

**REGULAR MEETING  
CONSERVATION COMMISSION**

**1 JUNKINS AVENUE  
PORTSMOUTH, NEW HAMPSHIRE  
EILEEN DONDERO FOLEY COUNCIL CHAMBERS**

*Members of the public also have the option to join the meeting over  
Zoom (See below for more details)\**

**3:30 P.M.**

**November 09, 2022**

**AGENDA**

**I. APPROVAL OF MINUTES**

1. October 12, 2022

**II. WETLAND CONDITIONAL USE PERMITS (NEW BUSINESS)**

1. 800 McGee Drive  
Darren and Jessica Kenney, Owners  
Assessor Map 229, Lot 45-6
2. 225 Borthwick Avenue  
Liberty Mutual Insurance, Owner  
Assessor 240, Lot 1

**III. OTHER BUSINESS**

**IV. ADJOURNMENT**

*\*Members of the public also have the option to join this meeting over Zoom, a unique meeting ID and password will be provided once you register. To register, click on the link below or copy and paste this into your web browser:*

[https://us06web.zoom.us/webinar/register/WN\\_Xc02qOb\\_QsSJ\\_QIOHsqh9g](https://us06web.zoom.us/webinar/register/WN_Xc02qOb_QsSJ_QIOHsqh9g)

**MINUTES  
CONSERVATION COMMISSION**

**1 JUNKINS AVENUE  
PORTSMOUTH, NEW HAMPSHIRE  
EILEEN DONDERO FOLEY COUNCIL CHAMBERS**

**3:30 P.M.**

**October 12, 2022**

**MEMBERS PRESENT:** Chair Barbara McMillan; Vice Chair Samantha Collins; Members; Allison Tanner, Lynn Vaccaro, Jessica Blasko (via Zoom), Thaddeus Jankowski; Alternate Abigail Gindele

**MEMBERS ABSENT:** Alternate Mika Court

**ALSO PRESENT:** Peter Britz, Environmental Planner/Sustainability Coordinator, Kate Homet, Associate Environmental Planner

\*Time stamps on the recording are denoted in brackets []

[5:20] Chair McMillan opened the meeting.

[6:14] Chair McMillan issued an apology for the last Conservation Commission meeting mix-up where two members had previously stated they would not be in attendance and a quorum was not met until sometime came to the meeting.

**I. APPROVAL OF MINUTES**

a. September 14, 2022

[6:43] Ms. Tanner moved to make a motion to accept the minutes with the following corrections:

1. Second page, first line – “Ms. Tanner asked if any trees were being cut own”. The last word should be “down” not “own”.
2. Second page under Other Business at the end of the first paragraph, “associated with sustained land care” should be corrected to “sustainable” not “sustained”.
3. Second page at the bottom of the second paragraph, “appropriately incorporate into recommendations” should be “incorporated” and not “incorporate”.

[7:43] The motion was seconded by Vice Chair Collins. Mr. Jankowski and Ms. Gindele abstained from voting. The motion passed unanimously.

## II. WORK SESSIONS

- a. 67 Ridges Court  
Jeffrey & Melissa Foy, Owners  
Map 207, Lot 59

John Chagnon from Ambit Engineering represented the Foy family for this application. This work session application proposed to add a detached garage structure on the property.

The existing house currently has two driveways, this application proposes to add the garage structure where one of the driveways currently sits. This plan will require a variance from the Zoning Board of Adjustment. Included in the Conservation Commission packet was the application previously denied by the Zoning Board of Adjustment and an updated site plan to reflect the changes made for an upcoming Zoning Board of Adjustment hearing. This plan includes a reduction in impervious surface.

[10:50] When the applicant does return to the Conservation Commission for a regular session, they will include in the updated plans an additional parking spot on the south side of the garage. This will be porous pavement and will serve the purpose of helping the runoff from the driveway. They have pulled the proposed garage structure as far away from the tidal shoreline as possible. There is a variance required for the setback they are requesting, where the applicant is requesting a 13.5 foot setback where 19 feet is required.

[12:14] Current runoff comes off the current paved parking area and runs into one of the planted areas, over the retaining wall and then into the second planted area. Most of the runoff in the front of the lot runs down along the lower wall near the street and then into a grassy area. They are proposing a rain garden in this area to treat the runoff and then either moving the existing wall or putting in a berm. The applicant is currently waiting for the results from the Zoning Board of Adjustment which is why this has been treated as a work session in the Conservation Commission.

[14:54] The first plan from the applicant that was sent to the Zoning Board of Adjustment included a three-bay garage. This prompted a lot of discussion by the abutters and members of the Board regarding the fact that it was originally proposed to be in the buffer. They are also proposing a 10 foot wide planted buffer in the lawn area for buffer enhancement.

[17:06] Ms. Tanner asked how the applicant would place a rain garden in that bottom tier? With the drainage placed below the wall, what would happen in a heavy rain event with the pressure directed towards that lower wall?

[17: 34] Mr. Chagnon responded that the rain garden has not yet been designed but they would either have a storm overflow or have a pipe overflow into the middle that would discharge out to the lawn.

[17:38] Ms. Gindele asked if the applicant was proposing just one bay in the new garage.

[18:17] Mr. Chagnon responded that yes, there would only be one bay. There will be a pass-through door to the left of the new garage bay.

[19:25] Ms. Tanner mentioned that she went out and looked at the property the day prior. She asked if there would have to be some excavation to the road to add the addition.

[19:46] Mr. Chagnon responded that they will have to build a four foot frost wall but it will not be a full basement.

[20:05] Ms. Gindele asked what is the square footage of the existing house and that of the proposed with the new addition?

[20:17] Mr. Chagnon responded that it is included in the plan set on sheet C2 of the Variance Plan. The square footage goes from 1,591 square feet to 2,109 square feet.

[21:06] Ms. Tanner asked if Mr. Chagnon saw the staff report and the recommendations.

[21:12] Mr. Chagnon responded that yes he had seen the report and he proceeded to respond to the recommendations listed there. His response includes:

- They have already shown all the jurisdictional wetlands and buffers.
- They will have a full plan set in the future showing the erosion control, limits, and square footage of impacts
- They will have a landscape plan.
- There are currently no invasive species on the site that they are aware of. There is burning bush and maples on the site.
- They are looking to add a ten-foot buffer strip.
- They would prefer not to have a wetland boundary marker stick in their client's yard that is within their view that would say wetland. Mr. Britz responded that this is part of the Zoning Ordinance which requires markers shown on the plan and installed during construction, perhaps there would be a better area for signage such as on a tree or closer to the tidal buffer where a post could be placed. There are a few locations Mr. Chagnon suggested that are also trafficked by the public which could be good spots for markers.
- They do not expect any groundwater impacts due to the proposed garage being at grade.
- They will put a note on the plan about the storage of a docking structure which is part of NHDES rules that floats cannot be stored within the buffer.
- The buffer plantings at the top of the revetment could act as a living shoreline or enhance the shoreline.



[26:58] Chair McMillan asked if the applicant could explain more about the pervious parking spot previously mentioned.

[27:08] Mr. Chagnon responded that this does not show on the current plan because it was brought up after they had filed. The owners need a second parking spot due to their garage only having one bay. They are proposing to put in a porous parking spot downslope of the driveway, where everything running down the driveway would be filtered through the porous section before entering the rain garden.

[27:50] Chair McMillan expressed concerns with this as using a porous parking area as treatment for non-porous parking runoff could cause complications. It may make more sense to make the whole parking area porous.

[28:58] Vice Chair Collins mentioned that she would really need to see a very robust planting plan. More plantings would be better than what is proposed with a ten-foot buffer, having a maintenance plan, utilizing NOFA standards, and decreasing lawn space and increasing plantings.

[29:27] Mr. Chagnon mentioned that he is looking at complying with NHDES soil enhancement standards and NOFA standards.

[30:14] Vice Chair Collins said that the commission would really want to see a reduction of all impacts to Little Harbor.

[30:48] Ms. Gindele agreed that a 10-foot buffer is not enough and would like to see a large planting and enhancement plan.

[31:30] Chair McMillan and Mr. Britz discussed how a future site walk should be scheduled for this site. City staff is currently trying to work out a standard site walk schedule for wetland conditional use permit applicants. Mr. Britz mentioned that he hopes to have one set up for the week before the next Commission meeting at 3:30 p.m. for this site.

[31:48] Mr. Chagnon responded that they can do a site walk a week before the next meeting that they apply to.

[33:13] Chair McMillan asked that the applicant include a maintenance plan for the rain garden if it is being included in the updated plan.

[33:32] Vice Chair Collins mentioned that if they are to do a site walk, it is helpful for the Commission if the applicant is able to stake out where the addition will be along with the buffer lines and proposed rain garden locations.

### **III. STATE WETLAND BUREAU APPLICATIONS (OLD BUSINESS)**

#### **a. Major Impact**

41 Pickering Avenue  
Esther's Marina, LLC, Owner  
Map 102, Lot 25

[34:16] Mr. Jankowski recused himself from hearing and speaking to this application.

[34:38] Steve Riker presented this application for NHDES for the expansion of an existing commercial docking structure located at 41 Pickering Avenue. The property owner currently rents slip space to boat owners as well as dinghy space. The property owner also owns and operates a kayak rental business. The purpose of this expansion is to provide more space for the kayak business. There are around 125 kayaks on site as well as paddle boards. The expansion consists of another gangway (3' x 40') that will be off of the existing fixed pier which will go down to a 10' x 70' float. The mean low water runs through the western proportion of the proposed float. The negative one foot contour runs through the center of the float. It will be enough to provide the owner with space for her customers to place their kayaks in the water there and get into them. The applicant expects that approximately five to ten customers will be able to safely use the dock at one time for kayak launching. The application package to NHDES has more information and maps regarding coastal vulnerability assessments.

[39:27] Ms. Vaccaro, Mr. Gindele and Chair McMillan all clarified whether the new float will be used only for kayaks or if there would be other boats using it.

Mr. Riker responded yes. The business technically meets the NHDES definition of a marina, but it does not house any underground fuel storage or fuel services, it is a recreation-based business and the kayak floats will only be seasonal structures.

[40:22] Chair McMillan asked the applicant to explain more on why this proposed kayak use cannot be done on the existing float.

[40:34] Mr. Riker responded that if a finger float were to be added to the existing structure and then kayaks would have to be walked down past boat slips and people it would cause a space and safety issue for kayak launching. This proposed solution provides more space.

[42:21] Vice Chair Collins asked if the proposed float is twice the width of the existing structure.

[42:33] Mr. Riker responded that the proposed float is ten feet wide, and the existing float is six feet wide. There is more stability in floats with greater width, so the wider float provides greater stability.

[43:16] Vice Chair Collins mentioned that there are quite a bit of pilings, wouldn't that help the stability?

[43:26] Mr. Riker responded that the piles are located just to keep it in place.

[44:20] Ms. Vaccaro asked if this proposed project would change the way they use the shoreline.

[44:28] Mr. Riker mentioned that they could launch from the shore because there is tidal access but there is not a lot of water due to tide and the mean low water line. For periods of high tide there could be shore launches.

[45:45] Ms. Tanner made a motion for recommendation for approval to the State. Ms. Gindele seconded the motion. The commission voted to approve the motion unanimously.

#### **IV. OTHER BUSINESS**

##### **a. Update on Conservation Lands (non-public session)**

[5:40] Ms. Tanner made a motion to move the update on conservation lands to the end of the agenda. Ms. Gindele seconded the motion. The motion passed unanimously.

[1:34:00] Ms. Tanner made a motion to go into non-public session. Ms. Gindele seconded the motion. The motion passed unanimously.

[1:54:55] Ms. Tanner made a motion to seal the minutes of the non-public session. Ms. Gindele seconded the motion. The motion passed unanimously.

##### **b. CIP Funds Discussion**

[1:04:33] Chair McMillan introduced this item with an update on the letter to the City Council requesting the \$500,000 for land acquisition items in the Capital Improvement Plan. It has been sent to the City Council, the Mayor, and the City Manager. She will speak to this letter at the December 14th Planning Board meeting where they decide to adopt CIP requests and then it will be sent to the City Council where Chair McMillan will again present it.

[1:05:57] Ms. Tanner mentioned that she will not be around for the November meeting.

[1:08:05] Ms. Tanner brought up that the City of Dover is looking at a program for when developers want to increase density on their property. This program would give developers an option to pay for increased density and that money would go into a conservation fund for the City. This would be an alternative to applying for a variance for density.

[1:11:25] Mr. Jankowski had submitted four residential Capital Improvement Plan requests that were included in the packet. These requests included:

1. Funding for a commercial-grade steamer to kill weeds without pesticides or herbicides. Dover has one that they built themselves so that they do not have to use weed killer. They

use it on the sidewalks and sides of roads. This would also have an added benefit of sanitizing surfaces. He had talked to Peter Rice about it previously and was told that there was not enough funding for it.

2. Funding for a deep tine aerator which could be used twice a year to aerate all the city parks. This was also something he had previously discussed with Peter Rice who expressed interest.
3. \$500,000 a year to transition the City to all electric landscaping equipment. There are more charging stations going up and electric infrastructure is growing in this area which will provide a better landscape for these types of tools
4. A pot of money that can be used for land conservation, recreation, and historic preservation. Mr. Jankowski proposed that one percent of the annual budget be used for this, which would be about \$1,000,000 a year. He does not believe that \$500,000 is enough.

[1:14:24] Ms. Tanner also submitted a proposal to the Capital Improvement Plan as a resident. This regarded tree planting and having the City use its buying power to work with residents that would like to have trees on their property. There is supposed to be a number of trees that the City plants each year but enabling residents to plant would be helpful, especially by reducing financial burdens on the resident.

[1:19:13] Mr. Britz mentioned that the public improvement submissions to the Capital Improvement Plan would not be put at the end of the plan this year as per usual and the City Council is making a more concerted effort this year to bring up the resident requests and they will include it on an upcoming Council agenda. This will provide an opportunity for the public to speak to it as well as hear some of the proposals. The December 15<sup>th</sup> Planning Board meeting is when they will vote to send certain requests to the Council, this is likely when they will take public input. The City Council will also have an upcoming public meeting with public input.

#### c. Standardizing Site Walks

[1:22:44] Mr. Britz introduced this topic about site walks, mentioning that staff would like to see site walks become more regular for Conservation Commission applications. This would mean a set site walk date, exactly one week before each meeting, at 3:30 p.m. This would be the first Wednesday of the month and would reduce the need for further polling and scheduling if it is a standing date each month.

#### d. Digital Wetland Delineation Requirements

[46:20] Ms. Tanner made a motion to move the Other Business item 'Digital Wetland Delineation Requirements' to the first item under Other Business. This motion was seconded by Vice Chair Collins. The motion passed unanimously.

[47:10] Mr. Britz introduced this item and mentioned that City staff have been considering asking applicants for digital files of their wetland buffer and boundary delineations when they

apply for a wetland conditional use permit. With updated delineations on file, the City could then prepare a higher resolution wetland map for the City of Portsmouth that could utilize these small-scale delineations to provide greater accuracy. This is not currently a requirement within the ordinance, but the Commission could ask for them from applicants that come in with delineations.

[52:01] Mr. Riker requested to make a few comments on this potential new stipulation. His concern was how the information would be used by the City once it entered the City's GIS database. His hesitation lies in where property owners and applicants will have paid for delineations to be done and potential neighbors in the future might be able to request this data from the City for free when it is technically owned by the property owner who originally paid for it. This would also be affiliated with the wetland scientist who delineated it and stamped it.

[24:22] Mr. Britz mentioned that staff will have to have a conversation with the Legal Department to see what they can require and what kind of impacts that could have to a contractor in the future with liability and permissions.

e. Boundary Marker Signs

[1:25:12] Kate Homet introduced this topic and mentioned that she and Mr. Britz had been discussing how there is a requirement in the ordinance for wetland boundary markers. There is interest to start requiring these marker signs be installed with new applicants and there is preference for them to be purchasing City-made boundary marker signs. Ms. Homet modeled some sign designs for Portsmouth based off of a sign company's examples and the advice of the Exeter Conservation Commission staff member, Kristen Murphy. She is proposing that the Conservation Commission pick a design that would be preferred for City use, order a small, bulk amount for a trial run, and then sell them to applicants to have consistent signage across the City.

After discussion among the Commission, the preferred material is metal and not plastic. The preferred wording is City of Portsmouth, Do Not Disturb or Cut with a simple graphic along with the City seal.

f. [1:55:30] Mr. Jankowski brought up an addition Other Business item, a standing sustainable land care subcommittee update.

[1:55:45] Mr. Jankowski had a meeting with a NOFA Connecticut representative and Diana Carpinone to talk about how they are holding a live accreditation program for NOFA that will be in Portsmouth in the spring of 2023. He wanted to verify that one of the official sponsors of this training program would be the Portsmouth Conservation Commission. This will be a four day course running from 9-4 p.m. and they expect 30-40 students. Mr. Jankowski will talk to the library about holding it there. They will promote this via the landscape associations and it will be geared towards landscaping professionals.

[1:58:05] Vice Chair Collins mentioned that the Discovery Center or the Urban Forestry Center would be a great location for the class as well.

[1:58:35] Chair McMillan said that October 19th is what she had written down for the next subcommittee meeting.

[1:59:05] Mr. Jankowski said that there would not be much to update the group on.

[1:59:28] Vice Chair Collins mentioned that she did have some ordinance updates for that meeting.

[1:59:35] Chair McMillan will have updates as well on the brochure. The meeting will be October 19th at 3:30 p.m. and Mr. Jankowski will come up with an agenda.

[2:00:10] Ms. Tanner made a motion to adjourn the meeting and Ms. Gindele seconded. The motion passed unanimously.

## **V. ADJOURNMENT**

The meeting adjourned at 5:31 p.m.

Respectfully submitted,

Kate E. Homet

Secretary for the Conservation Commission



# Memo

TO: Conservation Commission Members  
FROM: Peter Britz, Environmental Planner  
Kate Homet, Associate Environmental Planner  
DATE: November 4, 2022  
SUBJ: November 9, 2022 Conservation Commission Meeting

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**Site Address**  
**Mr. Darren Kenney**  
**800 McGee Drive**  
**Map 219, Lot 45-6 (LU-22-208)**

## Description:

Applicant is requesting a wetland conditional use permit to install a new shed on their property. The shed is located completely within the 100' wetland buffer where there is currently lawn.

*1. The land is reasonably suited to the use activity or alteration.*

Applicant is proposing to construct a new shed in an area of lawn just beyond the driveway. The shed itself will be 10x12 in size and will be placed on a crushed stone area 12x14 in size. The size of the stone area will allow for infiltration of stormwater from the shed below the footprint area of the shed. Given that this will be located approximately 75 feet from the edge of the wetland, the proposal is within the 100' wetland buffer where grass currently exists.

*2. There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration.*

Given the side yard setback, the shed is being placed 10 feet from the property line and cannot be placed in front of the principal structure. The entire backyard of the property is within the 100' wetland buffer therefore the location is as far from the resource as practicable.

*3. There will be no adverse impact on the wetland functional values of the site or surrounding properties.*

The small size of the shed, distance from the wetland and the infiltration proposed with the crushed stone will reduce any impacts due to the new impervious surface area of 120square feet.

*4. Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals.*

The shed is proposed to be located over an existing lawn area. Given the lawn area will be replaced with crushed stone and the shed there is some lawn area being removed. This work will amount to 168 square feet of new crushed stone in an area of lawn. The applicant has been removing invasive species from the wetland buffer. A planting plan for the buffer would be appropriate in order to establish a more effective buffer along the shoreline of the pond.

*5. The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this section.*

Given the small size of the project there significant impacts are not expected. A plan for replanting the 25' vegetated buffer would easily offset any impacts from the proposed shed.

