

City of Portsmouth, New Hampshire

Wetland Conditional Use Permit Application Checklist

This wetland conditional use permit application checklist is a tool designed to assist the applicant in the planning process and for preparing the application for Conservation Commission and Planning Board review. The checklist is required to be uploaded as part of your wetland conditional use permit application to ensure a full and complete application is submitted to the Planning and Sustainability Department and to the online portal. A pre-application conference with a member of the Planning and Sustainability Department is encouraged as additional project information may be required depending on the size and scope of the project. The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all wetland conditional use permit requirements. Please refer to Article 10 of the City of Portsmouth Zoning Ordinance for full details.

Applicant Responsibilities: Applicable fees are due upon application submittal to the Planning Board (no fees are required for Conservation Commission submission). The application will be reviewed by Planning and Sustainability Department staff to determine completeness. Incomplete applications which do not provide required information for the evaluation of the proposed site development shall not be provided review by the Conservation Commission or Planning Board.

Name of Applicant:	Date Submitted:	

Application # (in City's online permitting): _____

Site Address: ______ Map: _____ Lot: _____

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Ø	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)
	Basic property and wetland resource information. (10.1017.21)	
	Additional information required for projects proposing greater than 250 square feet of permanent or temporary impacts. (10.1017.22)	
	Demonstrate impacts as they relate to the criteria for approval set forth in Section 10.1017.50 (or Section 10.1017.60 in the case of utility installation in a right-of-way). (10.1017.23)	
	Balance impervious surface impacts with removal and/or wetland buffer enhancement plan. (10.1017.24)	

V	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)
	Wetland buffer enhancement plan. (10.1017.25)	
	Living shoreline strategy provided for tidal wetland and/or tidal buffer impacts. (10.1017.26)	
	 Stormwater management must be in accordance with Best Management Practices including but not limited to: 1. New Hampshire Stormwater Manual, NHDES, current version. 2. Best Management Practices to Control Non-point Source Pollution: A Guide for Citizens and City Officials, NHDES, January 2004. (10.1018.10) 	
	Vegetated Buffer Strip slope of greater than or equal to 10%. (10.1018.22)	
	Removal or cutting of vegetation, use of fertilizers, pesticides and herbicides. (10.1018.23/10.1018.24/10.1018.25)	
	All new pavement within a wetland buffer shall be porous pavement. (10.1018.31)	
	An application that proposes porous pavement in a wetland buffer shall include a pavement maintenance plan. (10.1018.32)	
	Permanent wetland boundary markers shall be shown on the plan submitted with an application for a conditional use permit and shall be installed during project construction. (10.1018.40)	
Ø	Requested Items for Submittal	Item Location (e.g. Page or Plan Sheet/Note #)
	A narrative/letter addressed to the Conservation Commission Chair (if recommended to Planning Board then an additional narrative addressed to the Planning Board Chair at that time) describing the project and any proposed wetland and/or wetland buffer impacts. Please visit the <u>WCUP instruction page</u> for further application instructions.	· · ·
	If New Hampshire Department of Environmental Services (NHDES) Standard Dredge and Fill Permit is required for this work, please provide this permit application at the same time as your submission for a Wetland Conditional Use Permit.	

Applicant's Signature: ______ Date: ______

Wetland Conditional Use Permit Application Checklist/February 2025

Hron Brothers Construction

Timothy Hron 288 Currier Hill Road Gilmanton, NH 03237 hronbrosconstruction@gmail.com (603) 630-1525

May 5, 2025

Peter Britz, Chairman Portsmouth Conservation Commission Planning and Sustainability Director City of Portsmouth Municipal Complex 1 Junkins Avenue Portsmouth, NH 03801

Re: Proposed Residential Project at 15 Marjorie Street, Portsmouth, NH – Addition and Retaining Wall

Dear Mr. Britz,

I am writing on behalf of **Matt and Beth Reichl**, the property owners at **15 Marjorie Street**, **Portsmouth**, **NH**, to formally submit a residential improvement project for review by the **Portsmouth Conservation Commission**.

The proposed work includes the construction of a **18x34' sunroom/covered porch, 20x32' addition** and installation of an approx. 120' **retaining wall** to support native landscaping and improve site grading. The property lies within or near the **inland wetland buffer zone**, and we are committed to ensuring that the project meets all local and state environmental regulations.

A site plan and supporting documents have been prepared and are enclosed for your review. We are mindful of the property's proximity to sensitive environmental areas and will incorporate appropriate erosion control measures and low-impact stormwater practices to minimize environmental impact during and after construction.

The project was designed and will be managed by **Hron Brothers Construction**, based in Gilmanton, NH. I will serve as the primary point of contact throughout the review and construction process.

We respectfully request to be placed on an upcoming **Conservation Commission agenda** to present the project and respond to any questions the Commission may have.

Thank you for your time and consideration. Please feel free to contact me at **(603) 630-1525** or **hronbrosconstruction@gmail.com** if you require any additional information prior to the meeting.

Sincerely, **Timothy Hron** Hron Brothers Construction 288 Currier Hill Road Gilmanton, NH 03237 hronbrosconstruction@gmail.com (603) 630-1525

Letter of Authorization

I Matt Reichl give authorization to Tim Hron to file applications and speak n my behalf regarding 15 Marjorie St application

Matt Reichl

Hron Brother's Construction

288 Currier Hill Rd Gilmanton, NH 03237 Hronbrosconstruction@gmail.com 603.630.1525

04.30.2025

Portsmouth Conservation Commission 1 Junkins Avenue Portsmouth, NH 03801

Re: Proposed Addition at 15 Sylvester Street – Wetland Buffer Criteria Compliance

Dear Members of the Conservation Commission,

I am writing to respectfully submit information regarding a proposed development at 15 Sylvester Street, Portsmouth, NH, (tax map 232, lot 41 and 232, lot 29) and to address the criteria required under the City's Wetland Protection Ordinance for projects within a wetland buffer. This letter outlines how the proposed work complies with each of the six criteria specified by the ordinance.

1. Suitability of Land for Proposed Use

The parcel at 15 Sylvester Street is reasonably suited to the proposed residential development, which will be located on an existing lot of record in a residential neighborhood. The site is predominantly upland with sufficient elevation, and the proposed use is consistent with surrounding properties and zoning regulations. Site design has been carefully planned to avoid disturbance to critical wetland areas.

2. Lack of Feasible Alternative Locations Outside the Wetland Buffer

Given the size and configuration of the lot, as well as existing constraints such as setbacks and lot coverage limitations, there is no feasible or reasonable alternative location for the proposed structure that would avoid the wetland buffer entirely. The design minimizes encroachment to the greatest extent possible while preserving the integrity and usability of the lot.

3. No Adverse Impact on Wetland Functional Values

The project has been designed to preserve wetland function by maintaining natural drainage patterns, incorporating erosion control measures, and avoiding direct alteration of the wetland itself. Buffer impacts are minor and temporary, and the development will not impair flood storage, water quality, wildlife habitat, or other wetland functions on the site or surrounding properties.

