Findings of Fact | Wetland Conditional Use Permit
City of Portsmouth Planning Board

Date: July 20, 2023
Property Address: 325 Little Harbor Road
Application #: LU-23-81
Decision: □ Approve □ Deny □ Approve with Conditions

Findings of Fact:

Effective August 23, 2022, amended RSA 676:3, I now reads as follows: The local land use board shall issue a final written decision which either approves or disapproves an application for a local permit and make a copy of the decision available to the applicant. **The decision shall include specific written findings of fact that support the decision. Failure of the board to make specific written findings of fact supporting a disapproval shall be grounds for automatic reversal and remand by the superior court upon appeal, in accordance with the time periods set forth in RSA 677:5 or RSA 677:15, unless the court determines that there are other factors warranting the disapproval.** If the application is not approved, the board shall provide the applicant with written reasons for the disapproval. If the application is approved with conditions, the board shall include in the written decision a detailed description of the all conditions necessary to obtain final approval.

In order to grant Wetland Conditional Use permit approval the Planning Board shall find the application satisfies criteria set forth in the Section 10.1017.50 (Criteria for Approval) of the Zoning Ordinance.

	Zoning Ordinance Sector 10.1017.50 Criteria for Approval	**Finding** **(Meets Criteria for Approval)**	**Supporting Information**
1	*1. The land is reasonably suited to the use activity or alteration.*	**Meets** **Does Not Meet**	The proposed site has an existing bridge connecting the mainland to Lady Isle, where a safe method of transport is needed to get residents, contractors, guests, etc. to the property and back from the mainland. The proposed project would construct a new bridge spanning a tidal water way connecting the island to the mainland with a higher elevation to increase resiliency to sea level rise, a lifespan of approximately 75 years, and an increased passage size to allow for improved tidal flow over what currently exists.
2	*2. There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration.*	**Meets** **Does Not Meet**	The existing and proposed bridge are within the City tidal wetlands and tidal buffer zone as well as State tidal wetlands and tidal buffer zone. To provide access to the Island any reconstruction, rehab work or new construction of the bridge must occur in these wetland and buffer areas.

	Zoning Ordinance Sector 10.1017.50 Criteria for Approval	Finding (Meets Criteria for Approval)	Supporting Information
3	*3. There will be no adverse impact on the wetland functional values of the site or surrounding properties.*	**Meets** **Does Not Meet**	The applicant has performed a study of the habitat underneath the current bridge and has deemed it not highly valuable. Surrounding impacts to salt marsh and Marsh Elder (Iva frutescens) habitats will be minimized through the introduction of new plantings of salt marsh habitat (both low and high marsh) and replanting of existing Marsh Elder (Iva frutescens) in a more protected area.
4	*4. Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals.*	**Meets** **Does Not Meet**	This proposal will require regrading and filling the current private drive to increase the height of the road and proposed bridge. Additionally, the new location of the bridge will impact areas of existing vegetation. All impacted vegetation will be remediated through a restoration plan of new plantings on site.
5	*5. The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this section.*	**Meets** **Does Not Meet**	Given the nature of the project, replacing the bridge in its current location would continue to cause scouring of the channel under the bridge and would impact the function of the waterway. Placement of the bridge further east would cause unwanted impacts to well-established salt marsh. The proposed placement on the west side of the existing bridge shows the least adverse impacts to the tidal waterway and salt marsh.
6	*6. Any area within the vegetated buffer strip will be returned to a natural state to the extent feasible.*	**Meets** **Does Not Meet**	Applicant is proposing planting low and high marsh areas along the shoreline along with native buffer species between the shoreline/marsh and the road.
7	**<u>Other Board Findings:</u>**		

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

June 28th, 2023

City of Portsmouth Planning Board
1 Junkins Ave, 3rd Floor
Portsmouth, NH 03801

Re: Wetland Conditional Use Permit – 325 Little Harbor Road, Portsmouth – Tax Map: 205, Lot: 2 & Tax Map: 204, Lot: 5

To the Portsmouth Planning Board:

Attached herein is a complete set of plans, documents, and exhibits to support the *Wetland Conditional Use Permit* for the bridge replacement and tidal area restoration project located at the above referenced property. This project proposes to replace the existing bridge with a new timber bridge on wooden piles, remove the existing causeways, construct new bridge approaches, and connect the subject property to municipal utilities. Additionally, this project proposes to restore the *Upland Tidal Buffer Zone* with native plantings and restore salt marsh areas that are currently occupied by the causeways.

This project meets all criteria specified under Article 10, Section 10.1010, Rule 10.1017.50 of the Zoning Ordinance, specifically the following:

(1) **The land is reasonably suited to the use**. A bridge already exists on-site, and the proposed timber bridge will be located within the existing footprint.
(2) **There is no alternative location outside the wetland buffer that is feasible for the use**. The bridge must cross the wetland buffer in order to connect the subject property to the mainland.
(3) **There will be no adverse impact on the wetland functional values**. A *Coastal Functional Assessment (CFA)* was completed, and it was utilized to ensure the functions and values of the wetland on-site will not be impacted.
(4) **Alteration of the natural vegetative state will occur only to the extent necessary to achieve construction goals**.
(5) **This proposal is the alternative with the least adverse impact to jurisdictional areas**. It will utilize an existing footprint and will implement avoidance and minimization measures as described in this permit application.
(6) **Any area within the vegetated buffer strip will be returned to a natural state**. The upland tidal buffer zone and salt marsh areas will be stabilized and restored.

This *Wetland Conditional Use Permit* application contains an updated version of the *Upland Tidal Buffer Zone Restoration Plan*, now titled the *Proposed Mitigation Planting Plan*. This plan is the only aspect of this permit application that has changed since the Conservation Commission meeting. We will discuss the updates to this plan in depth during the upcoming Planning Board meeting. Should you have any questions or concerns regarding this permit application, please do not hesitate to contact me at 603-431-2222, anytime from 8:00 AM to 5:00 PM.

Sincerely,
TFMoran, Inc.

Kyra Higgins

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran, Inc. Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

Project # 47099.01

NH Wetlands Bureau

Standard Dredge & Fill Wetlands Permit Application

for

ADL 325 Little Harbor Road Trust

Replace an Existing Residential Bridge with a New Bridge and Tidal Area Restoration Project

325 Little Harbor Road, Lady Isle, Portsmouth, NH

Rockingham County

May 24, 2023

TFMoran, Inc.

170 Commerce Way – Suite 102
Portsmouth, NH 03801
(603) 431-2222

TABLE OF CONTENTS

SECTION 1

NHDES-W-06-012

STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

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

APPLICANT'S NAME: ADL 325 Little Harbor Road Trust TOWN NAME: Portsmouth

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

A person may request a waiver of the requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interest of the public or the environment but is still in compliance with RSA 482-A. A person may also request a waiver of the standards for existing dwellings over water pursuant to RSA 482-A:26, III(b). For more information, please consult the Waiver Request Form.

SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))

Please use the Wetland Permit Planning Tool (WPPT), the Natural Heritage Bureau (NHB) DataCheck Tool, the Aquatic Restoration Mapper, or other sources to assist in identifying key features such as: priority resource areas (PRAs), protected species or habitats, coastal areas, designated rivers, or designated prime wetlands.

Has the required planning been completed?	☒ Yes ☐ No
Does the property contain a PRA? If yes, provide the following information:	☒ Yes ☐ No
• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04.	☐ Yes ☒ No
• Protected species or habitat? ○ If yes, species or habitat name(s): Marsh elder, Eel grass beds, Atlantic Sturgeon, Shortnose Sturgeon ○ NHB Project ID #: NHB23-0723	☒ Yes ☐ No
• Bog?	☐ Yes ☒ No
• Floodplain wetland contiguous to a tier 3 or higher watercourse?	☐ Yes ☒ No
• Designated prime wetland or duly-established 100-foot buffer?	☒ Yes ☐ No
• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	☒ Yes ☐ No
Is the property within a Designated River corridor? If yes, provide the following information: • Name of Local River Management Advisory Committee (LAC): N/A	☐ Yes ☒ No

• A copy of the application was sent to the LAC on Month: Day: Year:	
For dredging projects, is the subject property contaminated? • If yes, list contaminant: N/A	☐ Yes ☒ No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	☐ Yes ☒ No
For stream crossing projects, provide watershed size (see WPPT or Stream Stats): N/A	

SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))

Provide a **brief** description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.

Permanently impact 36,342 SF of Tidal Waters, 3,443 SF of Tidal Marsh and 26,298 SF of the Developed Upland Tidal Buffer Zone for the purpose replacing an existing failing bridge with a new bridge on wooden piles that spans the tidal resource area. The existing causeways within public waters will be removed, salt marsh area will be restored, and the developed upland buffer will be enhanced with native vegetation. This project also proposes to connect Lady Isle to municipal utilities.

SECTION 3 - PROJECT LOCATION

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

ADDRESS: 325 Little Harbor Road

TOWN/CITY: Portsmouth, NH

TAX MAP/BLOCK/LOT/UNIT: Tax Map: 205, Lot: 2 & Tax Map 204, Lot: 5

US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Piscataqua River
☐ N/A

(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): 43.065188° North

		70.745992° West
SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a)) If the applicant is a trust or a company, then complete with the trust or company information.		
NAME: ADL 325 Little Harbor Road Trust		
MAILING ADDRESS: C/o Stephen H. Roberts, ESQ, 127 Parrott Ave		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: sroberts@hpgrlaw.com		
FAX:	PHONE: private	
ELECTRONIC COMMUNICATION: By initialing here: , I hereby authorize NHDES to communicate all matters relative to this application electronically.		
SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c)) ☐ N/A		
LAST NAME, FIRST NAME, M.I.: Aube, Jason, R.		
COMPANY NAME: TFMoran, Inc.		
MAILING ADDRESS: 170 Commerce Way, Suite 102		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: jaube@tfmoran.com		
FAX:	PHONE: 603-431-2222	
ELECTRONIC COMMUNICATION: By initialing here JRA, I hereby authorize NHDES to communicate all matters relative to this application electronically.		
SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b)) If the owner is a trust or a company, then complete with the trust or company information. ☒ Same as applicant		
NAME:		
MAILING ADDRESS:		
TOWN/CITY:	STATE:	ZIP CODE:
EMAIL ADDRESS:		
FAX:	PHONE:	
ELECTRONIC COMMUNICATION: By initialing here , I hereby authorize NHDES to communicate all matters relative to this application electronically.		

SECTION 7 - RESOURCE-SPECIFIC CRITERIA ESTABLISHED IN Env-Wt 400, Env-Wt 500, Env-Wt 600, Env-Wt 700, OR Env-Wt 900 HAVE BEEN MET (Env-Wt 313.01(a)(3))

Describe how the resource-specific criteria have been met for each chapter listed above (please attach information about stream crossings, coastal resources, prime wetlands, or non-tidal wetlands and surface waters):
Please see attached supplemental information entitled, "SECTION 7 - Resource Specific Criteria."

SECTION 8 - AVOIDANCE AND MINIMIZATION

Impacts within wetland jurisdiction must be avoided to the maximum extent practicable (Env-Wt 313.03(a)).* Any project with unavoidable jurisdictional impacts must then be minimized as described in the Wetlands Best Management Practice Techniques For Avoidance and Minimization and the Wetlands Permitting: Avoidance, Minimization and Mitigation Fact Sheet. For minor or major projects, a functional assessment of all wetlands on the project site is required (Env-Wt 311.03(b)(10)).*

Please refer to the application checklist to ensure you have attached all documents related to avoidance and minimization, as well as functional assessment (where applicable). Use the Avoidance and Minimization Checklist, the Avoidance and Minimization Narrative, or your own avoidance and minimization narrative.

**See Env-Wt 311.03(b)(6) and Env-Wt 311.03(b)(10) for shoreline structure exemptions.*

SECTION 9 - MITIGATION REQUIREMENT (Env-Wt 311.02)

If unavoidable jurisdictional impacts require mitigation, a mitigation pre-application meeting must occur at least 30 days but not more than 90 days prior to submitting this Standard Dredge and Fill Permit Application.

Mitigation Pre-Application Meeting Date: Month: 01 Day: 17 Year: 2023

(☒ N/A - Mitigation is not required)

SECTION 10 - THE PROJECT MEETS COMPENSATORY MITIGATION REQUIREMENTS (Env-Wt 313.01(a)(1)c)

Confirm that you have submitted a compensatory mitigation proposal that meets the requirements of Env-Wt 800 for all permanent unavoidable impacts that will remain after avoidance and minimization techniques have been exercised to the maximum extent practicable: ☐ I confirm submittal.

(☒ N/A – Compensatory mitigation is not required)

SECTION 11 - IMPACT AREA (Env-Wt 311.04(g))

For each jurisdictional area that will be/has been impacted, provide square feet (SF) and, if applicable, linear feet (LF) of impact, and note whether the impact is after-the-fact (ATF; i.e., work was started or completed without a permit).

For intermittent and ephemeral streams, the linear footage of impact is measured along the thread of the channel. *Please note, installation of a stream crossing in an ephemeral stream may be undertaken without a permit per Rule Env-Wt 309.02(d), however other dredge or fill impacts should be included below.*

For perennial streams/rivers, the linear footage of impact is calculated by summing the lengths of disturbances to the channel and banks.

Permanent impacts are impacts that will remain after the project is complete (e.g., changes in grade or surface materials).

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

JURISDICTIONAL AREA		PERMANENT			TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
Wetlands	Forested Wetland			☐			☐
	Scrub-shrub Wetland			☐			☐
	Emergent Wetland			☐			☐
	Wet Meadow			☐			☐
	Vernal Pool			☐			☐
	Designated Prime Wetland			☐			☐
	Duly-established 100-foot Prime Wetland Buffer			☐			☐
Surface Water	Intermittent / Ephemeral Stream			☐			☐
	Perennial Stream or River			☐			☐
	Lake / Pond			☐			☐
	Docking - Lake / Pond			☐			☐
	Docking - River			☐			☐
Banks	Bank - Intermittent Stream			☐			☐
	Bank - Perennial Stream / River			☐			☐
	Bank / Shoreline - Lake / Pond			☐			☐
Tidal	Tidal Waters	36,342		☐			☐
	Tidal Marsh	3,443		☐			☐
	Sand Dune			☐			☐
	Undeveloped Tidal Buffer Zone (TBZ)			☐			☐
	Previously-developed TBZ	26,298		☐			☐
	Docking - Tidal Water			☐			☒
TOTAL		66,083					

SECTION 12 - APPLICATION FEE (RSA 482-A:3, I)

☐ **MINIMUM IMPACT FEE**: Flat fee of $400.

☐ **NON-ENFORCEMENT RELATED, PUBLICLY-FUNDED AND SUPERVISED RESTORATION PROJECTS, REGARDLESS OF IMPACT CLASSIFICATION:** Flat fee of $400 (refer to RSA 482-A:3, 1(c) for restrictions).

☒ **MINOR OR MAJOR IMPACT FEE:** Calculate using the table below:

Permanent and temporary (non-docking):	66,083 SF	× $0.40 =	$	26,433.20
Seasonal docking structure:	SF	× $2.00 =	$	
Permanent docking structure:	SF	× $4.00 =	$	
Projects proposing shoreline structures (including docks) add $400 =			$	
Total =			$	26,433.20
The application fee for minor or major impact is the above calculated total or $400, whichever is greater =			$	26,433.20

SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)

Indicate the project classification.

☐ Minimum Impact Project	☐ Minor Project	☒ Major Project

SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)

Initial each box below to certify:

Initials: JA SR	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials: JA SR	The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.
Initials: JA SR	The signer understands that: • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: 1. Deny the application. 2. Revoke any approval that is granted based on the information. 3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1. • The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641. • The signature shall constitute authorization for the municipal conservation commission and the Department to inspect the site of the proposed project, except for minimum impact forestry SPN projects and minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.
Initials: JA SR	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

SECTION 15 - REQUIRED SIGNATURES (Env-Wt 311.04(d); Env-Wt 311.11)

SIGNATURE (OWNER): DocuSigned by: Stephen Roberts DBDEC8C78D724FE	PRINT NAME LEGIBLY: Stephen H. Roberts	DATE: 5/23/23
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE): Jason Aube	PRINT NAME LEGIBLY: Jason Aube of TFMoran, Inc.	DATE: 5/19/2023

SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))

As required by RSA 482-A:3, I(a)(1), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

TOWN/CITY CLERK SIGNATURE:	PRINT NAME LEGIBLY:
TOWN/CITY:	DATE:

DIRECTIONS FOR TOWN/CITY CLERK:
Per RSA 482-A:3, I(a)(1)

1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
2. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
3. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board.
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:
Submit the original permit application form bearing the signature of the Town/City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery at the address at the bottom of this page. Make check or money order payable to “Treasurer – State of NH”.

Keep this checklist for your reference; do not submit with your application.

APPLICATION CHECKLIST

Unless specified, all items below are required. Failure to provide the required items will delay a decision on your project and may result in denial of your application. Please reference statute RSA 482-A, Fill and Dredge in Wetlands, and the Wetland Rules Env-Wt 100-900.

- ☐ The completed, dated, signed, and certified application (Env-Wt 311.03(b)(1)).
- ☐ Correct fee as determined in RSA 482-A:3, I(b) or (c), subject to any cap established by RSA 482-A:3, X (Env-Wt 311.03(b)(2)). Make check or money order payable to "Treasurer – State of NH".
- ☐ The Required Planning actions required by Env-Wt 311.01(a)-(c) and Env-Wt 311.03(b)(3).
- ☐ US Army Corps of Engineers (ACE) "Appendix B, New Hampshire General Permits (GPs), Required Information and Corps Secondary Impacts Checklist" and its required attachments (Env-Wt 307.02). This includes the US Fish and Wildlife Service IPAC review and Section 106 Historic/Archaeological Resource review.
- ☐ Project plans described in Env-Wt 311.05 (Env-Wt 311.03(b)(4)).
- ☐ Maps, or electronic shape files and meta data, and other attachments specified in Env-Wt 311.06 (Env-Wt 311.03(b)(5)).
- ☐ Explanation of the methods, timing, and manner as to how the project will meet standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7)).
- ☐ If applicable, the information regarding proposed compensatory mitigation specified in Env-Wt 311.08 and Chapter Env-Wt 800 - Permittee Responsible Mitigation Project Worksheet, unless not required under Env-Wt 313.04 (Env-Wt 311.03(b)(8); Env-Wt 311.08; Env-Wt 313.04).
- ☐ Any additional information specific to the **type of resource** as specified in Env-Wt 311.09 (Env-Wt 311.03(b)(9); Env-Wt 311.04(j)).
- ☐ Project specific information required by Env-Wt 500, Env-Wt 600, and Env-Wt 900 (Env-Wt 311.03(b)(11)).
- ☐ A list containing the name, mailing address and tax map/lot number of each abutter to the subject property (Env-Wt 311.03(b)(12)).
- ☐ Copies of certified postal receipts or other proof of receipt of the notices that are required by RSA 482-A:3, I(d) (Env-Wt 311.03(b)(13)).
- ☐ Project design considerations required by Env-Wt 313 (Env-Wt 311.04(j)).
- ☐ Town tax map showing the subject property, the location of the project on the property, and the location of properties of abutters with each lot labeled with the name and mailing address of the abutter (Env-Wt 311.06(a)).
- ☐ Dated and labeled color photographs that:
  - (1) Clearly depict:
    - a. All jurisdictional areas, including but not limited to portions of wetland, shoreline, or surface water where impacts have or are proposed to occur.
    - b. All existing shoreline structures.
  - (2) Are mounted or printed no more than 2 per sheet on 8.5 x 11 inch sheets (Env-Wt 311.06(b)).
- ☐ A copy of the appropriate US Geological Survey map or updated data based on LiDAR at a scale of one inch equals 2,000 feet showing the location of the subject property and proposed project (Env-Wt 311.06(c)).
- ☐ A narrative that describes the work sequence, including pre-construction through post-construction, and the relative timing and progression of all work (Env-Wt 311.06(d)).

- ☐ For all projects in the protected tidal zone, a copy of the recorded deed with book and page numbers for the property (Env-Wt 311.06(e)).
- ☐ If the applicant is not the owner in fee of the subject property, documentation of the applicant's legal interest in the subject property, provided that for utility projects in a utility corridor, such documentation may comprise a list that:
  - (1) Identifies the county registry of deeds and book and page numbers of all of the easements or other recorded instruments that provide the necessary legal interest; and
  - (2) Has been certified as complete and accurate by a knowledgeable representative of the applicant (Env-Wt 311.06(f)).
- ☐ The NHB memo containing the NHB identification number and results as well as any written follow-up communications such as additional memos or email communications with either NHB or NHF&G (Env-Wt 311.06(g)). See Wetlands Permitting: Protected Species and Habitat Fact Sheet.
- ☐ A statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments (Env-Wt 311.06(h)).
- ☐ For projects in LAC jurisdiction, a statement of whether the applicant has received comments from the LAC and, if so, how the applicant has addressed the comments (Env-Wt 311.06(i)).
- ☐ If the applicant is also seeking to be covered by the state general permits, a statement of whether comments have been received from any federal agency and, if so, how the applicant has addressed the comments (Env-Wt 311.06(j)).
- ☐ Avoidance and Minimization Written Narrative or the Avoidance and Minimization Checklist, or your own avoidance and minimization narrative (Env-Wt 311.07).
- ☐ For after-the-fact applications: information required by Env-Wt 311.12.
- ☐ Coastal Resource Worksheet for coastal projects as required under Env-Wt 600.
- ☐ Prime Wetlands information required under Env-Wt 700. See WPPT for prime wetland mapping.

Required Attachments for Minor and Major Projects

- ☐ Attachment A: Minor and Major Projects (Env-Wt 313.03).
- ☐ Functional Assessment Worksheet or others means of documenting the results of actions required by Env-Wt 311.10 as part of an application preparation for a standard permit (Env-Wt 311.03(b)(3); Env-Wt 311.03(b)(10)). See Functional Assessments for Wetlands and Other Aquatic Resources Fact Sheet. For shoreline structures, see shoreline structures exemption in Env-Wt 311.03(b)(10)).

Optional Materials

- ☐ Stream Crossing Worksheet which summarizes the requirements for stream crossings under Env-Wt 900.
- ☐ Request for concurrent processing of related shoreland / wetlands permit applications (Env-Wt 313.05).

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NHDES Wetlands Permit Application

SECTION 7 – Resource Specific Criteria

Env-Wt 300 – Permits and Other Authorizations – Conditions Applicable to All Work in Jurisdictional Areas

Env-Wt 307.07 – All project activities will be conducted in compliance with the applicable requirements of RSA 483-B and Env-Wq 1400 during and after construction. A NHDES Shoreland Permit Application will be submitted to demonstrate this project meets the minimum standards of RSA 483-B:9, V.

Env-Wt 307.11 – Permanent fill associated with removing the existing causeways and restoring the areas of saltmarsh within the vicinity of the project will consist of clean materials and will not exceed the limits specified in the design plans. Additionally, filled areas will not direct flows onto adjacent or downstream properties, and will not impact the restoration of wetlands and surface waters post-construction. This project will result in significant decreases in the velocity of the ebb and flow of the tide within the project area.

Env-Wt 307.13(d) – This project proposes impacts within 10-feet of an adjacent property, and we have obtained consent of the affected abutter to such impacts – see the attached "Abutter's Consent Letter."

Env-Wt 311.05 (a)(5) – The names and professional license numbers of each individual responsible for the design plan can be found on the design plan.

Env-Wt 311.05 (a)(13) – The location(s) of all jurisdictional areas delineated can be found within the design plan and on the Wetlands Classification Plan.

Env-Wt 311.05 (a)(14) – The name and professional license number of the individual responsible for the delineation of jurisdictional areas can be found on the design plan.

Env-Wt 311.05 (b) – The design plan associated with the Wetland Permit Application is accompanied by an Existing Conditions Plan that has been prepared and stamped by a Certified Wetlands Scientist.

Env-Wt 311.05 (b)(5) – The dates, means and methods of all delineation(s) can be found in the "Coastal Functional Assessment" located within Section-2 of the permit application and within the notes on the Existing Conditions Plan.

Env-Wt 313.03(c)(3) – This project does not involve the construction or modification of a non-tidal shoreline structure. In addition, it proposes no adverse impacts to abutting properties and the ability of abutters to use and enjoy their properties – we have notified all Abutters of both permanent and temporary impacts via certified mail.

TFMoran, Inc.
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T(603) 472-4488 www.tfmoran.com

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170 Commerce Way–Suite 102, Portsmouth, NH 03801
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Env-Wt 400 – Delineating, Classifying Jurisdictional Areas and Project Classification

This project is located within a portion of *Tidal Waters, Tidal Wetlands,* and the *Upland Tidal Buffer Zone* of the back channel of the Piscataqua River. The *Highest Observable Tide Line (HOTL)* was delineated, and it is depicted on the design plans attached to this permit application. Neighboring freshwater wetlands and salt marsh areas are depicted on the plans as well. Due to the proposed impacts within Tidal Waters and Wetlands, which are both *Priority Resource Areas (PRAs)*, this project is classified as a *Major Impact Project*.

Env-Wt 500 – Project Specific Requirements

This project is located in a coastal area and therefore, these rules are not applicable to this project.

Env-Wt 600 – Project Specific Requirements – Coastal Lands and Tidal Waters/ Wetlands

Env-Wt 603.02 (a) – This project proposes to impact *Tidal Waters*, *Tidal Wetlands,* and the *Previously Developed Upland Tidal Buffer Zone* for the purpose of replacing an existing outdated bridge with a new bridge that spans the resource, creating new bridge approaches, and removing existing causeways to restore natural tidal flows and facilitate the passage of aquatic organisms. New connections to municipal utilities will be installed and salt marsh area and the developed upland will be restored with native vegetation.

Env-Wt 603.02 (b) – The natural resource assets proposed to be impacted by this project are the Tidal Waters, Tidal Wetlands, and the Previously Developed Upland Tidal Buffer Zone. On-site observations and the NHDES Wetlands Permit Planning Tool (WPPT) were used to determine the presence of these natural resource assets. Supplemental screening maps using NH GRANIT GIS data layers are included with this permit application.

Env- Wt 603.02 (c)(1) – The "Coastal Functional Assessment (CFA)" is attached to this permit application. In accordance with Env-Wt 602.07, the Coastal Functional Assessment is an evaluation of the jurisdictional coastal natural resource area proposed to be impacted by this project. This project proposes to impact the Estuarine Tidal Wetland on site. In addition to the functional assessment, an "Ecological Integrity Assessment" was completed for this resource. Addition functional assessments accompany the Prime Wetland Waiver Request.

Env- Wt 603.02 (c)(2) – A "Coastal Vulnerability Assessment" is attached to this permit application.

Env- Wt 603.02 (d) – The "Avoidance and Minimization Written Narrative" has been included with this permit application.

Env- Wt 603.02 (e)(1) – This project meets all relevant standard conditions of Env-Wt 307. This is demonstrated within the "Standard Conditions Narrative" located within Section-1 of the "Coastal Resource Worksheet."

Env- Wt 603.02 (e)(2) – This project meets all approval criteria under Env-Wt 313.01, and this is demonstrated within the "Approval Criteria Narrative" located within Section-1 of the "Coastal Resource Worksheet."

Env- Wt 603.02 (f)(1) – As required by Env-Wt 603.06, the "Project Design Narrative" is provided within Section-1 of the "Coastal Resource Worksheet."

Env- Wt 603.02 (f)(2) – The design plans associated with this project meet all the requirements of Env-Wt 603.07.

Env- Wt 603.02 (f)(3) – The *Water Depth Supporting Information* is depicted on the design plans and the Vulnerability Assessment plans.

Env-Wt 603.02 (f)(4) – A statement from the *Pease Development Authority Division of Ports and Harbors ("DP&H") Chief Harbormaster* relative to how the proposed structures will not become navigational hazards is attached to this permit application. A statement from the U.S. Coast Guard is included as well.

Env-Wt 603.03 (a)(1) – The data screening was determined using the NHDES Wetlands Permit Planning Tool (WPPT) and GIS data layers available at NH GRANIT. GIS screening maps are included with this permit application.

Env-Wt 603.03 (a)(2) – No impacts are proposed to shellfish sites, eelgrass beds, or sand dunes. A few small fringe saltmarsh areas exist within the vicinity of the project site but, although some impacts are proposed to this area, as a result of the proposed salt marsh restoration efforts, this project will result in no net loss of salt marsh area.

Env-Wt 603.03 (a)(3) – We have coordinated with the *National Oceanic Atmospheric Administration* (*NOAA*) *Marine Fisheries* and concluded that this project is not likely to adversely affect (NLAA) any species listed as threatened or endangered by the National Marine Fisheries Service (NMFS) under the Endangered Species Act (ESA) of 1973, as amended. The "EFH Mapper Report" has been included with this permit application. Natural tidal flows and currents will not be impacted.

Env-Wt 603.03 (a)(4) – On-site assessments were conducted on March 24th and confirmed the proposed impacts will occur within the *Tidal Waters*, *Wetlands*, and the *Previously Developed Upland Tidal Buffer Zone* on site.

Env-Wt 603.03 (a)(5) – The projected sea level rise and location relative to the 100-Year Floodplain Map is depicted on the design plans as well as within the Coastal Vulnerability Assessment.

Env-Wt 603.04 – The "Coastal Functional Assessment (CFA)" is attached to this permit application form. In accordance with Env-Wt 602.07, the Coastal Functional Assessment is an evaluation of the jurisdictional coastal natural resource area proposed to be impacted by this project. This project proposes to impact the Estuarine Tidal Wetland on site. In addition to the functional assessment, an "Ecological Integrity Assessment" was completed for this resource.

Env-Wt 603.05 – The "Coastal Vulnerability Assessment" is attached to this permit application form.

Env-Wt 603.06 (a) –The "Project Design Narrative" is provided within Section-1 of the "Coastal Resource Worksheet."

Env-Wt 603.06 (b) – The proposed erosion/ siltation control methods are specified on the design plans as well as within the attached "Work Sequence Narrative."

Env-Wt 603.06 (c) – Once the project is completed, and the site is deemed stable, the erosion controls will be removed. In addition, the saltmarsh areas in the vicinity of the project site will be restored with native plantings and topsoil additions (in areas with insufficient topsoil to support native plantings). The native plantings will be monitored to ensure successful establishment and growth.

Env-Wt 603.07 – The attached design plans meet all the criteria relative to this design plan rule.

Env-Wt 603.08 – The *Water Depth Supporting Information* is depicted on the design plans and within the Vulnerability Assessment plans.

Env-Wt 603.09 – A statement regarding navigation and passage from the *Pease Development Authority Division of Ports and Harbors ("DP&H") Chief Harbormaster* has been attached to this permit application. This project proposes no adverse impacts to navigation and passage.

Env-Wt 604.01 – This project proposes no impacts to *Tidal Beaches* or sand dunes. It will impact a portion of *Tidal Shoreline* – but it meets all of the General Criteria for Tidal Shorelines and has been evaluated for the standard conditions in Env-Wt 307, the avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03, the approval criteria in Env-Wt 313.01, the evaluation criteria in Env-Wt 313.05, and the project specific criteria in Env-Wt 600. This permit application also contains the Coastal Functional Assessment (CFA) required by Env-Wt 603.04 and the Vulnerability Assessment required by Env-Wt 603.05.

Env-Wt 604.02 - This project meets all of the General Criteria for *Tidal Buffer Zones* and has been evaluated for the standard conditions in Env-Wt 307, the Avoidance and Minimization Requirements in Env 311.07 and Env-Wt 313.03, the approval criteria in Env-Wt 313.01, the evaluation criteria in Env-Wt 313.05, the project specific criteria in Env-Wt 600, the Coastal Functional Assessment (CFA) required by Env-Wt 603.04, and the Vulnerability Assessment required by Env-Wt 603.05.

Env-Wt 604.03 – This project meets all criteria of Env-Wt 604.03. Permanent impacts are proposed to tidal waters and wetlands, but they are proposed for the purpose of public safety. The existing bridge is old, outdated, and in need of replacement. This project will replace this bridge with an updated and more structurally sound bridge that will better accommodate tidal flows and currents. Further, the impacts of this project have been evaluated for the standard conditions in Env-Wt 307, the avoidance and minimization requirements in Env-Wt 311.07 and 313.03, the approval criteria in Env-Wt 313.01, the evaluation criteria in Env-Wt 313.05, and the project specific criteria in Env-Wt 600. This permit application includes the Coastal Functional Assessment (CFA) required by Env-Wt 603.04 and the Vulnerability Assessment required by Env-Wt 603.05. Lastly, this project will optimize the natural function of the wetland, including restoration of habitat, water quality, and stability to storm surge.

Env-Wt 605.01 – This project will not impact finfish, shellfish, crustacea or wildlife. No groundwater or surface water will be impacted, and no impacts will cause erosion on adjacent shoreline properties. The

project will have no adverse impact on navigation, recreation, or commerce of the general-public and will not impact prevailing tidal flows or currents.

Env-Wt 605.02 – This project proposes no adverse impacts to beach or tidal flat sediment replenishment, movement of sediments along the shore, dissipation of wave energy and storm surge, runoff, or salinity levels. This project will result in the natural distribution of sediments over an area that has unnaturally been scoured away from accelerated tidal flows caused by a tidal restriction.

Env-Wt 605.03 – Compensatory mitigation is not required for this project. This project does propose permanent impacts to tidal waters and wetlands, but it also consists of removing two tidal restrictions (the existing causeways). As a result, hydraulic capacity will be increased, and the passage of aquatic organisms will be better facilitated. In addition, natural tidal flows will be restored, and over time, the original geomorphology of the wetlands on site will be restored. Further, this project does not propose a new bridge, but rather the replacement of an existing bridge.

Env-Wt 610.03 – The applicant has considered the standards described in FEMA P-55, Coastal Construction Manual: Principles and Practices of Planning, Siting, Designing, Constructing, and Maintaining Residential Buildings in Coastal Areas, 4th Edition (2011). The applicant has performed *Coastal Hazard Analysis* through the preparation of the attached *Coastal Vulnerability Assessment*. This project falls within FEMA Flood Zone-AE and Flood Zone-X. This project will receive oversight from the City of Portsmouth Planning Board and the Conservation Commission.

Env-Wt 700 – Prime Wetlands

This project proposes impacts to a *Duly-Established 100-foot Prime Wetland Buffer*, and therefore, we have submitted a Prime Wetland Waiver Request with this permit application.

Env-Wt 800 – Compensatory Mitigation

This project is self-mitigating. This project proposes to remove two existing causeways from public waters which will result in significant improvements to hydraulic capacity, passage of aquatic organisms, and the natural tidal flows and geomorphology of the area. Under Env-Wt 605.03 (b)(9), these improvements exempt this project from requiring compensatory mitigation. This project also proposes to restore salt marsh area and restore the upland buffers with native vegetation.

Env-Wt 900 – Stream Crossings

This project proposes no stream crossings. This project only proposes to cross a tidal area, and therefore, these administrative rules are not applicable to this project.

STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION ATTACHMENT A: MINOR AND MAJOR PROJECTS

Water Division/Land Resources Management

Wetlands Bureau

Check the Status of your Application

RSA/ Rule: RSA 482-A/ Env-Wt 311.10; Env-Wt 313.01(a)(1); Env-Wt 313.03

APPLICANT'S NAME: ADL 325 Little Harbor Road Trust **TOWN NAME:** Portsmouth

Attachment A is required for *all minor and major projects*, and must be completed *in addition* to the Avoidance and Minimization Narrative or Checklist that is required by Env-Wt 307.11.

For projects involving construction or modification of non-tidal shoreline structures over areas of surface waters having an absence of wetland vegetation, only Sections I.X through I.XV are required to be completed.

PART I: AVOIDANCE AND MINIMIZATION

In accordance with Env-Wt 313.03(a), the Department shall not approve any alteration of any jurisdictional area unless the applicant demonstrates that the potential impacts to jurisdictional areas have been avoided to the maximum extent practicable and that any unavoidable impacts have been minimized, as described in the Wetlands Best Management Practice Techniques For Avoidance and Minimization.

SECTION I.I - ALTERNATIVES (Env-Wt 313.03(b)(1))

Describe how there is no practicable alternative that would have a less adverse impact on the area and environments under the Department's jurisdiction.

There is no practicable alternative that would have a less adverse impact on NHDES Wetlands Bureau jurisdictional areas. Through the removal of the two existing causeways within public waters and the construction of new timber bridge that spans the sensitive resource on piles, this project results in significant increases in hydraulic capacity and aquatic organism passage. This project also proposes to restore salt marsh area and the upland tidal buffer zone with native vegetaion.

SECTION I.II - MARSHES (Env-Wt 313.03(b)(2))

Describe how the project avoids and minimizes impacts to tidal marshes and non-tidal marshes where documented to provide sources of nutrients for finfish, crustacean, shellfish, and wildlife of significant value.

While this project proposes some impacts to fringe salt marsh areas, this project proposes to mitigate these lossess by converting the areas currently occupied by causeways into salt marsh.

SECTION I.III - HYDROLOGIC CONNECTION (Env-Wt 313.03(b)(3))

Describe how the project maintains hydrologic connections between adjacent wetland or stream systems.

As a result of removing the causeways from public waters, there will be greater connectivity between resources. Removal of the causeways results in increases in hydraulic capacity and opens aquatic organism pathways. Removal of the causeways increases the overall ecological integrity of the area.

SECTION I.IV - JURISDICTIONAL IMPACTS (Env-Wt 313.03(b)(4))

Describe how the project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A, especially those in which there are exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and habitat and reproduction areas for species of concern, or any combination thereof.

There will be no loss of vernal pools, protected species, and habitat/reproduction areas as a result of this project. We have coordianted with NOAA Marine Fisheries, the U.S. Fish and Wildlife Service, NH Natural Heritage Bureau (NHB), and the NH Fish and Game Department. We have made arrangements with the NHB to transplant and monitor 8 marsh elder plants within the project area.

SECTION I.V - PUBLIC COMMERCE, NAVIGATION, OR RECREATION (Env-Wt 313.03(b)(5))

Describe how the project avoids and minimizes impacts that eliminate, depreciate or obstruct public commerce, navigation, or recreation.

We have coordinated with the U.S. Coast Guard and the Pease Development Authority and they have concurred this project poses no impacts to public commerce, navigation, or recreation. During construction, neighboring property owners will not be precluded from accessing their properties by recreational boats.

SECTION I.VI - FLOODPLAIN WETLANDS (Env-Wt 313.03(b)(6))

Describe how the project avoids and minimizes impacts to floodplain wetlands that provide flood storage.

N/A - There are no floodplain wetlands on this site.

SECTION I.VII - RIVERINE FORESTED WETLAND SYSTEMS AND SCRUB-SHRUB – MARSH COMPLEXES (Env-Wt 313.03(b)(7))

Describe how the project avoids and minimizes impacts to natural riverine forested wetland systems and scrub-shrub – marsh complexes of high ecological integrity.

N/A - This project has no impact to forested wetland systems or scrub-shrub marsh complexes.

SECTION I.VIII - DRINKING WATER SUPPLY AND GROUNDWATER AQUIFER LEVELS (Env-Wt 313.03(b)(8))

Describe how the project avoids and minimizes impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

N/A - This project is not adjacent to any drinking water supplies or groundwater aquifers.

SECTION I.IX - STREAM CHANNELS (Env-Wt 313.03(b)(9))

Describe how the project avoids and minimizes adverse impacts to stream channels and the ability of such channels to handle runoff of waters.

N/A - This project proposes no impacts to stream channels.

SECTION I.X - SHORELINE STRUCTURES - CONSTRUCTION SURFACE AREA (Env-Wt 313.03(c)(1))

Describe how the project has been designed to use the minimum construction surface area over surface waters necessary to meet the stated purpose of the structures.

As highlighted within the attached "Section-7 Resource Specific Information", this project has been designed to meet all NHDES Administrative Rules relative to Coastal Land and Tidal Waters/ Wetlands, more particularly, Env-Wt 600.

SECTION I.XI - SHORELINE STRUCTURES - LEAST INTRUSIVE UPON PUBLIC TRUST (Env-Wt 313.03(c)(2))

Describe how the type of construction proposed is the least intrusive upon the public trust that will ensure safe docking on the frontage.

N/A - This project proposes no docking structures.

SECTION I.XII - SHORELINE STRUCTURES – ABUTTING PROPERTIES (Env-Wt 313.03(c)(3))

Describe how the structures have been designed to avoid and minimize impacts on ability of abutting owners to use and enjoy their properties.

The project will have no adverse impact on the abutting properties. The abutting property owner has provided consent to the impacts occuring on their property. The abutting property owner has signed the NHDES Wetlands Permit Application as well.

SECTION I.XIII - SHORELINE STRUCTURES – COMMERCE AND RECREATION (Env-Wt 313.03(c)(4))

Describe how the structures have been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.

N/A No shoreline structures are proposed.

SECTION I.XIV - SHORELINE STRUCTURES – WATER QUALITY, AQUATIC VEGETATION, WILDLIFE AND FINFISH HABITAT (Env-Wt 313.03(c)(5))

Describe how the structures have been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.

N/A - No shoreline structures are proposed.

SECTION I.XV - SHORELINE STRUCTURES – VEGETATION REMOVAL, ACCESS POINTS, AND SHORELINE STABILITY (Env-Wt 313.03(c)(6))

Describe how the structures have been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.

N/A - No shoreline structures are proposed.

PART II: FUNCTIONAL ASSESSMENT
REQUIREMENTS Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).
FUNCTIONAL ASSESSMENT METHOD USED: This project is considered a "Major" project, and therefore, in accordance with Env-Wt 311.03, (b)(10), we have provided a Functional Assessment of the "wetland" on the property. In this instance, the "wetland" is the neighboring fringe salt marsh and mud flat areas adjacent to the project site. The Army Corps of Engineers Highway Methodology (Sept. 1999) was used to perfrom the Functional Assessment of this Wetland.
NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: JASON AUBE, CERTIFIED WETLANDS SCIENTIST
DATE OF ASSESSMENT: 5/1/2023 & 5/18/2023
Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT: ☒
For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable: ☒ Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.

PROTECTED TIDAL ZONE
PROJECT-SPECIFIC WORKSHEET
FOR STANDARD APPLICATION

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482-A/ Env-Wt 610

This worksheet summarizes the criteria and requirements for a Standard Permit for impact in the "Protected Tidal Zone", one of the six specific project types in tidal area described in Chapter Env-Wt 600. In addition to the project-specific criteria and requirements on this worksheet, all Standard Applications must meet the criteria and requirements listed in the Standard Application form (NHDES-W-06-012) and the Coastal Resource Worksheet.

SECTION 1 - APPLICATION REQUIREMENTS FOR PROTECTED TIDAL ZONE AND REQUIRED ATTACHMENTS (Env-Wt 610.04)

The following plans and other information shall be submitted with applications for work within the protected tidal zone:

- ☒ Existing and proposed contours at 2-foot intervals measured from the Highest Observable Tide Line (HOTL);
- ☒ If any portion of the subject parcel is located in a regulatory floodplain, the location of the 100-year flood boundary zone, and water elevation as shown on the applicable Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map;
- ☒ All of applicable local and state setbacks;
- ☒ The dimensions and locations of all:
  - ☒ Existing and proposed structures;
  - ☒ Existing and proposed impervious areas;
  - ☒ Existing and proposed disturbed areas;
  - ☒ Areas to remain in an unaltered state;
  - ☒ Existing cleared areas, such as gardens, lawns, and paths; and
  - ☒ Proposed temporary impacts associated with the completion of the project;
- ☒ Proposed methods of erosions and siltation controls, identified graphically and labeled on a plan, or otherwise annotated as needed for clarity;
- ☒ A plan of any planting(s) proposed in the waterfront buffer, showing the proposed locations(s) and Latin names or common names of proposed species;
- ☐ If applicable, the location of an existing or proposed 6-foot wide foot path to the waterbody or a temporary access path;
- ☐ For any project proposing that the impervious area be at least 15% but not more than 20% within the protected tidal zone, a statement signed by the applicant certifying that the impervious area is not more than 20%
- ☐ For any project proposing that impervious area be greater than 20% within the protected tidal zone, plans for a stormwater management system that will infiltrate increased stormwater from development provided that if impervious area is or is proposed to be greater than 30%, the stormwater management systems shall be designed by a professional engineer;
- ☐ For any project involving pervious surfaces, a plan with specifications of how those surfaces will be maintained; and
- ☒ All other relevant features necessary to clearly define both existing conditions and the proposed project.

SECTION 2 - APPROVAL CRITERIA (Env-Wt 313.01)

☒ An application for structure construction within the protected tidal zone shall comply with Env-Wt 313.01.

SECTION 3 - DESIGN & CONSTRUCTION REQUIREMENTS (Env-Wt 610.03)

The construction of structures within the protected tidal zone shall comply with:

☒ The standards described in FEMA P-55, Coastal Construction Manual: Principles and Practices of Planning, Siting, Designing, Constructing and Maintaining Residential Buildings in Coastal Areas, 4th edition (2011); and

☒ Local resiliency planning ordinances.

SECTION 4 - PROTECTED TIDAL ZONE RESTRICTIONS (Env-Wt 610.05- 610.13)

☒ The restrictions identified in RSA 483-B:9, II shall apply to the protected tidal zone;

☒ The provisions of RSA 483-B:9, V(a) related to the maintenance of a waterfront buffer shall apply to the protected tidal zone within 50 feet of the HOTL;

☒ Accessory structures in the waterfront buffer shall comply with the applicable provisions of Env-Wq 1400;

☒ The provisions of RSA 483-B:9, V(b) related to the maintenance of a woodland buffer shall apply to the protected tidal zone within 150 feet of the HOTL;

☒ The provisions of RSA 483-B:9, V(c) related to individual sewage disposal systems shall apply to the protected tidal zone;

☒ The provisions of RSA 483-B:9, V(d) related to erosion and siltation shall apply to the protected tidal zone;

☒ The provisions of RSA 483-B:9, V(e) related to minimum lots and residential development shall apply to the protected tidal zone;

☒ The provisions of RSA 483-B:9, V(f) related to minimum lots and non-residential development shall apply to the protected tidal zone; and

☒ The provisions of RSA 483-B:9 V(g) related to impervious surfaces shall apply to the protected tidal zone.

SECTION 5 - PROJECT CLASSIFICATION (Env-Wt 610.17)

(a) A major project shall be:

(1) Any dredging, filling, or construction activity, or any combination thereof, that is proposed to:

a. Occur within 100 feet of the HOTL; and

b. Alter any tidal shoreline bank, tidal flat, wetlands, surface water, or undeveloped uplands; or

(2) A project that would be major based on an aggregation of projects under Env-Wt 400.

(b) A minor project shall be any dredging, filling, or construction activity, or any combination thereof, that:

(1) Involves work within 75 feet of a saltmarsh in the developed upland tidal buffer;

(2) Is not a major project; and

(3) Will disturb 3,000 square feet (SF) or more but less than 10,000 SF in the developed upland tidal buffer.