*6. Any area within the vegetated buffer strip will be returned to a natural state to the extent feasible.*

The applicant has been removing a well established area of Asian bittersweet. The shoreline would benefit from the planting of native plants in this location.

**Recommendation:** Staff recommends approval of this application with the following stipulation:

1. The applicant submit a planting plan that includes native species to be planted near the wetland edge to enhance the 25' vegetated buffer strip prior to Planning Board approval.

**Site Address**  
**225 Borthwick Avenue**  
**Map 240, Lot 1 (LU-22-212)**

The proposed work for this application is located on the northern side of Borthwick Avenue where two detention ponds currently exist. This project proposes to stabilize the banks of these manmade ponds with stone, coir logs and plantings along the banks. While these are artificial ponds, they are also designated wetland areas.

*1. The land is reasonably suited to the use activity or alteration.*

The pond has grass planted right to the edge of the water where the property owner has been mowing for years. The proposal to stabilize the shoreline and plant vegetation where grass currently exists has the ability to create a buffer along the edge the pond. Given there is no vegetation planted there today the stabilization and planting proposed could be an improvement to what currently exists.

*2. There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration.*

Given the applicant has a specific project focus of stabilizing the bank of the pond this is the most reasonable location in which to conduct the project.

*3. There will be no adverse impact on the wetland functional values of the site or surrounding properties.*

The existing wetland has limited functions as it is being maintained as ornamental man made ponds. The proposed work will add some shoreline vegetation which could enhance the functions of this wetland area.

*4. Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals.*

The proposed plans will alter some of the lawn area to install stabilization and plantings to enhance the bank of the pond.

*5. The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this section.*

The project is proposed along the bank of two manmade ponds. There is no existing vegetation providing habitat therefore this project could provide some enhancement to these ponds.



*6. Any area within the vegetated buffer strip will be returned to a natural state to the extent feasible.*

The applicant is proposing to stabilize the shoreline and expand the existing vegetation to include some plantings edge of the pond. This planting is working towards a more natural shoreline environment for this site.

**Recommendation:** Staff recommends the applicant provide details about the species to be planted and more information about how this vegetation will be maintained. Given the proposed work to enhance the shoreline vegetation, staff recommends approval of this project with the following stipulation:

1. In order to ensure the success of the shoreline plantings, staff recommends requiring the applicant plan for at least two years of monitoring and maintaining the buffer plantings. If after one year the plantings do not have at least an 80% success rate, replanting will be required and an updated planting plan will be submitted to Planning Department staff.

**LU-22-208**

## Land Use Application

**Status:** Active**Date Created:** Oct 25, 2022**Applicant**

Darren Kenney  
darrenkenney@gmail.com  
800 McGee Dr  
Portsmouth, NH 03801  
7814929765

**Primary Location**

800 MCGEE DR  
Portsmouth, NH 03801

**Owner:**

Darren Kenney  
800 McGee Drive 800 MCGEE DR Portsmouth, NH 03801

**Applicant Information****Please indicate your relationship to this project**

A. Property Owner

**Alternative Project Address****Alternative Project Address**

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**Project Type**

**Addition or Renovation:** any project (commercial or residential) that includes an ADDITION to an existing structure or a NEW structure on a property that already has structure(s) on it

☐

**New Construction:** any project (commercial or residential) that involves adding a NEW structure on a parcel that is currently VACANT. If there are any existing structures on the property (even if you are planning to remove them), you should select Addition and Renovation above

☐

**Minor Renovation:** for projects in the Historic District only that involve a minor exterior renovation or alteration that does not include a building addition or construction of a new structure

☐

**Home Occupation:** residential home occupation established in an existing residential dwelling unit and regulated by the Zoning Ordinance. Home Occupations are not allowed in the following Zoning Districts: Waterfront Business, Office Research, Industrial, or Waterfront Industrial

☐

**New Use/Change in Use:** for a change of land use or an expansion to an existing use (e.g. addition of dwelling units) that includes no exterior work or site modifications

☐

**Temporary Structure / Use:** only for temporary uses (e.g. tents, exhibits, events)

☐

**Demolition Only:** only applicable for demolition projects that do not involve any other construction, renovation, or site work

☐

**Subdivision or Lot Line Revision:** for projects which involved a subdivision of land or an adjustment to an existing lot line

☐

**Other Site Alteration requiring Site Plan Review Approval and/or Wetland Conditional Use Permit Approval**

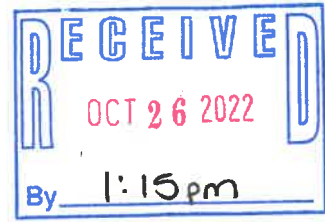
☒

**Sign:** Only applies to signs requiring approval from a land use board (e.g. Historic Commission, Zoning Board of Adjustment)

☐

**Request for Extension of Previously Granted Land Use Approval**

October 26, 2022



Dear Ms. McMillan,

My name is Darren Kenney. My wife Jessica, and I are the owners of the property located at 800 McGee Drive, here in Portsmouth. I am writing you today to ask for your approval of our wetland conditional use permit. The purpose of the permit is to allow us to place a shed in our back yard. As you will notice from the attached map, much of our property lies within the wetland barrier. The location we would like to place the shed is 10' from the adjacent property, ~75' from the water's edge and entirely within the barrier space. Currently this space is part of our yard and contains no wild vegetation. The shed would be 10'x12" (120 sq ft) and would be place on a crushed rock base that is 12'x14' (168 sq ft).

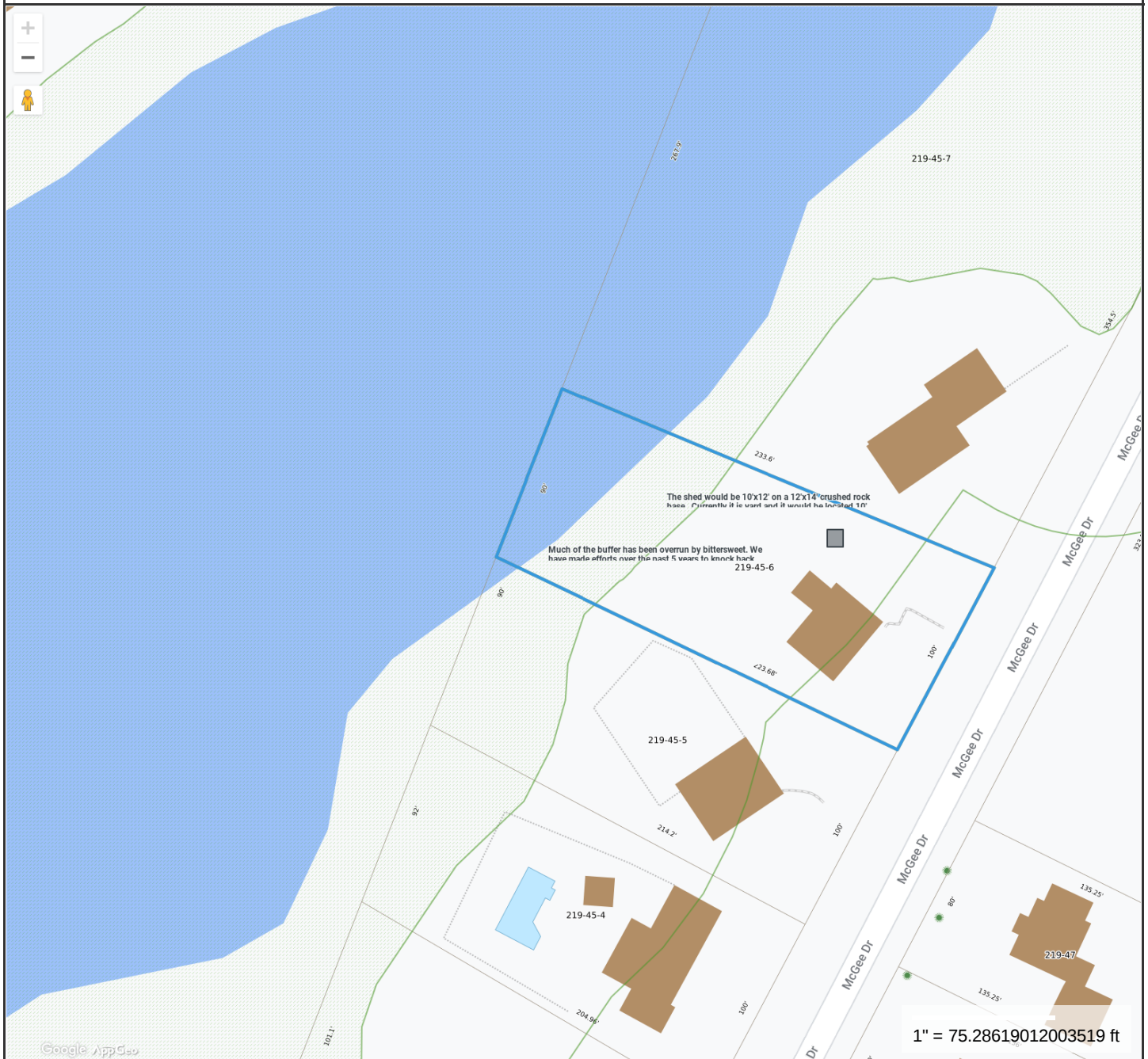
We feel as though this location would have the least impact on the pond and surrounding area. Over the past 5 years of owning this home, we have taken great pleasure in having the pond in our back yard and have made efforts to reduce the impact of the invasive species, bittersweet, that has been plaguing its shorelines. Our intent is to continue to support a healthy, thriving environment for all the amazing wildlife that makes "our" pond its home. Based on this information, we respectfully ask that you approve this conditional use permit and allow us to move forward with this project.

Thank you for your consideration.

Best,

Darren Kenney

## 800 McGee Dr Shed Location (approx.)

**Property Information**

**Property ID** 0219-0045-0006  
**Location** 800 MCGEE DR  
**Owner** KENNEY DARREN

**MAP FOR REFERENCE ONLY  
NOT A LEGAL DOCUMENT**

City of Portsmouth, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 09/21/2022  
Data updated 3/9/2022

Print map scale is approximate.  
Critical layout or measurement  
activities should not be done using  
this resource.

Map Theme Legends

Wetlands

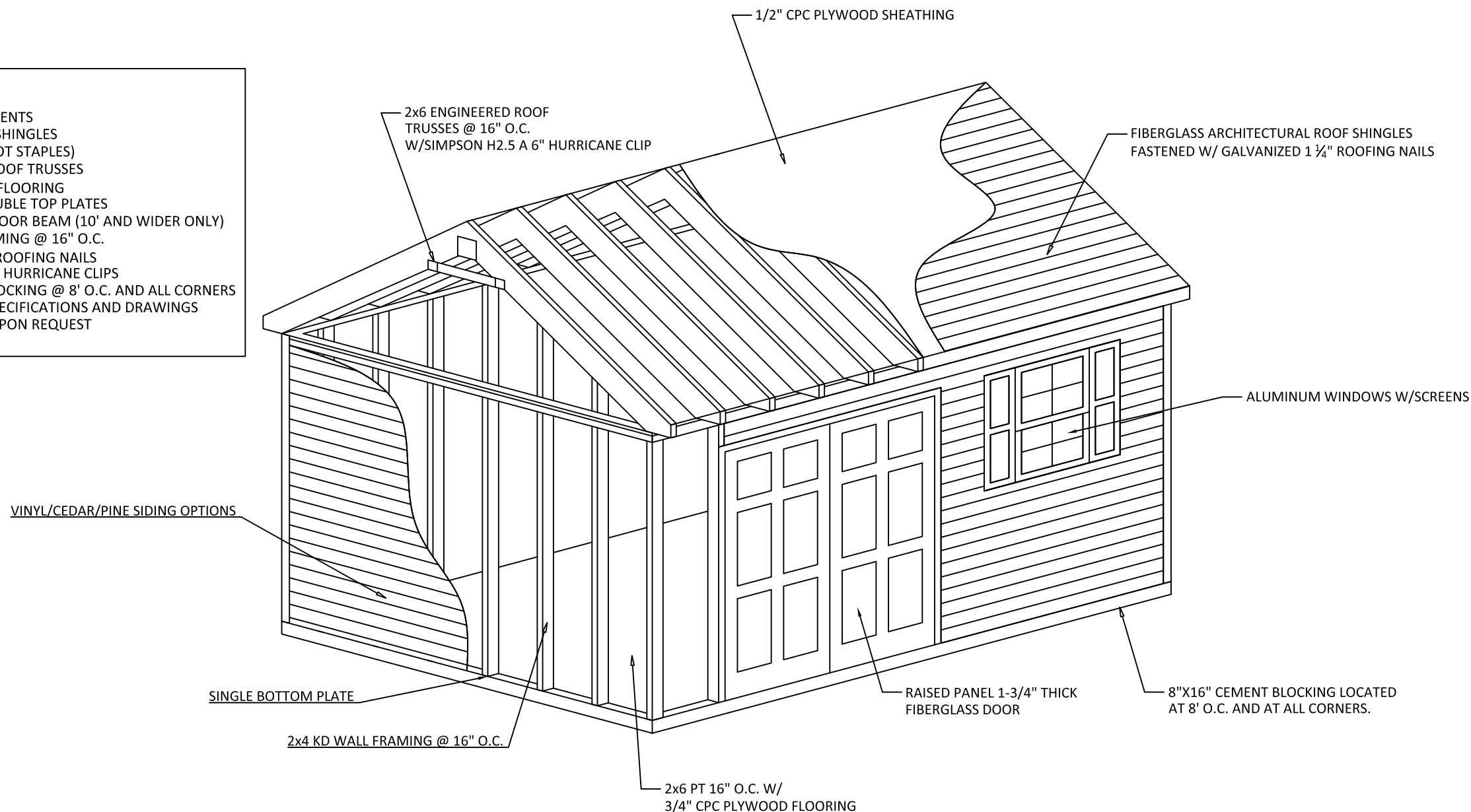
-  Wetlands
-  100ft Wetlands Buffer

City of Portsmouth

# STANDARD FEATURES

VINYL/CEDAR/PINE SIDING OPTIONS  
ALUMINUM WINDOWS W/SCREENS  
ALUMINUM DRIP EDGE ON ALL SIDES  
LOCKING DOOR HANDLE  
FULL 1-3/4" THICK FIBERGLASS DOORS  
DOUBLE 2x DOOR HEADERS W/ JACK STUDS  
ALL PVC TRIM (VINYL SIDED ONLY)  
6' 4 1/2" STANDARD WALL HEIGHT  
ALL FLOORS 10' IN WIDTH (10'x12', 10'x14')  
HAVE RIM JOIST AT 6' 4" SEAM  
ALL FLOORS 12' IN WIDTH WITH A DOUBLE  
JOIST AT THE 6' SEAM  
ALL FLOORS WIDER WILL BE SEAMED AT 8'

SCREENED GABLE VENTS  
FIBERGLASS ROOF SHINGLES  
ROOFING NAILS (NOT STAPLES)  
2x6 LOAD RATED ROOF TRUSSES  
3/4" CPC PLYWOOD FLOORING  
INTERLOCKING DOUBLE TOP PLATES  
DOUBLE CENTER FLOOR BEAM (10' AND WIDER ONLY)  
2x6 PT FLOOR FRAMING @ 16" O.C.  
GALVANIZED 1 1/4" ROOFING NAILS  
SIMPSON H2.5 A 6" HURRICANE CLIPS  
8"x16" CEMENT BLOCKING @ 8' O.C. AND ALL CORNERS  
TRUSS LOADING SPECIFICATIONS AND DRAWINGS  
AVAILABLE UPON REQUEST



GREGSAK ENGINEERING, INC.

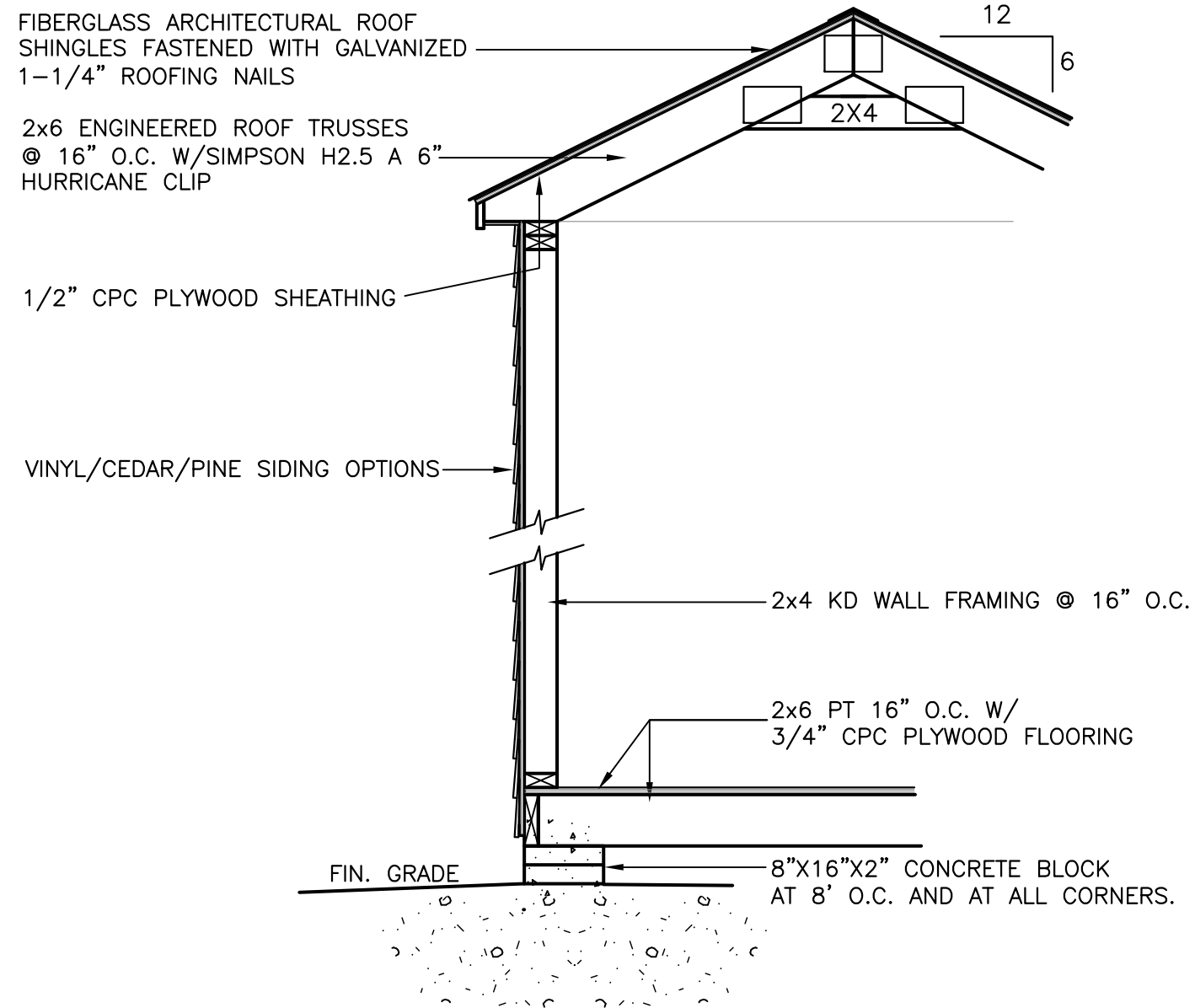


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P.O. BOX 271  
CHESTER, NEW HAMPSHIRE 03036  
PH: (603) 887-6979  
FAX: (603) 887-6636  
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ISOMETRIC VIEW  
POST WOODWORKING TYPICAL SHED DESIGN  
163 KINGSTON ROAD  
DANVILLE NH

PREPARED FOR:  
POST WOODWORKING, INC.  
163 KINGSTON ROAD  
DANVILLE, NH 03819  
(866) 794-7433

Scale: NTS  
APRIL 18, 2016



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WALL SECTION  
POST WOODWORKING TYPICAL SHED DESIGN  
163 KINGSTON ROAD  
DANVILLE NH