4. Limited Alteration of Natural Vegetative State

Disturbance to the natural vegetative state within the buffer will be limited strictly to what is necessary for construction access and structural footprint. Mature vegetation and existing tree canopy will be preserved wherever feasible, and selective clearing will be done with minimal ground disturbance to avoid long-term ecological disruption.

5. Least Impactful Alternative Selected

Several layout alternatives were evaluated, and the current proposal represents the least impactful configuration. The development has been compactly designed to limit encroachment, with utility placement and access routes chosen to avoid sensitive areas wherever possible.

6. Restoration of Buffer to Natural State

Following construction, disturbed areas within the buffer will be restored to a natural vegetative state to the greatest extent feasible. This will include replanting with native species and implementing measures to prevent invasive plant growth. A buffer restoration and landscaping plan will be submitted as part of the permit application. Additionally, permanent wetland boundary markers will be placed during and after construction.

We believe that the proposed development has been thoughtfully planned to protect wetland values and to meet the intent of the City's conservation regulations. We respectfully request the Conservation Commission's review and support for this project.

Thank you for your time and consideration. Please feel free to contact me if any additional information or clarification is needed.

Sincerely, **Timothy Hron** Hron Brother's Construction

Residential Stormwater Management Plan

Property Owners: Matt & Beth Reichl
Address: 15 Sylvester Street, Portsmouth, NH
Lot Size: Approximately 0.25 acres
New Impervious Area: 964 sq. ft. (addition)
Date: 05.05.2025

1. Project Overview

This plan addresses stormwater impacts from the addition of 964 square feet of impervious surface to an existing residential lot. Stormwater practices are proposed to promote infiltration and reduce runoff volume and velocity in accordance with the **New Hampshire Stormwater Manual**.

2. Site Conditions

- Soil Type: Sandy loam (Hydrologic Soil Group B)
- **Topography**: Gently sloping to the rear of the property
- Vegetation: Mixed lawn and tree canopy
- Wetlands: Approx. 7,380 sq. ft. of inland wetland buffer present on-site

3. Stormwater Management Objectives

- Reduce runoff volume from new impervious surfaces
- Promote infiltration on-site to support groundwater recharge
- Prevent erosion and sediment transport to nearby wetlands
- Improve water quality through natural filtration

4. Proposed Best Management Practices (BMPs)

A. Permeable Paver Driveway Extension

• **Purpose**: Infiltrate runoff directly at the source

- Base Layer: 12-inch washed aggregate storage bed
- **Surface**: Permeable interlocking concrete pavers
- Underdrain: Optional based on infiltration test results
- **Overflow:** Sheet flow directed toward lawn area

B. Dry Well for Roof Runoff

- **Purpose**: Capture and infiltrate rooftop runoff from new addition
- Location: Adjacent to building foundation, downslope side
- **Design Volume**: Sized for the 1-inch water quality storm (~60–80 gallons)
- **Construction**: Pre-cast concrete or plastic chamber set in gravel trench
- Inlet: Connected to downspouts
- **Overflow:** Routed to vegetated lawn or existing swale

C. Vegetated Buffer Strip

- **Purpose**: Treat and slow overland flow before it reaches wetland buffer
- Location: At edge of lawn near wetland buffer zone
- Design:
 - Width: 10 feet minimum
 - **Slope**: Less than 5%
 - Vegetation: Dense mix of native grasses and shrubs

5. Maintenance Plan

ВМР	Task	Frequency
Permeable Pavers	Sweep/vacuum to remove sediment	Quarterly
Dry Well	Inspect inlet/outlet, clean debris	Biannually and after storms
Vegetated Buffer Strip	Mow high grasses, remove invasives	Monthly during growing season

6. Regulatory Compliance

This plan follows design guidance provided in the **New Hampshire Stormwater Manual**, especially:

- Volume 2: Post-Construction Best Management Practices
- Volume 3: Stormwater Site Design and Infiltration Guidelines

All BMPs are designed with adequate separation from seasonal high groundwater (>4 feet where infiltration is proposed), and no structures encroach within required buffers for jurisdictional wetlands.

The Matt and Beth Reichl Residence

15 Marjorie Lane, Portsmouth NH 03801 Additions and Renovations

Architectural Design Drawing List

AD-0.01 EXISTING AND NEW PLOT PLANS

AD-1.00	EXISTING & NEW BASEMENT PLAN

- EXISTING & NEW FIRST FLOOR PLAN AD-1.01
- AD-1.02 EXISTING & NEW SECOND FLOOR PLAN **EXISTING & NEW ROOF PLAN** AD-1.03

NEW EXTERIOR ELEVATIONS SOUTH & EAST AD-3.01 AD-3.02



Existing Plot Plan

1/8" = 1'-0"

1/8" = 1'-0"





Existing Floor Plan @ Basement









Existing Floor Plan @ Second Floor









Proposed New Roof Plan









29'-11" +/- PER ZONING ORDINANCE	34'-9" +/-			32 Contract 1. THE DESIGNS, DETAIL 0NE DRAWING OF THI DRAWINGS COMPRISE 2. IT IS THE INTENT OF T ARCHITECTURAL AND WITH ALL APPLICABLE AND/OR INSTALLATIO RESPONSIBILITY OF T SHALL BE BROUGHT ARCHITECTURALINTE 3. CONTRACTOR(S) SHAIN NFIELD. 4. DO NOT SCALE DRAWNINDICATED IS VALID O D6/18/24 06/27/24	Case Street, Portsmouth, NH 03801 198-0973 / hubert@hubertkrah.com www.hubertkrah.com Street, Portsmouth, NH 03801 198-0973 / hubert@hubertkrah.com www.hubertkrah.com Street, Portsmouth, NH 03801 198-0973 / hubert@hubertkrah.com Street, Portsmouth, NH 03801 198-0973 / hubert@hubertkrah.com sww.hubertkrah.com Street, Portsmouth, NH 03801 198-0973 / hubert@hubertkrah.com sww.hubertkrah.com Street, Portsmouth, NH 03801 198-0973 / hubert@hubertkrah.com Street, Portsmouth, NH 03801 198-0973 / hubert@hubertkrah.com Street, Portsmouth, NH 03801 199-0973 / hubert@hubertkrah.com 199-0973 / hubert@hubertkrah.com 199-0973 / hubert@hubertkrah.com 199-0973 / hubert@hubertkrah.com 199-0975 / hubert@hubert
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29'-11" +/- PER ZONING ORDINANCE		NEW GARAGE FRAMING		Ada Re Th R 1 Por	ditions and novations for the Reichlesidence 5 Marjorie Street 5 M



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Elevation





South Elevation

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PAGE 2 OF 2

Landscape Plan			
orie Way, Portsmouth, NH 03801			
date	revision		
3.24.25			
checked by	drawing #		
	Prop. Layout		

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al Name	Common Name
elis virginiana	WITCHHAZEL
jea paniculata 'Candy Apple'	CANDY APPLE PANICLE HYDRANGEA
ra 'Gem Box'	GEM BOX INKBERRY
alnifolia 'Ruby Spice'	RUBY SPICE SUMMER SWEET
ne canadensis	ANEMONE
s tuberosa	BUTTERFLY WEED
lactiflora 'Shirley Temple'	SHIRLEY TEMPLE PEONY
Nide Brim ⁱ	WIDE BRIM HOSTA

l. This plan was developed using the following plans as references: -Additions and Renovations for the Reichl Residence, Prepared by Hubert Krah Designs LLC 6/27/24 -City of Portsmouth, New Hampshire Sewer Service Improvements. Drawing C-4, Reichl Home Sewer Service Plan and Profile, Prepared by Wright Pierce. Revision date not listed on plan. -Proposed Site Plan. Project No 18738 Drawing No 18738_SITE prepared by

2. Elevation markers noted as inches in relation to the established zero point (marked +/- 0.0). The

Reichl Residence Landscape Plan			
orie Way, Portsmouth, NH 03801			
date	revision		
3.24.25			
checked by	drawing #		
	Prop. Plantings		

Pavement Maintenance plan

Inspect the Driveway

- Look for leaves, dirt, or water that isn't draining.
- Check for weeds or loose areas.