(c) A minimum impact project shall be any dredging, filling, or construction activity, or any combination thereof, that:

(1) Is in a previously developed upland area;

(2) Is within 100 feet of the HOTL; and

(3) Will disturb less than 3,000 SF.

PRIME WETLAND WAIVER
FORESTRY & OTHER ACTIVITIES
Water Division/Land Resources Management
Wetlands Bureau

RSA/Rule: RSA 482-A:11/ Env-Wt 706

APPLICANT LAST NAME, FIRST NAME, M.I.: ADL 325 Little Harbor Road Trust

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

As provided in RSA 482-A:11, IV(b)(1), to be eligible for the Forestry Statutory Permit-by-Notification (Forestry SPN), a property owner must obtain a waiver to perform any forest management work and related activities in the forested portion of a designated **prime wetland*** or **duly-established 100-foot buffer†** from the department. *For a waiver request for Forestry Activities within a designated prime wetland or duly-established 100-foot buffer, please complete Part I of this form.*

As provided in RSA 482-A:11, IV(c), a property owner may request a waiver from the department to perform work not addressed above within a portion of any **duly-established 100-foot buffer†** of a prime wetland on his or her property. Please note that waivers for such activities may only be requested for work within a duly-established 100-foot buffer, not for work within prime wetlands. *For a waiver request for Activities Other than Forest Management within a duly-established 100-foot buffer, please complete Part II of this form.*

A waiver request for work in a prime wetland or duly-established 100-foot buffer must be submitted to the department at the same time as a notification for an SPN or other application, as applicable.

***Prime Wetlands**: Any contiguous areas falling within the jurisdictional definitions of RSA 482-A:2, X and RSA 482-A:4 that, because of their size, unspoiled character, fragile condition, or other relevant factors, make them of substantial significance (482-A:15, I-a).

†Duly-Established 100-foot Buffer: The buffer recognized in RSA 482-A:11, IV for prime wetlands designated on or after September 11, 2009 but before August 17, 2012 (Env-Wt 102.63).

PART I: WAIVER REQUEST FOR FORESTRY ACTIVITIES

SECTION 1 - REQUESTED WAIVER AND FILING FEE (Env-Wt 706.02(b)(3))

Check or money order for the applicable filing fee payable to "Treasurer – State of NH" (RSA 482-A:3, I(c)).

- ☐ $200 for a project that would otherwise qualify for a Forestry SPN if it was not located in or near a designated prime wetland or duly-established 100-foot buffer.
- ☐ $500 for a minor impact project that does not otherwise qualify as minimum or major impact project.
- ☐ $1,250 for a major impact project classified regardless of prime wetlands designation.

SECTION 2 - PROPOSED WORK (Env-Wt 706.02(b); RSA 482-A:11, IV(b)(1))

Provide a brief written description of the work to be performed.
N/A

SECTION 3 - PRIME WETLANDS VALUES (Env-Wt 706.02(b); RSA 482-A:11, IV(b)(1))

Provide a list of the prime wetlands values as identified by the municipality when the prime wetland or duly-established 100-foot buffer was designated. Demonstrate that the project will not create a significant net loss of these wetland values.
N/A

SECTION 4 - REQUIRED ATTACHMENTS (Env-Wt 706.02; RSA 482-A:11, IV(b)(1))

☐ A sketch of the property depicting the best approximate location of each prime wetlands/buffer in which work is proposed and the location of proposed work, including access roads.

☐ A copy of the notice of intent to cut, if applicable.

☐ Other information to demonstrate that there will be no significant net loss of wetland values identified by the municipality when the prime wetland/buffer was designated.

☐ Written comments from the conservation commission or local governing authority as applicable, stating that:

- The members have no objections to the requested waiver.
- The members have no objections to a waiver if the conditions specified in the comments are met.
  OR
- The members object to the waiver for the reason(s) stated in the comments.

SECTION 5 - ADDITIONAL INSTRUCTIONS (Env-Wt 706.02; RSA 482-A:11, IV(b)(3))

☐ At the time the applicant submits the waiver request to the department, the applicant also shall submit, ***via certified mail***, a copy of the waiver request and all supporting documentation to the local governing body, the planning board, if any, and the conservation commission, if any, of the municipalities in which any prime wetlands/buffers associated with the application are located.

☐ If a prime wetland/buffer associated with the application extends into an abutting property, the property owner requesting the waiver shall provide a copy of the waiver request and all supporting documentation to the owner of that abutting property. The applicant shall send the notice required ***by certified mail***.

Please note:

- As provided in RSA 482-A:11, IV(b)(3), the department shall not issue a waiver for forestry activities prior to 14 days after receipt of the waiver request, provided however that a municipal conservation commission may request an extension on such waiver issuance, not to exceed 14 days, which the department shall grant if requested.
- As provided by RSA 482-A:11, IV(b)(2), the department shall not issue a waiver unless the department determines that there will be no significant net loss of wetland values as identified by the local conservation commission/local governing authority or in RSA 482-A:1.
- If the department determines that the criteria for issuing a waiver are met, the waiver shall be issued as part of the Forestry SPN or permit, as applicable.
- If the department is unable to determine, based on the information submitted, that the proposed work will not cause a significant net loss of wetland values, the department shall notify the applicant of what additional information is needed and establish a deadline in consultation with the applicant for the submission of the additional information.
- If the department determines that the project would not cause a significant net loss of wetland values if certain conditions were met, the department shall place such conditions on the waiver as are necessary to protect the prime wetland resource.
- Any waiver issued shall be valid for the term of the permit or SPN with which it is associated, but may be extended.

PART II: WAIVER REQUEST FOR ACTIVITIES OTHER THAN FOREST MANAGEMENT

SECTION 1 - REQUESTED WAIVER AND FILING FEE (Env-Wt 706.04(b)(5))

Check or money order for the applicable filing fee payable to "Treasurer – State of NH" (RSA 482-A:3, I(c)).

☐ $200 for projects that would otherwise qualify as a minimum impact project if it was not located in a designated prime wetlands buffer.

☐ $500 for a minor impact project that does not otherwise qualify as minimum or major impact project.

☒ $1,250 for a major impact projects.

SECTION 2 - PROPOSED WORK (Env-Wt 706.04(b)(2))

Provide a written description of the work to be performed.

The property owner is proposing to replace an existing failing bridge with a new wooden bridge that spans the entire intertidal resource on wooden piles. The property owner is also proposing to remove the existing concrete and earthen causeways that currently restrict tidal flows and impede aquatic organism passage. Areas currently occupied with the causeways will be restored to salt marsh and the developed upland tidal buffer zone will be restored with native vegetation. The island will also be connected to municipal utilities eliminanting the use of an on-site septic system.

SECTION 3 - PRIME WETLANDS VALUES (Env-Wt 706.04(b))

Provide a list of the prime wetlands values identified by the municipality when the prime wetlands associated with the buffer was designated. Demonstrate that the project will not create a significant net loss of these wetland values. There are a number of discrepancies within the City of Portmouth Prime Wetland Analysis Report that make this task very difficult to complete. Little Harbor Cove Salt Marsh Prime Wetland ID number "061B" is only .90 acres but, it's listed as being 13.38 acres and 5-acres within the report. In one area of the report, it identifes the subject Prime Wetland as being Palustrine Emergent Persistent (PEM1) but, it's an Estaurine environment and this correction is reflected within the report. Field soil plots were performed near the Belle Isle Bridge but, this test site is over 1/2 mile away. Most noteably, at the time of designation, when evalauting candidates for designation as Prime Wetlands, NHDES Wetlands Bureau Administrative Rule Env-Wt 701.02 (c) specifically prescribed the use of certain methodologies to evaluate wetland functional values but, within the "Methodologies" section of the City of Portsmouth Prime Wetland Analysis Report (Section-2, page 3-4), it gives no mention of the methodologies used. The report also indicates that Prime Wetland "061B" was not evaluated in the "GES" study but, there is no explantion within this report that describes what the “GES” study is.

The Portsmouth Prime Wetland Designation Data form only indicates the primary functions of the Prime Wetland to be Wildlife Habitat and Education and Scientific Value because it is "directly adjacent to the Little Harbor School. This, too, is a discrepancy because this wetland is immediately adjacent to private properties and it does not provide any opportunity for educational value to the public. On page-5 of the report the justification for this wetland being designated as a "Prime Wetland" is its uniqueness to the City of Portmouth, rare species habitat, and critical fisheries habitat.

As demonstrated within the original Functional Assessment included with this permit application, including the Ecological Integrity Assessment, this project poses no threat to tidal resources. This project will result in significant increases to hydraulic capacity, aquatic organims passage and the overall ecological integrity of the area. Through clear and compelling impact analysis, this project will not create a significant net loss of the values listed within the City of Portmouth Prime Wetland Analysis Report, the functions and values listed in the Functions and Values assessment submitted with original permit application or the values set forth within RSA 482-A:1

SECTION 4 - REQUIRED ATTACHMENTS (Env-Wt 706.04)

☒ A sketch of the property depicting the best approximate location of the duly-established 100-foot buffer in which work is proposed and the location of proposed work, including access roads.

☒ Other information to demonstrate that there will be no significant net loss of wetland values identified by the municipality when the prime wetlands associated with the buffer was designated.

SECTION 5 - ADDITIONAL INSTRUCTIONS (Env-Wt 706.04; RSA 482-A:11, IV(c))

☒ At the time the applicant submits the waiver request to the department, the applicant also shall notify, ***by certified mail***, the local governing body, the planning board, if any, and the conservation commission, if any, of the municipalities in which the waiver is being sought that the waiver is being requested.

☒ If the buffer associated with the application extends onto an abutting property, the property owner requesting the waiver shall provide notice that the waiver is being requested to the owner of that abutting property.

Please note:

- As provided in Env-Wt 706.05, the department shall not issue a waiver under Env-Wt 706.01(b) prior to 14 days after receipt of the waiver request, provided however that a municipal conservation commission may request an extension on such waiver issuance, not to exceed 14 days, which the department shall grant if and as requested.

- The department shall not issue a waiver unless the department determines that there will be no significant net loss of wetland values as identified by the local conservation commission/local governing authority and in RSA 482-A:1.
- If the department determines that the criteria for issuing a waiver are met, the waiver shall be issued as part of the SPN or permit, as applicable.
- If the department is unable to determine, based on the information submitted, that the proposed work will not cause a significant net loss of wetland values, the department shall notify the applicant of what additional information is needed and establish a deadline in consultation with the applicant for the submission of the additional information.
- If the department determines that the project would not cause a significant net loss of wetland values if certain conditions were met, the department shall place such conditions on the waiver as are necessary to protect the prime wetlands resource.
- Any waiver issued shall be valid for the term of the permit or SPN with which it is associated, but may be extended.

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

Functional Assessment and Impact Analysis

Env-Wq 704.02 & RSA 482-A:11, IV(a)

Introduction

This *Functional Assessment* and *Impact Analysis* was conducted to support a NHDES Wetlands Permit Application to impact an intertidal and upland buffer area. Some impacts are proposed within a *Duly-Established 100-Foot Prime Wetland Buffer*, and therefore, under NHDES Wetlands Bureau Administrative Rule Env-Wt 704.02 and RSA 482-A:11, IV(a), we are required to demonstrate this project will not result in the *significant net loss* of the values set forth in RSA 482-A:1.

The impacts associated with this project are necessary to replace an existing failing bridge with a new bridge, remove exiting causeways within public waters that act as a significant tidal restriction, connect the island to municipal utilities, and restore salt marsh area and the developed upland tidal buffer zone with native vegetation.

The jurisdictional areas adjacent to the project site are predominantly Estuarine, Intertidal, Unconsolidated Shore, Cobble-Gravel (E2US1) and Estuarine, Intertidal, Unconsolidated Shore, Mud (E2US3). Isolated narrow bands of fringe salt marsh exist along the neighboring shorelines (E2EM1).

The upland area adjacent to the wetland is an approximately 12-acre island. The island consists of a single residential property that previously utilized some areas for equestrian purposes. The mainland consists of wooded areas with intermittent pockets of freshwater wetlands. No impacts are proposed to the freshwater wetlands. While the bulk of the areas to be impacted are previously developed, the NH Fish and Game Wildlife Action Plan (WAP) identifies the habitat adjacent to the area to be impacted as salt marsh and hemlock hardwood pine. The WAP indicates the Tidal Wetland resources are of the *Highest Ranked Habitat in NH*.

Methods

The wetland boundaries, more particularly, the *Highest Observable Tide Line* (HOTL), was delineated using the methods prescribed by NHDES Administrative Rule Env-Wt 602.23. The wetlands boundaries, including the limits of the 100-foot tidal buffer zone, are depicted on the attached site plans. The wetlands were classified based on the Classification of Wetlands and Deepwater Habitats of the United States, adapted from Cowardin, Carter, Golet and LaRoe (1979), August 2013, FGDC-STD-004-2013.)

The Functional Assessment was conducted by performing field visits on March 19, 2022 and April 2, 2022. The wetlands were assessed using the *Army Corps of Engineers Highway Methodology* (September 1999, NAEEP-360-1-30a).

The *Ecological integrity* of the intertidal resource was assessed using the *Method for Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire (June 1993)* and data from the NH Fish and Game Wildlife Action Plan (WAP).

The City of Portsmouth Prime Wetland Analysis Report, January, 2011, prepared by West Environmental Services, which was used to assess wetland resources for the purpose of *Prime Wetlands Designation* under RSA 482-A:15, was referenced as well.

Values set forth in RSA 482-A:1 and Impact Analysis

1. Sources of Nutrients for Finfish, Crustacea, Shellfish and Wildlife of Significant Value

The neighboring wetland resources provide embayments, tidal flats, vegetated shallows, and other environments in support of fish, shellfish, and marine mammals. Anadromous fish, including the striped bass (*Morone saxatilis*), are known to seasonally utilize the area to forage on sea worms/ nereids (*Echiurus echiurus*), sand eels (*Ammodytes marinus*), Silversides (*Menidia menidia*) and Green Crabs (*Carcinus maenas*) during high tide. Although shellfishing is prohibited in this area, various species of mollusks exist. This tidal marsh is highly productive and evidence of multiple trophic levels utilizing this area was observed.

There are no eel grass beds within the vicinity of the project. The NH Wildlife Action Plan (WAP) identifies the resource area as High-Ranking Wildlife Habitat in NH. The NH Natural Heritage Bureau (NHB) screened the project and has agreed to allow us to transplant the sensitive marsh elder plants that are currently located within the proposed impact areas.

Impact Analysis

While some impacts are proposed to an existing fringe saltmarsh, this project will result in significant increases in hydraulic capacity and aquatic organism passage. As a result of the proposed salt marsh restoration, there will be no net loss of salt marsh resources. The proposed enhancement of the developed upland tidal buffer zone with native vegetation, discontinuing the use of an on-site septic system and connecting the island to municipal sewer all result in significant environmental improvements, and therefore, this project *will not* adversely affect the value of areas of sources of nutrients for finfish, crustacea, shellfish and wildlife of significant value.

2. Habitats and Reproduction Areas for Plants & Fish and Wildlife of Importance

The neighboring resource includes a braided network of flats, channels and fragmented Spartina spp. plains which provide a unique habitat for a number of species, including plants. There are no eel grass beds within the area. The NH Wildlife Action Plan (WAP) identifies the wetland as Highest Ranked Wildlife Habitat in NH. The NH Natural Heritage Bureau (NHB) screened the project and has agreed to allow us to transplant the sensitive marsh elder plants that are currently located within the proposed impact areas.

Impact Analysis

While some impacts are proposed to an existing fringe saltmarsh, this project will result in significant increases in hydraulic capacity and aquatic organism passage. As a result of the proposed salt marsh restoration, there will be no net loss of salt marsh resources. The proposed enhancement of the developed upland tidal buffer zone with native vegetation, discontinuing the use of an on-site septic system and connecting the island to municipal sewer all result in significant environmental improvements, and therefore, this project *will not* adversely affect the value of habitats and reproduction areas for plants and fish and wildlife of importance.

3. Commerce, Recreation and Aesthetic Enjoyment of the Public

The neighboring resource includes a braided network of flats, channels and Spartina spp. plains which are unique to New Hampshire and, aesthetically, are quite beautiful during all tidal periods.

Impact Analysis

While some impacts are proposed to an existing fringe saltmarsh, this project will result in significant increases in hydraulic capacity and aquatic organism passage. Removal of the causeway will result in significant aesthetic improvements to the area. As a result of the proposed salt marsh restoration, there will be no net loss of salt marsh resources. The proposed enhancement of the developed upland tidal buffer zone with native vegetation, discontinuing the use of an on-site septic system and connecting the island to municipal sewer all result in significant environmental improvements, and therefore, this project *will not* adversely affect the value of commerce, recreation, and aesthetic enjoyment of the public.

4. Adequate Groundwater Levels

The neighboring wetland does not serve as a groundwater recharge and/or discharge site.

Impact Analysis

No direct impacts are proposed to the wetland resources. This project will not be detrimental to adequate groundwater levels.

5. Stream Channels and Their Ability to Handle the Runoff of Waters

While the neighboring resource includes a braided network of flats and channels, there are no stream channels.

Impact Analysis

While some impacts are proposed to an existing fringe saltmarsh, this project will result in significant increases in hydraulic capacity and aquatic organism passage. As a result of the proposed salt marsh restoration, there will be no net loss of salt marsh resources. The proposed enhancement of the developed upland tidal buffer zone with native vegetation, discontinuing the use of an on-site septic system and connecting the island to municipal sewer all result in significant environmental

improvements, and therefore, this project *will not* adversely affect stream channels and their ability to handle the runoff of waters.

6. Absorption of Flood Waters and Silt

The neighboring resource is effective in reducing flood damage by retaining flood waters for prolonged periods of time. During storm events and tidal surges, this wetland serves this function by providing floodwater storage capacity and this aides in protecting the neighboring community. The neighboring wetland also serves to trap sediments, toxicants, and pathogens within runoff.

Impact Analysis

While some impacts are proposed to an existing fringe saltmarsh, this project will result in significant increases in hydraulic capacity and aquatic organism passage. As a result of the proposed salt marsh restoration, there will be no net loss of salt marsh resources. The proposed enhancement of the developed upland tidal buffer zone with native vegetation, discontinuing the use of an on-site septic system and connecting the island to municipal sewer all result in significant environmental improvements, and therefore, this project *will not* adversely affect the value of Absorption of Flood Waters and Silt.

7. Interests of the General Public

This project will result in eliminating a major tidal restriction within the back channel of the Piscataqua River. This project will result in increased hydraulic capacity within tidal crossing and enhanced aquatic organism passage, and therefore, this project is clearly within the best interest of the general public.

Impact Analysis

While some impacts are proposed to an existing fringe saltmarsh, this project will result in significant increases in hydraulic capacity and aquatic organism passage. As a result of the proposed salt marsh restoration, there will be no net loss of salt marsh resources. The proposed enhancement of the developed upland tidal buffer zone with native vegetation, discontinuing the use of an on-site septic system and connecting the island to municipal sewer all result in significant environmental improvements, and therefore, this project *will not* adversely affect the interests of the general public.

Summary

The intertidal area adjacent to the project area serves many functions including flood-flow storage capacity, fish and shellfish habitat, sediment and toxicant retention, nutrient removal, resource export, sediment and shoreline stabilization, wildlife habitat, visual quality/ aesthetics, endangered species habitat, and therefore, it is considered a high value, high functioning resource of the State of New Hampshire. Although the subject Prime Wetland is less than 2-acres in size and no specific methodologies were used to evaluate this wetland at the time it was nominated to be a Prime Wetland and as required by NHDE Wetlands Bureau Administrative Rule Env-Wt 701.02 (c), this area, coupled with the adjacent fragmented salt marsh complex, was rightfully elected to become a Prime Wetland under RSA 482-A:14.

In summary, the environmental benefits associated with this project far outweigh the subtle impacts that must occur to the Duly-Established 100-foot Prime Wetland Buffer, and therefore, in accordance with NHDES Wetlands Bureau Administrative Rule Env-Wt 704.02 and RSA 482-A:11, IV(a), this project will not result in the *significant net loss* of the values set forth in RSA 482-A:1.

References

ACOE *Army Corps of Engineers Highway Methodology* (September 1999, NAEEP-360-1-30a).

Ammann, A.P. and A.L. Stone. 1993. *Method for Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire.*

Cowardin, L.M., V. carter, F.C Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deep-Water Habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

New Hampshire Fish and Game Department Wildlife Action Plan (WAP).

The City of Portsmouth Prime Wetland Analysis Report, January, 2011.

CITY OF PORTSMOUTH
Community Development Department
(603) 610-7232
Planning Department
(603) 610-7216

Ms. Dori Wiggin, East Region Supervisor
DES Wetlands Bureau, Pease District Office
222 International Drive, Suite 175
Portsmouth, NH 03801

January 25, 2011

Subject: City of Portsmouth Prime Wetlands Designation

Dear Ms. Wiggin:

Enclosed with this letter please find the Citywide Prime Wetland assessment and mapping that was recently completed and voted upon by the City Council. This effort was initiated in 2003 with the Completion of the Citywide Wetlands Inventory where all wetlands in the City were mapped and those wetlands meeting Prime Wetland Criteria were identified and reviewed. A follow-up study was begun in 2006 to study in greater detail the wetlands identified as Prime Wetlands and include additional wetlands which met the criteria. As part of this effort all of the wetlands in the City of Portsmouth, including those wetlands on the Pease Tradeport were investigated to determine which ones were most suitable for Prime Wetland designation under RSA 482 A:15

After a thorough review of all the potentially eligible prime wetlands was complete both the Conservation Commission (at their April 11, 2007 meeting) and the Planning Board (at their September 20, 2007 meeting) voted in favor of designating prime wetlands as listed in West Environmental Services report. On April 21, 2008 the City Council, at the recommendation of the Conservation Commission authorized funding for detailed mapping be completed in order to finalize the Prime Wetlands effort and to prepare a submission to the state. As part of this effort all of the wetlands reviewed for Prime Wetland status in the City of Portsmouth, including the wetland within the Pease Development Authority (PDA) had a final field visit where detailed mapping was completed and entered into the City's GIS.

For submission with this letter is a set of 14 wetlands, which have been chosen as the most significant wetlands in the City. At their meeting on July 19, 2010, the Portsmouth City Council held a public hearing, then voted in favor of forwarding the recommendations for the selected wetlands as Prime Wetlands to NHDES. One of these wetlands is within the PDA boundary. The wetland within the boundary of the PDA is labeled as wetland 7 for the purposes of this analysis. The Conservation Commission, Planning Board and the City Council voted to request that the Pease Development Authority adopt the recommendation that Wetland 007 (as shown on attached map) be designated a Prime wetland. A letter has been sent from the City to the PDA regarding wetland 007. If the PDA is interested in pursuing this designation this will be pursued as a separate action.

The submittal you have before you includes the following information for your review:

- City of Portsmouth Prime Wetland Analysis Report Completed in January 2010 by the City of Portsmouth and West Environmental Services Inc.

- Action sheet from Portsmouth City Council July 19, 2010 meeting where the City Council held a Public Hearing and took Action to approve designation of selected prime wetlands.

- Citywide map of prime wetlands in accordance with Env-Wt 702.02 format.

If you have questions or need additional information please do not hesitate to contact me at 610-7215 or plbritz@cityofportsmouth.com.

Sincerely

Peter Britz
Environmental Planner/Sustainability Coordinator

Cc: John P. Bohenko, City Manager

CITY OF PORTSMOUTH
PRIME WETLAND ANALYSIS REPORT

Prepared for:
New Hampshire Department of Environmental Services
Portsmouth Regional Office
Pease International Tradeport
222 International Drive, Suite 175
Portsmouth, NH 03801

Prepared by:

WEST ENVIRONMENTAL INC.

and

The City of Portsmouth
Planning Department

January 2011

TABLE OF CONTENTS

1. Introduction

West Environmental, Inc. (WEI) has prepared this report to provide documentation to support the designation of prime wetlands in the City of Portsmouth, New Hampshire. Initially the 2003 City Wide Wetlands Inventory (CWWI) identified potential prime wetland candidates. WEI used this 2003 mapping as a starting point to field verify the identified wetlands. WEI then included additional wetlands which met the criteria for Prime Wetlands. The verification and identification of new wetland areas was conducted in 2006 with funding assistance from the Piscataqua Region Estuaries Partnership (then New Hampshire Estuaries Project) under their Community Technical Assistance Program. This additional research and evaluation insured that individual wetlands met the requirements of RSA 482-A:15 and Chapter Wt 700 of the NHDES Wetlands Bureau Administrative Rules. WEI worked closely with the Portsmouth Conservation Commission and Planning Department staff to review the technical criteria for Prime Wetland Designation and the results of the CWWI. After review and expansion of the potential prime wetlands a mapping effort was funded in 2007 by the City of Portsmouth at the recommendation of the Conservation Commission to accurately map the wetland boundaries of all potential prime wetlands. This report represents the analysis and approval of the final wetlands to be selected by the Portsmouth Conservation Commission, Portsmouth Planning Board and Portsmouth City Council for designation as Prime Wetlands in the City of Portsmouth.

RSA 482-A:15 defines "Prime Wetlands" as jurisdictional wetlands that "because of their size, unspoiled character, fragile condition or other relevant factors, make them of substantial significance." Env-Wt 701.04 Selection of Designated Prime Wetlands states "Selection of Prime Wetlands shall be based on the ranking of relative function values" and shall meet the following minimum criteria:

1) The wetland shall have the presence of hydric soils, hydrophytic vegetation, and wetlands hydrology; and
2) At least 50% of the prime wetland shall have very poorly drained soils and the remaining soils shall be poorly drained soils.

The Prime Wetlands Candidates identified in Section 3 of this report meet all qualifications for Prime Wetland status.

2. Methodology

Twenty-one wetlands were determined to have the potential to "qualify" for Prime Wetland Designation in the CWWI. WEI identified six additional wetlands that could qualify for this designation resulting in a total of 27 wetlands evaluated. A Portsmouth specific Prime Wetland Data Form was created to evaluate prime wetland status of these wetlands. This form includes the following information necessary for Prime Wetland Designation:

- Soils verification
- Changes in wetland classification since 2002

- Wetland boundary verification
- Land use changes within the wetland buffer
- Potential water quality impacts
- Invasive species
- Information on rare plants and wildlife
- Wildlife habitat
- Educational / scientific values
- Restoration potential
- Results of functional analysis
- Justification for Prime Wetland Designation

Completed data forms are in Section 7 of this report. Each of the 27 wetlands was field inspected to verify the wetland boundaries, functional analysis, values assessments, and other important considerations relating to Prime Wetland Designation. Significant inaccuracies in the wetland boundaries were identified during the field verification process. Some of these boundary corrections required changes in the results of the functional analysis and therefore the previous wetland ranking.

The six new potential prime wetlands were evaluated in comparison to the 21 original qualifying wetlands. A final ranking of the 27 wetlands found significant break between the Prime Wetland Candidates and the remaining qualifying wetlands. Two of the wetlands were combined based on identifying a connection in the field.

3. Prime Wetland Candidates

The table below lists thirteen proposed prime wetland candidates, which represent the largest and highest functioning wetlands within the city. These wetlands total 1,860 acres: 1,736 acres of freshwater wetlands and 124 acres of tidal marsh. Eleven of the thirteen wetlands are over 40 acres in size. The salt marsh prime wetland candidates include the upper Sagamore creek marsh (062) the main Sagamore Creek marsh (061A) and the Little Harbor cove salt marshes (061B). The upper Sagamore Creek salt marsh totals 44 acres. The main Sagamore Creek marsh has four components including Tucker's cove marsh totaling 67 acres. The Little Harbor cove salt marsh complex is also made up of four separate components totaling 13 acres. In addition to their top 13 ranking, the proposed prime wetlands comprise the most diverse and critical wetland wildlife habitat in Portsmouth. These systems also are adjacent to some of the only remaining undisturbed upland habitat within the City boundaries. Together, they will provide crucial links between habitats in the form of undisturbed wildlife corridors.

ID	Size (in acres)	Rank	Justification
001	106.12	7	▪ Adjacent to Berry's Brook wetland complex ▪ Atlantic White Cedar stands ▪ 6th largest wetland
002	222.85	2	▪ Berry's Brook wetland complex ▪ 2nd largest wetland ▪ Rare species habitat
003A	542.26	1	▪ Great Bog ▪ Largest wetland ▪ Rare species habitat

005	203.83	3	▪ Berry's Brook wetland complex ▪ 3rd largest wetland ▪ Rare species habitat
006	48.5	8	▪ 7th largest wetland ▪ Unique wet meadow complex ▪ Headwaters of Sagamore Creek
007	99.39	6	▪ 4th largest wetland ▪ High level of diversity ▪ Headwaters to Hodgson Brook
015	35.22	11	▪ High value freshwater marsh habitat ▪ Abuts natural forestland ▪ High potential for wetland restoration
018 & 026	32.54*	10	▪ Unique open water habitat ▪ Diverse wetland complex ▪ Potential rare species habitat
019	15.07	12	▪ Tributary to Sagamore Creek ▪ Undisturbed wetland system w/natural buffers ▪ High value freshwater marsh habitat
023	55.08	9	▪ 8th largest wetland ▪ Atlantic White Cedar stands ▪ Adjacent Packers Bog in Greenland
061A	67.46	4	▪ Largest salt marsh ▪ Rare species habitat ▪ Critical fisheries habitat
061B	13.38	13	▪ One of only two salt marsh complexes ▪ Rare species habitat ▪ Critical fisheries habitat
062	43.54	5	▪ 2nd largest salt marsh ▪ Rare species habitat ▪ Critical fisheries habitat

5. Wetlands Eliminated From Consideration

ID	Size (in acres)	Rank	Justification
003B	18.65	22	▪ Directly abuts highway on 3 sides ▪ Invasive species ▪ No connection to upland habitat
004	50.46	14	▪ Does not qualify due to lack of very poorly drained soils
013A	39.97	18	▪ Historical wetland impacts ▪ Incorrectly mapped and 60% of original size ▪ Disconnected and culverted
013B	5.17	20	▪ Historical wetland impacts ▪ Water quality degradation observed ▪ Invasive species ▪ Small size (5 acres)
014	19.87	16	▪ Historical wetland impacts ▪ Surrounded by development ▪ Water quality degradation observed ▪ No connection to upland habitat
016	50.72	15	▪ Does not qualify due to lack of very poorly drained soils
022	19.65	19	▪ Incorrectly mapped and 70% of original size ▪ Surrounded by development

* (22.16+10.38)

			▪ Historical wetland impacts
029	21.88	17	▪ Incorrectly mapped and 50% of original size ▪ Surrounded by development ▪ Historical wetland impacts
031	15.09	21	▪ Surrounded by development ▪ Water quality degradation observed ▪ No connection to upland habitat
038	4.96	24 (tied)	▪ Small size ▪ Not recommended for consideration by CWWI ▪ Lacks diversity
044	4.56	24 (tied)	▪ Small size ▪ Not recommended for consideration by CWWI ▪ Lacks diversity
050	5.78	23	▪ Very small size ▪ Surrounded by development
117	2.51	26	▪ Small size ▪ Not recommended for consideration by CWWI ▪ Lacks diversity

5. Orthophoto Map of Proposed Prime Wetlands

See attached map.

Appendix A

Field Forms for Prime Wetlands Proposed
And
Those Eliminated from Consideration

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 001

Date: September 2006

Size: ~~110~~ 106.12 acres

Estimated Percent of Very Poorly Drained Soils: 85%

Field Soils Verification Plots: Plot A along railroad bed

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E

Classification Change since 2002: Only hydrology descriptive to be added

Boundary Verification

Changes to boundary: Yes, along eastern boundary 2+ acres of upland

Inlet Streams: Yes, mostly drainage ditches from adjacent development

Outlet Streams: Yes, Berry's Brook to the south, minimal culverting under railroad bed to the west

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: New subdivision to the east

Potential Water Quality Impacts: Runoff from commercial development off of Weatherstone Street

Natural Heritage Elements Present: Atlantic White Cedar stands

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 50% / Commercial 20% / Woodland 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, aquatic habitat present

Does this Wetland Rate High in Educational/Scientific Value? Yes, 7th in GES study

Does this wetland provide open vistas? Minimal

Is this wetland connected to open space land? Yes, in Greenland

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: ranks 5th in GES study for most functions

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

WEST ENVIRONMENTAL

Justification: Atlantic White Cedar swamp connected to Packer Bog in Greenland

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 002

Date: September 2006

Size: ~~400±~~ 222.85 acres

Est. Percent of Very Poorly Drained Soils: 60% with boundary adjustment

Field Soils Verification Plots: Plot 002A off Lang Road

Classification(s) in 2002 Wetland Mapping: PFO4E/PFO1E/SS1E

Classification Change since 2002: Yes – PEM1/SS1E

Boundary Verification — Changes to boundary: Yes, extensive changes along western & eastern boundaries 10 acres of upland

Inlet Streams: Yes, Berry's Brook from south and runoff from adjacent development west

Outlet Streams: Yes, Berry's Brook to the north

Ecological Integrity

Recent Impacts since 2002: Minimal

Recent Buffer Development since 2002: Minimal

Potential Water Quality Impacts: Stormwater runoff

Natural Heritage Elements Present: Possible spotted turtle habitat

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 70% / Fields 10% / Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, ranked 2nd

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranked 2nd

Does this wetland provide open vistas? Yes, ranked 1st although Sagamore Creek should rank higher

Is this wetland connected to open space land? Yes, in central portion

Potential Restoration Opportunity

Type of impact to wetland:

Approximate area of restoration:

Prime Wetland?

Functional Analysis: ranks 2nd in GES for most functions

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

WEST ENVIRONMENTAL

Justification: 2nd largest wetland, connected to Berry's Brook & Prime Wetlands, maintains vegetated buffers in many locations

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 003A Date: September 2006

Size: ~~573~~ 542.26 acres Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Plot 003A-A off of railroad bed

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E

Classification Change since 2002: PEM1E & PSS1E – correction, not change

Boundary Verification Changes to boundary: Minimal only along northern tip of Griffin Avenue

Inlet Streams: Yes, from west

Outlet Streams: Yes, to the west under Interstate 95 into Pickering Brook

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, Griffin Ave / Ocean Ave

Potential Water Quality Impacts: Yes, from Interstate 95

Natural Heritage Elements Present: NE Cottontail, Atlantic White Cedar, heavy fruited sedge, tufted loosestrife

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 10% / Forest 30% / Commercial 40% / Field 10%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, 1st

Does this Wetland Rate High in Educational/Scientific Value? Yes, 1st

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity
Type of impact to wetland: Invasive species

Approximate area of restoration: Interstate 95

Prime Wetland?
Functional Analysis: Ranked 1st in GES stuffy for most functions & values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Great Bog is one of the largest contiguous wetlands in Coastal NH and is home for rare plants and wildlife

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 005 Date: September 2006

Size: ~~250~~ 203.83 acres Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Plot 005-A off Lang Road

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E & PEM1/FO1E

Classification Change since 2002: No

Boundary Verification Changes to boundary: Yes, elimination of areas adjacent to Route 1 and along southern boundary

Inlet Streams: Yes, Berry's Brook from south

Outlet Streams: Yes, Berry's Brook to the north

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: Minor along western boundary

Potential Water Quality Impacts: Stormwater runoff

Natural Heritage Elements Present: Possible spotted turtle habitat

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 60% / Commercial 10% / Woodland 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, ranked 3rd

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranked 4th

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, in Rye to the south

Potential Restoration Opportunity
Type of impact to wetland: Fill along southwest boundary adjacent to commercial development on Route 1; phragmites invasion off of Dolphin Drive

Approximate area of restoration: 0.5 acres

Prime Wetland?
Functional Analysis: Ranks 3rd in GES study for most functions & values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

WEST ENVIRONMENTAL

Justification: Combined w/ Wetland 002, this is the largest wetland in the city. This wetland ranked 3rd in GES stuffy for the most functions and values and will help to protect Berry's Brook

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 006

Date: September 2006

Size: ~~89~~ 48.5 acres

Estimated Percent of Very Poorly Drained Soils: 60%

Field Soils Verification Plots: 006-A along railroad bed

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E

Classification Change since 2002: PEM1E and PEM1Ed

Boundary Verification

Changes to boundary: Yes, northern portion eliminated

Inlet Streams: Yes, headwaters to Sagamore Creek

Outlet Streams: Yes, Sagamore Creek drains under Peverly Hill Road

Ecological Integrity

Recent Impacts since 2002: None

Recent Buffer Development since 2002: Minor along Banfield Road

Potential Water Quality Impacts: None

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 10% / Woodland 70% / Fields 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity

Type of impact to wetland: None

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis:. 6 out of 7 principal functions present

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Diverse wetland with uncommon wet meadow component and intact natural buffers, headwaters to Sagamore Creek.

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 007 Date: September 2006

Size: ~~145~~ 99.39 acres Estimated Percent of Very Poorly Drained Soils: 60%

Field Soils Verification Plots: 007-A along access road

Classification(s) in 2002 Wetland Mapping: PFO1 – PFO1/SS1E

Classification Change since 2002: PEM1/SS1E

Boundary Verification Changes to boundary: Extensive – eliminated / adjust northern boundary

Inlet Streams: Yes, Grafton Ditch

Outlet Streams: Yes, tributary to Hogden Brook drains southeast under Interstate 95

Ecological Integrity
Recent Impacts since 2002: Yes, along northcentral boundary

Recent Buffer Development since 2002: Yes, commercial buildings along northern boundary

Potential Water Quality Impacts: Yes, from stormwater runoff – commercial development and Interstate 95

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 30% / Woodland 30% / Commercial 30% / Fields 10%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity
Type of impact to wetland: Water quality impacts to Grafton Ditch from Pease Tradeport

Approximate area of restoration: 0.5 acres along 1,000 linear feet of stream

Prime Wetland?
Functional Analysis: 7 out of 7 principal functions present

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

WEST ENVIRONMENTAL

Justification: Top five sized wetlands in city, diverse wildlife habitat, headwaters to Hogden Brook

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 15 Date: September 2006

Size: ~~36~~ 35.22 acres Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Plot 15-A along the railroad tracks

Classification(s) in 2002 Wetland Mapping: PEM1Eb

Classification Change since 2002: No

Boundary Verification Changes to boundary: Yes, minor fingers

Inlet Streams: No

Outlet Streams: Yes, to the south

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Significant untreated stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 10% / Commercial 50% / Woodland 40%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, ranks 9th

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranks 8th

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, part of well head protection area

Potential Restoration Opportunity
Type of impact to wetland: Water quality degradation

Approximate area of restoration: Several acres

Prime Wetland?
Functional Analysis: Ranks in top ten in most categories of GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Maintains vegetated buffers on two sides with mature forest habitat; portions of marsh are diverse and healthy

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 18 & 26 Date: September 2006
22.16 + 10.38 = 32.54
Size: ~~31 & 11~~ = 42 acres Estimated Percent of Very Poorly Drained Soils: 80%

Field Soils Verification Plots: Plot 18-A along the railroad bed

Classification(s) in 2002 Wetland Mapping: PEM/SS1E and PUBH/PFO1E

Classification Change since 2002: No, but beaver are active

Boundary Verification Changes to boundary: Yes, minor in southeastern corner

Inlet Streams: Yes, from wetland 26

Outlet Streams: Yes, to the north

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, from large commercial development to the north

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 40% / Commercial 40% / Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, ranks 10th

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranks 5th

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity
Type of impact to wetland: Water quality degradation

Approximate area of restoration: several acres

Prime Wetland?
Functional Analysis: Combined wetlands rank in top ten in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Pond habitat relatively rare for the city; diverse wetland with vegetated buffers still present

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 19 Date: September 2006

Size: ~~16~~ 15.07 acres Estimated Percent of Very Poorly Drained Soils: 70%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PSS1E/FO1E

Classification Change since 2002: No

Boundary Verification Changes to boundary: Yes, minor along eastern boundary

Inlet Streams: Yes, drainages

Outlet Streams: Yes, to Sagamore Creek (Wetland 61A)

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, at Tuckers Cove development to the east

Potential Water Quality Impacts: Minimal

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 60% / Woodland 40%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranks 7th

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, part of Urban Forestry Center

Potential Restoration Opportunity
Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?
Functional Analysis: Ranks high in finfish habitat and education potential in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Maintains vegetated buffers and has uncommon wet meadow habitat; tributary to Sagamore Creek Estuary

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 23 Date: September 2006

Size: ~~71~~ 55.08 acres Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: 023-A along railroad bed

Classification(s) in 2002 Wetland Mapping: PFO4E & PFO1E

Classification Change since 2002: No

Boundary Verification Changes to boundary: Yes, along northern boundary

Inlet Streams: No

Outlet Streams: Connected to Packer Bog

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, along northern boundary

Potential Water Quality Impacts: Yes, from stormwater runoff

Natural Heritage Elements Present: Atlantic White Cedar stands

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 30% / Woodland 70%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes, ranked 6th

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, Packer Bog in Greenland

Potential Restoration Opportunity
Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?
Functional Analysis: Ranks 6th in GES study for most functions and values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Contiguous to Packer Bog in Greenland; extensive stands of Atlantic White Cedar

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 61A Date: September 2006

Size: ~~120~~ 67.46 acres Estimated Percent of Very Poorly Drained Soils: 100%

Field Soils Verification Plots: Plot A along Route 1

Classification(s) in 2002 Wetland Mapping: PEM1 (wrong)

Classification Change since 2002: E2EM1P – not a change, but a correction

Boundary Verification Changes to boundary: Yes, mudflats were eliminated because they are not vegetated wetlands

Inlet Streams: Yes, Sagamore Creek

Outlet Streams: Tidal estuary

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: New subdivision Tucker's Cove

Potential Water Quality Impacts: Runoff from Route 1 and associated commercial development

Natural Heritage Elements Present: Artic / common terns feeding habitat

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 30% / Commercial 20% / Woodland 50%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, fisheries and tidal marsh habitat

Does this Wetland Rate High in Educational/Scientific Value? Yes, 3rd in GES study

Does this wetland provide open vistas? One of the highest ranking for visual aesthetic quality

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity
Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?
Functional Analysis: ranks 4th in GES study for most functions and values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Most important estuary / salt marsh in Portsmouth

WEST ENVIRONMENTAL

West Environmental Inc.

Portsmouth Vegetated Tidal Marsh Evaluation

Date: September 2006

Wetland ID: 61A Wetland Size: 120 acres Wetland Classification: E2EM1P

Type of Marsh System:

	yes	no
Coastal/Back Barrier Marsh		
Marsh derives most of its sediments from sea water	___	_X_
No major tidal rivers flow into this marsh	___	___
Marsh located adjacent to Atlantic coast	___	___
Dominated by Spartina patens	___	___
Estuarine Marsh		
Marsh derives majority of sediment from freshwater	_X_	___
Associated with major tidal river and/or bay	___	___
Meadow Marsh		
Contains more than 50% high marsh	___	_X_
Dominated by Spartina patens	___	_X_
Fringe Marshes		
Exposed to wind and wave energy	_X_	___
Located along river and bay shoreline	_X_	___
Minimal high marsh	_X_	___
Gentle grade from open water to upland	___	_X_
Dominated by Spartina alterniflora	_X_	___

Ecological Integrity:

Land use within 500 foot zone of influence

_20%_ Residential _10%_ Roads _5%_ Parking Lots _10%_ Freshwater wetlands _55%_ Forested

_X_Invasive plants present
- _X_<5% invasive species
- ___5% - 20% dominated by invasive species
- ___> 20% dominated by invasive species

Does restriction restrict seawater into wetland? NO

Does restriction detain freshwater from entering wetland? NO

Does restriction affect flow? NO

_NO_Tidal Restrictions present

_X_Is wetland ditched
- ___grid pattern
- _X_linear pattern

_X_Buffer present

Shoreline Anchoring:

Type of marsh system
- _X_estuarine fringe (receives more erosive energy force)
- ___estuarine meadow
- ___coastal/back-barrier

Wetland morphology
- ___no distinct bank between wetland and upland/freshwater wetland
- _X_distinct vegetated bank present
- ___distinct non-vegetated bank present

Finfish & Shellfish Habitat:

_X_Shellfish beds present
_X_Ecological impacts present
_X_Diverse wetland system
_X_Wetland connection to freshwater wetland or stream
_X_Wetland used for feeding, breeding, protection, or migration
_X_Fisheries habitat present

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 61B 1 through 11 Date: September 2006

Size: ~~5~~ 13.38 acres Estimated Percent of Very Poorly Drained Soils: 100%

Field Soils Verification Plots: Plot A near Bell Island Bridge

Classification(s) in 2002 Wetland Mapping: PEM1 (wrong)

Classification Change since 2002: E2EM1P – not a change, but a correction

Boundary Verification Changes to boundary: Yes, mudflats were eliminated because they are not vegetated wetlands

Inlet Streams: Yes, from Curriers Cove

Outlet Streams: Tidal estuary

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: Some house lots

Potential Water Quality Impacts: Runoff from adjacent development

Natural Heritage Elements Present: Artic / common terns feeding habitat

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 60% / School 20% / Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, fisheries and tidal marsh habitat

Does this Wetland Rate High in Educational/Scientific Value? Yes, directly adjacent to Little Harbour School

Does this wetland provide open vistas? One of the higher ranking for visual aesthetic quality

Is this wetland connected to open space land? Yes, cemetery

Potential Restoration Opportunity
Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?
Functional Analysis: Not ranked in GES study, but very high valued tidal marsh habitat

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Important estuary / salt marsh in Portsmouth

WEST ENVIRONMENTAL INC.