PREPARED FOR:  
POST WOODWORKING, INC.  
163 KINGSTON ROAD  
DANVILLE, NH 03819  
(866) 794-7433

Scale: 3/4"=1'-0"



APRIL 18, 2016

**LU-22-212**

## Land Use Application

**Status:** Active**Date Created:** Oct 26, 2022**Applicant**

Jennifer Brymer  
jbrymer@aqualisco.com  
2510 Meridian Parkway  
Durham, NC 27713  
9842866778

**Primary Location**

225 BORTHWICK AVE  
Portsmouth, NH 03801

**Owner:**

LIBERTY MUTUAL INSURANCE & ATTN: JOANNE BRAGG  
175 BERKELEY ST BOSTON, MA 02116

**Applicant Information****Please indicate your relationship to this project**

B. Property Owner's Representative

**Alternative Project Address****Alternative Project Address**

--

**Project Type**

**Addition or Renovation:** any project (commercial or residential) that includes an ADDITION to an existing structure or a NEW structure on a property that already has structure(s) on it

☐

**New Construction:** any project (commercial or residential) that involves adding a NEW structure on a parcel that is currently VACANT. If there are any existing structures on the property (even if you are planning to remove them), you should select Addition and Renovation above

☐

**Minor Renovation:** for projects in the Historic District only that involve a minor exterior renovation or alteration that does not include a building addition or construction of a new structure

☐

**Home Occupation:** residential home occupation established in an existing residential dwelling unit and regulated by the Zoning Ordinance. Home Occupations are not allowed in the following Zoning Districts: Waterfront Business, Office Research, Industrial, or Waterfront Industrial

☐

**New Use/Change in Use:** for a change of land use or an expansion to an existing use (e.g. addition of dwelling units) that includes no exterior work or site modifications

☐

**Temporary Structure / Use:** only for temporary uses (e.g. tents, exhibits, events)

☐

**Demolition Only:** only applicable for demolition projects that do not involve any other construction, renovation, or site work

☐

**Subdivision or Lot Line Revision:** for projects which involved a subdivision of land or an adjustment to an existing lot line

☐

**Other Site Alteration requiring Site Plan Review Approval and/or Wetland Conditional Use Permit Approval**

☒

**Sign:** Only applies to signs requiring approval from a land use board (e.g. Historic Commission, Zoning Board of Adjustment)

☐

**Request for Extension of Previously Granted Land Use Approval**



## Proposed for: Liberty Mutual

---

Liberty Mutual

225 Borthwick Ave.

Portsmouth, NH 03801

## Driver for Corrective Action

---



Attention Needed



Action Needed



Action Required



Shoreline Stabilization – Two wet detention ponds with side slope erosion. Easter Pond 252 linear Feet/Western Pond 335 Linear feet

## Summary of Issues

---

The following scope details a proposed option to stabilize the noted side slopes of two wet detention ponds at Portsmouth, Liberty Mutual. This proposed stabilization technique will incorporate engineered fabrics, vegetation, as well as a sub-water level stone toe footer. We recommend this scope, as it coincides with the existing aesthetic and provides a more dynamic approach to stabilizing the soils. The migrated and sloughed soil will be excavated and removed from the toe of the slope and stock-piled for re-use and/or disposal. The toe of each slope will be excavated in order to install a 12"x12" stone toe footer beneath the water line. The trench will be lined with geo-textile fabric to provide separation from the basin's soil, and prevent side slope soil migration, due to uniform pressure from the stone. TRM 250 (or equivalent) will be installed, extending from the stone to footer to the existing landscape features (replacing the existing turf buffer). A choir log will be installed at the normal water level to be staked into the ground using 2' engineers' stakes, which will then have native wetland plants installed on the uphill side of the choir log. Native wetland plants will be installed through the TRM to provide a vegetative buffer during the growing season, though the TRM 250 will provide stability during the winter and cold months.

The following scope includes both ponds shoreline as highlighted in the aerial diagram below (587LF)

## Scope of Work

---

AQUALIS will provide the Services and Deliverable(s) as follows:

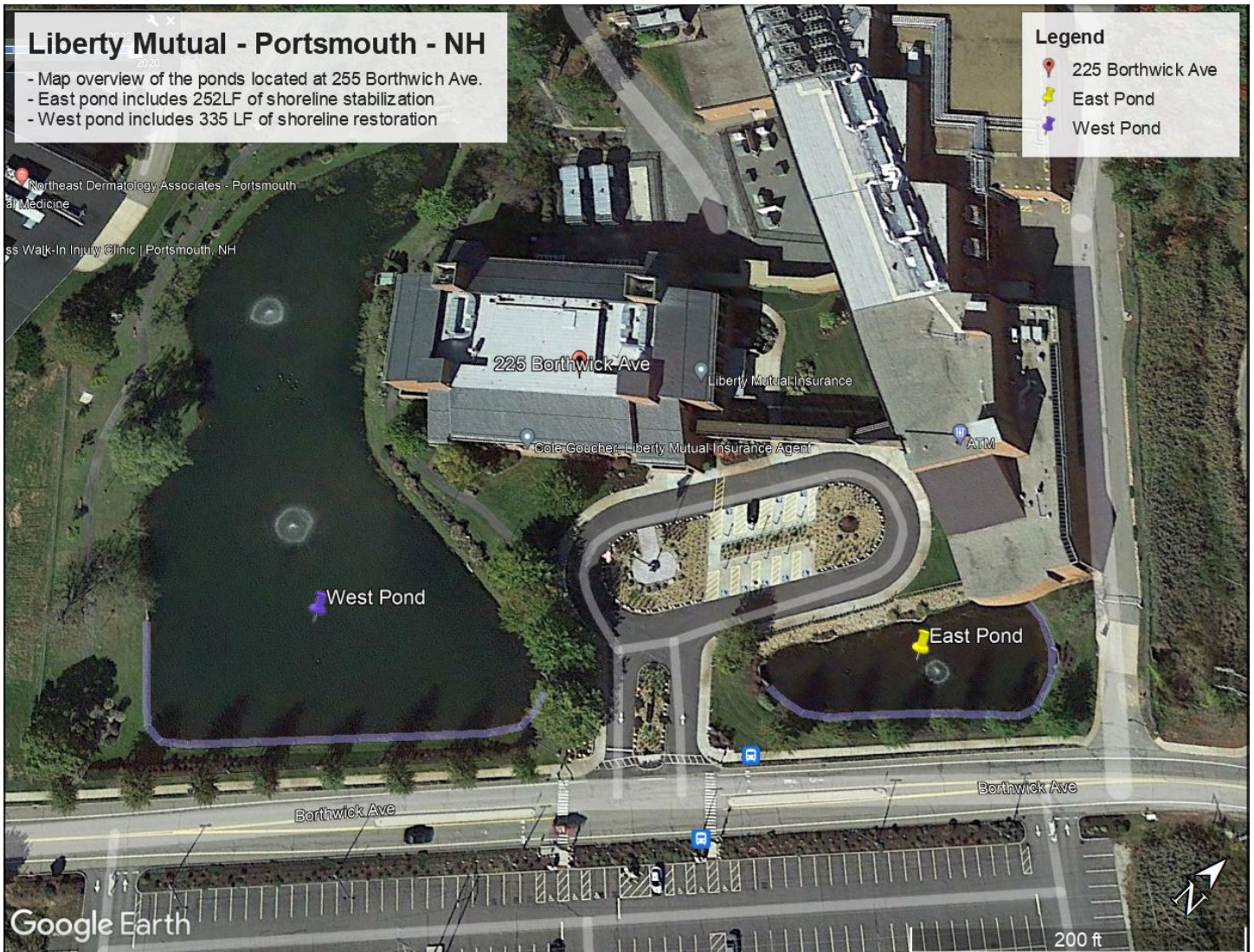
- Mobilize all equipment and labor to the site
- Deploy temporary traffic barricades as necessary for crew and customer safety
- Establish pump around to dewater pond as needed to install buffer
- De-water pond as needed using high flow de-watering pumps and boosters
- Excavate and "strip" non-compactable soil, to be stockpiled for reuse or disposal depending on composition
- Excavate and grade 12"x12 toe stone trench
  - Installation of geo-textile fabric according
  - Installation of 4-6 rip rap mixed with surge stone
- Finish grade of pond slope and embankment, to be confirmed using a rotary laser level and temporary benchmark
- Installation of TRM 250
  - Trench leading edge of TRM
  - Secure TRM 250 using 10" U staples
  - TRM to extend from the top of berm to the toe of slope and tie into stone footer
- Installation of choir log
  - Secured choir log with 2' engineers stakes driven deep into the ground
- Installation of Native Wetland Plants
  - Installation of 6 native wetland plugs per SY

- A variation of 4 species will be used to prevent monoculture and vector vulnerability
  - Perforations in the TRM 250 for the installation of the plants will be stapled, and zip tied to prevent soil migration
- Repair landscaping as needed and replace disturbed mulch
- Remove temporary traffic barricades; perform general site cleanup
- Demobilize

\*Includes both ponds

\*This cost does not include vector truck work

\*This cost does not include any camera investigations

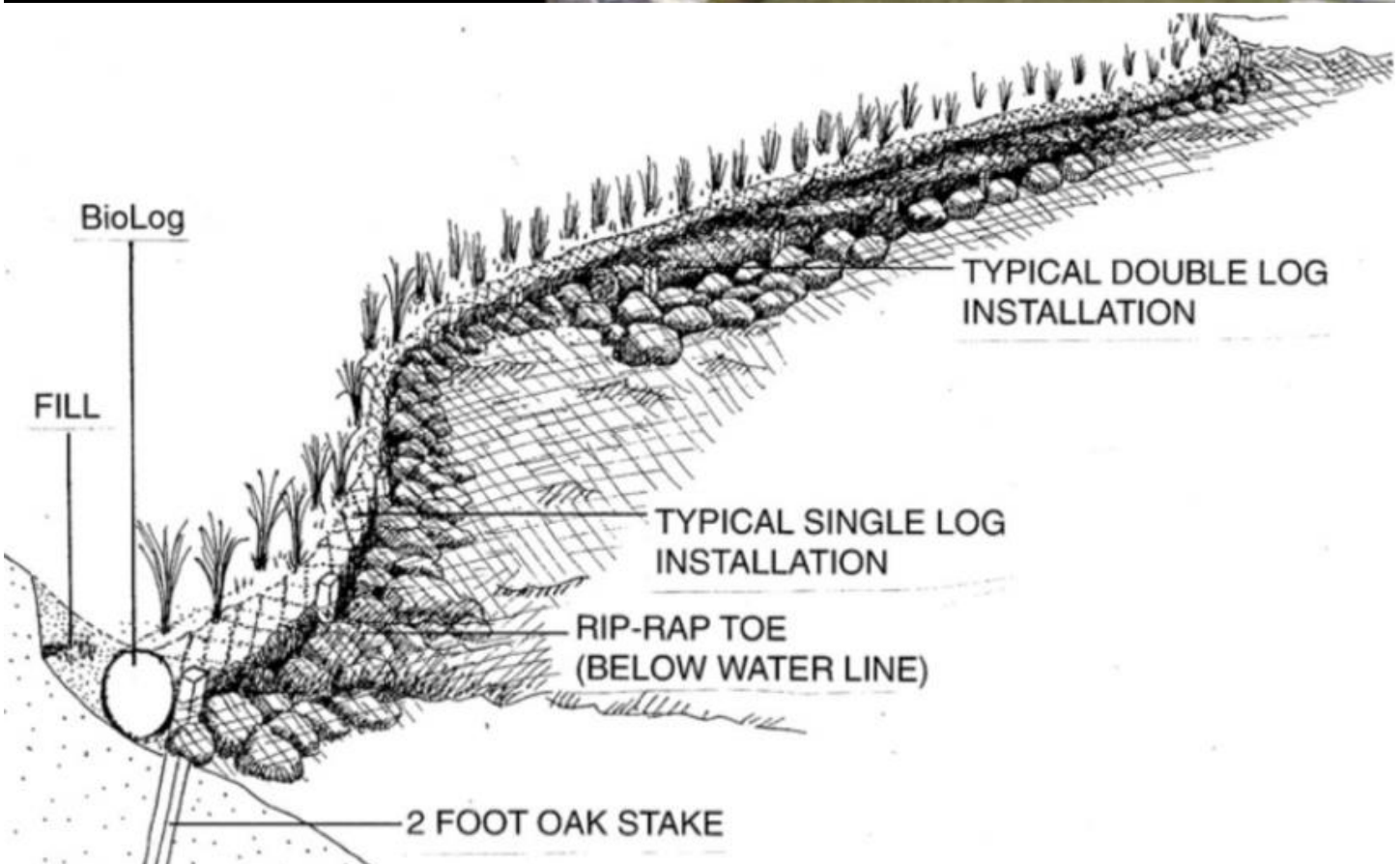
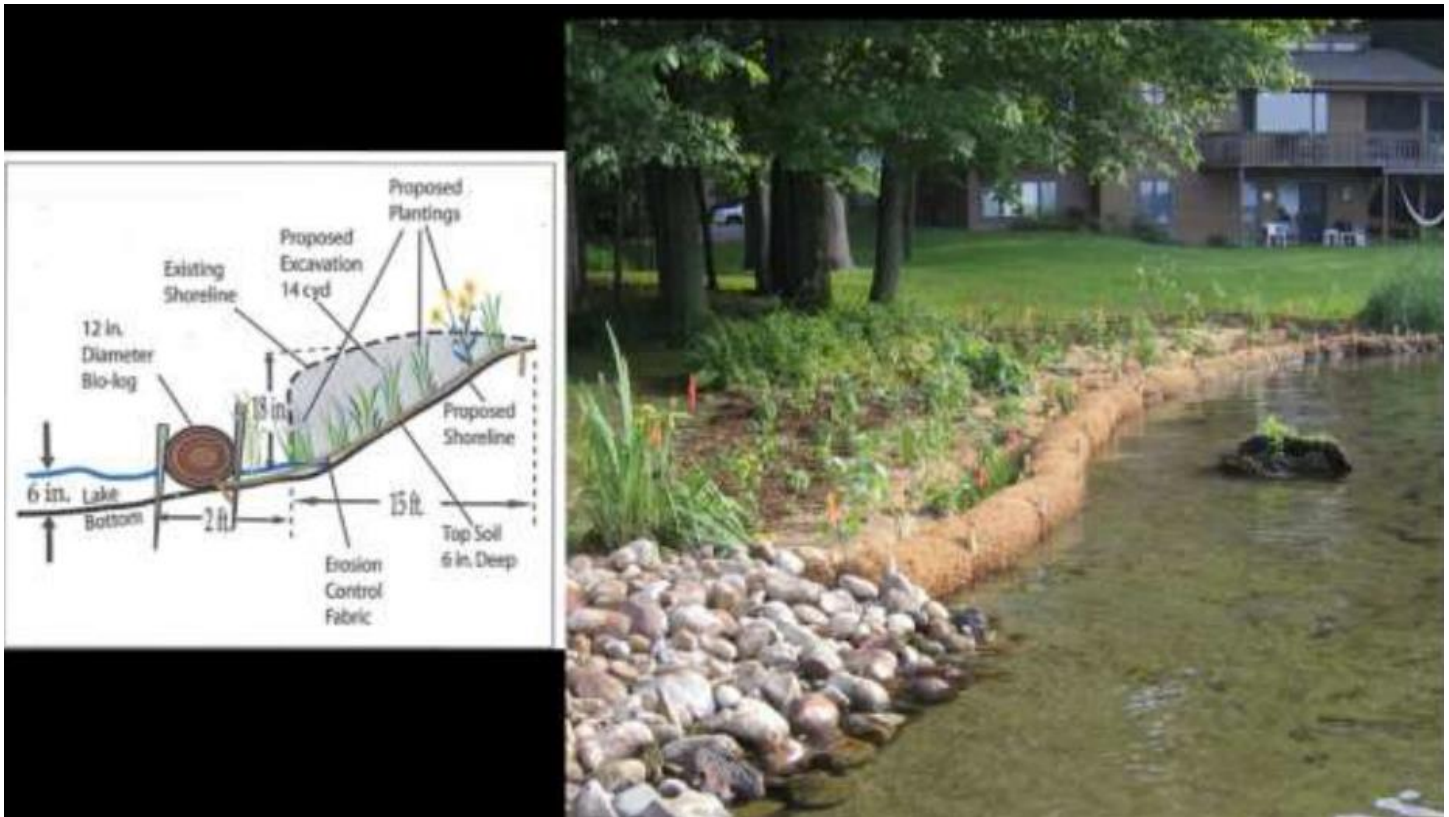




Living Shoreline Example (De-watered)



Newly Constructed Coir Log shoreline (Coir Log will be visible for apx. 1 growing season)















Vanasse Hangen Brustlin, Inc.  
Transportation  
Land Development  
Environmental Services  
Six Bedford Farms Drive, Suite 607  
Bedford, New Hampshire 03110  
603.644.0888 • FAX 603.644.2385

## HALEY & ALDRICH

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### REVISIONS

DATE	DESCRIPTION
05-11-12	CONSTRUCTION DOCUMENTS

### SEAL

### PROJECT

NUMBER  
RDK: 20110575, VHB: 52180.00

DATE  
05-11-12



225 Borthwick Avenue  
Portsmouth, New Hampshire

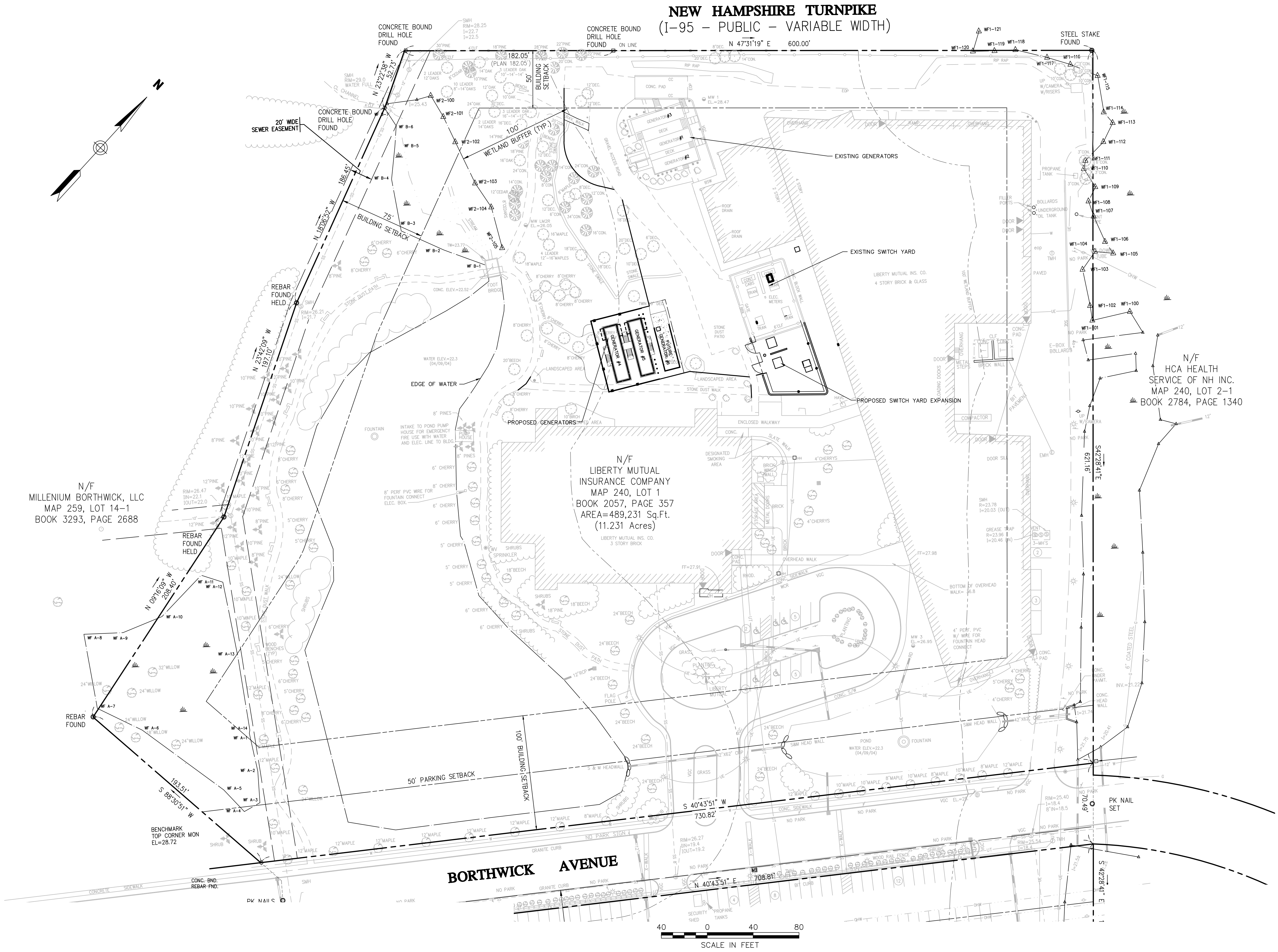
### DRAWING

DRAWN BY  
D. FENSTERMACHER

CHECKED BY  
M. LEO

SCALE  
1"=40'

