January 28, 2021

Wetland Inspection
New Hampshire Department of Environmental Services
Wetlands Bureau
29 Hazen Drive – P.O. Box 95
Concord, New Hampshire 03302

Re: NHDES Major Impact Wetland Permit Application
Tax Map 102, Lot 29
35 Salter Street
Portsmouth, New Hampshire

Dear Wetland Inspector,

Enclosed with this letter is a New Hampshire Department of Environmental Services (NHDES) Major Impact Wetland Permit Application for a proposed tidal docking structure that includes a request to permit 316 sq. ft. of permanent impact to tidal wetland, and 5 sq. ft. of permanent impact to previously developed 100' tidal buffer zone (TBZ). The proposed tidal docking structure will consist of a 4' x 4' access landing, a 3' x 30' aluminum gangway, and a 10' x 20' float (overall structure length approximately 48') providing one slip on 56' +/- of frontage along Perkins Cover (Piscataqua River).

Per Env-Wt 306.05, Matthew Cardin, CWS (License No. 284) classified all jurisdictional areas and identified the predominant functions off all jurisdictional and managed natural resources. The Highest Observable Tide Line delineates the boundary between tidal wetlands and the previously developed 100 TBZ, of which is shown on the attached plan set. Also attached to this application is a Wetlands Functions and Values Assessment and a Coastal Vulnerability Assessment summarizing these functions per the requirements of Env-Wt 603.04 and Env-Wt 603.05.

The proposed structure consists of a permanent access deck installed partially within the previously developed tidal buffer zone and partially within the tidal wetland area, which will be constructed on piles. The proposed aluminum gangway will be fastened to the access deck and extend to the float. The float will be secured by two permanent piles installed on the south side of the float. Two additional piles will be installed northward of the float piles as part of the float stop system per the requirements in Env-Wt 606.07 to maintain 24" of separation from the float to the substrate. The gangway and the float will be temporary structures and will be removed during winter months as to not incur any unnecessary impacts or damage from ice or weather when use is not anticipated.

The proposed docking structure will have no impact on the functions and values of the adjacent tidal wetland or previously developed 100' TBZ. It's anticipated that current functions and values will not be impacted by the proposed tidal dock structure and that current functions and values will be maintained as a result. The dock structure will not contribute to additional storm water or pollution. Per Natural Heritage Bureau and NH Fish and Game correspondence, it's anticipated that there will be no affect on any fish and wildlife species that utilize the resources and habitat at the project location.

The purpose of the proposed dock structure is to provide recreational boating access utilizing the previously developed tidal buffer zone as access point. There will be no earth disturbance or grading required associated with the proposed docking structure. All work will be performed from a crane barge during periods of low tide. All piles to be driven occur below the mean low low water (MLLW). Piles will be

driven during ebbed tides where water is not present within the disturbance area, therefore temporary disturbance associated with construction are not expected. Piles will be driven using a vibratory hammer positioned on the work barge. Working from a barge eliminates the need for additional temporary fill or machinery directly within the protected resource areas. The components of the dock structure are prefabricated and transported and installed via a crane barge.

The construction sequence for the proposed structure are as follows:

- Mobilize crane barge, push boat and work skiff containing prefabricated components (float, gangway) and materials (piles, associated timber and hardware) to the site during high-tide.
    - The barge will be positioned alongside the proposed location of the float and close enough to land where navigability won't be affected. There is no emergent or saltmarsh vegetation with the temporary workspace area to be impacted.
- All work is to be done during low-tide intervals where there is no flowing water within the work area. A temporary turbidity curtain may be placed to contain suspended solids during periods of high-tide once construction has temporarily stopped.
- Piles will be mechanically impact driven by crane to a depth of refusal or approximately 10'. There will be no excavation required as part of this project. Little to no foot traffic will be required to drive float piles.
- Float stop piles will be cut to the appropriate height – approximately 24" above substrate surface. Stringers will be fastened to float piles and float stop piles. This work will be done on foot within intertidal area and during low tide to minimize turbidity.
- The float and gangway will be lifted from the barge via crane and placed into position and installed.

This project represents the least impacting alternative with the least adverse impacts to the environment and nearby resources while allowing reasonable use of the property.

Per Env-Wt 603.02(b), you will find a plan set that depicts existing lot information, jurisdictional areas, and all-natural resources in the area to be impacted, abutting parcels, existing structures, and proposed structure and impact areas. In addition, maps are provided data screening information in accordance with Env-Wt 603.03 and Env-Wt 603.04.

Per the requirements in Env-Wt 306.05 (a)(2), the following provides a determination whether the subject property is or contains a priority resource area:

2a. *Contains any documented occurrences of protected species or habitat for such species, using the DataCheck tool;*

Attached to this application are the results of the Natural Heritage Bureau (NHB) review. It was recommended by the Marine Division of NH Fish and Game that the project response a time of year restriction between April 1 and June 15th in consideration of anadromous fish movements. Taking this recommendation into consideration, impacts to the species and/or habitat acknowledged by NHB will be impacted.

2b. *Is a bog;*

Utilizing the NHDES Wetland Permitting Planning Tool (WPPT), the subject is not a bog nor does it contain any portion of a bog.

2c. *Is a floodplain wetland contiguous to a tier 3 or higher watercourse;*

Utilizing the NHDES Wetland Permitting Planning Tool (WPPT), the subject property does not contain a floodplain wetland contiguous to a tier 3 or higher watercourse.

2d. *Does the property contain a designated prime wetlands or a duly established 100-foot buffer;*

The property does not contain a prime wetland or duly established 100-foot buffer.

2e. *Does the property contain a sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone;*

The property contains a tidal wetland and tidal waters. The property does not contain a sand dune or undeveloped tidal buffer zone.

The following evaluates and addresses DES Wetlands Bureau rules in Chapter Env-Wt 306.05 (a)(4) and (a)(7);

4a. Is the subject property within LAC jurisdiction;

The property does not occur within a LAC jurisdictional area.

4b. Does the subject property fall within or contain any areas that are subject to time of year restriction under Env-Wt 307;

The property does not technically fall within or contain any areas that are subject to time of year restrictions, however NHFG has provided guidance regarding reducing impacts to anadromous fish during construction by recommending a time of year restriction occur from April 1 to June 15th.

4c. Does the project have potential to impact impaired waters, class A waters, or outstanding resource waters;

It isn't believed the proposed project will have an impact to an impaired water as the project will have minimal to no affect to stormwater or groundwater on site due to the perviousness and small size of the overall structure.

The following evaluates and addresses DES Wetlands Bureau rules in Chapter Env-Wt 603.02 (e) & (f)

(E)(1) The project meets the standard conditions in Env-Wt 307;

The project meets the standard conditions in Env-Wt 307 as the proposed docking structure meets the standards of Env-Wq 1000, RSA 483-B and Env-Wq 1400. Sediment and erosion controls will be used as necessary during construction within the previously developed tidal buffer zone. A turbidity curtain will be used to minimize the transportation of sediment and suspended solids within the tidal wetland areas. Construction within the tidal wetland area will strictly be reserved during dry phases of the low tide cycle within the project area. It is not anticipated that there will be any impacts to the fish or shellfish nearby the project area. Under Env-Wt 306.05(a)(2)a, NHB and NHFH has been consulted to determine what

impacts to rare and threatened species and natural communities may be impacted. A time of year for construction has been recommended from April 1 to June 15th by NHFG to avoid impacts to anadromous fish activity potentially to occur within the project area. The protection of prime wetlands or duly-established 100 foot buffers does not apply as none exist on or adjacent to the subject lot.

(E)(2) The project meets the approval criteria in Env-Wt 313.01;

The project meets the above approval criteria as a functional assessment is enclosed with this application; the project meets the avoidance and minimization requirements as specified in Env-wt 313.03; the project does not require compensatory mitigation; the project meets applicable conditions specified in Env-Wt 307 (assessment provided above), and; the project meets specific criteria listed in Env-Wt 600. Tthe project is located entirely within the boundary of the applicant's property, however the tidal dock structure occurs within the 20 foot setback from the property boundary extension of Map 102, Lot 30. Per RSA 482-A(3), XIII(a) and (c), a signed, notarized letter providing written consent from the property owners of Map 102, Lot 30 is included with this application.

(F)(1) The project design narrative as described in Env-Wt 603.06;

The project design narrative is provided above.

(F)(2) Design plans that meet the requirements of Env-Wt 603.07;

The attached design plans meet the standards provided in Env-Wt 603.07.

(F)(3) The water depth supporting information required by Env-Wt 603.08;

The attached plans provide water depth information as surveyed by Alex Ross, LLS.

(F)(4) A statement regarding impact on navigation and passage required by Env-Wt 603.09;

A description of the project and a permit plan set was provided to Pease Development Authority, Division of Ports and Harbors for their review. A letter was received stating there is no impact on navigation as a result of the proposed tidal dock structure being installed. The letter is enclosed in this application.

The following evaluates and addresses DES Wetlands Bureau rules in Chapter Env-Wt 606.03:

(e) Non-toxic materials such as untreated wood, concrete, or steel shall be used if at all practicable, as such materials help reflect light under docks and typically do not release contaminants into aquatic environment. A design that uses treated wood timbers or pilings, or both, shall be approved only if the applicant demonstrates that using non-toxic materials is not practicable.

The proposed project is designed to use CCA (chromated copper arsenate) treated lumber, utilizing 12" CCA treated southern yellow pine. Attached to the application is the CCA Safety Data Sheet (SDS) for CCA treated wood. Per the SDS ecological information (#12) discloses that it is "not classified as environmentally hazardous". It should also be noted that the product is insoluble in water. The treated lumber comes to the Contractor pre-treated and there is no direct handling of CCA to treat the lumber or require on-site treatment in any way, therefore there is no risk of spilling or mis-handling.

Alternative, non-treated products would, likely require repeated repair and/or replacement at a higher frequency, and so given the above information, CCA treated lumber is the least impacting alternative.

The following evaluates and addresses DES Wetlands Bureau rules in Chapter Env-Wt 606.06:

(c) To reduce the overall number of residential tidal docks and the adverse impacts to nearshore habitat resulting therefrom, preference shall be given to residential tidal docks designed to service multiple properties.

The adjacent properties to the subject property contain private docking structures. Mutual use of the existing docking structures as a least impacting alternative was explored, however they were not feasible citing liability concerns from solely owned properties.

Thank you for your review of the subject permit application. Please don't hesitate to contact me with any questions or concerns.

Respectfully,

Matthew R. Cardin, CWS
Principal Wetland Scientist/Permit Specialist

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: Bruce Erickson, Elizabeth Levey -Pruyn **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? o If yes, species or habitat name(s): Shortnose Sturgeon, Atlantic Sturgeon o NHB Project ID #: NHB20-3673	☒ 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): • A copy of the application was sent to the LAC on Month: Day: Year:	☐ Yes ☒ No

For dredging projects, is the subject property contaminated? • If yes, list contaminant:	☐ 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):	

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.

The application proposes 316 sq. ft. of permanent impact to tidal wetland and approximately 5 sq. ft. of permanent impact to previously developed 100' tidal buffer zone for a tidal docking structuing that consists of a permanent 4'x4' access deck that staddles the highest observable tide line, connected to a seasonal 3' x 35' aluminum gangway, connected to a 10' x 20' seasonal float supported by two permanently installed 12" diameter Class A, CCA treated timber piles with associated float stops (overall structure length is 49'). The tidal docking structure provides 1 slip on approximately 55' of frontage along the Piscataqua River.

Additional details are as follows:

Float stops will be installed and will be comprised of (2) 12" diameter Class A, CCA treated timber piles installed on the northern end of the proposed float with (2) 3x10" stringers connected to the supporting float piles located on the southern side of the float. Float stops will be set to allow minimum 2 feet from float to marine bottom.

The permanent 4'x4' access deck will be supported by (2) timber piles on the seaward (north) side and deck posts on the landward (south) side to a depth of approximately 2-4' deep.

Timber piles, seasonal gangway and float are to be installed via a barge during low tide cycles. The 4'x4' access deck is to be installed from land. The use for heavy equipment is not required and minimal ground disturbance is expected outside of the two post holes necessary to support the deck to the ground.

Appropriate erosion controls will be installed on the upland side and turbidity curtains will be installed and maintained through the duration of construction.

SECTION 3 - PROJECT LOCATION

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

ADDRESS: 35 Salter Street

TOWN/CITY: Portsmouth

TAX MAP/BLOCK/LOT/UNIT: Map 102, Lot 29

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

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

° 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: Bruce Erickson and Elizibeth Levey-Pruyn		
MAILING ADDRESS: 35 Salter Street		
TOWN/CITY: 35 Salter Street	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: bruce@bericksongroup.com		
FAX:	PHONE: 617-875-6422	
ELECTRONIC COMMUNICATION: By initialing here: BE, 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.: Cardin, Matthew R		
COMPANY NAME: Cardin Enviroinmetnal Consulting and Permitting		
MAILING ADDRESS: 30 Old Post Road		
TOWN/CITY: Newington	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: matt@cardinenvironmental.com		
FAX:	PHONE: 603-988-6635	
ELECTRONIC COMMUNICATION: By initialing here MRC, 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 narratave that includes Avoidance and Minimization Checklist, Coastal Functional Assessment, a Vulnerability Assessment, methods to protect and minimize impacts to natural resources during and as a result of constructing the project and design criteria, water depths, statement regarding imapct to navigation and passage and appropriate data screening figures.

