 0150 0003 8818 4199

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.4

Postmark Here JUL 11

Sent To: Donald Lindh
Street, Apt. No.; or PO Box No.: 42 Maxwell St.
City, State, ZIP+4: Manchester, NH 03102

PS Form 3800, August 2006 — See Reverse for Instructions

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 4144

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

JUL 11 Postmark Here

Sent To: Robert Ouellet
Street, Apt. No.; or PO Box No.: 76 Main St
City, State, ZIP+4: Errol, NH 03579

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 7015

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

JUL 11 Postmark Here

Sent To: Donald LaPointe
Street, Apt. No.; or PO Box No.: 194 Howard St
City, State, ZIP+4: Berlin, NH 03570

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4205

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
OFFICIAL USE

Postage	$ .42
Certified Fee	2.70
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 3.12

JUL 11 Postmark Here

Sent To: Roger LaVerdiere
Street, Apt. No.; or PO Box No.: 1227 NH Rt. 16
City, State, ZIP+4: Dummer, NH 03588

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 4151

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horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8818 3987

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Street, Apt. No.; or PO Box No.: 370 Portland St.
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City, State, ZIP+4: Berlin NH 03570

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Street, Apt. No.; or PO Box No.: 2816 Success Rd
City, State, ZIP+4: Milan NH 03588

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horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

7008 0150 0003 8817 7924

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Street, Apt. No.; or PO Box No. PO Box 14
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Sent To William Woodward
Street, Apt. No.; or PO Box No. 7 Hills Ave
City, State, ZIP+4 Concord NH 03301

PS Form 3800, August 2006 See Reverse for Instructions

7008 0150 0003 8818 7114

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horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Philips Brook Wind Power Project
Coos County, New Hampshire
Certified Mail Receipts
Project No. 07198

horizons Engineering PLLC

SECTION 3

NH Division of Historical Resources Project Review

horizons Engineering PLLC

Project No. 07198
May 20, 2008

State Historic Preservation Officer
New Hampshire Division of Historical Resources
19 Pillsbury Street, 2nd Floor
Concord, New Hampshire 03301-3570

Subject: NHDES Wetland Application –Granite Reliable Power, LLC – Phillips Brook Wind Project – Irving Location, Odell Location, Dummer, Millsfield Location and Dixville Location, New Hampshire

Dear Preservation Officer:

Please accept this request for review of above referenced project in accordance with Condition #9 of the U. S. Army Corps of Engineers State Programmatic General Permit #52, to comply with Section 106 of the National Historic Preservation Act.

The project is a proposed wind project encompassing 22,000 acres within the Phillips Brook Watershed in Coos County, New Hampshire. At this time approximately 33 wind turbines are planned, with appurtenant roadways, transmission lines and an associated sub-station.

Enclosed please find a USGS Quad map of the project site (project site locus) which is also a conceptual plan of the project indicating the proposed project referred to as "limit of project area".

The owner of the project is Granite Reliable Power, LLC. The owner's principal contact is Mr. Pip Decker who can be reached at 8 Railroad Avenue, Essex, CT 06426. The consultant's principal contact is Stephen LaFrance or the undersigned.

Please review this information for the presence of historic / archaeological resources or other cultural resources and respond with your determination or concerns to Horizons Engineering, P.L.L.C., 34 School Street, Littleton, New Hampshire 03561. If you have any questions or should you require additional information please do not hesitate to contact me at (603) 444-4111.

Sincerely,

Jennifer Stonecipher
Environmental Manager
Horizons Engineering, L.L.C.

34 School Street
Littleton, NH 03561
Phone 603.444.4111
Fax 603.444.1343
email@horizonsengineering.com

T:\07198 Noble Power - Wetlands Permitting\DOCS\PERMITS\wetland permit\07198Preservation NH Historical resources doc

NH Natural Heritage Bureau Project Review

Memo

NH NATURAL HERITAGE BUREAU

To: Jennifer Stonecipher, Horizons Engineering
34 School Street
Littleton, NH 03561

From: Melissa Coppola, NH Natural Heritage Bureau
Date: 6/24/2008 (valid for one year from this date)
Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB08-1305
Project type: Transmission line

Town: Irvings Location, Odell, Dummer, Millsfield, and Dixville
Location: Tax Maps: Columbia: 425-6 & 424-2, Irvings Location: 1623-1, Odell: 1620-1 & 1620-1.21 Millsfield: 1620-1.22 & 1620-2, Dummer R-1-1

cc: Kim Tuttle

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

Comments:

Natural Community	State[1]	Federal	Notes
Medium level fen system	--	--	Level fens are stagnant, and as such are characterized by low nutrient levels, relatively high acidity levels, and accumulations of peat. The primary threats to this community are changes to its hydrology (especially that which causes pooling), increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance.

Plant species	State[1]	Federal	Notes
Farwell's Water Milfoil (*Myriophyllum farwellii*)*	E	--	Threats to aquatic species include changes in water quality, e.g., due to pollution and stormwater runoff, and significant changes in water level.
Kalm's Lobelia (*Lobelia kalmii*)*	T	--	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.
Lily-leaved Twayblade (*Listera convallarioides*)*	T	--	Threats include harvesting the canopy over the plants' seep or swamp habitat, compaction of the wet soils, increased inputs of nutrients or pollutants, and changes to local hydrology. Recreational hiking can also threaten the plants if not routed around their habitat.
Sensitive species	T	--	Please contact NH Natural Heritage (271-2215 x 323) if project impacts could occur

			in the area shown on the map.
Wapato (*Sagittaria cuneata*)*	E	--	Primarily vulnerable to changes to the hydrology of its habitat, especially alterations that change water levels. It may also be susceptible to increased pollutants and nutrients carried in stormwater runoff.

Vertebrate species	State[1]	Federal	Notes
American Marten (*Martes americana*)	T	--	Contact the NH Fish & Game Dept (see below).
Common Loon (*Gavia immer*)	T	--	Contact the NH Fish & Game Dept (see below).
Northern Harrier (*Circus cyaneus*)	E	--	Contact the NH Fish & Game Dept (see below).
Osprey (*Pandion haliaetus*)	T	--	Contact the NH Fish & Game Dept (see below).
Pied-billed Grebe (*Podilymbus podiceps*)	E	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet 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. For some purposes, including legal requirements for state wetland permits, the fact that no species of concern are known to be present is sufficient. However, 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

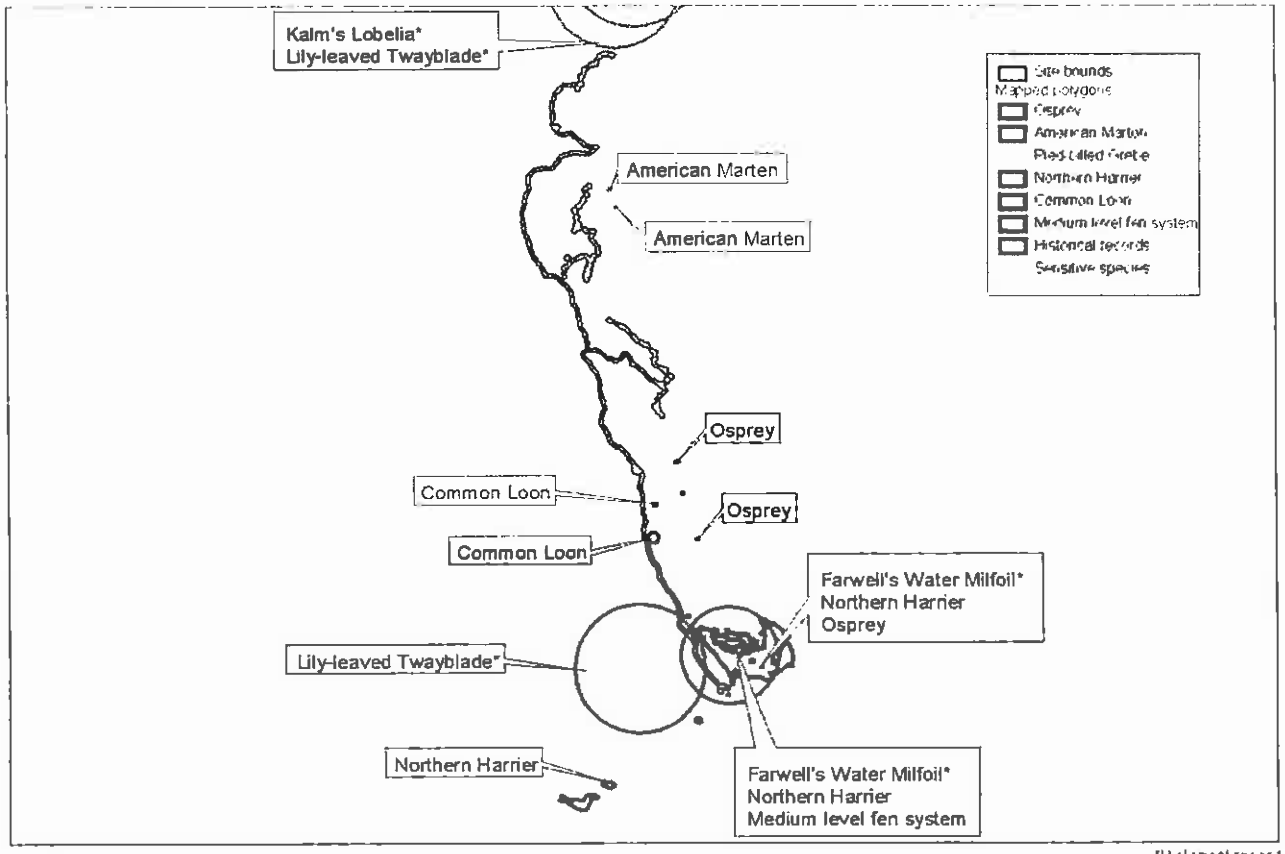
Memo

NH NATURAL HERITAGE BUREAU

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.



0.5 0 0.5 1 Miles

1:20000

*Historical record

Valid for one year from this date 24 Jun 200-

Department of Resources and Economic Development
Division of Forests and Lands
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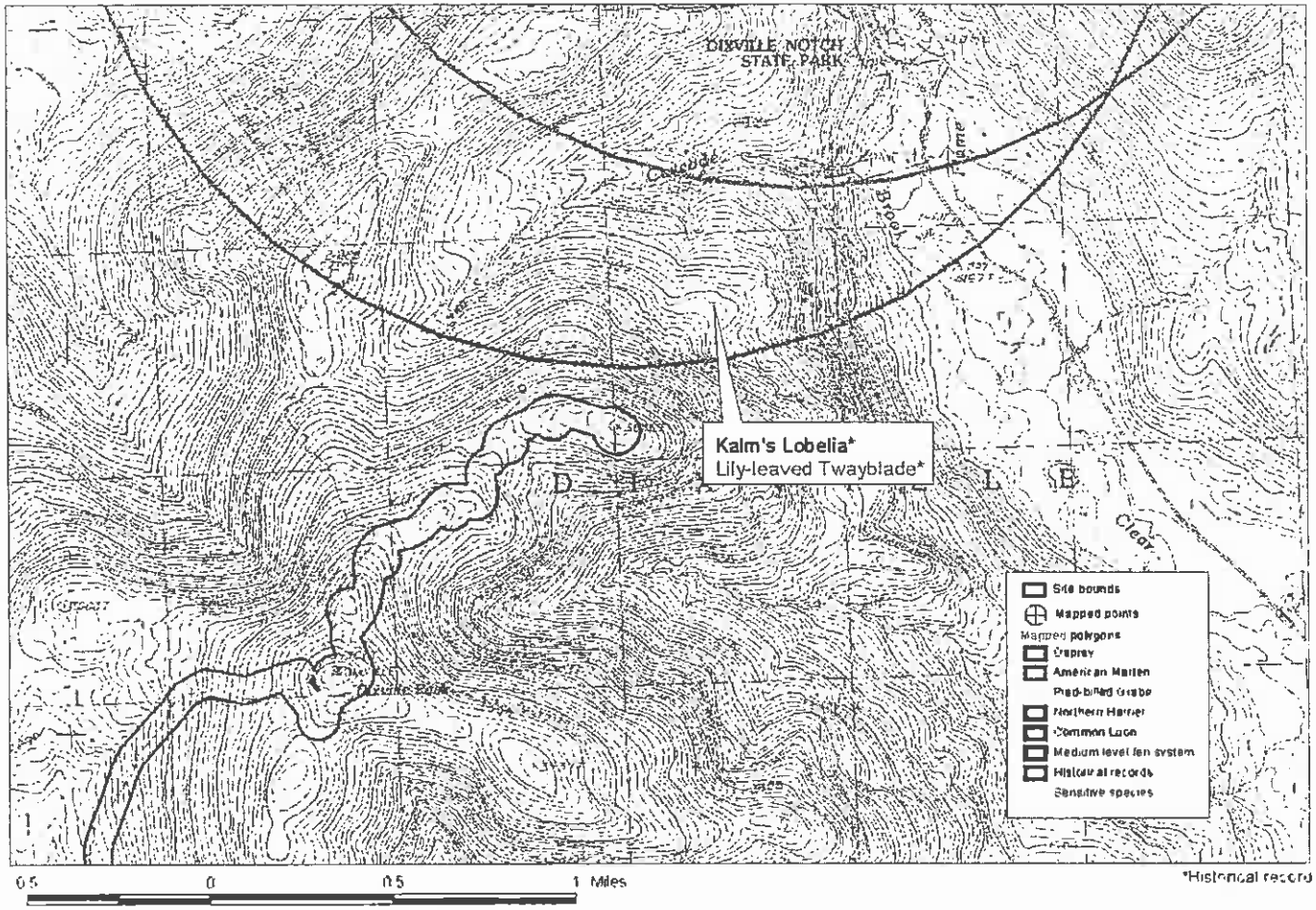

*Historical record

Valid for one year from this date 24 Jun 2005

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Memo

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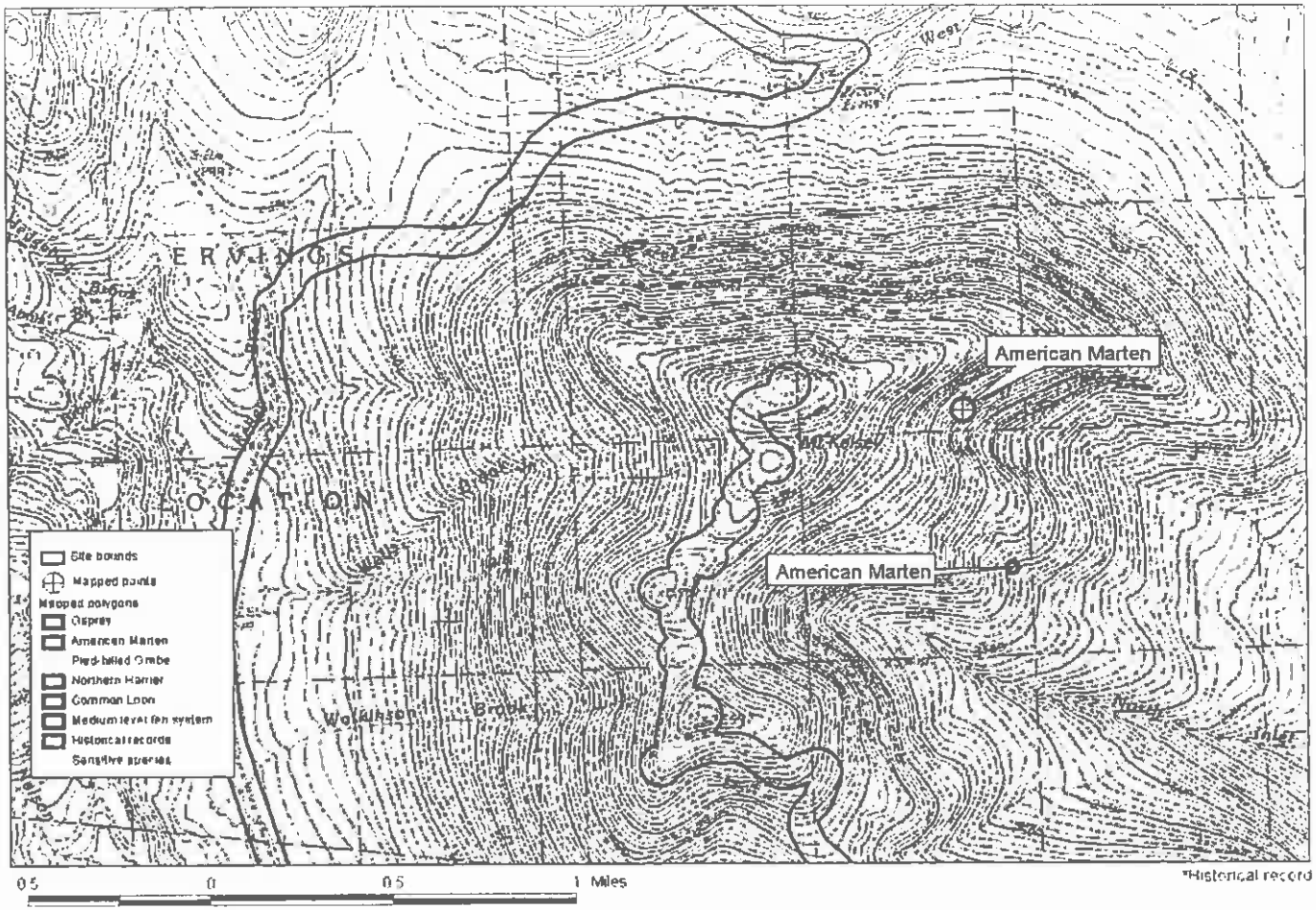

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Division of Forests and Lands
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Memo

NH NATURAL HERITAGE BUREAU

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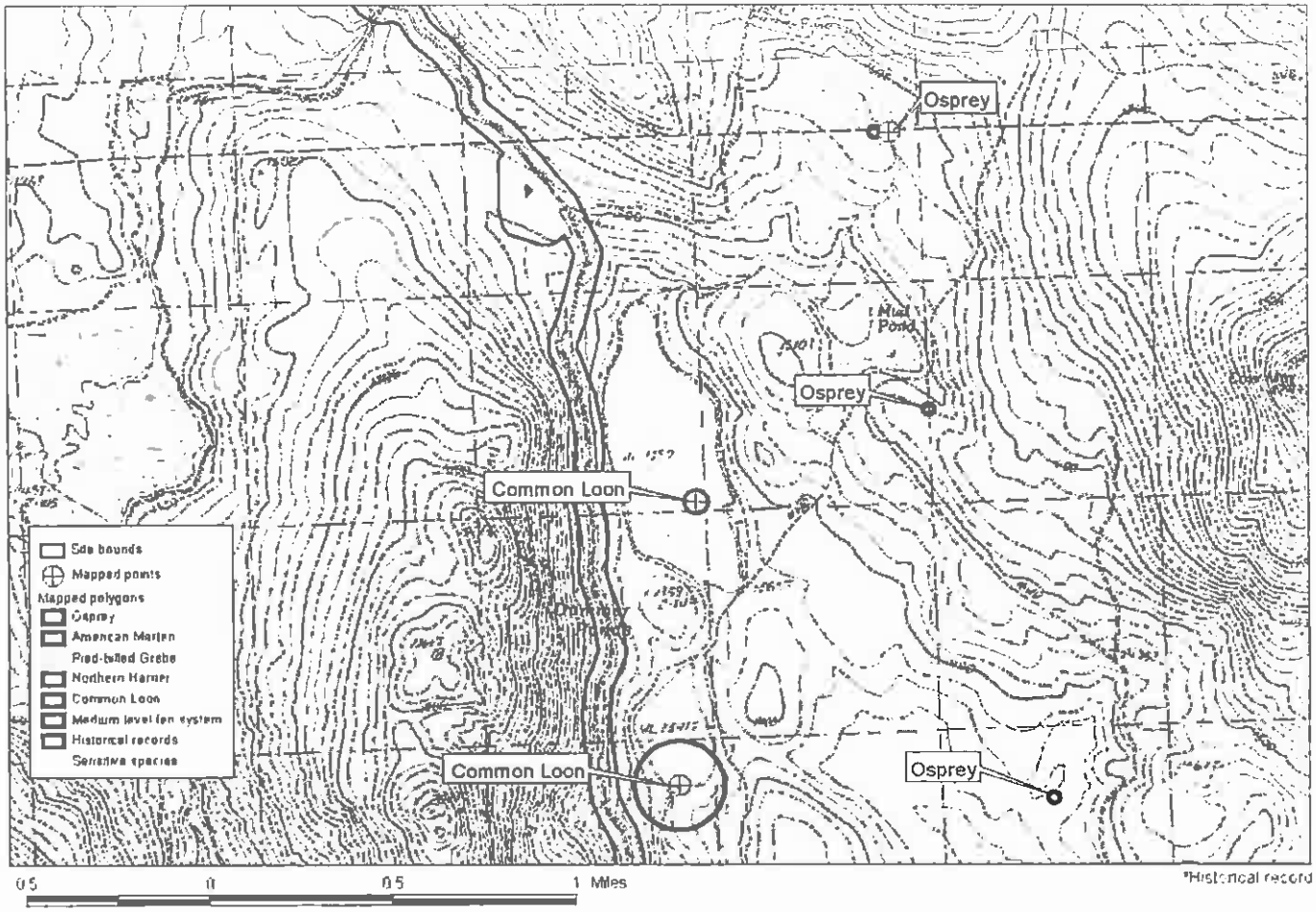
Known locations of rare species and exemplary natural communities

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



*Historical record

Valid for one year from this date 24 Jun 2008

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

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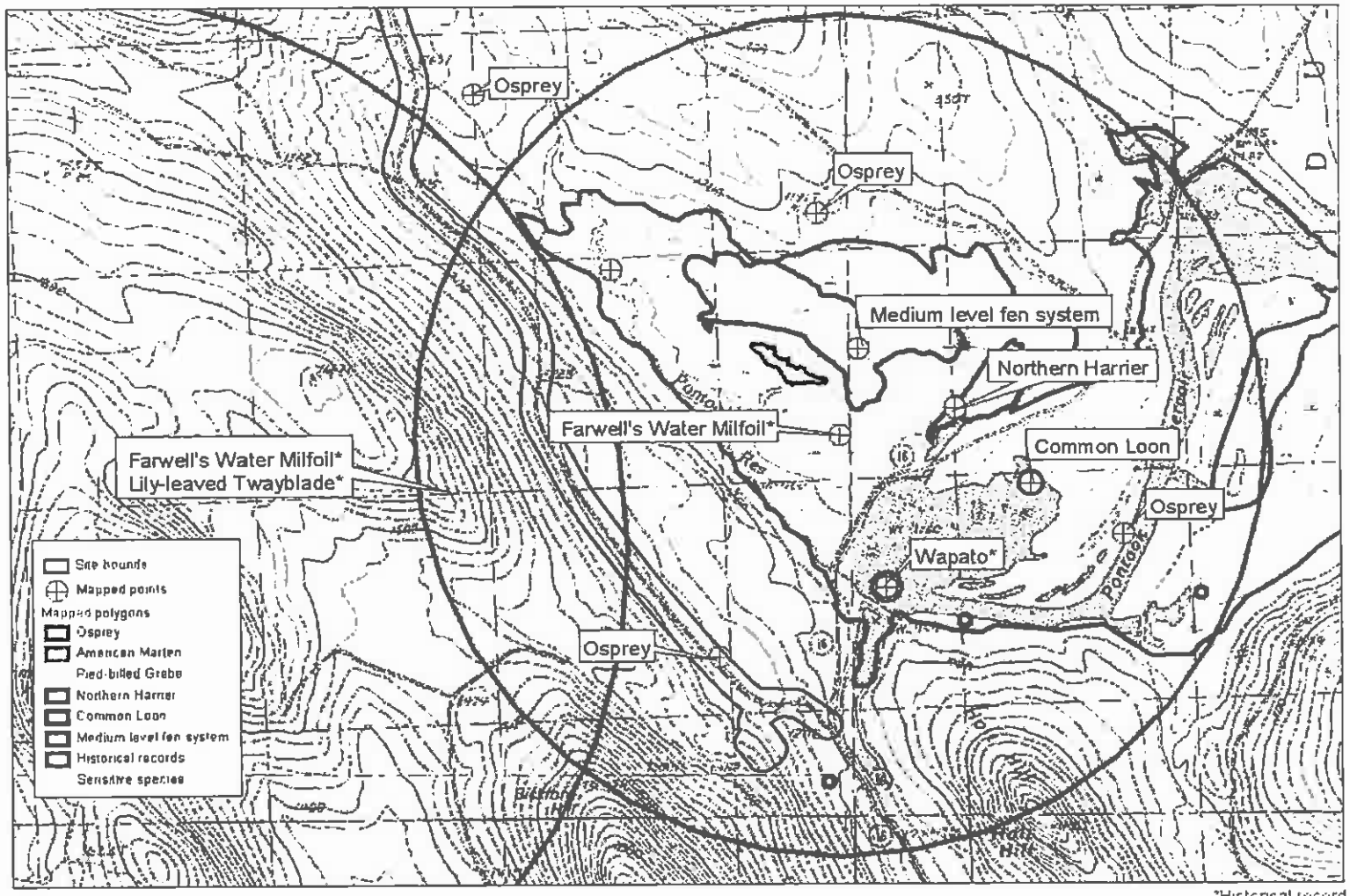
PO Box 1856
Concord NH 03302-1856

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.



0.5 0 0.5 1 Miles

*Historical record

1:24000

Valid for one year from this date 24 Jun 2008

New Hampshire Natural Heritage Bureau - System Record

Medium level fen system

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: Good quality, condition and lanscape context ('B' on a scale of A-D).
Comments on Rank:

Detailed Description: 1998: Composed of several peatland communities. They include ***large cranberry - short sedge moss lawn***, ***sweet gale - meadowsweet - tussock sedge fen***, ***leather-leaf - sheep laurel dwarf shrub bog*** (19 acres), ***highbush blueberry - mountain holly wooded fen*** (56 acres), and ***large cranberry - short sedge moss lawn***.

General Area: 1998: *Picea mariana* (black spruce) and/or *Larix laricina* (eastern larch) woodland swamp buffers most of the southern and eastern edges of the peatland from the Pontook Reservoir and Rte. 16. Pontook Reservoir, a regulated body of water, lies near the southern edge of the peatland. Rte. 16 passes near the southeastern edge of the swamp.

General Comments:
Management Comments:

Location

Survey Site Name: Pontook Reservoir
Managed By: Pontook Reservoir

County:	Coos	USGS quad(s):	Teakettle Ridge (4407162)
Town(s):	Dummer	Lat, Long:	443836N, 0711456W
Size:	98.9 acres	Elevation:	1170 feet

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

Directions: Park along side of Rte. 16 north of Milan.

Dates documented

First reported: 1998-09-21 Last reported: 1998-09-22

Nichols, Bill and Doug Bechtel. 1998. Field survey to Pontook Reservoir on September 21.

Sperduto, Daniel and William Nichols. 2004. Natural Communities of New Hampshire. NH Natural Heritage Bureau and The Nature Conservancy. Concord, NH.

New Hampshire Natural Heritage Bureau - Plant Record

Farwell's Water Milfoil (*Myriophyllum farwellii*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Critically imperiled due to rarity or vulnerability

Description at this Location

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

Detailed Description: 1947: No details.
General Area: 1947: No details.
General Comments:
Management Comments:

Location

Survey Site Name: Pontook Dam
Managed By: Pontook - Lease Area

County: Coos
Town(s): Dummer
Size: 2583.1 acres

USGS quad(s): Dummer Ponds (4407163)
Lat, Long: 443824N, 0711500W
Elevation: 1163 feet

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: Pontook Dam.

Dates documented

First reported: 1947
Last reported: 1947

New Hampshire Natural Heritage Bureau - Plant Record

Kalm's Lobelia (*Lobelia kalmii*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Imperiled due to rarity or vulnerability

Description at this Location

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

Detailed Description: 1855: Specimen collected.
General Area:
General Comments:
Management Comments:

Location

Survey Site Name: Dixville Notch
Managed By: Dixville Notch State Park

County: Coos
Town(s): Dixville
Size: 4592.3 acres

USGS quad(s): Dixville Notch (4407173)
Lat, Long: 445211N, 0711805W
Elevation: 2060 feet

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: Dixville Notch.

Dates documented

First reported: 1855-09-15
Last reported: 1855-09-15

New Hampshire Natural Heritage Bureau - Plant Record

Lily-leaved Twayblade (*Listera convallarioides*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Imperiled due to rarity or vulnerability

Description at this Location

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

Detailed Description: 1906: Williams specimen at AMES.
General Area:
General Comments:
Management Comments:

Location

Survey Site Name: Dixville Notch
Managed By: Dixville Notch State Park

County: Coos
Town(s): Dixville
Size: 4592.3 acres

USGS quad(s): Dixville Notch (4407173)
Lat, Long: 445211N, 0711805W
Elevation: 2060 feet

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: Dixville Notch.

Dates documented

First reported: 1906
Last reported: 1906-07-27

New Hampshire Natural Heritage Bureau - Plant Record

Lily-leaved Twayblade (*Listera convallarioides*)

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

Detailed Description: 1964: Specimen collected.
General Area:
General Comments:
Management Comments:

Location

Survey Site Name: Dummer Hill
Managed By: Pontook Reservoir

County:	Coos	USGS quad(s):	Dummer Ponds (4407163)
Town(s):	Dummer	Lat, Long:	443808N, 0711732W
Size:	4592.3 acres	Elevation:	1780 feet

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions: Dummer Hill.

Dates documented

First reported:	1964-08-06	Last reported:	1964-08-06

New Hampshire Natural Heritage Bureau - Plant Record

Wapato (*Sagittaria cuneata*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Critically imperiled due to rarity or vulnerability

Description at this Location

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

Detailed Description: 1959: Specimen #11025 at NHA.
General Area: Calm, shallow water above dam.
General Comments: Calm water. Leaves all floating.
Management Comments:

Location

Survey Site Name: Dummer Dam
Managed By:

County: Coos
Town(s): Dummer
Size: 2.8 acres

USGS quad(s): Teakettle Ridge (4407162)
Lat, Long: 443802N, 0711451W
Elevation: 1163 feet

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

Directions: Dummer Dam. Calm, shallow water above dam.

Dates documented

First reported: 1959
Last reported: 1959-07-27

New Hampshire Natural Heritage Bureau - Animal Record

American Marten (*Martes americana*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2004: Area 7024: 1 individual live-trapped.2001: Area 6957: Tracks observed.
General Area:
General Comments:
Management Comments:

Location

Survey Site Name: Mt. Kelsey
Managed By:

County: Coos
Town(s): Millsfield
Size: 2.4 acres

USGS quad(s): Dixville Notch (4407173)
Lat, Long: 444800N, 0711815W
Elevation:

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

Directions:

Dates documented

First reported: 2001-02-01
Last reported: 2004-07-24

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.

New Hampshire Natural Heritage Bureau - Animal Record

American Marten (*Martes americana*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2001: 1 reported by trapper, R. Goulet.
General Area:
General Comments:
Management
Comments:

Location

Survey Site Name: Bickford Hill, SW of
Managed By:

County: Coos
Town(s): Dummer
Size: 7.7 acres

USGS quad(s): West Milan (4407153)
Lat, Long: 443704N, 0711554W
Elevation:

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

Directions:

Dates documented

First reported: 2001
Last reported: 2001

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.

New Hampshire Natural Heritage Bureau - Animal Record

American Marten (*Martes americana*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Imperiled due to rarity or vulnerability

Description at this Location

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

Detailed Description: 1985: Small male caught, released.
General Area:
General Comments:
Management Comments:

Location

Survey Site Name: Sanguinary Mt
Managed By: Dixville Notch State Park

County: Coos
Town(s): Dixville
Size: 4592.3 acres

USGS quad(s): Diamond Pond (4407183)
Lat, Long: 445237N, 0711731W
Elevation: 2500 feet

Precision: Within 1.5 miles of the area indicated on the map (location information is vague or uncertain).

Directions:

Dates documented

First reported: 1985-10
Last reported: 1985-10

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.

New Hampshire Natural Heritage Bureau - Animal Record

Common Loon (*Gavia immer*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2005: 4 adults.2004: Area 3481M: pair, 2 hatched and survived.2002-2003: Area 3481M: pair, 1 hatched and survived.2001: 4 adults.2000: Area 3481M: pair, 2 hatched, 1 survived.
General Area:
General Comments: LPC territory NHT0039.
Management Comments:

Location

Survey Site Name: Dummer Pond
Managed By:

County: Coos
Town(s): Dummer
Size: 1.9 acres

USGS quad(s): Dummer Ponds (4407163)
Lat, Long: 444131N, 0711703W
Elevation:

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

Directions:

Dates documented

First reported: 2000-05-17
Last reported: 2004-07-07

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.

New Hampshire Natural Heritage Bureau - Animal Record

Common Loon (*Gavia immer*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2004-2005: pair.2003: 3 adults.2002: pair, 1 hatched and survived.2001: Area 3767M: 3 adults, nest and eggs.2000: pair, 2 hatched, 1 survived.

General Area:
General Comments: LPC territory NHT0167.
Management Comments:

Location

Survey Site Name: Pontook Reservoir
Managed By: Pontook - Lease Area

County: Coos
Town(s): Dummer
Size: 1.9 acres

USGS quad(s): Teakettle Ridge (4407162)
Lat, Long: 443817N, 0711423W
Elevation:

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

Directions:

Dates documented

First reported: 2000-05-17
Last reported: 2002-08-07

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.

New Hampshire Natural Heritage Bureau - Animal Record

Common Loon (*Gavia immer*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2005: 1 adult.2003: pair.2002: 1 adult.2001: pair, nest and eggs.2000: pair.
General Area:
General Comments: LPC territory NHT0233.
Management Comments:

Location

Survey Site Name: Little Dummer Pond
Managed By:

County: Coos
Town(s): Dummer
Size: 30.8 acres

USGS quad(s): Dummer Ponds (4407163)
Lat, Long: 444050N, 0711707W
Elevation:

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

Directions:

Dates documented

First reported: 2001-05-24
Last reported: 2001-08-08

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.

New Hampshire Natural Heritage Bureau - Animal Record

Northern Harrier (*Circus cyaneus*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2003: Area 4405: adult female.2001: Area 4405: pair.1998: Area 4405: pair.1996: Area 4407: adult male.1995: Area 4405: pair, female with nesting material.1994: Area 4405: pair, 5 young. Area 4407: 2 young.1993: Area 4405: adult female, 4 young.1992: Area 4405: pair, 1 young.1989: Area 4405: adult male.1986: Area 4405: 1 young.1984: Area 4405: pair.1983: Area 4405: pair.

General Area:
General Comments:
Management Comments:

Location

Survey Site Name: Pontook Reservoir
Managed By: Pontook - Lease Area

County: Coos
Town(s): Dummer
Size: 1216.2 acres

USGS quad(s): Teakettle Ridge (4407162)
Lat, Long: 443827N, 0711437W
Elevation: 1175 feet

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

Directions:

Dates documented

First reported: 1986
Last reported: 1996-08-23

PNDSMI01NHUS - Created by EO conversion

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.

New Hampshire Natural Heritage Bureau - Animal Record

Osprey (*Pandion haliaetus*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2006: Area 8163: nest active, unsuccessful.2005: Area 8163: nest active, unsuccessful.2004-2006: Area 8163: nest active, unsuccessful.2003: Area 8163: 2 fledged.2001-2002: Area 8163: nest active, unsuccessful.2000: Area 8163: 2 fledged. Area 8160: adults present.1998-1999: Area 8160: adults present1997: Area 8162: nest active, unsuccessful. Area 8160: adults present.1996: Area 8160, 8162: nest active, unsuccessful. Area 8163: adults present.1994-1995: Area 8160: nest active, unsuccessful1993: Area 8161: adults present.1991-1992: Area 8161: 2 fledged.1990: Area 8161: adults present.

General Area: Area 8161: nest 18.6m up dead *Pinus strobus* (white pine), dbh 52.3cm. Area 8160: nest 23.3m up dead *Pinus strobus* (white pine), dbh 60.2cm. Area 8162: nest 14.1m up dead *Betula lutea* (yellow birch), dbh 83.8cm. Area 8163: nest 21.7m up dead *Larix laricina* (American larch), dbh 45cm.

General Comments: 1998: Area 8160, 8162, 8163: predator guards installed. 1991: Area 8161: predator guard installed.

Management Comments:

Location

Survey Site Name: Millsfield Line 1
Managed By:

County: Coos
Town(s): Dummer
Size: 1.9 acres

USGS quad(s): Dummer Ponds (4407163)
Lat, Long: 444224N, 0711624W
Elevation: 1600 feet

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

Directions: Millsfield and Dummer townline north of Mud Pond on Right River Branch.

Dates documented

First reported: 1991
Last reported: 2006

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.

New Hampshire Natural Heritage Bureau - Animal Record

Osprey (*Pandion haliaetus*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2003: Area 8175: nest active, unsuccessful.2002: Area 8175: adults present.2001: Area 8174: 3 fledged.2000: Area 8173, 8174: adults present.1999: Area 8174: 1 fledged.1998: Area 8174: adults present.

General Area: Area 8174: nest 8.5m up dead *Abies balsamea*, dbh 33.3cm. Area 8173: nest in dead *Larix laricina*. Area 8175: nest 16.2m up live *Abies balsamea*, dbh 41.3cm.

General Comments: 1999: Area 8174: predator guard installed.

Management Comments:

Location

Survey Site Name: Magill Bay South
Managed By: Pontook - Lease Area

County: Coos
Town(s): Dummer
Size: 1.4 acres

USGS quad(s): Teakettle Ridge (4407162)
Lat, Long: 443809N, 0711405W
Elevation:

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

Directions:

Dates documented

First reported: 1999
Last reported: 2003

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.

New Hampshire Natural Heritage Bureau - Animal Record

Osprey (*Pandion haliaetus*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2001: Area 8166: adults present.2000: Area 8166: 2 fledged
General Area: Area 8166: nest in dead *Betula paperifera*, dbh 46.7cm.
General Comments:
Management Comments:

Location

Survey Site Name: Pontook North Cut
Managed By:

County: Coos
Town(s): Dummer
Size: .4 acres

USGS quad(s): Dummer Ponds (4407163)
Lat, Long: 443855N, 0711504W
Elevation:

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

Directions:

Dates documented

First reported: 2000
Last reported: 2000

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.

New Hampshire Natural Heritage Bureau - Animal Record

Osprey (*Pandion haliaetus*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2006: Area 8177: 2 fledged.2005: Area 8177: 2 fledged.2004: Area 8177: nest active, unsuccessful.2003: Area 8177: 3 fledged.2002: Area 8176: nest active, unsuccessful.2001: Area 8176: 3 fledged.2000: Area 8176: nest active, unsuccessful.1998-1999: Area 8176: 3 fledged.1997: Area 8176: 2 fledged.1996: Area 8176: 3 fledged.1994-1995: Area 8176: 2 fledged.1993: Area 8176: adults present.

General Area: Area 8176: nest 18m up dead *Betula lutea* (yellow birch), dbh 46.5cm. Area 8177: nest on pole.

General Comments: 1994: Area 8176: predator guard installed.

Management Comments:

Location

Survey Site Name: Pontook West
Managed By:

County: Coos
Town(s): Dummer
Size: .9 acres

USGS quad(s): Dummer Ponds (4407163)
Lat, Long: 443753N, 0711524W
Elevation:

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

Directions: Area 8177: Powerline ROW adjacent to Rte. 16 ca. 1.15 miles north of the junction of Rte.16 and Rte.110A.

Dates documented

First reported: 1994
Last reported: 2006

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.

New Hampshire Natural Heritage Bureau - Animal Record

Osprey (*Pandion haliaetus*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2000-2004: Area 8165: 2 fledged.1999: Area 8165: 3 fledged.1998: Area 8165: nest active, unsuccessful.1997: Area 8165: 2 fledged.1996: Area 8165: adults present.
General Area: Area 8165: nest 14.4m up dead *Betula lutea*, dbh 59.9cm.
General Comments: 1997: Area 8165: predator guard installed.
Management Comments:

Location

Survey Site Name: Rasmussen Camp
Managed By:

County: Coos
Town(s): Dummer
Size: .4 acres

USGS quad(s): Dummer Ponds (4407163)
Lat, Long: 443912N, 0711611W
Elevation:

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

Directions:

Dates documented

First reported: 1997
Last reported: 2004

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.

New Hampshire Natural Heritage Bureau - Animal Record

Pied-billed Grebe (*Podilymbus podiceps*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Poor quality, condition and/or lanscape context ('D' on a scale of A-D).
Comments on Rank:

Detailed Description: 1990: 1 immature seen at reservoir. 1989: 2 adults observed at marsh.
General Area:
General Comments:
Management Comments:

Location

Survey Site Name: Pontook Reservoir
Managed By: Pontook Reservoir

County: Coos
Town(s): Dummer
Size: 2.8 acres

USGS quad(s): Dummer Ponds (4407163)
Lat, Long: 443847N, 0711544W
Elevation: 1170 feet

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

Directions: [From Milan, take Rte. 16 north ca. 6 miles. Pontook Reservoir is to the left, and Pontook Marsh is north and west of Rte. 16 for about a mile.]

Dates documented

First reported: 1989
Last reported: 1990

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.

Legal Status	Conservation Status
Federal:	Global:
State:	State:

Description at this Location

Conservation Rank:
Comments on Rank:

Detailed Description:
General Area:
General Comments:
Management
Comments:

Location

Survey Site Name:
Managed By:

County:	USGS quad(s):
Town(s):	Lat, Long:
Size:	Elevation:

Precision:

Directions:

Dates documented

First reported:	Last reported:

NH Fish & Game Department Correspondence

New Hampshire
Fish and Game Department

11 Hazen Drive, Concord, NH 03301-6500
Headquarters: (603) 271-3421
Web site: www.wildlife.state.nh.us

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

Lee E. Perry
Executive Director

November 2, 2006

Robert D. Roy
Woodlot Alternatives, Inc.
30 Park Drive
Topsham, ME 04086

RE: NHFG file 2006-1344, Granite Reliable Power, LLC, Wind Energy

Dear Robert,

The NH Fish and Game Department (NHFG) has reviewed your request for information near the proposed Coos County wind project (towns of Odell, Columbia, Ervings Location, Millsfield, and Dummer). The NHFG has authority over wildlife in NH; the NH Natural Heritage Bureau should be contacted regarding potential impacts to rare plants and/or natural communities. In addition, the U.S. Fish and Wildlife Service has authority over impacts to migratory birds through the Migratory Bird Treaty Act of 1918.

Rare or endangered species identified in the area include: bald eagle (nesting off-site), osprey and loon (nesting on or very near project boundaries), northern harrier (nesting off-site), pied-billed grebe (nesting off-site), American marten (known on-site and high quality habitat on-site). Species potentially occurring on-site that are of conservation concern include but may not be limited to: Bicknell's thrush, spruce grouse, wood turtle (low-elevation stream segments of Phillips Brook), Leopard frog (low elevation wetlands or clearings), goshawk, and various bats including small-footed bats. The NH Wildlife Action Plan can be accessed via the NHFG website; this action plan can be used to identify other species or habitats that may be potentially affected by the proposed project. In addition to concerns over species occurring on-site, we have further concerns regarding the potential effects on migratory birds and bats, including some that may be rare or endangered.

In addition to direct impacts to migratory birds and bats, we have concerns over the habitat loss and fragmentation that would occur as a result of clearing and construction of access roads. Ridgelines on this property have been identified as providing high-quality habitat for rare species such as the American marten. High quality high-elevation spruce-fir habitats are a minor portion of New Hampshire's overall habitat but provide a critical habitat for a number of species (see Wildlife Action Plan habitat profile). These habitats also tend to be sensitive to disturbance because of harsh climatic conditions.

NHFG staff would like to discuss your scope of work and plans for monitoring. We look forward to meeting with you regarding this issue. Please contact me at 603-271-3016 for further details.

Sincerely,

Michael Marchand
Nongame & Endangered Wildlife Program

Cc: Will Staats, NHFG
Charlie Bridges, NHFG

U.S. Fish & Wildlife Service Correspondence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

November 17, 2006

Robert Roy
Woodlot Alternatives, Inc.
30 Park Drive
Topsham, Maine 04086

Dear Mr. Roy:

This responds to your recent correspondence requesting information on the presence of federally-listed endangered or threatened species in relation to the proposed wind energy development project in Coos County, New Hampshire, located just west of Errol. The proposed project includes the construction of wind turbines along some of the ridgelines. Associated access roads and transmission lines will extend from the lower elevations.

Threatened bald eagles (*Haliaeetus leucocephalus)* are known to breed on Lake Umbagog, approximately 13 miles east of the project area. The extent to which these birds can be found is not known at this time. In addition, the presence of the federally-threatened Canada lynx (*Lynx canadensis*) was recently confirmed (January and March 2006) in and around the Killkenny Unit of the White Mountain National Forest, approximately 18 miles south of the project area. Suitable lynx habitat is often associated with regenerating conifers and an abundance of prey, especially snowshoe hares (*Lepus americanus*). At this time, we do not know if lynx have taken up residence in the area or if they are transient individuals. As such, an assessment of habitats should be performed to determine suitability for lynx and their primary prey, the snowshoe hare. If suitable habitats are identified, additional surveys are advisable to determine if lynx are present. No other 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.

Operation of wind turbines can adversely affect a variety of wildlife species, including migratory birds and bats. In order to assess the level of risk and the scope of species potentially present in a wind turbine project area, this office recommends that 1) the spatial and temporal uses of the rotor-swept zone by wildlife be identified and evaluated using radar and other remote sensing techniques for a period of three years; and 2) the local site environs be evaluated to determine the presence and magnitude of habitat fragmentation syndrome of effects that would be implicated by project construction and/ or operation. These effects may include the direct loss of habitat; an increase in

edge habitat; increased nest parasitism and predation; increased isolation of remaining forest; a decrease in abundance and diversity of area-sensitive species; a decrease in size of remaining forest patches; increased human disturbance; a decrease in habitat suitability for area-sensitive species and a concurrent increase in habitat suitability for edge or generalist species; and interruption of travel corridors, displacement and other behavioral effects.

We recommend that the above pre-construction surveys be conducted to inform the project proponent, as well as the Service, of potential wildlife conflicts during the site selection and planning stages. With this information, risks can be assessed, and methods to avoid, minimize and mitigate impacts to wildlife may be accommodated. Without these pre-construction surveys, operational disruptions could reduce the benefits of this important alternative energy source while attempting to avoid impacts to wildlife. Absent adequate pre-construction surveys and careful analysis of subsequent data, the siting, construction and operation of a wind project that results in mortality to wildlife would likely result in violation of federal laws, such as the Migratory Bird Treaty Act and the Endangered Species Act.

Thank you for your coordination. Please contact Vernon Lang , with questions regarding Migratory Birds, or Anthony Tur, with questions regarding federally-listed species, at 603-223-2541, if we can be of further assistance.

Sincerely yours,

Anthony P. Tur
Endangered Species Specialist
New England Field Office

Letter From Wagner Forest Management, LTD.
On Behalf Of Landowner Bayroot LLC

WAGNER FOREST MANAGEMENT, LTD.

PO Box 160 • 150 Orford Road
Lyme, New Hampshire 03768

Telephone (603) 795-2002 Facsimile (603) 795-4631

July 7, 2008

Mr. Craig Rennie, CWS
New Hampshire Department of Environmental Services
Wetlands Bureau
Post Office Box 95
6 Hazen Drive
Concord, New Hampshire 03301-0095

Subject: Granite Reliable Power Wind Park – NHDES Wetlands Bureau Dredge & Fill Permit Application

Dear Mr. Rennie,

Granite Reliable Power plans to submit a Wetlands Bureau Dredge & Fill Permit application associated with their proposed wind park in the Phillips Brook area. Wagner Forest Management, Ltd. is the Manager of Bayroot LLC, one of the owners of the land upon which the Granite Reliable Power Wind Park project will be constructed. The owner has entered into an agreement with Granite Reliable Power to allow them to construct and maintain the project (in compliance with all applicable laws) and is in support of the endeavor.

Please let this letter serve as our authorization as landowner for Granite Reliable Power to make the application and for Horizons Engineering, LLC to act as their agent in the permit process.

If you have any questions or comments or need any additional information, please feel free to call.

For Bayroot LLC
By Wagner Forest Management, Ltd.
Its Manager

7/7/08

Daniel H. Hudnut
Senior Project Analyst

Letter From Landowner GMO Renewable Resources

GMO
Renewable Resources

July 10, 2008

Mr. Craig Rennie, CWS
New Hampshire Department of Environmental Services
Wetlands Bureau
Post Office Box 95
6 Hazen Drive
Concord, New Hampshire 03301-0095

Subject: Granite Reliable Power Wind Park – NHDES Wetlands Bureau Dredge & Fill Permit Application

Dear Mr. Rennie,

Granite Reliable Power plans to submit a Wetlands Bureau Dredge & Fill Permit application associated with their proposed wind park in the Phillips Brook area. GMO Renewable Resources LLC is one of the owners of the land upon which the Granite Reliable Power Wind Park project will be constructed. The owner has entered into an agreement with Granite Reliable Power to allow them to construct and maintain the project (in compliance with all applicable laws) and is in support of the endeavor.

Please let this letter serve as our authorization as landowner for Granite Reliable Power to make the application and for Horizons Engineering, LLC to act as their agent in the permit process. If you have any questions or comments or need any additional information, please feel free to call.

