#### **REGULAR MEETING CONSERVATION COMMISSION**

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

# 4:00 P.M.

March 12, 2025

# AGENDA (REVISED 3/10)

#### I. APPROVAL OF MINUTES

1. January 8, 2025 and February 12, 2025

#### **II. WETLAND CONDITIONAL USE PERMIT APPLICATIONS (OLD BUSINESS)**

- 185-187 Wentworth House Road Sea Level LLC Assessor Map 201 Lot 14
- 56 Ridges Court Rainboth Revocable Trust Assessor Map 207 Lots 63, 68 and 69

#### **III. WETLAND CONDITIONAL USE PERMIT APPLICATIONS (NEW BUSINESS)**

- 1. 200 FW Hartford Drive Tracey & David Foster, Owners Assessor Map 270 Lot 33
- 2. 224 Cate Street Jesse Anderson, Owner Assessor Map 173 Lot 3

#### IV. STATE WETLAND BUREAU APPLICATIONS (OLD BUSINESS)

 Dredge and Fill – Major Impact 185- 187 Wentworth House Road Sea Level LLC Assessor Map 201 Lot 14

# V. STATE WETLAND BUREAU APPLICATIONS (NEW BUSINESS)

1. Dredge and Fill – Major Impact Peverly Hill Road and Greenleaf Avenue, City ROW City of Portsmouth

Dredge and Fill – Minor Impact (Expedited)
 50 Andrew Jarvis Drive (581 Lafayette Road)
 City of Portsmouth (Atlas Commons LLC)
 Assessor Map 229 Lot 3

# VI. OTHER BUSINESS

- 1. Discussion on development in the wetland buffer
- 2. Prime Wetlands upcoming amendment

# VI. ADJOURNMENT

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

https://us06web.zoom.us/webinar/register/WN Xa4dhVDZTQmUmRUu21Ec7g

#### **REGULAR MEETING CONSERVATION COMMISSION**

# 1 JUNKINS AVENUE PORTSMOUTH, NEW HAMPSHIRE EILEEN DONDERO FOLEY COUNCIL CAHMBERS

4:00 P.M.

# **January 8, 2025**

#### MINUTES

MEMBERS PRESENT:	Chair Samantha Collins, Vice Chair Barbara McMillan; Members: Brian Gibb, Lynn Vaccaro, Jessica Blasko Alternate: Talia Sperduto
MEMBERS ABSENT:	Alice Carey, Stewart Sheppard
ALSO PRESENT:	Kate Homet; Environmental Planner

# I. APPROVAL OF MINUTES

1. November 13, 2024 and December 11, 2024

[1:51] Vice Chair McMillan made a motion to approve the November minutes as presented. B. Gibb seconded the motion. The motion passed unanimously.

B. Gibb made a motion to approve the December minutes as presented. Vice Chair McMillan seconded the motion. The motion passed unanimously (5-0).

# II. WETLAND CONDITIONAL USE PERMIT APPLICATIONS (NEW BUSINESS)

1. 333 Borthwick Avenue HCA Health Service of NH Inc. Assessor Map 201 Lot 14

[5:45] Brenden Walden of Gove Environmental Services came to present this application. He briefly went over the proposal to replace three existing culverts with a box culvert and went over the previous meeting and site visit with the Conservation Commission.

[7:39] Chair Collins asked the applicant about the status of the NHDES conditions of approval that the Commission had previously applied to the State permit. Mr. Walden addressed the previous conditions and asked for clarification on some as well as the staff recommendations.

[13:00] Vice Chair McMillan asked what the project timeline was. Mr. Walden responded that the project has been restricted by NH Fish & Game for work in the winter due to Blandings Turtles and they cannot start until after April 15<sup>th</sup>. Vice Chair McMillan noted that this was in disagreement with note #4 on Sheet C2-00. Mr. Walden noted that the disturbance period should only be one week long. Vice Chair McMillan followed up with another note on erosion control matting in the Wildlife Notes and in the Erosion Control notes but it did not specify the type of erosion controls to be used. Mr. Walden believed that those notes were pulled directly from the application's consultation with FIS. Vice Chair McMillan would like to see the erosion control matting as natural fibers such as coconut fibers and not just reference it as 'non-plastic' or biodegradable materials. Chair Collins also pointed out a condition for requiring wetland boundary markers. A discussion continued about the markers, where they should be placed, snowplow concerns, and how many might be necessary.

[20:38] L. Vaccaro asked about the flow in the proposed new culvert and expressed concern for its design for a 10-year storm. Mr. Walden noted that NHDES standards would require the culvert to handle up to a 50-year design storm. L. Vaccaro noted that a 10-year storm was referenced on the first page of the application and the flow calculations do not show it meeting the 50-year standard. A discussion continued about the excess flow and where overflow would end up.

[23:10] Ms. Homet notified Mr. Walden and the Commissioners that Public Works staff are requesting that the stream be dredged as part of this project as well. Ms. Homet noted that she would follow up with the applicant on the details of this and would inform the Commission if it has to come back before them.

[28:12] J. Blasko made a motion to recommend approval of the wetland conditional use permit to the Planning Board with the following stipulations:

1. Applicant shall include a plan for invasive species management in the proposed disturbance area. Included in this plan should be best management practices for monitoring, removal and disposal.

2. Applicant shall ensure wildlife notes are consistent: Sheet C2-00 Wildlife Note #6 shall be included in Sheet C3-01 Erosion Control Blanket Notes and in Sheet C3-00 Erosion Control Notes and Erosion Control Legend.

3. The use of fertilizer is prohibited within this jurisdictional wetland and wetland buffer per section 10.1018.24 of the City of Portsmouth Zoning Ordinance. Please note this on plans.

4. Applicant shall note on plans the location of wetland boundary markers. These shall be permanently installed prior to the start of construction between the edge of pavement and the top of the stream bank every 50' to deter foot traffic in the sensitive area.

5. Applicant shall install two 'no snow storage' signs along the swale behind the hospital. Please indicate proposed locations on plans.

6. Applicant shall monitor the success of proposed seeded areas and prepare a memo to be sent to the Portsmouth Planning & Sustainability Department annually for the first two years after planting/seeding. If after two years, the seeded areas show a survival rate of less than 80%, applicant will replant/reseed.

7. Applicant shall confirm that the proposed box culvert will meet 50-year design storm requirements.

Vice Chair McMillan seconded the motion. A discussion continued between the Commissioners and the applicant on the stipulations made.

[67:05] The motion passed unanimously (6-0).

# III. STATE WETLAND BUREAU APPLICATIONS (NEW BUSINESS)

# 1. **REQUEST TO POSTPONE**

Dredge and Fill – Major Impact 185- 187 Wentworth House Road Sea Level LLC Assessor Map 201 Lot 14

[2:30] Chair Collins announced that the applicants for this NHDES application had requested to be postponed.

J. Blasko made a motion to postpone the application until the February regular meeting. B. Gibb seconded the motion. The motion passed unanimously (5-0).

[3:10] L. Vaccaro joined the meeting which brought the member count up to six present.

# **IV. OTHER BUSINESS**

a. Election of Officers

[3:13] Chair Collins announced that she would have to leave the meeting at 4:40 and would like to request that the election of officers agenda item be moved up on the agenda. J. Blasko made a motion to move up the agenda item. B. Gibb seconded the motion. The motion passed unanimously (6-0). A discussion continued about the nomination process and the work on the current chair and vice chair positions.

J. Blasko made a motion to nominate Samantha Collins for the position of Chair and Barbara McMillan for the position of Vice Chair. B. Gibb seconded the motion. The motion passed unanimously (6-0).

# V. ADJOURNMENT

The meeting adjourned at 4:42 p.m.

# **REGULAR MEETING CONSERVATION COMMISSION**

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

4:00 P.M.	<b>February 12, 2025</b>
MEMBERS PRESENT:	Chair Samantha Collins; Members: Brian Gibb, Jessica Blasko, Alice Carey, Alternate: Talia Sperduto
MEMBERS ABSENT:	Vice Chair Barbara McMillan; Members: Stewart Sheppard, Lynn Vaccaro
ALSO PRESENT:	Kate Homet; Environmental Planner

# **MINUTES**

[10:03] Chair Collins opened the meeting and announced that the Commission had enough members present to create a quorum for all the applications except those pertaining to Wentworth House Road, as one member had to recuse themselves.

# I. APPROVAL OF MINUTES

1. January 8, 2024

[12:14] B. Gibb made a motion to postpone the approval of the January meeting minutes until the March meeting due to a quorum issue. A. Carey seconded the motion. The motion passed unanimously.

# II. WORK SESSIONS (NEW BUSINESS)

1. 82 Driftwood Lane

[12:29] Chair Collins announced that the applicant withdrew their work session request. No further action was taken.

# III. WETLAND CONDITIONAL USE PERMIT APPLICATIONS (NEW BUSINESS)

1. 185-187 Wentworth House Road Sea Level LLC Assessor Map 201 Lot 14

[11:17] A. Carey made a motion to postpone this application as well as the related NHDES application until the March meeting. T. Sperduto seconded the motion. The motion passed unanimously.

2. 56 Ridges Court Rainboth Revocable Trust Assessor Map 207 Lot 63

[12:52] Eric Weinrieb of Altus Engineering came to present this application and noted that the new property owners had bought all three lots being presented and wishes to combine all three lots in an effort to limit further development of the area in the future. Mr. Weinrieb proceeded to go through the details of the application and the project proposal. He noted that the parcel with the existing home is in a tight spot as it is almost entirely encompassed by wetland buffers, both freshwater and tidal, and it is also restricted by zoning setbacks. Additional considerations for the location of the new addition included aesthetics and views of the water. He also mentioned that two different wetland scientists had been hired by the property owners to delineate the wetlands on site and both scientists concurred that a large area of currently mowed lawn is in fact, a wetland resource. Mr. Weinrieb noted that the property owners bought the property with the intention of maintaining the backyard as is and keeping it as a mowed lawn. To maintain a mowed wetland and 25' wetland buffer, the applicant is proposing to mitigate these impacts through the planting of trees and the merging of all three lots to preserve them from future development. He went on to describe the distances of each new structure from the wetland and the proposed stormwater treatment. Mr. Weinrieb noted that while he recognized that fertilizer is prohibited, the applicants would like to use it for establishing turf on the property.

[21:31] Chair Collins asked if the swale would be grass, Mr. Weinrieb responded yes. She followed up with a question about the proposed trees to be planted and the species proposed. Additionally, Chair Collins wanted to know why the proposed shed would be placed so far from the primary structure. Mr. Weinrieb responded that it was due to several constraints such as setbacks and getting it away from the wetland resource. Chair Collins noted that the narrative stated that combining all three parcels could create an allowable amount of square footage to create a separate lot with access to a paper street, which is not what the applicants want to do.

A. Carey asked if anything would be formalized to combine the three lots. Mr. Weinrieb responded that it would be on condition of approval that the Planning Board require they combine the lots before moving forward. He also noted that the applicants are currently taxed on three buildable lots and that was a motivating factor for merging them.

[25:07] J. Blasko asked for clarity on the staff memo and the reason for recommending postponement from staff. Ms. Homet responded that the driving reason for recommending postponement was not due to the merging of the lots, although that condition was put in the memo due to recommendation by the Legal Department. J. Blasko then asked what that process for merging might look like and if the applicants could do it in tandem with receiving a WCUP and Mr. Weinrieb responded with the estimated timeline which is short in comparison to all the

other approvals needed.

[27:55] B. Gibb noted that the increase in impervious surface within the wetland buffer would be over 20%, which he noted would not be an insignificant outcome. He noted that the impact was consequential and if allowed, it would not be consistent with how the Commission tries to follow their regulations. He noted that it needs to be a priority to better understand the alternatives that were explored and those that still exist. Mr. Weinrieb responded to this with an alternative where the addition would be further to the south but would restrict the driveway in that cars would not be able to park in front of the garage in the driveway. With this alternative, there had also been aesthetic architectural concerns with placing an addition in an alternative location and they did not want to look at alternatives that did not meet zoning setbacks. He went on to describe existing impacts to the property that would be eliminated with this proposal. [31:51] Chair Collins noted that the applicant was proposing to offset the impervious surface increases through the consolidation of three lots into one and a legal restriction on future development on those lots. Mr. Weinrieb confirmed this but noted that if it made a difference, they could look into reducing the deck and shed sizes or changing the driveway surfaces to permeable materials if needed. B. Gibb noted that it would be good to review those alternatives with the Commission. Mr. Weinrieb stated that if the Commission was inclined, he could work to reduce the impervious surfaces by 460 s.f. which is what the proposed increase sits at. A. Carey stated that some combination of that effort or doing some more planting work in the buffer, ideally both, would be helpful because the current application does not show enhancement of the wetland buffer. A discussion continued about the potential changes to the application that could be made to enhance the quality of the wetland and wetland buffer.

[35:21] A. Carey said that she was going back and forth between the existing and proposed plans and noted that a few trees were proposed to be removed and wondered if the configuration of the proposed additional structures could save some of the larger trees. Mr. Weinrieb said changing the layout would likely not be acceptable for his clients.

[36:17] J. Blasko made a motion to recommend approval of the application to the Planning Board. T. Sperduto seconded the motion. A discussion ensued about the application and the recommendation within the staff memo. Ms. Homet noted that the Legal Department prefers conservation easements over deed restrictions in these types of cases. Mr. Weinrieb responded that the property owners could be amenable to that depending on what language is used for the restriction but would likely be more comfortable coming back with an application showing more mitigation compared to having an easement restriction.

[39:41] Chair Collins stated that a lot merger, easement or deed restriction would not be enough, in her opinion, to compensate for the impacts to the wetland and buffer. She noted that the other undeveloped parcels were already within the 100' wetland buffer and would be extremely difficult to develop regardless of having a restriction on them or not. She thought it would be more important to enhance the resource that is there now which would include no longer mowing the wetland, the 25' wetland buffer and placing some physical barriers along the no-mow line. B. Gibb noted his agreement with Chair Collins. Chair Collins stated that going forward, she would be recommending a postponement of this application so that things could be reconfigured. A. Carey also noted her agreement and stated that the big impact for her was that the applicant

wants to keep mowing the actual wetland, and not just the buffer.

Mr. Weinrieb argued that a property across the street recently went through a conditional use process and their entire lawn is within the wetland buffer. Chair Collins responded that unless that application was in front of her, she couldn't comment on the specifics of that permit.

[43:12] J. Blasko agreed with the Chair and noted that while the net change in impervious surface was not huge, in looking at the proposed addition and deck it created unknowns in what could happen to the property in the future. The proposed structure is significant, and it seems like the other pieces of mitigation are not very well defined or equal to the structure imposition. She would like to see alternatives considered where there are less structures proposed within the buffer. Mr. Weinrieb responded that it would be impossible to remove the existing structure from the buffer and B.Gibb responded that it was possible for any proposed additions to be removed from the buffer, reduced in size or moved further from the wetland.

[45:11] Chair Collins stated that it sounded like the Commission would like to postpone the application and she and other commissioners went on to list the areas that the applicant would need to work on to have a more viable application for a permit.

[48:40] J. Blasko withdrew her motion for approval and T. Sperduto withdrew her second. J. Blasko then made a motion to postpone the application until the March meeting for the applicant to consider all the issues discussed. B. Gibb seconded the motion. The motion passed unanimously.

# V. STATE WETLAND BUREAU APPLICATIONS (OLD BUSINESS)

 Dredge and Fill – Major Impact 185-187 Wentworth House Road Sea Level LLC Assessor Map 201 Lot 14

[11:17] A. Carey made a motion to postpone this application as well as the related WCUP application until the March meeting. T. Sperduto seconded the motion. The motion passed unanimously.

The Commission discussed different motion types and what would constitute a motion for denial of a permit.

# V. OTHER BUSINESS

1. WCUP Checklist

[55:07] Ms. Homet introduced a checklist that was formatted for new wetland conditional use permit applications. She proceeded to describe the need for the checklist, how it is to be used by applicants and commissioners, how to fill it out and noted that it would be a requirement now with all new WCUP applications starting in March. The Commission gave feedback to Ms. Homet on final additions and edits to the checklist and how it would apply to recent applications

that had come before them.

[1:07:57] J. Blasko made a plug for the upcoming Sustainability Fair to be held on Friday April  $11^{\text{th}}$  from 4:30 - 7:00 p.m. at the Connie Bean in Portsmouth. She is hoping that the Conservation Commission could host a booth again this year. The Commission will look into it.

# VI. ADJOURNMENT

The meeting adjourned at 5:06 p.m.

# Memo

TO:	Conservation Commission Members
FROM:	Kate Homet, Environmental Planner; Peter Britz, Director of
	Planning & Sustainability
DATE:	March 7, 2025
SUBJ:	March 12, 2025 Conservation Commission Meeting



# 185- 187 Wentworth House Road Sea Level LLC Assessor Map 201 Lot 14

This application is for the required remediation of PCBs by the EPA and associated impacts within a tidal wetland and previously disturbed wetland buffer. As part of this remediation, the applicant is proposing to remove 175 s.f. of sediment from existing salt marsh down to a depth of 1 ft as well as an adjacent section of 235 s.f. of fill to be removed down to a depth of 6 in. To restore these excavated areas, the applicant is proposing to add 6 in of sand in the first removal area with the addition of saltmarsh bulrush plugs. In the upper portion of the marsh area and above the HOTL, salt tolerant grass mix is proposed as well as boulder armoring and stone riprip for bank stability. Additional proposed impacts to the buffer include the removal of 0.5 cubic yards of soil in two different buffer locations down to 1 ft in depth, with one of these areas proposed to be covered with a geotextile liner and 5,000 s.f. concrete cap. All other areas impacted by PCBs in the wetland buffer will receive 6 in of clean topsoil and vegetation. Other buffer work includes the reuse of existing gravel for boat storage activities and the plugging of an existing storm drain.

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

A majority of this work is proposed for previously disturbed areas that need remediation done to remove contaminants from the wetland system. The existing salt marsh is not a suitable site for excavation work but the necessity of removing the PCBs and the associated replanting of the marsh should create a better outcome for the health of the wetland resource in this location if it can be properly maintained.

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

This is EPA-mandated remediation work that must occur to reduce existing PCB levels on site. It cannot occur anywhere else outside of the buffer.

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

This proposal aims to remove existing toxins from the wetland and buffer system that currently exist and bring in clean topsoil and seed for the growth of the marsh. While the temporary impacts may be harmful, the outcome will create a healthier environment for all. To minimize impacts from construction, significant erosion controls are needed as part of this project.

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

This remediation project only proposes the removal of vegetation to the extent necessary to remove the impacted soil and cap.

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

This proposal appears to be the most efficient way to clean up the PCB contaminants currently in the soils of this wetland and buffer resource. Without remediation, this site will continue to be adversely impacted from the contaminants. Applicant should ensure that any contaminated soils are properly covered if left on site at any time during the project period or afterwards.

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

While riprap is proposed for the bank immediately above the HOTL, the area between the bank and the proposed concrete cap will be loamed and hydroseeded as well as planted with a variety of trees and shrubs. Applicant should ensure that a wetland buffer seed mix is used through the 100' wetland buffer for seeding, not just wildlife-compatible mix.

**Recommendation:** Staff recommends approval of this wetland conditional use permit to the Planning Board with the following stipulations:

1. The applicant should consider extending the erosion controls to completely enclose the proposed mixed stone/riprap area (see area below). Additionally, the applicant should consider extending erosion control to encapsulate all edges of the newly restored upland site (green area).



- 2. Applicant shall use an appropriate wetland buffer seed mix for any areas to be seeded within the 100' buffer.
- 3. Applicant shall receive all necessary permissions from NHDOT and the contributing abutting landowners as applicable prior to plugging or abandoning any of the existing 15" drainage pipe. Further, please provide a drainage plan and calculation analysis for the rerouting of flow entering this pipe. This shall occur prior to Planning Board approval and may need review from TAC.
- 4. Grass-lined drainage swale is mentioned in the maintenance manual but not shown on plans. Please revise plans to show exact location, dimensions, elevations and plantings within swale.
- 5. In accordance with Section 10.1018.40 of the Zoning Ordinance, applicant shall permanently install wetland boundary markers, which may be purchased through the City of Portsmouth Planning & Sustainability Department. Markers are to be placed along the 25' vegetative buffer at 50-foot intervals and must be installed prior to the start of any construction.

# 56 Ridges Court Rainboth Revocable Trust Assessor Map 207 Lot 63, 68 and 69

This application proposes work across three parcels which is to include the demolition of an existing garage, shed, and deck, the removal of paved walkways, existing landscaped steps and the removal of vegetation for the purposes of construction. Proposed new development includes a home addition, a reconstructed driveway, new decking, new permeable walkways, a shed and a garage. The existing impervious coverage within the 100' wetland buffer over all three lots is 2,715 s.f. and this application proposes a final impervious cover of 2,653 s.f., a decrease of 62 s.f.

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

This project proposes the removal of existing structures and pavement from the wetland buffer with the installation of new structures and a driveway within the buffer but further away from the resource. A majority of the work is within the wetland buffer.

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

A majority of this work is proposed within the 100' wetland buffer and includes new structures in the buffer but an overall reduction in impervious surfaces. Since the previous application, applicants have moved the proposed shed and deck slightly further from the wetland but not outside of the buffer.

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

This project proposes the removal of four existing trees and one shrub within the buffer and the addition of six highbush blueberries and an 1,100 s.f. naturalized area in a portion of the 25' no-cut buffer. Some improvement to the wetland functional values as they exist today appear to be proposed. Proper care and maintenance of the wetland and wetland buffer would prevent adverse impacts. This should include no longer mowing the wetland resource. In addition, applicant should come into compliance with the City's 25' no-cut vegetative buffer regulations.

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

This project proposes the removal of some existing vegetation to achieve construction goals and proposes replacement with blueberries and a small portion of the 25' no-cut buffer to be naturalized. Property owners have historically altered the vegetative state of a portion of the wetland and the entire 25' buffer through regular mowing. Staff suggest this practice ends to come into compliance with our vegetative buffer strip standards.

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

This proposal is not the alternative with the least adverse impact. The proposal requests the continued mowing of some of the most sensitive ecosystems on the properties.

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

This appears to be feasible, but it is not proposed. Only a portion of the vegetated buffer strip is proposed to be re-naturalized. The applicant should commit on the plan set to no longer mowing all the way to the vegetated buffer strip to come into compliance with the City's Zoning Ordinance.

**Recommendation:** Staff recommends approval of this wetland conditional use permit to the Planning Board with the following stipulations:

- 1. Proposed impervious area within the 100' buffer appears to be calculated incorrectly. Total proposed should be 2,653 not 2,633 s.f.
- 2. If lots are to remain separate, please remove notes on plan stating otherwise.
- 3. It is recommended that the applicant discontinue the practice of mowing the wetland and come into compliance with the City's no-cut vegetative buffer strip regulations.
- 4. It is recommended that the applicant discontinue all practices of mowing the wetland resource.
- 5. In accordance with Section 10.1018.40 of the Zoning Ordinance, applicant shall permanently install wetland boundary markers, which may be purchased through the City of Portsmouth Planning & Sustainability Department. Markers are to be placed along the 25' vegetative buffer at 50-foot intervals and must be installed prior to the start of any construction.

# 200 FW Hartford Drive Tracey & David Foster, Owners Assessor Map 270 Lot 33

This application is for the removal of six trees within the 100' buffer of a wetland towards the rear of the property at 200 FW Hartford Drive. These trees include four pines and two maple trees, one of which is diseased according to an ISA Certified Arborist. The applicant is proposing to leave the stumps in place and plant two new red maple trees and four new winterberry bushes close to where the existing trees are proposed to be removed.

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

This work proposed removing six trees from within the 100' wetland buffer which is a forested wetland.

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

These trees are all located within the wetland buffer and while they serve as a vital function within the wetland buffer, the applicant is proposing a replacement of plantings in lieu of the trees to be removed.

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

The removal of these large trees will have an adverse impact on the wetland functional values as they serve as great habitat and carbon capture for this ecosystem. The installation of new plantings will help to boost this ecosystem, but it may not be sufficient to compete with the trees to be removed. Applicant should consider planting a greater ratio of trees to shrubs.

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

This project calls for the removal of six trees, all within the wetland buffer and most within the 25' no-cut buffer. A certified arborist has stated that only one of the proposed trees to be removed is diseased and unless the other five are a significant risk, the removal of the healthier trees does not seem necessary at this time.

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

This proposal appears to have some adverse impact at the removal of five healthy trees that are serving multiple functions within the wetland buffer. The proposed plantings will help to offset the impacts felt from removing those trees but it may be necessary to substitute more trees instead of or in addition to the winterberries to equate the loss of those six trees.

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

It appears that most of the trees to be removed are located in the vegetated buffer strip and proposed plantings will be in this general vicinity.

**Recommendation:** Staff recommends approval of this wetland conditional use permit to the Planning Board with the following stipulations:

- 1. The applicant should consider planting a greater proportion of trees compared to the shrubs.
- 2. In accordance with Section 10.1018.40 of the Zoning Ordinance, applicant shall permanently install wetland boundary markers, which may be purchased through the City of Portsmouth Planning & Sustainability Department. Markers are to be placed along the 25' vegetative buffer at 50-foot intervals and must be installed prior to the start of any construction.



January 30, 2025 File No. 2021-075

Samantha Collins, Chair Portsmouth Conservation Commission (ConCom) Portsmouth City Hall 1 Junkins Ave, 3rd Floor Portsmouth, NH 03801

# Re: 185-187 Wentworth Road, Portsmouth, NH Wetlands Conditional Use Permit Application (CUPA) Marina Restoration Project

Dear Ms. Collins:

Please find attached a hard copy of the following information which was provided in an online application filed January 8, 2025. A site visit was attended by Samantha Collins and Lynn Vacarro of the ConCom on January 27, 2025, at which the proposed limits of work were reviewed in the field along with engineering drawings depicting proposed activities for remediation and restoration.

Aries Engineering looks forward to the February 12, 2025, meeting with ConCom. This information has been prepared to address the City of Portsmouth CUPA on-line instructions and Section 10 of the City Zoning Ordinance, the latter identified in correspondence on January 29, 2025, with Ms. Kate Homet, Environmental Planner, City Planning & Sustainability Department.

# A. ON-LINE INSTRUCTIONS/QUESTIONS

**1.0 Description of site and proposed construction;** The project objective is final remediation of PCBs initially addressed under U.S. EPA approval issued on 9-9-2016, with 1-31-23 Addendum approval, per 40 CFR 761.61(a) in a working waterfront; see Appendix D, 4-24-2023 memorandum to NHDES Wetlands Permit Application, for history and regulatory requirements (appended to the CUPA). This new cleanup effort limits impacts within Zone AE/other jurisdictional zones as follows: 1) Zone AE at 5 to 6 FT MSL: 3 small areas totaling 175 square feet (SF) of existing salt marsh area, contained wholly within a small, isolated, and blind section of Witch Cove contiguous to tidal Sagamore Creek will be temporarily impacted via removal of 175 SF of sediment to 1 ft depth, upper 6 inches (in.) of which is PCB-impacted. Also, 6 in. layer of 235 SF adjacent area filled inadvertently during prior remediation will be removed to achieve prior 6 FT MSL, for a total 11 cubic yards (CY) of

wetland soil excavation. Restoration involves adding 6 in. of sand in the 175 SF area, and planting saltmarsh bulrush plugs up to 6 FT MSL in the entire 410 SF area, per grading/planting plan presented in Sheets 5-7 (Appendix E); 2) Zone AE 6 to 8 FT MSL (HOTL): salt tolerant grass mix will be seeded; 3) Outside Zone AE: a) 470 SF of near-vertical tidal cove shoreline above HOTL/below 11 ft MSL will be stabilized by armoring using boulders saved during prior remediation, and adding 4-5 in. stone riprap, lined by geotextile and designed per NH Stormwater Handbook and minimization techniques; b) a 0.5 CY "hot spot" in upland wooded area containing >50 ppm PCBs will be removed to 1 ft deep and that soil transported off-site to a licensed disposal facility, and an adjacent 0.5 CY area with soil >1<25 ppm PCBs, will be excavated to 1 ft deep and placed under the proposed concrete cap, see d) below. Both of these 0.5 CY areas lie on abutter Jason Goulemas property; 770 SF, other adjacent areas above 11 ft MSL in level graded areas, with >1<25ppm PCBs, will receive 6 inches of clean top soil and vegetated; d) within previously developed uplands, consisting of existing boatyard laydown and storage areas, a 5,000 SF 6 inch thick concrete pad, with 6 inch stone base beneath lined by geotextile, will be installed to cover soils with >25<50 ppm PCBs, and also lead levels with potential to leach into groundwater, see Engineering Sheets 4 and 5; e) adjacent to cap, gravel in degraded gravel condition areas will be re-used or re-installed as needed to allow boat storage to recommence; and f) to avoid future scouring effects of restored wetland areas from an existing 15 inch storm drain discharging into that area, this storm drain will be plugged. Appropriate erosion control measures will be applied during construction, which should be completed within one week in total, with wetland excavation occurring within a single day. An Operations Maintenance and Monitoring Plan and a Construction Monitoring Plan is provided in the attached WPA, Appendix J, Parts 4 and 5, respectively, which address future operations and construction activities, in according with federal, state, and City of Portsmouth (Section 10, Zoning Code) requirements. All impacts are temporary, occurring within 1 month period.

- **2.0** Total area of inland wetland or vernal pool (both on and off the parcel): 0 acres.
- **3.0** Impacted Jurisdictional Area(s) (i.e. vernal pool, inland wetland, inland wetland buffer, tidal wetland or tidal wetland buffer); The limits of work will impact 410 SF of tidal wetland within the highest observable tide line (HOTL) of 8 feet (actually 7.9 feet); and also, will temporarily impact the following areas within the 100-foot wetland buffer zone for the activities described above and will have the following SF affected:
  - 470 SF of near-vertical slope, above HOTL to 11 FT MSL, riprap restoration'
  - 772 SF of upland area (2 SF is described in Item 1.0, b above), to which a 6-inch cap will be added and wildlife-compatible seeding (non-lawn species) provided;
  - 5,000 SF of concrete cap, with dimension of 50 by 100 feet.



- **4.0 Distance of proposed structure or activity to the edge of wetland;** All activity occurs within 70 feet of the edge of wetland (see Engineering Sheet 5).
- 5.0 Total wetland area and/or wetland buffer area on the lot; See Section 3.0.
- **6.0** Total wetland area and/or wetland buffer area to be disturbed on the lot; See Section 3.0.
- 7.0 Project representatives names and contact information;

Tom Reis, President, Sea Level, LLC, <u>tom@substructure.com</u>; **603-436-1039** Jay Johonnett, Aries Engineering, LLC, jjohonnett@aries-eng.com;

603-228-0008

Steve Graham, Aries Engineering, LLC, <a href="mailto:sgraham@aries-eng.com">sgraham@aries-eng.com</a> ; 617-571-5280

- 8.0 Plans meeting the requirements of Section 10.1017.20 of the Zoning Ordinance; Engineering Sheets 1, 2, 4, and 5-7 meet these requirements. Sheets 3A-3D provide historical environmental sampling testing results and prior remediation limits.
- **9.0** All applicants are encouraged to discuss the project with impacted neighbors; Jason Goulemas is an abutter and co-applicant to the NHDES WPA, because remediation in upland areas and wetland areas occurs on his property. Other directly adjoining abutters have been notified, as identified in Appendix M of the attached WPA.
- **10.0** Enhancement of existing buffer plantings; Consider adding native vegetation (including trees) in the wetland buffer (and throughout the property) to increase biodiversity, habitat, improve soil stability, and reduce climate impact. Additionally, please consider preserving as much existing vegetation and trees as possible. Providing a planting plan is encouraged: A planting plan for wetlands and uplands areas, including appropriate tree additions, is identified in Engineering Sheets 5 and 6, prepared and stamped by a NH Certified Wetland Specialist, and also described in the WPA text in several appendices, see attached WPA List of Appendices.
- **11.0 Reduce lawn areas;** Consider reducing the lawn area on your property, especially in the buffer, and replace it with native plantings or let it grow naturally without mowing. This can increase stormwater runoff infiltration and improve biodiversity and shoreline stability. Additionally, utilizing NOFA's standards for organic land care on any lawn and landscaped areas that remain: Wildlife-enhancing natural grasses and tree plantings in the wetlands buffer are proposed, see Section 10.0
- **12.0** Use rain gardens, rain barrels, and gutters; Not applicable.
- **13.0 Reduce impervious surfaces;** Consider reducing the area of any new impervious surface (buildings, walkways, patios, driveways, etc.) to the absolute minimum necessary to achieve the project's goals. This can help reduce the environmental impact of your project: This approach has been



undertaken, impervious surface is limited to the 5,000 SF concrete cap required by US EPA to immobilize the relatively low levels of PCBs < 50 ppm. The remaining areas of work limits are either vegetated or permeable (riprap).

- **14.0 Consider Wildlife;** Consider including wildlife tunnels/crossing under roadways, ground clearance of fences, and curb cuts, slanted curbing, or no curbing to allow for the movement of wildlife through the property. The addition of pollinator gardens is encouraged. Wildlife can move within the mature forest canopied area of the upland area, or within the tidal wetlands area. See WPA, Appendix C, Wildlife Habitat Memorandum.
- **15.0** Limit lighting and blasting; Consider keeping lighting to a minimum and having it be dark-sky compliant, this can be shown in a lighting plan. Limit blasting and the keep the removal of trees and vegetation to an absolute minimum. No blasting will occur, and removal of trees is limited to only that necessary to allow construction of future site landscaping or plantings. Replanting of appropriate trees has been presented in Section 10.
- **16.0 Provide property maintenance plans;** Consider attaching property maintenance plans for pervious pavements, stormwater infiltration systems, no-mow zones, snow removal and buffer plantings to the property deed. This can help to ensure the long-term sustainability of your project: An Operations Maintenance and Monitoring Plan and a Construction Monitoring Plan is provided in the attached WPA, Appendix J, Parts 4 and 5, respectively, which address future operations and construction activities, in accordance with federal, state, and City of Portsmouth (Section 10, Zoning Code) requirements. All impacts are temporary, occurring within 1 month period.
- **17.0 Think outside the box;** Consider creative ways to reduce and offset the impacts of your project on the wetland buffer and the environment in general: We believe we have provided the most practical and environmentally sensitive approach to meeting environmental cleanup requirements and simultaneously restoring the wetland areas and buffers to a natural condition.

# **B. COMPLIANCE WITH ZONING ORDINANCE**

The following City of Portsmouth Zoning Ordinance sections, as amended through August 2023, have been reviewed and compliance with each section is provided below.

**1.0** Section 10.1017.21; (1) Location and area of lot and proposed activities and uses: See attached Engineering Sheets (ES)-1, 2 and 5; (2) Location and area of all jurisdictional areas (vernal pool, inland wetland, tidal wetland, river or stream) on the lot and within 250 feet of the lot; See ES-2 and 5; only tidal wetlands and wetland buffer zones exist. (3) Location and area of wetland buffers on the lot; See ES-5. (4) Description of proposed construction, demolition, fill, excavation, or any other alteration of the wetland or wetland buffer; See A, 1.0, above. (5) Setbacks of proposed alterations from property lines, jurisdictional areas and wetland buffers; See ES-2 and 5. (6) Location and area of wetland impact, new impervious surface, previously disturbed



upland; See ES-2 and 5. (7) Location and description of existing trees to be removed, other landscaping, grade changes, fill extensions, rip rap, culverts, utilities; See ES-2, 5, 6 and 7 for locations, for descriptions see text at bottom of ES-5 and ES-7. (8) Dimensions and uses of existing and proposed buildings and structures; See ES-5, and attached WPA, Appendix S, Marina Property Calculations. (9) Any other information necessary to describe the proposed construction or alteration. See WPA, Appendices A through S.

- 2.0 Section 10.1017.22; Where the proposed project will involve the temporary or permanent alteration of more than 250 sq. ft. of wetland and/or wetland buffer, the application shall provide information about the affected wetland and wetland buffer as follows: (1) Up to 1,000 sq. ft. of alteration to the wetland: a wetland characterization that describes the type of wetland (e.g., emergent, scrub-shrub, forested), the percent of invasive species, and whether the wetland is seasonally flooded: The wetlands are tidal only, no invasive species are known to exist, and the wetland is tidally flushed daily. See attached WPA List of Appendices, which directs the reviewer to pertinent sections of the attached WPA where a full characterization of the impacted wetland and wetland buffer and adjacent tidal waters is provided, along with impact minimization and mitigation measures. (2) More than 1,000 sg. ft. of alteration to the wetland: a functions and values assessment equivalent to the model set forth in Appendix A of The Highway Methodology Workbook Supplement -Wetland Functions and Values: A Descriptive Approach, NAEEP-360-1-30a, US Army Corps of Engineers, New England Division, September 1999, as amended. N/A. (3) More than 250 sq. ft. of alteration to the wetland buffer (regardless of the amount of alteration to the wetland): a description of the 100-foot buffer including vegetation type, the percent of the buffer with invasive species, and the percent of the buffer that is paved or developed. See ES-2 and WPA List of Appendices. No invasive species are known to predominate, although Oregon grape vine and similar briar species are present sporadically.
- Section 10.1017.23; The application shall describe the impact of the proposed 3.0 project with specific reference to the criteria for approval set forth in Section 10.1017.50 (or Section 10.1017.60 in the case of utility installation in a rightof-way) and shall demonstrate that the proposed site alteration is the alternative with the least adverse impact to areas and environments under the jurisdiction of this Ordinance. The proposed project meets all of the criteria listed in Section 10.1017.50 below, as demonstrated in the NHDES Application itself, and particularly in Appendices F, Avoidance and Minimization Checklist, and Appendix O, WPA Minor and Major Projects. In the latter, it is stated that the project is being undertaken in accordance with US EPA approvals issued through 2023 (see WPA Appendix D for regulatory history), and no practicable alternative exists to remove the contaminated wetland sediment and upland soils. It is noted that this project proposes to complete bank stabilization after remediation is complete via hard scaping, which is needed to maintain existing infrastructure (prior boat storage laydown area and boat storage shed foundation in a working waterfront with developed



uplands). The stabilization design meets the criteria for approval under NH Env-Wt 514.02 (b)(1), (2), (3), (4), (5), and (7) by design and conforms to the NHDES Wetlands Best Management Practice (BMP) Techniques Avoidance and Minimization (BMPs) since it meets these criteria and techniques to the extent practicable because the near vertical combination boulder and riprap design (see ESs 5-7) is the least intrusive practical method, conforms to the natural alignment of the bank/ shoreline; does not adversely affect the tidal stream course such that water flow will be transported by the stream channel in a manner adversely affecting the physical functions as described in NH Env-Wt 514.91 and BMPs, will not affect or change tidal water flow, alter hydraulics, flow pattern or floodplain connectivity, provides structural erosion control and installation of rip-rap shoreward of the Mean High Water line.

- **4.0** Section 10.1017.24; Where feasible, the application shall include removal of impervious surfaces at least equal in area to the area of impervious surface impact. The intent of this provision is that the project will not result in a net loss of pervious surface within a jurisdictional wetland buffer. If it is not feasible to remove impervious surfaces from the wetland buffer at least equal in area to the area of new impervious surface impact, the application shall include a wetland buffer enhancement plan that describes how the wetland functions and values will be enhanced to offset the proposed impact. Reduction of the extent of the amount of wetland impervious surface is not feasible, due to the need to install a 5,000 SF concrete cap within the wetland buffer zone to restrict future access and prevent infiltration of precipitation onto the underlying slightly impacted soils. This encapsulation method is specifically approved by the US EPA for this site and eliminates the risk of impact to human health and the environment.
- **5.0** Section 10.1017.25; A wetland buffer enhancement plan shall be designed to enhance the functions of the jurisdictional wetland and/or wetland buffer on the lot, and to offset the impact of the proposed project. (1) The wetland buffer enhancement plan shall include a combination of new plantings, invasive species removal, habitat creation areas, improved site hydrology, or protective easements provided offsite. This plan is provided in ES-5, 6 and 7, prepared and stamped by a NH Certified Wetlands Scientist, and described both on those sheets and in very extensive detail in WPA Appendix J, Coastal Resource Worksheet, Part 3—Narrative. (2) Where the vegetated buffer strip contains grass or non-native plantings, or is otherwise not intact, the first priority of the wetland buffer enhancement plan shall be to include revegetation of the vegetated buffer strip with native, low-maintenance shrubs and other woody vegetation. See response to (1) immediately above.
- **6.0** Section 10.1017.26; Where the proposed project involves a use, activity or alteration in a tidal wetland or tidal wetland buffer, the application shall include a living shoreline strategy to preserve the existing natural shoreline and/or encourage establishment of a living shoreline through restoration, as applicable. Said living shoreline strategy shall be implemented unless the Planning Board determines that it is not feasible. A living shoreline is not feasible for reasons described above in A, Section 3.0.



- 7.0 Section 10.1017.50; Criteria for Approval Any proposed development, other than installation of utilities within a right-of-way, shall comply with all of the following criteria: (1) The land is reasonably suited to the use, activity or alteration. (2) There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration. (3) There will be no adverse impact on the wetland functional values of the site or surrounding properties; (4) Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals; and (5) The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this Section. (6) Any area within the vegetated buffer strip will be returned to a natural state to the extent feasible. All of these criteria are answered by A Sections 1.0 through 6.0; WPA Appendix L, Wetlands Functional Assessment, evaluates these criteria in detail.
- 8.0 Section 10.1018.10; Stormwater Management All construction activities and uses of buildings, structures, and land within wetlands and wetland buffers shall be carried out so as to minimize the volume and rate of stormwater runoff, the amount of erosion, and the export of sediment from the site. All such activities shall be conducted in accordance with Best Management Practices for stormwater management including but not limited to: 1. New Hampshire Stormwater Manual, NHDES, current version. 2. Best Management Practices to Control Non-point Source Pollution: A Guide for Citizens and City Officials, NHDES, January 2004. The proposed construction activities and future use of the property meet these requirements, as described for stormwater management and erosion and sediment control in accordance with the above cited manuals in WPA Appendix J, Coastal Resource Worksheet Part 4— Operations Monitoring & Maintenance Plan, and Part 5—Construction Monitoring Plan, and Appendix J, Part 1 Narrative.
- **9.0** Section 10.1018.22; If the vegetated buffer strip contains an area that has a slope of 10% or more for at least 10 feet in a direction perpendicular to the edge of the jurisdictional area, the required width of the vegetated buffer strip shall be increased to 55 feet from the edge of a vernal pool and to 40 feet from the edge of any other wetland. N/A.
- **10.0** Section 10.1018.23; Removal or cutting of vegetation: (1) Chemical control of vegetation is prohibited in all areas of a wetland or wetland buffer. (2) The removal or cutting of vegetation is prohibited in a wetland or vegetated buffer strip, except that non-chemical control of plants designated by the State of New Hampshire as "New Hampshire Prohibited Invasive Species" is permitted. (3) The removal of more than 50% of trees greater than 6" diameter at breast height (dbh) is prohibited in the limited cut area. These requirements are met, as described in the planting plan for wetlands and uplands areas, including appropriate tree additions, is identified in Engineering Sheets 5 and 6, prepared and stamped by a NH Certified Wetland Specialist.
- **11.0** Section 10.1018.24; Fertilizers: (1) The use of any fertilizer is prohibited in a wetland, vegetated buffer strip or limited cut area. (2) The use of fertilizers other than low phosphate and slow-release nitrogen fertilizers is prohibited in



any part of a wetland buffer. Only limestone fertilizer is proposed as described in Appendix J, Coastal Resource Worksheet, Part 3, Narrative, Subsection 1 (3).

- **12.0 Section 10.1018.25;** Pesticides and herbicides: The use of pesticides or herbicides is prohibited in a wetland or wetland buffer, except that application of pesticides by a public agency for public health purposes is permitted. Pesticides or herbicides will not be applied in the wetland or wetland buffer.
- **13.0** Section 10.1018.31; All new pavement installed in a wetland buffer shall be porous pavement. The Planning Board may allow exceptions to this requirement where it can be demonstrated that the height of ground water, condition of soil, or other factors as described in the application are not appropriate for porous pavement. This requirement can not be met for reasons stated in B, Section 3.0 above.
- **14.0** Section 10.1018.32; An application that proposes porous pavement in a wetland buffer shall include a pavement maintenance plan addressing erosion control, periodic removal of sediment and debris from the porous surfaces, snow management, and repairs. The proposed impermeable cap and its future operation and maintenance are described in a pavement maintenance plan, see WPA Appendix J, Coastal Resource Worksheet Part 4—Operations Monitoring & Maintenance Plan, Subsection 4.1, Cap Maintenance and Part 4, Attachment CC, Inspection Form.

If you have any questions or need additional information, please contact the undersigned.

Sincerely, Aries Engineering, LLC

Stephen rerab

Stephen J. Graham, P.E. Director of Engineering

Jay P. Johonnett, P.E. Principal Engineer

RK:pj

Attachments: Full size Engineering Sheets NHDES WPA Appendices Table of Contents NHDES Wetlands Permit Application (WPA)



# New Hampshire Department of Environmental Services Dredge and Fill Wetlands Permit Application (WPA) Appendices

Appendix A NH Natural Heritage Bureau Data Check Results Letter (Per Section 1, NH ENV-WT 306.05 Appendix B Priority Resource Area and Protected Species (Per Section 1, NH ENV WT 306.05) Appendix C Habitat Evaluation Memorandum (Per Section 1, NH ENV-WT 306.05) Appendix D Aries Engineering April 24, 2023 Memorandum to NHDES (Per Section 2) Appendix E Engineering Project Plans, Drawings and Sheets (Per Sections 2, 7, 16, and NH ENV-WT 311.05, 311.03 {b}{4}) Appendix F Avoidance and Minimization Checklist (Per Section 8, NH ENV-WT 313.03{a}) Appendix G Copy of Application Fee (Per Section 12) Appendix H USGS Location Map (Per Section 16, NH ENV-WT 311.06{d}) Appendix I USACE Appendix B, NH General Permits, Required Information and Corps Secondary Impacts Checklist (Per Application Checklist, includes US FWS IPAC Review and Section 106 Historic/Archaeological Resource Review/NH Division of Historical Resources Review) Appendix J Coastal Resource Worksheet (Per Application Checklist, NH ENV-WT 600) Part 1—Coastal Resource Worksheet Part 2—Figure J1 Part 3—Narrative Part 4—Operations Monitoring & Maintenance Plan Part 5—Construction Monitoring Plan Appendix K Vulnerability Assessment Appendix L Coastal Functional Assessment Part 1—Coastal Functional Assessment Narrative Part 2-L1, Part A, Wetlands Functional Assessment (WFA) Worksheet Part 3—L1, Part B, Ecological Integrity Part 4—L2, USACE Wetland Evaluation Appendix M Copy of Town Tax Map, Location of Project on property, and location, name, and address of abutters, recorded deed with book and page numbers, and copies of certified postal receipts (Per Application Checklist, NH ENV-WT 311.06, 311.12, 311.13) Appendix N Color Photographs of Jurisdictional Area (Per Application Checklist, NH ENV-WT 311.06, 311.12, 311.13) Appendix O WPA Attachment A: Minor & Major Projects (Per Application Checklist) Appendix P Request for Concurrent Processing of Related Shoreland and Wetland Permit Application and Other Items (Per Application Checklist, NH ENV WT 311.05, 311.06) Appendix Q Tidal Shoreline Stabilization Worksheet Appendix R Tidal Dredging Worksheet Appendix S Portsmouth Marina Property Calculations



# STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION Water Division / Land Resources Management Check the Status of your Application



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

#### **APPLICANT'S NAME:**

#### TOWN NAME:

			File No.:
Administrative	Administrative	Administrative	Check No.:
Only	Only	Only	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 <u>Waiver Request Form</u>.

SEC	SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))			
Plea <u>Res</u> pro	ase use the <u>Wetland Permit Planning Tool (WPPT)</u> , the Natural Heritage Bureau (NHB) <u>DataCheck Too</u> storation <u>Mapper</u> , or other sources to assist in identifying key features such as: <u>Priority Resource Area</u> stected species or habitats, coastal areas, designated rivers, or designated prime wetlands.	ol, the <u>Aquatic</u> as (PRAs),		
Has	s the required planning been completed?	🗌 Yes 📃 No		
Doe	es 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 (NHFG) 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? <ul> <li>If yes, species or habitat name(s):</li> <li>NHB Project ID #: B20-3560</li> </ul>	🗌 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		
ls tl	he property within a Designated River corridor? If yes, provide the following information:	🗌 Yes 🗌 No		
•	Name of Local River Management Advisory Committee (LAC):			
•	A copy of the application was sent to the LAC on Month: Day: Year:			

<ul><li>For dredging projects, is the subject property contaminated?</li><li>If yes, list contaminant:</li></ul>	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 <u>WPPT</u> or Stream Stats):	
SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))	
Provide a description of the project and the purpose of the project, the need for the proposed impacts t	o jurisdictional
areas, an outline-of the scope of work to be performed, and whether impacts are temporary or permane	ent.
SECTION 3 - PROJECT LOCATION	
Separate wetland permit applications must be submitted for each municipality within which wetland im	pacts occur.
ADDRESS:	
TOWN/CITY:	
TAX MAP/BLOCK/LOT/UNIT:	
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME:	

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

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:				
MAILING ADDRESS:				
TOWN/CITY:		STATE:	ZIP CODE:	
EMAIL ADDRESS:				
FAX:	PHONE:			
ELECTRONIC COMMUNICATION: By initialing here, I her this application electronically.	eby authorize NHDES to cor	nmunicate all ma	atters relative to	
SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-	Wt 311.04(c))			
LAST NAME, FIRST NAME, M.I.:				
COMPANY NAME:				
MAILING ADDRESS:				
OWN/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 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.				
NAME:				
MAILING ADDRESS:				
TOWN/CITY:		STATE:	ZIP CODE:	
EMAIL ADDRESS:				
FAX:	PHONE:			
ELECTRONIC COMMUNICATION: By initialing here, I her this application electronically.	eby authorize NHDES to cor	nmunicate all ma	atters relative to	

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):

#### 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 <u>Wetlands Best Management</u> <u>Practice Techniques For Avoidance and Minimization</u> and the <u>Wetlands Permitting: Avoidance, Minimization and</u> <u>Mitigation fact sheet</u>. 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 <u>Avoidance and Minimization Checklist</u>, the <u>Avoidance and Minimization Narrative</u>, 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 <u>pre-application meeting</u> 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).

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

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

JURISDICTIONAL AREA		PERM.	PERM.	PERM.	TEMP.	TEMP.	TEMP.
		SF	LF	ATF	SF	LF	ATF
ds	Forested Wetland						
	Scrub-shrub Wetland						
	Emergent Wetland						
lan(	Wet Meadow						
/et	Vernal Pool						
5	Designated Prime Wetland						
	Duly-established 100-foot Prime Wetland						
	Buffer						
	Intermittent / Ephemeral Stream						
ce	Perennial Stream or River						
ırfa	Lake / Pond						
SL	Docking - Lake / Pond						
	Docking - River						
S	Bank - Intermittent Stream						
ank	Bank - Perennial Stream / River						
ä	Bank / Shoreline - Lake / Pond						
	Tidal Waters						
	Tidal Marsh						
dal	Sand Dune						
Tić	Undeveloped Tidal Buffer Zone (TBZ)						
	Previously-developed TBZ						
	Docking - Tidal Water						
	TOTAL						
SEC	TION 12 - APPLICATION FEE (RSA 482-A:3, I)						
	MINIMUM IMPACT FEE: Flat fee of \$400.						
	NON-ENFORCEMENT RELATED, PUBLICLY-FUN	DED AND SU	JPERVISED	RESTORAT	ION PROJEC	TS, REGARD	LESS OF
_	IMPACT CLASSIFICATION: Flat fee of \$400 (ref	er to RSA 48	2-A:3, 1(c)	for restricti	ons).		
	MINOR OR MAJOR IMPACT FEE: Calculate usin	ig the table b	pelow:				
	Permanent and temporal	ry (non-dock	ing):	SF		× \$0.40 =	\$
Seasonal docking structure:SF× \$2.00 = \$					\$		
Permanent docking structure:SF× \$4.00 = \$					\$		
	Projects p	roposing sho	oreline stru	uctures (incl	uding docks	) add \$400 =	\$
	Total = \$						
1	The application fee for minor or major impact is the above calculated total or \$400, whichever is greater = \$				0, whicheve	r is greater =	\$

#### NHDES-W-06-012

SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 30 Indicate the project classification.	06.05)					
Minimum Impact Project	num Impact Project Minor Project Major Project					
SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt	ECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)					
Initial each box below to certify:	-					
Initials To the best of the signer's knowledge and	d belief, all require	d notifications have been provided	ä.			
Initials: The information submitted on or with the signer's knowledge and belief.	e application is tru	e, complete, and not misleading to	the best of the			
Initials: Initials:	<ul> <li>The signer understands that:</li> <li>The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: <ol> <li>Deny the application.</li> <li>Revoke any approval that is granted based on the information.</li> </ol> </li> <li>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.</li> </ul>					
Initials: If the applicant is not the owner of the pr the signer that he or she is aware of the a SECTION 15 - REQUIRED SIGNATURES (Env-Wt 311	roperty, each prop application being fi .04(d): Env-Wt 31	erty owner signature shall constitu led and does not object to the filir 1.11)	ite certification by ng.			
SIGNATUBE (OWNER):	PRINT NAME LEGI	BLY: Tom Reis	DATE:			
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY: DATE					
SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY: Jay Johonnett					
SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env	v-Wt 311.04(f))					
As required by RSA 482-A:3, I(a)(1), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.						
TOWN/CITY CLERK SIGNATURE: PRINT NAME LEGIBLY:						
TOWN/CITY: DATE:						

#### DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3, I(a)(1)

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

#### DIRECTIONS FOR APPLICANT:

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

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

APPLICATION CHECKLIST
Unless specified, all items below are required. Failure to provide the required items will delay a decision on your project
and may result in denial of your application. Please reference statute RSA 482-A, Fill and Dredge in Wetlands, and the
Wetland Rules Env-Wt 100-900.
The completed, dated, signed, and certified application (Env-Wt 311.03(b)(1)).
Correct fee as determined in RSA 482-A:3, I(b) or (c), subject to any cap established by RSA 482-A:3, X (Env-Wt
311.03(b)(2)). Make check or money order payable to "Treasurer – State of NH".
The Required Planning actions required by Env-Wt 311.01(a)-(c) and Env-Wt 311.03(b)(3).
US Army Corps of Engineers (ACE) "Appendix B, New Hampshire General Permits (GPs), Required Information and <u>Corps Secondary Impacts Checklist</u> " and its required attachments (Env-Wt 307.02). This includes the <u>US Fish and</u> <u>Wildlife Service IPAC review</u> and <u>Section 106 Historic/Archaeological Resource review</u> .
Project plans described in Env-Wt 311.05 (Env-Wt 311.03(b)(4)).
Maps, or electronic shape files and meta data, and other attachments specified in Env-Wt 311.06 (Env-Wt 311.03(b)(5)).
Explanation of the methods, timing, and manner as to how the project will meet standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7)).
If applicable, the information regarding proposed compensatory mitigation specified in Env-Wt 311.08 and Chapter Env-Wt 800 - <u>Permittee Responsible Mitigation Project Worksheet</u> , unless not required under Env-Wt 313.04 (Env- Wt 311.03(b)(8); Env-Wt 311.08; Env-Wt 313.04).
Any additional information specific to the <b>type of resource</b> as specified in Env-Wt 311.09 (Env-Wt 311.03(b)(9); Env-Wt 311.04(j)).
Project specific information required by Env-Wt 500, Env-Wt 600, and Env-Wt 900 (Env-Wt 311.03(b)(11)).
A list containing the name, mailing address and tax map/lot number of each abutter to the subject property (Env-Wt 311.03(b)(12)).
Copies of certified postal receipts or other proof of receipt of the notices that are required by RSA 482-A:3, I(d) (Env-Wt 311.03(b)(13)).
Project design considerations required by Env-Wt 313 (Env-Wt 311.04(j)).
Town tax map showing the subject property, the location of the project on the property, and the location of properties of abutters with each lot labeled with the name and mailing address of the abutter (Env-Wt 311.06(a)).
Dated and labeled color photographs that:
(1) Clearly depict:
a. All jurisdictional areas, including but not limited to portions of wetland, shoreline, or surface water where impacts have or are proposed to occur.
b. All existing shoreline structures.
(2) Are mounted or printed no more than 2 per sheet on 8.5 x 11 inch sheets (Env-Wt 311.06(b)).
A copy of the appropriate US Geological Survey map or updated data based on LiDAR at a scale of one inch equals 2,000 feet showing the location of the subject property and proposed project (Env-Wt 311.06(c)).
A narrative that describes the work sequence, including pre-construction through post-construction, and the relative timing and progression of all work (Env-Wt 311.06(d)).

For all projects in the protected tidal zone, a copy of the recorded deed with book and page numbers for the property (Env-Wt 311.06(e)).
If the applicant is not the owner in fee of the subject property, documentation of the applicant's legal interest in the subject property, provided that for utility projects in a utility corridor, such documentation may comprise a list that:
(1) Identifies the county registry of deeds and book and page numbers of all of the easements or other recorded instruments that provide the necessary legal interest; and
(2) Has been certified as complete and accurate by a knowledgeable representative of the applicant (Env-Wt 311.06(f)).
The NHB memo containing the NHB identification number and results and recommendations from NHB as well as documentation of any consultation requests made to NHFG, communications and information related to the consultation, with the consultation results and recommendations from NHFG. (Env-Wt 311.06(g)). See <u>Wetlands</u> <u>Permitting: Protected Species and Habitat Fact Sheet</u> .
A statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments (Env-Wt 311.06(h)).
For projects in LAC jurisdiction, a statement of whether the applicant has received comments from the LAC and, if so, how the applicant has addressed the comments (Env-Wt 311.06(i)).
If the applicant is also seeking to be covered by the state general permits, a statement of whether comments have been received from any federal agency and, if so, how the applicant has addressed the comments (Env-Wt 311.06(j)).
Avoidance and Minimization Written Narrative or the Avoidance and Minimization Checklist, or your own avoidance and minimization narrative (Env-Wt 311.07).
For after-the-fact applications: information required by Env-Wt 311.12.
Coastal Resource Worksheet for coastal projects as required under Env-Wt 600.
Prime Wetlands information required under Env-Wt 700. See <u>WPPT</u> for prime wetland mapping.
For non-tidal shoreline structure projects, the length of shoreline frontage per Env-Wt 311.09(b)(1)
Required Attachments for Minor and Major Projects
Attachment A: Minor and Major Projects (Env-Wt 313.03).
Functional Assessment Worksheet or others means of documenting the results of actions required by Env-Wt 311.10 as part of an application preparation for a standard permit (Env-Wt 311.03(b)(3); Env-Wt 311.03(b)(10)). See Functional Assessments for Wetlands and Other Aquatic Resources Fact Sheet. For shoreline structures, see shoreline structures exemption in Env-Wt 311.03(b)(10)).
Optional Materials
Stream Crossing Worksheet which summarizes the requirements for stream crossings under Env-Wt 900.
Request for <u>concurrent processing of related shoreland / wetlands permit applications</u> (Env-Wt 313.05).

# New Hampshire Department of Environmental Services Dredge and Fill Wetlands Permit Application (WPA) Appendices

Appendix A NH Natural Heritage Bureau Data Check Results Letter (Per Section 1, NH ENV-WT 306.05 Appendix B Priority Resource Area and Protected Species (Per Section 1, NH ENV WT 306.05) Appendix C Habitat Evaluation Memorandum (Per Section 1, NH ENV-WT 306.05) Appendix D Aries Engineering April 24, 2023 Memorandum to NHDES (Per Section 2) Appendix E Engineering Project Plans, Drawings and Sheets (Per Sections 2, 7, 16, and NH ENV-WT 311.05, 311.03 {b}{4}) Appendix F Avoidance and Minimization Checklist (Per Section 8, NH ENV-WT 313.03{a}) Appendix G Copy of Application Fee (Per Section 12) Appendix H USGS Location Map (Per Section 16, NH ENV-WT 311.06{d}) Appendix I USACE Appendix B, NH General Permits, Required Information and Corps Secondary Impacts Checklist (Per Application Checklist, includes US FWS IPAC Review and Section 106 Historic/Archaeological Resource Review/NH Division of Historical Resources Review) Appendix J Coastal Resource Worksheet (Per Application Checklist, NH ENV-WT 600) Part 1—Coastal Resource Worksheet Part 2—Figure J1 Part 3—Narrative Part 4—Operations Monitoring & Maintenance Plan Part 5—Construction Monitoring Plan Appendix K Vulnerability Assessment Appendix L Coastal Functional Assessment Part 1—Coastal Functional Assessment Narrative Part 2-L1, Part A, Wetlands Functional Assessment (WFA) Worksheet Part 3—L1, Part B, Ecological Integrity Part 4—L2, USACE Wetland Evaluation Appendix M Copy of Town Tax Map, Location of Project on property, and location, name, and address of abutters, recorded deed with book and page numbers, and copies of certified postal receipts (Per Application Checklist, NH ENV-WT 311.06, 311.12, 311.13) Appendix N Color Photographs of Jurisdictional Area (Per Application Checklist, NH ENV-WT 311.06, 311.12, 311.13) Appendix O WPA Attachment A: Minor & Major Projects (Per Application Checklist) Appendix P Request for Concurrent Processing of Related Shoreland and Wetland Permit Application and Other Items (Per Application Checklist, NH ENV WT 311.05, 311.06) Appendix Q Tidal Shoreline Stabilization Worksheet Appendix R Tidal Dredging Worksheet Appendix S Portsmouth Marina Property Calculations



# NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

- To: Nyssa Seekamp, Seekamp Environmental Consulting, Inc. 15 Park Street Dover, NH 03820 nmseekamp@gmail.com
- From: NHB Review NH Natural Heritage Bureau Main Contact: Maddie Severance - <u>nhbreview@dncr.nh.gov</u>
- cc: NHFG Review, David Simmons

Date:	09/03/2024 (valid until 09/03/2025)
Re:	DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game
Permits:	NHDES - Shoreland Standard Permit, NHDES - Standard Dredge & Fill - Major

# NHB ID: NHB24-2245

Town:	Portsmouth
Location:	187 Wentworth House Road

**Project Description:** Sea Level, Inc. is undertaking the completion of a remediation project that was begun previously but remains incomplete. During the first remediation attempt a series of soil piles were left in the upland area and within the previously developed 100 foot Tidal Buffer Zone (TBZ). Additionally, a sump was created that disturbed a small portion of salt marsh. The piles of soil have been smoothed over and covered with a gravel base for stabilization until further remediation activities can occur. The purpose of this project is to complete the remediation and restore the disturbed salt marsh area.

# **Next Steps for Applicant:**

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

NHB Comments: No comments at this time.

**NHFG Comments:** Please refer to NHFG consultation requirements below.

# **NHB Consultation**

If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing <a href="https://nheavy.org/nheavy">nheavy.org/nheavy

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.



# NHB DataCheck Results LetterNH Natural Heritage BureauPlease note: maps and NHB record pages are confidential and shall be redacted from public documents.

# NH Fish and Game Department Consultation

If this NHB DataCheck letter DOES NOT include <u>ANY</u> wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB DataCheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <a href="https://www.wildlife.nh.gov/wildlife-and-habitat/nongame-and-endangered-species/environmental-review">https://www.wildlife.nh.gov/wildlife-and-habitat/nongame-and-endangered-species/environmental-review</a>. All requests for consultation and submittals should be sent via email to <a href="https://www.wildlife.nh.gov">NHFGreview@wildlife.nh.gov</a> or can be sent by mail, and **must include the NHB DataCheck results letter number and "Fis 1004 consultation request" in the subject line**.

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects <u>not</u> requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email <u>NHFGreview@wildlife.nh.gov</u>, and include the NHB DataCheck results letter number and "review request" in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.


#### **NHB Database Records:**

The following record(s) have been documented in the vicinity of the proposed project. Please see the map and detailed information about the record(s) on the following pages.

Vertebrate species	State <sup>1</sup>	Federal	Notes
Atlantic Sturgeon (Acipenser	Т	Т	Contact the NH Fish & Game Dept (see above) and
oxyrinchus oxyrinchus)			the US Fish & Wildlife Service (see below).
Shortnose Sturgeon (Acipenser	Е	Е	Contact the NH Fish & Game Dept (see above) and
brevirostrum)			the US Fish & Wildlife Service (see below).

<sup>1</sup>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 20 or more years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section above. Contact for federally-listed animals: David Simmons, USFWS, at (603) 223-2541. Contact for federally-listed species: David Simmons, USFWS, at (603) 223-2541.

<u>Disclaimer</u>: NHB's database can only tell you of <u>known</u> occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.