Clean the Surface

- Use a leaf blower, broom, or stiff brush to remove leaves, dirt, and debris.
- Sweep gently to avoid pushing dirt into the surface.

2. Seasonal or As-Needed Tasks

Remove Weeds

- Pull weeds by hand, roots and all.
- Consider adding a layer of gravel or sand between pavers to block new growth (use only clean material).

Fix Uneven Areas

- If pavers or stones settle, lift and re-level them.
- Add more base material (gravel or sand) under the pavers if needed.

Check Drainage

- After a rain, look for spots where water doesn't soak in.
- If water pools, sweep or lightly rake to loosen dirt, or consider professional vacuum cleaning once a year.

Winter Tips (No Salt or Sand)

- Use a **plastic shovel** or snow blower to remove snow without damaging the surface.
- Don't use **salt, sand, or ash**, as they can clog the pores.
- Let small amounts of snow melt naturally if it's safe to do so.

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al Name	Common Name
elis virginiana	WITCHHAZEL
jea paniculata 'Candy Apple'	CANDY APPLE PANICLE HYDRANGEA
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Reichl Residence Landscape Plan	
orie Way, Portsmouth, NH 03801	
date	revision
3.24.25	
checked by	drawing #
	Prop. Plantings

VIA EMAIL to: andy.morrill@wright-pierce.com

March 11, 2025

Mr. Andy Morrill, P.E. Wright-Pierce 230 Commerce Way, Suite 302 Portsmouth, NH 03801

Re: Marjorie, Joseph and Sylvester Streets, Greenleaf Avenue, Portsmouth Toyota, Chase School Portsmouth, NH

Dear Mr. Morrill,

The following preliminary remarks summarize observations made during site inspections conducted at the above-referenced locations between April 24 and April 27, 2023 as well as on November 13, 2023 and January 23, 2025 to identify and delineate jurisdictional wetlands. The approximate areas-of-interest (AOI) are depicted below in Figures 1-3. Previous delineation adjacent to or including portions of these AOI, primarily at the end of Marjorie Street, took place in July 2020 and is described in a report dated September 21, 2020, which was also prepared by this office and is appended to the back of this report. This report replaces the delineation report dated August 21, 2023.

FIGURE 1 (between Sylvester St., Joseph St., and Chase School)

609 Portsmouth Avenue PO Box 417 Greenland, NH 03840-0417

Phone (603) 686-5097 Fax (603) 686-5142 Mobile (603) 534-SOIL (7645)

FIGURE 3 (November 13, 2023 and January 23, 2025)

Certification Note

Site investigations were conducted and man-made and natural jurisdictional wetland boundaries (and bank associated with streams in specific locations) were delineated by Marc Jacobs, Certified Wetland Scientist number 090, in April and November 2023, as well as January 2025, according to the standards of the U.S. Army Corps of Engineers – 1987 Wetlands Delineation Manual; the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region; the Code of Administrative Rules, NH Department of Environmental Services - Wetlands Bureau – Env-Wt 100-900 and Article 10, §10.1010 – Environmental Protection Standards of the City of Portsmouth, NH zoning ordinance. Predominant hydric soils were evaluated utilizing the Field Indicators for Identifying Hydric Soils in New England, Version 4, June 2020 and the Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. The status of dominant vegetation as hydrophytic was determined according to the U.S. Army Corps of Engineers - Northcentral and Northeast 2020 Regional Wetland Plant List. Copies of site plans depicting the wetland delineation which have been reviewed by the wetland scientist are individually stamped, signed and dated. This note has been customized for this project. Bank associated with streams is identified per Env-Wt 102.15.

General Methodology

Jurisdictional wetlands were identified and wetland-upland boundaries within the AOI were delineated in the field based upon direct observation and on-the-ground investigations using the technical guidance above. Whereas portions of the AOI were apparently altered by previous site activities, and therefore represent atypical (versus natural) conditions, the delineation utilized protocols for altered wetlands, as well as best professional judgment and prior experience with sites having similar conditions, to ascertain the presence of wetlands and establish the wetland-upland boundary where necessary.¹ With a couple of exceptions noted by specific wetland flag sequence below, site alterations do not appear to be recent.²

Solid color pink survey flags were then placed at random intervals to mark wetland-upland boundaries in the field. Each flag series bears a unique letter and each flag a unique number to assist in subsequent field location by instrument survey as well as to ascertain exact field position when referencing site plans during any future site visits or during project design and permitting. The following flag series and numbers were used: A5-A15, E7-E18, I1-I32, J1-J9, K1-K, L1-L27, M1-M10, N1-N136, O1-O17, P1-P12, Q1-Q10, R1-R4, S1-S50, T1-T6, U1-U13, V1-V3, and W1-W9. Where they are depicted on site plans having been prepared in 2023, flags A1-A4, B1-B18, C1-C5, D1-D11, E1-E6, F1-F5, G1-G19 and H1-H4 were placed in 2020.

General Wetland Description

The following section generally describes wetland hydrology, vegetation and soil conditions within the various AOI. More specific information for each wetland area is provided below, generally organized by wetland flag series or, where appropriate, groups of flag series that generally define a discreet wetland area. Wetland classifications according to the National Wetland Inventory and the Cowardin system are also provided.

¹ Site alterations within jurisdictional wetlands may be considered violations of N.H. RSA 482-A: if they were undertaken without permits on or after July 2, 1969.

 $^{^{2}}$ For the purposes of this report, recent (filling, excavation, regrading, stump removal or other land altering activity) is defined as having occurred within the previous year and is an estimate based upon preliminary observations only. Additional investigations would be necessary to confirm the presence, date of placement and extent of any filled wetlands.