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: , Day: Year:

(☐ 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			☐			☐
	Tidal Marsh			☐			☐
	Sand Dune			☐			☐
	Undeveloped Tidal Buffer Zone (TBZ)			☐			☐
	Previously-developed TBZ	5		☐			☐
	Docking - Tidal Water	316		☐			☐
TOTAL		321					

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):	16 SF	× $0.40 =	$ 6.40
Seasonal docking structure:	305 SF	× $2.00 =	$ 610
Permanent docking structure:	SF	× $4.00 =	$
Projects proposing shoreline structures (including docks) add $400 =			$ 400
		Total =	$ 1,016.4

The application fee for minor or major impact is the above calculated total or $400, whichever is greater = $		
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: BE MK	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials: BE MK	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: BE MK	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: BE MK	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):	PRINT NAME LEGIBLY: Bruce A. Erickson	DATE: 12/29/20
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY: Matthew Cahoon	DATE: 1/30/21

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:

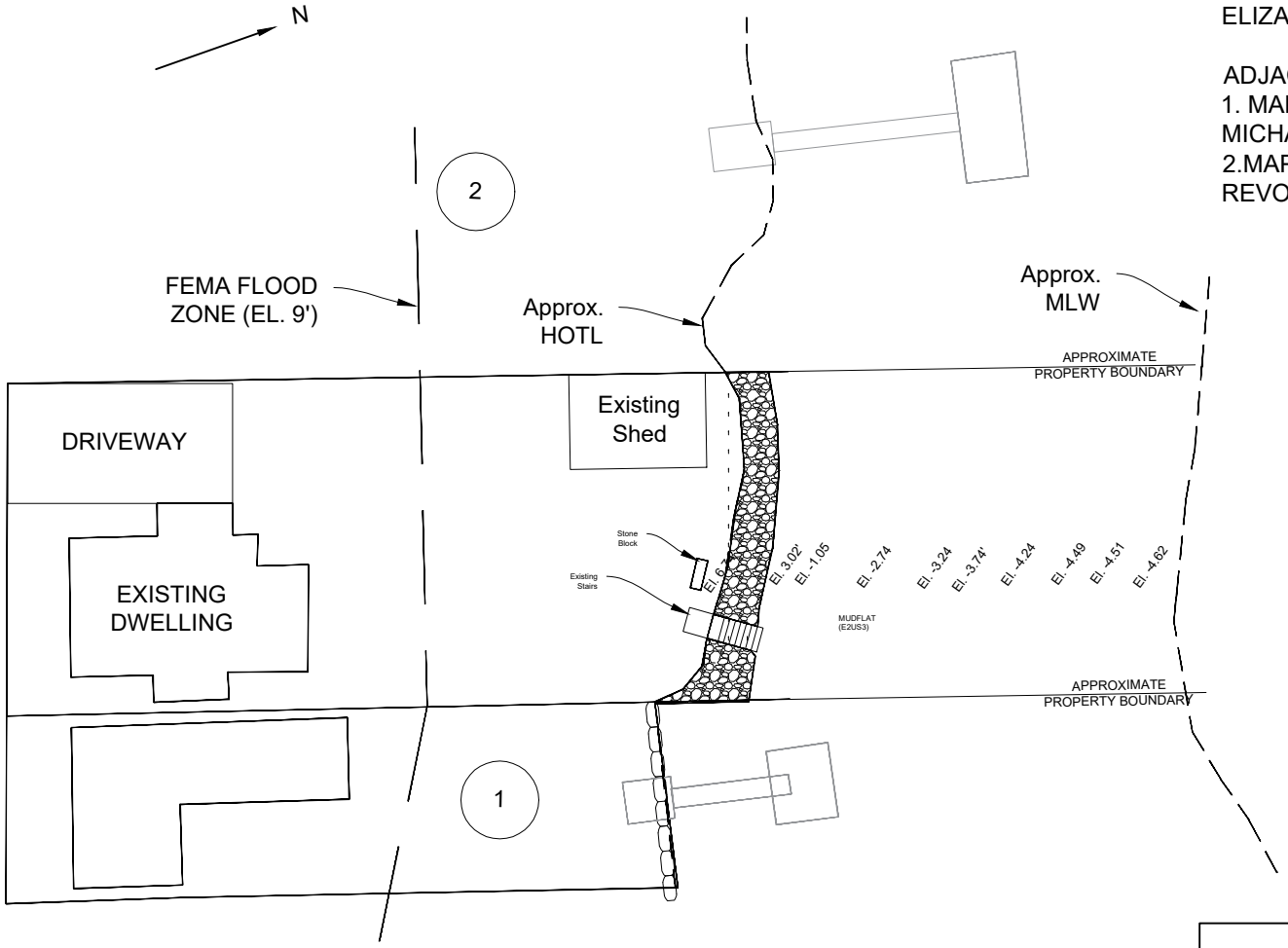
DIRECTIONS FOR TOWN/CITY CLERK:
Per RSA 482-A:3, I(a)(1)

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".

MAP 102, LOT 29 - BRUCE ERICKSON 7 ELIZABETH PRUYN

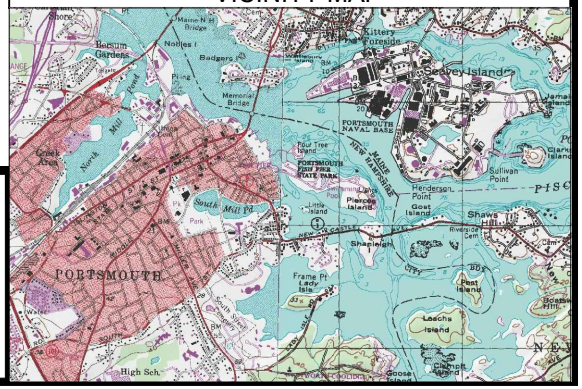
ADJACENT PROPERTY OWNERS:
1. MAP 102, LOT 30 -ARNA DiMAMBRO, MICHAEL LEWIS, PETER LEWIS
2.MAP 102, LOT 28 - GREGG NICOLE R REVOCABLE TRUST.



EXISTING SITE PLAN

SCALE: 1" = 30'

VICINITY MAP



Prepared For:

TM MARINE CONSTRUCTION
480 NEWINGTON ROAD
NEWINGTON, NH 03801

Prepared By:
Matthew Cardin, NH CWS

EXISTING CONDITIONS

ON: PISCATAQUA RIVER

TOWN: PORTSMOUTH

SHEET: 1 of 3

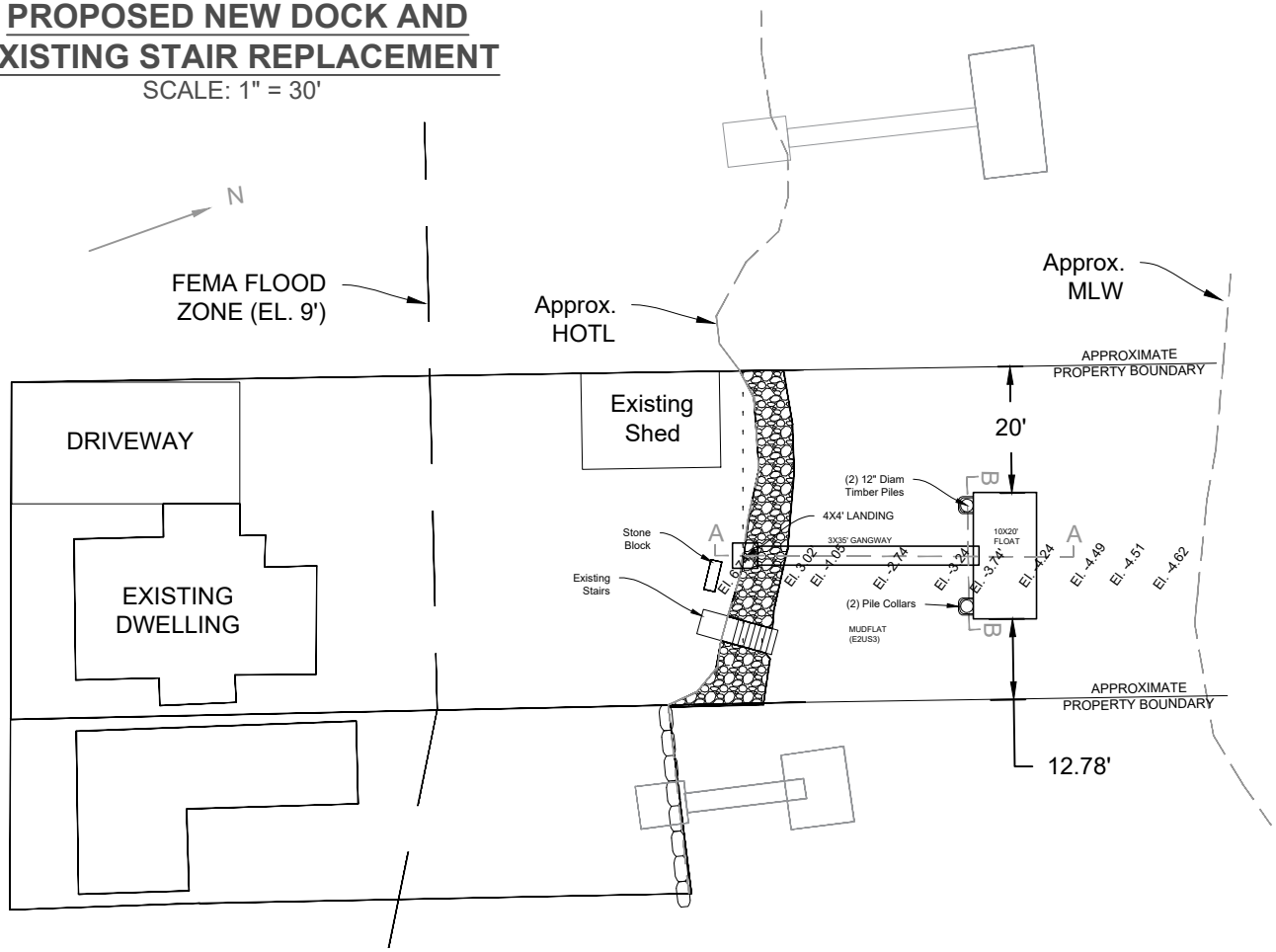
PROPOSED: NEW DOCK STRUCTURE AND EXISTING STAIR REPLACEMENT

AT: 35 SALTER ST STATE: NH

DATE: November 23, 2020

PROPOSED NEW DOCK AND EXISTING STAIR REPLACEMENT

SCALE: 1" = 30'



Notes:

1. Proposed dock structure: 4'x4' landing, 3'x35' gangway, 20'x10' float with two, 12' CCA treated timber piles.
2. Existing water front access stairs to be replaced in-kind and in-place using pressure treated wood. Approximately 4'x4.5' landing and 9 stairs.
3. All materials with dock structure to be CCA treated lumber and galvanized hardware. CCA treated lumber to be pre-treated prior to arrival at site.
4. Setbacks for over the water structures along east property boundary to be waived.
5. The work area or proposed dock location contains no SAS. No vegetated shallows were observed within 25' of proposed dock structure.
6. All lumber material below waterline to be CCA pressure treated wood and all hardware to be galvanized steel.
7. Construction associated with piles, gangway and float to be done from a barge. All construction associated with landing to be done from land within subject property limits.
8. Water elevations provided by Alex Ross, LLS.