However, many areas have never been surveyed, or have only been surveyed for certain species.

NHB recommends surveys to determine what species/natural communities are present onsite.



NHB DataCheck Results Letter NH Natural Heritage Bureau Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

# NHB24-2245



NHB24-2245

EOCODE:

AFCAA01042\*003\*NH

# New Hampshire Natural Heritage Bureau - Animal Record

#### Atlantic Sturgeon (Acipenser oxyrinchus oxyrinchus)

Legal Status	Conservation Status				
Federal: Listed Threatened	Global: Rare or uncommon				
State: Listed Threatened	State: Critically imperiled due to rarity or vulnerability				
Description at this Location					
Conservation Rank: Not ranked					
Comments on Rank:					
Detailed Description: 2016: 1 individual, sex unknown, der individual, sex unknown, der unknown, detected in Little	own, detected in the lower Piscataqua River. 2015: 1 tected in Portsmouth Harbor. 2012: 1 individual, sex Bay.				
General Area: 2016: Tidal waters in Portsm	2016: Tidal waters in Portsmouth Harbor, Little Bay, and the Piscatagua River.				
General Comments:					
Management					
Comments:					
Location					
Current Site Names - Disectory - Diver					
Survey Sile Name: Piscalaqua River					
Managed By:					
County:					
Town(s): Out-Of-State					
Size 77/9 3 acres	Elevation:				
5120. 7745.5 40103					
Precision: Within 1.5 miles of the area indicate	ed on the map (location information is vague or uncertain).				
Directions: 2016: Tidal waters of Portsmouth H	arbor, 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.

NHB24-2245

EOCODE:

AFCAA01010\*001\*NH

# 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 individu the lower Piscat detected in Por Harbor up the P detected in Littl Little Bay.	als, 1 female and 1 sex unknown, detected in Portsmouth Harbor and taqua River. 2015: 3 females and 2 other individuals, sex unknown tsmouth Harbor. 2014: 1 female detected moving from Portsmouth Piscataqua River to the mouth of the Cocheco River. 2012: 1 female le Bay. 2011: 1 female detected in Little Bay. 2010: 1 female detected in
General Area: 2016: Tidal wat	ers 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 P	ortsmouth 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.

#### NHB DataCheck Results Letter

NH Natural Heritage Bureau Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB24-2245

EOCODE:

AFCAA01010\*001\*NH

# WPA Appendix B, Priority Resource Mapping

Per SECTION 1 of the WPA Application, the required planning review for all projects subject to Env-Wt 306.05; RSA 482-A:3, I(d)(2)), has been conducted, with a review of the following tools: the <u>Wetland</u> <u>Permit Planning Tool (WPPT)</u>, the Natural Heritage Bureau (NHB) <u>DataCheck Tool</u>, the <u>Aquatic</u> <u>Restoration Mapper</u>, or other sources to assist in identifying key features such as: <u>Priority Resource</u> <u>Areas (PRAs)</u>, <u>protected species or habitats</u>, coastal areas, designated rivers, or designated prime wetlands.

The site is a PRA, due to its situation within tidelands, shorelands, and wetlands buffer zones. Specific information on protected species or habitats is provided in WPA Appendices C and J.

#### **APPENDIX C** -Wildlife Habitat Memorandum

The sites in Portsmouth, NH has the potential to support many wildlife species, including some endangered, threatened or species of greatest concern according to the NH Wildlife Action Plan (WAP). Based on field observations, aerial imagery, and georeferenced habitat data, Seekamp Environmental Consulting, Inc. (SEC) observed four distinctive wildlife habitats on the site, including Hemlock-Hardwood-Pine Forest, Estuarine, Salt Marsh, and Developed. The open water and part of the forested portion of the site contains "Tier 1 Highest Ranked Habitat in NH" for wildlife, as mapped by New Hampshire Fish and Game (NHFG) in the WAP. The site is mapped as having "low permeability" for wildlife connectivity. The landscape's overall ability to allow wildlife to move and disperse was confirmed in the field by SEC.

#### Hemlock-Hardwood-Pine Forest

Hemlock-Hardwood-Pine Forest is an upland habitat that makes up approximately 2,500 SF of the site. These habitats are transitional and can occur over different elevations, topography and soil types. They are comprised mainly of hemlock, white pine, beech, and oak trees. Most species that utilize this habitat require large unfragmented blocks of forest.

According to the NH WAP, hemlock-hardwood-pine forested habitat may support the following species: American woodcock, bald eagle, big brown bat, black-billed cuckoo, blue-spotted salamander complex, Canada warbler, chimney swift, common nighthawk, Eastern box turtle, Eastern hog-nosed snake, Eastern red bat, Eastern small-footed bat, Eastern whip-poor-will, golden eagle, hoary bat, Jefferson salamander complex, little brown bat, moose, Northern black racer, Northern goshawk, Northern long-eared bat, purple finch, rapids clubtail, ringed boghaunter, ruffed grouse, scarlet tanager, silver-haired bat, skillet clubtail, timber rattlesnake, tricolored bat, veery, and wood thrush.

The forested habitat on site is minimal and highly fragmented by surrounding developments. The

NHB Memo (NHB24-2245) results do not indicate that any of these species have been reported to occur on site. It is SEC's opinion that the hemlock-hardwood-pine forest habitat on site is not likely to support the minimum requirements of these species, therefore, there is a low potential for these species to occur on site.

#### **Estuarine**

An estuary is an open water habitat that makes up approximately 0.7 acres of the site. These habitats are formed when freshwater meets saltwater, in NH these habitats are found in the Great Bay and coastal watersheds. This type of habitat includes intertidal mudflats, oyster reefs, and eelgrass beds. Intertidal mudflats are most present on site.

According to the NH WAP, estuarine habitat may support the following species: American black duck, American oyster, American shad, Atlantic sturgeon, blueback herring, rainbow smelt, red

knot, ruddy turnstone, sanderling, sea lamprey, semipalmated sandpiper, shortnose sturgeon, whimbrel, and willet.

The estuarine habitat on site is minimal and fragmented by the marina and boat docks. The NHB Memo (NHB24-2245) results do not indicate that any of these species have been reported to occur on site. It is SEC's opinion that the estuarine habitat on site is not likely to support the minimum requirements of these species, therefore, there is a low potential for these species to occur on site.

## Salt Marsh

Salt marsh is a transitional habitat that makes up approximately 870 SF of the site. These habitats are grass-dominated tidal wetlands which mark the transition between the ocean and upland and are often found bordering estuarine habitats. They provide excellent habitat for bird species and are among the most productive ecosystems. In addition, salt marsh plants are salt-tolerant, and their roots provide stabilization of coastal banks which helps protect from erosion during storm surges and acts as a buffer to surrounding upland habitats.

According to the NH WAP, salt marsh habitat may support the following species: common tern, marsh wren, Nelson's sparrow, Northern harrier, purple martin, red knot, roseate tern, saltmarsh sparrow, saltmarsh tiger beetle, sanderling, seaside sparrow, semipalmated sandpiper, whimbrel, and willet.

The salt marsh habitat on site is minimal and highly fragmented by surrounding developments. The NHB Memo (NHB24-2245) results do not indicate that any of these species have been reported to occur on site. It is SEC's opinion that the salt marsh habitat on site is not likely to support the minimum requirements of these species, therefore, there is a low potential for these species to occur on site.

#### Developed

Developed habitat is an upland habitat that makes up approximately 2.7 acres of the site. These habitats include areas that contain residential or commercial development in NH which includes maintained gardens, lawns and buildings and other structures. Some wildlife have learned to use these areas for nesting, food sources and corridors connecting to other habitats.

According to the NH WAP, developed habitat may support the following species: American bumble bee, American kestrel, chimney swift, cliff swallow, common nighthawk, monarch, peregrine falcon, purple martin, rusty-patched bumble bee, yellow bumble bee, and yellowbanded bumble bee.

The developed habitat on site contains minimal vegetation and is highly fragmented from other more productive habitats. There are few food sources present and minimal areas for nesting. The NHB Memo (NHB24-2255) results do not indicate that any of these species have been reported to occur on site. It is SEC's opinion that the developed habitat on site is not likely to support the

minimum requirements of these species, therefore, there is a low potential for these species to occur on site.





#### **MEMORANDUM**

DATE:	April 24, 2023
FILE No.:	2021-075
TO:	Kristen Duclos, Wetlands Specialist, NHDES Wetlands Permitting
FROM:	Jay Johonnett, Rick Kowalski, Aries Engineering (Aries)
CC:	Patrick Seekamp, Seekamp Consulting; Steve Graham, Pete McGlew, Aries; Tom
	Reis, Sea Level LLC
SUBJECT:	Project Background for Permitting
PROJECT:	Sea Level, LLC Marina, 187 Wentworth Road, Portsmouth, NH

This memorandum was prepared in follow up to our Pre-Wetlands Application meeting with you on April 6, 2023, when it was mutually agreed that a history and context for the various permit applications that will be required for this project would be helpful to assist NHDES in its review of wetland, shoreline, and conditional use permit applications that will be submitted for this project. Aries Engineering has been retained by Sea Level, LLC (current property owner) to perform soil remediation planning activities to address polychlorinated biphenyls (PCBs) on the property located at 187 Wentworth Road in Portsmouth, New Hampshire (the Site) in accordance with the Toxic Substances Control Act (TSCA, 40 CFR Part 761.61(a)) using a Self-Implementing Cleanup Plan (SIP) and the New Hampshire Department of Environmental Services (NHDES) regulations Chapter Env-Or 600 Contaminated Site Management. The Site, formerly known as Witch Cove Marina, is now called Portsmouth Marina.

#### SITE LOCATION AND LEGAL DESCRIPTION

The Site is located along the south bank of Sagamore Creek and Witch Cove, on the north side of Wentworth Road in Portsmouth, New Hampshire (see Figure 1, Site Location Map in attached permit application drawing set). Portsmouth municipal records indicate that the Site consists of one 3.07-acre parcel identified as Lot 12 on Portsmouth Assessor's Map 201.

#### SITE AND VICINITY GENERAL DESCRIPTION

The Site is developed with one commercial/retail/warehouse building, three commercial apartment residences, one dry boat storage structure, two garages, and two sheds. The dry boat storage structure was destroyed by fire in November 2021, although the foundation remains, and the owner intends to rebuild the storage structure on the same footprint. The Site has been used for boat storage and as a maintenance facility since initial development in the 1950s. Developed properties in the Site area obtain water from the municipal water supply and domestic wastewater is discharged to private septic systems.

The Site topography generally slopes gently downward toward the north across the Site. The slope steepens sharply upon approaching the shoreline to Witch Cove, where at the shore edge, boulder riprapping serves as a retention and slope stability surface. The topography at the Site generally ranges from elevation 8 to 16 feet as referenced to the North American Vertical Datum

1988 (NAVD88). According to the FEMA Flood Hazard map, the northeast area of the Site along Sagamore Creek, a tidal inlet, is located within the 100-year flood zone (Zone AE) associated with the creek established at elevation 7.90 feet NAVD88. A larger area is within the 500-year flood zone (Zone X) extending to the south from the creek. Review of the project location on the U.S. Fish & Wildlife Service website indicates that wetlands of national significance are present along the banks of Sagamore Creek. The delineation of the wetlands was confirmed by a recent survey completed by Seekamp Environmental Consulting, Inc (Seekamp) of Kingston, NH on August 7, 2020 (Figure 2).

## CURRENT AND PAST USES OF THE PROPERTY

The City of Portsmouth Tax Assessor's database records indicate that the residences and commercial building present on Lot 12 were constructed in 1950. According to the prior owner J.P. Nadeau, the Site was operated as Witch Cove Marina from 2000 to 2016 and was Mike's Marina prior to 2000. Mr. Nadeau indicated that the Site has been used as a boat yard since its initial development sometime in the 1950s. Mr. Nadeau sold the property to Sea Level LLC on August 15, 2016. Review of historic topographic maps and aerial photographs show development of the Site between 1920 and 1956 and it being undeveloped prior to 1920. Two docks are visible in a 1960 aerial photograph indicating the likely use of the Site as a marina. Aerial photographs presented below show how the site continued to be used as a boat storage yard since at least 1992, down to the edge of the shoreline.

#### **PRIOR SITE INVESTIGATIONS - REMEDIAL ACTIVITIES**

PCBs were present in the Site soils and adjacent sediments in the cove, from historic maintenance of boats, specifically, the removal of bottom paint that contained PCBs. The results of the prior investigations completed on the Site indicate that PCBs at concentrations up to 100 milligrams per kilogram (mg/kg) had been detected in Site soils. These soils containing elevated concentrations of PCBs were subsequently removed in an attempt to achieve a post remedial condition of <1 mg/kg PCBs remaining in Site soils (as approved by EPA on September 9, 2016). The following is a summary of the activities previously completed on the Site.

#### Initial Subsurface Investigation and 2014 Remediation

A Phase II Environmental Site Assessment (ESA) conducted by Stonehill in 2014 included the collection of eight shallow soil samples from soil borings designated as B-1 through B-8. PCBs were detected in one soil sample (28 mg/kg in B-2) at a concentration above the NHDES Soil Remediation Standard of 1.0 mg/kg. This sample was collected from the area where boats had been historically stored in the off-season. Based upon the review of the assumed isolated area of PCBs around B-2, in Spring 2014 an area 10 feet by 15 feet to a depth of approximately two feet was excavated centered around B-2 by Duffield Engineering & Consulting (Duffield) and disposed off-Site at ESMI Landfill in Loudon, NH. A report was prepared and submitted to NHDES to meet the notification requirements. In June 2014 NHDES advised that PCB-impacted sites fall under EPA jurisdiction and that EPA Region 1 should be contacted.

Duffield subsequently developed a sampling plan to meet the TSCA 40 CFR 761 requirements. A grid layout centered at boring B-2, oriented with north-south and east-west axis and a 1.5-meter



grid spacing was used in a hexagonal configuration per federal regulation and guidance. Subsequent sampling rounds were conducted on 8/31/2014, 9/19/2014, 10/20/2014, 11/6/2014, 12/21/2014, 4/17/2015, 5/15/2015 and 5/4/2015. 154 samples were collected and analyzed. The surface sample results and grid layout are shown on Figure 3A (blue dots).

The PCB impact area was estimated at 2,300 square feet and with a one-foot depth for soil removal proposed by Duffield, equated to approximately 85 cubic yards of soil. Duffield submitted a Self-Implementing Plan (SIP) on August 18, 2015 to EPA to address the PCBs which was approved by EPA on March 15, 2016, but this SIP was never implemented. Upon sale of the property from Mr. Nadeau to Sea Level LLC on August 15, 2016, GeoInsight was subsequently retained to complete additional investigation and remediation by the new Site owner, Sea Level LLC.

#### Geoinsight investigation and 2016/2017 Remediation

GeoInsight submitted correspondence to EPA dated July 12, 2016 to present a PCB Cleanup and Disposal Plan Addendum. This Plan, which specified the removal of soils containing PCBs at a concentration >1 mg/kg, was approved by EPA on September 9, 2016.

Prior to implementing the PCB Cleanup and Disposal Plan Addendum, GeoInsight collected additional surface soil samples in July 2016, for PCB analyses in four areas that the highest PCB concentrations were detected. The results of these analyses are depicted on Figure 3A (green dots). The concentrations of PCBs detected in these samples were 20 mg/kg or less.

GeoInsight completed remedial excavation activities in two phases: the first phase consisting of removing and disposing of soils with PCB concentrations  $\geq$ 50 mg/kg and the second phase consisting of removing and disposal of soils with PCB concentrations >1 <50 mg/kg. Between November 15 and 17, 2016, the excavation of three areas ("A", "B" and "C" excavations) with PCBs at concentrations  $\geq$ 50 mg/kg was completed to a depth of 2 feet below grade in the locations shown on Figure 3B. Following the completion of these excavations, GeoInsight collected verification samples. The locations and results of these samples are shown on Figure 3B. A total of 14.11 tons of  $\geq$  50 mg/kg PCB soils were disposed at Wayne Disposal Inc. of Belleville, Michigan on December 20, 2016.

The excavation of soils with concentrations >1 mg/kg and <50 mg/kg occurred between December 15, 2016 and January 3, 2017 to a depth of 1 foot below grade in the area outlined on Figures 2 and Figures 3A-3C (outlined in purple). Following the completion of this excavation, GeoInsight collected verification samples. A total of 141 soil samples were collected. All results were less than 30.5 mg/kg. GeoInsight could not collect all of the planned soil samples for analysis of PCBs in the northernmost area of the excavation during initial excavation activities due to wet conditions. A total of 242.28 tons of <50 mg/kg PCB soils were disposed at the Waste Management of New Hampshire Turnkey Landfill in Rochester, New Hampshire in February 2017.

A small pile of soil with PCB concentrations <50 mg/kg was inadvertently left on the Site by GeoInsight (approximately 2-4 cubic yards). This soil was placed back into the excavation area after it was determined that the volume of soil that would be required to be removed to achieve the <1 mg/kg TSCA high occupancy cleanup goal was not economically feasible. All the material



was deposited in a pile in one of the two-foot-deep excavation areas. This material was sampled during the August 2020 supplemental soil sampling. It was anticipated that this soil might need to be removed again, so it was placed on and covered with plastic sheeting.

The continued use of the property for boat storage was determined from a review of TSCA regulations and discussion with EPA, to be allowable if a 6-inch-thick concrete pad would be constructed to serve as a TSCA-compliant cap to cover >25  $\leq$ 50 mg/kg PCB soils. The use of a TSCA compliant cap, in lieu of a fence, to isolate the remaining PCB soils will attain the TSCA low occupancy cleanup goal for soils with <50 mg/kg of PCBs.

## Supplemental Soil Sampling Results, 2020-2021

In order to document the concentrations of PCBs remaining on Site following the excavation activity implemented by GeoInsight in 2016 and 2017 and the placement of a small pile of soils back into the excavation that had been previously removed in an attempt to achieve a cleanup level of <1 mg/kg, a grid of borings was completed in the area where samples were not previously collected and where the previously excavated soils were emplaced.

# August 2020 Sampling Round

On August 24, 2020, a new consultant, CEA, collected a total of 16 soil samples (Sample #1 to #16) from the perimeter of the excavation area and five soil samples from the area where a small soil pile was placed back into the excavated area (Sample #17 to #21). This soil pile had been created after the  $\geq$  50 mg/kg PCB soils had been removed from the Site, as discussed in the section above. The location of samples #1 to #16 are shown on Figure 4B in blue text and samples #17 to #21 are shown on Figure 4B in purple text. These results indicate that there were four perimeter locations which exhibited PCB concentrations greater than 1 mg/kg, with a maximum concentration of 15 mg/kg detected in a sample collected from the northeast perimeter of the excavation area (sample N9-W2). The results for the soil pile samples indicated that the concentrations of PCBs were all less than 1 mg/kg.

In addition to the PCB samples, CEA collected two, 4-point composite, post-excavation confirmatory soil samples for laboratory analysis for Volatile Organic Compounds (VOCs), and arsenic and lead, in accordance with the requirements stipulated by the NHDES in their March 31, 2016 letter to the former owner (Mr. Nadeau), in response to plans submitted by Duffield. The results of these analyses indicated that there were no detections of VOCs in the samples. Low concentrations of arsenic and lead were detected in the samples.

#### September 2020 Sampling Round

Based on the August 2020 PCB results, a second round of soil sampling was completed on September 16, 2020, to further delineate the extent of the PCBs around the perimeter of the excavation area where concentrations of PCBs were greater than 1 mg/kg. A deeper sample was also collected from the location of N9-W2 where 15 mg/kg was detected, and samples were collected in seven other locations (samples #25 - #31) beyond the locations previously sampled. Soil samples were collected at two depths (0-0.25 ft and 1-1.25 ft) in four of these locations (sample #s 25, 26, 27 and 28), for a total of 12 samples. The results of these second analyses



indicate that seven of the samples exhibited PCB concentrations of 1.2 to 5.1 mg/kg. The other five samples had no PCB detections.

Based on the results of the lead in soils analyses, CEA activated these samples for analysis via the Synthetic Precipitation Leaching Procedure (SPLP), as required by NHDES for samples with total lead concentrations greater than 100 mg/kg. The results of these analyses indicated that both samples exhibited leaching concentrations less than the regulatory limit of 5 milligrams per liter (mg/L) for lead. However, the results indicate that the concentrations exceed the NHDES Ambient Groundwater Quality Standard (AGQS) for lead (15 micrograms per liter, ug/l), which indicate the potential for the contaminated soils at the site to leach lead to groundwater at concentrations that could exceed the AGQS. Aries notes that the proposed concrete cap over these soils will minimize the potential for lead to leach from these soils to the groundwater.

## March 2021 Sampling Round

Due to the detection of greater than 1 mg/kg of PCBs in seven locations in the September 2020 round, CEA collected 35 soil samples on March 3, 2021 and 19 samples on March 25, 2021. A number of these samples were from an area beyond the Sea Level property line, and many were collected from within tidally flushed Sagamore Creek wetlands. The samples collected on March 3, 2021 were identified as S-32 through S-40 -S and -D, S-41-S, S-42-S, S-43-S, S-44-S, S-44-D and S-45-S to S-55-S. The samples collected on March 25, 2021, were identified as 35-2-S, 35-2-D, 35-2 (1.5-1.75'), 41-D, 55-D, and 56- to 68-S. Most of these samples were collected from beyond the northern extent of the PCB excavation area, with the exception of samples 43 and 44 S and D which were collected from beyond the eastern extent of the excavation area. The locations of all of these samples are shown on Figure 4B. Note that the "S" prefix for samples S-32 to S-55 were dropped when depicted on Figure 4B.

The results for the March 3, 2021, samples indicate that there were 11 samples that had concentrations ranging from 1.06 to 6.9 mg/kg. The remaining samples had concentrations less than 1 mg/kg, or were not detected. The results for the March 25, 2021, samples indicate that there were three samples that had concentrations ranging from 2.3 to 4.5 mg/kg. The remaining samples had concentrations less than 1 mg/kg, or were not detected.

# April 2021 Sampling Round

The March 2021 results indicated that the extent of PCB impacts greater than 1 mg/kg had still not been fully delineated horizontally. Note that at this time, and until May 4, 2022, the property line was believed to be further north than was subsequently verified by Aries in consultation with Sea Level's surveyor. On April 20, 2021, CEA collected 12 surface soil samples along the northern edge of the property, identified as samples 69 to 80 (Figure 4B). Three of the 10 samples analyzed contained 1.2 to 1.9 mg/kg PCBs; eight samples had concentrations less than 1 mg/kg, or were not detected.), but one of the samples ultimately determined to exist beyond the northern property boundary (#76), exhibited a concentration of 230 mg/kg PCBs. This sample was considered a "hot spot" area, since it contained more than double the maximum PCB concentration detected in all the other samples. and had some rotten wood and colorful paint chips present. The colors were noted to be typical for use on boats. Since this was the first sample (out of 286 samples) that contained Aroclor 1242, in contrast to Aroclors in the other



samples which were Aroclors 1254 and 1260 predominantly, and did not include Aroclor 1242, this hot spot area was considered a separate source of PCBs, and therefore not part of the Sea Level property or responsibility. Historically, both properties have been used for the storage and maintenance of boats.

#### May 2021 Sampling Round

The May 12, 2021, sample round focused on the immediate area of sample #76. CEA collected 13 soil samples at three depths (0-0.25', 1-1.25' and 2-2.5') in three locations (81, 82 and 83). Samples were also collected at two depths (0-0.25' and 1-1.25') in two locations (84 and 85). The locations of the samples are shown on Figure 4B.

The results for the May samples indicated that the sample #76 hot spot appears to be a small isolated area, and shallow in depth, constituting perhaps less than 0.5 cubic yard, and reflecting the presence of discrete paint remnants. The highest concentration detected was 9.2 mg/kg in a surface sample (#81) within six inches to the west of sample #76. This sample also contained Aroclor 1242, but no other samples in this round did. Sample #84, located approximately 5 feet east-southeast from #76 had concentrations of 1.0 and 1.29 mg/kg in its samples from 0-0.25' and 1-1.25', respectively. The remaining 10 samples had PCB concentrations less than 1 mg/kg, or were not detected. Ultimately, it was decided to remove the # 76 hot spot, based on input from EPA and concurrence by Sea Level, as part of the remediation project.

#### Summary of Supplemental Sampling Results

Based on the results of the above-described PCB analyses, Aries concludes that the extent of the PCB impacts on Site have been fully delineated. Of the 91 soil samples analyzed within areas outside the previously designated boundary of PCB occurrence, 77 contained <1 mg/kg PCBs. The maximum concentration detected on Site (sample #76 is off-site) of these 91 samples was 15 mg/kg. Two other samples had concentrations between 5 and 10 mg/kg. Eleven samples had concentrations between 1 and 5 mg/kg.

#### **REVISED CLEANUP PLAN**

The soils remaining on the Site have been delineated sufficiently and demonstrate that the remaining on-site soils have concentrations less than 50 mg/kg PCBs. As previously stated above, it was determined that the cost to achieve the planned <1 mg/kg cleanup goal would be approximately double the originally estimated amount. Therefore, it is proposed in the SIP Addendum to conduct the following remediation efforts:

1) **Hot Spot:** remove these soils at location #76 for disposal as >50 mg/kg PCBs at a TSCAapproved facility off-site; this is located outside of Zone AE (depicted on Figure 4B) to achieve either <1 mg/kg if possible, or <25 mg/kg at a depth of 1 foot below clean fill;

2) Soils with PCBs ≥25 <50 mg/kg Outside Zone AE: these will be covered/isolated with a 6inch-thick concrete pad, which will serve as a TSCA compliant cap, in lieu of a fence, to attain the TSCA Low Occupancy cleanup goal for soils with <50 mg/kg of PCBs. This cap will also minimize the potential for lead, previously found at low levels, to leach from these soils to the groundwater.



The concrete pad will extend at least 10 feet beyond the area where the PCBs have been delineated to  $>25 \le 50 \text{ mg/kg}$ . The total area of the pad will be approximately 5,000 square feet. The pad will be constructed by leveling and compacting the subgrade using a plate compactor or vibratory roller. A witness fabric consisting of a geotextile fabric will be emplaced over the compacted subgrade soils. A layer of 6-inches of compacted crushed gravel will be emplaced over the witness fabric. The crushed gravel shall meet the material specifications for New Hampshire Department of Transportation (NHDOT) 304.3 Crushed Gravel. The pad will be surrounded by a 2-foot wide, 1-foot deep layer of <sup>3</sup>/<sub>4</sub>" washed crushed stone, and other erosion control measures both temporary and permanent will be established in accordance with City of Portsmouth/NHDES requirements, to allow stormwater runoff from the pad to infiltrate into the ground and to protect the soils left in place from erosion. The area proposed for the concrete pad was previously used for boat storage on a crushed gravel ground surface. The crushed gravel was considered an impervious surface. As such, no net increase of impervious area is proposed and a stormwater management plan is not required in accordance with NH RSA 483-B:9. A plan view of the pad relative to the PCB impacted area, and the proposed stone riprap area which extends to the top of the slope overlooking the cove, is shown on Figure 4B;

3) **Surficial Soils within Zone AE, PCBs > 1 < 25 mg/kg:** Remove shallow soils (0-6 inches) located within Zone AE (100-year flood zone) which cannot receive a cover protecting these impacted soils from future erosion due to wind, rain or flooding that may occur in this area and disturb the elevated PCBs (i.e., >1 mg/kg <25 mg/kg); seven locations with PCB concentrations >1 mg/kg within or immediately adjacent to Zone AE, constituting three small areas outlined in red on Figure 5, have a total area of approximately 195 ft<sup>2</sup>. Therefore, the estimated volume of soil to be removed is approximately 4 cubic yards (CY). The excavation will be backfilled with wetland soils and re-vegetated with wetland species as required by City of Portsmouth/NHDES regulations;

4) **Other Soils within Zone AE, > 1<25 mg/kg PCBs:** These soils are to be left in place and covered with 6 inches of clean imported material at a minimum to match the surrounding existing grades, see Figure 5.

Note that in order to accommodate a clean soil cover in the areas being remediated within Zone AE, those areas will be excavated to a depth of 0.5 feet prior to emplacement of a 6-inch clean wetland-type soil cover in order to avoid increasing the grade in this area which would decrease the flood storage and require approval by the Federal Emergency Management Agency (FEMA) under a Letter of Map Revision (LOMR). The top and bottom of slopes and the wetland soil removal areas will be restored in accordance with City of Portsmouth/NHDES requirements, under a permitting process to be completed prior to excavation, and as depicted in Figures 5, 6 and 7. The excavated soils from the area within Zone AE, which will be < 25 mg/kg PCBs, will be disposed off-Site at an approved facility such as the Turnkey Landfill in Rochester, NH.

Bottom samples will be obtained in accordance with 40 CFR Part 761, Subpart O, to document PCB concentrations to be left in place below the clean soil cover.

A deed restriction will also be placed on the portion of the property with residual PCBs in soil in accordance with both 40 CFR 761.61 (a) (8) and NHDES regulations Chapter Env-Or 600 Contaminated Site Management.



The concrete pad will be placed in an area outside Zone AE and extend at least 10 feet beyond the area where the PCBs have been delineated to >25 ≤50 mg/kg. The total area of the pad will be approximately 5,000 square feet. Since the excavation area was not backfilled following soil removal, no material will need to be removed from the proposed concrete pad area to prepare for the installation of the pad. The pad will be constructed by leveling and compacting the subgrade using a plate compactor or vibratory roller. A witness fabric consisting of a geotextile fabric will be emplaced over the compacted subgrade soils. A layer of 6-inches of compacted crushed gravel will be emplaced over the witness fabric. The crushed gravel shall meet the material specifications for New Hampshire Department of Transportation (NHDOT) 304.3 Crushed Gravel. Fill materials should be placed in 12-inch maximum loose lifts and should be compacted to a minimum of 95 percent of the material's maximum dry density, as determined by ASTM D 1557 (modified proctor test) and confirmed with field density testing (ASTM D 6938 or equivalent method). Lift thickness should be a maximum of 6-inch loose lifts when compacted with handguided equipment. Concrete forms shall be installed, and the concrete poured in one pour. The concrete shall be constructed in accordance with current NHDOT Standard Specifications for Roads and Bridges. The pad will be surrounded by a 2-foot wide, 1-foot deep layer of <sup>3</sup>/<sub>4</sub>" washed crushed stone, and other erosion control measures both temporary and permanent will be established in accordance with City of Portsmouth/NHDES requirements, to allow stormwater runoff from the pad to infiltrate into the ground and to protect the soils left in place from erosion. A plan view of the pad relative to the PCB impacted area is shown on Figure 4B.

#### Permits

Aries will obtain the necessary local and state permits including those required for working within the tidal buffer zone from the NHDES Wetlands Bureau and City of Portsmouth Conservation Commission. Aries will prepare documentation and obtain permits or document compliance with the following federal, state, and City regulatory requirements:

- NHDES Major Impact Wetland and Shoreline Permit Applications (WPAs): In accordance with the December 15, 2019, NHDES wetland rules, this project is assumed to be classified as "major" due to its disturbance of existing wetlands, and therefore this permit must be obtained. Sea Level LLC intends to submit the wetland and shoreland applications to the NHDES, and ConCom as one approximately concurrent submittal. Four hard copies of the application (full size drawings and text) will be provided to ConCom for their internal use and public review. A final tree inventory (Figure 7) has been prepared, which reflects the final square footage discussed above and final cap and grading requirements.
- City of Portsmouth Conditional Use Permit: The Shoreland Permit Application will request a Conditional Use Permit Application (CUPA) from ConCom for work occurring within tidal wetland overlay district, which this project triggers. The proposed grading and clearing activities within 100-feet of the highest observable tide line of Sagamore Creek (7.9 feet) are subject to review by the City of Portsmouth through the CUPA Permit process. A request to alter an area in excess of 10,000 square-feet of tidal buffer zone would require possible compensatory mitigation, but this project does not reach that threshold. A Functional Evaluation Form (FEF) consisting of approximately two pages of narrative and a writeup of planned saltmarsh restoration plan will be prepared.



Based on the on-line NHDES Wetland Permitting Tool, Sagamore Creek contains two priority resource areas, including tidal wetland and floodplain wetland adjacent to a Tier 3 stream, which influence the classification and permitting requirements for the project.

- U.S. Army Corps of Engineers (ACOE) Appendix B Checklist: This checklist will be submitted to the ACOE to identify planned sediment remediation location and techniques, and will be submitted in parallel to the DES Application.
- NH Historic Resource Information Verification: Sea Level, LLC verified in 2022 that a Phase IA or Phase 1B archeological assessment work is not required, via correspondence with the responsible NHDES agency, but an update to that letter will be made in parallel to the DES submittal.
- NH Natural Heritage Bureau (NH NHB) Verification: Sea Level, LLC verified in 2022 via correspondence with this agency, that Protected species survey and/or mitigation plans will not be needed, but an updated letter to this agency is required, and will be made in parallel to the DES submittal.
- **Abutter Notification:** Sea Level, LLC will notify all abutters of this project via certified mail in accordance with Env-Wt 501.01(c).
- New Hampshire State Programmatic General Permit (SPGP): Sea Level, LLC will determine if this Permit and/or State or federal compensatory mitigation is required, by quantifying and classifying the level of natural resource impact (wetland, wetland buffer, shoreland, vernal pool, exemplary natural community, and endangered species habitat) to determine if the proposed project qualifies for this review and its requirements. At this point, this does not appear needed.
- **Vulnerability Assessment Env-Wt 603.05:** This new NHDES requirement involves evaluation of climate-related potential impacts to the site shoreline, and will be prepared by Sea Level LLC. Known as a Climate Resiliency Assessment, this must be done as part of the NHDES WPA.

EPA's approval of the Revised Cleanup Plan, also known as a Self-Implementing Plan, is included as **Attachment 1**.



# **PHOTOGRAPHS**



Photo 1: Google Maps Street View – 187 Wentworth Road (prior to November 2021 fire destroyed 3-sided structure, work area to left of structure).



Photo 2: April 1992 Google Earth Image– Approximate 2016-2017 PCB excavation extents outlined in purple.





Photo 2: April 2013 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple.



**Photo 3:** October 2014 Google Earth Image – Approximate excavation extents outlined in purple.





**Photo 4:** May 2015 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple. Evidence of 2014 excavation is seen at bottom right of excavation extents.



Photo 5: May 2018 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple.



**Photo 6:** June 2020 - Witch Cove on left, PCB excavation area (overgrown) in foreground. Former marina building in background. View to east.



Photo 7: June 2020 - Witch Cove on left, PCB excavation area (overgrown) in foreground. Former marina building in background. View to east.





Photo 8: June 2020 - Witch Cove over slope in background. View to northeast.



Photo 9: June 2020 - Witch Cove over slope in background. View to northeast.





Photo 10: June 2020 - Parking / storage area, PCB soil excavation area, and residence across Witch Cove. View to northwest.



Photo 11: June 2022 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple. Area covered with geotextile marker and sand.



Photo 12: October 2022 - PCB excavation area covered with sand and marker barrier. View to east. Witch Cove visible in background.



Photo 13: October 2022 - PCB excavation area covered with sand and marker barrier. View to west.



# ATTACHMENT 1

From:	Woodward, Katherine (she/her/hers)
To:	Richard Kowalski
Cc:	tom@substructure.com; Stephen Graham
Subject:	RE: Revised SIP for Portsmouth Marina, New Hampshire
Date:	Thursday, February 2, 2023 11:06:45 AM

Rick,

Yes. It only applies only to the soil that is not capped.

Kate

From: Richard Kowalski <rkowalski@aries-eng.com>
Sent: Thursday, February 2, 2023 11:03 AM
To: Woodward, Katherine (she/her/hers) <Woodward.Katherine@epa.gov>
Cc: tom@substructure.com; Stephen Graham <sgraham@aries-eng.com>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Ms. Woodward: Thank you for your comments. Please provide clarification on one issue. Does the additional/modified condition #1 only apply to those areas that will not be covered by the concrete cap? This would be consistent with the third bullet item below. Thanks,

Rick Kowalski Director of Hydrogeology Cell (508) 951-3673

?

This e-mail and attachments (if any) are intended only for the addressee named above, and may contain privileged or confidential information. If you are not the intended message recipient, please do not use, copy, or print this information. Also, please do not forward or disclose this information to others. If you have received this communication in error, please notify this message sender by replying to this message and then delete this e-mail and attachments (if any) from your e-mail system. Thank you.

From: Woodward, Katherine (she/her/hers) <<u>Woodward.Katherine@epa.gov</u>>
Sent: Tuesday, January 31, 2023 5:28 PM
To: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Mr. Kowalski,

EPA is in receipt of August 10,2022 *Revised PCB Cleanup Status Report and Request to Modify Approved PCB Cleanup and Disposal under 40 CFR 761.61(a)* (the "Modification") which was submitted under the procedures of 40 CFR § 761.61(a)(3)(ii) as specified in Condition 16 of the September 9, 2016 PCB Cleanup and Disposal Approval under 40 CFR § 761.61(a) (the "Approval"). The modification includes the following:

- The area shown in Figure 7B, bounded by the green line has been determined to be a *low occupancy area* rather than a *high occupancy area*.
- Additional PCB remediation waste with ≥ 50 ppm PCBs in the vicinity of sample location #76 will be removed to a depth of 1 ft below grade surface (ft bgs) to achieve a PCB concentration of at least < 25 ppm. However, the goal will be to remediate to < 1 ppm. The PCB remediation waste shall be disposed in accordance with 40 CFR § 761.61(a)(5)(i)(B)(2)(iii).</li>
- Any *PCB remediation waste* with ≥ 25 ppm but < 50 ppm remaining outside of the Zone AE will be covered with a concrete cap compliant with 40 CFR § 761.61(a)(7).
- Any *PCB remediation waste* with > 1 ppm within the Zone AE boundary will be removed and disposed in accordance with 40 CFR § 761.61(a)(5)(i)(B)(2)(*ii*).
- Verification samples shall be collected in accordance with 40 CFR Part 761 Subpart O to document the concentrations remaining beneath the clean soil cover (shown in Figure 7A)
- A concrete pad as shown in Figures 7B and 8 will be placed over the remainder of the remediated area and provide a compliant cap over the area.
- A deed restriction will be placed on the property in accordance with 40 CFR § 761.61(a)(8)

EPA may approve this modification under the provisions of 40 CFR § 761.61(a)(3)(ii). Please be aware that the following additional/modified Conditions will be applied to the modification:

- The cleanup level for bulk *PCB remediation waste* (i.e., soil) remaining at the Site shall be less than or equal to ("≤") 25 parts per million ("ppm") to meet the *low occupancy area* cleanup requirements at 40 CFR § 761.61(a)(4)(i)(B)(3) (Modified Condition).
- 2. Within sixty (60) days of completing final property-wide remediation, Sea Level LLC shall submit to EPA a recorded deed restriction for the property in its entirety. The deed restriction shall include: a description of the extent and levels of contamination at the property following abatement; a description of the actions taken at the property; a description of the use restrictions for the property; and the long-term monitoring and maintenance requirements on the property per the requirements of 40 CFR § 761.61(a)(8) (New Condition).
- 3. Within 30 days of completion of the work authorized under this Approval, Sea Level LLC shall submit for EPA's review and concurrence, a detailed monitoring and maintenance plan (MMP) for the cap(s). Sea Level LLC shall incorporate any changes to the MMP required by EPA(New Condition).

a. The MMP shall include: a description of the activities that will be conducted, including inspection criteria, frequency, and routine maintenance activities; sampling protocols, sampling frequency, and analytical criteria, as applicable; and reporting requirements.
b. The MMP shall include a communications component which details how the maintenance and monitoring results will be communicated to the Site users, including building users, other on-site workers, and interested stakeholders, if requested.
c. The MMP also shall include a worker training component for maintenance workers or for any person that will be conducting work that could impact the cap(s).
d. Sea Level shall submit the results of these long-term monitoring and maintenance activities to EPA. Based on its review of the results, EPA may determine that modification to the MMP is necessary in order to monitor and/or evaluate the long-term effectiveness of the

cap(s).

e. Activities required under the MMP shall be conducted until such time that EPA determines, in writing, that such activities are no longer necessary.

Please include the modified work in the required final project report (Condition 20). Please be aware that EPA is only requiring documents electronically; therefore, hard copies of the documents are no longer neccessary.

Please feel free to contact me if there are any questions.

# Kate Woodward

Katherine A. Woodward, PE, PhD US Environmental Protection Agency, Region 1 5 Post Office Square, Suite 100 Mail Code: 07-2 Boston, Massachusetts 02109-3912 617.918.1353/Pronouns: She/her/hers

From: Richard Kowalski <rkowalski@aries-eng.com>
Sent: Tuesday, January 31, 2023 12:38 PM
To: Woodward, Katherine (she/her/hers) <<u>Woodward.Katherine@epa.gov</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Kate: Do you have any comments on this? Thanks,



# Director of Hydrogeology Cell (508) 951-3673

This e-mail and attachments (if any) are intended only for the addressee named above, and may contain privileged or confidential information. If you are not the intended message recipient, please do not use, copy, or print this information. Also, please do not forward or disclose this information to others. If you have received this communication in error, please notify this message sender by replying to this message and then delete this e-mail and attachments (if any) from your e-mail system. Thank you.

From: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Sent: Thursday, January 12, 2023 4:14 PM
To: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

It has been crazy here and I haven't yet gotten to it. I will read it on Tuesday and provide you with some comments.

From: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Sent: Thursday, January 12, 2023 3:30 PM
To: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Kate: Can you provide an update on your progress on this project? Thanks,

?

Rick Kowalski Director of Hydrogeology Cell (508) 951-3673

This e-mail and attachments (if any) are intended only for the addressee named above, and may contain privileged or confidential information. If you are not the intended message recipient, please do not use, copy, or print this information. Also, please do not forward or disclose this information to others. If you have received this communication in error, please notify this message sender by replying to this message and then delete this e-mail and attachments (if any) from your e-mail system. Thank you.

From: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Sent: Monday, December 5, 2022 9:35 AM
To: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Rick,

This is the first time I am seeing this document. I checked my email and I have nothing. I will have to read through it, which I will do this week.

Kate

From: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Sent: Monday, December 5, 2022 8:35 AM
To: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Katherine: Please let us know when we may expect to receive any comments back from you regarding the attached revised SIP submitted on August 10, 2022. Thanks,

Rick Kowalski Director of Hydrogeology Cell (508) 951-3673

?

This e-mail and attachments (if any) are intended only for the addressee named above, and may contain privileged or confidential information. If you are not the intended message recipient, please do not use, copy, or print this information. Also, please do not forward or disclose this information to others. If you have received this communication in error, please notify this message sender by replying to this message and then delete this e-mail and attachments (if any) from your e-mail system. Thank you.

From: Richard Kowalski
Sent: Wednesday, August 10, 2022 3:02 PM
To: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Cc: 'tom@substructure.com' <<u>tom@substructure.com</u>>; Stephen Graham (<u>sgraham@aries-eng.com</u>)
<<u>sgraham@aries-eng.com</u>>

Subject: Revised SIP for Portsmouth Marina, New Hampshire

Katherine: Please find attached the revised SIP for the Portsmouth Marina. Please let us know if you have any comments or questions. Thanks,

?

Richard G. Kowalski, CPG LSP, CHMM Director of Hydrogeology Aries Engineering, LLC 104 Pleasant Street Concord, New Hampshire 03301 Phone (603) 228-0008 Fax (603) 226-0374 Cell (508) 951-3673

# rkowalski@aries-eng.com www.aries-eng.com

This e-mail and attachments (if any) are intended only for the addressee named above, and may contain privileged or confidential information. If you are not the intended message recipient, please do not use, copy, or print this information. Also, please do not forward or disclose this information to others. If you have received this communication in error, please notify this message sender by replying to this message and then delete this e-mail and attachments (if any) from your e-mail system. Thank you.

# WPA APPENDIX E: ENGINEERING PROJECT PLANS/DRAWINGS/SHEETS

(Per Sections 2,7, 16 and NH ENV WT 311.05, 311.03(b)(4)

# MARINA RESTORATION PROJECT ENGINEERING PLANS

APPLICANT: TOM REIS, SEA LEVEL, INC. PREPARED BY: ARIES ENGINEERING, LLC

# SHEET INDEX

SHEET 1:	SITE LOCUS AND SHEET INDEX
SHEET 2:	SITE PLAN AND EXISTING CONDITIONS
SHEET 3A	PCB SAMPLE LOCATION PLAN
SHEET 3B	>50 PPM PCB POST-EXCAVATION SAMPL
SHEET 3C	< 50 PPM PCB POST-EXCAVATION SAMPL
SHEET 3D	SELF-IMPLEMENTING CLEANUP PLAN (SI
SHEET 4	CONCRETE PAD CROSS SECTION
SHEET 5	FINAL GRADING PLAN/SHORELINE STAE
SHEET 6	PLANTING PLAN WITH PLANTING SCHEE
SHEET 7	TREE TYPES AND LOCATIONS



SITE PLAN

\_E LOCATION PLAN \_E LOCATION PLAN iP)

BILIZATION PLAN (WITH TIDAL SHORELINE STABILITY) DULE

SITE LOCUS MAP 2024



Jay P. Johonnett, P.E.





- GENERAL PLAN NOTES:
- 1. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
- HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 (NAD83) NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM (NH ZONE 2800).
   SURVEY UNITS: U.S. SURVEY FEET
- BENCH MARK (BM) DATA: THE PRIMARY BM B-DOCK PAD SW LOCATED ON IN THE SW CORNER OF THE CONCRETE SLAB LEADING TO B-DOCK AT THE PORTSMOUTH MARINA. REFERENCE POSITION AND ELEVATION FOR THIS MONUMENT WERE OBTAINED VIA NGS OPUS BASED ON MULTIPLE LONG DURATION GNSS STATIC OBSERVATION SESSIONS.
- SOUNDING DATA WERE OBTAINED ON JAN 28, 2017 BY SV ORION USING AN R2SONIC 2024 MULTIBEAM ECHOSOUNDER AND AN APPLANIX POSMV. DURING THIS SURVEY, AN RTK DGNSS BASE STATION WAS ESTABLISHED ON THE PRIMARY BM. FINAL POSITION AND ELEVATION DATA FOR THIS SURVEY WERE OBTAINED VIA POST-PROCESSING WITH POSPAC MMS. SOUNDING DATA ARE SHOWN AS NEGATIVE ELEVATION CONTOURS RELATIVE TO THE NAVD88 REFERENCE PLANE.
- 6. PHOTOGRAMTERIC TOPOGRAPHIC LIDAR BY NEAR VIEW, LLC 6/4/17 & 2/16/18
- GENERAL SITE PLAN INFO IS BASED ON "CONDOMINIUM SITE PLAN FOR WITCH COVE MARINA CONDOMINIUMS" BY MSC CIVIL ENGINEERS AND LAND SURVEYORS, INC. DATED MAR 28, 2011.
   WETLAND DELINEATION WAS DONE ON 8/7/2020 AND CHECKED IN 2022 BY SEEKAMP
- ENVIRONMENTAL CONSULTING, INC., PATRICK D. SEEKAMP NH CWS #128, TO THE STANDARDS OF "WETLANDS DELINEATION MANUAL" TECHNICAL REPORT Y-87-1 CORPS OF ENGINEERS, JANUARY, 1987 AND "REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION," VERSION 2.0, U.S. ARMY CORPS OF ENGINEERS, JANUARY, 2012 AND SUBSEQUENT VERSIONS AND NH DES EN-WT 600 TIDAL RESOURCE DELINEATION METHODOLOGY. HOTL LIMITS ADJUSTED ACCORDING TO PRE-EXISTING LIMITS PRIOR TO INITIAL REMEDIATION WORK TO ALLOW FOR PRE-EXISTING TOE OF SLOPE LIMITS TO BE REESTABLISHED ON THE BANK.
- 9. WETLANDS DELINEATION SURVEY BY SUBSTRUCTURE, INC 08/10/2020 TRIMBLE R10 LOCATION POST PROCESSED KINEMATICS (PPK) UTILIZING TRIMBLE BUSINESS CENTER WITH BASE STATION CONTROL ON PRIMARY BM: B-DOCK-PAD-SW
- THE INFORMATION DEPICTED ON THESE MAPS REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED, AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
   ADDITIONAL SHORELINE AND FEDERAL CHANNEL LOCATIONS ARE BASED ON USACE DRAWING
- "PORTSMOUTH HARBOR, BACK CHANNEL / SAGAMORE CREEK, DESIGN FILE: SAGHSP3.DGN, DRAWING CODE: SAG-2729" DATED AUG 7, 2013.
- 12. FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) ZONE AE AND X AS DEPICTED ON MAP NUMBER 33015C0286F (SCALE 1"=500'), DATED JANUARY 29, 2021 FOR ROCKINGHAM COUNTY, NEW HAMPSHIRE.

The second secon					
SITE PLAN AND EXISTING CONDITIONS SITE PLAN SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE					
DRAFTED BY: J. Drebaum	No.	Date	Date Revision Description		
APPROVED BY: S. Graham	1.	1/23/24	Updates to general notes		
	2.	8/27/24	Updates	_	
ISSUED	ISSUED FOR PERMITTING				
				Project #: 2021-075A File: 2021-075A(SS)02-22	
				APRIL 24, 2023	
Patrick D. Seekamp, CWS		Jay P.	Johonnett, P.E.	SHEET 2	










1 INCH = 10 FEET (APPROXIMATE)

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# ELEV 12'

ELEV 13'

ELEV 14'

**ELEV 15'** 



# PROPOSED CONCRETE PAD CROSS SECTION (AA --- AA') (SEE SHEET 5 FOR LOCATION)



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## LEGEND

6-INCH CONCRETE PAD (NH DOT CLASS AAA, 5,000 PSI, GRADE 60 REBAR REINFORCED)

6-INCH CRUSHED STONE LAYER, COMPACTED

GEOTEXTILE FABRIC (MIRAFI 140N)

EXISTING GRADE, RE-LEVELED FOR PAD SITE

SOIL, FINAL LIFT COMPACTED VIA PLATE COMPACTOR







## NOTES:

SR

STGM

\*STGM species list includes: Canada Wild Rye (Elymus canadensis), Red 1. Fescue (Festuca rubra), Atlantic Coastal Panic Grass (Panicum amarum), Big Bluestem (Andropogon gerardii), Indian Grass (Sorghastrum nutans), Switch Grass (Panicum virgatum), and Path Rush (Juncus tenuis)

Salt Marsh Bullrush (Scirpus Robustus)

Salt Tolerant Grass Mix\*

Mean High Water (MHW) and Mean Low Water (MLW) lines are outside of 2. the Limit of Disturbance and beyond the area shown in the above cross section.

NOT TO SCALE

Plugs

Seed

Quantity
1
1
3
2
1
350
5 lb

-

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		βB	A B B B B B B B B B B B B B B B B B B B	s 2, (50')
DSD B	Final Grad	e		
Existing Grade				
Geotextile (Beneath RipRap)				
	Existing	g Soil		
AIZONTAL/VERTICAL Scales	s as snov	vn		
			A TATT	
		104 PLEASA	ARALE NGINEER NT STREET (603) 228-0 WWW.aries-	DO8 reng.com
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	P	PORTSM	SEA LEVEL, LLC. MAP 201, LOT 12 OUTH, NEW HAMPS	SHIRE
	J. Drebaum REVIEWED BY:	01 01/23/2 02 04/17/2 03 08/27/2	<ul> <li>Revision to Notes</li> <li>Revision to notes, area mea</li> <li>section, planting schedule</li> <li>Updates</li> </ul>	asurements, cross
				Project #: 2021-075A File:2021-075A(SS2)06-22 APRIL 24, 2023
				SHEET 6

Patrick D. Seekamp, CWS

Jay P. Johonnett, P.E.



## LEGEND



### GENERAL PLAN NOTES:

- VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
- HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 (NAD83) NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM (NH ZONE 2800). SURVEY UNITS: U.S. SURVEY FEET 2
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- WETLANDS DELINEATION SURVEY BY SUBSTRUCTURE, INC 08/10/2020 TRIMBLE R10 LOCATION POST PROCESSED KINEMATICS (PPK) UTILIZING TRIMBLE BUSINESS CENTER WITH BASE STATION 9. CONTROL ON PRIMARY BM: B-DOCK-PAD-SW
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	TREE TYPES AND LOCATIONS SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE								
DRAFTED BY:	No.	Date	Revision Des	cription					
J. Drebaum	01	01/23/24	Revision to Tr	ees, Table, Silt	Curtain, Notes				
REVIEWED BY:	02	04/17/24	Revision to no	tes, riprap, title	block				
S. Graham	03	08/27/24	Updates						
					Project #: 2021-075A File: 2021-075A(SS2)06-22 APRIL 24, 2023 SHEET 7				
Patrick D. Seekam	p, CV	vs	Jay P. Joho	onnett, P.E.					

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	TITLE SHEET, INDEX OF DRAWINGS and SITE LOCUS MAP MARINA RESTORATION PROJECT SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE							
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APPROVED BY:	S. Graham	1	8/27/24	Updates				
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				F NEW HAM	Project #: 2021-075A File: 2021-075A(SS)02-22			
		at.	JAY JOHONNETT		APRIL 24, 2023			
			Jav P.	No. 14110 ENSED SONAL ENGINITION Johonnett, P.E.	SHEET 1			



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	PCB SAMPLE LOCATION PLAN SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE						
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APPROVED BY:	S. Graham	1.	8/27/24	27/24 Updates			
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				NEW HAA	Project #: 2021-075A File: 2021-075A(SS)06-22		
			- STATE	JAY DHONNETT	APRIL 24, 2023		
		αŢ,	Jay P. Johonnett, P.E.		SHEET 3A		

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	>50 PPM PCB POST-EXCAVATION SAMPLE LOCATION PLAN SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE								
DRAFTED BY:	J. Drebaum	No.	Date	Revision Description					
APPROVE BY:	D S. Graham	1.	8/27/24	Updates					
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		-*	Jay P.	No. 14110 CENSED ONAL ENGINE	SHEET 3B				

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<50 PPM PCB POST-EXCAVATION SAMPLE LOCATION PLAN SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE								
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APPROVED BY:	S. Graham	1.	8/27/24	Updates				
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PROPOSED CONCRETE PAD w/ SAMPLE LOCATIONS					
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APPROVED BY:	S. Graham	1.	8/27/24	Updates	
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			uuu	NIN NIN	Project #: 2021-075A File: 2021-075A(SS)06-22
			STATE	JAY	APRIL 24, 2023
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BY:	J. Drebaum	No.	Date	Revision Description	<u> </u>	
APPROVED BY:	S. Graham	1	4/17/2024	Figure number upda	te	
		2	8/24/2024	Updates		
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FINAL GRADING PLAN/SHORELINE STABILIZATION PLAN (WITH TIDAL SHORELINE STABILITY) SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE						
DRAFTED BY:	No.	Date	Revision Descripti	on	n nga kawa kasulan yang peruntuk inter bartup majapitan kana pakapitan na maja katan nga katan nga p	
J. Drebaum	01	04/23/2	B Revision			
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( IN FEET ) 1 inch = 10 ft.

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NUMber       Numer       Number       Number								
TREE TYPES AND LOCATIONS SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE								
DRAFTED BY:	No.	Date	Revision Description					
J. Drebaum	01	01/23/24	Revision to Trees, Table, Silt Curtain, Notes					
REVIEWED BY:	02	04/17/24	Revision to notes, ripr	ap, title	block			
S. Graham	03	08/27/24	Updates					
PATRICK D. SEEKAMP No. 128 WETLAND SOLUTION Patrick D. Seekamp, PWS, CWS			JOHONNETT	Project #: 2021-075A File: 2021-075A(SS2)06-22 APRIL 24, 2023				
			Jay P. Johonnett, P	SHEET 7				

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AVOIDANCE AND MINIMIZATION CHECKLIST Water Division/Land Resources Management Wetlands Bureau <u>Check the Status of your Application</u>



#### RSA/Rule: RSA 482-A/ Env-Wt 311.07(c)

This checklist can be used in lieu of the written narrative required by Env-Wt 311.07(a) to demonstrate compliance with requirements for Avoidance and Minimization (A/M), pursuant to RSA 482-A:1 and Env-Wt 311.07(c).

For the construction or modification of non-tidal shoreline structures over areas of surface waters without wetland vegetation, complete only Sections 1, 2, and 4 (or the applicable sections in <u>Attachment A: Minor and Major Projects</u> (<u>NHDES-W-06-013</u>).

The following definitions and abbreviations apply to this worksheet:

- "A/M BMPs" stands for <u>Wetlands Best Management Practice Techniques for Avoidance and Minimization</u> dated 2019, published by the New England Interstate Water Pollution Control Commission (Env-Wt 102.18).
- "Practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (Env-Wt 103.62).

#### SECTION 1 - CONTACT/LOCATION INFORMATION

APPLICANT LAST NAME, FIRST NAME, M.I.: Sea Level, LLC and Goulemas Family Trust

PROJECT STREET ADDRESS: 185 - 187 Wentworth House Road

PROJECT TOWN: Portsmouth

TAX MAP/LOT NUMBER: 201/12

#### **SECTION 2 - PRIMARY PURPOSE OF THE PROJECT**

Env-Wt 311.07(b)(1) Indicate whether the primary purpose of the project is to construct a water-access structure or requires access through wetlands to reach a buildable lot or the buildable portion thereof.



If you answered "no" to this question, describe the purpose of the "non-access" project type you have proposed:

Final remediation of PCBs initially addressed under U.S. EPA approval issued on 9-9-2016 per 40 CFR 761.61(a) in a working waterfront (see 4-24-2023 memo to NHDES, Attachment D, for history and regulatory requirements). This new cleanup effort limits impacts within Zone AE/other jurisdictional zones as follows: 1) Zone AE at 5 to 6 FT MSL: removal of 175 SF to 1 ft deep of PCB impacted sediment in existing salt marsh area within isolated and blind section of Witch Cove contiguous to tidal Sagamore Creek plus removal of a 6 inch layer of fill over an area of 235 SF inadvertently placed during prior remediation, totaling 11 CY of wetland sediment excavation, both to be restored with saltmarsh plantings. 2) Outside Zone AE, 470 SF of near vertical tidal cove shoreline above HOTL/below 11 ft MSL to be stabilized by armoring using boulders saved during prior remediation, plus 4-5 inch stone riprap; removal of 0.5 CY of soil to 1' deep with >50ppm PCBs in upland wooded area to be transported off site to licensed disposal facility; removal of 0.5 CY soil to 1' deep with >25<50 ppm PCBs to be placed under concrete cap, both excavations to be filled with clean soil and vegetated; within previously developed uplands, new 5,000 SF concrete pad encapsulating >25<50 ppm PCBs soils with additional lead presence; and restoration of degraded gravel areas as needed to be reestablished to resume site operations. Erosion controls will be emplaced, impacts to be temporary over 1 month period.

#### SECTION 3 - A/M PROJECT DESIGN TECHNIQUES

Check the appropriate boxes below in order to demonstrate that these items have been considered in the planning of the project. Use N/A (not applicable) for each technique that is not applicable to your project.

Env-Wt 311.07(b)(2)	For any project that proposes new permanent impacts of more than one acre or that proposes new permanent impacts to a Priority Resource Area (PRA), or both, whether any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs.	🔀 Check 🔲 N/A
Env-Wt 311.07(b)(3)	Whether alternative designs or techniques, such as different layouts, construction sequencing, or alternative technologies could be used to avoid impacts to jurisdictional areas or their functions and values.	☐ Check ⊠ N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(1) Env-Wt 311.10(c)(2)	The results of the functional assessment required by Env-Wt 311.03(b)(10) were used to select the location and design for the proposed project that has the least impact to wetland functions.	🔀 Check 🗌 N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(3)	Where impacts to wetland functions are unavoidable, the proposed impacts are limited to the wetlands with the least valuable functions on the site while avoiding and minimizing impacts to the wetlands with the highest and most valuable functions.	🔀 Check 🔲 N/A
Env-Wt 313.01(c)(1) Env-Wt 313.01(c)(2) Env-Wt 313.03(b)(1)	No practicable alternative would reduce adverse impact on the area and environments under the department's jurisdiction and the project will not cause random or unnecessary destruction of wetlands.	Check
Env-Wt 313.01(c)(3)	The project would not cause or contribute to the significant degradation of waters of the state or the loss of any PRAs.	Check
Env-Wt 313.03(b)(3) Env-Wt 904.07(c)(8)	The project maintains hydrologic connectivity between adjacent wetlands or stream systems.	🔀 Check 🔲 N/A
Env-Wt 311.10 A/M BMPs	Buildings and/or access are positioned away from high function wetlands or surface waters to avoid impact.	Check
Env-Wt 311.10 A/M BMPs	The project clusters structures to avoid wetland impacts.	Check
Env-Wt 311.10 A/M BMPs	The placement of roads and utility corridors avoids wetlands and their associated streams.	Check
A/M BMPs	The width of access roads or driveways is reduced to avoid and minimize impacts. Pullouts are incorporated in the design as needed.	Check
A/M BMPs	The project proposes bridges or spans instead of roads/driveways/trails with culverts.	Check

A/M BMPs	The project is designed to minimize the number and size of crossings, and crossings cross wetlands and/or streams at the narrowest point.	Check
Env-Wt 500 Env-Wt 600 Env-Wt 900	Wetland and stream crossings include features that accommodate aquatic organism and wildlife passage.	Check
Env-Wt 900	Stream crossings are sized to address hydraulic capacity and geomorphic compatibility.	
A/M BMPs	Disturbed areas are used for crossings wherever practicable, including existing roadways, paths, or trails upgraded with new culverts or bridges.	
SECTION 4 - NON-TID	AL SHORELINE STRUCTURES	
Env-Wt 313.03(c)(1)	The non-tidal shoreline structure has been designed to use the minimum construction surface area over surfaces waters necessary to meet the stated purpose of the structure.	🔀 Check 🔲 N/A
Env-Wt 313.03(c)(2)	The type of construction proposed for the non-tidal shoreline structure is the least intrusive upon the public trust that will ensure safe navigation and docking on the frontage.	Check
Env-Wt 313.03(c)(3)	The non-tidal shoreline structure has been designed to avoid and minimize impacts on the ability of abutting owners to use and enjoy their properties.	Check
Env-Wt 313.03(c)(4)	The non-tidal shoreline structure has been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.	🔀 Check 🔲 N/A
Env-Wt 313.03(c)(5)	The non-tidal shoreline structure has been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.	Check
Env-Wt 313.03(c)(6)	The non-tidal shoreline structure has been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.	Check

#### APPENDIX G, COPY OF WPA APPLICATION FEE

(Per Section 12)



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



11

Robert R. Scott, Commissioner



• www.des.nh.gov

Documents have been received to the Lobby Reception Window, New Hampshire Department of Environmental Services, 29 Hazen Drive, Concord NH on:



•

pm 34

1815 1 3 -1 VILLAGE SAVINGS BANK MEREDITH, NEW HAMPSHIRE 03253 C SECURED BY Sea Level LLC dba: Portsmouth Marina P.O. Box 4094 Portmsouth, NH 03802 54-7293/2117 **Jot** 5 PAY TO THE \$ ORDER OF 00 000 BI XX WARES KI An DOLLARS 100 1 AUTHORIZED SIGNATURE MEMO "001815" \$211772936\$ OG 300307" ..... 1814 3 1 3 . VILLAGE SAVINGS BANK MEREDITH, NEW HAMPSHIRE 03253 C BECUMED BY Sea Level LLC dba: Portsmouth Marina P.O. Box 4094 Portmsouth, NH 03802 54-7293/2117 12 13/24 23( H Y TO THE 5 DER OF 00 fundRod IWENT C SEL 1E16 647 10 DOLLARS NP4 Gan e AUTHORIZED SIGNATURE MEMO "001814" #211772936# OG 30030?"



**APPENDIX I** 



US Army Corps

#### of Engineers ® Appendix B New England District **New Hampshire General Permits Required Information and USACE Section 404 Checklist**

#### **Required Information**

In order for USACE to properly evaluate your application, applicants must submit the following information for all projects along with the NHDES Wetlands Bureau application or permit notification forms. Some projects may require more information. Check with USACE at (978) 318-8832 for project-specific requirements. For your convenience, this Appendix B is also attached to the NHDES Wetlands Bureau application and Permit by Notification forms.