Christina Petersen
GMO Renewable Resources LLC

77 Franklin Street, 10th Floor | Boston, MA 02110
T: (617) 346-7597 | F: (617) 261-1527 | www.gmo.com

horizons Engineering PLLC

SECTION 4

Wetland Impact Photographs

Photo 5-1A: Impact 5-1
Looking West

Photo 5-1B: Impact 5-1
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 5-2A: Impact 5-2
Looking South

Photo 5-3A: Impact 5-3
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 5-4A: Impact 5-4
Looking Northwest

Photo 5-4B: Impact 5-4
Looking West

horizons Engineering inc
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 5-5A: Impact 5-5
Looking South

Photo 5-6A: Impact 5-6
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 5-6B: Impact 5-6
Looking West

Photo 5-7A: Impact 5-7
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 5-7B: Impact 5-7
Looking Northwest

Photo 5-7C: Impact 5-7
Looking Southeast

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 6-1A: Impact 6-1
Looking North

Photo 7-1A: Impact 7-1
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 7-1B: Impact 7-1
Looking East

Photo 7-2A: Impact 7-2
Looking Northeast

horizons Engineering

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 10-1A: Impact 10-1
Looking East

Photo 10-1B: Impact 10-1
Looking South

horizons Engineering

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 12-1A: Impact 12-1
Looking West

Photo 12-1B: Impact 12-1
Looking East

horizons Engineering

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 12-2A:
Impact 12-2
Looking Southeast

Photo 12-2B:
Impact 12-2
Looking Northwest

horizons Engineering LLC
34 School Street
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 12-3A:
Impact 12-3
Looking Northwest

Photo 12-3B:
Impact 12-3
Looking Southeast

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 13-1A:
Impact 13-1
Looking Southwest

Photo 14-1A:
Impact 14-1
Looking South

horizons Engineering

34 School Street
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 15-1A: Impact 15-1
Looking Northwest

Photo 15-2A: Impact 15-2
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 16-1A: Impact 16-1
Looking Southwest

Photo 16-2A:
Impact 16-2
Looking South

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 17-1A:
Impact 17-1
Looking East

Photo 17-1B:
Impact 17-1
Looking West

horizons Engineering
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 17-2A:
Impact 17-2
Looking West

Photo 17-2B:
Impact 17-2
Looking Northwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 17-2C:
Impact 17-2
Looking East

Photo 17-3A:
Impact 17-3
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 17-4A: Impact 17-4
Looking North

Photo 18-1A:
Impact 18-1
Looking West

horizons Engineering

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 18-1B:
Impact 18-1
Looking East

Photo 18-2A: Impact 18-2
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 18-3A:
Impact 18-3
Looking West

Photo 18-4A:
Impact 18-4
Looking Southeast

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 19-1A: Impact 19-1
Looking East

Photo 19-1B: Impact 19-1
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 19-2A:
Impact 19-2
Looking Northwest

Photo 19-2B: Impact 19-2
Looking East

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 20-1A: Impact 20-1
Looking West

Photo 20-1B: Impact 20-1
Looking East

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 20-2A:
Impact 20-2
Looking Northwest

Photo 20-2B:
Impact 20-2
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 20-2C: Impact 20-2
Looking East

Photo 21-1A: Impact 21-1
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 21-1B: Impact 21-1
Looking East

Photo 21-2A:
Impact 21-2
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 21-2B: Impact 21-2
Looking East

Photo 21-3A: Impact 21-3
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 22-1A: Impact 22-1
Looking South

Photo 22-2A: Impact 22-2
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 22-3A: Impact 22-3
Looking East

Photo 22-4A: Impact 22-4
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 22-5A: Impact 22-5
Looking East

Photo 22-6A: Impact 22-6
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 22-7A: Impact 22-7
Looking East

Photo 22-7B: Impact 22-7
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 23-1A: Impact 23-1
Looking East

Photo 23-1B: Impact 23-1
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 23-2A/3A:
Impacts 23-2 and 23-3
Looking North

Photo 23-2B: Impact 23-2
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 23-2C:
Impact 23-2
Looking East

Photo 23-4A:
Impact 23-4
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 24-1A: Impact 24-1
Looking North

Photo 24-1B: Impact 24-1
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 24-1C: Impact 24-1
Looking East

Photo 24-2A: Impact 24-2
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 24-3A: Impact 24-3
Looking North

Photo 24-3B: Impact 24-3
Looking East

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 24-4A:
Impact 24-4
Looking West

Photo 24-5A: Impact 24-5
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 24-5B: Impact 24-5
Looking East

Photo 24-6A: Impact 24-6
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 24-6B: Impact 24-6
Looking North

Photo 24-6C: Impact 24-6
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 24-7A: Impact 24-7
Looking East

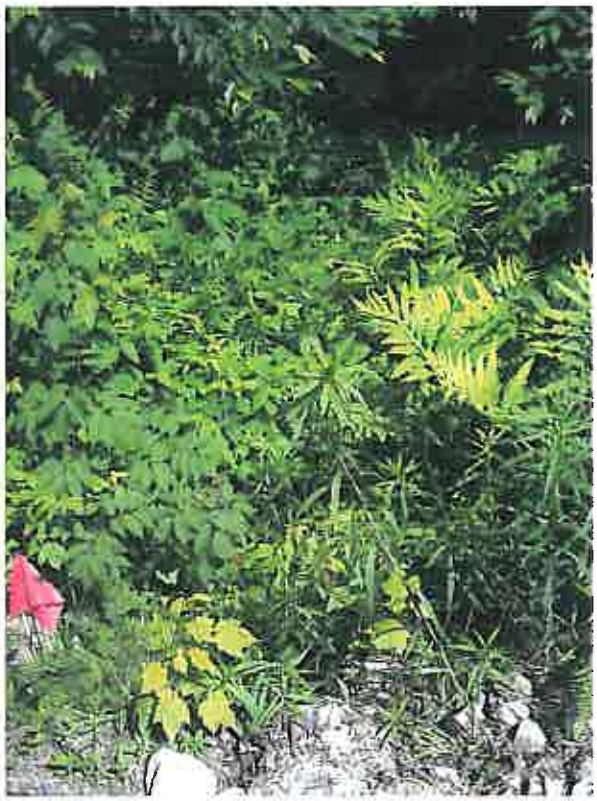

Photo 25-1A: Impact 25-1
Looking East

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 25-1B:
Impact 25-1
Looking Southwest

Photo 25-2A:
Impact 25-2
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 25-3A:
Impact 25-3
Looking East

Photo 25-4A: Impact 25-4
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 25-5A: Impact 25-5
Looking East

Photo 25-5B:
Impact 25-5
Looking North

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Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 25-6A: Impact 25-6
Looking North

Photo 25-7A: Impact 25-7
Looking East

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 25-8A: Impact 25-8
Looking North

Photo 25-9A: Impact 25-9
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 25-10A:
Impact 25-10
Looking East

Photo 26-1A: Impact 26-1
Looking Northwest

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34 School Street
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 26-2A:
Impact 26-2
Looking Northeast

Photo 26-3A: Impact 26-3
Looking East

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 26-4A: Impact 26-4
Looking North

Photo 26-5A:
Impact 26-5
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 26-6A:
Impact 26-6
Looking East

Photo 26-7A:
Impact 26-7
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 26-8A: Impact 1
Looking East

Photo 26-9A/11A:
Impacts 26-9 & 26-11
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 26-10A: Impact 26-10
Looking North

Photo 26-12A: Impact 26-12
Looking East

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 27-1A: Impact 27-1
Looking Southeast

Photo 27-2A: Impact 27-2
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 27-2B: Impact 27-2
Looking Northwest

Photo 27-3A:
Impact 27-3
Looking Southwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 29-1A: Impact 29-1
Looking North

Photo 29-1B:
Impact 29-1
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 29-2A:
Impact 29-2
Looking South

Photo 29-3A:
Impact 29-3
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 30-1A: Impact 30-1
Looking West

Photo 30-1B:
Impact 30-1
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 31-1A: Impact 31-1
Looking Northwest

Photo 31-1B: Impact 31-1
Looking Northeast

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 31-1C: Impact 31-1
Looking North

Photo 31-2A: Impact 31-2
Looking Southwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 31-3A: Impact 31-3
Looking Southeast

Photo 31-4A: Impact 31-4
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 31-5A: Impact 31-5
Looking West

Photo 31-5B: Impact 31-5
Looking East

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 31-5C: Impact 31-5
Looking South

Photo 31-6A: Impact 31-6
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 31-7A:
Impact 31-7
Looking Southwest

Photo 31-8A:
Impact 31-8
Looking Northeast

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 31-8B:
Impact 31-8
Looking Southwest

Photo 31-9A:
Impact 31-9
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 31-10A: Impact 31-10
Looking Northwest

Photo 32-1A/2A:
Impacts 32-1 & 32-2
Looking Southeast

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 32-2B:
Impact 32-2
Looking North

Photo 32-3A: Impact 32-3
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 32-4A: Impact 32-4
Looking Northwest

Photo 33-1A/3A:
Impacts 33-1 & 33-3
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 33-2A: Impact 33-2
Looking Northwest

Photo 33-4A:
Impact 33-4
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 33-5A:
Impact 33-5
Looking North

Photo 33-6A:
Impact 33-6
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 33-7A: Impact 33-7
Looking Northwest

Photo 33-8A: Impact 33-8
Looking Southwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 33-9A: Impact 33-9
Looking Northwest

Photo 33-10A/11A:
Impacts 33-10 & 33-11
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 33-10B: Impact 33-10
Looking Southwest

Photo 33-12A: Impact 33-12
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 33-12B:
Impact 33-12
Looking North

Photo 33-13A:
Impact 33-13
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 34-1A: Impact 34-1
Looking Northwest

Photo 34-1B:
Impact 34-1
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 34-2A: Impact 34-2
Looking North

Photo 34-3A:
Impact 34-3
Looking East

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 34-4A: Impact 34-4
Looking South

Photo 35-1A:
Impact 35-1
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 35-2A:
Impact 35-2
Looking Northeast

Photo 35-3A:
Impact 35-3
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 35-4A: Impact 35-4
Looking Northeast

Photo 35-5A:
Impact 35-5
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 35-5B:
Impact 35-5
Looking Southwest

Photo 35-6A: Impact 35-6
Looking Northeast

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 34-7A: Impact 34-7
Looking North

Photo 34-8A: Impact 34-8
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 34-9A: Impact 34-9
Looking North

Photo 38-1A:
Impact 38-1
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 38-2A:
Impact 38-2
Looking South

Photo 38-3A:
Impact 38-3
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 38-3B:
Impact 38-3
Looking East

Photo 38-4A:
Impact 38-4
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 38-4B:
Impact 38-4
Looking East

Photo 39-1A:
Impact 39-1
Looking West

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 39-2A:
Impact 39-2
Looking North

Photo 39-3A: Impact 39-3
Looking Southwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 39-3B:
Impact 39-3
Looking Northeast

Photo 39-4A: Impact 39-4
Looking Northwest

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 39-5A: Impact 39-5
Looking North

Photo 40-1A:
Impact 40-1
Looking Northwest

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34 School Street
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 40-1B:
Impact 40-1
Looking Southeast

Photo 40-2A: Impact 40-2
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 40-2B: Impact 40-2
Looking North

Photo 40-3A: Impact 40-3
Looking North

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 41-1A: Impact 41-1
Looking North

Photo 41-1B:
Impact 41-1
Looking Northeast

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 41-1C:
Impact 41-1
Looking Southwest

Photo 41-2A: Impact 41-2
Looking North

horizons Engineering inc
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 41-2B: Impact 41-2
Looking Southwest

Photo 41-3A:
Impact 41-3
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 41-3B: Impact 41-3
Looking Southeast

Photo 41-4A:
Impact 41-4
Looking West

horizons Engineering inc
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 41-4B: Impact 41-4 Looking North

Photo 41-5A: Impact 41-5 Looking Southwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 41-5B: Impact 41-5
Looking North

Photo 41-5C: Impact 41-5
Looking North

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 42-1A: Impact 42-1
Looking Southwest

Photo 42-1B: Impact 42-1
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 42-2A: Impact 42-2
Looking Northwest

Photo 42-2B: Impact 42-2
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 42-2C: Impact 42-2
Looking West

Photo 42-3A: Impact 42-3
Looking Northwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 42-4A:
Impact 42-4
Looking West

Photo 42-5A:
Impact 42-5
Looking Northeast

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 42-6A: Impact 42-6
Looking Southwest

Photo 42-6B:
Impact 42-6
Looking Northeast

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 42-7A: Impact 42-7
Looking North

Photo 42-7B:
Impact 42-7
Looking Southwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 43-1A: Impact 43-1
Looking Northwest

Photo 43-1B:
Impact 43-1
Looking Southeast

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 43-2A:
Impact 43-2
Looking South

Photo 43-2B:
Impact 43-2
Looking North

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 43-3A:
Impact 43-3
Looking Southwest

Photo 43-3B:
Impact 43-3
Looking Northwest

horizons Engineering inc
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 43-4A:
Impact 43-4
Looking Southwest

Photo 43-5A:
Impact 43-5
Looking North

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 43-6A: Impact 43-6
Looking West

Photo 43-6B: Impact 43-6
Looking Northeast

horizons Engineering inc
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 43-7A: Impact 43-7
Looking South

Photo 43-9A: Impact 43-9
Looking West

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 43-10A: Impact 43-10
Looking North

Photo 44-1A:
Impact 44-1
Looking South

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 44-2A: Impact 44-2
Looking Northwest

Photo 44-3A: Impact 44-3
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 44-3B: Impact 44-3
Looking West

Photo 44-5A:
Impact 44-5
Looking Northwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 44-5B:
Impact 44-5
Looking Southwest

Photo 44-6A: Impact 44-6
Looking North

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 44-6B: Impact 44-6
Looking North

Photo 45-1A: Impact 45-1
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 45-2A: Impact 45-2
Looking East

Photo 45-2B: Impact 45-2
Looking West

horizons Engineering inc
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 45-3A:
Impact 45-3
Looking Southwest

Photo 45-4A:
Impact 45-4
Looking Northwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 45-5A: Impact 45-5
Looking South

Photo 45-6A:
Impact 45-6
Looking Southwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 45-7A:
Impact 45-7
Looking Northwest

Photo 45-8A:
Impact 45-8
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 45-8B:
Impact 45-8
Looking Northwest

Photo 45-9A:
Impact 45-9
Looking West

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 45-9B:
Impact 45-9
Looking Northeast

Photo 45-10A: Impact 45-10
Looking Southwest

horizons Engineering
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 45-10B: Impact 45-10 Looking Northeast

Photo 46-1A: Impact 46-1 Looking North

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 46-2A:
Impact 46-2
Looking Southwest

Photo 46-3A:
Impact 46-3
Looking North

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 46-3B:
Impact 46-3
Looking Southwest

Photo 46-4A: Impact 46-4
Looking South

horizons Engineering inc
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 46-4B: Impact 46-4
Looking West

Photo 46-5A: Impact 46-5
Looking Southwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 46-6A: Impact 46-6
Looking South

Photo 46-7A: Impact 46-7
Looking Southeast

horizons Engineering
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 46-7B: Impact 46-7
Looking West

Photo 46-8A: Impact 46-8
Looking Northeast

horizons Engineering
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 46-9A:
Impact 46-9
Looking West

Photo 46-9B:
Impact 46-9
Looking Southwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 47-1A: Impact 47-1
Looking Southwest

Photo 47-1B: Impact 47-1
Looking Northeast

horizons Engineering
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 47-2A:
Impact 47-2
Looking Southwest

Photo 47-2B:
Impact 47-2
Looking Northeast

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 47-3A:
Impact 47-3
Looking Southwest

Photo 47-3B:
Impact 47-3
Looking Northeast

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 47-4A:
Impact 47-4
Looking North

Photo 47-5A:
Impact 47-5
Looking Southeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 47-5B:
Impact 47-5
Looking North

Photo 47-6A:
Impact 47-6
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 47-6B:
Impact 47-6
Looking Southwest

Photo 48-1A:
Impact 48-1
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 48-1B: Impact 48-1
Looking Southwest

Photo 48-2A:
Impact 48-2
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 48-3A:
Impact 48-3
Looking Northwest

Photo 48-4A: Impact 48-4
Looking Northwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 48-5A:
Impact 48-5
Looking Southwest

Photo 48-5B: Impact 48-5
Looking East

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 48-6A:
Impact 48-6
Looking Southwest

Photo 48-6B: Impact 48-6
Looking East

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 48-7A: Impact 48-7
Looking East

Photo 48-7B:
Impact 48-7
Looking South

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 49-1A:
Impact 49-1
Looking East

Photo 49-1B: Impact 49-1
Looking South

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 49-2A:
Impact 49-2
Looking Northeast

Photo 49-2B:
Impact 49-2
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 49-3A:
Impact 49-3
Looking West

Photo 49-3B:
Impact 49-3
Looking East

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 49-4A: Impact 49-4 Looking West

Photo 49-4B: Impact 49-4 Looking Southwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 49-4C:
Impact 49-4
Looking Southeast

Photo 50-1A:
Impact 50-1
Looking Northwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 50-1B:
Impact 50-1
Looking Southwest

Photo 50-2A:
Impact 50-2A
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 50-2B:
Impact 50-2
Looking Southwest

Photo 50-3A:
Impact 50-3
Looking West

horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 50-3B:
Impact 50-3
Looking Southwest

Photo 50-4A:
Impact 50-4
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 50-4B:
Impact 50-4
Looking North

Photo 50-5A:
Impact 50-5
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 50-5B:
Impact 50-5
Looking Southwest

Photo 50-6A:
Impact 50-6
Looking Northwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 51-1A:
Impact 51-1
Looking North

Photo 51-1B:
Impact 51-1
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 51-2A:
Impact 51-2
Looking North

Photo 51-2B:
Impact 51-2
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 52-1A:
Impact 52-1
Looking East

Photo 52-1B: Impact 52-1
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 52-2A:
Impact 52-2
Looking North

Photo 52-2B:
Impact 52-2
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 52-3A:
Impact 52-3
Looking North

Photo 52-3B:
Impact 52-3
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 53-1A:
Impact 53-1
Looking North

Photo 53-1B:
Impact 53-1
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 53-2A:
Impact 53-2
Looking North

Photo 53-2B:
Impact 53-2
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 54-1A:
Impact 54-1
Looking Southeast

Photo 54-2A:
Impact 54-2
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 54-2B:
Impact 54-2
Looking West

Photo 54-3A:
Impact 54-3
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 54-3B:
Impact 54-3
Looking West

Photo 54-4A:
Impact 54-4
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 54-4B: Impact 54-4
Looking Southwest

Photo 54-5A:
Impact 54-5
Looking Northeast

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 54-5B:
Impact 54-5
Looking West

Photo 54-6A:
Impact 54-6
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 54-7A:
Impact 54-7
Looking Northeast

Photo 54-7B: Impact 54-7
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 55-1A:
Impact 55-1
Looking Northeast

Photo 55-1B:
Impact 55-1
Looking West

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34 School Street
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 55-2A: Impact 55-2
Looking North

Photo 55-3A:
Impact 55-3
Looking Northeast

horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 55-3B:
Impact 55-3
Looking West

Photo 55-4A:
Impact 55-4
Looking Northeast

horizons Engineering LLC
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 55-4B:
Impact 55-4
Looking West

Photo 56-1A:
Impact 56-1
Looking East

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 56-1B:
Impact 56-1
Looking West

Photo 56-2A:
Impact 56-2
Looking Southwest

horizons Engineering LLC
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Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 56-3A:
Impact 56-3
Looking West

Photo 56-4A:
Impact 56-4
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 56-5A: Impact 56-5
Looking North

Photo 57-1A:
Impact 57-1
Looking Northwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 57-2A:
Impact 57-2
Looking Northwest

Photo 57-3A:
Impact 57-3
Looking Northwest

horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 57-4A:
Impact 57-4
Looking West

Photo 57-5A: Impact 57-5
Looking North

horizons Engineering LLC
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 57-5B: Impact 57-5
Looking East

Photo 57-5C: Impact 57-5
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 57-6A:
Impact 57-6
Looking West

Photo 57-7A:
Impact 57-7
Looking Southwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 58-1A:
Impact 58-1
Looking Northeast

Photo 58-1B: Impact 58-1
Looking West

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 58-2A: Impact 58-2
Looking North

Photo 58-3A:
Impact 58-3
Looking West

horizons Engineering LLC

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 58-4A:
Impact 58-4
Looking South

Photo 58-6A:
Impact 58-6
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 58-6B:
Impact 58-6
Looking Northeast

Photo 58-7A:
Impact 58-7
Looking West

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 58-8A:
Impact 58-8
Looking South

Photo 58-9A: Impact 58-9
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 59-1A:
Impact 59-1
Looking North

Photo 59-1B:
Impact 59-1
Looking South

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 59-2A:
Impact 59-2
Looking West

Photo 59-2B:
Impact 59-2
Looking East

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 59-3A: Impact 59-3
Looking North

Photo 59-4A:
Impact 59-4
Looking West

horizons Engineering LLC
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 59-4B:
Impact 59-4
Looking Southeast

Photo 59-5A:
Impact 59-5
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 59-5B:
Impact 59-5
Looking East

Photo 59-6A:
Impact 59-5
Looking East

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 59-6B:
Impact 59-6
Looking Northeast

Photo 59-7A:
Impact 59-7
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 59-7B:
Impact 59-7
Looking East

Photo 59-8A:
Impact 59-8
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 59-9A:
Impact 59-9
Looking East

Photo 60-1A:
Impact 60-1
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 60-2A: Impact 60-2
Looking East

Photo 60-3A:
Impact 60-3
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 60-4A:
Impact 60-4
Looking Northwest

Photo 60-4B:
Impact 60-4
Looking Southeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 60-6B: Impact 60-6
Looking East

Photo 60-7A:
Impact 60-7
Looking South

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34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 60-7B:
Impact 60-7
Looking North

Photo 61-1A: Impact 61-1
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 61-2A:
Impact 61-2
Looking West

Photo 61-3A: Impact 61-3
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 61-4A:
Impact 61-4
Looking Northwest

Photo 61-5A:
Impact 61-5
Looking Northeast

horizons Engineering LLC
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 61-6A:
Impact 61-6
Looking South

Photo 62-1A: Impact 62-1
Looking Northeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 62-1B: Impact 62-1
Looking Southwest

Photo 62-2A:
Impact 62-2
Looking Northwest

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 62-2B:
Impact 62-2
Looking Southeast

Photo 62-3A:
Impact 62-3
Looking West

horizons Engineering LLC
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 62-3B:
Impact 62-3
Looking South

Photo 62-4A: Impact 62-4
Looking Northeast

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 62-4B:
Impact 62-4
Looking West

Photo 62-4C: Impact 62-4
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 62-5A: Impact 62-5
Looking South

Photo 62-5B:
Impact 62-5
Looking West

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 63-1A:
Impact 63-1
Looking Northeast

Photo 63-1B: Impact 63-1
Looking Northeast

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 63-1C:
Impact 63-1
Looking South

Photo 63-1D:
Impact 63-1
Looking North

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 63-3A:
Impact 63-3
Looking Northeast

Photo 63-4A: Impact 63-4
Looking Southwest

horizons Engineering inc
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 63-3B:
Impact 63-3
Looking North

Photo 63-3C:
Impact 63-3
Looking South

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 63-3D:
Impact 63-3
Looking West

Photo 63-5A:
Impact 63-5
Looking North

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 63-5B:
Impact 63-5
Looking Southwest

Photo 63-6A: Impact 63-6
Looking Northeast

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34 School Street
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 63-6B:
Impact 63-6
Looking South

Photo 63-6C:
Impact 63-6
Looking North

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 63-6B:
Impact 63-6
Looking South

Photo 63-6C:
Impact 63-6
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 63-7A:
Impact 63-7
Looking Northeast

Photo 63-7B:
Impact 63-7
Looking Southwest

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 64-1A: Impact 64-1
Looking North

Photo 64-1B: Impact 64-1
Looking Southwest

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34 School Street
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 64-2A:
Impact 64-2
Looking East

Photo 64-2B:
Impact 64-2
Looking West

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34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 64-3A:
Impact 64-3 Looking Northwest

Photo 64-3B:
Impact 64-3 Looking Southeast

horizons Engineering inc
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 64-4A:
Impact 64-4
Looking East

Photo 64-4B:
Impact 64-4
Looking North

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 64-4C:
Impact 64-4
Looking South

Photo 64-4D:
Impact 64-4
Looking East

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 64-5A:
Impact 64-5
Looking South

Photo 64-6A:
Impact 64-6
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 64-6B:
Impact 64-6
Looking South

Photo 65-2A: Impact 65-2
Looking East

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 65-3A:
Impact 65-3
Looking North

Photo 65-4A:
Impact 65-4
Looking South

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 65-5A:
Impact 65-5
Looking South

Photo 65-5B:
Impact 65-5
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 65-6A:
Impact 65-6
Looking East

Photo 65-6B: Impact 65-6
Looking Southwest

horizons Engineering
34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 65-7A:
Impact 65-7
Looking North

Photo 65-7B:
Impact 65-7
Looking Southeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 65-8A:
Impact 85-8
Looking East

Photo 85-8B:
Impact 85-8
Looking Southwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 66-1A: Impact 66-1
Looking Northeast

Photo 66-1B: Impact 66-1
Looking Southwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 66-2A:
Impact 66-2
Looking Northeast

Photo 66-3A:
Impact 66-3
Looking Northeast

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 66-3B:
Impact 66-3
Looking Northeast

Photo 66-4A: Impact 66-4
Looking West

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 66-4B:
Impact 66-4
Looking East

Photo 66-5A:
Impact 66-5
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 66-5B:
Impact 66-5
Looking North

Photo 66-6A:
Impact 66-6
Looking Northeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 67-1A:
Impact 67-1 Looking South

Photo 67-1B:
Impact 67-1
Looking Northeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 67-1C: Impact 67-1
Looking West

Photo 67-2A:
Impact 67-2
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 67-2B:
Impact 67-2
Looking West

Photo 67-3A:
Impact 67-3
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 67-4A: Impact 67-4
Looking West

Photo 67-5A:
Impact 67-5
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 67-6A: Impact 67-6
Looking Northeast

Photo 67-6B:
Impact 67-6
Looking Southwest

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34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 68-1A:
Impact 68-1
Looking Northwest

Photo 68-2A:
Impact 68-2
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 68-3A:
Impact 68-3
Looking Northwest

Photo 68-4A:
Impact 68-4
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 68-5A:
Impact 68-5
Looking Northeast

Photo 68-6A:
Impact 68-6
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 68-7A:
Impact 68-7
Looking South

Photo 68-7B:
Impact 68-7
Looking Northwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 68-8A:
Impact 68-8
Looking Southeast

Photo 68-9A:
Impact 68-9
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 68-10A:
Impact 68-10
Looking North

Photo 68-11A:
Impact 68-11
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 68-12A:
Impact 68-12
Looking South

Photo 68-13A:
Impact 68-13
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 69-1A:
Impact 69-1
Looking South

Photo 69-2A: Impact 69-2
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 69-4A:
Impact 69-4
Looking Northwest

Photo 69-5A:
Impact 69-5 Looking
Northwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 69-5B:
Impact 69-5
Looking Southeast

Photo 69-6A:
Impact 69-6
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 69-6B:
Impact 69-6
Looking Northeast

Photo 69-7A:
Impact 69-7
Looking West

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 69-8A:
Impact 69-8
Looking West

Photo 69-8B:
Impact 69-8
Looking South

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 70-1A:
Impact 70-1
Looking South

Photo 70-1B: Impact 70-1
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 70-2A: Impact 70-2
Looking Southeast

Photo 70-2B:
Impact 70-2
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 70-3A:
Impact 70-3
Looking South

Photo 70-3B:
Impact 70-3
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 70-4A:
Impact 70-4
Looking South

Photo 70-4B:
Impact 70-4
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 71-4A:
Impact 71-4
Looking Southwest

Photo 71-5A:
Impact 71-5
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 71-6A:
Impact 71-6
Looking Southwest

Photo 71-7A:
Impact 71-7
Looking East

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 71-7B:
Impact 71-7
Looking Northwest

Photo 71-10A:
Impact 71-10
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 71-11A:
Impact 71-11
Looking West

Photo 71-12A:
Impact 71-12
Looking East

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

71-12B: Impact 71-12
Looking West

71-13A: Impact 71-13
Looking North

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 72-1A:
Impact 72-1
Looking West

Photo 72-1B:
Impact 72-1
Looking Northeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 72-2A:
Impact 72-2
Looking North

Photo 72-3A:
Impact 72-3
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 72-4A:
Impact 72-4
Looking North

Photo 72-5A: Impact 72-5
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 72-5B: Impact 72-5
Looking West

Photo 72-6A:
Impact 72-6
Looking North

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 72-6B:
Impact 72-6
Looking West

Photo 72-7A:
Impact 72-7
Looking South

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 72-8A:
Impact 72-8
Looking East

Photo 72-8B: Impact 72-8
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 73-1A:
Impact 73-1
Looking Northeast

Photo 73-2A:
Impact 73-2
Looking South

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 73-2B:
Impact 73-2
Looking West

Photo 73-3A: Impact 73-3
Looking East

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 73-3B: Impact 73-3
Looking East

Photo 73-4A:
Impact 73-4
Looking Northwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 73-5A:
Impact 73-5
Looking North

Photo 73-6A:
Impact 73-6
Looking North

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 73-7A:
Impact 73-7
Looking Northwest

Photo 73-8A: Impact 73-8
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 73-9A:
Impact 73-9
Looking East

Photo 73-10A:
Impact 73-10
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 73-11A:
Impact 73-11
Looking North

Photo 73-12A: Impact 73-12
Looking Southeast

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 73-13A: Impact 73-13
Looking Southeast

Photo 74-3A:
Impact 74-3
Looking Southeast

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 74-5A: Impact 74-5
Looking Southeast

Photo 74-6A: Impact 74-6
Looking Southeast

horizons Engineering LLC
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 74-7A: Impact 74-7
Looking Southeast

Photo 74-8A: Impact 74-8
Looking Southeast

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 74-9A: Impact 74-9
Looking Southeast

Photo 75-1A: Impact 75-1
Looking Southeast

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 75-3A: Impact 75-3
Looking Southeast

Photo 75-4A:
Impact 75-4
Looking Southeast

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 75-5A: Impact 75-5
Looking West

Photo 75-6A:
Impact 75-6
Looking East

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 75-8A: Impact 75-8
Looking East

Photo 75-9A:
Impact 75-9
Looking Northwest

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 75-11A:
Impact 75-11
Looking East

Photo 76-1A:
Impact 76-1
Looking Southeast

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 76-1B: Impact 76-1
Looking Northwest

Photo 76-2A: Impact 76-2
Looking Northeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 76-3A: Impact 76-3
Looking Southeast

Photo 76-3B: Impact 73-3
Looking Northwest

horizons Engineering inc
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 76-4A: Impact 76-4
Looking Southwest

Photo 76-4B: Impact 76-4
Looking Northeast

horizons Engineering inc
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 60-5A:
Impact 60-5
Looking Northwest

Photo 60-6A: Impact 60-6
Looking Northwest

horizons Engineering LLC
34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 76-5A:
Impact 76-5
Looking Northeast

Photo 76-5B:
Impact 76-5
Looking Northwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 76-6A:
Impact 76-6
Looking Northeast

Photo 76-6B:
Impact 76-6
Looking Northeast

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 76-6C:
Impact 76-6
Looking North

Photo 77-1A:
Impact 77-1
Looking Northwest

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34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-1B: Impact 77-1
Looking Southeast

Photo 77-2A:
Impact 77-2
Looking Northeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-2B:
Impact 77-2
Looking Northeast

Photo 77-2C:
Impact 77-2
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-3A:
Impact 77-3
Looking Northeast

Photo 77-3B:
Impact 77-3
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-4A:
Impact 77-4
Looking West

Photo 77-5A: Impact 77-5
Looking Southeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-6A:
Impact 77-6
Looking Northeast

Photo 77-6B:
Impact 77-6
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-7A: Impact 77-7
Looking Southwest

Photo 77-7B: Impact 77-7
Looking Northeast

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-9A: Impact 77-9
Looking Southeast

Photo 77-10A:
Impact 77-10
Looking Northwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-10B:
Impact 77-10
Looking Southwest

Photo 77-10C:
Impact 77-10
Looking Northeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-11A: Impact 77-11
Looking Southeast

Photo 77-12A:
Impact 77-12
Looking Northeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 77-12B:
Impact 77-12
Looking Southwest

Photo 78-1A:
Impact 78-1
Looking Northwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 78-1B:
Impact 78-1
Looking Southeast

Photo 78-2A:
Impact 78-2
Looking Southwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 78-2B:
Impact 78-2
Looking Northeast

Photo 78-3A:
Impact 78-3
Looking East

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 78-3B:
Impact 78-3
Looking North

Photo 78-4A:
Impact 78-4
Looking East

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 78-5A:
Impact 78-5
Looking Northeast

Photo 78-5B:
Impact 78-5
Looking Southwest

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 78-6A:
Impact 78-6
Looking Northwest

Photo 78-7A:
Impact 78-7
Looking Southeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 78-9A:
Impact 78-9
Looking Southeast

Photo 78-10A:
Impact 78-10
Looking Southeast

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 79-1A:
Impact 79-1
Looking Southwest

Photo 79-1B:
Impact 79-1
Looking Northeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 79-2A:
Impact 79-2
Looking Southwest

Photo 79-3A:
Impact 79-3
Looking Northeast

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 79-3B:
Impact 79-3
Looking Southwest

Photo 79-4A: Impact 79-4
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 79-5A:
Impact 79-5
Looking Northeast

Photo 79-5B:
Impact 79-5
Looking South

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 80-1A:
Impact 80-1
Looking Southeast

Photo 80-2A: Impact 80-2
Looking Southeast

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 80-3A:
Impact 80-3
Looking Southeast

Photo 80-3B:
Impact 80-3
Looking South

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 80-4A:
Impact 80-4
Looking South

Photo 80-4B:
Impact 80-4
Looking West

horizons Engineering

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 80-5A: Impact 80-5
Looking Southwest

Photo 80-5B:
Impact 80-5
Looking Southeast

horizons Engineering

34 School Street
Littleton, NH 03561
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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 80-5C:
Impact 80-5
Looking East

Photo 80-6A:
Impact 80-6
Looking Southwest

horizons Engineering inc

34 School Street
Littleton, NH 03561
(603) 444-4111

Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 80-7A: Impact 80-7
Looking Southeast

Photo 80-8A: Impact 80-8
Looking Northeast

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Wetland Photographs
Project No. 07198

Photo 80-10A: Impact 80-10
Looking West

Photo 82-1A:
Impact 82-1
Looking Southwest

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Wetland Photographs
Project No. 07198

Photo 83-1A:
Impact 83-1
Looking West

Photo 83-1B:
Impact 83-1
Looking Northwest

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Photo 83-2A:
Impact 83-2
Looking Southeast

Photo 83-2B:
Impact 83-2
Looking East

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Wetland Photographs
Project No. 07198

Photo 84-1A:
Impact 84-1
Looking Southeast

Photo 84-1B:
Impact 84-1
Looking Northwest

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Project No. 07198

Photo 87-1A:
Impact 87-1
Looking Southeast

Photo 87-1B:
Impact 87-1
Looking South

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Wetlands Permit Application
Granite Reliable Power, LLC
Granite Reliable Power Wind Park
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Wetland Photographs
Project No. 07198

Photo 97-1A:
Impact 97-1
Looking North

Photo 97-1B:
Impact 97-1
Looking Southwest

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Project No. 07198

Photo 97-2A:
Impact 97-2
Looking North

Photo 97-2B:
Impact 97-2
Looking Southwest

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Photo 97-3A:
Impact 97-3
Looking North

Photo 97-3B:
Impact 97-3
Looking West

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Project No. 07198

Photo 97-4A:
Impact 97-4
Looking North

Photo 97-5A:
Impact 97-5
Looking Southwest

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Coos County, New Hampshire
Wetland Photographs
Project No. 07198

Photo 97-6A:
Impact 97-6
Looking West

Photo 97-6B:
Impact 97-6
Looking Northeast

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Wetlands Permit Application
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Wetland Photographs
Project No. 07198

Photo 97-7A:
Impact 97-7
Looking Northwest

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Granite Reliable Power Wind Park
Coos County, New Hampshire
Wetland Photographs
Project No. 07198

horizons Engineering PLLC

SECTION 5

NHDES Preliminary Mitigation Agreement Form

NHDES PRELIMINARY MITIGATION AGREEMENT FORM

I, GRANITE RELIABLE POWER, LLC., ("Applicant"), by HORIZONS ENGINEERING, L.L.C. ("Authorized Agent"), and the Department of Environmental Services ("DES") hereby agree to the process described below to streamline the review of Applicant's application for a permit under RSA 482-A.

A **Preliminary Mitigation** package is being submitted with the Standard Dredge and Fill Application in accordance with Env-Wt 501.06 and Env-Wt 800. The package contains the information required as outlined in the DES Compensatory Mitigation Checklist.

The preliminary mitigation proposal type is (please check one or more types):

- ___ Wetland Restoration
- _X_ Upland Buffer Preservation
- ___ Wetland Creation
- ___ Payment into the Aquatic Resource Mitigation Fund following consideration of the three options noted above and determining them to not be feasible for complete mitigation.

By executing this agreement, DES agrees to accept Applicant's **Preliminary Mitigation** proposal for purposes of determining whether the application is administratively complete. However, the application will not be deemed complete if other basic information is missing, such as the required plans, attachments, and/or fees.

Applicant agrees to submit the final mitigation plans to DES for review by OCTOBER 31, 2008.

Applicant and DES, by mutual agreement authorized under RSA 482-A:3, XIV(c)(3), agree to extend the response time for DES to review the final mitigation proposal, once received, to 60 days from receipt of the final mitigation plans.

The applicant agrees that if the information required under Env Wt 800 is not submitted by the date specified in this agreement or 120 days from a Request For More Information by DES, the application will be denied.

I, ___ Applicant X Authorized Agent [check one] hereby certify that the information submitted with the application meets the **Preliminary Mitigation** requirements for the DES Wetlands Bureau to understand the nature and appropriateness of the proposed mitigation.

HORIZONS ENGINEERING 7/3/08

~~Signature of Applicant~~ or Authorized Agent Date

The NHDES Wetlands Bureau agrees, by the signature below, that the information submitted meets the **Preliminary Mitigation** requirements, and that technical review of the mitigation proposal will not commence until the required items are submitted before or on the date noted above.

NHDES Wetland Mitigation Coordinator Date

Revised 6-26-07

Compensatory Mitigation Area Assessment
Lobdell Associates, Inc.

Compensatory Wetland Mitigation Area Assessment
Granite Reliable Power Wind Park
Phillips Brook Headwaters

Lobdell Associates Inc
July 2008

1. Introduction

The purpose of this study is to evaluate and assess a proposed compensatory mitigation site for the Granite Reliable Power, LLC , wind park project which is proposed in the Towns of Dummer, Dixville, Ervings Location, Millsfield, and Odell, per NH Wetlands Bureau Administrative Rule 801.

For the purposes of this report, the project area is defined as the linear area in and adjacent to the project as shown on the project plans and includes a 500 foot diameter circle around each wind turbine location and an area along the proposed roads with a width from 200 to over 400 feet.

2. Wetland Mapping and Classification

Wetlands in the project area were delineated according to the standards of the 1987 Federal Manual (COE, 1987) and the rules of the NH Wetlands Bureau. Wetlands were flagged in the field by NH certified wetland scientists in the months of April, May, and June of 2008. The wetland flags were surveyed onto the project plans by Horizon Engineering. Horizons Engineering assembled a team of wetland scientist to complete the mapping which included the following NH certified wetland scientists: Raymond Lobdell, CSS, CWS (Delineation Coordinator); Michael Cuomo, CSS, CWS; Greg Howard, CSS, CWS; Marc Jacobs, CSS, CWS; Thomas Peragallo, CSS, CWS Nancy Rendall, CSS, CWS; Jonathan Sisson, CSS, CWS; Sean Sweeney, CWS, PE Jennifer West, CWS; Barry Keith, CWS; David Allain, CSS, CWS; Patrick Fairbairn, CWS; and Liz Garlo, CWS.

Wetlands were classified by the same team of wetland scientists according to the US Fish and Wildlife Service (USFWS)) classification method as described in Cowardin. et al. (1979). Wetland classifications are shown on the project area plans.

The wetlands in the project area are primarily forested with poorly drained glacial till and shallow to bedrock soils. Generally speaking, vegetation in both the wetlands and adjoining uplands is dominated by facultative and or facultative upland plants. As the elevation increases, so does the presence and dominance of hydrophytes found in the uplands. Therefore, soils rather than vegetation was frequently the most important factor in wetland determination. Soils, however, were often problematic due to cryic conditions above 2500 feet, dark parent materials, and spodic conditions.

The dominant vegetative class is Palustrine forested wetland including evergreen forested, broad leave deciduous forested, and complexes of the two. Tree species often also dominate in the sapling and shrub layers in both forested and more recently cut over areas. Evergreen species include balsam fir, red spruce, and black spruce with an understory of evergreen saplings and shrubs and a ground cover which includes sphagnum, goldthread, and occasional concentrations of ferns and sedges, Deciduous forested wetlands include yellow birch, red maple, and sugar maple with a shrub layer including hobblebush, striped maple, willow, raspberry, and an herb layer including sensitive fern, trout lily, jewel weed, false hellebore, and foam flower, Additional wetland classes include Palustrine scrub shrub wetlands of speckled alder and willow. Concentrations of Carex, Juncus and Scripus species were often found in skidder trails; and alder, willow, and elderberry found in mature ditches along the edge of log roads and skid trails.

The project area is located in the headwaters of two major river systems-the Connecticut and the Androscoggin. The majority of the main road system and the access roads to the FishBrook and Kelsey/Owlhead turbine strings drain to the west and are part of the Phillips Brook subwatershed, which drains to the south to the Upper Ammonoosuc River and on to its connection with the Connecticut in Northumberland. The Dixville turbine string access road drains to the east to West Branch Clear Stream and on to the Androscoggin River in Errol. Finally, the first six miles of the main access road from Route 16 drains to the east to Dummer Pond Brook which flows southeast to the Pontook Reservoir, a part of the Androscoggin River.

3. Wetland Functions and Values

For the purposes of discussing wetland functions and values within the project area, the wetlands have been placed into three groupings based primarily on elevation, slope, and existing and proposed land use. The groupings are as follows:

Group 1 – Includes wetlands in lower reaches of the project from Route 16 along the Dummer Pond Road corridor with northern hardwood and low-land spruce-fir forest with a corridor length over 14 miles. The road which divides the project area is a private well maintained logging road used for the transportation of wood products from the area. A high percentage of the wetlands are impacted by the road system, ditching, skid trails and decades of logging. Wetland classes are dominated by Palustrine forested deciduous and deciduous/ evergreen mix with both seasonal and perennial streams crossing or paralleling the road system. Elevations range from 1200 feet at the junction of Route 16 and Dummer Pond Road to 2200 at the turn up to the Dixville Peak turbine string.

Group 2 – Includes wetlands along the 3 access road corridors for each of the turbine strings-Fishbrook, Kelsey/Owlhead, and Dixville Peaks- and the transmission line. These corridors are also located in northern hardwood and low-

land spruce-fir forests and have less developed existing roads which include secondary logging roads that are not currently in use and have had many of the culverts removed and may or may not be used for recreational trails for snowmobiles or ATVs. They are relatively steep with elevations ranging from 1700 to about 2400 feet. Wetlands are Palustrine forested deciduous, Palustrine forested evergreen and a combination of deciduous/evergreen, generally with poorly drain mineral soils. Most streams present are seasonal, fast flowing mountain streams.

Group 3 – Includes wetlands along the 3 strings of the turbines Fishbrook, Kelsey/Owlhead, and Dixville Peaks and are generally located in a high-elevation spruce-fir forest system. Wetlands are predominately Palustrine forested evergreen.

A qualitative function and values assessment of wetlands in the project area has been completed by Lobdell Associates. The evaluation was completed using a method developed by the COE detailed in a report entitled "The Highway Methodology Workbook Supplement" (COE, 1999). Although the system was developed primarily for projects where the characterization of wetlands was necessary for permit requirements for Section 404 of the Clean Water Act, the system is suitable for a variety of evaluation applications. The system evaluates thirteen functions and values. Each of the wetland groupings in the project area was evaluated and the results are shown in Table 1 and discussed below. Evaluations were based on professional judgment, using information collected in the field and from existing maps and reports.

1. Groundwater Recharge Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Considerations for this function included the presence of glacial outwash soils or potential aquifers. All three wetland groups are dominated by glacial till and have no identified aquifers (USGS (Plates #4 and 7. WRIR 96-4318) nor are then any public or private wells in the immediate area.

2. Floodflow Alteration: This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods to reduce flood peaks. None of the 3 wetlands groups have significant floodflow value characteristic and they protect no land uses directly downstream from damage.

3. Fish and Shellfish Habitat: This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat. Group 1 wetlands include Phillips Brook and tributaries including No. 3 Brook, Walkinson Brook, Wells Brook and Kelley Brook, which may support populations of brook trout. Group 2 wetlands include the West Branch Clear Stream in the Androscoggin River watershed which also may support populations of brook trout. While trout are not stocked on site, the streams are stocked with trout further down the watershed.

4. Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the potential effectiveness of the wetland as a trap for sediments, toxicants or pathogens in runoff water from surrounding uplands of upstream eroding areas. None of the wetland groups have significant characteristics that support this function due to steepness, high associated water course velocities, road side ditches. There are no wells or water supplies immediately downstream. However, Groups 1 and 2, and to a lesser degree 3, potential sources of sediment from commercial logging activities in and around them.

Table 1
Wetland Functions and Values

Function	Group 1	Group 2	Group 3
Groundwater Recharge	7	5,7	6
Floodflow	3, ,13	2,3,	2,3,
Fish/Shellfish	1,4,7,814,17	1,4,7.8,14,17	1
Sediment/Toxicant	**1,10**	**1,10**	**1,10**
Nutrient Removal	-	-	-
Production Export	1,4	1,4	1
Sediment/Shoreline	1,2,3,8	1,2,3,8	2,8
Wildlife Habitat	**2,4,5,7,8,17**	**2,4,5,7,8,17**	**2,4,5,7,8,17**
Recreation	2,3,4,5	2,3,4,5	2,3,4,5
Educational/Scientific	-	-	-
Unique/Heritage	19	19	19
Visual/Aesthetic	4	4	
Endangered	1	1	1

See Attachment B for explanation of reference numbers for rationales for each
-function/value determined not present
Bold primary functions

5. Nutrient Removal/Retention Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms. This functions is limited in all 3 wetland groups due to wetland characteristics including a lack of nutrient attenuation, steepness and high velocities in associated streams. No significant nutrient sources exist above the wetlands.

6. Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for man or other living organisms. Wildlife use the wetlands as a source of food and were observed in the wetlands including deer, moose, bear, beaver, woodcock and a variety of other birds. Food sources are particularly high in

re-growth present in forested wetlands that have been logged.

7. Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion. The wetlands and associated streams are sloping, have high velocities and evidence of sediment in wetlands and stream bank erosion present, particularity in Groups 1 and 2 due to commercial forestry upstream.

8. Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. All wetlands on the site have this as an important value for a wide variety of reasons including location in a large undeveloped forest, high water quality, cover, food, etc. Group 3 wetlands have the least vegetative interspersion, open water or variety of food sources. Additional information on wetland wildlife functions is available elsewhere in the project's application.

9. Recreation: This function considers the wetland and associated watercourses to provide either consumptive or non-consumptive recreational opportunities. While the lack of large open water or wide streams limits traditional wetland recreational opportunities, the recreational value of wetlands is high due to their location in a large undeveloped forest that is currently available for recreation including hunting, fishing, hiking, etc.

10. Educational/Scientific Value: This value considers the suitability of the wetland as a site for an outdoor classroom or as a location for scientific study or research. While the extensive logging road system makes otherwise remote educational or research sites accessible, educational values of all wetlands is low due to their remoteness from schools and research and educational facilities that would most likely have more diverse wetlands at closer locations. Group 3 wetlands being more remote than Group 1 but do offer high elevation and cryic soil research opportunities.

11. Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated water bodies to provide certain special values including archaeological sites, critical habitat, ecological system health, etc. None of these wetlands provides this function. There are opportunities for wildlife viewing along the man logging road in Group 1, however.

12. Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland. The wetlands are forested and cannot easily be viewed. Additionally, commercial forest activities, including logging, yarding and the transportation of wood products is on-going. However, the hardwood forest in Groups 1 and 2 do turn vibrant colors in the fall.

13. Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species. The NH Natural Heritage Inventory was contacted and their report is enclosed with the wetlands application. Several state

threatened or endangered species in the vicinity of all 3 wetland groups including the Osprey, American Marten, Common Loon, Northern Harrier, Pied-billed Grebe, Farwell's Water Milfoil, Lily leaved Twayblade, and Wapato.

4. Wetland Impacts

The total wetland impacts for this project are 12.81 acres with 570 wetland impact sites ranging in size from less than 25 to 20,042 square feet in size. Wetlands impact sites include ditches, seasonal stream crossings, perennial stream crossings (15), forested wetlands, scrub shrub wetlands, and emergent wetlands. Many of the impacts are small with over 450 less than 1000 square feet and many of those in wetlands previously impacted by logging including ditches and shrub or emergent wetlands formed in previously disturbed areas. With regard to total area impacted, the largest impact is to forested wetlands.

The enclosed wetlands application details the wetland impacts.

5. Compensatory Mitigation

The proposal impacts 12.81 acres of wetland. Based on the NH Wetland Bureau's mitigation ratios (Wt. 803.05). The following options are available to meet the required mitigation.

Table 2
Mitigation Options

Mitigation Type	Ratio	Mitigation Required (sq. ft.)
Creation	1:1.5	19.3
Restoration	1:1.5	19.3
Upland Buffer	10:1	128.1
Maximum Allowed Included Jurisdictional Wetlands in Buffer	50% of Upland Buffer	64.05

Based on the mitigation requirements above, several options for mitigation were assessed:

- **In Lieu of Mitigation Fee**

This mitigation option is not available for this project since the wetland impacts area are greater than one acre.

- **Wetland Restoration and/or Creation**

The site does offer restoration opportunity on-site. The project area is located within property that has been in commercial forestry management for decades. Wetland restoration opportunities exist for logging yard restoration, wood debris removal, and the smoothing of ruts caused by skidder operations. While these sites would be relatively easy to restore, it should be realized that the project area and adjoining lands will remain in commercial forest use and the yards, log roads and skid trails will continue to be needed now and in the future. Additionally, the restored areas might be subject to future inadvertent logging impacts. Furthermore, having a large number of small to very small mitigation areas scattered over a 20 mile area would make monitoring difficult.

A restoration component will be included, however, which will include replacing existing culverts in perennial streams with open bottom culverts and stream channel restoration.

- **Wetland Creation**

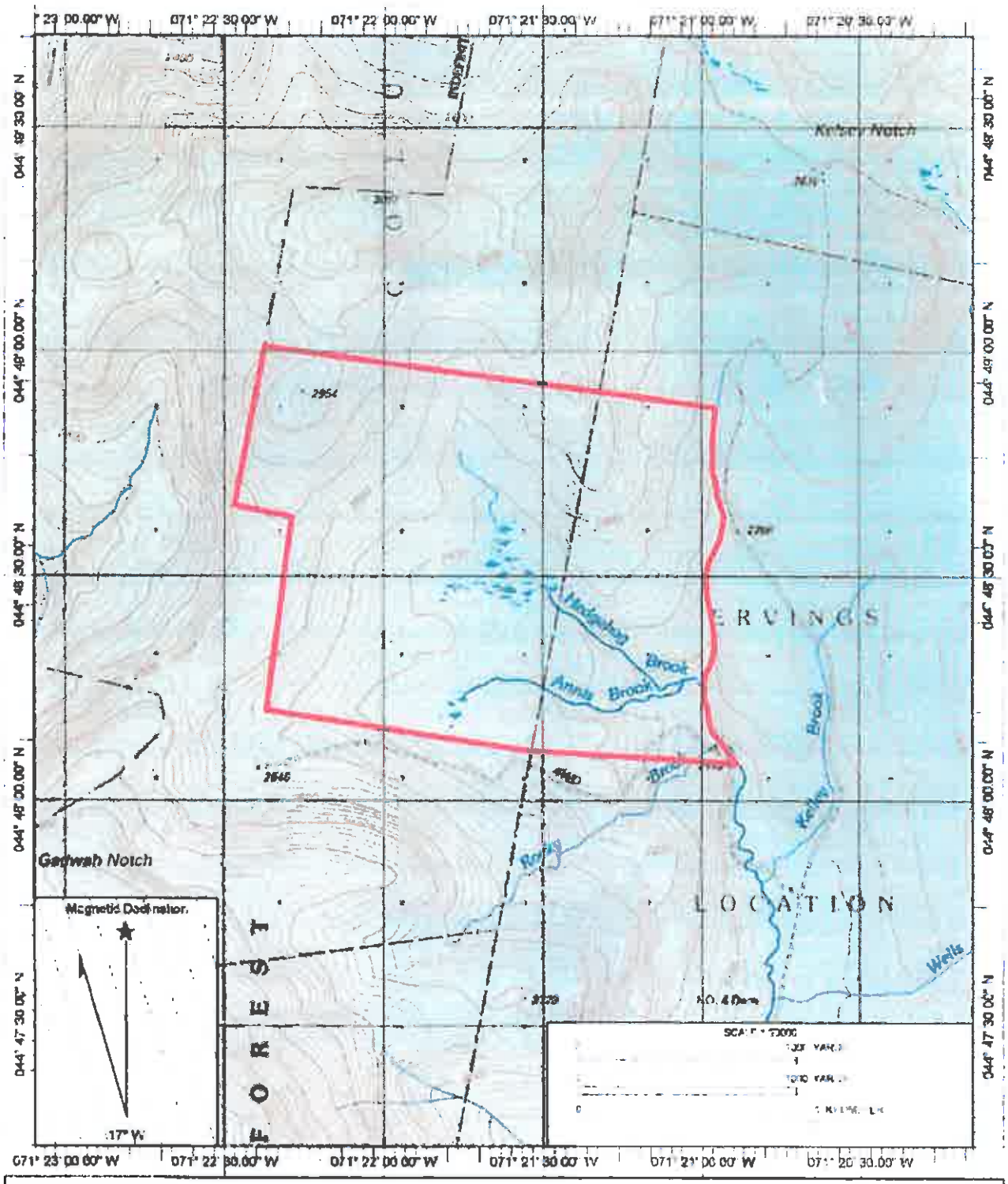
Wetlands could be created in a number of areas and opportunities exist for creating wetland either isolated or adjacent to existing wetlands. However, wetland creation was rejected due to the presence of substantial wetland resources in the vicinity and several of the same considerations discussed for wetland restoration.

- **Upland Buffer Protection**

This is the primary preferred mitigation option. Several areas were analyzed including sites along Philips Brook, the Pond Brook wetland complex, and various sites that abut the Nash Stream Forest. One large site was selected over several small ones. The proposed mitigation site was selected based on its multiple functions and values, as detailed below. It provides over 5 times the required compensatory mitigation.

6.0 Proposed Mitigation Site

The proposed Phillips Brook Mitigation Area consists of approximately 660 acres located within the Town of Columbia and unincorporated Ervings Location. The rectangular site buffers Phillips Brook on the east and the Nash Stream State Forest on the west and is located within a large commercial forest (See Figures 1, 2, and 3). Elevations on the site



Name DIXVILLE NOTCH
Date 7/6/2008
Scale 1 inch equals 1667 feet

Location 044° 48' 28.16" N 071° 21' 37.18" W NAD27
Caption Figure 3 Aerial View

Datum NAD27

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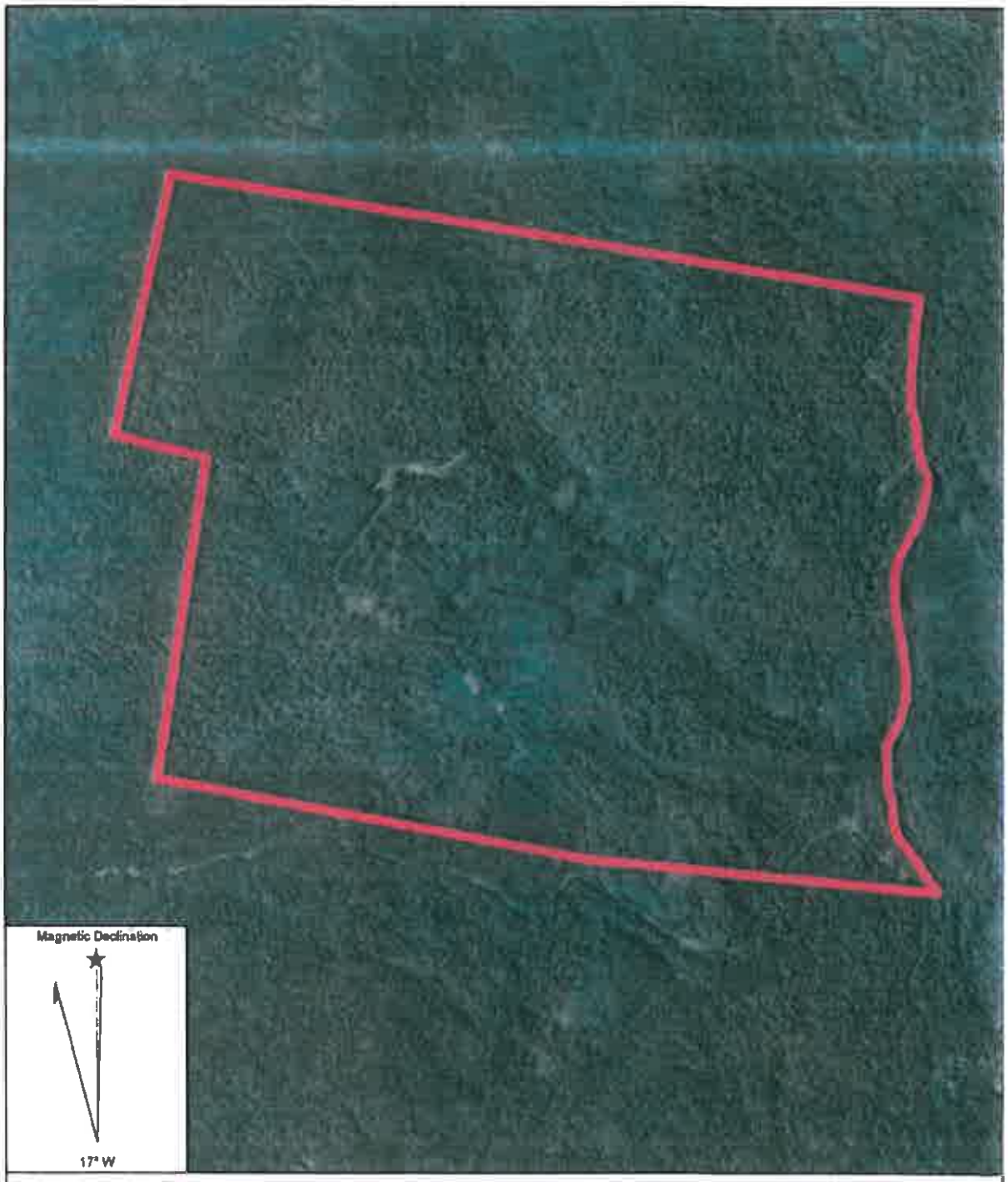

Name: DIXVILLE NOTCH SW, NH
Date: 7/10/2008
Scale: 1 inch equals 1000 feet

Location: 044° 48' 28.23" N 071° 21' 43.41" W NAD27
Caption: Figure 2 Aerial Photo

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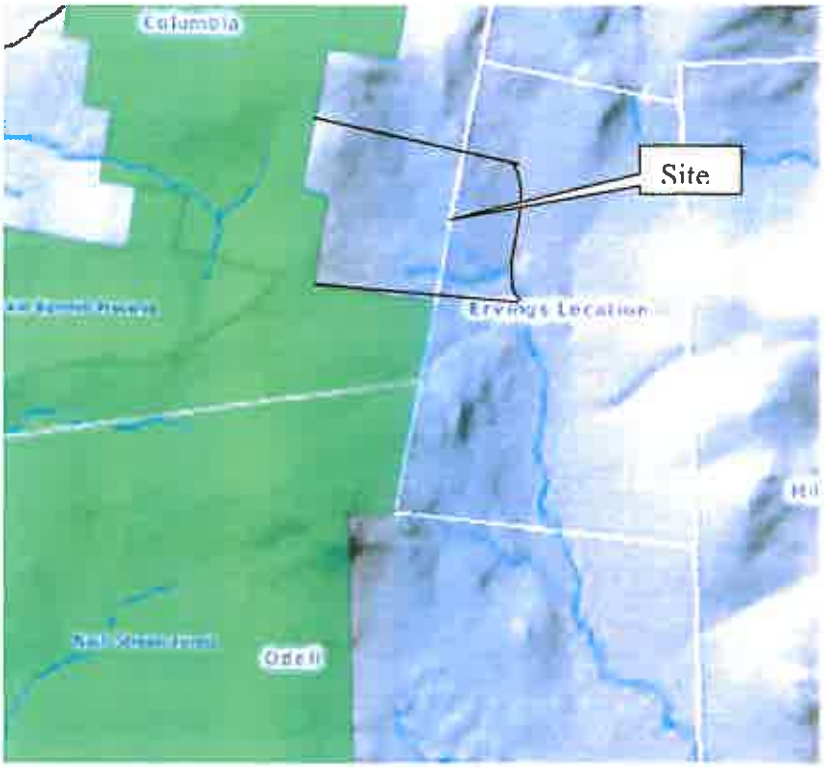
range from 2,100 at the southeast corner, where Phillips Brook flow off site, to 2,954 at a ridge top at the northwest corner of the site. Slopes range from very steep to gently sloping. The land slopes generally in a U-shaped pattern to the southeast to a wetlands complex at the headwaters of Hedgehog Brook in the central portion of the site, with drainage to the southeast.