Prepared For:

TM MARINE CONSTRUCTION
480 NEWINGTON ROAD
NEWINGTON, NH 03801

Prepared By:
Matthew Cardin, NH CWS

PROPOSED PLANS

ON: PISCATAQUA RIVER

TOWN: PORTSMOUTH

SHEET: 2 OF 3

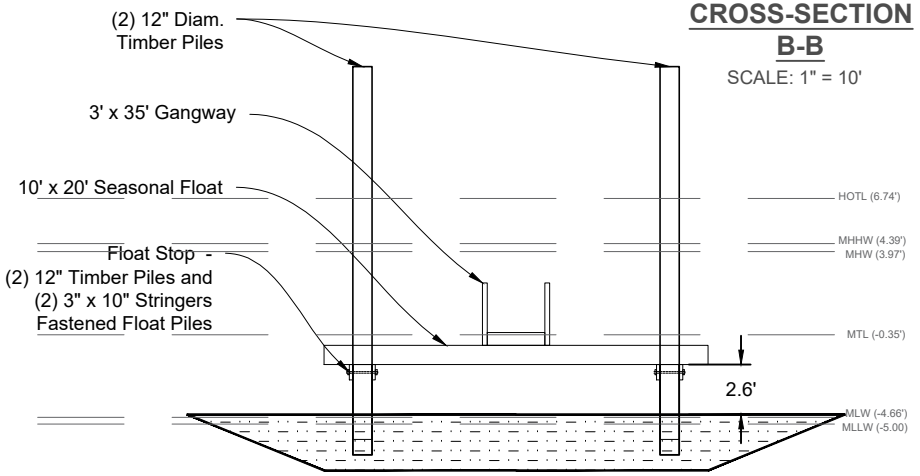
PROPOSED: NEW DOCK STRUCTURE AND EXISTING STAIR REPLACEMENT

AT: 35 SALTER ST STATE: NH

DATE: November 23, 2020

PROPOSED DOCK CROSS-SECTION B-B

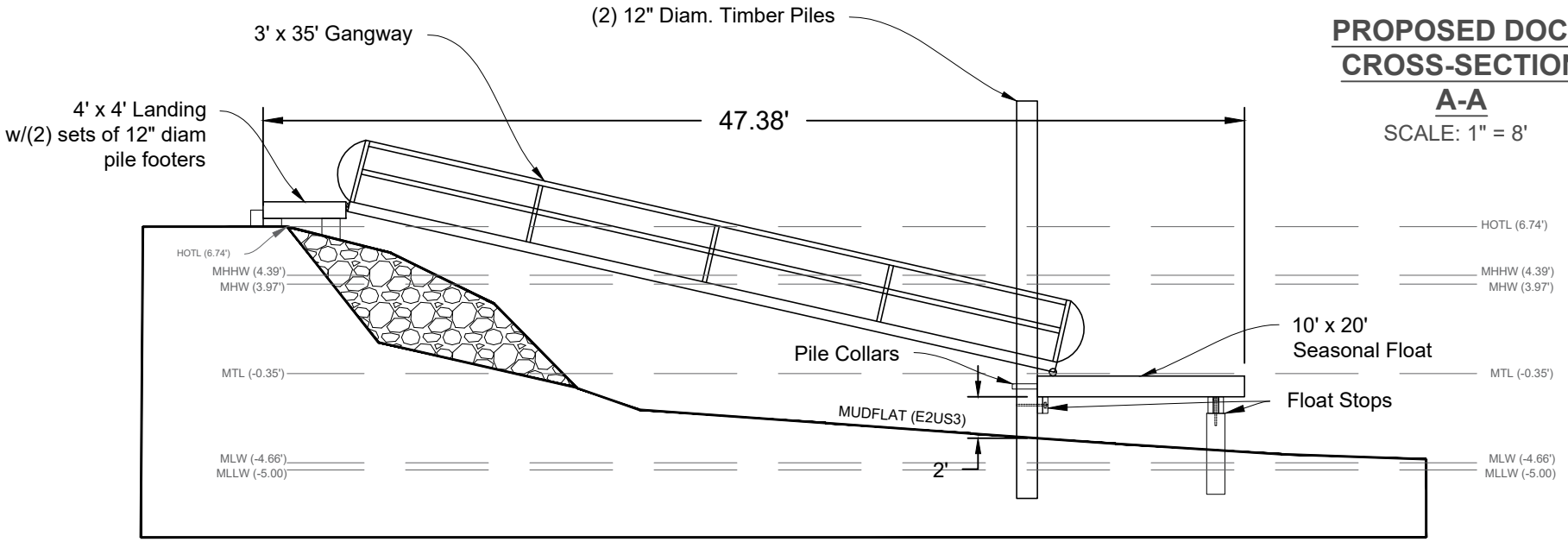
SCALE: 1" = 10'



Notes:
1. Proposed dock structure to be 4' x 4' Landing, 3' x 35' Gangway, 10' x 20' Seasonal Float, (2) 12" Diameter CCA treated timber piles as float supports
2. Float stop consists of two rows of (2) 12" Diameter CCA treated timber piles with (3) 3" x 10" Stringers. Top of float stop to be 24" above mudflat.
3. Total area of dock structure (Landing, Gangway and Float) is 321 sq. ft.
4. Impact to mudflat associated with timber piles for float support and float stop total 3.14 sq. ft. Area of impact is characterized as mudflat (E2US3).
5. The work area or proposed dock location contains no SAS. No vegetated shallows were observed within 25' of proposed dock structure.
6. All lumber material below waterline to be CCA pressure treated wood and all hardware to be galvanized steel. CCA trated lumber to be pre-treated before arriving at site.
7. Construction associated with piles, gangway and float to be done from a barge. All construction associated with landing to be done from land within subject property limits.

PROPOSED DOCK CROSS-SECTION A-A

SCALE: 1" = 8'



Prepared For:
TM MARINE CONSTRUCTION
480 NEWINGTON ROAD
NEWINGTON, NH 03801

Prepared By:
Matthew Cardin, NH CWS

PROPOSED PLANS

ON: PISCATAQUA RIVER

TOWN: PORTSMOUTH

SHEET: 3 OF 3

PROPOSED: NEW DOCK STRUCTURE AND EXISTING STAIR REPLACEMENT

AT: 35 SALTER ST STATE: NH

DATE: November 23, 2020

Map by NH GRANIT - 35 Salter Street, Portsmouth, NH

Legend

- Polygons
- State
- County
- City/Town

Map Scale

1: 6,494

Map Generated: 2/5/2021

Notes

USGS 7.5' Quad

MAIL TO

Elizabeth Levey Pruyn
41 Salter
Portsmouth NH 03801

STATE OF NEW HAMPSHIRE
DEPARTMENT OF REVENUE ADMINISTRATION
REAL ESTATE TRANSFER TAX
*****g Thousand 3 Hundred 75 Dollars
DATE 08/05/2014 RO041403 $ *****9375.00

C/H
L-CHIP
ROA253601

029007

2014 AUG -5 AM 9:55

ROCKINGHAM COUNTY
REGISTRY OF DEEDS

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS: That Charles P. Allard II, a single person, of 35 Salter Street, Portsmouth NH 03801, for consideration paid grants to Bruce A. Erickson, a single person, and Elizabeth A. Levey-Pruyn, a single person, of 41 Salter Street, Portsmouth NH 03801, as joint tenants with rights of survivorship with WARRANTY COVENANTS:

A certain lot or parcel of land with the buildings thereon, situated in Portsmouth on Salter Street, so called, bounded and described as follows:

Beginning at the Southwesterly corner of said lot on the Northeasterly side of Salter Street, at land of Janet White (formerly of Charles N. Osgood); thence running Easterly about fifty-one and four tenths (51.4) feet, more or less, by said street to land of Joe Hunt (formerly occupied by Mrs. Sarah A. Broughton); thence turning and running Northerly by said Hunt land eighty (80) feet, more or less, to the outlet of the South Mill Pond to the Piscataqua River; thence turning and running Westerly along the waters of said outlet fifty-one (51) feet. more or less, to said White property; thence turning and running Southerly by said White property eighty (80) feet, more or less, to the point of beginning.

Meaning and intending to describe and convey the same premises conveyed to Charles P. Allard II and Joan S. Davis as joint tenants with rights of survivorship by virtue of a deed from Joan S. Davis dated 05/24/2002 recorded in Book 3788, Page 0507, with the Rockingham County Registry of Deeds. Joan S. Davis being deceased on January 27, 2010, see death certificate recorded herewith. See also the deed recorded at Book 2238, Page 0963, Joan S. Davis being the surviving joint tenant upon the death of Albert C. Davis on March 3, 1998. Death certificate for Albert C. Davis recorded herewith. At the time of the conveyance from Joan S. Davis to Joan S. Davis and Charles P. Allard II recorded at Book 3788, Page 507, Joan was single. Charles P. Allard II, having personal knowledge of the above facts as Joan S. Davis and Albert C. Davis were my grandparents.

I, the grantor hereby release all rights of homestead in the above described premises.

Executed this 4th day of August, 2014

Charles P. Allard II

Charles P. Allard II

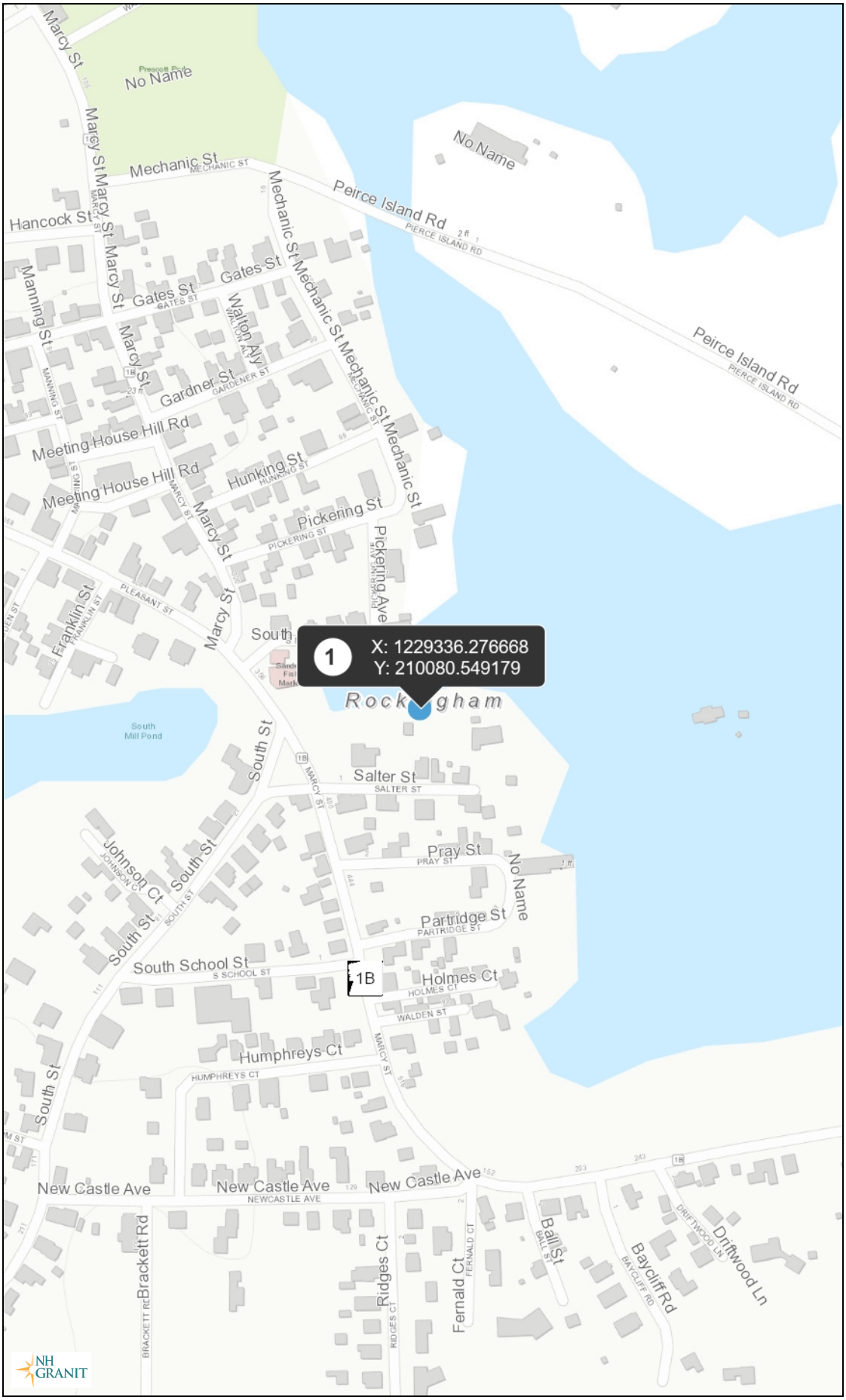
State of New Hampshire
Rockingham, ss.

On August 4, 2014, before me, the undersigned notary public, personally appeared the above-named, Charles P. Allard II and proved to me through satisfactory evidence of identification, which was a driver's license, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/~~she/they~~ signed it voluntarily for its stated purpose.