- NHDES Wetlands Permit Application. See Attachment
- Request for Project Review Form by the NH DHR: https://www.nh.gov/nhdhr/review/rpr.htm. Attached
- Photographs of wetland/waterway to be impacted. See Attachment, Photos
- Purpose of the project. See Attachment, Purpose of Project, NHDES WPA, Section 2
- Legible, reproducible plans no larger than 11"x17" with bar scale. Provide locus map
- and plan views of the entire property. See Sheets 1-7, Attached Typical cross-section views of all wetland and waterway fill areas and wetland replication areas. Sheets 5-7
- · In navigable waters, show MLW and MHW elevations. Show the HTL elevations when fill is involved. In other waters, show the OHW elevation. See Sheet 2
- On each plan, show the following for the project: See Sheet 2
  - Vertical datum and the NAVD 1988 equivalent with the vertical units as U.S. feet. In coastal waters this may be mean higher high water (MHHW), MHW, MLW, mean lower low water (MLLW) or other tidal datum with the vertical units as U.S. feet. MLLW and MHHW are preferred. Provide the correction factor detailing how the vertical datum (e.g., MLLW) was derived using the latest National Tidal Datum Epoch for that area, typically 1983 - 2001.
  - Horizontal state plane coordinates in U.S. survey feet based on the Traverse Mercator Grid system for the State of New Hampshire (Zone 2800) NAD 83.
  - Project limits with existing and proposed conditions.
  - Limits of any FNP in the vicinity of the project area and horizontal State Plane Coordinates in U.S. survey feet for the limits of the proposed work closest to the FNP.
  - $_{\odot}$  Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below the OHW in inland waters and below the HTL in coastal waters.
  - Delineation of all waterways and wetlands on the project site.
- Use Federal delineation methods and include USACE wetland delineation data sheets (GC 2). Attached
   For activities involving discharges of dredged or fill material into waters of the U.S. Sheet 2
- For activities involving discharges of dredged or fill material into waters of the U.S., N/A include a statement describing how impacts to waters of the U.S. are to be avoided and minimized, and either a statement describing how impacts to waters of the U.S. are to be compensated for (or a conceptual or detailed mitigation plan) or a statement explaining why compensatory mitigation should not be required for the proposed impacts. Please contact USACE for guidance.



US Army Corps of Engineers ®

#### of Engineers ® Appendix B New England District New Hampshire General Permits Required Information and USACE Section 404Checklist

#### **USACE Section 404 Checklist**

- 1. Attach any explanations to this checklist. Lack of information could delay a USACE permit determination.
- 2. All references to "work" include all work associated with the project construction and operation. Work
- includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
- 3. See GC 3 for information on single and complete projects.
- 4. Contact USACE at (978) 318-8832 with any questions.
- 5. The information requested below is generally required in the NHDES Wetland Application. See page 61 for NHDES references and Admin Rules as they relate to the information below.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See the following to determine if there is an impaired water in the vicinity of your work area. * <a href="https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/">https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/</a> <a href="https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment-site-nhdes.hub.arcgis.com/">https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment-site-nhdes.hub.arcgis.com/</a> <a href="https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment-site-nhdes.hub.arcgis.com/">https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment-site-nhdes.hub.arcgis.com/</a> <a href="https://www.des.state.nh.us/onestopdatamapper/onestopmapper.aspx">https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx</a>		x
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?		х
2.2 Are there proposed impacts to tidal SAS, prime wetlands, or priority resource areas? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at <u>https://www4.des.state.nh.us/NHB-DataCheck/</u> .	x	
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?		
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		x
2.5 The overall project site is more than 40 acres?		х
2.6 What is the area of the previously filled wetlands? 6 in depth fill by prior remediation	235	SE
2.7 What is the area of the proposed fill in wetlands?	0 SE	01
2.8 What % of the overall project sire will be previously and proposed filled wetlands? of 6,785 S	F 3.5%	)
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: <u>https://www4.des.state.nh.us/NHB-DataCheck/</u> . USFWS IPAC website: https://ipac.ecosphere.fws.gov/ See attached	x	

<ul> <li>3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at:</li> <li>PDF: <u>https://wildlife.state.nh.us/wildlife/wap-high-rank.html</u>.</li> <li>Data Mapper: <u>www.granit.unh.edu</u>.</li> <li>GIS: <u>www.granit.unh.edu/data/downloadfreedata/category/databycategory.html</u>.</li> </ul>		x
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		x
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		x
3.5 Are stream crossings designed in accordance with the GC 31?		х
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		Х
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the RPR Form ( <u>www.nh.gov/nhdhr/review</u> ) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 37 GC 14(d) of the GP document** See Attached	x	
6. Minimal Impact Determination (for projects that exceed 1 acre of permanent impact)	Yes	No
<ul> <li>Projects with greater than 1 acre of permanent impact must include the following:</li> <li>Functional assessment for aquatic resources in the project area.</li> <li>On and off-site alternative analysis.</li> <li>Provide additional information and description for how the below criteria are met.</li> </ul>		
6.1 Will there be complete loss of aquatic resources on site?		
6.2 Have the impacts to the aquatic resources been avoided and minimized to the greatest extent practicable?		
6.3 Will all aquatic resource function be lost?		
6.4 Does the aquatic resource (s) have regional significance (watershed or ecoregion)?		
6.5 Is there an on-site alternative with less impact?		
6.6 Is there an off-site alternative with less impact?		
6.7 Will there be a loss to a resource dependent species?		
6.8 Are indirect impacts greater than 1 acre within and adjacent to the project area?		

\*Although this checklist utilizes state information, its submittal to USACE is a federal requirement. \*\* If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.



### US Army Corps of Engineers ® New England District Required Information and USACE Section 404 Checklist

#### **NHDES Rule Citations**

Appendix B	NHDES Citation	NHDES Resource, Form & BMP
Requirements		
1. Impaired Wate	ers	
1.1	See Env-Wt 307.03 Protection	https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/
	of Water Quality Required &	https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment
	Env-Wt 306.05 a) 7	https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx
2. Wetlands	1	
2.1	N/A	N/A
2.2	Env 307.06; Env- Wt	NH Online Forms System - Coastal Resource Worksheet. Version 2.0
	311.01(a)(b) (c)	Wetlands Permitting: Protected Species and Habitat (nh.gov)
		Wetlands Permitting: Priority Resource Area (nh.gov)
		https://www4.des.state.nh.us/NHB-DataCheck/.
2.3	Env-Wt 313.03(b)(3); Env-Wt	See Chapter 7, Stream & Wetland Crossings:
	313.03(b)4)(7); Env-Wt 307.06	Wetlands Best Management Practice Techniques for Avoidance and Minimiz
		Wetlands-BMP-Manual-2019.pdf (neiwpcc.org) (& Env-Wt 900 for Stream
0.4		<u>Crossings)</u>
2.4	zopo): Epy Mt 704 (primo	
	buffore)	
2.5		Ν/Λ
2.5	N/A N/A	Ν/Δ
2.0	$E_{nv}$ = W/t 311 04(a)	Standard application Section 11- NH Online Forms System - Standard
		Dredge and Fill Wetlands Permit Application . Version 3.5
2.8	N/A	N/A
3. Wildlife	1	
3.1	Env-Wt 103.69 "Protected	NHB DataCheck Tool: <u>https://www4.des.state.nh.us/NHB-DataCheck/</u> .
	species or habitat"; Env-Wt	Wetlands Permitting: Protected Species and Habitat (nh.gov)
	307.06, 311.01	Wetlands Permitting: Priority Resource Area (nh.gov)
3.2	Env-Wt 311.02; 313.03(b)(2),	Wetlands Permitting: Protected Species and Habitat (nh.gov)
	(4), (7)(16); Env-Wt	Wetlands Permitting: Priority Resource Area (nh.gov)
	313.03(b)(6) & See Env-Wt	
	808.19(g), Env-Wt 808.20	
3.3		
3.4	NA (Env: ) Mt 000) Mierce off ) Merd	N/A
3.5	(Env-Wt 900) <u>Microsoft Word -</u>	NH Online Forms System Wetland Permit Application Stream Crossing
	$\frac{2110-001}{2020}$ docx (ph dov)	Worksheet Version 1.8
	<u>2020.000x (mi.gov)</u>	Stream Crossing Design (nh gov):
		<u>bitcam biossing besign (mi.gov)</u> .
		management/documents/RR V.9 FINAL 3-14-19 pdf
		Best Management Practices for Routine Roadway Maintenance Activities
		in New Hampshire, 2019, New Hampshire Department of Transportation.
4. Flooding/Floo	dplain Values	
4.1	Env-Wt 311.05; Env-Wt	Wetlands Permitting: Priority Resource Area (nh.gov)
	103.66	NH Online Forms System - Coastal Resource Worksheet. Version 2.0
	517.03(b); 517.06(a)(6);	New Hampshire Coastal Flood Risk Summary   NH Department of

	527.02(e); 527.04(d); Env-Wt 600 Env-Wt 900	Environmental Services (cited in Env-Wt 603.05) <u>NH Online Forms System - Wetland Permit Application Stream Crossing</u> <u>Worksheet. Version 1.8</u> <u>hydraulic-vulnerability-handout.pdf (nh.gov)</u>
4.2	Env-Wt 527.02 & 527.04 & 313.04 & Env-Wt 800; Wt 605.03 & 605.04	Yes, for permanent impacts to a PRA, impacts from public highway projects, & those projects where flood storage functions are lost when the mitigation threshold is reached. <u>Wetlands Mitigation   NH Department of Environmental Services</u>
5. Historical/Arc	heological Resources	
5.0	Env-Wt 311.02(f)(6)	
6. Minimal Impa	ct Determination	
6.0	F/V assessment: (Env-Wt 311.10); Env-Wt 603.04 (Coastal Functional Assessment) Alternatives: (Env-Wt 311.07(b)(2))	NH Online Forms System - Wetlands Functional Assessment Worksheet. Version 1.3 NH Online Forms System - Coastal Resource Worksheet. Version 2.0
6.1		Wetlands Permitting: Avoidance, Minimization, and Mitigation (nh.gov)
6.2	Env-Wt 102.12 ("Avoidance"), Env-Wt 102.13 ("Avoidance, minimization, mitigation"), Env-Wt 102.14 ("Avoid and minimize"), Env-Wt 311.01, Env-Wt 313.03 ("Avoidance & Minimization") Env-Wt 311.07	See <u>Wetlands Best Management Practice Techniques for Avoidance and</u> <u>Minimization</u> - <u>Wetlands-BMP-Manual-2019.pdf (neiwpcc.org)</u> referenced in Env-Wt 313.03(a); A/M written narrative ( <u>NH Online Forms System -</u> <u>Avoidance and Minimization Written Narrative. Version 2.0</u> ); Avoidance and Minimization Checklist: <u>NH Online Forms System - Avoidance and</u> <u>Minimization Checklist. Version 3.1</u>
6.3	Env-Wt 311.10, 603.04	See Functional Assessment worksheets above
6.4	Env-Wt 311.02, Env-Wt 312.04. Env-Wt 306.05, 307.06, 311.01	See Protected Species or Habitat (including exemplary natural communities)
6.5	Env-Wt 311.01, Env-Wt 311.07, Env-Wt 311.10 & 313.01 c)1)	See Avoidance & Minimization cites above & BMPs
6.6	(Env-Wt 313.01c) (1) & Env- Wt 311.07(b)(2))	
6.7	Env-Wt 311.10, Env-Wt 103.69, Env-307.06, see Avoidance & minimization cites	NH Online Forms System - Wetlands Functional Assessment Worksheet. Version 1.3; Wetlands Permitting: Priority Resource Area (nh.gov) NH Online Forms System - Coastal Resource Worksheet. Version 2.0
6.8	Env-Wt 102.05 (Water quality BMPs)	Practices to minimize or prevent direct or indirect discharge of sediment or other pollutants into surface waters and wetlands, listed in Env-Wt 307
6.9	Env-Wt 800	

New Hampshire Division of Historical Resources State Historic Preservation Office Attention: Review & Compliance 172 Pembroke Road, Concord, NH 03301   RECEIVED OCT 2 8 2024  Concord NH 03301  Receive by the New Hampshire Division of Historical Resources  NOV 11 2024  ARIES ENGINEENCE  Concord NA maina Restoration Project  Project Title Portsmouth Marina Restoration Project  Project Location 187 Wentworth Road and 5 Sagamore Grove  City/Town Portsmouth Marina Restoration Project  Project Accer Ack of rage for guidance.)  Lead Federal Agency and Contact ( <i>if applicable</i> ) USEPA, TSCA Cleanup: Katherine Woodward  Agency providing funds, licenses, or permite)  Permit Type and Permit or Job Reference # Self Implementing Plan Approved 1/31/2023  State Agency and Contact ( <i>if applicable</i> ) NHDES Wetlands Bureau: Kristen Duclos, Wetlands Specialist  Permit Type and Permit or Job Reference # WPA; NHDES Site No. 198604143  APPLICANT INFORMATION  Applicant Name Tom Reis, President, Sea Level, LLC  Mailing Address PO Box 4094 Phone Number 603-436-1039 City Portsmouth State NH Zip 03802 Email info@substructure.com  CONTACT PERSON TO RECEIVE RESPONSE Name/Company Phone Number (603) 228-0008 City Concord State NH Zip 03301 Email jjohonnet(@aries-eng.com	Please mail the completed form and required	l material to:	DHR U	se Only
State Historic Preservation Office Attention: Review & Compliance 172 Pembroke Road, Concord, NH 03301       RECEIVED OCT 2 8 2024       Iog In Date 10 - 36 / 34 Response Date 11 - 1 - 2 Sent Date 11 - 2 Sent Date 12 - 2 Sent Date 12 - 2 Sent Date 12 - 2 Sent Date 12 - 2 S	New Hampshire Division of Historical Resou	urces	R&C #	7943mi
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GENERAL PROJECT INFORMATION         Project Title Portsmouth Marina Restoration Project         Project Title Portsmouth Marina Restoration Project         Project Location 187 Wentworth Road and 5 Sagamore Grove         City/Town Portsmouth       Tax Map 201       Lot # 5, 12         NH State Plane - Feet Geographic Coordinates:       Easting 1230592       Northing 202980         (See RPR Instructions and R&C FAQs for guidance.)       USEPA, TSCA Cleanup: Katherine Woodward         (Agency providing funds, licenses, or permits)       Permit Type and Permit or Job Reference # Self Implementing Plan Approved 1/31/2023         State Agency and Contact ( <i>if applicable</i> ) NHDES Wetlands Bureau: Kristen Duclos, Wetlands Specialist       Permit Type and Permit or Job Reference # WPA; NHDES Site No. 198604143         APPLICANT INFORMATION       Applicant Name Tom Reis, President, Sea Level, LLC       Phone Number 603-436-1039         City Portsmouth       State NM       Zip 03802       Email info@substructure.com         Contract PERSON TO RECEIVE RESPONSE       Phone Number 603) 228-0008       Phone Number (603) 228-0008         Mailing Address       104 Pleasant Street       Phone Number (603) 228-0008         City Concord       State NH       Zip 03301       Email ijohonnett@aries-eng.com	<ul> <li>✓ This is a new submittal</li> <li>✓ This is additional information relating to</li> </ul>	DHR Review & Compli	ance (R&C) #: <sup>7943</sup>	ARIES ENGINEER
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	City Concord State <sup>N</sup>	NH Zip 03301	Email jjohonnett@aries	s-eng.com

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This form is updated periodically. Please download the current form at https://www.nhdhr.dncr.nh.gov/projectreview/project-review-compliance/requests-project-review. Please refer to the Request for Project Review Instructions for direction on completing this form. Submit one copy of this project review form for each project for which review is requested. Please include a self-addressed stamped envelope. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: https://www.nhdhr.dncr.nh.gov/projectreview/project-review-compliance/requests-project-review the R&C Specialist or contact at Elizabeth.A.Schneible@dncr.nh.gov or 603-271-2813.

#### PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- Attach the Project Mapping using EMMIT or relevant portion of a 7.5' USGS Map. (See RPR Instructions and R&C FAQs for guidance.)
- Attach a detailed narrative description of the proposed project.
- Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) (Informative photo captions are requested.)

A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in **Table 1**. (Blank table forms are available on the DHR website.) Please note, using EMMIT Guest View for an RPR records search does not provide the necessary in balance of the DHR review.

EMMIT or in-house records search conducted on 10/04/2024

#### <u>Architecture</u>

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area? The Yes No

If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s):

- Photographs of *each* resource or streetscape located within the project area, with captions, along with a mapped photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- ☐ If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.)

#### <u>Archaeology</u>

1

 $\checkmark$ 

Does the proposed undertaking involve ground-disturbing activity? ✓ Yes □ No If yes, submit all of the following information:

- Description of current and previous land use and disturbances.
- Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

DHR Comment/Finding Recommendation This Space for Division of Historical Resources Use Only

<b>Insufficient information to initiate review</b> . Additional information is needed in order to complete review.
🗌 No Potential to cause Effects 🔲 No Historic Properties Affected 🗌 No Adverse Effect 🗌 Adverse Effect
Comments:
If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.
Authorized Signatures Mark Mark & STAD

#### **APPENDIX I**

US ARMY CORPS OF ENGINEERS, NH GENERAL PERMIT CHECKLIST, LIST OF ATTACHMENTS

Attachment AA—NHDES Wetlands Permit Application (WPA), With NHDHR Review & Other Appendices

Attachment BB—Engineering Plans-Drawings-Sheets, 11" by 17"

Attachment CC—USFWS ICAP Review

#### MARINA RESTORATION PROJECT ENGINEERING PLANS

APPLICANT: TOM REIS, SEA LEVEL, INC. PREPARED BY: ARIES ENGINEERING, LLC / HALEY WARD, INC.

#### SHEET INDEX

- SHEET 1: SITE LOCUS AND SHEET INDEX
- SHEET 2: SITE PLAN AND EXISTING CONDITIONS SITE PLAN
- SHEET 3A PCB SAMPLE LOCATION PLAN
- SHEET 3B >50 PPM PCB POST-EXCAVATION SAMPLE LOCATION PLAN
- SHEET 3C <50 PPM PCB POST-EXCAVATION SAMPLE LOCATION PLAN
- SHEET 3D SELF-IMPLEMENTING CLEANUP PLAN (SIP) SHEET 4 CONCRETE PAD CROSS SECTION
- FINAL GRADING PLAN/SHORELINE STABILIZATION PLAN SHEET 5
- (WITH TIDAL SHORELINE STABILITY)
- SHEET 6 PLANTING PLAN WITH PLANTING SCHEDULE
- SHEET 7 TREE TYPES AND LOCATIONS
























		Planting Schedule			
Key	Plant Type	Species	Size (feet)	Caliper Size	Quantity
GB	Tree	Gray Birch (Betula populifolia)	3-4	-	1
RC	Tree	Red Cedar (Juniperus virginana)	3-4	-	1
SD	Shrub	Silky dogwood (Cornus amomum)	2-3	-	3
SB	Shrub	Shadbush (Amelanchier candensis)	2-3	-	2
BCB	Shrub	Black Chokeberry (Aronia melanocarpa)	2-3	-	1
SR	Plugs	Salt Marsh Bullrush (Scirpus Robustus)	-	_	350
STGM	Seed	Salt Tolerant Grass Mix*	-	_	5 lb

#### NOTES:

- \*STGM species list includes: Canada Wild Rye (Elymus canadensis), Red 1. Fescue (Festuca rubra), Atlantic Coastal Panic Grass (Panicum amarum), Big Bluestem (Andropogon gerardii), Indian Grass (Sorghastrum nutans), Switch Grass (Panicum virgatum), and Path Rush (Juncus tenuis)
- Mean High Water (MHW) and Mean Low Water (MLW) lines are outside of 2. the Limit of Disturbance and beyond the area shown in the above cross section.

NOT TO SCALE

HORIZONTAL/VERTICAL Scales as shown









# United States Department of the Interior

FISH AND WILDLIFE SERVICE New England Ecological Services Field Office 70 Commercial Street, Suite 300 Concord, NH 03301-5094 Phone: (603) 223-2541 Fax: (603) 223-0104



07/18/2024 18:41:23 UTC

In Reply Refer To: Project code: 2024-0118282 Project Name: Portsmouth Marina Remediation Project

Federal Nexus: yes Federal Action Agency (if applicable):

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for 'Portsmouth Marina Remediation Project'

Dear Nyssa Seekamp:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 18, 2024, for "Portsmouth Marina Remediation Project" (here forward, Project). This project has been assigned Project Code 2024-0118282 and all future correspondence should clearly reference this number.

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northeast Determination Key (DKey), invalidates this letter. <u>Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.</u>

To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative effect(s)), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17). Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no further consultation with, or concurrence from, the Service is

required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13]).

The IPaC results indicated the following species is (are) potentially present in your project area and, based on your responses to the Service's Northeast DKey, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Roseate Tern ( <i>Sterna dougallii dougallii</i> )	Endangered	No effect
Rufa Red Knot (Calidris canutus rufa)	Threatened	No effect

**Conclusion** If there are no updates on listed species, no further consultation/coordination for this project is required for the species identified above. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional consultation with the Service should take place before project implements any changes which are final or commits additional resources.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Monarch Butterfly *Danaus plexippus* Candidate
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

To complete consultation for species that have reached a "May Affect" determination and/or species may occur in your project area and are not covered by this conclusion, please visit the "New England Field Office Endangered Species Project Review and Consultation" website for step-by-step instructions on how to consider effects on these listed species and/or critical habitats, avoid and minimize potential adverse effects, and prepare and submit a project review package if necessary: https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference the Project Code associated with this Project.

#### **Action Description**

You provided to IPaC the following name and description for the subject Action.

#### 1. Name

Portsmouth Marina Remediation Project

### 2. Description

The following description was provided for the project 'Portsmouth Marina Remediation Project':

Sea Level, Inc. is undertaking the completion of a remediation project that was begun previously but remains incomplete. During the first remediation attempt a series of soil piles were left in the upland area and within the previously developed 100 foot Tidal Buffer Zone (TBZ). Additionally, a sump was created that disturbed a small portion of salt marsh. The piles of soil have been smoothed over and covered with a gravel base for stabilization until further remediation activities can occur. The purpose of this project is to complete the remediation and restore the disturbed salt marsh area.

The approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@43.05342615,-70.74499582496054,14z</u>



### QUALIFICATION INTERVIEW

- 1. As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully? *Yes*
- 2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

**Note:** This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

- 4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project? *No*
- 5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

**Note:** If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

Yes

- 8. Will the proposed project involve the use of herbicide where listed species are present? *No*
- 9. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

No

10. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

11. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

12. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

No

13. Will the proposed project affect wetlands where listed species are present?

This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

Yes

14. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

Yes

15. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?*Yes* 

16. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

No

17. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

No

18. Will the proposed project involve the removal of excess sediment or debris, dredging or instream gravel mining where listed species may be present?

Yes

19. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

Note New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

No

20. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

No

- 21. Will the proposed project involve blasting where listed species may be present? No
- 22. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

No

23. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

**Note**: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream.

Yes

- 24. Will earth moving activities result in sediment being introduced to streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography? No
- 25. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

Yes

26. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

Yes

27. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

No

28. Will the proposed project result in changes to beach dynamics that may modify formation of habitat over time?

**Note:** Examples of projects that result in changes to beach dynamics include 1) construction of offshore breakwaters and groins; 2) mining of sand from an updrift ebb tidal delta; 3) removing or adding beach sands; and 4) projects that stabilize dunes (including placement of sand fences or planting vegetation).

No

- 29. [Hidden Semantic] Is the project area located within the red knot AOI?Automatically answeredYes
- 30. If you have determined that the red knot is unlikely to occur within your project's action area or that your project is unlikely to have any potential effects on the red knot, you may wish to make a "no effect" determination for the red knot. Additional guidance on how to make this decision can be found in the project review section of your local Ecological Services Field Office's website. CBFO: https://www.fws.gov/office/chesapeake-bay-ecological-services/project-review ; MEFO: https://www.fws.gov/office/maine-ecological-services ; NJFO: https://www.fws.gov/office/new-jersey-field-office-project-review-guide ; NEFO: https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review#Step5 ; WVFO: https:// www.fws.gov/office/west-virginia-ecological-services/project-planning. If you are unsure, answer "No" and continue through the key.

Would you like to make a no effect determination for the red knot? *Yes* 

31. [Hidden Semantic] Is the project area located within the roseate tern AOI? **Automatically answered** *Yes* 

32. If you have determined that the roseate tern is unlikely to occur within your project's action area or that your project is unlikely to have any potential effects on the roseate tern, you may wish to make a "no effect" determination for the roseate tern. Additional guidance on how to make this decision can be found in the project review section of your local Ecological Services Field Office's website. CBFO: https://www.fws.gov/office/ chesapeake-bay-ecological-services/project-review ; MEFO: https://www.fws.gov/office/ maine-ecological-services ; NJFO: https://www.fws.gov/office/new-jersey-ecological-services/endangered-species-project-review#Step5 ; WVFO: https://www.fws.gov/office/west-virginia-ecological-services/project-planning. If you are unsure, answer "No" and continue through the key.

Would you like to make a no effect determination for the roseate tern? *Yes* 

- 33. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?
   Automatically answered
   No
- 34. [Semantic] Does the project intersect the Indiana bat critical habitat?Automatically answeredNo
- 35. [Semantic] Does the project intersect the candy darter critical habitat?Automatically answeredNo
- 36. [Semantic] Does the project intersect the diamond darter critical habitat?Automatically answeredNo
- 37. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?Automatically answeredNo
- 38. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

Automatically answered No

39. Do you have any other documents that you want to include with this submission? *No* 

### **PROJECT QUESTIONNAIRE**

- 1. Briefly describe the habitat within the construction/disturbance limits of the project site. *Tidal salt marsh wetland in coastal estuarine habitat. Salt march comprised primarily of intertidal mudflat with sparse vegetation.*
- 2. Approximately how many acres of trees would the proposed project remove? *0*
- 3. Approximately how many total acres of disturbance are within the disturbance/ construction limits of the proposed project?

0.16

# **IPAC USER CONTACT INFORMATION**

Agency: Private Entity Name: Nyssa Seekamp Address: 129 Route 125 City: Kingston State:  $\mathbf{NH}$ Zip: 03848 Email nseekamp14@gmail.com Phone: 6038193140



# United States Department of the Interior

FISH AND WILDLIFE SERVICE New England Ecological Services Field Office 70 Commercial Street, Suite 300 Concord, NH 03301-5094 Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To: Project Code: 2024-0118282 Project Name: Portsmouth Marina Remediation Project 07/18/2024 18:23:38 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

### About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

### **Endangered Species Act Project Review**

Please visit the "New England Field Office Endangered Species Project Review and **Consultation**" website for step-by-step instructions on how to consider effects on listed species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

**\*NOTE\*** Please <u>do not</u> use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

**Northern Long-eared Bat - (Updated 4/12/2023)** The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

#### https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at <u>newengland@fws.gov</u> to see if reinitiation is necessary.

#### Additional Info About Section 7 of the Act

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

#### https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

**Candidate species** that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

#### Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

Official Species List

# **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

#### New England Ecological Services Field Office

70 Commercial Street, Suite 300 Concord, NH 03301-5094 (603) 223-2541

### **PROJECT SUMMARY**

Project Code:	2024-0118282
Project Name:	Portsmouth Marina Remediation Project
Project Type:	Non-NPL Site Remediation
Project Description:	Sea Level, Inc. is undertaking the completion of a remediation project that
	was begun previously but remains incomplete. During the first
	remediation attempt a series of soil piles were left in the upland area and
	within the previously developed 100 foot Tidal Buffer Zone (TBZ).
	Additionally, a sump was created that disturbed a small portion of salt
	marsh. The piles of soil have been smoothed over and covered with a
	gravel base for stabilization until further remediation activities can occur.
	The purpose of this project is to complete the remediation and restore the
	disturbed salt marsh area.

### Project Location:

The approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@43.05342615,-70.74499582496054,14z</u>



Counties: Rockingham County, New Hampshire

### **ENDANGERED SPECIES ACT SPECIES**

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9045</u>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/10515</u>	Proposed Endangered
BIRDS NAME	STATUS
Roseate Tern Sterna dougallii dougallii Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/2083</u>	Endangered
Rufa Red Knot <i>Calidris canutus rufa</i> There is <b>proposed</b> critical habitat for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/1864</u>	Threatened
INSECTS NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9743</u>	Candidate

### **CRITICAL HABITATS**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# **IPAC USER CONTACT INFORMATION**

Agency:Private EntityName:Nyssa SeekampAddress:15 Park StreetCity:DoverState:NHZip:03820Emailnseekamp14@gmail.comPhone:6038193140



COASTAL RESOURCE WORKSHEET Water Division/Land Resources Management Wetlands Bureau <u>Check the Status of your Application</u>



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

#### APPLICANT LAST NAME, FIRST NAME, M.I.: Sea Level, LLC and Goulemas Family Trust

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

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

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

The following information is required for projects in coastal areas.

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

The purpose and goal is to complete remediation of PCBs, stabilize slopes and revegetate 410 SF of marsh, with adjacent slopes hardscape stabilized; also 1 CY soil of upland soil (>11 FT MSL) removed, 770 SF covered with 6 in soil cover (>1<25 ppm PCBs) and 5,000 SF concrete cap installed over soils with >25<50 ppm PCBs and lead, see Sheet 5. Resources proposed for impact include previously developed tidal buffer zone (TBZ) and shoreland. The TBZ and salt marsh within which work is proposed is currently disturbed.

All screening information and associated maps are provided in Appendix J, Part 2--Figure J1. A Coastal Functional Assessment (CFA) is completed in Appendix L for Sagamore Creek and associated tidal wetlands which includes saltmarsh and mudflat, completed by Adel Fiorillo Mattson, PWS#832 and Patrick Seekamp, CWS# 00128. The CFA was completed utilizing the USACE Highway Methodology (HM) Supplement (1993), USACE New England District HM Workbook Supplement (1999) for all functions and values except Ecological Integrity, which was assessed using the Method for the Evaluation and Inventory of Vegetated Tidal Marshes in NH (June 1993).

The Vulnerability Assessment is provided in Appendix K.

For standard permit projects, provide:

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

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

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

Per Env 311.07c, an Avoidance and Minimization Checklist May 2020 NH W-06-050 has been completed in Appendix F, which demonstrates compliance with Env-Wt 311.07. This Checklist demonstrates also that impacts to functions and values of all jurisdictional areas have been avoided and minimized to the maximum extent practicable, as required by Env-Wt 313.03.

Recognizing the location cannot be moved for this remediation project, methods to protect natural resources are described in Appendix J, Part 3--Coastal Resource Worksheet Narrative.

Vulnerability Assessment is provided in Appendix K.

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

The project addresses the cited Env-Wt 307 and 313.01, see Appendix J, Part 3, Coastal Resource Worksheet Narrative. Provide a project design narrative that includes the following:

A discussion of how the proposed project:
<ul> <li>Uses best management practices and standard conditions in Env-Wt 307;</li> <li>Meets all avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;</li> <li>Meets approval criteria in Env-Wt 313.01;</li> <li>Meets evaluation criteria in Env-Wt 313.01(c);</li> <li>Meets CFA requirements in Env-Wt 603.04; and</li> <li>Considers sea-level rise and potential flooding evaluated pursuant to Env-Wt 603.05;</li> <li>A construction sequence, erosion/siltation control methods to be used, and a dewatering plan; and</li> <li>A discussion of how the completed project will be maintained and managed.</li> </ul>
See Appendix J, Part 3, Coastal Resource Worksheet Narrative, which addresses each of these requirements. For erosion/siltation control methods to be used, see Appendix E, Engineering Plans, Sheets 5-7. No dewatering is required. For Construction Sequence, see Sheet 5. For discussion of how completed project will be maintained and managed, see Appendix J, Part 4, Operations Monitoring & Maintenance Plan.
<ul> <li>Provide design plans that meet the requirements of Env-Wt 603.07 (refer to Section 5);</li> <li>Provide water depth supporting information required by Env-Wt 603.08 (refer to Section 6); and</li> <li>For any major project that proposes to construct a structure in tidal waters/wetlands or to extend an existing structure seaward, provide a statement from the Pease Development Authority Division of Ports and Harbors (DP&amp;H) chief harbormaster, or designee, for the subject location relative to the proposed structure's impact on navigation. If the proposed structure might impede existing public passage along the subject shoreline on foot or by non-motorized watercraft, the applicant shall explain how the impediments have been minimized to the greatest extent practicable.</li> <li>See Appendix J, Part 3, Narrative to Coastal Resource Worksheet concerning design plans and water depth supporting information. See also Section 5 of this Worksheet. No structures are proposed or exist.</li> </ul>

SECTION 2 - DATA SCREENING (Env-Wt 603.03, in addition to Env-Wt 306.05)
Please use the Wetland Permit Planning Tool, or any other database or source, to indicate the presence of:
Existing salt marsh and salt marsh migration pathways;
Eelgrass beds;
Ocumented shellfish sites;
Projected sea-level rise; and
🔀 100-year floodplain.
Conduct data screening as described to identify documented essential fish habitat, and tides and currents that may be impacted by the proposed project, by using the following links:
National Oceanic and Atmospheric Administration (NOAA) Tides & Currents; and
NOAA Essential Fish Habitat Mapper.
Verify or correct the information collected from the data screenings by conducting an on-site assessment of the subject property in accordance with Env-Wt 406 and Env-Wt 603.04.
SECTION 3 - COASTAL FUNCTIONAL ASSESSMENT/ AVOIDANCE AND MINIMIZATION (Env-Wt 603.04; Env-Wt 605.01; Env-Wt 605.02; Env-Wt 605.03)
Projects in coastal areas shall:
Not impair the navigation, recreation, or commerce of the general public; and
Minimize alterations in prevailing currents.
An applicant for a permit for work in or adjacent to tidal waters/wetlands or the tidal buffer zone shall demonstrate that the following have been avoided or minimized as required by Env-Wt 313.04:
Adverse impacts to beach or tidal flat sediment replenishment;
Adverse impacts to the movement of sediments along a shore;
Adverse impacts on a tidal wetland's ability to dissipate wave energy and storm surge; and
Adverse impacts of project runoff on salinity levels in tidal environments.
For standard permit applications submitted for minor or major projects:
Attach a CFA based on the data screening information and on-site evaluation required by Env-Wt 603.03. The CFA for tidal wetlands or tidal waters shall be:
Performed by a qualified coastal professional; and
Completed using one of the following methods:
a. The US Army Corps of Engineers (USACE) Highway Methodology Workbook, dated 1993, together with the USACE New England District <i>Highway Methodology Workbook Supplement</i> , dated 1999; or
b. An alternative scientifically-supported method with cited reference and the reasons for the alternative method substantiated.

For any project that would impact tidal wetlands, tidal waters, or associated sand dunes, the applicant shall:
Use the results of the CFA to select the location of the proposed project having the least impact to tidal wetlands, tidal waters, or associated sand dunes;
🔀 Design the proposed project to have the least impact to tidal wetlands, tidal waters, or associated sand dunes;
Where impact to wetland and other coastal resource functions is unavoidable, limit the project impacts to the least valuable functions, avoiding and minimizing impact to the highest and most valuable functions; and
Include on-site minimization measures and construction management practices to protect coastal resource areas.
Projects in coastal areas shall use results of this CFA to:
Minimize adverse impacts to finfish, shellfish, crustacean, and wildlife;
Minimize disturbances to groundwater and surface water flow;
Avoid impacts that could adversely affect fish habitat, wildlife habitat, or both; and
Avoid impacts that might cause erosion to shoreline properties.
SECTION 4 - VULNERABILITY ASSESSMENT (Env-Wt 603.05) Refer to the New Hampshire Coastal Flood Risk Summary Part 1: Science and New Hampshire Coastal Flood Risk Summary Part II: Guidance for Using Scientific Projections or other best available science to:
Determine the time period over which the project is designed to serve.
1 month.
Identify the project's relative rick telerance to fleeding and notential domage or loss likely to result from fleeding to
buildings, infrastructure, salt marshes, sand dunes and other valuable coastal resource areas.
See Vulnerability Assessment, Appendix K.

NHDES-W-06-079

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

The 2 ft sea level rise for mapping was employed (see Appendix J, J1).

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

See Appendix J, Figure J1.

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

See Appendix E, Engineering Plans, Sheets 2, 5 through 7.

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

See Appendix J, Figure J1f, used SLR Scenario 2 ft.

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

Pre-application meeting date held:

SECTION 5 - DESIGN PLANS (Env-Wt 603.07, in addition to Env-Wt 311) Submit design plans for the project in both plan and elevation views that clearly depict and identify all required elements.
The plan view shall depict the following:
The engineering scale used, which shall be no larger than one inch equals 50 feet;
The location of tidal datum lines depicted as lines with the associated elevation noted, based on North American Vertical Datum of 1988 (NAVD 88), derived from <a href="https://tidesandcurrents.noaa.gov/datum_options.html">https://tidesandcurrents.noaa.gov/datum_options.html</a> , as described in Section 6.
An imaginary extension of property boundary lines into the waterbody and a 20-foot setback from those property line extensions;
The location of all special aquatic sites at or within 100 feet of the subject property;
Existing bank contours;
The name and license number, if applicable, of each individual responsible for the plan, including:
a. The agent for tidal docking structures who determined elevations represented on plans; and
<ul> <li>The qualified coastal professional who completed the CFA report and located the identified resources on the plan;</li> </ul>
The location and dimensions of all existing and proposed structures and landscape features on the property;
Tidal datum(s) with associated elevations noted, based on NAVD 88; and
Location of all special aquatic sites within 100-feet of the property.
The elevation view shall depict the following:
The nature and slope of the shoreline;
The location and dimensions of all proposed structures, including permanent piers, pilings, float stop structures, ramps, floats, and dolphins; and
Water depths depicted as a line with associated elevation at highest observable tide, mean high tide, and mean low tide, and the date and tide height when the depths were measured. Refer to Section 6 for more instructions regarding water depth supporting information.
See specific design and plan requirements for certain types of coastal projects:
Overwater structures (Env-Wt 606).     Tidal shoreline stabilization (Env-Wt 609).
<ul> <li>Dredging activities (Env-Wt 607).</li> <li>Protected tidal zone (Env-Wt 610).</li> </ul>
Tidal beach maintenance (Env-Wt 608).     Sand Dunes (Env-Wt 611).

SECTION 6 - WATER DEPTH SUPPORTING INFORMATION REQUIRED (Env-Wt 603.08)
Using current predicted NOAA tidal datum for the location, and tying field measurements to NAVD 88, field observations of at least three tide events, including at least one minus tide event, shall be located to document the range of the tide in the proposed location showing the following levels:
Mean lower low water;
Mean low water;
🔀 Mean high water;
Mean tide level;
Mean higher high water;
Highest observable tide line; and
Predicted sea-level rise as identified in the vulnerability assessment in Env-Wt 603.05.
The following data shall be presented in the application project narrative to support how water depths were determined:
The date, time of day, and weather conditions when water depths were recorded; and
The name and license number of the licensed land surveyor who conducted the field measurements.
For tidal stream crossing projects, provide:
Water depth information to show how the tier 4 stream crossing is designed to meet Env-Wt 904.07(c) and (d).
For repair, rehabilitation or replacement of tier 4 stream crossings:
Demonstrate how the requirements of Env-Wt 904.09 are met.
SECTION 7 - GENERAL CRITERIA FOR TIDAL BEACHES, TIDAL SHORELINE, AND SAND DUNES (Env-Wt 604.01)
Any person proposing a project in or on a tidal beach, tidal shoreline, or sand dune, or any combination thereof, shall evaluate the proposed project based on:
The standard conditions in Env-Wt 307;
The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
The approval criteria in Env-Wt 313.01;
The evaluation criteria in Env-Wt 313.05;
The project specific criteria in Env-Wt 600;
The CFA required by Env-Wt 603.04; and
The vulnerability assessment required by Env-Wt 603.05.
New permanent impacts to sand dunes that provide coastal storm surge protection for protected species or habitat shall not be allowed except:
To protect public safety; and
Only if constructed by a state agency, coastal resiliency project, or for a federal homeland security project.
Projects in or on a tidal beach, tidal shoreline, or sand dune shall support integrated shoreline management that:
Optimizes the natural function of the shoreline, including protection or restoration of habitat, water quality, and self-sustaining stability to flooding and storm surge; and
Protects upland infrastructure from coastal hazards with a preference for living shorelines over hardened shoreline practices.

SECTION 8 - GENERAL CRITERIA FOR TIDAL	BUFFER ZONES (Env-Wt 604.02)
The 100-foot statutory limit on the extent of a project in or on an undeveloped tidal buf	of the tidal buffer zone shall be measured horizontally. Any person proposing fer zone shall evaluate the proposed project based on:
The standard conditions in Env-Wt 307;	
🔀 The avoidance and minimization requir	ements in Env-Wt 311.07 and Env-Wt 313.03;
The approval criteria in Env-Wt 313.01;	
The evaluation criteria in Env-Wt 313.0	5;
🔀 The project specific criteria in Env-Wt 6	00;
🔀 The CFA required by Env-Wt 603.04; an	d
The vulnerability assessment required b	by Env-Wt 603.05.
Projects in or on a tidal buffer zone shall pr	eserve the self-sustaining ability of the buffer area to:
🔀 Provide habitat values;	
Protect tidal environments from potent	ial sources of pollution;
Provide stability of the coastal shoreline	e; and
Maintain existing buffers intact where t	he lot has disturbed area defined under RSA 483-B:4, IV.
SECTION 9 - GENERAL CRITERIA FOR TIDAL	WATERS/WETLANDS (Env-Wt 604.03)
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of	WATERS/WETLANDS (Env-Wt 604.03) anent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on:
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307;	WATERS/WETLANDS (Env-Wt 604.03) anent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on:
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307; The avoidance and minimization require	WATERS/WETLANDS (Env-Wt 604.03) anent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03;
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307; The avoidance and minimization require The approval criteria in Env-Wt 313.01;	WATERS/WETLANDS (Env-Wt 604.03) nanent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03;
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<ul> <li>SECTION 9 - GENERAL CRITERIA FOR TIDAL</li> <li>Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of</li> <li>The standard conditions in Env-Wt 307;</li> <li>The avoidance and minimization require</li> <li>The approval criteria in Env-Wt 313.01;</li> <li>The evaluation criteria in Env-Wt 313.01;</li> <li>The project specific criteria in Env-Wt 313.01;</li> <li>The project specific criteria in Env-Wt 603.04; an</li> <li>The vulnerability assessment required b</li> <li>Projects in tidal surface waters or tidal wet</li> <li>Optimize the natural function of the tid self-sustaining stability to storm surge;</li> <li>Be designed with a preference for living</li> </ul>	WATERS/WETLANDS (Env-Wt 604.03) Inanent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: Interpretent in Env-Wt 311.07 and Env-Wt 313.03; 5; 00; d py Env-Wt 603.05. Interpretent for the stabilization practices; and

#### **SECTION 10 – GUIDANCE**

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

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

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

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



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




### J1c. Essential Fish Habitat Report and Map

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EFH Report

#### **EFH Mapper Report**

#### **EFH Data Notice**

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office Atlantic Highly Migratory Species Management Division

#### **Query Results**

CEU

Degrees, Minutes, Seconds: Latitude = 43° 3' 14" N, Longitude = 71° 15' 18" W Decimal Degrees: Latitude = 43.054, Longitude = -70.745

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

#### \*\*\* WARNING \*\*\*

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.

сгп					
Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
P	0	Atlantic Butterfish	Adult	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
P	0	Atlantic Cod	Adult, Eggs, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
P	Θ	Atlantic IIerring	Adult, Juvenile, Larvae	New England	Amendment 3 to the Atlantic Herring FMP
R	Θ	Atlantic Mackerel	Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
	Θ	Atlantic Sea Scallop	ALL	New England	Amendment 14 to the Atlantic Sea Scallop FMP
P	0	Atlantic Wolffish	ALL	New England	Amendment 14 to the Northeast Multispecies FMP

https://www.habitat.noaa.gov/apps/efhmapper/efhreport/index.html

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8/4/23, 4:	49 PM		EFH Rep		
Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
P	0	Bluefin Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
P	0	Bluefish	Adult, Juvenile	Mid-Atlantic	Bluefish
A	0	Little Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
P	0	Pollock	Eggs, Juvenile, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
P	Θ	Red Hake	Adult, Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
P	0	Smooth Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
P	Θ	Thorny Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
P	0	White Hake	Adult, Eggs, Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
P	Θ	Windowpane Flounder	Adult, Eggs, Juvenile, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
P	0	Winter Flounder	Eggs, Juvenile, Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
P	0	Winter Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP

#### Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

#### Atlantic Salmon EFH / HAPC

Link	Data Caveat	Name	Designation	Lifestage	Management Council	FMP
R	Θ	Coastal Areas	EFH	All	New England	Amendment 3 to the Atlantic Salmon FMP

#### HAPCs

I	ink	Data Caveats	HAPC Name	Management Council
		0	Inshore 20m Juvenile Cod	New England Fishery Management Council

https://www.habitat.noaa.gov/apps/efhmapper/efhreport/index.html

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#### EFH Report

#### 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: <u>open data inventory --></u> All EFH species have been mapped for the Greater Atlantic region,

Atlantic Highly Migratory Species EFH, Bigeye Sand Tiger Shark, Bigeye Sixgill Shark, Caribbean Sharpnose Shark, Galapagos Shark, Narrowtooth Shark, Sevengill Shark, Sixgill Shark, Smooth Hammerhead Shark, Smalltail Shark



https://www.habitat.noaa.gov/apps/efhmapper/efhreport/index.html











### Narrative For Coastal Resource Worksheet (CRW), Env Wt 307 and Envt Wt 311.09, Env-Wt 400, Env-Wt 500, Env-Wt 600, and Env-Wt 700, and RSA 482-A:11; and Env Wt 313.01 and 313.03

- <u>Env Wt 307</u>: The project addresses the proposed dredging, filling, and construction within a jurisdictional area, per <u>307.1</u>; complies with all conditions of US Army Corps NH state general permit for dredging per <u>307.2</u>; for <u>307.3</u> compliance,
  - (a) The Proposed project activities are being conducted in such a way as to not cause or contribute to any violation of:
    - The surface water quality standards specified in RSA 485-A:8 or Env-Wq 1700;
    - (2) The ambient groundwater quality standards established under RSA 485-C;
    - (3) The limitations on activities in a sanitary protective area established under Env-Dw 302.10 or Env-Dw 305.10; or
    - (4) Any provision of RSA 485-A, Env-Wq 1000, RSA 483-B, or Env-Wq 1400 that protects water quality.
  - (b) <u>Soil erosion control:</u> All work, including management of soil stockpiles, will be conducted so as to minimize erosion, minimize sediment transfer to surface waters or wetlands, and minimize turbidity in surface waters and wetlands using the techniques described in:
    - (1) Env-Wq 1505.02, Env-Wq 1505.04, Env-Wq 1506, and Env-Wq 1508; specifically, to comply with <u>Env-Wq 1506</u>, mulching will be anchored with mulch netting or tackifier so that either are not blown away by wind or washed away by flowing water, applied at a rate of 70 to 90 pounds per 1,000 square feet to a thickness of at least two (2) inches; or alternatively, if an erosion control blanket is employed, it would be placed within 24 hours after sowing seed in the area being covered, by being laid loosely over the soils, maintaining contact with the soil, and not stretched; and installed per the manufacturer's specifications and will be anchored at the top of the slope in a trench, unrolled in the direction of the water flow, overlapping the edges and stapling. The seeding will be installed and staked at the toe (at HOTL, or 8 FT MSL) and top of the slope, at Elev 11 FT MSL, replacing the existing coir logs which exist in part along this 11 FT MSL line.
    - (2) The applicable BMP manual for Wetlands and Waterways Minimization and Avoidance is being followed;
  - (c) <u>Water quality control measures</u> have been:
    - (1) Selected and implemented based on the size and nature of the project and the physical characteristics of the site, including slope, soil type, vegetative cover, and proximity to jurisdictional areas;
    - (2) Comprised of wildlife-friendly erosion control materials;
    - (3) Installed prior to start of work and in accordance with the manufacturer's recommended specifications or, if none, the applicable requirements of Env-Wq 1506 or Env-Wq 1508, and will consist of staked coir logs at top

and toe of slopes, see WPA Appendix E, Engineering Sheets 5-7 ("Sheets 5-7");

- (4) Is capable of:
  - a. Minimizing erosion;
  - b. Collecting sediment and suspended and floating materials; and
  - c. Filtering fine sediment;
- (5) Will be maintained so as to ensure continued effectiveness in minimizing erosion and retaining sediment on-site during and after construction;
- (6) Remain in place until all disturbed surfaces are stabilized to a condition in which soils on the site will not experience accelerated or unnatural erosion, using techniques such as achieving and maintaining a minimum of 85% vegetative cover using an erosion control seed mix that is certified by its manufacturer as not containing any invasive species; and will consist of tall fescue and creeping red fescue applied at a rate of .45 lbs/1,000 SF and birdsfoot trefoil applied at a rate of 0.2 lbs/1,000 SF; per the NH Stormwater Handbook, Volume 1, 2008, since the upland soils cap area lies within 50 feet of a surface water, only limestone fertilizer will be applied at a rate of 138 lbs/1,000 SF; and
- (7) If designed and installed as temporary methods, be removed upon completion of work when compliance with (6), above, is achieved;
- (d) Any sediment collected by water quality control measures shall be:
  - (1) Removed with sufficient frequency to prevent the discharge of sediment; and
  - (2) Placed in an upland location in a manner that prevents its erosion into a surface water or wetland.
- (e) All exposed soils and other fills shall be permanently stabilized within 3 days following final grading.
- (f) <u>Turbidity curtain</u>--this will be deployed prior to dredging activities to:
  - Enclose the area of dredging conducted along the shoreline of the tidal inlet to Sagamore Creek, and will not be installed during periods of high flow; and
  - (2) Will be removed after work within the turbidity control is completed, the contained water has returned to background clarity, and removing the structure will not cause or contribute to a violation of (c)(6), above.
- (g) The person in charge of construction equipment shall:
  - Inspect such equipment for leaking fuel, oil, and hydraulic fluid each day prior to entering surface waters or wetlands or operating in an area where such fluids could reach groundwater, surface waters, or wetlands;
  - (2) Repair any leaks prior to using the equipment in an area where such fluids could reach groundwater, surface waters, or wetlands;
  - (3) Maintain oil spill kits and diesel fuel spill kits, as applicable to the type(s) and amount(s) of oil and diesel fuel used, on site so as to be readily accessible at all times during construction; and
  - (4) Train each equipment operator in the use of the spill kits.
- (h) Equipment shall be staged and refueled in accordance with Env-Wt 307.15, ie it will not be stored, maintained or repaired within wetlands; and it is anticipated

that the 4-8 cubic yards of wetland sediment to be removed, will be excavated by long reach excavator from the top of a riprap slope outside wetlands areas.

- <u>ENV WT 307.4</u>: the project will avoid and minimize discharges of dredged material or placement of fill material during spawning or breeding seasons by using water quality protection techniques as specified in Env-Wt 307 and timing of project as specified in Env-Wt 307.10(g) or (h);
- 3. <u>ENV WT 307.5</u>: the contractor will not use imported soil or seed stock containing nuisance or invasive species, by following the Invasive Plant BMPs;
- 4. <u>ENV WT 307.6</u>: no threatened or endangered species exist within the work area;
- 5. <u>ENV WT 307.7</u>: the proposed activities are consistent with the Shoreland Water Quality Protection Act, specifically maintenance and protection of waterfront buffer, natural woodland buffer, and protected shoreland, through adherence to Env Wq 1400 and RSA 483-B;
- 6. <u>ENV WT 307.8</u>: water quality and environmental minimization measures will be in place to ensure that functions and values of prime wetlands and duly-established 100-foot buffers are protected to extent practicable during construction;
- 7. <u>ENV WT 307.09</u>: no structures within jurisdictional areas are proposed;
- 8. <u>ENV WT 307.10:</u> dredging will not affect setbacks, will occur during low flow conditions, and turbidity controls shall:
  - (a) Be installed prior to construction and maintained during construction such that no turbidity escapes the immediate dredge area; and
  - (b) Remain in place until suspended particles have settled and water at the work site has returned to normal clarity;
  - (c) Dredged materials shall be disposed of out of jurisdictional areas, at a licensed disposal facility;
  - (d) Dredged materials (11 CY max) are intended to be to live-loaded and transported off-site, thus no stockpiling in uplands areas is anticipated. If this does become necessary, such stockpiling shall be dewatered in sedimentation basins that are:
    - (1) Contained within turbidity controls that prevent turbid water from leaving the basins; and
    - (2) Located outside of any jurisdictional area. Also, no dredging shall occur in tidal waters during a fish migration or larval setting stage of fish and shellfish, unless required, which is between March 15 and November 15; and will be designed and implemented to ensure that there is no disruption of tidal flushing;
- 9. ENV WT <u>307.11</u>: proposed fill shall be clean wetland hydric soil for dredging restoration areas, and clean topsoil for upland areas, and clean 4 or 5 inch stone and boulders for planned riprap areas, which do not contain any material that could contaminate surface or groundwater or otherwise adversely affect the ecosystem in which it is used; the limits of fill are clearly identified on the drawings (see Sheets 5 through 7) and will be controlled in accordance with Env-Wt 307.03 to ensure that fill does not spill over or erode into any area where filling is not authorized; slopes

adjacent to the dredging area and transitioning from upland areas to the dredging area will during construction, be immediately stabilized (as specified in Env-Wq 1506 or Env-Wq 1508), to prevent erosion into adjacent wetlands or surface waters. Fill shall be not placed so as to direct flows onto adjacent or down-current property. No swamp or construction mats nor temporary fill are anticipated, and construction work will be accomplished by excavators stationed on existing upland soils or riprap.

- 10. ENV WT <u>307-12</u>: Following project completion, project area will be restored according to the following:
  - (a) Within 3 days of final grading or temporary suspension of work in an area that is in or adjacent to surface waters, all exposed soil areas shall be stabilized by:
    - (1) Seeding and mulching, if during the growing season; or
    - (2) Mulching with tackifiers within the growing season;
  - (b) Upon completion of construction, all disturbed wetland areas shall be stabilized with either wetland plantings (See **Sheets 5-7**) or seed mix. Salt marsh bulrush will be planted below 6 FT MSL, and salt tolerant grass mix will be planted from 6 FT MSL to the HOTL at 8 FT MSL; see details under Construction Sequence note on **Sheet 5**;
  - (c) Any seed mix used shall not contain plant species that are invasive species;
  - (d) Mulch used within an area being restored shall be natural straw or equivalent non-toxic, non-seed-bearing organic material;
  - (e) Wetland soils from areas vegetated with invasive species shall not be used in the area being restored;
  - (f) If any temporary impact area that is stabilized with seeding or plantings does not have at least 75% successful establishment of wetlands vegetation after 2 growing seasons, the area shall be replanted or reseeded, as applicable;
  - (g) If a temporary impact area is restored by seeding or plantings, then:
    - (1) The work shall not be deemed successful if the area is invaded by invasive species during the first full growing season following the completion of construction; and
    - (2) The person responsible for the work shall submit a remediation plan to the department that proposes measures to be taken to eradicate invasive species during this same period;
  - (h) any trees cut in an area of authorized temporary impacts shall be cut at ground level with the shrub and tree roots left intact, to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area.
- 11. <u>ENV WT 307-1</u>: work will occur within 10 feet of an abutting property line, but written consent of the abutter has been obtained.
- 12. ENV WT 307-14: rocks will not be removed from surface waters;
- 13. per <u>307-15</u>, heavy equipment such as excavator and loader will need to be operated in the shoreland and wetlands buffer jurisdictional areas, but no mobile heavy equipment working in wetlands buffer area will be stored, maintained, or repaired in wetlands, except that repairing or refueling in a wetland is allowed if equipment cannot practicably be removed and secondary containment is provided; Where construction

requires the operation of heavy equipment in wetlands, the equipment will either have low ground pressure, namely less than 4 psi, or not be located directly on wetland soils and vegetation.

- 14. Per <u>307-16</u>, adherence to approved plans will be maintained; and
- 15. per <u>307-18</u>, a construction monitoring plan (CMP) with inspection reports, water quality reports, and review of project wetland planting plan which has been prepared by a certified wetland scientist is provided as **Appendix J**, **Part 5** and **Sheets 5-7**. A report that describes the monitoring conducted and date(s) of inspections, and includes photos showing the extent of jurisdictional impacts, areas of restoration, and progress of any plantings will be provided at the conclusion of work, along with a description of the stability of and status of the wetland system, including a description of any necessary adjustments; and a schedule and description of measures to be taken during construction and after completion of the project will be provided in CMP.
- 16. <u>Env-Wt 311.09</u>, <u>Env-Wt 400</u>, <u>Env-Wt 500</u>, <u>Env-Wt 600</u>, <u>and Env-Wt 700</u>: These criteria have been met, including project-specific criteria established in Env-Wt 500 and Env-Wt 600</u>.
- 17. <u>Env Wt 800</u>, Compensatory Mitigation, and <u>Env-Wt 900</u>, Stream Crossings, are not applicable. Specifically, for <u>311.09</u>, since this project lies within the protected shoreland as defined by RSA 483-B, the following has been provided on Sheets 2, and 5-7:
  - (a) The reference line;
  - (b) The location of all existing structures between the primary building line and the reference line;
  - (c) The location of all proposed structures (no new structures are proposed);
  - (d) The landward limit of the 100-foot tidal buffer zone; and
  - (e) The total jurisdictional area within the protected shoreland to be impacted as a result of the project.
- 18. Compliance with <u>Env-Wt 400</u> has been achieved regarding requirements for wetland and hydric soil delineation, jurisdictional area delineation, and assessment/classification of type of impact.
- 19. Compliance with <u>Env Wt 500</u> is demonstrated for: natural aquatic vegetation removal and restoration; maintenance of current shoreland alignment and function; and application and design requirements for shoreland riprap installation.
- 20. For <u>Env Wt 600</u>, the Tidal Dredging Worksheet has been completed as WPA Appendix R, and requirements are met for shoreland design narrative and plans. Specifically, for <u>603.07</u>,
  - (a) design plans for the project in both plan and elevational views are provided in Sheets 1 through 7 which depict and identify all required elements, as described in Env-Wt 311 and (b) and (c), below.
  - (b) The plan view depicts the following:
    - (1) The engineering scale used, no larger than one inch equals 50 feet;
    - (2) The location of tidal datum lines depicted as a line with the associated elevation noted, based on NAVD 88, as described in Env-Wt 603.08;

- (3) An imaginary extension of property boundary lines into the waterbody and a 20-foot setback from those property line extensions;
- (4) The location of all special aquatic sites at or within 100 feet of the subject property, if any (none exist, See WPA Appendix C, which contains Wildlife Habitat Map, and WPA Appendix J, Current Shellfish Beds, and 2023 Eelgrass maps, all of which show no applicability to the project area);
- (5) Existing bank contours;
- (6) The name and license number of each individual responsible for the plan, including the certified wetland scientist who completed the CFA report and located the identified resources on the plan; and
- (7) The location and dimensions of all existing and proposed structures and landscape features on the property.
- (c) The elevational views in Sheets 1-7 depict the following:
  - (1) The nature and slope of the shoreline;
  - (2) Water depths depicted as a line with associated elevation at highest observable tide, mean high tide, and mean low tide, and the date and tide height when the depths were measured, as presented on Sheet 5, and as identified in <u>603.08</u> has been provided therein. The predicted sea-level rise is identified in the vulnerability assessment (see **Appendix K**) per Env-Wt 603.05.(b); and
- (d) A bathymetric survey is essentially provided in Sheet 5 for the purposes of this Application.
- 21. Regarding <u>ENV WT 607.04</u>,. A sediment dispersion modeling defined in <u>607.04</u> has not been undertaken, because only 0.5 to 1.0 feet of either marsh sediment with silty grain size (defined per 607.05(g)) or prior fill materials from prior remediation activities are being excavated. Avoidance and minimization BMPs have been provided in the narrative.
- 22. In accordance with <u>607.03(b)(2</u>), a pre-application meeting was held on April 6, 2023 with Kristin Duclos, Wetlands Permitting Specialist, and David Price, Eastern Region Supervisor, of NHDES Water Pollution Division, and a site visit subsequently on April 24, 2023.
- 23. Per <u>Env Wt 700</u>, wetlands/tidal buffers have been delineated by a Certified Wetlands Scientist, and there is no significant net loss of values of the prime wetland/buffer results from the proposed dredging and restoration activities, based on a functional assessment and impact analysis.
- 24. Finally, as required by <u>RSA 482-A:11, II</u> for a permit to dredge or fill, the work will not "infringe on the property rights or unreasonably affect the value or enjoyment of property of abutting owners".
- 25. <u>Env Wt 313.01</u>: The project meets the criteria of this regulation, regarding functional assessments and avoidance and minimization requirements specified in Env-Wt 313.03, since no practicable alternative exists. No compensatory mitigation is

required. No permanent impacts will remain due to avoidance and minimization activities, all applicable conditions specified in Env-Wt 307 have been met.

- 26. <u>Env Wt 313.03</u>: a demonstration has been made concerning temporary impacts to jurisdictional areas which avoids such impacts to the maximum extent practicable, and establishes that any unavoidable impacts have been minimized, as described in NH Wetlands Avoidance and Mitigation BMPs, as noted above. Furthermore:
  - (a) There is no practicable alternative that would have a less adverse impact on the area and environments under the department's jurisdiction;
  - (b) The project avoids and minimizes impacts to tidal marshes and non-tidal marshes where documented which could provide sources of nutrients for finfish, crustacea, shellfish, and wildlife of significant value;
  - (c) The project maintains hydrologic connections between adjacent wetlands;
  - (d) The project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A;
  - (e) The project avoids and minimizes impacts that eliminate, depreciate, or obstruct public commerce, navigation, or recreation;
  - (f) The project avoids and minimizes impacts to floodplain wetlands that provide flood storage;
  - (g) The project avoids and minimizes impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

# **APPENDIX J, Part 4**

# OPERATIONS MONITORING & MAINTENANCE (OMM) PLAN PORTSMOUTH MARINA RESTORATION PROJECT 185 - 187 WENTWORTH ROAD, PORTSMOUTH, NH

Prepared for: Mr. Tom Reis, President Sea Level, LLC 187 Wentworth Road Portsmouth, NH



October 17, 2024 Aries Project No. 2021-075 NHDES #198604143

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### OPERATIONS MONITORING AND MAINTENANCE PLAN SEA LEVEL, LLC. PORTSMOUTH MARINA RESTORATION PROJECT, 185 - 187 WENTWORTH ROAD, PORTSMOUTH, NH

## **1.0 - INTRODUCTION**

This Operations Monitoring and Maintenance (OMM) Plan ("Plan") is intended to identify procedures and requirements applicable to the portion of the Portsmouth Marina property owned by Sea Level, LLC at 185-187 Wentworth Road, Portsmouth, NH (the "site"), which will be restored in accordance with applicable federal, state, and local environmental regulations. These procedures and requirements will concern as-built structures or constructed features which will have been implemented and need to be maintained and monitored to verify that regulatory standards and protocols are being met and that the integrity and effectiveness of the constructed features will continue over the anticipated 25-year life of the remediated portion of the site.

The applicable environmental regulations and associated requirements are as follows:

- Federal TSCA, 40 CFR 761 et al, for an approved Self-Implementing Plan (SIP), approved September 9, 2016, supplemented by a SIP Addendum approved January 31, 2023 by the U.S. Environmental Protection Agency (EPA), TSCA Section, Region I;
- NH Department of Environmental Services (DES) requirements associated with the Wetlands Protection Act and NH Stormwater Management Standards;
- NHDES requirements for hazardous waste cleanup, noting that EPA regulations take precedence over state regulations for the specific parameter of concern, PCBs, which has been present on site in concentrations exceeding 50 ppm, the threshold which triggers EPA jurisdiction; and
- City of Portsmouth Conservation Commission (ConCom) Wetlands Protection Regulations, Article 10, and Planning Commission requirements for a Conditional Use Permit, as applicable.

Therefore, this OMM Plan will need to be updated once final regulatory approvals from the respective state, local and federal agencies have been issued. It is prepared at present as a technical submittal to accompany the Wetlands Protection Act Application (WPA) and related permit applications, especially the Coastal Resource Worksheet, as Part 4 of the Shoreland Permit Application, to demonstrate the commitment of the WPA Applicant, Sea Level, LLC, to provide long-term maintenance and care of the several different components of remediation measures which will be implemented at the site, which include the following:

• Uplands Final Cover Area, 760 SF in area, a level area above Mean Sea Level (MSL) Elevation 11 to 12 feet and borders the armored riprap which lines the cove. This Area covers PCBs >1<25 ppm with a six-inch clean soil cap vegetated



with wetland compatible or wildlife meadow mix; it is regulated by TSCA as a "Low Occupancy Area", with certain requirements thereto; and

Uplands Concrete Cap Area, 5,000 SF in area, covering PCBs >25<50 ppm and lead. It occurs at MSL Elevation 13 to 15 and has a dual design in addition to providing a TSCA cap compliant with 40 CFR 761(a)(7), allows heavier boat storage to occur within this footprint. This Cap is sloped at a 2% slope from east to west, allowing precipitation to drain via sheet flow to the western and northern edges of the cap where it encounters a two-foot-wide 2-inch stone flow level spreader/attenuation barrier which reduces flow prior to entry to a packaged underground stormwater treatment and retention system such as Stormtech or equivalent. This system is intended to be sufficiently sized in design to retain and slowly release into adjacent soils after treatment for oils, metals, and other residues found on the concrete surface, the full volume of rainwater from a 2-year, 24-hour storm (3-inch precipitation event).</p>

Other stormwater originating adjacent to the cap will drain via overland sheet flow down to the riprap area, either directly in the north direction and over the Final Soil Cover Area, or indirectly (for flow to the west) via the natural vegetated drainage swale which currently exists above MSL Elevation 12 feet, in an eastwest direction and downwards over the MSL Elevation 11 to 12 foot area to the riprap zone between MSL Elevation 8 to 11, with 8 feet being the Highest Observable Tide Line.