Bedrock geology of the site, according to the Bedrock Map of NH, consists of metamorphic rocks include schist of the Silurian period. No surficial geology map is available.

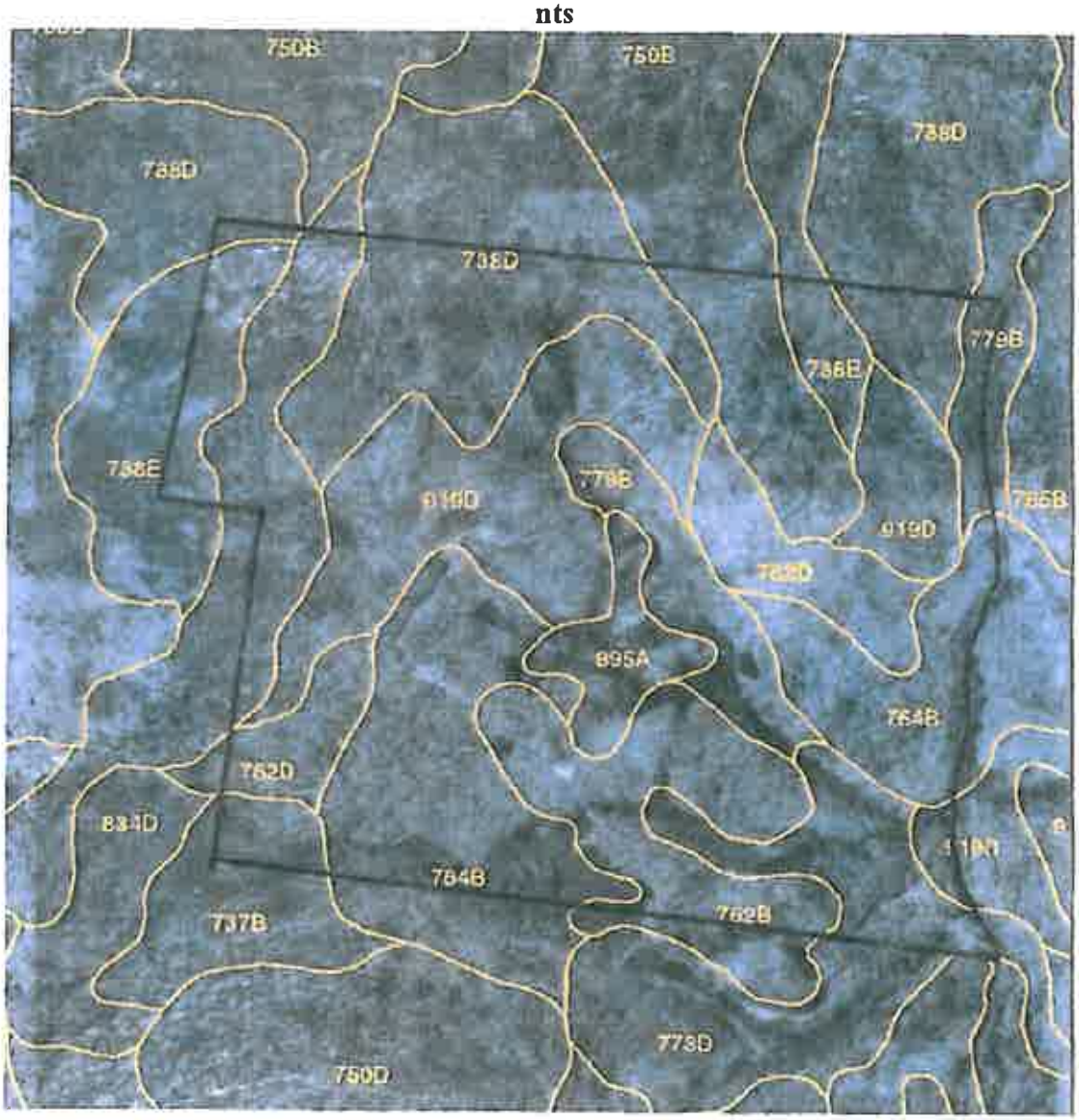
Figure 3
Conservation Lands Abutting Proposed Mitigation Area
GRANIT
nts



Wetland and upland soils are glacial till and bedrock with higher elevation soils (such as Bemis and Surplus soils in the 738 mapping units) in the cryic (cold) soil temperature regime and deeper soils being dense fine textured basal till (such as Howland and

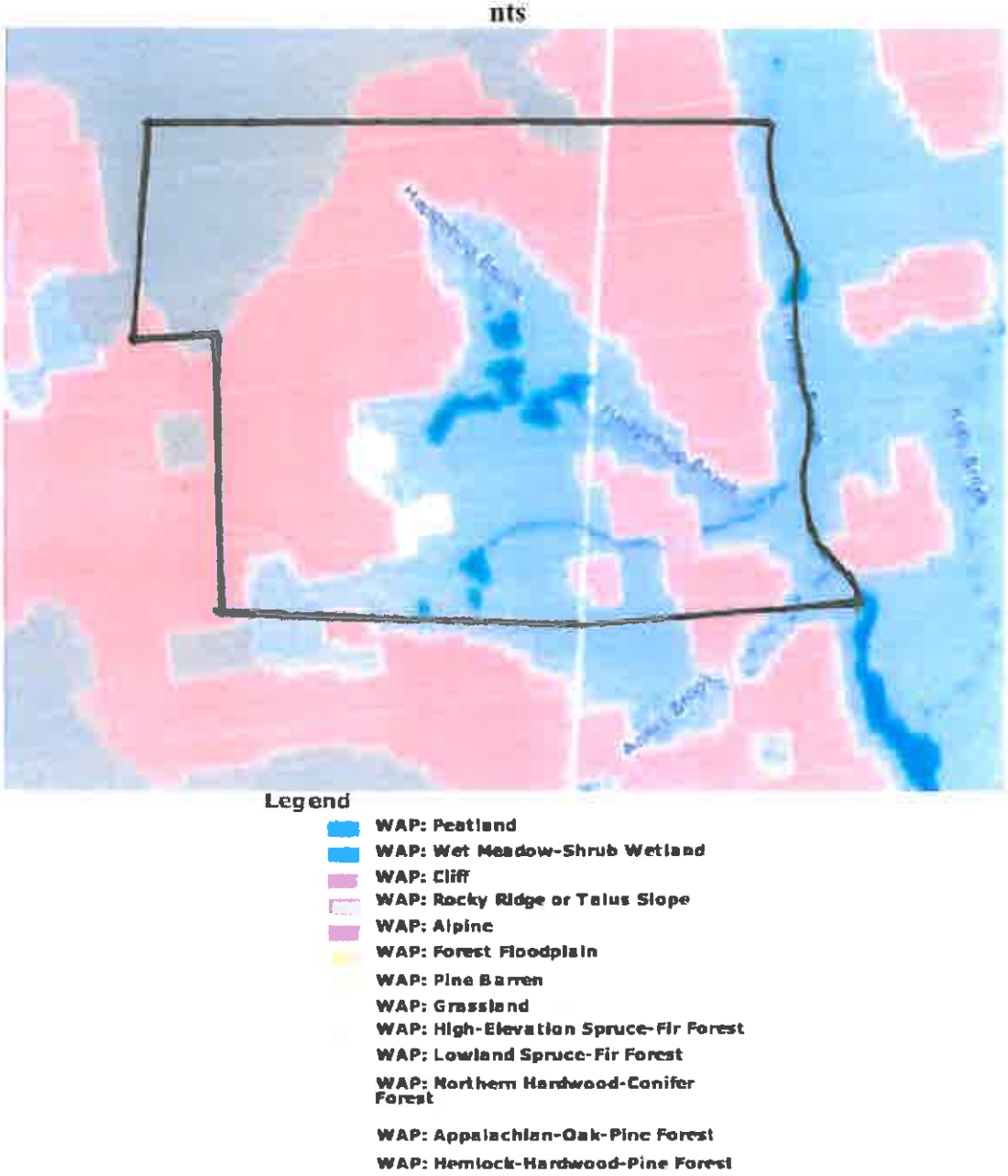
Monarda in the 762 and 764 soil mapping units) or sandy basal till (such as the Marlow and Dixmont soils in the 779 and 919 mapping units). Figure 4 shows the Coos County Soil Survey for the area.

Figure 6
Coos County Soil Survey (Interim)
Atlas Sheet 43
nts



Land use on the site is commercial forest with a variety of forest types including northern hardwoods, low elevation spruce-fir, and high elevation spruce-fir and wetlands, as shown on Figure 5. A series of logging roads can be found within the site with access from a logging road running from the southeast corner of the site at Dummer Pond Road. The road is currently not operational with culverts and bridges removed.

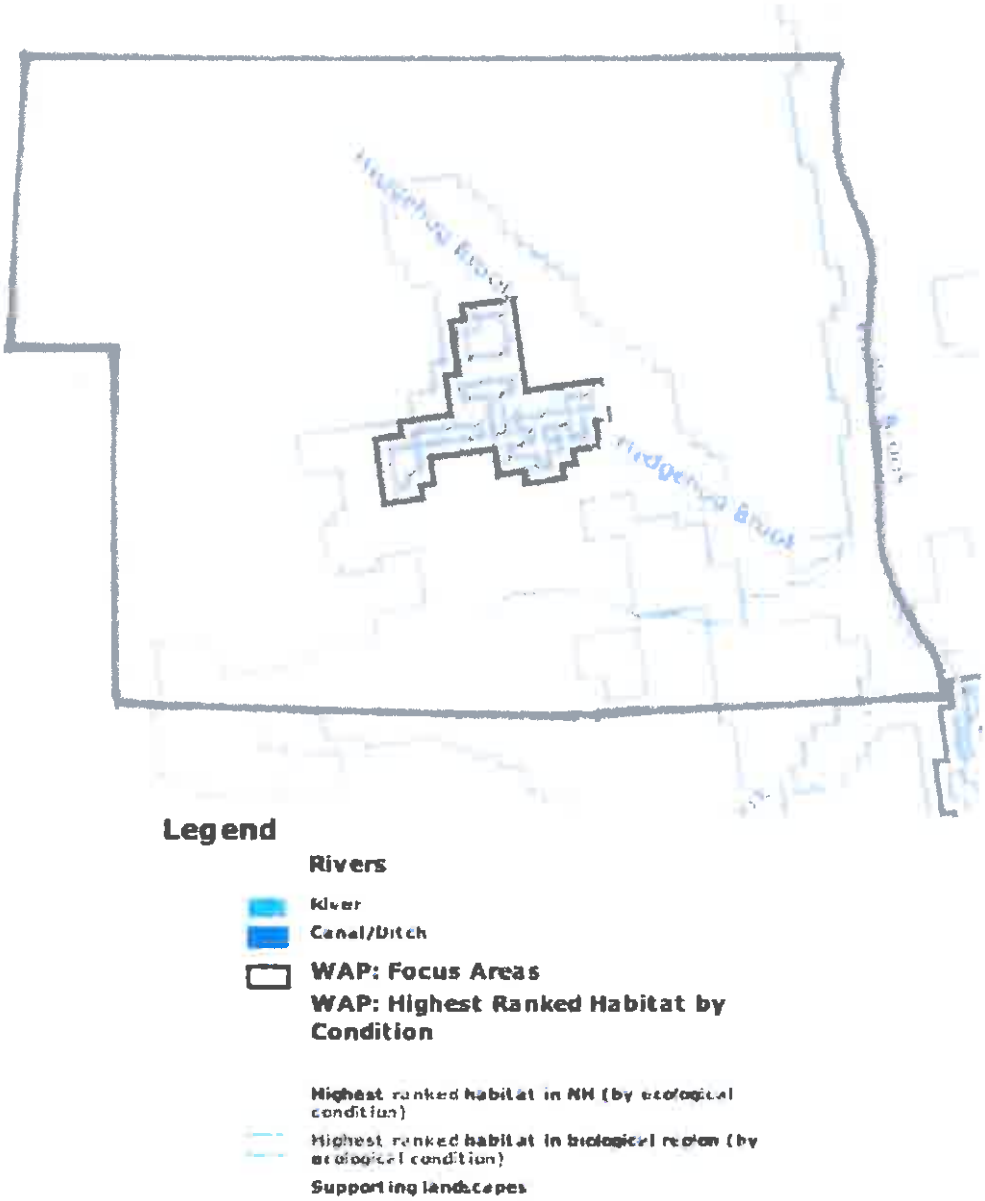
Figure 5
Plant Communities
NH Fish & Game Wildlife Action Plan
nts



Phillips Brook

The Phillips Brook area was identified by the Northern Forest Alliance as one of its priority areas for conservation (FY07 Strategic Conservation Opportunities Report, page 7) and much of the watershed is considered high value wildlife habitat based on the NH Fish & Games' Wildlife Action Plan (see Figure 6) .

Figure 6
Wildlife Action Plan
GRANIT
nts



The mitigation area buffers approximately one mile of the upper reaches of Phillips Brook, a perennial stream located in the Upper Ammonoosuc River watershed and part of the Connecticut River drainage system. Phillips Brook drains approximately 1800 acres as it drains steeply from the mitigation area south over 15 miles to its junction with the Upper Ammonoosuc which flows to the southwest to join the Connecticut River in Northumberland. As it flows out of the mitigation area, it has a bedrock and rubble channel which is from 20-30 feet wide and drops away steeply. Two tributaries of Phillips Brook, Hedgehog and Annis Brooks drain to it at the southeastern end of the site. Although no information is available concerning the presence of trout this far upstream, a brook trout population may be present.

Photographs of the site are included in Attachment A.

For the purposes of this report, wetlands within the mitigation area have been defined as those areas delineated as hydric soils by the Coos County Soil Survey (Figure 4) since it provides the most detailed mapping of the wetland areas available. It includes the very poorly drained Bucksport Muck (895A) soil, the Howland-Monarda association (764B) a portion of which is consists of the poorly drained till Mondara soils, and the Surplus-Bemis association (737B), a portion of which consists of the poorly drained till Bemis soil.

The wetlands on the site total approximately 150 acres with approximately 30 acres consisting of the very poorly drained Bucksport Muck. Perennial streams in the area are extensive and include Phillips Brook at the eastern boundary. Both Hedgehog and Annis Brook establish in wetland complexes within the mitigation area.

Wetlands were classified according to the US Fish and Wildlife Service (USFWS)) classification method as described in Cowardin et al. (1979), using the NWI maps, aerial photo interpretation and observation. The NWI maps do not include much of the forested wetland on the site.

Wetland classes include large areas of Palustrine forested wetland, Palustrine scrub shrub, emergent wetlands , and abandoned beaver impoundments. The perennial streams are classified as Riverine, upper perennial.

Figure 7
National Wetland Inventory
Wetland in the Area of Mitigation
nts

7. Mitigation Area Functions and Values

7.1 Wetland Areas

A qualitative function and values assessment of the wetlands within the mitigation area has been completed by Lobdell Associates. The evaluation was done using a method developed by the COE detailed in a report entitled "The Highway Methodology Workbook Supplement" (COE, 1999) as described previously. The system evaluates thirteen functions and values. Wetlands on the site was evaluated and the results are shown in Table 3 and discussed below. Evaluations were based on professional judgment, using information collected primarily from existing maps and reports.

The wetlands within the mitigation area were divided into two groups for the purposes of this assessment. Group 1 consists of the wetland complex at the headwaters of Hedgehog Brook including Palustrine forested, scrub shrub and emergent wetlands that predominate in the area shown as soil 895A in Figure 4, the Bucksport muck soil. Group 2 wetlands are the large areas of primarily Palustrine forested wetlands consisting of the poorly drained mineral soils located on the lower southeastern ½ of the site (shown as soil mapping units 764B and 737B).

1. Groundwater Recharge Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Considerations for this function included the presence of glacial outwash soils or potential aquifers. Both wetland groups are dominated by glacial till and have no identified aquifers (USGS (Plates #4 and 7. WRIR 96-4318) nor are then any public or private wells in the immediate area.

2. Floodflow Alteration: This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods to reduce flood peaks. Group 1 wetland functions higher in this regard due to water storage capacity, beaver ponds, etc. However, they protect no lands use directly downstream from damage.

3. Fish and Shellfish Habitat: This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat. While no detailed information is available, it is likely that the streams in the mitigation area contain a population of brook trout.

4. Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the potential effectiveness of the wetland as a trap for sediments, toxicants or pathogens in runoff water from surrounding uplands of upstream eroding areas. While no significant pathogens or toxicants exist upstream, both wetlands can trap sediment, with Group 1 wetlands having a higher function in this regard due to ponding and vegetative types.

Table 3
Mitigation Area Wetland Functions and Values

Function	**Group 1**	**Group 2**
Groundwater Recharge	7,12	5,7,12
Floodflow	2,3,,5 7, 13	2,3,,13
Fish/Shellfish	1,8	1,8
Sediment/Toxicant	1,10	1,10
Nutrient Removal	3,9	-
Production Export	1,4	1,4
Sediment/Shoreline	1,2, ,8	1,2, ,8
Wildlife Habitat	2,3,4,5,7,8,11,17	2,3,4,5,7,8,11,17
Recreation	2,3,4,5,6,7	2,3,4,5,6,7
Educational/Scientific	-	-
Unique/Heritage	-	-
Visual/Aesthetic	4	4
Endangered	2	2

See Attachment B for explanation of reference numbers for rationales for each
-function/value determined not present
Bold primary functions

5. Nutrient Removal/Retention Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other

forms. This function is very limit in both wetland groups due to wetland characteristics including a lack of nutrient attenuation, steepness and high velocities in associated streams. However Group 1 wetlands have the greatest potential for this function.

6. Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for man or other living organisms. Wildlife use the wetlands as a source of food and were observed in the wetlands including deer, moose, bear, beaver, woodcock and a variety of other birds. Food sources are particularly high in re-growth present in forested wetlands that have been logged. Again, Group 1 wetlands carry out this function well due to beaver activity and vegetative diversity.

7. Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion. Both wetlands and associated streams are sloping, have high velocities and potential for sediment in the wetlands.

8. Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both wetlands on the site have this as an important value for a wide variety of reasons including location in a large undeveloped forest, high water quality, cover, food, etc. Group 1 wetlands have open water, interspersion, and diversity that increases the value of this function greatly.

9. Recreation: This function considers the wetland and associated watercourses to provide either consumptive or non-consumptive recreational opportunities. While the lack of large open water or wide streams limits traditional wetland recreational opportunities, the recreational value of wetlands is high to their location in a large undeveloped forest that is currently available for recreation including hunting, fishing, hiking, etc.

10. Educational/Scientific Value: This value considers the suitability of the wetland as a site for an outdoor classroom or as a location for scientific study or research. While the extensive logging road system makes otherwise remote educational or research sites potentially accessible, educational values of all wetlands is low due to their remoteness from schools and research and educational facilities that would most likely have more diverse wetlands at closer locations.

11. Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated water bodies to provide certain special values including archaeological sites, critical habitat, ecological system health, etc. This function has not been evaluated.

12. Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland. The wetlands and surrounding uplands are forested and cannot easily be viewed The hardwood forest area does turn vibrant colors is the fall.

13. Endangered Species Habitat: This value considers the suitability of the wetland to

support threatened or endangered species. None are known to occur at this site (see Attachment C, but there are a number of threatened or endangered species in the general area.

7.2 Upland Areas

The mitigation area is estimated to contain over 70 % forested upland, some contains an estimated acres of upland which buffers the above described wetland areas. Its functions and values are as follows:

Wildlife Habitat-

The cold water aquatic habitat of Phillips Brook, its tributaries and associated wetlands in the mitigation area is enhanced by the surrounding forested upland. The uplands have been highly ranked in the NH Fish & Game Wildlife Action Plan and are located directly adjacent to the Nash Stream Forest.

Recreation and Aesthetic Enhancement-

Recreation values area high with hunting and hiking available and access along existing logging roads. Potential for increased in recreation values are high.

Endangered Species-

No endangered or threatened species are known to exist on the site (see Attachment C), but there are a number of threatened or endangered species in the general area.

Uniqueness-

The upper elevations have important high elevation forest stands and contain cryic soil types which are both limited in the non-federal lands in New Hampshire.

8. Mitigation Area Preservation

The mitigation area will be protected by a conservation easement granted by the owner. The Coos County Commissioners have agreed in principal to accept the easement.

9. Conclusions

The 660 acre site evaluated in this report offers valuable opportunities to mitigate future wetland impacts within the proposed Granit Reliable Wind Park. The site has many

valuable natural features including its size, location in the headwaters of Philips Brook, location adjacent to Nash Stream Forest, forested uplands, and important wetland/stream/upland complexes which offer important wildlife and recreation values.

ATTACHMENT A
PHOTOS

Granite Reliable Power, LLC
Mitigation Area
Lobdell Associates Inc.

PHOTO # 1– View northwest of logging road at boundary accessing mitigation site from southeast corner from main log road–7/8/2008

PHOTO #2- View upstream of Phillips Brook as it flows from mitigation area at southeastern corner.-7/8/2008

PHOTO # 3– View upstream of Hedgehog Brook just prior to flowing into Phillips Brook –7/8/2008

PHOTO #4- View upstream of the junction of Annis Brook and Hedgehog Brook.-7/8/2008

Granite Reliable Power, LLC
Mitigation Area
Lobdell Associates Inc.

PHOTO # 5– View northwest from interior of mitigation area with high elevation portion of mitigation area in background where it abuts Nash Stream Forest. –7/8/2008

PHOTO #6– View north from the interior with the northern high elevation areas in background-7/8/2008

Granite Reliable Power, LLC
Mitigation Area
Lobdell Associates Inc.

PHOTO # 7– View north of Hedgehog Brook wetland complex at center of mitigation area –7/8/2008

PHOTO #8– Typical view of Spruce-fir forest with skidder trail..-7/8/2008

Granite Reliable Power, LLC
Mitigation Area
Lobdell Associates Inc.

PHOTO # 9– View of northern hardwood forest in mitigation area–7/8/2008

PHOTO #10– View southwest of headwaters of Annis Brook and associated wetlands.-7/8/2008

Attachment B
Wetland Function/Value Considerations

(Appendix A from "The Highway Methodology Workbook, USACE)

Appendix A

Wetland evaluation supporting documentation; Reproducible forms.

Below is an example list of considerations that was used for a New Hampshire highway project. Considerations are flexible, based on best professional judgment and interdisciplinary team consensus. This example provides a comprehensive base, however, and may only need slight modifications for use in other projects.

GROUNDWATER RECHARGE/DISCHARGE— This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

CONSIDERATIONS/QUALIFIERS

1. Public or private wells occur downstream of the wetland
2. Potential exists for public or private wells downstream of the wetland.
3. Wetland is underlain by stratified drift.
4. Gravel or sandy soils present in or adjacent to the wetland
5. Fragipan does not occur in the wetland.
6. Fragipan, impervious soils, or bedrock does occur in the wetland.
7. Wetland is associated with a perennial or intermittent watercourse
8. Signs of groundwater recharge are present or piezometer data demonstrates recharge.
9. Wetland is associated with a watercourse but lacks a defined outlet or contains a constricted outlet.
10. Wetland contains only an outlet, no inlet.
11. Groundwater quality of stratified drift aquifer within or downstream of wetland meets drinking water standards.
12. Quality of water associated with the wetland is high.
13. Signs of groundwater discharge are present (e g., springs)
14. Water temperature suggests it is a discharge site
15. Wetland shows signs of variable water levels.
16. Piezometer data demonstrates discharge.
17. Other

FLOODFLOW ALTERATION (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas.

CONSIDERATIONS/QUALIFIERS

1. Area of this wetland is large relative to its watershed.
2. Wetland occurs in the upper portions of its watershed.
3. Effective flood storage is small or non-existent upslope of or above the wetland
4. Wetland watershed contains a high percent of impervious surfaces.
5. Wetland contains hydric soils which are able to absorb and detain water.
6. Wetland exists in a relatively flat area that has flood storage potential.
7. Wetland has an intermittent outlet, ponded water, or signs are present of variable water level.
8. During flood events, this wetland can retain higher volumes of water than under normal or average rainfall conditions.
9. Wetland receives and retains overland or sheet flow runoff from surrounding uplands
10. In the event of a large storm, this wetland may receive and detain excessive flood water from a nearby watercourse
11. Valuable properties, structures, or resources are located in or near the floodplain downstream from the wetland
12. The watershed has a history of economic loss due to flooding
13. This wetland is associated with one or more watercourses.
14. This wetland watercourse is sinuous or diffuse.
15. This wetland outlet is constricted
16. Channel flow velocity is affected by this wetland.
17. Land uses downstream are protected by this wetland
18. This wetland contains a high density of vegetation
19. Other

FISH AND SHELLFISH HABITAT (FRESHWATER) — This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

CONSIDERATIONS/QUALIFIERS

1. Forest land dominant in the watershed above this wetland.
2. Abundance of cover objects present.

STOP HERE IF THIS WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE

3. Size of this wetland is able to support large fish/shellfish populations
4. Wetland is part of a larger, contiguous watercourse
5. Wetland has sufficient size and depth in open water areas so as not to freeze solid and retain some open water during winter
6. Stream width (bank to bank) is more than 50 feet.
7. Quality of the watercourse associated with this wetland is able to support healthy fish/shellfish populations.
8. Streamside vegetation provides shade for the watercourse.
9. Spawning areas are present (submerged vegetation or gravel beds).
10. Food is available to fish/shellfish populations within this wetland
11. Barrier(s) to anadromous fish (such as dams, including beaver dams, waterfalls, road crossing) are absent from the stream reach associated with this wetland.
12. Evidence of fish is present
13. Wetland is stocked with fish
14. The watercourse is persistent
15. Man-made streams are absent.
16. Water velocities are not too excessive for fish usage
17. Defined stream channel is present.
18. Other

Although the above example refers to freshwater wetlands, it can also be adapted for marine ecosystems. The following is an example provided by the National Marine Fisheries Service (NMFS) of an adaptation for the fish and shellfish function.

FISH AND SHELLFISH HABITAT (MARINE) — This function considers the effectiveness of wetlands, embayments, tidal flats, vegetated shallows, and other environments in supporting marine resources such as fish, shellfish, marine mammals, and sea turtles

CONSIDERATIONS/QUALIFIERS

1. Special aquatic sites (tidal marsh, mud flats, eelgrass beds) are present
2. Suitable spawning habitat is present at the site or in the area
3. Commercially or recreationally important species are present or suitable habitat exists
4. The wetland/waterway supports prey for higher trophic level marine organisms
5. The waterway provides migratory habitat for anadromous fish.
6. Essential fish habitat, as defined by the 1996 amendments to the Magnuson-Stevens Fishery & Conservation Act, is present (consultation with NMFS may be necessary).
7. Other

SEDIMENT/TOXICANT/PATHOGEN RETENTION — This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

CONSIDERATIONS/QUALIFIERS

1. Potential sources of excess sediment are in the watershed above the wetland.
2. Potential or known sources of toxicants are in the watershed above the wetland.
3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland.
4. Fine grained mineral or organic soils are present.
5. Long duration water retention time is present in this wetland.
6. Public or private water sources occur downstream.
7. The wetland edge is broad and intermittently aerobic.
8. The wetland is known to have existed for more than 50 years
9. Drainage ditches have not been constructed in the wetland

STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.

10. Wetland is associated with an intermittent or perennial stream or a lake.
11. Channelized flows have visible velocity decreases in the wetland.
12. Effective floodwater storage in wetland is occurring. Areas of impounded open water are present.
13. No indicators of erosive forces are present. No high water velocities are present
14. Diffuse water flows are present in the wetland.
15. Wetland has a high degree of water and vegetation interspersion.
16. Dense vegetation provides opportunity for sediment trapping and/or signs of sediment accumulation by dense vegetation is present.
17. Other

NUTRIENT REMOVAL/RETENTION/TRANSFORMATION — This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

CONSIDERATIONS/QUALIFIERS

1. Wetland is large relative to the size of its watershed.
2. Deep water or open water habitat exists.
3. Overall potential for sediment trapping exists in the wetland.

4. Potential sources of excess nutrients are present in the watershed above the wetland
5. Wetland saturated for most of the season. Ponded water is present in the wetland.
6. Deep organic/sediment deposits are present.
7. Slowly drained fine grained mineral or organic soils are present.
8. Dense vegetation is present
9. Emergent vegetation and/or dense woody stems are dominant.
10. Opportunity for nutrient attenuation exists.
11. Vegetation diversity/abundance sufficient to utilize nutrients.

STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.

12. Waterflow through this wetland is diffuse.
13. Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation
14. Water moves slowly through this wetland.
15. Other

PRODUCTION EXPORT (Nutrient) — This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

CONSIDERATIONS/QUALIFIERS

1. Wildlife food sources grow within this wetland.
2. Detritus development is present within this wetland
3. Economically or commercially used products found in this wetland.
4. Evidence of wildlife use found within this wetland.
5. Higher trophic level consumers are utilizing this wetland.
6. Fish or shellfish develop or occur in this wetland.
7. High vegetation density is present.
8. Wetland exhibits high degree of plant community structure/species diversity.
9. High aquatic vegetative diversity/abundance is present.
10. Nutrients exported in wetland watercourses (permanent outlet present).
11. "Flushing" of relatively large amounts of organic plant material occurs from this wetland
12. Wetland contains flowering plants that are used by nectar-gathering insects.
13. Indications of export are present.
14. High production levels occurring, however, no visible signs of export (assumes export is attenuated).
15. Other

SEDIMENT/SHORELINE STABILIZATION — This function considers the effectiveness of a wetland to stabilize streambanks and shorelines against erosion.

CONSIDERATIONS/QUALIFIERS

1. Indications of erosion or siltation are present.
2. Topographical gradient is present in wetland.
3. Potential sediment sources are present up-slope.
4. Potential sediment sources are present upstream.
5. No distinct shoreline or bank is evident between the waterbody and the wetland or upland.
6. A distinct step between the open waterbody or stream and the adjacent land exists (i.e., sharp bank) with dense roots throughout
7. Wide wetland (>10') borders watercourse, lake, or pond.
8. High flow velocities in the wetland
9. The watershed is of sufficient size to produce channelized flow
10. Open water fetch is present.
11. Boating activity is present
12. Dense vegetation is bordering watercourse, lake, or pond.
13. High percentage of energy-absorbing emergents and/or shrubs border a watercourse, lake, or pond.
14. Vegetation is comprised of large trees and shrubs that withstand major flood events or erosive incidents and stabilize the shoreline on a large scale (feet).
15. Vegetation is comprised of a dense resilient herbaceous layer that stabilizes sediments and the shoreline on a small scale (inches) during minor flood events or potentially erosive events
16. Other

WILDLIFE HABITAT — This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered. Species lists of observed and potential animals should be included in the wetland assessment report.[1]

CONSIDERATIONS/QUALIFIERS

1. Wetland is not degraded by human activity.
2. Water quality of the watercourse, pond, or lake associated with this wetland meets or exceeds Class A or B standards.
3. Wetland is not fragmented by development
4. Upland surrounding this wetland is undeveloped.
5. More than 40% of this wetland edge is bordered by upland wildlife habitat (e.g., brushland, woodland, active farmland, or idle land) at least 100 feet in width.
6. Wetland is contiguous with other wetland systems connected by a watercourse or lake.
7. Wildlife overland access to other wetlands is present.
8. Wildlife food sources are within this wetland or are nearby
9. Wetland exhibits a high degree of interspersion of vegetation classes and/or open water.
10. Two or more islands or inclusions of upland within the wetland are present
11. Dominant wetland class includes deep or shallow marsh or wooded swamp
12. More than three acres of shallow permanent open water (less than 6.6 feet deep), including streams in or adjacent to wetland, are present.
13. Density of the wetland vegetation is high.
14. Wetland exhibits a high degree of plant species diversity.
15. Wetland exhibits a high degree of diversity in plant community structure (e.g., tree/shrub/vine/grasses/mosses)
16. Plant/animal indicator species are present. (List species for project)
17. Animal signs observed (tracks, scats, nesting areas, etc.)
18. Seasonal uses vary for wildlife and wetland appears to support varied population diversity/abundance during different seasons
19. Wetland contains or has potential to contain a high population of insects
20. Wetland contains or has potential to contain large amphibian populations
21. Wetland has a high avian utilization or its potential
22. Indications of less disturbance-tolerant species are present.
23. Signs of wildlife habitat enhancement are present (birdhouses, nesting boxes, food sources, etc.)
24. Other

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[1]In March 1995, a rapid wildlife habitat assessment method was completed by a University of Massachusetts research team with funding and oversight provided by the New England Transportation Consortium. The method is called WEThings (wetland habitat indicators for non-game species). It produces a list of potential wetland-dependent mammal, reptile, and amphibian species that may be present in the wetland. The output is based on observable habitat characteristics documented on the field data form. This method may be used to generate the wildlife species list recommended as backup information to the wetland evaluation form and to augment the considerations. Use of this method should first be coordinated with the Corps project manager. A computer program is also available to expedite this process.

RECREATION (Consumptive and Non-Consumptive) — This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland. Non-consumptive opportunities do not consume or diminish these resources of the wetland.

CONSIDERATIONS/QUALIFIERS

1. Wetland is part of a recreation area, park, forest, or refuge.
2. Fishing is available within or from the wetland.
3. Hunting is permitted in the wetland
4. Hiking occurs or has potential to occur within the wetland.
5. Wetland is a valuable wildlife habitat.
6. The watercourse, pond, or lake associated with the wetland is unpolluted.
7. High visual/aesthetic quality of this potential recreation site.
8. Access to water is available at this potential recreation site for boating, canoeing, or fishing.
9. The watercourse associated with this wetland is wide and deep enough to accommodate canoeing and/or non-powered boating.
10. Off-road public parking available at the potential recreation site.
11. Accessibility and travel ease is present at this site.
12. The wetland is within a short drive or safe walk from highly populated public and private areas
13. Other

EDUCATIONAL/SCIENTIFIC VALUE — This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened, rare, or endangered species
2. Little or no disturbance is occurring in this wetland.
3. Potential educational site contains a diversity of wetland classes which are accessible or potentially accessible.
4. Potential educational site is undisturbed and natural.
5. Wetland is considered to be a valuable wildlife habitat.
6. Wetland is located within a nature preserve or wildlife management area.
7. Signs of wildlife habitat enhancement present (bird houses, nesting boxes, food sources, etc.).
8. Off-road parking at potential educational site suitable for school bus access in or near wetland.
9. Potential educational site is within safe walking distance or a short drive to schools.
10. Potential educational site is within safe walking distance to other plant communities
11. Direct access to perennial stream at potential educational site is available.
12. Direct access to pond or lake at potential educational site is available.
13. No known safety hazards exist within the potential educational site.
14. Public access to the potential educational site is controlled
15. Handicap accessibility is available.
16. Site is currently used for educational or scientific purposes.
17. Other

UNIQUENESS/HERITAGE — This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation, and habitat diversity.

CONSIDERATIONS/QUALIFIERS

1. Upland surrounding wetland is primarily urban.
2. Upland surrounding wetland is developing rapidly
3. More than 3 acres of shallow permanent open water (less than 6.6 feet deep), including streams, occur in wetlands
4. Three or more wetland classes are present.
5. Deep and/or shallow marsh or wooded swamp dominate
6. High degree of interspersion of vegetation and/or open water occur in this wetland.
7. Well-vegetated stream corridor (15 feet on each side of the stream) occurs in this wetland.
8. Potential educational site is within a short drive or a safe walk from schools.
9. Off-road parking at potential educational site is suitable for school buses
10. No known safety hazards exist within this potential educational site.
11. Direct access to perennial stream or lake exists at potential educational site.
12. Two or more wetland classes are visible from primary viewing locations.
13. Low-growing wetlands (marshes, scrub-shrub, bogs, open water) are visible from primary viewing locations.
14. Half an acre of open water or 200 feet of stream is visible from the primary viewing locations.
15. Large area of wetland is dominated by flowering plants or plants that turn vibrant colors in different seasons.
16. General appearance of the wetland visible from primary viewing locations is unpolluted and/or undisturbed.
17. Overall view of the wetland is available from the surrounding upland.
18. Quality of the water associated with the wetland is high.
19. Opportunities for wildlife observations are available.
20. Historical buildings are found within the wetland.
21. Presence of pond or pond site and remains of a dam occur within the wetland.
22. Wetland is within 50 yards of the nearest perennial watercourse.
23. Visible stone or earthen foundations, berms, dams, standing structures, or associated features occur within the wetland.
24. Wetland contains critical habitat for a state- or federally-listed threatened or endangered species.
25. Wetland is known to be a study site for scientific research.
26. Wetland is a natural landmark or recognized by the state natural heritage inventory authority as an exemplary natural community.
27. Wetland has local significance because it serves several functional values.
28. Wetland has local significance because it has biological, geological, or other features that are locally rare or unique.
29. Wetland is known to contain an important archaeological site
30. Wetland is hydrologically connected to a state or federally designated scenic river.
31. Wetland is located in an area experiencing a high wetland loss rate.
32. Other

VISUAL QUALITY/AESTHETICS — This value considers the visual and aesthetic quality or usefulness of the wetland

CONSIDERATIONS/QUALIFIERS

1. Multiple wetland classes are visible from primary viewing locations.
2. Emergent marsh and/or open water are visible from primary viewing locations
3. A diversity of vegetative species is visible from primary viewing locations.
4. Wetland is dominated by flowering plants or plants that turn vibrant colors in different seasons
5. Land use surrounding the wetland is undeveloped as seen from primary viewing locations
6. Visible surrounding land use form contrasts with wetland.
7. Wetland views absent of trash, debris, and signs of disturbance.
8. Wetland is considered to be a valuable wildlife habitat.
9. Wetland is easily accessed.
10. Low noise level at primary viewing locations
11. Unpleasant odors absent at primary viewing locations.
12. Relatively unobstructed sight line exists through wetland
13. Other

ENDANGERED SPECIES HABITAT — This value considers the suitability of the wetland to support threatened or endangered species.

ES

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened or endangered species.
2. Wetland contains critical habitat for a state or federally listed threatened or endangered species.

Attachment C
Mitigation Area
Natural Heritage Inventory Report

New Hampshire Natural Heritage Bureau

To: Raymond Lobdell
Lobdell Associates
88 Gale Chandler Road
Landaff, NH 03585

Date: 7/3/2008

From: NH Natural Heritage Bureau

Re: Review by NH Natural Heritage Bureau of request dated 7/3/2008

NHB File ID: NHB08-1373

Applicant: Raymond Lobdell

Address: None
Ervings Location Columbia

Project Categories:
Tower Construction: Wind power construction

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

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

This review is valid through 7/3/2009.

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

New Hampshire Natural Heritage Bureau

MAP OF PROJECT BOUNDARIES FOR: NHB ID# NHB08-1373

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

Vernal Pool Report
Vernal Pool Inventory
Documentation Forms
Lobdell Associates, Inc.

Granite Reliable Power

Wind Park

VERNAL POOL INVENTORY

Prepared by
Lobdell Associates
July, 2008

Granite Reliable Power

Wind Power Park

VERNAL POOL INVENTORY

Introduction

The purpose of this study was to inventory the vernal pools per NH Wetlands Bureau Administrative Rule 101 for the Granite Reliable Power, LLC wind power project area in the Towns of Dummer, Dixville, and unincorporated Ervings Location.

For the purposes of this report, the project area is defined as the linear area in and adjacent to the project components as shown on the project plans and is an area that includes a 500 foot diameter circle around each wind tower location and an area along the proposed roads with a width from 200 to over 400 feet.

Wetlands and vernal pools in the project area were delineated in the fall of 2007 and the spring of 2008 by a team of certified wetland scientists assembled by Horizon Engineering which included the following NH certified wetland scientists: Raymond Lobdell, CSS, CWS (Delineation Coordinator); Michael Cuomo, CSS, CWS; Greg Howard, CSS, CWS; Marc Jacobs, CSS, CWS; Thomas Peragallo, CSS, CWS; Nancy Rendall, CSS, CWS; Jonathan Sisson, CSS, CWS; Sean Sweeney, CWS, PE; Jennifer West, CWS; Barry Keith, CWS; David Allain, CSS, CWS; Patrick Fairbairn, CWS; and Liz Garlo, CWS.

Please note that during the time frame of the delineation and inventory, NHDES adopted new rules (Env-Wt 101) which defined vernal pools. The rules were adopted on April 19, 2008, just one week prior to the start of the spring mapping at the site and after significant revisions. Therefore, in order to be sure of a complete inventory, all areas with primary indicator species' egg masses were inventoried.

Methodology

A vernal pool inventory was conducted within the project area by wetlands scientists during the wetland delineation carried out in the fall of 2007 and spring of 2008. In the course of wetland delineation if wetland scientists observed egg masses or a potential vernal pool they made a note on the numbered delineation flag. The wetland scientists then returned to the sites and completed a "Vernal Pool Documentation Sheet" (Parts 1 and 2) from the report "Identification and Documentation of Vernal Pools in New Hampshire", published by the NH Fish and Game Department Nongame and Endangered Wildlife Program. (Please note that because the definition of vernal pool was very new-and changed from the draft proposals from NHDES in January-it was decided the inventory for this project would include all areas with egg masses regardless of whether they were ultimately would be defined as vernal pools.) All documentation sheets were then compiled, analyzed, and summarized by Lobdell Associates.

Attachment A of this report contains representative photographs of the sites inventoried.

Several of the sites were observed by NHDES Wetlands Bureau and US Army Corps of Engineers staff on a wetland delineation site visit on July 1, 2008.

Results

A total of 25 inventory documentation sheets were prepared which can be found in the wetland application enclosures. Each site was numbered from 1 to 25 and approximate locations shown on an overall plan map. The results of the inventory have been summarized in Table 1 below.

All of the sites were to be found in jurisdictional wetlands. Sites were primarily adjacent to the existing logging roads with most located on the lower portions of the project area. Only one (#21) was noted at the higher elevations in the project area. Of the 25 sites, 8 were considered having natural origins and 17 were considered man-made, the result of commercial logging operations. Of these 17, 9 were considered recent.

The size of the vernal pools varied from 24 to 10,000 square feet (estimated). At least two were thought to be permanently pooled (#13 and 17) and many had seasonal drainages flowing into and/or out of them. Primary vernal pool indicator species' egg masses identified included wood frogs and spotted salamanders. Abundance was generally low with 19 sites having less than 25 wood frog egg masses and 20 with less than 15 spotted salamander masses. Only 3 had 100 or more of either species. Most of the habitat of the pools was forested, but many had at least one side adjacent to a road, yard or ditch. Many were also created by excavations related to logging

road construction or from depressions formed by skidder ruts in either natural soil or in piles of wood chips in or near yards. Fifteen exist along the main, permanent logging road that is actively used for transporting forest products from a major portion of the forest. Many pools were subject to sedimentation due to their proximity to roads, road ditches and ongoing logging activities.

Conclusions

Much of project area is within an on-going, active commercial logging operation including the main logging access road from Route 16 north for about 14 miles within the project area. Additionally, many of the sites are beside or adjacent to existing logging roads, ditches or skid trails etc. Based on egg masses per pool, most of the sites do not have significant egg mass numbers.

Since the new definition of vernal pools does not include those man-made sites in on-going logging operations, it is unclear as to which sites will currently be considered vernal pools. Only 8 of the sites have been deemed natural by the wetland scientists conducting the inventory(Sites# 6,7,8,10,11,13,17, and 21) . At least 8 additional sites deemed man-made have developed overstories and cover which has created a functional vernal pool environment (Sites# 12,14,15,16,18,19,20, and 22).

With regard to the proposed project, vernal pools, either man-made or natural should be avoided whenever possible and impacts minimized in areas of unavoidable impacts.

Table 1
Granite Reliable Power, LLC
Vernal Pool Inventory

Number	Mile	Sheet	Flags	CWS	Size (est.) sq.ft.	Species/#Egg Masses**	Type*
1	3-4	10	MJ28-13	MJ	45	WF/1 SS/1	2R
2	3-4	10	MJ 28-12	MJ	30	WF/3 SS/9	2R
3	3-4	10	MJ28-9	MJ	30	WF/3	2R
4	3-4	10	MJ (LOG YARD	MJ	20 DIA.	-	2R
5	3-4	11	MJ MI3.5	MJ	375	WF/5	2
6	7-8	21	27-1	SS	250	SS/2	1
7	7-8	21	27-2	SS	400	SS/11	1
8	7-8	21	27-3	SS	350	SS/6	1
9	8-9	24	JW96	JW	150	WF/50 SS/60	2R
10	8-9	25	JW115-	JW	500	SS/40	1
11	8-9	25	JW115	JW	250	WF/40 SS/6	1
12	9-10	26	MJ 48-1	MJ	-	WF/6 SS/4	2
13	10-11	30	RL56-12	RL	5000	WF/100 SS/50	1
14	10-11	30	RL13-11	RL	1800	WF/7 SS/3	2
15	10-11	30	RL13-13	RL	1800	WF/20 SS/10	2
16	10-11	30	RL15-15	RL	900	WF/5 SS/5	2
17	13-14	39	JW210	JW	10000	WF/200 SS/50	1
18	16-17	47	TAP 1-6	TAP	360	WF/15 SS/3	2
19	16-17	47	TAP 2-2	TAP	420	WF/1 SS/1	2
20	16-17	49	TAP 40-13	TAP	80	WF/3	2
21	Dixville	2	RL 18-1	MJ	750	WF/1 SS/7	1
22	Spur Road	62	DA 25-14	DA	450	WF/5	2
23	Kelsey	1	PF15	PF	24	WF/100	2R
24	Kelsey	2	PFN16SS	PF	30	WF/5	2R
25	Kelsey	2	PF 29	PF	375	WF/11	2R

*Type: 1- Natural
2- Man-made by logging
2R- Recently man-made by logging

**WF-Wood Frog SS-Spotted Salamander

Attachment A

Photographic Examples of Pools in Project Area

Figure 1

Site #25 (Kelsey)
Man-Made Pool in log yard

Figure 2
Site # 15 (Mile 10-11)
Man-Made Borrow pit for logging road construction

Figure 3
Site # 4 (Mile 3-4)
Man-made in log yard

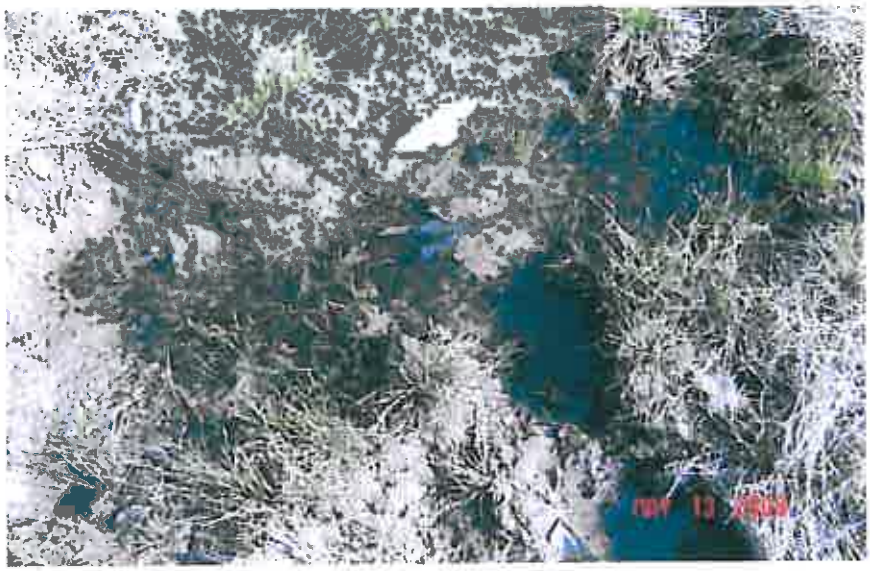
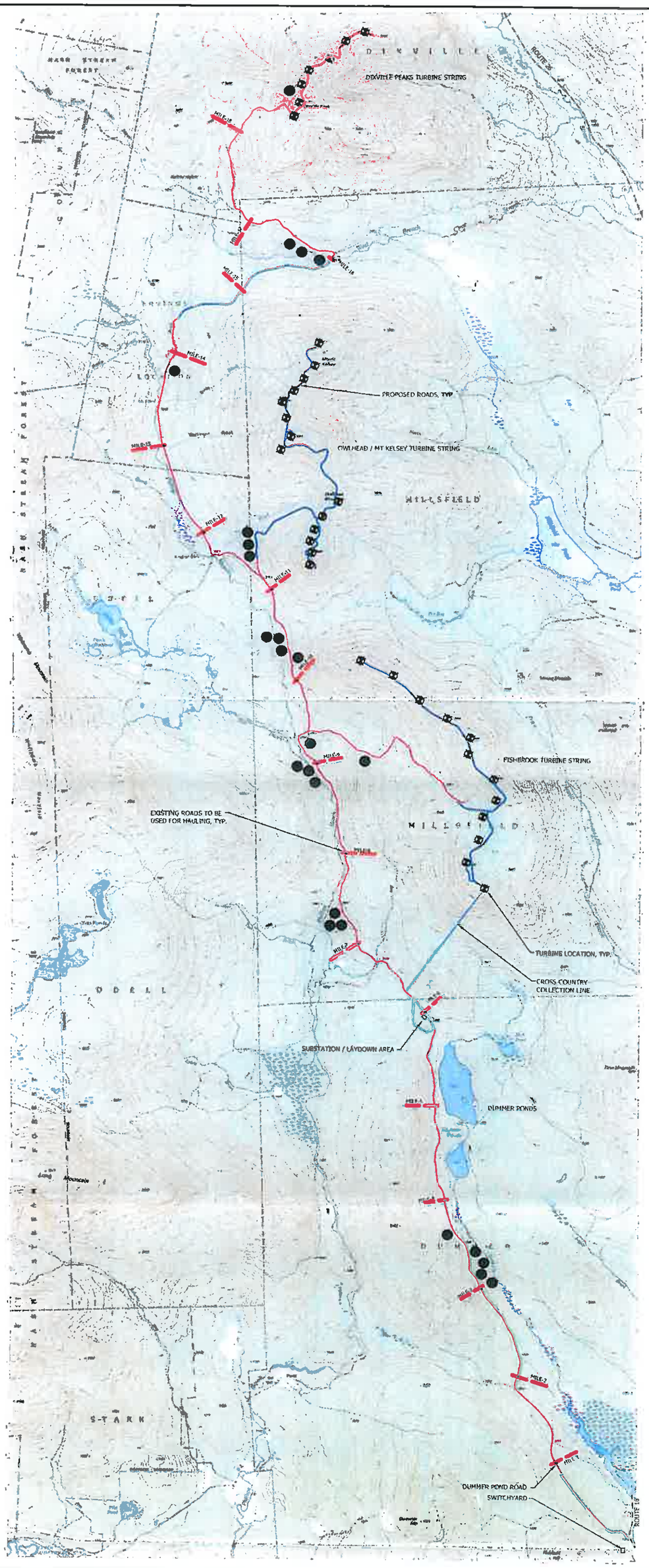


Figure 4
Site # 13 (Mile 10-11)
Natural Pool Adjacent to logging road-permanently flooded with stream flow to outlet via ditch and culvert

Figure 5
Site # 21 (Dixville)
High elevation pool on bedrock adjacent to log road

Figure 6
Site #23 (Kelsey)
Man-Made in Skidder Rut



● POTENTIAL VERNAL POOL SITE

0 1250 2500 5000 10000

SCALE IN FEET

horizons Engineering
34 School Street
Littleton, NH 03561
Phone 603 444.4111 · Fax 603 444 1343

GRANITE RELIABLE POWER, LLC

GRANITE RELIABLE POWER WIND PARK

COOS COUNTY, NEW HAMPSHIRE

PRELIMINARY OVERALL EXHIBIT
VERNAL POOL INVENTORY

NO	DATE	REVISION DESCRIPTION	ENG	DWG

DATE JULY 2008	PROJECT # 07090
ENGIN'D BY RL	DRAWN BY RL
CHECK'D BY RL	ARCHIVE # H-4547

SHEET 1 OF 1

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T:\07090 NEP - Phillips Br Wind Turbines\DWGS\FINAL\07090 overall exhibit.dwg, ovdl exhibit (2), 7/8/2008 11:04:01 AM, SycAdmin

ATTACHMENT

Vernal Pool Inventory

Documentation Forms

Granite Reliable Power, LLC
Phillips Brook Wind Power Project

①

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name MARC [illegible] Phone number 603-686-5097

Address PO BOX 417, GREENLAND NH [illegible]

Location of pool MILE 3 NEAR WET FLAG MT 38-13 (#1)
PHILIPS BROOK WIND POWER [illegible] - DUMMER, NH
PLAN SHEET 10

Photos attached _____ pool _____ animals

Date: 05/01/08 Time start _____ Time end _____

Weather SUNNY Pool size 3'x15' Water depth 1.5' max

☐ measured ☑ estimated

SPECIES	WOOD FROG		SPOTTED SALAMANDER				
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	1 LARGE		1 Standard				
tadpoles/larvae							
juveniles							

Comments: skidder cut

Date: _____ Time start _____ Time end _____

Weather _____ Pool size _____ Water depth _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments: _____

Use the back of the sheet for sketch/field map of the pool

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

#1

Pool Location EAST OF WET FIAS MT 78-13 Observer [illegible]

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 100 woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- ___ roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- ✓ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

COMMENTS:

(2)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name MARC JACOBS Phone number 603-686-5697

Address PO BOX 417 GREENLAND, NH 03840

Location of pool MILE 3 NEAR WET FLAG KZ8-12 VO MJ 28-13 (#2)
PHILIPS BROOK WIND POWER PROJECT, DUMMER, NH

Photos attached _____ pool _____ animals PLAN SHEET 10

Date: 05/01/08 Time start _____ Time end _____

Weather SUNNY Pool size 3' X 10' ☐ measured ☑ estimated Water depth 1.5' MAX

SPECIES	WOOD FROG		SPOTTED SALAMANDER				
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	3 MEDIUM		3 EACH LARGE, MED. & SMALL				
tadpoles/larvae							
juveniles							

Comments: Skidder rut

Date: _____ Time start _____ Time end _____

Weather _____ Pool size _____ Water depth _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments: _____

Use the back of the sheet for sketch/field map of the pool

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

#2 Pool Location EAST OF [illegible] RD 28-12 to MR 28-13 Observer [illegible]

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 100 ✓ woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- ___ roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- ✓ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

COMMENTS:

(3)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name MARC JACOBS Phone number 603 [illegible]

Address PO BOX 417 GREENLAND, NH 03840-0417

Location of pool MILE 3 NEAR WET FLAG 25-9 (# 3)

PHILIPS BROOK WIND POWER PROJECT - DUMMER, NH

Photos attached _____ pool _____ animals PLAN SHEET 10

Date: 25/01/08 Time start _____ Time end _____

Weather SUNNY Pool size 3' X 10' Water depth 15" MAX.