Notary Public: Kate Catalano
My Commission Expires:

KATE CATALANO
MY COMMISSION EXPIRES FEB. 12, 2019
NOTARY PUBLIC NEW HAMPSHIRE

Map by NH GRANIT - 35 Salter Street



Legend

- State
- County
- City/Town

Map Scale

1: 3,247

Map Generated: 12/28/2020

Notes

Abutter List

Owner: Bruce Erickson & Elizabeth Levey-Pruyn

Site Location: 35 Salter Street, Portsmouth, NH

Map 102, Lot 9

Map	Lot	Name	Mailing Address	Street Address
102	28	Gregg Nicole R Revocable Trust	13 Salter Street, Unit 1, Portsmouth, NH 03801	13 Salter Street, Unit 1, Portsmouth, NH 03801
102	30	Arna DiMambro, Michael Lewis, Peter Lewis	41 Salter Street, Portsmouth, NH 03801	41 Salter Street, Portsmouth, NH 03801

7020 2450 0001 3065 0982

U.S. Postal Service™
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Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.
Portsmouth, NH 03801

OFFICIAL USE

Certified Mail Fee $3.60	$0.00
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage $0.55	
Total Postage and Fees $4.15	

0801
16

Postmark Here
JAN 26 2021
01/26/2021

Sent To: Anna Dimambro, Michael Lewis
Street and Apt. No., or PO Box No.: 41 Salter Street
City, State, ZIP+4®: Portsmouth, NH 03801

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

7020 2450 0001 3065 0999

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Portsmouth, NH 03801

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Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage $0.55	
Total Postage and Fees $4.15	

0801
16

Postmark Here
JAN 26 2021
01/26/2021

Sent To: Gness Nizzle Lakeside Trust
Street and Apt. No., or PO Box No.: 13 Salter Street
City, State, ZIP+4®: Portsmouth, NH 03801

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

January 26, 2021

Gregg Nicole R Revocable Trust
13 Salter Street
Portsmouth, NH 03801

RE: NH Wetland Application for the installation of a tidal dockings structure for Bruce Erickson and Elizabeth Levey-Pruyn at 35 Salter Street, Portsmouth, NH.

Dear Property Owner,

Under NH RSA 482-A, this letter is to inform you in accordance with State Law that a Wetlands permit will be filed with the New Hampshire Department of Environmental Services (DES) Wetlands Bureau for a permit to **impact jurisdictional wetlands and the previously developed 100' Tidal Buffer Zone for the installation of a tidal docking structure** on behalf of your abutter, Bruce Erickson and Elizabeth Levey-Pruyn.

This letter is sent to inform you as an abutter to the above-referenced property (according to local Municipal records) that the owners of 35 Salter Street proposes a project that requires construction in the previously developed tidal buffer zone, and jurisdictional wetland areas.

Once the application is filed, plans will be on file and available for viewing that show the proposed project and wetland and other jurisdictional impacts at the City of Portsmouth's Clerk Office during normal business hours, or once received by DES at the offices of the DES Wetlands Bureau (8am to 4pm), (603) 271-2147. It's recommended that you call ahead to the appropriate office to ensure the application is available for review.

Sincerely,

Matthew R. Cardin, CWS
Principal Wetland Scientist/Permitting Specialist

CERTIFIED MAIL/Return Receipt Requested

January 26, 2021

Arna DiMambro and Michael Lewis
41 Salter Street
Salter Street
Portsmouth, NH 03801

RE: NH Wetland Application for the installation of a tidal dockings structure for Bruce Erickson and Elizabeth Levey-Pruyn at 35 Salter Street, Portsmouth, NH.

Dear Property Owner,

Under NH RSA 482-A, this letter is to inform you in accordance with State Law that a Wetlands permit will be filed with the New Hampshire Department of Environmental Services (DES) Wetlands Bureau for a permit to **impact jurisdictional wetlands and the previously developed 100' Tidal Buffer Zone for the installation of a tidal docking structure** on behalf of your abutter, Bruce Erickson and Elizabeth Levey-Pruyn.

This letter is sent to inform you as an abutter to the above-referenced property (according to local Municipal records) that the owners of 35 Salter Street proposes a project that requires construction in the previously developed tidal buffer zone, and jurisdictional wetland areas.

Once the application is filed, plans will be on file and available for viewing that show the proposed project and wetland and other jurisdictional impacts at the City of Portsmouth's Clerk Office during normal business hours, or once received by DES at the offices of the DES Wetlands Bureau (8am to 4pm), (603) 271-2147. It's recommended that you call ahead to the appropriate office to ensure the application is available for review.

Sincerely,

Matthew R. Cardin, CWS
Principal Wetland Scientist/Permitting Specialist

CERTIFIED MAIL/Return Receipt Requested

ABUTTER CONSENT of SETBACK ENCROACHMENT

December 16, 2020

NH DES Wetlands Bureau
29 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095

RE: SD&F Wetlands Application of Bruce Erickson and Elizabeth Levey-Pruyn at 35 Salter Street, Portsmouth, NH 03801

To Whom it May Concern,

I have received and reviewed a copy of the plans (plans by Matthew Cardin, NHCWS prepared for TM Marine Construction, dated December 16, 2020) depicting the proposed dock structure off the waterfront property of Bruce Erickson and Elizabeth Levey-Pruyn (Portsmouth Tax Map 102, Lot 29). A portion of the proposed project lies within the 20-foot setback of our shared property lines. Per NH RSA 482-A (3) XIII (c), a consent letter is required for proposed projects to encroach this 20-foot setback. I consent to the plans for the proposed project along their property in Portsmouth, NH, which is to be closer than the 20-foot setback. I have no objection to this project being constructed as depicted in said plan by Matthew Cardin, NHCWS and prepared for TM Marine Construction.

Arna DiMambro Lewis
41 Salter Street
Portsmouth, NH
Map 102, Lot 30

Michael Lewis
41 Salter Street
Portsmouth, NH
Map 102, Lot 30

THE STATE OF NEW HAMPSHIRE

COUNTY OF Rockingham

This instrument was acknowledged before me this 12/21/2020 (date) by

Arna DiMambro Lewis (name[s] of person[s]).

michael lewis

Notary Public Signature

Print Kelsey Loomis

Title/Rank: Notary

My commission expires: 10/02/2024

KELSEY LOOMIS
NOTARY PUBLIC
STATE OF NEW HAMPSHIRE
MY COMMISSION EXPIRES OCTOBER 2, 2024

PEASE
INTERNATIONAL
PORTS AND HARBORS

555 Market Street, Suite 1 Portsmouth, NH 03801

January 8, 2021

NH Department of Environmental Service
Coastal Division
Pease Field Office
222 International Drive, Suite 175
Portsmouth, NH 03801

Attn: Stefanie Giallongo

Re: 35 Salter St, Map 102 Lot 29

Dear Stefanie,

We reviewed plans for the construction of a pier and float system in the Piscataqua River back channel in Portsmouth on property belonging to

Bruce Erickson and Elizabeth Pruyn
35 Salter St
Portsmouth, NH

We examined the proposed site and found that the structure will have no negative effect on navigation in the channel.

Sincerely,

Tracy R. Shattuck
Chief Harbor Master

Cc: Matthew Cardin
Cardin Environmental

Map by NH GRANIT - 35 Salter Street

Legend

- State
- County
- City/Town
- Coastal 2019 1-foot RGB
- 2017

Map Scale

1: 6,494

Map Generated: 12/28/2020

Notes

Eelgrass- 2017

Map by NH GRANIT - 35 Salter Street

Legend

- State
- County
- City/Town
- Coastal 2019 1-foot RGB
- Highest Ranked Wildlife Hat
  - 1 Highest Ranked Habitat in NH
  - 2 Highest Ranked Habitat in Regior
  - 3 Supporting Landscape

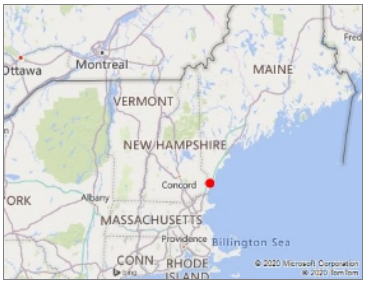
Map Scale

1: 6,494

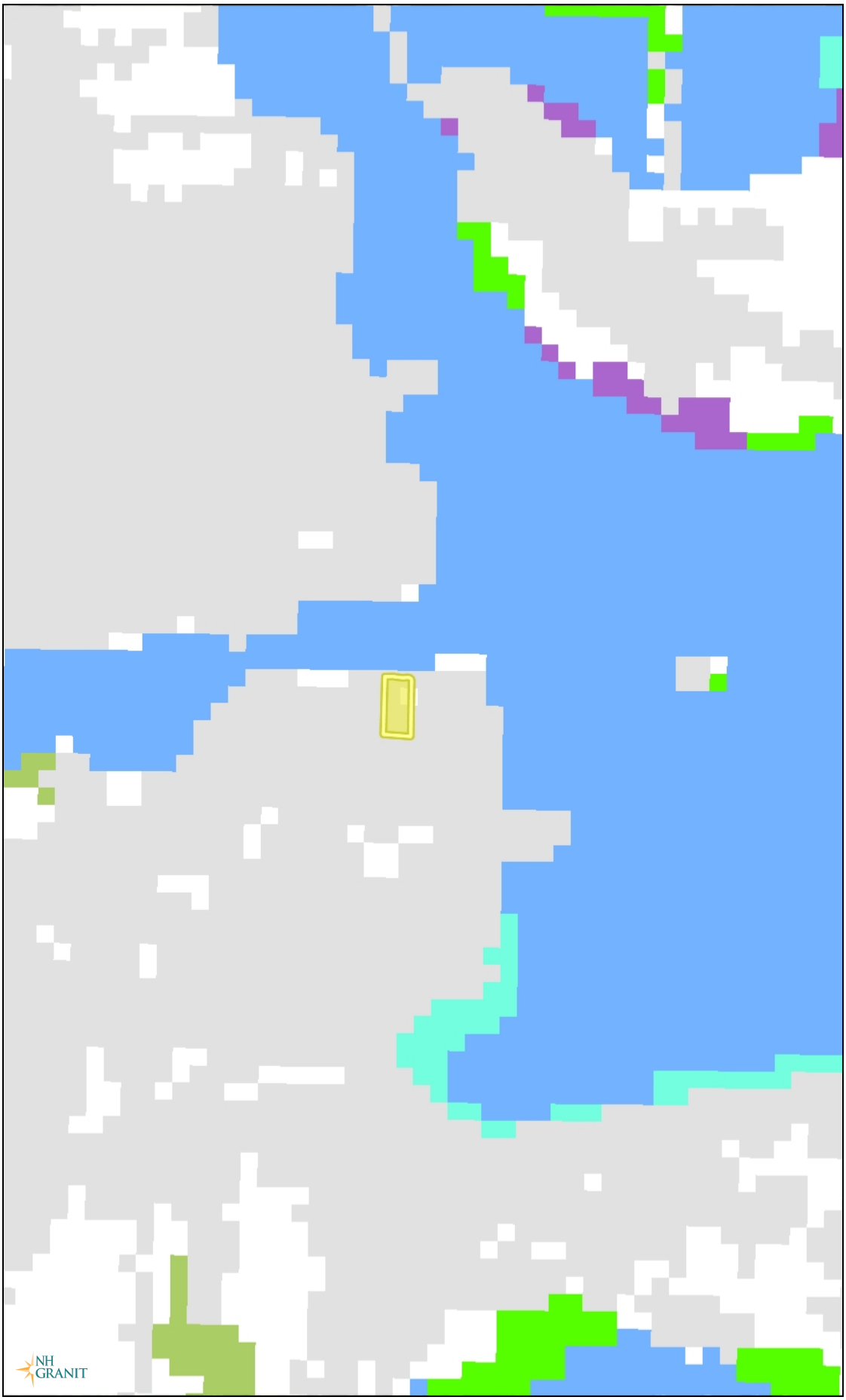
Map Generated: 12/28/2020

Notes

Highest Ranked Wildlife Habitat



Map by NH GRANIT - 35 Salter Street



Legend

- State
- County
- City/Town
- Coastal 2019 1-foot RGB
- Wildlife Habitat Land Cover
  - Alpine
  - Appalachian oak-pine
  - Cliff and Talus slope
  - Coastal island and Rocky coast
  - Developed Impervious
  - Developed or Barren land
  - Dune
  - Floodplain forest
  - Grassland
  - Hemlock-hardwood-pine
  - High-elevation spruce-fir
  - Lowland spruce-fir
  - Northern hardwood-conifer
  - Northern swamp
  - Open water
  - Peatland
  - Pine barren
  - Rocky ridge
  - Salt marsh
  - Sand/Gravel
  - Temperate swamp
  - Marsh and shrub wetland

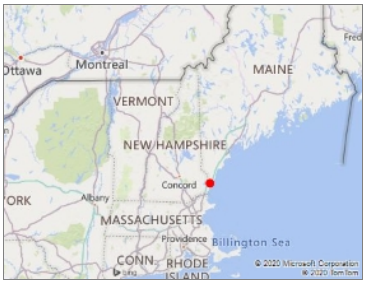
Map Scale

1: 3,247

Map Generated: 12/28/2020

Notes

Wildlife Habitat Land Cover



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 = 43º3'15" N, Longitude = 71º15'10" W
Decimal Degrees: Latitude = 43.05, Longitude = -70.75

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

Show	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

Show	Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
			Atlantic Cod	Larvae Adult Eggs	New England	Amendment 14 to the Northeast Multispecies 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

Show	Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
			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

HAPCs

Show	Link	Data Caveats	HAPC Name	Management Council
			Inshore 20m Juvenile Cod	NEFMC

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 -->

Mid-Atlantic Council HAPCs,
No spatial data for summer flounder SAV HAPC.