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 62

Date: September 2006

Size: ~~110~~ 43.54 acres

Estimated Percent of Very Poorly Drained Soils: 85%

Field Soils Verification Plots: Plot A along railroad bed

Classification(s) in 2002 Wetland Mapping: PEM1 (wrong)

Classification Change since 2002: E2EM1P – not a change, but a correction

Boundary Verification

Changes to boundary: No

Inlet Streams: Yes, Sagamore Creek

Outlet Streams: Creek flows under Route 1

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Commercial re-development

Potential Water Quality Impacts: Runoff from commercial development surrounding wetland

Natural Heritage Elements Present: Artic / common terns feeding habitat

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 50% / Commercial 20% / Woodland 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes, fisheries and salt marsh habitat

Does this Wetland Rate High in Educational/Scientific Value? Yes, but not in GES study

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: ranks 7th in GES study for most functions and values

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: Yes

Justification: Part of largest salt marsh system in Portsmouth

WEST ENVIRONMENTAL

West Environmental Inc.
Portsmouth Vegetated Tidal Marsh Evaluation

Date: September 2006

Wetland ID: 62 Wetland Size: 44 acres Wetland Classification: E2EM1P

Type of Marsh System:

Coastal/Back Barrier Marsh	yes	no
Marsh derives most of its sediments from sea water	___	_X_
No major tidal rivers flow into this marsh	___	_X_
Marsh located adjacent to Atlantic coast	___	_X_
Dominated by Spartina patens	___	_X_
Estuarine Marsh		
Marsh derives majority of sediment from freshwater	_X_	___
Associated with major tidal river and/or bay	_X_	___
Meadow Marsh		
Contains more than 50% high marsh	___	___
Dominated by Spartina patens	___	___
Fringe Marshes		
Exposed to wind and wave energy	_X_	___
Located along river and bay shoreline	_X_	___
Minimal high marsh	_X_	___
Gentle grade from open water to upland	_X_	___
Dominated by Spartina alterniflora	_X_	___

Ecological Integrity:

Land use within 500 foot zone of influence

_30%_ Residential _10%_ Roads _30%_ Parking Lots _10%_ Freshwater wetlands _20%_ Forested

_X_Invasive plants present
- _X_<5% invasive species
- ___5% - 20% dominated by invasive species
- ___> 20% dominated by invasive species

Does restriction restrict seawater into wetland? NO
Does restriction detain freshwater from entering wetland? NO
Does restriction affect flow? Yes, minor

_YES_Tidal Restrictions present

_X_Is wetland ditched
- ___grid pattern
- _X_linear pattern

___Buffer present

Shoreline Anchoring:

Type of marsh system
- _X_estuarine fringe (receives more erosive energy force)
- ___estuarine meadow
- ___coastal/back-barrier

Wetland morphology
- ___no distinct bank between wetland and upland/freshwater wetland
- _X_distinct vegetated bank present
- ___distinct non-vegetated bank present

Finfish & Shellfish Habitat:

_X_Shellfish beds present
_X_Ecological impacts present
_X_Diverse wetland system
_X_Wetland connection to freshwater wetland or stream
_X_Wetland used for feeding, breeding, protection, or migration
_X_Fisheries habitat present

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 003B

Date: September 2006

Size: ~~19~~ 18.65 acres

Estimated Percent of Very Poorly Drained Soils: 75%

Field Soils Verification Plots: Plot 003B-A along railroad tracks

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1 & PEM1E/SS1E

Classification Change since 2002: Some die back of canopy – PF05

Boundary Verification

Changes to boundary: No

Inlet Streams: No, just runoff

Outlet Streams: Drainage into 003A

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, Griffin Ave

Potential Water Quality Impacts: Yes, from Interstate 95

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Highway 65% / Wetland across RR 25% / Commercial 10%

Is Wildlife Habitat a Principal Function of this Wetland? No

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation

Approximate area of restoration: 20%

Prime Wetland?

Functional Analysis: Ranks relatively low

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Fragmented wetland surrounded by highway off ramp and railroad bed with invasive species present

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 004 Date: September 2006

Size: ~~51~~ 50.46 acres Estimated Percent of Very Poorly Drained Soils: 25%

Field Soils Verification Plots: Off Girl Scout trail

Classification(s) in 2002 Wetland Mapping: N/A

Classification Change since 2002: PFO1/4E

Boundary Verification Changes to boundary: N/A

Inlet Streams: Yes, from southwest

Outlet Streams: Yes, to northeast under Banfield Road

Ecological Integrity
Recent Impacts since 2002: None

Recent Buffer Development since 2002: Minor along Banfield Road

Potential Water Quality Impacts: Yes, from Banfield Road runoff

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Commercial 20% / Woodland 80%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes, with Scout property

Does this wetland provide open vistas? Limited

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity
Type of impact to wetland: None

Approximate area of restoration: N/A

Prime Wetland?
Functional Analysis: 6 out of 7 principal functions

Does this wetland qualify as prime? No

Prime Wetland Recommendation: No

Justification: Does not qualify

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 13A

Date: September 2006

Size: ~~25~~ 39.97 acres in two areas

Estimated Percent of Very Poorly Drained Soils: 60%

Field Soils Verification Plots: Plot 13A-A behind high school

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E

Classification Change since 2002: Some areas of emergent wetland

Boundary Verification

Changes to boundary: Extensive changes eliminating 30% of wetland area and separating them into two areas

Inlet Streams: Yes, from north

Outlet Streams: Through culvert to Wetland 13B

Ecological Integrity

Recent Impacts since 2002: Additional upgrades to high school

Recent Buffer Development since 2002: High school additions

Potential Water Quality Impacts: Stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: High school 40% / Residential 50% / Woodland 10%

Is Wildlife Habitat a Principal Function of this Wetland? No

Does this Wetland Rate High in Educational/Scientific Value? It has the opportunity with its proximity to the high school

Does this wetland provide open vistas? No

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation from stormwater runoff

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranking is inaccurate because of size discrepancy; it actually ranks lower than GES study indicates

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Fragmented disturbed wetland system with degraded wildlife habitat

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 13B Date: September 2006

Size: ~~5.2~~ 5.17 acres Estimated Percent of Very Poorly Drained Soils: 80%

Field Soils Verification Plots: Plot 13B-A next to ball fields

Classification(s) in 2002 Wetland Mapping: P SS1/ FO1E

Classification Change since 2002: No

Boundary Verification Changes to boundary: No

Inlet Streams: Yes, from Wetland 13A

Outlet Streams: Yes, to Sagamore Creek (Wetland 61A)

Ecological Integrity
Recent Impacts since 2002: None

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, runoff from adjacent ball fields could contain fertilizers

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 25% / Commercial 25% / High school 25% / Woodland 25%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No, but it has the opportunity

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes, Sagamore Creek (?)

Potential Restoration Opportunity
Type of impact to wetland: Water quality degradation

Approximate area of restoration: Area adjacent high school

Prime Wetland?
Functional Analysis: Ranks low in GES study, very small size

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

WEST ENVIRONMENTAL

Justification: Small size, adjacent development, invasive species and historic disturbance

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 14
1987
Size: ~~20~~ acres

Date: September 2006

Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Plot 14-A adjacent to hospital parking lot

Classification(s) in 2002 Wetland Mapping: PEM1E

Classification Change since 2002: PSS1E could be added

Boundary Verification

Changes to boundary: Yes, entire southern finger should be eliminated

Inlet Streams: No

Outlet Streams: No

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, from Interstate 95

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 10% / Commercial 50% / Highway 25% / Wetland 15%

Is Wildlife Habitat a Principal Function of this Wetland? No

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Yes

Potential Restoration Opportunity

Type of impact to wetland: Water quality degradation from stormwater runoff

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranked low in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

WEST ENVIRONMENTAL

Justification: Surrounded by development with no buffers on three sides and invasive species

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 16

Date: September 2006

Size: 50-72 ~~50~~ acres

Estimated Percent of Very Poorly Drained Soils: 20%

Field Soils Verification Plots: 016-A off Campus Drive

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: Yes, southeast finger eliminated

Inlet Streams: No

Outlet Streams: Yes, to north / piped

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, Water Country parking lot upgrades andc Banfield Road development

Potential Water Quality Impacts: Stormwater runoff from adjacent development

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 10% / Woodland 20% / Commercial 60% / Sandpit 10%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes, Community Campus

Does this wetland provide open vistas? No

Is this wetland connected to open space land? Yes, recreation land

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: 5 out of 7 principal functions present

Does this wetland qualify as prime? No

Prime Wetland Recommendation: No

Justification: Does not qualify

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 22 Date: September 2006

Size: ~~22~~ 19.65 acres Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: Along Jones Avenue

Classification(s) in 2002 Wetland Mapping: PEM1E & PSS1E/FO1E

Classification Change since 2002: No

Boundary Verification Changes to boundary: Yes, minor along northern boundary

Inlet Streams: No

Outlet Streams: Yes, under Jones Avenue to Wetland 13A

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, along southern boundary

Potential Water Quality Impacts: Yes, from stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 80% / Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes, a few

Is this wetland connected to open space land? No

Potential Restoration Opportunity
Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?
Functional Analysis: Ranks low in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Surrounded by development with limited vegetated buffers

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 29 Date: September 2006

Size: ~~12~~ 21.88 acres Estimated Percent of Very Poorly Drained Soils: 75%

Field Soils Verification Plots: 029-A

Classification(s) in 2002 Wetland Mapping: PSS1/ FO1E

Classification Change since 2002: PEM1E

Boundary Verification Changes to boundary: Major change to western portion which is all upland

Inlet Streams: No

Outlet Streams: Yes, under Jones Avenue

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: Yes, new development on southern boundary of wetland

Potential Water Quality Impacts: Minor from residential development

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 80% / Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? Yes

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity
Type of impact to wetland: None

Approximate area of restoration: N/A

Prime Wetland?
Functional Analysis: 1 out of 7 in GES Study / WEI found 5 out of 7 functions present

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Surrounded by development with minimal vegetated buffers

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 31

Date: September 2006

Size: ~~15~~ 15.09 acres

Estimated Percent of Very Poorly Drained Soils: 90%

Field Soils Verification Plots: 031-A off Sherburne Street

Classification(s) in 2002 Wetland Mapping: PFO1/SS1E/EM1E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: Minor

Inlet Streams: No

Outlet Streams: Yes, under Essex Ave to the east

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, from apartment complex

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 100%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: 2 out of 7 in GES Study / WEI found 4 out of 7 functions present

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Surrounded by development with minimal vegetated buffers

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 38 Date: September 2006

Size: ~~5~~ 4.96 acres Estimated Percent of Very Poorly Drained Soils: 50%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PFO4E

Classification Change since 2002: No

Boundary Verification Changes to boundary: No

Inlet Streams: No

Outlet Streams: No

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, from stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 70% / Woodland 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? No

Is this wetland connected to open space land? No – surrounded by development

Potential Restoration Opportunity
Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?
Functional Analysis: Ranked low in GES Study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Very small (5 acres), surrounded by development, no diverse or unique habitat

WEST ENVIRONMENTAL

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 44

Date: September 2006

Size: ~~4.6~~ 4.56 acres

Estimated Percent of Very Poorly Drained Soils: 80%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E

Classification Change since 2002: No

Boundary Verification

Changes to boundary: No

Inlet Streams: Part of a larger wetland in Rye

Outlet Streams: N/A

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: No

Natural Heritage Elements Present: Unknown

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 35% / Woodland 25% / Golf course 40%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? Yes

Is this wetland connected to open space land? Unknown

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranked low in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Most of this wetland is in Rye and the city cannot designate wetlands outside of Portsmouth

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 50 Date: September 2006

Size: ~~5.8~~ 5.78 acres Estimated Percent of Very Poorly Drained Soils: less than 50%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E with an area of PEM1E

Classification Change since 2002: No

Boundary Verification Changes to boundary: No

Inlet Streams: Yes, from south

Outlet Streams: Yes, from north

Ecological Integrity
Recent Impacts since 2002: No

Recent Buffer Development since 2002: No

Potential Water Quality Impacts: Yes, surrounded by development

Natural Heritage Elements Present: No

Urban Quality of Life
Dominant Land Use within 1500 feet of wetland: Residential 50% / Woodland 20% / Commercial 30%

Is Wildlife Habitat a Principal Function of this Wetland? Yes

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? No

Is this wetland connected to open space land? No

Potential Restoration Opportunity
Type of impact to wetland: Water quality degradation

Approximate area of restoration: N/A

Prime Wetland?
Functional Analysis: Ranked low in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

WEST ENVIRONMENTAL

Justification: Very small (6 acres) surrounded by commercial / residential development with minimal vegetated buffers, water quality degragation present

West Environmental, Inc.
Portsmouth Prime Wetland Designation Data Form

Wetland ID: 117

Date: September 2006

Size: ~~2.5~~ 2.51 acres

Estimated Percent of Very Poorly Drained Soils: 50%

Field Soils Verification Plots: No

Classification(s) in 2002 Wetland Mapping: PFO1E/SS1E

Classification Change since 2002: Emergent area established

Boundary Verification

Changes to boundary: No

Inlet Streams: Yes, from south

Outlet Streams: Yes, from north under Gosport Road

Ecological Integrity

Recent Impacts since 2002: No

Recent Buffer Development since 2002: Residential subdivision

Potential Water Quality Impacts: Yes, from stormwater runoff

Natural Heritage Elements Present: No

Urban Quality of Life

Dominant Land Use within 1500 feet of wetland: Residential 80% / Woodland 20%

Is Wildlife Habitat a Principal Function of this Wetland? No

Does this Wetland Rate High in Educational/Scientific Value? No

Does this wetland provide open vistas? No

Is this wetland connected to open space land? No

Potential Restoration Opportunity

Type of impact to wetland: No

Approximate area of restoration: N/A

Prime Wetland?

Functional Analysis: Ranked lowest in GES study

Does this wetland qualify as prime? Yes

Prime Wetland Recommendation: No

Justification: Surrounded by residential development with minimal vegetated buffers; not diverse or unique

WEST ENVIRONMENTAL

Appendix B

City Council Action Sheet

From July 10, 2010 Portsmouth City Council Meeting

With Approval to Adopt Prime Wetlands As Described

TO: JOHN P. BOHENKO, CITY MANAGER

FROM: VALERIE A. FRENCH, DEPUTY CITY CLERK

RE: ACTIONS TAKEN BY THE PORTSMOUTH CITY COUNCIL MEETING HELD ON JULY 19, 2010, EILEEN DONDERO FOLEY COUNCIL CHAMBERS, MUNICIPAL COMPLEX, ONE JUNKINS AVENUE, PORTSMOUTH, NEW HAMPSHIRE

PRESENT: MAYOR FERRINI, ASSISTANT MAYOR NOVELLINE CLAYBURGH, COUNCILORS HEJTMANEK, SPEAR, DWYER*, COVIELLO AND SMITH
ABSENT: COUNCILORS LISTER AND KENNEDY

*Councilor Dwyer participated via conference call, therefore all votes were taken by roll call in compliance with the Right-to-know RSA.

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1. At 6:00 p.m., an Anticipated "Non-Meeting" with Counsel was held regarding Negotiations – RSA 91-A:2, I (b-c).

2. Acceptance of Minutes – June 21, 2010 – Voted on a 7-0 roll call to approve and accept the minutes of the June 21, 2010 City Council meeting.

3. Public Comment Session – There were 6 speakers: Karina Quintans (Downtown Portsmouth Zero Waste Project); Martin Cameron and Bill St. Laurent (WWI Monuments); Al Lapanne and Bill St. Laurent (Opening Sherburne Gate); Al Silva (Projecting Sign at 19 Congress Street); and Mary Lou McElwain (Red Ginger Sidewalk Obstruction)

4. Public Hearing – Pursuant to RSA 482-A:15 II on the Designation of Prime Wetlands in Accordance with the Report Prepared for the Conservation Commission by West Environmental in February 2007 – Held a public hearing. One speaker, Philip Stokel.

5. Acceptance of Conservation License Plate Grant – Voted on a 7-0 roll call to authorize the City Manager to accept and expend a $10,000.00 grant from the State of New Hampshire Division of Historical Resources Conservation License Plate Grant Program for the Morton-Benedict House Roof Project.

6. Acceptance of Donations to the Coalition Legal Fund - Voted on a 7-0 roll call to approve and accept the donations, as listed, to be placed in the Coalition Legal Fund.
   - Town of Carroll - $1,000.00
   - Town of Moultonborough - $5,000.00
   - Town of Tuftonboro - $5,000.00

7. Voted on a 7-0 roll call to suspend the rules to take up Item X.A.1. – Prime Wetlands Designation.

8. Prime Wetlands Designation – Moved to adopt prime wetlands as designated on the Proposed Prime Wetland map with the exception of wetland 007 located on the Pease Tradeport and to authorize the City Manager to forward all necessary supporting documentation to the NH Department of Environmental Services for their review. Motion to table this matter for a report back from Planning Department failed on a 2-5 roll call vote. Main motion passed on a 6-1 roll call vote, Councilor Smith opposed.

9. Prime Wetlands Designation - Voted on a 7-0 roll call to authorize the City Manager to send a letter to the Pease Development Authority to ask them to seek State designation of wetland 007 as a Prime Wetland.

10. Consent Agenda – Voted on a 7-0 roll call to adopt the Consent Agenda.

    A. Letter from James Heinz and Rochelle Jones requesting permission to hold a softball game fundraiser for firefighter Sarah Fox on Sunday, August 22, 2010 at 2:00 p.m. at Alumni Field ***(Anticipated action – move to refer to the City Manager with power)***

11. Letter from Cindi Blanchette, Portsmouth City Soccer Club, requesting permission to hang banners at Leary field during soccer season from mid August through November (Same conditions as last year) – Voted on a 7-0 roll call to refer to the City Manager with power.

12. Letter from Richard Adams requesting that the City Council reconsider its action regarding the WW I monuments. – Voted on a 6-1 roll call to accept and place the letter on file. Councilor Spear voted opposed.

13. Petition requesting to open the back gate on Sherburne Road for a trial period during construction of the bridge over Interstate 95 – Voted on a 7-0 roll call to refer to the Traffic and Safety Committee for a report back.

14. Letter from Thans Lapanne requesting to change the name of the portion of Sherburne Road on the Tradeport – Voted on a 7-0 roll call to refer to the Planning board for a report back.

15. Request for License Agreement RE: 51 Islington Street, LLC – Voted on a 6-0 roll call to authorize the City Manager to enter into a license agreement with 51 Islington Street LLC to facilitate construction activities. Councilor Coviello abstained from voting on the matter.

16. Request for a License from Jeff Casler, owner of the Second Time Around, for property located at 19 Congress Street to install a projecting sign – Vote on a 7-0 roll call to accept the recommendation of the Planning Board with the aforementioned stipulations and approve the request of Jeff Casler, owner of Second Time Around, to install a projecting sign on a new bracket at 19 Congress Street and further authorize the City Manager to execute a License Agreement for this request.

    1) The license shall be approved by the Legal Department as to content and form;
    2) Any removal or relocation of the projecting sign, for any reason, will be done at no cost to the City; and
    3) Any disturbance of a sidewalk, street or other public infrastructure resulting from the installation, relocation or removal of the projecting sign, for any reason, shall be restored at no cost to the City and shall be subject to review and acceptance by the Department of Public Works.

17. Approval of Downtown Portsmouth Zero Waste Project – Voted on a 7-0 roll call to authorize the City Manager to proceed with the placement of recycling containers in downtown Portsmouth, as presented at the work session and the map location.

18. Report Back Re: Red Ginger, LLC, 261 South Street – Voted on a 7-0 roll call to approve the extension of the Sidewalk Obstruction License for the Red Ginger, 261 South Street for the remainder of the year at which time it is renewable annually.

19. Request to Establish a Work Session with Recreation Board Re: Recreation Needs Study – Voted on a 7-0 roll call to establish a work session with the Recreation Board regarding the Recreation Needs Study on Tuesday, September 7, 2010 at 6:00 p.m.

20. Representatives to the Rockingham Metropolitan Planning Organization (MPO) Technical Advisory (TAC) – Voted on a 7-0 roll call to designate Steve Parkinson, Public Works Director, Dave Allen, Deputy Public Works Director (alternate) and Rick Taintor, Planning Director (alternate) to act as the City's representatives to the Rockingham Metropolitan Planning Organization (MPO) Technical Advisory Committee (TAC) for the July 2010 – June 30, 2013 term

21. Appointment to be Voted – Elissa Hill Stone – Appointment as an Alternate to the Conservation Commission – Voted on a 7-0 roll call to appoint Elissa Hill Stone as an alternate to the Conservation Commission with term to expire 04/01/2013.

22. Acceptance of Resignation – Susanne Delaney – Economic Development Commission – Voted on a 7-0 roll call to accept the resignation of Susanne Delaney from the Economic Development Commission with regret and a letter of appreciation.

23. Report Back from School Board Re: Final Budget Adjustments – Voted on a 7-0 roll call to place on file the list of final adjustments made by the Portsmouth School Board to the FY2010 Budget.

24. Letter from First Lady Michelle Obama Re: Preserve America Community Designation – Voted on a 7-0 roll call to place Letter from First Lady Michelle Obama regarding Preserve American Community Designation on file.

25. Mayor's Report – Request from African Burying Ground Committee to make a presentation before the Council. – Mayor Ferrini submitted into the record a letter from Vernis Jackson, Chair, African Burying Ground Committee, requesting to make a presentation to the City Council with a suggested date of September 20, 2010.

26. Parking Committee Action Sheet and Minutes of the July 8, 2010 meeting. – Voted on a 7-0 roll call to approve and accept the action sheet and minutes of the July 8, 2010 Parking Committee meeting.

27. Adjournment - At 8:35 p.m., voted on a 7-0 roll call to adjourn.

Respectfully submitted by:
Valerie A. French, Deputy City Clerk I

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

Other Information to Demonstrate No Significant Loss of Wetlands Values

Env-Wq 706.04(b)(4)

Introduction

This *Functional Assessment* and *Impact Analysis* was conducted to support a *NHDES Prime Wetland Waiver Request*. This project proposes to impact the intertidal zone and *Developed Upland Tidal Buffer Zone* which is also within a *Duly Established 100-Foot Prime Wetland Buffer*. Under NHDES Wetlands Bureau Administrative Rule Env-Wt 706.04, we are required to demonstrate this project will not result in the *significant net loss* of the wetland values identified by the municipality when the prime wetlands associated with the buffer was designated. This supplemental document assesses the additional values not highlighted within the initial Functions and Values Assessment included with the original permit application and the Functional Assessment and Impact Analysis of the wetland values set forth in RSA 482-A:1, as required by NHDES Wetlands Bureau Administrative Rule Env-Wt 704.02 and RSA 482-A:11, IV(a).

The impacts associated with this project are necessary to replace an existing failing bridge with a new bridge, remove exiting causeways within public waters that act as a significant tidal restriction, connect the island to municipal utilities, restore areas currently occupied by the causeways with salt marsh, restore the developed upland tidal buffer zone with native vegetation, and connect the island to municipal utilities.

The jurisdictional areas adjacent to the project site are predominantly Estuarine, Intertidal, Unconsolidated Shore, Cobble-Gravel (E2US1) and Estuarine, Intertidal, Unconsolidated Shore, Mud (E2US3). Isolated narrow bands of fringe salt marsh exist along the neighboring shorelines (E2EM1).

The upland area adjacent to the wetland is an approximately 12-acre island. The island consists of a single residential property that previously utilized some areas for equestrian purposes. The mainland consists of wooded areas with intermittent pockets of forested freshwater wetlands. No impacts are proposed to the freshwater wetlands. While the bulk of the areas to be impacted are previously developed, open areas, the NH Fish and Game Wildlife Action Plan (WAP) identifies the habitat adjacent to the area to be impacted as salt marsh and hemlock hardwood pine. The WAP indicates the Tidal Wetland resources are of the *Highest Ranked Habitat in NH*.

Methods

The wetland boundaries, more particularly, the *Highest Observable Tide Line* (HOTL), was delineated using the methods prescribed by NHDES Administrative Rule Env-Wt 602.23. The wetlands boundaries, including the limits of the 100-foot tidal buffer zone, are depicted on the attached site plans.

The wetlands were classified based on the Classification of Wetlands and Deepwater Habitats of the United States, adapted from Cowardin, Carter, Golet and LaRoe (1979), August 2013, FGDC-STD-004-2013.)

The Functional Assessment was conducted by performing field visits on June 6, 2022 and June 10, 2022. The wetlands were assessed using the *Army Corps of Engineers Highway Methodology* (September 1999, NAEEP-360-1-30a).

The *Ecological integrity* of the wetlands was assessed using the *Method for Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire (June 1993)* and data from the NH Fish and Game Wildlife Action Plan (WAP).

The City of Portsmouth Prime Wetland Analysis Report, January 2011, prepared by West Environmental, Inc. Services, which was used to assess wetland resources for the purpose of *Prime Wetlands Designation* under RSA 482-A:15, was referenced as well.

Additional Wetland Values Identified by the City of Portsmouth

1. Urban Quality of Life

This value evaluates the potential for the wetland to enhance the quality of urban life by providing wildlife habitat and other natural values in an urban setting.

Impact Analysis

Although the project is not occurring in an urban setting, the Prime Wetland *does* enhance the quality of life for the local residential community. While some impacts are proposed within the Prime Wetland Buffer, as a result of the salt marsh restoration, there will be no net loss of salt marsh area. This project proposes significant environmental improvements, and therefore, it will have no adverse impacts on the "Urban Quality of Life" value.

2. Open Vistas

This value evaluates the overall aesthetic quality and the ability of the wetland to provide scenic views.

Impact Analysis

While some impacts are proposed within the Prime Wetland Buffer, salt marsh restoration is proposed so there will be no net loss of salt marsh area. Removal of the existing unsightly causeways will significantly improve the open vistas. This project proposes significant environmental improvements and improvements to the existing vistas, and therefore, it will have no adverse impacts on the "Open Vistas" value.

Summary

In summary, the environmental benefits associated with this project far outweigh the subtle impacts that must occur to the Duly-Established 100-foot Prime Wetland Buffer, and therefore, in accordance with

NHDES Wetlands Bureau Administrative Rule Env-Wt 704.02 and RSA 482-A:11, IV(a), this project will not result in the *significant net loss* of the additional wetland functions and values identified by the City of Portsmouth when this wetland was nominated to become a prime wetland.

References

ACOE *Army Corps of Engineers Highway Methodology* (September 1999, NAEEP-360-1-30a).

Ammann, A.P. and A.L. Stone. 1993. *Method for Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire.*

Cowardin, L.M., V. carter, F.C Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deep-Water Habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Method for Comparative Evaluation of Nontidal Wetlands in New Hampshire (1991), (NH Method).

New Hampshire Fish and Game Department Wildlife Action Plan (WAP).

The City of Portsmouth Prime Wetland Analysis Report, January, 2011.

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NEW HAMPSHIRE 200

ABUTTER NOTIFICATION FOR
PRIME WETLAND BUFFER WAIVER REQUEST

VIA CERTIFIED MAIL

May 22, 2023

Lisa M. Oakes
315 Little Harbor Road
Portsmouth, NH 03801

Project # 47099.01

RE: NHDES Wetlands Permit Application – Lady Isle Bridge Replacement Project
325 Little Harbor Road, Portsmouth, Tax Map: 204, Lot: 5

Dear Abutter:

This letter is to inform you that a Prime Wetland Buffer Waiver Request will be filed with the NH Department of Environmental Services (NHDES). Under NH Wetlands Law, RSA 482-A:11, IV(c) impacts proposed within a Duly Established 100-Foot Prime Wetland Buffer require a waiver from NHDES. Because your property, too, is within the Duly Established 100-Foot Prime Wetland Buffer, we are required to notify of this waiver request. The application, including the plans that depict the proposed impact areas, are available for viewing at the City of Portsmouth Clerk's Office.

Sincerely,
TFMoran, Inc.

Jay Aube, CWS
Environmental Permitting Specialist

cc: NHDES Wetlands Bureau

JRA/ ah

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NEW HAMPSHIRE 200

ABUTTER NOTIFICATION FOR
PRIME WETLAND BUFFER WAIVER REQUEST

VIA CERTIFIED MAIL

May 22, 2023

Lisa A. Grondahl Revocable Trust
304 Maplewood Ave
Portsmouth, NH 03801

Project # 47099.01

RE: NHDES Wetlands Permit Application – Lady Isle Bridge Replacement Project
325 Little Harbor Road, Portsmouth, Tax Map: 204, Lot: 5

Dear Abutter:

This letter is to inform you that a Prime Wetland Buffer Waiver Request will be filed with the NH Department of Environmental Services (NHDES). Under NH Wetlands Law, RSA 482-A:11, IV(c) impacts proposed within a Duly Established 100-Foot Prime Wetland Buffer require a waiver from NHDES. Because your property, too, is within the Duly Established 100-Foot Prime Wetland Buffer, we are required to notify of this waiver request. The application, including the plans that depict the proposed impact areas, are available for viewing at the City of Portsmouth Clerk's Office.

Sincerely,
TFMoran, Inc.

Jay Aube, CWS
Environmental Permitting Specialist

cc: NHDES Wetlands Bureau

JRA/ ah

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran, Inc. Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NEW HAMPSHIRE 200

ABUTTER NOTIFICATION FOR
PRIME WETLAND BUFFER WAIVER REQUEST

VIA CERTIFIED MAIL

May 22, 2023

City of Portsmouth Conservation Commission
1 Junkins Ave
Portsmouth, NH 03801

Project # 47099.01

RE: NHDES Wetlands Permit Application – Lady Isle Bridge Replacement Project
325 Little Harbor Road, Portsmouth, Tax Map: 204, Lot: 5

Dear Abutter:

This letter is to inform you that a Prime Wetland Buffer Waiver Request will be filed with the NH Department of Environmental Services (NHDES). Under NH Wetlands Law, RSA 482-A:11, IV(c) impacts proposed within a Duly Established 100-Foot Prime Wetland Buffer require a waiver from NHDES.

Because your property, too, is within the Duly Established 100-Foot Prime Wetland Buffer, we are required to notify of this waiver request. The application, including the plans that depict the proposed impact areas, are available for viewing at the City of Portsmouth Clerk's Office.

Sincerely,
TFMoran, Inc.

Jay Aube, CWS
Environmental Permitting Specialist

cc: NHDES Wetlands Bureau

JRA/ ah

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran, Inc. Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NEW HAMPSHIRE 200

GOVERNING BODY NOTIFICATION FOR PRIME WETLAND BUFFER WAIVER REQUEST

VIA CERTIFIED MAIL

May 22, 2023

City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801

TFM Project # 47099.01

RE: NHDES Wetlands Permit Application, 325 Little Harbor Road, Portsmouth, Tax Map/ Lot: 204/5

To Whom It May Be Concerned:

This letter is to inform you that a Prime Wetland Buffer Waiver Request will be filed with the NH Department of Environmental Services (NHDES). Under NH Wetlands Law, RSA 482-A:11, IV(c) impacts proposed within a Duly Established 100-Foot Prime Wetland Buffer require a waiver from NHDES.

Should you require additional information, please contact me anytime.

Sincerely,

TFMoran, Inc.

Jay Aube, CWS
Environmental Scientist

cc: NHDES Wetlands Bureau

JRA/sdr

VIA CERTIFIED MAIL

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NEW HAMPSHIRE 200

GOVERNING BODY NOTIFICATION FOR PRIME WETLAND BUFFER WAIVER REQUEST

May 22, 2023

City of Portsmouth
Planning Board
1 Junkins Avenue
Portsmouth, NH 03801

TFM Project # 47099.01

RE: NHDES Wetlands Permit Application, 325 Little Harbor Road, Portsmouth, Tax Map/ Lot: 205/2 & 204/5

To Whom It May Be Concerned:

This letter is to inform you that a Prime Wetland Buffer Waiver Request will be filed with the NH Department of Environmental Services (NHDES). Under NH Wetlands Law, RSA 482-A:11, IV(c) impacts proposed within a Duly Established 100-Foot Prime Wetland Buffer require a waiver from NHDES.

Should you require additional information, please contact me anytime.

Sincerely,
TFMoran, Inc.

Jay Aube, CWS
Environmental Permitting Specialist

cc: NHDES Wetlands Bureau

JRA/sdr

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

GOVERNING BODY NOTIFICATION FOR PRIME WETLAND BUFFER WAIVER REQUEST

May 22, 2023

City of Portsmouth
Conservation Commission
1 Junkins Avenue
Portsmouth, NH 03801

TFM Project # 47099.01

RE: NHDES Wetlands Permit Application, 325 Little Harbor Road, Portsmouth, Tax Map/ Lot: 205/2 & 204/5

To Whom It May Be Concerned:

This letter is to inform you that a Prime Wetland Buffer Waiver Request will be filed with the NH Department of Environmental Services (NHDES). Under NH Wetlands Law, RSA 482-A:11, IV(c) impacts proposed within a Duly Established 100-Foot Prime Wetland Buffer require a waiver from NHDES.

Should you require additional information, please contact me anytime.

Sincerely,
TFMoran, Inc.

Jay Aube, CWS
Environmental Permitting Specialist

cc: NHDES Wetlands Bureau

JRA/sdr

AVOIDANCE AND MINIMIZATION WRITTEN NARRATIVE

Water Division/Land Resources Management

Wetlands Bureau

Check the Status of your Application

RSA/ Rule: RSA 482-A/ Env-Wt 311.04(j); Env-Wt 311.07; Env-Wt 313.01(a)(1)b; Env-Wt 313.01(c)

APPLICANT'S NAME: **ADL 325 Little Harbor Road Trust** **TOWN NAME:** **Portsmouth**

An applicant for a standard permit shall submit with the permit application a written narrative that explains how all impacts to functions and values of all jurisdictional areas have been avoided and minimized to the maximum extent practicable. This attachment can be used to guide the narrative (attach additional pages if needed). Alternatively, the applicant may attach a completed Avoidance and Minimization Checklist (NHDES-W-06-050) to the permit application.

SECTION 1 - WATER ACCESS STRUCTURES (Env-Wt 311.07(b)(1))

Is the primary purpose of the proposed project to construct a water access structure?

N/A - No, the primary purpose of this project is to replace an existing failing bridge with a new bridge, restore the tidal resource area, and connect the island to municipal utilities.

SECTION 2 - BUILDABLE LOT (Env-Wt 311.07(b)(1))

Does the proposed project require access through wetlands to reach a buildable lot or portion thereof?

No but, the new wooden pile supported bridge will be constructed within tidal waters and mud flats.

SECTION 3 - AVAILABLE PROPERTY (Env-Wt 311.07(b)(2))*

For any project that proposes permanent impacts of more than one acre, or that proposes permanent impacts to a PRA, or both, are any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, that could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs?

**Except as provided in any project-specific criteria and except for NH Department of Transportation projects that qualify for a categorical exclusion under the National Environmental Policy Act.*

There is no other access way to the island that would be less impactful than constructing a bridge adjacent to the existing bridge.

SECTION 4 - ALTERNATIVES (Env-Wt 311.07(b)(3))

Could alternative designs or techniques, such as different layouts, different construction sequencing, or alternative technologies be used to avoid impacts to jurisdictional areas or their functions and values as described in the Wetlands Best Management Practice Techniques For Avoidance and Minimization?

There are no alternative designs, techniques or layouts that would aid in minimzing impacts to jurisdictional areas. Designing a bridge on wood piles that spans the resource and removes large concrete causeways within public waters that currently restrict tidal flows and impede aquatic organims passage is the best design possible. This project also proposes to restore salt marsh area and the Previously Developed Upland Tidal Buffer Zone with native vegetation.

SECTION 5 - CONFORMANCE WITH Env-Wt 311.10(c) (Env-Wt 311.07(b)(4))**

How does the project conform to Env-Wt 311.10(c)?

***Except for projects solely limited to construction or modification of non-tidal shoreline structures only need to complete relevant sections of Attachment A.*

A Coastal Functional Assessment (CFA) was perfromed to assess the "wetland" within the vicinity of the proposed impacts. In this instance, the "wetland" is the neighboring fringe salt marsh areas. We assessed the tidal mud flat areas as well. The Coastal Functional Assessment concluded these are exceptional resources that had qualifers for a significant number of key functions and values. The project does not, however, pose any threat or harm to the functions and values of these resource. This project will significantly enhance the overall value and ecological integrity within this area of NH's seacoast.

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

WORK SEQUENCE NARRATIVE FOR LAND-BASED IMPACTS

Env-Wt 311.06 (d)

1.) At least 48-hours prior to commencing the construction activities, the property owner will notify NHDES via the *Initiation of Construction Notification Form*.
2.) Prior to construction, silt socks barrier will be installed at the limits of the approved impact area.
3.) Once installed, a *Certified Professional in Erosion and Sediment Controls* (CPESC) will inspect the erosion and siltation control devices.
4.) The erosion and siltation control devices will be monitored, inspected, and adjusted as required throughout the duration of the project as required.
5.) Construction equipment will be inspected daily for leaking fuel, oil, and hydraulic fluid, and, if necessary, repairs will be made immediately.
6.) Contractors responsible for operating construction equipment will have adequate oil spill kits on site and readily accessible during construction and they will be trained in deploying this equipment should it be required.
7.) Construction activities will occur as described within the construction details on the approved plans and as conditioned by NHDES.
8.) Upon project completion, exposed soils will be seeded and watered as needed.
9.) Upon completing the project, the property owner, or their agent, will notify NHDES via the *Completion of Construction Notice and Certificate of Compliance Form*.
10.) Once the site is stable, the erosion and siltation control devices will be removed.

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran, Inc. Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

WORK SEQUENCE NARRATIVE FOR PROPOSED BRIDGE

Env-Wt 311.06 (d)

1.) At least 48-hours prior to commencing the construction activities, the property owner will notify NHDES via the *Initiation of Construction Notification Form*.
2.) Prior to construction, silt sock barriers will be installed at the limits of the approved impact areas.
3.) Turbidity curtains will be installed around the perimeter of the proposed new bridge approach impact areas.
4.) Once installed, a *Certified Professional in Erosion and Sediment Controls* (CPESC) will inspect the erosion and siltation control devices.
5.) The erosion and siltation control devices will be monitored, inspected, and adjusted as required throughout the duration of the project as required.
6.) To the greatest extent possible, bridge approach construction will be conducted during low tide.
7.) Construction equipment will be inspected daily for leaking fuel, oil, and hydraulic fluid, and, if necessary, repairs will be made immediately.
8.) Contractors responsible for operating construction equipment will have adequate oil spill kits on site and readily accessible during construction and they will be trained in deploying this equipment should it be required.
9.) Construction activities will occur as described within the construction details on the approved plans, as conditioned by NHDES, and those provided by the bridge designer, York Bridge Concepts (YBC), included with this work sequence narrative.
10.) Upon project completion, exposed soil adjacent to the new bridge approaches will be seeded and watered as needed.
11.) Upon completing the project, the property owner, or their agent, will notify NHDES via the *Completion of Construction Notice and Certificate of Compliance Form*.
12.) Once the site is stable, the erosion and siltation control devices will be removed.

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YORK
BRIDGE CONCEPTS
THE PREMIER TIMBER BRIDGE COMPANY

May 15, 2023

RE: Lady Isle Timber Bridge Work Sequence

Note that all below timeframes are weather-pending.

1. Mobilization & site set up – 2-3 days

1. YBC receives deliveries of material and equipment and sets up staging area.
2. Piling is coated with acrylic polymer coating prior to installation
3. Installation and maintenance of silt fence, floating turbidity barrier, or other BMPs is in place prior to YBC arrival

2. Build first abutment – 1-1.5 weeks

1. Prior to YBC arrival, client to install fill material to prevent water from prohibiting abutment construction
2. Starting on the mainland side of the crossing, YBC drives piling for first abutment and builds up headwall and wingwalls to elevation.
3. Minor excavation will occur at the base of the abutment to ensure that abutment is at least 2' below existing grade.
4. Piling is vibrated to refusal using NPK C8-C vibratory compactor attached to boom of a 200 series excavator.
5. After wall construction, client to bring in temporary backfill material to enable YBC equipment access to the top of the bridge.
6. After wall construction, client to install riprap prior to framing of first bridge span

3. Build Substructure from Bridge Deck – 3-4 weeks

1. YBC access the top of the bridge with excavator and drive pre-coated piling for the next bent.
    a. This method introduces very minor impact to the crossing as machinery remains on top of the structure throughout construction.
2. Piling will be cut to elevation and pile cap installed from scaffolding temporarily installed to the bridge
3. Pile wrap & X-brace will be installed from a small, site-built raft. See the attached drawing plans for raft assembly
4. Bridge framing and structural deck is installed from top of bridge
5. Excavator is moved onto the newly built span, and the process is repeated for the first 10 spans.

4. Build second abutment – 1-1.5 weeks

1. YBC will move equipment and material to the island side of the crossing via existing bridge
2. Starting from the island side of the crossing, YBC drives piling for second abutment and builds up headwall and wingwalls to elevation.
3. Minor excavation will occur at the base of the abutment to ensure that abutment is at least 2' below existing grade.
4. Piling is vibrated to refusal using NPK C8-C vibratory compactor attached to boom of a 200 series excavator.
5. After wall construction, client to bring in temporary backfill material to enable YBC equipment access to the top of the bridge.
6. After wall construction, client to install riprap prior to framing of first bridge span

5. Build substructure from Bridge Deck – 3-4 weeks

1. 10 bridge spans are built from island side in the same manner as the 10 spans above from mainland side

6. Build center freespan – 1 week

1. Glulam beams are placed for the center freespan via excavator located on top of the bridge deck
2. YBC installs framing and decking to the center span from the newly installed bridge deck

7. Build Curb & Guiderail System – 5-6 weeks

1. Curb and guiderail system is installed from the bridge deck

8. Apply Coatings – 2 weeks

1. Acrylic-polymer paint is applied to abutments via paint sprayer
    a. Some touch up painting of the substructure may be required.
2. 3-coat translucent protective oil system is applied to outside stringers, curb, and guiderail system

9. Install weardeck – 2-3 weeks

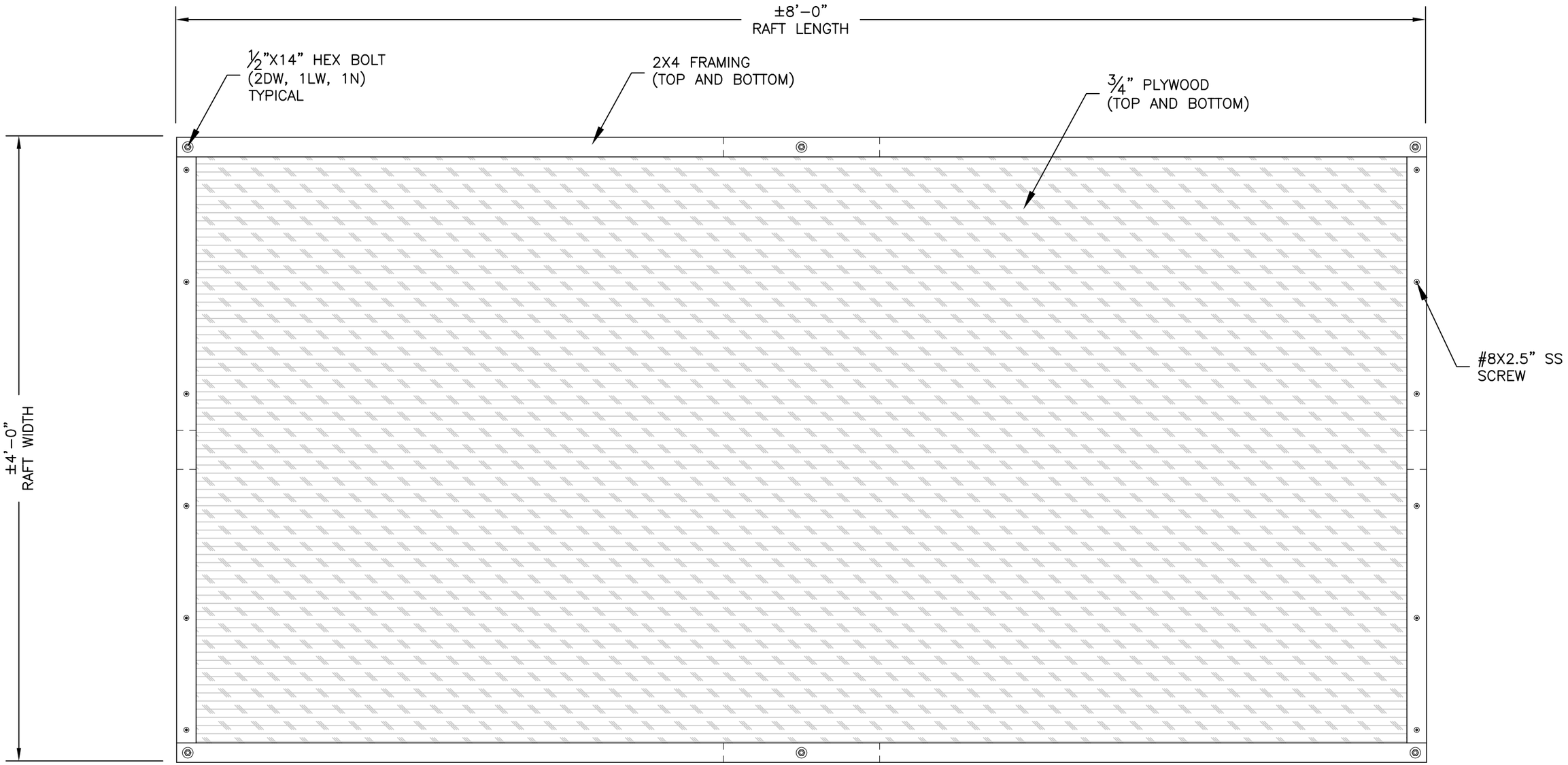
1. Hardwood weardeck is installed

10. Cleanup and demobilization – 2-3 days

1. YBC cleans up site and demobilizes equipment

Sincerely,
York Bridge Concepts, Inc

Brian Kennedy
Director of Construction Services



1 DETAIL - RAFT PLAN VIEW

SCALE: NONE

YORK BRIDGE CONCEPTS

THE PREMIER TIMBER BRIDGE COMPANY

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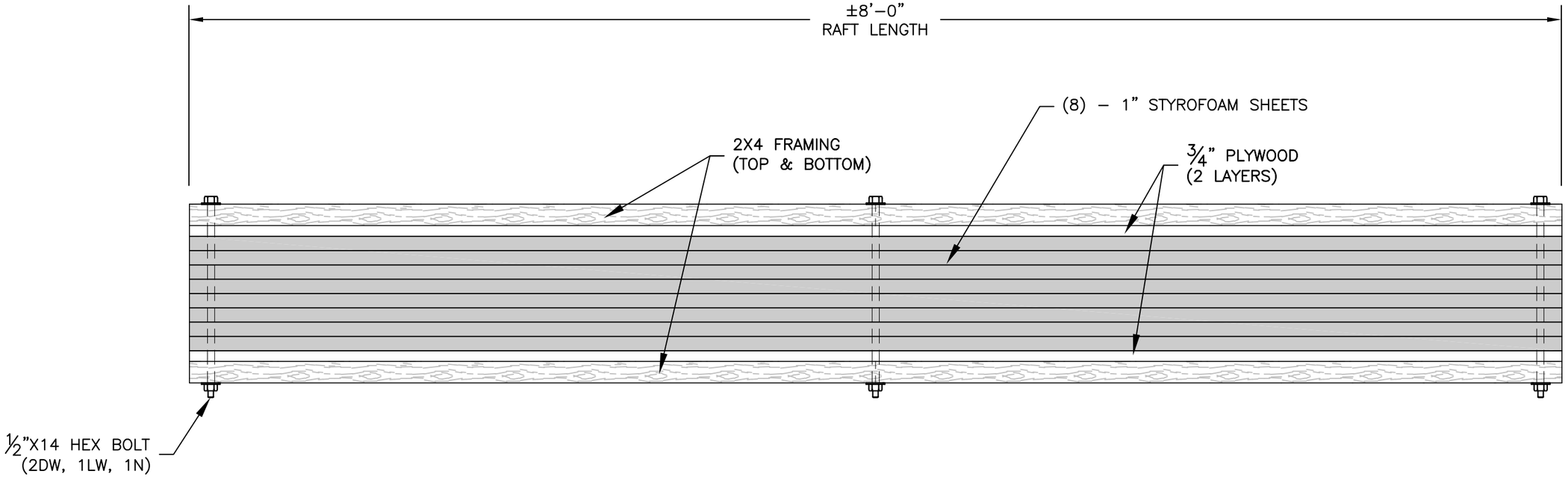
STYROFOAM RAFT DETAIL