☐ measured ☑ estimated

SPECIES	WOOD FROG						
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	[illegible]						
tadpoles/larvae							
juveniles							

Comments: Skidder rut

Date: _____ Time start _____ Time end _____

Weather _____ Pool size _____ Water depth _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments _____

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location [illegible] MT 25-9 Observer [illegible]

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 100 woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- ___ roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- ✓ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

COMMENTS:

(4)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name MARC [illegible] Phone number 603-[illegible]-5097

Address PO Box 417 GREENLAND NH 03840-0417

Location of pool EAST SIDE OF MIKE 3 - OLD YARDING AREA (#4)
PHILIPS BROOK WIND POWER PROJECT DUMMER, NH

Photos attached _____ pool 4 animals PLAN SHEET 10

Date: 05/01/08 Time start _____ Time end _____

Weather SUNNY Pool size 20' (CIRCULAR) Water depth 6" MAX

☐ measured ☑ estimated

SPECIES	WOOD FROG		SPOTTED SALAMANDER				
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments: MANMADE
VIABLE?

Date: _____ Time start _____ Time end _____

Weather _____ Pool size _____ Water depth _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments _____

Use the back of the sheet for sketch/field map of the pool

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location [illegible] Observer [illegible]

SITE/TYPE:

____ upland-isolated (pool not associated with a wetland)
____ bottomland-isolated (pool in a floodplain, not in a wetland)
____ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

____ woodland (specify type) ____ deciduous ____ coniferous ____ mixed
____ agriculture or open fields
____ gravel pit
____ residential
____ roadside
____ other_____

OVERSTORY:

____ heavy overstory, >50% shrubs and/or trees
____ moderate overstory, <50% shrubs and/or trees
____ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

____ shrubs
____ emergent vegetation (i.e. grass, cattails)
____ branches, twigs (in pool or overhanging into water)
____ submergent vegetation
____ sphagnum moss
____ other_____

BOTTOM: (estimate % of types composing bottom surface)

____ sand
____ mud/soft sediment
____ leaf litter
____ submergent vegetation
____ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

COMMENTS:

(5)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name: MARC JACOBS Phone number: 603-636-5071

Address: PO BOX 411, GREENLAND, NH 03840-0411 (#5)

Location of pool: BETWEEN 2 ACCESS ROADS @ MILE 3.5 ± DUMMER POND RD, DUMMER, NH PHILLIPS BROOK LUMBER PROJECT PLAN SHEET 11

Photos attached _____ pool _____ animals

Date: 05/02/08 Time start _____ Time end _____

Weather: SUNNY Pool size: 15X25' ☐ measured ☑ estimated Water depth: 3' MAX

SPECIES	WOOD FROG						
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	14 LARGE MASSES						
tadpoles/larvae							
juveniles							

Comments: MANMADE BY EXCAVATION + FILLING

Date: _____ Time start _____ Time end _____

Weather _____ Pool size _____ Water depth _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments _____

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

#5

Pool Location MILE 3.5Z DUMMER POND ROAD Observer MARC JACOBS

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 50 woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 50 roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ✓ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ✓ sand
- ✓ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional) Speckled Alder

COMMENTS:

(6)

VERNAL POOL 27-1

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

...er's name SEAN SWEENEY Phone number

...n of pool PHILLIPS BROOK WIND PROJECT MILE 7-8 (SEE EX. CONDITIONS PLAN SHEET 21)

...available) Latitude Longitude Datum

...attached X pool animals

5-5-08 Time start Time end

Pool size 250 FT² Water depth 15" MAX.

☑ measured ☐ estimated

SPECIES	SPOTTED SALAMANDER						
...zation							
...rus							
...hip							
...atophores							
	2 MASSES						
...isharvae							
...ies							

...ts

Time start Time end

Pool size Water depth

SPECIES							
...zation							
...rus							
...hip							
...atophores							
...isharvae							
...ies							

...s

...ack of the sheet for sketch/field map of the pool

VERNAL POOL 27-1

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

PHILLIPS BROOK MILE 7-8

Pool Location SEE EX. CONDITIONS SHEET 21 Observer SEAN SWEENEY

SITE/ TYPE:

- ___ upland isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- X wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 25% woodland (specify type) ___ deciduous ___ coniferous X mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 25% roadside
- ___ other

OVERSTORY:

- X heavy overstory, >50% shrubs and/or trees
- ___ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- X branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other

BOTTOM: (estimate % of types composing bottom surface)

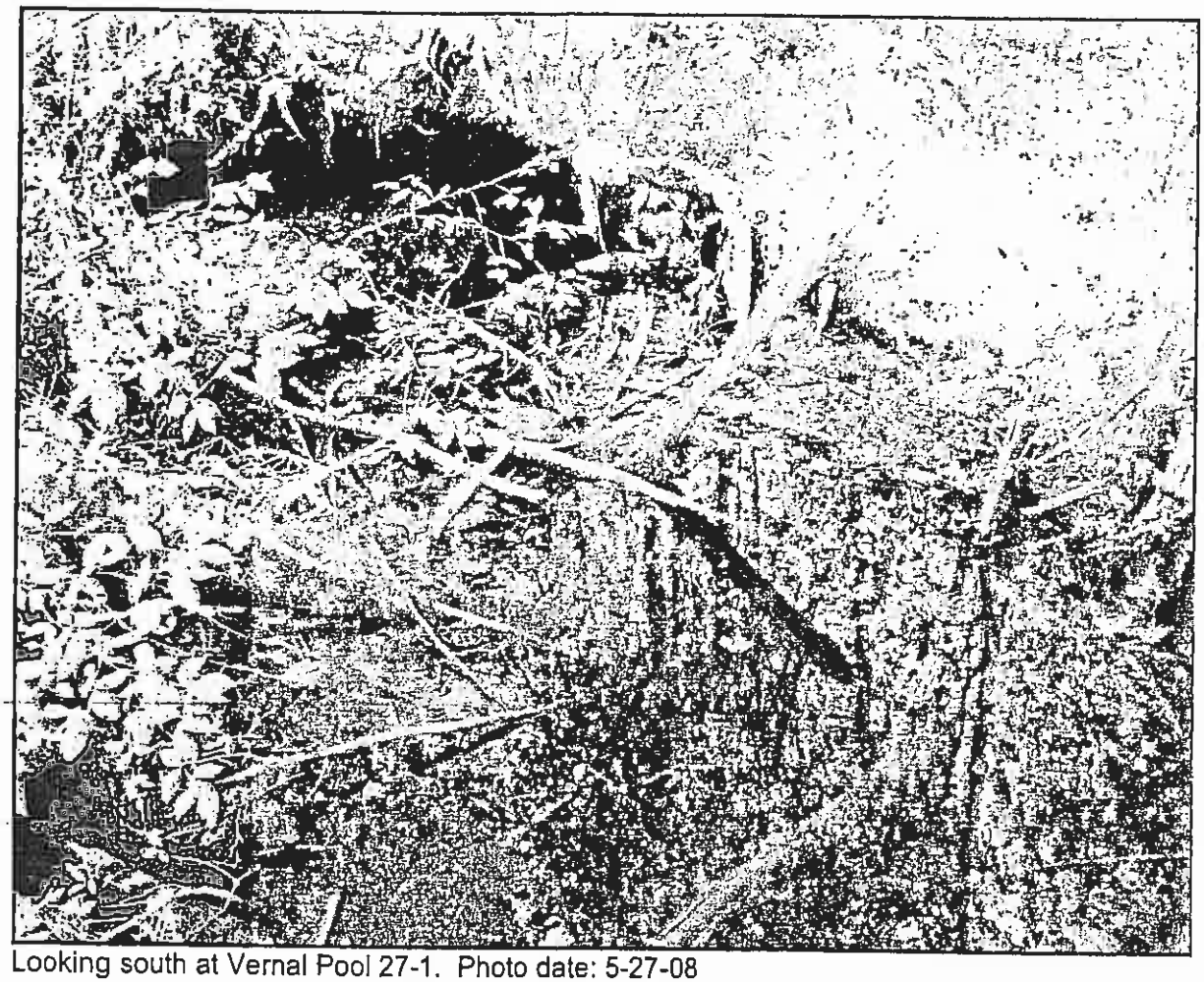
- ___ sand
- X mud/soft sediment
- X leaf litter
- ___ submergent vegetation
- ___ emergent vegetation
- X WOODY DEBRIS

DOMINANT PLANTS, LIST: (optional)

COMMENTS:

Attach location documentation.

Phillips Brook Wind Project
Mile 7 – 8 Vernal Pool Documentation



Looking south at Vernal Pool 27-1. Photo date: 5-27-08

7

VERNAL POOL 27-2

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

...server's name SEAN SWEENEY Phone number ____

...ress ____

...ation of pool PHILLIPS BROOK WIND PROJECT MILE 7-8 (SEE EX. CONDITIONS PLAN SHEET 21)

...S (if available): Latitude ____ Longitude ____ Datum ____

...tes attached ____ X ____ pool ____ animals

...e: 5-5-06 Time start ____ Time end ____

...ther ____ Pool size 400 FT² ☑ measured ☐ estimated Water depth 24" MAX

SPECIES	SPOTTED SALAMANDER						
...ult							
...calization							
...mplexus							
...ranship							
...ermatophores							
...gs	11 MASSES						
...ipoles/larvae							
...enlies							

...ments ____

Time start ____ Time end ____

...ther ____ Pool size ____ Water depth ____

SPECIES							
...ult							
...calization							
...plexus							
...ranship							
...ermatophores							
...s							
...ipoles/larvae							
...enlies							

...ments ____

...e back of the sheet for sketch/field map of the pool.

VERNAL POOL 27-2

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location PHILLIPS BROOK WIND PROJECT MILE 7-8 SEE EX. CONDITIONS SHEET 21 Observer SEAN SWEENEY

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- X wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 25% woodland (specify type) ___ deciduous ___ coniferous X mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 25% roadside
- ___ other ____

OVERSTORY:

- X heavy overstory, >50% shrubs and/or trees
- ___ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- X branches, hogs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ____

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- X mud/soft sediment
- X leaf litter
- ___ submergent vegetation
- ___ emergent vegetation
- X WOODY DEBRIS

DOMINANT PLANTS, LIST: (optional)

COMMENTS:

Attach location documentation

47

Phillips Brook Wind Project
Mile 7 – 8 Vernal Pool Documentation

Looking south at Vernal Pool 27-2. Photo date: 5-27-08

(8)

VERNAL POOL 27-3

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

...ver's name SEAN SWEENEY Phone number

...ss

...ation of pool PHIPPS BRANCH WIND PROJECT MILE 7-8 (SEE ATTACHED MAP SHEET 21)

...(if available): Latitude Longitude Datum

...s attached ✓ pool ... aerials

5-5-08 Time start Time end

...tor Pool size 350 FT² Water depth 36" MAX
☑ measured ☐ estimated

SPECIES	SPOTTED SALAMANDER		LADYBUGS				
...ds							
...amander							
...ptiles							
...iship							
...mmatophores							
...ps	LARVAE						
...podesticrves							
...mites			LARVAE				

...ments

Time start Time end

...tor Pool size Water depth

SPECIES							
...ds							
...amander							
...ptiles							
...iship							
...mmatophores							
...							
...podesticrves							
...mites							

...ents:

...e back of the sheet for sketch/field map of the pool.

VERNAL POOL 27-3

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location PHIPPS BRANCH WIND PROJECT MILE 7-8 SEE 24 CONDITIONS SHEET 21 Observer SEAN SWEENEY

SITE/ TYPE:

- ... upland-isolated (pool not associated with a wetland)
- ... bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland
- ... nodal, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 75% woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 25% roadside
- ___ other___

OVERSTORY:

- ✓ heavy overstory, >50% shrubs and/or trees
- ___ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and other concealment to aquatic adults and/or developing larvae (estimate % of type)

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ✓ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- ✓ mud/soil sediment
- ✓ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation
- ___ WOODY DEBRIS

DOMINANT PLANTS, LIST: (optional)

COMMENTS:

Attach location documentation

+7

Phillips Brook Wind Project
Mile 7 – 8 Vernal Pool Documentation

Looking south at Vernal Pool 27-3. Photo date: 5-27-08

(9)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name Jennifer West Phone number

Address

Location of pool Mile 8/9 EAST, JW-96-VP3 Sheet 24

Photos attached _____ pool _____ animals

Date: 5.16.08 Time start _____ Time end _____

Weather Clear, low 60's Pool size 6 0 x 25 ☐ measured ☒ estimated Water depth 8-10

SPECIES	Wood frog	Spotted Salamander	Water shrew	Bullfrog			
adult			✓				
vocalization							
amplexus							
courtship							
spermatophores							
eggs	≥ 50	≥ 60					
tadpoles/larvae	✓			✓			
juveniles							

Comments: Pool formed in road ditch.

Date: Time start Time end

Weather Pool size Water depth

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Mile 8/9 East, JW96-VP3 Observer Jennifer West
Granite Prior

SITE/TYPE:

- ✓ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ___ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 50 woodland (specify type) ✓ deciduous ___ coniferous ___ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 50 ✓ roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ___ moderate overstory, <50% shrubs and/or trees
- ✓ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- 45% shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- ✓ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

Alnus incana Glyceria canadensis
Carex spp.

COMMENTS:

(10)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name JENNIFER West Phone number

Address

Location of pool Mile 8/9 West, JW115-VP1 (within Stage JW115-11-T3 approx.)

Sheet 25

Photos attached _____ pool _____ animals

Date: 5.16.08 Time start _____ Time end _____

Weather Clear, low 60's Pool size 10 0x 50 Water depth 10-24

☐ measured ☒ estimated

SPECIES	Spotted Salamander			Water Strider			
adult				✓			
vocalization							
amplexus							
courtship							
spermatophores							
eggs	≥40						
tadpoles/larvae							
juveniles							

Comments: Pool receives a lot of sediment, which has covered EM. Beaver impoundment next to road. Natural

Date: _____ Time start _____ Time end _____

Weather _____ Pool size _____ Water depth _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments: _____

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Mile 8/9 West, JW115-VP1 Observer [illegible]
Granite River

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ✓ bottomland-isolated (pool in a floodplain, not in a wetland)
- ___ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- ___ woodland (specify type) ✓ deciduous ___ coniferous ___ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 10% roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- 10% shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- X mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

Alnus incana

COMMENTS:

(11)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name: Jennifer West Phone number:

Address:

Location of pool: Mile 8/9 West, JW-115-VP2

Photos attached _____ pool _____ animals

Date: 5/6/08 Time start: _____ Time end: _____

Weather: Clear - low 60's Pool size: 50 x 50 ☐ measured ☑ estimated Water depth: 10-36

SPECIES	Wood frog	Spotted salamander	Predaceous diving beetle	water strider			
adult			✓	✓			
vocalization							
amplexus							
courtship							
spermatophores							
eggs	≥ 40 egg	± 6					
tadpoles/larvae							
juveniles							

Comments: Did not survey entire pool as access difficult. Pool is result of beaver impoundment. Slight flow through dam. Within Phillips Brook floodplain.

Date: _____ Time start: _____ Time end: _____

Weather: _____ Pool size: _____ Water depth: _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Mile 8/9 Vent JW-115-VP2 Flags 115-87-90 Observer Jennifer Vent Granite Power

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- X bottomland-isolated (pool in a floodplain, not in a wetland)
- ___ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

Natural pool

HABITAT: (estimate % of type)

- X woodland (specify type) X deciduous ___ coniferous ___ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 25% roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- X moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- 30% shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___

Alnus incana around edge of pool

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- ✓ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

Alnus incana

COMMENTS:

(12)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name: MARC JACOBS Phone number: 603-536-5097

Address: PO Box 417 GREENLAND, NH 03840-0417

Location of pool: PHILIPS BROOK WIND POWER PROJECT - MILES MILLSFIELD NH ENCLOSED BY WETLAND FLAG LINE W48 - PLAN SHEET 26 (#7)

Photos attached _____ pool _____ animals

Date: 05/12/08 Time start _____ Time end _____

Weather: SUNNY 55°F ± Pool size: SEE FLAG LINE W48 Water depth: 1.0' MAX

☑ measured ☐ estimated

SPECIES	WOOD FROG		SPOTTED SALAMANDER				
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	6		4				
tadpoles/larvae							
juveniles							

Comments: MANMADE BUT NATURALIZING NICELY ENHANCEMENT OPPORTUNITY

Date: _____ Time start _____ Time end _____

Weather _____ Pool size _____ Water depth _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments: _____

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location PHILIPS BROOK WIND PROJECT MILE 7 WETLAND LINE MT 48 Observer MARC JACOBS

SITE/TYPE:

- ✓ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 50 ✓ woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- 50 ✓ gravel pit abandoned
- ___ residential
- ___ roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ___ moderate overstory, <50% shrubs and/or trees
- ✓ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ✓ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ✓ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- 20 sand
- 50 mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- 30 emergent vegetation

DOMINANT PLANTS, LIST: (optional) scouring rush, sphagnum, scrub willow meadowsweet, speckled alder

COMMENTS:

(13)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name R. LoBDell Phone number 838 - 6880

Address Noble Power

Location of pool Mile 10-11; WET FLAG: RL 56-12 #1

Photos attached ✓ pool _____ animals

Date: 5/14/08 Time start 9:30 AM Time end 10:00 AM

Weather _____ Pool size 50' x 100' Water depth 1-2'

☒ measured ☐ estimated

SPECIES	WOOD FROG	SPOTTED SAL.					
adult							
vocalization	Few on 5/6/08						
amplexus							
courtship							
spermatophores							
eggs	100+	50+					
tadpoles/larvae							
juveniles							

Comments: TADpoles JUST ABOUT TO FORM. SITE IMPACTED BY HEAVY LOGGING

Date: _____ Time start _____ Time end _____

Weather _____ Pool size _____ Water depth _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments: _____

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Noble Power Observer _____

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 75 ✓ woodland (specify type) ___ deciduous ___ coniferous ___ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 25 ✓ roadside
- ___ other _____

OVERSTORY:

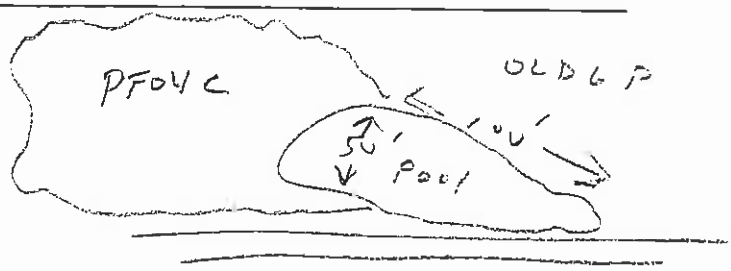
- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- 10 ✓ shrubs
- 10 ✓ emergent vegetation (i.e. grass, cattails)
- 10 ✓ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- 10 ✓ sphagnum moss
- ___ other _____

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- 50 ✓ mud/soft sediment
- 40 ✓ leaf litter
- 5 ✓ submergent vegetation
- 5 ✓ emergent vegetation



DOMINANT PLANTS, LIST: (optional) on edge: Balsam, black spruce, yellow birch, white birch, alder. In pool: sphagnum, reeds, sedges on hummocks.

COMMENTS: old stumps, logs, green algae

(14)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name R. Lobdell Phone number 836-6880

Address

Location of pool Dummer Pond RD - mile 10-11; UCTFL RL 15-15 + 13-5 #3

Photos attached ✓ pool _____ animals

Date: 5/14/08 Time start 11:30 Time end

Weather Sunny Pool size 60x30 ☐ measured ☐ estimated Water depth

SPECIES	Wood Frog	Sala Mander	Green Frog				
adult			1				
vocalization							
amplexus							
courtship							
spermatophores							
eggs	7 masses	3 masses					
tadpoles/larvae							
juveniles							

Comments: Man made - old borrow area for logging road + yard. Culvert drains into pool.

Date: Time start Time end

Weather Pool size Water depth

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Noble Power Dummer Pond RD mile 10-11 #3 Observer R. Lobdell

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 20 ✓ woodland (specify type) ___ deciduous ___ coniferous ___ mixed
- ___ agriculture or open fields
- 80 ✓ gravel pit
- ___ residential
- ___ roadside
- ___ other ___

OVERSTORY:

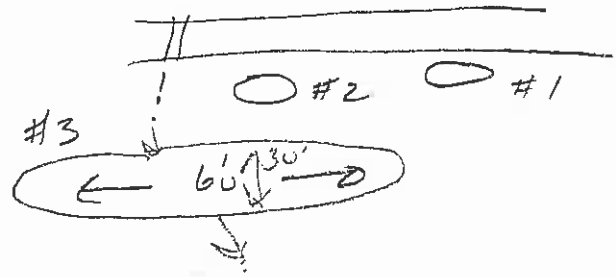
- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- 10 ✓ shrubs
- 25 ✓ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- 10 ✓ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- 75 ✓ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- 25 ✓ emergent vegetation



DOMINANT PLANTS, LIST: (optional) EDGE: Black Spruce, balsam, willow, sedges
Pool- Spagnum, Algae, horsetail.

COMMENTS:

(15)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name R LOBDell Phone number 838-6880

Address

Location of pool Noble Power mile 10-11; WET FLAG AL 13-11 #3

Photos attached X pool _____ animals

Date: 5/14/08 Time start 10:30 Time end

Weather Sunny 50's Pool size 60 x 30 ☐ measured ☐ estimated Water depth 1-1.5

SPECIES	WOOD FROG	? SALAMANDER					
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	20 MASSES	10 MASSES					
tadpoles/larvae	✓						
juveniles							

JUST

Comments: MAN-MADE BORROW AREA NEXT TO LOGGING ROAD + YARD

Date: Time start Time end

Weather Pool size Water depth

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Mill 10-11; FLAG: RL 13-11 #2 Observer R. Lowell

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 10 ✓ woodland (specify type) ___ deciduous ___ coniferous ___ mixed
- ___ agriculture or open fields
- 80 ✓ gravel pit
- ___ residential
- 10 ✓ roadside
- ___ other ___

OVERSTORY:

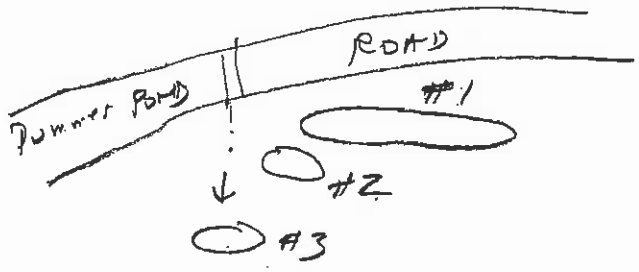
- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ✓ shrubs
- ✓ emergent vegetation (i.e. grass, cattails)
- ✓ branches, twigs (in pool or overhanging into water)
- ✓ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- 60 ✓ mud/soft sediment
- 30 ✓ leaf litter
- ___ submergent vegetation
- 10 ✓ emergent vegetation



DOMINANT PLANTS, LIST: (optional) ALONG EDGE: Alders, black spruce, red maple, ferns, Pool - sedges, dogwood

COMMENTS:

(16)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name R. LOBDELL Phone number 836-6980

Address

Location of pool Mobile Power - mile 10-11, FAG: RL 15-15 #4

Photos attached ✓ pool _____ animals

Date: 5/14/08 Time start 11:00 AM Time end

Weather SUNNY Pool size ☐ measured ☐ estimated Water depth 1'

SPECIES	WOOD FROG	SALAMANDER					
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	5 MASSES	5 MASSES					
tadpoles/larvae	✓						
juveniles							

JUST

Comments:

Date: Time start Time end

Weather Pool size Water depth

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Dummer Pond Road: Noble Power mile 10-11, FLAG RL 15-15 Observer R. Lobrell

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 10 ✓ woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- 70 ✓ gravel pit
- ___ residential
- 20 ✓ roadside
- ___ other ___

OVERSTORY:

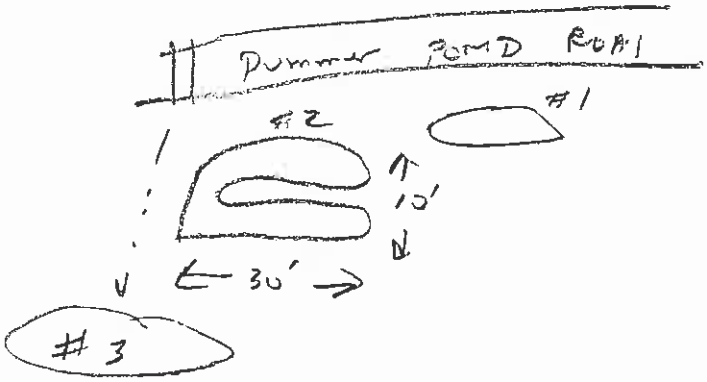
- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ✓ shrubs
- ✓ emergent vegetation (i.e. grass, cattails)
- ✓ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ✓ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- 30 ✓ mud/soft sediment
- 70 ✓ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation



DOMINANT PLANTS, LIST: (optional)

EDGE: Alders, black cherry, popular
Pool - Algae

COMMENTS:

(17)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name Jenni Ar West Phone number 207-797-7717

Address

Location of pool Mile 13 to 14, east side

JW 210

Photos attached _____ pool _____ animals

Date: 5·16·08 Time start 10:20 Time end

Weather clear, sunny - mid 50's Pool size 100 x 100 ☐ measured ☒ estimated Water depth ± 12-24

SPECIES	wood frog	spotted salamander					
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	≥ 200 EM	≥ 50 EM					
tadpoles/larvae							
juveniles							

Comments: Beaver impoundment next to landing for wood processing. Slight flow exiting impoundment through ditch, Egg masses (EM) along north side.

Date: Time start Time end

Weather Pool size Water depth

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location JW 210, Mile 13/14 East Observer Jennifer West
Granite Power

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- 70 woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 10% roadside
- 20% other leading to wood processing

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ___ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

ponded area has a scrub/shrub fringe, otherwise open water

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- 10% ✓ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- 15% ✓ branches, twigs (in pool or overhanging into water) along edge
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

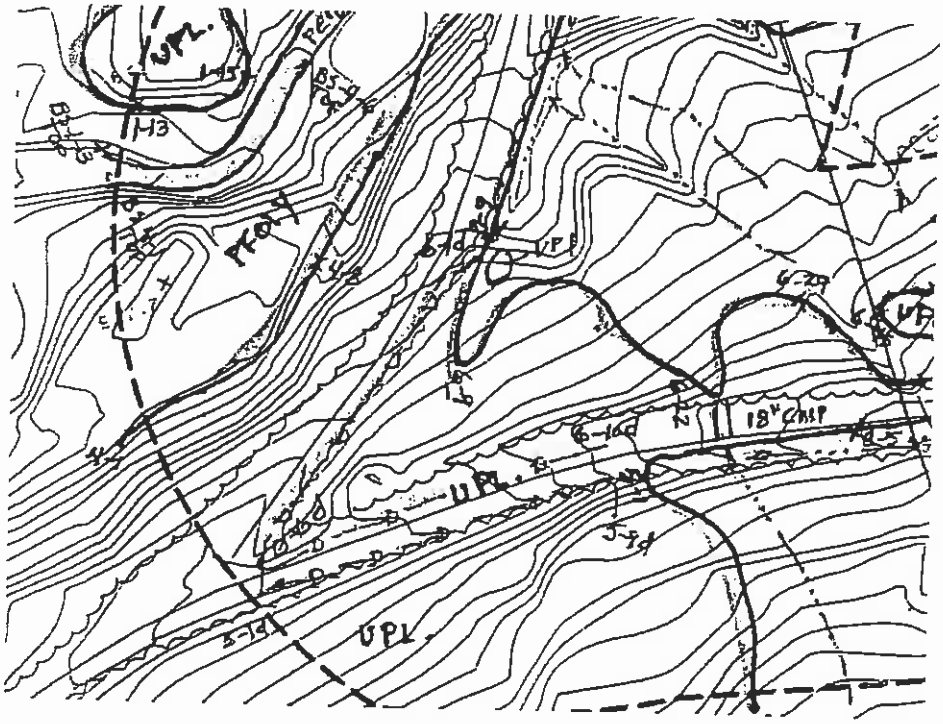
- ___ sand
- 100% mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

Acer rubrum, Abies balsamea, red spruce

COMMENTS:

"Vernal Pool 1" on Map Sheet #47 - Kelsey Section



VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name: S. Hale / T. Rudolph Phone number: 603-899-6721

Address: P.O. Box 570 Rindge NH 03461

Location of pool: Sheet 47

Photos attached: ✓ pool ✓ species (49%)

Date: Fri May 16 2008 Time start: 12:45 Time end: 1:05

Weather: Partly cloudy Pool size: 10' x 12' ☐ measured ☐ estimated Water depth: 15" max

SPECIES	10 Sept.	10 Sept.					
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	[illegible]	[illegible]					
tadpoles/larvae							
juveniles							

Comments:

Date: Time start: Time end:

Weather: Pool size: Water depth:

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet for sketch/map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location: Sheet 47 Observer: S. Hale / T. Rudolph

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- ✓ woodland (specify type): ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- ___ roadside
- ___ other:

OVERSTORY:

- ✓ heavy overstory, >50% shrubs underneath
- ___ moderate overstory, <50% shrubs under trees
- ___ open site with grasses, forbs, and/or shrubs

COVER Any material in the pool that can provide egg attachment sites and other conditions to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails,
- ✓ branches, logs (in pool or overhanging the water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other:

BOTTOM: (estimate % of pool comprising bottom surface)

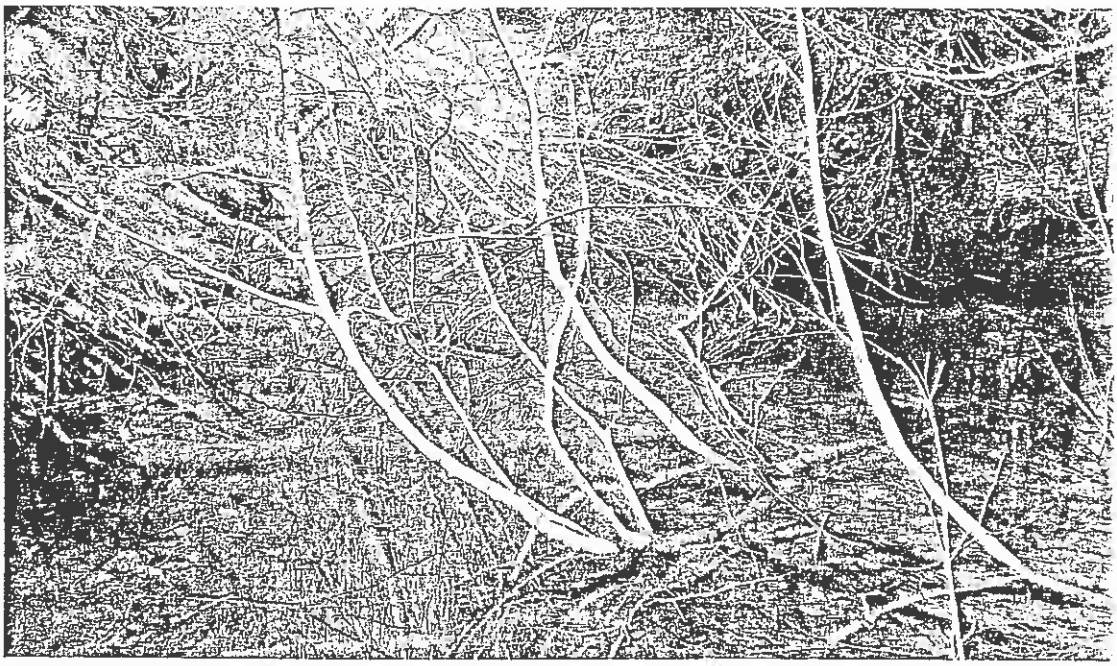
- ___ sand
- ✓ muck/organic sediment 10%
- ✓ leaf litter 90%
- ___ submergent vegetation
- ___ emergent vegetation

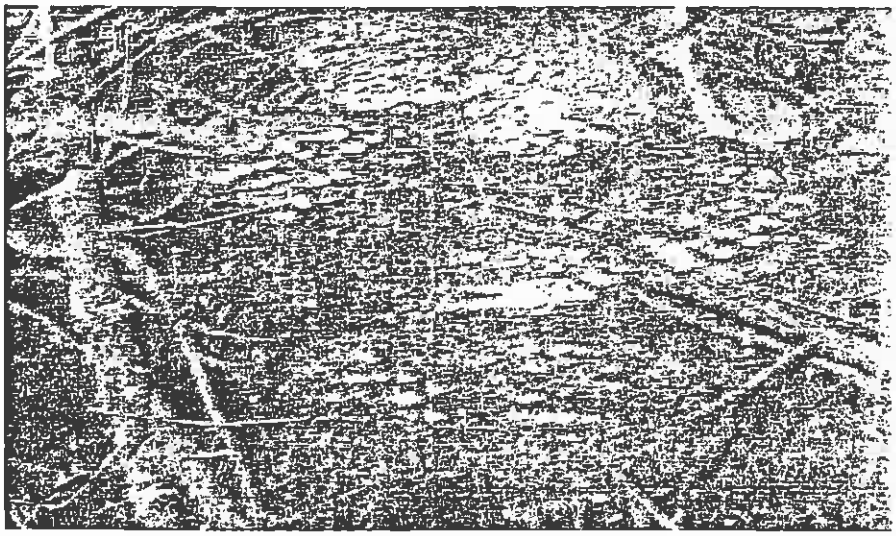
DOMINANT PLANTS, LIST: (species)

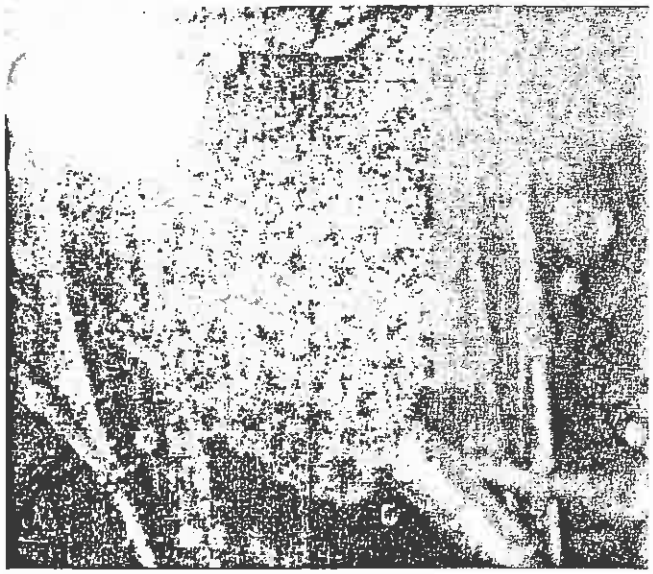
Black Ash, Yellow Birch, Acer [illegible] Red Maple, Red Oak, Pine

COMMENTS:

Pool is 15'20' off road

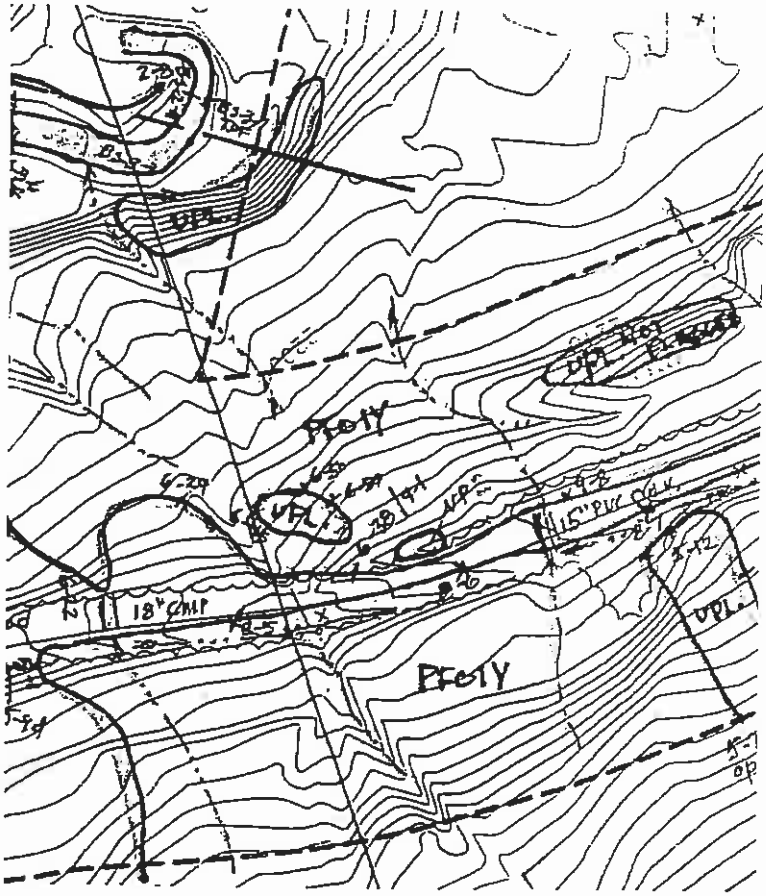






"Vernal Pool 2" on Map Sheet #47 - Kelsey Section

(19)



VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name: [illegible] Phone number:

Address: P.O. Box 56 Rindge NH 03461

Location of pool: Sheet 47 NHCP

Photos attached: ✓ pool ✓ animals (eggs)

Date: Friday May 16 2008 Time start: 1:15 Time end: 1:30

Weather: [illegible] Pool size: [illegible] ☐ measured ☐ estimated Water depth: [illegible]

SPECIES	[illegible]	[illegible]					
adult							
vocalization	✓						
amplexus							
courtship							
spermatophores							
eggs	✓ [illegible]	✓ [illegible]					
tadpoles/larvae							
juveniles	✓						

Comments:

Date: Time start: Time end:

Weather: Pool size: Water depth:

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

*Use the back of this sheet for a narrative map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location: Sheet (47) Observer: Peragallo / Kelsey

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ transitional-isolated (pool is in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- ✓ woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- ___ roadside
- ___ other:

OVERSTORY:

- ___ heavy overstory, >50% shade under trees
- ✓ moderate overstory, <50% shade under trees
- ___ open site with grasses, forbs, no woody shrubs

COVER: Any material in the pool that can provide egg attachment sites and other structure for aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ✓ branches, logs (in pool or overhanging from water)
- ___ aquatic type vegetation
- ✓ sphagnum moss
- ___ other:

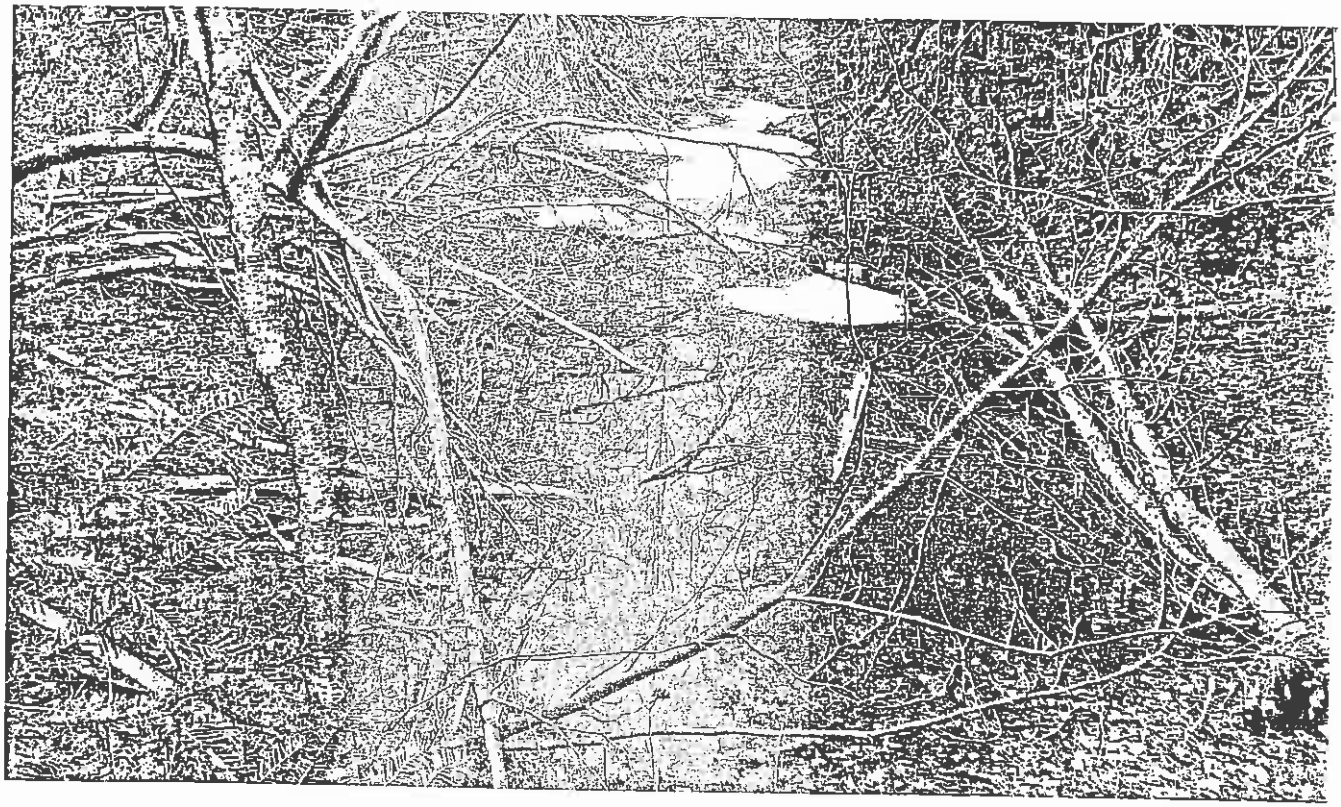
BOTTOM: (estimate % of types comprising bottom surface)

- ✓ sand
- ✓ muddy sediment 45%
- ✓ leaf litter 75%
- ___ submerged vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

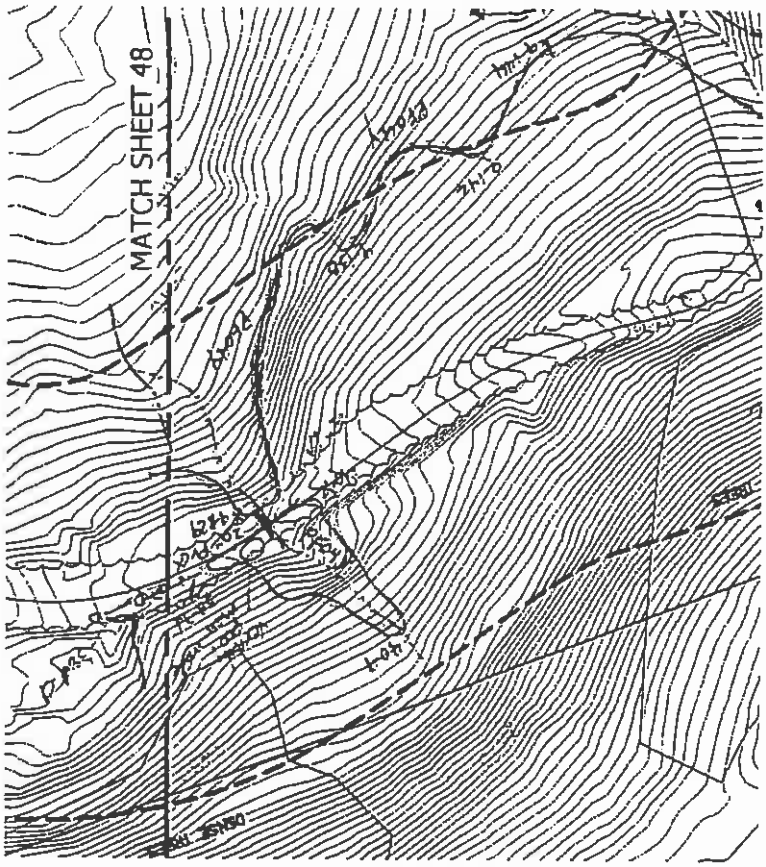
Plants, Red Oak, Red Maple, Dominant [illegible]

COMMENTS: [illegible] 25 30' off Pool



"Vernal Pool 3" on Map Sheet #49 - Kelsey Section

(20)



VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name: Steve / T. Rowland Phone number: 603-847-6721

Address: PO Box 570 Elmdale NH 03461

Location of pool: SHEET 49 NHRP

Photos taken: ✓ pool ✓ upands (eggs

Date: Fri May 16 2008 Time start: 1:45 Time end: 2:00 PM

Weather: Partly Cloudy Pool size: 20' x 40' (Ⓜ measured Ⓔ estimated) Water depth: 6-8" max

SPECIES	Wood F						
adult							
metamorphosing							
tadpoles							
caudata							
ambystomatidae							
eggs	3 masses						
tadpoles/larvae							
juveniles							

Comments:

Date: Time start: Time end:

Weather: Pool size: Water depth:

SPECIES							
adult							
metamorphosing							
tadpoles							
caudata							
ambystomatidae							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet or attached map of the pool

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location: Sheet 49 Observer: Steve

SITE/TYPE:

- ✓ upland-isolated (pool not associated with a wetland)
- ___ floodplain-isolated (pool in a floodplain, not in a wetland)
- ___ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, river)

HABITAT: (estimate % of type)

- ___ woodland (specify type) ___ deciduous ___ coniferous ___ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- ✓ roadside
- ___ other:

OVERSTORY:

- ___ heavy overstory, >50% shade water area
- ___ moderate overstory, <50% shade water area
- ✓ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites or other cover elements to aquatic adults and/or developing larvae (estimate % of type)

- ___ shrubs
- ✓ emergent vegetation (e.g. grass, sedge)
- ___ branches, logs (in pool or overhanging into water)
- ___ submergent vegetation
- ✓ spring growth moss
- ___ other:

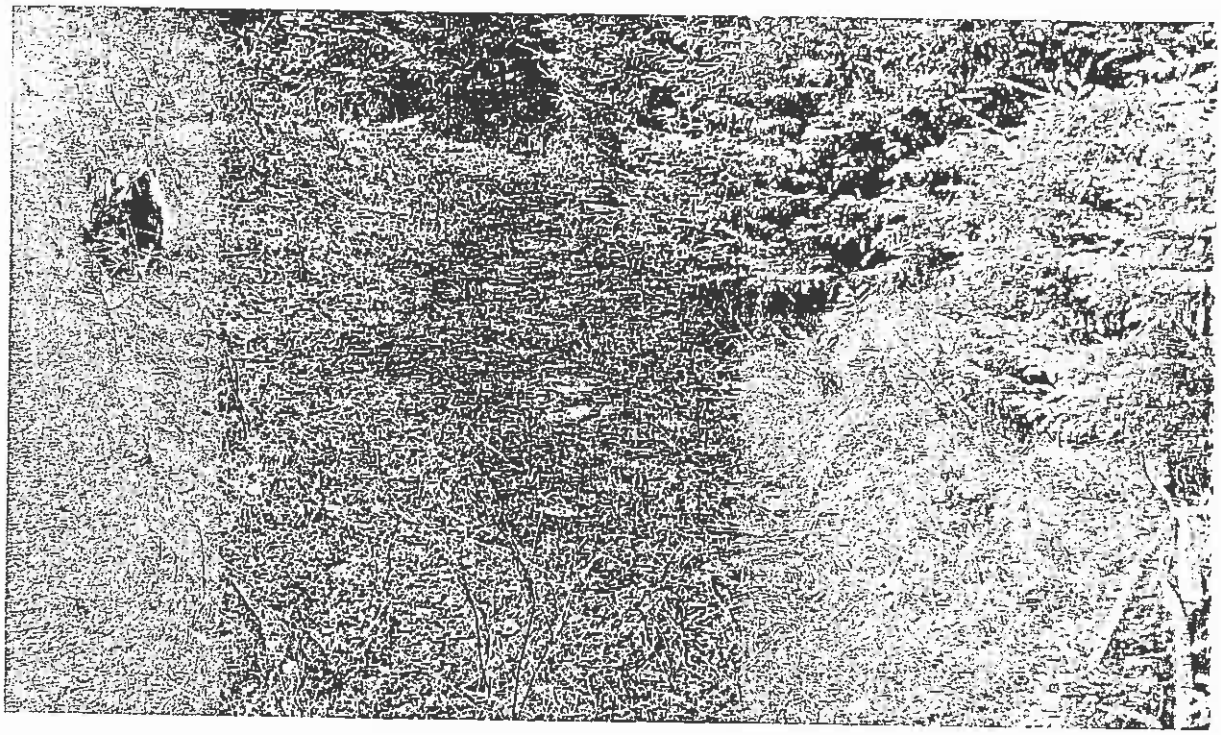
BOTTOM: (estimate % of types comprising bottom surface)

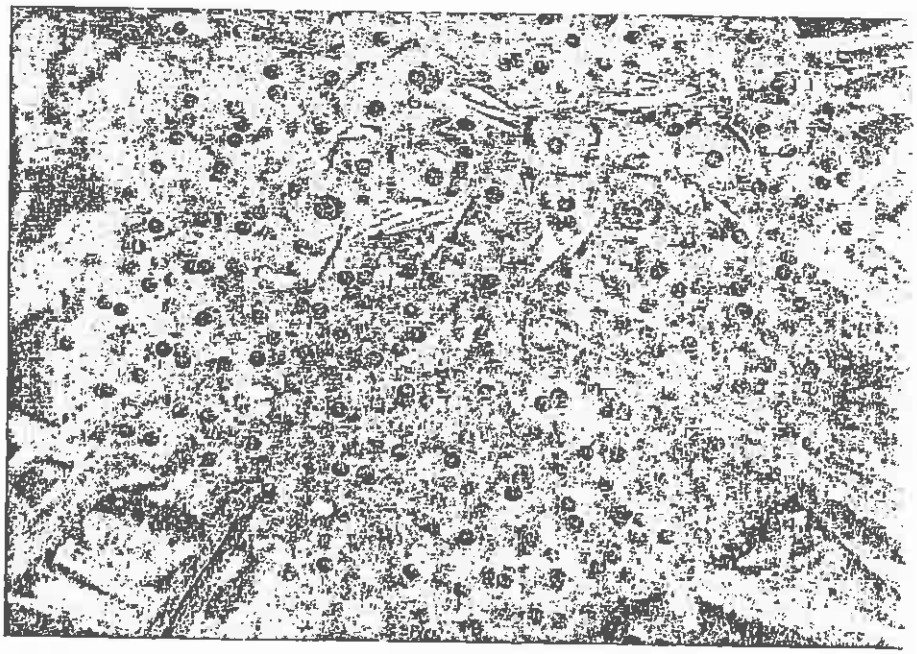
- 50% sand
- ___ muck/soft sediment
- ___ leaf litter
- 50% submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

Eupatorium, Sensitive Fern, Sphagnum moss, Pine Cones

COMMENTS:





VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name: MARC JACOBS Phone number: 603 · 636 · 5077

Address: PO BOX 471 GREENLAND, NH 03840-0471

Location of pool: Dixville Peak Stringer Philips Brook Wind Power Project (#6)
ENCLOSED BY WETLAND FLAG SERIES RL 1B DIXVILLE PEAK SITE
DIXVILLE, NH

Photos attached: 2 ✓ pool 2 ✓ animals 2

Date: 06/11/08 Time start: 9:30 Time end: 9:45

Weather: M. Sunny · Windy w/clouds Pool size: 50 X 15 (AVG.) ☐ measured ☑ estimated Water depth: 2'±? max.

see wetland flag line RL 1B

SPECIES	Spotted Salamander	Frog sp.	Wood Frog				
adult		?					
vocalization							
amplexus							
courtship							
spermatophores							
eggs	7 masses		1 old mass				
tadpoles/larvae			✓				
juveniles							

Comments: MANMADE ?

Date: Time start: Time end:

Weather: Pool size: Water depth:

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location: Boxville Park Street Observer: M. Jacobs

SITE/TYPE:

- ✓ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ___ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

adjacent

HABITAT: (estimate % of type)

- 90 woodland (specify type) — 10 deciduous — 90 coniferous — ___ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- 10 ✓ roadside
- ___ other ___

OVERSTORY:

- ✓ heavy overstory, >50% shrubs and/or trees
- ___ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- 30 ✓ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- 20 ✓ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- 100 sand
- ___ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional) sphagnum moss sedge sp.

COMMENTS:

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name R. Lobdell Phone number 938-6880

Address

Location of pool Noble Power - Fish Brook Spur Road
Wetland flag DA 25-14

Photos attached _____ pool _____ animals

Date: 5/10/08 Time start 10 AM Time end 10:15 AM

Weather Sunny Pool size 15 x 30 ☐ measured ☐ estimated Water depth 1'

SPECIES	Wood Frog						
adult							
vocalization	None						
amplexus							
courtship							
spermatophores							
eggs	5 masses						
tadpoles/larvae							
juveniles							

Comments: Man-made. Old borrow area from additional road.