CONFIDENTIAL – NH Dept. of Environmental Services review

Memo

NH Natural Heritage Bureau
NHB Datacheck Results Letter

To: Matt Cardin, Cardin Environmental Permitting
30 old post road
Newington, NH 03801

From: Amy Lamb, NH Natural Heritage Bureau
Date: 12/24/2020 (valid for one year from this date)
Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB20-3673 Town: Portsmouth Location: Tax Maps: Map 102, Lot 29
Description: The project involves installing a permanent 4' x 4' landing deck on the upland edge of the shoreline, a 3x35' seasonal gangway, a 10'x20' seasonal float and install (2) marine piles to support the seasonal float.
cc: Kim Tuttle

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

Comments: Contact the NH Fish & Game Department to address wildlife concerns.

Vertebrate species	**State[1]**	**Federal**	**Notes**
Atlantic Sturgeon (*Acipenser 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.

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

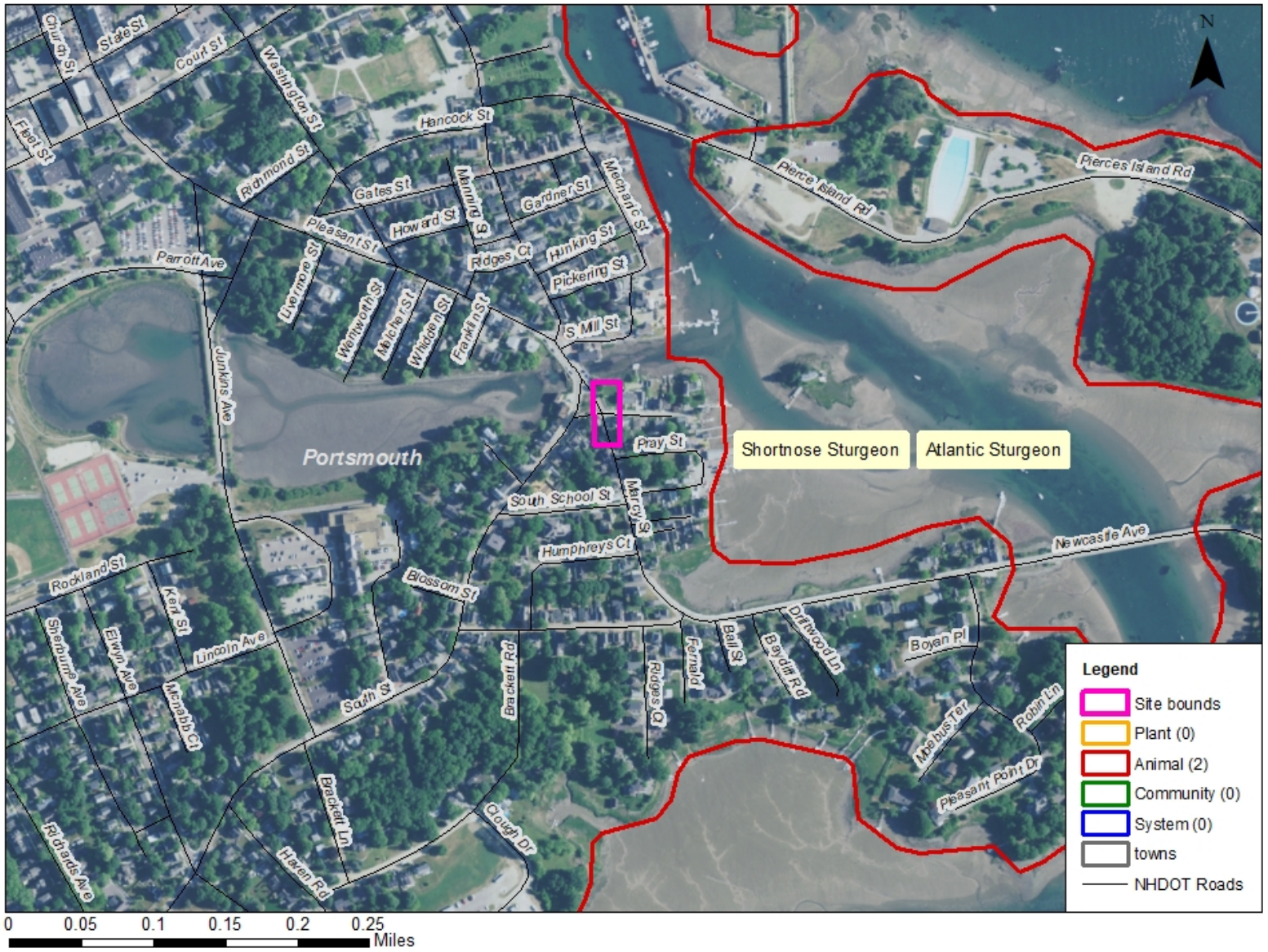
A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed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

Department of 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

NHB20-3673



New Hampshire Natural Heritage Bureau - Animal Record

Atlantic Sturgeon (*Acipenser 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.

Gmail **Matthew Cardin <mr.cardin@gmail.com>**

RE: NHB20-3673 tidal dock 35 Salter Street Portsmouth

Tuttle, Kim <Kim.A.Tuttle@wildlife.nh.gov> Fri, Jan 8, 2021 at 11:55 AM
To: Matthew Cardin <mr.cardin@gmail.com>

Matt,

The NHFG Nongame Program has completed its review of NHB20-3673 for the tidal dock at 35 Salter St. In Portsmouth. The NHB Identified the following protected species in the vicinity of the project:

Atlantic Sturgeon (*Acipenser 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).

The NHFG Nongame and Endangered Species Program consulted with our Marine Division and concurs with their recommendation that the piles be set outside of the April 1st through June 15th time-frame in consideration of anadromous fish movements.

Regards,

Kim Tuttle

Wildlife Biologist

NH Fish and Game

11 Hazen Drive

Concord, NH 03301

603-271-6544

[Quoted text hidden]

35 Salter Street, Portsmouth, NH – DES Wetland Application Photographs

Developed Tidal Buffer Zone – Facing North

Tidal Wetland from Channel – Facing South

35 Salter Street, Portsmouth, NH – DES Wetland Application Photographs

Tidal Wetland – Facing West towards 13 Salter Street

Tidal Wetland – Facing East towards 41 Salter Street

35 Salter Street, Portsmouth, NH – DES Wetland Application Photographs

Tidal Wetland – Facing Southwest

Tidal Wetland and Shoreline – Facing Southeast

SAFETY DATA SHEET

1. Identification

Product identifier	**Chromated Copper Arsenate (CCA) Treated Wood**
Other means of identification	092
Recommended use	Preservative Treated Wood for various weather protected and exterior uses.
Recommended restrictions	Outdoor residential structures such as decks and playgrounds.

Manufacturer/Importer/Supplier/Distributor information

Customers of Koppers Performance Chemicals Inc.

Company name

Address

Telephone number

Contact person

Emergency phone number

E-mail

2. Hazard(s) identification

Chromated Copper Arsenate (CCA) Treated Wood, under 29 CFR 1910.1200 Hazard Communication Standard, are considered mixtures due to further processing which may produce dusts and or fume. The categories of Health Hazards as defined in "GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev. 3" United Nations, New York and Geneva, 2009 have been evaluated. Refer to Section 3, 7, 8 and 11 for additional information.

Physical hazards	Not classified.	
Health hazards	Carcinogenicity	Category 1A
OSHA defined hazards	Combustible dust	

Label elements

Hazard symbols

Signal word Danger

Hazard statement May cause cancer by inhalation. May form combustible dust concentrations in air.

Precautionary statement

Prevention This solid, treated wood product poses little or no immediate health or fire hazard. When treated or untreated wood products are subjected to sawing, drilling, sanding, burning, grinding or other similar processes, potentially hazardous airborne particulate and fumes may be generated.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Prevent dust accumulation to minimize explosion hazard. Observe good industrial hygiene practices.

Response If exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use water fog, foam, carbon dioxide, dry chemical for extinction. Collect spillage.

Storage Store away from incompatible materials. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Wood/Wood dust	N/A	<92

Trivalent Chromium	1308-38-9	<3.5
Arsenic Pentoxide	1303-28-2	<3
Copper Oxide	1317-39-1	<1.5

Composition comments Depending on the additives applied to the treating solution, this wood may also contain < 1% of mold inhibitors, <1% of a wax oil emulsion, and <1% of a colorant. Components not listed are either non-hazardous or are below reportable limits.

4. First-aid measures

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals.

Skin contact Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals. In case of rashes, wounds or other skin disorders: Seek medical attention and bring along these instructions.

Eye contact Do not rub eye. Immediately flush eye(s) with plenty of water. Remove any contact lenses and open eyelids wide apart. If eye irritation persists: Get medical advice/attention.

Ingestion Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on wood species may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.

Indication of immediate medical attention and special treatment needed Treat symptomatically. Respiratory ailments and pre-existing skin conditions may be aggravated by exposure to wood dust. If one ounce of treated wood dust per 10 lbs. of body weight are ingested, acute arsenic intoxication is a possibility.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Depending on moisture content, and more importantly, particle diameter and airborne concentration, wood dust in a contained area may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts. Reference NFPA Standards- 654 and 664 for guidance. Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting equipment/instructions Use water spray to cool fire exposed surfaces and to protect personnel. In case of fire and/or explosion do not breathe fumes.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Avoid generation and spreading of dust. Avoid spread of dust. Avoid inhalation of dust. Provide adequate ventilation. Wear appropriate personal protective equipment (See Section 8).

Methods and materials for containment and cleaning up Sweep or vacuum up spillage and collect in suitable container for disposal. If not possible, gently moisten dust before it is collected with shovel, broom or the like. Containers must be labeled. For waste disposal, see Section 13.

Environmental precautions Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Not applicable for Chromated Copper Arsenate (CCA) Treated Wood as sold/shipped, however, when treated or untreated wood products are subjected to sawing, drilling, sanding, burning, grinding or other similar processes, potentially hazardous levels of airborne particulate and fumes may be generated and should be evaluated and controlled as necessary**.**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid working with freshly treated wet wood. If not possible, wear long sleeve shirt, long pants and gloves when working with freshly treated wet wood. Clothing should be removed and replaced if it becomes wet due to contact with freshly treated wood. Avoid prolonged or repeated breathing of dust. Avoid contact with skin and eyes. Do not smoke. Do not burn preserved wood. Do not use preserved wood as mulch. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a dry, cool and well-ventilated place. Store away from incompatible materials (See Section 10).

8. Exposure controls/personal protection

Occupational Exposure Limits (OELs): Chromated Copper Arsenate (CCA) Treated Wood as sold/shipped in its solid, treated wood product form does not present an inhalation, ingestion or contact hazard, nor would any of the following exposure data apply. However, operations such as sawing, drilling, sanding, burning, grinding or other similar processes may produce fumes and/or particulates. The following exposure limits are offered as reference, for an experienced industrial hygienist to review.

US. OSHA

Components	Type	Value	Form
Wood/Wood dust (CAS N/A)	PEL	5 mg/m^3	Respirable dust.
		15 mg/m^3	Total fraction.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Trivalent Chromium (CAS 1308-38-9)	PEL	0.5 mg/m^3

ACGIH

Components	Type	Value	Form
Wood/Wood dust (CAS N/A)	TWA	1 mg/m^3	Inhalable fraction.

U.S. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Arsenic Pentoxide (CAS 1303-28-2)	Ceiling	0.001 mg/m^3	Dust and mist.
Copper Oxide (CAS 1317-39-1)	TWA	1 mg/m^3	
Arsenic Pentoxide (CAS 1303-28-2)	TWA	0.05 mg/m^3	
Wood/Wood dust (CAS N/A)	TWA	1 mg/m^3	Dust

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Arsenic Pentoxide (CAS 1303-28-2)	35 µg/l	Inorganic arsenic, plus methylated, metabolites as As	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Provide sufficient general/local exhaust ventilation to maintain inhalation exposures below current exposure limits and areas below explosive dust concentrations. Shower, hand and eye washing facilities near the workplace are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields or safety goggles when sawing or cutting.

Skin protection

Hand protection

When handling wood, wear leather or fabric gloves.

Other

Wear normal work clothes and safety shoes. Use of an impervious apron is recommended.

Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH–approved respirator if there is a potential for exposure to dust exceeding exposure limits (See 29 CRF 1910.134, respiratory protection standard).
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	If wood dust contacts the skin, workers should wash the affected areas with soap and water. Clothing contaminated with wood dust should be removed, and provisions should be made for the safe removal of the chemical from the clothing. Persons laundering the clothes should be informed of the hazardous properties of wood dust. A worker who handles wood dust should thoroughly wash hands, forearms, and face with soap and water before eating, using tobacco products, using toilet facilities, applying cosmetics, or taking medication. Workers should not eat, drink, use tobacco products, apply cosmetics, or take medication in areas where wood dust is handled, or processed. Observe any medical surveillance requirements.