DETAILS
RAFT - PLAN VIEW

DESIGNED LOADING

DATE/TIME:	DRAWN BY:	PROJECT NUMBER:	SHEET NUMBER:
September 4, 2015	NA	NA	DETAILS



1 DETAIL - RAFT PROFILE VIEW

SCALE: NONE

YORK BRIDGE CONCEPTS

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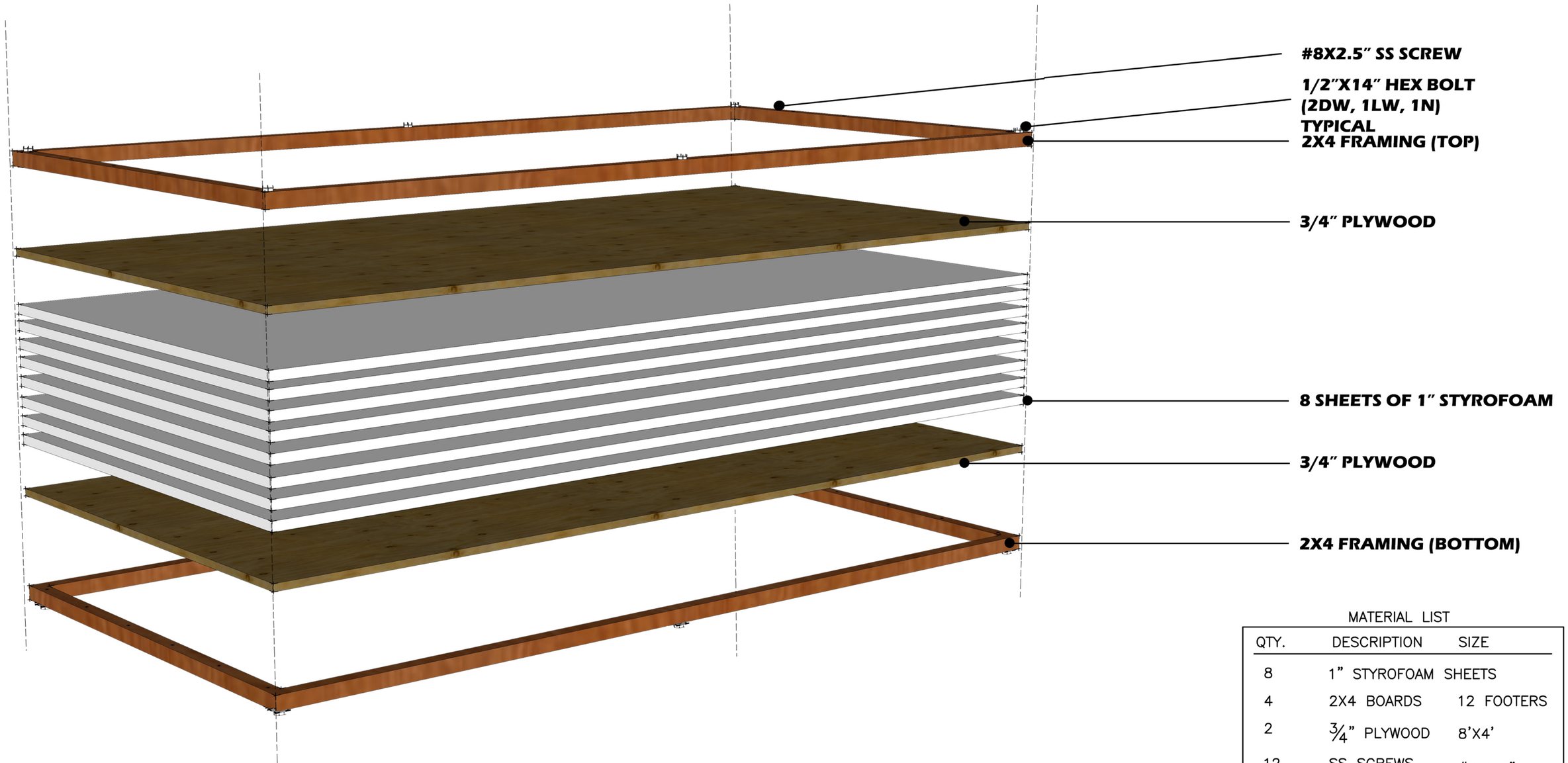
STYROFOAM RAFT DETAIL

DETAILS
RAFT PROFILE VIEW

DESIGNED LOADING

DATE/TIME:	DRAWN BY:	PROJECT NUMBER:	SHEET NUMBER:
September 4, 2015	NA	NA	DETAILS



1 DETAIL - RAFT 3D
SCALE: NONE

MATERIAL LIST

QTY.	DESCRIPTION	SIZE
8	1" STYROFOAM	SHEETS
4	2X4 BOARDS	12 FOOTERS
2	3/4" PLYWOOD	8'X4'
12	SS SCREWS	#8X2.5"
6	HEX BOLT	1/2"X14"

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STYROFOAM RAFT DETAIL

DETAILS
RAFT 3D

DESIGNED LOADING

DATE/TIME:	DRAWN BY:	PROJECT NUMBER:	SHEET NUMBER:
September 8, 2015	NA	NA	DETAILS

WORK SEQUENCE NARRATIVE FOR CAUSEWAY REMOVAL

Env-Wt 311.06 (d)

1.) At least 48-hours prior to commencing the construction activities, the property owner will notify NHDES via the *Initiation of Construction Notification Form*.
2.) Prior to construction, silt sock barriers will be installed at the limits of the approved upland impact areas.
3.) Turbidity curtains will be installed around the perimeter of the causeways at a distance that will allow for work to occur without being interfered with.
4.) Once installed, a *Certified Professional in Erosion and Sediment Controls* (CPESC) will inspect the erosion and siltation control devices.
5.) The erosion and siltation control devices will be monitored, inspected, and adjusted as required throughout the duration of the project as required.
6.) This work is *only* to occur during the approved construction window of November 15th and March 15th.
7.) To the greatest extent possible, the excavation work necessary to remove the existing causeways will occur at low tide.
8.) Excavation will begin at the end of the causeway and work landward. Large concrete structures will be removed to an elevation of 2-feet below the neighboring mud flats so that, with time, natural sediment migration will cover these structures.
9.) During low tide, to the greatest extent practicable, the mud flat areas will be regraded to mimic the natural contours of the surrounding area.
10.) Construction equipment will be inspected daily for leaking fuel, oil, and hydraulic fluid, and, if necessary, repairs will be made immediately.
11.) Contractors responsible for operating construction equipment will have adequate oil spill kits on site and readily accessible during construction and they will be trained in deploying this equipment should it be required.
12.) Construction activities will occur as described within the construction details on the approved plans, as conditioned by NHDES.
13.) Upon project completion, silt-sox will remain in place until the growing season.
14.) Once the growing season arrives, exposed upland soils will be loamed and seeded and the Developed Upland Tidal Buffer Zone will be restored with native vegetation according to the Developed Upland Restoration Plan.
15.) Upon completing the causeway removal and tidal area regrading, and after 6-months of natural sediment migration and tidal exposure, if the natural tidal hydrodynamics have returned, the salt marsh restoration will commence as detailed within the Salt Marsh Restoration Work Sequence Narrative.

16.) Within 1-week of completing the salt marsh restoration, a report, with photographs, will be submitted to NHDES to document the salt marsh restoration was completed. Monitoring reports will be submitted to NHDES annually for 2-years to document the success of the salt marsh restoration.
17.) Upon completing the project, the property owner, or their agent, will notify NHDES via the *Completion of Construction Notice and Certificate of Compliance Form*.
18.) Once the site is stable, the erosion and siltation control devices will be removed.

SALT MARSH RESTORATION
WORK SEQUENCE NARRATIVE

1. Upon completing the causeway removal and intertidal area regrading, and after 6-months of natural sediment migration and tidal exposure, the salt marsh restoration will commence provided the natural tidal hydrodynamics have returned and the site is sufficiently stable. If more time is required to achieve hydrodynamic stability, the salt marsh restoration will commence at the beginning of the next growing season.

2. Each fringe salt marsh area to be restored includes *Low Marsh* and *High Marsh* areas. Low Marsh exists between Mean Low Water (MLW) and Mean High Water (MHW). High Marsh exists between Mean High Water (MHW) and the landward limit of extreme high tides. These areas will be planted according to inundation frequency and soil structure, saturation, and chemistry requirements.

3. To the greatest extent possible, the soil's organic content and grain size will match that of the neighboring fringe salt marsh areas. During the causeway removal process, materials and soil will be distributed to the restoration areas so this can be achieved. *Spartina spp.* will be used for restoration as these species are hardy and well adapted to sandy, low nutrient soils.

4. Restoration activities will commence at low tide. Low Marsh zones will be planted with vegetation mats. Mats of Smooth Cordgrass (*Spartina alterniflora*) will be planted in accordance with the restoration plans. Spacing and distribution of the vegetation mats are depicted on the Salt Marsh Restoration Plan.

5. High Marsh zones will be planted primarily with vegetation mats of Saltmeadow Cordgrass (*Spartina patens*). Vegetation mats of Saltgrass (*Distichlis spicata*) and Black Grass (*Juncus gerardii*) may be incorporated, to increase diversity. If they are incorporated, Saltgrass and Black Grass mats will be distributed in a random, mixed fashion to achieve a more natural condition.

6. Within 1-week of completing the salt marsh restoration, a monitoring report will be submitted to NHDES. Annually, for two years, subsequent monitoring reports will be submitted to NHDES to document the success of the restoration.

7. If, after 2-growing seasons, a planting success rate of at least 75% is not achieved, additional plantings will occur until this planting success rate is achieved.

SECTION 2

COASTAL RESOURCE WORKSHEET

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482-A/ Env-Wt 600

APPLICANT LAST NAME, FIRST NAME, M.I.: ADL 325 Little Harbor Road Trust

This worksheet may be used to present the information required for projects in coastal areas, in addition to the information required for Lower-Scrutiny Approvals, Expedited Permits, and Standard Permits under Env-Wt 603.01.

Please refer to Env-Wt 605.03 for impacts requiring compensatory mitigation.

SECTION 1 - REQUIRED INFORMATION (Env-Wt 603.02; Env-Wt 603.06; Env-Wt 603.09)

The following information is required for projects in coastal areas.

Describe the purpose of the proposed project, including the overall goal of the project, the core project purpose consisting of a concise description of the facilities and work that could impact jurisdictional areas, and the intended project outcome. Specifically identify all natural resource assets in the area proposed to be impacted and include maps created through a data screening in accordance with Env-Wt 603.03 (refer to Section 2) and Env-Wt 603.04 (refer to Section 3) as attachments.

The purpose of this project is to replace an existing, outdated bridge that connects the subject property to the mainland with an updated, more structurally-sound bridge that spans the entire tidal resource on wooden piles. As this bridge is replaced, the property will be connected to municipal utilities as well. This project also proposes to remove two existing concrete and earthen causeways and doing so will result in opening an existing tidal restriction so that hydraulic capacity and aquatic organism passage can be improved.

This project proposes impacts to Tidal Waters, Mudflats and the Previously Developed Upland Tidal Buffer Zone. No impacts are proposed to sand dunes or eelgrass beds. While a fringe saltmarsh area will be impacted, this project also proposes to restore salt marsh within the areas that are currently occupied by the causeways. The existing bridge approaches and shoulders will be regraded to match the existing contours and restored with native vegetation.

The timing of the project and the particulars of the bridge construction and restoration activities are explained within the Work Sequence Narratives.

We have coordinated with the New Hampshire Natural Heritage Bureau (NHB), New Hampshire Fish and Game Department, the National Oceanic and Atmospheric Administration (NOAA), the Environmental Protection Agency (EPA), the U.S. Coast Guard, and the Pease Development Authority.

For standard permit projects, provide:

☒ A Coastal Functional Assessment (CFA) report in accordance with Env-Wt 603.04 (refer to Section 3).

☒ A vulnerability assessment in accordance with Env-Wt 603.05 (refer to Section 4).

Explain all recommended methods and other considerations to protect the natural resource assets during and as a result of project construction in accordance with Env-Wt 311.07, Env-Wt 313, and Env-Wt 603.04.

To best avoid impacts to sensitive resources and species, to the greatest extent practicable, the bridge construction and causeway removal will only occur at low tide. Erosion, sedimentation and turbidity controls will be installed prior to construction and monitored and adjusted as required throughout the duration of the project. These barriers will be monitored throughout construction and adjusted as needed, as well as removed once the site has been deemed stabilized. Any disturbed soils will be reseeded with native, salt-tolerant vegetation. The saltmarsh areas within the vicinity of the project site will not be impacted, but they will be restored after the bridge has been replaced. Topsoil will be added to areas with depleted topsoil, and native grasses, shrubs and trees will be planted.

Details relative to Avoidance and Minimization, as required by Env-Wt 311.07, are provided within the attached, "Avoidance and Minimization Narrative."

This project meets all criteria established within Env-Wt 313 relative to Approving Standard Applications and is demonstrated further below.

As required by Env-Wt 603.04, we have included a Wetlands Functional Assessment with this permit application to demonstrate the functions and values of the fringe salt marsh and intertidal zone.

Provide a narrative showing how the project meets the standard conditions in Env-Wt 307 and the approval criteria in Env-Wt 313.01.

Relevant Standard Conditions Narrative: This project proposal meets all relevant standards conditions of Env-Wt 307. To ensure water quality is protected, adequate levels of erosion and sediment controls will be installed, monitored, and adjusted as required throughout the duration of the project. Construction equipment will be inspected for leaks daily. If applicable, oil spill kits will be kept on site, and operators will be trained in using them. This project proposal meets all relevant minimum standards of RSA 483-B:9-V and this is demonstrated within the NHDES Shorland Permit Application submitted with this permit application.

Approval Criteria Narrative: This project proposal meets all relevant criteria for approving standard permit applications. This is demonstrated through following attached documents: Coastal Functional Assessment, Avoidance and Minimization Narrative, Coastal Resource Worksheet, and the supplemental document entitled, "Section 7- Resource Specific Criteria."

Provide a project design narrative that includes the following:

☒ A discussion of how the proposed project:

- Uses best management practices and standard conditions in Env-Wt 307;
- Meets all avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
- Meets approval criteria in Env-Wt 313.01;
- Meets evaluation criteria in Env-Wt 313.01(c);
- Meets CFA requirements in Env-Wt 603.04; and
- Considers sea-level rise and potential flooding evaluated pursuant to Env-Wt 603.05;

☒ A construction sequence, erosion/siltation control methods to be used, and a dewatering plan; and

☒ A discussion of how the completed project will be maintained and managed.

The erosion controls will be removed once the site has been deemed stabilized. The native plantings will be monitored for successful establishment and growth. Additional details relative to post-construction maintenance can be found in the attached Work Sequence Narratives.

☒ Provide design plans that meet the requirements of Env-Wt 603.07 (refer to Section 5);

☒ Provide water depth supporting information required by Env-Wt 603.08 (refer to Section 6); and

☒ For any major project that proposes to construct a structure in tidal waters/wetlands or to extend an existing structure seaward, provide a statement from the Pease Development Authority Division of Ports and Harbors (DP&H) chief harbormaster, or designee, for the subject location relative to the proposed structure's impact on navigation. If the proposed structure might impede existing public passage along the subject shoreline on foot or by non-motorized watercraft, the applicant shall explain how the impediments have been minimized to the greatest extent practicable.

A statement from the Pease Development Authority Division of Ports and Harbors Chief Harbormaster is included with this permit application. No impacts are proposed that would threaten or impede upon public passage or navigation for commercial or recreational purposes.

SECTION 2 - DATA SCREENING (Env-Wt 603.03, in addition to Env-Wt 306.05)

Please use the Wetland Permit Planning Tool, or any other database or source, to indicate the presence of:

☒ Existing salt marsh and salt marsh migration pathways;

☒ Eelgrass beds;

☒ Documented shellfish sites;

☒ Projected sea-level rise; and

☒ 100-year floodplain.

Conduct data screening as described to identify documented essential fish habitat, and tides and currents that may be impacted by the proposed project, by using the following links:

☒ National Oceanic and Atmospheric Administration (NOAA) Tides & Currents; and

☒ NOAA Essential Fish Habitat Mapper.

☒ Verify or correct the information collected from the data screenings by conducting an on-site assessment of the subject property in accordance with Env-Wt 406 and Env-Wt 603.04.

SECTION 3 - COASTAL FUNCTIONAL ASSESSMENT/ AVOIDANCE AND MINIMIZATION (Env-Wt 603.04; Env-Wt 605.01; Env-Wt 605.02; Env-Wt 605.03)

Projects in coastal areas shall:

☒ Not impair the navigation, recreation, or commerce of the general public; and

☒ Minimize alterations in prevailing currents.

An applicant for a permit for work in or adjacent to tidal waters/wetlands or the tidal buffer zone shall demonstrate that the following have been avoided or minimized as required by Env-Wt 313.04:

☒ Adverse impacts to beach or tidal flat sediment replenishment;

☒ Adverse impacts to the movement of sediments along a shore;

☒ Adverse impacts on a tidal wetland's ability to dissipate wave energy and storm surge; and

☒ Adverse impacts of project runoff on salinity levels in tidal environments.

For standard permit applications submitted for minor or major projects:

☒ Attach a CFA based on the data screening information and on-site evaluation required by Env-Wt 603.03. The CFA for tidal wetlands or tidal waters shall be:

- Performed by a qualified coastal professional; and
- Completed using one of the following methods:

  a. The US Army Corps of Engineers (USACE) Highway Methodology Workbook, dated 1993, together with the USACE New England District *Highway Methodology Workbook Supplement*, dated 1999; or

  b. An alternative scientifically-supported method with cited reference and the reasons for the alternative method substantiated.

For any project that would impact tidal wetlands, tidal waters, or associated sand dunes, the applicant shall:

☒ Use the results of the CFA to select the location of the proposed project having the least impact to tidal wetlands, tidal waters, or associated sand dunes;

☒ Design the proposed project to have the least impact to tidal wetlands, tidal waters, or associated sand dunes;

☒ Where impact to wetland and other coastal resource functions is unavoidable, limit the project impacts to the least valuable functions, avoiding and minimizing impact to the highest and most valuable functions; and

☒ Include on-site minimization measures and construction management practices to protect coastal resource areas.

Projects in coastal areas shall use results of this CFA to:

☒ Minimize adverse impacts to finfish, shellfish, crustacean, and wildlife;

☒ Minimize disturbances to groundwater and surface water flow;

☒ Avoid impacts that could adversely affect fish habitat, wildlife habitat, or both; and

☒ Avoid impacts that might cause erosion to shoreline properties.

SECTION 4 - VULNERABILITY ASSESSMENT (Env-Wt 603.05)

Refer to the New Hampshire Coastal Flood Risk Summary Part 1: Science and New Hampshire Coastal Flood Risk Summary Part II: Guidance for Using Scientific Projections or other best available science to:

Determine the time period over which the project is designed to serve.

Please see the attached Coastal Vulnerability Assessment.

Identify the project's relative risk tolerance to flooding and potential damage or loss likely to result from flooding to buildings, infrastructure, salt marshes, sand dunes and other valuable coastal resource areas.

Please see the attached Coastal Vulnerability Assessment.

Reference the projected sea-level rise (SLR) scenario that most closely matches the end of the project design life and the project's tolerance to risk or loss.

Please see the attached Coastal Vulnerability Assessment.

Identify areas of the proposed project site subject to flooding from SLR.

Please see the attached Coastal Vulnerability Assessment.

Identify areas currently located within the 100-year floodplain and subject to coastal flood risk.

Please see the attached Coastal Vulnerability Assessment.

Describe how the project design will consider and address the selected SLR scenario within the project design life, including in the design plans.

Please see the attached Coastal Vulnerability Assessment.

Where there are conflicts between the project's purpose and the vulnerability assessment results, schedule a pre-application meeting with the department to evaluate design alternatives, engineering approaches, and use of the best available science.

☐ Pre-application meeting date held: **No conflict exists.**

SECTION 5 - DESIGN PLANS (Env-Wt 603.07, in addition to Env-Wt 311)

Submit design plans for the project in both plan and elevation views that clearly depict and identify all required elements.

The plan view shall depict the following:

☒ The engineering scale used, which shall be no larger than one inch equals 50 feet;

☒ The location of tidal datum lines depicted as lines with the associated elevation noted, based on North American Vertical Datum of 1988 (NAVD 88), derived from https://tidesandcurrents.noaa.gov/datum_options.html, as described in Section 6.

☒ An imaginary extension of property boundary lines into the waterbody and a 20-foot setback from those property line extensions;

☒ The location of all special aquatic sites at or within 100 feet of the subject property;

☒ Existing bank contours;

☒ The name and license number, if applicable, of each individual responsible for the plan, including:

a. The agent for tidal docking structures who determined elevations represented on plans; and

b. The qualified coastal professional who completed the CFA report and located the identified resources on the plan;

☒ The location and dimensions of all existing and proposed structures and landscape features on the property;

☒ Tidal datum(s) with associated elevations noted, based on NAVD 88; and

☒ Location of all special aquatic sites within 100-feet of the property.

The elevation view shall depict the following:

☒ The nature and slope of the shoreline;

☒ The location and dimensions of all proposed structures, including permanent piers, pilings, float stop structures, ramps, floats, and dolphins; and

☒ Water depths depicted as a line with associated elevation at highest observable tide, mean high tide, and mean low tide, and the date and tide height when the depths were measured. Refer to Section 6 for more instructions regarding water depth supporting information.

See specific design and plan requirements for certain types of coastal projects:

- Overwater structures (Env-Wt 606).
- Dredging activities (Env-Wt 607).
- Tidal beach maintenance (Env-Wt 608).
- Tidal shoreline stabilization (Env-Wt 609).
- Protected tidal zone (Env-Wt 610).
- Sand Dunes (Env-Wt 611).

SECTION 6 - WATER DEPTH SUPPORTING INFORMATION REQUIRED (Env-Wt 603.08)

Using current predicted NOAA tidal datum for the location, and tying field measurements to NAVD 88, field observations of at least three tide events, including at least one minus tide event, shall be located to document the range of the tide in the proposed location showing the following levels:

☒ Mean lower low water;

☒ Mean low water;

☒ Mean high water;

☒ Mean tide level;

☒ Mean higher high water;

☒ Highest observable tide line; and

☒ Predicted sea-level rise as identified in the vulnerability assessment in Env-Wt 603.05.

The following data shall be presented in the application project narrative to support how water depths were determined:

☒ The date, time of day, and weather conditions when water depths were recorded; and

☒ The name and license number of the licensed land surveyor who conducted the field measurements.

For tidal stream crossing projects, provide:

☐ Water depth information to show how the tier 4 stream crossing is designed to meet Env-Wt 904.07(c) and (d).

For repair, rehabilitation or replacement of tier 4 stream crossings:

☐ Demonstrate how the requirements of Env-Wt 904.09 are met.

SECTION 7 - GENERAL CRITERIA FOR TIDAL BEACHES, TIDAL SHORELINE, AND SAND DUNES (Env-Wt 604.01)

Any person proposing a project in or on a tidal beach, tidal shoreline, or sand dune, or any combination thereof, shall evaluate the proposed project based on:

☒ The standard conditions in Env-Wt 307;

☒ The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;

☒ The approval criteria in Env-Wt 313.01;

☒ The evaluation criteria in Env-Wt 313.05;

☒ The project specific criteria in Env-Wt 600;

☒ The CFA required by Env-Wt 603.04; and

☒ The vulnerability assessment required by Env-Wt 603.05.

New permanent impacts to sand dunes that provide coastal storm surge protection for protected species or habitat shall not be allowed except:

☐ To protect public safety; and

☐ Only if constructed by a state agency, coastal resiliency project, or for a federal homeland security project.

Projects in or on a tidal beach, tidal shoreline, or sand dune shall support integrated shoreline management that:

☒ Optimizes the natural function of the shoreline, including protection or restoration of habitat, water quality, and self-sustaining stability to flooding and storm surge; and

☒ Protects upland infrastructure from coastal hazards with a preference for living shorelines over hardened shoreline practices.

SECTION 8 - GENERAL CRITERIA FOR TIDAL BUFFER ZONES (Env-Wt 604.02)

The 100-foot statutory limit on the extent of the tidal buffer zone shall be measured horizontally. Any person proposing a project in or on an undeveloped tidal buffer zone shall evaluate the proposed project based on:

☒ The standard conditions in Env-Wt 307;

☒ The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;

☒ The approval criteria in Env-Wt 313.01;

☒ The evaluation criteria in Env-Wt 313.05;

☒ The project specific criteria in Env-Wt 600;

☒ The CFA required by Env-Wt 603.04; and

☒ The vulnerability assessment required by Env-Wt 603.05.

Projects in or on a tidal buffer zone shall preserve the self-sustaining ability of the buffer area to:

☒ Provide habitat values;

☒ Protect tidal environments from potential sources of pollution;

☒ Provide stability of the coastal shoreline; and

☒ Maintain existing buffers intact where the lot has disturbed area defined under RSA 483-B:4, IV.

SECTION 9 - GENERAL CRITERIA FOR TIDAL WATERS/WETLANDS (Env-Wt 604.03)

Except as allowed under Env-Wt 606, permanent new impacts to tidal wetlands shall be allowed only to protect public safety or homeland security. Evaluation of impacts to tidal wetlands and tidal waters shall be based on:

☒ The standard conditions in Env-Wt 307;

☒ The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;

☒ The approval criteria in Env-Wt 313.01;

☒ The evaluation criteria in Env-Wt 313.05;

☒ The project specific criteria in Env-Wt 600;

☒ The CFA required by Env-Wt 603.04; and

☒ The vulnerability assessment required by Env-Wt 603.05.

Projects in tidal surface waters or tidal wetlands shall:

☒ Optimize the natural function of the tidal wetland, including protection or restoration of habitat, water quality, and self-sustaining stability to storm surge;

☒ Be designed with a preference for living shorelines over hardened stabilization practices; and

☒ Be limited to public infrastructure or restoration projects that are in the interest of the general public, including a road, a bridge, energy infrastructure, or a project that addresses predicted sea-level rise and coastal flood risk.

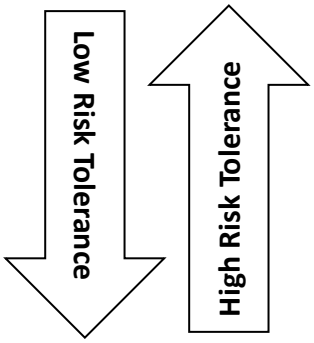
SECTION 10 – GUIDANCE

Your application must follow the New Hampshire Coastal Risk and Hazards Commission's Guiding Principles or other best available science. Below are some of these guidance principles:

- Incorporate science-based coastal flood risk projections into planning;
- Apply risk tolerance* to assessment, planning, design, and construction;
- Protect natural resources and public access;
- Create a bold vision, start immediately, and respond incrementally and opportunistically as projected coastal flood risks increase over time; and
- Consider the full suite of actions including effectiveness and consequences of actions.

*Risk tolerance is a project's willingness to accept a higher or lower probability of flooding impacts. The diagram below gives examples of project with lower and higher risk tolerance:

Critical infrastructures, historic sites, essential ecosystems, and high value assets typically have lower risk tolerance, and thus should be planned, designed, and constructed using higher coastal flood risk projections.



Sheds, pathways, and small docks typically have higher risk tolerance and thus may be planned, designed, and constructed using less protective coastal flood risk projections.

Wetland Function-Value Evaluation Form

Total area of wetland ~30 acres Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? no

Adjacent land use Residential, some undeveloped buffer Distance to nearest roadway or other development 0 feet, within ROW

Dominant wetland systems present E2US1/3, E2EM1 Contiguous undeveloped buffer zone present Yes

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lowest reach

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Belle-Isle Bridge

Latitude 43.064431 Longitude -70.746319

Prepared by: Jay Aube Date 5/5/2023

Wetland Impact:
Type Dredge/ Fill Area SF

Evaluation based on:
Office yes Field yes

Corps manual wetland delineation completed? Y N/A N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N	4,5,6,15	N	No aquifer interface, tidal/ estuarine.
Floodflow Alteration	Y	1,3,4,5,6,7,8,9,10,18	Y	Wetlands capable of retaining flood waters from neighboring residential area.
Fish and Shellfish Habitat	Y	1,3,4,5	Y	Shellfish and recreational fish species present.
Sediment/Toxicant Retention	Y	1,2,3,4,6,7,10,13,15	Y	Marsh can trap sediment and compounds from adjacent impervious areas.
Nutrient Removal	Y	3,6,8,9,10,11	Y	salt marsh species able to remove and transform compounds.
Production Export	Y	1,2,3,4,5,6,8,9,10,13	Y	Estuarine environment, highly productive.
Sediment/Shoreline Stabilization	Y	1,3,5,6,8,10,11,14	Y	Shoreline is moderately stable.
Wildlife Habitat	Y	7,8,10,12,16,17,18,19,20,21	Y	Evidence of wildlife present. T & E species utilize this area.
Recreation	Y	2,5,7,9	N	Private property, can access by boat/ kayak.
Educational/Scientific Value	Y	1,5	N	Private property, no public access.
Uniqueness/Heritage	Y	4,6,24	N	Private property, no public access.
Visual Quality/Aesthetics	Y	1,2,3,8,12	N	Private property, visible from boat/ kayak and local school observation deck.
ES Endangered Species Habitat	Y	1,2	Y	Sturgeon and Sea Turtles may utilize the area but it is not suitable for reproduction. Endangered Marsh elder on the shoreline.
Other Ecological Integrity	Y		Y	Ecologically, an exceptional resource for all trophic levels.

Notes: Ecological Integrity Score = .78 of possible 1.0

* Refer to backup list of numbered considerations.

Interpreting the Results of the U.S. Army Corps of Engineers Wetland Function-Value Evaluation Form

GROUNDWATER RECHARGE/DISCHARGE— This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

CONSIDERATIONS/QUALIFIERS

1. Public or private wells occur downstream of the wetland.
2. Potential exists for public or private wells downstream of the wetland.
3. Wetland is underlain by stratified drift.
4. Gravel or sandy soils present in or adjacent to the wetland.
5. Fragipan does not occur in the wetland.
6. Fragipan, impervious soils, or bedrock does occur in the wetland.
7. Wetland is associated with a perennial or intermittent watercourse.
8. Signs of groundwater recharge are present or piezometer data demonstrates recharge.
9. Wetland is associated with a watercourse but lacks a defined outlet or contains a constricted outlet.
10. Wetland contains only an outlet, no inlet.
11. Groundwater quality of stratified drift aquifer within or downstream of wetland meets drinking water standards.
12. Quality of water associated with the wetland is high.
13. Signs of groundwater discharge are present (e.g., springs).
14. Water temperature suggests it is a discharge site.
15. Wetland shows signs of variable water levels.
16. Piezometer data demonstrates discharge.
17. Other

FLOODFLOW ALTERATION (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas.

CONSIDERATIONS/QUALIFIERS

1. Area of this wetland is large relative to its watershed.
2. Wetland occurs in the upper portions of its watershed.
3. Effective flood storage is small or non-existent upslope of or above the wetland.
4. Wetland watershed contains a high percent of impervious surfaces.
5. Wetland contains hydric soils which are able to absorb and detain water.
6. Wetland exists in a relatively flat area that has flood storage potential.
7. Wetland has an intermittent outlet, ponded water, or signs are present of variable water level.
8. During flood events, this wetland can retain higher volumes of water than under normal or average rainfall conditions.
9. Wetland receives and retains overland or sheet flow runoff from surrounding uplands.
10. In the event of a large storm, this wetland may receive and detain excessive flood water from a nearby watercourse.
11. Valuable properties, structures, or resources are located in or near the floodplain downstream from the wetland.
12. The watershed has a history of economic loss due to flooding.
13. This wetland is associated with one or more watercourses.
14. This wetland watercourse is sinuous or diffuse.
15. This wetland outlet is constricted.
16. Channel flow velocity is affected by this wetland.
17. Land uses downstream are protected by this wetland.
18. This wetland contains a high density of vegetation.
19. Other

FISH AND SHELLFISH HABITAT (FRESHWATER) — This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

CONSIDERATIONS/QUALIFIERS

1. Forest land dominant in the watershed above this wetland.
2. Abundance of cover objects present.

STOP HERE IF THIS WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE

3. Size of this wetland is able to support large fish/shellfish populations.
4. Wetland is part of a larger, contiguous watercourse.
5. Wetland has sufficient size and depth in open water areas so as not to freeze solid and retain some open water during winter.
6. Stream width (bank to bank) is more than 50 feet.
7. Quality of the watercourse associated with this wetland is able to support healthy fish/shellfish populations.
8. Streamside vegetation provides shade for the watercourse.
9. Spawning areas are present (submerged vegetation or gravel beds).
10. Food is available to fish/shellfish populations within this wetland.
11. Barrier(s) to anadromous fish (such as dams, including beaver dams, waterfalls, road crossing) are absent from the stream reach associated with this wetland.
12. Evidence of fish is present.
13. Wetland is stocked with fish.
14. The watercourse is persistent.
15. Man-made streams are absent.
16. Water velocities are not too excessive for fish usage.
17. Defined stream channel is present.
18. Other

Although the above example refers to freshwater wetlands, it can also be adapted for marine ecosystems. The following is an example provided by the National Marine Fisheries Service (NMFS) of an adaptation for the fish and shellfish function.

FISH AND SHELLFISH HABITAT (MARINE) — This function considers the effectiveness of wetlands, embayments, tidal flats, vegetated shallows, and other environments in supporting marine resources such as fish, shellfish, marine mammals, and sea turtles.

CONSIDERATIONS/QUALIFIERS

1. Special aquatic sites (tidal marsh, mud flats, eelgrass beds) are present.
2. Suitable spawning habitat is present at the site or in the area.
3. Commercially or recreationally important species are present or suitable habitat exists.
4. The wetland/waterway supports prey for higher trophic level marine organisms.
5. The waterway provides migratory habitat for anadromous fish.
6. Essential fish habitat, as defined by the 1996 amendments to the Magnuson-Stevens Fishery & Conservation Act, is present (consultation with NMFS may be necessary).
7. Other

SEDIMENT/TOXICANT/PATHOGEN RETENTION — This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

CONSIDERATIONS/QUALIFIERS

1. Potential sources of excess sediment are in the watershed above the wetland.
2. Potential or known sources of toxicants are in the watershed above the wetland.
3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland.
4. Fine grained mineral or organic soils are present.
5. Long duration water retention time is present in this wetland.
6. Public or private water sources occur downstream.
7. The wetland edge is broad and intermittently aerobic.
8. The wetland is known to have existed for more than 50 years.
9. Drainage ditches have not been constructed in the wetland.

STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.

10. Wetland is associated with an intermittent or perennial stream or a lake.
11. Channelized flows have visible velocity decreases in the wetland.
12. Effective floodwater storage in wetland is occurring. Areas of impounded open water are present.
13. No indicators of erosive forces are present. No high water velocities are present.
14. Diffuse water flows are present in the wetland.
15. Wetland has a high degree of water and vegetation interspersion.
16. Dense vegetation provides opportunity for sediment trapping and/or signs of sediment accumulation by dense vegetation is present.
17. Other

NUTRIENT REMOVAL/RETENTION/TRANSFORMATION — This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

CONSIDERATIONS/QUALIFIERS

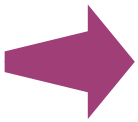
1. Wetland is large relative to the size of its watershed.
2. Deep water or open water habitat exists.
3. Overall potential for sediment trapping exists in the wetland.

4. Potential sources of excess nutrients are present in the watershed above the wetland.
5. Wetland saturated for most of the season. Ponded water is present in the wetland.
6. Deep organic/sediment deposits are present.
7. Slowly drained fine grained mineral or organic soils are present.
8. Dense vegetation is present.
9. Emergent vegetation and/or dense woody stems are dominant.
10. Opportunity for nutrient attenuation exists.
11. Vegetation diversity/abundance sufficient to utilize nutrients.

STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.

12. Waterflow through this wetland is diffuse.
13. Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation.
14. Water moves slowly through this wetland.
15. Other

PRODUCTION EXPORT (Nutrient) — This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.



CONSIDERATIONS/QUALIFIERS

1. Wildlife food sources grow within this wetland.
2. Detritus development is present within this wetland
3. Economically or commercially used products found in this wetland.
4. Evidence of wildlife use found within this wetland.
5. Higher trophic level consumers are utilizing this wetland.
6. Fish or shellfish develop or occur in this wetland.
7. High vegetation density is present.
8. Wetland exhibits high degree of plant community structure/species diversity.
9. High aquatic vegetative diversity/abundance is present.
10. Nutrients exported in wetland watercourses (permanent outlet present).
11. “Flushing” of relatively large amounts of organic plant material occurs from this wetland.
12. Wetland contains flowering plants that are used by nectar-gathering insects.
13. Indications of export are present.
14. High production levels occurring, however, no visible signs of export (assumes export is attenuated).
15. Other

SEDIMENT/SHORELINE STABILIZATION — This function considers the effectiveness of a wetland to stabilize streambanks and shorelines against erosion.

CONSIDERATIONS/QUALIFIERS

1. Indications of erosion or siltation are present.
2. Topographical gradient is present in wetland.
3. Potential sediment sources are present up-slope.
4. Potential sediment sources are present upstream.
5. No distinct shoreline or bank is evident between the waterbody and the wetland or upland.
6. A distinct step between the open waterbody or stream and the adjacent land exists (i.e., sharp bank) with dense roots throughout.
7. Wide wetland (>10’) borders watercourse, lake, or pond.
8. High flow velocities in the wetland.
9. The watershed is of sufficient size to produce channelized flow.
10. Open water fetch is present.
11. Boating activity is present.
12. Dense vegetation is bordering watercourse, lake, or pond.
13. High percentage of energy-absorbing emergents and/or shrubs border a watercourse, lake, or pond.
14. Vegetation is comprised of large trees and shrubs that withstand major flood events or erosive incidents and stabilize the shoreline on a large scale (feet).
15. Vegetation is comprised of a dense resilient herbaceous layer that stabilizes sediments and the shoreline on a small scale (inches) during minor flood events or potentially erosive events.
16. Other

WILDLIFE HABITAT — This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered. Species lists of observed and potential animals should be included in the wetland assessment report.[1]

CONSIDERATIONS/QUALIFIERS

1. Wetland is not degraded by human activity.
2. Water quality of the watercourse, pond, or lake associated with this wetland meets or exceeds Class A or B standards.
3. Wetland is not fragmented by development.
4. Upland surrounding this wetland is undeveloped.
5. More than 40% of this wetland edge is bordered by upland wildlife habitat (e.g., brushland, woodland, active farmland, or idle land) at least 500 feet in width.
6. Wetland is contiguous with other wetland systems connected by a watercourse or lake.
7. Wildlife overland access to other wetlands is present.
8. Wildlife food sources are within this wetland or are nearby.
9. Wetland exhibits a high degree of interspersion of vegetation classes and/or open water.
10. Two or more islands or inclusions of upland within the wetland are present.
11. Dominant wetland class includes deep or shallow marsh or wooded swamp.
12. More than three acres of shallow permanent open water (less than 6.6 feet deep), including streams in or adjacent to wetland, are present.
13. Density of the wetland vegetation is high.
14. Wetland exhibits a high degree of plant species diversity.
15. Wetland exhibits a high degree of diversity in plant community structure (e.g., tree/shrub/vine/grasses/mosses)
16. Plant/animal indicator species are present. (List species for project)
17. Animal signs observed (tracks, scats, nesting areas, etc.)
18. Seasonal uses vary for wildlife and wetland appears to support varied population diversity/abundance during different seasons.
19. Wetland contains or has potential to contain a high population of insects.
20. Wetland contains or has potential to contain large amphibian populations.
21. Wetland has a high avian utilization or its potential.
22. Indications of less disturbance-tolerant species are present.
23. Signs of wildlife habitat enhancement are present (birdhouses, nesting boxes, food sources, etc.).
24. Other

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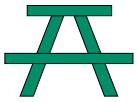
[1]In March 1995, a rapid wildlife habitat assessment method was completed by a University of Massachusetts research team with funding and oversight provided by the New England Transportation Consortium. The method is called WEThings (wetland habitat indicators for non-game species). It produces a list of potential wetland-dependent mammal, reptile, and amphibian species that may be present in the wetland. The output is based on observable habitat characteristics documented on the field data form. This method may be used to generate the wildlife species list recommended as backup information to the wetland evaluation form and to augment the considerations. Use of this method should first be coordinated with the Corps project manager. A computer program is also available to expedite this process.

RECREATION (Consumptive and Non-Consumptive) — This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland. Non-consumptive opportunities do not consume or diminish these resources of the wetland.



CONSIDERATIONS/QUALIFIERS

1. Wetland is part of a recreation area, park, forest, or refuge.
2. Fishing is available within or from the wetland.
3. Hunting is permitted in the wetland.
4. Hiking occurs or has potential to occur within the wetland.
5. Wetland is a valuable wildlife habitat.
6. The watercourse, pond, or lake associated with the wetland is unpolluted.
7. High visual/aesthetic quality of this potential recreation site.
8. Access to water is available at this potential recreation site for boating, canoeing, or fishing.
9. The watercourse associated with this wetland is wide and deep enough to accommodate canoeing and/or non-powered boating.
10. Off-road public parking available at the potential recreation site.
11. Accessibility and travel ease is present at this site.
12. The wetland is within a short drive or safe walk from highly populated public and private areas.
13. Other

EDUCATIONAL/SCIENTIFIC VALUE — This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

CONSIDERATIONS/QUALIFIERS

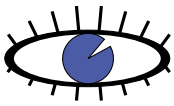
1. Wetland contains or is known to contain threatened, rare, or endangered species.
2. Little or no disturbance is occurring in this wetland.
3. Potential educational site contains a diversity of wetland classes which are accessible or potentially accessible.
4. Potential educational site is undisturbed and natural.
5. Wetland is considered to be a valuable wildlife habitat.
6. Wetland is located within a nature preserve or wildlife management area.
7. Signs of wildlife habitat enhancement present (bird houses, nesting boxes, food sources, etc.).
8. Off-road parking at potential educational site suitable for school bus access in or near wetland.
9. Potential educational site is within safe walking distance or a short drive to schools.
10. Potential educational site is within safe walking distance to other plant communities.
11. Direct access to perennial stream at potential educational site is available.
12. Direct access to pond or lake at potential educational site is available.
13. No known safety hazards exist within the potential educational site.
14. Public access to the potential educational site is controlled.
15. Handicap accessibility is available.
16. Site is currently used for educational or scientific purposes.
17. Other

UNIQUENESS/HERITAGE — This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation, and habitat diversity.

CONSIDERATIONS/QUALIFIERS

1. Upland surrounding wetland is primarily urban.
2. Upland surrounding wetland is developing rapidly.
3. More than 3 acres of shallow permanent open water (less than 6.6 feet deep), including streams, occur in wetlands.
4. Three or more wetland classes are present.
5. Deep and/or shallow marsh or wooded swamp dominate.
6. High degree of interspersion of vegetation and/or open water occur in this wetland.
7. Well-vegetated stream corridor (15 feet on each side of the stream) occurs in this wetland.
8. Potential educational site is within a short drive or a safe walk from schools.
9. Off-road parking at potential educational site is suitable for school buses.
10. No known safety hazards exist within this potential educational site.
11. Direct access to perennial stream or lake exists at potential educational site.
12. Two or more wetland classes are visible from primary viewing locations.
13. Low-growing wetlands (marshes, scrub-shrub, bogs, open water) are visible from primary viewing locations.
14. Half an acre of open water or 200 feet of stream is visible from the primary viewing locations.
15. Large area of wetland is dominated by flowering plants or plants that turn vibrant colors in different seasons.
16. General appearance of the wetland visible from primary viewing locations is unpolluted and/or undisturbed.
17. Overall view of the wetland is available from the surrounding upland.
18. Quality of the water associated with the wetland is high.
19. Opportunities for wildlife observations are available.
20. Historical buildings are found within the wetland.
21. Presence of pond or pond site and remains of a dam occur within the wetland.
22. Wetland is within 50 yards of the nearest perennial watercourse.
23. Visible stone or earthen foundations, berms, dams, standing structures, or associated features occur within the wetland.
24. Wetland contains critical habitat for a state- or federally-listed threatened or endangered species.
25. Wetland is known to be a study site for scientific research.
26. Wetland is a natural landmark or recognized by the state natural heritage inventory authority as an exemplary natural community.
27. Wetland has local significance because it serves several functional values.
28. Wetland has local significance because it has biological, geological, or other features that are locally rare or unique.
29. Wetland is known to contain an important archaeological site.
30. Wetland is hydrologically connected to a state or federally designated scenic river.
31. Wetland is located in an area experiencing a high wetland loss rate.
32. Other

VISUAL QUALITY/AESTHETICS — This value considers the visual and aesthetic quality or usefulness of the wetland.



CONSIDERATIONS/QUALIFIERS

1. Multiple wetland classes are visible from primary viewing locations.
2. Emergent marsh and/or open water are visible from primary viewing locations.
3. A diversity of vegetative species is visible from primary viewing locations.
4. Wetland is dominated by flowering plants or plants that turn vibrant colors in different seasons.
5. Land use surrounding the wetland is undeveloped as seen from primary viewing locations.
6. Visible surrounding land use form contrasts with wetland.
7. Wetland views absent of trash, debris, and signs of disturbance.
8. Wetland is considered to be a valuable wildlife habitat.
9. Wetland is easily accessed.
10. Low noise level at primary viewing locations.
11. Unpleasant odors absent at primary viewing locations.
12. Relatively unobstructed sight line exists through wetland.
13. Other

ENDANGERED SPECIES HABITAT — This value considers the suitability of the wetland to support threatened or endangered species.

ES

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened or endangered species.
2. Wetland contains critical habitat for a state or federally listed threatened or endangered species.

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
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Scientists

Narrative on Coastal Functional Assessment

Introduction

This *Coastal Functional Assessment* was conducted to support a NHDES Wetlands Permit Application to impact the Developed Upland Tidal Buffer Zone and the Intertidal Zone to replace an existing failing bridge with a new wooden bridge that spans the entire tidal resource on wooden piles. This project also proposes to remove the existing causeways from public waters and connect the residential island to municipal utilities. After the causeways are removed, the salt marsh area will be restored and the existing bridge approaches will be regraded and planted with native vegetation.

The jurisdictional areas adjacent to the project site are predominantly Estuarine, Intertidal, Unconsolidated Shore, Cobble-Gravel (E2US1) and Estuarine, Intertidal, Unconsolidated Shore, Mud (E2US3). Isolated narrow bands of fringe salt marsh exist along the neighboring shorelines (E2EM1).