Date: 5/29/08 Time start 2:15 Time end 2:30

Weather Pool size 15 x 30' Water depth

SPECIES	Wood Frog						
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae	+100						
juveniles							

Comments:

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Noble Power - Fish Brook Spur Observer R. Lobdell

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- X wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

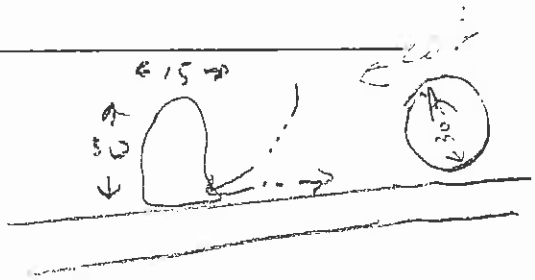
- 20 ✓ woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- 60 ✓ gravel pit
- ___ residential
- 80 ✓ roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- 10 ✓ shrubs
- 10 ✓ emergent vegetation (i.e. grass, cattails)
- 10 ✓ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___



BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- 75 ✓ mud/soft sediment
- 25 ✓ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional) willow, alder, red maple, striped maple along edge. Pool - sedges, reeds, horsetail

COMMENTS:

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name Patrick Fairbairn Phone number 603-472-5191 (work)

Address (work) Normandeau Associates Inc., 25 Nashua Road, Bedford, NH 03110

Location of pool Map Section 1, Wetland PF-15 V Sheet 1 Ne/SEY

Photos attached ✓ pool ✓ animals

Date: 22 May 2008 Time start 11:45 Time end 11:50

Weather Partly sunny, 60°F, breezy Pool size 8 ft x 3 ft ☐ measured ☑ estimated Water depth 12"

SPECIES	Rana sylvatica						
adult	1						
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae	≈ 100						
juveniles							

Comments:

Date: Time start Time end

Weather: Pool size Water depth

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Map Section 1, Wetland PF-15 V Observer Patrick Fairbairn

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- ✓ woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- ___ roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ___ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ✓ other Graminoid vegetation overhanging edge provides slight cover.

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- ✓ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

COMMENTS: Periodically logged forest.

(24)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name Patrick Fairbairn Phone number 603-472-5191 (work)

Address (work) Normandeau Associates Inc., 25 Nashua Road, Bedford, NH 03110

Location of pool Map Section 2 N16 SSV on centerline of Road C at 23+50.

Photos attached _____ pool _____ animals

Date: 19 May 2008 Time start 11:00 Time end 11:05

Weather Cloudy, cold Pool size 10 ft x 3 ft ☐ measured ☑ estimated Water depth 12 inches

SPECIES	Rana sylvatica						
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	5 egg masses						
tadpoles/larvae							
juveniles							

Comments: This pool exists temporarily where logging slash has dammed stream flow. Other obstructions in other years probably provide similar breeding opportunities.

Date: _____ Time start _____ Time end _____

Weather _____ Pool size _____ Water depth _____

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments: _____

Use the back of the sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Map Section 2, Wetland N16 55 V Observer Patrick Fairbairn

SITE/TYPE:

- ___ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ✓ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- ___ woodland (specify type) ___ deciduous ___ coniferous ✓ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- ___ roadside
- ___ other ___

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ✓ moderate overstory, <50% shrubs and/or trees
- ___ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- 10 shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- 80 branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- 10 other rocks

BOTTOM: (estimate % of types composing bottom surface)

- 5 sand
- 75 mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation
- 20 rocks

DOMINANT PLANTS, LIST: (optional)

COMMENTS: Recently clear-cut mixed forest, with remnant small trees bordering stream.

(25)

VERNAL POOL DOCUMENTATION (PART 1 OF 2)

Observer's name: Patrick Fairbairn Phone number: 603-472-5191 (work)

Address: (~~work~~) Normandeau Associates Inc., 25 Nashua Road, Bedford, NH 03110

Location of pool: May Section 2, Wetland PF-29 v

Photos attached: ✓ pool _____ animals

Date: 27 May 2008 Time start: 16:05 Time end: 16:30

Weather: cloudy, cool Pool size: 75 ft x 5 ft ☐ measured ☒ estimated Water depth: 8 inches

SPECIES	Rana sylvatica						
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs	11 egg masses						
tadpoles/larvae	✓						
juveniles							

Comments:

Date: Time start: Time end:

Weather: Pool size: Water depth:

SPECIES							
adult							
vocalization							
amplexus							
courtship							
spermatophores							
eggs							
tadpoles/larvae							
juveniles							

Comments:

Use the back of this sheet for sketch/field map of the pool.

VERNAL POOL HABITAT DOCUMENTATION (Part 2 of 2)

Pool Location Map Section 2, Wetland PF-28 V Observer Patrick Fairbairn

SITE/TYPE:

- ✓ upland-isolated (pool not associated with a wetland)
- ___ bottomland-isolated (pool in a floodplain, not in a wetland)
- ___ wetland complex (pool within or associated with a larger wetland habitat, i.e. red maple swamp, marsh, pond edge, other)

HABITAT: (estimate % of type)

- ___ woodland (specify type) ___ deciduous ___ coniferous ___ mixed
- ___ agriculture or open fields
- ___ gravel pit
- ___ residential
- ___ roadside
- ✓ other: recently clear-cut mixed forest.

OVERSTORY:

- ___ heavy overstory, >50% shrubs and/or trees
- ___ moderate overstory, <50% shrubs and/or trees
- ✓ open site with grasses, forbs, scattered shrubs

COVER: Any material in the pool that can provide egg attachment sites and offer concealment to aquatic adults and/or developing larvae (estimate % of type).

- ___ shrubs
- ___ emergent vegetation (i.e. grass, cattails)
- ✓ branches, twigs (in pool or overhanging into water)
- ___ submergent vegetation
- ___ sphagnum moss
- ___ other ___

BOTTOM: (estimate % of types composing bottom surface)

- ___ sand
- ✓ mud/soft sediment
- ___ leaf litter
- ___ submergent vegetation
- ___ emergent vegetation

DOMINANT PLANTS, LIST: (optional)

COMMENTS:

Inundated rutting on logging road. Main pool had all the spawn, most of it hatched, but many larvae had ventured downstream along a string of lesser rut-pools maintained by the through-flow of seasonal-stream runoff from the west.

Wetland Delineation Data Sheets
Lobdell Associates, Inc.

Granite Reliable Power
Wind Park
Wetland Delineation Procedures

R. Lobdell, CWS

The following describes the process used in delineated wetlands at the proposed Granite Reliable Power, LLC wind park project area in Dummer, Dixville, Ervings Location, Millsfield, and Odell. For the purposes of this report, the project area is defined as the linear area in and adjacent to the project as shown on the project plans and includes a 500 foot diameter circle around each wind tower location and an area along the proposed roads with a width from 200 to over 400 feet.

Wetland Mapping and Classification

Wetlands in the project area were delineated according to the standards of the 1987 Federal Manual (COE, 1987) and the rules of the NH Wetlands Bureau. Wetlands were flagged in the field by wetland scientists in October and November of 2007 and April, May, and June of 2008. Horizons Engineering assembled a team of wetland scientist to complete the mapping which included the following NH certified wetland scientists: Raymond Lobdell, CSS, CWS (Delineation Coordinator); Michael Cuomo, CSS, CWS; Greg Howard, CSS, CWS; Marc Jacobs, CSS, CWS; Thomas Peragallo, CSS, CWS; Nancy Rendall, CSS, CWS; Jonathan Sisson, CSS, CWS; Sean Sweeney, CWS, PE; Jennifer West, CWS; Barry Keith, CWS; David Allain, CSS, CWS; Patrick Fairbairn, CWS; and Liz Garlo, CWS.

Because of the linear nature of the project and the number of certified wetland scientists involved in the delineation, a standard flagging methodology was developed. First, each wetland scientist was assigned specific road miles within the project area and standard orange wetland flagging provided. Wetland scientist placed their initials on each delineation flag followed by the wetland delineation line and flag number (for example, RL 1-30). Additional information was also added to flags relative to wetland classification (for example, ss-seasonal stream, d-wet ditch, v-vernal pool, PF04- Palustrine forested evergreen). Map sketches were developed for each map section to assist surveyors in locating flags. Horizons Engineering surveyed all flags onto existing plans which were then reviewed by each wetland scientist and revisions made, as necessary.

Documentation of wetland conditions including vegetative, soil, and hydrologic characteristics can be found in the over 80 plot data sheets completed by the wetland scientists and enclosed with the application, arranged by project mile and wind tower string.

Wetlands were classified by the same team of wetland scientists according to the US Fish and Wildlife Service (USFWS)) classification method as described in Cowardin. et al. (1979). Wetland classifications are shown on the project area plans.

A wetland delineation site visit was undertaken on July 1, 2008 with Paul Minkin and Richard Roach of the US Army Corps of Engineers and Craig Rennie of the NH Wetlands Bureau. Wetlands were observed at several locations within the project area at different elevations and within different wetland types.

Wetland Overview

The wetlands in the project area are primarily forested with poorly drained glacial till and shallow to bedrock soils which have been vegetatively or hydrologically disturbed historically by many years of logging. Generally speaking, vegetation in both the wetlands and adjoining uplands is dominated by facultative and or facultative upland plants. As the elevation increases, so does the presence and dominance of hydrophytes found in the uplands. Therefore, soils rather than vegetation was frequently the most important factor in wetland determination. Soils, however, were often problematic due to cryic conditions above 2500 feet, dark parent materials, and spodic conditions.

The dominant vegetative class is Palustrine forested wetland including evergreen forested, broad leave deciduous forested, and complexes of the two. Tree species often also dominate in the sapling and shrub layers in both forested and more recently cut over areas. Evergreen species include balsam fir, red spruce, and black spruce with an understory of evergreen saplings and shrubs and a ground cover which includes sphagnum, goldthread, and occasional concentrations of ferns and sedges, Deciduous forested wetlands include yellow birch, red maple, and sugar maple with a shrub layer including hobblebush, striped maple, willow, raspberry, and an herb layer including sensitive fern, trout lily, jewel weed, false hellebore, and foam flower, Additional wetland classes include Palustrine scrub shrub wetlands of speckled alder and willow. Concentrations of Carex, Juncus and Scripus species were often found in skidder trails; and alder, willow, and elderberry found in mature ditches along the edge of log roads and skid trails.

Hydric soils in the project area include shallow and deep till cryic inceptisols at elevations above 2500 feet, loose or dense glacial till spodic soils, and mucky very poorly drained shallow organic soils. Deep organic soils were less common. Hydric soil series identified in the project site by the USDA NRCS in the Coos County Soil Survey (interim report) include the poorly drained Lyme, Pillsbury, Monarda soils and the very poorly drained Peacham, Wonsqueak, and Bucksport muck.

Hydrologic indicators include saturation, inundation, and wetland drainage patterns. Hydrologic patterns had been altered in many cases by skidders either concentrating flow by traveling perpendicular to the slope or increasing saturation and inundation by traveling parallel to the slope. Log yards, of which there were many, also often disturbed drainage patterns and altered vegetative communities due to compaction, rutting, and the accumulation of wood debris in various stages of decomposition.

For a discussion of wetland functions and values, see the Compensatory Mitigation Assessment report enclosed with the wetlands application.

011

Mile 0/1 West

PROJECT TITLE: Granite Power

TRANSECT: NR3 PLOT: Up

NEAR Flag NR3-5

DELINEATOR(S): Jennifer West

DATE: 6.3.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula alleghaniensis 6", 5, 6, 7,	459/860	53	✓	FAC
Betula lenta? 8, 8	402	47	✓	FACU
Saplings				
Acer pensylvanicum	30/80	38	✓	FACU
Acer saccharum	30	38	✓	FACU-
Fraxinus pensylvanicum	10	12	✓	FACW
Acer spicatum	10	12	✓	FACU-
Shrubs				
Viburnum alnifolium	5/35	14	✓	FAC
A. pensylvanicum	10	28	✓	FACU
Abies balsamea	10	28	✓	FAC
A. saccharum	10	28	✓	FACU-
Herbaceous				
Fra pen	10/40	25	✓	FACU
A. saccharum	10	25	✓	FACU-
Gym dry	20	50	✓	UPL

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	2	3	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
	7	1

Non-hydrophytes Subtotal (B): 8

PERCENT HYDROPHYTES (100A/A+B): 38

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification: _____
Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: None within 30"
Depth to Saturation (including capillary fringe): None within 20"
Altered Hydrology (explain): None

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2"	Oe	7.5YR 2.5/1		Hemic material
2-3	A	7.5YR 2.5/2		very dark sandy loam
3-4	E	10YR 4/2		↓
4-	Bhs	7.5YR 2.5/3	none observed	
EOE 20"	refusal - stone			

HYDRIC SOIL INDICATOR(S): Lacks hydric morphology.

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: moderately well drained
Depth to active water table: >16"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Granite Power TRANSECT: XR 3 PLOT: Up

Mile 0/1 West

Veg 0/1 Wet

91

PROJECT TITLE: Granite Power

TRANSECT: NR3 PLOT: Wet
near flag NR3.5

DELINEATOR(S): Jennifer Wozt

DATE: 6.3.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No trees or saplings in wetland				
Shrubs				
Fraxinus pensylvanicum	10/55	18		
Acer saccharum*	10	18		
Rubus ideaus	35	63	✓	Fac*
Herbaceous				
Carex crinita	50/85	59	✓	Obl
Solidago rugosa	5			
Rubus ideaus	20	24	✓	Fac*
Juncus spp.	5			
Typha latifolia	5			

* shallow rooted/on mound

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1			2

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:
- Depth to Free Water: saturated to surface
- Depth to Saturation (including capillary fringe): saturated to surface
- Altered Hydrology (explain): Skidder trail

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-4"	Oe	10YR 2/1		Humic material
4-	B	2.5Y 4/2	5Y 4/1, 5%	Very fine sandy loam
Refusal (stone) at 10"				

HYDRIC SOIL INDICATOR(S): VI REFERENCE(S): FIIHSNE (2004)

Hydric morphology present - mineral matrix with depleted oxygen and redox features.

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Granite Power TRANSECT: NR3 PLOT: Wet

Mile 0/1 West

0/1

Mile 0/1 East

PROJECT TITLE: Granite Power

TRANSECT: N1 PLOT: Up

Near Flag N1-9

DELINEATOR(S): Jennifer West

DATE: 6.3.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No Trees				
Saplings				
Populus tremuloides	15/35	43	✓	facU
Acer saccharum	20	57	✓	facU-
Shrubs				
A. saccharum	45/70	64	✓	facU-
Abies balsamea	20	28	✓	fac
A. spicatum	5			
Herbaceous				
Rubus idaeus	65/70	93	✓	fac-
Solidago spp	5			

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		1	

Hydrophytes Subtotal (A): 1

NON-HYDROPHYTES

FAC-	FACU	UPL
1	3	

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 20

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: None observed within 16"

Depth to Saturation (including capillary fringe): None observed within 16"

Altered Hydrology (explain): Disturbed during road construction

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-1	O_e			Humic material
1-7	A_1	7.5YR 3/2		very fine sandy loam, stony ↓
7-	A_2	10YR 3/2	none	
16" refusal				

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Lacks hydric morphology. Disturbed soil adjacent to road

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: moderately well drained
Depth to active water table: >16"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

CENAE-COR-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Power TRANSECT: N/1 PLOT: Up

Mile 0/1 east

-11

Wide OH East

PROJECT TITLE: Granite Power

TRANSECT: N1 Near flag N1-9

PLOT: wet

DELINEATOR(S): Jennifer West

DATE: 6.3.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No Trees				
Saplings				
A. saccharum *	25/25	100	✓	facU- *
Shrubs				
A. saccharum *	5/100	5		
Acer rubrum	30	30	✓	FAC
Alnus incana	40	40	✓	FAC
Viburnum cassinoides	20	20	✓	facW
A. spicatum *	5	5		
Herbaceous	25/80	31	✓	OBL
carex spp	15	19		
Rubus idaeus	35	44	✓	FAC
Agrostis hyemalis ?	5			
Strawberry				

* on mound

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	1	3	1

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: ___
Aerial photography Identification: ___
Other Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: Surface
Depth to Saturation (including capillary fringe): [illegible]
Altered Hydrology (explain): none

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-10"	Oe	10YR2/1		Humic material Extremely stony
refusal	at 10"			

HYDRIC SOIL INDICATOR(S): IV

Histic epipedon

REFERENCE(S): FIIHSNE (2004)

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Power TRANSECT: N1 PLOT: Wet

Mile 0/1 EAST

Wells 011 East

4/1

PROJECT TITLE: Granite Power

TRANSECT: K11 PLOT: Up

NEAR Flag K11-3

DELINEATOR(S): [illegible]

DATE: 6.3.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula alleghaniensis 6,5	192/540	35	✓	FAC
Prunus serotina 5	78	14		
Betula lenta? 6,5,5	270	50	✓	FACU
Saplings				
B. lenta	30/100	30	✓	FACU
B. alleghaniensis	25	25	✓	FAC
A. pensylvanicum	10	10		
A. saccharum	15	15		
P. serotina	20	20	✓	FACU.
Shrubs				
A. saccharum	5/5	100	✓	FACU
Herbaceous				
Trout lily, Ery ame	10/10	100	✓	FAC

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		3	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
	4	

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 43 %

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: None observed within 20"

Depth to Saturation (including capillary fringe): None observed within 20"

Altered Hydrology (explain): adjacent to fill along [illegible] road

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2	Oe	10YR2/1		Humic material
2-12	A	10YR2/2		very fine sandy loam
12-	Bw	2.5YR3/3	10YR3/2, 2%	↓
Refusal at 20"				

HYDRIC SOIL INDICATOR(S): Lacks hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: smooth & porous
Depth to active water table: 12-16
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Granite Power TRANSECT: K 11 PLOT: Up

Mile 0/1 East

Mile o/l east

PROJECT TITLE: Granite Power

TRANSECT: k11 near flag k11-3 (just past 0.15 mile)

PLOT: Wet

DELINEATOR(S): Dennis West

DATE: 6.3.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No trees				
Saplings				
Betula papyrifera	10/80	88	✓	FAC
A. saccharum *	70			
Shrubs				
A. saccharum *	5/5	100	✓	FACU-*
Herbaceous				
Trout lily - Erythronium americanum	10/10	100	✓	FAC

* on mounds

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		2	1

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: ___
Aerial photography Identification: ___
Other Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: >10"
Depth to Saturation (including capillary fringe): surface
Altered Hydrology (explain): none

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-5	Oa	10YR 2/1		mucky
5-10	B_1	2.5Y 2.5/1	10YR 3/3, 2%	fine sandy loam
10-	B_2	2.5Y 4/2	5Y 4/2, 2%	↓
Refusal	at 16"			

HYDRIC SOIL INDICATOR(S): V REFERENCE(S): FIHSNE (2004)

Mineral histic with depleted horizons and redox features in underlying horizons

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Granite Power TRANSECT: K11 PLOT: Wet

mile 0/1 EAST

mile 0-1 Switch

PROJECT TITLE: Mobile Wind Power TRANSECT: FL100-23 PLOT: 2

DELINEATOR(S): RL Switchyard DATE: 3/14/08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Acer Saccharum	695/797		✓	FACU-
Fraxinus Americana	102/797			FACU
Saplings				
Acer Saccharum	25/35		✓	FACU
Viburnum sp	10/35			
Shrubs				
Rubus Idaeus	25/30		✓	FAC-
Viburnum sp	5/30			
Herbs				
Carex sp	20/85		✓	FAC→FACW
Foam flower	5/85			—
Eleocharis rostellata	20/85		✓	OBL
Pharis arundinacea?	20/85		✓	FACW
Impatiens capensis	20/85		✓	FACW

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	2	1	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
1	2	

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 5/8 = 61

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification: _____
Other Identification: _____

☐ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: _____
Depth to Saturation (including capillary fringe): _____
Altered Hydrology (explain): _____

☑ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☑ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): Shadow Trail cross slope

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

E SKIDDER TRAIL

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2	A	2.5Y 3/1		FSI
2-13	B	2.5Y 4/3.	10YR 5/6 few, mod	FSI
13-18+	B	5Y 5/4	5YR 4/6 common, mod.	VFSI ORGANIC STREAKING

HYDRIC SOIL INDICATOR(S): III, I. 1.

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: PD
Depth to active water table: SURFACE
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Noble Wind Power TRANSECT RL100-23 PLOT: 2

mile 0-1 Switch

PROJECT TITLE: Noble Power TRANSECT: FL 100-23 PLOT: 1

DELINEATOR(S): RL Switch YARD DATE: 5/14/08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Acer saccharum	31/100		✓	FACU-
Fraxinus americana	35/100		✓	FACU
Betula allegheniensis	19/100			FAC
Saplings				
Acer saccharum	40/80		✓	FACU-
Fagus grandifolia	15/80			FACU
Abies balsamea	5/80			FAC
Betula allegheniensis	20/80		✓	FAC
Shrubs				
Acer saccharum	40/60		✓	FACU-
Acer pensylvanicum	10/60			FACU
Betula allegheniensis	10/60			FAC
Herbs				
Erythronium umbilicatum	20/50		✓	FAC
Acer saccharum	20/50		✓	FACU
Polystichum acrostichoides	10/50		✓	FACU-
Fern - ??	5/50			?
Flower ??	5/50			?

HYDROPHYTES

OBL	FACW	FAC	*OTHER
0	0	2	

Hydrophytes Subtotal (A): ___

NON-HYDROPHYTES

FAC-	FACU	UPL
0	6	

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 2/8 = 25%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: ___
Aerial photography Identification: ___
Other Identification: ___

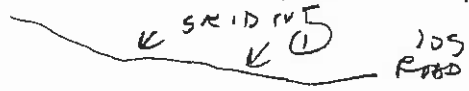
☐ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: none
Depth to Saturation (including capillary fringe): none
Altered Hydrology (explain): none

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-3		7.5YR 3/2	none	VFSL
3-14		7.5YR 4/4	↓	VFSL
14-18+		2.5Y 5/4	↓	FSL

HYDRIC SOIL INDICATOR(S): none

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: WD
Depth to active water table: none obs.
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: [illegible] TRANSECT: R' 100-23 PLOT: 1
SWITCHYARD

1/2

Mile 1/2 east

PROJECT TITLE: Granite Power

TRANSECT: JW48 PLOT: Wet
near flag JW48-40

DELINEATOR(S): Jennifer W.J

DATE: 6.3.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No Trees				
Saplings				
Larix laricina	10/25	40	✓	FacW
Abies balsamea	15	60	✓	Fac
Shrubs				
Salix spp.	15/45	33	✓	FacW
Alnus incana	5	10		
Rubus idaeus	20	44	✓	Fac-
Betula all	5	10		
Herbaceous				
Carex crinita	25/90	28	✓	Obl
Rubus idaeus	20	22	✓	Fac-
Juncus effusus	5			
Scirpus subcontractus	15	17		
carex spp.	25	28	✓	Obl

HYDROPHYTES

OBL	FACW	FAC	*OTHER
2	2	1	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
2		

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 71 %

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification: _____
Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: surface
Depth to Saturation (including capillary fringe): surface
Altered Hydrology (explain): sheddin trails

☐ Inundated ☑ Saturated In upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-4	A_1	10YR 2/1	10YR 4/1 5%	loam
4-10	A_2	10YR 3/1, 3/2 mixed	7.5YR 3/6 5%	loam
10-	Oab	10YR 2/1	7.5YR 3/4 5%	muck
EOE 16", stone refusal				

HYDRIC SOIL INDICATOR(S): IV

REFERENCE(S): 5± I HSNE (2004)

Disturbed by skidder; Histic epipedon

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Power TRANSECT: JW 1/8 PLOT: Wet

Mile 1/2 east

1/2

Milo 1/2 West

PROJECT TITLE: Granite Power

TRANSECT: JW 48 PLOT: Up

upslope ±50' from JW 45-40

DELINEATOR(S): Jennifer West

DATE: 6.3.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
Abies balsamea 5"		100	✓	FAC
Saplings				
A. saccharum	20/25	80	✓	FACU-
Betula alleghaniensis	5	20	✓	FAC
Shrubs				
Prunus virginiana	30/70	43	✓	FacU
A. saccharum	40	57	✓	FacU-
Herbaceous				
Tiarella cordifolia	50/70	71	✓	Fac-
P. virginiana	10			
Rubus idaeus	10			

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		2	

Hydrophytes Subtotal (A): 2

NON-HYDROPHYTES

FAC-	FACU	UPL
1	3	

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 33 %

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: None Observed within 20"
Depth to Saturation (including capillary fringe): " " " "
Altered Hydrology (explain): None

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0 - 4	Oa	10YR 2/1		
4 - 10	Bhs1	7.5YR 2.5/1		fine sandy loam
10 - 18	Bhs2	10YR 2/2 (80%) 10YR 4/2 20%		
18 -	C	2.5Y 3/3	10YR 5/4	Fine sandy loam, strong
EOB refusal 20' stones				

HYDRIC SOIL INDICATOR(S): Lacho hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class: moderately to somewhat poorly
Depth to active water table: 12-16
NTCHS hydric soil criterion:

REFERENCE(S):

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Granite Point TRANSECT: JN 40 PLOT: Up

mile 1/2 east

1/2

Mile 1/2 west

PROJECT TITLE: Granite Power TRANSECT: JW 11 PLOT: wet

NEAR JW 11-22

DELINEATOR(S): Jennifer Ward DATE: 6.3.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula alleghaniensis 7,	154/386	40	✓	FAC
Fraxinus pensylvanica 7, 5	232	60	✓	FACW
Saplings				
Salix spp.	15/70	21	✓	FACW
Populus balsamifera	25	35	✓	FACW
F. pensylvanica	10	14		
A. saccharum *	20	29	✓	FACU- *
Shrubs				
A. pensylvanicum *	15/55	27	✓	FACU *
A. saccharum *	15	27	✓	FACU- *
P. balsamifera	35	45	✓	FACW
Herbaceous				
A. saccharum	15/60	25	✓	FACU-
Carex crinita	30	50	✓	OBL
Solidago rugosa	5			
Trout lily	10	17		

* shallow rooted

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	3	1	3

Hydrophytes Subtotal (A): 8

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 89 %

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: ± 10"

Depth to Saturation (including capillary fringe): surface

Altered Hydrology (explain): None

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-6	Oa	10YR2/1		mucky
6-12	Bg.	2.5Y4/2	10YR3/2, 5%	fine sandy loam
12-	C	5Y4/2	5Y5/1, 2%	↓ Stony
Refusal at 16"		stones		

HYDRIC SOIL INDICATOR(S): V

REFERENCE(S):

Hydric morphology - mineral hosts with depleted subsoil and redox.

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Granite Power TRANSECT: JW 11 PLOT: 1

mile 1/2 west

Mile 1/2 west

PROJECT TITLE: Granite Power

TRANSECT: JW 11 PLOT: UP

NEAR flag JW11-22

DELINEATOR(S): Jennifer Wild

DATE: 6.2.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
Tsuga canadensis 12"	452/1074	42	✓	FAC
Betula populifolia 6	113	11		
Acer saccharum 9	254	24	✓	FAC
Betula lenta? 9	254	24	✓	FACU
Saplings				
A. saccharum	15/20	75	✓	FACU-
Abies balsamea	5	25	✓	FAC
Shrubs				
A. pensylvanicum	25/70	36	✓	FACU
A. saccharum	15	21	✓	FACU-
A. balsamea	5	—		
Fraxinus pensylvanica	15	21	✓	FACW
Viburnum alnifolium	10	—		
Herbaceous				
Sarsaparilla - Aralia nudicaulis	20/60	33	✓	FACU
Oak fern, Gymnocarpium dryopteris	20	33	✓	UPL
Rubus idaeus	10	17	✓	FAC
Christmas fern	5			
Athyrium felix femina	5			

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	4	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
	5	1

Non-hydrophytes Subtotal (B): 6

PERCENT HYDROPHYTES (100A/A+B): 45%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification:
- Aerial photography — Identification:
- Other — Identification:

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: None observed within 16"

Depth to Saturation (including capillary fringe): None observed within 16

Altered Hydrology (explain): None

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2	Oe	10YR 2/2		
2-8	A	10YR 2/2		Very fine sandy loam
8-12	Bhs1	10YR 3/2		
12-	Bhs2	10YR 3/3		
Refusal	at 16"			Stony

HYDRIC SOIL INDICATOR(S): Lacks hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class: moderately well
Depth to active water table: >16
NTCHS hydric soil criterion:

REFERENCE(S):

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Granite Power TRANSECT: JW11 PLOT: Up

mile 1/2 west

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH
TRANSECT: MC-3 AT FLAG # MC29-2
PLOT: UPLAND
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6
DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
BETULA ALLEGHANIENSIS	39/39	100	✓	FAC
SAPLING/SHRUB				
ACER PENSYLVANICUM	45/100	45	✓	FACU
ACER SACCHARUM	40/100	40	✓	FACU-
HERBS				
ERYTHRONIUM ROSTRATUM	20/60	33	✓	UPL
TIARELLA CORDIFOLIA (FOAM FLOWER)	15/60	25	✓	FAC-

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		2	

Hydrophytes Subtotal (A): 2

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	1

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 40%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: No
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
2"	Oe			
0-5"	A	10YR 3/3 DARK BROWN	No	STONY FINE SANDY LOAM
5-11"	B	10YR 4/4 DARK YELLOW BROWN	7.5Y 6/4 FEW, MEDIUM DISTINCT	" " "
11-20"	B/C	2.5Y 4/3 OLIVE BROWN	7.5Y 6/3 COMMON, MEDIUM FAINT 7.5Y 4/2 COMMON MEDIUM DISTINCT	" " "

HYDRIC SOIL INDICATOR(S):

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	DARK PARENT MATERIAL
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH

TRANSECT: MC-3 PLOT: UPLAND AT FLAG # MC 29-2

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH TRANSECT: MC-3 PLOT: WETLAND AT FLAG # MC 29-2 (MILE FOUR)

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
SHRUB/SAPL				
RUBUS IDAEUS (RED RASPBERRY)	20/60	33	✓	FAC-
ACER SACCHARUM	40/60	66	✓	FACU
HERBS				
IMPATIENS CAPENSIS	25/100	25	✓	FACW
CAREX SP.	30/100	30	✓	FACW

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	2	1	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 75%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification: _____
Other Identification: _____

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 7"
Depth to Saturation (including capillary fringe): _____
Altered Hydrology (explain): LOGGED; RUTTED AND CUT OVER

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1"	Oi			
0-7"	A	7.5Y 3/1 VERY DARK GRAY	PORE LININGS 2.5Y 4/6	SANDY FINE SANDY LOAM
7-13"	B	2.5Y 4/3 OLIVE BROWN	2.5Y 6/4 COMMON, MEDIUM, FAINT	" "
13-19"	B/C	5Y 5/3 OLIVE	2.5Y 5/4 COMMON, MEDIUM DISTINCT 2.5Y 6/3 FEW MEDIUM PROMINENT	" "

HYDRIC SOIL INDICATOR(S): XIII

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	— ALTERED HYDROLOGY NOT YET REFLECTED IN SOILS
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☒	☐	— LOW CHROMA PARENT MATERIAL
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-3 PLOT: WETLAND AT FLAG # MC-29-2

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH TRANSECT: MC-2 PLOT: UPLAND AT FLAG # 1 AC40-5

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
PICEA RUBENS	64/64	100	✓	FACU
SHRUB/SAPL				
POPULUS TREMULA	40/100	40	✓	FACU
PRUNUS PENSYLVANICA	20/100	20	✓	FACU-
HERBS				
MAIANTHEMUM CANADENSE	20/50	40	✓	FAC-
RUBUS HISPIDUS	15/50	30	✓	FACW
ARALIA NUDICAULIS	10/50	20	✓	FACU

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	1	

Hydrophytes Subtotal (A): 2

NON-HYDROPHYTES

FAC-	FACU	UPL
	4	

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 33%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: No
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
3"	Oe			
0-3"	E	7.5YR 6/1 GRAY	No	STONY FINE SANDY LOAM
3-11"	Bs	7.5YR 5/6 STRONG BROWN	No	" "
11-18"	B	10YR 5/4 YELLOW BROWN	10YR 4/4 COMMON, MEDIUM FAINT 2.5Y 6/2 FEW FINE, DISTINCT	" "
18-20"	B2	2.5Y 6/4 LIGHT YELLOW BROWN	10YR 5/4 COMMON MEDIUM, DISTINCT 2.5Y 6/2 FEW MEDIUM, FAINT	" "

HYDRIC SOIL INDICATOR(S):

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-2 PLOT: UPLAND AT FLAG #MC40-5

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH TRANSECT: MC-2 PLOT: WETLAND AT FLAG #MC40-5 (MILE FOUR)

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
SHRUB/SAPL.				
POPULUS TREMULA	60/100	60	✓	FACU
ACER PENSYLVANICUM	40/100	40	✓	FACU
HERBS				
ONOCLEA SENSIBILIS	50/75	67	✓	FACW

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1		

Hydrophytes Subtotal (A): 1

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 33

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 1" STANDING WATER OR SATURATED TO SURFACE
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain): BULLDOZED SKID TRAIL INTERCEPTS GROUNDWATER

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1"	Oa			
0-7"	A	2.5Y 3/2 VERY DARK BROWN	2.5Y 6/3 FEW, MEDIUM DISTINCT	STONY FINE SANDY LOAM SOME SAND SEDIMENTATION
7-11"	Bg	2.5Y 6/2 LIGHT BROWN GRAY	2.5Y 7/2 COMMON, MEDIUM FAINT 2.5Y 6/6 COMMON MEDIUM, DISTINCT	STONY FINE SANDY LOAM
11-14"	B/C	2.5Y 4/3 LIGHT OLIVE BROWN	2.5Y 7/1 COMMON, MEDIUM DISTINCT 2.5Y 6/6 MANY MEDIUM, DISTINCT	STONY FINE SANDY LOAM

HYDRIC SOIL INDICATOR(S): VI

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☐	☒
Hydric soils criterion met?	☒	☐
Wetland hydrology criterion met?	☒	☐
IS THIS DATAPOINT IN A WETLAND?	☒	☐

REMARKS: MAN-MADE WETLAND

BASED ON HYDROLOGY IN SPRING

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-2 PLOT: WETLAND AT FLAG # MC 40-5

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH TRANSECT: MC-1 AT FLAG #MC 4-3 PLOT: UPLAND

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
ACER SACCHARUM	426/879	48	✓	FACU-
FRAXINUS AMERICANA	204/879	23	✓	FACU
BETULA ALLEGHANIENSIS	249/879	28	✓	FAC
SHRUBS/SAPL				
FAGUS GRANDIFOLIA	36/70	50	✓	FACU
B. ALLEGHANIENSIS	25/70	36	✓	FAC
HERBS				
DRYOPTERIS SPINULOSA	20/35	57	✓	FACU+

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		3	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
	3	

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 50%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: NO
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
2"	Oe			
0-11"	A	2.5Y 3/1 VERY DARK GRAY	NO	VERY FINE SANDY LOAM
11-19"	B	2.5Y 4/3 OLIVE BROWN	10YR 4/6 COMMON, MEDIUM PROMINENT 2.5Y 5/3 FEW, MEDIUM FAINT	STONY FINE SANDY LOAM

HYDRIC SOIL INDICATOR(S):

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-1 AT FLAG #MC1-3 PLOT: UPLAND

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH
TRANSECT: MC-1 AT FLAG # 4-3 (MILE FOUR)
PLOT: WETLAND
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6
DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
ACER SACCHARUM	211/235	88	✓	FACU-
SHRUB/SAPLING				
BETULA ALLEGHANIENSIS	40/80	50%	✓	FAC
HERBS				
OSMUNDA CINNAMOMEA	30/85	35%	✓	FACW
UNOCLEA SENSIBILIS	25/85	29%	✓	FACW

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	2	1	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 75%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage — Identification:
Aerial photography — Identification:
Other — Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 12"
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain): FORESTRY SKID TRAILS UPSLOPE, RUTS IN WETLAND

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

☒ OTHER (explain): SEASONAL STREAM FLOWS THRU' PLOT

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1"	Oe			
0-11"	A	2.5Y 3/1 VERY DARK GRAY	PORE LININGS 2.5Y 4/4	VERY FINE SANDY LOAM WITH STRATA OF COARSE SAND & STREAM OVERWASH
11-14"	Bg	2.5Y 5/2 GRAYISH BROWN	10YR 4/4 COMMON, MEDIUM, DISTINCT 2.5Y 6/2 COMMON, MEDIUM FAINT	FINE SANDY LOAM
14-19"	Bg	2.5Y 4/3 OLIVE BROWN	10YR 5/6 MANY, FINE, DISTINCT 2.5Y 5/2 COMMON, MEDIUM FAINT	STONY FINE SANDY LOAM

HYDRIC SOIL INDICATOR(S): VII

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-1 AT FLAG #MC4-3 PLOT: WETLAND

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T2 (mile 7 - 8) PLOT: U

DELINEATOR(S): Sean Sweeney DATE: 6-11-08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Acer rubrum	33/61.5	54	x	FAC
Betula papyrifera	21.2/61.5	34	x	FACU
Betula populifolia	2.8/61.5	5		
Betula alleghaniensis	2.6/61.5	4		
Abies balsamea	2.0/61.5	3		
Saplings				
Abies balsamea	10.5/33	32	x	FAC
Betula papyrifera	10.5/33	32	x	FACU
Betula alleghaniensis	3/33	9		
Acer pensylvanicum	3/33	9		
Acer rubrum	3/33	9		
Prunus pensylvanica	3/33	9		
Shrubs				
Acer rubrum	10.5/25.5	41	x	FAC
Acer spicatum	3/25.5	12	x	FACU-
Viburnum lantanoides	3/25.5	12	x	FAC
Abies balsamea	3/25.5	12	x	FAC
Betula papyrifera	3/25.5	12	x	FACU
Acer pensylvanicum	3/25.5	12	x	FACU
Herbs				
Maianthemum canadense	38/60.5	63	x	FAC-
Solidago spp	10.5/60.5	17		
Athyrium filix-femina	3/60.5	5		
Abies balsamea	3/60.5	5		
Rubus strigosus	3/60.5	5		
Ribes spp.	3/60.5	5		

HYDROPHYTES				NON-HYDROPHYTES		
0	0	5	0	1	5	0
OBL	FACW	FAC	*OTHER	FAC-	FACU	UPL

Hydrophytes Subtotal (A): 5 Non-hydrophytes Subtotal (B): 6

PERCENT HYDROPHYTES (100A/A+B): 5/11 = 45%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: none observed within 20" of mineral soil surface
Depth to Saturation (including capillary fringe): none observed within 20" of mineral soil surface
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

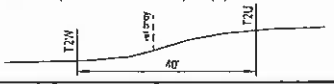
☐ OTHER (explain):

CENAE-COP-RPT Version 7/1/00 Page 1

SOIL

Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T2U plot center located 22' NE from flag SS2-19 and 33' NW from flag SS2-20



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1/2 - 0"	Oi	—	—	fibric material
0 - 1/2"	A	7.5YR 2.5/1	—	loam
1/2 - 2 1/2"	E	10YR 5/1	—	fine sandy loam
2 1/2 - 4"	Bh	2.5YR 2.5/1	—	loam
4 - 6"	Bhs	5YR 3/3	—	fine sandy loam
6 - 15"	B/C	2.5Y 4/4	—	sandy loam
15 - 20"+	C	10YR 3/3	common concentrations 5YR 3/4	sandy loam

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

OPTIONAL SOIL DATA REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	Area disturbed by logging activities - vegetation altered
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

CENAE-COP-RPT Version 7/1/00 Page 2

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T2 (mile 7 - 8) PLOT: U

8/11

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T2 (mile 7 - 8) PLOT: W

DELINEATOR(S): Sean Sweeney DATE: 6-11-08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula populifolia	70/130	54	x	FAC
Betula alleghaniensis	40/130	30	x	FAC
Acer rubrum var. trisylvanicum	20/130	16		
Saplings				
Betula alleghaniensis	38/100	38	x	FAC
Betula papyrifera	38/100	38	x	FACU
Acer spicatum	10.5/100	11		
Acer rubrum	10.5/100	11		
Prunus pensylvanica	3/100	3		
Shrubs				
Betula alleghaniensis	10.5/27	39	x	FAC
Betula papyrifera	10.5/27	39	x	FACU
Acer rubrum	3/27	11		
Salix spp.	3/27	11		
Herbs				
Maianthemum canadense	20.5/47.5	43	x	FAC-
Carex spp.	10.5/47.5	22	x	FAC
Athyrium filix-femina	10.5/47.5	22	x	FAC
Onoclea sensibilis	3/47.5	6		
Solidago spp.	3/47.5	6		

HYDROPHYTES

OBL	FACW	FAC	*OTHER
0	0	6	0

NON-HYDROPHYTES

FAC-	FACU	UPL
1	2	0

Hydrophytes Subtotal (A): 6 Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 6/9 = 67%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 8"
Depth to Saturation (including capillary fringe): 0" (saturated to surface)
Altered Hydrology (explain):

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

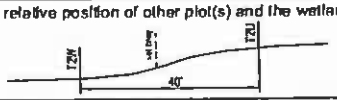
☒ OTHER (explain): Surface water flowing through wetland ~40' SSE from plot center (not a stream channel)
Small areas of ponded water scattered throughout wetland

CENAE-COI-PT Version 7/1/00 Page 1

SOIL

Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T2W plot center located 20' SW from flag SS2-19 and 46' SSE from flag SS2-18



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1/2 - 0"	Oi	--	--	fibric material
0 - 3"	A	5YR 2.5/1	--	loam
3 - 11"	B	10YR 4/2	common concentrations 5YR 4/6 common depletions 10YR 6/2	fine sandy loam
11 - 20"+	B/C	2.5Y 4/3	many concentrations 7.5YR 3/4 common depletions 2.5Y 5/3	gravelly sandy loam

HYDRIC SOIL INDICATOR(S): VI. Depleted Matrix

REFERENCE(S): NEIWPCC April 2004 Field Indicators for Identifying Hydric Soils in New England, Version 3

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S):

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☒	☐
Hydric soils criterion met?	☒	☐
Wetland hydrology criterion met?	☒	☐
IS THIS DATAPOINT IN A WETLAND?	☒	☐

REMARKS: Area disturbed by logging activities - vegetation altered (trees removed with pioneer and early successional species now present) and some ground surface disturbance (skidder ruts)

CENAE-COI-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T2 (mile 7 - 8) PLOT: W

118

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T15 (mile 7 - 8) PLOT: W

DELINEATOR(S): Sean Sweeney DATE: 6-12-08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Acer rubrum	432/774	56	x	FAC
Abies balsamea	187/774	24	x	FAC
Betula alleghaniensis	109/774	14		
Acer saccharum	25/774	3		
Betula papyrifera	21/774	3		
Saplings				
Abies balsamea	10.5/27	39	x	FAC
Acer rubrum	10.5/27	39	x	FAC
Fraxinus pennsylvanica	3/27	11		
Acer saccharum	3/27	11		
Shrubs				
Abies balsamea	10.5/36	29	x	FAC
Fraxinus pennsylvanica	10.5/36	29	x	FACW
Betula alleghaniensis	3/36	8		
Acer spicatum	3/36	8		
Acer saccharum	3/36	8		
Acer pensylvanicum	3/36	8		
Acer fulvum	3/36	8		
Herbs				
Dryopteris boottii	3/12	25	x	FACW
Athyrium filix-femina	3/12	25	x	FAC
Acer spicatum	3/12	25	x	FACU-
Viburnum lantanoides	3/12	25	x	FAC
Abies balsamea	trace	—		
Impatiens capensis	trace	—		
Trientalis borealis	trace	—		

HYDROPHYTES

OBL	FACW	FAC	*OTHER
0	2	7	0

Hydrophytes Subtotal (A): 9

NON-HYDROPHYTES

FAC-	FACU	UPL
0	1	0

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 9/10 = 90%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification _____
Other Identification: _____

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 3"
Depth to Saturation (including capillary fringe): 0" (saturated to surface)
Altered Hydrology (explain): _____

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

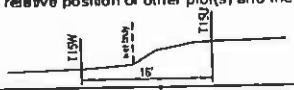
☐ OTHER (explain):

CENAE-COE-RPT Version 7/1/00 Page 1

SOIL

Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T15W plot center located 14' SSW from flag SS15-5 and 18' ENE from flag SS15-6



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1 - 0"	Oa	—	—	sapric material
0 - 11"	A	10YR 2/1	—	loam
11 - 20"+	B/C	10YR 4/2	common concentrations 5YR 4/6 common depletions 2.5Y 5/1	sandy loam

HYDRIC SOIL INDICATOR(S): VII. Depleted Below Dark Surface

REFERENCE(S): NEWPCC April 2004 Field Indicators for Identifying Hydric Soils in New England, Version 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

CENAE-COE-RPT Version 7/1/00 Page 2

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T15 (mile 7 - 8) PLOT: W

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T10 (mile 7 - 8) PLOT: U

DELINEATOR(S): Sean Sweeney DATE: 6-11-08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Shrubs	38/86	44	x	FAC
Acer rubrum	10 5/86	12	x	FAC
Viburnum lantanoides	10 5/86	12	x	FACU-
Prunus pensylvanica	10 5/86	12	x	FAC
Betula alleghaniensis	10 5/86	12	x	FACU
Sorbus americana	3/86	3		
Abies balsamea	3/86	3		
Populus grandidentata				
Herbs	20.5/70	29	x	FAC-
Maianthemum canadense	10 5/70	15	x	FAC-
Cornus canadensis	10 5/70	15	x	NI
Rubus strigosus	10.5/70	15	x	FACU-
Prunus pensylvanica	3/70	4		
Abies balsamea	3/70	4		
Viburnum lantanoides	3/70	4		
Acer rubrum	3/70	4		
Trillium spp	3/70	4		
Aralia nudicaulis	3/70	4		
Betula alleghaniensis				

Note: Area clear cut (no trees or saplings present)

HYDROPHYTES: 0 OBL, 0 FACW, 3 FAC, 0 *OTHER

NON-HYDROPHYTES: 2 FAC-, 3 FACU, 0 UPL

Hydrophytes Subtotal (A): 3

Non-hydrophytes Subtotal (B): 5

PERCENT HYDROPHYTES (100A/A+B): 3/8 = 38%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: none observed within 20" of mineral soil surface
Depth to Saturation (including capillary fringe): none observed within 20" of mineral soil surface
Altered Hydrology (explain):

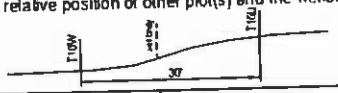
☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL

Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T10U plot center located 20' W from flag SS10-15 and 21' SE from flag SS10-16



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
2 - 0"	Oi	—	—	fibric material
0 - 6"	A	10YR 2/1	—	loam
6 - 9"	E	10YR 5/1	—	sandy loam
9 - 10 1/2"	Bh	5YR 2.5/1	—	loam
10 1/2 - 12"	Bhs	5YR 3/3	—	fine sandy loam
12 - 18"	Bs	7.5YR 3/4	—	fine sandy loam
18 - 20"	B/C	10YR 3/4	—	fine sandy loam
20"+	R			

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

OPTIONAL SOIL DATA REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☐	☒
Hydric soils criterion met?	☐	☒
Wetland hydrology criterion met?	☐	☒
IS THIS DATAPOINT IN A WETLAND?	☐	☒

REMARKS: Area disturbed by logging activities - vegetation altered (clear cut)

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T10 (mile 7 - 8) PLOT: U

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T10 (mile 7 - 8) PLOT: W

DELINEATOR(S): Sean Sweeney DATE: 6-11-08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Shrub				
Acer rubrum	20.5/46	45	x	FAC
Betula alleghaniensis	10.5/46	23	x	FAC
Abies balsamea	3/46	7		
Salix spp	3/46	7		
Acer saccharum	3/46	7		
Acer spicatum	3/46	7		
Acer pensylvanicum	3/46	7		
Herby				
Carex crinita	38/90.5	42	x	OBL
Impatiens capensis	10.5/90.5	12	x	FACW
Juncus effusus	10.5/90.5	12	x	FACW+
Betula alleghaniensis	10.5/90.5	12	x	FAC
Carex intumescens	3/90.5	3		
Eupatorium maculatum	3/90.5	3		
Athyrium filix-femina	3/90.5	3		
Thelypteris hexagonoptera	3/90.5	3		
Rubus spp. (dewberry)	3/90.5	3		
Tiarella cordifolia	3/90.5	3		
Acer saccharum	3/90.5	3		

Note: Area clear cut (no trees or saplings present). Two Betula alleghaniensis stumps within 30'R from plot center

HYDROPHYTES

1	2	3	0
OBL	FACW	FAC	*OTHER

NON-HYDROPHYTES

0	0	0
FAC-	FACU	UPL

Hydrophytes Subtotal (A): 6

Non-hydrophytes Subtotal (B): 0

PERCENT HYDROPHYTES (100A/A+B): 6/6 = 100%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: _____
- Aerial photography — Identification: _____
- Other — Identification: _____

☐ NO RECORDED DATA

☒ OBSERVATIONS:
- Depth to Free Water: 0"
- Depth to Saturation (including capillary fringe): _____
- Altered Hydrology (explain): _____

☒ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

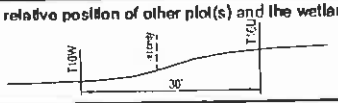
☐ OTHER (explain):

CENAE-COR-PT Version 7/1/00 Page 1

SOIL

Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T10W plot center located 33' N from flag SS10-15 and 23' ENE from flag SS10-16



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules concretions, masses, pore linings, restrictive layers, root distribution, soil water etc.)
2 - 0"	Oa	—	—	sapric material
0 - 2"	A	10YR 2/1	—	loam
2 - 15"	B	5Y 4/1	common concentrations 7.5YR 3/3 common depletions 2.5Y 5/1	sandy loam
15 - 19"	C	5Y 5/2	—	very fine sandy loam
19"+	R			

HYDRIC SOIL INDICATOR(S):

VI Depleted Matrix

REFERENCE(S):

NEIWPCC. April 2004. Field Indicators for Identifying Hydric Soils in New England, Version 3

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S):

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☒	☐
Hydric soils criterion met?	☒	☐
Wetland hydrology criterion met?	☒	☐
IS THIS DATAPOINT IN A WETLAND?	☒	☐

REMARKS:

Area disturbed by logging activities - vegetation altered (clear cut)

CENAE-COR-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T10 (mile 7 - 8) PLOT: W

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T15 (mile 7 - 8) PLOT: U

DELINEATOR(S): Sean Sweeney DATE: 6-12-08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Acer rubrum	432/686	63	x	FAC
Abies balsamea	187/686	27	x	FAC
Betula alleghaniensis	46/686	7		
Betula papyrifera	21/686	3		
Saplings				
Betula alleghaniensis	20.5/23.5	87	x	FAC
Acer rubrum	3/23.5	13		
Shrubs				
Abies balsamea	38/66.5	57	x	FAC
Betula alleghaniensis	10.5/66.5	16		
Picea rubens	3/66.5	5		
Betula papyrifera	3/66.5	5		
Acer rubrum	3/66.5	5		
Acer spicatum	3/66.5	5		
Acer saccharum	3/66.5	5		
Fraxinus pennsylvanica	3/66.5	5		
Herbs				
Maianthemum canadense	20.5/72.5	28	x	FAC-
Aralia nudicaulis	20.5/72.5	28	x	FACU
Clintonia borealis	10.5/72.5	14		
Dryopteris boottii	3/72.5	4		
Acer saccharum	3/72.5	4		
Trientalis borealis	3/72.5	4		
Cypripedium acaule	3/72.5	4		
Sorbus americana	3/72.5	4		
Cornus canadensis	3/72.5	4		
Coptis trifolia	3/72.5	4		

HYDROPHYTES

OBL	FACW	FAC	*OTHER
0	0	4	0

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
1	1	0

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 4/6 = 67%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: none observed within 22" of mineral soil surface
Depth to Saturation (including capillary fringe): none observed within 22" of mineral soil surface
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

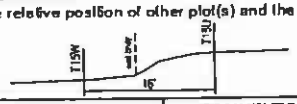
☐ OTHER (explain):

GRNAE-CO-3.PT Version 7/1/00 Page 1

SOIL

Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T15U plot center located 19' WSW from flag SS15-5 and 20' N from flag SS15-6



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOX/MORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1 1/2 - 0"	Oi	—	—	fibric material
0 - 2"	A	7.5YR 2.5/1	—	loam
2 - 3"	E	10YR 5/2	—	sandy loam
3 - 3 1/2"	Bh	2.5YR 2.5/1	—	loam
3 1/2 - 6"	Bhs	5YR 3/2	—	loam
6 - 19"	B/C	10YR 4/4	common concentrations below 10" 5YR 3/3 and 5YR 4/6 common depletions below 15" 2.5Y 5/4	fine sandy loam
19 - 22"	C	2.5Y 4/3	—	fine sandy loam
22"+	R			

HYDRIC SOIL INDICATOR(S): 1X B. Spodosols

REFERENCE(S): NEIWPCC April 2004 Field Indicators for Identifying Hydric Soils in New England, Version 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

GRNAE-CO-3.PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Reliable Power - Phillips Brook Wind Project TRANSECT: T15 (mile 7 - 8) PLOT: U

8/1

8/9

Mile 8/9 West

PROJECT TITLE: Granite Power

TRANSECT: JW100 PLOT: UP
Near flag JW100-9

DELINEATOR(S): Jennifer West

DATE: 6·3·08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No trees, saplings (road edge)				
Shrubs				
Abies balsamea	10/65	15		
Rubus idaeus	25	38	✓	FAC-
Salix spp	25	38	✓	FACW
Alnus incana	5			
Herbaceous				
Strawberry, fragaria virginiana	40/50	80	✓	FACU
Solidago rugosa	10	20	✓	FAC

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	1	

Hydrophytes Subtotal (A): 2

NON-HYDROPHYTES

FAC-	FACU	UPL
1	1	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 50

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: _____
- Aerial photography — Identification: _____
- Other — Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: None observed -

Depth to Saturation (including capillary fringe): none observed

Altered Hydrology (explain): fill and disturbed in construction of road

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-12"	Ap	10XR2/2		gravelly fine sandy loam
12"	refusal -	stones		

HYDRIC SOIL INDICATOR(S): Lacks hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: moderately well drained
Depth to active water table: > 16"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☐	☑
Hydric soils criterion met?	☐	☑
Wetland hydrology criterion met?	☐	☑
IS THIS DATAPOINT IN A WETLAND?	☐	☑

REMARKS: side of road, hydrology altered by grading and filling.