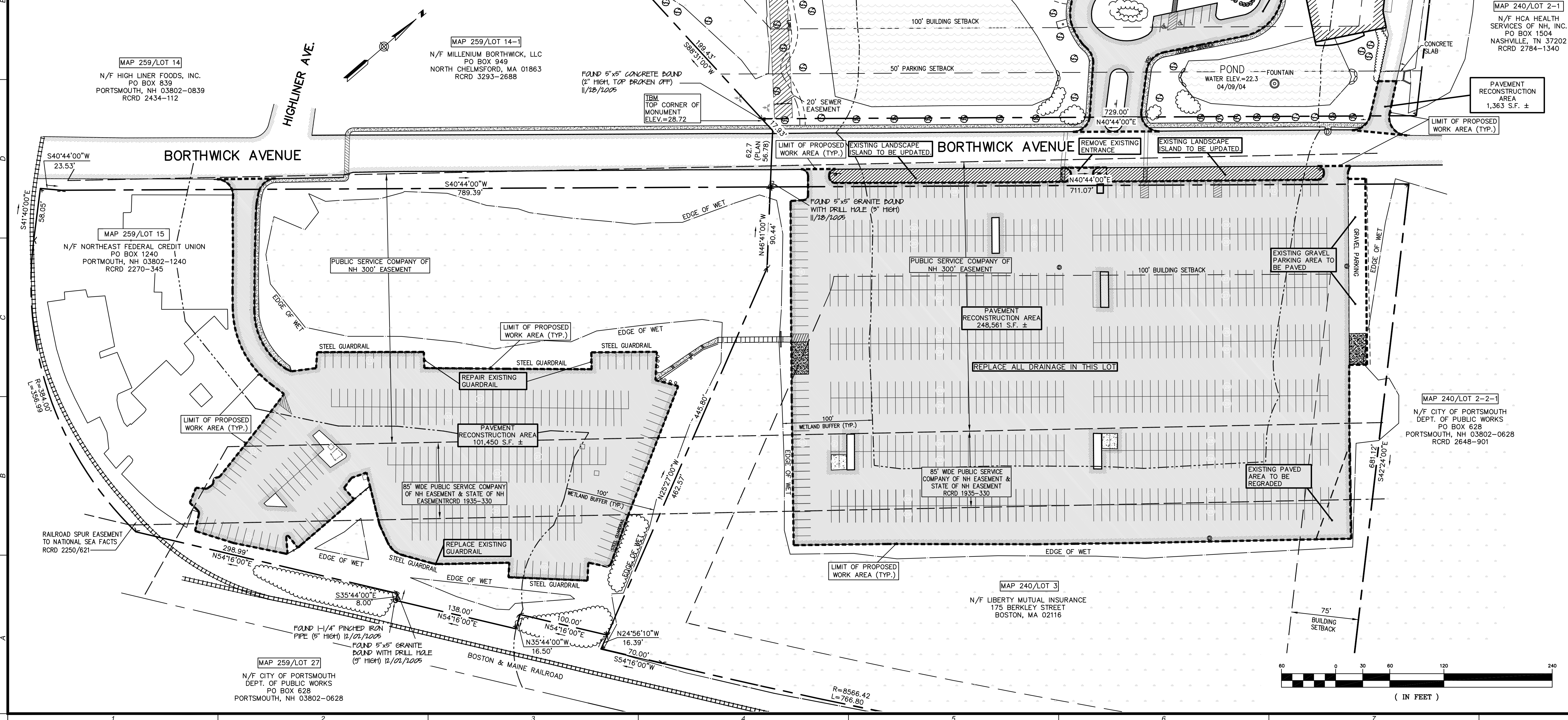
OVERALL  
SITE PLAN





- \* Reconstruction of existing parking areas as shown on Civil Engineers plans, pulverizing, repaving, recuring and restriping a total area of 372,853 s.f. +/- . This work is to be phased.
- \* The demolition and replacement of drainage appurtenances in the Northerly parking facility including catch basins, frames and grates, collector piping and perforated piping.
- \* Demolition of light poles and bases and underground electric in the Northerly parking area, at the main entrance parking area and turn around and upgrade of the existing lighting with the addition of the placement bollard lights.
- \* Removal of existing entrance (located in the center of the island between Borthwick Avenue and the Northerly parking area).
- \* Replacement of guardrail in various locations along the perimeter of the Southerly parking area.
- \* Existing gravel parking area adjacent to the Northerly parking area is to be paved. Northeast corner of Northerly parking area is to be re-graded prior to the repaving to raise the elevation.
- \* Alternate Bid is to be included for the existing island between Borthwick Avenue and the Northerly parking area to provide upgraded landscaping.

NOTE:  
SEE SHEET 2 OF 10 FOR STANDARD  
NOTES AND ZONE REQUIREMENTS.



Jan 11, 2007 - 1:56pm  
P:\05783\dwg\05783 OA-ST.dwg

MAP 240, LOT 3 & MAP 259, LOT 15  
PROPERTY OF  
LIBERTY MUTUAL INSURANCE COMPANY  
BORTHWICK AVENUE  
COUNTY OF ROCKINGHAM  
PORTSMOUTH NEW HAMPSHIRE

**OVERALL VIEW SITE PLAN**

**AMES MSC**  
ARCHITECTS & ENGINEERS

DATE: DECEMBER 27, 2005

**SHEET 1 OF 10**

PROJECT NO. 05783

SCALE: 1" = 60'

REV. 4	06/05/06	NO REVISIONS THIS SHEET
REV. 3	05/18/06	REVISIONS PER REVIEW
REV. 2	03/17/06	REVISIONS PER CLIENT REVIEW
REV. 1	02/23/06	REVISIONS PER CLIENT REVIEW

REV. 1	02/23/06
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PHONE: 603-431-2222  
FAX: 603-431-0910  
[www.amesmsc.com](http://www.amesmsc.com)



# **Wetland and Waterbody Delineation Report**

September 30, 2022

## **Liberty Mutual Wetland Delineation Project**

**225 Borthwick Avenue  
Portsmouth, New Hampshire**

### **Prepared By:**

TRC  
670 N. Commercial Street  
Suite 203  
Manchester, NH 03101



## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
<b>2.0</b>	<b>PROJECT SITE CHARACTERISTICS.....</b>	<b>1</b>
2.1	General Description .....	1
2.2	Hydrology .....	1
2.3	Federal and State Mapped Wetlands and Streams .....	1
2.4	Mapped Soils.....	2
2.4.1	Hydric Rating .....	2
2.4.2	Natural Drainage Class .....	3
2.4.3	Prime Farmland .....	3
2.4.4	Hydrologic Soil Groups.....	3
2.5	Rare, Threatened, and Endangered Species .....	4
<b>3.0</b>	<b>WETLAND AND STREAM DELINEATION METHODOLOGY.....</b>	<b>4</b>
3.1	Non-wetland Aquatic Resource Methodology .....	4
3.1.1	Streams .....	5
3.1.2	Vernal Pools .....	5
3.2	Wetland Delineation Methodologies .....	6
3.2.1	Hydrophytic Vegetation Methodologies.....	6
3.2.2	Hydric Soil Methodologies .....	7
3.2.3	Wetland Hydrology Methodologies .....	7
3.2.4	Prime Wetlands.....	8
3.2.5	Priority Resource Areas .....	8
<b>4.0</b>	<b>RESULTS.....</b>	<b>9</b>
4.1	Delineated Wetlands.....	9
4.2	Delineated Streams .....	9
4.3	Delineated Waterbodies .....	9
<b>5.0</b>	<b>REFERENCES .....</b>	<b>11</b>

## TABLES

Table 1. Mapped Soils .....	2
Table 2. Delineated Wetlands and Waterbodies .....	10
Table 3. Delineated Streams.....	10

## APPENDICES

### Appendix A   Figures

Figure 1. Site Location Map

Figure 2. Delineated Resources

### Appendix B   Photographs

### Appendix C   Wetland Determination Data Forms

### Appendix D   NRCS Soil Report



## 1.0 Introduction

This report presents the results of a wetland and waterbody delineation conducted on September 19, 2022, by TRC Companies, Inc. (TRC) at 225 Borthwick Avenue in the City of Portsmouth, Rockingham County, New Hampshire (Site). The survey area included approximately 11.23 acres on Parcel ID 240-1.

This report documents wetlands, streams, and other aquatic resources (ponds, lakes, impoundments, etc.) at the Site regardless of assumed jurisdictional status and addresses the implementation of local and state regulated buffer areas. To the extent practicable, the delineated resources were investigated to determine drainage patterns and a physical nexus to Waters of the United States (WOTUS).

Appendix A provides a Site location map (Figure 1) and a map of the resources delineated by TRC (Figure 2). Appendix B includes representative photographs of the Site, Appendix C includes wetland determination data forms, and Appendix D contains the Natural Resources Conservation Service (NRCS) Soil Report.

## 2.0 Project Site Characteristics

Prior to conducting field investigations on September 19, 2022, the following data sources were reviewed to aid in identifying wetlands and streams:

- US Geological Survey (USGS) topographic mapping;
- US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping;
- Natural Resources Conservation Service (NRCS) medium-intensity soil survey mapping;
- GRANIT, the New Hampshire statewide Geographic Information Systems (GIS) clearinghouse; and
- Recent and historical aerial photography.

### 2.1 General Description

The Site is generally flat with a few shallow slopes surrounding the ponds and wetlands. The Site is bounded by commercial and open space properties. Interstate I-95 (Blue Star Turnpike) borders the Site to the northwest and additional office complexes and parking lots abut the Site in all other directions.

### 2.2 Hydrology

The Site generally drains offsite via culverts and underwater routes towards the southeast. The boundary of the Site is depicted in the Locus map in Figure 1, outlined in black. The Site is located in the Salmon Falls/Piscataqua Rivers Watershed (01060003).

Flood hazard areas identified on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) are identified as Special Flood Hazard Areas (SFHAs). SFHAs are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. There are no SFHAs or other FEMA flood zones in the Project parcel.

### 2.3 Federal and State Mapped Wetlands and Streams

The USFWS is the principal federal agency tasked with providing information to the public on the status and trends of wetlands on a national scale. The USFWS NWI is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of nationwide wetlands (where

mapped). NWI mapping data is offered to promote the understanding, conservation, and restoration of wetlands. The online New Hampshire Department of Environmental Services (NHDES) Wetlands Permitting Planning Tool was accessed to determine the extent of federal and state-mapped aquatic resources.

According to TRC's review of NWI and NHDES mapping, there are two NWI-mapped wetlands connected by one riverine feature within the Site. The two wetland features were confirmed during TRC's delineation, and the riverine feature appeared to be culverted under the existing roadway. There is one NWI-mapped wetland located to the northeast of the site, although TRC confirmed that this feature did not extend into the Site.

## 2.4 Mapped Soils

The NRCS's Web Soil Survey identifies three soil map units within the Site. Map units can represent a type of soil, a combination of soils, or miscellaneous land cover types (e.g., water, rock outcrop, developed impervious surface). Map units are usually named for the predominant soil series or land types within the map unit. A summary of soil characteristics for soils mapped at the Site are included in Table 1, below. The following sections provide details about hydric ratings, drainage class, prime farmland, and hydrologic soil groups (HSGs). Details about soil map unit descriptions are provided in the NRCS Soil Report included as Appendix D.

**Table 1. Mapped Soils**

Symbol	Soil Name	Hydric Rating (%)	Drainage Class	Hydrologic Soil Group	Farmland Classification
140B	Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky	8	Well drained	B	Not prime farmland
699	Urban land	0	N/A	N/A	Not prime farmland
299	Udorthents, smoothed	0	Excessively drained	N/A	Not prime farmland

### 2.4.1 Hydric Rating

The *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) (1987 Manual) defines a hydric soil as "...a soil that in its undrained condition, is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation."

Due to limitations imposed by the small scale of the soil survey mapping, it is not uncommon to identify wetlands within areas not mapped as hydric soil while areas mapped as hydric often do not support wetlands. This concept is emphasized by the NRCS:

*Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.*

Hydric Soil Rating (HSR) indicates the percentage of a map unit that meets the criteria for hydric soils.

Map unit 140B has an HSR of 8 percent, and map units 299 and 600 have HSRs of 0 percent. For map unit 140B, the hydric components within the map unit are Freetown and Walpole, very stony. For map units 299 and 699, there are no hydric components.

#### **2.4.2 Natural Drainage Class**

Natural drainage class refers to the frequency and duration of wet periods under conditions similar to those under which the soil developed. Anthropogenic alteration of the water regime, either through drainage or irrigation, is not a consideration unless the alterations have significantly changed the morphology of the soil.

Map unit 140B is rated as well drained, map unit 299 is rated as excessively drained, and map unit 699 does not have a drainage class because it is a land type.

#### **2.4.3 Prime Farmland**

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is available for these uses (the land could be cropland, pastureland, rangeland, forestland, or other land, but not urban built-up land or water). Land used for a specific high-value food or fiber crop is classified as “unique farmland.” Generally, additional “farmlands of statewide importance” include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. In some local areas, there is concern for certain additional farmlands, even though these lands are not identified as having national or statewide importance. These farmlands are identified as being of “local importance” through ordinances adopted by local government. The NRCS State Conservationist reviews and certifies lists of farmlands of state and local importance. These lists, along with state and locally established Land Evaluation and Site Assessment (LESA) systems where applicable, are used by federal agencies to review and evaluate activities that may impact farmland. As defined in 7 CFR Part 657, important farmland encompasses prime and unique farmland, as well as farmland of statewide and local importance.

According to the NRCS, all three map units are classified as “not prime farmland.”

#### **2.4.4 Hydrologic Soil Groups**

Soils are assigned to a HSG based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A: Soils have a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.



Group B: Soils have a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C: Soils have a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D: Soils have a very slow infiltration rate (high runoff potential) when thoroughly wet. Soils consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition in Group D are assigned to dual classes.

Map unit 140B is in HSG B, and map units 299 and 699 do not have assigned HSGs.

## **2.5 Rare, Threatened, and Endangered Species**

TRC's wetland and waterbody delineations did not include field surveys for rare plants or rare, threatened, or endangered (RTE) species. During permitting, TRC recommends consultation with the New Hampshire Natural Heritage Bureau (NHNHB) to understand if there are known occurrences of rare, threatened, or endangered species within one mile of the proposed Project. Consultation with NHNHB will result in a report from NHNHB documenting any known occurrences of RTE species and further discussion to determine if proposed work will affect these species.

## **3.0 Wetland and Stream Delineation Methodology**

In addition to the desktop review described above, TRC biologists performed field investigations at the Site to identify wetlands, waterbodies, and other surface waters on September 19, 2022.

The Portsmouth Conservation Commission (the Commission) administers local wetland protection regulations in addition to the United States Army Corps of Engineers (USACE). The Commission has jurisdiction over the following resource areas according to the Portsmouth Zoning Ordinance:

- Any inland wetland, other than a vernal pool, that is 10,000 square feet or more in area;
- Any vernal pool regardless of area;
- Any non-tidal perennial river or stream; and
- The tidal wetlands of Sagamore Creek, Little Harbour, North Mill Pond, South Mill Pond, and part of the Piscataqua River.

## **3.1 Non-wetland Aquatic Resource Methodology**

Streams and other non-wetland aquatic features within the Site were identified by the presence of an ordinary high water mark (OHWM), which is the line established by the fluctuations of water (33 CFR 328.3). The OHWM line is indicated by physical characteristics, which can include: a clear, natural line impressed

on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other characteristics of the surrounding areas.

### 3.1.1 Streams

Streams were identified using the State of New Hampshire Code of Administrative Rules Chapter Env-Wt. 101.109, which defines a "Watercourse" as:

*"... any surface water that:*

- (a) Develops and maintains a defined scoured channel, with evidence of sediment transport, that:*
  - (1) Is greater than 75 feet in length; or*
  - (2) Is of any length and connected to another jurisdictional area at either end; and*
- (b) Is not a drainage swale." (Env-Wt. 101.109)*

Streams were further defined based on the flow characteristics as ephemeral, intermittent, or perennial using the following New Hampshire regulatory definitions:

**"Ephemeral stream"** means a watercourse that is located above the water table year-round and is not fed by groundwater, such that runoff from rainfall and snowmelt is the primary source of stream flow and so the stream has flowing water only during, and for a short duration after, precipitation or spring thaw events. (Env-Wt. 101.39)

**"Intermittent stream"** means a watercourse that is fed by groundwater but is not in the groundwater table throughout the year, with runoff from rainfall and snowmelt as a supplemental source of water for flow, such that it typically does not have flowing water during dry portions of the year. (Env-Wt. 101.52)

**"Perennial stream"** means a watercourse that is in the groundwater table for most of the year and so has groundwater as its primary source of water for stream flow, with runoff from rainfall and snowmelt as a supplemental source of water, so that it contains flowing water year-round during a typical year. (Env-Wt. 101-70)

When a watercourse was encountered that met any of the above definitions, blue survey flagging was labeled with an alpha-numeric code and hung at points along the stream. For streams wider than six (6) feet, flags were hung along the bank of the stream. For streams narrower than six (6) feet, flags were hung along the centerline of the stream and the width of the stream was noted for the purpose of developing GIS shapefiles.

### 3.1.2 Vernal Pools

During wetland delineations TRC concurrently conducted surveys for potential vernal pools. To conduct these surveys TRC scientists utilized vernal pool survey protocols and field data forms based on the document "Identification and Documentation of Vernal Pools in New Hampshire", published by the New Hampshire Fish and Game Department (New Hampshire F&G) Nongame and Endangered Wildlife Program. Confirmation of vernal pool presence would have to occur during the vernal pool breeding season in the spring when vernal pool indicator species are active.

### 3.2 Wetland Delineation Methodologies

Wetlands are regulated by the USACE under Section 404 of the Clean Water Act (CWA). Further, wetlands in New Hampshire are regulated under the Fill and Dredge in Wetlands Law (Wetlands Law, RSA 482-A) which is administered by the NHDES Wetlands Bureau.