The upland area adjacent to the wetland is an approximately 12-acre island. The island consists of a single residential property that previously utilized some areas for equestrian purposes. The mainland consists of wooded area with intermittent forested freshwater wetlands. No impacts are proposed to the freshwater wetlands. While the bulk of areas to be impacted are previously developed, open areas, the NH Fish and Game Wildlife Action Plan (WAP) identifies the habitat adjacent to the area to be impacted as salt marsh and hemlock hardwood pine. The WAP indicates the Tidal Wetland resources are of the *Highest Ranked Habitat in NH*.

Methods

The wetland boundaries, more particularly, the *Highest Observable Tide Line* (HOTL), was delineated using the methods prescribed by NHDES Administrative Rule Env-Wt 602.23. The wetlands boundaries, including the limits of the 100-foot tidal buffer zone, are depicted on the attached site plans. The wetlands were classified based on the Classification of Wetlands and Deepwater Habitats of the United States, adapted from Cowardin, Carter, Golet and LaRoe (1979), August 2013, FGDC-STD-004-2013.)

The Coastal Functional Assessment (CFA) was conducted by performing field visits on May 1, 2023 and May 15, 2023. The wetlands were assessed using the *Army Corps of Engineers Highway Methodology* (September 1999, NAEEP-360-1-30a).

The *Ecological integrity* of the wetlands was assessed using the *Method for Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire (June 1993)* and data from the NH Fish and Game Wildlife Action Plan (WAP).

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Results:

Groundwater Recharge/ Discharge

This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge site. More particularly, this function refers to the interaction between wetlands and aquifers. Given there are no aquifers in the area and the wetland is estuarine, this wetland *does not* provide this function.

Floodflow Alteration

This function analyzes the effectiveness of the wetland in reducing flood damage by retaining flood waters for prolonged periods of time. During storm events and tidal surges, this wetland serves this function by providing floodwater storage capacity and this aides in protecting the neighboring community.

Fish and Shellfish Habitat

This function considers a wetland's ability to provide embayments, tidal flats, vegetated shallows, and other environments in support of fish, shellfish, marine mammals. Consultation with the National Oceanic and Atmospheric Association (NOAA) Marine Fisheries section indicates the area is considered *Essential Fish Habitat* (EFH) for the Atlantic Sturgeon (*Acipenser oxyrhynchus*), Shortnose Sturgeon (*Acipenser brevirostrum*) and four (4) species of sea turtles. Anadromous fish, including the striped bass (*Morone saxatilis*), are known to seasonally utilize the area to forage on sea worms/ nereids (*Echiurus echiurus*), sand eels (*Ammodytes marinus*), Silversides (*Menidia menidia*) and Green Crabs (*Carcinus maenas*) during high tide.

The existing tidal restriction created by the causeway increases tidal velocities and has artificially created a mico-niche habitat with a rock and rubble substrate. Species identified in this area include Common Periwinkle (Littorina littorea), Smooth Periwinkle, (Littorina obtusata), Rough Periwinkle (Littorina saxatilis), Acorn Barnacles (*Semi balanua balanoides*), Blue Mussel (Mytilus edulis), Eastern Oyster (Crassostrea virginica), Softshell Clam (Mya arenaria), Atlantic Surf Clam (Spisula solidissima), Iris Moss (Chondurus crispus), Red Algae species, (Rhodophyta), Rockweed (Ascophyllum nodosum), Bladder Wrack (Fucus vesiculosus), Sugar Kelp (Saccharina latissimi), Sea felt (Pylaiella littoralis), Doubled Ribbon Weed (Ulva linza) and other green algae Chlorophyta species.

There is no eel grass within the area. The NH Wildlife Action Plan (WAP) identifies the wetland as Highest Ranked Wildlife Habitat in NH. Fish and Shellfish Habitat is considered a principal function of this wetland.

Sediment/ Toxicant Retention

This function considers the effectiveness of a wetland to act as a trap for sediments, toxicants, and pathogens within runoff. This wetland function had a significant level of qualifiers based on the periodic, tidally influenced, slow moving waters. Additionally, the immediate uplands that surround the wetland are well vegetated. The neighboring residential community and island property areas are contributors of

sediments and toxicants. This wetland acts to filter and trap these sediments and toxicants, and therefore, it is a principal function of this wetland.

Nutrient Removal/ Retention/ Transformation

This function recognizes a wetland's ability to serve as a trap for nutrients in runoff from surrounding uplands or contiguous wetlands. The adjacent residential neighborhood is likely a contributor of phosphorous and nitrogen. Due to the high level of saturation and presence of deep organic/ sediment deposits, this wetland acts to absorb nutrients and it transfers them to other trophic levels, and therefore, nutrient removal/ retention/ transformation is a principal function of this wetland

Production Export

This function considers the wetland's ability to export resources to other areas. For example, rosette terns utilize the area to forage for silversides and transport the nutrients off-site. As evidenced by the *Fish and Shellfish Habitat* function above, this tidal marsh area is highly productive. Evidence of multiple trophic levels utilizing this area was observed, and therefore, production export is a principal function of this wetland.

Sediment/ Shoreline Stabilization

This function relates to a wetland's effectiveness to stabilize shorelines and prevent erosion. The shoreline is well anchored by mature trees and saplings. Some vegetation along the shoreline and their root systems anchor the shoreline, and therefore, sediment/ shoreline stabilization is a principal function of this wetland.

Wildlife Habitat

This function considers a wetland's ability to provide wildlife habitat. According to the NH Wildlife Action Plan (WAP), this wetland is considered Highest Ranked Habitat in NH. Consultation with National Oceanic and Atmospheric Association (NOAA) Marine Fisheries indicates the area may be used by Atlantic and Shortnose Sturgeon. Wildlife Habitat is a principal function of this wetland.

Recreation

This function considers the effectiveness of the wetland to provide recreational opportunities such as canoeing, boating, fishing, and other passive recreational activities. Although the area cannot be directly accessed by the abutting private properties, the area is accessible from other public boat launches. The area is frequented by kayakers and recreational anglers. Due to the lack of direct access, recreation is not considered a primary principal function of this wetland.

Education/ Scientific Value

This value considers the effectiveness of the wetland to serve as an "outdoor classroom." The area does not offer direct public access, and therefore, education/ scientific value is not a key function of this wetland.

Uniqueness/ Heritage

This value relates to the effectiveness of a wetland to produce certain *special values* such as archeological sites, unusual aesthetic quality, historical events, and unique plants. Given NH has a relatively small coastal shoreline, this area is certainly unique to NH. Although the proposed impact area is not within any known archaeological sites, the surrounding area was once inhabited by Native Americans. Additionally, the threatened plant species, Marsh Elder (*Iva Frutescens*), is near the impacts area. Unfortunately, the site cannot be accessed by the public, and therefore, Uniqueness/ Heritage is not a principal function of this wetland.

Visual Quality/ Aesthetics

This value considers the wetland's overall visual quality and aesthetics. The area surrounding the wetland is private property. While the area can be accessed by boat and kayak, due to the lack of access, visual quality/ aesthetics is not considered a key function of this wetland.

Endangered Species Habitat

Endangered species habitat relates to the effectiveness of the wetland to support endangered species habitat. Consultation with the National Oceanic and Atmospheric Association (NOAA) Marine Fisheries indicates the area is considered *Essential Fish Habitat* (EFH) for the Atlantic Sturgeon (*Acipenser oxyrhynchus*), Shortnose Sturgeon (*Acipenser brevirostrum*). This wetland *does not* provide the key features necessary for spawning (salinity level, substrate, and cover) and therefore, is not considered critical habitat (CH). The Roseate Tern (*Sterna dougallit*) forages on small fish within this wetland during high tide. The threatened species, Marsh Elder (*Iva Frutescens*), is present on the bank of the salt marsh but, they (8-plants) will be transplanted during the growing season before this project begins. Endangered Species Habitat is considered a key function of this wetland.

Ecological Integrity

Ecological Integrity is a measure of the extent to which natural ecosystems and their buffers have been altered. For the most part, aside from residential docking structures, the tidal resource has not undergone a tremendous amount of alteration. A large portion of the Zone of Influence is a residential neighborhood which likely contributes to untreated stormwater runoff to the resource. The Ecological Integrity Score of Resource is .78 out of a possible 1.0. Ecological Integrity is a principal function of this resource.

Summary

This wetland serves many functions including floodflow storage capacity, fish and shellfish habitat, sediment and toxicant retention, nutrient removal, resource export, sediment and shoreline stabilization, wildlife habitat, endangered species habitat and ecological integrity and therefore, it is considered a high value, high functioning resource of the State of New Hampshire.

A low impact vibratory system will be used to install the new piles and, to the greatest extent practicable, this work will occur during low tide.

To minimize impacts to wildlife species that utilize this resource, the project will adhere to the time of year restrictions and will remove causeways from public waters between December 15th and March 15th.

In summary, as result of incorporating the aforementioned conservation measures and as a result of removing the existing tidal restriction, the natural hydraulic capacity and aquatic organism pathways will be restored and this significantly enhances the functions and values of this resource. The proposed salt marsh and upland tidal buffer zone restoration will significantly enhance the neighboring resources as well. While this project proposes to remove an unnaturally occurring micro-niche habitat, doing so poses no threat or harm to threatened or endangered species. This project may temporarily affect, but is unlikely to adversely affect the principal functions and values of this resource and will result in significant increases in the functions and values of this resource.

References

ACOE *Army Corps of Engineers Highway Methodology* (September 1999, NAEEP-360-1-30a).

Cowardin, L.M., V. carter, F.C Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deep-Water Habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Ammann, A.P. and A.L. Stone. 1993. *Method for Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire.*

Ecological Integrity of the Tidal Wetland

Methods

Tidal marshes are among the most productive and most disturbed ecosystems. Undeveloped, undisturbed natural buffers are critical to supporting the health of aquatic ecosystems. Natural buffers protect tidal resources by anchoring and stabilizing the shoreline, reducing erosion, and absorbing nutrients and contaminants found in stormwater. *Ecological Integrity* is a measure of the extent to which natural ecosystems and their buffers have been altered.

The ecological integrity of the tidal wetland was assessed using the *Method for Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire (June 1993)* and data from the NH Fish and Game Wildlife Action Plan (WAP).

Figure 1. Overview of the tidal resource area, depicting the existing causeways that act as a tidal restriction. It is worth noting, however, that these causeways will be removed as part of the proposed project.

Ecological Integrity of the Tidal Wetland

EU= Evaluation Unit (the Tidal Wetland)

Percent of wetland plant community dominated by invasive plant species	Score
Less than 5% of EU dominated by invasive species	**1.0**
5% to 20% of EU dominated by invasive species	**.5**
More than 20% of the EU dominated by invasive species	**.1**
Number of Tidal Restrictions	
No Tidal Restrictions	**1.0**
One Tidal Restriction between the EU and free tidal flow	**.5**
More than one Tidal Restriction between the EU and free tidal flow	**.1**
Type of Tidal Restriction	
No restriction affecting tidal flow	**1.0**
Flow through bridge appears adequate	**.5**
Flow through bridge appears inadequate and/ or flow restricted by culvert(s)	**.1**
Ditching on the Surface of the EU	
No ditching within the EU	**1.0**
Ditches present in linear pattern	**.5**
Ditches present in grid pattern	**.1**
Dominant Land Use in the 500-Foot Zone of Influence Surrounding the EU	
Forested, Fields, Open Water or Open Space	**1.0**
Agriculture or Rural Residential	**.5**
Commercial, Industrial, High Density Residential or Heavily used Highways	**.1**

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Ratio of the Number of Occupied Buildings within the EU or within the Zone of Influence Surrounding the EU	
Less than 0.1 Buildings/ acre.	**1.0**
From 0.1 to 0.5 Buildings/ acre.	**.5**
More than 0.5 Buildings/ acre.	**.1**
Percent of the EU/ Upland Border which has a buffer of woodland or idle land at least 500-feet in width.	
More than 70%	**1.0**
From 30% to 70%	**.5**
Less than 30%	**.1**
Square footage of roads, driveways, and parking lots within 150-feet of the EU.	
Ratio less than 1,500 square feet/ acre	**1.0**
Ration between 1,500 square feet to 6,000 square feet/ acre	**.5**
Ratio greater than 6,000 square feet/ acre	**.1**
SCORE = 1.0+.1+.1+1.0+1.0+1.0+.5+.5 = 6.2 6.2/8 = 0.775	**.78**

Summary:

The tidal wetland adjacent to the project area is composed largely of mudflats and contains a few small areas of saltmarsh. Less than 5% of the tidal wetland is dominated with invasive species, namely with Glossy Buckthorn (*Frangula alnus*). A tidal restriction is present in the form of two causeways (see Figure 1). There are no ditches within the area that alter how the resource drains. The dominant land use within the 500-foot zone of influence surrounding the EU is open water with forested buffer zones. The ratio of the occupied buildings within the zone of influence is less than 0.1 buildings per acre. The previous development of the existing bridge (to be replaced) removed some of the woodland buffer, but a decent portion of the woodland buffer remains. The impervious area within 150-feet of the tidal wetland is around 5,000-6,000 square feet per acre. The existing bridge and causeways contribute most of this impervious area.

In summary, the tidal wetland has undergone some degradation by anthropogenic sources. Tidal flows have been restricted, and portions of the woodland buffer have been previously cleared for bridge development. The bridge itself adds significant impervious area within the vicinity of the EU. It certainly contributes stormwater runoff and associated pollutants to the resource.

References

Ammann, A.P. and A.L. Stone. 1993. *Method for Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire.*

NH Fish and Game Department Wildlife Action Plan (WAP).

Civil Engineers
Structural Engineers
Traffic Engineers
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Coastal Vulnerability Assessment

Env-Wt 603.05

Introduction

TFMoran recognizes rising seas pose a significant threat to New Hampshire's coastal communities, ecosystems, and cultural resources (STAP, 2014). This *Coastal Vulnerability Assessment* (CVA) was prepared to accompany the associated NHDES Wetlands Permit Application seeking approval to impact Tidal Waters, Mud Flats, and the Upland Tidal Buffer Zone for the purpose of removing two existing causeways from public waters and constructing a new timber bridge and bridge approaches. This project will result in significantly increasing the hydraulic capacity and aquatic organism passage within a Tier-4 Tidal Crossing. This project also proposes to connect the property to municipal utilities thereby eliminating the need to install an on-site septic system.

Methodology

This Coastal Vulnerability Assessment (CVA) was conducted using the *NH Coastal Flood Risk Science and Technical Advisory Panel (STAP) Report, Sea-Level Rise, Storm Surges, and Extreme Precipitation in Coastal New Hampshire: Analysis of Past and Projected Future Trends* as prescribed by NHDES Wetlands Administrative Rule Env-Wt 603.05. Additionally, the New Hampshire Coastal Flood Risk Summary, Part II: Guidance for Using Scientific Projections (NHCFRSTAP, 2020) prepared by the New Hampshire Coastal Flood Risk Science and Technical Advisory Panel was referenced to demonstrate this site's vulnerability to sea level rise. Moreover, the Rockingham Planning Commission (RPC) Tides to Storms - Preparing for New Hampshire's Future Coast, City of Portsmouth Vulnerability Assessment (RPC, 2015) was consulted. Site visits and field observations were performed by Coastal Professional and Certified Wetlands Scientist (CWS) Jason Aube, on March 1, 2023, and March 17, 2023.

Step 1.1 – Project Goal and Project Type

The goal of this project is to replace an outdated existing bridge with a new, more structurally sound, bridge to access a residential island and connect the island to municipal utilities. The beneficiary is the private property owner and the State of NH. The State of NH is also a beneficiary as this project proposes to remove fill from the public waters that will result in significantly increasing the hydraulic capacity and aquatic organism passage within a *Tier-4* Tidal Crossing. The State of NH also benefits by having the residential island connected to municipal sewer rather than using an on-site, in ground, septic system.

Step 1.2 – Project Area

The project area is located on 325 Little Harbor Road, Portsmouth, NH, Tax Map: 205, Lot: 2, also known as Belle Isle or Lady Isle.

Step 1.3 – Time Period Over Which the Project is Designed to Serve

This project will be designed to serve to at least the year 2100.

Step 2.1 – Risk Tolerance to Flooding and Potential Damage or Loss

This project proposes to construct a new bridge that will have infrastructure designed to withstand the daily ebb and flow of tidal waters, and therefore, it has a relatively low sensitivity to inundation. Additionally, this area of the coast is not exposed to highly erosive tidal energy forces. However, the proposed bridge is relatively high cost and moderately modifiable and, if damaged, has some implications in terms of public safety, and therefore, this project is classified as having a **medium** to **low tolerance for flood risk**.

Risk Tolerance	High	Medium	Low	Very Low
Description	A project that is able to tolerate a high level of flood risk	A project that is able to tolerate a medium level of flood risk	A project that is only able to tolerate a low level of flood risk	A project that is only able to tolerate a very low level of flood risk
Possible Project Characteristics **Risk tolerance depends on the combination and importance of the project characteristics**	Low value or cost	Medium value or cost	High value or cost	Extremely high value or cost
	Easy to modify	Moderately modifiable	Difficult to Modify	Extremely difficult to modify
	Little to no implications on public function and/ or safety	Moderate implications for public function and/ or safety	Critical to public function and/ or safety	High risk of public harm if project fails
	Low sensitivity to inundation	Moderate sensitivity to inundation	High Sensitivity to inundation	Extremely high sensitivity to inundation

Table 1: Framework for determining projected tolerance for flood risk.

Step 2.2 – Project Specific Considerations

This project poses no threat to public access to important services. The project area is on an island of private property and, if damaged, poses no threat to the access of public services. Only those on the island may be limited to important public services.

Step 3.1 Relative Sea Level Rise (RSLR) Estimates For the Project

When considering projected relative sea level rise (RSLR) for this project, four different global greenhouse gas scenarios (Representative Concentration Pathways (RCPs)) were considered. We elected to use the recommended intermediate RCP 4.5 scenario because, according to the data, this is the more likely scenario whereby greenhouse emissions peak in 2040 and decline until 2080. Using this RCP also allows us to project sea level rise beyond the year 2100.

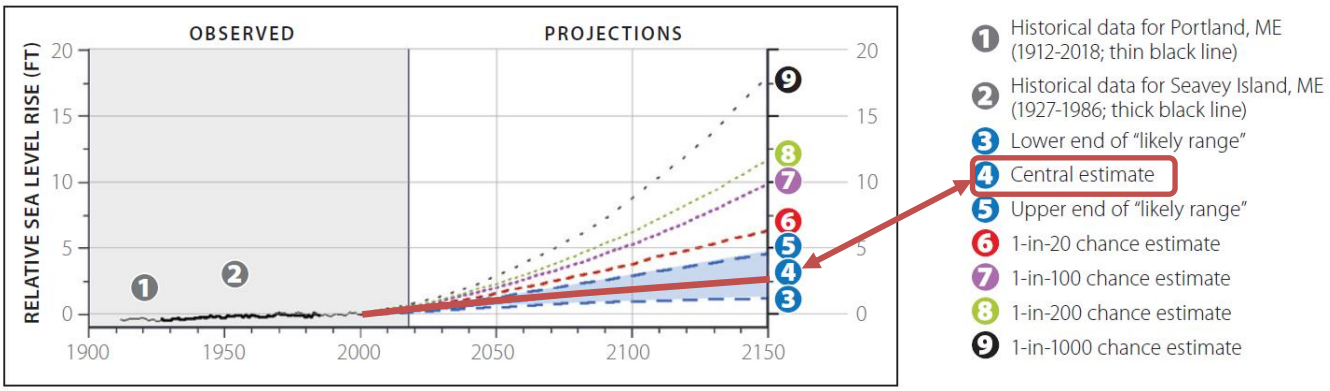


Figure 1: Greenhouse gas concentration scenario *Representative Concentration Pathway* RCP 4.5 used for RSLR estimates.

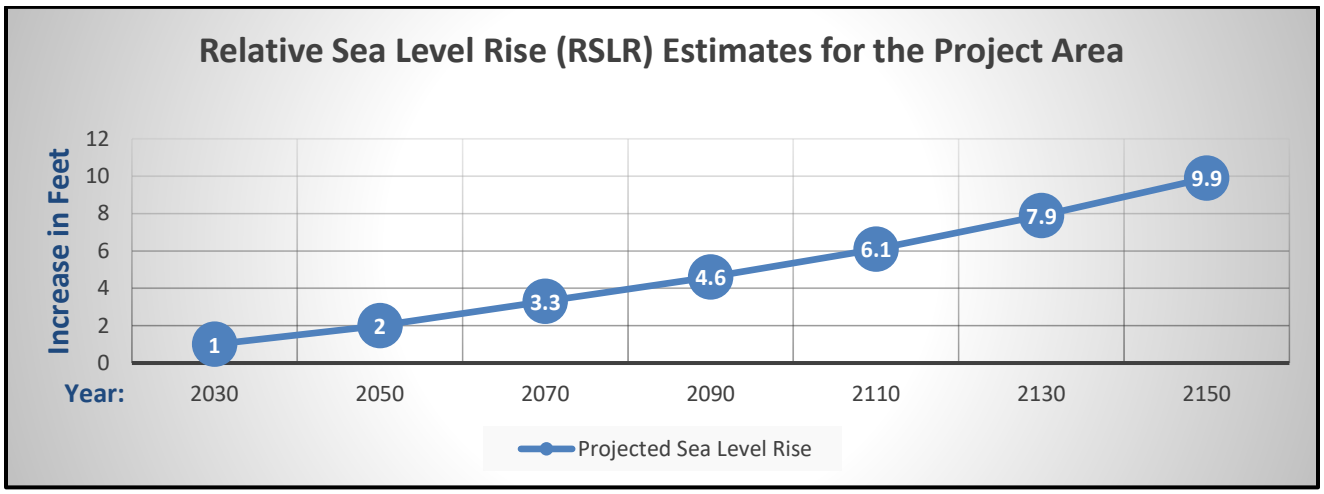


Figure 2: Incremental Relative Sea Level Rise for the project area based on Representative Concentration Pathway (RCP) 4.5 and a LOW tolerance for flood risk.

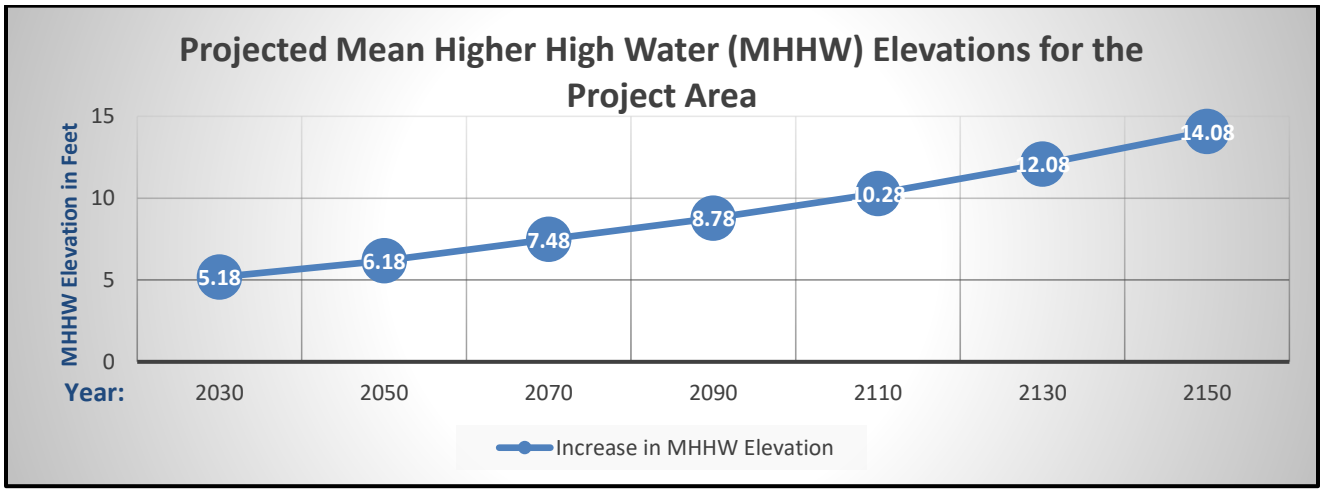


Figure 3: Incremental Relative Sea Level Rise for the project area based on Representative Concentration Pathway (RCP) 4.5, a LOW Tolerance for flood risk, and the current Mean Higher High Water (MHHW) elevation of 4.18 feet determined by the National Oceanic and Atmospheric Association (NOAA) Seavey Island, Maine Station 8419870 using NAVD 88 datum.

Step 3.2 Assess Relative Sea Level Rise (RSLR) Impacts to the Project

The projected depth and extent of waterflow will have very little impact on the proposed bridge. The bridge's piles are designed to withstand constant exposure to tidal waters. We have, however, increased the height of the bridge deck from approximately 9.9-feet to 13.3-feet so that it will be less vulnerable to anticipated sea level rise and water inundation.

The surrounding infrastructure will not affect the project area. As a result of removing the existing causeways, the hydraulic capacity will be increased and this, in turn, will aid in decreasing erosive tidal forces. Increases in sediment deposition will have no bearing on this project. Erosive forces associated with sea level rise will not adversely impact the proposed bridge.

Step 4.1 Identify and Assess Relative Sea Level Rise (RSLR) Adjusted for Coastal Storms/ Design Flood Elevation (DFE)

Naturally, bridge infrastructure is designed to be exposed to marine waters and sediments. This section of the Vulnerability Assessment is not applicable to marine structures. We have, however, increased the deck of the proposed bridge by approximately 3.4-feet so that the bridge is less susceptible to anticipated sea level rise.

The projected *Highest Astronomical Tide* (HAT) in the year 2100 is estimated to be at elevation 11.22-feet. When considering an additional 2-feet of storm surge, the height of the proposed deck at elevation 13.3-feet will remain above water during the *Highest Astronomical Tide* in the year 2100. Please see the Vulnerability Assessment Plan.

	HIGH TOLERANCE FOR FLOOD RISK	MEDIUM TOLERANCE FOR FLOOD RISK	LOW TOLERANCE FOR FLOOD RISK	VERY LOW TOLERANCE FOR FLOOD RISK
IF PROJECT AREA IS LOCATED IN:	RSLR-ADJUSTED DESIGN FLOOD ELEVATION (DFE) =			
A, AO, OR AE ZONE* NOT IDENTIFIED AS COASTAL A ZONE**	[BFE] + RSLR	[BFE + (required freeboard ≥ 1 ft)] + RSLR	[BFE + (required freeboard ≥ 1 ft)] + RSLR	Whichever is greater: [BFE + (required freeboard ≥ 2ft)] + RSLR OR 0.2% annual chance flood elevation + RSLR
VE ZONE*** AND COASTAL A ZONE			[BFE + (required freeboard ≥ 2 ft)] + RSLR	

Figure 4: Recommended approach to determining *Design Flood Elevation* (DFE) based on flood risk tolerance.

Step 4.2 Assess Relative Sea Level Rise-Adjusted Coastal Storm Impacts to the Project≥

The base of the proposed bridge will be constructed at elevation 13.3-feet so that the cumulative impacts of storm events and projected sea level rise will not adversely impact the proposed bridge.

Step 5.1 Identify Relative Sea Level Rise Induced Groundwater Rise

Mean groundwater rise is projected to be 66% of relative sea level rise (RSLR) between 0 to 0.6 miles from coastal areas (Knot, Jacobs, et al.) Relative Sea Level Rise Induced Groundwater Rise will not adversely impact the proposed bridge and the associated infrastructure. The pilings are designed to be submerged within water and saturated marine soils until at least the year 2100.

	PREFERRED APPROACH (MAPPED COASTAL COMMUNITY)	ALTERNATE APPROACH (UNMAPPED COASTAL COMMUNITY)
	IF PROJECT AREA IS LOCATED IN A MAPPED COASTAL COMMUNITY:	IF PROJECT AREA IS LOCATED WITHIN 3 MILES OF TIDAL SHORELINE IN AN UNMAPPED COASTAL COMMUNITY:
RSLR-INDUCED GROUNDWATER RISE =	Refer to Sea-Level Rise Mapper[38] to estimate RSLR-induced groundwater rise	Commit to manage = (RSLR) x (0.33) Be prepared to manage = (RSLR) x (0.66)
DEPTH TO RSLR-ADJUSTED GROUNDWATER =	(Present-day depth to groundwater) - (RSLR-induced groundwater rise)	

Figure 5: The approach selected for determining sea level rise induced groundwater rise at the project site.

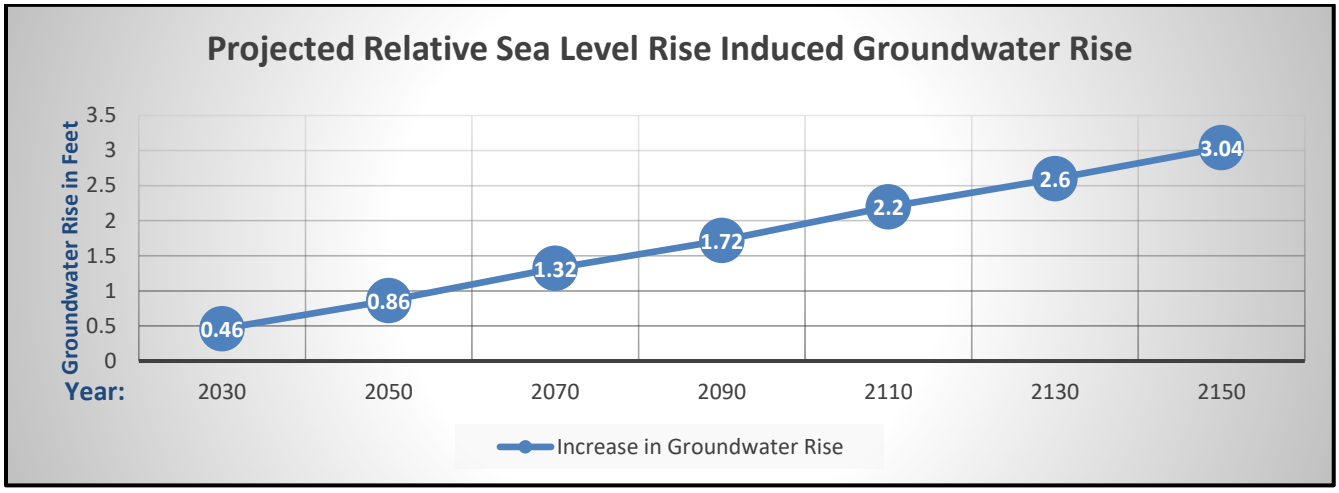


Figure 6: Incremental groundwater rise for the project area based on representative concentration pathway (RCP) 4.5.

Step 5.2 Estimate Depth to Present-Day and Future Groundwater for the Project Area

This section of the Vulnerability Assessment is not applicable to this project as the proposed bridge pilings will be continually submerged and exposed to water and marine sediments.

Step 5.3 Assess Relative Sea Level Rise-Induced Groundwater Rise Impacts

This section of the Vulnerability Assessment is not applicable to this project as the proposed bridge pilings will be continually submerged and exposed to water and marine sediments.

Step 6.1 Account for Projected Increases in Extreme Precipitation

Under representative concentration pathway (RCP) 4.5, by the end of the century, the amount of precipitation falling on the wettest day of the year is projected to increase by 8-15% (NHCFRSTAP, 2020). This project has a medium to low tolerance for flood risk, and therefore, we have elected to account for a 20% increase in extreme precipitation estimates.

	HIGH TOLERANCE FOR FLOOD RISK	MEDIUM TOLERANCE FOR FLOOD RISK	LOW TOLERANCE FOR FLOOD RISK	VERY LOW TOLERANCE FOR FLOOD RISK
PROJECTED EXTREME PRECIPITATION ESTIMATE =	(Best available precipitation data) x (1.15)		(Best available precipitation data) x (>1.15)	

Figure 8: The approach for calculating projected extreme precipitation estimates based on the project's tolerance for flood risk.

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	New Hampshire
Location	New Hampshire, United States
Latitude	43.065 degrees North
Longitude	70.746 degrees West
Elevation	0 feet
Date/Time	Thu Mar 16 2023 16:29:22 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.82	1.04	1yr	0.70	0.98	1.21	1.56	2.03	2.66	2.93	1yr	2.36	2.82	3.23	3.95	4.56	1yr
2yr	0.32	0.50	0.62	0.82	1.02	1.30	2yr	0.88	1.18	1.52	1.94	2.49	3.21	3.58	2yr	2.85	3.44	3.95	4.69	5.34	2yr
5yr	0.37	0.58	0.73	0.98	1.25	1.61	5yr	1.08	1.47	1.89	2.44	3.15	4.07	4.59	5yr	3.61	4.41	5.05	5.95	6.71	5yr
10yr	0.41	0.65	0.82	1.12	1.46	1.90	10yr	1.26	1.73	2.24	2.90	3.76	4.87	5.54	10yr	4.31	5.33	6.10	7.12	7.99	10yr
25yr	0.48	0.76	0.97	1.34	1.78	2.35	25yr	1.54	2.15	2.79	3.64	4.75	6.18	7.11	25yr	5.47	6.84	7.83	9.05	10.07	25yr
50yr	0.54	0.86	1.11	1.55	2.08	2.77	50yr	1.80	2.54	3.30	4.34	5.68	7.40	8.60	50yr	6.55	8.27	9.45	10.84	11.99	50yr
100yr	0.60	0.97	1.25	1.78	2.43	3.27	100yr	2.10	2.99	3.92	5.18	6.79	8.86	10.39	100yr	7.85	10.00	11.42	13.00	14.29	100yr
200yr	0.68	1.11	1.44	2.06	2.85	3.86	200yr	2.46	3.53	4.64	6.16	8.11	10.62	12.57	200yr	9.40	12.09	13.81	15.59	17.04	200yr
500yr	0.81	1.33	1.73	2.51	3.50	4.80	500yr	3.02	4.41	5.80	7.74	10.25	13.50	16.17	500yr	11.95	15.54	17.75	19.83	21.52	500yr

Figure 9: Extreme precipitation data from the Northeast Regional Climate Center for the project area.

Increase in extreme precipitation estimates by 20%			
Storm Event	**24-hour precipitation total**	**Increase *x* 20%**	**Projected 24-hour precipitation**
1 Year	2.66 inches	*x* 1.20	3.19 inches
2 Year	3.21 inches	*x* 1.20	3.85 inches
10 Year	4.87 inches	*x* 1.20	5.84 inches
50 Year	7.40 inches	*x* 1.20	8.88 inches

Table: 2: Increase in precipitation during predicted 24-hours storm events.

Step 6.2 Assess Projected Extreme Precipitation Impacts to the Project

Extreme precipitation events will not have an impact on this project.

Step 7.1 Assess Cumulative Risk and Evaluate Adaption Options

Collectively, the compounded impacts of relative sea level rise, coastal storms, relative sea level rise induced groundwater rise and extreme precipitation will not adversely impact the proposed underground infrastructure.

Step 7.2 Identify and Evaluate Adaptation Options to Mitigate Coastal Flood Risk

The proposed bridge and associated approaches have a relatively medium to low tolerance for flood risk, and therefore, to the greatest extent practicable, this project proposes to raise the elevation of the bridge so that flood waters can be avoided.

	NO ACTION	AVOID	ACCOMMODATE	RESIST	RELOCATE
IN OTHER WORDS, RECOGNIZE RISK AND...	*Don't change anything**	*Prioritize investment out of the water's way*	*Live with the water*	*Keep the water out*	*Move assets or facilitate migration*
COASTAL FLOOD RISK IS:	**Very Low to Low**	**Very Low**	**Moderate**	**High**	**High**
TOLERANCE FOR FLOOD RISK IS:	**High**	**Medium to Very Low**	**Medium**	**Low to Very Low**	**Low to Very Low**

Figure: 10: Adaption adoptions available to manage coastal flood risk.

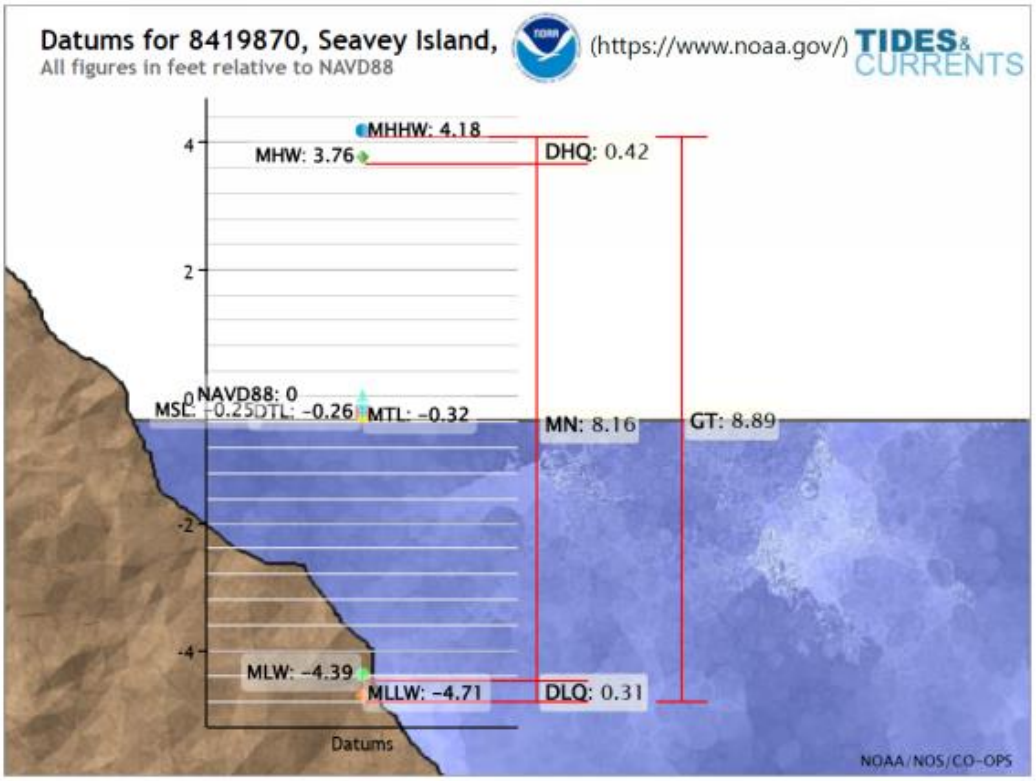


Figure: 11: National Oceanic and Atmospheric Association (NOAA) Seavey Island, Maine Station 8419870 tidal datum.

References

Extreme Precipitation in New York & New England, Version 1.12. Managed by the Northeast Regional Climate Center.http://precip.eas.cornell.edu/

Knott, J.F., Jacobs, J., Daniel, J.S., & Kirshen, P. Journal of Coastal Research. Modeling Groundwater Rise Caused by Sea-Level Rise in Coastal New Hampshire. 2018.

NHCFRSTAP (NH Coastal Flood Risk Science and Technical Advisory Panel). New Hampshire Coastal Flood Risk Summary, Part II: Guidance four Using Scientific Projections. Report Published by the University of New Hampshire, Durham. March, 2020.

NOAA (National Oceanic Atmospheric Association). NOAA Tides and Currents – Datums for Seavey Island, Maine – Site# 8419870. Site viewed on February 10, 2020. https://tidesandcurrents.noaa.gov/datums.html?datum=NAVD88&units=0&epoch=0&id=8419870&name=Seavey+Island&state=ME

RPC (Rockingham Planning Commission). Tides to Storms, Preparing for New Hampshire's Future Coast, City of Portsmouth Vulnerability Assessment. September, 2015.

SLRM (Sea Level Rise Mapping New Hampshire Open Coast, Piscataqua River, and Great Bay for the University of New Hampshire – Submitted by AECOM). December, 2013.

STAP (Science and Technical Advisory Panel, NH Coastal Risks and Hazards Commission). Sea-level Rise, Storm Surges, and Extreme Precipitation in Coastal New Hampshire: Analysis of Past and Project Future Trends). August, 2014.

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

GIS Data Screening

Env-Wt 603.03

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran, Inc. Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

100 - Year Flood Plain

0 250 500 1,000 1,500 2,000 Feet

N

100 Year Flood Plain

TFM Since 1968

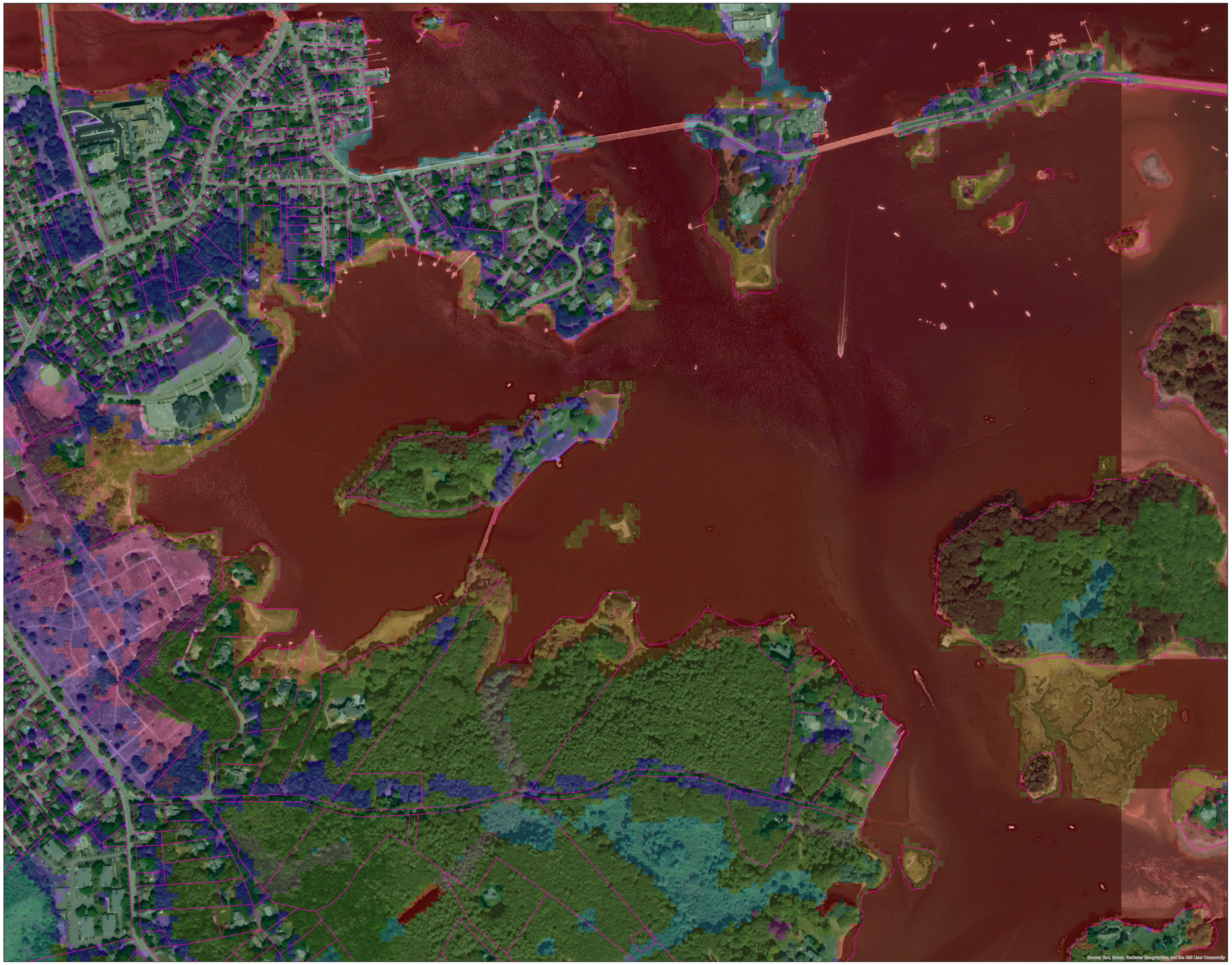
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

N

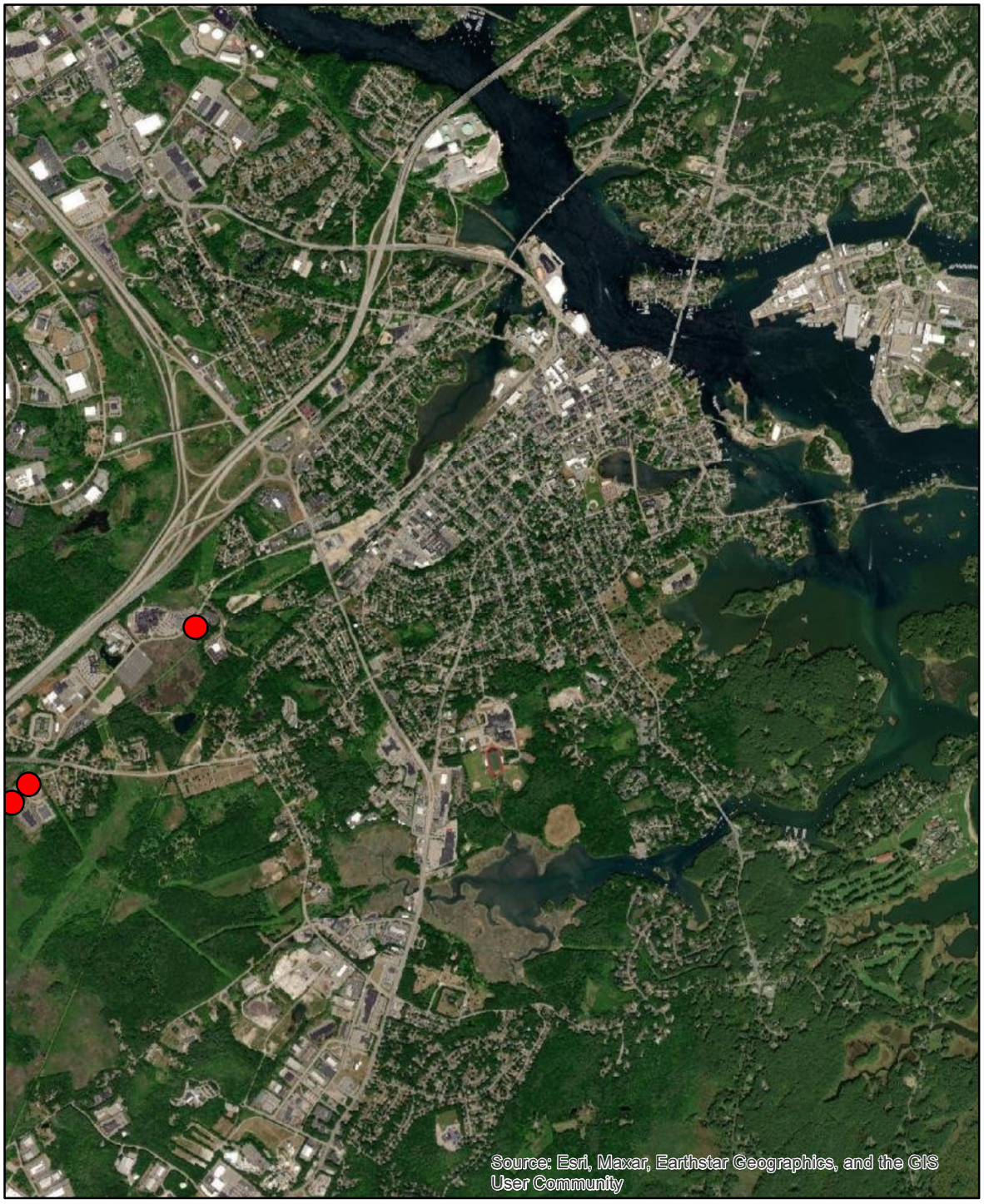
2020 Wildlife Action Plan (WAP) Habitat Types

2020-WAP-Habitats
WAP_HAB

- High-elevation spruce-fir
- Northern hardwood-conifer
- Open water
- Wet meadow/shrub wetland
- Peatland
- Lowland spruce-fir
- Developed or Barren land
- Northern swamp
- Rocky ridge
- Cliff and Talus
- Developed Impervious
- Grassland
- Floodplain forest
- Temperate swamp
- Hemlock-hardwood-pine
- Sand/Gravel
- Alpine
- Appalachian oak-pine
- Pine barren
- Salt marsh
- Coastal island
- Dune



Local Potential Contamination Sources



0 750 1,500 3,000 4,500 6,000 Meters

N

Local Potential Contamination Sources

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Civil Engineers
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Land Surveyors
Landscape Architects
Scientists

Known Eel Grass Beds

0 750 1,500 3,000 4,500 6,000 Feet

N

eelgrass2021

TFM Since 1968

Civil Engineers
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Land Surveyors
Landscape Architects
Scientists

Impaired Waterbodies

0 250 500 1,000 1,500 2,000 Feet

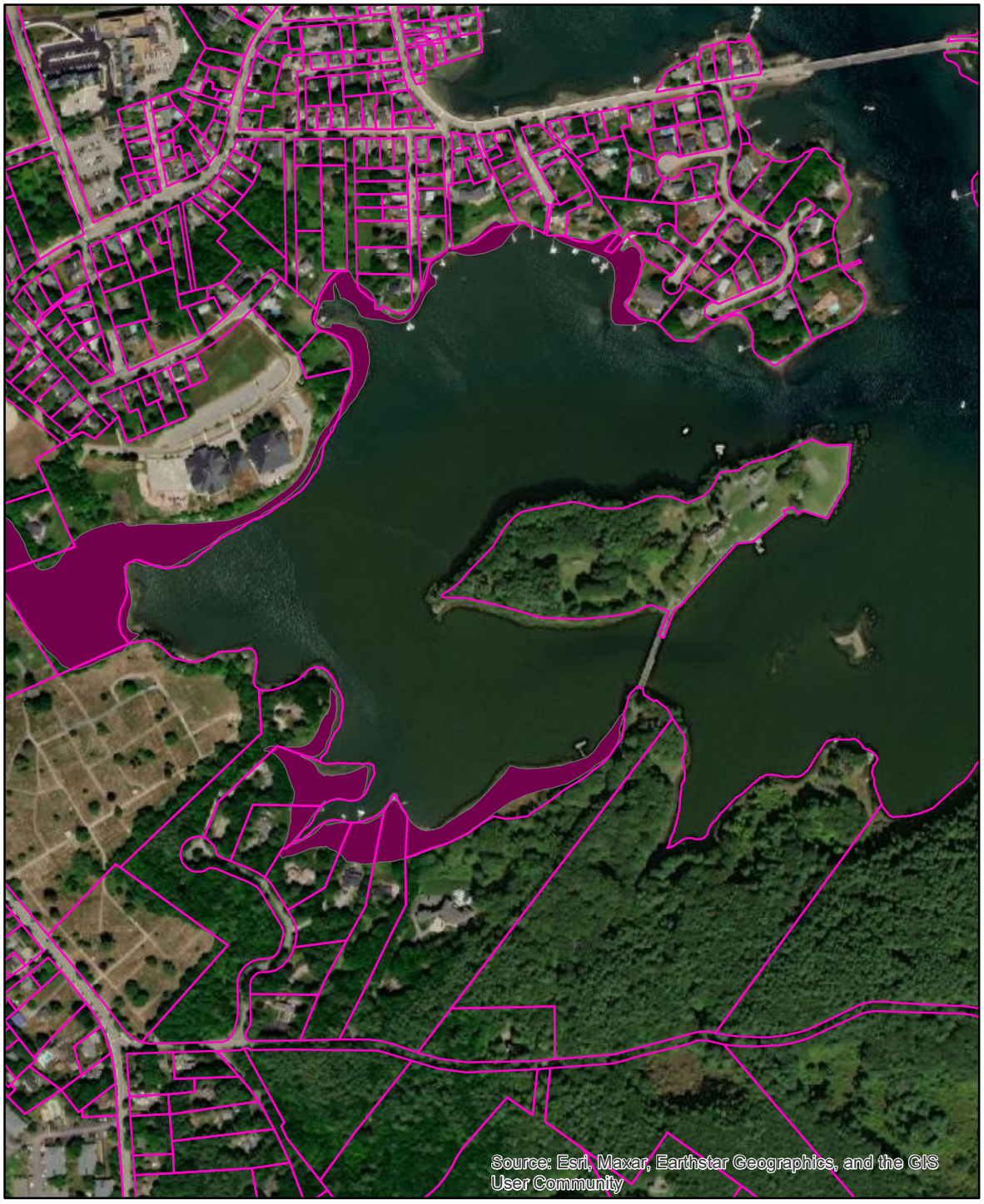
N

Impaired Waterbodies

TFM Since 1968

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

Prime Wetlands



0 500 1,000 2,000 3,000 4,000 Feet

N

Prime Wetlands

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Land Surveyors
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Scientists

Saltmarsh Area

0 250 500 1,000 1,500 2,000 Feet

N

Saltmarsh

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Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

Sand Dunes

0 750 1,500 3,000 4,500 6,000 Feet

N

Sand Dune

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Civil Engineers
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Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NH Fish and Game
Wildlife Action Plan (WAP) Habitat Tiers

0 250 500 1,000 1,500 2,000 Feet

N

1 Highest Ranked Habitat in New Hampshire

2 Highest Ranked Habitat in Biological Region

3 Supporting Landscapes

TFM Since 1968

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

SECTION 3

From:	Croot, Gary T CIV (USA)
To:	Jason Aube
Subject:	RE: 325 Little Harbor Road, Portsmouth, NH - bridge replacement/ tidal area restoration [Filed 31 Mar 2023 14:43]
Date:	Friday, March 31, 2023 10:44:28 AM
Attachments:	AA_Ltr_Belle Isle Bridge_1996 Jan 06.pdf

Jason,

When the bridge was constructed in 1996, the Coast Guard issued an Advance Approval letter which I have attached. The Advance Approval asserts that no CG Bridge Permit will be required. All of the other aspects of the letter remain in effect.