The anticipated limits of work and final layout and dimensions and components of the completed project components are identified in Engineering Plan/Sheet 5. Each component is addressed separately in the sections which follow.

# 2.0 - ACTIVITY AND USE RESTRICTION (AUR)

The U.S. EPA will accept a state-defined environmental deed restriction instrument as the legal mechanism by which the remediation area of the site containing final cleanup measures is assured to be maintained and monitored over the post-closure project life to continue to protect human health and the environment, in accordance with TSCA regulations established at 40 CFR 761(a)(8). Specific TSCA requirements pertinent to an AUR, and identified in EPA's January 23, 2023 approval letter, are as follows:

Within sixty (60) days of completing final property-wide remediation, Sea Level LLC shall submit to EPA a recorded deed restriction for the property in its entirety. The deed restriction shall include: a description of the extent and levels of contamination at the property following abatement; a description of the actions taken at the property; and a description of the use restrictions for the property; and the long-term monitoring and maintenance requirements on the property per the requirements of 40 CFR § 761.61(a)(8).



NHDES En Or 608 Contaminated Site Management provides for an Activity and Use Restriction (AUR) to provide this deed restriction. The Applicant will after completion of remediation activities, file an AUR Application (Attachment AA) which is completed at that time to identify the measures and activities it will undertake to provide assurance that regulatory requirements and environmental controls will remain in good condition.

Where the area subject to the AUR comprises only a portion of a lot, the AUR Application will include both of the following:

- a. A metes and bounds description of the restricted area and
- b. A recordable plan, prepared by a New Hampshire registered land surveyor that shows the location of the restricted area in relation to the property boundaries of the site.

Also necessary is the following information, which are identified in Sections 3, 4 and 5 of this document, unless provided below in parenthesis following the applicable requirement, or is stated on the AUR Application:

- 1. The time period during which the AUR shall be effective (25 years).
- 2. A precise description of the site activities and uses that will be prohibited on the site and allowed on the site.
- 3. A description of how the restrictions will eliminate the risks to human health and the environment.
- 4. A precise description of the measures to be taken to ensure compliance with the AUR.
- 5. A description of the procedures to be followed when an emergency requires immediate excavation of contaminated soil to repair utility lines or other infrastructure on the site, or to respond to other emergencies that might result in a significant risk to human health, evaluated pursuant to procedure specified in Env-Or 606.19(d)(2) and (3), from exposure to contaminants at the site, which shall include:
  - a. Notifying NHDES of such emergency condition; and
  - b. Limiting disturbance of contaminated media to the minimum necessary to adequately respond to the emergency; and
  - c. Undertaking specified precautions to reduce exposure of workers and neighbors of the site to contaminated media and
  - d. Preparation and implementation of a written plan for restoring the site to a condition consistent with the AUR.
- 6. An acknowledgement by the applicant that the AUR shall run with the land pursuant to Env-Or 608.01(b)(3).
- 7. An analysis of the long-term feasibility of maintaining the AUR.
- 8. An acknowledgement by the applicant to incorporate either in full or by reference to the AUR into all deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instruments conveying an



interest in and/or a right to use the property pursuant to Env-Or 608.01(b)(2).

- 9. The procedures for modifying and terminating the AUR pursuant to Env-Or 608.06 and Env-Or 608.07.
- 10. Title reference by which the property owner(s) acquired title to the property.
- 11.A schedule for self-certifying compliance with the AUR pursuant to Env-Or 608.01(e).

Future use restrictions and obligations which require the monitoring, maintenance and record keeping are anticipated to exist for the following permanent site remediation features, which are TSCA caps in accordance with 40 CFR 761(a): 1) impermeable concrete cap in upland soils, installed over a 5,000 square foot (SF) area at the site to prevent infiltration of precipitation to soils beneath which contain residual but legally compliant levels of environmental constituents of concern (PCBs >25<50 ppm and lead); and 2) a permeable cap (Final Cover) installed to prevent contact with subsurface levels of PCBs >1<25 ppm considered to exist below regulatory levels, as long as the six-inch-thick Final Cover over the affected 770 SF remains intact; and 3) maintenance of stormwater management controls and features which allow the two caps in Items 1 and 2 to remain intact and prevent human or wildlife contact with the PCBs/lead in soils.

To enforce the prevention of contact with the PCBs/lead in soils, the AUR will be selfcertified using the NHDES template (Attachment BB) recorded on the property deed by the Applicant once soil remedial activities are complete as planned for 2025, and will identify the following restrictions and conditions for the site consistent with EPA, NHDES, and City of Portsmouth issued permits and approvals:

- Low occupancy use, as described below with respect to the TSCA Cap;
- Construction Worker Caution, as described below;
- Industrial/Commercial land use restriction, meaning that residential development is prohibited;
- Future Building Construction restriction: Any commercial/industrial building constructed intended for regular occupancy must have a full concrete slab-on-grade floor;
- Any future disturbance of the AUR area, including by utility companies working for third parties, should only be undertaken under the supervision of a NH-Licensed Professional Engineer or Professional Geologist, who will prepare a Health and Safety Plan (HASP) consistent with 29 CFR 1910.120, and conducted in accordance with a Soil and Groundwater Management Plan (SMP), which in combination with a HASP will proscribe safe and environmentally compliant procedures and protocols to protect human health, safety, welfare and the environment while the temporary disturbance of the soils occurs;
- A notification that the caps must be maintained in perpetuity by any potential purchaser of the property; and



• A notification that the land has been used for PCB remediation waste disposal and is restricted to use as a low occupancy area as defined in 40 CR 761.3.

The SMP would need to address the following items:

- Be prepared by a NH-licensed professional and implemented prior to the commencement of any construction activity, or any planned (non-emergency) utility installation, repair or maintenance activity, which is likely to disturb or encounter soil or groundwater located below surface grade (current elevation at the date of the Notice of AUR) within the AUR area unless such activity is permitted as noted above. The SMP shall be prepared in accordance with the MCP (310 CMR 40.0030). The SMP should describe soil excavation, handling, storage, transport, and disposal procedures and include a description of engineering controls and air monitoring procedures necessary to ensure that onsite workers and receptors in the vicinity are not affected by fugitive dust or particles. Procedures for managing water encountered in the excavation should also be addressed in the SMP. On-site workers who may come into contact with impacted soils on the Property must be appropriately trained concerning the requirements of the SMP, must be informed of the requirements in the SMP, and the SMP must be made available on site; and
- Be supplemented by a health and safety plan ("HASP") prepared by a qualified professional and implemented prior to the commencement of any non-emergency utility installation, repair or maintenance activity, or construction activity which is likely to disturb or encounter soil or groundwater located below surface grade (current elevation assumed to be 11+ FT MSL at the date of the Notice of AUR) within the AUR area. The HASP shall require workers encountering subsurface soils and groundwater to be adequately protected and trained consistent with relevant federal and state occupational, health and safety requirements (e.g. 29 CFR 1910.120), and must otherwise be prepared in accordance with the guidelines discussed in the AUR. The HASP should consider the appropriate personal protection equipment (PPE) for construction workers and monitoring of the breathing zone air quality during Site construction and earth work activities. The HASP should clearly identify the location(s) and nature(s) of the capped materials which may be encountered.

The caps must be maintained in perpetuity and include the completion of annual inspections and maintenance activities, unless additional remedial actions are completed and their removal is approved by the appropriate regulatory agency(s);

- On-site construction and utility workers must be informed of the location and nature of contaminated soil within the AUR area and of the restrictions imposed by the AUR. Copies of the HASP and SMP must be available on site during any activities that may result in disturbance of contaminated soil or groundwater in the AUR area;
- Any soils removed from the AUR area in accordance with the AUR must be managed in a manner consistent with NHDES protocols and guidance, and in accordance with federal, state, and local regulations;



- The U.S. EPA requires notification from current and future owners thirty (30) days prior to any change in ownership of the property. Such notice must include the name, address, and telephone number of the new owner, and the name of the new owner's contact person. The current and future owners must also submit a letter to EPA, signed by the potential purchaser, stating whether it intends to maintain the TSCA cap, and whether it plans to maintain the TSCA-defined "low occupancy land use", or whether it intends to remove and dispose of additional PCB-contaminated soils off-site instead;
- The lessee/owner will restrict routine access to the AUR deed restricted area.
- The lessee must notify the owner of any planned or proposed soil disturbance activities in the AUR area at least 30 days prior to the activity;
- No site soils from the AUR area are to be transferred off-site with the prior approval of the owner;
- Lessee/owner will ensure that site access is secured when the site is not occupied;
- Lessee/owner will allow agency access, if requested;
- Sea Level, LLC. will provide sufficient financial assurance to enable annual inspections and maintenance activities.

## 3.0 - STORMWATER MANAGEMENT SYSTEM/OPERATIONS MONITORING AND MAINTENANCE PLAN (OMM PLAN)

EPA set forth in its January 31, 2023 SIP approval letter the following conditions pertinent to long term maintenance and monitoring:

- Within 30 days of completion of the work authorized under this Approval, Sea Level LLC shall submit for EPA's review and concurrence, a detailed OMM Plan for the caps and other pertinent features. Sea Level Inc. shall incorporate any changes to the OMM Plan required by EPA.
  - a. The OMM Plan shall include: a description of the activities that will be
  - b. The OMM Plan shall include a communications component which details how the maintenance and monitoring results will be communicated to the Site users, including building users, other on-site workers, and interested stakeholders, if requested.
  - c. The OMM Plan also shall include a worker training component for maintenance workers or for any person that will be conducting work that could impact the cap(s).
  - d. Sea Level Inc. shall submit the results of these long-term monitoring and maintenance activities to EPA. Based on its review of the results, EPA may determine that modification to the OMM Plan is necessary in order to monitor and/or evaluate the long-term effectiveness of the cap(s).
  - e. Activities required under the OMM Plan shall be conducted until such time that EPA determines, in writing, that such activities are no longer necessary.



This present OMM Plan is intended to address each of the above requirements. In addition to specific measures identified in Section 3.1, the findings of annual OMM Plan inspections will be communicated to site personnel, and filed with EPA and other regulatory entities as needed; and personnel conducting the inspections and providing maintenance activities, repairs or restoration work, will be trained in performance of their duties.

Consistent with the New Hampshire Stormwater Handbook:

- The owner shall conduct an annual summary inspection using a Stormwater Operation & Maintenance Checklist, which will be the OMM Plan Checklist in Attachment CC, and keep this inspection and log on-site. It can be provided to the City of Portsmouth ConCom if requested. The inspection will focus on inspection and maintenance activities including performances of Best Management Practices (BMPs); and,
- Should ownership of the site change, the owner will continue to be responsible until the succeeding owner shall notify the US EPA, NHDES, and as appropriate, the City of Portsmouth ConCom, that the succeeding owner has assumed such responsibility.

# 3.1 - Operations, Monitoring & Maintenance (OMM) Plan

Features of the OMM plan, which will meet the EPA requirements for a OMM Plan, including Best Management Practices (BMPs) are as follows:

### Housekeeping

The existing development has been designed to maintain an appropriate level of water quality treatment for stormwater discharge, which will occur via sheet flow to the low point of the cap areas and ultimately to the wetland areas. An OMM plan has been prepared and the owner (or its designee) is responsible for adherence to the OMM plan in a strict and complete manner.

### • Storing of Materials & Water Products

The trash and waste program for the site includes exterior dumpsters designed to capture trash and debris.

### Vehicle Washing

Outdoor vehicle washing has the potential to result in high loads of nutrients, metals, and hydrocarbons during dry weather conditions, as the detergent-rich water used to wash the grime off the vehicle enters the stormwater drainage system. The existing site status does not include any designated vehicle washing areas, although it is expected that any vehicle washing will take place on-site on a routine basis, but outside the 100-foot Tidal Buffer Zone.



# • Spill Prevention & Response

Sources of potential spill hazards include vehicle fluids, liquid fuels, pesticides, paints, solvents, and liquid cleaning products. The majority of the spill hazards would likely occur within the enclosed site buildings or on the 5,000 SF concrete cap (Engineering Sheet 5) which is provided for heavier boat storage. Other smaller boat storage will occur on NHDES-designated impervious gravel outside the limits of the two caps (soil or concrete). It is noted that this "impervious gravel" is 1-2 inch in size, is a combination of degraded and intact gravel. The degraded gravel has over time, due to its location adjacent to a woodland buffer, received leaf detritus which over time via natural biodegradation has covered its upper surface. However, both the degraded and intact gravel are quite pervious in function, and cover the majority of the site, as noted in the Shoreland Permit Application for this project. This gravel base allows rapid infiltration of stormwater even for design storm events.

The project design avoids the need for stormwater to enter the local municipal stormwater drainage system. However, there are spill hazards from vehicle fluids from hydraulic lines located outside of the building on the concrete cap which has the potential to enter the overland stormwater drainage system and are to be addressed as follows:

- Spill hazards of pesticides, paints, and solvents shall be remediated using the Manufacturers' recommended spill cleanup protocol.
- Vehicle fluids and liquid fuel spills shall be remediated according to the local and state regulations governing fuel spills.
- The owner shall have the following equipment and materials on hand to address a spill clean-up: brooms, dust pans, mops, rags, gloves, absorptive material and/or sand, and plastic or metal trash containers.
- All spills shall be cleaned up immediately after discovery.
- Spills of oil or hazardous material over US EPA and NHDES thresholds would be reported to the appropriate agencies, and cleanup operations undertaken by the owner, if small, or by a licensed spill response contractor.
- Should a spill occur, the pollution prevention plan will be adjusted to include measures to prevent another spill of a similar nature. A description of the spill, along with the causes and cleanup measures will be included in the updated pollution prevention plan.

# Management of Deicing Chemicals and Snow

Snow will be stockpiled on site until the accumulated snow becomes a hazard to the daily operations of the site. It will be the responsibility of the snow removal contractor to properly dispose of transported snow according to NHDES guidelines governing the proper disposal of snow. It will be the responsibility of the snow removal contractor to follow these guidelines and all applicable laws and regulations. The owner's maintenance staff (or its designee) will be responsible for the clearing of the sidewalk and building entrances. The owner may be required to use a deicing agent such as potassium chloride to maintain a safe walking



surface. If used, the de-icing agent for the walkways and building entrances will be kept within the storage rooms located within the building. If used, de-icing agents will not be stored outside. The owner's maintenance staff will limit the application of sand.

## Inspection Log Form

A OMM Plan Inspection Form (Attachment CC) will be kept summarizing inspections, maintenance, and any corrective actions taken. The log will include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, the location where the sediment and debris was disposed after removal will be indicated. The log will be made accessible to ConCom and NHDES upon request, and will be issued annually to EPA.

# • Stormwater Collection System – On-Site

The stormwater collection system is comprised of natural water quality swales, stone check dam/level spreaders at the north and west ends of the concrete cap, (see Engineering Sheets 4 and 5) and the packaged underground stormwater treatment and retention system described above. The packaged system will be maintained by periodic flushing or removal of solids as needed

# **3.2 - Inspection and Maintenance Frequency and Corrective Measures**

The following will be observed for this site:

# • Scope and Frequency of Inspections:

In accordance with NHDES Stormwater Handbook: Volume 2, the following areas, facilities, and measures will be inspected and the identified deficiencies will be corrected: Clean-out of stormwater control devices must include the removal and legal disposal of any accumulated sediments, trash, and debris. In any and all cases, operations, inspections, and maintenance activities shall utilize best practical measures to avoid and minimize impacts to wetland resource areas outside the footprint of the Limits of Work. An annual inspection at a minimum, and after severe storm events impacting the caps, is anticipated.

Proper construction, inspections, maintenance, and repairs are key elements in maintaining a successful stormwater management program on a developed property. Routine inspections ensure permit compliance and reduce the potential for deterioration of infrastructure or reduced water quality. For the purpose of this Stormwater Management Program, a significant rainfall event is considered an event of three (3) inches or more in a 24-hour period or at least 0.5 inches in a one-hour period.



### Construction Requirements:

During construction, expected to require only one month, inspections will be conducted every two weeks or after a 0.25" rainfall event in a 24-hour period per the EPA NPDES Phase II SWPPP, until the entire disturbed area is fully restabilized, which should occur within two months after completion of work. Upon full stabilization of the project and filing of an NOI, inspections need only be conducted after a significant rainfall event as described above or as described in the maintenance guidelines below.

### Invasive Species:

The NH Commissioner of Agriculture prohibits the collection, possession, importation, transportation, sale, propagation, transplantation, or cultivation of plants banned by NH LAW RSA 430:53 and NH Code Administrative Rules AGR 3800. The project shall meet all requirements and the intent of RSA 430:53 and AGR 3800 relative to invasive species.

# 4.0 - TSCA CAP

The TSCA Cap will be inspected on a yearly basis using the OMM Plan inspection form presented in Attachment CC. The TSCA Cap will be maintained as described below, and repaired as needed with the methods identified in the following sections.

### 4.1 - Cap Maintenance

Recommendations for routine maintenance of the TSCA cap as well as maintenance for asphalt damage and weathering are provided below, in the event repairs are needed. Engineering Sheets 4 and 5 depict the construction and extent of the concrete TSCA cap, which serves as an impermeable barrier.

### • Crack Filling or Sealing

This treatment should be used for small and medium cracks that are found to be 0.25 to 2 inches in width. The cracks should be cleaned with high pressure air blasting equipment over the entire length of the cracks prior to sealing. Small cracks (between 0.25 inch and 0.5 inch) should be widened to a minimum of 0.5 inch using a pavement saw where feasible. An appropriate sealant or Type II concrete should be applied to fill such cracks.

### • Full Depth Pavement Reconstruction

This repair method should be used where potholes or depressions greater than 3 inches in depth, or extensive spalling or surface degradation, are observed. The edges of the repair should be saw cut to the full depth of the concrete pavement and the existing subbase material removed if needed and replaced with a new 6-inch concrete cap and sub-base material, matching the original cap section.



Because Federal regulations indicate "repairs shall begin within 72 hours of discovery for any breaches which would impair the integrity of the cap" (40 CFR 761.61 (a) (7)), annual cap inspection and routine informal monitoring is recommended. It is expected that the new owner will perform the annual cap inspection and identify deficiencies or recommended actions, using the OMM Plan Inspection Form in Attachment CC.

# 4.2 - Record Keeping

Copies of the inspections and any maintenance or inspection follow-up activities should be maintained on-site. The facility must maintain a written record of all sampling and analyses of PCBs or notifications for 3 years from the date of the waste's generation. The records must be made available to US EPA and/or NHDES upon request, per 40 CFR 761.62 (b)(5).

### 4.3 - Change in Ownership

The US EPA requires notification from Sea Level LLC. thirty (30) days prior to any change in ownership of the property. Such notice must include the name, address, and telephone number of the new owner, and the name of the new owner's contact person. Sea Level LLC must also submit a letter, signed by the potential purchaser, stating whether it intends to maintain the TSCA cap, and whether it plans to maintain the low occupancy land use, or whether it intends to remove and dispose of additional PCB-contaminated soils off-site instead.

### 5.0 - FINAL SOIL COVER CAP

The Low Occupancy Final Soil Cover's location and dimensions are provided on Engineering Sheet 5, and its composition consists of six inches of clean soil cover/topsoil vegetated with wetland-compatible or wildlife habitat plants. The Cover will be inspected on a yearly basis using the form presented in Attachment CC, and will be maintained as described below, and repaired as needed with the methods identified in the following sections.

#### 5.1 - Cap Maintenance

The integrity of the Cover must be maintained, and repairs as needed must be made "in kind". If animal burrows are detected, the animal must be removed in accordance with local regulations on animal control, and the burrow sealed with loam (not sand or gravel). Stormwater controls (swales, check dams, level spreaders) must be repaired to original condition.

### 5.2 - Record Keeping

Copies of the inspections and any maintenance or inspection follow-up activities should be maintained on-site.



#### LIMITATIONS

Aries prepared this Post-Closure Operation and Maintenance (O & M) Plan for Soil RBDP Stormwater Management System (SMS), TSCA Cap, & Engineered Barriers; BUD Area; and Former Radiological Control Area on behalf of and for the exclusive use of Sea Level, LLC. (Client) solely for its use. This Plan shall not be transmitted to any other party, or relied upon by any other party, without Aries' written consent. However, Aries acknowledges the report may be conveyed to the U.S. EPA, New Hampshire Department of Environmental Services and other local, state, and federal agencies. Aries made the reported observations under the conditions stated herein. Aries based the report conclusions solely on the services described herein, and not on scientific tasks or procedures beyond the scope of described services.

In preparing this report, Aries relied on certain information provided by state officials, federal officials and other parties referenced herein, and on information contained in the files of federal, state and local agencies available to Aries at the time of the report. Although there may have been some degree of overlap in the information provided by these various sources, Aries did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this report.

Aries anticipates variations in actual site conditions beyond those interpreted, and would have to reevaluate the report conclusions and recommendations if additional site data are made available.

Laboratory testing was performed as part of the study. Where such analyses were conducted by an outside laboratory, Aries relied upon the data provided, and did not conduct an independent evaluation of the reliability of these data.

Aries conducted this report in general accordance with accepted consulting practices. Aries makes no warranty, either expressed or implied.



APPENDIX J, Part 4

NHDES

# Application for Activity and Use Restriction (AUR)





Env-Or 608

AN ACTIVITY AND USE RESTRICTION (AUR) is implemented under Env-Or 608 at sites where a New Hampshire Department of Environmental Services (NHDES) approved remedial action relies on the restriction of site activities and uses to achieve or maintain protection of human health and the environment.

#### SUBMIT:

- ONE SIGNED AND COMPLETED APPLICATION SUPPORTING INFORMATION
- SUPPORTING INFORMATION
- PROPOSED AUR DOCUMENT (using NHDES approved template)
- TO: NHDES/Waste Management Division Site Remediation Programs Groundwater Management Permit Coordinator P.O. Box 95, 29 Hazen Drive Concord, NH 03302-0095

SITE INFORMATION		
Site Name:	DES Site #:	
Address:		
City:	State:	Zip:
Тах Мар:	Lot Number:	
Deed Reference: County:	B	ook and Page:
SITE OWNER INFORMATION		
Site Owner Name:	Phone:	
Mailing		
Address:		
City:	State:	Zip:
Email:	Fax:	
Address: City: Email: CONTACT PERSON INFORMATION	State: Fax: V (complete only if different	Zip: than site owner)
Contact Person Name:	Phon	e:
Mailing		
Address:		
City:	State:	Zip:

IV.	SUPPORTING INFORMATION (Check Yes, "Y", if information is enclosed, or Not Applicable,
	"N/A", if requested information does not apply.)

Y	N/A		
		1.	Where the AUR applies to an entire lot, include at least one of the following:
			a. Recordable plan of the site prepared by a New Hampshire registered land surveyor; OR
			b. A reference by book and page number to a survey plan of the lot that has been recorded or registered in the registry of deeds for the county in which the site is located OR
			c. A reference by book and page number to a property description of the lot that has been recorded or registered in the registry of deeds for the county in which the site is located.
		2.	Where the area subject to the AUR comprises only a portion of a lot, include both of the following:
			<ul> <li>A metes and bounds description of the restricted area and</li> </ul>
			<ul> <li>A recordable plan, prepared by a New Hampshire registered land surveyor that shows the location of the restricted area in relation to the property boundaries of the site.</li> </ul>
		3.	The time period during which the AUR shall be effective.
		4.	A precise description of the site activities and uses that will be prohibited on the site and allowed on the site.
		5.	A description of how the restrictions will eliminate the risks to human health and the environment.
		6.	A precise description of the measures to be taken to ensure compliance with the AUR.
		7.	A description of the procedures to be followed when an emergency requires immediate excavation of contaminated soil to repair utility lines or other infrastructure on the site, or to respond to other emergencies that might result in a significant risk to human health, evaluated pursuant to procedure specified in Env-Or 606.19(d)(2) and (3), from exposure to contaminants at the site, which shall include: a. Notifying NHDES of such emergency condition; and b. Limiting disturbance of contaminated media to the minimum necessary to adequately respond to the emergency: and
			<ul> <li>Undertaking specified precautions to reduce exposure of workers and neighbors of the site to contaminated media and</li> </ul>
			d. Preparation and implementation of a written plan for restoring the site to a condition consistent with the AUR.
		8.	An acknowledgement by the applicant that the AUR shall run with the land pursuant to
		~	Env-Or 608.01(b)(3).
		9. 10	An analysis of the long-term reasibility of maintaining the AOR.
		10.	AUX acknowledgement by the applicant to incorporate either in full or by reference to the AUR into all deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instruments conveying an interest in and/or a right to use the property pursuant to Env-Or 608.01(b)(2).
		11.	The procedures for modifying and terminating the AUR pursuant to Env-Or 608.06 and Env-Or 608.07.

- 12. Title reference by which the property owner(s) acquired title to the property.
- 13. A schedule for self-certifying compliance with the AUR pursuant to Env-Or 608.01(e).
  - 14. The proposed AUR document that will be recorded if the AUR application is approved, including a block for the property owner(s) notarized signature (use NHDES template).

#### V. AUR ISSUANCE INFORMATION

- 1. Within 90 days from the receipt of a complete AUR application, NHDES shall notify the applicant in writing of its decision to approve or deny the application OR notify the applicant in writing that the information submitted is not sufficient to make a decision and request additional information from the applicant.
- 2. NHDES shall approve and AUR application if the application contains all items required by Env-Or 608.03 and the proposed AUR is consistent with Env-Or 608.01(b).
- 3. An AUR that is approved by NHDES shall become effective upon recordation.
- 4. Within 30 days of the date NHDES approves the AUR application pursuant to Env-Or 608.02(c), the applicant shall provide notice of the AUR to current holders of any interest in the site of the existence and location of the contamination subject to the AUR. Notice sent pursuant to the above shall be on a form provided by NHDES and via certified mail, return receipt requested.
- 5. Within 60 days of the date on which NHDES approves the AUR application pursuant to Env-Or 608.029(c), the applicant shall sign and acknowledge the document AND record the AUR document and a site plan prepared in accordance with Env-Or 608.03(a)(2) or (a)(3), (as applicable), in the registry of deeds on the chain of title for each lot that is subject to the AUR.
- 6. Within 30 days of recordation, the applicant shall submit a copy of the recorded AUR document and site plan to NHDES and the governing body of the municipality in which the site is located.

#### **VI. CERTIFICATION**

To the best of my knowledge, the data and information that I have submitted to obtain the Activity and Use Restriction (AUR) from the New Hampshire Department of Environmental Services are true and correct.

Date:	Signature:		
		Permit Applicant	
Name (print or type):			

No liability is incurred by the State by reason of any approval for Groundwater Management Permits. Approval by the New Hampshire Department of Environmental Services is based on the information supplied by the applicant. No guarantee is intended or implied by reason of any advice given by NHDES or its staff. APPENDIX J, Part 4



Self-Certification of Activity and Use Restriction

Waste Management Division Site Remediation Programs



Env-Or 608.01(a) and Env-Or 608.01(f)

Pursuant to N.H. Administrative Rules Env-Or 608.01(a), an Activity and Use Restriction (AUR) must be implemented at each site where a remedial action approved by the New Hampshire Department of Environmental Services (NHDES) relies on the restriction of site activities and uses to achieve or maintain protection of human health and the environment. Maintaining compliance with the conditions of the AUR is essential to ensure long term effectiveness of the remedial actions.

Pursuant to Env-Or 608.01(f), the owner of record of a site that is subject to an AUR must certify that all conditions of the AUR for the site are being met. This self-certification is accomplished by completing, signing and returning this form to NHDES within 30 days after receiving it.

#### SUBMIT TO:

NHDES/Waste Management Division Site Remediation Programs Groundwater Management Permit Compliance Coordinator P.O. Box 95, 29 Hazen Drive Concord, NH 03302-0095

SITE OR FACILITY INFORMATION						
Site or Facility Name:						
NHDES Site or Facility #:						
Address:						
City:	State:	Zip:				
Тах Мар:	Lot Number:					
Recorded AUR: County:	Book and	Page:				
OWNER INFORMATION						
Name:	Phone:					
Mailing Address:						
City:	State:	Zip:				
Email:	Fax:					

IV.

**CONDITIONS** Please check (Yes, "Y" or No "N")

#### NHDES-S-02-013

#### ΥΝ

Are all conditions of the AUR being met? (If your answer is no, please provide a detailed explanation and what action will be taken to achieve compliance with all the conditions of the AUR.)

Have site conditions that required implementation of the AUR changed since recordation of the AUR? (If answer is yes, please describe in detail how site conditions changed and what actions will be taken to achieve compliance with the terms of the AUR.)

If detailed explanations are required for either question above, it may indicate the terms of the AUR require modification. In such a case NHDES refers the owner to the modification process requirements outlined in Env-Or 608.06.

#### V. CERTIFICATION

To the best of my knowledge and belief, the data and information that I have provided to the New Hampshire Department of Environmental Services under this Activity and Use Restriction (AUR) self-certification are true and correct.

Date:	Signature:	
Name (print or type):		(Owner)

No liability is incurred by the State by reason of any approval for Groundwater Management Permits. Approval by the New Hampshire Department of Environmental Services is based on the information supplied by the applicant. No guarantee is intended or implied by reason of any advice given by NHDES or its staff.

#### APPENDIX J, Part 4 ATTACHMENT CC OPERATIONS MONITORING AND MAINTENANCE (OMM) PLAN

Inspection Checklist

Sea Level, LLC 185-187 Wentworth Rd, Portsmouth, NH

BMP / System	Minimum Inspection Frequency	Minimum Inspection Requirement	Maintenance Threshold	Inspection Completed? (yes/no)
Stabilized Construction Entrance	Quarterly	Inspect adjacent roadway for sediment tracking Inspect gravel stone for sediment accumulation	Sweep adjacent roadways as soon as sediment is tracked Top dress with additional stone when necessary to prevent tracking	
Level Spreader (N & W End of Concrete Cap) And Concrete Cap (reinforced cement)	Quarterly	Inspect accumulated sediment level, rips, and tears; and concrete surfaces for spalling or cracks	Repair or replace damaged Sections of spreader or cap Remove and dispose of accumulated sediment once level reaches 1/3 of barrier height	
Gravel Base	Annually	Inspect gravel for ruts and depth	Replace gravel as necessary, regrade as necessary to maintain design grades, remove any accumulated gravel washed from roadway	
Litter/Trash Removal	Routinely	Inspect dumpsters, outdoor waste receptacles area, and yard areas.	Site will be free of litter/trash.	
Deicing Agents	N/A	N/A	Use agents approved by ConCom as the primary agent for roadway safety during winter.	

BMP / System	Minimum Inspection Frequency	Minimum Inspection Requirement	Maintenance Threshold	Inspection Completed? (yes/no)
Stormwater Packaged System	Annually	Check for sediment accumulation & clogging.	More than 12" sediment depth	
Grass Lined Drainage Swale, Final Cover Area (Low Occupancy)	Spring and Fall and after every 3" of rain or greater in a 24- hour period, as needed	Check for sediment buildup Check for damaged vegetation, re-seed as needed Inspect for erosion rills or channels.	Remove excess sediment and any trash/debris. Loss of vegetation > 10 % of Final Cover or Drainage Swale Loss of > 1 in of total 6 in Final Cover	
Annual Report	1 time per year	Submit Annual Report to EPA, Other agencies upon request	EPA Requirement	

Inspection Notes:

Inspector: \_\_\_\_\_

Date of Inspection: \_\_\_\_\_

Date of Repairs:	
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Repairs	Verified	By:			
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NHDES WPA, APPENDIX J, Part 5 — Construction Monitoring Plan



2021-075

October 22, 2024

# CONSTRUCTION MONITORING PLAN FOR PORTSMOUTH MARINA RESTORATION PROJECT

## Prepared by:

Aries Engineering, LLC 104 Pleasant Street Concord, NH 03301 (603) 228-0008

## **Prepared for:**

Sea Level LLC 185-187 Wentworth House Road Portsmouth, New Hampshire 03801

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1.0 INTRODUCTION	L
1.1 Scope of Work	L

# ATTACHMENTS

Attachment A:

Inspection Reports



# **1.0 INTRODUCTION**

This Construction Monitoring Plan (CMP) is needed for this project per NH DES Env-Wt 307-18, which requires a CMP to contain inspection reports, water quality reports, and a review/implementation of a project wetland planting plan which has been prepared by a certified wetland scientist. Also, a report must be generated at project completion which describes the monitoring conducted and date(s) of inspections, and includes photos showing the extent of jurisdictional impacts, areas of restoration, and progress of any plantings, along with a description of the stability of and status of the wetland system, including a description of any necessary adjustments. The CMP must also include a schedule and description of measures to be taken during construction and after completion of the project.

# 1.1 Scope of Work

The specific activities included in this CMP are as follows:

- Inspection reports: a checklist of initial (Week 1) and at-completion (Week 4) inspections is presented in **Attachment A**;
- Water quality reports will be also be filed using the Attachment A form, before and after Week 1 of dredging and restoration activities in the wetland area. Only one (1) day of dredging is anticipated in the wetland area (see Engineering Sheets 1-7, WPA Appendix E), to remove a maximum of 12 inches of surficial, submerged sediment, generating 8 to 11 CY of sediment via shore-based excavator with dredge attachment. Installation of the marsh grasses (see Engineering Sheets 5-7) will be completed within Week 1. The water quality evaluation will be qualitative in nature, observing the relative absence or presence of sediment in the over-sediment water column before and after dredging, to the extent possible. This evaluation must necessarily take into account the potentially twice daily flushing of this wetland area, assuming that the natural berm at the eastern end of this cove area is surmounted by incoming tidal water;
- The review/implementation of a project wetland planting plan in Engineering Sheet
   6 which has been prepared by a certified wetland scientist before and after installation of different vegetative types (6 to 8 FT MSL), from Week 1 installation and then monthly for the next three months until vegetation is adequately established. This frequency of inspection is also documented in Attachment A, and will serve as the report which must be generated at project completion and is required to describe the monitoring conducted and date(s) of inspections;
- Photos showing the extent of jurisdictional impacts, areas of restoration, and progress
  of plantings will be obtained prior to Week 1, and monthly until Month 3, assuming
  that period of time is adequate to establish vegetation. A qualitative evaluation of the
  description of the stability of and status of the wetland vegetative system, including a
  description of any necessary adjustments, will also be included in the Attachment A
  form.



## NHDES WPA, APPENDIX K, VULNERABILITY ASSESSMENT

## APPENDIX K

# SECTION E. WORKSHEET AND PROJECT INVENTORY TABLE

This Worksheet and Project Inventory Table is a companion resource to be used while referencing the *New Hampshire Coastal Flood Risk Summary Part II: Guidance* for Using Coastal Flood Risk Projections (Guidance). The purpose of the Worksheet is to help decision makers work through the seven step approach for incorporating coastal flood risk projections in multiple local, state, and federal projects, including planning, regulatory, or site-specific efforts. The Guidance provides principles, step-by-step instructions, and key resources needed to fill out this Worksheet. Use of the Worksheet is voluntary. For some projects, the Worksheet will be a useful tool for decision makers working through the seven step process. For other projects, decision makers may find that only part of the Worksheet is useful, that they need to adjust the worksheet to tailor it to their project, or that they prefer to apply the Guidance to their project without using the Worksheet. Decision makers are expected to acquire additional data about their project in order to use the Guidance and complete the Worksheet.

The seven step approach recommended in the Guidance is intended for private, local, state, and federal planning, regulatory, and site-specific projects affecting or taking place in New Hampshire's 17 coastal zone municipalities, including Dover, Durham, Exeter, Greenland, Hampton, Hampton Falls, Madbury, New Castle, Newfields, Newington, Newmarket, North Hampton, Portsmouth, Rollinsford, Rye, Seabrook, and Stratham. The seven steps provide a framework to guide decision makers as they select appropriate coastal flood risk projections, begin assessing impacts of those projections, and consider actions to increase project resilience. The term "decision maker" refers broadly to project proponents, regulators, advisors, and stakeholders affected or served by a project. In the Guidance and Worksheet, project-specific considerations are provided for steps where Guidance application is likely to differ for planning, regulatory, or site-specific projects. Referenced resources that may be useful for completing the Worksheet appear at the end of each step in the Guidance. The Project Inventory Table is provided for decision makers working on detailed projects and/or projects that are broad in scale with multiple areas, facilities, structures, and/or resources to evaluate.

In order to fill out this worksheet, decision makers will need to reference the Guidance. Prior to beginning the worksheet, read the Guidance Section A *Purpose and Intended Use*, as well as Guidance Section B *Guiding Principles for Enhancing Coastal Flood Resilience*. Guidance Section C *Step-by-Step Approach for Selecting and Incorporating Coastal Flood Risk Projections* presents Steps 1-7 that are directly referenced throughout this Worksheet and Project Inventory Table.

# BACKGROUND

B.1 Preparer name:Pete McGlew, PG									
B.2 Preparer affiliation to the project: Environmental Consultant									
B.3 Preparer contact information: Email pmcglew@aries-eng.com Phone 603-228-0008									
B.4 Select the municip	ality or municipalities	where the project take	s place.						
Dover	🗌 Durham	Exeter	Greenland	Hampton	Hampton Falls				
🗌 Madbury	🗌 New Castle	Newfields	Newington	🗌 Newmarket	🗌 North Hampton				
Portsmouth	Rollinsford	🗌 Rye	Seabrook	Stratham					
B.5 Date: Septembe	er 30, 2024								

# STEP 1 DEFINE PROJECT GOAL, TYPE, LOCATION, AND TIMEFRAME(S)

See Guidance Step 1, including Resources to Reference.

#### STEP 1.1 DEFINE THE PROJECT GOAL AND PROJECT TYPE.

1.1.1 Project name: Marina Restoration Project, 187 Wentworth Rd, Portsmouth, NH

#### 1.1.2 Project goal:

Remediate PCB waste, restore waterfront use (boat storage, marina support)

#### 1.1.3 Identify the project beneficiaries.

	Sea Level, LLC	;			
1.1.4	Select the project	ct type:	Site-specific	Other:	
1.1.5	Briefly describe t	the project activities.			

## STEP 1.2 DEFINE AND INVENTORY THE PROJECT AREA.

1.2.1 Describe the project planning, regulatory, or site-specific area. If relevant (likely for site-specific projects) identify address and tax lot number.

See WPA attached, also Appendix D, Memo to NHDES 4-23-23

Optional: For detailed projects, use the Project Inventory Table, row 1, to list project sub-areas.

1.2.2 Identify important facilities, structures, and resources within the project area.

gravel upland area

tidal wetlands, shoreland

Optional: For detailed projects, use the Project Inventory Table, row 1, to list facilities, structures, and resources.

1.2.3 Identify important access and services relevant to the project.

# water, primary road direct

## STEP 1.3 DEFINE THE TIMEFRAME(S) FOR THE PROJECT.

Optional: For detailed projects, use the Project Inventory Table, rows 2-3, to identify multiple timeframes.

1.3.1 Identify the planning horizon, regulatory timeframe, or useful life of the project. \_\_\_\_\_Years

1.3.2 Identify the year when the project timeframe ends. Year:  $\frac{2050}{2050}$ 

1.3.3 Identify likely incremental action points over the course of the project timeframe.

Incremental Action Point (Year)	Explanation
2037	50% design life

# **STEP 2 DETERMINE TOLERANCE FOR FLOOD RISK**

See Guidance Step 2, including Step 2 Table and Resources to Reference.

## STEP 2.1 IDENTIFY PROJECT CHARACTERISTICS THAT INFLUENCE TOLERANCE FOR FLOOD RISK.

2.1.1 Identify and rank characteristics of the overall project that influence tolerance for flood risk using the table provided.

Project Characteristics that Influence Tolerance for Flood Risk	Very High	High	Medium	Low	N/A	Explanation
Value or replacement cost			.х.			medium cost
Capacity to adapt			x			medium ability to adapt
Implication for public safety & function			x			medium implication
Sensitivity to inundation			x			medium sensitivity
Other, if applicable:						

Optional: For detailed projects, use the Project Inventory Table, rows 4-7, to describe tolerance for flood risk characteristics of multiple features.

## STEP 2.2 DETERMINE TOLERANCE FOR FLOOD RISK APPLICABLE TO THE PROJECT.

2.2.1 The tolerance for flood risk applicable to the overall project is:

Medium

🗌 High

🗌 Very Low

Explanation:

meets medium criteria. Re-established marina use can be repaired relatively quickly.

Low

Optional: For detailed projects, use the Project Inventory Table, row 8, to determine tolerance for flood risk of multiple features.

2.2.2 Consider the tolerance for flood risk of important access and services identified in Step 1.2 and possible implications for the project.

	access continues directly.	
2.2.3	Consider how the project goal and use of the project area may change over the course of the project timeframe and resulting changes	in
	tolerance for flood risk.	

no change anticipated

# STEP 3 SELECT AND ASSESS RELATIVE SEA-LEVEL RISE (RSLR) ESTIMATE(S)

See Guidance Step 3, including Step 3 Table A or B and Resources to Reference.

## STEP 3.1 SELECT THE RSLR ESTIMATE(S) FOR THE PROJECT.

- 3.1.1 Based on tolerance for flood risk and project timeframe, select the RSLR or range of RSLR estimate(s) that the project should plan to, regulate for, or design for: <u>1.6</u> feet by <u>2050</u> year from 1.3.2
- 3.1.2 Based on tolerance for flood risk and incremental action points, select the RSLR or range of RSLR estimate(s) that the project should make incremental plans for. (Repeat for all incremental action point years).

Incremental Action Point (Year from 1.3.3)	RSLR (feet)
2037	1,3

Optional: For detailed projects, use the Project Inventory Table, row 9, to select RSLR estimate(s) for multiple, different features.

## STEP 3.2 ASSESS RSLR IMPACTS TO THE PROJECT.

Mapping tools listed in Guidance Step 3 may assist with Step 3.2.

3.2.1 Identify the tidal datum used for the project.

NGVD29

NAVD88
--------

🗌 Other:

3.2.2 Select the tidal (non-storm) water reference levels that are most relevant to the project overall.

Mean Lower Low Water	Mean Low Water	🗌 Mean Sea Level	
🗌 Mean High Water	🗌 Mean Higher High Water	Highest Observable Tide Line	Other:

3.2.3 Calculate RSLR-adjusted elevations for the relevant tidal water reference line(s).

Tidal Water Reference Level	Present-Day Elevation (feet)	RSLR-Adjusted Elevation or Range of Elevations (feet)
Mean Lower Low Water (MLLW)	-4.62	-3.02
Mean Low Water (MLW)	-4.3	-2.7
Mean Sea Level (MSL)		
Mean High Water (MHW)	3.81	5.41
Mean Higher High Water (MHHW)	4.22	5.8
Highest Observable Tide Line (HOTL)	7.9	9.5
Other:		

3.2.4 If relevant, describe present-day sediment deposition and/or erosion dynamics at the site.

Not relevant just removing a limited zone of PCB containing sediment

- SECTION E
- 3.2.5 Evaluate risks to the project from RSLR-induced increases in tidal extent, water level, current velocities, and changes in sediment deposition and/or erosion using the table provided.

Risks from RSLR-Induced:	Very High	High	Medium	Low	N/A	Explanation
Increase in tidal extent			x			medium still allows sed removal
Increase in water level			x			medium still allows sed removal
Increase in current velocities			x			medium still allows sed removal
Changes in sediment deposition					x	n/a
Changes in erosion			x			medium still allows sed removal
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 10, to evaluate risks from RSLR-induced impacts to project features.

3.2.6 Describe how nearby landscape features and infrastructure such as undersized culverts and bridges, as well as future land use change may affect risks to the overall project from RSLR in the future.

Project interactions with RSLR and nearby landscape features and infrastructure:

nearby land use expected to continue as at present, homeowners mostly, state road parallel to site

Project interactions with RSLR and future land use change:

Limited changes in project area in past anticipated to remain in future

3.2.7 Evaluate the RSLR impacts on the overall project, natural resources, cultural and historic resources, public access, socially vulnerable populations, and other relevant project characteristics.

RSLR Impacts on:	Very High	High	Medium	Low	N/A	Explanation
Overall Project			x			medium to low anticipated
Natural Resource			x			medium
Cultural and Historic Resources			x			medium to low anticipated
Socially Vulnerable Populations			x			medium
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 11, to evaluate RSLR impacts for multiple project features.

## STEP 4 IDENTIFY AND ASSESS RSLR-ADJUSTED COASTAL STORMS

See Guidance Step 4, including Step 4 Table and Resources to Reference.

## STEP 4.1 DETERMINE RSLR-ADJUSTED DESIGN FLOOD ELEVATION (DFE).

4.1.1 If relevant, identify the Flood Design Class or classes most closely associated with the project.

	Class	1
--	-------	---

Class 3
---------

🗌 Not applicable

С	ass	2

Class 4

Optional: For detailed projects, use the Project Inventory Table, row 12, to identify Flood Design Class for multiple project features.

4.1.2 Identify the present-day coastal storm(s) relevant to the project.

	1% annual	chance storm	(100-year)
--	-----------	--------------	------------

	0.2%	annual	chance	storm	(500-year)
--	------	--------	--------	-------	------------

□ Other:\_\_\_\_\_

4.1.3 Identify present-day FEMA Flood Insurance Rate Map Special Flood Hazard Area(s) flood zone(s) for the project area. AE Zone 🗌 AO Zone Coastal A Zone U VE Zone X Zone Other:\_\_\_\_\_ 4.1.4 If the project takes place in a FEMA Special Flood Hazard Area, identify the present-day Base Flood Elevation(s) (BFE) for the project area. 8 □ No BFE feet or Optional: For detailed projects, use the Project Inventory Table, rows 13-14, to identify Flood Zone and BFE for multiple project features. 4.1.5 Identify any freeboard requirements or recommendations associated with the project area related to present-day coastal flood protection. 0 feet 1 foot 2 feet Other: Optional: For detailed projects, use the Project Inventory Table, row 15, to identify freeboard for multiple project features. 4.1.6 Identify the present-day coastal storm DFE(s) for the project. For instructions on how to calculate DFE, see Guidance Step 4 Table. 11.6 feet Optional: For detailed projects, use the Project Inventory Table, row 16, to identify DFE for multiple project features.

4.1.7 For projects with no DFE or for which DFE is not applicable, describe how a present-day coastal storm might affect the project.

NA			

4.1.8 Identify RSLR-adjusted DFE(s) or range of DFE that the project should plan to, regulate for, or design for. For instructions on how to calculate RSLR-adjusted DFE, see Guidance Step 4 Table.

**11.6** feet

Optional: For detailed projects, use the Project Inventory Table, row 16, to identify RSLR-adjusted DFE for multiple project features.

## STEP 4.2 ASSESS RSLR-ADJUSTED COASTAL STORM IMPACTS TO THE PROJECT.

Mapping tools listed in Guidance Step 4 Resources to Reference may assist with Step 4.2.

4.2.1 Evaluate risks to the project from RSLR-adjusted coastal storm induced increases in tidal extent, water level, current velocities, and changes in sediment deposition and/or erosion using the table provided.

Risks from RSLR-Adjusted Coastal Storms Resulting in:	Very High	High	Medium	Low	N/A	Explanation
Increase in flood extent			x			Medium can time work
Increase in flood water level			x			Medium can time work
Increase in storm current velocities			x			Medium can time work
Changes in sediment deposition			x			Medium can time work
Changes in erosion			x			Medium can time work
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 18, to evaluate risks from RSLR-adjusted coastal storm impacts on project features.

4.2.2 Describe how nearby landscape features and infrastructure such as undersized culverts and bridges, as well as future land use change may affect risks to the project from RSLR-adjusted coastal storms in the future.

Project interactions with RSLR-adjusted coastal storms and nearby landscape features and infrastructure:

NA

Project interactions with RSLR-adjusted coastal storms and future land use change:

Remove limited sediment within embayment no structures in immediate project area will time work to safe conditions

4.2.3 Assess the RSLR-adjusted coastal storm impacts on the overall project, natural resources, cultural and historic resources, public access, socially

vulnerable populations, and other relevant project characteristics.

RSLR-Adjusted Coastal Storm Impacts on:	Very High	High	Medium	Low	N/A	Explanation
Overall Project			x			limited sed removal no structures
Natural Resources			x			limited sed removal no structures
Cultural and Historic Resources			×			limited sed removal no structures
Socially Vulnerable Populations			x			limited sed removal no structures
Other:						

Optional: For detailed approach, use the Project Inventory Table, row 19, to evaluate RSLR-adjusted coastal storm impacts for multiple project features.

# STEP 5 IDENTIFY AND ASSESS RSLR-INDUCED GROUNDWATER RISE

See Guidance Step 5, including Step 5 Table and Resources to Reference.

## STEP 5.1 IDENTIFY RSLR-INDUCED GROUNDWATER RISE FOR THE PROJECT.

5.1.1 Identify the groundwater rise mapping status for the communities associated with the project area.

Mapped	Unmapped	🗆 Bot	h
5.1.2 If the project area is mapped	, identify the RSLR-inducec	l groundwater rise estimate(s) or rang	ge of estimatesfeet
5.1.3 If the project area is unmapp	ed, identify the RSLR-induc	ed groundwater rise estimates for th	ne project.
Commit to manage to:	feet	and be prepared to adapt to:	feet.
Optional: For detailed projects,	use the Project Inventory Ta	ble, rows 20-21, to identify RSLR-induce	ed groundwater rise for project features.

## STEP 5.2 ESTIMATE DEPTH TO PRESENT-DAY AND FUTURE GROUNDWATER FOR THE PROJECT AREA.

5.2.1 Estimate the present-day depth to Seasonal High Water Table (SHWT). 5.2.1

Optional: For detailed projects, use the Project Inventory Table, row 22, to estimate present-day depth to SHWT for project features.

feet

feet

2.8-3.8

5.2.2 Determine estimated depth or range of depths to projected SHWT.

Optional: For detailed projects, use the Project Inventory Table, row 23, to estimate depth to projected SHWT for project features.

## STEP 5.3 EVALUATE IMPACTS OF RSLR-INDUCED GROUNDWATER RISE FOR THE PROJECT.

5.3.1 Describe risks to the overall project from RSLR-induced groundwater rise.

] Very High	🗌 High	Medium	Low	🗌 No Risk	
Explanation:					
Consistent with map limits we propose.	ped groundwater eleva	tion the risk appears mediu	um to this marina boa	at storage facility.	No structures in the work

Optional: For detailed projects, use the Project Inventory Table, row 24, to describe risk from RSLR-induced groundwater rise on project features.

5.3.2 Assess the RSLR-induced groundwater rise impacts on the overall project, natural resources, cultural and historic resources, public access, socially vulnerable populations, and other relevant project characteristics.

RSLR-Induced Groundwater Rise Impacts on:	Very High	High	Medium	Low	N/A	Explanation
Overall Project			x			sed removal in embayment
Natural Resources			x			sed removal in embayment
Cultural and Historic Resources			x			sed removal in embayment
Socially Vulnerable Populations			x			sed removal in embayment
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 25, to evaluate RSLR-adjusted coastal storm impacts for multiple project features.

# STEP 6 IDENTIFY AND ASSESS EXTREME PRECIPITATION ESTIMATES.

See Guidance Step 6, including Step 6 Table and Resources to Reference.

#### STEP 6.1 ACCOUNT FOR PROJECTED INCREASES IN EXTREME PRECIPITATION.

- 6.1.1 Based on tolerance for flood risk, identify the percent increase in extreme precipitation for the project.
  - 15%

□ More than 15% Specify: \_\_\_\_\_%

Optional: For detailed projects, use the Project Inventory Table, row 26, to identify percent increase in extreme precipitation for multiple project features.

6.1.2 For projects involving hydrologic and/or hydraulic modeling, identify the following:

- Duration and recurrence interval(s) relevant to the project,
- Best available present-day extreme precipitation estimates for the selected duration and recurrence interval(s), and

• Projected extreme precipitation estimates for the selected duration and recurrence interval(s).

Duration and Recurrence Interval	Present-day Precipitation Estimate	Projected Precipitation Estimate

## STEP 6.2 ASSESS PROJECTED EXTREME PRECIPITATION IMPACTS TO THE PROJECT.

For projects not involving hydrologic and/or hydraulic modeling, qualitatively assess projected extreme precipitation impacts.

For projects conducting hydrologic and/or hydraulic modeling, use modeling results to analyze projected extreme precipitation impacts.

6.2.1 Evaluate risks to the project from projected extreme precipitation using the following table.

Risks from Projected Extreme Precipitation Resulting in:	Very High	High	Medium	Low	N/A	Explanation
Increase in flood extent			x			can time PCB sed removal work
Increase in flood water level			x			can time PCB sed removal work
Increase in storm current velocities			x			can time PCB sed removal work
Changes in sediment deposition			×			can time PCB sed removal work
Changes in erosion			x			can time PCB sed removal work
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 27, to evaluate risks from projected extreme precipitation for multiple project features.

6.2.2 Describe how nearby landscape features and infrastructure such as undersized culverts and bridges, as well as future land use change may affect risks to the project from projected extreme precipitation.

Project interactions with projected extreme precipitation and nearby landscape features and infrastructure:

NA

Project interactions with projected extreme precipitation and future land use, including possible changes in impervious cover:

NA

6.2.3 Assess the projected extreme precipitation impacts on the overall project, natural resources, cultural and historic resources, public access, socially vulnerable populations, and other relevant project characteristics.

Projected Extreme Precipitation Impacts on:	Very High	High	Medium	Low	N/A	Explanation
Overall Project			x			no structures in work area, will time work
Natural Resources			x			no structures in work area, will time work
Cultural and Historic Resources			x			no structures in work area, will time work
Socially Vulnerable Populations			x			no structures in work area, will time work
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 28, to assess projected extreme precipitation impacts on multiple project features.

# STEP 7 ASSESS CUMULATIVE RISK AND EVALUATE ADAPTATION OPTIONS

See Guidance Step 7, including Step 7 Tables A and B and Resources to Reference.

## STEP 7.1 ASSESS CUMULATIVE COASTAL FLOOD RISK TO THE PROJECT.

7.1.1 Specify, based on responses to Steps 3-6, projected coastal flood risk impacts to the overall project.

Overall future coastal flood risk impacts to the project:	Very High	High	Medium	Low	N/A
RSLR (3.2.7)			x		
RSLR-adjusted coastal storms (4.2.3)			x		
RSLR-induced groundwater rise (5.3.2)			x		
Projected extreme precipitation (6.2.3)			x		

7.1.2 Describe how the cumulative impact of multiple coastal flood risks occurring together may affect the project.

Will be able to time the limited PCB sediment removal to fair weather. No structures are in the embayment where the sediment will be removed. Upslope on land has been operating as a marina and boat storage for decades.

7.1.3 Select the coastal flood risk(s) that are most impactful to the project and explain.

	RSLR
--	------

RSLR-adjusted coastal storms

RSLR-induced groundwater rise

Projected extreme precipitation INO coastal flood risk outweighs others

Explanation:

limited PCB sediment removal within embayment will time and work around specific issu

Optional: For detailed projects, use the Project Inventory Table, row 29, to specify coastal flood risks that are most impactful for multiple project features.

## STEP 7.2 IDENTIFY AND EVALUATE POSSIBLE ADAPTATION OPTIONS TO MITIGATE COASTAL FLOOD RISK.

7.2.1 Identify adaptation options and select relevant action category(ies) for each option. Insert more rows if needed.

Option	Ontion	Action Category								
ÎD#	Option	No Action	Avoid	Accommodate	Resist	Relocate				
1	Remove limited volume PCB Seds	×	×							
2	Refurbish existing rirprap after sed work	×	×	X						
3										
4										
5										

Use the table "Framework for Evaluating Adaptation Options" on the following page to complete Steps 7.2.2-7.2.3. Insert more rows if needed.

7.2.2 Identify additional "custom" criteria to evaluate adaptation options.

7.2.3 Evaluate adaptation options against each "effectiveness," "guiding principles," and "custom" criteria.

SECTION E

	FRAMEWORK FOR EVALUATING ADAPTATION OPTIONS												
Evaluation Criteria													
		EF	FECTIVENE	SS			GUIDING F	RINCIPLES			CUSTOM		
Option ID# from 7.2.1	Action Categories from 7.2.1	Mitigation of Flood Risk	Meets Project Goal	Short-Term or Long- Term	Cost	Contributes to Mal- Adaptation	Effect on Socially Vulnerable Populations	Effect on Natural Resources	Effect on Cultural and Historic Resources	Effect on Public access	Custom Criteria	Custom Criteria	
		High Medium Low	Yes/No	ST/LT	\$/\$\$/\$\$\$	Yes/No	Positive Neutral Negative	Positive Neutral Negative	Positive Neutral Negative	Positive Neutral Negative			
1	1,2	Low	Yes	ST	0\$	No	Neutral	Neutral	Neutral	Neutral			
2	1,2,3	Low	Yes	ST/SLT	\$10K	No	Neutral	Neutral	Neutral	Positive			
3													
4													
5													

Optional: For detailed projects, fill out this framework for each relevant column (project feature) in the Project Inventory Table.

## STEP 7.3 SELECT PREFERRED OPTION(S) AND PROCEED WITH PROJECT OR REVISIT AND REVISE PREVIOUS STEPS.

7.3.1 Describe adaptation option(s) selected for the project and considerations to ensure transparent disclosure of flood risk and future actions that may be necessary to further mitigate flood risk, particularly if a flexible adaptation approach is followed.

Project adaptations are to remove the shallow PCB sediments from the embayment when there is not high precipitation, flooding, tidal surges or high velocities from wind and waves. No other adaptations are proposed.

Optional: For detailed projects, use the Project Inventory Table, row 30, to describe preferred option(s) for multiple project features.

7.3.2 Should the project proceed with the adaptation options selected, revisit and revise previous steps, or not proceed?

□ Proceed

 $\Box$  Revisit and revise

Do not proceed

PROJECT INVENTORY TABLE			1
	1	Project Sub-area, Structures, Facilities, and/or Resources (list one feature per column; add columns if needed)	No structures in proposed project active area.
<b>PROJECT DEFINITION</b>	2	Project Timeframe (year)	2025
	3	Incremental Action Points (year(s))	2037
	4	Value or Replacement Cost (very high, high, medium, or low)	Low
	5	Capacity to Adapt (very high, high, medium, or low)	Medium
	6	Importance for Public Function and/or Safety (very high, high, medium, or low)	Medium
FLOOD RISK	7	Sensitivity to Inundation (very high, high, medium, or low)	Medium
	8	Tolerance for Flood risk (high, medium, low, very low)	Medium
	9	RSLR estimate (in feet)	by 2050 =1.6 feet
RELATIVE SEA-LEVEL RISE (RSLR)	10	Notes about RSLR impacts to the project from changed tidal extent, water level, current velocities, sediment deposition, erosion	Limited impacts
	11	RSLR impact (very high, high, medium, or low)	Medium
	12	Flood Design Class (1, 2, 3, 4)	2
	13	FEMA Flood Zone (AE, AO, Coastal A, VE, X)	AE
	14	BFE (in feet)	8
	15	Freeboard (in feet)	2
COASTAL STORMS	16	DFE (in feet)	11.6
	17	RSLR-adjusted DFE (in feet)	10
	18	Notes about RSLR–adjusted coastal storm impacts from changed tidal extent, water level, current velocities, sediment deposition, erosion	v water embayment on Sagamore Creek low velocity subject to tidal storn
	19	Coastal storm impact (very high, high, medium, or low)	medium
	20	Map status (mapped, unmapped)	Mapped
	21	RSLR-induced groundwater rise estimate (in feet)	1.2 to 2.2
RSLR-INDUCED	22	Present-day depth to SHWT (in feet)	5
GROUNDWATER RISE	23	Projected depth to RSLR-adjusted SHWT (in feet)	2.8 to 3.8
	24	Notes about RSLR-induced groundwater rise impacts	Marina & boat storage work area in creek
	25	Groundwater rise impact (very high, high, medium, or low)	Medium
PROJECTED EXTREME	26	Percent increase in extreme precipitation (15% or greater)	15%
PRECIPITATION	27	Notes about projected extreme precipitation impacts	can perform work when not extreme precipitation
	28	Projected extreme precipitation impact (very high, high, medium, or low)	Medium
	29	Which, if any, projected coastal flood risks outweigh others in terms of impacts to the project? (RSLR, RSLR- adjusted coastal storms, RSLR-induced groundwater rise, projected extreme precipitation)	No Risk outweighs the other
CUMULATIVE IMPACTS	30	Use framework in worksheet (Step 7.2.3) to identify and evaluate adaptation options for each structure, facilitiy, or resource, as needed.	No structures in project area only limited sediment removal

	2	3	4	5	6
1					
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#### APPENDIX L Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

## L - Coastal Functional Assessment Narrative

The completed Wetland Function - Value Evaluation Form, Ecological Integrity Worksheet and list of considerations and qualifiers are provided in Attachment L2. All data screening maps are provided in Attachment J1. Table 1 provides a summary of principal functions and values for Sagamore Creek and associated salt marsh and mudflats.

#### 1 - Ecological Integrity

In general, the function of Ecological Integrity focuses on components of the unit such as invasive plant species, extent of tidal flow, level of human disturbance and buffer characteristics. All considerations and calculations are included in Attachment L2. The maximum score is 1.00 and the minimum score is 0.10. The Ecological Integrity (EI) of the Ecological Unit (EU) for Sagamore Creek and associated salt marsh and mudflats is 0.90. Therefore, Sagamore Creek scored high for Ecological Integrity of the EU. However, the EI for the Zone of Influence (ZI), which is more focused around the project site, scored 0.30 which is a low score for the ZI.

#### 2 – Educational Potential

This value considers the ability of the wetlands to provide educational opportunities. This site is not known to currently provide these values and the area is too small and can only be accessed over private land. Therefore, this is not a principal value for this project area.

#### 3 - Fish and Aquatic Life Habitat

This function considers the wetlands ability to support marine resources. The estuarine wetland includes salt marshes and tidal flats that are exposed at low tide. The salt marshes and tidal flats are "special aquatic sites" and the creek provides suitable spawning habitat for small resident fish. However, desktop data indicates that Sagamore Creek is not mapped as Essential Fish Habitat (Attachment J1). There is no eelgrass mapped in Sagamore Creek and, although shellfish areas are not mapped (Attachment J1), the creek does provide the potential for shellfish habitat within the mudflats but within the cove associated with the project site. Therefore, although suitable, Fish and Aquatic Life Habitat are not a principal function of Sagamore Creek and associated mudflats. The project proposes salt marsh restoration which will only benefit the tidal system as a whole.

#### 4 - Flood Storage

This function considers the wetland effectiveness in reducing flood damage. The salt marsh restoration area is within the 100 year floodplain and will continue to provide some storage capacity because post remediation grads will be restored to pre-remediation grades. The adjacent sloping landscape provides little flood storage. This is a principal function of Sagamore Creek but not the narrow cove associated with the proposed project. The project does not propose any impact on flood storage function.

#### 5 - Groundwater Recharge

This function considers the potential for the wetlands to interact with groundwater. The primary source of surface water is from incoming tides. The wetlands associated with Sagamore Creek do not support groundwater recharge as they are predominately salt water and tidal.

#### 6 - Noteworthiness

This value considers the suitability of the wetlands to provide habitat for rare species. The NH NHB has identified the potential for the presence of rare species but has determined that the proposed project is not likely to have an impact on rare species. However, the proposed remediation and restoration work will be an overall benefit. The IPAC data indicates the potential presence of the endangered Northern Long-eared Bat (*Myotis septentrionalis*), threatened Red Knot (*Calidris canutus rufa*) and the endangered Roseate Tern (*Sterna dougallii dougallii*). The narrow tidal cove and previously developed tidal buffer zone associated with this project do not provide habitat for these mammal or avian species. Overall, the area surrounding the project site is suitable for rare species but this is not a principal value.

## 7 - Nutrient Trapping/Retention & Transformation

This function considers the wetlands ability to trap, retain or transform excess nutrients from adjacent uplands. The limited tidal marsh vegetation represents the majority of the capability to perform this function here making this a principal function. Additionally, the proposed restoration work will be an overall benefit.