The CWA and NH Wetlands Law (*Env-Wt. 101.113*) define wetlands as:

*areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances (do) support, a prevalence of vegetation typically adapted for life in saturated soil conditions.*

In accordance with the New Hampshire Code of Administrative Rules for the Delineation and Classification of Wetlands (*Env-Wt. 301*), wetland delineations were conducted according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v2* ("Regional Supplement") (USACE 2012). The Regional Supplement follows criteria established in the USACE Wetlands Delineation Manual (Environmental Laboratory 1987), but is region specific, giving the wetland delineator a better tool to apply to regional vegetation communities, indicators of hydrology, and indicators of hydric soils when conducting a wetland boundary determination.

The USACE manual provides a repeatable methodology to identify potential wetland areas using a three (3) factor approach (i.e. hydrophytic vegetation, indicators of hydrology, and the presence of hydric soils). When a location having the requisite three (3) factors that constitute a wetland was encountered, the boundaries were flagged in the field using glo-pink survey flagging emblazoned with the words "Wetland Delineation" and sequentially labeled with a unique alpha-numeric code. This code designates the wetland Resource ID which is used on Wetland Determination Forms, resource mapping, and summary tables to identify each delineated resource.

#### 3.2.1 Hydrophytic Vegetation Methodologies

Hydrophytic vegetation is defined in the 1987 Manual as:

*...the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present.*

Plants are categorized according to their occurrence in wetlands. Scientific names and wetland indicator statuses for vegetation are those listed in *The National Wetland Plant List: 2016 Wetland Ratings* (NWPL) (Lichvar et al. 2016). The indicator statuses specific to the "Northcentral and Northeast Region" as defined by the USACE apply to the Site. For upland species that are not listed on the NWPL, the Integrated Taxonomic Information System was referenced for currently accepted scientific names. The official short definitions for wetland indicator statuses are as follows:

- Obligate Wetland (OBL): Almost always occur in wetlands;
- Facultative Wetland (FACW): Usually occur in wetlands, but may occur in non-wetlands;
- Facultative (FAC): Occur in wetlands and non-wetlands (50/50 mix);
- Facultative Upland (FACU): Usually occur in non-wetlands, but may occur in wetlands; and
- Upland (UPL): Almost never occur in wetlands.

Plants that are not found in a region, but are found in an adjacent region, take on the indicator status of that adjacent region for dominance calculations. Plants that are included on the NWPL, but not within the Site region or an adjacent region, are not included in dominance calculations. Plants that are not found in wetlands in any region are considered “UPL” for dominance calculations.

Vegetation community sampling was accomplished using the methodologies outlined in the 2012 Supplement. The “50/20 rule” was applied to determine whether a species was dominant in its stratum. In using the 50/20 rule, the plants that comprise each stratum are ranked from highest to lowest in percent cover. The species that cumulatively equal or exceed 50 percent of the total percent cover for each stratum are dominant species, and any additional species that individually provides 20 percent or more percent cover is also considered dominant species of its respective strata.

A hydrophytic vegetation community is present when: 1) all of the dominant species are FACW and/or OBL (Rapid Test for Hydrophytic Vegetation); 2) greater than 50 percent of the dominant species’ (as determined by the 50/20 rule) indicator statuses are FAC, FACW, or OBL (Dominance Test); and/or 3) when the calculated Prevalence Index is equal to or less than 3.0. When applying the Prevalence Index, all plants are assigned a numeric value based on indicator status (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5) and their abundance (absolute percent cover) is used to calculate the prevalence index.

Cover types are also assigned to each wetland and waterbody in accordance with the system presented in *The Classification of Wetlands and Deepwater Habitats of the United States, Second Edition* (Federal Geographic Data Committee 2013).

### **3.2.2 Hydric Soil Methodologies**

Hydric soil indicators described in *Field Indicators for Identifying Hydric Soils in New England, Version 4* (New England Hydric Soils Technical Committee 2017) and in *Field Indicators of Hydric Soils in the United States, Version 8.2* (NRCS 2018) were used to determine the presence of characteristic soil morphologies resulting from prolonged saturation and/or inundation. Soil color was described using standard color notations provided on Munsell® soil color charts. Soil texture was determined using the methods described by Thien (1979). Soil test pits were dug using a spade shovel to a depth of approximately 20 inches or more (if needed).

*Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin* (MLRA Handbook) (USDA NRCS 2006) was referenced to determine the hydric soil indicators that apply to the Site. Per the MLRA Handbook, the Site is within Major Land Resource Area (MLRA) 144A (New England and Eastern New York Upland, Southern Part) of Land Resource Region (LRR) R (Northeastern Forage and Forest Region). Hydric soil indicators that do not apply to this MLRA were not considered on the wetland determination data forms.

### **3.2.3 Wetland Hydrology Methodologies**

Per the 1987 Manual:

*The term “wetland hydrology” encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and*

*reducing conditions, respectively. Such characteristics are usually present in areas that are inundated or have soils that are saturated to the surface for sufficient duration to develop hydric soils and support vegetation typically adapted for life in periodically anaerobic soil conditions. Hydrology is often the least exact of the parameters, and indicators of wetland hydrology are sometimes difficult to find in the field. However, it is essential to establish that a wetland area is periodically inundated or has saturated soils during the growing season. (Environmental Laboratory 1987)*

Wetland hydrology indicators are grouped into 18 primary and 11 secondary indicators presented in the Supplement. The USACE considers wetland hydrology to be present when at least one primary indicator or two secondary indicators are identified.

### **3.2.4 Prime Wetlands**

Under NH Wetlands Law a municipality may designate high-value wetlands as “Prime Wetlands”. Prime Wetlands provide functions and values such as protection of a Town’s surface and groundwater quality, control of flooding during significant rain events, protection of significant wildlife habitats, or recreational opportunities for the greater public good. To designate wetlands as Prime, a rigorous evaluation process is used to rank a Town’s wetland resources. Only wetlands providing a high level of functions and values are considered. Once wetlands are chosen, the Town must hold a public hearing where residents vote on the designations. If approved by residents, the Town provides the NHDES Wetlands Program a copy of the wetlands study and mapping of designated Prime Wetlands at which point the maps are registered with NHDES. Under Env-Wt. 700, any work within 100 feet of designated Prime Wetlands (in certain municipalities depending on when Prime Wetlands were designated) requires a higher level of scrutiny during permit review to ensure that an activity will not result in the significant loss of any wetlands values.

TRC reviewed online information provided by the NHDES and the City of Portsmouth and determined that there are no Prime Wetlands located within the Site. There is one Prime Wetland located on the parcel adjacent to the Site, identified as Prime Wetland 015. The State of New Hampshire also regulates a 100-foot upland buffer next to this Prime Wetland, a small portion of which is within the Site. None of TRC’s delineated wetlands appear to be proximal to the mapped Prime Wetland area or overlap with the Prime Wetland 100-foot upland buffer.

### **3.2.5 Priority Resource Areas**

The NHDES groups certain high-value wetland resources into Priority Resource Areas (PRA). PRA are protected under New Hampshire wetland law RSA 482-A and have one or more of the following characteristics:

- (a) Has documented occurrences of protected species or habitat;
- (b) Is a bog;
- (c) Is a floodplain wetland contiguous to a Tier 3 or higher watercourse;
- (d) Is a designated prime wetland;
- (e) Is a duly-established 100-foot buffer of designated prime wetlands;
- (f) Is a sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone; or
- (g) Is any combination of (a) through (f), above.

At the time of this writing, the Survey Area does not contain wetlands that meet any of the PRA characteristics. At the time of the survey, the Project area is not known to contain protected species or habitat. However, to fully determine the applicability of characteristic (a), TRC recommends that Aqualis conduct a review with the New Hampshire Natural Heritage Bureau (NHNHB) regarding occurrences of protected species.

## 4.0 Results

TRC investigated the Site depicted on the Resource Maps provided in Figure 2. Two wetlands, two ponds, and two perennial streams were delineated within the Site. Delineated areas are described in the following sections and summarized at the end of this section in Tables 2 and 3. Refer to the photographs in Appendix B and the wetland determination data forms in Appendix C for further details about each delineated area.

### 4.1 Delineated Wetlands

**W-HSW-1** is a palustrine emergent (PEM) wetland. This wetland is located along the southern edge of the Site and does not have any aboveground hydrologic connections to other wetlands or waterbodies on site. The dominant vegetation included purple loosestrife (*Lythrum salicaria*). Indicators of wetland hydrology included saturation (A3), oxidized rhizospheres on living roots (C3), presence of reduced iron (C4), and dry-season water table (C2). Soils were composed of silt loam, and they met Hydric Soil Indicator A12, Thick Dark Surface as described in *Field Indicators of Hydric Soils in the United States*, Version 8.2 (Field Indicators) (USDA NRCS 2018).

**W-HSW-2** is also a palustrine emergent (PEM) wetland. This wetland is located in the northwestern corner of the Site and is associated with S-HSW-1 and S-HSW-2. The dominant vegetation included broad-leaf cat-tail (*Typha latifolia*) and mild water-pepper (*Persicaria hydropiper*). Indicators of wetland hydrology included saturation (A3), oxidized rhizospheres on living roots (C3), presence of reduced iron (C4), and FAC-neutral test (D5). Soils were composed of clay loam and silty clay loam, and they met Hydric Soil Indicator F2, Loamy Gleyed Matrix as described in *Field Indicators of Hydric Soils in the United States*, Version 8.2 (Field Indicators) (USDA NRCS 2018).

### 4.2 Delineated Streams

**S-HSW-1** and **S-HSW-2** are perennial streams that begin at culverts in the northwestern corner of the site and converge with each other before feeding into WB-HSW-1 via concrete dam. These streams had a moderate flow stage and were flowing towards the southeast during the field delineation. Average depth of the streams was four inches, and the substrate was comprised of silt/clay. The channel gradient was less than two percent, and banks were approximately two feet high with moderate erosion potential.

### 4.3 Delineated Waterbodies

WB-HSW-1 and WB-HSW-2 appear to be artificial ponds that are connected to each other via a culverted stream. The substrate was silty and there was significant algae growth in the ponds. TRC biologists noted the presence of ramshorn snails, bladder snails, and a deceased painted turtle.

There were no Potential Vernal Pools identified on-site on September 19, 2022.

**Table 2. Delineated Wetlands and Waterbodies**

Wetland Field Designation	Field Designated NWI Classification <sup>1</sup>	Assumed Jurisdictional Status	Assumed Buffer/ Setback Requirements
W-HSW-1	PEM	USACE/NHDES/Local	100-ft buffer zone
W-HSW-2	PEM	USACE/NHDES/Local	100-ft buffer zone
WB-HSW-1	N/A – Pond	USACE/NHDES/Local	100-ft buffer zone
WB-HSW-2	N/A - Pond	USACE/NHDES/Local	100-ft buffer zone
<sup>1</sup> <i>The Classification of Wetlands and Deepwater Habitats of the United States, Second Edition</i> (Federal Geographic Data Committee 2013). Categories include: Palustrine Forested (PFO) and Palustrine Unconsolidated Bottom (PUB).			

**Table 3. Delineated Streams**

Stream Field Designation	Flow Regime	Flow Stage	Flow Velocity	Bank Width	Water Depth	Dominant Substrate
S-HSW-1	Perennial	Moderate	Slow	4.5 ft	4 in	Silt/clay
S-HSW-2	Perennial	Moderate	Slow	4.5 ft	4 in	Silt/clay

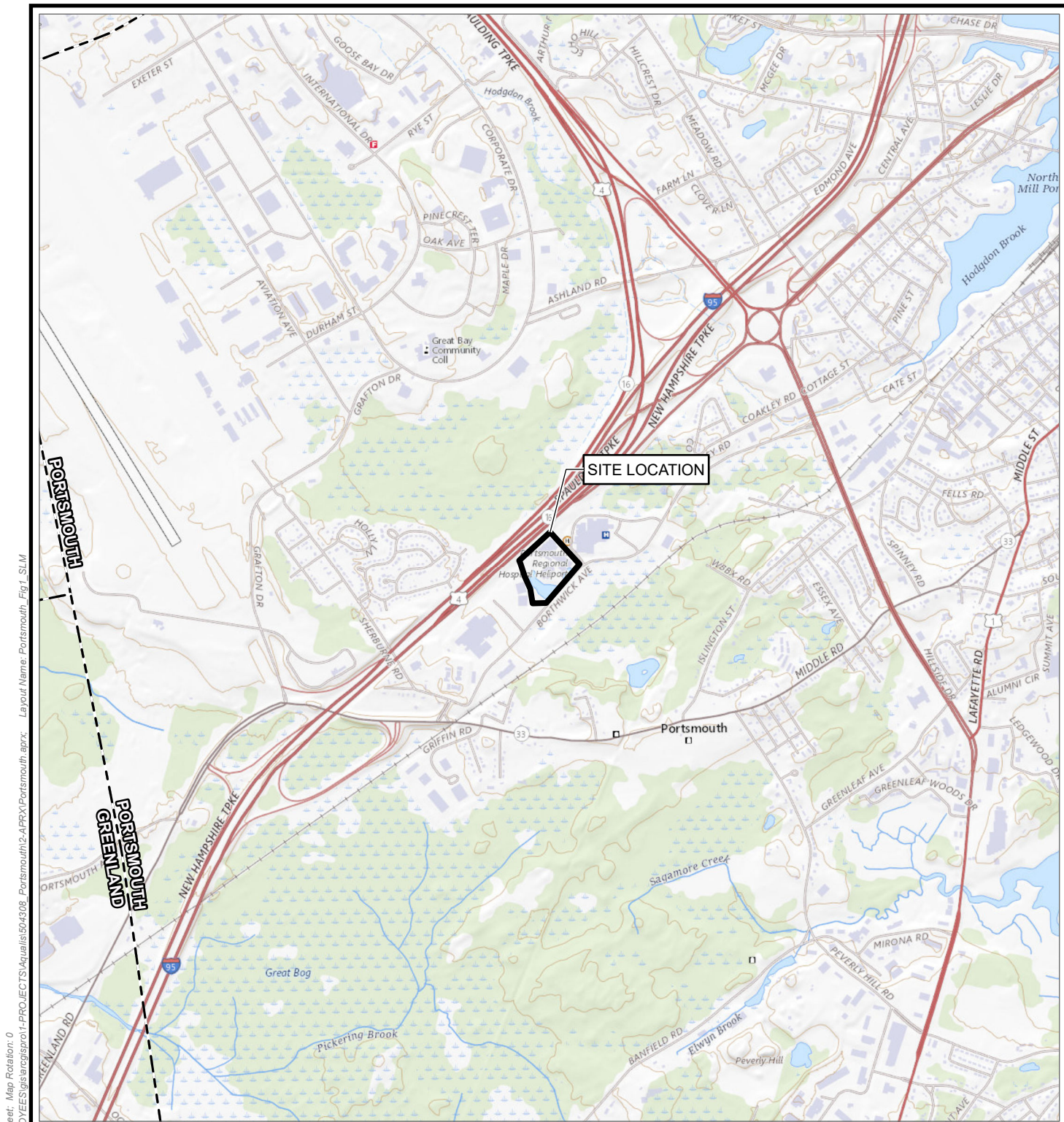





## 5.0 References

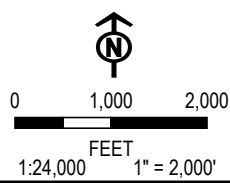
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers: Waterways Experiment Station; Vicksburg, MS.
- Environmental Protection Agency (EPA). 2019. *Electronic Code of Federal Regulations*. Title 40, Chapter 1, Subchapter H, Part 230, Subpart A, Section 230.3. [https://www.ecfr.gov/cgi-bin/text-idx?SID=c2ac4e35564a7e132276a509222dded&mc=true&node=se40.27.230\\_13&rgn=div8](https://www.ecfr.gov/cgi-bin/text-idx?SID=c2ac4e35564a7e132276a509222dded&mc=true&node=se40.27.230_13&rgn=div8). Accessed October 2021.
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- USDA NRCS. Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/>. Accessed September 2022.
- USDA NRCS. 2018. *Field Indicators of Hydric Soils in the United States, Version 8.2* L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
- USDA NRCS. 2006. *Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin*. USDA Handbook 296.




## **Appendix A: Figures**



-  SITE BOUNDARY
-  MUNICIPAL BOUNDARY
-  USGS 7.5 MINUTE QUADRANGLE MAP BOUNDARY



PROJECT:		<b>LIBERTY PORTSMOUTH WETLAND DELINEATION PROJECT PORTSMOUTH, NEW HAMPSHIRE</b>	
TITLE:		<b>SITE LOCATION MAP</b>	
DRAWN BY:	R. BARBER	PROJ. NO.:	504308.0000.0000
CHECKED BY:	J. FREDENBURG	<b>FIGURE 1</b>	
APPROVED BY:	O. SHAW		
DATE:	SEPTEMBER 2022		
		6 ASHLEY DRIVE 1ST FLOOR SCARBOROUGH, ME 04074	
FILE:		Portsmouth	

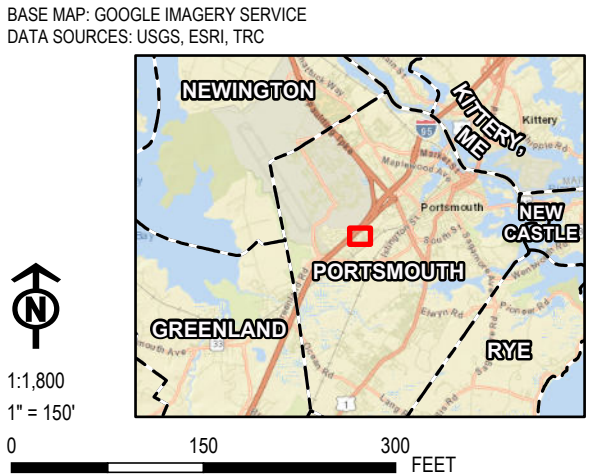
BASE MAP: USGS NATIONAL MAP  
DATA SOURCES: USGS, ESRI, TRC



Coordinate System: NAD 1983 StatePlane New Hampshire FIPS 2800 Feet; Map Rotation: 0  
-- Saved By: JFREDENBURG on 9/30/2022 10:47:29 AM; File Path: T:\PROJECTS\Aqualis\504308\_Portsmouth\2-APRX\Portsmouth.aprx; Layout Name: Portsmouth\_Fig\_Site Plan




- PEM PLOT
  - UPL PLOT
  - ⊗ STREAM PLOT
  - CULVERT
- DELINEATED STREAM LINE**
- BANK/EDGE
  - - - CENTERLINE
- DELINEATED WETLAND BOUNDARY LINE**
- DELINEATED SURFACE WATER
  - DELINEATED WETLAND
- SITE BOUNDARY**
- ▭





PROJECT:		LIBERTY MUTUAL WETLAND DELINEATION PROJECT PORTSMOUTH, NEW HAMPSHIRE	
TITLE:		DELINEATED RESOURCE	
DRAWN BY:	R. BARBER	PROJ. NO.:	504308.0000.0000
CHECKED BY:	J. FREDENBURG	FIGURE 2	
APPROVED BY:	O. SHAW		
DATE:	SEPTEMBER 2022		
		6 ASHLEY DRIVE 1ST FLOOR SCARBOROUGH, ME 04074	
FILE:		Portsmouth.aprx	





## **Appendix B: Photographs**

LIBERTY MUTUAL WETLAND DELINEATION PROJECT 225 BORTHWICK AVE, PORTSMOUTH, NEW HAMPSHIRE	
<p><b>Photograph:</b> 1</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> North</p> <p><b>Description:</b> Overview of W-HSW-1.</p>	
<p><b>Photograph:</b> 2</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> South</p> <p><b>Description:</b> Overview of W-HSW-1.</p>	





LIBERTY MUTUAL WETLAND DELINEATION PROJECT 225 BORTHWICK AVE, PORTSMOUTH, NEW HAMPSHIRE	
<p><b>Photograph:</b> 3</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> North</p> <p><b>Description:</b> Overview of W-HSW-2.</p>	
<p><b>Photograph:</b> 4</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> South</p> <p><b>Description:</b> Overview of W-HSW-2.</p>	