Also note that any waterside construction vessels such as workboats or barges must comply with lighting requirements of the Inland Navigation Rules, as well as pollution prevention and response requirements.

Please let me know if you have any questions regarding Coast Guard requirements for this bridge replacement.

Gary Croot
Bridge Management Specialist
First Coast Guard District
Boston, MA

From: Jason Aube <jaube@tfmoran.com>
Sent: Thursday, March 30, 2023 3:46 PM
To: Croot, Gary T CIV (USA) <Gary.T.Croot@uscg.mil>
Cc: Lefebvre, Lindsey E CIV USARMY CENAE (USA) <Lindsey.E.Lefebvre@usace.army.mil>
Subject: [Non-DoD Source] RE: 325 Little Harbor Road, Portsmouth, NH - bridge replacement/ tidal area restoration

Hi Gary,

We're in the midst of preparing a NH Department of Environmental Services wetlands permit application to construct a new bridge adjacent to the existing bridge that accesses Lady Isle/ Belle Isle in Portsmouth, NH. Once the new bridge is constructed, the old bridge, including the existing causeways, will be removed from public waters. In anticipation of future sea-level rise, the deck of the proposed bridge will be elevated by 3.4-feet and this will allow (for a period of time) more room for the passage of recreational boats/ kayaks at higher tides. We do anticipate that, during the restoration activities, recreational boat traffic within this area will be impeded but, private property owners inland of the proposed impacts will still be able to access ocean waters via the most northerly side of Lady Isle. We anticipate the restoration activities associated with the removal of the causeways and associated fill will be between November 15th and March 15th.

As part of the coordination required for this permitting process, Lindsey Lefebvre, from the US Army Corps of Engineers, asked us to reach out to you. I have attached a general project overview, plans, and drone photos of the project area.

Should you have any questions or require additional information, please contact me anytime.

Jay Aube, CWS
Project Manager
Certified Wetland Scientist
TFMoran Seacoast Division
170 Commerce Way - Suite 102, Portsmouth, NH 03801
Tel: (603) 431-2222 Fax: (603) 431-0910
Cell: (603) 988-2615

From: Lefebvre, Lindsey E CIV USARMY CENAE (USA) <Lindsey.E.Lefebvre@usace.army.mil>
Sent: Friday, March 17, 2023 1:03 PM
To: Jason Aube <jaube@tfmoran.com>
Subject: RE: 325 Little Harbor Road, Portsmouth, NH - bridge replacement/ tidal area restoration

Hi Jay,

Our NOAA contact is Kaitlyn Shaw: kaitlyn.shaw@noaa.gov

Coast Guard: Gary.T.Croot@uscg.mil

Let me know if you have any additional questions.

Lindsey Lefebvre
US Army Corps of Engineers
New England District
Regulatory Division
696 Virginia Rd
Concord, MA 01742
(o) (978)-318-8295
(c) (978)-471-0741

From: Jason Aube <jaube@tfmoran.com>
Sent: Tuesday, March 14, 2023 4:53 PM
To: Lefebvre, Lindsey E CIV USARMY CENAE (USA) <Lindsey.E.Lefebvre@usace.army.mil>
Subject: [Non-DoD Source] 325 Little Harbor Road, Portsmouth, NH - bridge replacement/ tidal area restoration

Hi Lindsey,

Per NOAA's recommendations, we'd like to engage with them sooner than later on this project. Do you have a good point of contact at NOAA? I have included the Essential Fish Habitat Mapper report.

Also, we'd like to reach out to the U.S. Coast Guard – any suggestions?

If you recall, this project proposes to replace an existing bridge with a new bridge on piles. The existing causeways will be removed from public waters. Contact me anytime if you have more suggestions.

Jay Aube, CWS
Project Manager
Certified Wetland Scientist
TFMoran Seacoast Division
170 Commerce Way - Suite 102, Portsmouth, NH 03801
Tel: (603) 431-2222 Fax: (603) 431-0910
Cell: (603) 988-2615

.O[SYS]<CFORMS>USCG_LETTER.FOC*

16211/NV-343

JAN 0 6 1996

Mr. Herbert A. Horgan, Jr.
Belle Isle Partners Trust
69 Algonquin Road
Chestnut Hill, MA 02167

Re: Advance Approval determination for proposed replacement of the Belle Isle (Lady Isle) bridge across the Back Channel (Portsmouth Harbor), NH

Dear Mr. Horgan:

We have completed review of your bridge permit application for approval of the referenced bridge replacement across the Portsmouth Harbor Back Channel at Portsmouth, New Hampshire.

Based on our review of the documentation provided by Emanuel Engineering, and the fact that no objections were received as a result of Public Notice 1-891 dated 25 November 1996, we have determined that a formal Coast Guard bridge permit will not be required for this project. The project will be placed in the Advance Approval category as per 33 CFR 115.70. Future bridge projects along the same waterway will have to be investigated for their environmental impact before they may be considered for Advance Approval.

This office has prepared a Categorical Exclusion for this project, a copy of which is available upon request.

Coast Guard approval does not relieve the applicant of the responsibility to ensure compliance with any applicable federal, state or local requirements for the proposed project.

Although this project will not require a bridge permit, other areas of Coast Guard jurisdiction apply. The following stipulations must be met:

a. The requirement to display permanent navigation lights at this bridge in accordance with 33 CFR 118 is waived. This waiver may be rescinded at anytime in the future should nighttime navigation through this bridge be increased to a level determined by the District Commander to warrant lighting (generally four or more passages per week between the hours of sunset and sunrise).

b. Upon completion of construction, the bridge owner shall submit "as built" drawings showing clearances through the bridge and sufficient data to permit this office to prepare a completion report. This report is used for Coast Guard and other mariner publications.

c. Any spillage of oil or oil based products during construction must be promptly reported to the Coast Guard by calling 1-800-424-8802.

If you have any questions, please call this office at the above telephone number.

Sincerely,

Gary Kassof
Chief, Bridge Branch
First Coast Guard District
By Direction Of The District Commander

Copy: USCG Station Portsmouth Harbor
Corps of Engineers, New England Division (File #199502561)
Fred S. Emanuel, P. E.

SMART/es/27DEC96/BRIDGE.CARRET/AA.FORMAT.BELLE.ISLE

US Army Corps of Engineers®
New England District

Appendix B

Regional General Permits (GPs)
Required Information and Corps Secondary Impacts Checklist

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

All Projects:

- Corps application form (ENG Form 4345) as appropriate.
- Photographs of wetland/waterway to be impacted.
- Purpose of the project.
- Legible, reproducible black and white (no color) plans no larger than 11"x17" with bar scale. Provide locus map and plan views of the entire property.
- Typical cross-section views of all wetland and waterway fill areas and wetland replication areas.
- In navigable waters, show mean low water (MLW) and mean high water (MHW) elevations. Show the high tide line (HTL) elevations when fill is involved. In other waters, show ordinary high water (OHW) elevation.
- On each plan, show the following for the project:
- Vertical datum and the NAVD 1988 equivalent with the vertical units as U.S. feet. Don't use local datum. In coastal waters this may be mean higher high water (MHHW), mean high water (MHW), mean low water (MLW), mean lower low water (MLLW) or other tidal datum with the vertical units as U.S. feet. MLLW and MHHW are preferred. Provide the correction factor detailing how the vertical datum (e.g., MLLW) was derived using the latest National Tidal Datum Epoch for that area, typically 1983-2001.
- Horizontal state plane coordinates in U.S. survey feet based on the Traverse Mercator Grid system for the State of New Hampshire (Zone 2800) NAD 83.
- Show project limits with existing and proposed conditions.
- Limits of any Federal Navigation Project in the vicinity of the project area and horizontal State Plane Coordinates in U.S. survey feet for the limits of the proposed work closest to the Federal Navigation Project;
- Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below the ordinary high water in inland waters and below the high tide line in coastal waters.
- Delineation of all waterways and wetlands on the project site,:
- Use Federal delineation methods and include Corps wetland delineation data sheets. See GC 2 and www.nero.noaa.gov/hcd for eelgrass survey guidance.
- GP 3, Moorings, contains eelgrass survey requirements for the placement of moorings.
- For activities involving discharges of dredged or fill material into waters of the U.S., include a statement describing how impacts to waters of the U.S. are to be avoided and minimized, and either a statement describing how impacts to waters of the U.S. are to be compensated for (or a conceptual or detailed mitigation plan) or a statement explaining why compensatory mitigation should not be required for the proposed impacts. Please contact the Corps for guidance.

US Army Corps of Engineers ®
New England District

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

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	X	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?		X
2.2 Are there proposed impacts to SAS, special wetlands. Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at https://www2.des.state.nh.us/nhb_datacheck/. The book Natural Community Systems of New Hampshire also contains specific information about the natural communities found in NH.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage? New tidal crossing will improve hydraulic capacity and aquatic organism passage	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		X
2.5 The overall project site is more than 40 acres?		X
2.6 What is the area of the previously filled wetlands?	5,020	
2.7 What is the area of the proposed fill in wetlands?	5,300	
2.8 What is the % of previously and proposed fill in wetlands to the overall project site? 5.57% increase but, in area that does not restrict tidal flows as currently existing.		
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: https://www2.des.state.nh.us/nhb_datacheck/ USFWS IPAC website: https://ecos.fws.gov/ipac/location/index	X	

3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.	X	
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the GC 21?		N/A
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	X	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		X
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review**)** with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 11 GC 8(d) of the GP document**	X	

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

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: March 13, 2023
Project Code: 2023-0055303
Project Name: 325 Little Harbor Road - Bridge Replacement and Tidal Area Restoration

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 3/8/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (Updated 3/8/2023) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule will go into effect on **March 31, 2023**. After that date, the current 4(d) rule for NLEB will be invalid, and the 4(d) determination key will no longer be available. New compliance tools will be available in March 2023, and information will be posted in this section on our website and on the northern long-eared bat species page, so please check this site often for updates.

Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project may result in incidental take of NLEB after the new listing goes into effect, this will need to be addressed in an updated consultation that includes an Incidental Take Statement. Many of these situations will be addressed through the new compliance tools. If your project may require re-initiation of consultation, please wait for information on the new tools to appear on this site or contact our office for additional guidance.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

PROJECT SUMMARY

Project Code: 2023-0055303
Project Name: 325 Little Harbor Road - Bridge Replacement and Tidal Area Restoration
Project Type: Bridge - Replacement
Project Description: Impact approximately 20,000 square feet for the purpose of replacing an existing bridge to a residential island with a new bridge. This project proposes to remove fill from public water so that the hydraulic capacity and aquatic organism passage can be improved.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.064841400000006,-70.74616735916936,14z

Counties: Rockingham County, New Hampshire

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

BIRDS

NAME	STATUS
Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Roseate Tern *Sterna dougallii dougallii* Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPAC USER CONTACT INFORMATION

Agency: TFMoran, Inc.
Name: Jay Aube
Address: 170 Commerce Way
City: Suite 102
State: NH
Zip: 03801
Email jaube@tfmoran.com
Phone: 6034312222

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: March 14, 2023
Project code: 2023-0055303
Project Name: 325 Little Harbor Road - Bridge Replacement and Tidal Area Restoration
IPaC Record Locator: 695-123608113

Federal Nexus: yes
Federal Action Agency (if applicable): Army Corps of Engineers

Subject: Record of project representative's no effect determination for '325 Little Harbor Road - Bridge Replacement and Tidal Area Restoration'

Dear Jay Aube:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on March 14, 2023, for '325 Little Harbor Road - Bridge Replacement and Tidal Area Restoration' (here forward, Project). This project has been assigned Project Code 2023-0055303 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter.

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action

and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Red Knot *Calidris canutus rufa* Threatened
- Roseate Tern *Sterna dougallii dougallii* Endangered

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2023-0055303 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

325 Little Harbor Road - Bridge Replacement and Tidal Area Restoration

2. Description

The following description was provided for the project '325 Little Harbor Road - Bridge Replacement and Tidal Area Restoration':

> Impact approximately 20,000 square feet for the purpose of replacing an existing bridge to a residential island with a new bridge. This project proposes to remove fill from public water so that the hydraulic capacity and aquatic organism passage can be improved.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.064841400000006,-70.74616735916936,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

3. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   No

5. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

6. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

7. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the effects of any activities that would not occur but for the proposed action.

   If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

   Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

   Yes

PROJECT QUESTIONNAIRE

Will all project activities by completed by April 1, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: TFMoran, Inc.
Name: Jay Aube
Address: 170 Commerce Way
City: Suite 102
State: NH
Zip: 03801
Email jaube@tfmoran.com
Phone: 6034312222

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

From:	"Kyra Higgins"
To:	"Brochi, Jean" <Brochi.Jean@epa.gov>
Date:	4/13/2023 1:58:08 PM
Subject:	RE: Question about Butternut Translucent Oil Coating/Finish for Lady Isle Bridge

Great, thank you so much for letting me know.
Have a great rest of your week,
My best,

-Kyra Higgins

From: Brochi, Jean <Brochi.Jean@epa.gov>
Sent: Thursday, April 13, 2023 1:40 PM
To: Kyra Higgins <khiggins@tfmoran.com>
Cc: Jason Aube <jaube@tfmoran.com>
Subject: RE: Question about Butternut Translucent Oil Coating/Finish for Lady Isle Bridge

Hi Kyra,
Thank you for your response. Your questions were very thorough and my questions were about the oil and toxicity and application which has been addressed.

No further questions. Thank you very much. Jean

From: Kyra Higgins <khiggins@tfmoran.com >
Sent: Thursday, April 13, 2023 1:04 PM
To: Brochi, Jean <Brochi.Jean@epa.gov >
Cc: Jason Aube <jaube@tfmoran.com >
Subject: FW: Question about Butternut Translucent Oil Coating/Finish for Lady Isle Bridge

Good afternoon Jean,

I hope that you are well! My name is Kyra Higgins, and I'm a new Environmental Permitting Specialist at TFMoran in Portsmouth. I wanted to reach out and forward these emails to you – as they address your concerns about the Lady Isle bridge replacement project. I understand that, in a pre-application meeting, you expressed concerns about the toxicity of the Butternut Translucent Oil finish to be applied to the piles. I've corresponded with Brian Kennedy from York Bridge Concepts and he clarified that this finish is not associated with the Butternut tree – butternut is only the color of the finish. Further, this finish will be a non-toxic acrylic coating on the piles. Please let me know if you have further questions – you can call me at 603-431-2222 anytime from 8 AM to 5 PM.
Thank you,

-Kyra Higgins

From: Brian Kennedy <bkennedy@ybc.com >
Sent: Friday, March 24, 2023 4:25 PM
To: Kyra Higgins <khiggins@tfmoran.com >
Cc: Jim Youngblood <jim@youngbloodbuilders.com >; Ajay Sujanani <ajay@ybc.com >; Drew Dancey <ddancey@ybc.com >; Katarina Lovell <klovell@ybc.com >
Subject: RE: Question about Butternut Translucent Oil Coating/Finish for Lady Isle Bridge [Filed 24 Mar 2023 16:34]

Hello Kyra, I think there is some confusion, as butternut is simply the tint color of the stain. It is not associated with the butternut tree.

Additionally, the oil stain is not applied to the piling, it will be an acrylic coating on the piling. We will draft up the color palette for the bridge and send with our next drawing submittal.

Thank you.

Brian Kennedy, Director of Construction Services
YORK BRIDGE CONCEPTS, INC.™
bkennedy@ybc.com
www.YBC.com
2423 Brunello Trace ~ Lutz, FL 33558

From: Kyra Higgins <khiggins@tfmoran.com >
Sent: Friday, March 24, 2023 4:09 PM
To: Brian Kennedy <bkennedy@ybc.com >
Subject: Question about Butternut Translucent Oil Coating/Finish for Lady Isle Bridge

Good afternoon Brian,
I hope that you are well! My name is Kyra Higgins, and I'm a new Environmental Permitter at TFMoran in Portsmouth. I'm not working directly on the Lady Isle Bridge project, but I'm doing some review of the bridge materials for the EPA, and I was hoping I could ask you some questions.
The EPA is wondering about the environmental impacts of the Butternut Translucent Oil that will be applied to the piles of the bridge. They're concerned about the toxic chemical that Butternut produces (from what I understand it can be toxic towards certain terrestrial/aquatic plants and wildlife) and how this chemical might be incorporated into the Oil Finish. I'm wondering if you can provide me with some insight on how the Butternut Translucent Oil is manufactured? More specifically, what parts of the Butternut tree are utilized for the oil? Also, when the Butternut Oil is applied to the piles, how much time are the piles given to dry / how long before they are installed in the water?
Let me know, and I really appreciate your help.
Thank you,
Sincerely,

-Kyra Higgins

Kyra Higgins
Environmental Permitting Specialist

TFM Since 1968
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

TFMoran Seacoast Division
170 Commerce Way - Suite 102, Portsmouth, NH 03801
Tel: (603) 431-2222 Fax: (603) 431-0910
E-Mail: khiggins@tfmoran.com
www.tfmoran.com

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 43º 3' 53" N, Longitude = 71º 15' 14" W
Decimal Degrees: Latitude = 43.065, Longitude = -70.746

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

***** W A R N I N G *****

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Atlantic Sea Scallop	ALL	New England	Amendment 14 to the Atlantic Sea Scallop FMP
		Atlantic Wolffish	ALL	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs Juvenile Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Little Skate	Juvenile Adult	New England	Amendment 2 to the Northeast Skate Complex FMP
		Atlantic Herring	Juvenile Adult Larvae	New England	Amendment 3 to the Atlantic Herring FMP
		Atlantic Cod	Larvae Adult Eggs	New England	Amendment 14 to the Northeast Multispecies FMP

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Pollock	Juvenile Eggs Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
		Red Hake	Adult Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Windowpane Flounder	Adult Larvae Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Smooth Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		White Hake	Adult Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Thorny Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Bluefin Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Atlantic Mackerel	Eggs Larvae Juvenile	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Bluefish	Adult Juvenile	Mid-Atlantic	Bluefish
		Atlantic Butterfish	Adult	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11

Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

All spatial data is currently available for the Mid-Atlantic and New England councils,
Secretarial EFH,
Bigeye Sand Tiger Shark,
Bigeye Sixgill Shark,
Caribbean Sharpnose Shark,
Galapagos Shark,
Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark

Please mail the completed form and required material to:

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

TFM Project: 47099.01

RECEIVED MAR 3 1 2023

DHR Use Only	
R&C #	14854
Log In Date	3/31/23
Response Date	4/27/23
Sent Date	5/4/23

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

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

RECEIVED
MAY 08 2023
MSC/TFM

GENERAL PROJECT INFORMATION

Project Title New Bridge and Tidal Area Restoration Project

Project Location 325 Little Harbor Road (Belle Isle)

City/Town Portsmouth Tax Map 204 Lot # 5

NH State Plane - Feet Geographic Coordinates: Easting 1230200.351 Northing 207035.533
(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact *(if applicable)* ACOE
(Agency providing funds, licenses, or permits)
Permit Type and Permit or Job Reference # NHDES Wetlands Permit

State Agency and Contact *(if applicable)* NHDES - Wetlands Bureau, David Price

Permit Type and Permit or Job Reference # Dredge & Fill

APPLICANT INFORMATION

Applicant Name ADL 325 Little Harbor Trust

Mailing Address 127 Parrott Ave Phone Number private

City Portsmouth State NH Zip 03801 Email jaube@tfmoran.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company TFMoran, Inc.

Mailing Address 170 Commerce Way, Suite 102 Phone Number 603-431-2222

City Portsmouth State NH Zip 03801 Email jaube@tfmoran.com

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

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- ☒ Attach the Project Mapping ***using EMMIT or relevant portion of a 7.5' USGS Map.*** *(See RPR Instructions and R&C FAQs for guidance.)*
- ☒ Attach a detailed narrative description of the proposed project.
- ☒ Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- ☒ Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Informative photo captions are requested.)*
- ☒ A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in **Table 1.** *(Blank table forms are available on the DHR website.)*
  EMMIT or in-house records search conducted on March/17/2023.

Architecture

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

Approximate age(s): ~ 70

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

Archaeology

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

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

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

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

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

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

Comments: FINDING INCLUDES PROPOSED CHANGES IN SCOPE OF WORK FROM 2022 REVIEW. (RPR 13464).

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

Authorized Signature: Nadia Miller DSHPO Date: 4/27/23

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Jay Aube
170 Commerce Way - Suite 102
Portsmouth, NH 03801

From: NHB Review, NH Natural Heritage Bureau
Date: 3/23/2023 (valid until 03/23/2024)
Re: Review by NH Natural Heritage Bureau
Permits: MUNICIPAL POR - Portsmouth, NHDES - Shoreland Standard Permit, NHDES - Wetland Standard Dredge & Fill - Major, USACE - General Permit

NHB ID: **NHB23-0723** Town: Portsmouth Location: 325 Little Harbor Road
Description: Impact approximately 35,000 square feet for the purpose of replacing a failing bridge with a new bridge, restoring tidal resources (removing two causeways from public waters), and connecting a residential island to municipal utilities.
cc: NHFG Review

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

Comments **NHB: Please contact NHB regarding recommendations for marsh elder surveys. Please ensure proper erosion and sediment controls are used to avoid impacts to the nearby exemplary eelgrass bed natural community.**
F&G: Please refer to NHFG consultation requirements below.

Natural Community	State[1]	Federal	Notes
Eelgrass bed	--	--	

Plant species	State[1]	Federal	Notes
marsh elder (*Iva frutescens*)	T	--	Threats are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.

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

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

Vertebrate species	State[1]	Federal	Notes
Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*)	T	T	Contact the NH Fish & Game Dept and the US Fish & Wildlife Service (see below).
Shortnose Sturgeon (*Acipenser brevirostrum*)	E	E	Contact the NH Fish & Game Dept and the US Fish & Wildlife Service (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section below.

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

IMPORTANT: NHFG Consultation

If this NHB Datacheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB Datacheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to https://wildlife.state.nh.us/wildlife/environmental-review.html. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB DataCheck results letter number and "Fis 1004 consultation request" in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule)*, coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email NHFGreview@wildlife.nh.gov, and include the NHB DataCheck results letter number and "review request" in the email subject line.

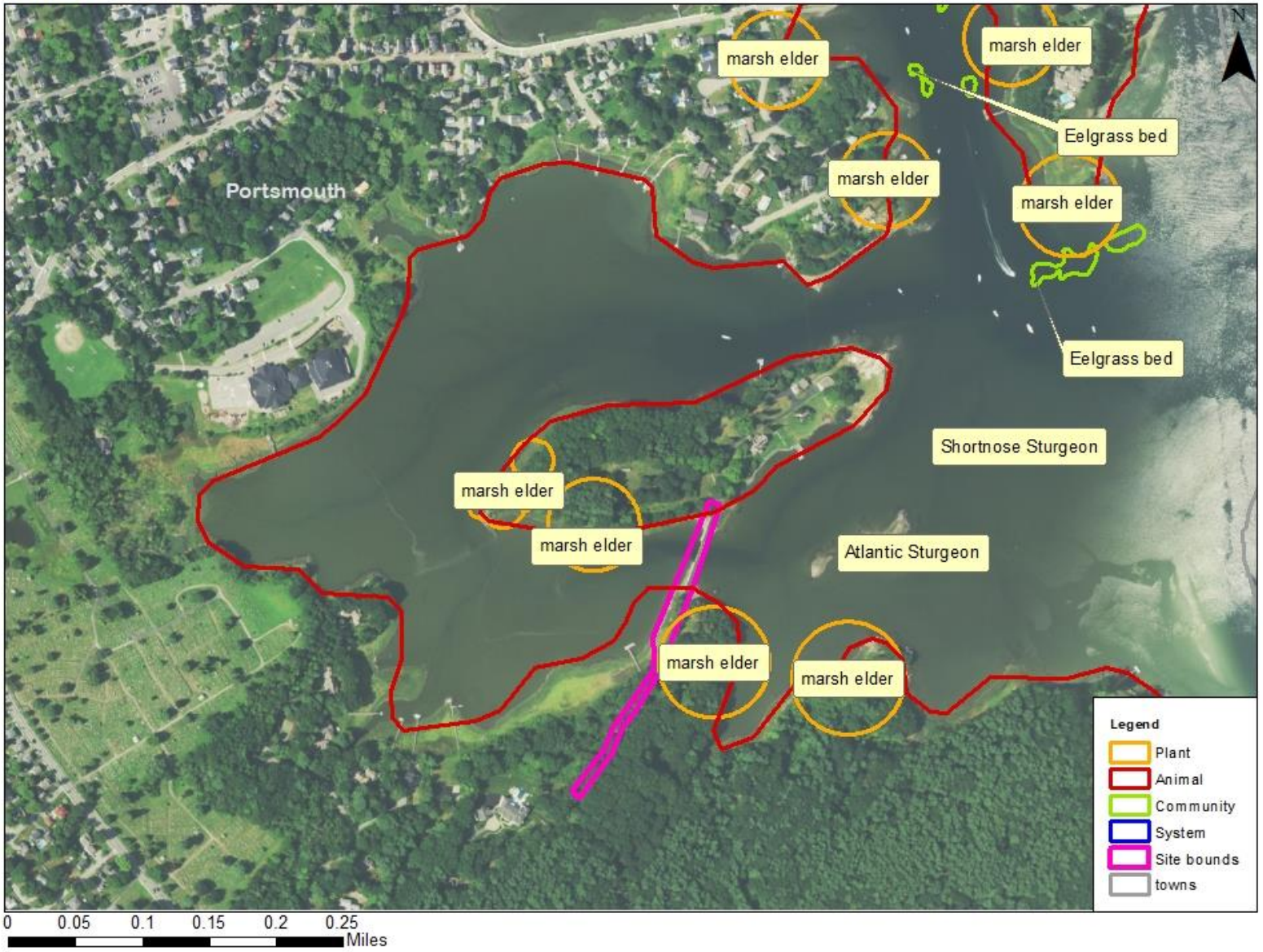
Contact NH Fish & Game at (603) 271-0467 with questions.

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

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB23-0723



New Hampshire Natural Heritage Bureau - Community Record

Eelgrass bed

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2017: 174.6 acres of eelgrass bed mapped over 90 individual patches.
General Area: 2017: In permanently inundated tidal waters from Little Bay down to the mouth of Portsmouth Harbor. Often occurred with macroalgae.
General Comments: 2017: Data derived from report on annual mapping of eelgrass extent in the Great Bay estuary.
Management Comments: --

Location

Survey Site Name: Piscataqua River
Managed By:

County:
Town(s): Out-Of-State
Size: 183.6 acres
Elevation:

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

Directions: 2017: Eelgrass beds in portions of Portsmouth Harbor, the Piscataqua River, and Little Bay. Includes areas in Maine state waters.

Dates documented

First reported: 2017
Last reported: 2017

New Hampshire Natural Heritage Bureau - Plant Record

marsh elder (*Iva frutescens*)

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

Description at this Location

Conservation Rank:	Excellent quality, condition and landscape context ('A' on a scale of A-D).
Comments on Rank:	This rank may be for the state rather than relative to others in the region.
Detailed Description:	2021: Lady Isle: Plants intermittently distributed along the westernmost portion of the island. 2020: Tidal Pool: Species observed in flower. 2017: Leachs Island: Several thousand plants spread along 800+ feet of shoreline. 10-20% dieback, 10-15% yellowing, 65-80% normal to vigorous. Aphids observed on 80% of clumps. 2016: Peirce Island: Additional subpopulations located, raising total number of plants to over 600. Plants appear to be in much better health than 2014, with all individuals in fruit and in good vigor. Shaws Hill: Several clumps over an area approximately 30 x 15 feet. Estimated at over 200 individuals. Tidal Pool: Plants in 3 areas along shoreline near tidal pool. 2014 Peirce Island: Over 500 plants were observed, all stunted, with approximately 50-60% dead stems, mostly confined to the upper portions of the plants. 1996: Constant observation since 1953 reported, including all stages of phenology and age structure. 1982: Good clump observed.
General Area:	2017: Leachs Island: Upper edge of brackish marsh/rocky shore. Plants absent from areas with broader expanse of marsh. Rocks present in most areas where the plants are growing. Associated species include black oak (*Quercus velutina*), saltmarsh rush (*Juncus gerardii*), sea-blite (*Suaeda* sp.), hastate-leaved orache (*Atriplex* cf. *prostrata*), smooth cordgrass (*Spartina alterniflora*), Carolina sea-lavender (*Limonium carolinianum*), and seaside plantain (*Plantago maritima* ssp. *juncoides*). 2016: Peirce Island: Population forms a narrow band immediately above the highest observed wrack line along the shore. Associated upland species include staghorn sumac (*Rhus hirta*), autumn-olive (*Elaeagnus umbellata* var. *parvifolia*), Asian bittersweet (*Celastrus orbiculatus*), and speckled alder (*Alnus incana* ssp. *rugosa*). The saline areas downslope of the marsh elder contained over 50% unvegetated substrate, as well as a mixture of cordgrass (*Spartina* sp.) and saltgrass (*Distichlis spicata*). Shaws Hill: Surrounding land use is developed. All plants below highest observable tide line in ***high salt marsh***, located among saltmeadow cordgrass (*Spartina patens*), smooth cordgrass (*Spartina alterniflora*), and seaside goldenrod (*Solidago sempervirens*). Tidal Pool: Sagamore Creek/Great Bay shoreline, with smooth cordgrass (*Spartina alterniflora*), saltmarsh rush (*Juncus gerardii*), saltmeadow cordgrass (*Spartina patens*), seaside goldenrod (*Solidago sempervirens*), and sea-blite (*Suaeda* spp.). 1996: On shores of several islands and peninsulas in the more or less enclosed bay system. Associated plant species: *Solidago sempervirens* (seaside goldenrod), *Juncus gerardii* (salt marsh rush), *Spartina patens* (salt-meadow cord-grass), *Triglochin maritimum* (arrow-grass), *Elymus virginicus* (Virginia wild rye), *Atriplex patula* (narrow-leaved orach), and *Artemisia vulgaris* (common mugwort). Substrate: gravel and marsh peat and muck. 1982: On shore at Pleasant Point.
General Comments:	2021: Lady Isle: Site is referred to Belle Isle on reporting form, and appears as Belle Island on some maps, but is called Lady Isle on USGS topo. 2016: Peirce Island: "The population currently appears to be in good health, although the results of the June 2014 surveys indicated that there may be some intermittent pressure on this population. The propensity of this species to grow in a very narrow band along the tide line does not allow for rapid adaptation to changing sea levels, storm events, or polluted runoff that a larger, robust population may resist. If sea levels gradually rise as expected, the marsh elder will be unable to move inland due to a small but steep cut bank that forms the upland break adjacent to the marsh elder population. The remaining subpopulations may also be getting shaded by the adjacent upland vegetation, which appears to be encroaching on the shoreline. This vegetation is comprised of large shrub species and the invasive Oriental bittersweet that is capable of overtaking the native plants in the area."

Management Comments: --

Location

Survey Site Name: Little Harbor, back channel
Managed By: Little Harbor Trust

County: Rockingham
Town(s): Portsmouth
Size: 61.4 acres Elevation:

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

Directions: 2021: Lady Isle: Shoreline along western end of Lady Isle. 2017: Leachs Island: Island in New Castle only accessible by boat. Plants observed on south shore of island. 2016: Peirce Island: Along the southern shore of Peirce Island, along the edge of a small cove west of the wastewater treatment facility. Shaws Hill: Take Laurel Lane off New Castle Avenue, bear left onto driveway right-of-way servicing 51A and 51B Laurel Lane. At end of right-of-way, 51B will be located on the right. Tidal Pool: Along Sagamore Creek shoreline on Creek Farm Reservation property in Portsmouth. In the vicinity of Rte. 1B which encircles the Little Harbor back channel from Portsmouth to New Castle and Rye. Many of the sites are visible only by boat.

Dates documented

First reported: 1953 Last reported: 2021-02-10

New Hampshire Natural Heritage Bureau - Animal Record

Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*)

Legal Status		**Conservation Status**	
Federal:	Listed Threatened	Global:	Rare or uncommon
State:	Listed Threatened	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2016: 1 individual, sex unknown, detected in the lower Piscataqua River. 2015: 1 individual, sex unknown, detected in Portsmouth Harbor. 2012: 1 individual, sex unknown, detected in Little Bay.
General Area: 2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscataqua River.
General Comments: --
Management Comments: --

Location

Survey Site Name: Piscataqua River
Managed By:

County:
Town(s): Out-Of-State
Size: 7749.3 acres Elevation:

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

Directions: 2016: Tidal waters of Portsmouth Harbor, Little Bay, and the Piscataqua River.

Dates documented

First reported: 2012-06-02 Last reported: 2016-05-27

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 70 Commercial Street, Suite 300, Concord NH 03301 or at (603) 223-2541.

New Hampshire Natural Heritage Bureau - Animal Record

Shortnose Sturgeon (*Acipenser brevirostrum*)

Legal Status		**Conservation Status**	
Federal:	Listed Endangered	Global:	Rare or uncommon
State:	Listed Endangered	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: --

Detailed Description: 2016: 2 individuals, 1 female and 1 sex unknown, detected in Portsmouth Harbor and the lower Piscataqua River. 2015: 3 females and 2 other individuals, sex unknown detected in Portsmouth Harbor. 2014: 1 female detected moving from Portsmouth Harbor up the Piscataqua River to the mouth of the Cocheco River. 2012: 1 female detected in Little Bay. 2011: 1 female detected in Little Bay. 2010: 1 female detected in Little Bay.
General Area: 2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscataqua River.
General Comments: --
Management Comments: --

Location

Survey Site Name: Piscataqua River
Managed By:

County:
Town(s): Out-Of-State
Size: 7749.3 acres Elevation:

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

Directions: 2016: Tidal waters of Portsmouth Harbor, Little Bay, and the Piscataqua River.

Dates documented

First reported: 2010-11-03 Last reported: 2016-10-20

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 70 Commercial Street, Suite 300, Concord NH 03301 or at (603) 223-2541.

From: Snyder, Kimberly
To: Jason Aube
Cc: Kyra Higgins; Vincent Brigagliano; FGC: NHFG review; Dionne, Michael
Subject: RE: New Bridge and Tidal Area Restoration Project - Lady Isle, Portsmouth
Date: Monday, May 8, 2023 3:10:31 PM

Jay,
Thank you for this assessment.

Mike Dionne and I have looked over this and we have no further questions or concerns with the assessment. We agree that restoration to a mud flat and tidal marsh habitat would be a benefit to this site and the species using it.

We do not expect impacts to the Atlantic or Shortnose sturgeon from this project, however we would prefer that the work occur during the normal dredge window (Nov 15th-Mar 15th). If this will not be possible, please contact us for BMPs to avoid sedimentation.

Kim S.
Program Planner
Nongame and Endangered Wildlife Program
New Hampshire Fish and Game Department
Kimberly.C.Snyder@wildlife.nh.gov
Phone: 603-271-0467

From: Jason Aube <jaube@tfmoran.com>
Sent: Friday, May 5, 2023 11:00 AM
To: Snyder, Kimberly <kimberly.C.Snyder@wildlife.nh.gov>
Cc: Kyra Higgins <khiggins@tfmoran.com>; Vincent Brigagliano <vbrigagliano@tfmoran.com>
Subject: New Bridge and Tidal Area Restoration Project - Lady Isle, Portsmouth

---

Hi Kim,

We'd like to take a moment to bring you up to speed with a bridge replacement project that will be occurring in Portsmouth. The property owner is proposing to remove the causeways associated with the existing bridge (which are within public waters) and construct a new timber bridge that spans the entire tidal resource. In a pre-application meeting in February, Mike Dionne expressed concerns about the unnaturally created, micro-niche habitat below the existing bridge. The existing causeways restrict tidal flows and increase the velocity of tidal flows, and this, in turn, scours the area below the bridge and creates an unnatural micro-niche habitat. Mike requested we perform a wildlife assessment of the area below the bridge for his review. Unfortunately, we have just learned that Mike has taken a new position within Fish and Game and he hasn't had an opportunity to review this document.

Attached to this email is the relevant NH Natural Heritage Bureau (NHB) Report associated with this project and the wildlife assessment. Our plan is to restore this tidal area by removing the existing causeways to an elevation 2-feet below the elevation of the adjacent mud flats so that this area, with time, can naturally and gradually, return to its original mud flat habitat condition. We are also proposing to restore the salt marsh and restore the upland buffer of the island and the mainland with native vegetation. Lindsey Lefebvre, of the U.S. Army Corps of Engineers and Kaitlyn Shaw, of NOAA Fisheries, concur with this restoration approach. We will have a final restoration plan prepared for your review shortly.

Our relative new hires Kyra Higgins and Vince Brigagliano, each from UNH and copied on this reply, prepared the attached wildlife assessment. If you have any questions, they can be reached anytime.

Respectfully,

Jay Aube, CWS
Project Manager
Certified Wetland Scientist
TFMoran Seacoast Division
170 Commerce Way - Suite 102, Portsmouth, NH 03801
Tel: (603) 431-2222 Fax: (603) 431-0910
Cell: (603) 988-2615

From: DNCR: NHB Review
To: Jason Aube
Subject: RE: Marsh Eleder - 325 Little Harbor Road, Portsmouth - NHB23-0723
Date: Monday, May 22, 2023 7:44:40 AM

Jay,

Based on my review of the materials, there is no anticipated impact to eel grass beds for this project.

Best.

Ashley Litwinenko
Environmental Reviewer
Natural Heritage Bureau (NHB)
Division of Forests & Lands - DNCR
172 Pembroke Rd., Concord, NH 03301
Phone: 603-271-2834
Datacheck Tool
NHB Botany information

From: Jason Aube <jaube@tfmoran.com>
Sent: Friday, May 19, 2023 7:24 PM
To: DNCR: NHB Review <nhbreview@dncr.nh.gov>
Cc: Severance, Madeline <Madeline.P.Severance@dncr.nh.gov>
Subject: RE: Marsh Eleder - 325 Little Harbor Road, Portsmouth - NHB23-0723

Hi Ashley/ Maddie:

Do you also concur that this project will pose no threat to known eel grass beds? The water depth at the project site is too shallow to support this habitat. I have attached an eel grass map for your reference.

Jay Aube, CWS
Project Manager
Certified Wetland Scientist
TFMoran Seacoast Division
170 Commerce Way - Suite 102, Portsmouth, NH 03801
Tel: (603) 431-2222 Fax: (603) 431-0910
Cell: (603) 988-2615

From: DNCR: NHB Review <nhbreview@dncr.nh.gov>
Sent: Thursday, May 11, 2023 1:04 PM
To: Jason Aube <jaube@tfmoran.com>
Cc: Kyra Higgins <khiggins@tfmoran.com>; Vincent Brigagliano <vbrigagliano@tfmoran.com>
Subject: RE: Marsh Eleder - 325 Little Harbor Road, Portsmouth - NHB23-0723

Hi Jay,

Thank you for sending these documents and information over. Maddie forwarded me your email because I'll be providing next steps for this review, as I've taken over Environmental Review follow-up from Jessica Bouchard.

Transplanting will be an acceptable approach for the marsh elder (*Iva frutescens*) occurrences being threatened by the proposed bridge construction. Reading your recommendations, it sounds like there is a good basis for transplanting marsh elder, and NHB is aware you are very familiar with this state-threatened species. NHB would like to ask that TF Moran provide a draft transplant protocol for us to review and provide comments on if needed. If you could please put the information you have provided in a more detailed document for NHB to look over prior to transplanting following the below information as a guide.

NHB recommendations for long-term establishment of transplants:

1. **Transplant location**:
    a. Suitable habitat: Saline marshes, most commonly near limit of high tide.
    b. In an area that is not expected to be developed in the future.
    c. Include a map showing existing locations and proposed transplant location.
    d. Please provide reasoning for proposed relocation site.
2. **Transplant timing**:
    a. Flowers early-August to end of October (expect annual variability). Seed is expected early November, and seed collection could occur early November until mid-November.
    b. Please provide suggested timing for transplanting to occur.
    c. Transplanting preferably to occur on a cloudy day, early morning, or evening. Avoid transplanting in the hottest part of the day.