9. Physical and Chemical Properties

Appearance	
Physical state	Solid.
Form	Chips. Dust.
Color	Yellow/green.
Odor	Wood odor.
Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash Point	Not available.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Combustible dust.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Highly insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not applicable.

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous reactions do not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Minimize dust generation and accumulation. Avoid contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Toxic vapors from wood and preservative may be given off in a fire. Ash will contain free arsenic and chromium and may be toxic.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Wood dust, treated or untreated, is irritating to the nose, throat and lungs. Prolonged or repeated inhalation of wood dusts may cause respiratory irritation, recurrent bronchitis and prolonged colds. Some species may cause allergic respiratory reactions with asthma-like symptoms in sensitized individuals. Prolonged exposure to wood dusts by inhalation has been reported to be associated with nasal and paranasal cancer.
Skin contact	Handling may cause splinters. Prolonged contact with treated wood and/or treated wood dust, especially when freshly treated at the plant, may cause irritation to the skin. Abrasive handling or rubbing of the treated wood may increase skin irritation. Some wood species, regardless of treatment, may cause dermatitis or allergic skin reactions in sensitized individuals.
Eye contact	Dust may irritate the eyes.
Ingestion	Not likely, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting. Certain species of wood and their dusts may contain natural toxins, which can have adverse effects in humans.
Symptoms related to the physical, chemical and toxicological characteristics	Wood dust: May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on wood species may cause respiratory sensitization and/or irritation. Symptoms can include irritation, redness, scratching of the cornea, and tearing. May cause eczema-like skin disorders (dermatitis). Airborne treated or untreated wood dust may cause nose, throat, or lung irritation and other respiratory effects.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Dust may irritate skin.
Serious eye damage/eye irritation	Dust may irritate the eyes.

Respiratory or skin sensitization

ACGIH Sensitization

Wood/Wood dust (CAS N/A)	Dermal sensitization. Respiratory sensitization.
Respiratory sensitization	Exposure to wood dusts can result in hypersensitivity.
Skin sensitization	Exposure to wood dust can result in the development of contact dermatitis. The primary irritant dermatitis resulting from skin contact with wood dusts consist of erythema, blistering, and sometimes erosion and secondary infections occur.
Germ cell mutagenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a mutagen by OSHA.
Carcinogenicity	May cause cancer by inhalation. Untreated wood dust or saw dust: The International Agency for Research on Cancer (IARC) classifies untreated wood dust as a Group I human carcinogen. The classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with occupational exposures of untreated wood dust. Epidemiological studies have been reported on carcinogenic risks of employment in the furniture-making industry, the carpentry industry, and the lumber and sawmill industry. IARC has reviewed these studies and reports that there is sufficient evidence that nasal carcinomas have been caused by employment in the furniture-making industry where the excess risk is associated with exposure to untreated wood dust or sawdust from hardwood species. IARC concluded that epidemiological data are not sufficient to make a definite assessment of the carcinogenic risk of employment as a carpenter or worker in a lumber mill or sawmill.

IARC Monographs. Overall Evaluation of Carcinogenicity

Wood/Wood dust (CAS N/A)	1 Carcinogenic to humans.
Arsenic Pentoxide (CAS 1303-28-2)	1 Carcinogenic to humans.
Trivalent Chromium (CAS 1308-38-9)	3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Wood/Wood dust (CAS N/A)	Known To Be Human Carcinogen.
Arsenic Pentoxide (CAS 1303-28-2)	Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2)	Cancer

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Chronic effects	Chronic exposure to wood dusts can result in pneumonitis, and coughing, wheezing, fever and the other signs and symptoms associated with chronic bronchitis.
Further information	All wood, whether treated with CCA or not, requires the use of PPE to avoid exposure to wood dust from sawing and sanding although not commonly done on the EPA pesticide label-directed applications of CCA. Upon treatment with wood, the metals in CCA transform to form an insoluble complex that remains tightly bound to wood fibers under most conditions of use. The effects of occupational exposure to the chrome-copper-arsenic preservative used to treat CCA wood has been evaluated in multiple independent epidemiology and worker exposure studies. In each case the authors concluded that workers exposed on a daily basis to these preservatives were at no increased risk of death or disease as a result of their exposure. Several exposure studies found air concentrations of arsenic and chromium below the limit of detection for outdoor carpentry work (drilling, sanding, sawing) using CCA treated lumber, poles and marine piles. Recreational exposure to children using CCA treated wood playground equipment has been evaluated by various government agencies and other groups. The results of one study indicated that the amount of arsenic transferred from the wood surface to the child is within the normal variation of total arsenic exposure to children and that the maximum risks of skin cancer associated with the wood exposure approximates the skin cancer risk from the sunlight experienced during play periods. Leaf, stem, and fruit of grape plants grown adjacent to CCA treated wood poles did not take up preservative components from the poles above background levels (limit of detection 0.2 and 0.05 ppm for chrome and arsenic, respectively).

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available on bioaccumulation.
Mobility in soil	The product is insoluble in water.
Mobility in general	The product is not volatile but may be spread by dust-raising handling.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. DO NOT BURN! Ash may be toxic and a hazardous waste; combustion vapors may be toxic. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste P List: Reference

Arsenic Pentoxide (CAS 1303-28-2)	P011
Waste from residues / unused products	Dispose in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.

IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Arsenic Pentoxide (CAS 1303-28-2) Cancer. Liver. Skin. Respiratory irritation. Nervous system. Acute toxicity.

CERCLA Hazardous Substance List (40 CFR 302.4)

Arsenic Pentoxide (CAS 1303-28-2)	LISTED
Copper Oxide (CAS 1317-39-1)	LISTED
Trivalent Chromium (CAS 1308-38-9)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories

Hazard categories	Carcinogenicity
	Combustible dust

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Arsenic Pentoxide	1303-28-2	1		100	10,000

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Arsenic Pentoxide	1303-28-2	< 3
Copper Oxide	1317-39-1	<1.5
Trivalent Chromium	1308-38-9	<3.5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Arsenic Pentoxide (CAS 1303-28-2)

Trivalent Chromium (CAS 1308-38-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)

US. New Jersey Worker and Community Right-to-Know Act

Arsenic Pentoxide (CAS 1303-28-2)
Copper Oxide (CAS 1317-39-1)
Trivalent Chromium (CAS 1308-38-9)
Wood/Wood dust (CAS N/A)

US. Pennsylvania Worker and Community Right-to-Know Law

Arsenic Pentoxide (CAS 1303-28-2)
Trivalent Chromium (CAS 1308-38-9)
Wood/Wood dust (CAS N/A)

US. Rhode Island RTK

Arsenic Pentoxide (CAS 1303-28-2)
Copper Oxide (CAS 1317-39-1)
Trivalent Chromium (CAS 1308-38-9)

US. California Proposition 65

WARNING. Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information, go to www.P65Warnings.ca.gov/wood.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-05-2015

Revision date 10-30-2019

Version # 06

Further Information HMIS® is a registered trade and service mark of the NPCA.
E - Safety Glasses, Gloves, Dust Respirator

PERCENTAGE OF ACTIVE INGREDIENTS PER RETENTION LEVEL

	0.25 pcf	0.40 pcf	0.60 pcf	1.0 pcf	2.5 pcf
Arsenic Pentoxide	0.3%	0.4%	0.6%	1.0%	2.6%
Copper Oxide	0.15%	0.2%	0.3%	0.6%	1.3%
Chromium Trioxide	0.4%	0.6%	0.9%	1.4%	3.3%
Wood/Wood dust*	84.28%	83.98%	83.45%	82.45%	78.88%

* This represents the maximum amount of wood dust that could be generated if the wood was completely machined.

The above percentages are based on the applicable retention, a wood density of 32 pcf., and a moisture content of 15%, the above values may vary due to the variability of treatment and the natural variability of wood.

HMIS® ratings

Health: 1*
Flammability: 1
Physical hazard: 0
Personal protection: E

NFPA ratings

Disclaimer

Supplier cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Wetlands Function and Values Assessment

Prepared for:

Bruce Erickson and Elizabeth Levey-Pruyn

35 Salter Street

Portsmouth, NH

Prepared by Matthew Cardin, CWS

Date: January 2021

INTRODUCTION

This wetland functions and values assessment and report are in support of a NHDES Major Wetland Permit application for a proposed tidal docking structure at 35 Salter Street, Portsmouth, New Hampshire. The project site is identified as Tax Map 102, Lot 29, which is a 5,663 sq. ft., developed residential lot with approximately 56 feet of water frontage on Perkins Cover. The proposed tidal dock structure project requires impacts to tidal wetlands and the 100' previously developed Tidal Buffer Zone (TBZ).

This report will present the existing functions and values of the tidal wetland resources and assess the impacts associated with the proposed project and determine if affected wetland resources will maintain the ability to perform the functions and values. The assessment was conducted to consider the larger ecosystem of which the tidal wetlands being impacted are apart of.

METHODS

Data Collection

The tidal wetlands associated with this project area were identified and characterized through field surveys and review of available information. Matt Cardin, CWS conducted multiple site visits in July and October to conduct field assessments and collect necessary information to complete a functions and values assessment. Accompanied with the assessment is a formal record search with the New Hampshire Natural Heritage Bureau (NHB) regarding documented rare species or natural communities within the vicinity of the project site.

Wetland Functions and Values Assessment

Matt Cardin, CWS assessed the tidal wetland resources in the project vicinity for the ability to provide functions and values and assess the potential effects of the proposed project may have on their ability to continue to provide those functions and values. The functions and values assessment method used is the *Highway Methodology Workbook, Wetland Functions and Values: A Descriptive Approach*[1]. This method uses 13 functions and values in evaluating the wetland resource as outlined below.

- **Groundwater Interchange (Recharge/Discharge)**
  This function considers the potential for the project area wetlands to serve as groundwater recharge and/or discharge areas. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

- **Floodwater Alteration (Storage and Desynchronization)**
  This function considers the effectiveness of the wetlands in reducing flood damage by attenuating floodwaters for prolonged periods following precipitation and snow melt events.

- **Fish and Shellfish Habitat**

[1] U.S. Army Corps of Engineers, 1999. *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach.* U.S. Army Corps of Engineers. New England Division. 32pp. NAEEP-360-1-30a.

This function considers the effectiveness of seasonally or permanently flooded areas within the subject wetlands for their ability to provide fish and shellfish habitat.

- **Sediment/Toxicant Retention**

This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland to function as a trap for sediments, toxicants, or pathogens, and is generally related to factors such as the type of soils, the density of vegetation, and the position in the landscape.

- **Nutrient Removal/Retention/Transformation**

This wetland function relates to the effectiveness of the wetland to prevent or reduce the adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

- **Product Export (Nutrient)**

This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

- **Sediment/Shoreline Stabilization**

This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion, primarily through the presence of persistent, well-rooted vegetation.

- **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.

- **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.

- **Uniqueness/Heritage**

This value relates to the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study of research.

- **Visual Quality/Aesthetics**

This value relates to the visual and aesthetic qualities of the wetland.

- **Endangered Species Habitat**

This value considers the suitability of the wetlands to support threatened or endangered species.

FUNCTIONS AND VALUES ASSESSMENT

The results of the wetland functions and values are presented below as well as a discussion regarding the results and the potential changes to wetland functions and values as a result of the proposed project:

Groundwater Interchange (Recharge/Discharge)
The site is not underlain by an identified sand and gravel aquifer and the wetlands are not underlain by sand or gravel. It is unlikely that significant groundwater recharge is occurring within the tidal wetlands.

Floodwater Alteration (Storage and Desynchronization)
The tidal wetlands and the abutting waterbody, Pisctaqua River, receive floodwaters from several tributaries and surrounding watersheds and therefore is considered a principal function based on the size of the watershed and effects of sea level rise (slr).

Fish and Shellfish Habitat
The tidal wetland area provides fish and shellfish habitat, notably for anadromous fish per NHB data record results; therefore, is considered a principal function.

Sediment/Toxicant Retention
The tidal wetland (on site) lacks dense vegetation and a significant source of nutrients, limiting its ability to provide this function.

Production Export (Nutrient)
The tidal wetland is associated with a larger tidal ecosystem that provides fish and wildlife habitat that contributes to commercial and recreational fisheries opportunities, and nutrients are transferred over several trophic levels within the overall marine ecosystem, therefore this is considered a principal function.

Sediment/Shoreline Stabilization
Due to the tidal environment and exposure to wave energy at this location, sediment/shoreline stabilization is considered a principal function.