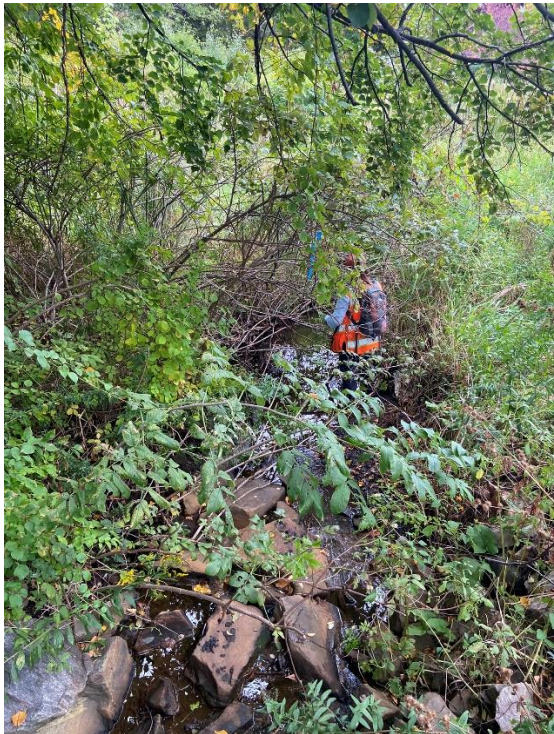


LIBERTY MUTUAL WETLAND DELINEATION PROJECT 225 BORTHWICK AVE, PORTSMOUTH, NEW HAMPSHIRE	
<p><b>Photograph:</b> 5</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> South</p> <p><b>Description:</b> View of S-HSW-1 where it ends at the dam between the stream and WB-HSW-1.</p>	
<p><b>Photograph:</b> 6</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> North</p> <p><b>Description:</b> View upstream of S-HSW-1.</p>	



LIBERTY MUTUAL WETLAND DELINEATION PROJECT 225 BORTHWICK AVE, PORTSMOUTH, NEW HAMPSHIRE	
<p><b>Photograph:</b> 7</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> South</p> <p><b>Description:</b> View downstream of S- HSW-1.</p>	
<p><b>Photograph:</b> 8</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> East</p> <p><b>Description:</b> View of termination of S- HSW-1 at WB-HSW-1.</p>	



<b>LIBERTY MUTUAL WETLAND DELINEATION PROJECT</b> <b>225 BORTHWICK AVE, PORTSMOUTH, NEW HAMPSHIRE</b>	
<p><b>Photograph:</b> 9</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> East</p> <p><b>Description:</b> View of termination of S- HSW-1 at northwestern Site boundary.</p>	
<p><b>Photograph:</b> 10</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> South</p> <p><b>Description:</b> Downstream view of S- HSW-2</p>	



**LIBERTY MUTUAL WETLAND DELINEATION PROJECT**  
**225 BORTHWICK AVE, PORTSMOUTH, NEW HAMPSHIRE**

**Photograph:** 11

**Date:** 9/19/2022

**Direction:** Southeast

**Description:**

Overview of WB-HSW-1.



**Photograph:** 12

**Date:** 9/19/2022

**Direction:** Down

**Description:**

Photo of typical bank conditions along WB-HSW-1.



**LIBERTY MUTUAL WETLAND DELINEATION PROJECT**  
**225 BORTHWICK AVE, PORTSMOUTH, NEW HAMPSHIRE**

**Photograph:** 13

**Date:** 9/19/2022

**Direction:** East

**Description:**

Dam connecting S-HSW-1  
and WB-HSW-1.



**Photograph:** 14

**Date:** 9/19/2022

**Direction:** Northeast

**Description:**

Overview of WB-HSW-2.





**LIBERTY MUTUAL WETLAND DELINEATION PROJECT**  
**225 BORTHWICK AVE, PORTSMOUTH, NEW HAMPSHIRE**

**Photograph:** 15

**Date:** 9/19/2022

**Direction:** Northwest

**Description:**

View of bank along northwestern edge of WB-HSW-2, and culvert connecting WB-HSW-1 and WB-HSW-2.



**Photograph:** 16

**Date:** 9/19/2022



**Direction:** North

**Description:**

View of bank along north edge of WB-HSW-2.





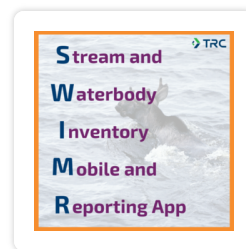
<b>LIBERTY MUTUAL WETLAND DELINEATION PROJECT</b> <b>225 BORTHWICK AVE, PORTSMOUTH, NEW HAMPSHIRE</b>	
<p><b>Photograph:</b> 17</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> East</p> <p><b>Description:</b> View of southeastern bank of WB-HSW-2.</p>	
<p><b>Photograph:</b> 18</p> <p><b>Date:</b> 9/19/2022</p> <p><b>Direction:</b> Northeast</p> <p><b>Description:</b> View of Liberty Mutual building abutting WB-HSW-2. The culverted bridge on the northeastern edge of the waterbody is also pictured.</p>	

## **Appendix C: Wetland Determination Data Forms**



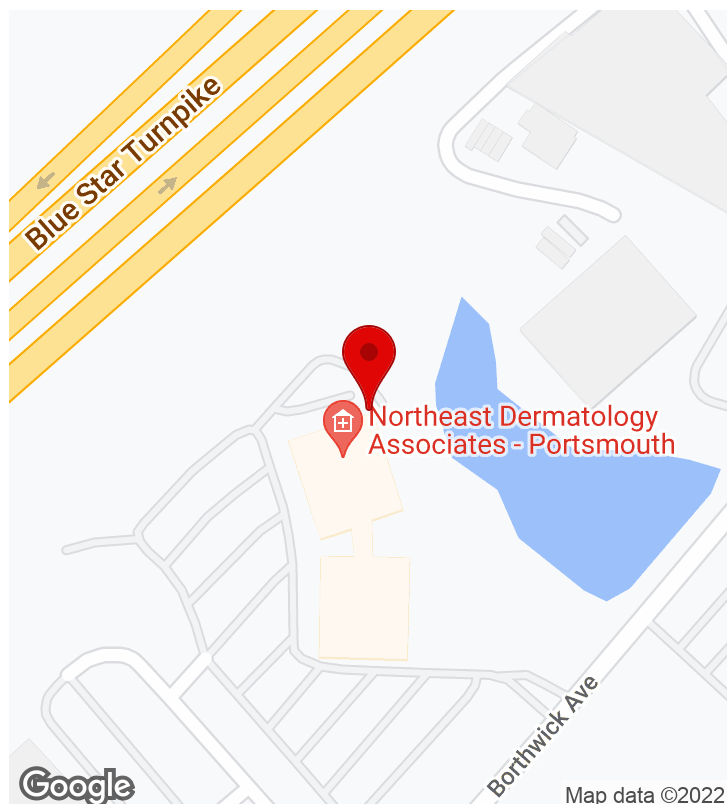
# New Hampshire SWIMR Waterbody Inventory

Generic stream and waterbody inventory app. SWIMR



## S-HSW-01, Liberty Portsmouth

9/23/2022, 6:25:01 PM UTC



### CREATED

🕒 9/19/2022, 3:07:54 PM UTC

👤 by Heather Storlazzi-Ward

### UPDATED

🕒 9/23/2022, 6:25:01 PM UTC

👤 by Olivia Shaw

### STATUS

🔴 Field Collected

### LOCATION

📍 43.063041, -70.793939

Select Project	
Client	Liberty
Project Name	Liberty Portsmouth
Project Number	504308.0000.0000
Date and Time	2022-09-19 11:07:54
Lead Evaluator	Heather Storlazzi-Ward
Evaluator's Initials	HSW
Additional Evaluators	
Evaluated By	Heather Storlazzi-Ward
Stream / Waterbody Number	1
Stream/Waterbody Delineation ID	S-HSW-01
Stream Delineation ID Override	
Stream Name	
Stream Location	
Latitude/Longitude	43.0630408, -70.7939394
Presumed Regulatory Authority	
Address	155 Borthwick Avenue Portsmouth New Hampshire 03801 United States

## STREAM / WATERBODY CHARACTERISTICS

Stream / Waterbody Class	Perennial
--------------------------	-----------

## Observed Hydrology

Flow Stage	Moderate
Flow Direction	SE
Average Depth (in.)	4
Perceptible Flow	Yes
Channel Substrate	Silt/Clay
Channel Gradient	< 2% (< 1 deg) Gentle

## Width Measurement (feet)

Is floodplain present?	Yes
Across Existing Water (ft)	2
Ordinary High Water Mark (ft)	3
Bankfull Width (ft)	4.5
OHWI Indicators	Matted, Bent, or Absent Vegetation, Bed and Banks



Probed Stream Depth (in.)	0 to 6 inches
Observed Use	Drainage
Water Quality	Slightly Turbid
Water Quality Comments	

## Left Bank

Left Bank Height (feet)	2
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Bank Erosion Potential	Moderate

## Right Bank

Right Bank Height (feet)	2
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Bank Erosion Potential	Moderate
Bank Substrate	Silt/Clay
Aquatic Habitat	Overhanging Vegetation, Undercut Banks
Estimated Canopy Closure	0 to 10%

Observed Fauna

Presence of Rare, Threatened, or Endangered Species

Unknown

Species and Evidence

Notes

### Photos Upstream





### Photos Downstream



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### Photos Across Stream



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### Photos

---

### Sketch of Stream

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Liberty Portsmouth City/County: Portsmouth, Rockingham County Sampling Date: 2022-Sept-19  
 Applicant/Owner: Liberty State: New Hampshire Sampling Point: W-HSW-01\_PEM-1  
 Investigator(s): Heather Storlazzi-Ward, Olivia Shaw Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): LRR R Lat: 43.0623348 Long: -70.7931076 Datum: WGS84  
 Soil Map Unit Name: 299 - Udorthents, smoothed NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☒ Soil ☒ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID:	W-HSW-01
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks: (Explain alternative procedures here or in a separate report)  
 Covertypes is PEM. Area is wetland, all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input checked="" type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION -- Use scientific names of plants.

Sampling Point: W-HSW-01\_PEM-1

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status																																																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																																																
2. _____	_____	_____	_____																																																	
3. _____	_____	_____	_____																																																	
4. _____	_____	_____	_____																																																	
5. _____	_____	_____	_____																																																	
6. _____	_____	_____	_____																																																	
7. _____	_____	_____	_____																																																	
	<u>0</u>	= Total Cover		<b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 10%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">100</td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;">100</td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">10</td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;">20</td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;">110</td> <td></td> <td></td> <td style="text-align: center;">(A) 120</td> <td style="text-align: center;">(B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>1.1</u></td> <td></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:			OBL species	100		x 1 =	100		FACW species	10		x 2 =	20		FAC species	0		x 3 =	0		FACU species	0		x 4 =	0		UPL species	0		x 5 =	0		Column Totals	110			(A) 120	(B)	Prevalence Index = B/A =				<u>1.1</u>	
	Total % Cover of:		Multiply By:																																																	
OBL species	100		x 1 =		100																																															
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				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																																																
				<b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																																
				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____																																																
				<b>Remarks: (Include photo numbers here or on a separate sheet.)</b> Fallow field.																																																



## SOIL

Sampling Point: W-HSW-01\_PEM-1

[illegible]

Soil Photos



Photo of Sample Plot  
North





Photo of Sample Plot  
East



Photo of Sample Plot  
South





Photo of Sample Plot  
West



# **WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Liberty Portsmouth City/County: Portsmouth, Rockingham County Sampling Date: 2022-Sept-19  
 Applicant/Owner: Liberty State: New Hampshire Sampling Point: W-HSW-01\_UPL-1  
 Investigator(s): Heather Storlazzi-Ward, Olivia Shaw Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1 to 3  
 Subregion (LRR or MLRA): LRR R Lat: 43.0623647 Long: -70.7938273 Datum: WGS84  
 Soil Map Unit Name: 299 - Udorthents, smoothed NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☒ Soil ☒ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID:
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report) Covertypes is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.		

## **HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					



Sampling Point: W-HSW-01 UPL-1

Tree Stratum (Plot size: <u>30 ft</u> )			Absolute % Cover	Dominant Species?	Indicator Status
1.					
2.					
3.					
4.					
5.					
6.					
7.					
			0	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			Absolute % Cover	Dominant Species?	Indicator Status
1.					
2.					
3.					
4.					
5.					
6.					
7.					
			0	= Total Cover	

Herb Stratum (Plot size: <u>5 ft</u> )			Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Poaceae</i>		95	Yes	NI
2.	<i>Glechoma hederacea</i>		10	No	FACU
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
			105	= Total Cover	

Woody Vine Stratum (Plot size: <u>30 ft</u> )			Absolute % Cover	Dominant Species?	Indicator Status
1.					
2.					
3.					
4.					
			0	= Total Cover	

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply By:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals	(A)      40    (B)
Prevalence Index = B/A =	

### Hydrophytic Vegetation Indicators:

☐ 1- Rapid Test for Hydrophytic Vegetation  
☐ 2- Dominance Test is > 50%  
☐ 3- Prevalence Index is ≤ 3.0<sup>1</sup>  
☐ 4- Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

### Definitions of Vegetation Strata:

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: (Include photo numbers here or on a separate sheet.)

Mowed and maintained lawn.

## SOIL

Sampling Point: W-HSW-01\_UPL-1

[illegible]

Soil Photos



Photo of Sample Plot  
North





Photo of Sample Plot  
East



Photo of Sample Plot  
South



Photo of Sample Plot  
West





# **WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Liberty Portsmouth City/County: Portsmouth, Rockingham County Sampling Date: 2022-Sept-19  
 Applicant/Owner: Liberty State: New Hampshire Sampling Point: W-HSW-02\_PEM-1  
 Investigator(s): Heather Storlazzi-Ward, Olivia Shaw Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): LRR R Lat: 43.0629557 Long: -70.7939775 Datum: WGS84  
 Soil Map Unit Name: 299 - Udorthents, smoothed NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☒ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID:	W-HSW-02
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks: (Explain alternative procedures here or in a separate report)</b> Covertypes is PEM. Area is wetland, all three wetland parameters are present.			

## **HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b>				<b>Secondary Indicators (minimum of two required)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>3</u>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>		
(includes capillary fringe)					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>					
<b>Remarks:</b>					

The criterion for wetland hydrology is met.

Sampling Point: W-HSW-02 PEM-1

Tree Stratum (Plot size: 30 ft )				Dominance Test worksheet:			
	Absolute % Cover	Dominant Species?	Indicator Status				
1.				Number of Dominant Species That Are OBL, FACW, or FAC:			2 (A)
2.				Total Number of Dominant Species Across All Strata:			2 (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:			100 (A/B)
4.				Prevalence Index worksheet:			
5.				Total % Cover of:		Multiply By:	
6.				OBL species	115	x 1 =	115
7.				FACW species	5	x 2 =	10
	0	= Total Cover		FAC species	0	x 3 =	0
Sapling/Shrub Stratum (Plot size: 15 ft )				FACU species	0	x 4 =	0
1.				UPL species	0	x 5 =	0
2.				Column Totals	120	(A)	125 (B)
3.				Prevalence Index = B/A =			1
4.				Hydrophytic Vegetation Indicators:			
5.				___ 1 - Rapid Test for Hydrophytic Vegetation			
6.				<input checked="" type="checkbox"/> 2 - Dominance Test is >50%			
7.				<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>			
	0	= Total Cover		___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
Herb Stratum (Plot size: 5 ft )				___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
1. <i>Typha latifolia</i>	60	Yes	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
2. <i>Persicaria hydropiper</i>	50	Yes	OBL	Definitions of Vegetation Strata:			
3. <i>Verbena hastata</i>	5	No	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
4. <i>Carex gynandra</i>	5	No	OBL	<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
5. <i>Poaceae</i>	5	No	NI	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
6.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.			
7.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No ___			
8.							
9.							
10.							
11.							
12.							
	125	= Total Cover					
Woody Vine Stratum (Plot size: 30 ft )							
1.							
2.							
3.							
4.							
	0	= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)							
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).							



## SOIL

Sampling Point: W-HSW-02\_PEM-1

[illegible]

Soil Photos



Photo of Sample Plot  
North





Photo of Sample Plot  
East



Photo of Sample Plot  
South





Photo of Sample Plot  
West



# **WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Liberty Portsmouth City/County: Portsmouth, Rockingham County Sampling Date: 2022-Sept-19  
 Applicant/Owner: Liberty State: New Hampshire Sampling Point: W-HSW-02\_UPL-1  
 Investigator(s): Heather Storlazzi-Ward, Olivia Shaw Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1 to 3  
 Subregion (LRR or MLRA): LRR R Lat: 43.0629711 Long: -70.7939499 Datum: WGS84  
 Soil Map Unit Name: 299 - Udorthents, smoothed NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☒ Soil ☒ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID:
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report) Covertypes is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to mowing of vegetation.		

## **HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

A positive indication of wetland hydrology was observed (at least one primary indicator).



VEGETATION -- Use scientific names of plants.

Sampling Point: W-HSW-02\_UPL-1

Tree Stratum (Plot size: <u>30 ft</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Betula populifolia</i>	5	Yes	FAC
2.	<i>Picea pungens</i>	5	Yes	FACU
3.				
4.				
5.				
6.				
7.				
		10	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		0	= Total Cover	
Herb Stratum (Plot size: <u>5 ft</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Poaceae</i>	100	Yes	NI
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		100	= Total Cover	
Woody Vine Stratum (Plot size: <u>30 ft</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
		0	= Total Cover	

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:		Multiply By:	
OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>5</u>	x 3 =	<u>15</u>
FACU species	<u>5</u>	x 4 =	<u>20</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals	<u>10</u>	(A)	<u>35</u> (B)
Prevalence Index = B/A =		<u>3.5</u>	

**Hydrophytic Vegetation Indicators:**

     1- Rapid Test for Hydrophytic Vegetation

     2 - Dominance Test is > 50%

     3 - Prevalence Index is ≤ 3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes      No ✓

**Remarks: (Include photo numbers here or on a separate sheet.)**

Residential lawn.