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Power TRANSECT: JW100 PLOT: Up

Mile 8/9 west

8/9

Mile 8/9 West

PROJECT TITLE: Granite Power

TRANSECT: JW 100 PLOT: Wet near flag JW100-9

DELINEATOR(S): Jennifer West

DATE: 6.3.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula all 7,6,5,5	424/779	54	✓	Fac
Acer rubrum 7,8	354	46	✓	Fac
Saplings				
Abies balsamea	25/55	45	✓	Fac
Bet all	20	36	✓	Fac
A. pensylvanicum	10	18		
Shrubs				
Viburnum alnifolium	20/27	74	✓	fac
A. balsamea	5	19		
Red spruce*	2			
Herbaceous				
Impatiens capensis	5/15	33	✓	FacW
Rubus hispidus	5	33	✓	FacW
Vib alni	5	33	✓	fac

* Shallow rooted

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	2	6	

Hydrophytes Subtotal (A): 8

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: ___
Aerial photography Identification: ___
Other Identification: ___

☐ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: saturated to surface
Depth to Saturation (including capillary fringe): surface
Altered Hydrology (explain): ___

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-12"	Oa	10YR2/1		sapric material
12-	C	2.5/N gley layer		silt loam

HYDRIC SOIL INDICATOR(S): V REFERENCE(S): FIHSNE (2004)

Hydric morphology - Mineral texture

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Grand Pond TRANSECT: JW100 PLOT: Wet

Mile 8/9 west

8/9

Mile 8/9 east

PROJECT TITLE: Granite Power

TRANSECT: JW 89

PLOT: UP JW Near Flag 89-31

DELINEATOR(S): Jennifer West

DATE: 6.3.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees	157/471	33	✓	fac
Abies balsamea 5,5,	79	17		
Picea rubra (red spruce) 5	235	50	✓	facU-
Acer saccahrum 5,5,5				
Saplings	20/90	22	✓	facU-
A. saccahrum	40	44	✓	fac
A. balsamea	25	27	✓	fac
Betula alleghenensu	5			
A. pensylvanica				
Shrubs	25/35	71	✓	facU-
A. saccahrum	10	29	✓	fac
A. balsamea				
Herbaceous	30/40	75	✓	fac-
Mit can	5			
Sarsparilla	5			
Cornus canadensis				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
1	3	

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 50

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification:
- Aerial photography — Identification:
- Other — Identification:

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: None within 12"

Depth to Saturation (including capillary fringe): None within 12"

Altered Hydrology (explain): None

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-4	Oe	7.5YR2.5/1		humic material
4-8	E	10YR5/1		very fine sandy loam
8-	Bhs/Bs	7.5YR2.5/2 10YR3/3 mixed		↓ - stony
Refusal at	12" stones			

HYDRIC SOIL INDICATOR(S): Lacks hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: moderately well drained
Depth to active water table: 7-16
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Grand River TRANSECT: 11/09 PLOT: UP

Mile 8/9 East

8/9

Mile 2/9 East

PROJECT TITLE: Granite Power TRANSECT: JW89 PLOT: West

DELINEATOR(S): Jennifer West DATE: 6.13.06

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No Trees in wetland				
Sapling				
Alnus incana	40/40	100	✓	fac
Shrubs			✓	fac
Alnus incana	25/60	42	✓	fac
Acer rubrum	25	42		
Abies balsamea	5	8		
Cornus amomum	5	8		
Herbaceous				
Tall meadow rue - Thalictrum polygamum	30/100	30	✓	facW+
Rubus idaeus	5	5		
Carex spp.	10	10		
Agrostis hyemalis?	20	20	✓	fac
Solidago ~~spp~~ rugosa	5	5		
Rubus nigrobaccus	30	30	✓	facW

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	2	4	

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: ___
Aerial photography Identification: ___
Other Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: 10"
Depth to Saturation (including capillary fringe): Surface
Altered Hydrology (explain): None

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0–6"	A/Oa	10YR 2/1		mucky
6–				
refusal at 12", stony – very stony at 12				

HYDRIC SOIL INDICATOR(S): Histic epipedon

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: Surface to
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: [illegible] TRANSECT: [illegible] PLOT: [illegible]

Mile 8/9 East

4/10

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH

TRANSECT: MC-4 PLOT: WETLAND AT FLAG #MC CC-2 (MILE NINE)

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6

DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
ACER SACCHARUM	153/712	21	✓	FACU-
BETULA ALLEGHANIENSIS	299/712	42	✓	FAC
PICEA RUBENS	145/712	20	✓	FACU
SHRUBS/SAPLING				
ACER SACCHARUM	30/40	75	✓	FACU-
HERBS				
ANEMONE QUINQUEFOLIA	35/90	39	✓	FACU
SPHAGNUM SP.	35/90	39	✓	?OBL

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1		1	

Hydrophytes Subtotal (A): 2

NON-HYDROPHYTES

FAC-	FACU	UPL
	4	

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 33%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: No
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☒ Drift Lines ☒ Sediment Deposits ☒ Drainage Patterns within Wetland

☒ OTHER (explain): ACTIVE FLOOD PLAIN

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-10	A	7.5YR 3/2 DARK BROWN	PORE LININGS 7.5Y 4/4	VERY FINE SANDY LOAM; SOME STRATA OF SAND
10-18	C	5Y 5/1 GRAY	2.5Y 6/6 COMMON, MEDIUM PROMINENT 5Y 6/1 COMMON, MEDIUM FAINT	VERY FINE SANDY LOAM; SOME STRATA OF FINE SAND

HYDRIC SOIL INDICATOR(S): VII

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S):

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	ACTIVE FLOOD PLAIN
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-4 PLOT: WETLAND AT FLAG #MC66-2

7/10

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH TRANSECT: MC-4 AT FLAG #MC06-2 PLOT: UPLAND

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE:

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
BETULA ALLEGHANIENSIS	188/818	23	✓	FAC
PICEA RUBENS	515/818	63	✓	FACU
SHRUB/SAPLING				
ACER SACCHARUM	20/50	40	✓	FACU-
ABIES BALSAMEA	15/50	30	✓	FAC
ACER PENSYLVANICUM	10/50	20	✓	FACU
HERBS				
ANEMONE QUINQUEFOLIA	35/80	44	✓	FACU
MAIANTHEMUM CANADENSE	15/80	19	✓	FAC-
ERYTHRONIUM ROSTRATUM	15/80	19	✓	UPL

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		2	

Hydrophytes Subtotal (A): 2

NON-HYDROPHYTES

FAC-	FACU	UPL
1	4	1

Non-hydrophytes Subtotal (B): 6

PERCENT HYDROPHYTES (100A/A+B): 25 %

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: No
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): FLOODPLAIN

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-10"	A	10YR 3/2 VERY DARK GRAY BROWN	NO	FINE SANDY LOAM
10-16"	A2	10YR 3/3 DARK BROWN	NO	" " "
16-20"	C	10YR 4/6 DARK YELLOW BROWN	2.5Y 6/3 COMMON, FINE PROMINENT 2.5Y 6/6 COMMON FINE DISTINCT	LOAMY COARSE SAND

HYDRIC SOIL INDICATOR(S):

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	FLOOD PLAIN
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MG-4 AT FLAG #MG 6-2 PLOT: UPL

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH
TRANSECT: MC-5 PLOT: WETLAND AT FLAG # MC 94-2 (MILE NINE)
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
ABIES BALSAMEA	100/354	28	✓	FAC
ACER RUBRUM	109/354	31	✓	FAC
PICEA RUBENS	106/354	30	✓	FACU
SHRUB/SAPLING				
RUBUS IDAEUS	20/65	31	✓	FAC
BETULA ALLEGHANIENSIS	15/65	23	✓	FAC
ACER RUBRUM	15/65	23	✓	FAC
HERBS				
MAIANTHEMUM CANADENSE	10/40	25	✓	FAC-
OXALIS MONTANA (WOOD SORREL)	10/40	25	✓	FAC-

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		5	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
2	1	

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 62 %

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: No
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain): UPSLOPE HAUL ROAD MAY INTERCEPT GROUNDWATER

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
4"	Oe			
0-3"	A	10YR 4/2 DARK GRAY BROWN	2.5Y 5/4 COMMON, MEDIUM DISTINCT	STONY FINE SANDY LOAM
3-9"	Bg	2.5Y 5/2 GRAY BROWN	5Y 6/1 COMMON, MEDIUM FAINT	" "
9-17"	B	5Y 4/2 OLIVE GRAY	2.5Y 6/4 COMMON, MEDIUM DISTINCT 5Y 6/1 COMMON MEDIUM, FAINT	" "
17-20"	Cd	5Y 4/3 OLIVE	7.5Y 5/6 COMMON MEDIUM, PROMINENT 5Y 7/1 COMMON MEDIUM, DISTINCT	STONY VERY FINE SANDY LOAM FIRM - HARDPAN

HYDRIC SOIL INDICATOR(S): VI

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☒	☐
Hydric soils criterion met?	☒	☐
Wetland hydrology criterion met?	☒	☐
IS THIS DATAPOINT IN A WETLAND?	☒	☐

REMARKS: BASAL TILL
DARK PARENT MATERIAL

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-5 AT FLAG #WC 84-2 PLOT: WETLAND

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH
TRANSECT: MC-5 AT FLAG #MC04-2
PLOT: UPLAND
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6
DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
ACER RUBRUM	7/31 /758	30	✓	FAC
PICEA RUBENS	24 /753	27	✓	FACU
SHRUB/SAPLING				
BETULA ALLEGHANIENSIS	15 /75	20	✓	FAC
VIBURNUM LENTAGO	15 /75	20	✓	FAC
ABIES BALSAMEA	30 75	40	✓	FAC
HERBS				
DRYOPTERIS SPINULOSA	5 /30	17	✓	FAC+
MAIANTHEMUM CANADENSE	5 /30	17	✓	FAC-
COPTIS TRIFOLIA	10/30	33	✓	FACW

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	5	

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL
1	1	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 75 %

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: No
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
3"	Oe			
0-3"	A	2.5Y 2.5/1 BLACK	2.5Y 4/2 FEW, FINE, FAINT	STONY VERY FINE SANDY LOAM
3-6"	E	2.5Y 6/1 GRAY	5Y 6/1 COMMON, MEDIUM, FAINT 2.5Y 5/4 COMMON, MEDIUM, DISTINCT	" "
6-14"	Bg	5Y 5/2 GRAY	5Y 7/1 COMMON, MEDIUM, FAINT 5Y 5/4 COMMON, MEDIUM, DISTINCT	" "
14-17"	B/C	5Y 5/4 OLIVE	2.5Y 5/6 COMMON, MEDIUM, DISTINCT 5Y 7/2 COMMON, COARSE, DISTINCT	" "

HYDRIC SOIL INDICATOR(S): VI

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	DARK PARENT MATERIAL
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-5 PLOT: UPLAND AT FLAG #MC84-2

7/10

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH
TRANSECT: MC-6 PLOT: WETLAND AT FLAG # WC 90-11 (MILE NINE)
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6
DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
BETULA ALLEGHANIENSIS	109/273	40	✓	FAC
ACER RUBRUM	84/273	31	✓	FAC
ABIES BALSAMEA	60/273	22	✓	FAC
SHRUB/SAPLING				
B. ALLEGHANIENSIS	15/40	38	✓	FAC
A. RUBRUM	10/40	25	✓	FAC
FRAXINUS PENNSYLVANICA	10/40	25	✓	FACW
HERBS				
GRAMINEAE	55/100	55	✓	UNK.
IMPATIENS CAPENSIS	20/100	20	✓	FACW

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	2	5	

Hydrophytes Subtotal (A): 7

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): 0

PERCENT HYDROPHYTES (100A/A+B): 100 %

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 5"
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-5"	A	7.5Y 3/2 DARK BROWN	PORE LININGS 7.5YR 4/4	MUCKY SILT LOAM
5-8"	Bg1	5Y 3/2 DARK OLIVE GRAY	7.5Y 3/4 COMMON, MEDIUM, DISTINCT PORE LININGS 10YR 4/6	SILT LOAM
8-16"	Bg2	5Y 5/2 OLIVE GRAY	10YR 4/6 COMMON, MEDIUM PROMINENT 5Y 7/2 FEW, MEDIUM, FAINT	" "
16-20"	B/C	5Y 5/3 OLIVE	7.5Y 5/4 COMMON, MEDIUM, FAINT 5Y 7/2 COMMON, MEDIUM, FAINT	" "

HYDRIC SOIL INDICATOR(S): VI

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☒	☐
Hydric soils criterion met?	☒	☐
Wetland hydrology criterion met?	☒	☐
IS THIS DATAPOINT IN A WETLAND?	☒	☐

REMARKS: SILT LOAM TILL WITH DARK PARENT MATERIAL

PROJECT TITLE: GRANITE RELIABLE POWER GOOS COUNTY, NH TRANSECT: MC-6 PLOT: WETLAND AT FLAG # MC 9D-11

PROJECT TITLE: GRANITE RELIABLE POWER LLC TRANSECT: MC-6 PLOT: UPLAND
COOS COUNTY, NH AT FLAG #WC 90-11
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 26 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
ACER SACCHARUM	423/783	54	✓	FACU-
BETULA ALLEGHANIENSIS	285/783	36	✓	FAC
SHRUB/SAPLING				
ACER SACCHARUM	40/90	44	✓	FACU-
B. ALLEGHANIENSIS	20/90	22	✓	FAC
HERBS				
MAIANTHEMUM CANADENSE	15/35	43		FAC-
DRYOPTERIS SPINULOSA	5/35	14	✓	FAC+
ERYTHRONIUM PROSTRATUM	5/35	14	✓	UPL

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		3	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
1	2	1

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 43%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: No
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
3"	Oa			
0-7"	A	2.5Y 2.5/1 BLACK	2.5Y 4/2 FEW, MEDIUM, FAINT	VERY FINE SANDY LOAM
7-13"	Bw	2.5Y 4/4 OLIVE BROWN	10YR 6/4 COMMON, MEDIUM, DISTINCT 2.5Y 7/2 COMMON, COARSE, DISTINCT	STONY FINE SANDY LOAM
13-18"	B/C	2.5Y 6/2 LIGHT BROWNISH GRAY	7.5Y 4/4 COMMON, MEDIUM, DISTINCT 5Y 7/2 COMMON, MEDIUM FAINT	" " "

HYDRIC SOIL INDICATOR(S):

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-6 AT FLAG # WL 90-11 PLOT: UPLAND

PROJECT TITLE: Noble Wind Power TRANSECT: RL 72-8 PLOT: 1

DELINEATOR(S): RL mile 10-11 FLAG 72-8 DATE: 5/14/08

VEGETATION

Stratum and Species (Recently Logged)	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees (now plus stumps)				
Betula Alleghaniensis	191/1152			FAC
Abies Balsamea	476/1152		✓	FAC
Acer Rubrum	253/1152		✓	FAC
Picea rubrum	212/1152		✓	FACU
Saplings				
Betula Alleghaniensis	5/45			FAC
Picea rubens	5/45			FACU
Betula papyrifolia	5/45			FACU
Acer pensylvanicum	5/45			FACU
Prunus serotina	10/45			FACU
Abie Balsamea			✓	FAC
Shrubs				
Abies Balsamea	20/50		✓	FAC
Viburnum Alleghaniensis	10/50		✓	FAC
Acer pensylvanicum	20/50		✓	FACU
Herbs				
Erythronium umbilicatum	20/40		✓	FAC
Abies Balsamea	5/40			FAC
Trillium erectum	5/40			FACU
Viburnum Alleghaniensis	10/40		✓	FAC

HYDROPHYTES

OBL	FACW	FAC	*OTHER
0	0	7	

Hydrophytes Subtotal (A): 7

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 7/9 = 77

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification:
- Aerial photography — Identification:
- Other — Identification:

☐ NO RECORDED DATA

☐ OBSERVATIONS:

Depth to Free Water: none

Depth to Saturation (including capillary fringe): 10"

Altered Hydrology (explain): logging

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-3	A	5Y 3/2		FSl
3-12	B	5Y 5/4	10YR 5/6 Few, Faint	FSl
12-18+		5Y 5/4	10YR 5/6 Few, Faint	gr ls

HYDRIC SOIL INDICATOR(S): None

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table: mwD
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	But just barely + just in growing season?
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Noble Wind Power TRANSECT: RL 72-8 PLOT: 2

10/11

PROJECT TITLE: Noble Wind Project TRANSECT: 1 PLOT: 2

DELINEATOR(S): RL mile 10-11; FLAG 72-8 DATE: 5/14/08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				FAC
Betula Alleghaniensis	446/782		✓	FAC
Abies Balsamea	19/782			FAC
Acer Rubrum	115/782			FACU
Picea Rubens	202/782	26	✓	
SAPLINGS				FAC
Abies Balsamea	10/20	50	✓	FAC
Betula Alleghaniensis	10/20	50	✓	
SHRUBS				FAC
Viburnum Lanantoides	20/50	40	✓	FAC
Picea Rubens	10/50	20	✓	FAC
Abies Balsamea	20/50	40		
Herbs *				FAC
Viburnum Lanatoides	5/65	7		FACW?
Carex sp.	40/65	79	✓	FAC → FACW
Rorippa sp ?	5/65	7		FAC?
Erythronium umbilicatum	5/65	7		FAC

HYDROPHYTES

OBL	FACW	FAC	*OTHER
0	1	6	

Hydrophytes Subtotal (A): 7

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 7/8 =

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification:
- Aerial photography — Identification:
- Other — Identification:

☐ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: SURFACE

Depth to Saturation (including capillary fringe): SURFACE

Altered Hydrology (explain): YES - LOGGING - SKIDDER RUTS

☑ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☑ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

CENAE-CO-R-PT Version 7/1/00 Page 1

* TOO EARLY FOR Complete herb layer

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

#2 ① ② SKID TRAIL LOG ROAD

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-4	A	10YR 2/1	–	LFS1
4-10	Bw	5Y 4/3	10YR 5/8 FEW, FINE	FS1
10-18+	Bg	5Y 4/2	10YR 5/8 MANY, med.	FS1

HYDRIC SOIL INDICATOR(S): III-I

REFERENCE(S): NEIWPCC-HE

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: PD
Depth to active water table: SURFACE
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: Noble Wind Power TRANSECT: 1 PLOT: 2

RL mile 10-11 FLAG 22-8

10/11

PROJECT TITLE: Noble Wind Power TRANSECT: RL 43-7 PLOT: 2

DELINEATOR(S): RL mile 10-11; FLAG 43-7 DATE: 5/14/08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Acer rubrum	210/483		✓	FAC
Ostrya virginiana	79/483			FACU
Fagus grandifolia	47/483			FACU
Betula allegheniensis	94/483		✓	FAC
Picea rubens	51/483			FACU
Saplings				
Betula allegheniensis	20/80	25	✓	FAC
Acer rubrum	20/80	25	✓	FAC
Fagus grandifolia	40/80	50	✓	FACU
Shrubs				
Viburnum alleghaniensis	20/30	66	✓	FAC
Fagus grandifolia	10/30	33	✓	FACU
Herbs*				
Viburnum alleghaniensis	20/30		✓	FAC
Smilacina commutatum	5/30			FACU
Trillium erectum	5/30			FACU

* Too early for complete herb layer

HYDROPHYTES

OBL	FACW	FAC	*OTHER
0	0	6	

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL
0	2	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 8/6 = 75

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

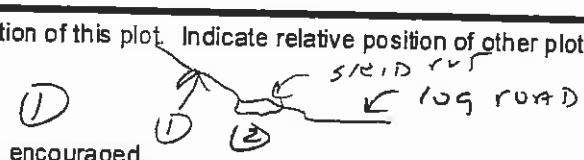
☐ NO RECORDED DATA

☐ OBSERVATIONS:
Depth to Free Water: none
Depth to Saturation (including capillary fringe): none
Altered Hydrology (explain): none

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1-0	Oi			Leaves, Twigs
0-3	A	7.5YR 4/2	None	VFSl
3-4	E	10YR 6/2		FSl
4-6	Bs	7.5YR 4/6		VFSL
6-9	BW1	10YR 4/6		VFSl
9-18	BW2	10YR 5/6		VFSl
18+	C	2.5Y 4/6		VFSl

HYDRIC SOIL INDICATOR(S): None

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	Too early for Comple herbs
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Noble Wind Power RL Mole 10-11, FLAG 43-7 TRANSECT: PLOT:

10/11

PROJECT TITLE: Noble Wind Power TRANSECT: RL43-7 PLOT: 1

DELINEATOR(S): RL mile 10-11; FLM 43-7 DATE: 5/14/08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
BETULA ALLEGHANIENSIS	115/355		✓	FAC
BETULA PAPYRIFOLIA	38/355			FACU
ACER RUBRUM	149/355		✓	FAC
OSTRYA VIRGINIANA	53/155			FACU
SAPLINGS				
BETULA ALLEGHANIENSIS	15/25	60	✓	FAC
ACER RUBRUM	5/25	20	✓	FAC
ABIES BALSAMEA	5/25	20	✓	FAC
SHRUBS				
SALIX SP	10/20	50	✓	FAC → FACU
BETULA ALLEGHANIENSIS	10/20	50	✓	FAC
Herbs *				
CAREX SP	90/110		✓	FAC → FACU
EQUISETUM SP	10/110			FAC → FACU
TIARELLA CORDIFOLIA	5/110			FAC-
ACER RUBRUM	5/110			FAC

* TOO EARLY FOR COMPLETE LAYER

HYDROPHYTES				NON-HYDROPHYTES		
0	0	8	0	0	0	0
OBL	FACW	FAC	*OTHER	FAC-	FACU	UPL

Hydrophytes Subtotal (A): ___ Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 8/8 100%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: ___
Aerial photography Identification: ___
Other Identification: ___

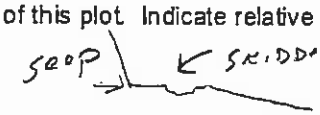
☐ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: AT SURFACE
Depth to Saturation (including capillary fringe): SURFACE
Altered Hydrology (explain): logged, skidder ruts

☒ Inundated ☒ Saturated In upper 12" ☒ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

☐ OTHER (explain): See [illegible] that was logged

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
5-0	Oe	7.5R 2.5/1		hemic organic material
0-7	A	10YR 2/1		VFSL
7-15+		5Y 6/1	10YR 5/8 many, med N 6/0 few, fine	VFSL - organic streaking

HYDRIC SOIL INDICATOR(S): III H.1.

REFERENCE(S): NE/WPCC - NE INDICATORS

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: VPD
Depth to active water table: SURFACE
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Noble WIND POWER RL mile 10-11 TRANSECT: FLAG 43-7 PLOT:

11/12

While 11/12

PROJECT TITLE: Granite Power

TRANSECT: JW 172 East PLOT: Up
Near Flag 172-25

DELINEATOR(S): Jennifer West

DATE: 6.2.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
trees				
Acer saccharum 12, 12, 8, 7	1260/1460	86	✓	FACU
Betula alleghaniensis 8"	200	14		
Saplings				
Ace sac	20/50	40	✓	FACU
Betula, all	15	30	✓	FAC
Ace spicatum	15	30	✓	FACU-
Shrubs				
Acer spicatum	25/60	42	✓	FACU-
Vib alv	5			
Bet all	20	33	✓	FAC
A. sac	10			
Herbaceous				
Erythronium americanum	20/40	50	✓	FAC
Ace sac	10	25	✓	FACU-
Dry spin	10	25	✓	FAC+

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
	5	

Non-hydrophytes Subtotal (B): 5

PERCENT HYDROPHYTES (100A/A+B): 44 %

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification:
- Aerial photography — Identification:
- Other — Identification:

☑ NO RECORDED DATA

☑ OBSERVATIONS:
- Depth to Free Water: None observed within 14"
- Depth to Saturation (including capillary fringe): None observed within 14"
- Altered Hydrology (explain): None

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2	Oe	7.5YR 2.5/1		
2-6	E	7.5YR 3/1		very fine sandy loam
6-	Bs	10YR 3/3		↓
EOE	14" - refusal due to stones			

HYDRIC SOIL INDICATOR(S): Lacks hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: somewhat to moderately well drained
Depth to active water table: 12-16"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Granite Power TRANSECT: TW 172 PLOT: Up

Mile 11/12 East

11/12

* mile 11/12 East

PROJECT TITLE:

TRANSECT: JW 172 PLOT: Wet

Near Flag JW172-26

DELINEATOR(S):

DATE: 6.2.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
A. sac* 4,6,6,5,10		100%	✓	FACU*
Saplings				
Acer pensylvanicum*	10/35	28%	✓	FACU*
Betula alleghaniensis	25	72	✓	FAC
Shrubs				
Abies balsamea	10/40	25	✓	FAC
Bet all	25	62	✓	FAC
Acc sac	5	13		
Herbaceous				
Agrostis hyemalis?	80/95	84	✓	FAC
Impatiens capensis	10			
Solidago rugosa	5			

* shallow rooted

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	2

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: surface

Depth to Saturation (including capillary fringe): surface

Altered Hydrology (explain): [illegible]

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-6	Oa	10YR 2/2		mucky
6 -	A	10YR 2/2		Very fine sandy loam
12" refusal due to stones				

HYDRIC SOIL INDICATOR(S): V REFERENCE(S): FIIHSNE (2004)

Hydric morphology present - mineral histic

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly drained
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Power TRANSECT: 161172 PLOT: Wet

Mile 11/12 East

11/12

Mile 11/12 East

PROJECT TITLE: Granite Power

TRANSECT: VW170 PLOT: Up

Near flag VW170-7

DELINEATOR(S): Jennifer West

DATE: 6.2.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula pap 8,5,5,7		100%	✓	FACU
Saplings				
Abies balsamea	70/40	50	✓	FAC
Betula pap	20	50	✓	FACU
Shrubs				
Abies balsamea	20/40	50	✓	FAC
Rubus idaeus	20	50	✓	FAC-
Herbaceous				
Dryopteris cristata	70/25	80	✓	FAC+
Maianthemum canadense	5	20	✓	FAC-

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		3	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
2	2	

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 43

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: 6"

Depth to Saturation (including capillary fringe): 6"

Altered Hydrology (explain): None

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): Heavy rainfall overnight.

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-6"	Oe	7.5YR 2.5/1, 2.5/2		Hemic material
6-8	A	10YR 3/2		very fine sandy loam
8-10	B_s	10YR 4/6		↓
10-	Bw	2.5Y 3/3	10YR 3/4, 5%	↓ , V. stony
14"	refusal due to stones			

HYDRIC SOIL INDICATOR(S): Lack hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: somewhat poorly
Depth to active water table: 12-16"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: [illegible] TRANSECT: TW170 PLOT: Up

11/12

Wed 11/12 East

PROJECT TITLE: Granite Power

TRANSECT: JW170 PLOT: Wet

Near flag JW170-6

DELINEATOR(S): Jennifer West

DATE: 6.2.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No. stress or saplings				
Shrubs				
Alnus incana	30/40	75	✓	FAC
Acer rub	7			
Betula populifolia	10	25	✓	FAC
Herbaceous				
Agrostis hyemalis?	85/100	85	✓	FAC
Dry: spec	5			

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		3	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100 %

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: 8" ±

Depth to Saturation (including capillary fringe): [illegible]

Altered Hydrology (explain): Area has been disturbed by equipment

☐ Inundated ☑ Saturated In upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2	Oe	7.5YR 2.5/2		
2-4	A	10YR 3/2		pre sandy loam
4-8	Bg	2.5Y 4/2	10YR 3/6 2%	fine sandy loam
8-		5Y 3/2	2.5Y 3/3 10%	↓
EOE either very firm or stones at 12"				

HYDRIC SOIL INDICATOR(S): Hydric morphology present

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

CENAE-COR-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Power TRANSECT: JW170 PLOT: WET

Mile 11/12 East

12/13

Mile 12/13 East

PROJECT TITLE: Granite Pass TRANSECT: JW 134 PLOT: West

DELINEATOR(S): Jennifer West DATE: 6-2-08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No trees or saplings within wetland				
Shrubs				
Alnus tenuifolia	10/35	28	✓	FAC
Viburnum cassinoides	5			
Rubus idaeus	20	57	✓	FAC-
Herbaceous				
Agrostis hyemalis ?	80/100	80	✓	FAC
Dryopteris expansis	20	20	✓	FACW
Interrupted fern - Osmunda claytoniana	T			

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	2	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
1		

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 75%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: surface

Depth to Saturation (including capillary fringe): surface

Altered Hydrology (explain): shoulder treat has funneled runoff.

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2	Oe	10YR 2/1	-	
2-	A	10YR 2/1	2.5Y 4/1, 5%	fine sandy loam ↓
15"	refusal -	stones		

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Hydric morphology present in disturbed shudder tracks, very dark to horizon with redox features.

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly drained
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Granite Power TRANSECT: JU 174 PLOT: WET

Mile 17/13 East

PROJECT TITLE: Granite Power TRANSECT: JW134 PLOT: UP

Mar flag JW134-16

DELINEATOR(S): Jennifer West DATE: 6.2.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula pap - 8"	201/433	46	✓	FACU
Acer saccharum 7", 5"	237	54	✓	FACU-
Sapling				
A. saccharum	40/40	100	✓	FACU-
Shrubs				
Abies balsamea	35/40	88	✓	FAC
Betula pap	5			
Herbaceous				
Interrupted fern - Osmunda claytonaria	5/40	13		
Gymnocarpium dryopteris	20	50	✓	Upl
NY fern	5	15		
Solidago rugosa	T			
Abies balsamea	10	25	✓	FAC

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		1	

Hydrophytes Subtotal (A): 1

NON-HYDROPHYTES

FAC-	FACU	UPL
	3	1

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 20

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☐ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: None within 14"

Depth to Saturation (including capillary fringe): None within 14"

Altered Hydrology (explain): _____

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2"	O_e	7.5YR 2.5/2		Hemic material
2-4	A_1	10YR 2/2		fine sandy loam
4-	A_2	7.5YR 3/4		
14"	refusal	due to stones		

HYDRIC SOIL INDICATOR(S): Lacks hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: moderately well drained
Depth to active water table: >16"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Granite Power TRANSECT: JW134 PLOT: up

mile 12/13 East

PROJECT TITLE: Granite Power

TRANSECT: Mile 13/14E PLOT: NW 120-1W

NEAR Stag 120-7

DELINEATOR(S): Jenn for West

DATE: 5/16/08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Abies balsamea 5"		100	✓	FAC
Saplings				
Alnus incana	30/60	50	✓	FAC
Bet pap (on mound)	5			
Picea rubens*	15	25	✓	FACU*
Betula all	10	20	✓	FAC
Shrubs - none				
Herbaceous				
Dryopteris spinulosa	20/20	100	✓	FAC*

* On mound

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	1

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☒ NO RECORDED DATA

☒ OBSERVATIONS:
- Depth to Free Water: 6"
- Depth to Saturation (including capillary fringe): Surface
- Altered Hydrology (explain): None

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-6	A	10YR 2/2		fine sandy loam
6-10	Bg1	2.5Y 3/2	10YR 3/2, 2%	↓
10-EOB 16	Bg2	2.5Y 3/2	10YR 4/6, 10% coarse	gravelly

HYDRIC SOIL INDICATOR(S): XII

REFERENCE(S): Field Indicators... Ver 3 (2002)

Hydric morphology present

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: [illegible] TRANSECT: Mile 12-14E PLOT: JW120-1W

PROJECT TITLE: Granite Power TRANSECT: Mile 13/14 E PLOT: JW120-10

NEAR flag 120-2

DELINEATOR(S): Jennifer West DATE: 5.16.08

VEGETATION	Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees					
Betula alt	6"	113/534	21	✓	FAC
Betula pap	6	113	21	✓	FACU
Abies balsamea	7, 7	308	58	✓	FAC
Saplings					
Abies balsamea		80 /80	[illegible]	✓	FAC
Shrubs					
Abies balsamea		20 %	100	✓	FAC
Herbaceous					
Carex spp.		5/10	50	✓	OBL
Cornus canadensis		7			
Ingopterus spinulosa		5	50	✓	FAC+

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1		5	

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 86

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☒ NO RECORDED DATA

☒ OBSERVATIONS:
- Depth to Free Water: None within 20"
- Depth to Saturation (including capillary fringe): None within 20"
- Altered Hydrology (explain): None observed

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0 - 4	Oe	5YR 2.5/2		
4 - 6	A	10YR 2/1		Loam
6 - 7	E	2.5Y 4/1		vfsL
7 - 12	Bsg mixed Tree Throw	10YR 3/3 4/2		
12 - 60+ 20" stony	"	"	7.5YR 2.5/2	

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Lacks hydric morphology.

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: somewhat poorly
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: Granite Power TRANSECT: Mile 13/14E PLOT: JN120-1U

1 of 4

PROJECT TITLE: Granite Power TRANSECT: [illegible] PLOT: JW206-1W

DELINEATOR(S): Jennifer West DATE: 5.16.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No Trees				
Shrubs				
Kalmia latifolia	90/90	100%	✓	FACW+
Herbaceous				
Solidago spp.	15/[illegible]	25		NI
Agrostis spp. ??	30	75		NI

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	|		

NON-HYDROPHYTES

FAC-	FACU	UPL

Hydrophytes Subtotal (A): 1 Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100 %

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: ___
- Aerial photography Identification: ___
- Other Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:
- Depth to Free Water: ± 9"
- Depth to Saturation (including capillary fringe): Surface
- Altered Hydrology (explain): None apparent

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-4	A ↙?	10YR 2/2		muck
4-12	B	5Y4/1	2.5Y4/3, 10%, fine	very fine sandy loam
12-	Cm ↑ restrictive layer	5Y3/2	2.5Y4/3, 15% coarse	↓

LOE 14" due to dense restrictive layer

HYDRIC SOIL INDICATOR(S): V. Mineral Histic REFERENCE(S): Field Indicators, Ver. 3 (2001)
Mineral histic at 0-4" with depleted horizon just below it.

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: TRANSECT: Mir 13/14E, PLOT: JW206-1W

PROJECT TITLE: Granite Power | TRANSECT: Mile 13/14 E | PLOT: JW206-1U

NEAR Flag 206-11

DELINEATOR(S): Jennifer West | DATE: 5.16.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Abies balsamea 5", 10, 5,	471/2133	22	✓	FAC
Betula [illegible] 6, 10, 10, 10, 12	1507	71	✓	FACU
Picea rubens-7	154	7		
Saplings				
Abies balsamea	25/50	50	✓	FAC
Alnus incana	15	30	✓	FACW
Acer saccharum	10	20	✓	FACU-
Shrubs				
Alnus incana	30/30	100	✓	FACU
Herbaceous				
Agrostis? S/P	100/100	100	✓	NI

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	2	2	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 67%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: _____
- Aerial photography — Identification: _____
- Other — Identification: _____

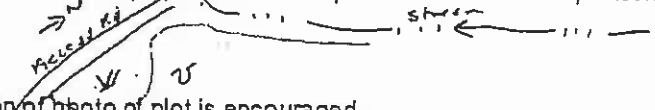
☑ NO RECORDED DATA

☑ OBSERVATIONS:
- Depth to Free Water: Now within 12"
- Depth to Saturation (including capillary fringe): now
- Altered Hydrology (explain): Site modified by filling

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): [illegible]

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-6"	A	10YR2/2		Loam
6-10	Ap	10YR 3/2, 2/4, 4/4 mixed		
10-12	Ak	10YR 2/1		
12 -	Bb	2.5Y3/3	7.5YR 3/3, 20% fine	
Refusal	at 12"			

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Location has been disturbed by past filling, which has altered hydrology.
Soils non-hydric, lack morphology

OPTIONAL SOIL DATA

REFERENCE(S):

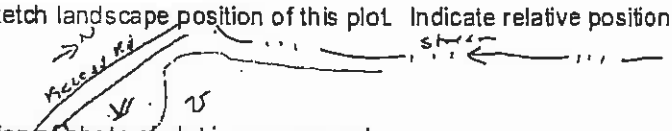
Taxonomic subgroup:
Soil drainage class: somewhat poorly
Depth to active water table: ± 12"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Granite Power TRANSECT: Mile 13/14 E. PLOT: JW206-1U

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-6"	A	10YR2/2		Loam
6-10	Ap	10YR 3/2, 2/4, 4/4 mixed		
10-12	Ab	10YR 2/1		
12 -	Bb	2.5Y 3/3	7.5YR 3/3, 20% fine	
Refusal at 12"				

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Location has been disturbed by past filling, which has altered hydrology. Soils non-hydric, lack morphology

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: somewhat poorly
Depth to active water table: ± 12"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Groundwater Tower TRANSECT: Mile 13/14 E. PLOT: JW2006-10

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0 - 4	Oe	7.5YR 2.5/1		
4 - 6	Oa1	10YR 2/1		muck, stony
6 - 12	Oa2	2.5Y 2.5/1	10YR 3/2, 2%	muck, stony
12 -	Bg	2.5Y 3/1	5Y 4/1 - 5% 10YR 3/2 - 2%	very fine sandy loam, stony

HYDRIC SOIL INDICATOR(S): IV REFERENCE(S): FISH'S

#: Histic epipedon over mineral soils. Redox features noted at 6".

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly to very poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Granite Power TRANSECT: JW222 PLOT: Wet

13/14

Wetland 13/14

PROJECT TITLE: Granite Tower

TRANSECT: JW 222 West PLOT: UP
Near Flag JW 222-1

DELINEATOR(S): Jennifer Nut

DATE: 6-2-08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Abies balsamea 5"				FACU
Picea rubens 8"				
Saplings				
Abies balsamea	20/30	67	✓	FAC
Picea rubens	10	33	✓	FACU
Shrubs				
Abies balsamea	30/40	75	✓	FAC
Picea rubens	10	25	✓	FACU

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		2	

Hydrophytes Subtotal (A): 2

NON-HYDROPHYTES

FAC-	FACU	UPL
	3	

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 40 %

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage — Identification:
Aerial photography — Identification:
Other — Identification:

☑ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: 18" ±
Depth to Saturation (including capillary fringe): 16" ±
Altered Hydrology (explain): none

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): none

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-3"	Oe	7.5YR 2.5/2		Humic material
3-8	A/E mixed	10YR 2/2, 10YR 4/1		fine sandy loam
8-18	B	10YR 3/2		↓
18-	C	5Y 4/2	2%, faint	

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Lacks hydric morphology based on lack of redox features within 12"

OPTIONAL SOIL DATA

Taxonomic subgroup: REFERENCE(S):
Soil drainage class: somewhat poorly
Depth to active water table: 12-16
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Point TRANSECT: JW 222 PLOT: up

mile 13/14

14/15

PROJECT TITLE: Noble Wind Power TRANSECT: FL 86-6 PLOT: 1

DELINEATOR(S): RL mile 14-15 FL 86-6 DATE: 5/20/08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees (Logged)				
Abies Balsamea	40/40	100%	✓	FAC
Saplings				
Abies Balsamea	50/70	70%	✓	FAC
Picea rubens	10/70	15		FACU
Betula Alleghansis	10/70	15		FAC
Shrubs				
Abies balsamea	20/60	33	✓	FAC
Rubrum Idaeus	20/60	33	✓	FAC-
Betula Alleghansis	20/60	33	✓	FAC
HERBS *				
Carex sp	70/100			
Carex sp	15/100		✓	FAC → FACW
Herb # 1	15/100			FAC → FACW ?

* Too early - herbs just starting

HYDROPHYTES

OBL	FACW	FAC	*OTHER
0	0	5	

NON-HYDROPHYTES

FAC-	FACU	UPL
1		

Hydrophytes Subtotal (A): ___ Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 5/6 = 83

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: ___
- Aerial photography Identification: ___
- Other Identification: ___

☐ NO RECORDED DATA

☐ OBSERVATIONS:
- Depth to Free Water: 12"
- Depth to Saturation (including capillary fringe): Surface
- Altered Hydrology (explain): logging

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
3-0	Oe	5R 2.5/1	R 2.5/1	Hemic
0-3	E	2.5Y 4/1	7.5YR 6/6 med, common	/
3-7		5Y 4/1	10YR 4/6 common, coarse	VFS1
7-18		5Y 5/12	7.5YR 5/6 common, coarse + 7.5YR 5/6 common, med.	VFS1

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

III.H. 1.

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: PD
Depth to active water table: 12"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Noble Land Power mile 14-15 TRANSECT: FL-01-6 PLOT: 1

PROJECT TITLE: Noble Wind Power TRANSECT: FL 86-6 PLOT: 2

DELINEATOR(S): RC mile 14-15 DATE: 5/20/08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Abies balsamea		100%	✓	FAC
Saplings				
Abies balsamea	60/80	75%	✓	FAC
Picea rubens	10/80	12%		FAC
Acer rubrum	10/80	12%		FAC
Shrubs				
Betula alleghaniensis	10/40	25%	✓	FAC
Abies balsamea	20/40	50%	✓	FAC
Viburnum lantanoides	10/40	25%	✓	FAC
Herbs				
Coptis trifolia	15/25		✓	FACW
Erythronium umbilicatum	5/25			FAC
Fern #1	5/25			?
moss 100%				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
0	1	5	

NON-HYDROPHYTES

FAC-	FACU	UPL
0	0	0

Hydrophytes Subtotal (A): ___ Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: ___
- Aerial photography Identification: ___
- Other Identification: ___

☐ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: > 20"

Depth to Saturation (including capillary fringe): none

Altered Hydrology (explain): logging

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

2 1

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
3-0	Oi			Fibric
0-1	A	5YR 2.5/1		VFSL
1-2	E	7.5YR 5/1		VFSL
2-3	Bh	2.5YR 3/2		VFSL
3-6	BS	10YR 5/6		VFSL
6-12	BW1	2.5Y 5/4		VFSL
12-16	BW2	5Y 5/3	5YR 5/8 many, medium	VFSL
16-+	C	5Y 5/3	N5/0 - few	VFSL

HYDRIC SOIL INDICATOR(S): None

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: MWD
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Noble wind power RL mile 14-15 TRANSECT: FL 86-6 PLOT: 2

PROJECT TITLE: Granite Power TRANSECT: Mile 14/15 S. PLOT: [illegible]

DELINEATOR(S): Jim [illegible] DATE: 5/16/08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Abies balsamea 5"	78/100	[illegible]		
Betula all 7", 9"	[illegible]	[illegible]	✓	FAC
[illegible] 6"	[illegible]	19		
Saplings				
Acer pensylvanicum *	15/50	30	✓	FACU*
Acer saccharum *	20	40	✓	[illegible]
Picea rubens *	5	[illegible]	✓	FACU*
Abies balsamea	10	10		
Shrubs				
Viburnum alnifolium	15/62	24	✓	FAC
[illegible] *	20	32	✓	FACU*
Ac. pensylvanicum *	15	24	✓	FACU*
[illegible]	10	16		
Semi[illegible]	2	—		
Herbaceous				
Erythronium [illegible]	10 /45	22	✓	FAC
grass	25	55	✓	NI
Dryopteris [illegible]	10	22	✓	FAC*

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	5

Hydrophytes Subtotal (A): 9

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100 %

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

☐ OBSERVATIONS:

Depth to Free Water: No free water within 16"

Depth to Saturation (including capillary fringe): Saturated at ≈ 10"

Altered Hydrology (explain): Harvesting equipment has modified drainage patterns.

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0 - 2	Oe	10YR 2/1		Muck
2 - 4	A1	2.5Y 3/1	10YR 3/4, fine 5%	Silt loam
4 - 10	Ab	10YR 2/1		muck
10 -	B	2.5Y 3/2	10YR 3/3, 15%	fine sandy loam
EOE 16"				

HYDRIC SOIL INDICATOR(S): V. Mineral Hydric REFERENCE(S): Field Indicators ... Ver 3 (2004)
Soils have been disturbed by harvesting equipment. Hydrology modified by equipment.

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly drained
Depth to active water table: 6" to surface
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Granite Power TRANSECT: Mitr 11/15 PLOT: JW255-1W

14/15

PROJECT TITLE: Granite Power

TRANSECT: Mile 14/15 South PLOT: JW255-1U

Near flag JW255-16

DELINEATOR(S): Jennifer West

DATE: 5.16.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula alleghaniensis DBH - 14"		100%	✓	FAC
Saplings				
Acer saccharum	10/10	100	✓	FACU
Shrubs				
Abies balsamea	20/70	29	✓	FAC
Viburnum [illegible]	40	57	✓	FAC
A. [illegible]	10	14		
Herbaceous				
Rubus [illegible]	10/35	29	✓	FAC
[illegible]	20	57	✓	FAC
[illegible]	5	—		

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
1	1	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 67%

HYDROLOGY

☐ RECORDED DATA

Stream, lake, or tidal gage Identification: _____

Aerial photography Identification: _____

Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: None observed within 20"

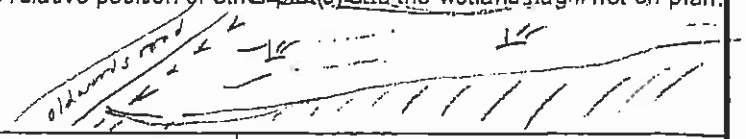
Depth to Saturation (including capillary fringe): None within 20"

Altered Hydrology (explain): Site has been harvested for Tender in the [illegible]

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2	A_1	10YR 3/2		[illegible]
2-6	A_2	10YR 2/1		↓
6-10	B_S	7.5YR 3/2	5YR 3/3 fine, 10%	[illegible]
10-16	B_{W1}	2.5Y 3/3	none	↓
16-	B_{W2}	↓	10YR 3/2 fine, 10%	↓
LOE 20"				

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Lack hydric morphology. A_1 horizon is material managed when shredder went over site. Redox features in B_S probably a reflection of soil compaction by equipment

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: moderately well drained
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: Granite Power TRANSECT: [illegible] PLOT: JW255-10

14/15

PROJECT TITLE: Granite Power

TRANSECT: Mile 14/15 S. PLOT: JW255-1W

DELINEATOR(S): Jennifer West

DATE: 5/16/08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Abies balsamea 5"	78/600	13		
Betula all 7", 9"	408	68	✓	FAC
Picea rubens 6"	113	19		
Saplings				
Acer pensylvanicum*	15/50	30	✓	FAC U*
Acer saccharum*	20	40	✓	FAC U*
Picea rubens*	5	20	✓	FAC U*
Abies balsamea	10	10		
Shrubs				
Viburnum atrifolium	15/62	24	✓	FAC
Picea rubens*	20	32	✓	FAC U*
A. pensylvanicum*	15	24	✓	FAC U*
A. balsamea	10	16		
Sambucus canadensis	2	—		
Herbaceous				
Erythronium americanum	10/45	22	✓	FAC
grass	25	55	✓	NI
Dryopteris spinulosa	10	22	✓	FAC+

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	5

Hydrophytes Subtotal (A): 9

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

☐ OBSERVATIONS:

Depth to Free Water: No free water within 16"

Depth to Saturation (including capillary fringe): Saturated at ≈ 10"

Altered Hydrology (explain): Harvesting equipment has modified drainage patterns.

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

PROJECT TITLE: Granite Power

TRANSECT: Mile 14/15 South PLOT: JW255-1U
Near flag JW255-16

DELINEATOR(S): Jennifer West

DATE: 5.16.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula alleghaniensis DBH - 14"		100 %	✓	FAC
Saplings				
Acer saccharum	10/10	100	✓	FACU-
Shrubs				
Abies balsamea	20/70	29	✓	FAC
Viburnum cassinoides	40	57	✓	FAC
A. pensylvanicum	10	14		
Herbaceous				
Rubus idaeus	10/35	29	✓	FAC-
Erythronium americanum	20	57	✓	FAC
grass (unid)	5	—		

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
1	1	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 67 %

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: None observed within 20"

Depth to Saturation (including capillary fringe): none within 20"

Altered Hydrology (explain): Site has been harvested for timber in the past

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): None

Mk 16-17 Upland 16/17

PROJECT TITLE: TRANSECT: T-2 PLOT: 11-9-U

DELINEATOR(S): PERACCHIO / HALE DATE: 5-28-08

VEGETATION

Stratum and Species	Basal Area / % Cover	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES					
Balsam Fir (Abies balsamea)	990 sq in.	990/1135	87%	✓	FAC
Red Spruce (Picea rubens)	95 sq in.	95/1135	8%		FACU
Paper Birch (Betula papyrifera)	50 sq in	50/1135	5%		FACU
SAPLINGS					
Balsam Fir	50%	50/51	98%	✓	FAC
Paper Birch	1%	1/51	2%		FACU
SHRUBS					
Balsam Fir	25%	25/35	71%	✓	FAC
Hobblebush (Viburnum lantanoides)	10%	10/35	29%		FAC
HERB/MOSS					
Sphagnum	10%	10/15	66%	✓	OBL
Goldthread (Coptis trifolia)	5%	5/15	33%	✓	FACW

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	1	3	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

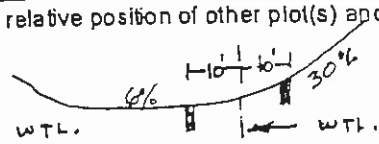
☑ OBSERVATIONS:
- Depth to Free Water: >22"
- Depth to Saturation (including capillary fringe): N/A
- Altered Hydrology (explain): ___

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): N/A

UPL.

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)	
2-0	Oi	10YR3/3	—	hemic material (mpt)	CS
0-4	Oa	10YR2/1	—	sapric material (muck) massive, mvfr	CW
4-5	E	5Y 4/1, 5/1	NONE	VFSL, massive, mvfr	IB
5-22	Bw	10YR3/3	10% 10YR3/4 @ 21"	VFSL, 1msbk, mfr	—

HYDRIC SOIL INDICATOR(S): N/A

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup: Aquic Haplocryods
Soil drainage class: Moderately well drained
Depth to active water table: > 22" (sat. @ 20")
NTCHS hydric soil criterion: NO

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

CENAE-COR-PT Version 7/1/00 Page 2

PROJECT TITLE: SHEET 7 Kelsey NH Reliable Power, Millsfield, NH

TRANSECT: T-2

PLOT: 11-9-U

Near Station 138 + 00

upland

Mile 16 WETLAND 16/17

PROJECT TITLE: TRANSECT: T-2 PLOT: 11-9-W

DELINEATOR(S): PETRAGALLO/HALE DATE: 5-28-08

VEGETATION

Stratum and Species		Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES	BASAL AREA				
BALSAM FIR (ABIES BALSAMEA)	490 SQ IN.	490/661	74%	✓	FAC
RED SPRUCE (PICEA RUBENS)	58 SQ. IN.	58/661	9%		FAC J
PAPER BIRCH (BETULA PAPYRIFERA)	113 SQ IN.	113/661	17%		FAC J
SAPLINGS	% COVER				
BALSAM FIR	25%	25/31	80%	✓	FAC
RED SPRUCE	1%	1/31	4%		
PAPER BIRCH	5%	5/31	16%		
SHRUBS					
BALSAM FIR	5%	5/10	50%	✓	FAC
RED SPRUCE	5%	5/10	50%	✓	FAC U
HERB/MOSS					
SPHAGNUM	75%	75/82.5	91%	✓	OBL
GOLDTHREAD	5%	5/82.5	6%		
BUNCHBERRY	2.5%	2.5/82.5	3%		

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1		3	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 80%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: 3"

Depth to Saturation (including capillary fringe): 0"

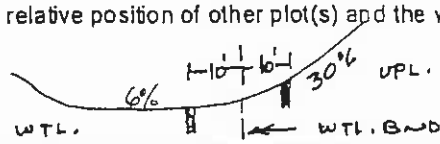
Altered Hydrology (explain): _____

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

WTL.