<u>Hydrology</u>

All flags and flag series identify freshwater wetlands. Dominant wetland hydrology for the majority of wetlands in these AOI were historically sustained by a perennial stream.³ The stream has been channelized and straightened by a combination of excavation and filling. Some of the filling is associated with the installation of sewer utilities while some filling is associated with residential and commercial land development. Our observations suggest that significant wetland acreage has been lost within and adjacent to the AOI over the years due to filling. The channelization of the stream has also diverted some of the stream flow around certain wetland areas but the wetlands are still mostly hydrologically contiguous and the stream continues to play an important, albeit somewhat diminished role in sustaining wetland hydrology. No geographically isolated wetlands have resulted from the stream diversion, especially owing to the installation of various culverts as well as dominant soil types. Wetland area 'N' may have been geographically isolated at one time, partly due to the stream diversion, but subsequent earth moving activity has resulted in a channel that connects this wetland to other wetlands. However, this channel serves mostly to drain the wetland. As a result of the stream diversion, other sources of hydrology, such as sheet flow from surrounding uplands, stormwater from adjacent development and direct precipitation, have taken on increased importance. Increased stormwater inputs have ramifications for water quality, especially if the stormwater is not treated prior to discharge to wetlands.

No primary or secondary vernal pool indicators were observed during site investigations and our preliminary observations suggest that the delineated wetlands do not provide breeding habitat for species customarily associated with vernal pools; however, an exhaustive vernal pool survey was not conducted. These wetlands likely provide significant supporting habitat however.

Vegetation

The largest portion of the AOI comprised by the Portsmouth Toyota property has experienced historic and more recent alterations of the plant community and is therefore dominated by emergent and herbaceous plant species with a few trees and a significant amount of shrubs. The west side of the site is less altered and is constituted by a forested swamp. Dominant vegetation in the tree canopy includes red maple (*Acer rubrum*) and American elm (*Ulmus Americana*), both deciduous species. Portions of the AOI located to the north and west of Portsmouth Toyota are generally forested and/or shrub dominated and are described in the 2020 delineation report. Vegetation is described in more detail by wetland flag series below.

<u>Soils</u>

Hydric soils predominantly involve a mosaic of poorly drained Scitico series (*Typic Endoaquepts*) mineral soils and very poorly drained Maybid series (*Typic Humaquepts*) mineral soils. Scitico and Maybid series soils are derived from silt and clay parent materials of marine origin. We did not distinguish between wetlands with poorly drained soils versus those with very poorly drained soils in the field. Similarly, any fill materials were only evaluated as needed to ascertain if they represent hydric soils and have not been thoroughly assessed or characterized otherwise.

³ The status of streams as ephemeral, intermittent or perennial is based upon a single observation only and is therefore preliminary. If the definitive jurisdictional status of any stream is required for future design or permitting efforts, additional inspections or investigations will be necessary.

Wetland Flag Series A, B and K

Wetland flag series 'A', 'B' and 'K' generally identify the bank of a low-gradient stream; the channel alignment of which appears to be the result of excavation and filling. The stream is likely perennial although much of the flow is likely constituted by urban storm water runoff. Flags $\pm A1$, $\pm B1$ and $\pm K1$ start at a 36-inch diameter corrugated metal pipe (CMP) with boulder retaining walls. Flag B18 ends at twin 18-inch diameter high-density polyethylene (HDPE) culverts. The slopes on the approach to the HDPE culverts and the mouth of the culverts have been stabilized with riprap. The stream was observed to be flowing during site investigations. Flags A1-A4 were placed in 2020 and this flag series was extended in 2023. The 'B' series flags were also placed during the 2020 site investigations. The classification of this resource is: Riverine, Lower Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated (R2UBFx). A significant colony of Japanese knotweed (*Polygonum cuspidatum*) was observed along wetland flag series 'K'. The colony had been mowed relatively recently. Other colonies of knotweed exist in various locations within the AOI. Refer to images 1 and 2.

Wetland Flag Series C – F

Wetland flag series 'C – F' identify the toe-of-fill. The fill does not appear to be recent. Wetland flag series F represents an upland island created by fill. Flags E1 and D11 are located to either side of a 10-inch diameter polyvinylchloride (PVC) culvert with a flared-end section comprised of high density polyethylene (HDPE). All flags were placed in 2020 although flags E7-E18 were placed in 2023. Wetlands identified by flag series 'C – F' are hydrologically contiguous to other wetlands outside the AOI by virtue of a 15-inch diameter CMP near wet flags C5 and D1. Classification of the dominant wetland condition delineated by these flag series is Palustrine, Scrub-shrub, Broad-leaved Deciduous (PSS1). Common shrub species include winterberry (*Ilex verticillata*), dogwood (*Cornus* sp.), glossy buckthorn (*Frangula alnus*) and speckled alder (*Alnus incana rugosa*). Willow (*Salix* sp.) trees were common around the periphery of the wetland. Dominant soil conditions involve a complex of poorly drained Scitico series soils and very poorly drained Maybid series soils. Both soil types are derived from marine sediments dominated by silt and clay size soil particles and textures.

Wetland Flag Series I

Wetland flag series 'I' identifies a variety of conditions. Flag II starts at a 15-inch diameter CMP. Flags \pm I1 to \pm I2 and \pm I21 to \pm I32 identify the toe-of-fill. Flags \pm I21 to \pm I32 appear to represent the toe-of-fill placed to create athletic fields at the Chase School. Flags \pm I12 to \pm I21 identify relatively natural vegetation, soil and hydrology conditions. Classification of the dominant wetland conditions delineated by flag series 'I' include Palustrine, Scrub-shrub, Broad-leaved Deciduous (PSS1) and Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded/Saturated. (PFO1E). Common shrub species include winterberry, dogwood, speckled alder, multiflora rose (*Rosa multiflora*) and glossy buckthorn. Common trees include willow and red maple. Dominant soil conditions involve a complex of poorly drained Scitico series soils and very poorly drained Maybid series soils.

Wetland Flag Series J

Wetland flag series 'J' identifies an upland island that appears to have been created by the placement of fill (dredge spoils). Similar shrub species as those identified along the 'E' and 'I' series were noted in adjacent wetlands and common buckthorn (*Rhamnus cathartica*) was noted along the wetland-upland boundary. A mature swamp white oak (*Quercus bicolor*) tree was observed here.

Wetland Flag Series L

Wetland flag series 'L' identifies a variety of conditions. Flag L1 starts at the downstream end of a 36inch diameter CMP with a boulder retaining wall. Flags \pm L1 to \pm L4 and \pm L20 to \pm L27 generally represent the bank of the stream and mean high water and are the likely result of excavation and/or filling. Flags \pm L4 to \pm L20 generally represent an area that has highly altered soils and vegetation. The area appears to have been altered more recently than most areas on site. Indeed, the vegetation appeared to have been mowed or cut within the last year. Refer to images 3 and 4 below. Flags \pm L26 to \pm L27 generally involve a riprap slope. Flag L27 ends at twin 18-inch diameter HDPE culverts. Classification of the dominant wetland condition delineated by flag series 'L' include Palustrine, Emergent, Persistent (PEM1). Common herbaceous vegetation that was observed includes soft rush (*Juncus effusus*), broadleaf cat-tail (*Typha latifolia*), tussock sedge (*Carex stricta*), reed canary grass (*Phalaris arundinacea*) and cranesbill (*Geranium maculatum*). Dominant soil conditions are highly altered and generally involve poorly drained Udorthents series soils. Where the flags identify (stream) bank, the classification of this resource is: Riverine, Lower Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated (R2UBFx).