Wildlife Habitat
The wetland area is part of a network of marine/shoreline habitat to a variety of dependent species, therefore it is considered a principal function.

Recreation (Consumptive and Non-Consumptive)
The larger tidal wetland and waters associated with the Piscataqua River provides a large amount of both recreational opportunities including water resource dependent activities, fishing, hunting, and bird watching, therefore this is considered a principal function.

Education/Scientific Value
The tidal wetland is part of a larger marine ecosystem that is regionally specific and is access by a number of public access areas, therefore this is a principal function.

Uniqueness/Heritage
The tidal wetland and Piscataqua River are unique to the seacoast area of New Hampshire. There are also extensive historical documentation and preservation to pre and post contact period activities associated with the Piscataqua River, therefore this is a principal function

Visual Quality/Aesthetics
The wetland areas and associated waterways of the Piscataqua River watershed provide aesthetically pleasing coastal views that are enjoyed from surrounding areas of the project area as well as the water, therefore making this a principal function.

Endangered Species Habitat
There were no rare, threatened or endangered species observed on site. The NHB data record request disclosed two rare species of record occur to utilize habitat that occurs within the project area, therefore making this a principal function.

PROPOSED IMPACTS

This report is in support to a NHDES Major Impact Wetland Permit Application to permit approximately 316 sq. ft. of permanent impact to tidal wetland, and 5 sq. ft. of permanent impacts to previously developed TBZ for the construction of a tidal docking structure that consists of a 4’ x 4’ access landing, a 3’ x 30’ aluminum gangway, and a 10’ x 20’ float that provides 1 slip on 56’ +/- of frontage along the Piscataqua River.

CONCOLUSIONS

The proposed impact area is a tidal wetland area that is part of a larger marine ecosystem along New Hampshire’s coastline and provided nine principal functions and values when assessed for localized impacts as well as considering the larger ecosystem as a whole. The following are the nine principal functions and values: floodflow alteration, fish and shellfish habitat, production export, sediment/shoreline stabilization, wildlife habitat, recreation, education/scientific value, uniqueness/heritage, and visual quality aesthetics. Although the proposed structure proposes a change to the waterfront, there will not be impacts to the functions and values of the wetland area and the greater associated marine ecosystem.

The proposed impacts resulting from the proposed dock and dock design have been minimized to the extent practicable, while allowing reasonable use of the property. The proposed docking structure has been designed to utilized pilings within the tidal wetland and previously developed TBZ so to minimize the overall footprint of the overall structure. The number of pilings has been reduced to the least amount possible in order to properly support the three

components of the structure: the access platform, the gangway and the float dock. The proposed docking structure will not have a negative impact on the wetland's ability to continue to provide the nine principal functions and values identified above. The tidal dock structure will not negatively affect flood or tidal flow within the wetland area due to the inconsequential amount of displacement proposed being limited to just the pilings. The tidal wetland fish and shellfish habitat is not expected to be impacted due to the inconsequential amount of direct impact to the wetland being limited to just the pilings. The structure will not have an impediment on fish or shellfish movement through the tidal wetland; the float will be placed on float stops to keep the float a minimum of 24" off the mudflat at low tide. Construction will occur outside of the time of year restriction (April 1 to June 15) to ensure impacts to anadromous fish moving through the area are not impacted by temporary construction activity. The tidal dock structure will be secured by an access platform that straddles the highest observable tide line and by float piles located within the tidal wetland. The tidal wetland will be protected by utilizing float stops which will allow at least 24" of space between the float and the mud flat to eliminate wallowing and erosion of sediment below the float. The dock itself will be intended to access the associated marine ecosystem. The dock structure has been designed to a suitable size for the associated property. The dock structure is located within a wetland that contributes to the education value, uniqueness heritage and visual quality aesthetics, however the dock structure will not have an impact on the ability for the overall marine ecosystem to continue to provide those functions and values.

The purpose of the proposed dock structure is to provide recreational boating access utilizing the previously developed tidal buffer zone as access point. There will be no earth disturbance or grading required associated with the proposed docking structure. All work will be performed from a crane barge during periods of low tide. All piles to be driven occur below the mean low low water (MLLW). Piles will be driven during ebbed tides where water is not present within the disturbance area, therefore temporary disturbance associated with construction are not expected. Piles will be driven using a vibratory hammer positioned on the work barge. Working from a barge eliminates the need for additional temporary fill or machinery directly within the protected resource areas. The components of the dock structure are prefabricated and transported and installed via a crane barge.

The construction sequence for the proposed structure are as follows:

- Mobilize crane barge, push boat and work skiff containing prefabricated components (float, gangway) and materials (piles, associated timber and hardware) to the site during high-tide.
  - The barge will be positioned alongside the proposed location of the float and close enough to land where navigability won't be affected. There is no emergent or saltmarsh vegetation with the temporary workspace area to be impacted.
- All work is to be done during low-tide intervals where there is no flowing water within the work area. A temporary turbidity curtain may be placed to contain suspended solids during periods of high-tide once construction has temporarily stopped.

- Piles will be mechanically impact driven by crane to a depth of refusal or approximately 10'. There will be no excavation required as part of this project. Little to no foot traffic will be required to drive float piles.
- Float stop piles will be cut to the appropriate height – approximately 24" above substrate surface. Stringers will be fastened to float piles and float stop piles. This work will be done on foot within intertidal area and during low tide to minimize turbidity.
- The float and gangway will be lifted from the barge via crane and placed into position and installed.

Based on the assessment of the current functions and values of the tidal wetland areas and overall marine ecosystem, the proposed tidal docking structure and the construction methods, we believe the proposed project will not have a significant impact on the tidal wetland and marine ecosystem's ability to provide the evaluated functions and values as described.

WETLAND
FUNCTIONS AND VALUES
EVALUATION FORM

Wetland Function-Value Evaluation Form

Total area of wetland NA Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Urban/Developed Distance to nearest roadway or other development 0'

Dominant wetland systems present Tidal Mudflat (E2US3) Contiguous undeveloped buffer zone present No

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

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

Wetland I.D. 35 Salter St

Latitude _____ Longitude _____

Prepared by: MRC Date 1/28/2021

Wetland Impact:
Type Tidal Area 316

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	7,	N	Tidal wetland without any presence of sand or gravel or identified aquifer recharge zone.
Floodflow Alteration	Y	1, 4, 6, 7, 8, 9, 10, 11,	Y	Tidal wetlands associated with marine ecosystem is a primary function for altering and retaining flood water from tributaries.
Fish and Shellfish Habitat	Y	1, 3, 4, 5,	Y	Area is known habitat to marine fish and shellfish, including anadromous fish.
Sediment/Toxicant Retention	Y	3, 4, 8, 9,	N	The immediate tidal wetland lacks vegetation, sources and low water retention time
Nutrient Removal	Y	1, 2, 5, 7,	N	The immediate tidal wetland lacks vegetation, sources and low water retention time
Production Export	Y	1, 3, 4, 5, 6, 13,	Y	Immediate wetland provides habitat for larger marine ecosystem that provides commercial and recreational fishery
Sediment/Shoreline Stabilization	Y	1, 2, 6, 7, 10, 11,	Y	High wave and tidal activity at this location makes wetland and shoreline critical for shoreline stabilization
Wildlife Habitat	Y	3, 6, 8, 12, 18	Y	Wetland is associated with larger marine ecosystem utilized by permanent and seasonal marine and bird species
Recreation	Y	2, 5, 7, 8, 9, 12	Y	Tidal wetland is associated with larger marine ecosystem that has many recreational opportunities utilized by the general community
Educational/Scientific Value	Y	5, 13, 14,	Y	The tidal wetland is a unique ecosystem to the region where many opportunities exist within the larger marine ecosystem
Uniqueness/Heritage	Y	1, 3, 8, 10, 14, 17, 19, 22, 27, 28.	Y	The associated marine ecosystem is unique for the region and contains documented historical events both pre and post European contact
Visual Quality/Aesthetics	Y	6, 7, 8, 9, 12	Y	The associated marine ecosystem provides aesthetic coastline that are visible from surrounding uplands and from the wtaer.
ES Endangered Species Habitat	Y		Y	The wetland provides habitat for anadromous fish including Atlantic and Short-nose Sturgeon.
Other				

Notes:

* Refer to backup list of numbered considerations.

Coastal Vulnerability Assessment

Prepared for:

Bruce Erickson and Elizabeth Levey-Pruyn

35 Salter Street

Portsmouth, NH

Prepared by Matthew Cardin, CWS

Date: January 2021

INTRODUCTION

This Coastal Vulnerability Assessment (CVA) is in support of a NHDES Major Wetland Permit application for a proposed tidal docking structure at 35 Salter Street, Portsmouth, New Hampshire. The project site is identified as Tax Map 102, Lot 29, which is a 5,663 sq. ft., developed residential lot with approximately 56 feet of water frontage on the Piscataqua River. The proposed tidal dock structure project requires impacts to tidal wetlands and the 100' previously developed Tidal Buffer Zone (TBZ). The surrounding land use is residential/densely developed with similar residential docking structures.

METHODS

On June 26th and July 27th, 2020, Matthew Cardin, NHCWS visited the site to conduct evaluations for wetlands functions and values and for coastal characteristics. The CVA was completed utilizing the NH Coastal Flood Risk Science and Technical Advisory Panel (2019), New Hampshire Coastal Flood Risk Summary part: Guidance for Using Scientific Projections. Report Published by the University of New Hampshire (referred to herein as "Guidance Document").

Step 1.1 Project Type and Goal

The project is for a proposed tidal docking structure on the residential lot for the purposes of providing the applicant with recreational boating access to the Piscataqua River. The project entails installing pre-assembled access platform, gangway and float to be secured by permanent timber piles. The piles and pre-assembled dock components will be placed using a crane barge temporarily located at the shorefront location.

Step 1.2 Project Area

The project is located at 35 Salter Street, Portsmouth, NH, Map 102, Lot 29 and consists of approximately 5,663 sq. ft. of developed residential property with approximately 56' +/- of frontage along the Piscataqua River. The site is located with relatively flat topography and occurs as a maintained residential lot with a stone protected shoreline slope below the highest observable tide line and transitions to tidal wetland mudflat (E2US3) at the toe of slope. The proposed docking structure will consist of a 4' x 4' access platform installed at the highest observable tide line, a 3' x 30' aluminum gangway, a 10' x 20' float. Access to the site will be from barge to install piles and hoist pre-assembled components (gangway and float) into position. Alternative access will be from Salter Street and through the subject property.

Step 1.3 Timeframe for the Project

The desired useful life of the project is intended to be in perpetuity to the current residential use of the property. Based on historical use of the property serving as a residential property, it is reasonable to expect the current use to continue as such for the foreseeable future. The life expectancy of the structure is dependent on the maintenance and care by the landowners with the expectancy of replacing piles, floats and gangway in the next 15-50 years.

Step 2.1 Project Risk Tolerance

The proposed project is considered to have a relatively high project risk tolerance for the following reasons. The proposed structure has a relatively low replacement cost if needed due to storm or flood damage. The structure is easily adaptable as it's primarily a pivoting gangway and float where the access point from land to the gangway would require adapting to SLR.

Step 2.2 Tolerance to Flood Risk

The proposed dock structure is considered to have a medium to high risk tolerance as the structure itself can be easily repaired, adapted and/or removed if need be without little impact to the property or environment.

The risk tolerance to access and service does not apply to the proposed project as it occurs on private property.

The goal of the project is to provide recreational opportunity for the applicant to access the Pisctaqua River. It is not anticipated that the project goal will change for as long as the current use of the property remains. Based off the SLR models, the property itself has a relatively high flood risk as a residential use providing access to the Piscataqua River. The proposed structure is adaptable to flood risk and SLR by increasing the elevation of the access way, however, if unreasonable, the dock structure can be removed with little to no impact to the environment.

Step 3.1 Relative Sea Level Rise Scenario (RSLS)

Based on the Guidance Document shown in Step 3, Table A, the RSLS for the proposed tidal dock structure as a high risk tolerance project/structure, is considered to be on the lower magnitude, higher probability scale. Based on this assessment, the probably see level rise from 2000 to 2150 is as follows:

Timeframe	Sea level rise (ft)
2030	0.7
2050	1.3
2100	2.9
2150	4.6

Step 3.2 – RSLR Impacts to the Project

The proposed dock structure has a fixed point on land at the access landing where the gangway will be attached to. The access land is proposed to be at approximately the location of the highest observable tide line (HOTL), approximately El. 6.74' (NAVD88). Based on the RSLS described above, the RSLR relative to the HOTL elevation are provided in the table below.

The project site is subject to risks caused by RSLR due to the relatively flat topography of the surrounding land above the HOTL and associated dwelling structure associated with the residential lot. The proposed docking structure is subject to risk associated with RSLR specifically changes caused be erosion and increase in water level. These factors could affect the access points to where the proposed docking structure is located along the HOTL area. However, the overall docking structure is highly adaptable to the factors listed above by increasing the height of the access point and/or extending the access point beyond the RSLR adjusted HOTL.