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
3-0"	Oi	10YR 3/3	—	fibric material, peat from woody origin CS
0-4"	Oa	10YR 2/1	—	sapric material (muck) massive, mufr CS
4-5"	E	2.5Y 3/1	20% 10YR 4/3 and org. streaking	VFSL, massive/1 Cosbk mfr Cw
5-12"	Bs	7.5YR 3/3	15% 7.5YR 3/4	FSL massive, mfr Cw
12-16"	C	2.5Y 3/2	10% 10YR 4/6	VFSL massive, mfr Cw
16"	R	granite bedrock		

HYDRIC SOIL INDICATOR(S): Dark surface (org.), redox in E and Bs

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup: Lithic Cryaquods
Soil drainage class: somewhat poorly drained (est.)
Depth to active water table: 3" (sat. to surface)
NTCHS hydric soil criterion: IX A.1. (NEIWPCC - ver. 3)

CONCLUSIONS

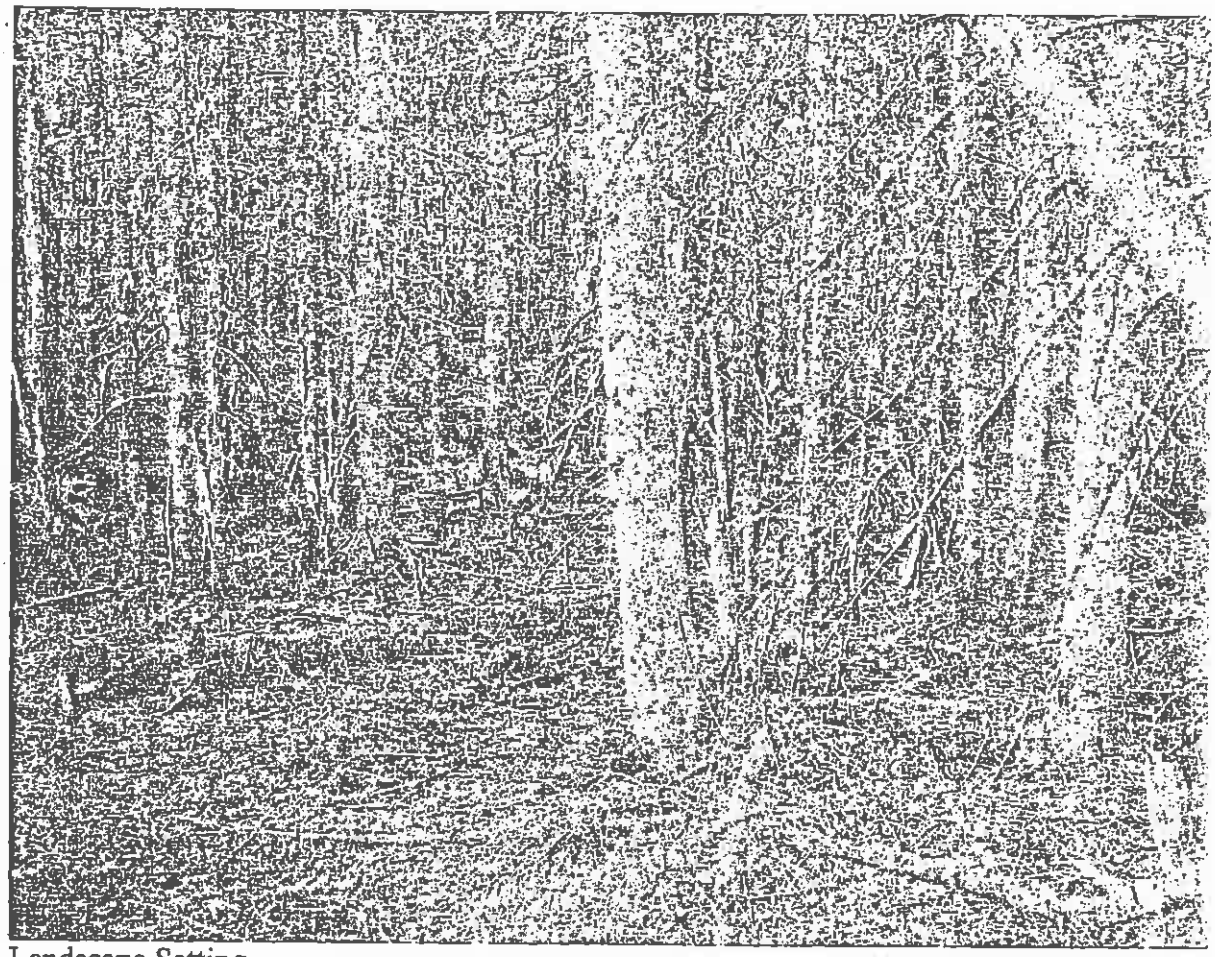
	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: SHEET 7 Kelsey NH Reliable Power, Millsfield, NH TRANSECT: T-2 PLOT: 11-9-W

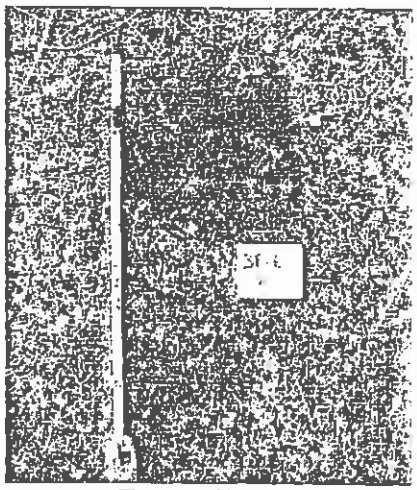
Near station 138+00

wetland

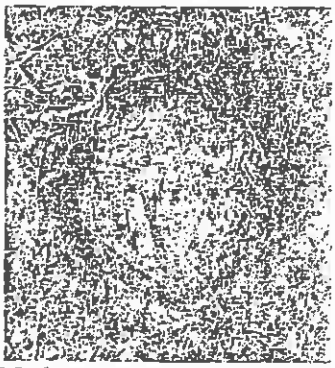
Wetland at Transect T-1, Sheet 8, Kelsey Section



Landscape Setting

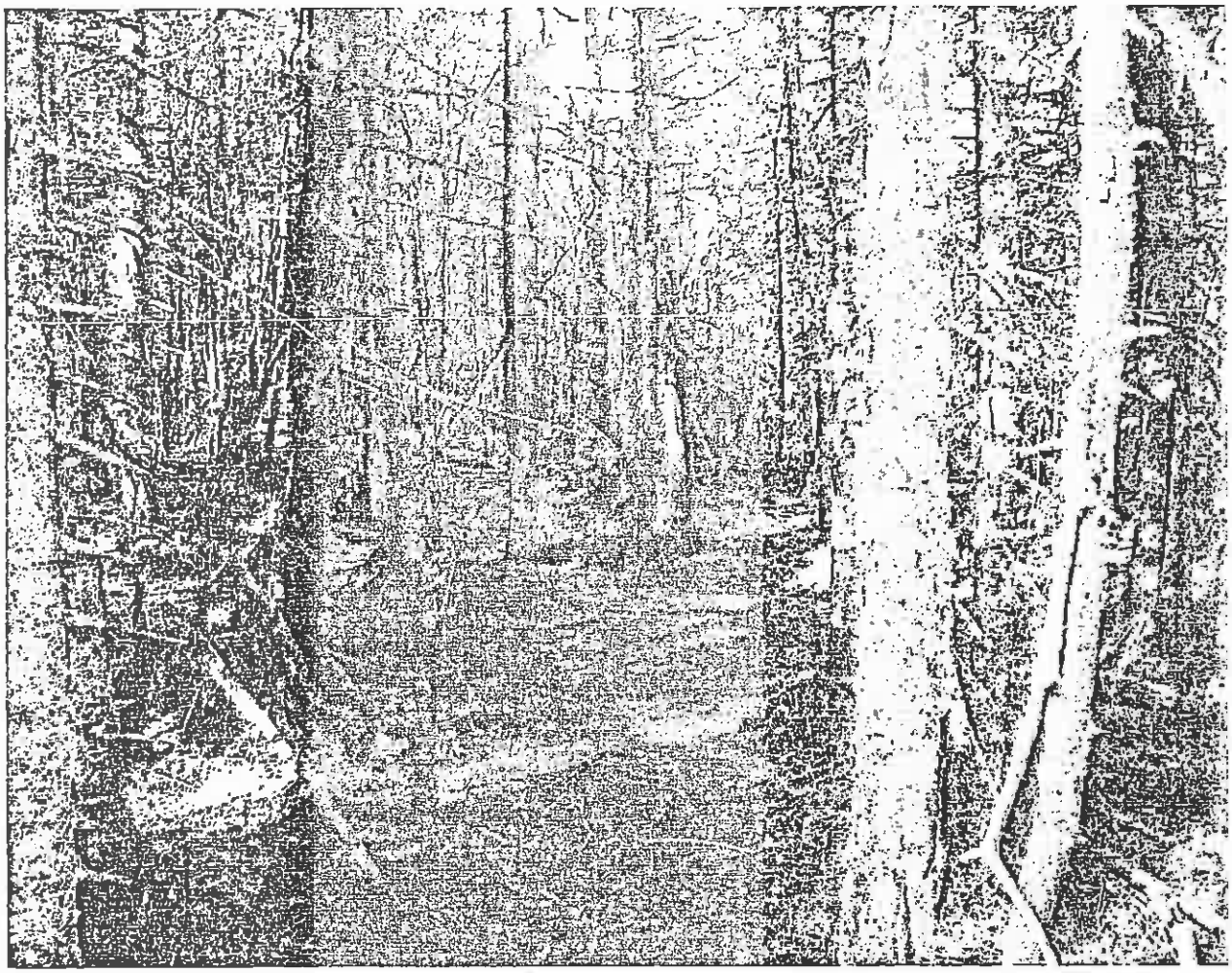


T-1, Soil 38-6 w

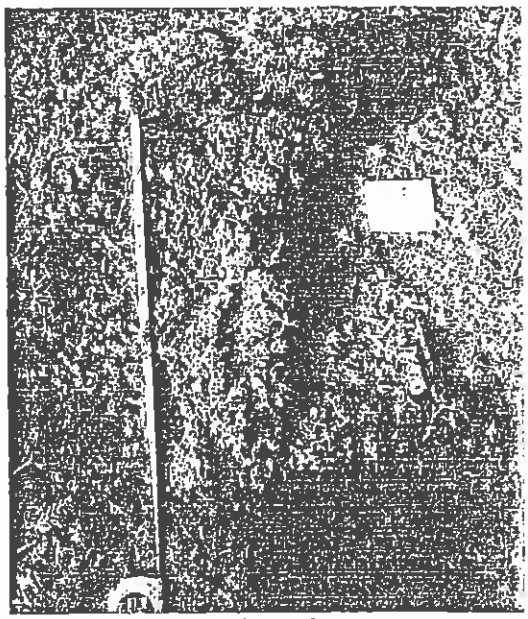


T-1, Soil 38-6 u

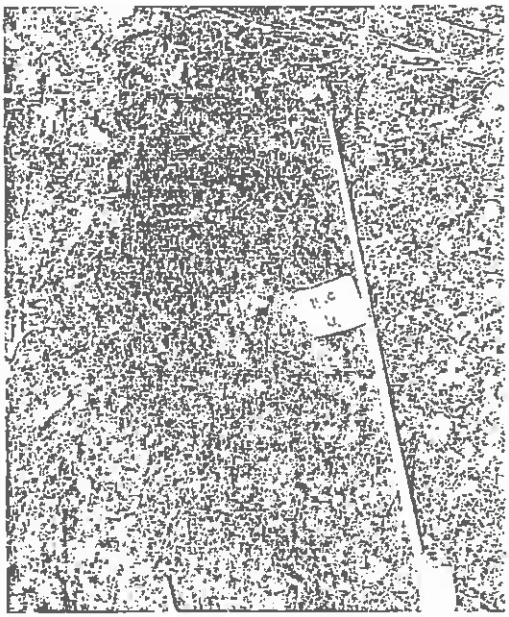
Wetland at Transect T-2, Sheet 7, Kelsey Section



Landscape Setting



T-2, Soil 11-9 w



T-2, Soil 11-9 u

16/17

Milkfield, NH mile 16-17

PROJECT TITLE: Granite Reliable Power TRANSECT: T-1 PLOT: 9-119-4

DELINEATOR(S): T.A. Peragallo, S. Hale DATE: 5-15-08

VEGETATION Stratum and Species (Dominants Only)		Dominance Ratio	Percent Dominance	NWI STATUS
TREES	TOT DBH			
PICEA RUBENS (RED SPRUCE)	32.5 (SQ INCH)	32.5/47.5	70%	FACU *
ABIES BALSAMEA (BALSAM FIR)	15.0	15.0/47.5	30%	FAC *
	47.5			
SAPLINGS	% COV			
ACER PENSYLVANICUM (STRIPED MAPLE)	7.5%	7.5/21	36%	FACU *
ACER RUBRUM (RED MAPLE)	5%	5/21	24%	FAC *
BETULA PAPYRIFERA (PAPER BIRCH)	7.5%	7.5/21	36%	FACU *
BETULA ALLEGHANIENSIS (YELLOW BIRCH)	1%	1/21	5%	FAC
	21			
SHRUBS				
0 —				
HERB				
SPHAGNUM MOSS	40%	40/52.5	76%	
ERYTHRONIUM AMERICANUM (TROUT LILY)	7.5%	7.5/52.5	14%	OBL *
DRYOPTERIS INTERMEDIA (EVERGREEN WOOD FERN)	5%	5/52.5	10%	FAC
	52.5			FACU

NOTE 1: Use asterisk * to indicate plants with observed adaptations to wetland hydrology. Plants recorded with asterisks should be considered as "other hydrophytes" in the tally below.

NOTE 2: Species with NA or NI status are reported, but are not calculated in the tally below.

OBL	FACW	FAC	*OTHER HYDROPHYTES	FAC-	FACU	UPL
1		2			3	

Hydrophytes SUBTOTAL: 3 NON-hydrophytes SUBTOTAL: 3

100 x Subtotal Hydrophytes / Subtotal Hydrophytes + Subtotal Non-hydrophytes = PERCENT HYDROPHYTES = 50%

HYDROLOGY
1. Hydrology is often the most difficult feature to observe.
2. Interpretation must consider the validity of the observation in light of the season, recent weather conditions, watershed alterations, etc.
3. Interpretation of hydrology may require repeated observations over more than one season.

☐ RECORDED DATA
Stream, lake or tidal gage Identification:
Aerial Photograph Identification:
Other Identification:

☐ NO RECORDED DATA

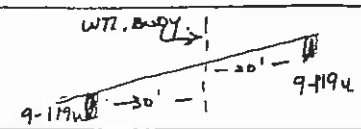
☐ OBSERVATIONS: N/A

Depth to Free Water:
Depth to Saturation (including capillary fringe):
Describe Altered Hydrology:

☐ Inundated ☐ Saturated in upper 12 Inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain)

9-19-U

SOIL	Sketch Landscape Position	
5-15-08		@ WF TAP 9-119

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES Color, Abundance, Size & Contrast	USDA Texture; and nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.
2-0"	Oe	—	—	Mpt, hemic material, woody AS
0-2"	A	7.5YR2/2	—	MVFSL, 1fgr, mufr AS
2-15"	Bw1	10YR3/4	15% 10YR4/4 @8"	VFSL 1f-m sbk, mfr GW
15-25"	Bw2	2.5Y4/3	5% 7.5YR5/4 15% 10YR 4/4	VFSL, massive, mfr CS
25"	Cd	5Y4/3	5% 10YR5/4 15% 5Y4/2	VFSL, massive, mfi in-situ 5% channers

developed in phyllitic parent material

HYDRIC SOIL INDICATOR(S): N/A

REFERENCE:

OPTIONAL SOIL DATA:

TAXONOMIC SUBGROUP:

SOIL DRAINAGE CLASS: SPD

DEPTH TO ACTIVE WATER TABLE: >25"

NTCHS HYDRIC SOIL CRITERION: N/A

REFERENCES:

CONCLUSIONS

	Yes	No
Greater than 50% Hydrophytes?	☒	☐
Hydric Soils Criterion Met?	☐	☒
Wetland Hydrology Met?	☐	☒

IS THIS DATAPOINT WITHIN A WETLAND?	Yes	No
	☐	☒

REMARKS:

PROJECT TITLE: GRANITE RELIABLE POWER TRANSECT: T-1 PLOT: 9-119 U

MILLSFIELD, NH

Millsfield, NH Mile 16-17

PROJECT TITLE: GRANITE RELIABLE POWER TRANSECT: T-1 PLOT: 9W

DELINEATOR(S): T.A. Perugello, S. Hale DATE: 5-15-08

VEGETATION

Stratum and Species (Dominants Only)	% Cover	Dominance Ratio	Percent Dominance	NWI STATUS
TREE - None				
SAPLINGS -				
ABIES BALSAMEA (BALSAM FIR)	45%	45/100	45%	FAC*
PICEA RUBENS (RED SPRUCE)	40%	40/100	40%	FACU*
ACER RUBRUM (RED MAPLE)	7.5%	7.5/100		FAC
BETULA PAPYRIFERA (PAPER BIRCH)	7.5%	7.5/100		FACU
	100			
SHRUB -				
VIBURNUM ALNIFOLIUM (WAYFARING)	10%	10/12.5	80%	FAC*
CORNUS AMOMUM (SILKY DOGWOOD)	2.5%	2.5/12.5	20%	FACW*
	12.5			
HERB -				
ERYTHRONIUM AMERICANUM (TROUT LILY)	5%	5/15	33.3%	FAC* (?)
DRYOPTERIS INTERMEDIA (EVERGREEN WOOD FERN)	5%	5/15	33.3%	FACU*
GOLDTHREAD (COPTIS GROENLANDICA, TRIFOLIA)	2.5%	2.5/15	16.6%	FACW
CORNUS CANADENSIS (BUNCHBERRY)	2.5%	2.5/15	16.6%	FACW
	15			FAC-

NOTE 1: Use asterisk * to indicate plants with observed adaptations to wetland hydrology. Plants recorded with asterisks should be considered as "other hydrophytes" in the tally below.

NOTE 2: Species with NA or NI status are reported, but are not calculated in the tally below.

OBL	FACW	FAC	*OTHER HYDROPHYTES	FAC-	FACU	UPL
		3			2	

Hydrophytes SUBTOTAL: 4 NON-hydrophytes SUBTOTAL: 2

$$\frac{100 \times \text{Subtotal Hydrophytes}}{\text{Subtotal Hydrophytes} + \text{Subtotal Non-hydrophytes}} = \text{PERCENT HYDROPHYTES} = 66\%$$

HYDROLOGY

1. Hydrology is often the most difficult feature to observe.
2. Interpretation must consider the validity of the observation in light of the season, recent weather conditions, watershed alterations, etc.
3. Interpretation of hydrology may require repeated observations over more than one season.

☐ RECORDED DATA
- Stream, lake or tidal gage — Identification:
- Aerial Photograph — Identification:
- Other — Identification:

☐ NO RECORDED DATA

☐ OBSERVATIONS:

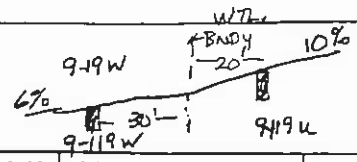
Depth to Free Water: 6"
Depth to Saturation (including capillary fringe): 0"
Describe Altered Hydrology: surface disturbance tree throw, logging

☐ Inundated ☑ Saturated in upper 12 inches ☑ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

T-1 9-119-W 1

SOIL	Sketch Landscape Position



5-15-08

@ WF #TAP 9-19

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES Color, Abundance, Size & Contrast	USDA Texture; and nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.
4-0"	Oi	—	—	Peat, fibric (sphagnum) AS
0-2"	A	2.5Y 3/1	—	MVFSL, 1fgr mufr AS
2-13"	Bw	5Y 3/2	20% 7.5YR 3/6 20% 5Y 4/2 & 5/1 @2"	VFSL, 1fsbk, mfr CW
13-24"	Cd	5Y 4/2	10% 5Y 4/1 20% 7.5YR 5/4	VFSL, massive, mfi in-situ

HYDRIC SOIL INDICATOR(S) _ REFERENCE: NEWPCC Ver. 3

Depleted matrix

OPTIONAL SOIL DATA: REFERENCES:

TAXONOMIC SUBGROUP :

SOIL DRAINAGE CLASS: PD

DEPTH TO ACTIVE WATER TABLE: 6"

NTCHS HYDRIC SOIL CRITERION: XI. A

CONCLUSIONS

	Yes	No
Greater than 50% Hydrophytes?	☒	☐
Hydric Soils Criterion Met?	☒	☐
Wetland Hydrology Met?	☒	☐

IS THIS DATAPOINT WITHIN A WETLAND?	Yes	No
	☒	☐

REMARKS:

PROJECT TITLE: GRANITE RELIABLE POWER TRANSECT: T-1 PLOT: 9-119 W

MILLSFIELD, NH

Mile 16-17

PROJECT TITLE: GRANITE RELIABLE POWER AILLS FIELD, NH TRANSECT: T-2 PLOT: 5-4-4

DELINEATOR(S): T. Peragallo, S. Hale DATE: 5-15-08

VEGETATION Stratum and Species (Dominants Only)		Dominance Ratio	Percent Dominance	NWI STATUS
TREES				
ACER RUBRUM (RED MAPLE)	TOT DBH (SQ INCH) 311	311/311	100	FAC *
SAPLINGS				
ABIES BALSAMEA (BALSAM FIR)	10%	11/27.5	36%	FAC *
PICEA RUBENS (RED SPRUCE)	7.5%	7.5/27.5	27%	FAC U *
BETULA LENTA (PRUNUS SEROTINA)	5%	5/27.5	18%	FAC U
ACER PENSYLVANICUM (STRIPED MAPLE)	5%	5/27.5	18%	FAC U
	27.5			
SHRUB				
VIBURNUM ALNIFOLIUM (HOBBLEBUSH)	30%	30/32.5	92%	FAC *
SILKY DOGWOOD (CORNUS AMOMUM)	2.5%	2.5/32.5	8%	FACW
	32.5			
HERB				
ERYTHRONIUM AMERICANUM (T. LILY)	30%	30/45	66%	FAC *
DRYOPTERIS NOVEBORACENSIS (E. GRAY'S FERN)	10%	10/45	22%	FAC U *
SPHAGNUM MOSS	5%	5/45	11%	OBL
	45			

NOTE 1: Use asterisk * to indicate plants with observed adaptations to wetland hydrology. Plants recorded with asterisks should be considered as "other hydrophytes" in the tally below.

NOTE 2: Species with NA or NI status are reported, but are not calculated in the tally below.

OBL	FACW	FAC	*OTHER HYDROPHYTES	FAC-	FACU	UPL
		4			2	

Hydrophytes SUBTOTAL: 4 NON-hydrophytes SUBTOTAL: 2

100 x Subtotal Hydrophytes / Subtotal Hydrophytes + Subtotal Non-hydrophytes = PERCENT HYDROPHYTES = 66%

HYDROLOGY

1. Hydrology is often the most difficult feature to observe.
2. Interpretation must consider the validity of the observation in light of the season, recent weather conditions, watershed alterations, etc.
3. Interpretation of hydrology may require repeated observations over more than one season.

☐ RECORDED DATA
Stream, lake or tidal gage Identification:
Aerial Photograph Identification:
Other Identification:

☐ NO RECORDED DATA

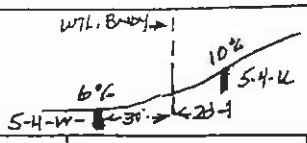
☐ OBSERVATIONS:

Depth to Free Water: >16"
Depth to Saturation (including capillary fringe): >16"
Describe Altered Hydrology

☐ Inundated ☐ Saturated in upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): N/A

mile 16-17
5-4-U

SOIL	Sketch Landscape Position		
5-15-08			@ WF TAP 5-4

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES Color, Abundance, Size & Contrast	USDA Texture; and nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.	
1-0"	Oe	–	–	mpt, hemic material	AS
0-2"	A	10YR 2/2	–	ifgr, mvfr, VFSL	AS
2-14"	Bw	2.5Y 4/3	10% 10YR 4/4 @ 6"	VFSL, 1msbk, mfr	CW
14-16"	Cd	5Y 4/3	10% 10YR 4/4 20% 2.5Y 3/4	VFSL, massive, mfi in-situ	

HYDRIC SOIL INDICATOR(S): N/A

REFERENCE:

OPTIONAL SOIL DATA:

TAXONOMIC SUBGROUP :

SOIL DRAINAGE CLASS: SPD

DEPTH TO ACTIVE WATER TABLE: >16"

NTCHS HYDRIC SOIL CRITERION: N/A

REFERENCES:

CONCLUSIONS

	Yes	No
Greater than 50% Hydrophytes?	☐	☐
Hydric Soils Criterion Met?	☐	☒
Wetland Hydrology Met?	☐	☒

IS THIS DATAPOINT WITHIN A WETLAND? Yes ☐ No ☐

REMARKS:

PROJECT TITLE:

TRANSECT: T-2

PLOT: 5-4-U

mile 16-17 16/17

PROJECT TITLE: GRANITE RELIABLE POWER MILLSFIELD, NH TRANSECT: T-2 PLOT: 5-4-WB

DELINEATOR(S): T. Peragallo, S. Hale DATE: 5-15-08

VEGETATION Stratum and Species (Dominants Only)	TOT DBH (inch)	Dominance Ratio	Percent Dominance	NWI STATUS
TREES				
ACER RUBRUM (RED MAPLE)	170	170/530	32%	FAC*
BETULA ALLEGHANIENSIS (YELLOW BIRCH)	275	275/530	52%	FACW*
BETULA PAPYRIFERA (PAPER BIRCH)	85	85/530	16%	FACU
	530			
SAPLINGS	% COV			
ABIES BALSAMEA (BALSAM FIR)	15%	15/28.5	53%	FAC*
PICEA RUBENS (RED SPRUCE)	5%	5/28.5	17.5%	FACU
ACER PENSYLVANICUM (STRIPED MAPLE)	7.5%	7.5/28.5	26%	FACU
PRUNUS SEROTINA (BLACK CHERRY)	1%	1/28.5	3%	FACU
	28.5			
SHRUB				
VIBURNUM ALNIFOLIUM (HOBBLEBUSH)	50%	50/50	100%	FAC*
HERB				
ERYTHRONIUM AMERICANUM (TROUT LILY)	25%	25/50	50%	FAC*
SPHAGNUM MOSS	10%	10/50	20%	OBL*
TRILLIUM UNDULATUM (PURPLE TRILLIUM)	5%	5/50	10%	FACU-
VERATRUM VIRIDE (FALSE HELLEBORE)	5%	5/50	10%	FACW+
DRYOPTERIS INTERMEDIA (EVERGREEN WOOD FERN)	5%	5/50	10%	FACU
	50			

NOTE 1: Use asterisk * to indicate plants with observed adaptations to wetland hydrology. Plants recorded with asterisks should be considered as "other hydrophytes" in the tally below.

NOTE 2: Species with NA or NI status are reported, but are not calculated in the tally below.

OBL	FACW	FAC	*OTHER HYDROPHYTES	FAC-	FACU	UPL
1		5				

Hydrophytes SUBTOTAL: 6 NON-hydrophytes SUBTOTAL: 0

100 x Subtotal Hydrophytes / Subtotal Hydrophytes + Subtotal Non-hydrophytes = PERCENT HYDROPHYTES = 100%

HYDROLOGY

1. Hydrology is often the most difficult feature to observe.
2. Interpretation must consider the validity of the observation in light of the season, recent weather conditions, watershed alterations, etc.
3. Interpretation of hydrology may require repeated observations over more than one season.

☐ RECORDED DATA
Stream, lake or tidal gage Identification:
Aerial Photograph Identification:
Other Identification:

☐ NO RECORDED DATA

☐ OBSERVATIONS:

Depth to Free Water: 7"
Depth to Saturation (including capillary fringe): 0"
Describe Altered Hydrology: Forestry, tree throw

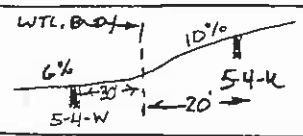
☐ Inundated ☒ Saturated in upper 12 inches ☒ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

☐ OTHER (explain):

5-4-W

SOIL | Sketch Landscape Position

5-15-08



@ WF TAP 5-4

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES Color, Abundance, Size & Contrast	USDA Texture; and nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.	
2-0"	Oe	—	—	mpt, hemic material	AS
0-2"	A	10YR 2/1	—	MVFSL, 1fgr, mvfr	AS
2-12"	Bw1	5Y 3/2	10% 5Y 5/1 30% 10YR 3/4 @ 2"	VFSL, 1fsbk, mfr	GW
12-16"	Bw2	5Y 4/3	10% 5Y 5/4 20% 5Y 4/2	CoSL, 10% fine gravel, massive mvfr	CW
16"	Cd	5Y 4/2	10% 5Y 3/4 10% 5Y 4/1	VFSL, massive, mfi in-situ	

HYDRIC SOIL INDICATOR(S) REFERENCE: NEIWPCC Version 3

Depleted matrix.

OPTIONAL SOIL DATA: REFERENCES:

TAXONOMIC SUBGROUP:

SOIL DRAINAGE CLASS: PD

DEPTH TO ACTIVE WATER TABLE: 7"

NTCHS HYDRIC SOIL CRITERION: XI A.

CONCLUSIONS

	Yes	No		Yes	No
Greater than 50% Hydrophytes?	☐	☐	IS THIS DATAPOINT WITHIN A WETLAND?	☐	☐
Hydric Soils Criterion Met?	☒	☐	REMARKS:		
Wetland Hydrology Met?	☒	☐			

PROJECT TITLE: GRANITE RELIABLE POWER TRANSECT: T-2 PLOT: 5-4-W

PROJECT TITLE: Phillips Brook TRANSECT: 1 PLOT: 2

DELINEATOR(S): Gregory W. Howard DATE: 6/10/08 mile 17-18

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Balsam Fir - Albies balsamea				FAC
Saplings				
Balsam Fir - Albies balsamea				FAC
Yellow Birch - Betula alleghaniensis				FAC
Shrubs				
Common Elderberry - Sambucus canadensis L.				FACW-
Herbaceous				
Trout Lily - Erythronium umbilicatum				FAC
False Helleboro - Veratrum viride Ait.				FACW+

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	2	4	

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): 0

PERCENT HYDROPHYTES (100A/A+B): 100%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification: _____
Other Identification: _____

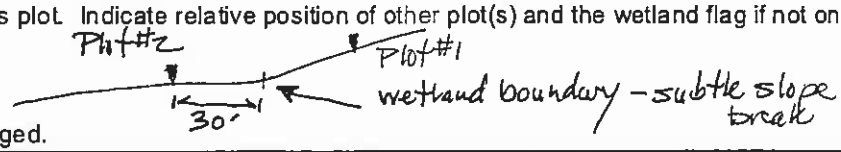
☑ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: At surface
Depth to Saturation (including capillary fringe): At surface
Altered Hydrology (explain): _____

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-1"	A	7.5YR 2.5/1		vfsl
1-3"	Bh	7.5YR 2.5/2		vfsl
3-6"	Bhs	7.5YR 3/3	C2d 7.5YR 4/2	fsl
6-9"	B1	7.5YR 4/3	C2d 7.5YR 4/2+3/3	vfsl
9-14"	B	10YR 4/3	C2d 10YR 5/2 + 4/4	vfsl
14"	R	Bedrock —	Phyllites	

HYDRIC SOIL INDICATOR(S): IX. C. 2.

REFERENCE(S): NEIWPCC "Field Indicators for Identifying Hydric Soils in New England." Version 3. April 2004

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Phillips Brook TRANSECT: 1 PLOT: 2

PROJECT TITLE: Phillips Brook TRANSECT: 1 PLOT: 1

DELINEATOR(S): Gregory W. Howard DATE: 6/10/08 mile 17-18

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Tree				
Balsam Fir - Albies balsamea				FAC
Sapling				
Yellow Birch - Betula alleghaniensis				FAC
Balsam Fir - Albies balsamea				FAC
Shrub				
Common Elderberry - Sambucus canadensis L.				FACW-
Hobblebush - Viburnum lantanoides				FAC
Herbaceous				
Trout Lily - Erythronium umbilicatum				FAC
Canada Mayflower - Maianthemum canadense				FAC-

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	5	

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL
1		

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 85%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

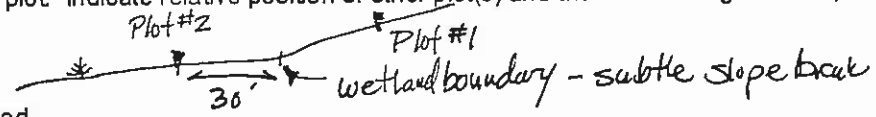
☑ NO RECORDED DATA

☑ OBSERVATIONS:
- Depth to Free Water: 10 inches below grade
- Depth to Saturation (including capillary fringe): 5 inches below grade
- Altered Hydrology (explain): _____

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2"	A	7.5YR 2.5/1		fsl
2-4"	Bh	7.5YR 2.5/2		fsl
4-7"	Bhs	7.5YR 3/2		fsl
7-9"	Bs	7.5YR 3/4		lfs
9-12"	B	7.5YR 4/3	C1f 7.5YR 4/4 + 4/2	lfs
12"+	BC	10YR 4/3	C2 d 10YR 5/2 + 7.5YR 4/4	lfs

HYDRIC SOIL INDICATOR(S): None

REFERENCE(S): NEIWPCC "Field Indicators for Identifying Hydric Soils in New England" Version 3 April 2004

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☐	☑	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	Soils are not hydric. Dark parent materials derived from Phyllites

PROJECT TITLE: Phillips Brook TRANSECT: 1 PLOT: 1

PROJECT TITLE: Phillips Brook TRANSECT: 2 PLOT: 1

DELINEATOR(S): Gregory W. Howard DATE: 6/10/08 mile 17-18

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Balsam Fir - Abies balsamea				FAC
Red Spruce - Picea rubens Sarg.				FACU
Saplings				
Balsam Fir - Abies balsamea				FAC
Yellow Birch - Betula alleghaniensis				FAC
Shrubs				
Hobblebush - Viburnum lantanoides				FAC
Herbaceous				
Canada Mayflower - Maianthemum canadense				FAC-
Trout Lily - Erythronium umbilicatum				FAC

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		5	

NON-HYDROPHYTES

FAC-	FACU	UPL
1	1	

Hydrophytes Subtotal (A): 5

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 71%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification: _____
Other Identification: _____

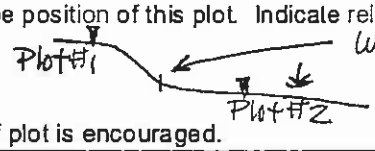
☑ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: Greater than 16 inches below grade
Depth to Saturation (including capillary fringe): 14 inches below grade surface
Altered Hydrology (explain): _____

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2"	A	7.5YR 2.5/1		vfsl
2-3"	E	7.5YR 4/1		vfsl
3-6"	Bh	7.5YR 3/2		vfsl
6-9"	Bhs	7.5YR 3/4		vfsl
9-13"	BC	10YR 3/4	czd 10YR 4/3	vfsl
13-22"	C	2.5Y 4/3	czd 2.5Y 4/2 + 10YR 4/4	vfsl

HYDRIC SOIL INDICATOR(S): None - Cryic soil temperature regime

REFERENCE(S): NEIWPCC "Field Indicators for Identifying Hydric Soils in New England" Version 3. April 2004

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☐	☑	Parent material derived from Phyllites
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	Dark parent materials, cryic regime and lack of hydology make non-wetland.

PROJECT TITLE: Phillips Brook TRANSECT: 1 PLOT: 1

17/18

PROJECT TITLE: Phillips Brook TRANSECT: 2 PLOT: 2

DELINEATOR(S): Gregory W. Howard DATE: 6/10/08 mile 17-18

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Balsam Fir - Abies balsamea				FAC
Saplings				
Balsam Fir - Abies balsamea				FAC
Yellow Birch - Betula Alleghaniensis				FAC
Herbaceous				
Trout Lily - Erythronium umbilicatum				FAC
Canada Mayflower - Maianthemum canadense				FAC-
Cinnamon Fern - Osmunda cinnamonea				FACW
Painted Trillium - Trillium undulatum				FACU

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	4	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
1	1	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 71%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification: _____
Other Identification: _____

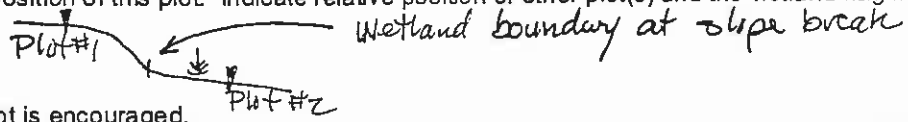
☑ NO RECORDED DATA

☐ OBSERVATIONS:
Depth to Free Water: 6 inches below grade
Depth to Saturation (including capillary fringe): At surface
Altered Hydrology (explain): _____

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-2"	A	7.5YR 2.5/1		vfsl
2-3"	E	7.5YR 5/1		vfsl
3-6"	Bh	7.5YR 2.5/3		vfsl
6-8"	Bhs	7.5YR 3/4	czd 7.5YR 4/3 + 4/2	vfsl
8-13"	BC	10YR 3/4	czd 10YR 4/2	vfsl
13-22"	C	2.5Y 4/3	czd 2.5Y 4/2 + 10YR 4/3	vfsl

HYDRIC SOIL INDICATOR(S): IX.A.2.

REFERENCE(S): NEIWPCC "Field Indicators for Identifying Hydric Soils in New England", Version 3. April 2004

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Phillips Brook TRANSECT: 2 PLOT: 2

PROJECT TITLE: Noble Power - Phillips B/C Fish Smoke Road TRANSECT: A PLOT: A-2

DELINEATOR(S): R.H. Keith, LWS, PWC DATE: 5/21/08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Yellow Birch (Betula alleganiensis)	7/44	16		FAC
White Birch (Betula papyrifera)	1/44	2		FACU
Balsam fir (Abies balsamea)	3/44	7		FAC
Red maple (Acer rubrum)	1/44	2		FAC
Red spruce (Picea rubens)	3/44	7		FACU
Saplings/shrubs				
Balsam fir (Abies balsamea)	12/44	27		FAC
Hobblebush (Viburnum lantanoides)	17/44	39		FAC
Groundcover (*)				
Sphagnum moss (Sphagnum plustre)		20%		OBL
Touch-me-not (Impatiens capensis)		20%		FACW
Other groundcover not identified AT BEGINNING OF GROWING SEASON.		30%		

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	1	5	

Hydrophytes Subtotal (A): 7

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 77.7%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification:
- Aerial photography — Identification:
- Other — Identification:

☒ NO RECORDED DATA

☒ OBSERVATIONS: (*)

Depth to Free Water: SURFACE - 30% STANDING WATER WITHIN GROUNDCOVER STRATUM.

Depth to Saturation (including capillary fringe): SURFACE

Altered Hydrology (explain): N/A

☒ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

☐ OTHER (explain):

Plot: A-2 Pg 2

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

See Shot 64 Fish Brook Road

Submission of photo of plot is encouraged. by: B. H. Keith CWS 5/21/08

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1"-0	matted	grass / leaves		
0-6	A_1	2.5Y 3/1 Very Dk Gray		Sandy loam - saturated
6-13	A_2	2.5Y 2.5/1 Black		Organic muck - saturated
13-20"+	B	5Y 3/1 Very Dark Gray		Sandy loam - saturated

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Low Soil Chroma & observed saturation - beginning of growing season

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

CENAE-CO-R-FT Version 7/1/00 Page 2

PROJECT TITLE: [illegible] TRANSECT: [illegible] PLOT: A-2

PROJECT TITLE: NOBLE POWER-PHILLIPS BK FISH BK ROAD TRANSECT: A PLOT: A-1

DELINEATOR(S): B. H. Kerth, CWS, PWS DATE: 5/21/08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Sugar maple (Acer saccharum)	7/129	5		FACU-
Am. Beech (Fagus grandifolia)	1/129	1		FACU
Yellow Birch (Betula alleghaniensis)	10/129	8		FAC
Striped Maple (Acer pensylvanicum)	6/129	5		FACU
Red Spruce (Picea rubens)	2/129	1.5		FACU
Shrubs/Saplings				
Balsam fir (Abies balsamea)	10/129	8		FAC
Red Spruce (Picea rubens)	3/129	2		FACU
Striped maple (Acer pensylvanicum)	8/129	6		FACU
Am. Beech (Fagus grandifolia)	3/129	2		FACU
Sugar maple (Acer saccharum)	32/129	25		FACU-
Hobblebush (Viburnum lantanoides)	30/129	23		FAC
Groundcover				
Red Trillium (Trillium erectum)	2/129	1.5		FACU-
Trout lily (Erythronium americanum)	15/129	12		FAC
Other species not identifable in beginning of growing season.				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	

NON-HYDROPHYTES

FAC-	FACU	UPL
	9	

Hydrophytes Subtotal (A): 4

Non-hydrophytes Subtotal (B): 9

PERCENT HYDROPHYTES (100A/A+B): 30.8%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☒ NO RECORDED DATA

☒ OBSERVATIONS:
- Depth to Free Water: None
- Depth to Saturation (including capillary fringe): None
- Altered Hydrology (explain): N/A

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

Plot: A-1 PG 2

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

See sht. 64 - Fish Brook Road

Submission of photo of plot is encouraged. by: B. H. Keith, CWS

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1"-0	leaves/duff			
0-10"	A_1	2.5Y 4/4 Olive Br.	None	Sandy loam
10-13	A_2	2.5Y 3/3 Pk. Olive Br	None	Sandy loam
13"	Albic	7.5YR 5/1		Albic layer
13-17	B	2.5Y 4/4 Olive Br.	None	Sandy loam Refusal - Boulders/stones

HYDRIC SOIL INDICATOR(S): None

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

CENAE-COR-PT Version 7/1/00 Page 2

PROJECT TITLE: North Power - Phillips Bk. TRANSECT: A PLOT: A-1

Fish Brook 081

PROJECT TITLE: Noble Power - Phillips B/c FISH BROOK ROAD TRANSECT: A PLOT: A-2

DELINEATOR(S): B.H. KEITH, LWS, PWS DATE: 5/21/08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Yellow Birch (Betula alleganiensis)	7/44	16		FAC
White Birch (Betula papyrifera)	1/44	2		FACU
Balsam fir (Abies balsamea)	3/44	7		FAC
Red maple (Acer rubrum)	1/44	2		FAC
Red spruce (Picea rubens)	3/44	7		FACU
Saplings/shrubs				
Balsam fir (Abies balsamea)	12/44	27		FAC
Hobblebush (Viburnum lantanoides)	17/44	39		FAC
Groundcover (*)				
Sphagnum moss (Sphagnum palustre)		20%		OBL
Touch-me-not (Impatiens carpensis)		20%		FACW
Other groundcover not identified - AT BEGINNING OF GROWING SEASON.		30%		

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	1	5	

Hydrophytes Subtotal (A): 7

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 77.7%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: ____
- Aerial photography Identification: ____
- Other Identification: ____

☒ NO RECORDED DATA

☒ OBSERVATIONS: (*)

Depth to Free Water: SURFACE - 30% STANDING WATER WITHIN GROUNDCOVER STRATUM.

Depth to Saturation (including capillary fringe): SURFACE

Altered Hydrology (explain): N/A

☒ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

☐ OTHER (explain):

Plot: A-2 Pg 2

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

See Shot 64 Fish Brook Road

Submission of photo of plot is encouraged. by: B. H. Keith CWS 5/21/08

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1"-0	matted	grass / leaves		
0-6	A_1	2.5Y3/1 Very DK GRAY		Sandy loam - saturated
6-13	A_2	2.5Y2.5/1 Black		Organic muck - saturated
13-20"+	B	5Y3/1 Very Dark Gray		Sandy loam - saturated

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Low Soil Chroma + observed saturation - beginning of growing season

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: N. Bk Power Phillips Blk TRANSECT: A PLOT: A-2

PROJECT TITLE: NOB/c Power-Phillips B/c Fish B/c Road TRANSECT: A PLOT: A-1

DELINEATOR(S): B. H. Kurtz, CWS, PWS DATE: 5/21/18

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Sugar maple (Acer saccharum)	7/129	5		FACU-
Am. Beech (Fagus grandifolia)	1/129	1		FACU
Yellow Birch (Betula alleghaniensis)	10/129	8		FAC
Striped maple (Acer pensylvanicum)	6/129	5		FACU
Red Spruce (Picea rubens)	2/129	1.5		FACU
Shrubs/Saplings				
Balsam fir (Abies balsamea)	10/129	8		FAC
Red spruce (Picea rubens)	3/129	2		FACU
Striped maple (Acer pensylvanicum)	8/129	6		FACU
Am. Beech (Fagus grandifolia)	3/129	2		FACU
Sugar maple (Acer saccharum)	32/129	25		FACU-
Hobblebush (Viburnum lantanoides)	30/129	23		FAC
Groundcover				
Red Trillium (Trillium erectum)	2/129	1.5		FACU-
Trout lily (Erythronium americanum)	15/129	12		FAC
Other species not identifiable in beginning of growing season.				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		4	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
	9	

Non-hydrophytes Subtotal (B): 9

PERCENT HYDROPHYTES (100A/A+B): 30.8 %

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: _____
- Aerial photography — Identification: _____
- Other — Identification: _____

☒ NO RECORDED DATA

☒ OBSERVATIONS:
- Depth to Free Water: None
- Depth to Saturation (including capillary fringe): None
- Altered Hydrology (explain): N/A

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

Plot: A-1 PS 2

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

See sht. 64 - Fish Brook Road

Submission of photo of plot is encouraged. by: B. H. Keith, CWS

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1" - 0	leaves / duff			
0 - 10"	A1	2.5Y 4/4 olive Br.	None	sandy loam
10-13	A2	2.5Y 3/3 pk. olive Br	None	sandy loam
13"	Albic	7.5YR 5/1		Albic layer
13-17	B	2.5Y 4/4 olive Br.	None	sandy loam refusal - boulders/stones

HYDRIC SOIL INDICATOR(S): None

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: Noble Power - Phillips Bk. TRANSECT: A PLOT: A-1

Fish Bk ROAD

PROJECT TITLE: PHILLIPS BROOK WIND PROJECT TRANSECT: B PLOT: DA B-2

DELINEATOR(S): DAVID J. ALLAIN, CSS, CWS DATE: 5/21/08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
GROUND COVER				
SEDGES (CYPERACEAE)*		60%+/-		
NON descript HERBACEOUS growth* (TOO EARLY IN GROWING SEASON TO ID)		35%+/-		
BLUETS (HOUSTONIA CAERULEA)		5%+/-		
TREES / SHRUBS				
WILLOW (SALIX SPP) 3 PLANTS 18"+/- high				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		60%	

Hydrophytes Subtotal (A): ___

NON-HYDROPHYTES

FAC-	FACU	UPL
	5%	

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 60% (OR MORE POSSIBLE)

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: ___
Aerial photography Identification: ___
Other Identification: ___

☒ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: ___
Depth to Saturation (including capillary fringe): ___
Altered Hydrology (explain): LANDING AREA (LOGGING) EXCAVATED / REGRADED

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☒ OTHER (explain): LOW CHROMA MATRIX

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

SEE SHEET 60 FOR LOCATION

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-16"	Ap	10YR3/3	NONE	SANDY LOAM

HYDRIC SOIL INDICATOR(S): NONE

REFERENCE(S):

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S):

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: Phillips Brook Power Project TRANSECT: B PLOT: D1-B

PROJECT TITLE: PHILLIPS BROOK WIND Project TRANSECT: B PLOT: DAB-1

DELINEATOR(S): FISH & W. ROAD DAVID J. ALLAIN CWS CSS DATE: 5/21/08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
SHRUBS				
RED RASPBERRY (RUBUS IDAEUS)		95%		
NO TREES				
GROUNDCOVER NOT IDENTIFIED TOO EARLY IN SEASON		5%		

HYDROPHYTES

___ OBL ___ FACW ___ FAC ___ *OTHER

Hydrophytes Subtotal (A): ___

NON-HYDROPHYTES

___ FAC- ___ FACU 95% UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 0%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: ___
- Aerial photography Identification: ___
- Other Identification: ___

☒ NO RECORDED DATA

☒ OBSERVATIONS:

Depth to Free Water: NONE OBSERVED

Depth to Saturation (including capillary fringe): NONE OBSERVED

Altered Hydrology (explain): ___

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): ___

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

SEE SHEET 60 FOR LOCATION

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-16"	Ap	10YR3/3	NONE	SANDY LOAM

HYDRIC SOIL INDICATOR(S): NONE

REFERENCE(S):

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S):

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: Phillips Brook Power Project TRANSECT: 3 EXT. UA-B-1

BETWEEN WET FLAGS MJ 76-1 AND MJ 76-15

PROJECT TITLE: PHILLIPS BROOK WIND POWER TRANSECT: 3 PLOT: 1
FISH BROOK STRING ROAD A @ PROPOSED ℄ STATION 63+00 to 64+00±
DELINEATOR(S): MARC JACOBS DATE: 06/13/08 LAT/LON N44° 44.5404 W71° 17.0052

VEGETATION

Stratum and Species		Dominance Ratio	Percent Dominance	DOM	NWI Status
HERB					
Bunchberry	Cornus canadensis	63/96	66	✓	FAC-
Canada mayflower	Maianthemum canadense	10.5/96	11		FAC-
Mountain ash	Sorbus americana	10.5/96	11		FACU
Yellow Clintonia	Clintonia borealis	3/96	3		FAC
Wood fern	Dryopteris spinulosa	3/96	3		FACU
Birch	Betula papyrifera	3/96	3		FACU
Raspberry	Rubus spp.	3/96	3		
SHRUB					
Balsam fir	Abies balsamea	63/63	100	✓	FAC
SAP/TREE/LIANA	Absent				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		1	

Hydrophytes Subtotal (A): 1

NON-HYDROPHYTES

FAC-	FACU	UPL
1		

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 50%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☑ NO RECORDED DATA

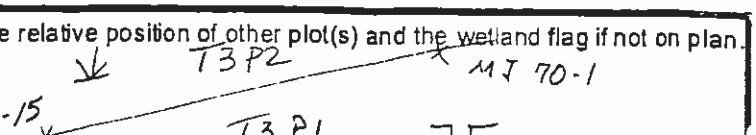
☐ OBSERVATIONS:
Depth to Free Water: 16.0"
Depth to Saturation (including capillary fringe): 12.0"
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

FISHBROOK STRING

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
+2	Oi	–	–	—
0"	E	10YR7/1	—	fsl
1"	Bh	7.5YR2.5/1	—	fsl
3"	Bhs	7.5YR 3/3	common coarse 7.5YR 6/1 common fine 7.5Y 5/3	fsl
17"	Bs	7.5YR 4/4	common fine 7.5YR 4/6	fsl - firm in place
22"				terminated, no refusal

HYDRIC SOIL INDICATOR(S): IX. B

REFERENCE(S): VERSION 3 NE INDICATORS

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	50/50
Hydric soils criterion met?	☑	☐	technically
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

PROJECT TITLE: PHILLIPS BROOK WIND PROJECT EISMBROOK STRING - ROAD A MILLSFIELD, NH TRANSECT: 3 PLOT: 1

TRANSECT BISECTS LINE BETWEEN WET FLAGS MJ 76-1 AND MJ76

PROJECT TITLE: PHILIPS BROOK WIND POWER TRANSECT: 3 PLOT: 2
FISH BROOK STRING ROAD A @ PROPOSED ℄ STATION 63+00 to 64+00 ±
DELINEATOR(S): MHRC JACOBS DATE: 06/13/08 LAT/LON N 44° 44' 5404 W 71° 17' 0052

VEGETATION	Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
HERB					
Spinulose wood fern	Dryopteris spinulosa	20.5/91	23	✓	FAC+
Sphagnum moss	Shagnum spp.	20.5/91	23	✓	OBL
Yellow clintonia	Clintonea borealis	3/91	3		FAC
Bunchberry	Cornus cana densis	3/91	3		FAC-
Goldenrod spp.	Solidago spp.	3/91	3		FAC assumed
Paper birch	Betula papyrifera	Trace	T		FACU
Mountain ash	Sarbus americana	3/91	3		FACU
Sedge spp.	Carex spp.	Trace	T		FAC assumed
Wood sorrel	Oxalis spp.	Trace	T		FAC assumed
Broad beech fern	Thelypteris hexagonoptera	Trace	T		FAC
Massachusetts fern	Thelypteris simulata	38/91	42	✓	FACW
SHRUB					
Balsam fir	Abies balsamea	63/63	100	✓	FAC
SAP/TREE/LIANA	Absent				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	1	11	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
0	0	0

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

☐ OBSERVATIONS:
- Depth to Free Water: 0.0"
- Depth to Saturation (including capillary fringe): 0.0"
- Altered Hydrology (explain): ___

☑ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): inundated nearby

CENAE-CO-H-PT Version 7/1/00 Page 1

FISHBROOK STRING

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Alt T3 P1

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
+2"	Oi			fibric
0"	A	2.5Y 2.5/1	—	fsl
1"	Bg	2.5Y 4/1	—	fsl
2.5"	Bg2	2.5Y 5/2	few fine 2.5Y 5/1	fsl
4"	C	2.5Y 4/3	common fine 2.5Y 5/6 common fine 2.5Y 5/1	fsl
14"	R			terminated, refusal

HYDRIC SOIL INDICATOR(S): VI.

REFERENCE(S): NE INDICATORS VERSION 3

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class: Poor
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S): SSSNNE SITE-SPEC SOIL MAPPING STD'S

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☑	☐
Hydric soils criterion met?	☑	☐
Wetland hydrology criterion met?	☑	☐
IS THIS DATAPOINT IN A WETLAND?	☑	☐

REMARKS: PLOT CENTERS AND SOIL OBSERVATION NOTES MARKED WITH RED & WHITE STRIPED FLAGS

PROJECT TITLE: PHILIPS BROOK WIND PROJECT FISH BROOK ROAD & COOS CTY, NH TRANSECT: 3 PLOT: 2

WETLAND FLAG LINE MJ70 NEAR 70-1

PROJECT TITLE: PHILIPS BROOK WIND POWER TRANSECT: FOUR PLOT: ONE
FISHBROOK STRING ROAD A NEAR PROPOSED & STATION 20+00 to 21+00±
DELINEATOR(S): MARC JACOBS DATE: 06/13/08 LAT/LON N44° 44.0720' W71° 16.6761

VEGETATION	Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
HERB					
False Hellebore	Veratrum Neride	38/105.5	36	✓	FACW+
Sensitive fern	Onoclea sensibilis	38/105.5	36	✓	FACW
Goldenrod	Solidago spp.	20.5/105.5	19		FAC assumed
Grass-leaved goldenrod	Solidago graminifolia	3/105.5	3		N/L
Solomon seal	Polygonatum biflorum	3/105.5	3		FACU
SHRUB					
Hazelnut	Corylus spp.	10.5/27	39	✓	FACU-
Elderberry	Sambucus canadensis	10.5/27	39	✓	FACW-
Sugar maple	Acer saccharum	3/27	11		FACU-
Balsam fir	Abies balsamea	3/27	11		FAC
Moose wood	Acer pensylvanicum	Trace	T		FACU
Hobble bush	Viburnum lantanades	Trace	T		FAC
SAP/TREE/LIANA	Absent				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	///		

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
	/	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 75%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☑ NO RECORDED DATA

☐ OBSERVATIONS:
Depth to Free Water: 0.0"
Depth to Saturation (including capillary fringe): 0.0"
Altered Hydrology (explain): some minor rutting

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

FISHBROOK STRING

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T4P1 ↓ ↓ T4P2

Submission of photo of plot is encouraged. WET FLAG MJ70-1

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
+1.5"	Oe			
0"	A	2.5Y2.5/1	N/A	loam
4"	B	2.5Y 3/3	N/A	fsl
22"				terminated, no refusal

HYDRIC SOIL INDICATOR(S):

REFERENCE(S): NE INDICATORS VERSION 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☑	☐
Hydric soils criterion met?	☐	☑
Wetland hydrology criterion met?	☑	☐
IS THIS DATAPOINT IN A WETLAND?	☐	☑

REMARKS: ENTIRE TROUGH DOMINATED BY HYDROPHYTES TO FIRST BREAK IN TOPO HELLEBORE FREQUENTLY FOUND IN NON-HYDRIC SOILS ELSEWHERE ON SITE

PROJECT TITLE: PHILLIPS BROOK WIND TRANSECT: 4 PLOT: 1

MILLSFIELD, NH

WETLAND FLAG LINE MJ70 - NEAR 70-1 FISH BROOK

PROJECT TITLE: PHILIPS BROOK WIND POWER TRANSECT: FOUR PLOT: TWO
FISH BROOK STRING ROAD A PROPOSED ℄ STATION 20+00 to 21+00 ±
DELINEATOR(S): MARC JACOBS DATE: 06/03/08 LAT/LON N 44° 44.072 W 71° 16.1671

VEGETATION	Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
HERB					
False hellebore	Veratrum veride	20.5/68	30	✓	FACW+
Goldenrod spp.	Solidago spp.	20.5/68	30	✓	FAC assumed
Grass-leaved goldenrod	Solidago graminifolia	10.5/68	15		N/L
fern spp.	Athyrium spp.	10.5/68	15		FAC
Grass spp	Graminae spp.	10.5/68	15		FAC assumed
Interupted fern	Osmunda claytoniana	3/68	4		FAC
Sarsaparilla	Aralia nudicaulis	Trace	T		FACU
Sugar maple	Acer saccharum	Trace	T		FACU-
Fringe sedge	Carex crinita	Trace	T		OBL
SHRUB					
Balsam fir	Abies balsamea	10.5/16.5	64	✓	FAC
Hobble bush	Viburnum lantanoides	3/16.5	18		FAC
Moosewood	Acer pensylvanicum	3/16.5	18		FACU
Raspberry	Rubus spp.	Trace	T		FAC assumed
Beech	Fagus grandifolia	Trace	T		FACU

SHP TREE LIANA Absent

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	11	

NON-HYDROPHYTES

FAC-	FACU	UPL
0	0	0

Hydrophytes Subtotal (A): 3 Non-hydrophytes Subtotal (B): 0

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☑ NO RECORDED DATA

☐ OBSERVATIONS:
Depth to Free Water: 0.0"
Depth to Saturation (including capillary fringe): 0.0"
Altered Hydrology (explain): MINOR RUTS

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

CENAE-CO-R-PT Version 7/1/00 Page 1

FISHBROOK STRING

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

see TH P1

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0"	A	2.5Y 2.5/1	–	–
5"	B	2.5Y 3/3	few fine 2.5Y 5/6 few coarse 2.5Y 5/2	
24"				terminated, no refusal

HYDRIC SOIL INDICATOR(S): XII.