Wetland Flag Series M

Wetland flag series 'M' identifies an upland island that appears to have been created inadvertently during other site alterations or activities. Flags \pm M1 to \pm M4 generally represent the bank of the stream. Nearby wetlands / vegetation between the 'L' and 'M' series flags have been cut within the last year or two. Where the flags identify (stream) bank, the classification of this resource is: Riverine, Lower Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated (R2UBFx).

Wetland Flag Series N

Wetland flag series 'N' identifies a large area comprised by wetlands that are classified as Palustrine, Emergent, Persistent (PEM1) and Palustrine, Scrub-shrub, Broad-leaved Deciduous (PSS1). The wetland, while altered, represents relatively natural conditions, although the wetland-upland boundary is almost entirely man-made by filling. An obscure swale was observed within the wetland. This swale may have been constructed to support agriculture or it may be the remnants of the former perennial stream channel that existed before the stream was channelized and diverted around this wetland. Significant communities of invasive common reed (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*) were observed within this wetland. Other vegetation commonly observed included willow, speckled alder and dogwood shrubs. Recent site alteration activities were also observed. Refer to images 5 and 6 below.

Flag N1 starts at a buried culvert(s) and boulder retaining wall. Flag N136 ends at a 24-inch diameter reinforced concrete pipe (RCP) and poured concrete headwall. Flags \pm N3 to \pm N4, \pm N5 to \pm N6, \pm N127 to \pm N130 and \pm N130 to \pm N136 identify the bank of another stream. The stream is likely intermittent, receiving flow from the wetland as well as stormwater runoff from nearby development and associated impervious surfaces upgradient of and adjacent to flag N136. The finger-like wetland projection identified by flags \pm N98 to \pm N108 may be man-made. More investigations would be necessary to be certain, however it appears that the original wetland has been filled, but wetland characteristics are developing in the topographic depression created by the fill slopes and associated grading. Similar conditions may be responsible for wetlands identified by flags \pm N127.

Wetland Flag Series O

Wetland flag series 'O' generally identifies wetlands associated with a likely intermittent stream. Flag O1 starts at a 24-inch diameter RCP and poured concrete headwall. Flags \pm O1 to \pm O3 and \pm O6 to \pm O7 identify the bank of the stream. Flag O17 ends at a buried culvert(s) and boulder retaining wall. The stream is likely the result of stormwater runoff as described above but there appears to be a groundwater component as well. The bank and wetland boundary or portions thereof were created by fill. The vegetation community on the side of the stream closest to the AOI would generally be classified as Palustrine Scrub-Shrub, Broad-leaved Deciduous (PSS1). Dominant shrubs included speckled alder, multiflora rose, highbush cranberry (*Viburnum trilobum*), honeysuckle (*Lonicera*) sp.) and dogwood. The stream is best classified as Riverine, Intermittent, Unconsolidated Bottom, Mud (R4UB3).

Wetland Flag Series P

Wetland flag series 'P' encloses a densely vegetated upland island that appears to have been created by the placement of fill. Dominant vegetation involves honeysuckle, common buckthorn, glossy buckthorn and autumn olive (*Elaeagnus umbellata*) shrubs.

Flag Series Q

Flag series 'Q' identifies the bank of a likely intermittent stream confined by wetlands identified by the 'N' and 'O' series flags. Solid color blue flags numbered Q1 to Q10 were placed in pairs on either side of the bank but do not appear to be shown on site plans that depict the wetland delineation. We believe however, based upon communications with Doucet Survey and the survey crew in the field during site investigations, that some of the flags were located via survey and that the channel depicted on the plan generally coincides with those flags, except along flags \pm O12 to \pm O16. The stream is best classified as Riverine, Intermittent, Unconsolidated Bottom, Mud (R4UB3). Refer to image 7.

Wetland Flag Series R

Wetland flag series 'R' identifies an isolated wetland that is likely man-made. The area supports a dominance of wetland vegetation (willow, dogwood and alder shrubs) and wetland hydrology, and appears to flow intermittently from flag R1 toward flag N8 on occasion. The soils, while not meeting the hydric soil definition (likely due to prior alteration), provided signs of periodic saturation (signs of shallow flooding were also observed) and it is my opinion that the saturation and flooding occur with a frequency and duration sufficient to meet the definition of a wetland, so we have delineated and flagged the area. The area is best classified as Palustrine Scrub-Shrub, Broad-leaved Deciduous, Excavated (PSS1x).

Wetland Flag Series S

Wetland flag series 'S' identifies a variety of conditions. Flag S1 starts at a buried culvert(s) and boulder retaining wall. Flags \pm S1 to \pm S3, \pm S4 to \pm S14 and \pm S26 to \pm S41 generally identify the toe-of-fill and, in the case of flags \pm S4 to \pm S14 (and \pm S37 to \pm S46), likely dredge spoils. Flags \pm S3 to \pm S4, \pm S14 to \pm S15, \pm S21 to \pm S26 and \pm S34 to \pm S36 generally identify natural conditions. Flags \pm S15 to \pm S21 and \pm S41 to \pm S49 identify the bank of the aforementioned diverted perennial stream, which was created by excavation. Exposed bedrock was observed in the bottom and sides of the excavated channel from flags \pm S17 to \pm S19. Wetlands adjacent to flags \pm S21 to \pm S41 represent a relatively natural forested condition. These wetlands are best classified as Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded/Saturated. (PFO1E). Common trees include red maple, American elm and swamp white oak.

Along flags \pm S15 to \pm S21 and \pm S41 to \pm S49 the classification of the stream is: Riverine, Lower Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated (R2UBFx). Downstream of flag S1, to the confluence with the perennial stream, the stream is best classified as Riverine, Intermittent, Unconsolidated Bottom, Mud (R4UB3). Flags S47 and S48 are located to either side of twin 18-inch diameter HDPE culverts. Flag S50 ends at a 15-inch diameter CMP. Refer to images 8 and 9.

Flag series T

Flag series 'T' identifies the bank of a likely intermittent stream confined by wetlands identified by the 'S' and 'U' series flags. Solid color blue flags numbered T1 to T6 were placed in pairs on either side of the bank but do not appear to be shown on site plans that depict the wetland delineation. We believe however, based upon communications with Doucet Survey and the survey crew in the field during site investigations, that the flags were located via survey and that the channel depicted on the site plan generally coincides with those flags. The stream is best classified as Riverine, Intermittent, Unconsolidated Bottom, Cobble/Gravel (R4UB1) down to its confluence with the diverted perennial stream discussed below. See flag series 'V' and 'W'. Refer to image 10.

Wetland Flag Series U

Wetland flag series 'U' generally identifies wetlands associated with a likely intermittent stream although there appears to be a groundwater component as well, especially along flags U6 to U11. This groundwater may also be associated with a poorly constructed and poorly maintained stormwater detention facility on the adjacent property, which is also causing occasional surface flow to scour a channel near flags \pm U6 to \pm U8 and along flags \pm U12 and \pm U13. Flag U1 starts at a buried culvert(s) and boulder retaining wall. Flag U13 ends at or very near the property line but the hydrology continues off site.