#### 8 - Production Export

This function considers the ability of the wetland to export nutrients to other areas. The high productivity of the tidal marsh and the presence of food resources within it and the creek, together with the tidal flushing of the creek make production export a suitable function of the creek, however, this is not a principal function of the narrow cove associated with the project site. The proposed project will not have any negative impact on the ability of the wetland complex to provide production export functions.

#### 9 - Scenic Quality

This value considers the quality of the wetland from a visual perspective. Sagamore Creek and associated wetlands have visual quality but the visibility of these areas is not present at the project site due to the narrow cove so this is not considered a principal value. The proposed project will not detract from this value. The aesthetics of the restored area will be an improvement to the existing conditions.

#### **10 – Sediment Trapping**

This function considers the wetlands ability to trap sediments. The major source of sediments come from the incoming tides and any sedimentation that occurs within the tidal wetland is natural. The tidal flushing limits the retention of toxicants and pathogens. The proposed project may protect Sagamore Creek and associated wetlands from upland toxicants or pathogen sources through the completion of the remediation work making this a principal function.

## 11 - Shoreline Anchoring

This function considers the ability of the wetland to maintain shoreline stability. Sagamore Creek and the project site are relatively low energy areas as indicated by the presence of mudflats and salt marshes but storm surges result in high energy flows. These areas provide for the deposition of sediments carried in by the tide making this a principal function.

## 12 - Uniqueness/Heritage

This value considers the wetlands with respect to local and/or geographical significance as well as the functions it provides. Sagamore Creek provides a significant number of principal functions and values to the community and the public but the project site does not offer these amenities and is therefore not a principal value. The proposed project will not impact the uniqueness or heritage of the area. Both the restoration and the remediation will be a benefit to the community.

## 13 - Wetland - Based Recreation

This value considers the ability of the wetlands to provide recreational opportunities. Sagamore Creek is frequently used by boaters and offers many other recreational opportunities, however; this is not the case in the narrow cove associated with the project site so recreation is not a principal value. The project will not create barriers to the recreational uses of the creek.

## 14 – Wetland-Dependent Wildlife Habitat

This function considers the effectiveness of the wetland to provide habitat to species particularly adapted to wetland environments. Sagamore Creek and the tidal marsh is mapped as Highest Ranked Habitat in The Wildlife Action Plan (Attachment J1). Wildlife particularly suited to wetlands are associated with the areas within Sagamore Creek. A list of observed and potential wildlife is provided with the Wetland Function - Value Evaluation Form in Attachment J1. Wildlife habitat is a suitable function of the narrow cove associated with the project site. The proposed restoration project will only serve to improve the ability of the wetlands to perform this function.

Wetland ID	Cowardin Classes	Ecological Integrity	Educational Potential	Fish/ & Aquatic Life Habitat	Flood Storage	Groundwater Recharge	Noteworthiness	Nutrient Trapping/Retention & Transformation	Production Export	Scenic Quality	Sediment/Toxicant Retention	Sediment Trapping	Uniqueness/Heritage	Wetland-Based Recreation	Wetland-Based Wildlife Habitat	Wetland Description:
Wetland A	E2US3	Y	N	N	N	N	N	Y	N	N	N	Ŷ	N	N	N	Tidal creek complex with mudflats and salt marsh. The project area includes previously disturbed salt marsh due to ongoing remediation efforts.

## Table 1. Summary of Principal Functions and Values

# L1. Wetland Functional Assessment Worksheets



WETLANDS FUNCTIONAL ASSESSMENT WORKSHEET Water Division/Land Resource Management Wetlands Bureau Check the Status of your Application



RSA/Rule: RSA 482-A / Env-Wt 311.03(b)(10); Env-Wt 311.10

#### APPLICANT LAST NAME, FIRST NAME, M.I.: Sea Level LLC and Goulemas Family Trust

As required by Env-Wt 311.03(b)(10), an application for a standard permit for minor and major projects must include a functional assessment of all wetlands on the project site as specified in Env-Wt 311.10. This worksheet will help you compile data for the functional assessment needed to meet federal (US Army Corps of Engineers (USACE); if applicable) and NHDES requirements. Additional requirements are needed for projects in tidal area; please refer to the <u>Coastal Area</u> <u>Worksheet (NHDES-W-06-079)</u> for more information.

Both a desktop review and a field examination are needed to accurately determine surrounding land use, hydrology, hydroperiod, hydric soils, vegetation, structural complexity of wetland classes, hydrologic connections between wetlands or stream systems or wetland complex, position in the landscape, and physical characteristics of wetlands and associated surface waters. The results of the evaluation are to be used to select the location of the proposed project having the least impact to wetland functions and values (Env-Wt 311.10). This worksheet can be used in conjunction with the <u>Avoidance and Minimization Written Narrative (NHDES-W-06-089)</u> and the <u>Avoidance and Minimization</u> <u>Checklist (NHDES-W-06-050)</u> to address Env-Wt 313.03 (Avoidance and Minimization). If more than one wetland/ stream resource is identified, multiple worksheets can be attached to the application. All wetland, vernal pools, and stream identification (ID) numbers are to be displayed and located on the wetlands delineation of the subject property.

SECTION 1 - LOCATION (USACE HIGHWAY METHODOLOGY)							
ADJACENT LAND USE: Marina/ Residential							
CONTIGUOUS UNDEVELOPED BUFFER ZO	NE PRESENT? 🗌 Yes 🛛 No						
DISTANCE TO NEAREST ROADWAY OR OT	HER DEVELOPMENT (in feet): <75 feet						
SECTION 2 - DELINEATION (USACE HIGHV	VAY METHODOLOGY; Env-Wt 311.10)						
CERTIFIED WETLAND SCIENTIST (if in a nor prepared this assessment: Patrick Seekam	CERTIFIED WETLAND SCIENTIST (if in a non-tidal area) or QUALIFIED COASTAL PROFESSIONAL (if in a tidal area) who prepared this assessment: Patrick Seekamp, CWS						
DATE(S) OF SITE VISIT(S): 10/01/20	DELINEATION PER ENV-WT 406 COMPLETED? 🛛 Yes 🔲 No						
CONFIRM THAT THE EVALUATION IS BASE	ED ON:						
Office and							
Field examination.							
METHOD USED FOR FUNCTIONAL ASSESS	MENT (check one and fill in blank if "other"):						
🔀 USACE Highway Methodology.							
Other scientifically supported method	(enter name/ title): Vegetated Tidal Wetlands						

SECTION 3 - WETLAND RESOURCE SUMMARY (USACE HIGH	WAY METHODOLOGY; Env-Wt 311.10)					
WETLAND ID: A	LOCATION: (LAT/ LONG) 43.05333/70.74555					
WETLAND AREA: 0.5 acres	DOMINANT WETLAND SYSTEMS PRESENT: Wetland/ Salt Marsh					
HOW MANY TRIBUTARIES CONTRIBUTE TO THE WETLAND?	COWARDIN CLASS:					
None	E2US3					
IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM?	IS THE WETLAND PART OF:					
🗌 Yes 🖾 No	🔀 A wildlife corridor or 🔲 A habitat island?					
if not, where does the wetland lie in the drainage basin?	IS THE WETLAND HUMAN-MADE?					
Coastal	Yes 🛛 No					
IS THE WETLAND IN A 100-YEAR FLOODPLAIN?	ARE VERNAL POOLS PRESENT?					
🔀 Yes 🔲 No	Yes 🛛 No (If yes, complete the Vernal Pool Table)					
ARE ANY WETLANDS PART OF A STREAM OR OPEN-WATER SYSTEM? Yes No	ARE ANY PUBLIC OR PRIVATE WELLS DOWNSTREAM/ DOWNGRADIENT? 🔲 Yes 🔀 No					
PROPOSED WETLAND IMPACT TYPE: Remediation and Restoration	PROPOSED WETLAND IMPACT AREA: 410 SF, 11 CY					
SECTION 4 - WETLANDS FUNCTIONS AND VALUES (USACE H	IIGHWAY METHODOLOGY; Env-Wt 311.10)					
The following table can be used to compile data on wetlands in the "Functions/ Values" column refer to the following fun	s functions and values. The reference numbers indicated ctions and values:					
1. Ecological Integrity (from RSA 482-A:2, XI)						
2. Educational Potential (from USACE Highway Methodo	ology: Educational/Scientific Value)					
3. Fish & Aquatic Life Habitat (from USACE Highway Me	thodology: Fish & Shellfish Habitat)					
4. Flood Storage (from USACE Highway Methodology: Fl	oodflow Alteration)					
5. Groundwater Recharge (from USACE Highway Metho	dology: Groundwater Recharge/Discharge)					
6. Noteworthiness (from USACE Highway Methodology:	Threatened or Endangered Species Habitat)					
7. Nutrient Trapping/Retention & Transformation (from	USACE Highway Methodology: Nutrient Removal)					
8. Production Export (Nutrient) (from USACE Highway N	1ethodology)					
9. Scenic Quality (from USACE Highway Methodology: V	isual Quality/Aesthetics)					
10. Sediment Trapping (from USACE Highway Methodolo	gy: Sediment /Toxicant Retention)					
11. Shoreline Anchoring (from USACE Highway Methodol	ogy: Sediment/Shoreline Stabilization)					
12. Uniqueness/Heritage (from USACE Highway Methodology)						
13. Wetland-based Recreation (from USACE Highway Me	thodology: Recreation)					
14. Wetland-dependent Wildlife Habitat (from USACE Hig	ghway Methodology: Wildlife Habitat)					
First, determine if a wetland is suitable for a particular function and value ("Suitability" column) and indicate the rationale behind your determination ("Rationale" column). Please use the rationale reference numbers listed in Appendix A of USACE <i>The Highway Methodology Workbook Supplement</i> . Second, indicate which functions and values are principal ("Principal Function/value?" column). As described in <i>The Highway Methodology Workbook Supplement</i> , "functions and values can be principal if they are an important physical component of a wetland eccevator (function).						

only) and/or are considered of special value to society, from a local, regional, and/or national perspective".

#### NHDES-W-06-049

"Important Notes" are to include characteristics the evaluator used to determine the principal function and value of the wetland.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	🛛 Yes 🔲 No	The Ecological Integrity of the Ecological Umt{EU) is 0.90 and the Zone of Influence (ZI) is 0.30	X Yes No	Yes for the EU but no for the Zl.
2	🗌 Yes 🔀 No	None	☐ Yes ⊠ No	Project is located on private commercial property.
3	🛛 Yes 🔲 No	1,5	☐ Yes ⊠ No	Small fringe salt marsh at tip of tidal cove exposed at low tide.
4	☐ Yes ⊠ No	5,9,18	☐ Yes ⊠ No	Small fringe salt marsh at tip of tidal cove.
5	☐ Yes ⊠ No	10,15	☐ Yes ⊠ No	Tidal exchange is dominant hydrology.
6	🛛 Yes 🗌 No	1	☐ Yes ⊠ No	NHB report states no anticipated Impact.
7	🛛 Yes 🔲 No	2,3,4,6,7,8,11,12	🔀 Yes 🔲 No	Relatively small watershed with biggest threat being residential lawns and marina operation. Point source discharge present
8	🛛 Yes 🔲 No	1,2,4,6,7.10,14	☐ Yes ⊠ No	Assessment based on scale/slze of salt marsh fringe.
9	☐ Yes ⊠ No	2,6,8	☐ Yes ⊠ No	No primary viewing location available.
10	🛛 Yes 🗌 No	1,7,3,4,8	Yes	Small fringe salt marsh at upper reach of tidal cove.
11	🛛 Yes 🔲 No	1,5,6,10,11,12,13,15	🔀 Yes 🔲 No	Signs of erosion are present. Proposed restoration and bank stabilization will enhance this function.
12	☐ Yes ⊠ No	1,2,13,22,23,31	☐ Yes ⊠ No	Old marina cribbing present in wetland.
13	☐ Yes ⊠ No	5,9	☐ Yes ⊠ No	Private marina

Irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

🔀 Yes

No

	Yes
$\boxtimes$	No

#### SECTION 5 - VERNAL POOL SUMMARY (Env-Wt 311.10)

Delineations of vernal pools shall be based on the characteristics listed in the definition of "vernal pool" in Env-Wt 104.44. To assist in the delineation, individuals may use either of the following references:

- *Identifying and Documenting Vernal Pools in New Hampshire 3<sup>rd</sup> Ed.*, 2016, published by the New Hampshire Fish and Game Department; or
- The USACE *Vernal Pool Assessment* draft guidance dated 9-10-2013 and form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

All vernal pool ID numbers are to be displayed and located on the wetland delineation of the subject property.

"Important Notes" are to include documented reproductive and wildlife values, landscape context, and relationship to other vernal pools/wetlands.

Note: For projects seeking federal approval from the USACE, please attach a completed copy of The USACE "Vernal Pool Assessment" form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

VERNAL POOL ID NUMBER	DATE(S) OBSERVED	PRIMARY INDICATORS PRESENT (LIST)	SECONDARY INDICATORS PRESENT (LIST)		LENGTH OF HYDROPERIOD	IMPORTANT NOTES	
1							
2							
3			_				
4							
5			-				
SECTION 6 - STREAM RESOURCES SUMMARY							
DESCRIPTION OF STREAM:			STREAM TYPE (ROSGEN):				
HAVE FISHERIES BEEN DOCUMENTED?			DOES THE STREAM SYSTEM APPEAR STABLE?				
OTHER KEY ON-SITE FUNCTIONS OF NOTE:							

number are defined in Section 4.						
FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES		
1	Yes No		Yes No			
2	Yes No		Yes No			
3	Yes No		Yes No			
4	Yes No		Yes No			
5	Yes No		Yes No			
6	Yes No		Yes No			
7	Yes No		Yes No			
8	Yes No		Yes No			
9	Yes No		Yes No			
10	Yes No		Yes No			
11	Yes No		Yes No			
12	Yes No		Yes No			
13	Yes No		Yes No			
14	Yes No		Yes No			
SECTION 7 - ATTACHMENTS (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)						
Wildlife and vegetation diversity/abundance list.						
Photograph of wetland.						
Wetland delineation plans showing wetlands, vernal pools, and streams in relation to the impact area and						
surrounding landscape. Wetland IDs, vernal pool IDs, and stream IDs must be indicated on the plans.						

The following table can be used to compile data on stream resources. "Important Notes" are to include characteristics the evaluator used to determine principal function and value of each stream. The functions and values reference

For projects in tidal areas only: additional information required by Env-Wt 603.03/603.04. Please refer to the <u>Coastal Area Worksheet (NHDES-W-06-079)</u> for more information.

#### 4.1 Functional Assessment.

# Function 1 — Ecological Integrity

Tidal marshes are among the most productive and most disturbed ecosystems in the state. It is estimated that 50% of the tidal marshes in New Hampshire have been destroyed. Of the remaining 50%, most of them have been negatively impacted by coastal development to some degree. These impacts include filling and dredging within the EU, construction of roads, railroads or other impounding structures across the surface of the marsh, and adverse land-use in the area surrounding the EU. These impacts can result in the trapping of freshwater from upland drainage, as well as restricting flow of tidal waters that flood the EU. Both of these changes can alter the water and soil chemistry. allowing the EU to be dominated by invasive plant species (e.g. common reed, purple loosestrife), which can lead to the loss of function.

The Ecological Integrity of the marsh is a measure of the extent to which the natural ecosystem has been altered. EUs that have a high Average Functional Index (AFI) for Ecological Integrity have most likely undergone little alteration or degradation. A low AFI for Ecological Integrity indicates an EU that has suffered a high degree of degradation.

This function is divided into two parts. Part A assesses the Ecological Integrity within the EU. Part B assesses the Ecological Integrity of the Zone of Influence by looking at the current condition of the area surrounding the EU. By assessing the two areas separately, the user can gain a better understanding of the factors that influence the integrity of the EU. For example, if the AFI for Part A is high and the AFI for Part B is low, then the EU is being more negatively impacted by what is happening in the Zone of Influence than by a disruption of tidal flushing or extensive damage to the EU itself.

#### PART A: ECOLOGICAL INTEGRITY OF THE EU

#### Questions that may require field observation.

#### Question 1A. Percent of the marsh plant community dominated by invasive plant species.

**Directions** — Estimate the size of the area of the EU in which plants indicative of changes in the marsh community occur. These species may include common reed (Phragmites communis), purple loosestrife (Lythrum salicaria), or narrow leaf cattail (Typha angustifolia) or other freshwater or upland species that do not naturally occur in tidal marsh communities (see Appendix J).

> a. less than 5% of EU dominated by invasive species 1.0 0.5

> > 0.1

- b. 5% 20% of EU dominated by invasive species
- c. more than 20% of EU dominated by invasive species

**Rationale** — Invasive plant species may occur in the transition zone of a tidal marsh and not indicate disturbance. However, they can invade and eventually dominate disturbed tidal marshes, causing the loss of the natural diversity in the plant and animal communities. The disturbance can result from changes in drainage patterns caused by road construction, excessive development in the upland, fragmentation of the marsh system, or restriction of tidal flow.

#### Question 2A. Number of tidal restrictions.

**Directions** — Count the number of tidal restrictions from the EU to unrestricted tidal flow by the shortest route (see Figure 4-1). Do not consider the bridges over the major tidal rivers as a restriction. A list of the major tidal rivers can be found on page 12.





**Rationale** — The restriction of seawater to, and the detention of the freshwater in the marsh can cause changes in the salinity which in turn may affect the natural plant and animal communities of the marsh. The fragmentation of the system by the construction of roads or other types of impoundments and restrictions may influence all of the functions of the marsh. The present condition of the EU may be caused by the cumulative impact of two or more sequential restrictions of tidal flow (see Appendix J).
#### Question 3A. Type of tidal restriction.

1

**Directions** — Identify all the tidal restrictions between the EU and unrestricted tidal waters by the shortest route (See Figure 4-1). Determine which restriction is the most severe and apply the following criteria. Be sure to consider all tidal restrictions affecting flow into the EU (see Appendix J).

a.	no restriction affecting flow	1.0
b.	flow through bridge appears adequate	0.5
c.	flow through bridge appears inadequate and/or flow	
	restricted by culvert(s)	0.1

**Rationale** — The type of tidal restriction can be one of the main causes of degradation in an EU. A bridge that spans a tidal creek may allow adequate flow in the channel, but the approaches to the bridge are usually associated with the restriction of flow across the surface of the marsh. The presence and type of flow restriction may also cause freshwater flooding in the EU during springtime runoff or major rainstorms. In marsh systems such as the Little River in North Hampton, this flooding can damage surrounding roads and buildings.

There are many types of structures that can influence the free flow of tides, ranging from jetties to culverts. Each type of restriction has different effects on the hydrology of the marsh. For example, jetties, such as those at the mouths of Rye and Hampton Harbors, affect the flow of tidal waters in and out of the marsh. The level of information that will be collected using the Coastal Method will not allow for the evaluation of the effects of these changes in hydrology. However, some of the restrictions are so severe that there is a direct effect on the biotic communities of the EU.

Bridges and culverts in the marsh can be of two different types. The restriction with the least effect on a marsh is a structure spanning a tidal creek from headland to headland such as the Rt. 1A bridge over Parsons Creek in Rve. The other type is a road across the surface of the marsh with bridges or culverts over tidal creeks. The construction of the road across the marsh fragments the marsh and creates impoundments which prevent the free flow of tidal waters across the surface of the marsh at the point of construction. Even if the bridge is properly sized for the creek it spans, the amount of tidal water reaching the far side of the road is limited by the presence of the road. Culverts are the most restrictive and are often associated with degraded EUs because of the limited amount of tidal flow that reaches the far side of the culvert.

#### Question 4A. Ditching on the surface of the EU.

**Directions** — Determine from the base map or a site visit if man-made ditches are present in the EU and in what pattern.

a. no ditching within the EU	
b. ditches present in linear pattern	0.5
c. ditches present in grid pattern	0.1

c. ditches present in grid pattern

**Rationale** — Many of the larger marshes in New Hampshire were ditched either for agricultural purposes or in an attempt to help in the control of salt marsh mosquitoes. The effects of the ditching on the integrity of a marsh are not fully understood, but there is little doubt that the ditches do affect the functioning of the EU. Many times the spoils from the ditching were left on the surface of the marsh next to the ditch, trapping water and leading to the degradation of the marsh peat. A grid pattern of ditches and the associated spoils is more likely to have a negative impact on the EU by trapping both tidal waters and freshwater drainage from the surrounding upland on the marsh surface leading to the dieback of natural tidal marsh plant communities, degradation of the marsh peat and changes in water and soil chemistry.

#### PART B: ECOLOGICAL INTEGRITY OF THE ZONE OF INFLUENCE

#### Questions that may require field observation.

## Question 1B. Dominant land-use in the 500 foot Zone of Influence surrounding the EU.

**Directions** — Using the base map, determine the dominant land-use based on the current use of the land. The dominant land-use refers to the use which occupies the largest percentage of the Zone of Influence.

a. forested, fields, open water, or similar open space
b. agriculture or rural residential

1.0

0.5

0.1

1.0

0.5

- o. agriculture or rural residential
- commercial, industrial, high density residential or heavily used highways

**Rationale** — The *Coastal Method* assumes that marshes in areas which have low intensity use, such as forestry or open space, are least likely to have undergone past disturbances. In addition, these areas are most likely to remain undisturbed in the future.

## Question 2B. Ratio of the number of occupied buildings (including seasonally occupied) within the EU or within the Zone of Influence to the total area of EU.

**Directions** — Count the number of occupied buildings in the EU and/or within 500 feet of the EUs edge. Use the EU area as previously determined on the base map. Express the number of occupied buildings as a ratio to the area of the EU. If an occupied structure falls half in and half out of the Zone of Influence it should be counted as being in.

<u>number of occupied dwellings</u> = <u>buildings</u> total area of EU (acres) acre

- a. less than 0.1 building/ac.
- b. from 0.1 to 0.5 building/ac.
- c. more than 0.5 building/ac.

**Rationale** — Occupied buildings are an indicator of the human impact on the EU. These impacts can include increased runoff, nutrient loading from malfunctioning septic systems and use of fertilizers and increased activity in and around the EU. This activity can be detrimental to water quality and many plants and animals.

## Question 3B. Percent of the EU/upland border which has a buffer of woodland or idle land at least 500 feet in width.

**Directions** — Using the base map, measure the total length of the EU/upland border. Then measure the length of this border which has a 500 foot buffer zone of woodland or idle land. The 500 foot buffer zone will coincide with the Zone of Influence as mapped. **Do not include those areas bordered by agricultural use**. Express the length of the buffer as a percentage of the total length of the EU/upland border.

> length of 500 foot wide undeveloped buffer X 100 length EU/upland border

a.	more than 70%	1.0
b.	from 30% to 70%	0.5
c.	less than 30%	0.1

**Rationale** — A buffer zone (an uncut area of vegetation providing wildlife cover, and helping to control erosion and maintain water quality) increases the ecological integrity of a EU in several important ways. It provides habitat for upland animals, which may use a tidal marsh during parts of their life cycle, and habitat for water dependent wildlife species that require upland habitat for parts of their life cycle. The vegetation in an undisturbed buffer zone acts as a filter to absorb some of the contaminates from residential, agricultural or commercial development before they can enter the EU. During severe storm events the buffer zone can provide refuge for marsh animals to escape high winds and flooding. These undisturbed areas may also slowly evolve into tidal marsh as sea level rises. Agricultural land is not counted as a buffer zone because the application of fertilizers and pesticides can be harmful to the marsh ecosystem.

## Question 4B. Square footage of roads, driveways and parking lots within 150 feet of EU.

**Directions** — Determine the square footage of roads, driveways and other paved areas such as parking lots <u>within 150 feet</u> of the EU and express it as a ratio to the area of the EU (in acres).

square footage of roads and other paved areas (in sq. feet) area of EU (in acres)

a.	ratio less than 1500 sq. feet/acre	1.0
b.	ratio between 1500 - 6000 sq. feet/acre	0.5
c.	ratio greater than 6000 sq. feet/acre	0.1

**Rationale** — Roads, driveways, parking lots, and other paved areas are the focus of considerable disturbance including noise, air pollution and polluted runoff. All of these factors can have an negative effect on populations of plant and animals within the EU.

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The Ecological Integrity of the Ecological Unit is 0.90

The Ecological Integrity of the Zone of Influence is 0.30

APPENDIX L, Part 4 - L2 Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

#### L2: Army Corps Appendix A - List of Considerations and Qualifiers

## Appendix A

# Wetland evaluation supporting documentation; Reproducible forms.

Below is an example list of considerations that was used for a New Hampshire highway project. Considerations are flexible, based on best professional judgment and interdisciplinary team consensus. This example provides a comprehensive base, however, and may only need slight modifications for use in other projects.



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

CONSIDERATIONS/QUALIFIERS

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



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

#### CONSIDERATIONS/QUALIFIERS

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

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

#### CONSIDERATIONS/QUALIFIERS

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

STOP HERE IF THIS WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE

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

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



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

CONSIDERATIONS/QUALIFIERS

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

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

CONSIDERATIONS/QUALIFIERS

- 1. Potential sources of excess sediment are in the watershed above the wetland.
- 2. Potential or known sources of toxicants are in the watershed above the wetland.
- 3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland.
- 4. Fine grained mineral or organic soils are present.
- 5. Long duration water retention time is present in this wetland.
- 6. Public or private water sources occur downstream.
- 7. The wetland edge is broad and intermittently aerobic.
- 8. The wetland is known to have existed for more than 50 years.
- 9. Drainage ditches have not been constructed in the wetland.
- STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.
- 10. Wetland is associated with an intermittent or perennial stream or a lake.
- 11. Channelized flows have visible velocity decreases in the wetland.
- Effective floodwater storage in wetland is occurring. Areas of impounded open water are present.
- 13. No indicators of erosive forces are present. No high water velocities are present.
- 14. Diffuse water flows are present in the wetland.
- 15. Wetland has a high degree of water and vegetation interspersion.
- 16. Dense vegetation provides opportunity for sediment trapping and/or signs of
- sediment accumulation by dense vegetation is present.
- 17. Other



#### NUTRIENT REMOVAL/RETENTION/TRANSFORMATION — This function

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

CONSIDERATIONS/QUALIFIERS

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



- 4. Potential sources of excess nutrients are present in the watershed above the wetland.
- 5. Wetland saturated for most of the season. Ponded water is present in the wetland.
- 6. Deep organic/sediment deposits are present.
- 7. Slowly drained fine grained mineral or organic soils are present.
- 8. Dense vegetation is present.
- 9. Emergent vegetation and/or dense woody stems are dominant.
- 10. Opportunity for nutrient attenuation exists.
- 11. Vegetation diversity/abundance sufficient to utilize nutrients.
- STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.
- 12. Waterflow through this wetland is diffuse.
- 13. Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation.
- 14. Water moves slowly through this wetland.
- 15. Other

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

#### CONSIDERATIONS/QUALIFIERS

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

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



#### CONSIDERATIONS/QUALIFIERS

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





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

CONSIDERATIONS/QUALIFIERS

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

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

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



#### CONSIDERATIONS/QUALIFIERS

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

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

#### CONSIDERATIONS/QUALIFIERS

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





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

#### CONSIDERATIONS/QUALIFIERS

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

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



#### CONSIDERATIONS/QUALIFIERS

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

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



CONSIDERATIONS/QUALIFIERS

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

WPA APPENDIX M -- Copy of Town Tax Map, Location of Project on property, and location, name, and address of abutters, recorded deeds for site properties with book and page numbers, and copies of certified postal receipts to abutters (Per Application Checklist, NH ENV-WT 311.06, 311.12, 311.13)



#### List of Abutters to Portsmouth Marina and Goulemas Properties

3 Sagamore Grove (Map 201, Lot 7) Owners: Neste Brian Rv Tr (1/2 Int); Byrd Bradford Rv Tr (1/2 Int) Owners Address: 184 Walker Bungalow Rd, Portsmouth, NH 03801

6 Sagamore Grove (Map 201, Lot 5) Owners: Bosen Tina D Revocable Trust, Bosen Tina D Trustee Owners Address: 6 Sagamore Grove, Portsmouth, NH 03801

191 Wentworth House Road (Map 201, Lot 14) Owner: Boat House Rental LLC Owners Address: 200 Sagamore Rd, Rye, NH 03870

Wentworth House Road (Map 201, Lot 11) Owner: Live Free Real Estate LLC Owners Address: 314 Middle St, Portsmouth, NH 03801



C/H L-CHIP ROA335173

#### WARRANTY DEED

KNOW EVERYONE BY THESE PRESENTS that I, J.P. Nadeau, of 507 State Street, Portsmouth, County of Rockingham and State of New Hampshire (hereinafter referred to as "Grantor"), for consideration paid grants to Sea Level LLC, of 185 Wentworth Road, Portsmouth, County of Rockingham and State of New Hampshire (hereinafter referred to as "Grantee"), with WARRANTY COVENANTS, all of Grantor's right, title and interest in the following described property, none of which is homestead property.

#### LEGAL DESCRIPTION

**Parcel 1:** A certain tract or parcel of land, with buildings located thereon, in Portsmouth, New Hampshire, bounded and described as follows:

Beginning at a point in the Northerly sideline of Wentworth House Road at the Southeasterly corner of land now or formerly of William F. Huber, thence running N 27° 10' E by land of said Huber one hundred fifty-six and six tenths (156.6) feet to a corner; thence turning and running S 79° 08' E by land now or formerly of Philip A. and Anita M. Hayes one hundred forty (140) feet, more or less, to Sagamore Creek; thence turning and running Southeasterly by said creek to land formerly of Michael and Dunya D. Kuchtey; thence turning and running S 15° 38' W by land of said Kuchtey about one hundred sixty (160) feet to Wentworth House Road; thence turning and running N 74° 22' W by said road one hundred eighty-seven and five tenths (187.5) feet to the point of beginning.

Subject to all covenants and conditions contained in deed of Wentworth Hotel, Inc., to Michael Kuchtey and Dunya D. Kuchtey, dated November 10, 1958 and recorded in the Rockingham County Registry of Deeds at Book 1487, Page 419.

<u>Parcel 2:</u> A certain lot or parcel of land together with the buildings located thereon, situate in Portsmouth, County of Rockingham, State of New Hampshire, on the Northerly side of Wentworth House Road, so-called, and more particularly bounded and described as follows:

Beginning at a point at the Southwesterly corner of land now or formerly of one Apostolides at the Southeasterly corner of the premises herein conveyed thence running in a Westerly direction by said Wentworth House Road one hundred eighty-three (183) feet to a point at land now or formerly of Sadie P. Gouse; thence turning and running at right angles in a general Northerly direction by said land of Gouse one hundred forty-four and fifty-eight hundredths (144.58) feet, more or less, to Sagamore Creek; thence turning and running in a general Easterly direction, following the course of said Sagamore Creek, to the Northwesterly corner of land of said Apostolides; thence turning and running in a Southerly direction by said

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Apostolides land one hundred seventy-five (175) feet, more or less, to said Wentworth House Road and the point of beginning.

<u>Parcel 3</u>: A certain parcel of land, with the buildings thereon, situate in Portsmouth, County of Rockingham and State of New Hampshire, bounded and described as follows:

Beginning at the Southwesterly corner of the parcel conveyed at a point in the Northerly sideline of Wentworth House Road; thence running North 09° 50' East by other land now or formerly of said Sadie Gouse about 210 feet to Sagamore Creek; thence turning and running in a general Easterly direction by said Creek to a point distant 150 feet Easterly at right angles from the first described course; thence turning and running South 09° 50' West by other land of said Sadie Gouse about 250 feet to Wentworth House Road; thence turning and running Westerly by said road about 150 feet to the point of beginning.

Also another parcel of land with the buildings thereon situated in said Portsmouth, and bounded and described as follows:

Beginning at a point on the Northerly side of Wentworth House Road at the Southeasterly corner of other land of this grantor; thence running North 09° 50' East by other land of this grantor about 185 feet to Sagamore Creek; thence running Easterly by said Creek about 40 feet to land conveyed to Nicholas Pesarik; thence turning and running South 22° 35' West by said land conveyed to said Pesarik passing through a drill hole in a ledge about 180 feet to Wentworth House Road and the point of beginning.

<u>Parcel 4</u>: A certain tract or parcel of land, together with the buildings thereon, situated on the Northerly side of Wentworth House Road in Portsmouth, County of Rockingham and State of New Hampshire, bounded and described as follows:

Beginning at a hub in the ground on the Northerly side of said road and at the Southwesterly corner of land now or formerly of Joseph LaCava thence turning and running North 69° 09' West by said Wentworth House Road 119.2 feet to land now or formerly of Peter and Florence Apostolides; thence turning and running North 22° 35' East by other land now or formerly of Sadie P. Gouse and passing through a drill hole in a ledge about 180 feet to Sagamore Creek; thence running in a general Southerly and Easterly direction by said Creek to land of Joseph LaCava; thence turning and running South 23° 26' West by land of said LaCava about 104 feet to Wentworth House Road and the point of beginning.

<u>Parcel 5</u>: A certain tract of land, with the buildings thereon, situate in Portsmouth, County of Rockingham and State of New Hampshire, bounded and described as follows:

Beginning at a hub on the Northerly side of Wentworth House Road at land now or formerly of Sadie P. Gouse; thence running North 23° 26' East by land now or formerly of Gouse to Sagamore Creek; thence turning and running Northeasterly by said creek to land now or formerly of Henry Chartrand; thence turning and running South 26° 30'

West by land now or formerly of said Chartrand to said Wentworth House Road; thence turning and running 66° 34' West by said road seventy five (75) feet to the point of beginning.

See also boundary agreement between Michael Kuchtey and Dunya D. Kuchtey and Ronald F. Eagan and Anne M. Eagan, dated June 17, 1968 and recorded in the Rockingham County Registry of Deeds at Book 1772, Page 192, as said agreement may affect the above description.

Parcels 1, 2, 3, 4 and 5 are also collectively depicted as one parcel located on the northerly side of Wentworth House Road on a plan entitled, "Plan of Land for Michael Kuchtey Revocable Trust, Wentworth Road, County of Rockingham, Portsmouth/Rye, NH, Scale 1"=50", by Millette, Sprague & Colwell, Inc., dated March 25, 1999 and recorded in the Rockingham County Registry of Deeds on July 20, 1999 as Plan Number D-27320, which parcel is bounded and described as follows"

Beginning at an iron rod on the Northerly sideline of Wentworth House Road at the Southeasterly corner of the within described parcel and the Southwesterly corner of land now or formerly of the B.R. Graves, Jr. Revocable Trust of 1992; thence running along the Northerly sideline of Wentworth House Road the following courses and distances: North 68° 01' 00" West for a distance of 75.00 feet to a point; North 70° 36' 00" West for a distance of 119.20 feet to a point; North 75° 07' 00" West for a distance of 150.97 feet to a point; North 78° 31' 34" West for a distance 187.01 feet to a point; and North 75° 19' 24" West for a distance 187.50 feet to an iron rod at the Southeasterly corner of land now or formerly of Michael A. Kuchtey; thence turning and running North 26° 12' 36" East along land of said Kuchtey for a distance of 156.60 feet to an iron pipe at land now or formerly of Lawrence E. Hayes; thence turning and running South 80° 05' 24" East along land of said Hayes for a distance of 140.00 feet to a point at the high water mark of Sagamore Creek; thence running in a Southeasterly direction along said high water mark (on a tie course of South 86° 48' 59" East for a distance of 174.75 feet); thence turning and running on a Northeasterly direction along said high water mark (on a tie course of North 72° 48' 54" East for a distance of 137.81 feet); thence turning and running in a Southeasterly direction along said high water mark (on tie courses of South 43° 01' 00" East for a distance of 80.94 feet; South 21° 22' 41" East for a distance of 80.31 feet; and South 68° 07' 25" East for a distance of 106.49 feet); thence turning and running in a Northeasterly direction along said high water mark (one a tie course of North 79° 28' 21" East for a distance of 81.44 feet) to a point at land now or formerly of The B.R. Graves, Jr. Revocable Trust of 1992; thence turning and running South 25° 03' 00" West along said Graves Trust land for a distance of 198.00 feet to the point of beginning.

<u>Parcel 6</u>: A certain parcel of land, with any buildings thereon, located on Wentworth Road, Portsmouth, County of Rockingham, State of New Hampshire, more particularly described follows:

Beginning at a point in the Southerly sideline of Wentworth Road, said point being two hundred eleven and eighteen hundredths (211.18) feet Easterly of the Northeast corner of

land now or formerly of Herman Odiorne; thence running South 19° 59' West by land of Ronald F. Eagan and Anne M. Eagan one hundred and no-tenths (100.00) feet to a corner; thence turning and running North 69° 09' West by land now or formerly of the Michael Kuchtey Revocable Trust dated July 2, 1996 seventy and no-tenths (70.0) feet to a corner; thence turning and running North 19° 59' East by other land now or formerly of said Kuchtey Trust one hundred and no-tenths (100.) feet to said Wentworth Road; thence turning and running South 69° 09' East by said road seventy and no-tenths (70.0) feet to the point of beginning.

See also boundary agreement between Michael Kuchtey and Dunya D. Kuchtey and Ronald F. Eagan and Anne M. Egan, dated June 17, 1968 and recorded in Rockingham Registry of Deeds at Book 1772, Page 192 as said agreement may affect the above description.

Parcel 6 is also depicted as one parcel located on the Southerly side of Wentworth House Road on a plan entitled, "Plan of Land for Michael Kuchtey Revocable Trust, Wentworth Road, County of Rockingham, Portsmouth/Rye, NH, Scale 1"=50", by Millette, Sprague & Colwell, Inc. dated March 25, 1999 and recorded in the Rockingham County Registry of Deeds on July 20, 1999 as Plan Number D-27320, which parcel is bounded and described as follows:

Beginning at an iron rod on the Southerly sideline of Wentworth House Road at the Northeasterly corner of the within described parcel and the Northwesterly corner of land now or formerly of The B.R. Graces, Jr. Revocable Trust of 1992; thence running South 19° 59' 00" West along said Graves Trust land for a distance of 100.00 feet to an iron rod; thence turning and running North 69° 09; 00" West along Parcel 2 above-described for a distance of 70.00 feet to an iron rod; thence turning and running North 69° 0 a distance of 100.00 feet to an iron rod; thence turning and running North 69° 09' 00" East along Parcel 2 above-described for a distance of 100.00 feet to an iron rod on the Southerly sideline of Wentworth House Road; thence turning and running South 69° 09' 00" East along the Southerly sideline of said Wentworth House Road for a distance of 70.00 feet to the point of beginning.

<u>Parcel 7</u>: Two certain tracts of land together with any buildings thereon, partly in Portsmouth and partly in Rye, County of Rockingham, State of New Hampshire, further described as follows:

#### TRACT I:

Beginning at a pipe in the Southerly sideline of Wentworth Road at the Northeasterly corner of land now or formerly of Herman Odiorne, said pipe being also one hundred thirty-four (134) feet more or less Easterly of land now or formerly of the Mark Wentworth Home for Chronic Invalids; thence running South 76° 35' East one hundred twenty-six and twenty-three one-hundredths (126.23) feet to an iron pin at land now or formerly of Andrew J. and Kathleen P. DeLisle; thence turning and running South 19° 59' West one hundred (100) feet, more or less, by land of said DeLisle to an iron pin at a corner; thence turning and running South 69° 9' East by land of said DeLisle seventy (70) feet, more or less, to an iron pin at the Southeasterly corner of said land of DeLisle and in the Westerly sideline of land now or formerly of Paul F. and Ruth G. Brockway; thence turning and running South 19° 59' West by land of said Paul F. and Ruth O. Brockway

one hundred thirty-one (131) feet, more or less, to a pipe at a corner; thence turning and running South 89° 49' West by a poposed street or way two hundred twenty-five (225) feet to a pipe at a corner in said proposed street or way; thence turning and running South 0° 11' East fifty (50) feet to a pipe in the Southerly line of said proposed street or way; thence turning and running South 89° 49' West one hundred thirty-six and eighty-four one-hundredths (136.84) feet to a pipe in the Easterly sideline of the said Mark Wentworth Home for Chronic Invalids land; thence turning and running N 16° 45' East along said Mark Wentworth Home for Chronic Invalids two hundred fifty-five (255) feet to a pipe in the Southerly line of said Herman Odiorne; thence running and running N 16° 45' East along land of said Herman Odiorne one hundred thirty four (134) feet to the Southeasterly corner of land of said Odiorne; thence turning and running North 16° 45' East along land of said Herman Odiorne one hundred twenty (120) feet to the pipe in the Southerly sideline of Wentworth Road at the point of beginning.

#### TRACT II:

Beginning at a pipe situated one hundred twenty (120) feet Southerly of the Southerly line of Wentworth Road, said distance being measured along the Easterly sideline of land now or formerly of the Mark Wentworth Home for Chronic Invalids, thence turning and running South 16° 45' West two hundred fifty-five (255) feet along said land of Mark Wentworth Home for Chronic Invalids to a pipe at a corner in the conveyed premises; thence turning and running North 89° 45' East along land now or formerly of Helen Mulcahy one hundred thirty-six and eighty-four one hundredths (136.84) feet to a pipe at a corner in the conveyed premises; thence turning and running North 0° 11' West fifty (50) feet to a pipe at a corner in the conveyed premises; thence turning and running North 89° 49' East along a proposed street or way seventy-five (75) feet to a pipe at a corner in the conveyed premises; thence turning and running North 0° 11' West along other land herein conveyed one hundred (100) feet to a pipe at a corner in the conveyed premises; thence turning and running South 89° 49' West along other land herein conveyed seventy-five (75) feet to a pipe at a corner in the conveyed premises; thence turning and running North 0° 11' West along other land herein conveyed seventy-eight and eightythree one hundredths (78.83) feet to a pipe at land now or formerly of Herman Odiorne; thence turning and running North 76° 35' West along land now or formerly of said Hermand Odiorne sixty-four and thirty-five one hundreds (64.35) feet to the pipe at the place of beginning.

Meaning and intending to convey hereby lots No. 1 and No. 2 on a plan entitled "Plan showing property of Blanche M. Chartrand – Surveyed by Moulton Engineering Co., September 1953 and June 1955."

Also hereby conveying to the grantees, their heirs and assigns, the right to use in common with others a certain right of way as shown on said foregoing plan which runs from Wentworth Road Southerly and Westerly to and from land formerly of Frank Jones and now or formerly of Helen Mulcahy, said right of way adjoining said lots No. 1 and No. 2 in part and running to and from said Wentworth Road, with the right to use such right of way in common with others for all such purposes as may be necessary or useful for the use and occupation of the land hereby conveyed, in common with said Blanche M. Chartrand, her heirs and assigns.

See also boundary agreement between the Michael Kuchtey and Dunya D. Kuchtey and Ronald F. Eagen and Anne M. Eagen, dated June 17, 1968 and recorded in Rockingham Registry of Deeds at Book 1772, Page 192 as said agreement may affect the above description.

Parcel 7 is also depicted as one parcel located on the Southerly side of Wentworth House Road on a plan entitled, "Plan of Land for Michael Kuchtey Revocable Trust, Wentworth Road, County of Rockingham, Portsmouth/Rye, NH, Scale 1"=50", by Millette, Sprague & Colwell, Inc., dated March 25, 1999 as Plan Number D-27320, which parcel is bounded and described as follows:

Beginning at an iron rod on the Southerly sideline of Wentworth House Road at the Northwesterly corner of the within described parcel and the Northeasterly corner of land now or formerly of Gertrude A. Lamont; thence running South 76° 35' 00" East along the Southerly sideline of Wentworth House Road for a distance of 126.33 feet to a point; thence continuing South 69° 09' 00" East along said Wentworth House Road for a distance of 14.95 feet to an iron rod at the Northwesterly corner of land identified as Map R1, Lot 17 on the above-referenced plan; thence turning and running South 19° 59' 00" West along said Map R1, Lot 17 for a distance of 100.00 feet to an iron rod; thence turning and running South 69° 09' 00" East along said Map R1, Lot 17 for a distance of 70.00 feet to an iron rod at land now or formerly of The B.R. Graves, Jr. Revocable Trust of 1992; thence turning and running South 19° 59' 00" West along said Graves Trust land and land now or formerly of Bruce and Joanna Graves, and crossing the Portsmouth/Rye Town Line, for a distance of 131.00 feet to a point; thence turning and running South 89° 49' 00" West along land of said Graves and land now or formerly of Edmund J. and David L. Mulcahy, and crossing the Portsmouth/Rye Town Line for a distance of 225.00 feet to a point; thence turning and running South 00° 11' 00" East along said Mulcahy land for a distance of 50.07 feet to a point; thence turning and running South 89° 45' 15" West along said Mulcahy land for a distance of 136.81 feet to an iron pipe at land now or formerly of the City of Portsmouth Conservation Commission; thence turning and running North 16° 45' 00" East along said Conservation Commission land for a distance of 173.80 feet to an iron pipe; thence continuing North 16° 46' 51" East still along said Conservation Commission land for a distance of 80.99 feet to an iron pipe at land now or formerly of Gertrude A. Lamont; thence turning and running South 76° 40' 24" East along said Lamont land for a distance of 133.97 feet to an iron rod; thence turning and running North 16° 45' 00" East still along said Lamont land for a distance of 120.00 feet to the point of beginning.

Meaning and intending to convey all of the parcels of land with the buildings thereon as bounded and described in the deed from Witch Cove Properties, LLC to William H. Shaheen, et al dated December 17, 2002, recorded in the Rockingham county Registry of Deeds at Book 3922, Page 1165, the Grantor having acquired all right title and interest in said land and buildings by the following Warranty Deeds:

Deed of Priscilla Dalrymple, Trustee of the Walter G. Stanley Revocable Trust of 1994 to J.P. Nadeau dated April 13, 2006, recorded in the Rockingham County Registry of deeds at Book

4648, Page 0685;

Deed of William H. Shaheen to J.P. Nadeau dated April 17, 2006, recorded in the Rockingham County Registry of Deeds at Book 4648, Page 0686; and

Deed of Bruce E. Nadeau to J.P. Nadeau dated April 11, 2006 recorded in the Rockingham County Registry of Deeds at Book 4648, Page 0687;

This Conveyance Is Subject To The Following Conditions, Restrictions And Encumbrances:

- a.) By accepting this Deed, the Grantee is accepting conveyance of the premises in its "as is" condition and without Grantor's warranting compliance with any zoning, land use and other governmental laws, rules and regulations, and particularly those governing the United States Environmental Protection Agency (USEPA) and the State of New Hampshire Department of Environmental Services (NHDES); and
- b.) By accepting this Deed, the Grantee is also accepting the responsibility for completing any and all USEPA and NHDES remediation requirements and will accept any Deed Notice provision they may require; and
- c.) The free use of one boat slip reserved to William H. Shaheen of 140 Washington Street, Second Floor, Dover, New Hampshire, for the duration of his life, for a boat not in excess of thirty (30) feet in length, which use he can assign for the use of others during his life.

Witness my hand this <u>15</u> day of August, 2016

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Witness

STATE OF NEW HAMPSHIRE ROCKINGHAM COUNTY

Dated: August <u>15</u>, 2016

**PERSONALLY APPEARED** the above named, J.P. Nadeau, and gave oath that the foregoing subscribed to by him is his own free act and deed, Before me;

Notary Public / Justice of the Peace Commission Expires: <u>5/9/17</u> Michelly Lacan

Return to:



#### WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, that Paul W. Cain Investments, LLC, a New Hampshire limited liability company, with an address of 19 Revolutionary Lane, Nottingham NH 03290, for consideration paid grant(s) to Jason Goulemas, Trustee of the Jason Goulemas 2002 Family Trust and Lisa M. Goulemas, Trustee of the Lisa M. Goulemas 2002 Family Trust and Lisa M. Goulemas, Cape Neddick, ME 03902, as tenants in common, with WARRANTY COVENANTS:

A certain tract or parcel of land with the buildings thereon situate in Portsmouth, Rockingham County, State of New Hampshire, and further bounded and described as follows:

Beginning at a hub in the ground on the easterly side of a private roadway leading from Sagamore Avenue in said Portsmouth through land now or formerly of William F. Huber known as Sagamore Grove and at a point bearing S  $14^{\circ}$  34' W a distance of thirty-one and eight-tenths (31.8) feet from a hub at the southeasterly corner of land of Leroy Terrio; thence running S  $65^{\circ}$  10' E by other land now or formerly of said William F. Huber two hundred six and four-tenths (206.4) feet to a hub; thence turning and running S  $41^{\circ}$  52' W, a distance of ninety (90) feet to a hub at other land now or formerly of said Huber; thence turning and running N  $79^{\circ}$  08' W by other land now or formerly of said Huber; thence turning and running N  $29^{\circ}$  44' E by said private to a hub at the private roadway aforesaid; thence turning and running N  $29^{\circ}$  44' E by said private road one hundred thirty-four and two-tenths (134.2) feet to the point of beginning. Together with the land lying easterly of the above described parcel including between the northerly and southerly sidelines of the parcel projected easterly to the cove, so-called.

Right of way over Private Roadway from Sagamore Avenue to the premises is hereby granted.

See also, Right of Way benefitting the within conveyed premises contained in deed of George D. Mavrikis and Marion B. Mavrikis to John B. Gibbons and Clarissa B. Gibbons, recorded in the Rockingham County Registry of Deeds, Book 1733, Page 8. Containing about 21,300 square feet.

Property address is 5 Sagamore Grove, Portsmouth New Hampshire, 03801

Meaning and intending to describe and convey the same premises conveyed to Paul W. Cain Investments, LLC by deed dated February 19, 2015 and recorded in the Rockingham County Registry of Deeds in Book 5595, Page 2404.

Executed this  $216^{\text{f}}$  day of December, 2016.

Paul W. Cam Investments, LLC Paul W. Cain

Duly authorized Member

State of New Hampshire County of Rockingham

Then personally appeared before me on this  $21^{87}$  day of December, 2016, the said Paul W. Cain, who acknowledged himself to be the duly authorized Member of Paul W. Cain Investments, LLC and acknowledged the foregoing to be his voluntary act and deed in said capacity.

Notary Public/Justice of the Peace



Aries Engineering, LLC **104 PLEASANT ST** CONCORD NH 03301-2902

\$5.54 **US POSTAGE** FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



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**USPS CERTIFIED MAIL** 9407 1118 9876 5452 7484 99

Brian Neste RV TR & Bradford Byrd RV TR **184 BUNGALOW ROAD** PORTSMOUTH NH 03801

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Reference	
USPS #	9407111898765452748499
USPS Mail Class	Certified with Electronic Delivery Confirmation
USPS Status	Your item was picked up at the post office at 3:38 pm on December 17, 2024 in PORTSMOUTH, NH 03801.
USPS History	Available for Pickup, 12/16/2024, 4:05 am, PORTSMOUTH, NH 03801 Notice Left (No Authorized Recipient Available), 12/14/2024, 4:32 pm, PORTSMOUTH, NH 03801 Out for Delivery, 12/14/2024, 7:56 am, PORTSMOUTH, NH 03801 Arrived at Post Office, 12/14/2024, 7:45 am, PORTSMOUTH, NH 03801 Arrived at USPS Facility, December 12, 2024, 8:12 pm, MANCHESTER, NH 03103
	Accepted at USPS Origin Facility, December 12, 2024, 6:57 pm, CONCORD, NH 03301 Shipping Label Created, USPS Awaiting Item, 12/12/2024, 2:57 pm, CONCORD, NH 03301

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Aries Engineering, LLC 104 PLEASANT ST CONCORD NH 03301-2902 \$5.54 US POSTAGE FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



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Boat House Rental LLC 200 SAGAMORE RD RYE NH 03870-2057

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Reference USPS # USPS Mail Class	9407111898765452747621 Certified with Electronic Delivery Confirmation
USPS Status	Your item was delivered to an individual at the address at 11:00 am on December 14, 2024 in RYE, NH 03870.
USPS History	Out for Delivery, 12/14/2024, 8:12 am, RYE, NH 03870 Arrived at Post Office, 12/14/2024, 8:01 am, RYE, NH 03870 Arrived at USPS Facility, December 12, 2024, 8:12 pm, MANCHESTER, NH 03103 Accepted at USPS Origin Facility, December 12, 2024, 6:57 pm, CONCORD, NH 03301 Shipping Label Created, USPS Awaiting Item, 12/12/2024, 3:02 pm, CONCORD, NH 03301

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Aries Engineering, LLC 104 PLEASANT ST CONCORD NH 03301-2902 \$5.54 US POSTAGE FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



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USPS CERTIFIED MAIL

Live Free Real Estate LLC 314 MIDDLE ST PORTSMOUTH NH 03801-5102

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Reference USPS # USPS Mail Class	9407111898765452747386 Certified with Electronic Delivery Confirmation
USPS Status	Your item was delivered to the front desk, reception area, or mail room at 12:32 pm on December 16, 2024 in PORTSMOUTH, NH 03801.
USPS History	No Access to Delivery Location, 12/14/2024, 1:03 pm, PORTSMOUTH, NH 03801 Arrived at USPS Facility, December 12, 2024, 8:10 pm, MANCHESTER, NH 03103 Accepted at USPS Origin Facility, December 12, 2024, 6:55 pm, CONCORD, NH 03301
	Shipping Label Created, USPS Awaiting Item, 12/12/2024, 3:03 pm, CONCORD, NH 03301

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Aries Engineering, LLC **104 PLEASANT ST** CONCORD NH 03301-2902 \$5.54 **US POSTAGE** FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



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Tina D Bosen, Trustee **6 SAGAMORE GRV** 

PORTSMOUTH NH 03801-5547

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Reference	
USPS #	9407111898765452747874
USPS Mail Class	Certified with Electronic Delivery Confirmation
USPS Status	Your item was delivered to an individual at the address at 11:20 am on December 17, 2024 in PORTSMOUTH, NH 03801.
USPS History	Out for Delivery, 12/17/2024, 6:10 am, PORTSMOUTH, NH 03801 Arrived at Post Office, 12/17/2024, 5:17 am, PORTSMOUTH, NH 03801 In Transit to Next Facility, 12/16/2024 In Transit to Next Facility, 12/15/2024 In Transit to Next Facility, 12/14/2024 Arrived at USPS Facility, December 12, 2024, 8:12 pm, MANCHESTER, NH 03103 Accepted at USPS Origin Facility, December 12, 2024, 6:57 pm, CONCORD, NH 03301 Shipping Label Created, USPS Awaiting Item, 12/12/2024, 3:00 pm, CONCORD, NH 03301

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Photograph 1: Google Maps Street View – 187 Wentworth Road (prior to November 2021 fire destroyed 3-sided structure, work area to left of structure).



Photograph 2: April 2013 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple with mapped photo key



APPENDIX N - Photograph Log Portsmouth Marina Restoration Project 187 Wentworth Hill Road Portsmouth, New Hampshire



Photograph 3b: Looking east to Sagamore Creek, east end of wetland remediation area in isolated cove in foreground, berm separates wetland remediation area from Witch Cove; July 2024





Photograph 4b: Looking east, east of wetland remediation area and berm, in vicinity of cribbed retaining wall and building foundation, at right; July 2024







Photograph 5b: Looking south, view of cribbed stone retaining wall, from A-10 eastward (see Sheet 5); July 2024





Photograph 6a: Looking west to abutter at 5 Sagamore Grove at northwest end of wetland remediation area; April 2024



Photograph 6b: Looking west to abutter at 5 Sagamore Grove at northwest end of wetland remediation area; July 2024







Photograph 8a: Looking east, storm drain pipe to left of rock underneath green ash tree, pipe above highest observable tide line; April 2024



Photograph 8b: Looking north, storm drain pipe underneath green ash tree, pipe above highest observable tide line; July 2024





Photograph 9b: Looking east from storm drain pipe, note eroded bank along right, shows entire wetland remediation area; July 2024




#### APPENDIX N - Photograph Log Portsmouth Marina Restoration Project 187 Wentworth Hill Road Portsmouth, New Hampshire



Photograph 10a: Looking east, also showing south bank and upland remediation area; April 2024



Photograph 10b: Looking east, also showing south bank and upland remediation area; July 2024



APPENDIX N - Photograph Log Portsmouth Marina Restoration Project 187 Wentworth Hill Road Portsmouth, New Hampshire



Photograph 11b: Looking west, showing prior upland remediation area; July 2024



NHDES-W-06-013



#### **APPENDIX O** Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

### STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION ATTACHMENT A: MINOR AND MAJOR PROJECTS Water Division/Land Resources Management Wetlands Bureau



Check the Status of your Application

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

#### APPLICANT'S NAME: Tom Reis, Sea Level, LLC and Goulemas Family Trust **TOWN NAME:** Portsmouth

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

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

#### PART I: AVOIDANCE AND MINIMIZATION

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

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

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

OBJECTIVE IS FINAL REMEDIATION OF PCBS INITIALLY ADDRESSED UNDER U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) APPROVAL ISSUED ON 9-9-2016 PER 40 CFR 761.61(A) (SEE 4-24-2023 MEMO TO NHDES, WPA APPENDIX D, FOR HISTORY AND REGULATORY REQUIREMENTS). THIS NEW CLEANUP OCCURRING WITHIN ZONE AE AND ADJACENT JURISDICTIONAL ZONES MUST BE UNDERTAKEN PER EPA DIRECTION TO REMOVE CONTAMINATED WETLAND SEDIMENT AND UPLAND SOILS. NO PRACTICABLE ALTERNATIVE EXISTS.

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

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

Impacts to salt marsh are direct but temporary, lasting < one month, and limited to 410 SF with the purpose of completing the remediation work. The original salt marsh disturbance under the previous remediation activities created a sump that ponds tidal flows and traps flotsam and debris within this small, narrow, blind cove. The area proposed for temporary impacts will be restored to match original grades and planted with native salt marsh vegetation to improve existing conditions to the extent possible given the tidal dynamics of the cove. The proposed native salt marsh plantings, in this area with currently limited such vegetation, will improve habitat. Under existing conditions, tidal flushing is the only contributor to nutrients for adjacent Sagamore Creek. Under proposed conditions tidal flushing will continue with the benefit of additional nutrients furnished through natural seasonal senescence (biological breakdown).

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

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

The narrow cove where work is proposed is tidally connected to Sagamore Creek. This will not change under proposed future conditions.

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

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

Proposed remediation activities limit the extent of disturbance to the absolute minimum, and have been defined by hundreds of samples analyzed by a licensed laboratory. Certain temporary (< 1 month) impacts to the following jurisdictional areas will occur: Zone AE: 410 SF; HOTL To Within 50 FT Waterfront Shoreline Buffer: 5,230 SF; HOTL to 75 FT Setback, 6,375 SF; and within 100 FT Tidal Buffer Zone, 6,375 SF. Mitigative measures are discussed in WPA Appendix J, Part 3, Narrative to Coastal Resource Worksheet and Appendix E, Engineering Plans, Sheets 1 through 7. The project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A, especially those in which there are exemplary natural communities, protected species and habitat, documented fisheries, or any combination thereof, as described further in Appendix J, Coastal Resource Worksheet. Remediation methodologies are driven by site cleanup/EPA regulatory requirements.

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

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

The narrow tidal cove where work is proposed is bordered by private property, and does not currently provide public commerce, naviation or recreation opportunities nor will the proposed project provide for this. The section of Witch Cove within which work will occur lies approximately 100 feet away from the main channel of Sagamore Creek. See also Coastal Resource Worksheet.

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

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

The proposed remediation project will improve flood storage by reducing floodplain by six inches within the 175 SF remediation footprint, and also within an adjacent 235 FT area previously filled in, to total 410 SF, see Sheet 5. Vegetation to be installed above the 11 FT MSL line will retard runoff, in combination with re-engineering the drainage swale south of the cove remediation area, which will be modified to a 4% grade from its current 2:1 slope, and which drains into the remediation footprint area during precipitation events. Sheet flow runoff from the concrete cap will be controlled by two feet of 2 inch stone installed around south and west perimeter edge with underdrain routed to packaged underground stormwater treatment system to treat and intercept runoff directed from this 2% sloped pad, see Sheets 4 and 5. Also, extensive existing gravel fill immediately outside the project limits of work (Sheets 2, 5-7) is permeable, thus little runoff occurs during precipitation events. Note that a 15 inch storm drain pipe discharging into this blind cove from the state/city roadways east of and outside the project area, will be capped with a 5 ft concrete plug, once the origin of that pipe is terminated by others and approved by regulators. This will also reduce significant stormwater discharge originating during precipitation events.

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

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

There are no riverine forested wetlands or scrub-shrub-marsh complexes of high ecological integrity associated with this proposed project.

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

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

The proposed project is in and adjacent to tidal, saltwater wetlands which do not provide for drinking water or which impact groundwater aquifer levels.

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

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

The proposed project is not associated with any stream channel, but Witch Cove is tributary to tidal Sagamore Creek.

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

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

No structures over surface waters are proposed.

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

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

No new structures are proposed within waters that intrude upon the public trust. To maintain slope stabilization, and to avoid the possibility of exposing adjacent soils containing PCBs >1<25 ppm covered by 6 inches of soil above the 11 FT MSL line, pre-existing boulders will be re-established along the eastern shoreline of the cove supplemented by 4 to 5 inch stone to create an armored rip rap from HOTL 8 FT to 11 FT MSL. The location of these boulders which have been saved are shown in the NHDES 4-26-23 Memo, WPA APPENDIX D, in photographs section and WPA, Appendix C, Wildlife Habitat photo.

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

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

No new shoreline structures are proposed so the project will not have any impact on abutting properties relative to shoreline structures nor will the the single abutter have diminished use and enjoyment of his/her property. Notification to abutter(s) has been confirmed in writing in WPA, Appendix M.

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

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

No new shoreline structures are proposed so the project will not have any impact on the public's right to navigation,

passage or use of the resource for commerce or recreation.

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

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

No new shoreline structures are proposed so the proposed project will not have any impact on water quality, aquatic vegetation, wildlife or finfish habitat. However, the proposed project may be beneficial for water quality by remediating hazardous waste and, beneficial through the addition of native salt marsh vegetation where there currently is none, and minor addition of increased flood storage.

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

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

No structures are contemplated. The number of future access points through wetlands or over the bank will remain unchanged, see Sheets 5-7. The shoreline stability will be greatly enhanced as described above.

#### PART II: FUNCTIONAL ASSESSMENT

#### REQUIREMENTS

Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).

FUNCTIONAL ASSESSMENT METHOD USED:

Army Corps of Engineers Highway Methodology and Method for the Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire was employed.

NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: PATRICK SEEKAMP, CWS

DATE OF ASSESSMENT: 10 OCT 2020/CONFIRMED 202

Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT:

For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable:

Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.

#### APPENDIX P

#### Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

#### NHDES WPA, Concurrent Review Request and Other Items (ENV WT 313.05, 311.06 (e)(g)(h)(i))

**Per NH ENV Wt 313.05:** because the proposed project requires both a Shoreland permit under the Shoreland Water Quality Protection Act (RSA 483-B) and a Wetlands permit under RSA 482-A, as they are proposing impacts regulated under these two statutes, the applicant is requesting that the permit applications for these permits be reviewed concurrently by the New Hampshire Department of Environmental Service (NHDES) Shoreland and Wetlands programs.

<u>Per NH Envt Wt 311.06 (a)</u>: Maps and Other Documents: A copy of a town tax map showing the subject property, the location of the project on the property, and the location of properties of abutters with each lot labeled with the name and mailing address of the abutter is provided in WPA Appendix M.

**Per NH Envt Wt 311.06(e):** Since the project is located in a protected tidal zone, a copy of the recorded deed with book and page numbers for the property is provided as **WPA Appendix M**.

<u>Per NH Envt Wt 311.06 (g)</u>: The NHB memo in WPA Appendix A contains the NHB identification number and results and recommendations from NHB as well as any consultation requests made to NHF&G pursuant to Fis 1004.01, communications and information related to the consultation, results of the consultation from NHF&G pursuant to Fis 1004.01, and any recommendation for actions necessary to prevent adverse impacts to species protected under Fis 1400.

**Per NH Envt Wt 311.06 (h), (i):** Regarding providing a statement of whether the applicant has received comments from the local conservation commission, or LAC, none have been received.

NHDES-W-06-075



#### APPENDIX Q Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

### TIDAL SHORELINE STABILIZATION PROJECT-SPECIFIC WORKSHEET FOR STANDARD APPLICATION Water Division/Land Resources Management Wetlands Bureau Check the Status of your Application



#### RSA/Rule: RSA 482-A/ Env-Wt 609

This worksheet summarizes the criteria and requirements for a Standard Permit for "Tidal Shoreline Stabilization" projects in tidal areas as outlined in Chapter Env-Wt 600. In addition to the project-specific criteria and requirements on this worksheet, all Standard Applications must meet the criteria and requirements listed in the <u>Standard Dredge and Fill</u> <u>Wetlands Permit Application Form (NHDES-W-06-012)</u> and the <u>Coastal Resource Worksheet (NHDES-W-06-079)</u>.