REFERENCE(S): N.E INDICATORS VERSION 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☑	☐
Hydric soils criterion met?	☑	☐
Wetland hydrology criterion met?	☑	☐
IS THIS DATAPOINT IN A WETLAND?	☐	☐

REMARKS: MOTTLES INCREASE SLIGHTLY W/ DEPTH

PLOT CENTER AND SOIL OBSERVATION HOLES MARKED WITH RED & WHITE STRIPED FLAGS

PROJECT TITLE: PHILIPS BROOK WIND PROJECT COOS COUNTY, NH TRANSECT: 1 PLOT: 2

Relsey Relsey
UPLAND

PROJECT TITLE: TRANSECT: PLOT: T-1 688-64

DELINEATOR(S): Peragallo / Hale DATE: 5-28-08

VEGETATION Stratum and Species		Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES	Basal Area				
Balsam Fir (Abies balsamea)	1150 sq in.	1150/1440	80%	✓	FAC
Red Spruce (Picea rubens)	250 sq in.	250/1440	17%		FACU
Paper Birch (Betula papyrifera)	40 sq in.	40/1440	3%		FACU
SAPLINGS	% Cover				
Balsam Fir	80%	80/112.5	71%	✓	FAC
Red Spruce	30%	30/112.5	27%	✓	FACU
Paper Birch	2.5%	2.5/112.5	2%		FACU
SHRUBS					
Balsam Fir	20%	20/40	50%	✓	FAC
Red Spruce	20%	20/40	50%	✓	FACU
HERB / MOSS					
Sphagnum	45%	45/57.5	78%	✓	OBL
Goldthread (Coptis trifolia)	10%	10/57.5	17%		FACW
Bunch Berry (Cornus canadensis)	2.5%	2.5/57.5	5%		FAC —

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1		3	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 66%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: _____
- Aerial photography — Identification: _____
- Other — Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:
- Depth to Free Water: NONE
- Depth to Saturation (including capillary fringe): _____
- Altered Hydrology (explain): _____

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

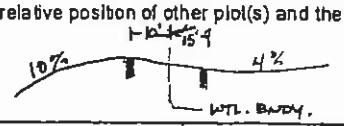
☐ OTHER (explain): NONE

CENAE-CO-R-PT Version 7/1/00 Page 1

UPL.

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T-2 38-6u



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)	
3-0"	Oe	7.5YR 5/2	—	hemic material - woody (mpt)	CS
0-2"	Oa	10YR2/1	—	sapric material (muck) massive, mfr	CS
2-5"	E	5Y 4/1	None	VFSL, massive → 1Cpl mfr/mfi in-situ	
5"	R granite	Bedrock			

HYDRIC SOIL INDICATOR(S): N/A

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup: Lithic Haplorthods
Soil drainage class: excessively (shallow to bedrock)
Depth to active water table: N/A
NTCHS hydric soil criterion: N/A

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: SHEET B (KELSEY) NH Reliable Power, Millsfield, NH TRANSECT: T-1 PLOT: 38-6 U

Near Station 145+00

upland

Nelsey Nelsey

WETLAND

PROJECT TITLE: TRANSECT: T-1 PLOT: BB-6WE

DELINEATOR(S): Petracallo/Hale DATE: 5-28-02

VEGETATION

Stratum and Species		Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES	Basal Area				
Balsam Fir (Abies balsamea) -	1462 sq. in.	1462/1709	86%	✓	FAC
Red Spruce (Picea rubens) -	247 sq in	247/1709	14%		FACU
SAPLINGS	% Cover				
Balsam Fir	30%	30/32.5	92%	✓	FAC
Paper Birch (Betula papyrifera)	2.5%	2.5/32.5	8%		FACU
SHRUBS					
Balsam Fir	25%	25/30	83%	✓	FAC
Red Spruce	5%	5/30	17%		FACU
HERB/MOSS					
Sphagnum	95%	95/116	82%	✓	OBL
Goldthread (Coptis trifolia)	20%	20/116	17%		FACW
Bunchberry (Cornus canadensis)	1%	1/116	1%		FAC-
[Unidentified Fern	15%]				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1		3	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): 0

PERCENT HYDROPHYTES (100A/A+B): 100%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: /
Aerial photography Identification:
Other Identification:

☑ NO RECORDED DATA

☑ OBSERVATIONS:
Depth to Free Water: 6"
Depth to Saturation (including capillary fringe): 0"
Altered Hydrology (explain): /

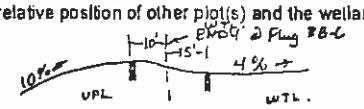
☐ Inundated ☑ Saturated in upper 12" ☑ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

WTL.

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

T-1 38-6 W



T-1 38-6W

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
5-3"	Oi	10YR 3/3	10YR 3/3	fibric material (peat from Sphagnum) S
3-0"	Oe	10YR 2/2	10YR 2/2	hemic material (mucky peat) CS
0-4"	Oa	10YR 2/1	10YR 2/1	sapric material (muck) CW massive, mfr
4-6"	Eg	2.5Y 3/1	10% 10YR 3/2	VFSL, massive, mfr CW
6-13"	Bhs	7.5YR 2.5/2	yes, some cementation	VFSL, massive, mfr –
13"	R granite	bedrock		

HYDRIC SOIL INDICATOR(S): REFERENCE(S):

Dark surface, redox in E, redox and some ortstein formation within 10"

IX A.1. (NE1WPCC) Ver. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup: Lithic Cryaquods
Soil drainage class: Poorly drained
Depth to active water table: 6" (Sat. to surface)
NTCHS hydric soil criterion: YES

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

CENAE-COR-PT Version 7/100 Page 2

PROJECT TITLE: SHEET 8 (Kelsey) NH Reliable Power, Millsfield, NH TRANSECT: T-1 PLOT: 38-6 W

Near station 145+00 Transect 2 wetland flag # 38-6 wetland

Upland KYLSEY

PROJECT TITLE: TRANSECT: T-2 PLOT: 11-9-U

DELINEATOR(S): PERACCHIO/HULE DATE: 5-28-08

VEGETATION

Stratum and Species		Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES	BASAL AREA				
BALSAM FIR (ABIES BALSAMEA)	990 SQ IN.	990/1135	87%	✓	FAC
RED SPRUCE (PICEA RUBENS)	95 SQ IN.	95/1135	8%		FACU
PAPER BIRCH (BETULA PAPYRIFERA)	50 SQ IN	50/1135	5%		FACU
SAPLINGS	% COVER				
BALSAM FIR	50%	50/51	98%	✓	FAC
PAPER BIRCH	1%	1/51	2%		FACU
SHRUBS					
BALSAM FIR	25%	25/35	71%	✓	FAC
HOBBLEBUSH (VIBURNUM LANTANOIDES)	10%	10/35	29%		FAC
HERB/MOSS					
SPHAGNUM	10%	10/15	66%	✓	OBL
GOLDTHREAD (COPTIS TRIFOLIA)	5%	5/15	33%	✓	FACW

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	1	3	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

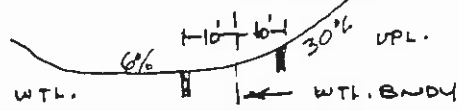
☑ OBSERVATIONS:
- Depth to Free Water: >22"
- Depth to Saturation (including capillary fringe): N/A
- Altered Hydrology (explain): ___

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): N/A

UPL.

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)	
2-0	Oi	10YR3/3	—	hemic material (mpt)	CS
0-4	Oa	10YR2/1	—	sapric material (muck) massive, mrfr	CW
4-5	E	5Y 4/1, 5/1	NONE	VFSL, massive, mrfr	JB
5-22	Bw	10YR3/3	10% 10YR3/4 @ 21"	VFSL, 1msbk, mfr	—

HYDRIC SOIL INDICATOR(S): N/A

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup: Aquic Haplocryods
Soil drainage class: Moderately well drained
Depth to active water table: > 22" (sat. @ 20")
NTCHS hydric soil criterion: NO

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

CENAE-COR-PT Version 7/1/00 Page 2

PROJECT TITLE: SHEET 7 Kelsey NH Reliable Power, Millsfield, NH TRANSECT: T-2 PLOT: 11-9-U

Near station 138+00

upland

WETLAND [illegible]

PROJECT TITLE: TRANSECT: T-2 PLOT: 11-9-W

DELINEATOR(S): PETRAGALLO / HALE DATE: 5-28-08

VEGETATION Stratum and Species		Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES	BASAL AREA				
BALSAM FIR (ABIES BALSAMEA)	490 SQ IN.	490/661	74%	✓	FAC
RED SPRUCE (PICEA RUBENS)	58 SQ. IN.	58/661	9%		FAC U
PAPER BIRCH (BETULA PAPYRIFERA)	113 SQ IN.	113/661	17%		FAC U
SAPLINGS	% COVER				
BALSAM FIR	25%	25/31	80%	✓	FAC
RED SPRUCE	1%	1/31	4%		
PAPER BIRCH	5%	5/31	16%		
SHRUBS					
BALSAM FIR	5%	5/10	50%	✓	FAC
RED SPRUCE	5%	5/10	50%	✓	FAC U
HERB/MOSS					
SPHAGNUM	75%	75/82.5	91%	✓	OBL
GOLDTHREAD	5%	5/82.5	6%		
BUNCHBERRY	2.5%	2.5/82.5	3%		

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1		3	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 80%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: 3"

Depth to Saturation (including capillary fringe): 0"

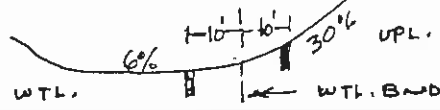
Altered Hydrology (explain): _____

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

WTL.

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)	
3-0"	Oi	10YR 3/3	—	fibric material, peat from woody origin	CS
0-4"	Oa	10YR 2/1	—	sapric material (muck) massive, mtr	CS
4-5"	E	2.5Y 3/1	20% 10YR 4/3 and org. streaking	VFSL, massive/1 Cosbk mfr	Cw
5-12"	Bs	7.5YR 3/3	15% 7.5YR 3/4	FSL massive, mfr	Cw
12-16"	C	2.5Y 3/2	10% 10YR 4/6	VFSL massive, mfr	Cw
16"	R	granite bedrock			

HYDRIC SOIL INDICATOR(S): Dark surface (org.), redox in E and Bs

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup: Lithic Cryaquods
Soil drainage class: Somewhat poorly drained (est.)
Depth to active water table: 3" (sat. to surface)
NTCHS hydric soil criterion: IX A.1. (NEIWPCC - ver. 3)

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: SHEET 7 Kelsey NH Reliable Power, Millsfield, NH TRANSECT: T-2 PLOT: 11-9-W

Near Station 138+00

wetland

Kelsey Ridge – Section 1, Road C

PROJECT TITLE: Granite Power

TRANSECT: PF12 (PF1) PLOT: W

Near flag PF12-3

DELINEATOR(S): P. Fairbairn + N. Randall

DATE: 5.27.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Tree				
Betula all 8	201/393	51	✓	fac
Acer sac* 6,5	192	48	✓	fac U+
Sapling				
Acer sac*		100	✓	fac U-
Shrub				
Betula all	20/26	77	✓	fac
Abies balsamea	3			
Viburnum lantanoides	3			
Herbaceous				
Dryopteris noveboracensis	20/42	48	✓	fac
Thelypteris palustris	10	24	✓	fac W+
Acer sac	3			
Tiarella cordifolia	3			
Carex sp.	3			
Carex granulata	3			

* Shallow rooted

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	3	2

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: 8"

Depth to Saturation (including capillary fringe): surface

Altered Hydrology (explain): None

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-8	O_e	[illegible]	[illegible]	[illegible]
8-14	Bg_1	[illegible]	none	[illegible]
14-16	B_2	[illegible]	[illegible]	[illegible]

HYDRIC SOIL INDICATOR(S): V - [illegible]

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: [illegible]
Depth to active water table: [illegible]
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

PROJECT TITLE: Granite Power TRANSECT: Pf12 PLOT: WET

Kelsey Ridge - Section 1

Kelsey Ridge - Section 1, Road C

PROJECT TITLE: Granite River

TRANSECT: PF12 (PF1) near flag PF12-3 PLOT: W

DELINEATOR(S): P. Fairbairn + W. Randall

DATE: 5.27.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Tree				
Betula all 8	201/393	51	✓	fac
Acer sac* 0.5	192	48	✓	facU+
Sapling				
Acer sac*		100	✓	facU-
Shrub				
Betula all	20/26	77	✓	fac
Abies balsamea	3			
Viburnum lantanoides	3			
Herbaceous				
Dryopteris noveboracensis	20/42	48	✓	fac
Thelypteris palustris	10	24	✓	facW+
Ace sac	3			
Tiarella cordifolia	3			
Carex spp	3			
Carex canescens	3			

* Shallow rooted

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	3	2

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: 8"

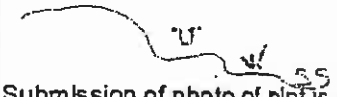
Depth to Saturation (including capillary fringe): surf. w

Altered Hydrology (explain): none

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
~~0 - 8~~ 8 - 0	Oe	5YR 2.5/2	none	Saturated - UM - [illegible]
~~8 - 14~~ 0 - 6	Bg 1	5Y 4/1	none	Saturated - S/G
~~14 - 16~~ 6 - 8	Bg 2	5Y 4/1	10YR 4/6 10%	[illegible] - w/ [illegible]

HYDRIC SOIL INDICATOR(S): V - Mineral Hydric (PF)

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: VPD
Depth to active water table: [illegible] 0'
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Power TRANSECT: Pf12 PLOT: WET
(PF1 - Pf12-3 + Pf12-4)

Kelsey Ridge - Section 1

Kelsey Ridge - Section 1, Road C

PROJECT TITLE: Granite Power

TRANSECT: PF 12 (PF1) New Flag PF 12-3 PLOT: UP

DELINEATOR(S): P. Fairbairn + N. Randall DATE: 5.27.08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Acer sac - 8, 7, 7, 7, 7, 7, 8, 6, 5	1363/1985	69	✓	FacU-
Betula alleghaniensis 7, 8	355	18		
Fraxinus pensylvanica 6	113	6		
Fagus grandifolia 7	154	8		
Saplings	10/16	62	✓	FacU-
A. sac	3	18		
B. alleghaniensis	3			
A. pensylvanicum		18		
Shrub	20/26	77	✓	FACU
F. grandifolia	3			
Viburnum lantanoides	3			
A. sac				
Herbaceous	10.5/21	50	✓	FAC+
Dryopteris spinulosa	10.5	50	✓	fac
Erythronium americanum	3			
Maianthemum canadensis	3			
Claytonia carolinium				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		2	

Hydrophytes Subtotal (A): 2

NON-HYDROPHYTES

FAC-	FACU	UPL
	3	

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 40%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: _____
- Aerial photography Identification: _____
- Other Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: > 17"

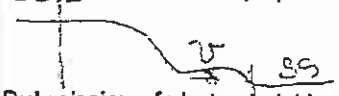
Depth to Saturation (including capillary fringe): 7"

Altered Hydrology (explain): None

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
2-0	Oi			leaf litter / many roots
0-3	OAi	10YR 2/1		many roots - fine; med.
3-7	Bw1	10YR 3/3	none	gr; fr; moist; mfr; high in OM fsl
7-16	Bw2	~~10YR~~ 2.5Y 4/3	7.5YR 4/6 2%	SAB; fr; saturated; fsl

HYDRIC SOIL INDICATOR(S): Lacks hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: somewhat poorly
Depth to active water table: 12-16
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☐	☒
Hydric soils criterion met?	☐	☒
Wetland hydrology criterion met?	☐	☒
IS THIS DATAPOINT IN A WETLAND?	☐	☒

REMARKS:

PROJECT TITLE: Granite Power TRANSECT: PF12 PLOT: 1-Up
(PF1) & PF12-3 & PF12-4

Kelley Ridge - sections

Kelsey Ridge - Section 1, Rondc

PROJECT TITLE: Granite Power TRANSECT: PF 14 PLOT: up near PF 14-16

DELINEATOR(S): P. Fairbairn + N. Rendall DATE: 5.27.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Acer saccharum		100 %	✓	FACU-
Saplings				
A. saccharum	20/80	25	✓	FacU-
A. pensylvanicum	20	25	✓	FacU
Betula alleghaniensis	20	25	✓	Fac
Fagus grandifolia	20	25	✓	FacU
Shrubs				
A. saccharum	10/36	28	✓	FacU-
A. pensylvanicum	10	28	✓	FacU
B. alleghaniensis	10	28	✓	FacU
F. grandifolia	3	8		
Viburnum lentoides	3	8		

HYDROPHYTES

OBL	FACW	FAC	*OTHER

Hydrophytes Subtotal (A): ___

NON-HYDROPHYTES

FAC-	FACU	UPL
1	6	

Non-hydrophytes Subtotal (B): 7

PERCENT HYDROPHYTES (100A/A+B): 0

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: ___
- Aerial photography Identification: ___
- Other Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: None observed to 19"

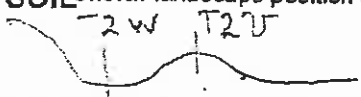
Depth to Saturation (including capillary fringe): None within 19"

Altered Hydrology (explain): None

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks None ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
1-0	Oi	—	—	leaf litter
0-5	OA	7.5YR 3/1	none	gr; fr; high OM; vfsl mtr
5-14	Bh	7.5YR 2.5/3	none	fine rock; SAB; OM; fsl friable
14-19	BW	10YR 4/3	none	friable SAB high OM fsl

HYDRIC SOIL INDICATOR(S): Lacks hydric morphology

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: MWD
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☑	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☑	
IS THIS DATAPOINT IN A WETLAND?	☐	☑	

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Power TRANSECT: Pf 14 (T2) by PF 14-6 PLOT: U

Kelcey Ridge - Section 1

Kelley Ridge - Section 1, Road C

PROJECT TITLE: Granite Power TRANSECT: Pf14 PLOT: Wet near Pf14-16

DELINEATOR(S): P. Fairbairn + N. Rendall DATE: 5.27.08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
No Trees				
Saplings				
Acer saccharum *	20/43	47	✓	FAC U- *
Acer rub	3			
Betula all	20	47	✓	FAC
Shrub				
Fagus grandifolia	20/60	33	✓	FAC U
Betula all	20	33	✓	FAC
A. saccharum	20	33	✓	FAC U-
Herbaceous				
Carex spp	10/32	31	✓	FACW
Impatiens capensis	10	31	✓	FACW
Chrysosplenium americanum	3	9	✓	OBL
Onoclea sensibilis	3	9	✓	FACW
Athyrium filix-femina	3	9	✓	FAC
Dryopteris spinulosa	3	9	✓	FAC +

*: Shallow rooted

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	3	4	1

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Hydrophytes Subtotal (A): 9

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 81

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification: ___
- Aerial photography Identification: ___
- Other Identification: ___

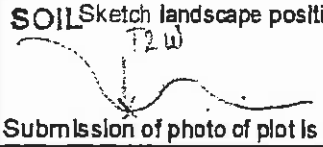
☐ NO RECORDED DATA

☐ OBSERVATIONS:
- Depth to Free Water: >18"
- Depth to Saturation (including capillary fringe): to surface
- Altered Hydrology (explain): None

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
4-0	Oe	10YR 2/1	none	saturated
0-11	OA	10YR 3/4	None	Saturated - mfr fsl - OM
11-	Bw	2.5Y 3/2	None	Mottle - silt loam
16-18	Bg	2.5Y 4/1		

HYDRIC SOIL INDICATOR(S): Hydric morphology evident

REFERENCE(S):

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class: poorly
Depth to active water table: surface to 6"
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☑	☐	
Hydric soils criterion met?	☑	☐	
Wetland hydrology criterion met?	☑	☐	
IS THIS DATAPOINT IN A WETLAND?	☑	☐	

CENAE-COR-PT Version 7/1/00 Page 2

PROJECT TITLE: Granite Power TRANSECT: PF 14 PLOT: W
(PF2) NEAR flag PF 14-6

Hickory Ridge, Section 1

DIXVILLE RIDGE

PROJECT TITLE: TRANSECT: T-2 PLOT:

DELINEATOR(S): RL+SS DATE: 5/26/08 FL-13-6

VEGETATION Stratum and Species (Dominants Only)	Dominance Ratio	Percent Dominance	NWI STATUS
Trees			
ABIES BALSAMEA	1825/1984	92	FAC ✓
PICEA RUBENS	10/1984	7	FACU
BETULA PAPYRIFERA	149/1984	1	FACU
Saplings			
none			
Shrubs			
ABIES BALSAMEA	63/66	95	FAC ✓
PICEA RUBENS	3/66	5	FACU
Herbs			
PICEA RUBENS	3/65	1	FACU
CORNUS CANADENSIS	3/65	1	FAC-
ATHYRIUM FILIX-FEMINA (LADY FERN)	105/65	16	FAC
POLYTRICHUM	105/65	16	
SPHAGNUM	38/65	58	FACW ? ✓

NOTE 1: Use asterisk * to indicate plants with observed adaptations to wetland hydrology. Plants recorded with asterisks should be considered as "other hydrophytes" in the tally below.

NOTE 2: Species with NA or NI status are reported, but are not calculated in the tally below.

OBL	FACW	FAC	*OTHER HYDROPHYTES	FAC-	FACU	UPL
0	1	2		0	0	0

Hydrophytes SUBTOTAL: 3 NON-hydrophytes SUBTOTAL: 0

$$\frac{100 \times \text{Subtotal Hydrophytes}}{\text{Subtotal Hydrophytes + Subtotal Non-hydrophytes}} = \text{PERCENT HYDROPHYTES} = 100\%$$

HYDROLOGY

1. Hydrology is often the most difficult feature to observe.
2. Interpretation must consider the validity of the observation in light of the season, recent weather conditions, watershed alterations, etc.
3. Interpretation of hydrology may require repeated observations over more than one season.

☐ RECORDED DATA
Stream, lake or tidal gage Identification:
Aerial Photograph Identification:
Other Identification:

☐ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: 22" over ledge
Depth to Saturation (including capillary fringe): 15"
Describe Altered Hydrology: none

☐ Inundated ☐ Saturated in upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL	Sketch Landscape Position

3 Y 50 " Elevation

Snow still 3'-4' around this site!

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES Color, Abundance, Size & Contrast	USDA Texture; and nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.
2-0	Oa			
0-2	A	2.5YR 2.5/1		VFSl
2-5	E	2.5Y 5/1		10Am - organic staining
5-19	B	7.5YR 5/6		VFSl
19-22	C	5Y 4/3		VFSl
22-	R			

HYDRIC SOIL INDICATOR(S)

REFERENCE:

OPTIONAL SOIL DATA:

REFERENCES:

TAXONOMIC SUBGROUP :

SOIL DRAINAGE CLASS:

DEPTH TO ACTIVE WATER TABLE:

NTCHS HYDRIC SOIL CRITERION:

CONCLUSIONS

	Yes	No		Yes	No
Greater than 50% Hydrophytes?	☒	☐	IS THIS DATAPOINT WITHIN A WETLAND?	☐	☒
Hydric Soils Criterion Met?	☐	☒	REMARKS:		
Wetland Hydrology Met?	☐	☒	- ? Snow just left.		

CENED-CO-RAN(tm) Version 1AUG95 Page 2

PROJECT TITLE: Noble Power TRANSECT: PLOT:

Dixville (SADDLE) · EL 3450'

PROJECT TITLE: Noble Wind Power TRANSECT: 2 PLOT: (2)

DELINEATOR(S): RL+SS DATE: 5/26/04 RL — FL13-6

VEGETATION Stratum and Species (Dominants Only)	Dominance Ratio	Percent Dominance	NWI STATUS
Trees			
Abies Balsamea	1213	79	FAC ✓
Picea Rubens	1213	21	FACU ✓
Saplings			
Abies Balsamea	3	100	FAC ✓
Shrub			
Abies Balsamea	66/69	96	FAC ✓
Picea Rubens	3/69	4	FACU
Herbs			
Spagnum 98	98/107	98	FACW ✓
Coptis Trifolia 3 (Solar Thread)	3/107	1	FACW
Abies Balsamea 3	3/107	1	FAC
Athyrium Filey Femina 3 (Lady Fern)	3/107	1	FACW

NOTE 1: Use asterisk * to indicate plants with observed adaptations to wetland hydrology. Plants recorded with asterisks should be considered as "other hydrophytes" in the tally below.

NOTE 2: Species with NA or NI status are reported, but are not calculated in the tally below.

OBL	FACW	FAC	*OTHER HYDROPHYTES	FAC-	FACU	UPL
0	1	3			1	

Hydrophytes SUBTOTAL: 4 NON-hydrophytes SUBTOTAL: 1

$$\frac{100 \times \text{Subtotal Hydrophytes}}{\text{Subtotal Hydrophytes} + \text{Subtotal Non-hydrophytes}} = \text{PERCENT HYDROPHYTES} = 80\%$$

4/5

HYDROLOGY
1. Hydrology is often the most difficult feature to observe.
2. Interpretation must consider the validity of the observation in light of the season, recent weather conditions, watershed alterations, etc.
3. Interpretation of hydrology may require repeated observations over more than one season.

☐ RECORDED DATA
- Stream, lake or tidal gage Identification:
- Aerial Photograph Identification:
- Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:

Depth to Free Water: 5"

Depth to Saturation (including capillary fringe): Surface

Describe Altered Hydrology:

☐ Inundated ☒ Saturated in upper 12 inches ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☒ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch Landscape Position

E.L 3 %

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES Color, Abundance, Size & Contrast	USDA Texture; and nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.
7-2	Oa			
2-0	Oa			
0-2	E	2.5Y 5/2 + 10YR 4/2		SI ORGANIC STAINING
2-8	Bs	7.5YR 3/2	7.5YR 6/8 common, med	vFSI
8-15	C	2.5Y 4/2	7.5YR 6/8 common med	gr FSI
15-	R	—		

HYDRIC SOIL INDICATOR(S)

REFERENCE: Reg. Ind.

OPTIONAL SOIL DATA:

REFERENCES:

TAXONOMIC SUBGROUP :

SOIL DRAINAGE CLASS:

DEPTH TO ACTIVE WATER TABLE:

NTCHS HYDRIC SOIL CRITERION:

CONCLUSIONS

	Yes	No
Greater than 50% Hydrophytes?	☒	☐
Hydric Soils Criterion Met?	☒	☐
Wetland Hydrology Met?	☒	☐

IS THIS DATAPOINT WITHIN A WETLAND? Yes ☒ No ☐

REMARKS:

PROJECT TITLE: TRANSECT: PLOT:

1/14/1112

PROJECT TITLE: GRANITE RELIABLE POWER LLC TRANSECT: MC-12 PLOT: UPLANDS
COOS COUNTY, NH AT FLAG # MC 113-B
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 13 JUN 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
SHRUB/SAPLING	30%			
RUBUS IDAEUS	10	33	✓	FAC-
BETULA PAPYRIFERA	10	33	✓	FACU
HERBS	100%			
CAREX SP.	40	40	✓	?
CAREX CRINITA	20	20	✓	OBL
DENNSTAEDTIA PUNCTILOBULA	20	20	✓	UPL

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1			

NON-HYDROPHYTES

FAC-	FACU	UPL
1	1	1

Hydrophytes Subtotal (A): 1

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 25

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 7"
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-3"	A	10YR 3/2 VERY DARK GRAY BROWN	No	FINE SANDY LOAM
3-7"	B	10YR 4/4 DARK YELLOW BROWN	10YR 5/6 COMMON FINE, DISTINCT	" " "
7-11"	C	7.5Y 3/3 DARK OLIVE BROWN	7.5Y 2/1, COMMON MEDIUM, DISTINCT 7.5Y 6/1 COMMON MEDIUM, DISTINCT	" " "
11"+	R			

HYDRIC SOIL INDICATOR(S):

NONE APPLY

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☐	☒
Hydric soils criterion met?	☐	☒
Wetland hydrology criterion met?	☒	☐
IS THIS DATAPOINT IN A WETLAND?	☐	☒

REMARKS:

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-12 AT FLAG #MC 113-8 PLOT: UPLAND

11/4/11

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH
TRANSECT: MC-12 PLOT: WET-B AT FLAG # MC113-8
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6
DATE: 13 JUN 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
PICEA MARIANA	99/99	100	✓	FACW-
S/S	60%			
P. MARIANA	50	83	✓	FACW-
HERB	200%			
SPHAGNUM SP.	100	50%	✓	OBL?
CAREX SP.	65	32	✓	?

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	2		

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): 0

PERCENT HYDROPHYTES (100A/A+B): 100%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification:
- Aerial photography — Identification:
- Other — Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
- Depth to Free Water: SURFACE
- Depth to Saturation (including capillary fringe):
- Altered Hydrology (explain):

☐ Inundated ☒ Saturated In upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-4"	Oi	7.5YR 5/6 STRONG BROWN		
4-9"	Oe	7.5YR 2.5/2 VERY DARK BROWN		
9-24"	Oa	7.5YR 2.5/1 BLACK		
				ORGANIC TO 38"+; WOODY DEBRIS(?) AT BOTTOM OF OBSERVATION

HYDRIC SOIL INDICATOR(S): III

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	100FT DOWNSLOPE OF FLAG MC113-B
Hydric soils criterion met?	☒	☐	SPRUCE/SPHAGNUM BOG
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH

TRANSECT: MC-12 PT: WET-B AT FLAG #MC 113-B

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH
TRANSECT: MC-12 PLOT: WET-A AT FLAG # MC 113-8
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6
DATE: 13 JUN 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
PICEA RUBENS	59/148	40	✓	FACU
ABIES BALSAMEA	50/148	34	✓	FAC
BETULA ALLEGHANIENSIS	39/148	26	✓	FAC
S/S	50%			
RUBUS IDAEUS	15	30	✓	FAC-
VIBURNUM LENTAGO	10	20	✓	FAC
B. ALLEGHANIENSIS	10	20	✓	FAC
HERB	95%			
CAREX CRINITA	25	26	✓	OBL
DENNSTAEDTIA PUNCTILOBULA	20	21	✓	UPL
SPHAGNUM SP.	20	21	✓	OBL?

HYDROPHYTES

OBL	FACW	FAC	*OTHER
2		4	

Hydrophytes Subtotal (A): 6

NON-HYDROPHYTES

FAC-	FACU	UPL
1	1	1

Non-hydrophytes Subtotal (B): 3

PERCENT HYDROPHYTES (100A/A+B): 67

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage — Identification:
Aerial photography — Identification:
Other — Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 3"
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
2"	Oi			
0-4"	A	2.5Y 4/3 OLIVE BROWN	2.5Y 6/2 Common, MEDIUM, FAINT 2.5Y 5/6 Common FINE, DISTINCT	STONY FINE SANDY LOAM
4-7"	E	2.5Y 5/2 GRAY	2.5Y 3/2 Common, MEDIUM, FAINT 2.5Y 6/2 Common MEDIUM, FAINT	" "
7-13"	C	2.5Y 5/4 LIGHT OLIVE BROWN	2.5Y 6/6 Common MEDIUM, DISTINCT 2.5Y 7/2 Common MEDIUM, DISTINCT	" "
13"+	R			" "

HYDRIC SOIL INDICATOR(S): NONE APPLY

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☒	☐
Hydric soils criterion met?	☐	☒
Wetland hydrology criterion met?	☒	☐
IS THIS DATAPOINT IN A WETLAND?	☒	☐

REMARKS: HYDROLOGY

CENAE-CO-R-PT Version 7/1/00 Page 2

PROJECT TITLE: GRANITE RELIABLE POWER GOOS COUNTY, NH TRANSECT: MC-12 PLOT: WCT-A AT FLAG #MC 113-8

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH TRANSECT: MC-11 AT FLAG # MC 115-2 PLOT: WETLAND

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 13 JUN 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
NONE				
SHRUB / SAPLING NONE				
HERBS	100%			
CAREX CRINITA	40	40	✓	OBL
SCIRPUS ATROVIRENS	20	20	✓	OBL
JUNCUS EFFUSUS	20	20	✓	FACW

HYDROPHYTES

2 OBL 1 FACW ___ FAC ___ *OTHER

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

___ FAC- ___ FACU ___ UPL

Non-hydrophytes Subtotal (B): 0

PERCENT HYDROPHYTES (100A/A+B): 100%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: ___
Aerial photography Identification: ___
Other Identification: ___

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: SURFACE
Depth to Saturation (including capillary fringe): ___
Altered Hydrology (explain): MAN MADE WETLAND - SKID TRAIL

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain): VERNAL POOL SPP. / EGG WASSES OBSERVED MAY '08

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0-5"	Ap1	10YR 3/3 DARK BROWN	2.5Y 5/2 Common, MEDIUM, DISTINCT 10YR 5/6 Common, MEDIUM, DISTINCT	SILTY FINE SANDY LOAM
5-13"	Ap2	2.5Y 3/3 DARK OLIVE BROWN	10YR 5/2 Common COARSE, DISTINCT 2.5Y 5/6 Common COARSE, DISTINCT	" "
13-16"	C	2.5Y 4/3 OLIVE BROWN	2.5Y 5/6 Common FINE, DISTINCT 2.5Y 5/1 Common MEDIUM, DISTINCT	" "
16"+	R			

HYDRIC SOIL INDICATOR(S): NONE APPLY

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	MAN-MADE VERNAL POOL
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

CENAE-COR-PT Version 7/1/00 Page 2

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH

TRANSECT: MC-11 AT FLAG #MC 115-2

PLOT: WETLAND

D14911X

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH
TRANSECT: MC-9 AT FLAG # MC 138-5
PLOT: UPLAND
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6
DATE: 12 JUN 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
ABIES BALSAMEA	479/730	66	✓	FAC
PICEA RUBENS	173/730	24	✓	FACU
SHRUB/SAPLING	45%			
A. BALSAMEA	40	88	✓	FAC
HERBS	50%			
COPTIS TRIFOLIA	20	40	✓	FACU
DRYOPTERIS SPINULOSA	20	40	✓	FAC+

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	1	3	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 80

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification:
- Aerial photography — Identification:
- Other — Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
- Depth to Free Water: No
- Depth to Saturation (including capillary fringe):
- Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
3"	Oe			
0-4"	A	7.5YR 3/3 DARK BROWN	NONE	FINE SANDY LOAM
4-10"	B	7.5YR 4/4 BROWN	NONE	" "
10"+	R			" "

HYDRIC SOIL INDICATOR(S): NONE APPLY

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: GRANITE RELIABLE POWER TRANSECT: MC-9 PLOT: UPLAND
COOS COUNTY, NH AT FLAG #MC138-5

Dixville

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH TRANSECT: MC-9 AT FLAG # MC 138-5 PLOT: WETLAND

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 12 JUN 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREE				
ABIES BALSAMEA	260/437	59	✓	FAC
PICEA RUBENS	177/437	41	✓	FACU
SHRUB/SAPLING	10%			
A. BALSAMEA	5	50	✓	FAC
P. RUBENS	5	50	✓	FACU
HERBS	120%			
SPHAGNUM SP.	80	67	✓	OBL?

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1		2	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 60%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage Identification:
- Aerial photography Identification:
- Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
- Depth to Free Water: 12"
- Depth to Saturation (including capillary fringe):
- Altered Hydrology (explain):

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
4"	Oa			
0-12"	A	2.5Y 3/1 Very Dark Gray	Oxidized Rhizospheres and Stripped Sand Grains	Very Fine Sandy Loam
12-16"	C	2.5Y 6/3 Light Yellow Brown	2.5Y 5/6 Common, Fine, Distinct 2.5Y 7/2 Common, Fine, Faint	Loamy Coarse Sand
16"+	R			

HYDRIC SOIL INDICATOR(S): X, C

REFERENCE(S): Field Indicators for Identifying Hydric Soils in New England, Ver. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: Granite Reliable Power, Coos County, NH TRANSECT: MC-9 PLOT: Wetland at Flag #MC-B8-5

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
4"	Oe			
0-2"	F	2.5YG/1 GRAY	NONE	VERY FINE SANDY LOAM
2"+	R			

HYDRIC SOIL INDICATOR(S): NONE APPLY

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S):

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: GRANITE RELIABLE QUARRY COOS COUNTY, NH

TRANSECT: MC 3 PLOT: UPLAND AT FLAG #MC 14/2-2

Dixville

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH TRANSECT: MC-8 PLOT: UPLAND AT FLAG # MC 1-12-2

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 12 JUN 08

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
ABIES BALSAMEA	666/1222	54	✓	FAC
PICEA RUBENS	536/1222	44	✓	FACU
S/S	80%			
A. BALSAMEA	57	71	✓	FAC
P. RUBENS	23	29	✓	FACU
HERBS	145%			
SPHAGNUM SP.	80	55	✓	OBL

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1		2	

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Hydrophytes Subtotal (A): ___ Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 60%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: ___
Aerial photography Identification: ___
Other Identification: ___

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: NONE
Depth to Saturation (including capillary fringe): ___
Altered Hydrology (explain): ___

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

Dixville

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH TRANSECT: MC-B PLOT: WETLAND AT FLAG # MC 142-2

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 12 JUN 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
ABIES BALSAMEA	243/243	100	✓	FAC
SHRUBS/SAPLINGS	35%			
A. BALSAMEA	10	57	✓	FAC
PICEA RUBENS	15	43	✓	FACU
HERBS	150%			
SPHAGNUM SP.	90	60	✓	OBL?

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1		2	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 75

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 5"
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
2"	Oa			
0-4"	E	7.5YR 6/1 GRAY	7.5YR 4/3 Common COARSE, DISTINCT	VERY FINE SANDY LOAM
4-6"	Bhs	7.5YR 3/3 DARK BROWN	10YR 4/4 common, MEDIUM, FAINT 10YR 3/1 common, MEDIUM, DISTINCT	FINE SANDY LOAM
6"+	R			

HYDRIC SOIL INDICATOR(S): IX A1,

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-8 PLOT: WETLAND AT FLAG #MC147-2

Dixville

PROJECT TITLE: GRANITE RELIABLE POWER LLC COOS COUNTY, NH
TRANSECT: MC-7 AT FLAG # MC121-14
PLOT: UPLAND
DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6
DATE: 29 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
ABIES BALSAMEA	257/598	43	✓	FAC
PICEA RUBENS	293/598	49	✓	FACU
SHRUB/SAPLING				
A. BALSAMEA	20/50	40	✓	FAC
P. RUBENS	20/50	40	✓	FACU
BETULA LENTA	10/50	20	✓	FACU
HERB				
A. BALSAMEA	10/15	66	✓	FAC
LYCOPODIUM SP.	5/15	33	✓	?FACU

HYDROPHYTES

OBL	FACW	FAC	*OTHER
		3	

Hydrophytes Subtotal (A): 3

NON-HYDROPHYTES

FAC-	FACU	UPL
	4	

Non-hydrophytes Subtotal (B): 4

PERCENT HYDROPHYTES (100A/A+B): 43%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification:
Aerial photography Identification:
Other Identification:

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: No
Depth to Saturation (including capillary fringe):
Altered Hydrology (explain):

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
3"	O			
0-3"	A	7.5YR 3/2 DARK BROWN	No	VERY FINE SANDY LOAM
3-6"	E	10YR 6/2 LIGHT BROWNISH GRAY	No	" "
6-8"	Bs	7.5YR 4/6 STRONG BROWN	No	" "
8-13"	B/C	10YR 6/4 LIGHT YELLOW BROWN	10YR 4/4 FEW, MEDIUM FAINT	" " BEDROCK REFUSAL ?

HYDRIC SOIL INDICATOR(S):

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☐	☒	
Hydric soils criterion met?	☐	☒	
Wetland hydrology criterion met?	☐	☒	
IS THIS DATAPOINT IN A WETLAND?	☐	☒	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-7 AT FLAG #MC121-14 PLOT: UPLAND

Dixville

PROJECT TITLE: GRANITE RELIABLE POWER LLC TRANSECT: MC-7 PLOT: WETLAND
COOS COUNTY, NH AT FLAG #MC 121-14 (DIXVILLE 48+00)

DELINEATOR(S): MICHAEL CUOMO, C.S.S. #6 DATE: 29 MAY 08

VEGETATION Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
TREES				
ABIES BALSAMEA	676/1092	62	✓	FAC
PICEA RUBENS	349/1092	32	✓	FACU
SHRUB/SAPLING				
ABIES BALSAMEA	20/35	57	✓	FAC
PICEA RUBENS	10/35	29	✓	FACU
HERBS				
SPHAGNUM SP.	30/100	30	✓	?OBL
COPTIS TRIFOLIA	20/100	20	✓	FACW
A. BALSAMEA	20/100	20	✓	FAC

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	1	3	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
	2	

Non-hydrophytes Subtotal (B): 2

PERCENT HYDROPHYTES (100A/A+B): 71%

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification: _____
Other Identification: _____

☐ NO RECORDED DATA

☒ OBSERVATIONS:
Depth to Free Water: 8"
Depth to Saturation (including capillary fringe): _____
Altered Hydrology (explain): _____

☐ Inundated ☒ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
2"	O_i			
0-3"	A	7.5Y 3/1 VERY DARK GRAY	No	VERY FINE SANDY LOAM
3-12"	E	5Y 5/1 GRAY	2.5Y 6/4 Common, MEDIUM, PROMINENT 2.5Y 6/1 FEW, MEDIUM, FAINT	" " "
12-18"	B	2.5Y 4/3 OLIVE BROWN	2.5Y 5/4 Common, MEDIUM, FAINT 2.5Y 5/1 common, MEDIUM, DISTINCT	FINE SANDY LOAM

HYDRIC SOIL INDICATOR(S): VI

REFERENCE(S): FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VER. 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO	REMARKS:
Hydrophytic vegetation criterion met?	☒	☐	
Hydric soils criterion met?	☒	☐	
Wetland hydrology criterion met?	☒	☐	
IS THIS DATAPOINT IN A WETLAND?	☒	☐	

PROJECT TITLE: GRANITE RELIABLE POWER COOS COUNTY, NH TRANSECT: MC-7 AT FLAG # WL121-14 PLOT: WETLAND

(a) END OF DIXVILLE PEAK STRING — Dixville

PROJECT TITLE: PHILIPS BROOK WIND POWER TRANSECT: 1 PLOT: 1

TRANSECT BISECTS LINE BETWEEN WETFLAGS MJ02-4 & MJ102-5 LAT/LON

DELINEATOR(S): MARC JACOBS DATE: 06/12/08 N 44° 50.6821 W71° 18.0512

VEGETATION Stratum and Species		Dominance Ratio	Percent Dominance	DOM	NWI Status
HERB					
Spinulose wood fern	Dryopteris spinulosa	10.5/54.5	19	–	FACU+
Massachusetts fern	Thelypteris simulata	20.5/54.5	38	✓	FACW
Sphagnum moss	Sphagnum spp.	20.5/54.5	38	✓	OBL
Aster	Aster spp.	3.0/54.5	6	–	FAC assumed
SHRUB					
Black spruce	Picea mariana	10.5/10.5	100	✓	FACW-
SAPLING	absent				
TREE					
Balsam fir	Abies balsamea				
108.9, 81.5, 38.5, 97.5, 92, 86.7, 86.7, 49.7, 76.5		718/838	86	✓	FAC
Black spruce	Picea mariana	81.5/838	10	–	FACW-
Paper birch	Betula papyrifera	38.5/838	5	–	FACU
LIANA	absent				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	11	1	

Hydrophytes Subtotal (A): 4

NON-HYDROPHYTES

FAC-	FACU	UPL
0	0	0

Non-hydrophytes Subtotal (B): 0

PERCENT HYDROPHYTES (100A/A+B): 100

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage — Identification: ____
Aerial photography — Identification: ____
Other — Identification: ____

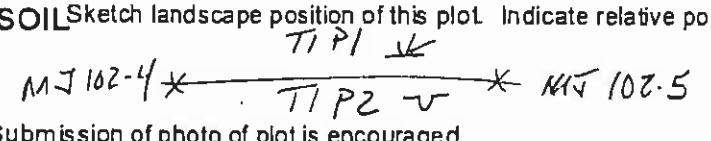
☑ NO RECORDED DATA

☐ OBSERVATIONS:
Depth to Free Water: 3.0"
Depth to Saturation (including capillary fringe): 0.0"
Altered Hydrology (explain): NO

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

PLAN VIEW



X-C VIEW

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
0"	A	2.5Y 2.5/1		loam
3"	A_2	2.5Y 3/1	5% 2.5Y 5/1 fine	fsl
6"	Bg	2.5Y 4/1	5% 2.5Y 6/2 fine	fsl
11"	BC	2.5Y 4/3	10% 2.5Y 5/6 fine	fsl
21"	R			terminated, possible refusal

HYDRIC SOIL INDICATOR(S): VI

REFERENCE(S): VERSION 3 NE INDICATORS

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class: poorly drained
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S): SSSNNE SITE SPEC. SOIL MAPPING STD'S

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☑	☐
Hydric soils criterion met?	☑	☐
Wetland hydrology criterion met?	☑	☐
IS THIS DATAPOINT IN A WETLAND?	☑	☐

REMARKS: PLOT CENTERS IDENTIFIED WITH RED & WHITE STRIPED FLAGS

PROJECT TITLE: PHILIPS BROOK WIND POWER DIXVILLE, NH TRANSECT: 1 PLOT: 1

END OF DIXVILLE PEAK STRING

PROJECT TITLE: PHILIPS BROOK WIND POWER TRANSECT: 1 PLOT: 2
TRANSECT BISECTS LINE BETWEEN WETFLAGS MJ 102-4 & MJ 102-5
DELINEATOR(S): MARC JACOBS DATE: 06/12/08 N 44° 50.6821 LAT W 71° 18.0512 LON

VEGETATION	Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
HERB					
Spinulose wood fern	Dryopteris spinulosa	20.5/54.5	38	✓	FAC+
gold thread	Coptis trifolia	20.5/54.5	38	✓	FACW
Yellow clintonia	Clintonia borealis	3/54.5	6	–	FAC
wood sorrel	Oxalis corniculata	trace	T		FACU
Balsam fir	Abies balsamea	10.5/54.5	19	–	FAC
SHRUB					
Balsam fir	Abies balsamea	10.5/13.5	77	✓	FAC
Black spruce	picea mariana	3/13.5	22	✓	FACW-
SAP					
Birch	Betula papyrifera	20.5/20.5	100	✓	FACU
TREE					
LIANA mt. Ash	Sorbus americana	45.8/1125	4		FACU
Black spruce	Picea mariana	81.5/1125	7		FACW-
Balsam fir	Abies balsamea	997.7/1125	89	✓	FAC
108.9, 66.9, 62.4, 86.7, 42.1, 81.5, 114.9, 103.1 97.5, 49.7, 92.0, 92.0					

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	11	111	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 83

HYDROLOGY

☐ RECORDED DATA
Stream, lake, or tidal gage Identification: _____
Aerial photography Identification: _____
Other Identification: _____

☑ NO RECORDED DATA

☐ OBSERVATIONS:
Depth to Free Water: none observed
Depth to Saturation (including capillary fringe): none observed
Altered Hydrology (explain): _____

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

see T1 P1

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
+1	Oe	–	–	forest duff
0"	A	2.5Y 2.5/1	–	loam
1"	E	2.5Y 5/1	–	fsl
2"	E2	2.5Y 5/2	–	fsl
3"	Bhs	7.5YR 2.5/3	–	vfsl
6"	Bs	7.5YR 4/4	–	fsl
13	Bw	10YR 4/3	5% 10YR 5/6 fine 5% 7.5YR 4/6 fine	fsl
20				terminated, no refusal or obs. H2O

HYDRIC SOIL INDICATOR(S):

REFERENCE(S): NE INDICATORS VERSION 3

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class: SPD
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S): SSSNNE SITE SPECIFIC SOIL MAP STD's

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☑	☐
Hydric soils criterion met?	☐	☑
Wetland hydrology criterion met?	☐	☑
IS THIS DATAPOINT IN A WETLAND?	☐	☑

REMARKS: PLOT CENTERS AND SOIL OBSERVATIONS IDENTIFIED WITH RED & WHITE STRIPED FLAGS

PROJECT TITLE: PHILIPS BROOK WIND PROJECT DIXVILLE NH TRANSECT: 1 PLOT: 2

DIXVILLE PEAK STRING OPPOSITE PROPOSED ROAD & STATION 47+00 ±

PROJECT TITLE: PHILIPS BROOK WIND PROJECT TRANSECT: 2 PLOT: 1

TRANSECT BISECTS LINE BETWEEN WET FLAGS MJ84-4 & MJ84-5 LAT/LON

DELINEATOR(S): MARC JACOBS DATE: 06/12/08 N 44° 50.5266 W 70° 18.7378

VEGETATION

Stratum and Species		Dominance Ratio	Percent Dominance	DOM	NWI Status
HERB					
Sphagnum moss	Sphagnum spp.	98.0/104	94	✓	OBL
Wood Sorrel	oxalis corniculata	3.0/104	3		FACU
Gold thread	Coptis trifolia	3.0/104	3		FACW
Cinnaman fern	Osmunda cinnamomea	Trace	T		FACW
SHRUB					
Black spruce	Picea mariana	10.5/21	50	✓	FACW-
Balsam fir	Abies balsamea	10.5/21	50	✓	FAC
SAP					
Paper birch	Betula papyrifera	10.5/105	100	✓	FACU
TREE (aerial coverage)					
Black spruce	Picea mariana	20.5/58.5	35	✓	FACW-
Balsam fir	Abies balsamea	38/58.5	65	✓	FAC
LIANA	absent				

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	11	11	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 83

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ____
- Aerial photography — Identification: ____
- Other — Identification: ____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: ____

Depth to Saturation (including capillary fringe): ____

Altered Hydrology (explain): ____

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.

see T2 P2

Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
+4	Oe	–	–	forest duff
0"	A	2.5Y 3/1	oxidized rhizosphere	vfsl
6"	B	10YR 3/2	2.5Y 5/6 common medium 2.5Y 4/1 common medium	vfsl
11"	Cg	5Y 5/2	10YR 4/6 common coarse 2.5Y 6/1 common medium	vfsl
20"				terminated, no refusal

HYDRIC SOIL INDICATOR(S): XI. A

REFERENCE(S): NE INDICATORS VERSION 3

OPTIONAL SOIL DATA

Taxonomic subgroup:
Soil drainage class: PVD
Depth to active water table:
NTCHS hydric soil criterion:

REFERENCE(S): SSSNNE SITE-SPEC SOIL MAP STD'S

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☑	☐
Hydric soils criterion met?	☑	☐
Wetland hydrology criterion met?	☑	☐
IS THIS DATAPOINT IN A WETLAND?	☑	☐

REMARKS:

PROJECT TITLE: PHILLIPS BROOK WIND POWER DIXVILLE, NH TRANSECT: 2 PLOT: 1

DIXVILLE PEAK STRING - OPPOSITE PROP ROAD STATION 4740

PROJECT TITLE: PHILLIPS BROOK WIND PROJECT TRANSECT: 2 PLOT: 2

TRANSECT BISECTS LINE BETWEEN WET FLAGS MJ 84-4 AND MJ 84-5

DELINEATOR(S): MARC JACOBS DATE: 06/12/08 N 44° 50.5266 W71° 18.7378 L/L

VEGETATION

Stratum and Species		Dominance Ratio	Percent Dominance	DOM	NWI Status
HERB					
Moss	Musci spp. (not Sphagnum)	85.5/115	74	✓	FAC assumed
Wood sorrel	Oxalis corniculata	10.5/115	9	-	FACU
Canada mayflower	Maianthemum canadense	3/115	3	-	FAC-
Yellow clintonia	Clintonia borealis	3/115	3	-	FAC
gold thread	coptis trifolia	3/115	3	-	FACW
SHRUB					
Black spruce	Picea mariana	10.5/21	50	✓	FACW-
Balsam fir	Abies balsamea	10.5/21	50	✓	FAC
SAP					
Paper birch	Betula papyrifera	3.0/3.0	100	✓	FACU
TREE (aerial coverage)					
Black spruce	Picea mariana	20.5/58.5	35	✓	FACW-
Balsam fir	Abies balsamea	38.0/58.5	65	✓	FAC
LIANA absent					

HYDROPHYTES

OBL	FACW	FAC	*OTHER
	11	111	

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL
	1	

Non-hydrophytes Subtotal (B): 1

PERCENT HYDROPHYTES (100A/A+B): 83

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: _____
- Aerial photography — Identification: _____
- Other — Identification: _____

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: none observed

Depth to Saturation (including capillary fringe): none observed

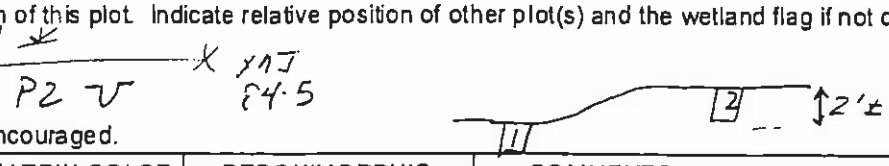
Altered Hydrology (explain): _____

☐ Inundated ☐ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns within Wetland

☐ OTHER (explain):

PLAN VIEW (NOT TO SCALE) X-C VIEW

SOIL Sketch landscape position of this plot. Indicate relative position of other plot(s) and the wetland flag if not on plan.



Submission of photo of plot is encouraged.

DEPTH	HORIZON	MATRIX COLOR	REDOXIMORPHIC FEATURES (color, abundance, size, contrast)	COMMENTS (USDA texture, nodules, concretions, masses, pore linings, restrictive layers, root distribution, soil water, etc.)
+5	Oe	—	—	forest duff
0"	E	10YR 6/1	2.5Y 6/3 common fine	lfs
4"	C	2.5Y 6/4	2.5Y 5/4 common medium 2.5Y 6/2 common medium	fsl
5"	R			termination, refusal

HYDRIC SOIL INDICATOR(S):

REFERENCE(S): NE INDICATORS VERSION 3

OPTIONAL SOIL DATA

REFERENCE(S):

Taxonomic subgroup:
Soil drainage class:
Depth to active water table:
NTCHS hydric soil criterion:

CONCLUSIONS

	YES	NO
Hydrophytic vegetation criterion met?	☑	☐
Hydric soils criterion met?	☐	☑
Wetland hydrology criterion met?	☐	☑
IS THIS DATAPOINT IN A WETLAND?	☐	☑

REMARKS: PLOT CENTERS AND SOIL OBSERVATIONS IDENTIFIED WITH RED & WHITE STRIPED FLAGS

PROJECT TITLE: PHILLIPS BROOK WIND POWER DIXVILLE, NH TRANSECT: 2 PLOT: 2

1/14

Mile 12/14

PROJECT TITLE: Granite Power

TRANSECT: JW222 west PLOT: WET

DELINEATOR(S): Jennifer West

DATE: 6.2.08

Nearest flag JW222-1

VEGETATION

Stratum and Species	Dominance Ratio	Percent Dominance	DOM	NWI Status
Trees				
Betula papyrifera* 10"		100%	✓	FACU*
Saplings				
Alnus incana	25/30	83	✓	FAC
Picea rubens	5			
Shrubs				
Alnus incana	50/60	83	✓	FAC
Sambucus canadensis	10			
Herbaceous				
Impatiens capensis	50/80	63	✓	FACW
Equisetum spp	T			
Osmunda cinnamomea	5	—		
Carex spp	20	25	✓	obl
Onoclea sensibilis	5			

*Shallow rooted - on mound

HYDROPHYTES

OBL	FACW	FAC	*OTHER
1	1	2	1

Hydrophytes Subtotal (A): 5

NON-HYDROPHYTES

FAC-	FACU	UPL

Non-hydrophytes Subtotal (B): ___

PERCENT HYDROPHYTES (100A/A+B): 100%

HYDROLOGY

☐ RECORDED DATA
- Stream, lake, or tidal gage — Identification: ___
- Aerial photography — Identification: ___
- Other — Identification: ___

☑ NO RECORDED DATA

☑ OBSERVATIONS:

Depth to Free Water: ± 10"

Depth to Saturation (including capillary fringe): ± 10"

Altered Hydrology (explain): ___

☐ Inundated ☑ Saturated in upper 12" ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☑ Drainage Patterns within Wetland

☐ OTHER (explain):