Wetland Flag Series V

Wetland flag series 'V' generally identifies two sources of runoff. Flags \pm V1 to \pm V2 identify the bank of a man-made intermittent, scoured channel resulting from the poorly maintained stormwater facility described above. Flags \pm V2 to \pm V3+ identify the bank of the stream just downstream of the confluence of the aforementioned intermittent stream and diverted perennial stream. The stream below the confluence is therefore best classified as Riverine, Lower Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated (R2UBFx).

Wetland Flag Series W

Wetland flag series 'W' mostly identifies the bank of the aforementioned diverted perennial stream, which was created by excavation. Exposed bedrock was observed in the bottom of the excavated channel near flag \pm W6. Flags W1 to W8 identify the bank of the stream. The stream is best classified as Riverine, Lower Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated (R2UBFx). The area along flags W8 to W9 represents the edge of a large forested wetland which extends off site and is best classified as Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded/Saturated. Refer to images 8 and 9.

Storm Water Control Measure

The storm water control measure⁴ on Marjorie Street was evaluated during site investigations conducted on November 13, 2023 (as part of the larger AOI depicted in Figure 3) and January 23, 2025. It is apparently man-made, chiefly by excavation, and the portion closest to Marjorie Street is lined with riprap stone. Refer to the green shaded area in Figure 4 and Images 11 and 12 below.

As is to be expected, the soils in the storm water control measure are highly altered and possess minimal horizon development that is customary to natural soils. Also to be expected, as a storm water control measure, the soils possess some morphological signs consistent with episodic short-term wetness. However, the soils do not currently meet the definition of a hydric soil per the technical standards cited above in the certification note. This is likely due to significant periods of drying between storm events.

FIGURE 4

The storm water control measure supports a variety of herbaceous and shrub vegetation. A significant community of herbaceous species dominated by sensitive fern (*Onoclea sensibilis*) was observed in the portion of the storm water control measure that is not lined with riprap. Sensitive fern is a facultative wetland species and as such is customarily considered a hydrophyte and an indicator of jurisdictional wetlands in the presence of hydric soils. However, facultative wetland species are also commonly found in upland (non-wetland areas). Sensitive fern is known to colonize altered and natural soils including non-hydric soils that experience periodic wetness.

The storm water control measure likely drains to the south, towards assessor's Lot 38, via intermittent overland flow during larger storm events. There may also be infiltration to groundwater taking place through the bottom of the practice during smaller storm events that do not generate sufficient runoff to result in overland flow. There is however no contiguous wetland connection via hydric soils or hydrophytic vegetation to nearby jurisdictional wetlands identified by the 'E' flag series at the rear of assessor's Lots 26 or 38 which were delineated in 2023.

⁴ Storm water control measures were formerly referred to as storm water best management practices.

For the above reasons, the storm water control measure does not possess the three factors (a plant community dominated by hydrophytic plant species, hydric soils and signs of wetland hydrology) necessary to be considered a jurisdictional wetland per state regulation or Portsmouth zoning §10.1014.11.

The conclusion above notwithstanding, if the area was <u>legally</u> constructed as a storm water management practice and subsequently developed the necessary wetland characteristics identified above, thus becoming jurisdictional as a wetland, it may be maintained, repaired, replaced or modified under state law (NH RSA 482-A:3, IV(b)) without a permit.

Similarly, per Portsmouth zoning §10.1013.10, inland (freshwater) wetlands, which are not vernal pools and are less than 10,000 square feet (SF) in area, are not subject to local regulation. November and January are not ideal months in which to make determinations regarding vernal pools. I did not observe any secondary indicator species in 2023 (in the absence of snow cover); the presence of which would suggest that the area is a potential vernal pool. Whereas I also concluded that the area is not a wetland, it was not delineated. Regardless, the storm water control measure does not appear to be \geq 10,000 SF in size, but additional calculations or measurements may be necessary to confirm the size of the area.

Invasive Species

Observations of plant species in the AOI which are commonly considered invasive included: purple loosestrife, Japanese knotweed, common reed, Asian bittersweet (*Celastrus orbiculata*), glossy buckthorn, common buckthorn, multiflora rose, Autumn olive, Japanese barberry (*Berberis thunbergii*), garlic mustard (*Alliaria petiolata*) and honeysuckle.

Japanese knotweed, bittersweet and purple loosestrife are considered Type II Priority Invasive Plant Species by the NH Department of Transportation (NHDOT). There is no NHDOT jurisdiction within the AOI, however it should be noted that NHDOT Type II priority invasive plant species can be dispersed by seed *and* vegetative means (root and stem fragments) and thus are very easily spread by typical construction and infrastructure maintenance activities involving soil excavation, transportation and deposition. Infestations of these species are very difficult to control and nearly impossible to eradicate once established. It is therefore recommended that any proposed work areas are inspected prior to alteration so that invasive species can be avoided if possible or a management plan can be developed if invasive species cannot be avoided.

State Jurisdiction

All wetlands and any banks are jurisdictional under NH RSA 482:A and the NH Code of Administrative Rules – Chapter Env-Wt 100-900.⁵ With the exception of prime wetlands in certain communities, the NHDES does not require a buffer to freshwater wetlands, to the extent that any work in adjacent uplands does not cause indirect impacts, such as sedimentation, to areas under NHDES jurisdiction.

Shoreland Protection

There are no water bodies located within 250 feet of the AOI that are identified on the Comprehensive List of Water Bodies subject to RSA 483-B, the Shoreland Water Quality Protection Act.

⁵ The definition of bank (Env-Wt 102.15) can be difficult to apply in the field, resulting in occasional disagreement with the N.H. Department of Environmental Services over the location of the bank, and correspondingly, where state jurisdiction begins and ends. Should any project need to alter the streams at this location, I encourage you to correspond with NHDES regarding this potential issue prior to design, permitting and/or construction.

Prime Wetlands

The NHDES applies applicable rules and law to all municipally designated prime wetlands (and in certain municipalities all land within 100-feet of municipally designated prime wetlands). Prime wetlands are those wetlands with higher functions and values and receive additional protection under the law. Portsmouth has designated municipal prime wetlands which are recognized by NHDES. Portsmouth prime wetlands receive a 100-foot state buffer. The subject wetlands are not identified as prime wetlands. Refer to Figure 5 below.

Priority Resource Areas

Areas that embody bogs, sand dunes, tidal waters, tidal wetlands, undeveloped tidal buffer zone, floodplain wetlands adjacent to a tier 3 or higher watercourse, designated prime wetland or duly established prime wetland buffer zone and/or documented occurrences of protected rare species or habitat are considered Priority Resource Areas (PRA). Projects which propose impacts to jurisdictional areas that involve PRA's are elevated to major project classification for permitting review purposes, with a couple of exceptions. With the possible exception of rare species, remote sensing and direct observation confirm that there are no PRA's within the AOI. However, we have not contacted the Natural Heritage Bureau for information regarding rare species, which we presume will take place during the permitting process for any proposed project going forward.

Local Zoning

Chapter 10 of the Portsmouth Zoning Ordinance, specifically Article 10 – Environmental Protection Standards and Section 10.1010 – Wetland Protection, take jurisdiction over the following areas:

- Any inland wetland area greater than 10,000 SF in size;
- Any vernal pool regardless of size;
- Any non-tidal perennial river or stream; and,
- Any tidal wetlands.