#### SECTION 1 - APPLICATION REQUIREMENTS (Env-Wt 609.02)

Applications for tidal shoreline stabilization projects shall demonstrate that:

The technique or combinations of techniques is based on best available scientific and engineering practices.

- The proposed technique or combination of techniques addresses:
  - Results of the avoidance and minimization narrative required in Env-Wt 311.07, the avoidance, minimization
    and mitigation demonstration required in Env-Wt 313.03 and Env-Wt 313.04, the coastal functional
    assessment (CFA) required in Env-Wt 603.04, and the project design narrative required in Env-Wt 603.06,
  - Any causes of erosion that can be identified,
  - The degree or extent of erosion,
  - Relative exposure based on shoreline geometry, shore orientation, intensity of boat traffic, influence of adjacent structures, storm surge, and extreme precipitation events,
  - Potential sea-level rise and vulnerability assessment under Env-Wt 603.05,
  - Potential marsh migration as a result of sea-level rise and
  - The design requirements of Env-Wt 514.04.

An application for a tidal shoreline stabilization shall include the following information:

Tidal shoreline stabilization shall be accomplished using living shoreline techniques, per Env-Wt 609.04(b), unless the applicant demonstrates that a living shoreline is not practicable.

Applicants proposing to install new rip-rap shall include the following information with the application:

- Evidence of erosion that cannot be stabilized solely with a soft stabilization design.
- A description of anticipated turbulence, flows, restricted space, fetch or similar factors that render vegetative and diversion methods physically impractical.
- An assessment of the potential for the proposed rip-rap to erode the shoreline of neighboring properties, based on an examination of the shoreline and modeling based on tides, average wave height and force, and the energy absorption of deflection or the proposed rip-rap.
- Specification of minimum and maximum stone sizes, existing contours and final proposed contours, the volume of rip-rap to be used, the minimum and maximum rip-rap thickness, and the type and thickness of bedding for the stone.

Cross-section and plan views of the proposed installation.

The relationship of the project to fixed points of reference, abutting properties, and features of the natural shoreline.

SECTION 2 - APPROVAL CRITERIA (Env-Wt 607.07; Env-Wt 607.08; Env-Wt 609.01; Env-Wt 609.09)
<ul> <li>Applications for tidal shoreland stabilization projects shall:</li> <li>Maintain or enhance the natural process functions of the shoreline as the critical transition zone between the intertidal zone and upland tidal buffer zone/sand dune regimes.</li> <li>Provide wildlife habitat while providing protection against coastal hazards.</li> <li>Be compatible with the existing natural land cover and its functions.</li> <li>Address the known causes of erosion.</li> <li>Avoid adverse impacts to near shore ecosystem processes, habitats, and adjacent shoreline.</li> </ul>
<ul> <li>The department shall not approve any tidal shoreline stabilization plan that proposes to install new rip-rap unless the applicant demonstrates that:</li> <li>Anticipated turbulence, flows, restricted space, fetch or similar factors render soft stabilization methods physically impractical, and</li> <li>Natural areas or naturalized soft shoreline stabilization on neighboring properties will not be damaged by the placement of the proposed rip-rap, or</li> <li>Rip-rap is a component used as a sill to stabilize the toe, but is not the primary or dominant component of a living shoreline stabilization design.</li> </ul>
<ul> <li>The department shall not approve any tidal shoreline stabilization plan that proposes to install a wall unless:</li> <li>The wall is required to protect public infrastructure in situations where softer stabilization technique is shown to be impracticable.</li> </ul>
SECTION 3 - DESIGN & CONSTRUCTION REQUIREMENTS (Env-Wt 609.05; Env-Wt 609.06)
<ul> <li>Living shoreline design plans shall:</li> <li>Be prepared and stamped by a professional engineer and reviewed relative to delineations of wetlands and stamped by a certified wetland scientist in accordance with the "Guidance for Considering the Use of Living Shorelines" (National Oceanic and Atmospheric Administration, 2015).</li> </ul>
<ul> <li>Be prepared to show that the project will:</li> <li>Use native vegetation, sand fill, and limited stone or wood as specified in Env-Wt 609.06 to provide shoreline stabilization and protection,</li> <li>Mimic the natural landscape and leave natural vegetation intact to the greatest extent practicable,</li> <li>If practicable, be based on the location of the highest observable tide line, water turbulence and soil conditions, add vegetation to existing sand beaches or dune or construct vegetated sand dunes,</li> <li>Design the sill to the lowest elevation possible that still ensure stabilization of the toe of the living shoreline,</li> <li>Maintain the shoreline's ability to absorb and mitigate storm impacts and adapt to the landward progression of the sea,</li> <li>Minimize or prevent wave reflection toward abutting properties,</li> <li>If space and soil conditions allow, cut back unstable banks to a flatter slope, seed and replant with native, non-invasive trees and shrubs, and</li> <li>Provide habitat for wildlife and aquatic species.</li> <li>Large wood debris and natural rock that is comparable to the natural-occurring rock found in the vicinity of the project may be incorporated into a soft tidal shoreline stabilization design as matrix material for a bio-engineering back etablication</li> </ul>
Living shoreline techniques shall be required if the project is to replace an existing stabilization structure that: Has not functioned as required by Env-Wt 609.0, or Is not an existing legal structure.

SECTION 4 - MAINTENANCE & REPAIR (Env-Wt 609.03; Env-Wt 609.08)		
Applications for repair or rehabilitation of existing tidal shoreland stabilization structures shall include an analysis by the engineer or qualified coastal professional to rate the conditions of the existing structure and the purpose for the repair based on the following:		
The degree of damage or extent of deterioration, as applicable, such as missing components, cracking, or weeping with erosion.		
Whether opportunities exist to use soft bank stabilization components or a combination of soft and hard components.		
The ability of the structure to withstand coastal flood risk in accordance with the vulnerability assessment required by Env-Wt 603.05.		
SECTION 5 - PROJECT CLASSIFICATION (Env-Wt 609.10; Env-Wt 609.11)		
Refer to Env-Wt 609.10 and Env-Wt 609.11 for project classification.		



#### APPENDIX R Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

TIDAL DREDGING PROJECT-SPECIFIC WORKSHEET FOR STANDARD APPLICATION Water Division/Land Resources Management Wetlands Bureau



Check the Status of your Application

#### RSA/Rule: RSA 482-A/ Env-Wt 607

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

Pursuant to Env-Wt 607.01, this project type applies to:

- Maintenance and Improvement Dredging of Federal Navigation Projects (FNPs);
- New, improvement, and maintenance dredging associated with non-FNP projects that are in the direct interest of maintaining commerce for the well-being of the general public, such as shipping conveyance of fuel oil or road salt cargo and marinas; and
- Dredging that is necessary to:
  - (1) Remediate contaminated sites;
  - (2) Restore storm-driven sediment depositions that threaten public safety or hinder navigation; and
  - (3) Maintain intake and outflow infrastructure.

#### SECTION 1 - APPLICATION REQUIREMENTS (Env-Wt 607.05)

An application for a tidal dredge project shall include the following details:

Plans for tidal dredging projects shall include the following:

Location of the state boundary line for projects proposed in the Piscataqua River or Salmon Falls River;

- Location of each sediment sampling location, with a key to sampling findings;
- Projected dredge prism tied to bottom contours; and
- Proposed overdredge, not to exceed 2 feet;
- Disposal sites adequate to contain the volume of dredged material, including the volume of allowable over-depth dredging, shall be identified;
- Bankward slopes of the dredged area shall be no steeper than 3:1 to ensure that sloughing of the channel side slopes does not occur;
- Fishery habitat functions/services in the project areas, including an essential fish habitat study, shall be identified and characterized prior to any dredge and fill activities;
- The impacts of dredge or fills on fishery habitat shall be identified during proposed project reviews, including alterations of hydrology and water quality as a result of the proposed project;

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The coastal functional assessment (CFA) required in Env-Wt 603.04 shall include an assessment of the cumulative impact from past, current, and all reasonably foreseeable future dredge and fill operations that impact aquatic habitats and an anticipated dredge cycle;					
Sediment from the proposed dredge site shall be characterized according to the following:					
Benthic analysis;					
🔀 Grain size; and					
History of exposure to contamination sources, whether from a land-based discharge source or in-water source from a spill. If the results of the sediment characterization assessment above meet the formula for potential or known contamination, then testing of the sediment in the proposed dredge location shall be as required by:					
<ul> <li>Requirements for land-based solid or hazardous waste disposal as specified in Env-Sw 100- 2000, Env-Hw 100- 1200, and Env-Or 600; and</li> </ul>					
<ul> <li>Regional Implementation "Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters", US Environmental Protection Agency New England and US Army Corps of Engineers New England District, dated April 2004.</li> </ul>					
SECTION 2 - APPROVAL CRITERIA (Env-Wt 607.03)					
An application for a tidal dredge project shall meet the following criteria:					
Dredging in tidal waters or tidal wetlands shall not be allowed unless the primary purpose of the dredging is to:					
• Maintain or improve a FNP that provides a public benefit to commercial and industrial shipping, commercial fishing, existing working waterfront areas, or homeland security;					
Construct, maintain, or improve a marina, private association, or public facility; or					
Remediate contamination, remove storm-driven sediment, or maintain intake and outflow infrastructure;					
Dredging in tidal waters or tidal wetlands shall not be approved unless:					
• The project meets standard conditions of Env-Wt 307 and avoidance and minimization techniques in Env-Wt 607.02;					
• The project applicant participates in and follows guidance provided in a pre-application meeting with the department or the New Hampshire dredge management task force; and					
• The project is sponsored by the state so that:					
<ul> <li>All applications to the department for dredging of FNPs in tidal waters or tidal wetlands are submitted by the division of ports and harbors ("DP&amp;H") pursuant to RSA 12-G:45; and</li> </ul>					
<ul> <li>All other dredging projects in tidal waters/wetlands have DP&amp;H sponsorship or authorization for another entity, such as a municipality or private person, to act as an agent to apply for a permit from the department.</li> </ul>					
SECTION 3 - DESIGN & CONSTRUCTION REQUIREMENTS (Env-Wt 607.02; Env-Wt 607.06; Env-Wt 607.07; Env-Wt 607.08; Env-Wt 607.09)					
A tidal dredge project shall be designed and constructed as follows:					
The footprint and volume of material to be dredged shall be reduced to the maximum extent practicable;					
Sequential dredging shall be used when practicable to avoid dredging activity during specific time periods in environmentally sensitive areas, to avoid turbidity and sedimentation, bottom disruption, and noise in sensitive areas used by fishery resources during spawning, migration, and egg development;					

Avoidance and minimization techniques require avoidance of dredging in accordance with Env-Wt 607.05 in areas of high resource value identified by the CFA, including the following resource areas:
Areas that support shellfish beds;
Areas with submerged aquatic vegetation, areas that historically supported submerged aquatic vegetation, historic and maintained FNP areas that exhibit high resource value, and publicly funded restoration sites;
🔀 Intertidal and wetland habitat; or
Estuarine/salt marshes, and other high value habitat areas, including shorebird habitat and nesting areas, essential fish habitat, and other protected species or habitat;
New cable and pipeline crossings shall be aligned along the least environmentally damaging route, specifically to avoid sensitive habitats including rocky reefs, submerged aquatic vegetation, oyster reefs, shellfish beds, emergent marsh, and mud flats;
Pipelines and submerged cables shall be buried where possible to avoid impacts to invertebrate migratory patterns resulting from pipe exposure;
Open trenching for pipeline or cable installation shall not be used unless all other methods are not practicable. If open trenching is used, a method in which the trench is immediately backfilled shall be used to reduce the impact duration;
Existing rights-of-way shall be used whenever possible to lessen overall encroachment and disturbance of coastal areas;
Equipment access shall be limited to the immediate project area unless access requires use of a more environmentally sensitive access;
No dredged material shall be disposed in areas containing sensitive or unique marine benthic habitats, including spawning sites, feeding sites, and surface deposits of cobble or gravel substrate;
Prior to finalizing a dredge proposal, the applicant shall conduct an existing conditions bathymetric survey and submit it with the application to the department; and
Prior to finalizing a dredge proposal, the applicant shall submit information regarding the current and historic presence of submerged aquatic vegetation, as documented by the CFA in Env-Wt 603.04, within and adjacent to the proposed dredging footprint.
Dredge Methods:
For non-FNP projects, sediment dispersion modeling shall be done to characterize sediment resuspension and dispersion during operations, and modeling outputs shall be used to design operations, including measures to avoid and minimize impacts from suspended sediment and turbidity on living marine resources. Sediment dispersion models shall be field-verified to various sediment and hydraulic conditions to ensure they have been calibrated appropriately to predict sediment transport and dispersion; and
Dredging methods shall:
Be based on the nature of the sediment as determined by sediment characterization, results of contaminant testing, turbidity transport modeling, and resource vulnerabilities;
Be based on suitability of existing site conditions;
Be based on location and suitability of disposal options;
Represent the least environmentally-impacting practicable alternative; and

Be by one of the following means, listed in descending order of preference:				
<ul> <li>Mechanical closed, or enviro, bucket dredge;</li> </ul>				
Mechanical clamshell dredge;				
Mechanical open bucket dredge; or				
Suction dredge.				
Dredging Contaminated Sites:				
Areas of known contamination shall not be partially dredged, leaving freshly-exposed sources of contamination to be transported by currents and dispersed into uncontaminated areas; and				
For sites identified as contaminated, no dredging of contaminated sediments shall be allowed without complete removal of all contaminated material.				
Sedimentation Control:				
Dredging in fine sediments shall be avoided when possible to reduce turbidity plumes and the release of nutrients and contaminants that bind to fine particles, and				
All practicable methods for minimizing suspended sediment and turbidity shall be employed, including closed buckets when appropriate.				
Sediment Transport and Disposal:				
The applicant shall include in the application an explanation of how the dredged material will be transported and off-loaded to minimize dispersion of sediments;				
The CFA report shall be considered when assessing the potential impact of proposed disposal locations and determining the least impacting disposal location;				
Sediment disposal shall not negatively impact priority resource areas;				
Any unavoidable negative impacts from sediment disposal shall require compensatory mitigation;				
The primary acceptable means of disposal for uncontaminated sediments shall be for beneficial use, such as beach nourishment, dune restoration, and shoal creation associated with living shorelines;				
Near-shore disposal of dredged material with the intent of creating a berm to provide a sand source for a nearby sandy beach shall be considered beneficial use;				
If dredged materials will not be beneficially used, the disposal location shall be:				
Appropriate to the nature of the material; and				
Identified in the application;				
Contaminated sediment shall be disposed of at a facility authorized to accept such material;				
For non-FNP requests to place dredged material in state waters, the applicant shall evaluate the site evaluation criteria developed for selection or designation of dredged material disposal sites, in accordance with 40 CFR 228 and EPA's ocean dumping program described for Region I at <a href="https://www.epa.gov/ocean-dumping/managing-ocean-dumping-epa-region-1">https://www.epa.gov/ocean-dumping/managing-ocean-dumping-epa-region-1</a> .				

#### SECTION 4 - PROJECT CLASSIFICATION (Env-Wt 607.10)

Removal of sediments surrounding an intake or outflow structure shall be classified as minimum impact provided:

- (1) The sediments are removed by means of hand-held suction equipment;
- (2) Work is limited to the immediate mouth of the structure; and
- (3) The footprint of the activity does not exceed 500 square feet.

Except as provided above, all forms of dredging in tidal waters/wetlands shall be classified as major.

	APP Portsmouth Marin House Road	ENDIX S a, 185-187 Portsmou	Wentworth	
	nouse roau,	FUIISIIIUU	uii, ini i	]
Entity	:	SQFT		
Buildings		931.5		
		824.1		
		474.69		
		1136.6		
		4100		
		444.85		
		103.2		
		493.22		
		1001.19		
		182.5		
		95.16		
		4799.76		
Total		14586.77		
		1.000177		
Entity		SOFT		
Pavement	·	2464 64	1189 32	
ravement		2404.04	1075.02	
Fatit.			12/5.32	
Enury				
		6684.72		
Other Permeable Surfaces (Lawn etc)		14401.8899	5036.8111	
			2015.4271	
			2405.6524	
			3441.3926	
			1204.2673	
			298.3394	
Property Boundary Area as shown in CAD F	ïle	131660.4931		3.022497 <acre< td=""></acre<>
Gravel, Intact Gravel, Degraded Gravel, Rip	rap, Current Rip Rap,			
Woodland, Buldings, Pavement, Permeable	e Areas	130642.3256		
Remaining SQFT = Water+ Saltmarsh areas	5	1018.1675		
Entity	:	SQFT		
Salt Marsh Restoration		236.12		
RinBan		471,496		
Current BinBan		130 455		
Unland Area Regrade		773 34	409 77	
optana Area neglade		770.04	363 57	
Wotland Postoration		175.0	505.57	
		175.2		
Proposed Concrete		5000		
		63.32	00100 0000	
Intact Gravel (Red Hatch)		35006.8907	29126.6909	
-			5880.1998	
Degraded Gravel (Green Hatch)		14557.6824		
Gravel Drive (Black Dots)		31973		
Woodland Blue Hatch		10364.7816	4210.3537	
			213.739	
			5940.6889	
Area Outside of 50' Offset (Part of Concrete	e and Gravel)	1135.11		
Sheet 5 Calcs				
Below HOTL		411.32		
Hotl to 50' (Rip, Regrade, Cncrete, Drain, -	Area Outside	5173.046		
HOTL to 11' Elev (RipRap onlv)		471.496		
HOTL to 75' Setback (Rip. Regrade, Cocrete	e, Drain)	6308.156		
50' to 75' Setback (Part of Concrete and Dr	ain)	1135 11		
Within 50' Buffer (All above except 50-75 a	nd Salt Marsh Bestore	5348 246		
Between 50 and 150		1135 11		
between 50 and 150		1100.11		

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Note: Tax map says property = 3.07 acres



### City of Portsmouth, New Hampshire

## Wetland Conditional Use Permit Application Checklist

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

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

Name of Applicant: Rainboth Revocable Trust of 2010 Date Submitted: 2/20/2025

Application # (in City's online permitting): <u>LU 25-13</u>

Site Address: 56 Ridges Court

\_\_\_\_\_Map: 207 \_\_\_\_\_Lot: \_\_\_\_\_

Ø	Required Items for Submittal	Item Location (e.g. Page or Plan Sheet/Note #)
~	Complete <u>application</u> form submitted via the City's web-based permitting program	completed on line
	All application documents, plans, supporting documentation, this checklist and other materials uploaded to the application form in OpenGov in digital <b>Portable Document Format (PDF)</b> . One hard copy of all plans and materials shall be submitted to the Planning and Sustainability Department by the published deadline.	completed, detailed on plan and in the narrative

Ŋ	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)
	Basic property and wetland resource information. (10.1017.21)	completed on line
<b>~</b>	Additional information required for projects proposing greater than 250 square feet of permanent or temporary impacts. <b>(10.1017.22)</b>	setbacks, locations of wetlands, new and existing impervious areas are shown
	Demonstrate impacts as they relate to the criteria for approval set forth in Section 10.1017.50 (or Section 10.1017.60 in the case of utility installation in a right-of-way). (10.1017.23)	completed, detailed on plan and in the narrative
~	Balance impervious surface impacts with removal and/or wetland buffer enhancement plan. (10.1017.24)	Reduction of impervious in buffer, see sheet C-2

Wetland Conditional Use Permit Application Checklist/February 2025

	Popuired Items for Submittal Item Location			
	Required items for Submittai	(e.g. Page/line or Plan Sheet/Note #)		
✓	Wetland buffer enhancement plan. (10.1017.25)	Buffer plantings and naturalization area is shown on Sheet C-2		
	Living shoreline strategy provided for tidal wetland and/or tidal buffer impacts. (10.1017.26)	NA		
✓	<ul> <li>Stormwater management must be in accordance with Best</li> <li>Management Practices including but not limited to:</li> <li>1. New Hampshire Stormwater Manual, NHDES, current version.</li> <li>2. Best Management Practices to Control Non-point Source Pollution:</li> <li>A Guide for Citizens and City Officials, NHDES, January 2004.</li> <li>(10.1018.10)</li> </ul>	permeable driveway and infiltration area meets the intent of the NHDES BMP's.		
	Vegetated Buffer Strip slope of greater than or equal to 10%. (10.1018.22)	No portion of the 25-foot buffer is in excess of 10%		
	Removal or cutting of vegetation, use of fertilizers, pesticides and herbicides. (10.1018.23/10.1018.24/10.1018.25)	lawn will continue to be maintained. fertilizers, pesticides and herbicides wil		
~	All new pavement within a wetland buffer shall be porous pavement. (10.1018.31)	See Sheet C-2		
~	An application that proposes porous pavement in a wetland buffer shall include a pavement maintenance plan. <b>(10.1018.32)</b>	See O & M plan with drainage computations		
~	Permanent wetland boundary markers shall be shown on the plan submitted with an application for a conditional use permit and shall be installed during project construction. <b>(10.1018.40)</b>	Lawn will continue to be maintained. Wetland buffer plaques		
Ø	Requested Items for Submittal	Item Location (e.g. Page or Plan Sheet/Note #)		
	A narrative/letter addressed to the Conservation Commission Chair (if recommended to Planning Board then an additional narrative addressed to the Planning Board Chair at that time) describing the project and any proposed wetland and/or wetland buffer impacts. Please visit the <u>WCUP instruction page</u> for further application instructions.	in submission materials		
	If New Hampshire Department of Environmental Services (NHDES) Standard Dredge and Fill Permit is required for this work, please provide this permit application at the same time as your submission for a Wetland Conditional Use Permit.	Not required. No direct impacts are proposed		

Applicant's Signature: \_\_\_\_

Wetland Conditional Use Permit Application Checklist/February 2025



Civil Site Planning Environmental Engineering 133 Court Street Portsmouth, NH 03801-4413

February 20, 2025

Peter Britz, Planning and Sustainability Director City of Portsmouth Municipal Complex 1 Junkins Avenue Portsmouth, New Hampshire 03801

#### Re: Application for Conditional Use Permit Assessor's Map 207, Lots 63, 68 & 69 56 Ridges Court Altus Project No. 5639

Dear Peter,

On behalf of Annemarie (Annie) and Michael Rainboth, Trustees of the Rainboth Revocable Trust of 2010, Altus Engineering LLC (Altus) and the design team are pleased to submit a revised n application for a Conditional Use Permit and wish to be heard at the March 12<sup>th</sup> Conservation Commission meeting. Annie and Michael own the property located at 56 Ridges Court. They currently live a few houses away on the corner of Ridges Court and New Castle Avenue. They intend to renovate and expand the existing home.

The entire neighborhood was constructed prior to City wetland buffer regulations. Portions of the lot are within the NHDES 100-foot tidal buffer and the 250-foot Shoreland Buffer. No improvements are proposed within 100 feet of the highest observable tide line. A permit from the NHDES Shoreland program will be required.

The existing garage and shed will be razed. A garage addition with living space above is proposed along with a new shed. The structures will be further from the resource area than the existing buildings. Stormwater management improvements are proposed to enhance the wetland buffer.

At the February 12<sup>th</sup> Conservation Commission meeting, the Commission voted to continue the application to the March hearing.

Based on the comments of the Commission, Altus working with the Rainboth's have revised the application package.

- The shed has been reduced in size and moved further from the wetlands.
- The deck has been reduced in size and moved further from the wetlands.

- The portion of the driveway within the wetland buffer will be constructed using permeable pavers or porous pavement.
- We are no longer proposing to consolidate the three parcels as the Chair expressed that consolidating the lots had no positive impact on the application.
- There will be a reduction in impervious on the entire site as well as within the 100-foot wetland buffer.
- An 1,100 SF area of the wetland buffer is designated to be naturalized.
- Additional native plantings are proposed in the buffer.

Enclosed for the Commission's consideration please find the following:

- Letter of Authorization
- Conditional Use Permit Narrative (revised)
- Wetland Buffer Function and Values Assessment (Noel)
- Drainage computations
- Stormwater O & M manual (revised)
- Project Site Plans (revised)

The drainage computations have not been revised as the conversion of the driveway to a permeable surface has no impact on the calculations as the driveway was already designed to infiltrate. The deck was designed to infiltrate as well, thus the reduction has no impact. The reduced shed footprint will create a slight reduction in the rate and volume of runoff.

Please feel free to call or email me directly should you have any questions or need any additional information.

Sincerely,

### **ALTUS ENGINEERING, LLC**

Enclosures

eCopy: Annie and Mike Rainboth Joseph Noel, Wetlands Scientist Amy Dutton

wde/5639.00 cup rev cvr ltr.docx

#### Letter of Authorization

I, Annemarie Rainboth and Michael Rainboth, Trustees of The Rainboth Revocable Trust of 2010, owner of the property located at 56 Ridges Court, Portsmouth, NH, hereby authorize Altus Engineering, LLC of Portsmouth, NH to represent us as the Owner and Applicant in all matters concerning the engineering and related permitting on Portsmouth Tax Map 207, Lots 63, 68, and 69, Portsmouth, New Hampshire. This authorization shall include any signatures required for Federal, State and Municipal permit applications.

uns Signature Annemarie Rainboth Date

petria Horne 118/2025

Witness Print Name Date

nwe

2025 Date

Signature

Michael Rainboth

Bare House 118/2025

Witness Print Name Date



Civil Site Planning Environmental Engineering

133 Court Street Portsmouth, NH 03801-4413

#### CONDITIONAL USE PERMIT APPLICATION 56 RIDGES COURT NARRATIVE February 20, 2025

On behalf of the Applicant, Annemarie (Annie) and Michael Rainboth and the Rainboth Revocable Trust of 2010, Altus Engineering, LLC (Altus) respectfully submits a Wetlands Conditional Use Permit application for the expansion of a single-family residence at 56 Ridges Court. Annie and Mike propose to retain, renovate, and expand the 100-year-old home and raze the existing outbuildings.

The home is sited on Tax Map 207, Lot 63. Two additional vacant parcels, Tax Map 207 Lots 68 and 69, are contiguous to the Rainboth's future home. The vacant lots appear to have frontage on a paper street. For the basis of the computations, all three lots being contiguous are included.

The southeast corner of the parcel lies within the 100-foot tidal buffer. We are proposing to avoid impacting the tidal buffer. The southeastern portion of the lot is a freshwater wetland. The 100-foot buffer from the wetland encompasses a significant portion of the lot, making redevelopment of any sort nearly impossible without a Conditional Use Permit. The majority of the on-site wetland is maintained as lawn.

The house was constructed prior to City wetland buffer regulations and before most zoning ordinances were enacted. Based on the topography adjacent to the existing driveway, it appears that portions of the lot were regraded and filled.

The existing garage is over 80-feet from Ridges Court requiring a long driveway and turnaround area. The expanded home will be sited close to the street, reducing the driveway substantially.

The built infrastructure will be sited further from the resource area than the current buildings and pavement. Stormwater management treatment will be provided where none currently exists. The Rainboth's are good stewards of the land and want to keep the back yard lawn as a maintained lawn. They are committed to avoiding the use of herbicides, pesticides, and fertilizers in the wetlands and across their whole property.

In accordance with Article 10 Environmental Protection Standards Section 10.1010 Wetland Protect, the redevelopment will require a Conditional Use Permit from the Planning Board. The project does not require any additional relief from the City of Portsmouth Zoning Ordinance.

Per Section 10.1017.50 for criteria for approval of a Conditional Use Permit, Altus offers the following:

(1) The land is reasonably suited to the use, activity, or alteration.

The property is within the SRB Zoning District, a residential zone. All of the abutting properties are residential. The parcel has been used as a single-family residence for nearly 100-years and will continue to do so. The minimum lot size in the zoning district is 15,000 SF. The existing lot is 20,585 SF in area. Consolidated, the lot will exceed 30,000 SF, enough land to subdivide the land into two parcels.

The existing home is served by municipal water supply and is connected to the municipal sewage collection system. Commercial use of the property is not allowed. As such, the only viable use of the property is a single-family residence.

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

Consolidated, the 30,962 SF parcel exceeds the minimum lot size for the zoning district. Only 3,550 SF of the lot is not within the wetland buffer and the majority of that area is within the front and side yard setbacks which are not buildable by right or are sited in the rear of the lot requiring a long access drive across the buffer for access. Only 725 SF of the lot exclusive of the existing building is viable for development without obtaining a variance or conditional use permit.

Thus, there is very little viable building envelope that meets both the zoning setbacks and is outside the wetland buffer area. The development proposed is sited as far from the resource area as reasonably possible. The Rainboth's are taking advantage of retaining the existing home and expanding it. Due to the layout of the existing structure and the desire to have a two-bay garage, the addition needs to be attached to the rear of the home and then will extend south to provide access to the garage.

(3) There will be no adverse impact on the wetland functional values of the site or surrounding properties;

The majority of the on-site wetland system is maintained as lawn and has been for several decades.

Along the property line, the wetland transitions to a natural environment with scrub growth. The wetland/lawn encompasses 6,100 SF. No impacts or changes are proposed to this area. The lawn functions as a stormwater filter, natural

detention, and moderates the velocity of runoff discharging from the neighborhood.

Currently upgradient of the wetland is the house, garage/shed, and large paved driveway. The existing expansive driveway is within 32-feet of the wetlands. The building and pavement will be moved further from the wetland. The proposed deck, which will be permeable beneath, will be 51.5 feet from the wetland. Drip edges will be installed on the west side of the building to promote infiltration, reduce the rate of runoff, and provide treatment. Runoff from the east and north side of the building will be captured in gutters and will be directed to the infiltration system beneath the deck. The portion of the driveway within the wetland buffer will be constructed using permeable materials, either pavement or pavers. Runoff from the impervious portion of the new driveway will be routed across the lawn through a swale that will treat, reduce the velocity, and reduce runoff temperature before discharge into the wetland.

Stormwater quantity will be enhanced and volume and peak rate of runoff discharging from the site will be reduced.

The site effective impervious area will be slightly reduced in both the wetland buffer and the entire lot, as we are taking advantage of the area beneath the deck to provide groundwater recharge and infiltration.

(4) Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals; and

The entire redevelopment project will be within areas that have previously been altered. Five trees and shrubs within the buffer will be removed. To offset the removal, 5 new wetland tolerant trees will be planted. Additionally, a  $\pm 1,100$  SF portion of the existing lawn in the wetland buffer will be allowed to naturalize and will no longer be maintained as lawn. 6-high bush blueberry plants will be installed at the end of the swale adjacent to the wetlands.

(5) The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this Section.

The proposed project will impact approximately 8,800 SF of land area within the wetland buffer. All of the impacts will be within previously developed areas that are either lawn, building, or driveway. The design approach avoids impacting natural areas. The house addition is placed as close to the front lot line as reasonably possible and remain compliant with the zoning ordinance and provide natural flow of the interior of the existing house to the addition and garage, while

providing adequate space for parking in the driveway for visitors as Ridges Court is narrow and has limited opportunities for street parking.

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

In lieu of restoring the wetland to the natural state and providing a natural buffer, the Rainboth's are allowing a portion of the lot to naturalize, and adding native plantings.

5639-rev 1 cup narrative.docx



#### JOSEPH W. NOEL P.O. BOX 174 SOUTH BERWICK, MAINE 03908 (207) 384-5587

CERTIFIED SOIL SCIENTIST \* WETLAND SCIENTIST \* LICENSED SITE EVALUATOR

January 22, 2025

Mr. Eric Weinrieb, P.E. Altus Engineering 133 Court Street Portsmouth, New Hampshire 03801

RE: 56 Ridges Court, Portsmouth, New Hampshire, JWN #23-142

Dear Eric:

Per your request, the following information is provided to assist you in the Conditional Use Permit Application requirements. Specifically, Section 10.101722(3) of the City Of Portsmouth, New Hampshire Zoning Ordinance.

The wetland delineation was conducted on December 21, 2023 (both tidal and freshwater wetlands). The delineation was conducted in accordance with the U.S. Army Corps of Engineers document *Corps of Engineers Wetlands Delineation Manual*, (1987) along with the required *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*: *Northcentral and Northeast Region*, (Version 2, January 2012). The wetland boundary was located by North Easterly Surveying. Mr. Marc Jacobs, Wetland Scientist #010, reviewed and confirmed the wetland delineation on February 20, 2024. The attached FEMA 100 year flood and extended flood hazard map from the town GIS database for the properties more closely represents the existing wetland system compared to other available resource maps.

The proposed project will not encroach into the 100 foot buffer of the tidal system (refer to photo of adjacent off-site tidal system). The freshwater wetland where buffer encroachment will occur is approximately an acre in size and would classify as a wet meadow with poorly drained soils. The portion of the delineated wetland on the subject properties is essentially a mowed lawn with some scattered sedges within the yard(s) and one large willow (*Salix sp.*). A few scattered willows were noted in the wetland off-site as well. An on-site was conducted on January 16, 2025 to collect data on the plants within the more natural portion of the wetland that was within the paper road. This area had been recently cut and there was not enough vegetation left to classify most of the herbaceous layer (refer to photo – the more snow covered areas are maintained paths within the wetland). Adjacent to the property line of 56 Ridges Court the few shrubs that were observed included: common buttonbush (*Cephalanthus occidentalis*), rambler rose (*Rosa multiflora*), glossy false buckthorn (*Frangula alnus*), European buckthorn (*Rhamnus cathartica*), and honeysuckle (*Lonicera sp.*). On the property, the only invasive plant was some

bittersweet (*Celastrus sp.*) that was growing in the garden with the planted blackberries (*Rubus sp.*). Per Altus Engineering "Site Preparation Plan" they plan to remove miscellaneous garden area features where the bittersweet is growing. The bittersweet should be carefully removed and properly disposed of. A request from the Natural Heritage Bureau (NHB) was conducted and no rare species or exemplary natural communities were documented on the property (refer to attachment). There was a NHB record nearby but the NHB determined the proposed project will not impact the NHB record (detailed information on the NHB record was not supplied). During the wetland flagging of the tidal wetland, Jesuits-bark (*Iva frutescens*) that is a state listed "Threatened" species was observed by the undersigned. These shrubs are off-site and will not be impacted by the proposed development.

A formal functions and values assessment is not required per Section 10.1017.22 of the City Of Portsmouth, New Hampshire Zoning Ordinance. Using professional judgement, the performance of the functions and values would be low due to: relatively small wetland size (1+/- acre), wetland is disturbed/routinely cut so vegetation is not diverse, subtle ditching within the wetland lowers the ability to store and slowly release water, and existing buffers around the wetland are developed with residential homes. This wet meadow is still of importance due to the nearby downstream tidal wetland system. Refer to Altus Engineering stormwater plan for details on protecting the wet meadow system from increased runoff, etc.

The proposed redevelopment of the property will reduce the driveway size, relocated the garage and the attached garden shed further from the wet meadow. There will be a proposed addition, new deck, etc. Refer to Altus Engineering plans for details on the existing versus proposed plans for the property. The impervious surface will increase with the proposed redevelopment of the property (refer to Altus Engineering plans for existing and proposed impervious surface area, and proposed effective impervious area figures). Per Altus Engineering, the compensation proposed is to consolidate Lot 68 & 69 with Lot 63. Plantings are discussed by Altus Engineering to offset the removal of trees and shrubs in the uplands. The actual plantings and locations will be determined by a landscape designer.

I hope this information is sufficient in the review of the proposed project. Please feel free to call with any questions.

Sincerely,

Jonk W. Nil

Joseph W. Noel NH Certified Wetland Scientist #086 NH Certified Soil Scientist #017



January 22, 2025 JWN #23-142 Page 2 of 2 City of Portsmouth, NH

January 18, 2025



PHOTOS 56 Ridges Court – Portsmouth, New Hampshire (Photos taken by Joseph W. Noel on January 17, 2025)



Freshwater wetland system that was recently cut with berm in background and snow-covered maintained paths.



A view of the tidal wetland system with Canada geese taken from berm.

#### New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

To: Eric Weinrieb, Altus Engineering, Inc. 133 Court Street

Portsmouth, NH 03801

From: NH Natural Heritage Bureau

Date: 1/22/2025 (valid until 1/22/2026)

**Re:** Review by NH Natural Heritage Bureau of request submitted 1/6/2025

Permits: MUNICIPAL POR - Local Review, NHDES - Shoreland Standard Permit

NHB ID: NHB25-0048

Applicant: Trustees of Rainboth Revocable Trust of 2010

Location: Portsmouth 56 Ridges Court

Project

**Description:** Proposed addition to the house, deck, and shed.

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 1/6/2025 5:30:44 P.M, and cannot be used for any other project.

Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

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

### New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

#### MAP OF PROJECT BOUNDARIES FOR: NHB25-0048



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
# **DRAINAGE ANALYSIS**

# FOR

# **Trustees of Rainboth Revocable Trust of 2010**

56 Ridges Court Portsmouth, NH

Tax Map 207 Lots 63, 68, and 69

January 29, 2025

Stormwater Maintenance Manual revised 02/20/25

Prepared For:

Annmarie and Micheal Rainboth Trustees of Rainboth Revocable Trust of 2010122 New Castle Avenue Portsmouth, NH 03801

Prepared By:

### **ALTUS ENGINEERING**

133 Court Street Portsmouth, NH 03801 Phone: (603) 433-2335





Altus Project 5639

# Table of Contents

- Section 1 Narrative Project Description Site Overview Site Soils/Wetlands Proposed Site Design Calculation Methods Drainage Analysis Conclusions Disclaimer
- Section 2 Aerial Photo USGS Location Map
- Section 3 Drainage Analysis, Pre-Development
- Section 4 Drainage Analysis, Post-Development
- Section 5 Precipitation Table
- Section 6 NRCS Soils Report
- Section 7 Stormwater Operations and Maintenance Plan
- Section 8 Watershed Plans Pre-Development Watershed Plan Post-Development Watershed Plan



# Section 1

# Narrative



# **PROJECT DESCRIPTION**

The Trustees of the Rainboth Revocable Trust of 2010 are proposing to construct an addition to the existing home, a new driveway and a shed located at 56 Ridges Court Portsmouth, New Hampshire. The 0.71-acre property is identified as Tax Map 207, Lots 63, 68, and 69 and is located in the Single Residence-B District. The site is currently developed as a single-family residence. Access to the development site is via a driveway coming off Ridges Court.

The proposed project will construct a new addition, driveway, and shed. The house is serviced by municipal water and sewer. The proposed stormwater management system includes stone drip edges, a stone infiltration basin, and vegetative swales. These will mitigate and improve the storm water quality leaving the property.

#### Site Soils/Wetlands

Based off data from the USDA National Resources Conservation Service Web Soil Survey, the site sits on 799 Urban land-Canton complex soils. Altus recognizes these soils as HSG B and C except for the wetland which we categorized as HSG D based on poor infiltration capacity. Joseph W. Noel, Wetland Scientist, completed an on-site inspection on December 21, 2023, and identified a freshwater wetland greater than 10,000 square feet. This finding was confirmed by Wetlands Scientist, Marc Jacobs.

#### **Pre-Development (Existing Conditions)**

The site currently features a single-family home with a deck, detached shed, and paved driveway. Stormwater is collected in gutters around the home and is conveyed towards the wetland. The site generally slopes in a westerly direction towards the delineated wetland. Hydrology is characterized by two existing sub-catchments as delineated on the accompanying "Pre-Development Watershed Plan". Site runoff was analyzed at two points of analysis (POA). POA #1 is on the northern border of the property and POA #2 is in the southwest corner of the property under the wetland.

### Post-Development (Proposed Conditions)

The site plan features the addition to the existing house as well as the new driveway and proposed shed.

The post-development conditions were analyzed at the same discharge point as the predevelopment conditions. The post-development watersheds are delineated on the accompanying "Post-Development Watershed Plan". Modifications to the delineated areas and associated ground cover were made to sub-catchments to account for the improvements to the property. As shown on the attached Post-Development Watershed Plan, the site was divided into seven postdevelopment sub-catchment areas. The same points of analysis in the Pre-Development model were used for comparison of the Pre- and Post-development conditions.

The Post-Development Watershed Plan illustrates the proposed stormwater management system. Site topography, existing features, proposed site improvements, proposed grading, drainage and erosion control measures are shown on the accompanying plans. Recommended erosion control measures are based upon the December 2008 edition of the "*New Hampshire Stormwater Manual Volumes 1 through 3*" prepared by NHDES and Comprehensive Environmental, Inc. as amended.

### **CALCULATION METHODS**

The drainage study was completed using the USDA SCS TR-20 Method within the HydroCAD Stormwater Modeling System. Reservoir routing was performed with the Dynamic Storage Indication method with automated calculation of tailwater conditions. A Type III 24-hour rainfall distribution was utilized in analyzing the data for the 2, 10, 25 and 50 year - 24-hour storm events using rainfall data provided by the Northeast Regional Climate Center (NRCC). 15% was added to each storm event's rainfall data as required in the city or Portsmouth site plan review regulations. A time span of 0 to 24 hours was analyzed at 0.01-hour increments. Infiltration rates are based on the  $K_{sat}$  Values for New Hampshire soils.

#### Drainage Analysis

A complete summary of the drainage model is included in the appendix of this report. The following table compares pre- and post-development peak rates at the Points of Analysis identified on the plans for the 2, 10, 25 and 50-year storm events:

	2-Yr Storm	10-Yr Storm	25-Yr Storm	50-Yr Storm	
	(3.69 inch)	(5.59 inch)	(7.10 inch)	(8.50 inch)	
POA #1					
Pre	0.04	0.10	0.16	0.22	
Post	0.04	0.10	0.16	0.22	
Change	0.00	0.00	0.00	0.00	
POA #2				-	
Pre	1.39	2.75	3.88	4.94	
Post	1.25	2.47	3.49	4.93	
Change	-0.14	-0.28	-0.39	-0.01	

#### Stormwater Modeling Summary Peak Q (cfs) for Type III 24-Hour Storm Events

As the above table demonstrates, the proposed peak rates of runoff at the point of analysis will be decreased or unchanged from the existing conditions for all analyzed storm events.

#### CONCLUSION

This proposed site redevelopment of property located at 56 Ridges Court Portsmouth, New Hampshire will have no adverse effect on abutting properties as a result of stormwater runoff or siltation. Post-construction peak rates of runoff from the site will be lower than or the same as the existing conditions for all analyzed storm events. The new stormwater management system will also provide appropriate treatment to runoff from the proposed on-site impervious surfaces. Appropriate steps will be taken to properly mitigate erosion and sedimentation using temporary and permanent Best Management Practices for sediment and erosion control.

#### Disclaimer

Altus Engineering, notes that stormwater modeling is limited in its capacity to precisely predict peak rates of runoff and flood elevations. Results should not be considered to represent actual storm events due to the number of variables and assumptions involved in the modeling effort. Surface roughness coefficients (n), entrance loss coefficients (ke), velocity factors (kv) and times of concentration (Tc) are based on subjective field observations and engineering judgment using available data. For design purposes, curve numbers (Cn) describe the average conditions. However, curve numbers will vary from storm to storm depending on the antecedent runoff conditions (ARC) including saturation and frozen ground. Also, higher water elevations than predicted by modeling could occur if drainage channels, closed drain systems or culverts are not maintained and/or become blocked by debris before and/or during a storm event as this will impact flow capacity of the structures. Structures should be re-evaluated if future changes occur within relevant drainage areas in order to assess any required design modifications.

# Section 2

# Aerial Photo and USGS Map







# Section 3

# Drainage Calculations

Pre-Development 2-Year, 24-Hour Summary 10-Year, 24-Hour Complete 25-Year, 24-Hour Summary 50-Year, 24-Hour Summary





Type III 24-hr 2 Year Rainfall=3.69" Printed 1/27/2025

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> Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S:	Runoff Area=1,900 sf 0.00% Impervious Runoff Depth>0.85" Tc=6.0 min CN=65 Runoff=0.04 cfs 0.003 af
Subcatchment2S:	Runoff Area=34,047 sf 16.59% Impervious Runoff Depth>1.64" Flow Length=248' Tc=8.0 min CN=78 Runoff=1.39 cfs 0.107 af
Link POA 1: Northern POA	Inflow=0.04 cfs 0.003 af Primary=0.04 cfs 0.003 af

Link POA 2: Southern POA

Inflow=1.39 cfs 0.107 af Primary=1.39 cfs 0.107 af

Type III 24-hr 25 Year Rainfall=7.10" Printed 1/27/2025

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> Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S:	Runoff Area=1,900 sf 0.00% Impervious Runoff Depth>3.18" Tc=6.0 min CN=65 Runoff=0.16 cfs 0.012 af
Subcatchment2S:	Runoff Area=34,047 sf 16.59% Impervious Runoff Depth>4.56" Flow Length=248' Tc=8.0 min CN=78 Runoff=3.88 cfs 0.297 af
Link POA 1: Northern POA	Inflow=0.16 cfs 0.012 af Primary=0.16 cfs 0.012 af

Link POA 2: Southern POA

Inflow=3.88 cfs 0.297 af Primary=3.88 cfs 0.297 af

Type III 24-hr 50 Year Rainfall=8.50" Printed 1/27/2025

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> Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S:	Runoff Area=1,900 sf 0.00% Impervious Runoff Depth>4.30" Tc=6.0 min CN=65 Runoff=0.22 cfs 0.016 af
Subcatchment2S:	Runoff Area=34,047 sf 16.59% Impervious Runoff Depth>5.85" Flow Length=248' Tc=8.0 min CN=78 Runoff=4.94 cfs 0.381 af
Link POA 1: Northern POA	Inflow=0.22 cfs 0.016 af Primary=0.22 cfs 0.016 af

Link POA 2: Southern POA

Inflow=4.94 cfs 0.381 af Primary=4.94 cfs 0.381 af

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#### Area Listing (all nodes)

Area	CN	Description
 (acres)		(subcatchment-numbers)
0.033	61	>75% Grass cover, Good, HSG B (2S)
0.346	74	>75% Grass cover, Good, HSG C (2S)
0.181	80	>75% Grass cover, Good, HSG D (2S)
0.111	65	Brush, Good, HSG C (1S, 2S)
0.024	73	Brush, Good, HSG D (2S)
0.042	98	Paved parking, HSG B (2S)
0.043	98	Paved parking, HSG C (2S)
0.041	98	Roofs, HSG B (2S)
0.004	98	Roofs, HSG C (2S)
0.825	77	TOTAL AREA

#### Printed 1/27/2025

### Soil Listing (all nodes)

Area	Soil	Subcatchment
(acres)	Group	Numbers
0.000	HSG A	
0.115	HSG B	2S
0.505	HSG C	1S, 2S
0.205	HSG D	2S
0.000	Other	
0.825		TOTAL AREA

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HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment
0.000	0.033	0.346	0.181	0.000	0.561	>75% Grass cover, Good	2S
0.000	0.000	0.111	0.024	0.000	0.135	Brush, Good	1S, 2S
0.000	0.042	0.043	0.000	0.000	0.085	Paved parking	2S
0.000	0.041	0.004	0.000	0.000	0.045	Roofs	2S
0.000	0.115	0.505	0.205	0.000	0.825	TOTAL AREA	

# Ground Covers (all nodes)

Type III 24-hr 10 Year Rainfall=5.59" Printed 1/27/2025

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> Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S:	Runoff Area=1,900 sf 0.00% Impervious Runoff Depth>2.05" Tc=6.0 min CN=65 Runoff=0.10 cfs 0.007 af
Subcatchment2S:	Runoff Area=34,047 sf 16.59% Impervious Runoff Depth>3.21" Flow Length=248' Tc=8.0 min CN=78 Runoff=2.75 cfs 0.209 af
Link POA 1: Northern POA	Inflow=0.10 cfs 0.007 af Primary=0.10 cfs 0.007 af
Link POA 2: Southern POA	Inflow=2.75 cfs 0.209 af Primary=2.75 cfs 0.209 af

Total Runoff Area = 0.825 ac Runoff Volume = 0.217 af Average Runoff Depth = 3.15" 84.29% Pervious = 0.696 ac 15.71% Impervious = 0.130 ac

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#### Summary for Subcatchment 1S:

Runoff 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 2.05" =

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"



10

11 12 13 14 15 16 17 18 19 20 Time (hours)

21

22 23

24

#### Summary for Subcatchment 2S:

Runoff = 2.75 cfs @ 12.11 hrs, Volume= 0.209 af, Depth> 3.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"

A	rea (sf)	CN I	Description						
	1,767	98	Roofs, HSG	ЪВ					
	195	98	Roofs, HSG	СС					
	1,811	98	8 Paved parking, HSG B						
	1,876	98	Paved parking, HSG C						
	1,445	61 ;	>75% Gras	s cover, Go	ood, HSG B				
	15,077	74 :	>75% Gras	s cover, Go	ood, HSG C				
	2,942	65 I	Brush, Goo	d, HSG C					
	7,899	80 :	>75% Gras	s cover, Go	ood, HSG D				
	1,035	73	<u> Brush, Goo</u>	d, HSG D					
	34,047	78	Weighted A	verage					
	28,398	ä	33.41% Per	vious Area					
	5,649		16.59% Imp	pervious Are	ea				
Тс	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
5.2	50	0.0800	0.16		Sheet Flow, Brush, HSG C				
					n= 0.300 P2= 3.69"				
0.6	106	0.0377	377 2.91		Shallow Concentrated Flow,				
					Grassed Waterway Kv= 15.0 fps				
2.2	92	0.0100	0.70		Shallow Concentrated Flow, Brush, HSG D				
					Short Grass Pasture Kv= 7.0 fps				
8.0	248	Total							

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Subcatchment 2S:



#### Summary for Link POA 1: Northern POA

Inflow A	Area	=	0.044 ac,	0.00% Impervious,	Inflow Depth >	2.0	5" for 10 Year event
Inflow	=	=	0.10 cfs @	12.09 hrs, Volume	= 0.007	af	
Primary	/ =	=	0.10 cfs @	12.09 hrs, Volume	= 0.007	af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs



### Link POA 1: Northern POA

#### Summary for Link POA 2: Southern POA

Inflow /	Area	=	0.782 ac,	16.59% Impe	ervious,	Inflow De	epth > 3	8.21"	for 10	Year event	
Inflow		=	2.75 cfs @	12.11 hrs,	Volume	=	0.209 a	f			
Primar	у	=	2.75 cfs @	12.11 hrs,	Volume	=	0.209 a	f, Atte	en= 0%,	Lag= 0.0 mi	n

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs



### Link POA 2: Southern POA

# Section 4

# Drainage Calculations

Post-Development 2-Year, 24-Hour Summary 10-Year, 24-Hour Complete 25-Year, 24-Hour Summary 50-Year, 24-Hour Summary





Type III 24-hr 2 Year Rainfall=3.69" Printed 1/27/2025

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Subcatchment R1: Roof 1 Runoff	Runoff Area=1,149 sf 100.00% Impervious Runoff Depth>3.45" Tc=6.0 min CN=98 Runoff=0.09 cfs 0.008 af
Subcatchment R2: Roof 2 Runoff	Runoff Area=307 sf 100.00% Impervious Runoff Depth>3.45" Tc=6.0 min CN=98 Runoff=0.03 cfs 0.002 af
Subcatchment R3: Roof 3 Runoff	Runoff Area=476 sf 100.00% Impervious Runoff Depth>3.45" Tc=6.0 min CN=98 Runoff=0.04 cfs 0.003 af
SubcatchmentS1:	Runoff Area=1,900 sf 0.00% Impervious Runoff Depth>0.85" Tc=6.0 min CN=65 Runoff=0.04 cfs 0.003 af
Subcatchment S2:	Runoff Area=26,434 sf 2.23% Impervious Runoff Depth>1.44" Flow Length=248' Tc=8.0 min CN=75 Runoff=0.93 cfs 0.073 af
SubcatchmentS3A: Driveway/GrassA	rea Runoff Area=1,111 sf 65.35% Impervious Runoff Depth>2.18" Tc=6.0 min CN=85 Runoff=0.07 cfs 0.005 af
SubcatchmentS3B: Road/Driveway/La	wn Runoff Area=3,576 sf 67.28% Impervious Runoff Depth>2.62" Tc=6.0 min CN=90 Runoff=0.25 cfs 0.018 af
SubcatchmentS4: Deck	Runoff Area=985 sf 15.74% Impervious Runoff Depth>2.72" Tc=6.0 min CN=91 Runoff=0.07 cfs 0.005 af
Reach 1R: n=0.022	Avg. Flow Depth=0.06' Max Vel=1.28 fps Inflow=0.25 cfs 0.018 af _=177.0' S=0.0169 '/' Capacity=10.11 cfs Outflow=0.24 cfs 0.018 af
<b>Reach 2R:</b> n=0.150	Avg. Flow Depth=0.02' Max Vel=0.11 fps Inflow=0.04 cfs 0.003 af L=177.0' S=0.0282 '/' Capacity=6.48 cfs Outflow=0.02 cfs 0.003 af
Pond 1P: Below Deck (Yard Drain 2) Discarded=0.0	Peak Elev=10.23' Storage=176 cf Inflow=0.26 cfs 0.019 af 06 cfs 0.019 af Primary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.019 af
Pond 2P: Yard Drain 1 6.0" Ro	Peak Elev=10.23' Inflow=0.16 cfs 0.012 af ound Culvert n=0.010 L=50.0' S=0.0020 '/' Outflow=0.16 cfs 0.012 af
Pond 3P: Clean Out 1 6.0" Ro	Peak Elev=12.09' Inflow=0.03 cfs 0.002 af ound Culvert n=0.010 L=70.0' S=0.0214 '/' Outflow=0.03 cfs 0.002 af
Pond 4P: Trench Drain 6.0" Ro	Peak Elev=10.83' Storage=0.000 af Inflow=0.07 cfs 0.005 af ound Culvert n=0.010 L=10.0' S=0.0580 '/' Outflow=0.07 cfs 0.005 af
Link POA 1: Northern POA	Inflow=0.04 cfs 0.003 af Primary=0.04 cfs 0.003 af
Link POA 2: Southern POA	Inflow=1.19 cfs 0.094 af Primary=1.19 cfs 0.094 af

Type III 24-hr 25 Year Rainfall=7.10" Printed 1/27/2025

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Subcatchment R1: Roof 1 Runoff	Runoff Area=1,149 sf 100.00% Impervious Runoff Depth>6.86" Tc=6.0 min CN=98 Runoff=0.18 cfs 0.015 af
Subcatchment R2: Roof 2 Runoff	Runoff Area=307 sf 100.00% Impervious Runoff Depth>6.86" Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af
Subcatchment R3: Roof 3 Runoff	Runoff Area=476 sf 100.00% Impervious Runoff Depth>6.86" Tc=6.0 min CN=98 Runoff=0.08 cfs 0.006 af
SubcatchmentS1:	Runoff Area=1,900 sf 0.00% Impervious Runoff Depth>3.18" Tc=6.0 min CN=65 Runoff=0.16 cfs 0.012 af
Subcatchment S2:	Runoff Area=26,434 sf 2.23% Impervious Runoff Depth>4.23" Flow Length=248' Tc=8.0 min CN=75 Runoff=2.81 cfs 0.214 af
SubcatchmentS3A: Driveway/GrassA	rea Runoff Area=1,111 sf 65.35% Impervious Runoff Depth>5.34" Tc=6.0 min CN=85 Runoff=0.16 cfs 0.011 af
SubcatchmentS3B: Road/Driveway/La	wn Runoff Area=3,576 sf 67.28% Impervious Runoff Depth>5.92" Tc=6.0 min CN=90 Runoff=0.54 cfs 0.040 af
SubcatchmentS4: Deck	Runoff Area=985 sf 15.74% Impervious Runoff Depth>6.03" Tc=6.0 min CN=91 Runoff=0.15 cfs 0.011 af
Reach 1R: n=0.022	Avg. Flow Depth=0.11' Max Vel=1.89 fps Inflow=0.74 cfs 0.046 af L=177.0' S=0.0169 '/' Capacity=10.11 cfs Outflow=0.69 cfs 0.046 af
<b>Reach 2R:</b> n=0.150	Avg. Flow Depth=0.03' Max Vel=0.15 fps Inflow=0.08 cfs 0.006 af L=177.0' S=0.0282 '/' Capacity=6.48 cfs Outflow=0.05 cfs 0.006 af
Pond 1P: Below Deck (Yard Drain 2) Discarded=0.0	Peak Elev=10.72' Storage=353 cf Inflow=0.54 cfs 0.042 af 06 cfs 0.036 af Primary=0.33 cfs 0.006 af Outflow=0.40 cfs 0.042 af
<b>Pond 2P: Yard Drain 1</b> 6.0" Ro	Peak Elev=10.83' Inflow=0.34 cfs 0.026 af ound Culvert n=0.010 L=50.0' S=0.0020 '/' Outflow=0.34 cfs 0.026 af
Pond 3P: Clean Out 1 6.0" Ro	Peak Elev=12.13' Inflow=0.05 cfs 0.004 af ound Culvert n=0.010 L=70.0' S=0.0214 '/' Outflow=0.05 cfs 0.004 af
Pond 4P: Trench Drain 6.0" Ro	Peak Elev=10.94' Storage=0.000 af Inflow=0.16 cfs 0.011 af ound Culvert n=0.010 L=10.0' S=0.0580 '/' Outflow=0.16 cfs 0.011 af
Link POA 1: Northern POA	Inflow=0.16 cfs 0.012 af Primary=0.16 cfs 0.012 af
Link POA 2: Southern POA	Inflow=3.37 cfs 0.266 af Primary=3.37 cfs 0.266 af

Type III 24-hr 50 Year Rainfall=8.50" Printed 1/27/2025

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Subcatchment R1: Roof 1 Runoff	Runoff Area=1,149 sf 100.00% Impervious Runoff Depth>8.25" Tc=6.0 min CN=98 Runoff=0.22 cfs 0.018 af
Subcatchment R2: Roof 2 Runoff	Runoff Area=307 sf 100.00% Impervious Runoff Depth>8.25" Tc=6.0 min CN=98 Runoff=0.06 cfs 0.005 af
Subcatchment R3: Roof 3 Runoff	Runoff Area=476 sf 100.00% Impervious Runoff Depth>8.25" Tc=6.0 min CN=98 Runoff=0.09 cfs 0.008 af
SubcatchmentS1:	Runoff Area=1,900 sf 0.00% Impervious Runoff Depth>4.30" Tc=6.0 min CN=65 Runoff=0.22 cfs 0.016 af
Subcatchment S2:	Runoff Area=26,434 sf 2.23% Impervious Runoff Depth>5.49" Flow Length=248' Tc=8.0 min CN=75 Runoff=3.63 cfs 0.277 af
SubcatchmentS3A: Driveway/GrassA	rea Runoff Area=1,111 sf 65.35% Impervious Runoff Depth>6.69" Tc=6.0 min CN=85 Runoff=0.19 cfs 0.014 af
SubcatchmentS3B: Road/Driveway/La	wn Runoff Area=3,576 sf 67.28% Impervious Runoff Depth>7.29" Tc=6.0 min CN=90 Runoff=0.65 cfs 0.050 af
SubcatchmentS4: Deck	Runoff Area=985 sf 15.74% Impervious Runoff Depth>7.41" Tc=6.0 min CN=91 Runoff=0.18 cfs 0.014 af
Reach 1R: n=0.022	Avg. Flow Depth=0.15' Max Vel=2.23 fps Inflow=1.18 cfs 0.060 af _=177.0' S=0.0169 '/' Capacity=10.11 cfs Outflow=1.13 cfs 0.060 af
<b>Reach 2R:</b> n=0.150	Avg. Flow Depth=0.03' Max Vel=0.17 fps Inflow=0.09 cfs 0.008 af L=177.0' S=0.0282 '/' Capacity=6.48 cfs Outflow=0.06 cfs 0.007 af
Pond 1P: Below Deck (Yard Drain 2) Discarded=0.0	Peak Elev=10.73' Storage=361 cf Inflow=0.64 cfs 0.051 af 06 cfs 0.041 af Primary=0.56 cfs 0.010 af Outflow=0.62 cfs 0.051 af
Pond 2P: Yard Drain 1 6.0" Ro	Peak Elev=10.99' Inflow=0.41 cfs 0.032 af ound Culvert n=0.010 L=50.0' S=0.0020 '/' Outflow=0.41 cfs 0.032 af
Pond 3P: Clean Out 1 6.0" Ro	Peak Elev=12.14' Inflow=0.06 cfs 0.005 af ound Culvert n=0.010 L=70.0' S=0.0214 '/' Outflow=0.06 cfs 0.005 af
Pond 4P: Trench Drain 6.0" Ro	Peak Elev=11.06' Storage=0.000 af Inflow=0.19 cfs 0.014 af ound Culvert n=0.010 L=10.0' S=0.0580 '/' Outflow=0.19 cfs 0.014 af
Link POA 1: Northern POA	Inflow=0.22 cfs 0.016 af Primary=0.22 cfs 0.016 af
Link POA 2: Southern POA	Inflow=4.79 cfs 0.345 af Primary=4.79 cfs 0.345 af

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#### Area Listing (all nodes)

Area	CN	Description	
(acres)		(subcatchment-numbers)	
0.023	61	>75% Grass cover, Good, HSG B (S2, S3A, S3B)	
0.342	74	>75% Grass cover, Good, HSG C (S2, S3B)	
0.181	80	>75% Grass cover, Good, HSG D (S2)	
0.102	65	Brush, Good, HSG C (S1, S2)	
0.024	73	Brush, Good, HSG D (S2)	
0.019	90	Deck, HSG C (S4)	
0.052	98	Paved parking, HSG B (R1, S3A, S3B)	
0.021	98	Paved parking, HSG C (S2, S3B)	
0.039	98	Roofs, HSG B (R1, R2, S3B)	
0.022	98	Roofs, HSG C (R3, S2, S4)	
0.825	78	TOTAL AREA	

### Soil Listing (all nodes)

Area	Soil	Subcatchment	
(acres)	Group	Numbers	
0.000	HSG A		
0.114	HSG B	R1, R2, S2, S3A, S3B	
0.506	HSG C	R3, S1, S2, S3B, S4	
0.205	HSG D	S2	
0.000	Other		
0.825		TOTAL AREA	

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HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.023	0.342	0.181	0.000	0.547	>75% Grass cover, Good	S2, S3A, S3B
0.000	0.000	0.102	0.024	0.000	0.126	Brush, Good	S1, S2
0.000	0.000	0.019	0.000	0.000	0.019	Deck	S4
0.000	0.052	0.021	0.000	0.000	0.073	Paved parking	R1, S2, S3A, S3B
0.000	0.039	0.022	0.000	0.000	0.060	Roofs	R1, R2, R3, S2, S3B, S4
0.000	0.114	0.506	0.205	0.000	0.825	TOTAL AREA	

#### Ground Covers (all nodes)

Type III 24-hr 10 Year Rainfall=5.59" Printed 1/27/2025

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Subcatchment R1: Roof 1 Runoff	Runoff Area=1,149 sf 100.00% Impervious Runoff Depth>5.35" Tc=6.0 min CN=98 Runoff=0.14 cfs 0.012 af
Subcatchment R2: Roof 2 Runoff	Runoff Area=307 sf 100.00% Impervious Runoff Depth>5.35" Tc=6.0 min CN=98 Runoff=0.04 cfs 0.003 af
Subcatchment R3: Roof 3 Runoff	Runoff Area=476 sf 100.00% Impervious Runoff Depth>5.35" Tc=6.0 min CN=98 Runoff=0.06 cfs 0.005 af
SubcatchmentS1:	Runoff Area=1,900 sf 0.00% Impervious Runoff Depth>2.05" Tc=6.0 min CN=65 Runoff=0.10 cfs 0.007 af
Subcatchment S2:	Runoff Area=26,434 sf 2.23% Impervious Runoff Depth>2.93" Flow Length=248' Tc=8.0 min CN=75 Runoff=1.95 cfs 0.148 af
SubcatchmentS3A: Driveway/GrassA	Runoff Area=1,111 sf 65.35% Impervious Runoff Depth>3.91" Tc=6.0 min CN=85 Runoff=0.12 cfs 0.008 af
SubcatchmentS3B: Road/Driveway/L	awn Runoff Area=3,576 sf 67.28% Impervious Runoff Depth>4.44" Tc=6.0 min CN=90 Runoff=0.41 cfs 0.030 af
SubcatchmentS4: Deck	Runoff Area=985 sf 15.74% Impervious Runoff Depth>4.55" Tc=6.0 min CN=91 Runoff=0.11 cfs 0.009 af
<b>Reach 1R:</b> n=0.022	Avg. Flow Depth=0.08' Max Vel=1.54 fps Inflow=0.41 cfs 0.032 af L=177.0' S=0.0169 '/' Capacity=10.11 cfs Outflow=0.40 cfs 0.032 af
<b>Reach 2R:</b> n=0.150	Avg. Flow Depth=0.02' Max Vel=0.14 fps Inflow=0.06 cfs 0.005 af L=177.0' S=0.0282 '/' Capacity=6.48 cfs Outflow=0.03 cfs 0.005 af
Pond 1P: Below Deck (Yard Drain 2) Discarded=0.	Peak Elev=10.71' Storage=341 cf Inflow=0.41 cfs 0.032 af 06 cfs 0.030 af Primary=0.09 cfs 0.001 af Outflow=0.15 cfs 0.032 af
Pond 2P: Yard Drain 1 6.0" R	Peak Elev=10.73' Inflow=0.26 cfs 0.020 af ound Culvert n=0.010 L=50.0' S=0.0020 '/' Outflow=0.26 cfs 0.020 af
Pond 3P: Clean Out 1 6.0" R	Peak Elev=12.11' Inflow=0.04 cfs 0.003 af ound Culvert n=0.010 L=70.0' S=0.0214 '/' Outflow=0.04 cfs 0.003 af
Pond 4P: Trench Drain 6.0" R	Peak Elev=10.88' Storage=0.000 af Inflow=0.12 cfs 0.008 af ound Culvert n=0.010 L=10.0' S=0.0580 '/' Outflow=0.12 cfs 0.008 af
Link POA 1: Northern POA	Inflow=0.10 cfs 0.007 af Primary=0.10 cfs 0.007 af
Link POA 2: Southern POA	Inflow=2.37 cfs 0.185 af Primary=2.37 cfs 0.185 af

Type III 24-hr 10 Year Rainfall=5.59" Printed 1/27/2025

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> Total Runoff Area = 0.825 ac Runoff Volume = 0.223 af Average Runoff Depth = 3.24" 83.84% Pervious = 0.692 ac 16.16% Impervious = 0.133 ac

#### Summary for Subcatchment R1: Roof 1 Runoff

Runoff = 0.14 cfs @ 12.08 hrs, Volume= 0.012 af, Depth> 5.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"



#### Summary for Subcatchment R2: Roof 2 Runoff

Runoff = 0.04 cfs @ 12.08 hrs, Volume= 0.003 af, Depth> 5.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"

Ai	rea (sf)	CN	Description			
	307	98	Roofs, HSC	βB		
	307		100.00% Impervious Area			
Tc (min)	Length (feet)	Slop (ft/fl	e Velocity ) (ft/sec)	Capacity (cfs)	Description	
6.0					Direct Entry,	

#### Subcatchment R2: Roof 2 Runoff


# Summary for Subcatchment R3: Roof 3 Runoff

Runoff = 0.06 cfs @ 12.08 hrs, Volume= 0.005 af, Depth> 5.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"

Aı	rea (sf)	CN	Description		
	476	98	Roofs, HSC	G C	
	476		100.00% In	npervious A	rea
Tc (min)	Length (feet)	Slop (ft/f	e Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,
			<b>C</b> I	t . h	ant D2: Deef 2 Dureff



# Subcatchment R3: Roof 3 Runoff

1 2

3 4 5 6 7 8 9

0

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# **Summary for Subcatchment S1:**

Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"



10

11 12 13 14 15 16 17 18 19 20 Time (hours)

21

22 23

24

# **Summary for Subcatchment S2:**

Runoff = 1.95 cfs @ 12.12 hrs, Volume= 0.148 af, Depth> 2.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"

A	rea (sf)	CN E	Description		
	320	98 F	Roofs, HSG	G C	
	270	98 F	Paved park	ing, HSG C	
	464	61 >	75% Gras	s cover, Go	bod, HSG B
	13,894	74 >	•75% Gras	s cover, Go	bod, HSG C
	2,552	65 E	Brush, Goo	d, HSG C	
	7,899	80 >	•75% Gras	s cover, Go	ood, HSG D
	1,035	73 E	<u> Brush, Goo</u>	d, HSG D	
	26,434	75 V	Veighted A	verage	
	25,844	g	7.77% Pei	rvious Area	
	590	2	.23% Imp€	ervious Are	а
_					
TC	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cts)	
5.2	50	0.0800	0.16		Sheet Flow, Brush, HSG C
					n= 0.300 P2= 3.69"
0.6	106	0.0377	2.91		Shallow Concentrated Flow,
			- <b>-</b> -		Grassed Waterway Kv= 15.0 fps
2.2	92	0.0100	0.70		Shallow Concentrated Flow,
					Short Grass Pasture Ky= 7.0 fps

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Subcatchment S2:



# Summary for Subcatchment S3A: Driveway/Grass Area

Runoff = 0.12 cfs @ 12.09 hrs, Volume= 0.008 af, Depth> 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"

A	rea (sf)	CN	Description		
	726	98	Paved park	ing, HSG B	3
	385	61	>75% Gras	s cover, Go	ood, HSG B
	1,111	85	Weighted A	verage	
	385		34.65% Pe	rvious Area	a
	726		65.35% Imp	pervious Ar	rea
Тс	Length	Slop	e Velocity	Capacity	Description
(min)	(feet)	(ft/ft	:) (ft/sec)	(cfs)	
6.0					Direct Entry,

# Subcatchment S3A: Driveway/Grass Area



# Summary for Subcatchment S3B: Road/Driveway/Lawn

Runoff = 0.41 cfs @ 12.08 hrs, Volume= 0.030 af, Depth> 4.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"

A	vrea (sf)	CN	Description			
	301	98	Roofs, HSG	БB		
	1,461	98	Paved parki	ing, HSG B		
	644	98	Paved parki	ing, HSG C		
	161	61	>75% Grass	s cover, Go	ood, HSG B	
	1,009	74	>75% Grass	s cover, Go	ood, HSG C	
	3,576	90	Weighted A	verage		
	1,170		32.72% Per	vious Area		
	2,406		67.28% Imp	ervious Are	ea	
Тс	Length	Slop	e Velocity	Capacity	Description	
(min)	(feet)	(ft/1	ft) (ft/sec)	(cfs)	•	
60				<b>\$</b>	Direct Entry.	