Post-transplant recommendations:

1. **Protection during construction**:
    a. Surround with orange construction fencing to protect during construction/ if in a high traffic area.
2. **Monitoring**:
    a. Short-term monitoring immediately following transplanting to prevent drying out and aid establishment.
    b. Long-term monitoring of transplants should occur annually for three years, during spring bloom/seed development timeframe.

NHB Long-term monitoring:

1. **Rare Plant Monitoring Report Guidelines**
    a. This report should be prepared and sent to NHB on an annual basis, for three consecutive years to assess transplanting success.
    b. Images of the original population prior to transplanting. Photos should also be taken during removal and after transplanting. Photos should also be taken every year during monitoring.

c. Map showing transplant areas in relation to original population site.
d. Use GPS or flagging to find the population each monitoring year. If project work is actively occurring or transplants are in a high traffic area, use flagging or fencing to protect the population.
e. Providing information about changes in the population is helpful to understand its viability.
f. Fill out a rare plant reporting form once the plants are transplanted: https://www.nh.gov/nhdfl/reports/rare-plant-list.htm

Please let me know if you have any questions.

Thank you!

Ashley Litwinenko
Environmental Reviewer
Natural Heritage Bureau (NHB)
Division of Forests & Lands - DNCR
172 Pembroke Rd., Concord, NH 03301
Phone: 603-271-2834
Datacheck Tool
NHB Botany information

From: Jason Aube <jaube@tfmoran.com>
Sent: Thursday, May 11, 2023 9:34 AM
To: Severance, Madeline <Madeline.P.Severance@dncr.nh.gov>
Cc: Bouchard, Jessica <Jessica.R.Bouchard@dncr.nh.gov>; Kyra Higgins <khiggins@tfmoran.com>; Vincent Brigagliano <vbrigagliano@tfmoran.com>
Subject: RE: Marsh Eleder - 325 Little Harbor Road, Portsmouth - NHB23-0723

Hi Maddie,

More marsh elder to discuss! I've reviewed this project with Jessica in the past - so I copied her as well.

Lady Isle/ Belle Isle is currently served by a deteriorating bridge that rests on two large causeways within public waters. These causeways act to unnaturally restrict tidal flows and they're an impediment to aquatic organism passage. The plan is to construct a new bridge on wooden piles adjacent to the existing bridge that spans the entire resource. We also plan to remove the existing causeways from public waters and restore this tidal area (salt marsh restoration and upland tidal buffer zone restoration.) NH Fish and Game, the Army Corp of Engineers and NOAA Fisheries are all on board with our efforts to restore the tidal area in this manner.

In order to construct the new bridge, we must construct two new bridge approaches. Unfortunately, these bridge approaches will impact marsh elder in two locations (plan attached.) These marsh elder

locations are not formally documented by the NHB. There are, however, many known and well-established clusters of marsh elder within the vicinity of our project. We'd like your permission to relocate the existing marsh elder plants to an area of the island adjacent to an existing, healthy established stand of marsh elder.

During the transplanting, we'll be certain to extract the plants in a manner that retains their entire root systems. We'll ensure that transplant holes are dug prior to transplanting and that each hole can adequately accommodate the proposed planting. We'll water each transplant hole prior to planting and they'll be located at or near the Highest Observable Tide Line (HOTL) – similar to the adjacent healthy stand of marsh elder. We'll monitor the success of the transplanting and water as required.

I have attached a plan the depicts the locations of the newly identified marsh elder species as well as a drone image that nicely demonstrates the areas where the causeways will be removed and the area where we're proposing to transplant the marsh elder.

We're excited to attempt this and we're eager to receive your feedback.

Respectfully,

Jay Aube, CWS
Project Manager
Certified Wetland Scientist
TFMoran Seacoast Division
170 Commerce Way - Suite 102, Portsmouth, NH 03801
Tel: (603) 431-2222 Fax: (603) 431-0910
Cell: (603) 988-2615

From: Severance, Madeline <Madeline.P.Severance@dncr.nh.gov>
Sent: Friday, March 24, 2023 12:42 PM
To: Jason Aube <jaube@tfmoran.com>
Cc: Bouchard, Jessica <Jessica.R.Bouchard@dncr.nh.gov>; Kyra Higgins <khiggins@tfmoran.com>; Vincent Brigagliano <vbrigagliano@tfmoran.com>
Subject: RE: Marsh Eleder - 70 Pleasant Point Dr, Portsmouth - NHB22-1430

Hi Jay,

The snow has mostly melted but there's more in the forecast! I am definitely ready for warmer weather.

Thank you for flagging the marsh elder in order to ensure its protection during work, and welcome Kyra and Vincent, I look forward to working with you in the future.

Enjoy your weekend,

Maddie

Maddie Severance (she/her/hers)
Assistant Ecological Information Specialist
New Hampshire Natural Heritage Bureau (NHB)
Division of Forests & Lands
NH Dept. of Natural & Cultural Resources
172 Pembroke Rd
Concord, NH 03301
(603)-271-0687 (office)

NHB DataCheck Tool

From: Jason Aube <jaube@tfmoran.com>
Sent: Friday, March 24, 2023 12:20 PM
To: Severance, Madeline <Madeline.P.Severance@dncr.nh.gov>
Cc: Bouchard, Jessica <Jessica.R.Bouchard@dncr.nh.gov>; Kyra Higgins <khiggins@tfmoran.com>; Vincent Brigagliano <vbrigagliano@tfmoran.com>
Subject: Marsh Eleder - 70 Pleasant Point Dr, Portsmouth - NHB22-1430

Hi Maddy/ Jessica,

I hope you had a great winter – I suspect it's still closer to winter up there!

I had an opportunity to get out and re-stake and surround the Marsh elder on this site with *caution tape* this morning. It was great opportunity to train our new staff members Vincent and Kyra, each copied on this email, how to identify Marsh Elder during the non-growing season.

Best,

Jay Aube
Certified Wetland Scientist (CWS)
TFMoran, Inc.

PEASE
INTERNATIONAL
PORTS AND HARBORS

555 Market Street, Suite 1 Portsmouth, NH 03801

May 11, 2023

NH Department of Environmental Service
Coastal Division
Pease Field Office
222 International Drive, Suite 175
Portsmouth, NH 03801

Attn: Kristin Duclos

Re: Lady Isle Bridge

Dear Kristin,

We reviewed plans for the replacement of an existing bridge with site improvements on the Piscataqua River back channel in Portsmouth on property at

325 Little Harbor Road
Portsmouth, NH
Map 205 Lot 2

We examined the proposed site and found that the project will have no negative effect on navigation in the channel.

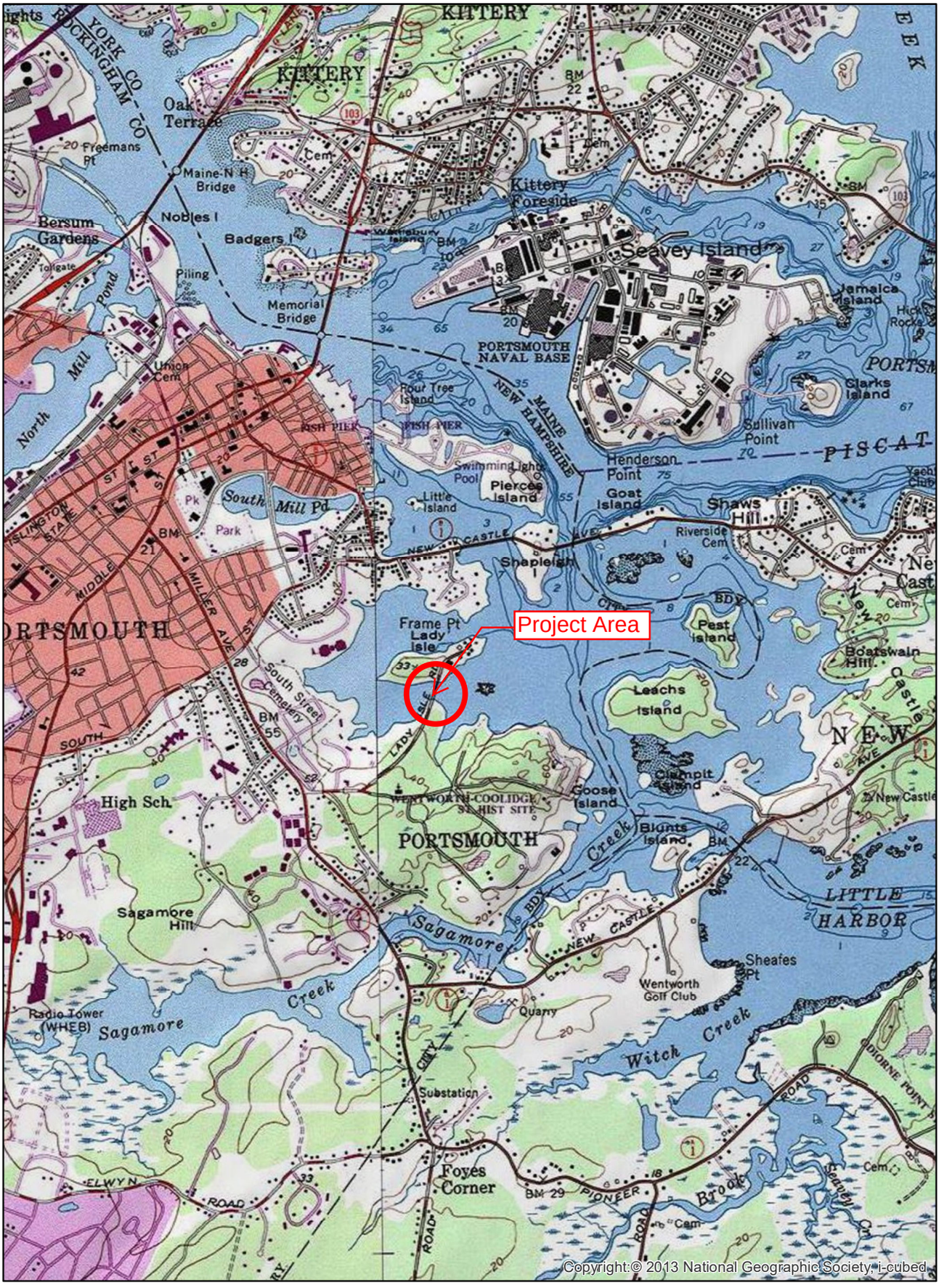
Sincerely,

Tracy R. Shattuck
Chief Harbor Master

Cc: Duncan Mellor
Civilworks New England/Haight Engineering
181 Watson Road
Dover, New Hampshire 03821

SECTION 4

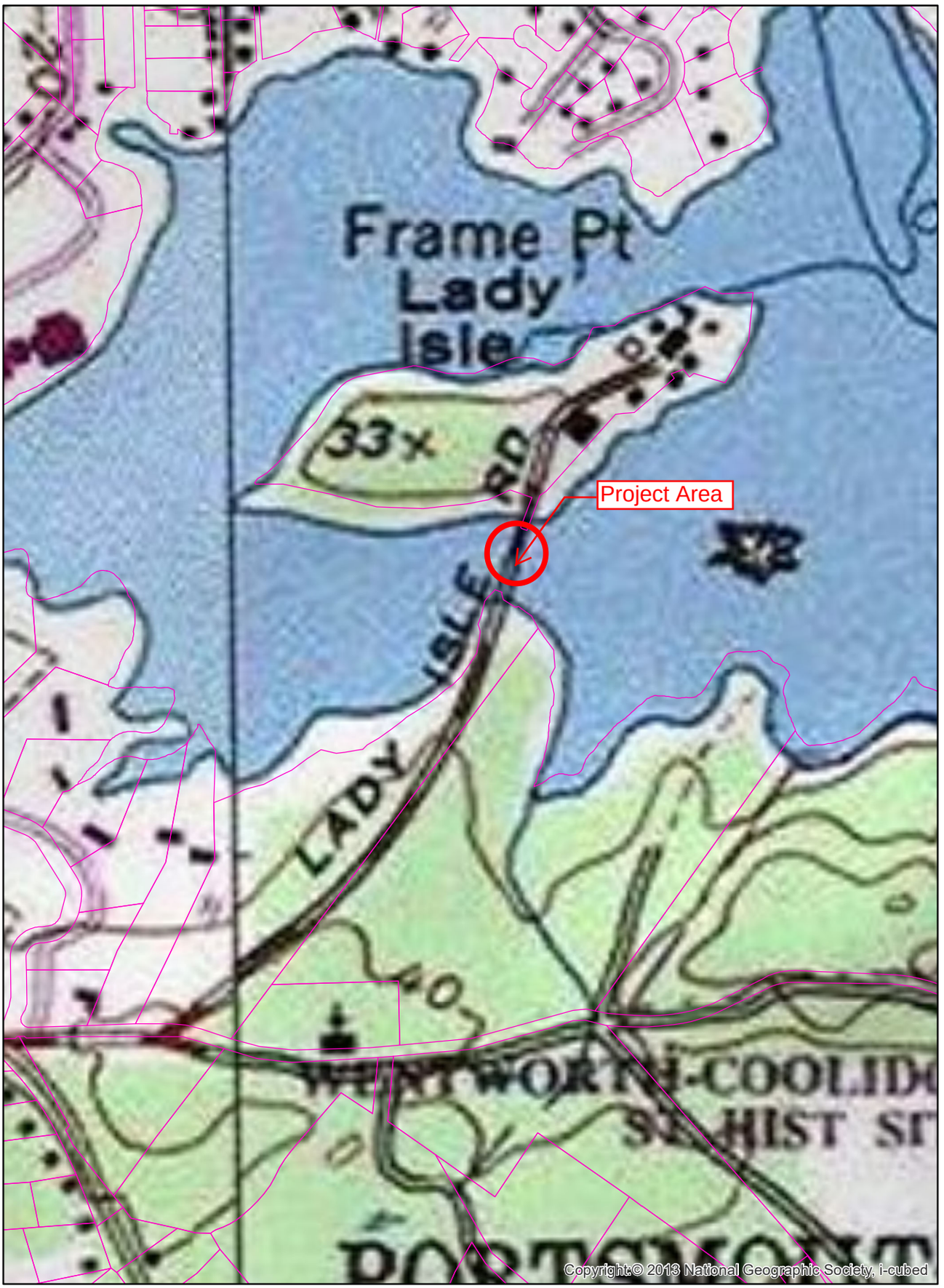
USGS MAP
Scale 1:24,000



0 0.25 0.5 1 1.5 2 Miles

N

USGS MAP
Scale 1:5,000



0 250 500 1,000 1,500 2,000 Feet

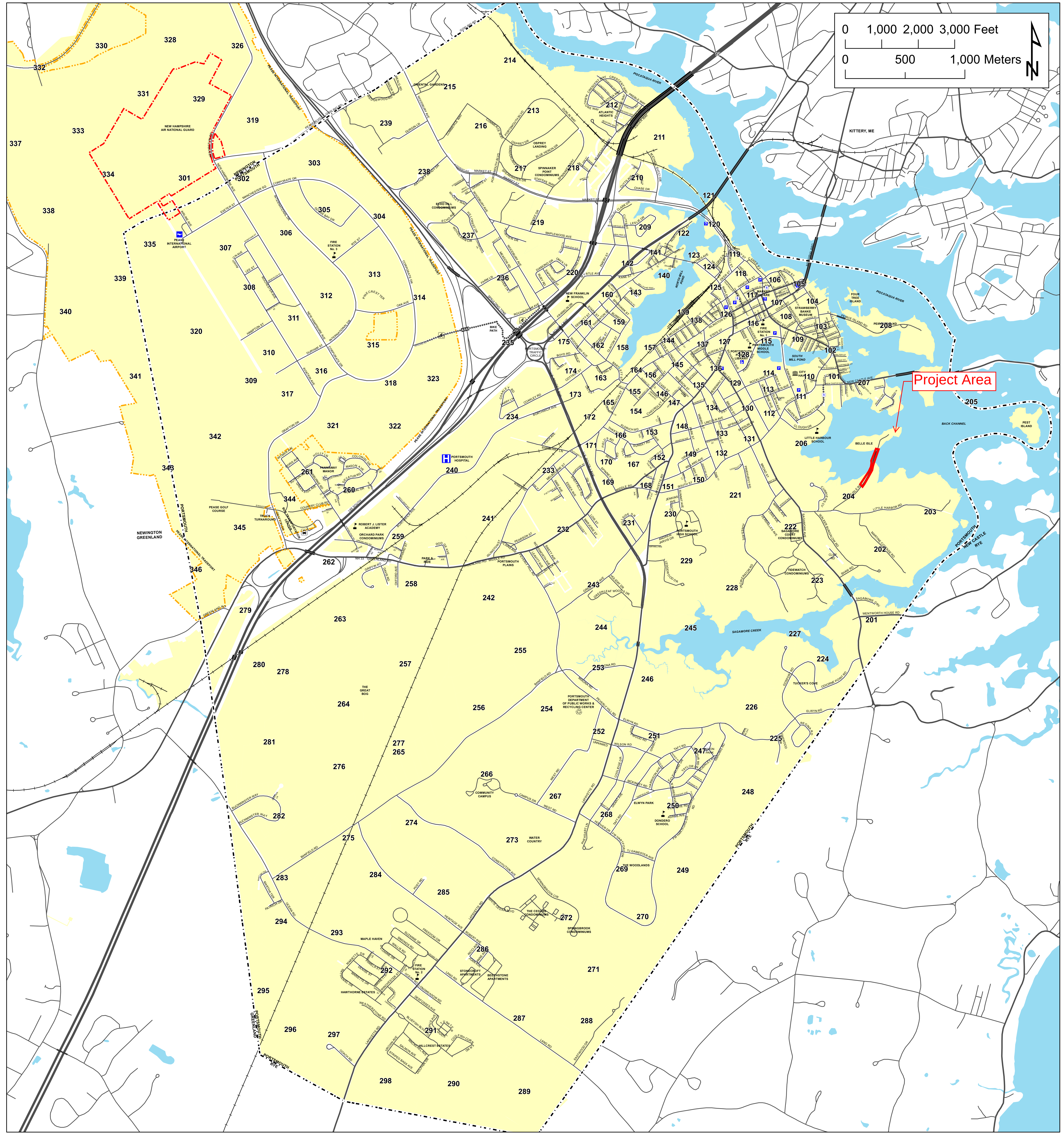
N

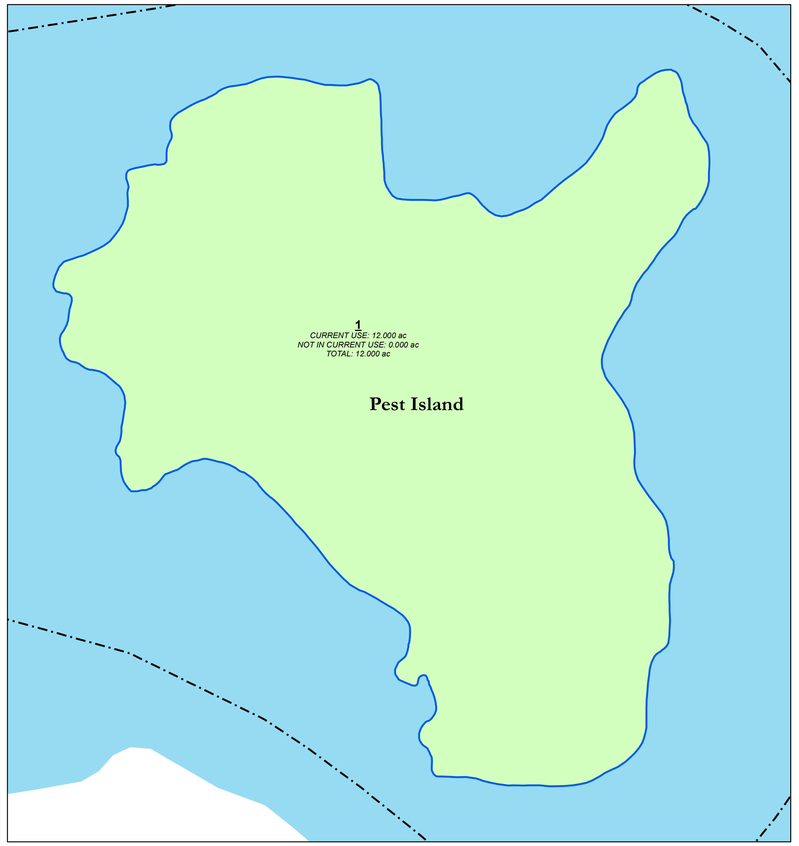
City of Portsmouth
2019 Rural Tax Maps

Maps 201-298

Tax Map Legend

7-5A	Lot or Lot-Unit Number
2.56 ac	Parcel Area in Acres
23	Address Number
233-137	Parcel Number from a Neighboring Map
68'	Parcel Line Dimension
SIMS AVE	Street Name
Piscataqua River	Water Body
	Cemetery
	Parcel Assigned to the Current Map
	Parcel from Another Map (please refer to the appropriate map)
	Water
	Parcel in Current Use
	Line Between Parcels
	Line Between Parcel and Right of Way
	Line Between Parcel and Water
	City Line
	New Hampshire Air National Guard (NHANG) Boundary
	Pease International Tradeport Boundary
	Structure (2006 data)
	Swimming Pool (2006 data)
	Railroad Track





Partial Legend

See the cover sheet for the complete legend.

7-5A	Lot or lot-unit number
2.56 ac	Parcel area in acres (ac) or square feet (sf)
25	Address number
233-137	Parcel number from a neighboring map
68'	Parcel line dimension
SIMS AVE	Street name
	Parcel/Parcel boundary
	Parcel/ROW boundary
	Water boundary
	Structure (2006 data)
	Parcel covered by this map
	Parcel from a neighboring map (see other map for current status)

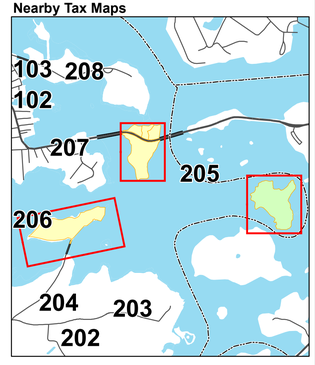
N

Feet
0 50 100 200 300

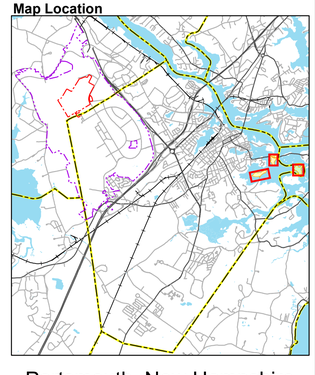
Meters
0 50 100

This map is for assessment purposes only. It is not intended for legal description or conveyance.
Parcels are mapped as of April 1.
Building footprints are 2006 data and may not represent current structures.
Streets appearing on this map may be paper (unbuilt) streets.
Lot numbers take precedence over address numbers. Address numbers shown on this map may not represent posted or legal addresses.

Nearby Tax Maps



Map Location



Portsmouth, New Hampshire
2020

Tax Map 205

Little Harbor

BELLE ISLE RD

CURRIER'S CV

LITTLE HARBOR RD

SAGAMORE AVE

WALKER BUNGALOWS RD

MARTINE COTTAGE RD

1 5.500 ac

2

10 1.000 ac

11 1.000 ac

12 1.940 ac

13 1.310 ac

14 1.100 ac

15 2.200 ac

16 7.770 ac

4 2.550 ac

5 10.600 ac

6 CURRENT USE: 0.200 ac
NOT IN CURRENT USE: 2.110 ac
TOTAL: 2.310 ac

7 22.270 ac

8 CURRENT USE: 5.900 ac
NOT IN CURRENT USE: 0.000 ac
TOTAL: 5.900 ac

9 CURRENT USE: 3.900 ac
NOT IN CURRENT USE: 0.000 ac
TOTAL: 3.900 ac

222-25

222-42

222-7

222-8

222-6

222-5-3

222-1-1

222-5-2

222-5-1

202-14A

202-21

Partial Legend

See the cover sheet for the complete legend.

7-5A	Lot or lot-unit number
2.56 ac	Parcel area in acres (ac) or square feet (sf)
25	Address number
233-137	Parcel number from a neighboring map
68'	Parcel line dimension
SIMS AVE	Street name
	Parcel/Parcel boundary
	Parcel/ROW boundary
	Water boundary
	Structure (1994 data)
	Parcel covered by this map
	Parcel from a neighboring map (see other map for current status)

0 50 100 200 300 Feet

0 20 40 80 Meters

This map is for assessment purposes only. It is not intended for legal description or conveyance.
Parcels are mapped as of April 1.
Building footprints are 2006 data and may not represent current structures.
Streets appearing on this map may be paper (unbuilt) streets.
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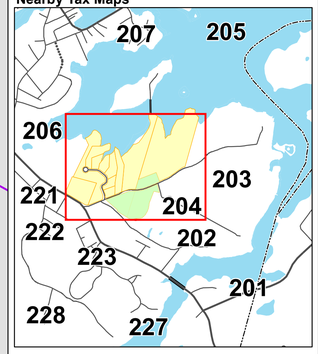
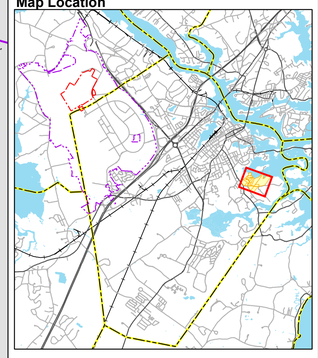
Nearby Tax Maps



Map Location



Portsmouth, New Hampshire
2022

Tax Map 204

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

325 Little Harbor Road, Portsmouth
Lady Isle / Belle Isle Bridge Project
Photo Exhibit

Photo 1. A view of the existing bridge approach (on the opposite side of Lady Isle) to be replaced as well as a portion of the upland on site.

Photo 2. A view of the existing bridge to be replaced, the causeways to be removed, and the area in which new utility connections will be constructed. The tidal wetland (comprised largely of mudflats) and the upland tidal buffer zones can be seen as well. A few of the saltmarsh areas to be restored reside on either side of the bridge in the vicinity of the causeways.

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran, Inc. Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

Photo 3. Another view of the bridge and causeways as well as the subject property. The tidal wetland and portions of the buffer zones can still be seen. A portion of saltmarsh can be seen along the edge of the bridge and road leading to the property.

Photo 4. An aerial view of the bridge, causeways, property, tidal resources, and saltmarsh areas.

Photo 5. A final view of the bridge approach on Lady Isle to be replaced as well as a portion of upland.

Photo Orientation Key

0 125 250 500

Feet

N

SECTION 5

18045306 11/05/2018 10:34:46 AM
Book 5959 Page 1244 Page 1 of 4
Register of Deeds, Rockingham County

Return to:
Hoefle, Phoenix, Gormley & Roberts, P.A.
127 Parrott Avenue
Portsmouth, NH 03801

LCHIP	ROA429347	25.00
RECORDING		22.00
SURCHARGE		2.00

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, that **Stephen H. Roberts, Esq., Trustee of The ADL Portsmouth Residence Trust,** u/d/t October 30, 2017 with a business address of 127 Parrott Avenue, Portsmouth, New Hampshire 03801, for consideration, grants to **Stephen H. Roberts, Esq., Trustee of the ADL 325 Little Harbor Road Trust,** u/d/t October 31, 2018 with a business address of 127 Parrott Avenue, Portsmouth, New Hampshire 03801, with warranty covenants, the following described premises:

A certain tract or parcel of land, with the buildings thereon, situated on the northerly side of Little Harbor Road, in Portsmouth in the County of Rockingham and State of New Hampshire, bounded and described as follows:

A certain tract of land, situated in said Portsmouth, and being the island heretofore known as Marston's Island, anciently know as Salter's Island and before that Jackson's Island, now known as "Belle Isle," together with all the buildings thereon, also the bridge, together with its approaches, piling, planks, rails and other appurtenances connecting said Island with the lot of land first herein conveyed (other land formerly of said Michael R. Clark), together with such rights of way, if any from New Castle Avenue, in, upon, over and across the land formerly of John J. Pickering, or any others, from New Castle Avenue to Frame Point and from said Frame Point to said New Castle Avenue, as may be appurtenant.

TOGETHER WITH THE BENEFIT OF the following permanent access, building restrictions, and waterline easements reserved to the current and/or future owner(s) of the above described "Belle Isle" as set forth in a certain Easement and Restriction Deed granted from Michael R. Clark to Michael R. Clark, dated September 12, 2005 and recorded in the Rockingham County Registry of Deeds at Book 4548, Page 2823 and Corrective Easement and Restriction Deed recorded at Book 4551, Page 327. Said permanent easements are identified on plan of land entitled, "Subdivision Plan for Michael R. Clark, Little Harbor Road, Portsmouth, NH," dated July 30, 2004, by Doucet Survey, Inc., 76 Exeter Street, P.O. Box 163, Newmarket, NH, 03857-0163, revised through August 10, 2005 and recorded in the Rockingham County Registry of Deeds as Plan #D-33062. Said permanent easements are more particularly bounded and described in accordance with said Plan as follows:

(i) A permanent easement for vehicular and pedestrian travel, access, maintenance, repair and replacement, over the area identified as Tax Map 205, Lot 2 on said Plan, which easement is identified on said plan as "Proposed 25 Foot Wide Access Easement" and "Existing Paved Driveway" and more particularly bounded and described as follows:

Beginning at a railroad spike set on Lot 1 on said plan, at Little Harbor Road, 29.36 feet southeasterly of the southwesterly most corner of Proposed Lot 1; thence turning and running N 54 degrees 01' 55" E, a distance of 37.11 feet to a drill hole set; thence turning and running along a curve to the right, length 151.50 feet, radius 487.50 feet, delta 17 degrees 48' 20", tangent 76.36 chord direction N 62 degrees 56' 05"E, on a chord of 150.89 feet to a drill hole set; thence turning and running N 71 degrees 50' 15" E, distance of 159.08 feet to a 5/8" rebar set, up to 4" to the boundary of Lot 2 on said plan; thence turning and running N 71 degrees 50' 15" E, a distance of 296.12 feet to a 5/8" rebar set up 2"; thence turning and running along a curve to the left a length of 247.7 feet, radius 737.50 feet, delta 19 degrees 14' 38", tangent 125.03, chord direction N 62 degrees 12' 56" E, on a chord of 246.54 feet to a 5/8" rebar set; thence turning and running N 52 degrees 35' 37" E, a distance of 198.23 feet to a 5/8" rebar set up 2"; thence turning and running along a curve to the left length 192.61 feet, radius 1487.50 feet, delta 07 degrees 25' 14", tangent 96.46, chord direction N 48 degrees 53' 00" E, chord length 192.51 feet to a point, thence turning and running S 37 degrees 28' 00" E, a distance of 25.20 feet to a point; thence turning and running along a curve to the right, length 192.62, radius 152.150, delta 07 degrees 17' 50" W, chord direction S 48 degrees 56' 42" W, chord length 192.50 feet to a drill hole set in a 10" diameter boulder; thence turning and running S 52 degrees 35' 37" W, a distance of 198.23 feet to a 5/8" rebar set up 2"; thence turning and running along a curve to the right, length 256.10 feet, radius 762.50 feet, delta 19 degrees 14' 38", tangent 129.27, chord direction S 62 degrees 12' 56" W, chord length 254.90 feet to a 5/8" rebar set up 1", thence turning and running S 71 degrees 50' 15" W, a distance of 352.38 feet to a 5/8" rebar set up 1", the common lot line between Proposed Lot 1 and Proposed Lot 2; thence turning and running S 71 degrees 50' 15" W, a distance of 102.82 feet to a 5/8" rebar set up 2"; thence turning and running along a curve to the left, length 143.73 feet, radius 462.50 feet, delta 17 degrees 48' 20", tangent 72.45 feet, chord direction S 62 degrees 56' 05" W, chord length 143.15 feet to a 5/8" rebar set up 1"; thence turning and running S 54 degrees 01' 55" W, a distance of 17.27 feet to a railroad spike set at Little Harbor Road; thence turning and running N 74 degrees 24' 17" W, a distance of 31.92 feet to a railroad spike set and the point of beginning.

(ii) A permanent easement identified on said plan as "easement area" 54,600 square feet, 1.38 acres (Not Buildable). The term "not buildable" as used herein, refers only to buildings and shall not preclude the owner of "Belle Isle" from installing and maintaining landscaping, fences, walkways, gates and the like as permitted by law. The current and/or future owner of "Belle Isle" shall also have the exclusive use for vehicular and pedestrian access to "Belle Isle" over the "easement area" so described, said area more particularly described as follows:

Beginning at a 5/8" rebar set up 3" at the southwesterly corner of the easement area so described, thence running N 37 degrees 28' 00" W, a distance of 12.25 feet to a point; thence turning and running N 37 degrees 28" 00" W, a distance of 25.20 feet to a point; thence turning and running N 37 degrees 28' 00" W, a distance of 12.55 feet to a 5/8" rebar set up 8"; thence turning and running N 39 degrees 19' 45" E, a distance of 233.36 feet to a 5/8" rebar set up 5" at the bank of the Piscataqua River; thence turning and running along the bank of the river along a tie line

N 75 degrees 16' 04" E, a distance of 268.60 feet to a 5/8" rebar set up 1"; thence turning and running S 52 degrees 35' 37" W, a distance of 474.94 feet to a 5/8" rebar set up 3" at the point of beginning.

(iii) A permanent easement for the installation, operation, maintenance, repair and replacement of the existing waterline running from Little Harbor Road to and along the "Proposed 25 foot wide Access Easement" described on said Plan to the "Belle Isle" lot. Said easement is 16 feet in width, 8 feet on each side of the centerline of the waterline. The owner of "Belle Isle" shall be responsible for the maintenance and plowing of the primary driveway identified as "Existing Paved Driveway" on said plan; provided, however, that if the owner of "Belle Isle" does not maintain and plow said driveway, the owners of Proposed Lot 1 and/or Proposed Lot 2, shall be entitled to plow and maintain that portion of said driveway as necessary to gain access to their respective lots, all without recourse to the owner of "Belle Isle". For that portion of the foregoing easement that burdens Lot 1 as shown on the Plan, see Easement Deed from Lisa A. Grondahl, Trustee of the Lisa A. Grondahl Revocable Trust of 2006 to Michael R. Clark dated August 14, 2015 and recorded in the Rockingham County Registry of Deeds at Book 5648, Page 2721.

Meaning and intending to describe and convey the premises conveyed to Stephen H. Roberts, Esq., Trustee of The ADL Portsmouth Residence Trust, u/d/t October 30, 2017 by virtue of a Warranty Deed from Anthony DiLorenzo, dated October 30, 2017 and recorded in the Rockingham County Registry of Deeds in Book 5867, Page 2492.

THIS IS A NON-CONTRACTUAL TRANSFER AND IS EXEMPT FROM TRANSFER TAXES UNDER RSA 78-B:2, IX.

Trustee's Certificate

The undersigned **Stephen H. Roberts, Esq., Trustee of The ADL Portsmouth Residence Trust, u/d/t October 30, 2017**, hereby states pursuant to RSA 564-A:7, that said Trustee has full and absolute power in said Trust Agreement to execute, sign and deliver a deed for any real estate or other property held in said Trust, and no purchaser or third party shall be bound to inquire whether the Trustee has said power or is properly exercising said power or to see to the proceeds paid for any conveyance.

Stephen H. Roberts, Esq., Trustee of The ADL Portsmouth Residence Trust, u/d/t October 30, 2017, certifies that the Trust is in full force and effect, that he is empowered to act as Trustee on the date of this certificate, and that the Trust has not been revoked or amended.

The Trustee further certifies that the undersigned is the Trustee of said Trust, and that the undersigned has received all written authorizations from beneficiaries, if any, required by the terms of said Trust.

This is not homestead property of the Grantor.

WITNESS my hand and seal this 1st day of November, 2018.

Stephen H. Roberts, Esq., Trustee of The ADL Portsmouth Residence Trust, u/d/t October 30, 2017

STATE OF NEW HAMPSHIRE
COUNTY OF ROCKINGHAM

Dated this 1st day of November, 2018, personally appeared the above named Stephen H. Roberts, Esq., Trustee of The ADL Portsmouth Residence Trust, u/d/t October 30, 2017, and acknowledged the execution of the foregoing to be his free act and deed, before me.

Notary Public
My commission expires

JANET A. SENECHAL, Notary Public
State of New Hampshire
My Commission Expires June 24, 2020

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

Abutters List

Dilorenzo - Lady Isle Bridge Replacement Project
325 Little Harbor Road, Portsmouth, NH 03801

May 16, 2023
47099.01

Assessors Map		Abutter Name	Mailing Address
Map	Lot		
204	4	LISA M. OAKES	315 LITTLE HARBOR ROAD PORTSMOUTH, NH 03801
204	5	LISA A. GRONDAHL REVOCABLE TRUST	304 MAPLEWOOD AVE PORTSMOUTH, NH 03801
204	7	CITY OF PORTSMOUTH CONSERVATION COMMISSION	1 JUNKINS AVE PORTSMOUTH, NH 03801
Civil Engineers / Surveyor		TFMoran, Inc.	170 Commerce Way - Suite 102 Portsmouth, NH 03801
Environmental / Wetlands Scientist		Kyra Higgins	170 Commerce Way - Suite 102 Portsmouth, NH 03801
Architect		York Bridge Concepts	3423 Brunello Trce Lutz, FL 33558

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NEW HAMPSHIRE 200

ABUTTER NOTIFICATION FOR
NHDES WETLANDS PERMIT APPLICATION

VIA CERTIFIED MAIL

May 16th, 2023

Lisa M. Oakes
315 Little Harbor Road
Portsmouth, NH 03801

Project # 47099.01

Re: NHDES Wetlands Permit Application – Lady Isle Bridge Replacement Project
325 Little Harbor Road, Portsmouth, Tax Map: 205, Lot: 2

Dear Abutter:

This letter is to inform you that a Wetlands Permit Application will be filed with the NH Department of Environmental Services (NHDES). Under NH Wetlands Law, RSA 482-A, impacts within 100-feet of the Highest Observable Tide Line (HOTL) of Tidal Waterbodies require a NHDES Wetlands Permit and, under RSA 482-A:3, we are required to notify you about this permit application via certified mail.

Once the permit application is filed, a copy of the complete permit application, including the design plans that depict the proposed impact areas, will be available for viewing at the Town of Portsmouth Clerk's Office.

Should you have any questions or require additional information about this project, please do not hesitate to contact me at (603) 431-2222, anytime from 8:00 A.M. to 5:00 P.M., Monday through Friday.

Sincerely,
TFMoran, Inc.

Kyra Higgins, KRH

Environmental Permitting Specialist

cc: NHDES Wetlands Bureau

JRA/krh

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran, Inc. Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NEW HAMPSHIRE 200

ABUTTER NOTIFICATION FOR
NHDES WETLANDS PERMIT APPLICATION

VIA CERTIFIED MAIL

May 16th, 2023

Lisa A. Grondahl Revocable Trust
304 Maplewood Ave
Portsmouth, NH 03801

Project # 47099.01

Re: NHDES Wetlands Permit Application – Lady Isle Bridge Replacement Project
325 Little Harbor Road, Portsmouth, Tax Map: 205, Lot: 2

Dear Abutter:

This letter is to inform you that a Wetlands Permit Application will be filed with the NH Department of Environmental Services (NHDES). Under NH Wetlands Law, RSA 482-A, impacts within 100-feet of the Highest Observable Tide Line (HOTL) of Tidal Waterbodies require a NHDES Wetlands Permit and, under RSA 482-A:3, we are required to notify you about this permit application via certified mail.

This project proposes to construct a timber pile bridge as well as new bridge approaches. In addition, it proposes to replace the existing utility connections and connect the subject property to municipal utilities. It also proposes to remove the existing causeways and restore the tidal resource. As a result of these improvements, permanent impacts will occur on your property. We are required to provide your written consent of the aforementioned impacts to NHDES, and thus, we respectfully request that you co-sign the Wetlands Permit Application for this project. We have attached design plans to this letter for your review, and the full application materials will be available for your review shortly.

Once the permit application is filed, a copy of the complete permit application will also be available at the Town of Portsmouth Clerk's Office. Should you have any questions about this project, please do not hesitate to contact me at (603) 431-2222, anytime from 8:00 A.M. to 5:00 P.M., Monday through Friday.

Sincerely,
TFMoran, Inc.

Kyra Higgins, Environmental Permitting Specialist

cc: NHDES Wetlands Bureau

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran, Inc. Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NEW HAMPSHIRE 200

ABUTTER NOTIFICATION FOR
NHDES WETLANDS PERMIT APPLICATION

VIA CERTIFIED MAIL

May 16th, 2023

City of Portsmouth Conservation Commission
1 Junkins Ave
Portsmouth, NH 03801

Project # 47099.01

Re: NHDES Wetlands Permit Application – Lady Isle Bridge Replacement Project
325 Little Harbor Road, Portsmouth, Tax Map: 205, Lot: 2

Dear Abutter:

This letter is to inform you that a Wetlands Permit Application will be filed with the NH Department of Environmental Services (NHDES). Under NH Wetlands Law, RSA 482-A, impacts within 100-feet of the Highest Observable Tide Line (HOTL) of Tidal Waterbodies require a NHDES Wetlands Permit and, under RSA 482-A:3, we are required to notify you about this permit application via certified mail.

Once the permit application is filed, a copy of the complete permit application, including the design plans that depict the proposed impact areas, will be available for viewing at the Town of Portsmouth Clerk's Office.

Should you have any questions or require additional information about this project, please do not hesitate to contact me at (603) 431-2222, anytime from 8:00 A.M. to 5:00 P.M., Monday through Friday.

Sincerely,
TFMoran, Inc.

Kyra Higgins, KRH

Environmental Permitting Specialist

cc: NHDES Wetlands Bureau

JRA/krh

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

NEW HAMPSHIRE 200

May 3rd, 2023

VIA CERTIFIED MAIL

Lisa A. Grondahl Revocable Trust
304 Maplewood Avenue
Portsmouth, NH 03801

Re: Consent to Impact Area Within 10-Feet of Abutting Property
325 Little Harbor Road, Portsmouth, NH 03801 – Tax Map: 205, Lot: 2

Dear Abutter:

TFMoran, Inc. is preparing to submit a *Wetlands Permit Application* to the NH Department of Environmental Services (NHDES) Wetlands Bureau for improvements to the above referenced property. More specifically, the existing, outdated bridge leading to this property will be replaced with an updated, more structurally-sound bridge. The property will also be connected to municipal utilities.

Under NHDES Wetlands Administrative Rule Env-Wt 307.13(d), because temporary impacts are proposed closer than 10-feet to your property line, we are required to provide your written consent of the aforementioned impacts to NHDES. If you are amenable to these improvements, we respectfully request that you sign below indicating your concurrence and return this document via the self-addressed stamped envelope included with this letter. Alternatively, you can sign, scan, and email this document to khiggins@tfmoran.com.

Should you have any questions or wish to discuss this project in more detail, you may contact me directly at (603) 431-2222, weekdays, 8:00 AM to 5:00 PM.

Respectfully,
TFMoran, Inc.

Kyra Higgins, KRH
Environmental Permitting Specialist

The Lisa A. Grondahl Revocable Trust of 2006	Lisa A Grondahl, Trustee	05-25-2023
Property Owner Name	Signature	Date

JRA/krh

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran, Inc. Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

7021 2720 0001 3467 9397

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

Postage $ .60

Total Postage and Fees $ =$8.10

Postmark Here
MAY 17 2023
USPS

Sent To: LISA M. OAKES
Street and: 315 LITTLE HARBOR ROAD
City, State, PORTSMOUTH, NH 03801

PS Form ... tions

7021 2720 0001 3467 9380

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- ☑ Return Receipt (hardcopy) $ 3.35
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage $ .60

Total ... $ =$8.10

Postmark Here
MAY 17 2023
USPS

Sent ... CITY OF PORTSMOUTH
Stree ... CONSERVATION COMMISSION
City, ... 1 JUNKINS AVE
PORTSMOUTH, NH 03801

PS F ... nstructions

7021 2720 0001 3467 9359

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

Postage
$

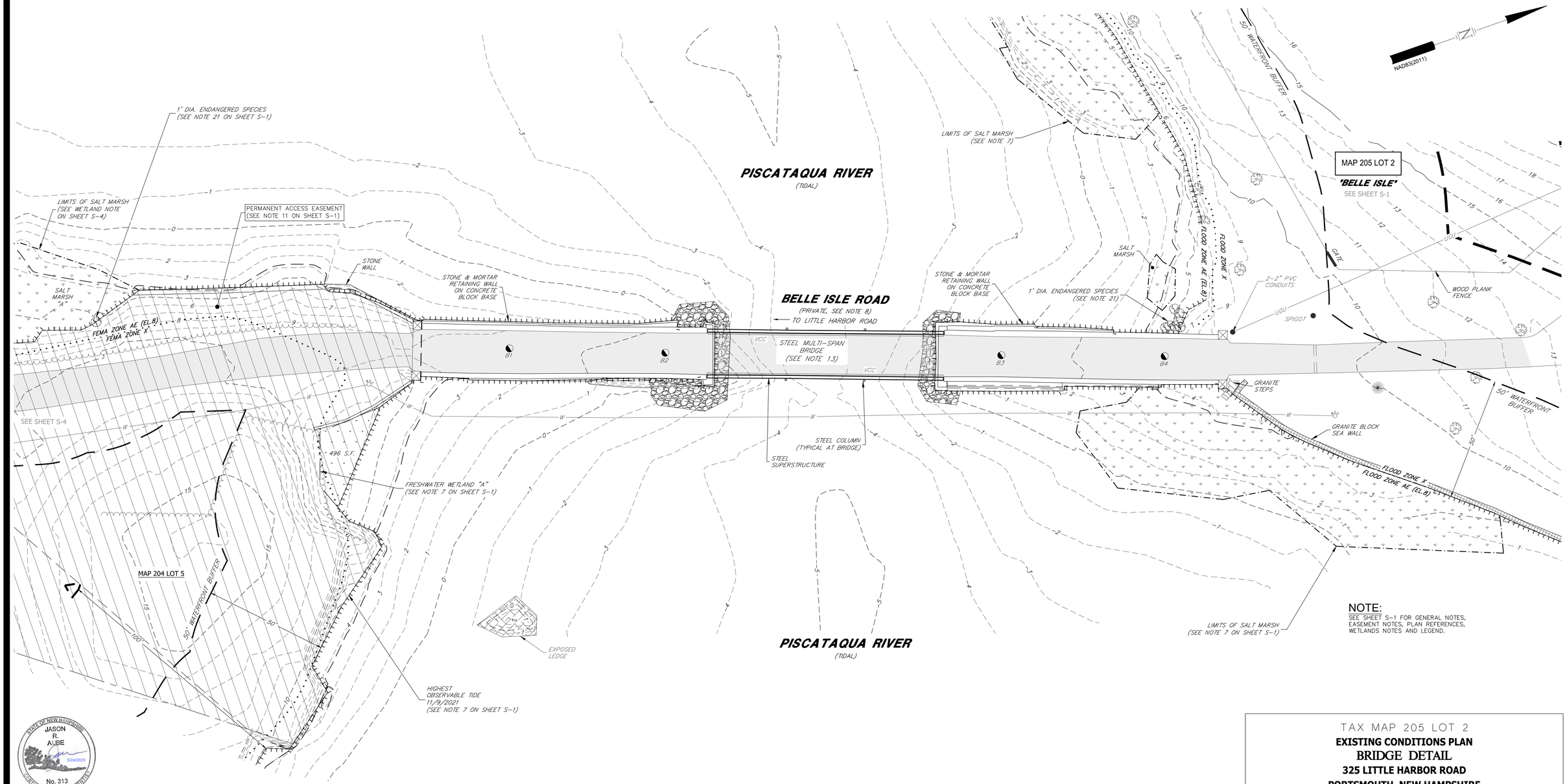
Total Postage and Fees
$

GREENLAND POST OFFICE 03840
MAY 3 2023
Postmark Here

Sent To Lisa A. Grandahl Revocable Trust
Street and Apt. No., or PO Box No. 304 Maplewood Avenue
City, State, ZIP+4® Portsmouth, NH 03801

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

SECTION 6



NOTE:
SEE SHEET S-1 FOR GENERAL NOTES, EASEMENT NOTES, PLAN REFERENCES, WETLANDS NOTES AND LEGEND.