Timeframe	Sea level rise (ft)	HOTL* + SLR (El. ~ 6.74' + SLR)
2030	0.7	7.44
2050	1.3	8.04
2100	2.9	9.64
2150	4.6	11.34

*NAVD88

Step 4.1 – RSLR Coastal Storm Assessment

The proposed docking structure is adjacent to the Piscataqua River waterbody, which will be subject to 100 and 500 year storms, however the proposed docking structure is consistent with adjacent properties with similar docking structures. Based on the proposed structure having high risk tolerance as an easily maintainable/adaptable structure to RSLR, the coastal storm impact assessment is low for the overall project.

Step 5.1 – Projected RSL-Induced Groundwater Rise

Based on the Sea-Level Rise Scenarios provided, there is no project groundwater rise associated with RSLR on the project site that will affect the proposed structure.

Step 5.2 – Project Groundwater Depth at the Project Location

Based on the observations gathered during site visits, the estimated seasonal high water table is no shallower than 20" deep and likely extends to 30" deep below the soil surface.

Step 6 – Extreme Precipitation Events

The proposed project has high tolerance to flood risk due to the structure being anchored to the ground with the ability to allow stormwater to pass through and inundate the dock structure without causing harm to the structure or the environment.

Step 7 – Cumulative Coastal Flood Risk to the Project

Based on the high risk tolerance of the proposed tidal dock structure as described above and combined with the other factors assessed including RSLR, coastal storms, RSLR-induced groundwater rise, extreme precipitation occurring together, the tidal dock contains some risk of damage due to coastal flooding, however the structure is easily maintainable and adaptable to the effects and changes caused by the factors mentioned above.

Map by NH GRANIT - 35 Salter Street

Legend

- State
- County
- City/Town
- Coastal 2019 1-foot RGB MHHW + 1-ft SLR
  - 0 - 2
  - 2 - 4
  - 4 - 6
  - 6 - 8
  - 8 - 10
  - 10 +
  - 10 +
  - 10 +
  - 10 +
  - 10 +

Map Scale

1: 1,624

Map Generated: 12/28/2020

Notes

One Foot Sea Level Rise

Map by NH GRANIT - 35 Salter Street

Legend

- State
- County
- City/Town
- Coastal 2019 1-foot RGB MHHW + 2-ft SLR
  - 0 - 2
  - 2 - 4
  - 4 - 6
  - 6 - 8
  - 8 - 10
  - 10 +
  - 10 +
  - 10 +
  - 10 +
  - 10 +

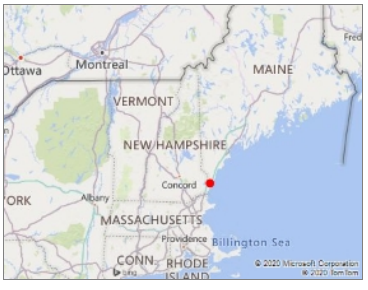
Map Scale

1: 1,624

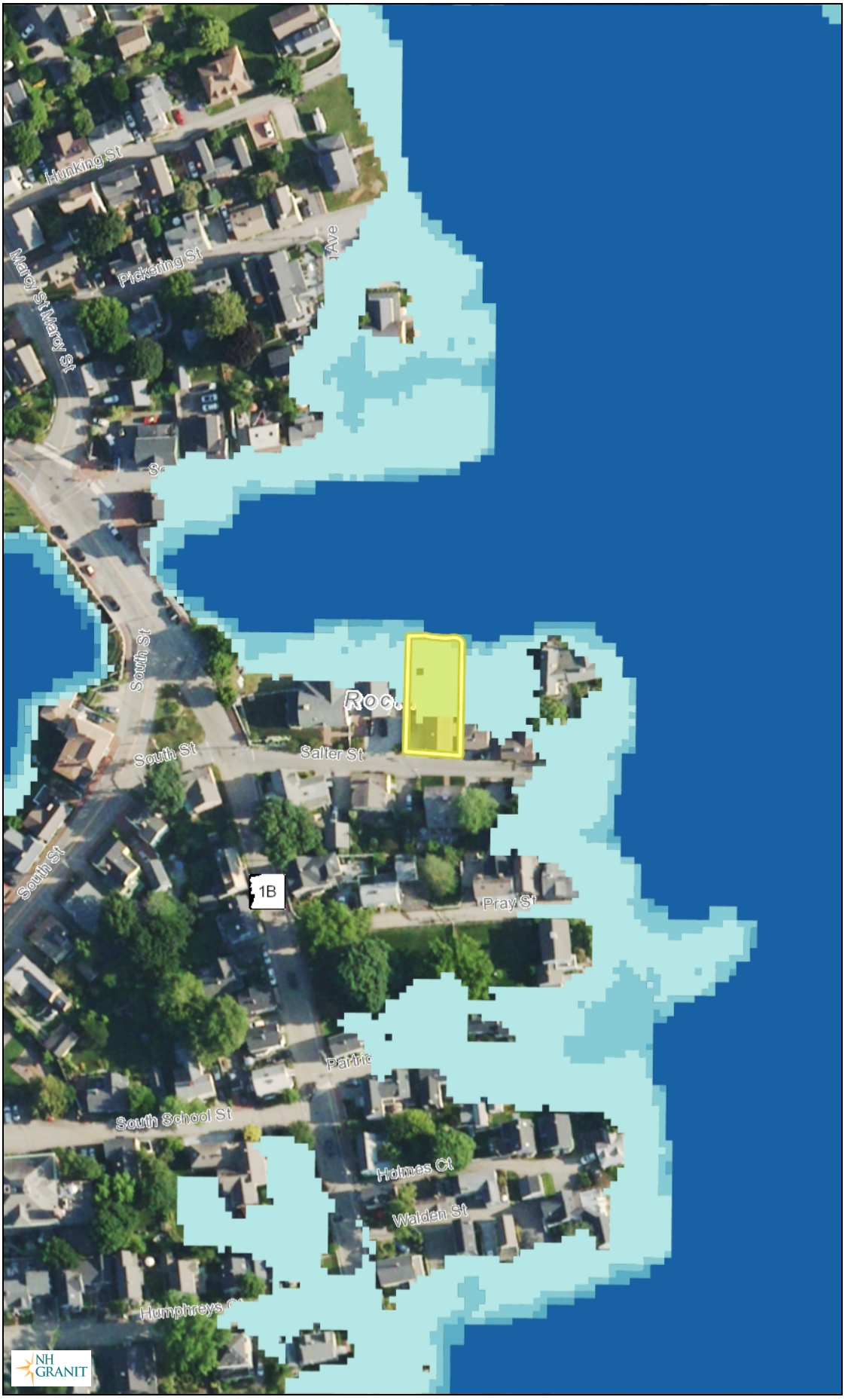
Map Generated: 12/28/2020

Notes

Two Foot Sea Level Rise



Map by NH GRANIT - 35 Salter Street



Legend

- State
- County
- City/Town
- Coastal 2019 1-foot RGB MHHW + 4-ft SLR
  - 0 - 2
  - 2 - 4
  - 4 - 6
  - 6 - 8
  - 8 - 10
  - 10 +
  - 10 +
  - 10 +
  - 10 +
  - 10 +

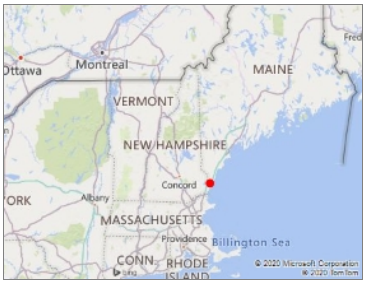
Map Scale

1: 1,624

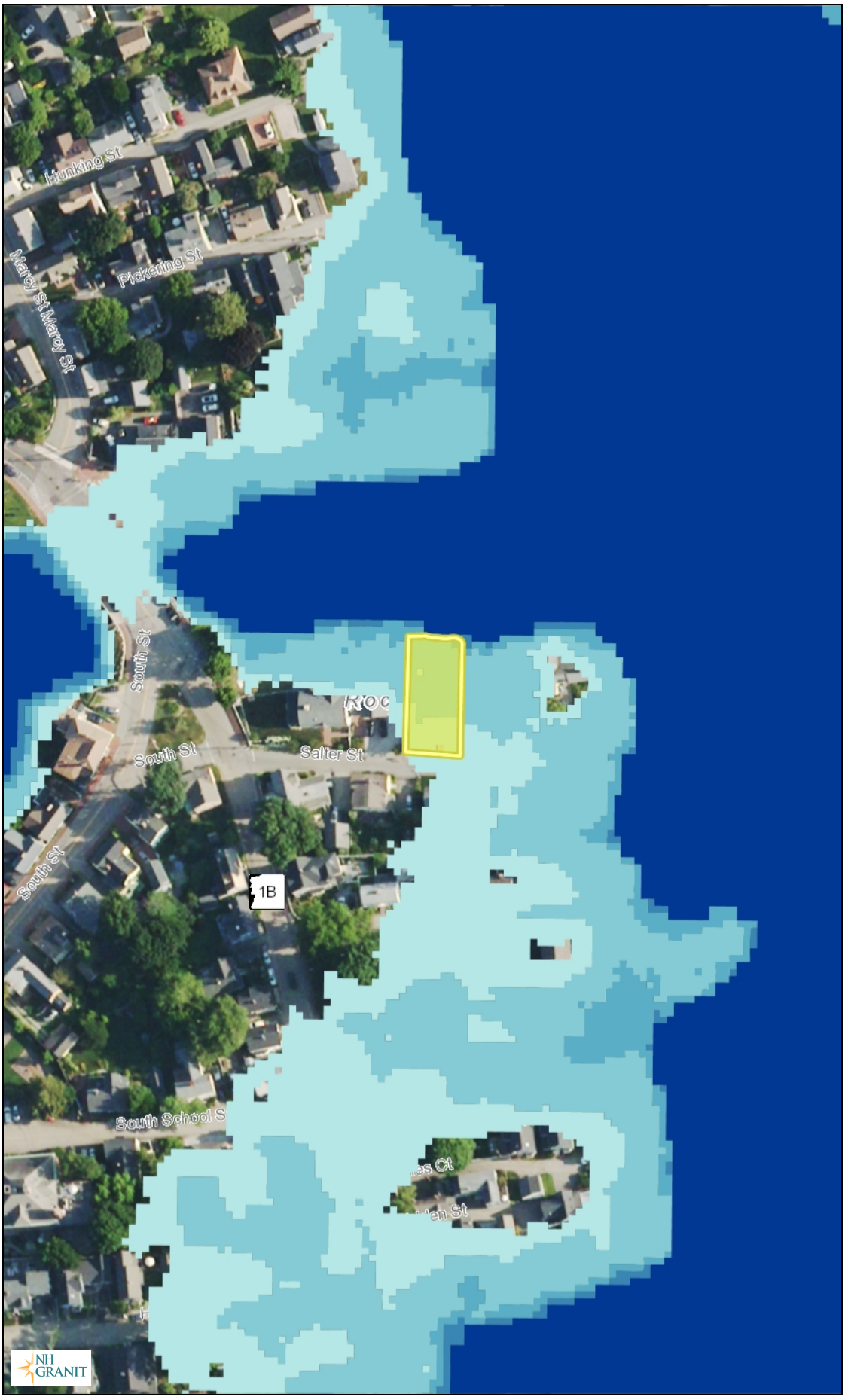
Map Generated: 12/28/2020

Notes

Four Foot Sea Level Rise



Map by NH GRANIT - 35 Salter Street



Legend

- State
- County
- City/Town
- Coastal 2019 1-foot RGB
- MHHW + 6-ft SLR
  - 0 - 2
  - 2 - 4
  - 4 - 6
  - 6 - 8
  - 8 - 10
  - 10 +
  - 10 +
  - 10 +
  - 10 +
  - 10 +

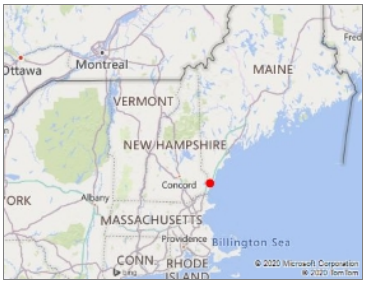
Map Scale

1: 1,624

Map Generated: 12/28/2020

Notes

Six Foot Sea Level Rise



Map by NH GRANIT - 35 Salter Street

Legend

- State
- County
- City/Town
- Coastal 2019 1-foot RGB
- MHHW + 8-ft SLR
  - 0 - 2
  - 2 - 4
  - 4 - 6
  - 6 - 8
  - 8 - 10
  - 10 +
  - 10 +
  - 10 +
  - 10 +
  - 10 +

Map Scale

1: 1,624

Map Generated: 12/28/2020

Notes

Eight Foot Sea Level Rise