# Subcatchment S3B: Road/Driveway/Lawn



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# Summary for Subcatchment S4: Deck

Runoff = 0.11 cfs @ 12.08 hrs, Volume= 0.009 af, Depth> 4.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type III 24-hr 10 Year Rainfall=5.59"

Area (sf) CN Description	
155 98 Roofs, HSG C	
* 830 90 Deck, HSG C	
985 91 Weighted Average	
830 84.26% Pervious Are	а
155 15.74% Impervious A	Irea
Tc Length Slope Velocity Capacity (min) (feet) (ft/ft) (ft/sec) (cfs)	/ Description
6.0	Direct Entry,
Subcat	tchment S4: Deck
Hydr	ograph
	D.11 cfs
0.115 Type III 24-hr	
0.1 - 10 Year Rainfall=5.59"	
0.095 Runoff Area=985 sf	
້ອັ <sup>0.07</sup> Runoff Depth>4.55"	
<sup>8</sup> 0.06 <b>Tc=6</b> 0 min	
0.045	
0.005	
	1 12 13 14 15 16 17 18 19 20 21 22 23 24
Ti	me (hours)

# Summary for Reach 1R:

 Inflow Area =
 0.164 ac, 66.54% Impervious, Inflow Depth > 2.33" for 10 Year event

 Inflow =
 0.41 cfs @ 12.08 hrs, Volume=
 0.032 af

 Outflow =
 0.40 cfs @ 12.10 hrs, Volume=
 0.032 af, Atten= 3%, Lag= 1.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Max. Velocity= 1.54 fps, Min. Travel Time= 1.9 min Avg. Velocity = 0.40 fps, Avg. Travel Time= 7.3 min

Peak Storage= 46 cf @ 12.10 hrs Average Depth at Peak Storage= 0.08' Bank-Full Depth= 0.50' Flow Area= 2.3 sf, Capacity= 10.11 cfs

3.00' x 0.50' deep channel, n= 0.022 Grass Side Slope Z-value= 3.0 '/' Top Width= 6.00' Length= 177.0' Slope= 0.0169 '/' Inlet Invert= 10.50', Outlet Invert= 7.50'

‡

# Reach 1R:



# Summary for Reach 2R:



# Summary for Pond 1P: Below Deck (Yard Drain 2)

Inflow Area	ı =	0.082 ac, 6	5.79% Imp	ervious,	Inflow Depth >	4.68"	for 10 Y	ear event	
Inflow	=	0.41 cfs @	12.09 hrs,	Volume	= 0.032	af			
Outflow	=	0.15 cfs @	12.33 hrs,	Volume	= 0.032	af, Att	en= 63%,	Lag= 14.7 mi	n
Discarded	=	0.06 cfs @	12.33 hrs,	Volume	= 0.030	af		-	
Primary	=	0.09 cfs @	12.33 hrs,	Volume	= 0.001	af			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Peak Elev= 10.71' @ 12.33 hrs Surf.Area= 830 sf Storage= 341 cf Flood Elev= 10.70' Surf.Area= 830 sf Storage= 332 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 29.4 min ( 800.2 - 770.8 )

Volume	١n	/ert Ava	il.Stor	age	Storage Descrip	otion	
#1	9.	.70'	1,16	62 cf	Custom Stage	Data (Prismatic)	Listed below (Recalc)
Elevatio (fee 9.7 10.7 11.7	on et) 70 70 70	Surf.Area (sq-ft) 830 830 830	Void (% 0. 40. 100.	ls 6) 0 0 0	Inc.Store (cubic-feet) 0 332 830	Cum.Store (cubic-feet) 0 332 1,162	
Device	Routing	In	vert	Outle	et Devices		
#1	Discard	ed 9	9.70'	3.00	0 in/hr Exfiltratio	on over Surface	area
#2	Primary	· 10	).70'	36.6 Head 2.50 Coef 2.65	ductivity to Groun ' long x 5.0' bre d (feet) 0.20 0.4 3.00 3.50 4.00 f. (English) 2.34 2.67 2.66 2.68	adth Broad-Cres 0 0.60 0.80 1.0 4.50 5.00 5.50 2.50 2.70 2.68 2.70 2.74 2.79	sted Rectangular Weir 1 - 0.01 1 - 0.01 1.20 1.40 1.60 1.80 2.00 2.68 2.66 2.65 2.65 2.65 2.88

**Discarded OutFlow** Max=0.06 cfs @ 12.33 hrs HW=10.71' (Free Discharge) **1=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=0.09 cfs @ 12.33 hrs HW=10.71' TW=10.56' (Dynamic Tailwater) ←2=Broad-Crested Rectangular Weir (Weir Controls 0.09 cfs @ 0.24 fps)

Pond 1P: Below Deck (Yard Drain 2)



# Summary for Pond 2P: Yard Drain 1

Inflow Area = 0.052 ac, 82.96% Impervious, Inflow Depth > 4.64" for 10 Year event Inflow 0.26 cfs @ 12.09 hrs, Volume= 0.020 af = 0.26 cfs @ 12.09 hrs, Volume= Outflow = 0.020 af, Atten= 0%, Lag= 0.0 min 0.26 cfs @ 12.09 hrs, Volume= 0.020 af Primary = Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Peak Elev= 10.73' @ 12.32 hrs Flood Elev= 11.10' Device Routing Invert Outlet Devices 6.0" Round Culvert L= 50.0' Ke= 0.500 #1 Primary 9.70' Inlet / Outlet Invert= 9.70' / 9.60' S= 0.0020 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.20 cfs @ 12.09 hrs HW=10.32' TW=10.26' (Dynamic Tailwater) -1=Culvert (Outlet Controls 0.20 cfs @ 1.07 fps)



# Pond 2P: Yard Drain 1

# Summary for Pond 3P: Clean Out 1

Inflow Area = 0.007 ac,100.00% Impervious, Inflow Depth > 5.35" for 10 Year event Inflow 0.04 cfs @ 12.08 hrs, Volume= 0.003 af = 0.04 cfs @ 12.08 hrs, Volume= Outflow 0.003 af, Atten= 0%, Lag= 0.0 min = 0.04 cfs @ 12.08 hrs, Volume= Primary = 0.003 af Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Peak Elev= 12.11' @ 12.08 hrs Flood Elev= 15.25' Device Routing Invert **Outlet Devices** 6.0" Round Culvert L= 70.0' Ke= 0.500 #1 Primary 12.00' Inlet / Outlet Invert= 12.00' / 10.50' S= 0.0214 '/' Cc= 0.900

Primary OutFlow Max=0.04 cfs @ 12.08 hrs HW=12.11' TW=10.25' (Dynamic Tailwater)

**1=Culvert** (Inlet Controls 0.04 cfs @ 1.15 fps)



# Pond 3P: Clean Out 1

n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

# Summary for Pond 4P: Trench Drain

Inflow Area	a =	0.026 ac, 6	5.35% Imperv	vious, Inflow [	Depth > 🗧	3.91" for	10 Year event	
Inflow	=	0.12 cfs @	12.09 hrs, Vo	olume=	0.008 a	af		
Outflow	=	0.12 cfs @	12.09 hrs, Vo	olume=	0.008 a	af, Atten=	0%, Lag= 0.2 m	in
Primary	=	0.12 cfs @	12.09 hrs, Vo	olume=	0.008 a	af	-	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Peak Elev= 10.88' @ 12.09 hrs Surf.Area= 0.000 ac Storage= 0.000 af Flood Elev= 11.68' Surf.Area= 0.000 ac Storage= 0.000 af

Plug-Flow detention time= 1.2 min calculated for 0.008 af (100% of inflow) Center-of-Mass det. time= 0.8 min (803.4 - 802.6)

Volume	Invert	Avail.Storag	e Storage Description
#1	10.68'	0.000 a	af 0.50'W x 22.50'L x 1.00'H Prismatoid
Device	Routing	Invert	Outlet Devices
#1	Primary	10.68' (   	6.0" Round Culvert L= 10.0' Ke= 0.500 Inlet / Outlet Invert= 10.68' / 10.10' S= 0.0580 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.12 cfs @ 12.09 hrs HW=10.88' TW=10.33' (Dynamic Tailwater) **1=Culvert** (Inlet Controls 0.12 cfs @ 1.54 fps)

### **Hydrograph** Inflow 0 12 cfs Primary Inflow Area=0.026 0.12 0.11 Peak Elev=10.88' 0.1 Storage=0.000 af 0.09 6.0" 0.08 **Round Culvert 5** 0.07 Flow 0.06 n=0.010 0.05 L=10.0' 0.04 S=0.0580 '/' 0.03 0.02 0.01 0 11 12 13 14 15 16 17 18 19 20 21 0 1 2 3 4 5 6 7 8 9 10 22 23 24 Time (hours)

# Pond 4P: Trench Drain

# Summary for Link POA 1: Northern POA

Inflow A	Area	=	0.044 ac,	0.00% Impervious,	Inflow Depth >	2.05	5" for 10 Year event
Inflow	=	=	0.10 cfs @	12.09 hrs, Volume	= 0.007	af	
Primary	/ =	=	0.10 cfs @	12.09 hrs, Volume	= 0.007	af, /	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs



# Link POA 1: Northern POA

# Summary for Link POA 2: Southern POA

Inflow A	Area	=	0.781 ac,	17.07% Impe	ervious,	Inflow De	pth > 2	2.84	" for 10`	Year event
Inflow		=	2.37 cfs @	12.11 hrs,	Volume	=	0.185 a	af		
Primar	y :	=	2.37 cfs @	12.11 hrs,	Volume	=	0.185 a	af, A	tten= 0%,	Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs



# Link POA 2: Southern POA

# Section 5

Precipitation Table



**Extreme Precipitation Tables** Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

	Metadata for Point
Smoothing	Yes
State	
Location	
Latitude	43.069 degrees North
Longitude	70.75 degrees West
Elevation	0 feet
Date/Time	Mon Dec 30 2024 12:29:14 GMT-0500 (Eastern Standard
	Time)

15% added to values for modeling

# Extreme Precinitation Estimates

		dinn i	nnan		חווומיר	Ņ											
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1 day	2d:
1yr	0.26	0.40	0.50	0.65	0.81	1.04	1yr	0.70	0.98	1.21	1.56	2.03	2.66	2.92	1yr	2.35	2.8
2yr	0.32	0.50	0.62	0.82	1.02	1.30	2yr	0.88	1.18	1.52	1.94	2.49	3.21	3.57	2yr	2.84	3.4
5yr	0.37	0.58	0.73	0.98	1.25	1.61	5yr	1.08	1.47	1.89	2.43	3.14	4.07	4.58	5yr	3.60	4.4
10yr	0.41	0.65	0.82	1.12	1.45	1.89	10yr	1.25	1.73	2.23	2.89	3.75	4.86	5.53	10yr	4.31	5.3
25yr	0.48	0.76	0.97	1.34	1.78	2.34	25yr	1.53	2.14	2.78	3.63	4.74	6.17	7.10	25yr	5.46	6.8
50yr	0.54	0.86	1.10	1.54	2.08	2.76	50yr	1.79	2.53	3.29	4.33	5.67	7.39	8.58	50yr	6.54	8.2
100yr	09.0	0.97	1.25	1.77	2.42	3.26	100yr	2.09	2.98	3.91	5.16	6.77	8.85	10.38	100yr	7.83	9.6
200yr	0.68	1.10	1.43	2.05	2.83	3.84	200yr	2.44	3.52	4.62	6.14	8.08	10.60	12.55	200yr	9.38	12.
500yr	0.80	1.32	1.72	2.49	3.49	4.78	500yr	3.01	4.39	5.78	7.72	10.22	13.47	16.14	500yr	11.92	15.

# **Lower Confidence Limits**

2d;	с с С
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2hr	Yð U
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30min	U S U
15min	VVV
10min	ソひ リ
5min	U 72
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# Section 6

# NRCS Soils Report





United States Department of Agriculture

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants Custom Soil Resource Report for Rockingham County, New Hampshire



# Preface

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

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

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

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

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

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

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# **How Soil Surveys Are Made**

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

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

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

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

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

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

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

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

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

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

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

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

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

# Soil Map

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

### Custom Soil Resource Report Soil Map



Γ

MAP INFORMATION	The soil surveys that comprise your AOI were mapped at 1:24,000.	Warning: Soil Map may not be valid at this scale.	Enlargement of maps beyond the scale of mapping can cause	misunderstanding of the detail of mapping and accuracy of soil line placement The maps do not show the small areas of	contrasting soils that could have been shown at a more detailed	scale.		Please rely on the bar scale on each map sheet for map measurements.		Source of Map: Natural Resources Conservation Service Web Soil Survev URL:	Coordinate System: Web Mercator (EPSG:3857)	Maps from the Web Soil Survey are based on the Web Mercator	projection, which preserves direction and shape but distorts	usuance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more	accurate calculations of distance or area are required.	This product is generated from the USDA-NRCS certified data as	of the version date(s) listed below.	Soil Survey Area: Rockingham County, New Hampshire	Survey Area Data: Version 27, Sep 3, 2024	Soil map units are labeled (as space allows) for map scales	1:50,000 or larger.	Date(s) aerial images were photographed: Jun 19, 2020—Sep	20, 2020	The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident
MAP LEGEND	Area of Interest (AOI)     Result       Area of Interest (AOI)     Area of Interest (AOI)	Soils Soil Map Unit Polygons	Soil Map Unit Lines	Soil Map Unit Points Secret line Eastrines	Special Point Features	Blowout     Water reatures     Streams and Canals	Borrow Pit	Clay Spot     Clay Spot     Heteron	Closed Depression	Gravel Pit US Routes	** Gravelly Spot	Contraction Local Roads	Lava Flow Background	👞 Marsh or swamp 🐹 Aerial Photography	🙊 Mine or Quarry	Miscellaneous Water	Perennial Water	Rock Outcrop	Saline Spot	Sandy Spot	Severely Eroded Spot	Sinkhole Sinkhole	Slide or Slip	Sodic Spot

# Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
799	Urban land-Canton complex, 3 to 15 percent slopes	9.3	93.0%
W	Water	0.7	7.0%
Totals for Area of Interest		10.0	100.0%

# **Map Unit Descriptions**

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

# **Rockingham County, New Hampshire**

# 799—Urban land-Canton complex, 3 to 15 percent slopes

# **Map Unit Setting**

National map unit symbol: 9cq0 Elevation: 0 to 1,000 feet Mean annual precipitation: 42 to 46 inches Mean annual air temperature: 45 to 48 degrees F Frost-free period: 120 to 160 days Farmland classification: Not prime farmland

# **Map Unit Composition**

*Urban land:* 55 percent *Canton and similar soils:* 20 percent *Minor components:* 25 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

# **Description of Canton**

# Setting

Parent material: Till

# **Typical profile**

*H1 - 0 to 5 inches:* gravelly fine sandy loam *H2 - 5 to 21 inches:* gravelly fine sandy loam *H3 - 21 to 60 inches:* loamy sand

# **Properties and qualities**

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: A Ecological site: F144AY034CT - Well Drained Till Uplands Hydric soil rating: No

# **Minor Components**

# Udorthents

*Percent of map unit:* 5 percent *Hydric soil rating:* No

# Boxford and eldridge

Percent of map unit: 4 percent Hydric soil rating: No

### Squamscott and scitico

Percent of map unit: 4 percent Landform: Marine terraces Hydric soil rating: Yes

# Scituate and newfields

Percent of map unit: 4 percent Hydric soil rating: No

# Chatfield

Percent of map unit: 4 percent Hydric soil rating: No

### Walpole

Percent of map unit: 4 percent Landform: Depressions Hydric soil rating: Yes

# W-Water

# Map Unit Setting

National map unit symbol: 9cq3 Elevation: 200 to 2,610 feet Farmland classification: Not prime farmland

### Map Unit Composition

Water: 100 percent Estimates are based on observations, descriptions, and transects of the mapunit.

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Stormwater Operations & Maintenance Plan


#### **STORMWATER INSPECTION AND MAINTENANCE MANUAL**

#### Trustees of Rainboth Revocable Trust of 2010 Tax Map 207, Lots 63, 68, and 69 56 Ridges Court Portsmouth, NH

#### OWNER: Trustees of Rainboth Revocable Trust of 2010 122 New Castle Avenue Portsmouth, NH 03801

Proper inspection, maintenance, and repair are key elements in maintaining a successful stormwater management program on a developed property. Routine inspections ensure permit compliance and reduce the potential for deterioration of infrastructure or reduced water quality. The following responsible parties shall be in charge of managing the stormwater facilities:

#### **RESPONSIBLE PARTIES:**

Owner:	Micheal and Anner	narie Rainboth	603-431-1993
	Name	Company	Phone
Inspection:	Micheal and Anner	narie Rainboth	603-431-1993
	Name	Company	Phone
Maintenance	: Micheal and Anne	marie Rainboth	603-431-199 <u>3</u>
	Name	Company	Phone

#### <u>NOTES:</u>

Written inspection forms and maintenance logs shall be completed yearly by a qualified inspector retained the owner or assigns.

Photographs of each stormwater BMP are to be taken at each inspection and submitted with the annual inspection reports.

Inspection and maintenance responsibilities shall transfer to any future property owner(s).

This manual shall be updated as needed to reflect any changes related to any transfer of ownership and/or any delegation of inspection and maintenance responsibilities to another entity



#### **INFILTRATION BASINS**

*Function* – Infiltration basins and tree box filters provide treatment to runoff prior to directing it to stormwater systems by filtering sediment and suspended solids, trapping them in the bottom of the facility and in the filter media itself. Additional treatment is provided by the native water-tolerant vegetation which removes nutrients and other pollutants through bio-uptake. Stormwater detention and infiltration can also be provided as the filtering process slows runoff, decreases the peak rate of discharge and promotes groundwater recharge.

Infiltration basin and tree box filters shall be managed (Per AGR 3800 and RSA 430:53) to: prevent and control the spread of invasive plant, insect, and fungal species; minimize the adverse environmental and economic effects invasive species cause to agriculture, forests, wetlands, wildlife, and other natural resources of the state; and protect the public from potential health problems attributed to certain invasive species.

Maintenance

- Inspect bi-annually and after significant rainfall events.
- If a infiltration basin or tree box filter does not completely drain within 72-hours following a rainfall event, then a qualified professional shall be retained to assess the condition of the facility to determine measures required to restore its filtration and/or infiltration function(s), including but not limited to removal of accumulated sediments and/or replacement or reconstruction of the filter media. Filter media shall be replaced with material matching the specification on the design drawings or the NHDES Stormwater Manual.
- Replace any riprap dislodged from spillways, inlets and outlets.
- Remove any obstructions, litter and accumulated sediment or debris as warranted but no less than once a year.
- Mowing of any grassed area in or adjacent to a raingarden or tree box filter, including any berms, shall be performed at least twice per year (when areas are not inundated) to keep the vegetation in vigorous condition. The cut grass shall be removed to prevent the decaying organic litter from clogging the filter media or choking other vegetation.
- Select vegetation should be maintained in healthy condition. This may include pruning, removal and replacement of dead or diseased vegetation.
- Remove any invasive species, Per AGR 3800 and RSA 430:53.
- Remove any hard wood growth aside from trees in tree box filters.
- Replace media in tree box filters when replacing tree.

#### **CULVERTS AND DRAINAGE PIPES**

*Function* – Culverts and drainage pipes convey stormwater away from buildings, walkways, and parking areas and to surface waters or closed drainage systems.

Maintenance

- Culverts and drainage pipes shall be inspected semi-annually, or more often as needed, for accumulation of debris and structural integrity. Leaves and other debris shall be removed from the inlet and outlet to insure the functionality of drainage structures. Debris shall be disposed of on site where it will not concentrate back at the drainage structures or at a solid waste disposal facility.
- Riprap Areas Culvert outlets and inlets shall be inspected during annual maintenance and operations for erosion and scour. If scour or creek erosion is identified, the outlet owner shall take appropriate means to prevent further erosion. Increased lengths of riprap may require a NHDES Permit and/or local permit.

#### **CATCH BASINS/YARD DRAINS**

*Function* – Catch basins and field drains collect stormwater, primarily from paved surfaces and roofs. Stormwater from paved areas often contains sediment and contaminants. Sumps serve to trap sediment, trace metals, nutrients and debris. Hooded catch basins trap hydrocarbons and floating debris.

Maintenance

- Remove leaves and debris from structure grates on an as-needed basis.
- Sumps shall be inspected and cleaned annually and any removed sediment and debris shall be disposed of at a solid waste disposal facility.

#### **RIP RAP OUTLETS, SWALES AND PLUNGE POOLS**

*Function* – Rip rap outlets slow the velocity of runoff, minimizing erosion and maximizing the treatment capabilities of associated buffers. Vegetated buffers, either forested or meadow, slow runoff which promotes and reduces peak rates of runoff. The reduced velocities and the presence of vegetation encourage the filtration of sediment and the limited bio-uptake of nutrients.

#### Maintenance

- Inspect riprap, level spreaders and buffers at least annually for signs of erosion, sediment buildup, or vegetation loss.
- Inspect level for signs of condensed flows. Level spreader and rip rap shall be maintained to disperse flows evenly over level spreader.
- If a meadow buffer, provide periodic mowing as needed to maintain a healthy stand of herbaceous vegetation.
- If a forested buffer, then the buffer should be maintained in an undisturbed condition, unless erosion occurs.
- If erosion of the buffer (forested or meadow) occurs, eroded areas should be repaired and replanted with vegetation similar to the remaining buffer. Corrective action should include eliminating the source of the erosion problem and may require retrofit or reconstruction of the level spreader.
- Remove debris and accumulated sediment and dispose of properly.

#### LANDSCAPED AREAS – FERTILIZER PROHIBITED

#### LANDSCAPED AREAS - LITTER CONTROL

*Function* – Landscaped areas tend to filter debris and contaminates that may block drainage systems and pollute the surface and ground waters.

Maintenance

- Litter Control and lawn maintenance involves removing litter such as trash, leaves, lawn clippings, pet wastes, oil and chemicals from streets, parking lots, and lawns before materials are transported into surface waters.
- Litter control shall be implemented as part of the grounds maintenance program.

#### **VEGETATIVE SWALES**

*Function* – Vegetative swales filter sediment from stormwater, promote infiltration, and the uptake of contaminates. They are designed to treat runoff and dispose of it safely into the natural drainage system.

Maintenance

- Timely maintenance is important to keep a swale in good working condition. Mowing of grassed swales shall be monthly to keep the vegetation in vigorous condition. The cut vegetation shall be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale.
- Fertilizing shall be bi-annual or as recommended from soil testing.
- Inspect swales following significant rainfall events.
- Woody vegetation shall not be allowed to become established in the swales or rock riprap outlet protection and if present shall be removed.
- Accumulated debris disrupts flow and leads to clogging and erosion. Remove debris and litter as necessary.
- Inspect for eroded areas. Determine cause of erosion and correct deficiency as required. Monitor repaired areas.

#### **CONTROL OF INVASIVE PLANTS**

*Function* – Invasive plants are introduced, alien, or non-native plants, which have been moved by people from their native habitat to a new area. Some exotic plants are imported for human use such as landscaping, erosion control, or food crops. They also can arrive as "hitchhikers" among shipments of other plants, seeds, packing materials, or fresh produce. Some exotic plants become invasive and cause harm by:

- becoming weedy and overgrown;
- killing established shade trees;
- obstructing pipes and drainage systems;
- forming dense beds in water;
- lowering water levels in lakes, streams, and wetlands;
- destroying natural communities;
- promoting erosion on stream banks and hillsides; and
- resisting control except by hazardous chemical.

#### Maintenance

During maintenance activities, check for the presence of invasive plants and remove in a safe manner as described in the attached "Methods for Disposing Non-Native Invasive Plants" prepared by the UNH Cooperative Extension.

#### **GENERAL CLEAN UP**

- Upon completion of the project, the contractor shall remove all temporary stormwater structures (i.e., temporary stone check dams, silt fence, temporary diversion swales, catch basin inlet filter, etc.). Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform to the existing grade, prepared, and seeded. Remove any sediment in catch basins and clean drain pipes that may have accumulated during construction.
- Once in operation, all paved areas of the site should be swept at least once annually at the end of winter/early spring prior to significant spring rains.

#### **SNOW MANANGEMENT**

Snow should never be stored in any stormwater practice as it may affect functionality by blocking drains and reducing the storage volume available for runoff. The Owner/Applicant and any maintenance personnel should take great care to ensure that snow is stored only in areas depicted on the site plan and away from locations that could negatively impact drainage infrastructure or flow paths.

#### **PERMEABLE PAVERS**

*Function* – Porous pavement (Pavers) is designed to capture rainwater runoff containing suspended solids, nutrients and pollutants. Proper maintenance of porous pavement is crucial for ensuring its longevity and functionality to infiltrate runoff.

#### Maintenance

- New porous pavement shall be inspected several times in the first month after construction and at least annually thereafter. Inspections shall be conducted after major storms to check for surface ponding that might indicate possible clogging.
- Inspect annually for pavement deterioration or spalling.
- Vacuum sweeping shall be performed once a year or as needed to maintain permeability. Power washing may be required prior to vacuum sweeping to dislodge trapped particles.
- Sand and abrasives shall not be used for winter maintenance, as they will clog the pores; de-icing materials shall be used instead.
- Never reseal or repave with impermeable materials. If the porous pavement is damaged, it can be repaired using conventional, non-porous patching mixes as long as the cumulative area repaired does not exceed 10 percent of the paved area.

#### APPPENDIX

- A. Stormwater System Operations and Maintenance Report
- B. Site Grading and Drainage Plan

#### STORM WATER SYSTEM OPERATION AND MAINTENANCE REPORT

	General Information						
Project Name							
Owner							
Inspector's Name(s)							
Inspector's Contact Information							
Date of Inspection	Start Time:	End Time:					
Type of Inspection:          Post-storm event        Due to a discharge of significant amounts of sediment							
Notes:							

	General Site Questions and Discharges of Significant Amounts of Sediment						
Sub	ject	Status	Notes				
A d	ischarge of significant amounts of sedime.	nt may be i	ndicated by (but is not limited to) observations of the following.				
Not	e whether any are observed during this in	spection:					
			Notes/ Action taken:				
1	Do the current site conditions reflect	□Yes					
	the attached site plan?	□No					
2	Is the site permanently stabilized,	□Yes					
	temporary erosion and sediment	□No					
	controls are removed, and stormwater						
	discharges from construction activity						
	are eliminated?						
3	Is there evidence of the discharge of	□Yes					
	significant amounts of sediment to	□No					
	surface waters, or conveyance systems						
	leading to surface waters?						

	Permit Coverage and Plans						
#	BMP/Facility	Inspected	Corrective Action Needed and Notes	Date Corrected			
	Catch Basins	□Yes □No					
	Drainage Pipes	□Yes □No					
	Riprap Aprons/Plunge Pools	□Yes □No					
	Site Vegetation	□Yes □No					
	Infiltration Basins	□Yes □No					

• INSPECTOR TO TAKE REPRESENTATIVE PHOTOGRAPHS OF EACH BMP INSPECTED AND INCLUDE THEM IN THE ANNUAL INPECTION REPORT.

# Watershed Plans

Pre-Development Watershed Plan Post-Development Watershed Plan



## LEGEND



	GRAPHIC SCALE					
20	Ŷ	10	20	40 I		
	( IN FEET )					



	ALTUS ENGINEERING
	133 Court Street (603) 433-2335Portsmouth, NH 03801 www.altus-eng.com
NHSPC (NAD83)	ERIC D. WEINRIEB No. 7634 CENSED NO. 7634
	ISSUED FOR:
	ISSUE DATE:
	<b>REVISIONS</b> NO. DESCRIPTIONBYDATE0INITIAL SUBMISSIONEDW01/29/25
20	
	DRAWN BY:
RIDO	DRAWING FILE: 5639.dwg
IT S S IT S	$\frac{\text{SCALE:}}{(22^{"}\times34^{"}) \ 1^{"} = 20'}{(11^{"}\times17^{"}) \ 1^{"} = 40'}$
	OWNERS/APPLICANTS:
JRT	& MICHAEL RAINBOTH, TRUSTEE
	TRUSTEES OF RAINBOTH REVOCABLE TRUST OF 2010
	122 NEW CASTLE AVENUE
	PORTSMOUTH, NH 03801
	PROJECT:
	RESIDENTIAL ADDITION
	TAX MAP 207
	LOT 63, 68, AND 69
	DO RIDGES COURT PORTSMOUTH, NEW HAMPSHIRE
	PRE WATERSHED PLAN
	SHEET NUMBER:
P5639	WS-1

# LEGEND

	WATERSHED BOUNDARY			
>	Tc PATH			
>	REACH PATH			
	SOIL BOUNDARY			
799	SOIL DESIGNATION			
	SOILS - HSG A			
	SOILS - HSG B			
	SOILS - HSG C			
	SOILS - HSG D			
	SOILS - IMPERVIOUS PAVE/BLDG			
	SOILS - OPEN WATER			
	SUBCATCHMENT/POND/REACH			
POA	POINT OF ANALYSIS			

		<b>GRAPHIC SCALE</b>				
20	Q	10	20	40		
		( IN FEET )				



(IADB3)	ALTON         ALTON
N	ISSUED FOR: CONSERVATION COMMISSION
20- — —	ISSUE DATE:FEBRUARY 20, 2025REVISIONSNO.BYDATE0INITIAL SUBMISSIONEDW1CONSERVATION COMMISSIONEDW202/20/25
RIDGES	DRAWN BY:
COURT	OWNERS/APPLICANTS: ANNEMARIE RAINBOTH, TRUSTEE & MICHAEL RAINBOTH, TRUSTEE TRUSTEES OF RAINBOTH REVOCABLE TRUST OF 2010
	122 NEW CASTLE AVENUE PORTSMOUTH, NH 03801
	PROJECT: RESIDENTIAL ADDITION TAX MAP 207 LOTS 63, 68, AND 69 56 RIDGES COURT PORTSMOUTH, NEW HAMPSHIRE MILE: POST WATERSHED PLAN
, ( )      	SHEET NUMBER: WS-2

# PROPOSED ADDITION **RAINBOTH RESIDENCE**

# 56 Ridges Court Portsmouth, New Hampshire

# Assessor's Parcel 207, Lots 63, 68, and 69

# *Owner/Applicant:* ANNEMARIE RAINBOTH, TRUSTEE & MICHAEL RAINBOTH, TRUSTEE

TRUSTEES OF RAINBOTH **REVOCABLE TRUST OF 2010** 

122 New Castle Avenue Portsmouth, NH 03801 (603) 431-1993



Surveyor: North Easterly Surveying SURVEYORS IN N.H. & MAINE 1021 Goodwin Road, Unit #1 Eliot, Maine 03903

(207) 439–6333

# Building Designer: AMY DUTTON

9 Walker Street Kittery, ME 03904 (207) 345-6050

# Wetland Scientist: JOSEPH W. NOEL, NH CWS #086

P.O. Box 174 South Berwick, ME 03908 (207) 384-5587

Plan Issue Date:

January 29, 2025 February 20, 2025 Conservation Commission (Initial Submission) **Conservation Commission** 



Sheet Index Title

Existing Conditions Plan (by Site Preparation Plan Site Plan Grading & Drainage Plan Detail Sheet Detail Sheet Detail Sheet Proposed Foundation Plan Elevations Elevations

	Sheet No.:	Rev.	Date
Easterly)	1 OF 1	0	02/22/24
	C-1	0	01/29/25
	C-2	1	02/20/25
	C-3	1	02/20/25
	D-1	0	02/20/25
	D-2	1	02/20/25
	D-3	1	02/20/25
	A-8	0	02/17/25
	A-16	0	02/17/25
	A-17	0	02/17/25







NOTES:

1. OWNERS OF RECORD: TAX MAP 207 LOTS 63, 68, 69 MICHAEL RAINBOTH, TRUSTEE ANNEMARIE RAINBOTH, TRUSTEE TRUSTEES OF THE RAINBOTH REVOCABLE TRUST OF 2010 R.C.R.D. BOOK 6513 PAGE 673 DATED OCTOBER 19, 2023

2. TOTAL EXISTING PARCEL AREAS: TAX MAP 207 LOT 63 20,585± Sq. Ft.

> TAX MAP 207 LOT 68 5,201± Sq. Ft.

> TAX MAP 207 LOT 69 5,176± Sq. Ft.

3. BASIS OF BEARING IS PER NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM (NAD83).

4. APPROXIMATE ABUTTER'S LINES SHOWN HEREON ARE FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE RELIED UPON AS BOUNDARY INFORMATION.

5. THE SUBJECT PARCELS ARE CONVEYED TOGETHER WITH THE RIGHT "TO USE THE STREET LEADING TO SAID GRANTED PREMISES FROM NEW CASTLE AVENUE FOR ALL USUAL AND CUSTOMARY PURPOSES". REFERENCE IS MADE TO R.C.R.D. DEED BOOK 6513 PAGE 673. EASEMENTS OR OTHER UNWRITTEN RIGHTS MAY EXIST THAT ENCUMBER OR BENEFIT THE PROPERTY NOT SHOWN HEREON.

6. PORTIONS OF THE SUBJECT PARCELS APPEAR TO LIE WITHIN A 100' WETLAND BUFFER ZONE, AS SHOWN HEREON. REFERENCE IS MADE TO THE CITY OF PORTSMOUTH ZONING ORDINANCE ARTICLE 10 (ENVIRONMENTAL PROTECTION STANDARDS). ZONING INFORMATION AND SETBACKS SHOWN HEREON ARE FOR REFERENCE PURPOSES. CONFIRM CURRENT ZONING REQUIREMENTS WITH THE CITY OF PORTSMOUTH PRIOR TO DESIGN OR CONSTRUCTION. ADDITIONAL ZONING REQUIREMENTS MAY APPLY THAT ARE NOT SHOWN HEREON.

7. THE BOUNDARY SHOWN HEREON IS DETERMINED FROM WRITTEN RECORDS, FIELD EVIDENCE AND PAROL TESTIMONY RECOVERED AT THE TIME OF SURVEY AND MAY BE SUBJECT TO CHANGE IF OTHER EVIDENCE BECOMES AVAILABLE.

8. PORTIONS OF THE SUBJECT PARCELS APPEAR TO LIE WITHIN FEMA SPECIAL FLOOD HAZARD AREA ZONE AE (EL. 8). REFERENCE IS MADE TO FEMA FLOOD INSURANCE RATE MAP NUMBER 33015C0259F, MAP REVISED 1/29/2021. LIMITS OF SAID FLOOD ZONE SHOWN HEREON ARE PER THIS REFERENCED FLOOD MAP.

9. THE WESTERLY BOUNDARY LINES OF THE SUBJECT PARCELS ABUT AN UNNAMED STREET, AS SHOWN ON PLAN REFERENCE #1. THIS STREET IS UNDEVELOPED AND THEREFORE MAY BE CONSIDERED A "PAPER STREET". PLAN REFERENCE #2 DEPICTS A POTENTIAL OWNERSHIP CLAIM TO ONE HALF OF THE UNDEVELOPED STREET THAT DIRECTLY ABUTS THE SUBJECT PARCELS. CONSULTATION WITH A REAL ESTATE ATTORNEY IS ADVISED REGARDING THIS MATTER.

				EXISTING CONDITIONS PLAN					
F						56 Rida	es Court		
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DNIA	108					OWNE	D BY		
poling			-		Michae	l Rain	both, I	rustee	
TURE				Ar	nnemai	rie Ra	inboth,	Truste	e
2/22/2024				Trustees of the Rainboth Revocable Trust of 2010					
				North					
				W EASTERLY					
IG CONDITIONS FOR RD BOUNDARY SURVEY			/EY		9	SURVE	YING		
OR CONVEYANCE, OR			R	SUDVEVODS	INNH	MAINE	1021 GOOD	WIN ROAL	). UNIT #1
				(207	() 439-633	3	ELIOT	, MAINE	03903
				SCALE:	PROJECT NO.	DATE:	SHEET:	DRAWN BY:	CHECKED BY:
				1" = 20'	23712	2/22/24	1 OF 1	J.D.S.	P.L.A.
				DRAWING No: 2	23712 EXISTING	CONDITIONS	Tax Map 2	07 Lots	63. 68. 69
	BY	CHKD	APPD.	FIELD BOOK No:	"Portsmouth	#18″			







### SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION PROPOSED RESIDENTIAL ADDITION & SITE IMPROVEMENTS 56 RIDGES COURT PORTSMOUTH, NEW HAMPSHIRE TAX MAP 207 LOT 63, 68 & 69

LONGITUDE: -70°45'20" W LATITUDE: 43°04'10" N

OWNER / APPLICANT:

ANNEMARIE RAINBOTH, TRUSTEE & MICHAEL RAINBOTH, TRUSTEE TRUSTEES OF RAINBOTH REVOCABLE TRUST OF 2010 122 NEW CASTLE AVENUE PORTSMOUTH, NH 03801

#### DESCRIPTION

The project consists of the removal of a garage and the construction of an addition to a single-family residential home along with associated site improvements.

#### DISTURBED AREA

The total area to be disturbed for the redevelopment improvements is approximately 10,500 S.F. (±0.24 acres)

#### PROJECT PHASING

The proposed project will be completed in one phase

#### NAME OF RECEIVING WATER

The site drains overland to an unnamed wetland leading to Little Harbor.

#### SEQUENCE OF MAJOR ACTIVITIES

- 1. Install temporary erosion control measures including silt fences, stabilized construction entrance and inlet sediment filters as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project. 2. Raze existing structures or portions thereof as shown,
- 3. Strip loam and stockpile.
- 4. Construct site features as shown on plan.
- 5. Rough grade site including placement of borrow materials.
- 6. Construct drainage structures, culverts, utilities & swales.
- 7. Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized. 8. Install permeable & impervious driveway.
- 9. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.

#### TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Work shall conform to the practices described in the "New Hampshire Stormwater Manual, Volumes 1 - 3", issued December 2008, as amended. As indicated in the sequence of Major Activities, the silt fences shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area, silt fences and any earth/dikes will be removed once permanent measures are established.

During construction, runoff will be diverted around the site with stabilized channels where possible Sheet runoff from the site shall be filtered through hay bale barriers, stone check dams, and silt fences. All storm drain inlets shall be provided with hay bale filters or stone check dams. Stone rip rap shall be provided at the outlets of drain pipes and culverts where shown on the drawings.

Stabilize all ditches, swales, & level spreaders prior to directing flow to them.

Temporary and permanent vegetation and mulching is an integral component of the erosion and sedimentation control plan. All areas shall be inspected and maintained until vegetative cover is established. These control measures are essential to erosion prevention and also reduce costly rework of graded and shaped areas.

Temporary vegetation shall be maintained in these areas until permanent seeding is applied. Additionally, erosion and sediment control measures shall be maintained until permanent vegetation is established

#### INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

A. GENERAL

These are general inspection and maintenance practices that shall be used to implement the

- . The smallest practical portion of the site shall be denuded at one time. 2. All control measures shall be inspected at least once each week and following any storm event of 0.25 inches or greater.
- 3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours. 4. Built-up sediment shall be removed from silt fence or other barriers when it has reached
- one-third the height of the fence or bale, or when "bulges" occur.
- 5. All diversion dikes shall be inspected and any breaches promptly repaired. 6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy
- growth. 7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
- 8. An area shall be considered stable if one of the following has occurred:
- a. Base coarse gravels have been installed in areas to be paved; b. A minimum of 85% vegetated growth as been established;
- c. A minimum of 3 inches of non-erosive material such as stone of riprap has been installed; — or —
- d. Erosion control blankets have been properly installed. 9. The length of time of exposure of area disturbed during construction shall not exceed 45 days.
- B. MULCHING

Mulch shall be used on highly erodible soils, on critically eroding areas, on areas where conservation of moisture will facilitate plant establishment, and where shown on the plans.

- Timing In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this: a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
- b. Required Mulching within a specified time period. The time period can range from 21 to 28 days of inactivity on a area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

#### INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

2.	Guidelines for Winter Mulch	Application –
	<u>Type</u> Hay or Straw	<u>Rate per 1.000 s.f.</u> 70 to 90 lbs.
	Wood Chips or Bark Mulch	460 to 920 lbs.
	Jute and Fibrous Matting (Erosion Blanket	As per manufacturer Specifications
	Crushed Stone 1/4" to 1-1/2" dia.	Spread more than 1/2" thick
	Erosion Control Mix	2" thick (min)

3. Maintenance - All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

C. TEMPORARY GRASS COVER

- 1. Seedbed Preparation -
- Apply fertilizer at the rate of 600 pounds per acre of 10-10-10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.
- 2. Seeding -
- a. Utilize annual rye grass at a rate of 40 lbs/acre. b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed. c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and
- fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.
- 3. Maintenance -

Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (mulch, filter barriers, check dams, etc.).

D. FILTERS

1. Sequence of Installation -

drainage area.

- 2. Maintenance a. Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any sians of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water, the sediment barriers shall be replaced with a temporary stone check dam.
- b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be
- a. Sediment deposits must be removed when deposits reach approximately one-third (1/3) the height of the barrier.
- b. Any sediment deposits remaining in place after the silt fence or other barrier is no longer required shall be removed. The area shall be prepared and seeded.
- c. Additional stone may have to be added to the construction entrance, rock barrier and riprap lined swales, etc., periodically to maintain proper function of the erosion control structure.
- E. PERMANENT SEEDING -
- 1. Bedding stones larger than  $1\frac{1}{2}$ ", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.
- 2. Fertilizer lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

Agricultural Limestone @ 100 lbs. per 1,000 s.f. 10-20-20 fertilizer @ 12 lbs. per 1,000 s.f.

3. Seed Mixture (recommended):

<u>Type</u> Tall Fescue	<u>Lbs. / Acre</u> 24	<u>Lbs.</u> 0.55
Creeping Red Fescue	24	0.55
Total	48	1.10

Seed Mixture (For slope embankments): Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified:

	Min. <u>Purity (%)</u>	Min. <u>Germination</u>
Creeping Red Fescue (c)	96	85
Perennial Rye Grass (a)	98	90
Redtop	95	80
Alsike Clover	97	90(e)

- a. Ryegrass shall be a certified fine-textured variety such as Pennfine, Fiesta, Yorktown, Diplomat, or equal.
- b. Fescue varieties shall include Creeping Red and/or Hard Reliant, Scaldis, Koket, or Jamestown.

- Use and Comments Must be dry and free from mold. May be used with plantings.
- Used mostly with trees and shrub plantings.
- Used in slope areas, water courses and other Control areas
- Effective in controlling wind and water erosion
- \* The organic matter content is between
- 80 and 100%, dry weight basis. \* Particle size by weight is 100% passing
- a 6"screen and a minimum of 70 %, maximum of 85%, passing a 0.75" screen. \* The organic portion needs to be fibrous
- and elongated. \* Large portions of silts, clays or fine sands are not acceptable in the mix.
- \* Soluble salts content is less than 4.0 mmhos/cm.
- \* The pH should fall between 5.0 and 8.0.

- Sediment barriers shall be installed prior to any soil disturbance of the contributing upslope

- <u>/ 1,000 sf</u>
- Kg./Hectare (%) (Lbs/Acre) 45 (40) 35 (30) 5 (5) 5 (5)
- Total 90 (80)

#### INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

4. Sodding - sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt), etc.

#### WINTER CONSTRUCTION NOTES

- 1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events;
- 2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and
- 3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.





INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS; PLACE

AND PLACE THE GRATE INTO CATCH BASIN INSERT SO THE GRATE IS BELOW THE TOP STRAPS AND

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF THE UNIT AFTER

EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE CATCH

BASIN INSERT. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE

REMOVE THE GRATE. IF USING OPTIONAL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.

EMPTIED. TO EMPTY THE UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND

ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

ABSORBENT PILLOW IN UNIT. STAND GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY



- ENGINEER.

A SIMPLE SHEET OF GEOTEXTILE UNDER THE GRATE IS NOT ACCEPTABLE.

UNACCEPTABLE INLET PROTECTION METHOD:

INSTALLATION AND MAINTENANCE:

### STORM DRAIN INLET PROTECTION

NOT TO SCALE













#### City of Portsmouth, New Hampshire

#### Wetland Conditional Use Permit Application Checklist

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

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

Name of Applicant:	Date Submitted:	
		_

Application # (in City's online permitting): \_\_\_\_\_

Site Address: \_\_\_\_\_\_ Map: \_\_\_\_\_ Lot: \_\_\_\_\_

 Image: Page of the second s

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

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

Applicant's Signature: \_\_\_\_\_\_ Date: \_\_\_\_\_\_

Wetland Conditional Use Permit Application Checklist/February 2025

Project Plan: Tree Removal, 200 F W Hartford Dr, Portsmouth, NH 03801

Tracey Foster

To: Conservation Committee

Subject: Backyard tree removal

Removal of six trees in the back yard, two maple and four pine trees. Stumps will remain in place.

2024 Winter we lost limbs from these trees towards the house. Growth of mold and moss on the house due to location of these trees and lack of sun.

Maple Tree closest to the house is "at risk" per Chris Kemp, Plant Healthcare Manager, ISA Certified Arborist, due to disease, see attached photos.

See map of trees to be removed. Trees are located in the wetlands buffer.

With the stumps staying in place, we will plant two new trees and four new bushes. The new trees will be red maple. The bushes will be native Winterberry, *llex verticillata*. The new bushes and trees will be planted in the same general area of the removed trees. The impact to the wetland buffer will be minimal, if any, due to the stumps remaining in place and new plants added.

Figure 1: Red "X" indicates tree to be removed. Red "X" with circle is tree that is "At Risk." Green dots is where the new bushes and trees will be planted.

Figure 2: Identifies that most of the house and all of the back yard are in the buffer zone, which remains untouched since built in 1983.

Thank you for your consideration in this matter.

Sincerely,

Tracey Foster

200 F W Hartford Dr

703-731-9241

Figure 1: Trees removed and new tree/bush locations.

#### **RE: Tree in guestion**

From: Chris Kemp (ckemp@piscataqualandscaping.com)

- To: gerin02@yahoo.com
- Date: Monday, February 24, 2025 at 02:36 PM EST

Email | Website

Hello Tracey,

Thank you for forwarding the photos of the red maple tree in question. When we looked at this tree last autumn I had concerns about its' structural integrity. I am calling this tree "at risk" since the amount of decay in the lower portion of the trunk is significant and its' location on the property is within striking distance to the house. I am recommending removal of this maple for safety reasons. Please let me know if you have any questions. Thank you! Chris.

Chris Kemp Plant Healthcare Manager ISA Certified Arborist Tree Risk Assessment Qualified (207)/39-2241

From: Tracey-Dave Foster <gerin02@yahoo.com> Sent: Wednesday, February 19, 2025 12:56 PM To: Chris Kemp <ckemp@piscataqualandscaping.com> Subject: Re: Tree in question

[CAUTION EXTERNAL EMAIL: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.]



#### Figure 2: Wetlands map.















#### City of Portsmouth, New Hampshire

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		_

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Site Address: \_\_\_\_\_\_ Map: \_\_\_\_\_ Lot: \_\_\_\_\_

 Image: Page of the second s

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	All new pavement within a wetland buffer shall be porous pavement. (10.1018.31)	
	An application that proposes porous pavement in a wetland buffer shall include a pavement maintenance plan. (10.1018.32)	
	Permanent wetland boundary markers shall be shown on the plan submitted with an application for a conditional use permit and shall be installed during project construction. (10.1018.40)	
Ø	Requested Items for Submittal	Item Location (e.g. Page or Plan Sheet/Note #)
	A narrative/letter addressed to the Conservation Commission Chair (if recommended to Planning Board then an additional narrative addressed to the Planning Board Chair at that time) describing the project and any proposed wetland and/or wetland buffer impacts. Please visit the <u>WCUP instruction page</u> for further application instructions.	· · ·
	If New Hampshire Department of Environmental Services (NHDES) Standard Dredge and Fill Permit is required for this work, please provide this permit application at the same time as your submission for a Wetland Conditional Use Permit.	

Applicant's Signature: \_\_\_\_\_\_ Date: \_\_\_\_\_\_

Wetland Conditional Use Permit Application Checklist/February 2025

#### MEMORANDUM



Peter Britz, City of Portsmouth Director of Planning and Sustainability
Kate Homet, City of Portsmouth Environmental Planner
Sarah Sullivan (Large), FB Environmental Associates
224 Cate Street Wetland Buffer Restoration
February 18, 2025
Jesse Anderson (property owner); Forrest Bell & Kevin Ryan, FB Environmental Associates

Attachments: 1) Wetland Delineation Map; 2) Site Map; 3) Site Photographs

.....

FB Environmental Associates (FBE) was contracted by Jesse Anderson, owner of 224 Cate Street (Map 173, Lot 3) in Portsmouth, New Hampshire, to assist with a wetland buffer restoration project addressing a violation of the city's 100-foot wetland buffer ordinance. Sarah Sullivan (Large), CWS, began coordination with Jesse Anderson in mid-December and conducted an initial site visit on 29 January 2025.

The City's violation letter cites vegetation and tree removal, as well as soil disturbance, within 100 feet of Hodgson Brook. The work was unintentionally conducted without approval. During coordination on future redevelopment plans, the property owner became aware of the Wetlands Protection Ordinance. A Land Use and Wetland Conditional Use Application has been submitted through the City's online permitting system.

This memorandum and its attachments supplement the submission.

#### SITE DESCRIPTION

The property includes a two-story house, garage, gravel driveway, shed, two stone retaining walls, and a backyard. The yard slopes gradually north to south toward Hodgson Brook, a perennial watercourse that flows west to east along the southern boundary, between the parcel and Hodgson Way. Two large tree stumps are present upslope from the brook. Snow cover obscured the ground during the site visit, but there was little to no evidence of shrub or tall herbaceous vegetation throughout the yard. Based on photographs provided by the property owner and Google Earth imagery, the yard appears to be a maintained lawn.

The sloped embankment along Hodgson Brook is sparsely vegetated with trees and shrubs, including white ash (*Fraxinus americana*), maple (*Acer* sp.), red-osier dogwood (*Cornus sericea*), weeping forsythia (*Forsythia suspensa*), multiflora rose (*Rosa multiflora*), and Japanese knotweed (*Fallopia japonica*). Only a few isolated individuals of the non-native, invasive multiflora rose and Japanese knotweed were observed, comprising less than 1% of the wetland buffer. A berm with 15 Virginian arborvitae/western red cedar (Thuja plicata x standishii) trees lines the western edge of the backyard.

Due to its proximity to Hodgson Brook, approximately 69% of the lot falls within the City's 100-foot wetland buffer, with about 15% of the buffer occupied by residential development.

Hodgson Brook was mostly frozen during the site visit, though a small exposed section contained up to six inches of flowing water. It is classified as an upper perennial riverine system with an unconsolidated cobble-gravel and sand substrate (R3UB1/2). The watercourse, influenced by its urban surroundings, follows a linear channel constrained between two embankments. The northern edge of Hodgson Brook within the property was delineated, where the ordinary high-water mark and top of bank coincide.

#### **RESTORATION PLAN & WETLAND BUFFER ENHANCEMENT**

To restore the site, exposed topsoil in the backyard will be seeded with grass to re-establish groundcover. The vegetated buffer along Hodgson Brook will be enhanced with native shrubs, primarily red-osier and/or gray dogwood (*Cornus racemosa*), to improve soil stabilization and stormwater management. Five dogwood shrubs, spaced 10 feet apart in a triangular pattern, will be planted within the buffer enhancement area shown on the Site Plan. If unavailable, alternative native species suited to well-drained, sandy loam soils, such as highbush blueberry (*Vaccinium corymbosum*) and smooth arrowwood (*Viburnum dentatum*), may be used.

This work will occur in the spring, during the growing season. Establishing vegetated groundcover and plantings isn't feasible in the winter. In the meantime, the current snow cover acts as a protective blanket over the exposed soils, preventing sediment from entering the stream. Erosion control measures, consisting of a silt sock, have been installed along the top of the slope adjacent to the brook, which will be monitored and adjusted as needed once the snow has melted.

#### WETLAND CONDITIONAL USE PERMIT APPLICATION – SUPPLEMENTAL INFORMATION

#### Wetland Buffer Impacts (10.1017.23 & 10.1017.50)

The impacts within the wetland buffer include tree removal and soil disturbance within 100 feet of Hodgson Brook, conducted unintentionally without prior approval.

- The property owner states that the two removed trees, a red oak (*Quercus rubra*) and an ash (*Fraxinus* sp.), were diseased and deteriorating, posing a risk to property and human traffic underneath.
- A contractor used tracked machinery to access and remove the trees, disturbing the lawn's topsoil.
- A Wetland Conditional Use Permit application is submitted to address the violation and restore the wetland buffer.
- The proposed site alteration is the least impactful alternative under the Wetlands Protection Ordinance.
- The restoration aims to re-establish previous site conditions while enhancing the vegetated buffer along the brook.

The following address the Criteria for Approval in Section 10.1017.50:

- 1. Suitability The land is well-suited for this activity; the yard was previously lawn and will be restored. Native plantings will help compensate for the trees removed.
- 2. No feasible alternative There is no feasible alternative location outside the wetland buffer; the work is focused on restoration.
- 3. Wetland buffer functions Re-established groundcover and native plantings will enhance shoreline stabilization, sediment retention, nutrient attenuation, and stormwater management, protecting Hodgson Brook's water quality.
- 4. Minimal necessary alteration Tree removal was limited to what was necessary to protect the property, structures, and people traversing the site.
- 5. Least adverse impact The proposed restoration minimizes impacts to the wetland buffer and Hodgson Brook while addressing the violation.
- 6. Natural state restoration Areas within the vegetated buffer will be returned to a natural state to the maximum extent feasible. Areas of exposed soil will be stabilized and returned to grass. Native plantings will compensate for the tree removal and enhance the buffer along Hodgson Brook.

#### Vegetated Buffer Strip (10.1018.22)

The sloped embankment along Hodgson Brook is greater than 10%. Therefore, per Article 10.1018.22 the Vegetated Buffer Strip along the perennial stream is 40 feet from the wetland resource.

#### **Removal or Cutting of Vegetation** (10.1018.23)

The two trees removed are located near the 40-foot Vegetated Buffer Strip (see attached Site Map). Included with this memo is documentation from the company hired to remove the two trees noting their assessment of the health and status of the trees. The disturbed topsoil will be seeded with grass to re-establish groundcover.

#### 224 CATE STREET PORTSMOUTH | WETLAND BUFFER RESTORATION MEMO

#### ATTACHMENT 1. WETLAND DELINEATION MAP


#### 224 CATE STREET PORTSMOUTH | WETLAND BUFFER RESTORATION MEMO

#### ATTACHMENT 2. SITE MAP



#### **ATTACHMENT 3. SITE PHOTOGRAPHS**



**Photo 1.** View facing west of the cut tree stumps and vegetation along Hodgson Brook. Photo taken 29 January 2025.



**Photo 2.** View of the property's backyard looking northwest toward the western boundary, lined with a row of planted arborvitae (*Thuja* sp.). Photo taken 29 January 2025.



**Photo 3.** Hodgson Brook, a perennial watercourse, flows west to east along the property's southern boundary. Photo taken 29 January 2025.



**Photo 4.** Vegetation on the embankment along Hodgson Brook consists of a sparse mix of trees and shrubs. Photo taken 29 January 2025.



**Photo 5.** A Google Earth aerial image of 224 Cate Street from April 2013 depicting existing conditions.



**Photo 6.** A Google Earth aerial image of 224 Cate Street from April 2016 depicting existing conditions.



**Photo 7.** A Google Earth aerial image of 224 Cate Street from May 2018 depicting existing conditions.



**Photo 8.** A google street view image facing Hodgson Brook and 224 Cate Street depicting conditions without snow cover.

#### 224 CATE STREET PORTSMOUTH | WETLAND BUFFER RESTORATION MEMO



**Photo 9.** Image of soil disturbance from fall 2024, provided by the property owner.



**Photo 10.** An image of the soil disturbance and remaining stumps, provided by the property owner.



**Photo 11.** Silt sock erosion control measures installed at the top of the embankment above Hodgson Brook. Photo provided by the property owner.



I: P:NHI5010480-EDDIE HAUCKI001-ALPINE CONSTRUCTION\_236 CATE ST.-CSAI02-CAD\_FILESISURVEYI5010480-V-EC.DWG, 2024.10.11



#### Sarah Large <sarahl@fbenvironmental.com>

# Fwd: Tree removal

Jesse Anderson <jesse@andersonweldingllc.com> To: Sarah Large <sarahl@fbenvironmental.com> Thu, Dec 12, 2024 at 3:22 PM

Anderson Welding LLC AWCO Jesse Anderson Owner Office: (603)905-9955 Cell: (603)828-5876 19 Colonial Way Barrington NH 03825 www.AWCOutilities.com

------ Forwarded message ------From: **Timber Falls Tree Care** <timberfallstreecare@gmail.com> Date: Thu, Dec 12, 2024 at 3:16 PM Subject: Tree removal To: <Jesse@andersonweldingllc.com>

To whom it may concern.

Jesse Anderson hired my company Timber Falls Tree Care for the services of removing 2 trees in his backyard. One of the trees was an Ash tree which due to the Emerald Ash bore beetle left the tree in a rapid state of structural collapse. The second tree was an aging Red oak tree with evidence of past upper canopy failures and substantial visible decaying wood roughly 20' up on the main trunk. With the forecasted constructions plans discussed with the land owner we decided to remove the tree as the traffic under the canopy of the tree will be increasing over the next several months.

Thank you Derek Barnett



#### Sarah Large <sarahl@fbenvironmental.com>

# **Project Check In**

Jesse Anderson <jesse@andersonweldingllc.com> To: Sarah Large <sarahl@fbenvironmental.com> Cc: Forrest Bell <info@fbenvironmental.com>

Sarah,

You have my approval to move forward and represent me on my behalf.

Jesse

Anderson Welding LLC AWCO Jesse Anderson Owner Office: (603)905-9955 Cell: (603)828-5876 19 Colonial Way Barrington NH 03825 www.AWCOutilities.com

[Quoted text hidden]

Wed, Feb 19, 2025 at 12:36 PM



# STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION Water Division / Land Resources Management Check the Status of your Application



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

#### **APPLICANT'S NAME:**

#### TOWN NAME:

			File No.:
Administrative	Administrative	Administrative	Check No.:
Only	Only	Only	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 <u>Waiver Request Form</u>.