## SOIL

Sampling Point: W-HSW-02\_UPL-1

[illegible]

Soil Photos



Photo of Sample Plot  
North





Photo of Sample Plot  
East



Photo of Sample Plot  
South





Photo of Sample Plot  
West



## **Appendix D: NRCS Soil Report**





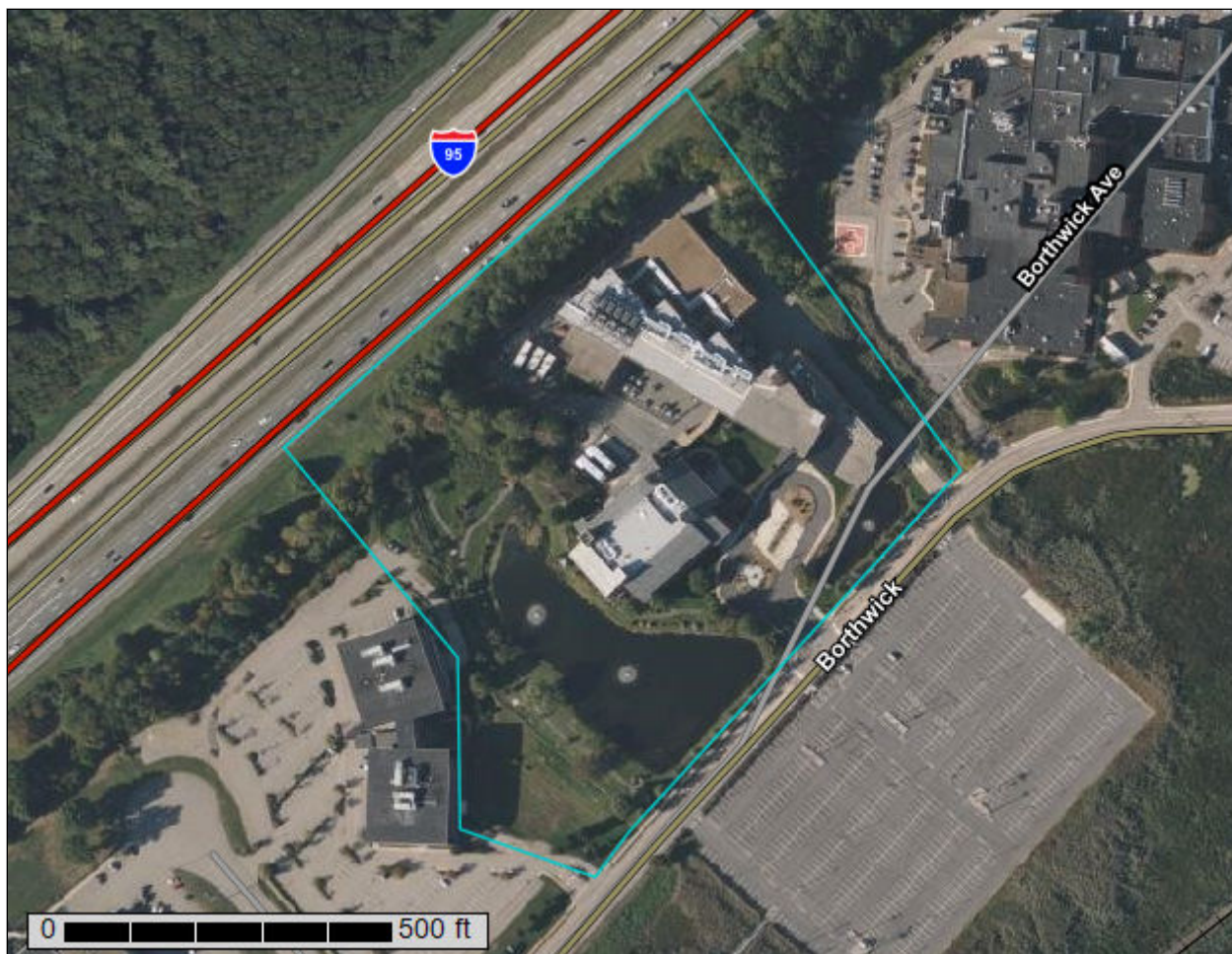
United States  
Department of  
Agriculture

NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Rockingham County, New Hampshire



September 23, 2022

# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# Contents

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<b>Preface</b> .....	2
<b>How Soil Surveys Are Made</b> .....	5
<b>Soil Map</b> .....	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Rockingham County, New Hampshire.....	13
140B—Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky.....	13
299—Udorthents, smoothed.....	16
699—Urban land.....	16
<b>References</b> .....	17

# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and



## Custom Soil Resource Report

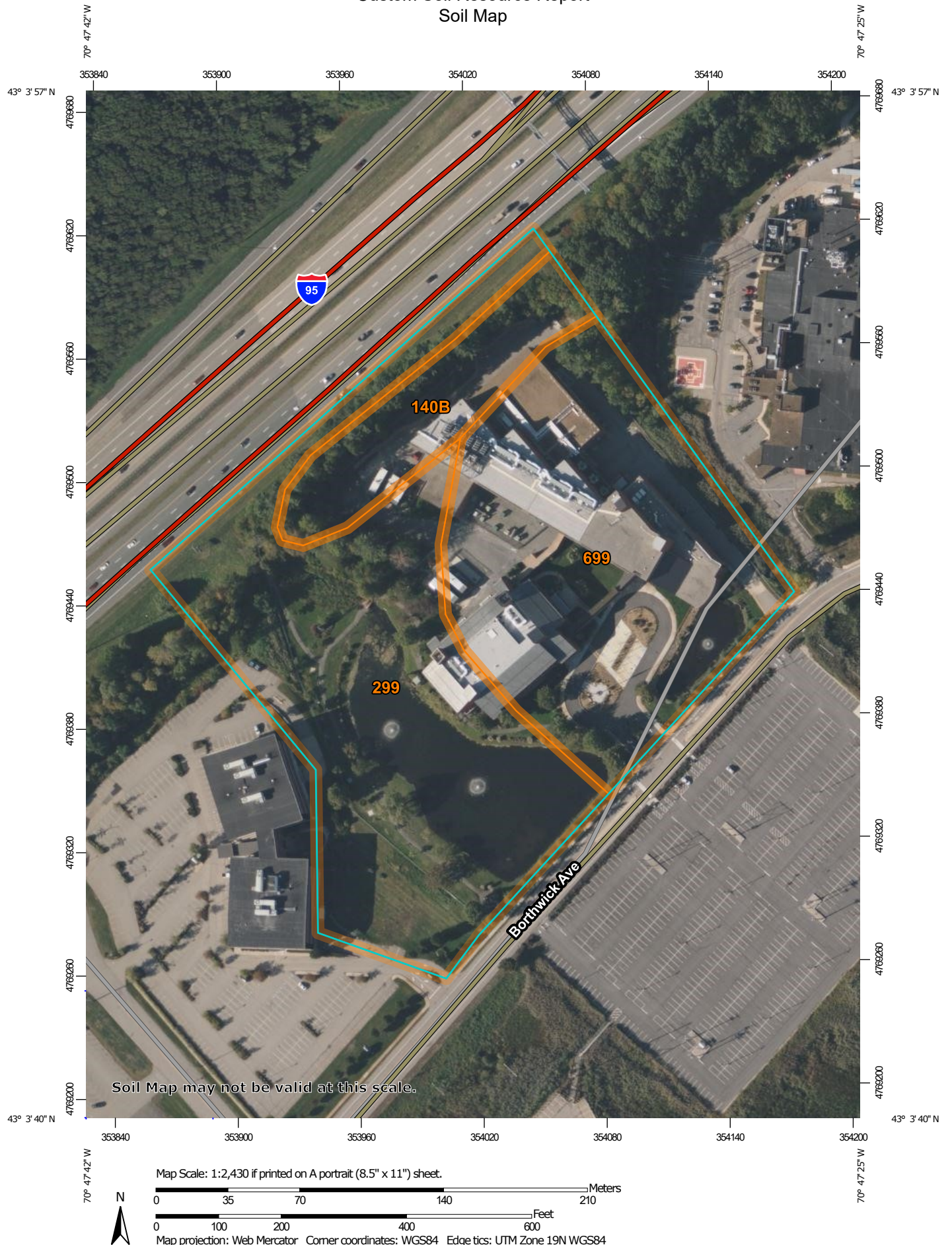
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

---

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map





# Custom Soil Resource Report

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils


 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit


 Clay Spot


 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry


 Miscellaneous Water

 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot


 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals


### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rockingham County, New Hampshire  
Survey Area Data: Version 24, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
140B	Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky	1.6	11.3%
299	Udorthents, smoothed	7.1	48.9%
699	Urban land	5.8	39.8%
<b>Totals for Area of Interest</b>		<b>14.6</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.



## Rockingham County, New Hampshire

### 140B—Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky

#### Map Unit Setting

*National map unit symbol:* 2w82m  
*Elevation:* 380 to 1,070 feet  
*Mean annual precipitation:* 36 to 71 inches  
*Mean annual air temperature:* 39 to 55 degrees F  
*Frost-free period:* 145 to 240 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Chatfield, very stony, and similar soils:* 35 percent  
*Hollis, very stony, and similar soils:* 25 percent  
*Canton, very stony, and similar soils:* 25 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Chatfield, Very Stony

##### Setting

*Landform:* Ridges, hills  
*Landform position (two-dimensional):* Summit, shoulder, backslope  
*Landform position (three-dimensional):* Nose slope, side slope, crest  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear, convex  
*Parent material:* Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

##### Typical profile

*Oi - 0 to 1 inches:* slightly decomposed plant material  
*A - 1 to 2 inches:* fine sandy loam  
*Bw - 2 to 30 inches:* gravelly fine sandy loam  
*2R - 30 to 40 inches:* bedrock

##### Properties and qualities

*Slope:* 0 to 8 percent  
*Surface area covered with cobbles, stones or boulders:* 1.6 percent  
*Depth to restrictive feature:* 20 to 41 inches to lithic bedrock  
*Drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low (0.00 to 0.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Low (about 4.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* B  
*Ecological site:* F144AY034CT - Well Drained Till Uplands

## Custom Soil Resource Report

*Hydric soil rating:* No

### Description of Hollis, Very Stony

#### Setting

*Landform:* Ridges, hills

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Nose slope, side slope, crest

*Down-slope shape:* Convex

*Across-slope shape:* Linear, convex

*Parent material:* Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

#### Typical profile

*Oi - 0 to 2 inches:* slightly decomposed plant material

*A - 2 to 7 inches:* gravelly fine sandy loam

*Bw - 7 to 16 inches:* gravelly fine sandy loam

*2R - 16 to 26 inches:* bedrock

#### Properties and qualities

*Slope:* 0 to 8 percent

*Surface area covered with cobbles, stones or boulders:* 1.6 percent

*Depth to restrictive feature:* 8 to 23 inches to lithic bedrock

*Drainage class:* Somewhat excessively drained

*Runoff class:* Very high

*Capacity of the most limiting layer to transmit water (Ksat):* Very low (0.00 to 0.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very low (about 2.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6s

*Hydrologic Soil Group:* D

*Ecological site:* F144AY033MA - Shallow Dry Till Uplands

*Hydric soil rating:* No

### Description of Canton, Very Stony

#### Setting

*Landform:* Moraines, hills, ridges

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Nose slope, side slope, crest

*Down-slope shape:* Convex, linear

*Across-slope shape:* Convex

*Parent material:* Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

#### Typical profile

*Oi - 0 to 2 inches:* slightly decomposed plant material

*A - 2 to 5 inches:* fine sandy loam

*Bw1 - 5 to 16 inches:* fine sandy loam

*Bw2 - 16 to 22 inches:* gravelly fine sandy loam

*2C - 22 to 67 inches:* gravelly loamy sand

**Properties and qualities**

*Slope:* 0 to 8 percent  
*Surface area covered with cobbles, stones or boulders:* 1.6 percent  
*Depth to restrictive feature:* 19 to 39 inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.14 to 14.17 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Low (about 3.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* B  
*Ecological site:* F144AY034CT - Well Drained Till Uplands  
*Hydric soil rating:* No

**Minor Components**

**Newfields, very stony**

*Percent of map unit:* 5 percent  
*Landform:* Ground moraines, hills, moraines  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* No

**Freetown**

*Percent of map unit:* 5 percent  
*Landform:* Marshes, depressions, bogs, kettles, swamps  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

**Walpole, very stony**

*Percent of map unit:* 3 percent  
*Landform:* Deltas, depressions, outwash plains, depressions, outwash terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

**Rock outcrop**

*Percent of map unit:* 2 percent  
*Landform:* Ridges, hills  
*Hydric soil rating:* Unranked



## **299—Udorthents, smoothed**

### **Map Unit Setting**

*National map unit symbol:* 9cmt

*Elevation:* 0 to 840 feet

*Mean annual precipitation:* 44 to 49 inches

*Mean annual air temperature:* 48 degrees F

*Frost-free period:* 155 to 165 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Udorthents and similar soils:* 100 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Udorthents**

#### **Properties and qualities**

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Excessively drained

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

## **699—Urban land**

### **Map Unit Composition**

*Urban land:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Minor Components**

#### **Not named**

*Percent of map unit:* 15 percent

*Hydric soil rating:* No

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United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_052290.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf)



The State of New Hampshire  
**Department of Environmental Services**

Robert R. Scott, Commissioner



October 31, 2022

393 NEW CASTLE AVENUE LLC  
PO BOX 393  
PORTSMOUTH NH 03801



**Re: Approved Standard Dredge and Fill Wetlands Permit Application (RSA 482-A)**  
**NHDES File Number: 2022-00118**  
**Subject Property: 390 New Castle Avenue, Portsmouth, Tax Map #207, Lot #6**

Dear Owner:

On October 31, 2022, the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau approved the above-referenced application to impact 40 square feet (SF) of previously developed upland tidal buffer zone and 395 SF of tidal wetland to construct a tidal docking structure consisting of a 4 foot by 10 foot access landing connected to a 4 foot by 30 foot fixed pier connected to a 3 foot by 25 foot ramp connected to a 10 foot by 20 foot float with associated piles and float stops. The overall length of this docking structure, seaward of the highest observable tide line, is 75 feet, on 80 feet of frontage along the Piscataqua River (Back Channel) in Portsmouth.

In accordance with RSA 482-A:10, RSA 21-O:14, and Rules Env-WtC 100-200, **any person aggrieved by this decision may file a Notice of Appeal directly with the NH Wetlands Council (Council) within 30 days of the decision date, October 31, 2022.** Every ground claiming the decision is unlawful or unreasonable must be fully set forth in the Notice of Appeal. Only the grounds set forth in the Notice of Appeal are considered by the Council. Information about the Council, including Council Rules, is available at <https://www.nhec.nh.gov/wetlands-council/about>. For appeal related issues, contact the Council Appeals Clerk at (603) 271-6072.

In accordance with RSA 482-A:3, II(a) and Env-Wt 313.02(b), as your project is a major project located in a great pond or in public waters of the state, your application must also be approved by the Governor and the Executive Council. Upon expiration of the appeal period, a redacted copy of the file is submitted to the Governor and the Executive Council for their consideration. Information about the Governor and the Executive Council is available at <https://www.nh.gov/council/>.

Sincerely,

Philip Trowbridge, P.E., Manager  
Land Resources Management, Water Division

Enclosure: Copy of Decision

cc: Agent  
Municipal Clerk/Conservation Commission  
Abutters  
ec: Assistant Administrator, Wetlands Bureau

[www.des.nh.gov](http://www.des.nh.gov)

29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095  
NHDES Main Line: (603) 271-3503 • Subsurface Fax: (603) 271-6683 • Wetlands Fax: (603) 271-6588  
TDD Access: Relay NH 1 (800) 735-2964



FILE #2022-00118  
393 NEW CASTLE AVENUE LLC  
PORTSMOUTH

DECISION DATE:  
October 31, 2022

**DECISION:**

Impact 40 square feet (SF) of previously developed upland tidal buffer zone and 395 SF of tidal wetland to construct a tidal docking structure consisting of a 4 foot by 10 foot access landing connected to a 4 foot by 30 foot fixed pier connected to a 3 foot by 25 foot ramp connected to a 10 foot by 20 foot float with associated piles and float stops. The overall length of this docking structure, seaward of the highest observable tide line, is 75 feet, on 80 feet of frontage along the Piscataqua River (Back Channel) in Portsmouth.

**CONDITIONS:**

1. All work shall be done in accordance with the approved plans dated April 2021, revised through September 29, 2022, by Ambit Engineering, Inc., and last received by the NH Department of Environmental Services (NHDES) on September 30, 2022, in accordance with Env-Wt 307.16
2. This permit shall not be effective until the permittee records this permit at the Rockingham County Registry of Deeds. Any limitations or conditions in the permit so recorded shall run with the land beyond the expiration of the permit. The permittee shall provide the NHDES with a copy of the permit stamped by the registry with the book and page and date of receipt, in accordance with New Hampshire Administrative Rule Env-Wt 314.02(b) and (c).
3. The ramp and float portions of residential tidal docks shall be seasonal and removed from the water during the non-boating season, in accordance with Env-Wt 606.06(b).
4. Tidal docking installation shall be done by barge or upland to prevent the driving of construction equipment in or through tidal waters/wetlands or on the bottom of the inter-tidal zone, in accordance with Env-Wt 606.05(b).
5. Tidal docking construction shall be done in accordance with the standard conditions in Env-Wt 307.
6. Heavy equipment shall not be operated in any jurisdictional area unless specifically authorized by this permit, in accordance with Env-Wt 307.15(a).
7. In accordance with Env-Wt 307.03(h), equipment shall be staged and refueled outside of jurisdictional areas and in accordance with Env-Wt 307.15.
8. In accordance with Env-Wt 307.03(g)(1), the person in charge of construction equipment shall inspect such equipment for leaking fuel, oil, and hydraulic fluid each day prior to entering surface waters or wetlands or operating in an area where such fluids could reach groundwater, surface waters, or wetlands.
9. In accordance with Env-Wt 307.03(g)(2), the person in charge of construction equipment shall repair any leaks prior to using the equipment in an area where such fluids could reach groundwater, surface waters, or wetlands.
10. In accordance with Env-Wt 307.03(g)(3) and (4), the person in charge of construction equipment shall maintain oil spill kits and diesel fuel spill kits, as applicable to the type(s) and amount(s) of oil and diesel fuel used, on site so as to be readily accessible at all times during construction; and train each equipment operator in the use of the spill kits.

**FINDINGS:**

1. This project is classified as a major project per Rule Env-Wt 606.17(a)(1), for all new overwater structure construction in tidal waters/wetlands.
2. On February 22, 2022, the Department received correspondence from the NH Fish and Game Department (NHFG) dated February 1, 2022, stating that "[the NHFG Marine Division] does not anticipate any impacts to [the identified sensitive animal species]. Since all piles will be driven above MLW (mean low water), [the NHFG Marine Division has] no issue with construction of this dock occurring any time of the year."
3. On February 22, 2022, the Department received correspondence from the Natural Heritage Bureau (NHB) dated January 31, 2022, stating that "[b]ased on the proposed conditions plan, no impacts to [the identified sensitive plant species] will occur in association with the proposed project" and had no additional concerns on the project as submitted by the applicant.

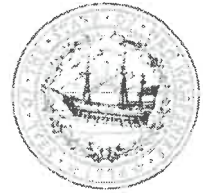
4. NHDES finds that the project as approved and conditioned will not have an unreasonable adverse impact on the value of such areas as sources of nutrients for finfish, crustacea, shellfish and wildlife of significant value, nor will it damage or destroy habitats and reproduction areas for plants, fish and wildlife of importance.
5. As of October 27, 2022, the Department has not received correspondence from the Portsmouth Conservation Commission regarding this project.
6. Per Rule Env-Wt 313.01(a)(5), and as required by RSA 482-A:11, II, this permit for work to dredge or fill will not 'infringe on the property rights or unreasonably affect the value or enjoyment of property of abutting owners'.
7. On February 22, 2022, the applicant obtained a statement from the Pease Development Authority, Division of Ports and Harbors regarding the projects impact on navigation and passage stating, "[w]e examined the proposed site and found that the structure will have no negative effect on navigation in the channel," per Rule Env-Wt 603.09.
8. NHDES finds that the requirements for a public hearing, as established in RSA 482-A, do not apply as the project will not have a significant environmental impact, as defined in New Hampshire Administrative Rule Env-Wt 104.19, on the resources protected by RSA 482-A, and, is not of substantial public interest, as defined in New Hampshire Administrative Rule Env-Wt 104.32.
9. The Department finds that the project as proposed and conditioned meets the requirements of RSA 482-A and the Wetlands Program Code of Administrative Rules Chapters Env-Wt 100-1000. No waivers of RSA 482-A or the Wetlands Program Code of Administrative Rules Chapters Env-Wt 100-1000 were requested or approved under this permit action.





The State of New Hampshire  
**Department of Environmental Services**

**Robert R. Scott, Commissioner**



October 27, 2022

MARTINGALE LLC  
3 PLEASANT ST STE 400  
PORTSMOUTH NH 03801



**Re: Approved Standard Dredge and Fill Wetlands Permit Application (RSA 482-A)**  
**NHDES File Number: 2021-02150**  
**Subject Property: 99 Bow Street, Portsmouth, Tax Map #106, Lot #54**

Dear Owner:

On October 27, 2022, the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau approved the above-referenced application to expand an existing 12 foot x 100 foot wharf by constructing an additional 712 square foot wharf section on the westerly end of the frontage and an 883 square foot wharf section on the easterly end of frontage with no modifications to be made to the existing 10 foot x 75 foot float, providing three slips on the frontage accessed by a 3 foot x 25 foot ramp and a 14 foot 8 inch x 4 foot platform all adjacent to property having approximately 185 feet of frontage along the tidal reach of the Piscataqua River in Portsmouth. Compensatory mitigation to be provided for permanent impacts within tidal surface waters is a one-time payment into the Aquatic Resource Mitigation Fund ("ARM") of \$44,894.81.