STATE OF NEW HAMPSHIRE
JASON R. AUBE
5/24/2023
No. 313
CERTIFIED WETLAND SCIENTIST

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY THOSE UNDER MY DIRECT SUPERVISION AND ARE THE RESULT OF A FIELD SURVEY CONDUCTED IN JANUARY 2022 AND JANUARY & APRIL 2023. THIS SURVEY CONFORMS TO THE ACCURACY REQUIREMENTS OF AN URBAN SURVEY OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I FURTHER CERTIFY THAT THIS SURVEY IS CORRECT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, AND THE FIELD TRAVERSE SURVEY EXCEEDS A PRECISION OF 1:15,000.

STATE OF NEW HAMPSHIRE
No. 844
JOHN COREY COLWELL
LICENSED LAND SURVEYOR
SIGNATURE

LICENSED LAND SURVEYOR

2023-05-23
DATE

DIG SAFE
MA ME NH RI VT
UTILITIES UNDERGROUND PLANT DAMAGE PREVENTION SYSTEM
CALL 811 TOLL FREE
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

20 10 0 20
Graphic Scale in Feet

REV.	DATE	DESCRIPTION	DR	CK

TAX MAP 205 LOT 2

EXISTING CONDITIONS PLAN
BRIDGE DETAIL
325 LITTLE HARBOR ROAD
PORTSMOUTH, NEW HAMPSHIRE
COUNTY OF ROCKINGHAM

OWNED BY

THE ADL PORTSMOUTH RESIDENCE TRUST

SCALE: 1" = 20' (22x34)
1" = 40' (11x17)

FEBRUARY 1, 2023

Seacoast Division
TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
170 Commerce Way, Suite 102
Portsmouth, NH 03801
Phone (603) 431-2222
Fax (603) 431-0910
www.tfmoran.com

FILE	DR	MVP	FB	583	S-02
47099-01	CK	BMK	CADFILE	SEE MARGIN	

NAD83 (2011)

NOTES

1. QUALIFIED COSTAL PROFESSIONAL, JASON R. AUBE (CWS #313), USING THE PUBLISHED DATA COMPLETED THE WETLAND FUNCTIONAL ASSESSMENT AND WETLAND CLASSIFICATION.

WETLAND CLASSIFICATION			
PF01	PALUSTRINE FORESTED BROAD-LEAVED DECIDUOUS	E2US3M	ESTAURINE INTERTIDAL UNCONSOLIDATED SHORE MUD IRREGULARLY FLOODED
E2EM1P	ESTAURINE INTERTIDAL EMERGENT PERSISTENT IRREGULARLY FLOODED	E2RS1/2N	ESTAURINE INTERTIDAL ROCKY SHORE BEDROCK EUHALINE/EUSALINE REGULARLY FLOODED

HORIZONTAL SCALE 1"=60'
60 30 0 60

REV.	DATE	DESCRIPTION	DR	CK

BRIDGE PERMITTING PLANS

TAX MAP 205 LOT 2

WETLAND CLASSIFICATION PLAN

LADY ISLE BRIDGE REPLACEMENT

325 LITTLE HARBOR ROAD, PORTSMOUTH, NH

OWNED BY & PREPARED FOR

ADL 325 LITTLE HARBOR ROAD TRUST

1"=120' (11"x17")
SCALE: 1"=60' (22"x34")

MAY 24, 2023

Seacoast Division
TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
170 Commerce Way, Suite 102
Portsmouth, NH 03801
Phone (603) 431-2222
Fax (603) 431-0910
www.tfmoran.com

FILE		DR	JKC	FB	–	
47099.01		CK	JCC	CADFILE	47099-01_WETLAND CLASSIFICATION	BR-01

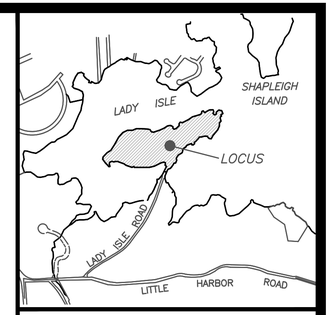
May 23, 2023 - 3:01pm
P:\MSC Projects\47099 - Little Harbor Rd & Gosport Rd - Portsmouth\47099-01 - DiLorenzo - 325 Little Harbor Rd\Design\PRODUCTION DWGS BRIDGE\47099-01_Wetland Classification.dwg

NAD 83

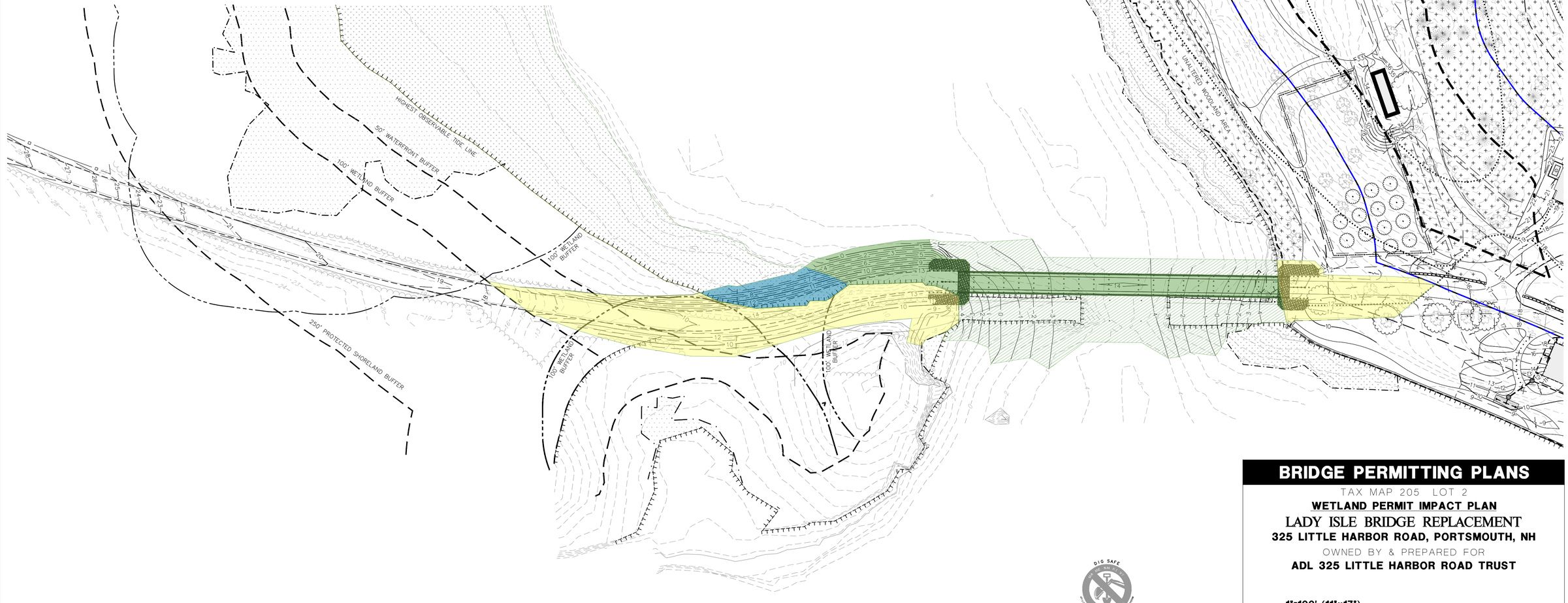
	IMPACT AREA
PROPOSED PERMANENT IMPACTS WITHIN THE DEVELOPED UPLAND TIDAL BUFFER ZONE	**26,298 S.F.**
PROPOSED PERMANENT IMPACTS BELOW HOTL (SEE BELOW)	**39,785 S.F.**
PROPOSED PERMANENT IMPACTS FOR THE PURPOSE OF RESTORING THE TIDAL AREA	*23,737 S.F.*
PROPOSED PERMANENT IMPACTS FOR THE PURPOSE OF ADDING MATERIAL TO CONSTRUCT THE NEW SOUTH BRIDGE APPROACH	*12,605 S.F.*
PROPOSED SALT MARSH IMPACTS FOR THE PURPOSE OF ADDING MATERIAL TO CONSTRUCT THE NEW SOUTH BRIDGE APPROACH	*3,443 S.F.*
TOTAL PROPOSED PERMANENT IMPACTS JURISDICTIONAL UNDER NH WETLANDS LAW	**66,083 S.F.**

TIDAL ELEVATIONS	
MHHW	4.18
MHW	3.76
MTL	-0.32
MLW	-4.39
MLLW	-4.71

TIDAL ELEVATIONS ARE BASED ON NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) STATION 8423898, SEAVEY ISLAND, ME AND AS USED WITHIN THE TOWN OF PORTSMOUTH VULNERABILITY ASSESSMENT PREPARED BY THE ROCKINGHAM PLANNING COMMISSION, SEPTEMBER, 2015 AND INCLUDED WITH THE NHDES WETLANDS PERMIT APPLICATION. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



LOCATION PLAN



HORIZONTAL SCALE 1"=50'
50 25 0 50

BRIDGE PERMITTING PLANS

TAX MAP 205 LOT 2

WETLAND PERMIT IMPACT PLAN

LADY ISLE BRIDGE REPLACEMENT

325 LITTLE HARBOR ROAD, PORTSMOUTH, NH

OWNED BY & PREPARED FOR

ADL 325 LITTLE HARBOR ROAD TRUST

1"=100' (11"x17")
SCALE: 1"=50' (22"x34")

MAY 24, 2023

DIG SAFE NH 811 — CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

REV.	DATE	DESCRIPTION	DR	CK

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FILE		DR	JKC	FB	–	
	47099.01	CK	JCC	CADFILE	47099-01_WETLAND PERMIT PLAN	BR-02

NAD 83
N
PERMANENT ACCESS EASEMENT
TIDAL AREA IMPACT FOR RESTORATION BELOW MEAN HIGH WATER (MHW) = 9.280 SF
TIDAL AREA IMPACT FROM NEW FILL BELOW THE MEAN HIGH WATER (MHW) = 5,300 SF
PROPOSED REPLACEMENT TIMBER BRIDGE
PROPOSED UTILITIES TO BE SUSPENDED UNDER BRIDGE
LIMITS OF BRIDGE
TIMBER PIERS (TYPICAL)
(PRIVATE) TO LITTLE HARBOR ROAD
TIDAL AREA IMPACT FOR RESTORATION BELOW MEAN HIGH WATER (MHW) =6,930 SF
SALT MARSH
HIGHEST OBSERVABLE TIDE LINE
B1
B2
B3
B4
EXISTING FILL (SOUTH CAUSEWAY) BELOW HIGH WATER (MHW) TO BE REMOVED = 2,830 SF
EXISTING LADY ISLE BRIDGE (TO BE REMOVED)
EXISTING FILL (NORTH CAUSEWAY) BELOW HIGH WATER (MHW) TO BE REMOVED = 2,190 SF
STONE & MORTAR RETAINING WALL ON CONCRETE BLOCK BASE
STONE & MORTAR RETAINING WALL ON CONCRETE BLOCK BASE
GRANITE STEPS
SALT MARSH
MEAN HIGH WATER LINE (3.76)
FRESHWATER WETLAND
MEAN HIGH WATER LINE (3.76)
100' WETLAND BUFFER
100' TIDAL BUFFFER
100' WETLAND BUFFER
50' WATERFRONT BUFFER
100'
100'
100'
50'
HIGHEST OBSERVABLE TIDE LINE
EXPOSED LEDGE

LEGEND

- G — GAS LINE
- W — WATER LINE
- UGE — UNDERGROUND UTILITIES LINE
- FM — SEWER – FORCE MAINE
- Ⓢ SEWER MANHOLE
- SALT WATER MARSH
- FRESH WATER WETLAND
- RIPRAP ABUTMENTS
- EDGE OF WOODS
- HIGHEST OBSERVABLE TIDE LINE (HOTL)
- MEAN HIGH WATER LINE (MHW)

TIDAL AREA IMPACTS BELOW MEAN HIGH WATER (MHW)

DESCRIPTION	AREA (SF)
NEW FILL FOR BRIDGE ABUTMENT	5,300
FILL REMOVAL OF EXISTING CAUSEWAYS	5,020
NET INCREASE IN FILL BELOW MHW	**280**

TIDAL AREA RESTORATION BELOW MEAN HIGH WATER (MHW)

DESCRIPTION	AREA (SF)
REMOVAL OF EXISTING FILL (SOUTH CAUSEWAY)	2,830
REMOVAL OF EXISTING FILL (NORTH CAUSEWAY)	2,190
FILL REMOVAL OF EXISTING CAUSEWAYS (TOTAL)	5,020
GRADING TO MATCH EXISTING GRADES	16,210
TOTAL RESTORATION	**21,230**

NOTE:

THE MEAN HIGH WATER (MHW) ELEVATION OF 3.76 FEET WAS DETERMINED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ASSOCIATION (NOAA) SEAVEY ISLAND, MAINE TIDAL STATION 8419870 USING NAVD 88 DATUM.

HORIZONTAL SCALE 1"=20'
20 10 0 20

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CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

REV.	DATE	DESCRIPTION	DR	CK

BRIDGE PERMITTING PLANS

TAX MAP 205 LOT 2

ARMY CORP OF ENGINEERS IMPACT PLAN

LADY ISLE BRIDGE REPLACEMENT

325 LITTLE HARBOR ROAD, PORTSMOUTH, NH

OWNED BY & PREPARED FOR

ADL 325 LITTLE HARBOR ROAD TRUST

1"=40' (11"x17")
SCALE: 1"=20' (22"x34")

MAY 24, 2023

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FILE	47099.01	DR	JKC	FB	–	BR–03
		CK	JCC	CADFILE	47099-01_BRIDGE TIDAL IMPACT PLAN	

May 23, 2023 - 3:03pm
F:\MSC Projects\47099 - Little Harbor Rd & Gosport Rd - Portsmouth\47099-01 - DiLorenzo - 325 Little Harbor Rd\Design\PRODUCTION DWGS BRIDGE\47099-01_Bridge Tidal Impact Plan.dwg

PLANTING LEGEND - LOW MARSH		
SYMBOL	PLANT TYPE	QUANTITY
✱	SMOOTH CORDGRASS (SPARTINA ALTERNIFLORA)	173

PLANTING LEGEND - HIGH MARSH		
SYMBOL	PLANT TYPE	QUANTITY
◎	SALTMEADOW CORDGRASS (SPARTINA PATENS)	46
✳	SALTGRASS (DISTICHLIS SPICATA)	45
○	BLACK GRASS (JUNCUS GERARDII)	27

HORIZONTAL SCALE 1"=20'

20 10 0 20

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REV.	DATE	DESCRIPTION	DR	CK

BRIDGE PERMITTING PLANS

TAX MAP 205 LOT 2

TIDAL AREA RESTORATION PLAN

LADY ISLE BRIDGE REPLACEMENT

325 LITTLE HARBOR ROAD, PORTSMOUTH, NH

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MAY 24, 2023

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FILE	47099.01	DR	JKC	FB	–	BR–04
		CK	JCC	CADFILE	47099-01_BRIDGE RESTORATION PLAN	

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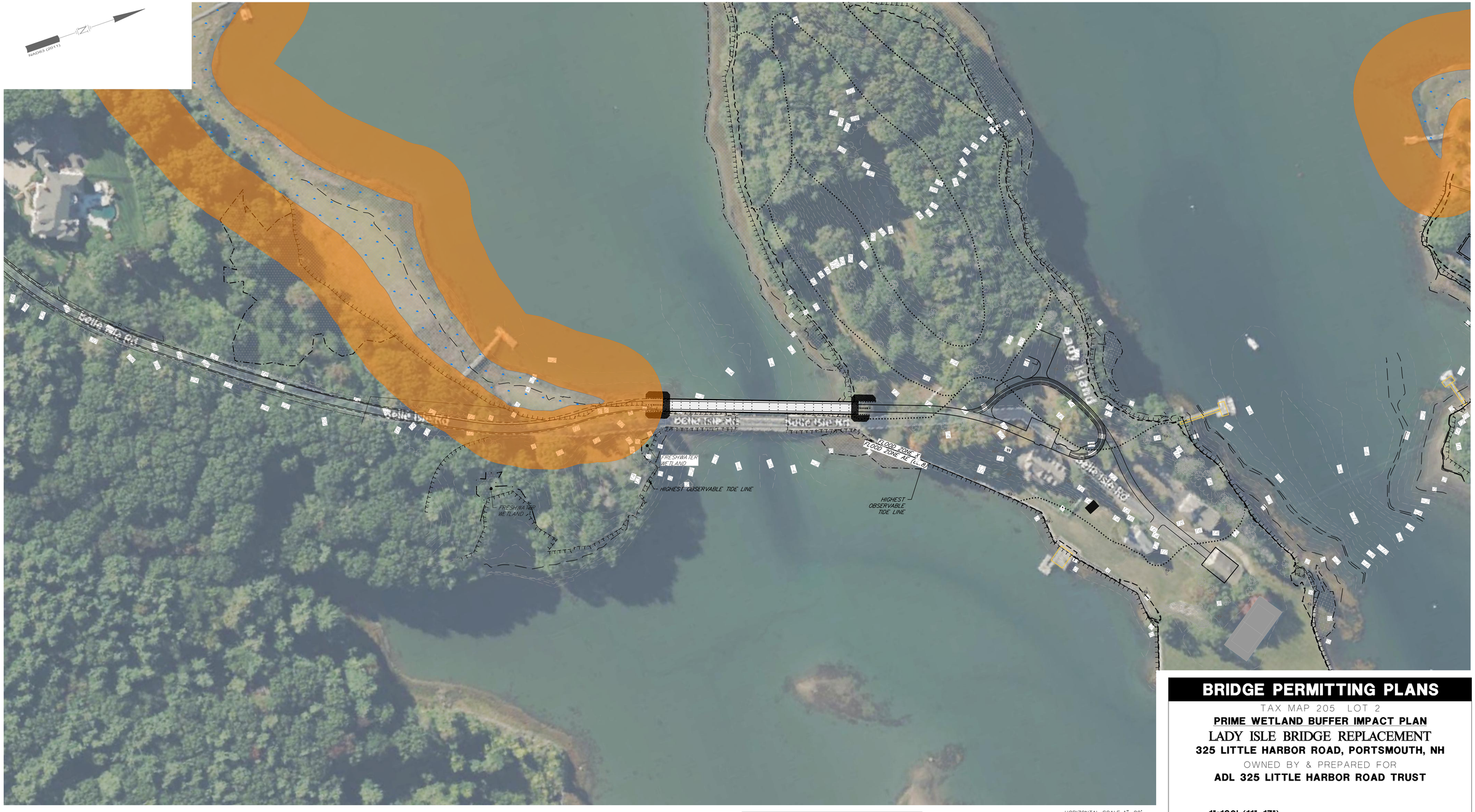

BRIDGE PERMITTING PLANS

TAX MAP 205 LOT 2

PRIME WETLAND BUFFER IMPACT PLAN

LADY ISLE BRIDGE REPLACEMENT

325 LITTLE HARBOR ROAD, PORTSMOUTH, NH

OWNED BY & PREPARED FOR

ADL 325 LITTLE HARBOR ROAD TRUST

1"=160' (11"x17")

SCALE: 1"=80' (22"x34")

MAY 24, 2023

LEGEND	
	PRIME WETLAND
	PRIME WETLAND BUFFER

HORIZONTAL SCALE 1"=80'

80 40 0 80

REV.	DATE	DESCRIPTION	DR	CK

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FILE		DR	JKC	FB	–	
	47099.01	CK	JCC	CADFILE	47099-01_PRIME WETLAND PLAN	BR-06

May 23, 2023 - 3:03pm
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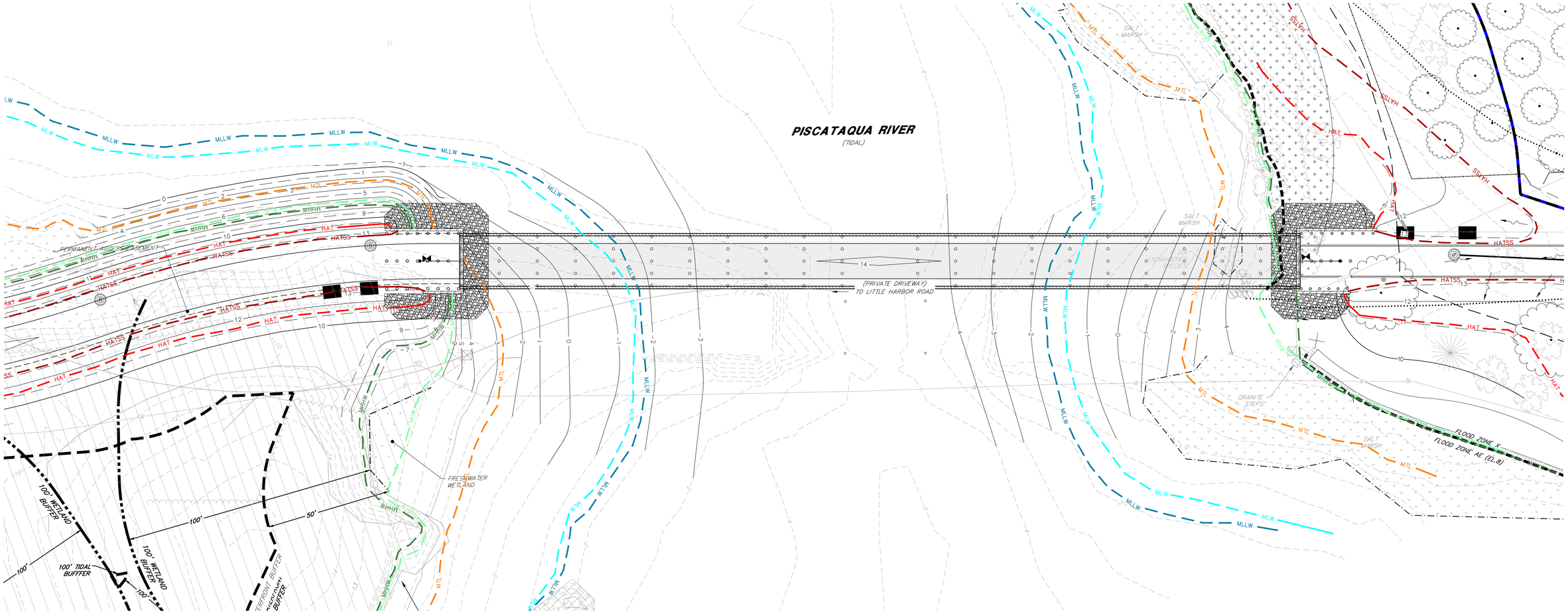
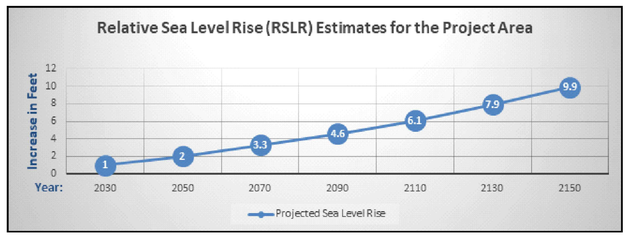
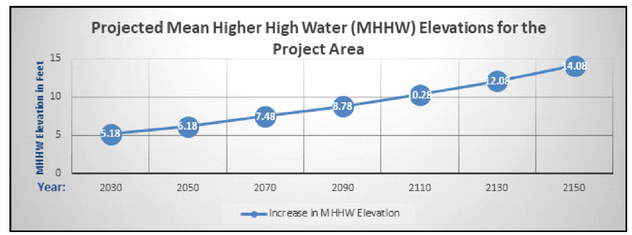


TIDAL ELEVATIONS		
	2022	2100(PROJECTED)
HAT + SS		13.22
HAT		11.22
MHHW	4.18	7.13
MHW	3.76	6.71
MTL	-0.32	2.63
MLW	-4.39	-1.44
MLLW	-4.71	-1.76

TIDAL ELEVATIONS ARE BASED ON NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) STATION 8423898, SEAVEY ISLAND, ME AND AS USED WITHIN THE TOWN OF HAMPTON VULNERABILITY ASSESSMENT PREPARED BY THE ROCKINGHAM PLANNING COMMISSION, SEPTEMBER, 2015 AND INCLUDED WITH THE NHDES WETLANDS PERMIT APPLICATION. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



INCREMENTAL RELATIVE SEA LEVEL RISE FOR THE PROJECT AREA BASED ON REPRESENTATIVE CONCENTRATION PATHWAY (RCP) 4.5 AND A LOW TOLERANCE FOR FLOOD RISK



INCREMENTAL RELATIVE SEA LEVEL RISE FOR THE PROJECT AREA BASED ON REPRESENTATIVE CONCENTRATION PATHWAY (RCP) 4.5 AND A LOW TOLERANCE FOR FLOOD RISK, AND THE CURRENT MEAN HIGHER HIGH (MHHW) ELEVATION OF 4.18 FEET DETERMINED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ASSOCIATION (NOAA) SEAVEY ISLAND, MAINE STATION 8419870 USING NAVD88 DATUM

BRIDGE PERMITTING PLANS

TAX MAP 205 LOT 2

VULNERABILITY ASSESSMENT PLAN

LADY ISLE BRIDGE REPLACEMENT

325 LITTLE HARBOR ROAD, PORTSMOUTH, NH

OWNED BY & PREPARED FOR

ADL 325 LITTLE HARBOR ROAD TRUST

1"=40' (22"x17")
SCALE: 1"=20' (22"x34")

MAY 24, 2023

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HORIZONTAL SCALE 1"=20'
20 10 0 20

REV.	DATE	DESCRIPTION	DR	CK

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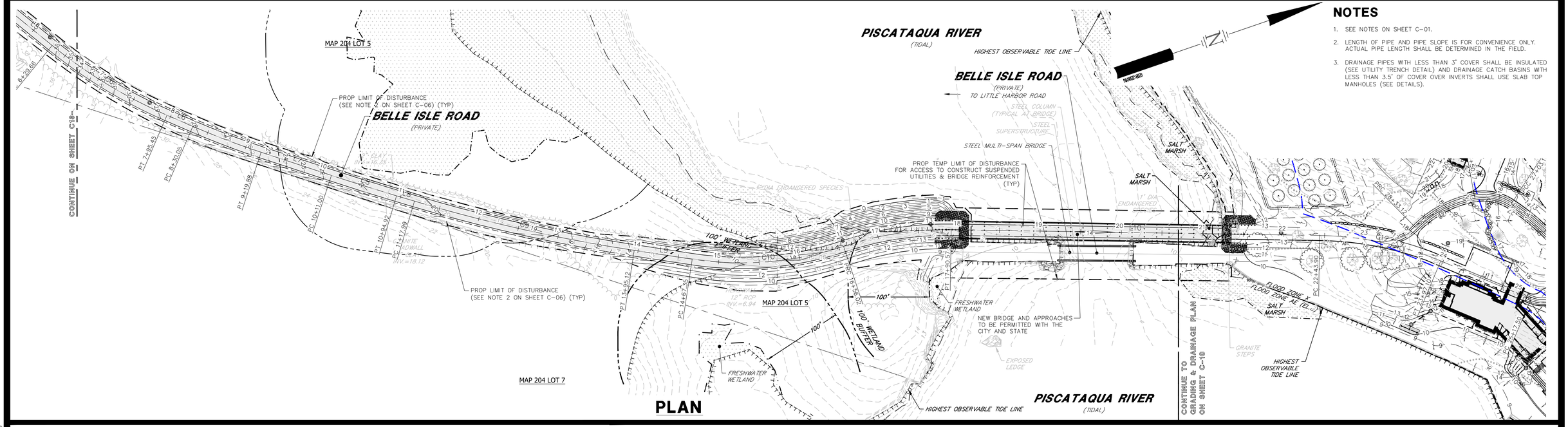
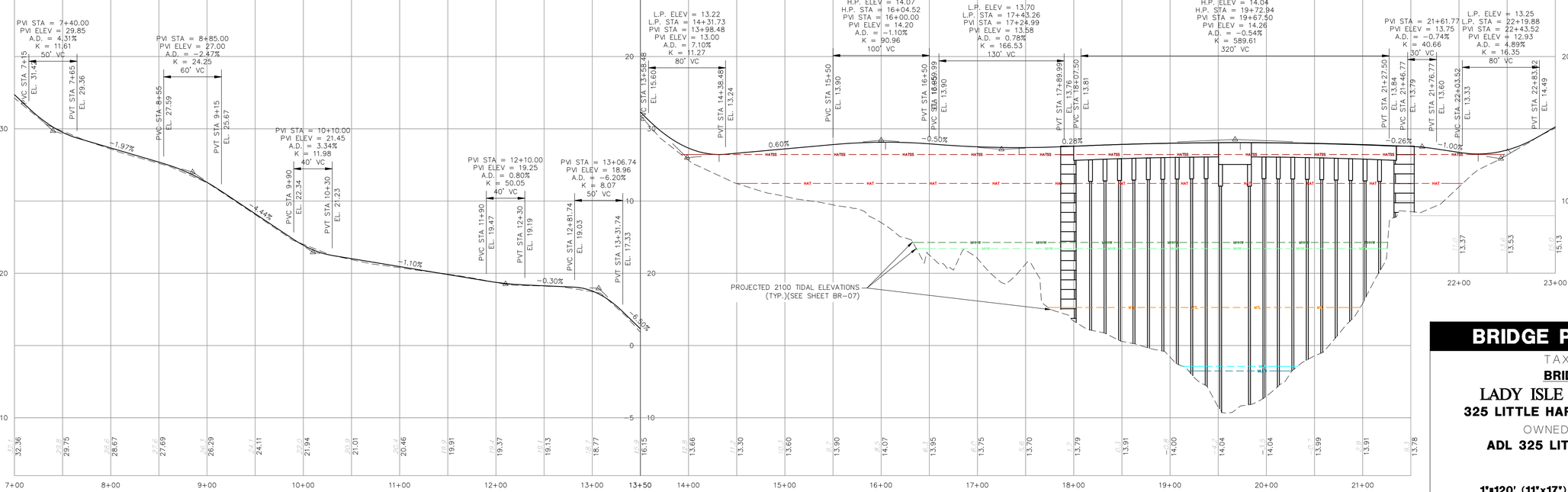
FILE	DR	JKC	FB	–	
47099.01	CK	JCC	CADFILE	47099-01_VULNERABILITY	BR-07



PLAN

NOTES

1. SEE NOTES ON SHEET C-01.
2. LENGTH OF PIPE AND PIPE SLOPE IS FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD.
3. DRAINAGE PIPES WITH LESS THAN 3' COVER SHALL BE INSULATED (SEE UTILITY TRENCH DETAIL) AND DRAINAGE CATCH BASINS WITH LESS THAN 3.5' OF COVER OVER INVERTS SHALL USE SLAB TOP MANHOLES (SEE DETAILS).



BELLE ISLE ROAD PROFILE

HORIZONTAL SCALE 1"=60'
60 30 0 60
4 0 4
VERTICAL SCALE 1"=4'

REV.	DATE	DESCRIPTION	DR	CK

BRIDGE PERMITTING PLANS

TAX MAP 205 LOT 2

BRIDGE PROFILE PLAN

LADY ISLE BRIDGE REPLACEMENT

325 LITTLE HARBOR ROAD, PORTSMOUTH, NH

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1"=120' (11"x17")
SCALE: 1"=60' (22"x34")

MAY 24, 2023

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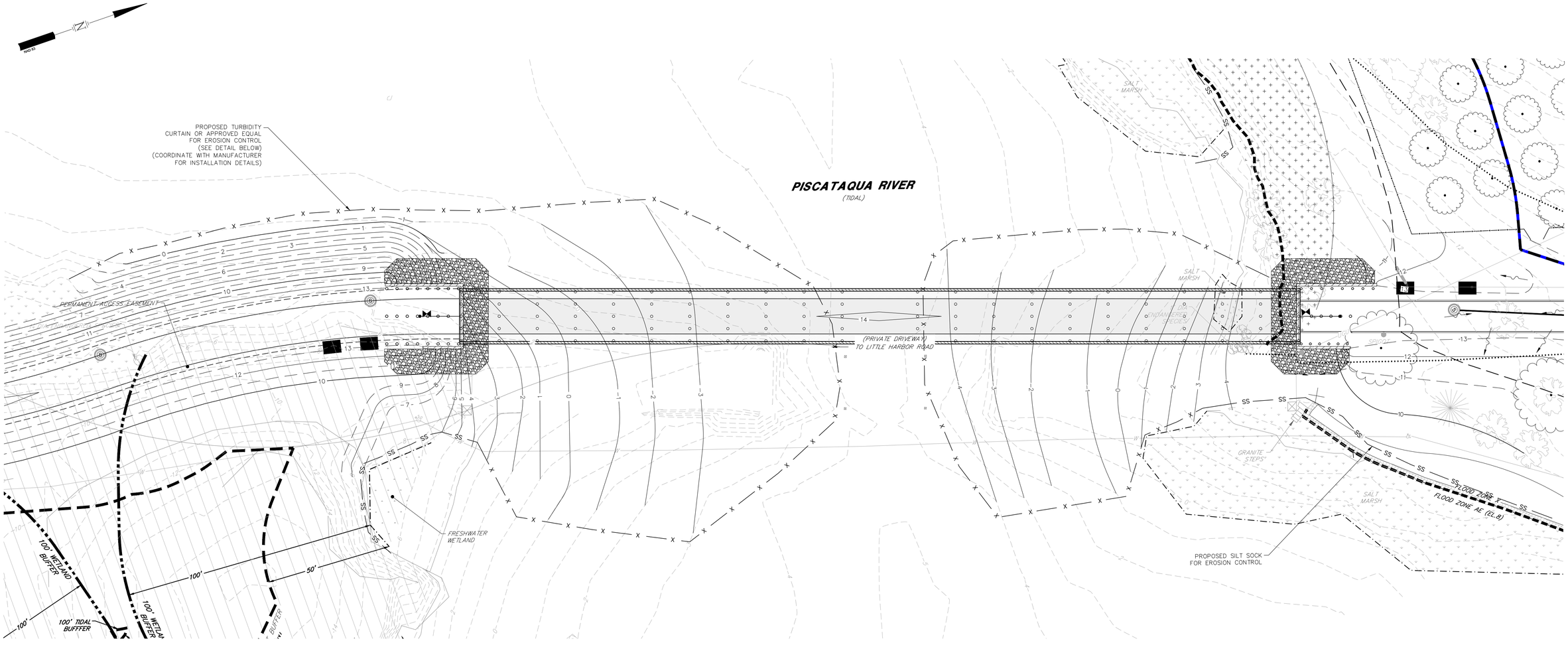
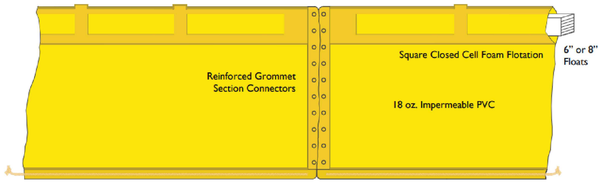
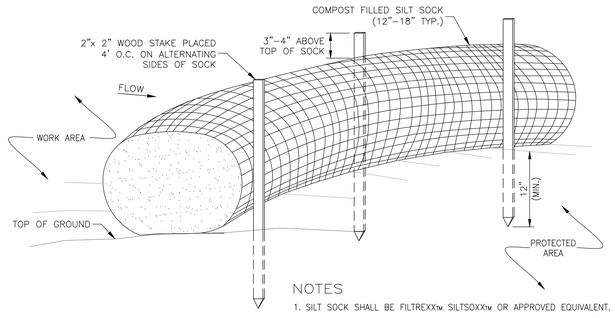
PRT — N	47099.01	DR	JKC	FB	–	BR-08
		CK	JCC	CADFILE	47099-01_PROFILE_DRIVEWAY	







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www.GEIWorks.com
info@geiworks.com

Type 1 DOT Turbidity Curtain

Scale:	Drawing:	Revision:	Date:	By:
Not to Scale			01/04/2018	MK

Drawing is for illustrative purposes only. Not to scale.
Copyright © GEI Works 2018
Natural forces such as current, wind, waves, and location affect your product and may require engineering, additional anchoring, and customization.

SILT SOCK

NOT TO SCALE

NOTES

1. SILT SOCK SHALL BE FILTREXX™ SILTSOXX™ OR APPROVED EQUIVALENT.
2. SEE SPECIFICATIONS FOR SOCK SIZE AND COMPOST FILL REQUIREMENTS.
3. SILT SOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

HORIZONTAL SCALE 1"=20'
20 10 0 20

REV.	DATE	DESCRIPTION	DR	CK

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BRIDGE PERMITTING PLANS

TAX MAP 205 LOT 2

EROSION AND SEDIMENT CONTROL PLAN

LADY ISLE BRIDGE REPLACEMENT

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MAY 24, 2023

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		CK	JCC	CADFILE	47099-01_EROSION	

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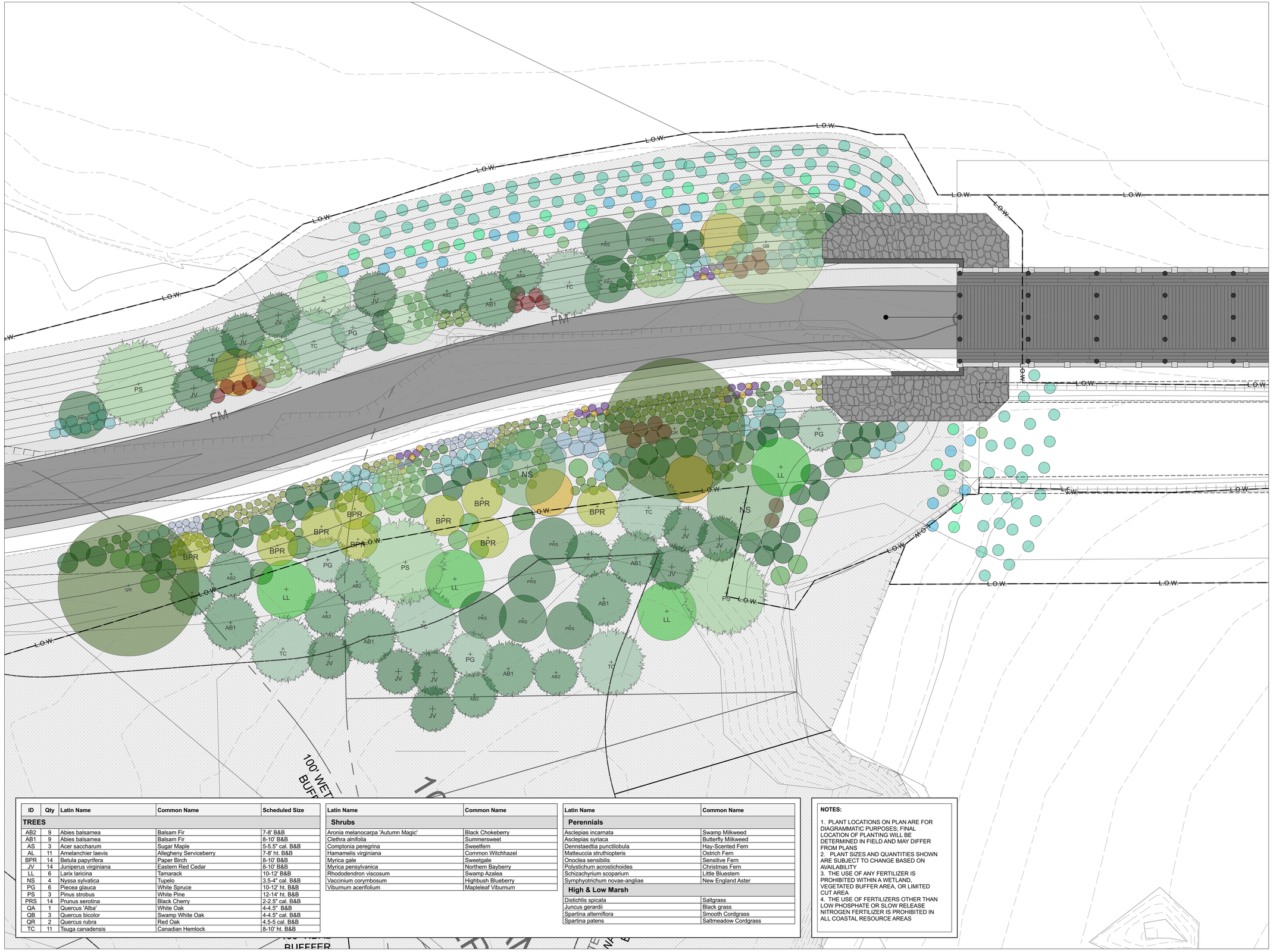

ID	Qty	Latin Name	Common Name	Scheduled Size
TREES				
AB2	9	Abies balsamea	Balsam Fir	7-8' B&B
AB1	9	Abies balsamea	Balsam Fir	8-10' B&B
AS	3	Acer saccharum	Sugar Maple	5-5.5" cal. B&B
AL	11	Amelanchier laevis	Allegheny Serviceberry	7-8' ht. B&B
BPR	14	Betula papyrifera	Paper Birch	8-10' B&B
JV	14	Juniperus virginiana	Eastern Red Cedar	8-10' B&B
LL	6	Larix laricina	Tamarack	10-12' B&B
NS	4	Nyssa sylvatica	Tupelo	3.5-4" cal. B&B
PG	6	Piecea glauca	White Spruce	10-12' ht. B&B
PS	3	Pinus strobus	White Pine	12-14' ht. B&B
PRS	14	Prunus serotina	Black Cherry	2-2.5" cal. B&B
QA	1	Quercus 'Alba'	White Oak	4-4.5" B&B
QB	3	Quercus bicolor	Swamp White Oak	4-4.5" cal. B&B
QR	2	Quercus rubra	Red Oak	4.5-5 cal. B&B
TC	11	Tsuga canadensis	Canadian Hemlock	8-10' ht. B&B

Latin Name	Common Name
Shrubs	
Aronia melanocarpa 'Autumn Magic'	Black Chokeberry
Clethra alnifolia	Summersweet
Comptonia peregrina	Sweetfern
Hamamelis virginiana	Common Witchhazel
Myrica gale	Sweetgale
Myrica pensylvanica	Northern Bayberry
Rhododendron viscosum	Swamp Azalea
Vaccinium corymbosum	Highbush Blueberry
Viburnum acerifolium	Mapleleaf Viburnum

Latin Name	Common Name
Perennials	
Asclepias incarnata	Swamp Milkweed
Asclepias syriaca	Butterfly Milkweed
Dennstaedtia punctilobula	Hay-Scented Fern
Matteuccia struthiopteris	Ostrich Fern
Onoclea sensibilis	Sensitive Fern
Polystichum acrostichoides	Christmas Fern
Schizachyrium scoparium	Little Bluestem
Symphyotrichum novae-angliae	New England Aster
High & Low Marsh	
Distichlis spicata	Saltgrass
Juncus gerardii	Black grass
Spartina alterniflora	Smooth Cordgrass
Spartina patens	Saltmeadow Cordgrass

NOTES:

1. PLANT LOCATIONS ON PLAN ARE FOR DIAGRAMMATIC PURPOSES; FINAL LOCATION OF PLANTING WILL BE DETERMINED IN FIELD AND MAY DIFFER FROM PLANS
2. PLANT SIZES AND QUANTITIES SHOWN ARE SUBJECT TO CHANGE BASED ON AVAILABILITY
3. THE USE OF ANY FERTILIZER IS PROHIBITED WITHIN A WETLAND, VEGETATED BUFFER AREA, OR LIMITED CUT AREA
4. THE USE OF FERTILIZERS OTHER THAN LOW PHOSPHATE OR SLOW RELEASE NITROGEN FERTILIZER IS PROHIBITED IN ALL COASTAL RESOURCE AREAS

Lady Isle

325 Little Harbor Road, Portsmouth NH

General Notes:

1. Existing conditions and topographic data are from a site plan of land dated March 2, 2021; prepared by: Thomas F. Moran Inc., 170 Commerce Way, Suite 102, Portsmouth, NH, 03801 - Tel: (603) 431.2222

2. Existing conditions supplemented from data collected by: Matthew Cunningham Landscape Design LLC, 411 Main Street, Stoneham, MA 02180 - Tel: (617) 905.2246

3. Do not scale drawings.

LICENSED LANDSCAPE ARCHITECT
MATTHEW J. CUNNINGHAM
00161
STATE OF NEW HAMPSHIRE

MATTHEW CUNNINGHAM LANDSCAPE DESIGN LLC
matthew-cunningham.com
411 Main Street, Stoneham, MA 02180
366 Fore Street, Portland, ME 04101
617.905.2246 p | 617.321.4014 f

REVISIONS:

#:		DESCRIPTION:

SCALE: 1" = 10'-0" DATE: 08 June 2023

0' 5' 10' 20'

SHEET TITLE:

LADY ISLE BRIDGE REPLACEMENT - **PROPOSED MITIGATION PLANTING**

SHEET NUMBER:

L1.0

FOR PERMIT SUBMISSION

Lady Isle

325 Little Harbor Road,
Portsmouth NH

General Notes:

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STATE OF NEW HAMPSHIRE

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matthew-cunningham.com

411 Main Street, Stoneham, MA 02180
366 Fore Street, Portland, ME 04101
617.905.2246 p | 617.321.4014 f

REVISIONS:

#:		DESCRIPTION:

SCALE: 1" = 30'-0" DATE: 08 June 2023

0' 15' 30' 60'

SHEET TITLE:

LADY ISLE BRIDGE REPLACEMENT - **PROPOSED MITIGATION PLANTING**

SHEET NUMBER:

L1.2

FOR PERMIT SUBMISSION