The local zoning requires a buffer of all land within 100-feet of any jurisdictional area. Permitted uses in wetlands and the wetland buffer include any use that does not involve the erection or construction of any structure or impervious surface and will not alter the natural surface configuration by the addition of fill or dredging. Any use or activity not specifically permitted is prohibited unless authorized by the Portsmouth Planning Board pursuant to a Conditional Use Permit (CUP) application after review by the

Portsmouth Conservation Commission. Regarding CUP applications, the following specific criteria for approval apply to public and private utilities within rights-of-way in wetlands and wetland buffers:

- The proposed construction is in the public interest;
- Design, construction and maintenance methods will utilize best management practices to minimize impact and will include restoration of sites as nearly as possible to the original grade;
- No alternative feasible route exists; and
- Alteration of natural vegetation will occur only to the extent necessary.

The zoning identifies performance standards for stormwater management and vegetation management, including fertilizer and herbicide application, within local jurisdiction. The zoning requires vegetation buffers within the overall 100-foot buffer.

The above represents a brief summary of the applicable local wetland zoning and state jurisdiction. We recommend that you consult this office, the Portsmouth Planning Department or the NHDES for further guidance before proceeding with any design, permitting or construction at this location.

Please contact the undersigned with any questions regarding the above-referenced information.

Cordially, 2025 Marc Jacob

WP-MarjorieSt&PortsToyota-PortsNH-Rpt-WD-031125

Wright-Pierce Marjorie Street, Portsmouth Toyota & Chase School Area Portsmouth, NH March 11, 2025

Image 1 – Looking northeast / upstream towards Rt. 1 by-pass at the perennial stream from wetland-upland boundary flag \pm K2. Note the knotweed stalks on the right.

Image 2 – Looking southwest / downstream at the perennial stream from wetland-upland boundary flag $\pm L1$.

Image 3 – Looking westerly near wetland-upland boundary flag \pm L9. Note the numerous clumps of soft rush.

Image 4 – Looking easterly toward Rt. 1 by-pass. Note the boulder from image 1 above, ruts and standing water.

Image 5 – Looking north from wetland-upland boundary flag \pm P2 toward Rt. 1 by-pass. Note wetland-upland boundary flag N91 on right in background. Note wide rut (center) with spoils deposition in foreground.

Image 6 – Looking northwesterly at wetland 'N' from near wetland-upland boundary flag \pm N127.

Image 7 – Looking northeast / upstream towards Rt. 1 by-pass at intermittent stream from wetland-upland boundary flags \pm N1 and \pm O17. Note foreground recently brush hogged.

Image 8 – Looking southeast / downstream at perennial stream from wetland-upland boundary flag \pm S21.

Wright-Pierce Marjorie Street, Portsmouth Toyota & Chase School Area Portsmouth, NH March 11, 2025

Image 9 – Looking northwest / upstream at the perennial stream from wetland-upland boundary flag \pm S21. Note forested wetland 'S' on right.

Image 10 – Looking southwest / downstream at the intermittent stream from wetland-upland boundary flags S1 and U1. Note foreground recently brush hogged.

Image 11 – Looking at the storm water control measure on January 23, 2025. Marjorie Street is in the background.

Image 12 – Looking at the storm water control measure from Marjorie Street on November 13, 2023.

Professional Wetland / Soil Scientist jacobs2wetsoil2004@yahoo.com

VIA EMAIL to jack@doucetsurvey.com

September 21, 2020

Mr. Jack Kaiser, LLS, Vice-President Doucet Survey, Inc. 102 Kent Place Newmarket, NH 03857

Re: Marjorie Street Portsmouth, NH DSI #6483

Dear Mr. Kaiser,

The following preliminary remarks summarize observations made during site inspections at the abovereferenced location conducted on July 3 and 16, 2020 to identify and delineate wetlands. The approximate area-of-interest (AOI) is depicted below in Figure 1.

FIGURE 1

Certification Note

Jurisdictional wetlands within the AOI were delineated in July 2020 by Marc Jacobs, Certified Wetland Scientist number 090, according to the standards of the US Army Corps of Engineers - Wetlands Delineation Manual; the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region; the Code of Administrative Rules, NH Department of Environmental Services - Wetlands Bureau – Env-Wt 100-900 and Article 10 – Environmental Protection Standards of the City of Portsmouth, NH Zoning. Soils were evaluated utilizing the Field Indicators for Identifying Hydric Soils in New England, Version 4, April 2017 and the Field Indicators of Hydric Soils in the United States, Version 8, 2016. The indicator status of dominant vegetation as hydrophytic was determined according to the U.S. Army Corps of Engineers - Northcentral and Northeast 2016 Regional Wetland Plant List. Copies of any site plans which depict the delineation that have been reviewed by the wetland scientist are individually stamped, signed and dated. This note has been customized for this project.

General Methodology

Jurisdictional wetlands were identified and wetland-upland boundaries within the AOI were delineated in the field based upon on-the-ground investigations using the technical guidance above. Solid color pink survey flags were then placed at random intervals to mark wetland-upland boundaries in the field. Each flag bears a unique letter and number to assist in subsequent field location by instrument survey as well as to ascertain exact field position when referencing site plans during any future site visits. The following flag sequences were used: A1-A4, B1-B18, C1-C5, D1-D11, E1-E6, F1-F5, G1-G19 and H1-H4.

General Wetland Description

The following section generally describes wetland hydrology, vegetation and soil conditions at this location. More specific information for each wetland area is provided below, organized by wetland flag series or, where appropriate, groups of flag series that generally define a discreet wetland area.

<u>Hydrology</u>

All flags and flag series identify freshwater wetlands. Dominant wetland hydrology historically involved groundwater discharge and sheet flow from upgradient uplands to the north and west. This hydrology has been altered more recently by residential development and associated impervious surfaces which have intercepted precipitation and concentrated the resulting stormwater runoff. We note the absence of catch basins in Marjorie Street however. There is a channel that runs along the south edge of the AOI. The channel appears to be man-made by excavation and filling and confines slow moving surface waters.

No primary or secondary vernal pool indicators were observed during site investigations and, with the possible exception of wetland area 'G' below, preliminary observations suggest that the delineated wetlands do not provide breeding habitat for species customarily associated with vernal pools. However, additional investigations during the spring would be necessary to definitively conclude that no vernal pool habitat exists.

Vegetation

The dominant wetland classification according to the National Wetlands Inventory and the Cowardin system involves palustrine forested (PFO) wetlands, except as noted below. Dominant vegetation in the tree canopy includes red maple (*Acer rubrum*), a deciduous species.

Plant species which were observed in the AOI that are customarily considered invasive include multiflora rose (*Rosa multiflora*), Japanese barberry (*Berberis thunbergii*), Japanese knotweed (*Polygonum cuspidatum*), glossy buckthorn (*Frangula alnus*), common buckthorn (*Rhamnus cathartica*), honeysuckle (*Lonicera* sp.), Asian bittersweet (*Celastrus orbiculatus*), garlic mustard (*Alliaria petiolata*) and purple loosestrife (*Lythrum salicaria*).