In accordance with RSA 482-A:10, RSA 21-O:14, and Rules Env-WtC 100-200, **any person aggrieved by this decision may file a Notice of Appeal directly with the NH Wetlands Council (Council) within 30 days of the decision date, October 27, 2022.** Every ground claiming the decision is unlawful or unreasonable must be fully set forth in the Notice of Appeal. Only the grounds set forth in the Notice of Appeal are considered by the Council. Information about the Council, including Council Rules, is available at <https://www.nhec.nh.gov/wetlands-council/about>. For appeal related issues, contact the Council Appeals Clerk at (603) 271-6072.

In accordance with RSA 482-A:3, II(a) and Env-Wt 313.02(b), as your project is a major project located in a great pond or in public waters of the state, your application must also be approved by the Governor and the Executive Council. Upon expiration of the appeal period, a redacted copy of the file is submitted to the Governor and the Executive Council for their consideration. Information about the Governor and the Executive Council is available at <https://www.nh.gov/council/>.

Sincerely,

Philip Trowbridge, P.E., Manager  
Land Resources Management, Water Division

Enclosure: Copy of Decision

cc: Agent  
Municipal Clerk/Conservation Commission  
Abutters  
ec: Assistant Administrator, Wetlands Bureau

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TDD Access: Relay NH 1 (800) 735-2964



FILE #2021-02150  
MARTINGALE LLC  
PORTSMOUTH

DECISION DATE:  
October 27, 2022

DECISION:

Expand an existing 12 foot x 100 foot wharf by constructing an additional 712 square foot wharf section on the westerly end of the frontage and an 883 square foot wharf section on the easterly end of frontage with no modifications to be made to the existing 10 foot x 75 foot float, providing three slips on the frontage accessed by a 3 foot x 25 foot ramp and a 14 foot 8 inch x 4 foot platform all adjacent to property having approximately 185 feet of frontage along the tidal reach of the Piscataqua River in Portsmouth. Compensatory mitigation to be provided for permanent impacts within tidal surface waters is a one-time payment into the Aquatic Resource Mitigation Fund ("ARM") of \$44,894.81.

CONDITIONS:

1. In accordance with Env-Wt 307.16, all work shall be done in accordance with the revised plans dated December 20, 2021 by Ambit Engineering, Inc., as received by the NH Department of Environmental Services (NHDES) on March 30, 2022.
2. The existing wharf and both areas of proposed wharf shall be solely supported by piles, freestanding, and detached from the mixed use structure located on the adjacent property identified as Lot 54 on Portsmouth Tax Map 106 (the Property) as required to maintain compliance with RSA 482-A:26.
3. In accordance with Env-Wt 307.06 and Env-Wt 307.10(i), all in-water pile driving shall be installed during the dredge window which is November 15 to March 15 to avoid impacts that could adversely affect fish habitat, wildlife habitat, or both.
4. In accordance with Env-Wt 314.02(b) and (c), for projects in the coastal area, the permittee shall record any permit issued for overwater structures, shoreline stabilization, and any work in the tidal buffer zone, tidal wetlands, or sand dunes at the registry of deeds in the county in which the property is located. Any limitations or conditions in the permit so recorded shall run with the land beyond the expiration of the permit. The permittee shall provide the department with a copy of the permit stamped by the registry with the book and page and date of receipt.
5. In accordance with Env-Wt 307.03(a), no activity shall be conducted in such a way as to cause or contribute to any violation of surface water quality standards specified in RSA 485-A:8 or Env-Wq 1700; ambient groundwater quality standards established under RSA 485-C; limitations on activities in a sanitary protective area established under Env-Dw 302.10 or Env-Dw 305.10; or any provision of RSA 485-A, Env-Wq 1000, RSA 483-B, or Env-Wq 1400 that protects water quality.
6. All work shall be conducted and maintained in such a way as to protect water quality as required by Rule Env-Wt 307.03(a) through (h).
7. In accordance with Env-Wt 307.03(c)(4), water quality control measures shall be capable of minimizing erosion; collecting sediment and suspended and floating materials; and filtering fine sediment.
8. In accordance with Env-Wt 307.03(c)(3), water quality control measures shall be installed prior to start of work and in accordance with the manufacturer's recommended specifications or, if none, the applicable requirements of Env-Wq 1506 or Env-Wq 1508.
9. In accordance with Env-Wt 307.03(c)(5), water quality control measures shall be maintained so as to ensure continued effectiveness in minimizing erosion and retaining sediment on-site during and after construction.
10. In accordance with Env-Wt 307.04(a), activities that produce suspended sediment in jurisdictional areas that provide value as bird migratory areas or fish and shellfish spawning or nursery areas, shall be done so as to avoid and minimize discharges of dredged material or placement of fill material during spawning or breeding seasons by using water quality protection techniques as specified in Env-Wt 307 and timing of project as specified in Env-Wt 307.10(g) or (h), as applicable.
11. In accordance with Env-Wt 307.03(b), all work, including management of soil stockpiles, shall be conducted so as to minimize erosion, minimize sediment transfer to surface waters or wetlands, and minimize turbidity in surface waters and wetlands using the techniques described in Env-Wq 1505.02, Env-Wq 1505.04, Env-Wq 1506, and Env-Wq 1508; the applicable BMP manual; or a combination thereof, if the BMP manual provides less protection to jurisdictional areas than the provisions of Env-Wq 1500.

12. In accordance with Env-Wt 307.03(g)(1), the person in charge of construction equipment shall inspect such equipment for leaking fuel, oil, and hydraulic fluid each day prior to entering surface waters or wetlands or operating in an area where such fluids could reach groundwater, surface waters, or wetlands.
13. In accordance with Env-Wt 307.03(g)(3) and (4), the person in charge of construction equipment shall maintain oil spill kits and diesel fuel spill kits, as applicable to the type(s) and amount(s) of oil and diesel fuel used, on site so as to be readily accessible at all times during construction; and train each equipment operator in the use of the spill kits.
14. In accordance with Env-Wt 307.03(g)(2), the person in charge of construction equipment shall repair any leaks prior to using the equipment in an area where such fluids could reach groundwater, surface waters, or wetlands.
15. In accordance with Env-Wt 307.03(h), equipment shall be staged and refueled outside of jurisdictional areas (unless allowed) and in accordance with Env-Wt 307.15.

#### MITIGATION

16. The permit is contingent providing a check in the amount of \$44,894.81 to the NHDES Aquatic Resource Mitigation Fund by the applicant as calculated per Env-Wt 803.07 and RSA 482-A:30.
17. In accordance with Env-Wt 807.01(b), the payment shall be received by NHDES within 120 days from the approval decision or NHDES will deny the application.

#### FINDINGS:

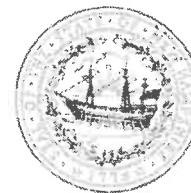
1. Pursuant to Env-Wt 606.17(a)(1), all new overwater structure construction in tidal waters/wetlands shall be classified as major.
2. The existing wharf is a commercial tidal dock as defined in Env-Wt 602.11, of the working waterfront type as defined in Env-Wt 602.62.
3. Pursuant to Env-Wt 606.12 Commercial Tidal Docks: Working Waterfront, the dimensions and configurations of a working waterfront facility shall be based on its use, rather than standard dimensions or configurations.
4. On June 4, 1996, the Wetlands Board, predecessor to the Wetlands Bureau, issued Wetlands Permit #1995-01922 to reconstruct an existing 12 foot x 100 foot wharf.
5. On November 13, 2007, NHDES approved Wetlands Permit #2006-02499 which authorized impacts in the tidal buffer zone for the construction of a mixed use building separate from, but adjacent to, the pre-existing wharf.
6. On January 2, 2013, NHDES approved Wetlands Permit #2012-01050 which authorized construction of a 10 foot x 75 foot float, providing three slips on the frontage of the Property to be accessed by a 3 foot x 25 foot ramp and a 14 foot 8 inch x 4 foot platform to be attached to the previously approved wharf.
7. On July 6, 2021, NHDES received an application to expand the 12 foot x 100 foot existing private wharf by extending wharf construction along the shore to the west and east of the existing structure.
8. The majority of the proposed wharf expansion would be located seaward of the mean high tide line and within the public submerged tidal lands.
9. The Applicant proposed to allow a portion of the wharf area, 544 square feet, to be used for restricted public access to the water and to provide access meeting the requirements of the Americans with Disabilities Act (ADA) through the adjacent restaurant and building to offset those areas of wharf expansion proposed for the purpose of providing additional restaurant seating over the public submerged tidal lands.
10. On October 8, 2021, NHDES received a letter from the Portsmouth Conservation Commission declining to recommend approval of the application.
11. The project as approved and conditioned to restrict the timing of impacts should not have adverse impact on protected aquatic species utilizing this tidal portion of the Piscataqua River.
12. The Department finds that because the project is not of significant public interest and will not significantly impair the resources of the Piscataqua River a public hearing under RSA 482-A:8 is not required.





The State of New Hampshire  
**Department of Environmental Services**

Robert R. Scott, Commissioner



October 27, 2022

MARTINGALE LLC  
3 PLEASANT ST STE 400  
PORTSMOUTH NH 03801

**Re: Approved Standard Dredge and Fill Wetlands Permit Application (RSA 482-A)**  
**NHDES File Number: 2021-02150**  
**Subject Property: 99 Bow Street, Portsmouth, Tax Map #106, Lot #54**

Dear Owner:

On October 27, 2022, the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau approved the above-referenced application to expand an existing 12 foot x 100 foot wharf by constructing an additional 712 square foot wharf section on the westerly end of the frontage and an 883 square foot wharf section on the easterly end of frontage with no modifications to be made to the existing 10 foot x 75 foot float, providing three slips on the frontage accessed by a 3 foot x 25 foot ramp and a 14 foot 8 inch x 4 foot platform all adjacent to property having approximately 185 feet of frontage along the tidal reach of the Piscataqua River in Portsmouth. Compensatory mitigation to be provided for permanent impacts within tidal surface waters is a one-time payment into the Aquatic Resource Mitigation Fund ("ARM") of \$44,894.81.

In accordance with RSA 482-A:10, RSA 21-O:14, and Rules Env-WtC 100-200, **any person aggrieved by this decision may file a Notice of Appeal directly with the NH Wetlands Council (Council) within 30 days of the decision date, October 27, 2022.** Every ground claiming the decision is unlawful or unreasonable must be fully set forth in the Notice of Appeal. Only the grounds set forth in the Notice of Appeal are considered by the Council. Information about the Council, including Council Rules, is available at <https://www.nhec.nh.gov/wetlands-council/about>. For appeal related issues, contact the Council Appeals Clerk at (603) 271-6072.

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Sincerely,

Philip Trowbridge, P.E., Manager  
Land Resources Management, Water Division

Enclosure: Copy of Decision

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FILE #2021-02150  
MARTINGALE LLC  
PORTSMOUTH

DECISION DATE:

October 27, 2022

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Expand an existing 12 foot x 100 foot wharf by constructing an additional 712 square foot wharf section on the westerly end of the frontage and an 883 square foot wharf section on the easterly end of frontage with no modifications to be made to the existing 10 foot x 75 foot float, providing three slips on the frontage accessed by a 3 foot x 25 foot ramp and a 14 foot 8 inch x 4 foot platform all adjacent to property having approximately 185 feet of frontage along the tidal reach of the Piscataqua River in Portsmouth. Compensatory mitigation to be provided for permanent impacts within tidal surface waters is a one-time payment into the Aquatic Resource Mitigation Fund ("ARM") of \$44,894.81.

CONDITIONS:

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3. In accordance with Env-Wt 307.06 and Env-Wt 307.10(i), all in-water pile driving shall be installed during the dredge window which is November 15 to March 15 to avoid impacts that could adversely affect fish habitat, wildlife habitat, or both.
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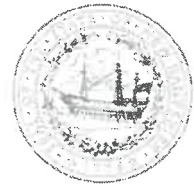
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3. Pursuant to Env-Wt 606.12 Commercial Tidal Docks: Working Waterfront, the dimensions and configurations of a working waterfront facility shall be based on its use, rather than standard dimensions or configurations.
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6. On January 2, 2013, NHDES approved Wetlands Permit #2012-01050 which authorized construction of a 10 foot x 75 foot float, providing three slips on the frontage of the Property to be accessed by a 3 foot x 25 foot ramp and a 14 foot 8 inch x 4 foot platform to be attached to the previously approved wharf.
7. On July 6, 2021, NHDES received an application to expand the 12 foot x 100 foot existing private wharf by extending wharf construction along the shore to the west and east of the existing structure.
8. The majority of the proposed wharf expansion would be located seaward of the mean high tide line and within the public submerged tidal lands.
9. The Applicant proposed to allow a portion of the wharf area, 544 square feet, to be used for restricted public access to the water and to provide access meeting the requirements of the Americans with Disabilities Act (ADA) through the adjacent restaurant and building to offset those areas of wharf expansion proposed for the purpose of providing additional restaurant seating over the public submerged tidal lands.
10. On October 8, 2021, NHDES received a letter from the Portsmouth Conservation Commission declining to recommend approval of the application.
11. The project as approved and conditioned to restrict the timing of impacts should not have adverse impact on protected aquatic species utilizing this tidal portion of the Piscataqua River.
12. The Department finds that because the project is not of significant public interest and will not significantly impair the resources of the Piscataqua River a public hearing under RSA 482-A:8 is not required.





The State of New Hampshire  
**Department of Environmental Services**

Robert R. Scott, Commissioner



October 24, 2022

Charles Doleac  
365 Little Harbor Road  
Portsmouth NH 03801



**Re: Restoration Plan Approval**  
**Land Resources Management File Number: 2022-02989**  
**Subject Property: 365 Little Harbor Road, Portsmouth, Tax Map 203, Lots 5 & 6**

Dear Mr. Doleac:

On September 19, 2022, the New Hampshire Department of Environmental Services (NHDES) Land Resources Management Program received a proposed site restoration plan (Restoration Plan) for the above-referenced property (Property). The Restoration Plan was in response a voluntary reporting of a violation and not a NHDES enforcement action. NHDES hereby approves the Restoration Plan as submitted, subject to the following specific conditions. If there is a conflict between the Restoration Plan and this Restoration Plan Approval, this Restoration Plan Approval will control.

1. **By June 1, 2023**, approximately 1,538 square feet of the Waterfront Buffer of the Protected Shoreland shall be restored, monitored, and managed in accordance with the Restoration Plan and all project descriptive details submitted to NHDES on September 19, 2022, by Marc Jacobs, Certified Soil and Wetland Scientist.
2. The restoration shall be conducted according to the Restoration Plan and as conditioned by this Restoration Plan Approval. Any changes or alterations to the Restoration Plan must be requested in writing and approved in writing by NHDES prior to implementing any such changes or alterations.
3. All persons involved in restoration activities on the Property shall have read and become familiar with the provisions of the Restoration Plan and this Restoration Plan Approval prior to beginning the activities. A copy of the Restoration Plan and this Restoration Plan Approval shall be kept posted at the Property during the restoration activities.
4. A pre-construction meeting shall be held on-site with the owner, contractor, certified wetland scientist, City of Portsmouth staff and NHDES Wetlands Bureau staff, to review the plans, the shoreland restoration program, and the Restoration Plan Approval.
5. The Portsmouth Conservation Commission and the NHDES Wetlands Bureau shall be notified in writing at least 48 hours prior to commencing restoration work.
6. A certified wetland scientist (CWS) shall supervise the restoration activities within RSA 483-B jurisdiction on the Property to ensure that the restoration is accomplished pursuant to this Restoration Plan Approval.

[www.des.nh.gov](http://www.des.nh.gov)

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7. Siltation, erosion, and turbidity controls shall be installed prior to restoration, shall be maintained during restoration activities, and shall remain until the area is stabilized.
8. All steps shall be taken to ensure that no water quality violations occur on the Property during restoration activities.
9. Silt fence and hay bales shall not be used across streams, channels, swales, ditches, or other drainage ways.
10. Within three days following the last activity in the restoration area or where restoration activities are suspended for more than three days, all exposed soils shall be stabilized by seeding and mulching. Mulch used within RSA 483-B and RSA 482-A jurisdiction shall be natural straw or equivalent non-toxic, non-seedbearing organic material.
11. No machinery shall be used within undisturbed NHDES jurisdictional areas on the Property during the restoration, unless vegetation and soil is not disturbed.
12. Invasive species, such as bittersweet, shall be controlled by measures agreed upon by the NHDES Wetlands Bureau if the species is found in the restoration areas during construction and during the early stages of vegetative establishment.
13. The property owner shall work with a licensed and experienced pesticide applicator to develop a program to allow for judicious application of herbicide to control bittersweet vine as may be needed before and after the installation of proposed plantings. Any herbicide proposed shall be chosen with the sensitive nature of the site, adjacent to the river, in mind.
14. There shall be no substitutions made for the plant species specified on the approved plan for replanting purposes without prior written approval from NHDES.
15. An initial monitoring report with photographs shall be submitted to NHDES by **June 30, 2023**. The initial monitoring report shall include, but not be limited to, documentation of erosion control deployment, restoration sequencing, restoration activities, and status of restoration at time of initial monitoring report. Photographs shall depict all stages of restoration sequencing. For restoration activities within RSA 483-B jurisdiction, this monitoring report shall be submitted in accordance with Env-Wq 1412.03(g).
16. All shoreland restoration areas shall have successful establishment of all vegetation after two growing seasons, or the areas shall be replanted until successful establishment has been monitored for at least two growing seasons in accordance with Env-Wq 1412.03(g).
17. Subsequent monitoring reports shall be submitted to NHDES by **June 30, 2024** and **June 30, 2025** to document the success of the restoration and outline a schedule for remedial actions if necessary. Such reports shall be submitted to NHDES with photographs demonstrating the conditions on the restoration site, include any necessary remedial actions, and contain a schedule for completing the remedial actions and conducting follow-up inspections.
18. Remedial actions may include, but are not limited to, replanting, relocating plantings, removing invasive

species, altering soil composition or depths, or deconsolidating soils due to compaction.

19. This Restoration Plan Approval does not convey a property right, nor authorize any injury to property of others, nor invasion of rights of others.
20. This Restoration Plan Approval does not relieve the owner(s) from the obligations of other local, state, or federal permits or requirements.
21. If restoration has not been completed, transfer of ownership of the Property shall require notification to NHDES and an agreement on transfer of the rights and obligations of this Restoration Plan Approval, prior to such transfer of ownership.

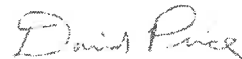
NHDES personnel may conduct future inspections to determine compliance with the provisions of the approved Restoration Plan and all other applicable NHDES statutes and rules.

Following completion of the restoration work, monitoring reports should reference NHDES File Number 2022-02989, and should be addressed as follows:

David Price  
Land Resource Management Program  
Department of Environmental Services  
222 International Drive Suite 175  
Portsmouth, NH 03801

Should you have any questions, please contact me at [David.Price@des.nh.gov](mailto:David.Price@des.nh.gov) or (603) 559-1514.

Sincerely,



David Price  
East Region Supervisor  
Land Resources Management Program  
Water Division

cc: Portsmouth Conservation Commission  
Portsmouth Environmental Planner  
Marc Jacobs





The State of New Hampshire  
**Department of Environmental Services**

Robert R. Scott, Commissioner



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Sincerely,



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