The garlic mustard infestation is located near wet flag D7. The infestation appears to be small and might be easily controlled with early intervention. The knotweed infestation is located on the opposite bank of the stream identified by the 'A' and 'B' series wetland flags and therefore may currently be confined to abutting property. Invasive species are often easily transported and spread to other sites during earth moving and construction work.

<u>Soils</u>

Except as noted below, all wet flags generally identify man-made wetland-upland boundaries created by filling and/or excavation activities associated with prior residential and utility construction. (The fill was not deposited recently – within the last few years – but may have been placed after the wetlands law became effective in 1969. Additional investigations would be needed to establish the extent of fill or determine when the fill was placed.) Similarly, several piles of organic yard wastes were observed along the wetland-upland boundary on either side of the unimproved section of Marjorie Street and adjacent to the 'D' and 'G' wetland flag series. Some of the piles are recent and this appears to be an ongoing activity.

Predominant hydric soils involve poorly drained Scitico series (*Typic Endoaquepts*) mineral soils although significant pockets of very poorly drained Maybid series (*Typic Humaquepts*) mineral soils can also be found in some locations. Scitico and Maybid series soils are derived from marine silt and clay parent materials. We did not distinguish between wetlands with poorly drained soils versus those with very poorly drained soils in the field. The fill materials were only evaluated as needed to ascertain if they represent hydric soils and have not been thoroughly assessed or characterized otherwise.

Wetland Flag series A & B

Wetland flags series 'A' and 'B' generally identify the bank of a low-gradient stream that is the result of excavation and filling. Wet flags $A1\pm$ and $B1\pm$ start at either end of a 24-inch diameter corrugated metal pipe (CMP) with boulder retaining walls. The stream was observed to be flowing during site investigations although stream velocity was very low, almost stagnant.

Wetland Flag series C – F

Wetland flags series 'C – F' identify the toe-of-fill. Wetland flag series F represents an upland island created by fill. Wet flags E1 and D11 are located to either side of a 10-inch diameter polyvinylchloride (PVC) culvert with a flared-end section comprised of high density polyethylene (HDPE). A trickle was observed to be discharging from this culvert during site investigations. The origin of this discharge is unclear given the absence of a stormwater management system within Marjorie Street. Wetlands identified by flag series 'C – F' are hydrologically contiguous to other wetlands outside the AOI by virtue of a 15-inch diameter CMP near wet flags C5 and D1.

Wetland Flag series G

Wetland flags series 'G' identifies the toe-of-fill. Palustrine scrub-shrub wetlands with a minor emergent wetland component exist in the area between wet flags $G1-G3\pm$ and $G17-G19\pm$. Based upon our

Doucet Survey, Inc. Marjorie Street September 21, 2020

observations of physical attributes and occasional adult wood frogs (*Lithobates sylvaticus*), this area may have more potential to provide vernal pool habitat than other areas within the AOI. Wetlands identified by flag series 'G' extend outside the AOI that was investigated so it is unclear if there are other upgradient wetlands that drain to these wetlands but remote sensing suggests that wetland 'G' does not appear to be hydrologically contiguous to other wetlands outside the AOI (or the stream identified by wetland flag series 'A' and 'B') and therefore may be isolated. It appears however that the area easily exceeds 10,000 square feet (SF) in size and as a result is jurisdictional pursuant to local zoning.

Wetland Flag series H

Wetland flag series H identifies a geographically isolated wetland created by filling. The area is very sparsely vegetated. The soils were saturated during site investigations but no flooding or ponding was observed and evidence suggests that the area infrequently ponds or ponds for very short durations such that the area is incapable of providing viable vernal pool habitat. We do not have an exact calculation regarding the surface area of this wetland but it would appear that the area is too small to be jurisdictional under Portsmouth zoning.

State Jurisdiction

All wetlands and any banks are jurisdictional under NH RSA 482:A and the NH Code of Administrative Rules – Chapter Env-Wt 100-900. With the exception of prime wetlands in certain communities, the NHDES does not require a buffer to freshwater wetlands, to the extent that any work in adjacent uplands does not cause indirect impacts, such as sedimentation, to areas under NHDES jurisdiction.

Shoreland Protection

There are no water bodies identified on the Comprehensive List of Water Bodies subject to RSA 483-B, the Shoreland Water Quality Protection Act, which are located within 250 feet of the AOI.

Prime Wetlands

The NHDES applies applicable rules and law to all municipally designated prime wetlands (and in certain municipalities all land within 100-feet of municipally designated prime wetlands). Prime wetlands are those wetlands with higher functions and values and receive additional protection under the law. Portsmouth has designated municipal prime wetlands which are recognized by NHDES. The subject wetlands are not identified as prime wetlands. Portsmouth prime wetlands receive a 100-foot state buffer. Refer to Figure 2 below.

Priority Resource Areas

Areas that embody bogs, sand dunes, tidal waters, tidal wetlands, undeveloped tidal buffer zone, floodplain wetlands adjacent to a tier 3 or higher watercourse, designated prime wetland or duly established prime wetland buffer zone and/or documented occurrences of protected rare species or habitat are considered Priority Resource Areas (PRA). Projects which propose impacts to jurisdictional areas that involve PRA's are elevated to major project classification for permitting review purposes, with a couple of exceptions. With the possible exception of rare species, remote sensing and direct observation confirm that there are no PRA's within the AOI. We have not contacted the Natural Heritage Bureau for information regarding rare species, which we presume will take place during the permitting process for any proposed project going forward.

Local Zoning

Chapter 10 of the Portsmouth Zoning Ordinance, specifically Article 10 – Environmental Protection Standards and Section 10.1010 – Wetland Protection, take jurisdiction over the following areas:

- Any inland wetland area greater than 10,000 SF in size;
- Any vernal pool regardless of size;
- Any non-tidal perennial river or stream; and,
- Any tidal wetlands.

The local zoning requires a buffer of all land within 100–feet of any jurisdictional area. Permitted uses in wetlands and the wetland buffer include any use that does not involve the erection or construction of any structure or impervious surface and will not alter the natural surface configuration by the addition of fill or dredging. Any use or activity not specifically permitted is prohibited unless authorized by the Portsmouth Planning Board by Conditional Use Permit (CUP) after review by the Portsmouth Conservation Commission. Regarding CUP applications, the following specific criteria for approval apply to public and private utilities within rights-of-way in wetlands and wetland buffers:

- The proposed construction is in the public interest;
- Design, construction and maintenance methods will utilize best management practices to minimize impact and will include restoration of sites as nearly as possible to the original grade;
- No alternative feasible route exists; and
- Alteration of natural vegetation will occur only to the extent necessary.

The zoning identifies performance standards for stormwater management and vegetation management, including fertilizer and herbicide application, within local jurisdiction. The zoning requires vegetation buffers within the overall 100-foot buffer.

The above represents a brief summary of the applicable local wetland zoning and state jurisdiction. We recommend that you consult this office, the Portsmouth Planning Department or the NHDES for further guidance before proceeding with any design, permitting or construction at this location.

which any questions regarding the above-referenced information. Please contact th MARC Cordially DSI-MarjorieSt-Ports 5