SEC	SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))		
Plea <u>Res</u> pro	Please use the <u>Wetland Permit Planning Tool (WPPT</u> ), the Natural Heritage Bureau (NHB) <u>DataCheck Tool</u> , the <u>Aquatic</u> <u>Restoration Mapper</u> , or other sources to assist in identifying key features such as: <u>Priority Resource Areas (PRAs</u> ), <u>protected species or habitats</u> , coastal areas, designated rivers, or designated prime wetlands.		
Has	s the required planning been completed?	🗌 Yes 📃 No	
Doe	es 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 (NHFG) 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? <ul> <li>If yes, species or habitat name(s):</li> <li>NHB Project ID #: B20-3560</li> </ul>	🗌 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	
ls tl	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:		

<ul><li>For dredging projects, is the subject property contaminated?</li><li>If yes, list contaminant:</li></ul>	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 <u>WPPT</u> or Stream Stats):		
SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))		
Provide a description of the project and the purpose of the project, the need for the proposed impacts t	o jurisdictional	
areas, an outline-of the scope of work to be performed, and whether impacts are temporary or permane	ent.	
SECTION 3 - PROJECT LOCATION		
Separate wetland permit applications must be submitted for each municipality within which wetland im	pacts occur.	
ADDRESS:		
TOWN/CITY:		
TAX MAP/BLOCK/LOT/UNIT:		
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME:		

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

SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) IN If the applicant is a trust or a company, then complete v	FORMATION (Env-Wt 311.0 with the trust or company ir	<b>4(a))</b> formation.	
NAME:			
MAILING ADDRESS:			
TOWN/CITY: STATE: ZIP CODE:			ZIP CODE:
EMAIL ADDRESS:			
FAX: PHONE:			
ELECTRONIC COMMUNICATION: By initialing here, I her this application electronically.	eby authorize NHDES to cor	nmunicate all ma	atters relative to
SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-	Wt 311.04(c))		
LAST NAME, FIRST NAME, M.I.:			
COMPANY NAME:			
MAILING ADDRESS:			
TOWN/CITY: STATE: ZIP CODE		ZIP CODE:	
EMAIL ADDRESS:			
AX: PHONE:			
ELECTRONIC COMMUNICATION: By initialing here, I her this application electronically.	eby authorize NHDES to cor	nmunicate all ma	atters relative to
SECTION 6 - PROPERTY OWNER INFORMATION (IF DIF If the owner is a trust or a company, then complete with Same as applicant	FERENT THAN APPLICANT) ( h the trust or company info	Env-Wt 311.04(b mation.	)))
NAME:			
MAILING ADDRESS:			
TOWN/CITY: STATE: ZIP CODE:			ZIP CODE:
EMAIL ADDRESS:			
AX: PHONE:			
ELECTRONIC COMMUNICATION: By initialing here, I her this application electronically.	eby authorize NHDES to cor	nmunicate all ma	atters relative to

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):

#### 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 <u>Wetlands Best Management</u> <u>Practice Techniques For Avoidance and Minimization</u> and the <u>Wetlands Permitting: Avoidance, Minimization and</u> <u>Mitigation fact sheet</u>. 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 <u>Avoidance and Minimization Checklist</u>, the <u>Avoidance and Minimization Narrative</u>, 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 <u>pre-application meeting</u> 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).

NHDES-W-06-012

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

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

JURISDICTIONAL AREA		PERM.	PERM.	PERM.	TEMP.	TEMP.	TEMP.
		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						
	Intermittent / Ephemeral Stream						
ce	Perennial Stream or River						
ırfa	Lake / Pond						
SL	Docking - Lake / Pond						
	Docking - River						
S	Bank - Intermittent Stream						
ank	Bank - Perennial Stream / River						
ä	Bank / Shoreline - Lake / Pond						
	Tidal Waters						
	Tidal Marsh						
dal	Sand Dune						
Tić	Undeveloped Tidal Buffer Zone (TBZ)						
	Previously-developed TBZ						
	Docking - Tidal Water						
	TOTAL						
SEC	TION 12 - APPLICATION FEE (RSA 482-A:3, I)						
	MINIMUM IMPACT FEE: Flat fee of \$400.						
	NON-ENFORCEMENT RELATED, PUBLICLY-FUN	DED AND SU	JPERVISED	RESTORAT	ION PROJEC	TS, REGARD	LESS OF
_	IMPACT CLASSIFICATION: Flat fee of \$400 (ref	er to RSA 48	2-A:3, 1(c)	for restricti	ons).		
	MINOR OR MAJOR IMPACT FEE: Calculate usin	ig the table b	pelow:				
Permanent and temporary (non-docking): SF × \$0.40 = \$			\$				
Seasonal docking structure: SF × \$2.00 = \$				\$			
Permanent docking structure: SF × \$4.00 = \$							
Projects proposing shoreline structures (including docks) add \$400 = \$							
						Total =	\$
1	The application fee for minor or major impact is	s the above d	alculated	total or \$40	0, whicheve	r is greater =	\$

#### NHDES-W-06-012

SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 30 Indicate the project classification.	06.05)			
Minimum Impact Project	Project	Major Project		
SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt	311.11)			
Initial each box below to certify:	-			
Initials To the best of the signer's knowledge and	d belief, all require	d notifications have been provided	ä.	
Initials: The information submitted on or with the signer's knowledge and belief.	e application is tru	e, complete, and not misleading to	the best of the	
<ul> <li>The signer understands that:</li> <li>The submission of false, incomplete, or misleading information constitutes grounds for NHDES to:</li> <li>1. Deny the application.</li> <li>2. Revoke any approval that is granted based on the information.</li> <li>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.</li> </ul>			or NHDES to: ineer licensed to ertification	
Initials: 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.				
SIGNATUBE (OWNER):	PRINT NAME LEGIBLY: Tom Reis		DATE:	
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY: JASON GOULEMAS		DATE:	
SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY: Jay Johonnett		DATE: 12/13/24	
SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env	v-Wt 311.04(f))			
As required by RSA 482-A:3, I(a)(1), I hereby certify plans, and four USGS location maps with the town/	that the applican city indicated bel	t has filed four application forms	, four detailed	
TOWN/CITY CLERK SIGNATURE:		PRINT NAME LEGIBLY:		
TOWN/CITY:		DATE:		

#### DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3, I(a)(1)

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

#### DIRECTIONS FOR APPLICANT:

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

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

APPLICATION CHECKLIST
Unless specified, all items below are required. Failure to provide the required items will delay a decision on your project
and may result in denial of your application. Please reference statute RSA 482-A, Fill and Dredge in Wetlands, and the
Wetland Rules Env-Wt 100-900.
The completed, dated, signed, and certified application (Env-Wt 311.03(b)(1)).
Correct fee as determined in RSA 482-A:3, I(b) or (c), subject to any cap established by RSA 482-A:3, X (Env-Wt
311.03(b)(2)). Make check or money order payable to "Treasurer – State of NH".
The Required Planning actions required by Env-Wt 311.01(a)-(c) and Env-Wt 311.03(b)(3).
US Army Corps of Engineers (ACE) "Appendix B, New Hampshire General Permits (GPs), Required Information and <u>Corps Secondary Impacts Checklist</u> " and its required attachments (Env-Wt 307.02). This includes the <u>US Fish and</u> <u>Wildlife Service IPAC review</u> and <u>Section 106 Historic/Archaeological Resource review</u> .
Project plans described in Env-Wt 311.05 (Env-Wt 311.03(b)(4)).
Maps, or electronic shape files and meta data, and other attachments specified in Env-Wt 311.06 (Env-Wt 311.03(b)(5)).
Explanation of the methods, timing, and manner as to how the project will meet standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7)).
If applicable, the information regarding proposed compensatory mitigation specified in Env-Wt 311.08 and Chapter Env-Wt 800 - <u>Permittee Responsible Mitigation Project Worksheet</u> , unless not required under Env-Wt 313.04 (Env- Wt 311.03(b)(8); Env-Wt 311.08; Env-Wt 313.04).
Any additional information specific to the <b>type of resource</b> as specified in Env-Wt 311.09 (Env-Wt 311.03(b)(9); Env-Wt 311.04(j)).
Project specific information required by Env-Wt 500, Env-Wt 600, and Env-Wt 900 (Env-Wt 311.03(b)(11)).
A list containing the name, mailing address and tax map/lot number of each abutter to the subject property (Env-Wt 311.03(b)(12)).
Copies of certified postal receipts or other proof of receipt of the notices that are required by RSA 482-A:3, I(d) (Env-Wt 311.03(b)(13)).
Project design considerations required by Env-Wt 313 (Env-Wt 311.04(j)).
Town tax map showing the subject property, the location of the project on the property, and the location of properties of abutters with each lot labeled with the name and mailing address of the abutter (Env-Wt 311.06(a)).
Dated and labeled color photographs that:
(1) Clearly depict:
a. All jurisdictional areas, including but not limited to portions of wetland, shoreline, or surface water where impacts have or are proposed to occur.
b. All existing shoreline structures.
(2) Are mounted or printed no more than 2 per sheet on 8.5 x 11 inch sheets (Env-Wt 311.06(b)).
A copy of the appropriate US Geological Survey map or updated data based on LiDAR at a scale of one inch equals 2,000 feet showing the location of the subject property and proposed project (Env-Wt 311.06(c)).
A narrative that describes the work sequence, including pre-construction through post-construction, and the relative timing and progression of all work (Env-Wt 311.06(d)).

For all projects in the protected tidal zone, a copy of the recorded deed with book and page numbers for the property (Env-Wt 311.06(e)).
If the applicant is not the owner in fee of the subject property, documentation of the applicant's legal interest in the subject property, provided that for utility projects in a utility corridor, such documentation may comprise a list that:
(1) Identifies the county registry of deeds and book and page numbers of all of the easements or other recorded instruments that provide the necessary legal interest; and
(2) Has been certified as complete and accurate by a knowledgeable representative of the applicant (Env-Wt 311.06(f)).
The NHB memo containing the NHB identification number and results and recommendations from NHB as well as documentation of any consultation requests made to NHFG, communications and information related to the consultation, with the consultation results and recommendations from NHFG. (Env-Wt 311.06(g)). See <u>Wetlands</u> <u>Permitting: Protected Species and Habitat Fact Sheet</u> .
A statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments (Env-Wt 311.06(h)).
For projects in LAC jurisdiction, a statement of whether the applicant has received comments from the LAC and, if so, how the applicant has addressed the comments (Env-Wt 311.06(i)).
If the applicant is also seeking to be covered by the state general permits, a statement of whether comments have been received from any federal agency and, if so, how the applicant has addressed the comments (Env-Wt 311.06(j)).
Avoidance and Minimization Written Narrative or the Avoidance and Minimization Checklist, or your own avoidance and minimization narrative (Env-Wt 311.07).
For after-the-fact applications: information required by Env-Wt 311.12.
Coastal Resource Worksheet for coastal projects as required under Env-Wt 600.
Prime Wetlands information required under Env-Wt 700. See <u>WPPT</u> for prime wetland mapping.
For non-tidal shoreline structure projects, the length of shoreline frontage per Env-Wt 311.09(b)(1)
Required Attachments for Minor and Major Projects
Attachment A: Minor and Major Projects (Env-Wt 313.03).
Functional Assessment Worksheet or others means of documenting the results of actions required by Env-Wt 311.10 as part of an application preparation for a standard permit (Env-Wt 311.03(b)(3); Env-Wt 311.03(b)(10)). See Functional Assessments for Wetlands and Other Aquatic Resources Fact Sheet. For shoreline structures, see shoreline structures exemption in Env-Wt 311.03(b)(10)).
Optional Materials
Stream Crossing Worksheet which summarizes the requirements for stream crossings under Env-Wt 900.
Request for <u>concurrent processing of related shoreland / wetlands permit applications</u> (Env-Wt 313.05).



# NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

- To: Nyssa Seekamp, Seekamp Environmental Consulting, Inc. 15 Park Street Dover, NH 03820 nmseekamp@gmail.com
- From: NHB Review NH Natural Heritage Bureau Main Contact: Maddie Severance - <u>nhbreview@dncr.nh.gov</u>
- cc: NHFG Review, David Simmons

Date:	09/03/2024 (valid until 09/03/2025)
Re:	DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game
Permits:	NHDES - Shoreland Standard Permit, NHDES - Standard Dredge & Fill - Major

# NHB ID: NHB24-2245

Town:	Portsmouth
Location:	187 Wentworth House Road

**Project Description:** Sea Level, Inc. is undertaking the completion of a remediation project that was begun previously but remains incomplete. During the first remediation attempt a series of soil piles were left in the upland area and within the previously developed 100 foot Tidal Buffer Zone (TBZ). Additionally, a sump was created that disturbed a small portion of salt marsh. The piles of soil have been smoothed over and covered with a gravel base for stabilization until further remediation activities can occur. The purpose of this project is to complete the remediation and restore the disturbed salt marsh area.

# **Next Steps for Applicant:**

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

NHB Comments: No comments at this time.

**NHFG Comments:** Please refer to NHFG consultation requirements below.

#### **NHB Consultation**

If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing <a href="https://nheavy.org/nheavy">nheavy.org/nheavy

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.



# NHB DataCheck Results LetterNH Natural Heritage BureauPlease note: maps and NHB record pages are confidential and shall be redacted from public documents.

#### NH Fish and Game Department Consultation

If this NHB DataCheck letter DOES NOT include <u>ANY</u> wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB DataCheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <a href="https://www.wildlife.nh.gov/wildlife-and-habitat/nongame-and-endangered-species/environmental-review">https://www.wildlife.nh.gov/wildlife-and-habitat/nongame-and-endangered-species/environmental-review</a>. All requests for consultation and submittals should be sent via email to <a href="https://www.wildlife.nh.gov">NHFGreview@wildlife.nh.gov</a> or can be sent by mail, and **must include the NHB DataCheck results letter number and "Fis 1004 consultation request" in the subject line**.

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects <u>not</u> requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email <u>NHFGreview@wildlife.nh.gov</u>, and include the NHB DataCheck results letter number and "review request" in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.



#### **NHB Database Records:**

The following record(s) have been documented in the vicinity of the proposed project. Please see the map and detailed information about the record(s) on the following pages.

Vertebrate species	State <sup>1</sup>	Federal	Notes
Atlantic Sturgeon (Acipenser	Т	Т	Contact the NH Fish & Game Dept (see above) and
oxyrinchus oxyrinchus)			the US Fish & Wildlife Service (see below).
Shortnose Sturgeon (Acipenser	Е	Е	Contact the NH Fish & Game Dept (see above) and
brevirostrum)			the US Fish & Wildlife Service (see below).

<sup>1</sup>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 20 or more years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section above. Contact for federally-listed animals: David Simmons, USFWS, at (603) 223-2541. Contact for federally-listed species: David Simmons, USFWS, at (603) 223-2541.

<u>Disclaimer</u>: NHB's database can only tell you of <u>known</u> occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.

However, many areas have never been surveyed, or have only been surveyed for certain species.

NHB recommends surveys to determine what species/natural communities are present onsite.



NHB DataCheck Results Letter NH Natural Heritage Bureau Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

# NHB24-2245



NHB24-2245

EOCODE:

AFCAA01042\*003\*NH

# New Hampshire Natural Heritage Bureau - Animal Record

#### Atlantic Sturgeon (Acipenser oxyrinchus oxyrinchus)

Legal Status	Conservation Status			
Federal: Listed Threatened	Global: Rare or uncommon			
State: Listed Threatened	State: Critically imperiled due to rarity or vulnerability			
Description at this Location				
Conservation Rank: Not ranked				
Comments on Rank:				
Detailed Description: 2016: 1 individual, sex unknown, der individual, sex unknown, der unknown, detected in Little	own, detected in the lower Piscataqua River. 2015: 1 tected in Portsmouth Harbor. 2012: 1 individual, sex Bay.			
General Area: 2016: Tidal waters in Portsm	nouth Harbor, Little Bay, and the Piscataqua River.			
General Comments:				
Management				
Comments:				
Location				
Current Site Names - Disectory - Diver				
Survey Sile Name: Piscalaqua River				
Managed By:				
County:				
Town(s): Out-Of-State				
Size 77/9 3 acres	Elevation:			
5120. 7745.5 40103				
Precision: Within 1.5 miles of the area indicate	ed on the map (location information is vague or uncertain).			
Directions: 2016: Tidal waters of Portsmouth H	arbor, 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.

NHB24-2245

EOCODE:

AFCAA01010\*001\*NH

# 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 individu the lower Piscat detected in Por Harbor up the P detected in Littl Little Bay.	als, 1 female and 1 sex unknown, detected in Portsmouth Harbor and taqua River. 2015: 3 females and 2 other individuals, sex unknown tsmouth Harbor. 2014: 1 female detected moving from Portsmouth Piscataqua River to the mouth of the Cocheco River. 2012: 1 female le Bay. 2011: 1 female detected in Little Bay. 2010: 1 female detected in
General Area: 2016: Tidal wat	ers 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 P	ortsmouth 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.

#### NHB DataCheck Results Letter

NH Natural Heritage Bureau Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB24-2245

EOCODE:

AFCAA01010\*001\*NH

# WPA Appendix B, Priority Resource Mapping

Per SECTION 1 of the WPA Application, the required planning review for all projects subject to Env-Wt 306.05; RSA 482-A:3, I(d)(2)), has been conducted, with a review of the following tools: the <u>Wetland</u> <u>Permit Planning Tool (WPPT)</u>, the Natural Heritage Bureau (NHB) <u>DataCheck Tool</u>, the <u>Aquatic</u> <u>Restoration Mapper</u>, or other sources to assist in identifying key features such as: <u>Priority Resource</u> <u>Areas (PRAs)</u>, <u>protected species or habitats</u>, coastal areas, designated rivers, or designated prime wetlands.

The site is a PRA, due to its situation within tidelands, shorelands, and wetlands buffer zones. Specific information on protected species or habitats is provided in WPA Appendices C and J.

## **APPENDIX C** -Wildlife Habitat Memorandum

The sites in Portsmouth, NH has the potential to support many wildlife species, including some endangered, threatened or species of greatest concern according to the NH Wildlife Action Plan (WAP). Based on field observations, aerial imagery, and georeferenced habitat data, Seekamp Environmental Consulting, Inc. (SEC) observed four distinctive wildlife habitats on the site, including Hemlock-Hardwood-Pine Forest, Estuarine, Salt Marsh, and Developed. The open water and part of the forested portion of the site contains "Tier 1 Highest Ranked Habitat in NH" for wildlife, as mapped by New Hampshire Fish and Game (NHFG) in the WAP. The site is mapped as having "low permeability" for wildlife connectivity. The landscape's overall ability to allow wildlife to move and disperse was confirmed in the field by SEC.

#### Hemlock-Hardwood-Pine Forest

Hemlock-Hardwood-Pine Forest is an upland habitat that makes up approximately 2,500 SF of the site. These habitats are transitional and can occur over different elevations, topography and soil types. They are comprised mainly of hemlock, white pine, beech, and oak trees. Most species that utilize this habitat require large unfragmented blocks of forest.

According to the NH WAP, hemlock-hardwood-pine forested habitat may support the following species: American woodcock, bald eagle, big brown bat, black-billed cuckoo, blue-spotted salamander complex, Canada warbler, chimney swift, common nighthawk, Eastern box turtle, Eastern hog-nosed snake, Eastern red bat, Eastern small-footed bat, Eastern whip-poor-will, golden eagle, hoary bat, Jefferson salamander complex, little brown bat, moose, Northern black racer, Northern goshawk, Northern long-eared bat, purple finch, rapids clubtail, ringed boghaunter, ruffed grouse, scarlet tanager, silver-haired bat, skillet clubtail, timber rattlesnake, tricolored bat, veery, and wood thrush.

The forested habitat on site is minimal and highly fragmented by surrounding developments. The

NHB Memo (NHB24-2245) results do not indicate that any of these species have been reported to occur on site. It is SEC's opinion that the hemlock-hardwood-pine forest habitat on site is not likely to support the minimum requirements of these species, therefore, there is a low potential for these species to occur on site.

#### **Estuarine**

An estuary is an open water habitat that makes up approximately 0.7 acres of the site. These habitats are formed when freshwater meets saltwater, in NH these habitats are found in the Great Bay and coastal watersheds. This type of habitat includes intertidal mudflats, oyster reefs, and eelgrass beds. Intertidal mudflats are most present on site.

According to the NH WAP, estuarine habitat may support the following species: American black duck, American oyster, American shad, Atlantic sturgeon, blueback herring, rainbow smelt, red

knot, ruddy turnstone, sanderling, sea lamprey, semipalmated sandpiper, shortnose sturgeon, whimbrel, and willet.

The estuarine habitat on site is minimal and fragmented by the marina and boat docks. The NHB Memo (NHB24-2245) results do not indicate that any of these species have been reported to occur on site. It is SEC's opinion that the estuarine habitat on site is not likely to support the minimum requirements of these species, therefore, there is a low potential for these species to occur on site.

# Salt Marsh

Salt marsh is a transitional habitat that makes up approximately 870 SF of the site. These habitats are grass-dominated tidal wetlands which mark the transition between the ocean and upland and are often found bordering estuarine habitats. They provide excellent habitat for bird species and are among the most productive ecosystems. In addition, salt marsh plants are salt-tolerant, and their roots provide stabilization of coastal banks which helps protect from erosion during storm surges and acts as a buffer to surrounding upland habitats.

According to the NH WAP, salt marsh habitat may support the following species: common tern, marsh wren, Nelson's sparrow, Northern harrier, purple martin, red knot, roseate tern, saltmarsh sparrow, saltmarsh tiger beetle, sanderling, seaside sparrow, semipalmated sandpiper, whimbrel, and willet.

The salt marsh habitat on site is minimal and highly fragmented by surrounding developments. The NHB Memo (NHB24-2245) results do not indicate that any of these species have been reported to occur on site. It is SEC's opinion that the salt marsh habitat on site is not likely to support the minimum requirements of these species, therefore, there is a low potential for these species to occur on site.

## Developed

Developed habitat is an upland habitat that makes up approximately 2.7 acres of the site. These habitats include areas that contain residential or commercial development in NH which includes maintained gardens, lawns and buildings and other structures. Some wildlife have learned to use these areas for nesting, food sources and corridors connecting to other habitats.

According to the NH WAP, developed habitat may support the following species: American bumble bee, American kestrel, chimney swift, cliff swallow, common nighthawk, monarch, peregrine falcon, purple martin, rusty-patched bumble bee, yellow bumble bee, and yellowbanded bumble bee.

The developed habitat on site contains minimal vegetation and is highly fragmented from other more productive habitats. There are few food sources present and minimal areas for nesting. The NHB Memo (NHB24-2255) results do not indicate that any of these species have been reported to occur on site. It is SEC's opinion that the developed habitat on site is not likely to support the

minimum requirements of these species, therefore, there is a low potential for these species to occur on site.





#### **MEMORANDUM**

DATE:	April 24, 2023
FILE No.:	2021-075
TO:	Kristen Duclos, Wetlands Specialist, NHDES Wetlands Permitting
FROM:	Jay Johonnett, Rick Kowalski, Aries Engineering (Aries)
CC:	Patrick Seekamp, Seekamp Consulting; Steve Graham, Pete McGlew, Aries; Tom
	Reis, Sea Level LLC
SUBJECT:	Project Background for Permitting
PROJECT:	Sea Level, LLC Marina, 187 Wentworth Road, Portsmouth, NH

This memorandum was prepared in follow up to our Pre-Wetlands Application meeting with you on April 6, 2023, when it was mutually agreed that a history and context for the various permit applications that will be required for this project would be helpful to assist NHDES in its review of wetland, shoreline, and conditional use permit applications that will be submitted for this project. Aries Engineering has been retained by Sea Level, LLC (current property owner) to perform soil remediation planning activities to address polychlorinated biphenyls (PCBs) on the property located at 187 Wentworth Road in Portsmouth, New Hampshire (the Site) in accordance with the Toxic Substances Control Act (TSCA, 40 CFR Part 761.61(a)) using a Self-Implementing Cleanup Plan (SIP) and the New Hampshire Department of Environmental Services (NHDES) regulations Chapter Env-Or 600 Contaminated Site Management. The Site, formerly known as Witch Cove Marina, is now called Portsmouth Marina.

#### SITE LOCATION AND LEGAL DESCRIPTION

The Site is located along the south bank of Sagamore Creek and Witch Cove, on the north side of Wentworth Road in Portsmouth, New Hampshire (see Figure 1, Site Location Map in attached permit application drawing set). Portsmouth municipal records indicate that the Site consists of one 3.07-acre parcel identified as Lot 12 on Portsmouth Assessor's Map 201.

#### SITE AND VICINITY GENERAL DESCRIPTION

The Site is developed with one commercial/retail/warehouse building, three commercial apartment residences, one dry boat storage structure, two garages, and two sheds. The dry boat storage structure was destroyed by fire in November 2021, although the foundation remains, and the owner intends to rebuild the storage structure on the same footprint. The Site has been used for boat storage and as a maintenance facility since initial development in the 1950s. Developed properties in the Site area obtain water from the municipal water supply and domestic wastewater is discharged to private septic systems.

The Site topography generally slopes gently downward toward the north across the Site. The slope steepens sharply upon approaching the shoreline to Witch Cove, where at the shore edge, boulder riprapping serves as a retention and slope stability surface. The topography at the Site generally ranges from elevation 8 to 16 feet as referenced to the North American Vertical Datum

1988 (NAVD88). According to the FEMA Flood Hazard map, the northeast area of the Site along Sagamore Creek, a tidal inlet, is located within the 100-year flood zone (Zone AE) associated with the creek established at elevation 7.90 feet NAVD88. A larger area is within the 500-year flood zone (Zone X) extending to the south from the creek. Review of the project location on the U.S. Fish & Wildlife Service website indicates that wetlands of national significance are present along the banks of Sagamore Creek. The delineation of the wetlands was confirmed by a recent survey completed by Seekamp Environmental Consulting, Inc (Seekamp) of Kingston, NH on August 7, 2020 (Figure 2).

# CURRENT AND PAST USES OF THE PROPERTY

The City of Portsmouth Tax Assessor's database records indicate that the residences and commercial building present on Lot 12 were constructed in 1950. According to the prior owner J.P. Nadeau, the Site was operated as Witch Cove Marina from 2000 to 2016 and was Mike's Marina prior to 2000. Mr. Nadeau indicated that the Site has been used as a boat yard since its initial development sometime in the 1950s. Mr. Nadeau sold the property to Sea Level LLC on August 15, 2016. Review of historic topographic maps and aerial photographs show development of the Site between 1920 and 1956 and it being undeveloped prior to 1920. Two docks are visible in a 1960 aerial photograph indicating the likely use of the Site as a marina. Aerial photographs presented below show how the site continued to be used as a boat storage yard since at least 1992, down to the edge of the shoreline.

## **PRIOR SITE INVESTIGATIONS - REMEDIAL ACTIVITIES**

PCBs were present in the Site soils and adjacent sediments in the cove, from historic maintenance of boats, specifically, the removal of bottom paint that contained PCBs. The results of the prior investigations completed on the Site indicate that PCBs at concentrations up to 100 milligrams per kilogram (mg/kg) had been detected in Site soils. These soils containing elevated concentrations of PCBs were subsequently removed in an attempt to achieve a post remedial condition of <1 mg/kg PCBs remaining in Site soils (as approved by EPA on September 9, 2016). The following is a summary of the activities previously completed on the Site.

#### Initial Subsurface Investigation and 2014 Remediation

A Phase II Environmental Site Assessment (ESA) conducted by Stonehill in 2014 included the collection of eight shallow soil samples from soil borings designated as B-1 through B-8. PCBs were detected in one soil sample (28 mg/kg in B-2) at a concentration above the NHDES Soil Remediation Standard of 1.0 mg/kg. This sample was collected from the area where boats had been historically stored in the off-season. Based upon the review of the assumed isolated area of PCBs around B-2, in Spring 2014 an area 10 feet by 15 feet to a depth of approximately two feet was excavated centered around B-2 by Duffield Engineering & Consulting (Duffield) and disposed off-Site at ESMI Landfill in Loudon, NH. A report was prepared and submitted to NHDES to meet the notification requirements. In June 2014 NHDES advised that PCB-impacted sites fall under EPA jurisdiction and that EPA Region 1 should be contacted.

Duffield subsequently developed a sampling plan to meet the TSCA 40 CFR 761 requirements. A grid layout centered at boring B-2, oriented with north-south and east-west axis and a 1.5-meter



grid spacing was used in a hexagonal configuration per federal regulation and guidance. Subsequent sampling rounds were conducted on 8/31/2014, 9/19/2014, 10/20/2014, 11/6/2014, 12/21/2014, 4/17/2015, 5/15/2015 and 5/4/2015. 154 samples were collected and analyzed. The surface sample results and grid layout are shown on Figure 3A (blue dots).

The PCB impact area was estimated at 2,300 square feet and with a one-foot depth for soil removal proposed by Duffield, equated to approximately 85 cubic yards of soil. Duffield submitted a Self-Implementing Plan (SIP) on August 18, 2015 to EPA to address the PCBs which was approved by EPA on March 15, 2016, but this SIP was never implemented. Upon sale of the property from Mr. Nadeau to Sea Level LLC on August 15, 2016, GeoInsight was subsequently retained to complete additional investigation and remediation by the new Site owner, Sea Level LLC.

## Geoinsight investigation and 2016/2017 Remediation

GeoInsight submitted correspondence to EPA dated July 12, 2016 to present a PCB Cleanup and Disposal Plan Addendum. This Plan, which specified the removal of soils containing PCBs at a concentration >1 mg/kg, was approved by EPA on September 9, 2016.

Prior to implementing the PCB Cleanup and Disposal Plan Addendum, GeoInsight collected additional surface soil samples in July 2016, for PCB analyses in four areas that the highest PCB concentrations were detected. The results of these analyses are depicted on Figure 3A (green dots). The concentrations of PCBs detected in these samples were 20 mg/kg or less.

GeoInsight completed remedial excavation activities in two phases: the first phase consisting of removing and disposing of soils with PCB concentrations  $\geq$ 50 mg/kg and the second phase consisting of removing and disposal of soils with PCB concentrations >1 <50 mg/kg. Between November 15 and 17, 2016, the excavation of three areas ("A", "B" and "C" excavations) with PCBs at concentrations  $\geq$ 50 mg/kg was completed to a depth of 2 feet below grade in the locations shown on Figure 3B. Following the completion of these excavations, GeoInsight collected verification samples. The locations and results of these samples are shown on Figure 3B. A total of 14.11 tons of  $\geq$  50 mg/kg PCB soils were disposed at Wayne Disposal Inc. of Belleville, Michigan on December 20, 2016.

The excavation of soils with concentrations >1 mg/kg and <50 mg/kg occurred between December 15, 2016 and January 3, 2017 to a depth of 1 foot below grade in the area outlined on Figures 2 and Figures 3A-3C (outlined in purple). Following the completion of this excavation, GeoInsight collected verification samples. A total of 141 soil samples were collected. All results were less than 30.5 mg/kg. GeoInsight could not collect all of the planned soil samples for analysis of PCBs in the northernmost area of the excavation during initial excavation activities due to wet conditions. A total of 242.28 tons of <50 mg/kg PCB soils were disposed at the Waste Management of New Hampshire Turnkey Landfill in Rochester, New Hampshire in February 2017.

A small pile of soil with PCB concentrations <50 mg/kg was inadvertently left on the Site by GeoInsight (approximately 2-4 cubic yards). This soil was placed back into the excavation area after it was determined that the volume of soil that would be required to be removed to achieve the <1 mg/kg TSCA high occupancy cleanup goal was not economically feasible. All the material



was deposited in a pile in one of the two-foot-deep excavation areas. This material was sampled during the August 2020 supplemental soil sampling. It was anticipated that this soil might need to be removed again, so it was placed on and covered with plastic sheeting.

The continued use of the property for boat storage was determined from a review of TSCA regulations and discussion with EPA, to be allowable if a 6-inch-thick concrete pad would be constructed to serve as a TSCA-compliant cap to cover >25  $\leq$ 50 mg/kg PCB soils. The use of a TSCA compliant cap, in lieu of a fence, to isolate the remaining PCB soils will attain the TSCA low occupancy cleanup goal for soils with <50 mg/kg of PCBs.

# Supplemental Soil Sampling Results, 2020-2021

In order to document the concentrations of PCBs remaining on Site following the excavation activity implemented by GeoInsight in 2016 and 2017 and the placement of a small pile of soils back into the excavation that had been previously removed in an attempt to achieve a cleanup level of <1 mg/kg, a grid of borings was completed in the area where samples were not previously collected and where the previously excavated soils were emplaced.

# August 2020 Sampling Round

On August 24, 2020, a new consultant, CEA, collected a total of 16 soil samples (Sample #1 to #16) from the perimeter of the excavation area and five soil samples from the area where a small soil pile was placed back into the excavated area (Sample #17 to #21). This soil pile had been created after the  $\geq$  50 mg/kg PCB soils had been removed from the Site, as discussed in the section above. The location of samples #1 to #16 are shown on Figure 4B in blue text and samples #17 to #21 are shown on Figure 4B in purple text. These results indicate that there were four perimeter locations which exhibited PCB concentrations greater than 1 mg/kg, with a maximum concentration of 15 mg/kg detected in a sample collected from the northeast perimeter of the excavation area (sample N9-W2). The results for the soil pile samples indicated that the concentrations of PCBs were all less than 1 mg/kg.

In addition to the PCB samples, CEA collected two, 4-point composite, post-excavation confirmatory soil samples for laboratory analysis for Volatile Organic Compounds (VOCs), and arsenic and lead, in accordance with the requirements stipulated by the NHDES in their March 31, 2016 letter to the former owner (Mr. Nadeau), in response to plans submitted by Duffield. The results of these analyses indicated that there were no detections of VOCs in the samples. Low concentrations of arsenic and lead were detected in the samples.

## September 2020 Sampling Round

Based on the August 2020 PCB results, a second round of soil sampling was completed on September 16, 2020, to further delineate the extent of the PCBs around the perimeter of the excavation area where concentrations of PCBs were greater than 1 mg/kg. A deeper sample was also collected from the location of N9-W2 where 15 mg/kg was detected, and samples were collected in seven other locations (samples #25 - #31) beyond the locations previously sampled. Soil samples were collected at two depths (0-0.25 ft and 1-1.25 ft) in four of these locations (sample #s 25, 26, 27 and 28), for a total of 12 samples. The results of these second analyses



indicate that seven of the samples exhibited PCB concentrations of 1.2 to 5.1 mg/kg. The other five samples had no PCB detections.

Based on the results of the lead in soils analyses, CEA activated these samples for analysis via the Synthetic Precipitation Leaching Procedure (SPLP), as required by NHDES for samples with total lead concentrations greater than 100 mg/kg. The results of these analyses indicated that both samples exhibited leaching concentrations less than the regulatory limit of 5 milligrams per liter (mg/L) for lead. However, the results indicate that the concentrations exceed the NHDES Ambient Groundwater Quality Standard (AGQS) for lead (15 micrograms per liter, ug/l), which indicate the potential for the contaminated soils at the site to leach lead to groundwater at concentrations that could exceed the AGQS. Aries notes that the proposed concrete cap over these soils will minimize the potential for lead to leach from these soils to the groundwater.

# March 2021 Sampling Round

Due to the detection of greater than 1 mg/kg of PCBs in seven locations in the September 2020 round, CEA collected 35 soil samples on March 3, 2021 and 19 samples on March 25, 2021. A number of these samples were from an area beyond the Sea Level property line, and many were collected from within tidally flushed Sagamore Creek wetlands. The samples collected on March 3, 2021 were identified as S-32 through S-40 -S and -D, S-41-S, S-42-S, S-43-S, S-44-S, S-44-D and S-45-S to S-55-S. The samples collected on March 25, 2021, were identified as 35-2-S, 35-2-D, 35-2 (1.5-1.75'), 41-D, 55-D, and 56- to 68-S. Most of these samples were collected from beyond the northern extent of the PCB excavation area, with the exception of samples 43 and 44 S and D which were collected from beyond the eastern extent of the excavation area. The locations of all of these samples are shown on Figure 4B. Note that the "S" prefix for samples S-32 to S-55 were dropped when depicted on Figure 4B.

The results for the March 3, 2021, samples indicate that there were 11 samples that had concentrations ranging from 1.06 to 6.9 mg/kg. The remaining samples had concentrations less than 1 mg/kg, or were not detected. The results for the March 25, 2021, samples indicate that there were three samples that had concentrations ranging from 2.3 to 4.5 mg/kg. The remaining samples had concentrations less than 1 mg/kg, or were not detected.

# April 2021 Sampling Round

The March 2021 results indicated that the extent of PCB impacts greater than 1 mg/kg had still not been fully delineated horizontally. Note that at this time, and until May 4, 2022, the property line was believed to be further north than was subsequently verified by Aries in consultation with Sea Level's surveyor. On April 20, 2021, CEA collected 12 surface soil samples along the northern edge of the property, identified as samples 69 to 80 (Figure 4B). Three of the 10 samples analyzed contained 1.2 to 1.9 mg/kg PCBs; eight samples had concentrations less than 1 mg/kg, or were not detected.), but one of the samples ultimately determined to exist beyond the northern property boundary (#76), exhibited a concentration of 230 mg/kg PCBs. This sample was considered a "hot spot" area, since it contained more than double the maximum PCB concentration detected in all the other samples. and had some rotten wood and colorful paint chips present. The colors were noted to be typical for use on boats. Since this was the first sample (out of 286 samples) that contained Aroclor 1242, in contrast to Aroclors in the other



samples which were Aroclors 1254 and 1260 predominantly, and did not include Aroclor 1242, this hot spot area was considered a separate source of PCBs, and therefore not part of the Sea Level property or responsibility. Historically, both properties have been used for the storage and maintenance of boats.

## May 2021 Sampling Round

The May 12, 2021, sample round focused on the immediate area of sample #76. CEA collected 13 soil samples at three depths (0-0.25', 1-1.25' and 2-2.5') in three locations (81, 82 and 83). Samples were also collected at two depths (0-0.25' and 1-1.25') in two locations (84 and 85). The locations of the samples are shown on Figure 4B.

The results for the May samples indicated that the sample #76 hot spot appears to be a small isolated area, and shallow in depth, constituting perhaps less than 0.5 cubic yard, and reflecting the presence of discrete paint remnants. The highest concentration detected was 9.2 mg/kg in a surface sample (#81) within six inches to the west of sample #76. This sample also contained Aroclor 1242, but no other samples in this round did. Sample #84, located approximately 5 feet east-southeast from #76 had concentrations of 1.0 and 1.29 mg/kg in its samples from 0-0.25' and 1-1.25', respectively. The remaining 10 samples had PCB concentrations less than 1 mg/kg, or were not detected. Ultimately, it was decided to remove the # 76 hot spot, based on input from EPA and concurrence by Sea Level, as part of the remediation project.

## Summary of Supplemental Sampling Results

Based on the results of the above-described PCB analyses, Aries concludes that the extent of the PCB impacts on Site have been fully delineated. Of the 91 soil samples analyzed within areas outside the previously designated boundary of PCB occurrence, 77 contained <1 mg/kg PCBs. The maximum concentration detected on Site (sample #76 is off-site) of these 91 samples was 15 mg/kg. Two other samples had concentrations between 5 and 10 mg/kg. Eleven samples had concentrations between 1 and 5 mg/kg.

#### **REVISED CLEANUP PLAN**

The soils remaining on the Site have been delineated sufficiently and demonstrate that the remaining on-site soils have concentrations less than 50 mg/kg PCBs. As previously stated above, it was determined that the cost to achieve the planned <1 mg/kg cleanup goal would be approximately double the originally estimated amount. Therefore, it is proposed in the SIP Addendum to conduct the following remediation efforts:

1) **Hot Spot:** remove these soils at location #76 for disposal as >50 mg/kg PCBs at a TSCAapproved facility off-site; this is located outside of Zone AE (depicted on Figure 4B) to achieve either <1 mg/kg if possible, or <25 mg/kg at a depth of 1 foot below clean fill;

2) Soils with PCBs ≥25 <50 mg/kg Outside Zone AE: these will be covered/isolated with a 6inch-thick concrete pad, which will serve as a TSCA compliant cap, in lieu of a fence, to attain the TSCA Low Occupancy cleanup goal for soils with <50 mg/kg of PCBs. This cap will also minimize the potential for lead, previously found at low levels, to leach from these soils to the groundwater.



The concrete pad will extend at least 10 feet beyond the area where the PCBs have been delineated to  $>25 \le 50 \text{ mg/kg}$ . The total area of the pad will be approximately 5,000 square feet. The pad will be constructed by leveling and compacting the subgrade using a plate compactor or vibratory roller. A witness fabric consisting of a geotextile fabric will be emplaced over the compacted subgrade soils. A layer of 6-inches of compacted crushed gravel will be emplaced over the witness fabric. The crushed gravel shall meet the material specifications for New Hampshire Department of Transportation (NHDOT) 304.3 Crushed Gravel. The pad will be surrounded by a 2-foot wide, 1-foot deep layer of <sup>3</sup>/<sub>4</sub>" washed crushed stone, and other erosion control measures both temporary and permanent will be established in accordance with City of Portsmouth/NHDES requirements, to allow stormwater runoff from the pad to infiltrate into the ground and to protect the soils left in place from erosion. The area proposed for the concrete pad was previously used for boat storage on a crushed gravel ground surface. The crushed gravel was considered an impervious surface. As such, no net increase of impervious area is proposed and a stormwater management plan is not required in accordance with NH RSA 483-B:9. A plan view of the pad relative to the PCB impacted area, and the proposed stone riprap area which extends to the top of the slope overlooking the cove, is shown on Figure 4B;

3) **Surficial Soils within Zone AE, PCBs > 1 < 25 mg/kg:** Remove shallow soils (0-6 inches) located within Zone AE (100-year flood zone) which cannot receive a cover protecting these impacted soils from future erosion due to wind, rain or flooding that may occur in this area and disturb the elevated PCBs (i.e., >1 mg/kg <25 mg/kg); seven locations with PCB concentrations >1 mg/kg within or immediately adjacent to Zone AE, constituting three small areas outlined in red on Figure 5, have a total area of approximately 195 ft<sup>2</sup>. Therefore, the estimated volume of soil to be removed is approximately 4 cubic yards (CY). The excavation will be backfilled with wetland soils and re-vegetated with wetland species as required by City of Portsmouth/NHDES regulations;

4) **Other Soils within Zone AE, > 1<25 mg/kg PCBs:** These soils are to be left in place and covered with 6 inches of clean imported material at a minimum to match the surrounding existing grades, see Figure 5.

Note that in order to accommodate a clean soil cover in the areas being remediated within Zone AE, those areas will be excavated to a depth of 0.5 feet prior to emplacement of a 6-inch clean wetland-type soil cover in order to avoid increasing the grade in this area which would decrease the flood storage and require approval by the Federal Emergency Management Agency (FEMA) under a Letter of Map Revision (LOMR). The top and bottom of slopes and the wetland soil removal areas will be restored in accordance with City of Portsmouth/NHDES requirements, under a permitting process to be completed prior to excavation, and as depicted in Figures 5, 6 and 7. The excavated soils from the area within Zone AE, which will be < 25 mg/kg PCBs, will be disposed off-Site at an approved facility such as the Turnkey Landfill in Rochester, NH.

Bottom samples will be obtained in accordance with 40 CFR Part 761, Subpart O, to document PCB concentrations to be left in place below the clean soil cover.

A deed restriction will also be placed on the portion of the property with residual PCBs in soil in accordance with both 40 CFR 761.61 (a) (8) and NHDES regulations Chapter Env-Or 600 Contaminated Site Management.

The concrete pad will be placed in an area outside Zone AE and extend at least 10 feet beyond the area where the PCBs have been delineated to >25 ≤50 mg/kg. The total area of the pad will be approximately 5,000 square feet. Since the excavation area was not backfilled following soil removal, no material will need to be removed from the proposed concrete pad area to prepare for the installation of the pad. The pad will be constructed by leveling and compacting the subgrade using a plate compactor or vibratory roller. A witness fabric consisting of a geotextile fabric will be emplaced over the compacted subgrade soils. A layer of 6-inches of compacted crushed gravel will be emplaced over the witness fabric. The crushed gravel shall meet the material specifications for New Hampshire Department of Transportation (NHDOT) 304.3 Crushed Gravel. Fill materials should be placed in 12-inch maximum loose lifts and should be compacted to a minimum of 95 percent of the material's maximum dry density, as determined by ASTM D 1557 (modified proctor test) and confirmed with field density testing (ASTM D 6938 or equivalent method). Lift thickness should be a maximum of 6-inch loose lifts when compacted with handguided equipment. Concrete forms shall be installed, and the concrete poured in one pour. The concrete shall be constructed in accordance with current NHDOT Standard Specifications for Roads and Bridges. The pad will be surrounded by a 2-foot wide, 1-foot deep layer of <sup>3</sup>/<sub>4</sub>" washed crushed stone, and other erosion control measures both temporary and permanent will be established in accordance with City of Portsmouth/NHDES requirements, to allow stormwater runoff from the pad to infiltrate into the ground and to protect the soils left in place from erosion. A plan view of the pad relative to the PCB impacted area is shown on Figure 4B.

## Permits

Aries will obtain the necessary local and state permits including those required for working within the tidal buffer zone from the NHDES Wetlands Bureau and City of Portsmouth Conservation Commission. Aries will prepare documentation and obtain permits or document compliance with the following federal, state, and City regulatory requirements:

- NHDES Major Impact Wetland and Shoreline Permit Applications (WPAs): In accordance with the December 15, 2019, NHDES wetland rules, this project is assumed to be classified as "major" due to its disturbance of existing wetlands, and therefore this permit must be obtained. Sea Level LLC intends to submit the wetland and shoreland applications to the NHDES, and ConCom as one approximately concurrent submittal. Four hard copies of the application (full size drawings and text) will be provided to ConCom for their internal use and public review. A final tree inventory (Figure 7) has been prepared, which reflects the final square footage discussed above and final cap and grading requirements.
- City of Portsmouth Conditional Use Permit: The Shoreland Permit Application will request a Conditional Use Permit Application (CUPA) from ConCom for work occurring within tidal wetland overlay district, which this project triggers. The proposed grading and clearing activities within 100-feet of the highest observable tide line of Sagamore Creek (7.9 feet) are subject to review by the City of Portsmouth through the CUPA Permit process. A request to alter an area in excess of 10,000 square-feet of tidal buffer zone would require possible compensatory mitigation, but this project does not reach that threshold. A Functional Evaluation Form (FEF) consisting of approximately two pages of narrative and a writeup of planned saltmarsh restoration plan will be prepared.


Based on the on-line NHDES Wetland Permitting Tool, Sagamore Creek contains two priority resource areas, including tidal wetland and floodplain wetland adjacent to a Tier 3 stream, which influence the classification and permitting requirements for the project.

- U.S. Army Corps of Engineers (ACOE) Appendix B Checklist: This checklist will be submitted to the ACOE to identify planned sediment remediation location and techniques, and will be submitted in parallel to the DES Application.
- NH Historic Resource Information Verification: Sea Level, LLC verified in 2022 that a Phase IA or Phase 1B archeological assessment work is not required, via correspondence with the responsible NHDES agency, but an update to that letter will be made in parallel to the DES submittal.
- NH Natural Heritage Bureau (NH NHB) Verification: Sea Level, LLC verified in 2022 via correspondence with this agency, that Protected species survey and/or mitigation plans will not be needed, but an updated letter to this agency is required, and will be made in parallel to the DES submittal.
- **Abutter Notification:** Sea Level, LLC will notify all abutters of this project via certified mail in accordance with Env-Wt 501.01(c).
- New Hampshire State Programmatic General Permit (SPGP): Sea Level, LLC will determine if this Permit and/or State or federal compensatory mitigation is required, by quantifying and classifying the level of natural resource impact (wetland, wetland buffer, shoreland, vernal pool, exemplary natural community, and endangered species habitat) to determine if the proposed project qualifies for this review and its requirements. At this point, this does not appear needed.
- **Vulnerability Assessment Env-Wt 603.05:** This new NHDES requirement involves evaluation of climate-related potential impacts to the site shoreline, and will be prepared by Sea Level LLC. Known as a Climate Resiliency Assessment, this must be done as part of the NHDES WPA.

EPA's approval of the Revised Cleanup Plan, also known as a Self-Implementing Plan, is included as **Attachment 1**.



## **PHOTOGRAPHS**



Photo 1: Google Maps Street View – 187 Wentworth Road (prior to November 2021 fire destroyed 3-sided structure, work area to left of structure).



Photo 2: April 1992 Google Earth Image– Approximate 2016-2017 PCB excavation extents outlined in purple.





Photo 2: April 2013 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple.



**Photo 3:** October 2014 Google Earth Image – Approximate excavation extents outlined in purple.





**Photo 4:** May 2015 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple. Evidence of 2014 excavation is seen at bottom right of excavation extents.



Photo 5: May 2018 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple.



**Photo 6:** June 2020 - Witch Cove on left, PCB excavation area (overgrown) in foreground. Former marina building in background. View to east.



Photo 7: June 2020 - Witch Cove on left, PCB excavation area (overgrown) in foreground. Former marina building in background. View to east.





Photo 8: June 2020 - Witch Cove over slope in background. View to northeast.



Photo 9: June 2020 - Witch Cove over slope in background. View to northeast.





Photo 10: June 2020 - Parking / storage area, PCB soil excavation area, and residence across Witch Cove. View to northwest.



Photo 11: June 2022 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple. Area covered with geotextile marker and sand.



Photo 12: October 2022 - PCB excavation area covered with sand and marker barrier. View to east. Witch Cove visible in background.



Photo 13: October 2022 - PCB excavation area covered with sand and marker barrier. View to west.



# ATTACHMENT 1

From:	Woodward, Katherine (she/her/hers)
To:	Richard Kowalski
Cc:	tom@substructure.com; Stephen Graham
Subject:	RE: Revised SIP for Portsmouth Marina, New Hampshire
Date:	Thursday, February 2, 2023 11:06:45 AM

Rick,

Yes. It only applies only to the soil that is not capped.

Kate

From: Richard Kowalski <rkowalski@aries-eng.com>
Sent: Thursday, February 2, 2023 11:03 AM
To: Woodward, Katherine (she/her/hers) <Woodward.Katherine@epa.gov>
Cc: tom@substructure.com; Stephen Graham <sgraham@aries-eng.com>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Ms. Woodward: Thank you for your comments. Please provide clarification on one issue. Does the additional/modified condition #1 only apply to those areas that will not be covered by the concrete cap? This would be consistent with the third bullet item below. Thanks,

Rick Kowalski Director of Hydrogeology Cell (508) 951-3673

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From: Woodward, Katherine (she/her/hers) <<u>Woodward.Katherine@epa.gov</u>>
Sent: Tuesday, January 31, 2023 5:28 PM
To: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Mr. Kowalski,

EPA is in receipt of August 10,2022 *Revised PCB Cleanup Status Report and Request to Modify Approved PCB Cleanup and Disposal under 40 CFR 761.61(a)* (the "Modification") which was submitted under the procedures of 40 CFR § 761.61(a)(3)(ii) as specified in Condition 16 of the September 9, 2016 PCB Cleanup and Disposal Approval under 40 CFR § 761.61(a) (the "Approval"). The modification includes the following:

- The area shown in Figure 7B, bounded by the green line has been determined to be a *low occupancy area* rather than a *high occupancy area*.
- Additional PCB remediation waste with ≥ 50 ppm PCBs in the vicinity of sample location #76 will be removed to a depth of 1 ft below grade surface (ft bgs) to achieve a PCB concentration of at least < 25 ppm. However, the goal will be to remediate to < 1 ppm. The PCB remediation waste shall be disposed in accordance with 40 CFR § 761.61(a)(5)(i)(B)(2)(iii).</li>
- Any *PCB remediation waste* with ≥ 25 ppm but < 50 ppm remaining outside of the Zone AE will be covered with a concrete cap compliant with 40 CFR § 761.61(a)(7).
- Any *PCB remediation waste* with > 1 ppm within the Zone AE boundary will be removed and disposed in accordance with 40 CFR § 761.61(a)(5)(i)(B)(2)(*ii*).
- Verification samples shall be collected in accordance with 40 CFR Part 761 Subpart O to document the concentrations remaining beneath the clean soil cover (shown in Figure 7A)
- A concrete pad as shown in Figures 7B and 8 will be placed over the remainder of the remediated area and provide a compliant cap over the area.
- A deed restriction will be placed on the property in accordance with 40 CFR § 761.61(a)(8)

EPA may approve this modification under the provisions of 40 CFR § 761.61(a)(3)(ii). Please be aware that the following additional/modified Conditions will be applied to the modification:

- The cleanup level for bulk *PCB remediation waste* (i.e., soil) remaining at the Site shall be less than or equal to ("≤") 25 parts per million ("ppm") to meet the *low occupancy area* cleanup requirements at 40 CFR § 761.61(a)(4)(i)(B)(3) (Modified Condition).
- 2. Within sixty (60) days of completing final property-wide remediation, Sea Level LLC shall submit to EPA a recorded deed restriction for the property in its entirety. The deed restriction shall include: a description of the extent and levels of contamination at the property following abatement; a description of the actions taken at the property; a description of the use restrictions for the property; and the long-term monitoring and maintenance requirements on the property per the requirements of 40 CFR § 761.61(a)(8) (New Condition).
- 3. Within 30 days of completion of the work authorized under this Approval, Sea Level LLC shall submit for EPA's review and concurrence, a detailed monitoring and maintenance plan (MMP) for the cap(s). Sea Level LLC shall incorporate any changes to the MMP required by EPA(New Condition).

a. The MMP shall include: a description of the activities that will be conducted, including inspection criteria, frequency, and routine maintenance activities; sampling protocols, sampling frequency, and analytical criteria, as applicable; and reporting requirements.
b. The MMP shall include a communications component which details how the maintenance and monitoring results will be communicated to the Site users, including building users, other on-site workers, and interested stakeholders, if requested.
c. The MMP also shall include a worker training component for maintenance workers or for any person that will be conducting work that could impact the cap(s).
d. Sea Level shall submit the results of these long-term monitoring and maintenance activities to EPA. Based on its review of the results, EPA may determine that modification to the MMP is necessary in order to monitor and/or evaluate the long-term effectiveness of the

cap(s).

e. Activities required under the MMP shall be conducted until such time that EPA determines, in writing, that such activities are no longer necessary.

Please include the modified work in the required final project report (Condition 20). Please be aware that EPA is only requiring documents electronically; therefore, hard copies of the documents are no longer neccessary.

Please feel free to contact me if there are any questions.

# Kate Woodward

Katherine A. Woodward, PE, PhD US Environmental Protection Agency, Region 1 5 Post Office Square, Suite 100 Mail Code: 07-2 Boston, Massachusetts 02109-3912 617.918.1353/Pronouns: She/her/hers

From: Richard Kowalski <rkowalski@aries-eng.com>
Sent: Tuesday, January 31, 2023 12:38 PM
To: Woodward, Katherine (she/her/hers) <<u>Woodward.Katherine@epa.gov</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Kate: Do you have any comments on this? Thanks,



## Director of Hydrogeology Cell (508) 951-3673

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From: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Sent: Thursday, January 12, 2023 4:14 PM
To: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

It has been crazy here and I haven't yet gotten to it. I will read it on Tuesday and provide you with some comments.

From: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Sent: Thursday, January 12, 2023 3:30 PM
To: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Kate: Can you provide an update on your progress on this project? Thanks,

?

Rick Kowalski Director of Hydrogeology Cell (508) 951-3673

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From: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Sent: Monday, December 5, 2022 9:35 AM
To: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Rick,

This is the first time I am seeing this document. I checked my email and I have nothing. I will have to read through it, which I will do this week.

Kate

From: Richard Kowalski <<u>rkowalski@aries-eng.com</u>>
Sent: Monday, December 5, 2022 8:35 AM
To: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Cc: tom@substructure.com; Stephen Graham <<u>sgraham@aries-eng.com</u>>
Subject: RE: Revised SIP for Portsmouth Marina, New Hampshire

Katherine: Please let us know when we may expect to receive any comments back from you regarding the attached revised SIP submitted on August 10, 2022. Thanks,

Rick Kowalski Director of Hydrogeology Cell (508) 951-3673

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This e-mail and attachments (if any) are intended only for the addressee named above, and may contain privileged or confidential information. If you are not the intended message recipient, please do not use, copy, or print this information. Also, please do not forward or disclose this information to others. If you have received this communication in error, please notify this message sender by replying to this message and then delete this e-mail and attachments (if any) from your e-mail system. Thank you.

From: Richard Kowalski
Sent: Wednesday, August 10, 2022 3:02 PM
To: Woodward, Katherine <<u>Woodward.Katherine@epa.gov</u>>
Cc: 'tom@substructure.com' <<u>tom@substructure.com</u>>; Stephen Graham (<u>sgraham@aries-eng.com</u>)
<<u>sgraham@aries-eng.com</u>>

Subject: Revised SIP for Portsmouth Marina, New Hampshire

Katherine: Please find attached the revised SIP for the Portsmouth Marina. Please let us know if you have any comments or questions. Thanks,

?

Richard G. Kowalski, CPG LSP, CHMM Director of Hydrogeology Aries Engineering, LLC 104 Pleasant Street Concord, New Hampshire 03301 Phone (603) 228-0008 Fax (603) 226-0374 Cell (508) 951-3673

## rkowalski@aries-eng.com www.aries-eng.com

This e-mail and attachments (if any) are intended only for the addressee named above, and may contain privileged or confidential information. If you are not the intended message recipient, please do not use, copy, or print this information. Also, please do not forward or disclose this information to others. If you have received this communication in error, please notify this message sender by replying to this message and then delete this e-mail and attachments (if any) from your e-mail system. Thank you.

# WPA APPENDIX E: ENGINEERING PROJECT PLANS/DRAWINGS/SHEETS

(Per Sections 2,7, 16 and NH ENV WT 311.05, 311.03(b)(4)

## MARINA RESTORATION PROJECT ENGINEERING PLANS

APPLICANT: TOM REIS, SEA LEVEL, INC. PREPARED BY: ARIES ENGINEERING, LLC / HALEY WARD, INC.

## SHEET INDEX

- SHEET 1: SITE LOCUS AND SHEET INDEX
- SHEET 2: SITE PLAN AND EXISTING CONDITIONS SITE PLAN
- SHEET 3A PCB SAMPLE LOCATION PLAN
- SHEET 3B >50 PPM PCB POST-EXCAVATION SAMPLE LOCATION PLAN
- SHEET 3C <50 PPM PCB POST-EXCAVATION SAMPLE LOCATION PLAN
- SHEET 3D SELF-IMPLEMENTING CLEANUP PLAN (SIP) SHEET 4 CONCRETE PAD CROSS SECTION
- FINAL GRADING PLAN/SHORELINE STABILIZATION PLAN SHEET 5
- (WITH TIDAL SHORELINE STABILITY)
- SHEET 6 PLANTING PLAN WITH PLANTING SCHEDULE
- SHEET 7 TREE TYPES AND LOCATIONS























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Planting Schedule									
Key	Plant Type	Species	Size (feet)	Caliper Size	Quantity				
GB	Tree	Gray Birch (Betula populifolia)	3-4	-	1				
RC	Tree	Red Cedar (Juniperus virginana)	3-4	-	1				
SD	Shrub	Silky dogwood (Cornus amomum)	2-3	-	3				
SB	Shrub	Shadbush (Amelanchier candensis)	2-3	-	2				
BCB	Shrub	Black Chokeberry (Aronia melanocarpa)	2-3	-	1				
SR	Plugs	Salt Marsh Bullrush (Scirpus Robustus)	-	_	350				
STGM	Seed	Salt Tolerant Grass Mix*	-	_	5 lb				

## NOTES:

- \*STGM species list includes: Canada Wild Rye (Elymus canadensis), Red 1. Fescue (Festuca rubra), Atlantic Coastal Panic Grass (Panicum amarum), Big Bluestem (Andropogon gerardii), Indian Grass (Sorghastrum nutans), Switch Grass (Panicum virgatum), and Path Rush (Juncus tenuis)
- Mean High Water (MHW) and Mean Low Water (MLW) lines are outside of 2. the Limit of Disturbance and beyond the area shown in the above cross section.

NOT TO SCALE

HORIZONTAL/VERTICAL Scales as shown





104 PLEASANT STREET CONCORD, NH 03301 (603) 228-008 www.aries-eng.com							
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APPROVED BY:	S. Graham	1	8/27/24	Updates			
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JAY JAY APRIL 24, 2023							
		et.	Jav P.	No. 14110 SONAL ENGINEERI Johonnett, P.E.	SHEET 1		

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Total Pleasant street       (603) 228-008         CONCORD, NH 03301       www.aries-eng.com								
	PCB SAMPLE LOCATION PLAN SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOLITH, NEW/HAMPSHIRE							
DRAFTED	J. Drebaum	No.	Date	Revision Description				
APPROVED BY:	S. Graham	1.	8/27/24	Updates				
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>50 PPM PCB POST-EXCAVATION SAMPLE LOCATION PLAN SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE									
DRAFTED BY	J. Drebaum	No.	Date	Revision Description					
APPROVED BY:	S. Graham	1.	8/27/24	Updates					
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DRAFTED BY:	J. Drebaum	No.	Date	Revision Description				
APPROVED BY:	S. Graham	1.	8/27/24	Updates				
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PROPOSED CONCRETE PAD w/ SAMPLE LOCATIONS								
	PORT	⁻SN	SEA LE <sup>V</sup> MAP 20 IOUTH,	VEL, LLC. 1, LOT 12 NEW HAMPSI	HIRE			
DRAFTED BY:	J. Drebaum	No.	Date	Revision Description	1			
APPROVED BY:	S. Graham	1.	8/27/24	Updates				
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CONCRETE PAD CROSS SECTION SEA LEVEL, LLC. MAP 201, LOT 12									
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BY:	J. Drebaum	No.	Date	Revision Description	l				
APPROVED BY:	S. Graham	1	4/17/2024	Figure number upda	te				
		2	8/24/2024	Updates					
	ISSUED	) FOF	R PERMITTI	NG					
				OF NEW HAMA	Project #: 2021-075A File: 2021-075A(SS)02-22				
			STAT	JAY O. Tol	APRIL 24, 2023				
ος.		Jay P	No. 1410 CENSED NO. 1410 SONAL ENGINE	SHEET 4					

THEORY						
FINAL GRADING PLAN/SHORELINE STABILIZATION PLAN (WITH TIDAL SHORELINE STABILITY) SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE						
DRAFTED BY: No. Date Revision Description						
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( IN FEET ) 1 inch = 10 ft.

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TREE TYPES AND LOCATIONS SEA LEVEL, LLC. MAP 201, LOT 12 PORTSMOUTH, NEW HAMPSHIRE									
DRAFTED BY:	No.	Date	Revision De	Revision Description					
J. Drebaum	01	01/23/24	Revision to	Trees, Table, Silt	able, Silt Curtain, Notes				
REVIEWED BY:	02	04/17/24	Revision to notes, riprap, title block						
S. Graham	03	08/27/24	Updates						
STITE OF NEW HA	AND SHIP			JAY HONNETT	Project #: 2021-075A File: 2021-075A(SS2)06-22 APRIL 24, 2023				
No. 128 WETLAND Patrick D. Seekam	p, ₽₩	vs, cws	Jay P. Jo	CENSED ONAL ENGINIE	SHEET 7				

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AVOIDANCE AND MINIMIZATION CHECKLIST Water Division/Land Resources Management Wetlands Bureau <u>Check the Status of your Application</u>



## RSA/Rule: RSA 482-A/ Env-Wt 311.07(c)

This checklist can be used in lieu of the written narrative required by Env-Wt 311.07(a) to demonstrate compliance with requirements for Avoidance and Minimization (A/M), pursuant to RSA 482-A:1 and Env-Wt 311.07(c).

For the construction or modification of non-tidal shoreline structures over areas of surface waters without wetland vegetation, complete only Sections 1, 2, and 4 (or the applicable sections in <u>Attachment A: Minor and Major Projects</u> (NHDES-W-06-013).

The following definitions and abbreviations apply to this worksheet:

- "A/M BMPs" stands for <u>Wetlands Best Management Practice Techniques for Avoidance and Minimization</u> dated 2019, published by the New England Interstate Water Pollution Control Commission (Env-Wt 102.18).
- "Practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (Env-Wt 103.62).

#### SECTION 1 - CONTACT/LOCATION INFORMATION

APPLICANT LAST NAME, FIRST NAME, M.I.: Sea Level, LLC and Goulemas Family Trust

PROJECT STREET ADDRESS: 185 - 187 Wentworth House Road

PROJECT TOWN: Portsmouth

TAX MAP/LOT NUMBER: 201/12

#### **SECTION 2 - PRIMARY PURPOSE OF THE PROJECT**

Env-Wt 311.07(b)(1) Indicate whether the primary purpose of the project is to construct a water-access structure or requires access through wetlands to reach a buildable lot or the buildable portion thereof.



If you answered "no" to this question, describe the purpose of the "non-access" project type you have proposed:

Final remediation of PCBs initially addressed under U.S. EPA approval issued on 9-9-2016 per 40 CFR 761.61(a) in a working waterfront (see 4-24-2023 memo to NHDES, Attachment D, for history and regulatory requirements). This new cleanup effort limits impacts within Zone AE/other jurisdictional zones as follows: 1) Zone AE at 5 to 6 FT MSL: removal of 175 SF to 1 ft deep of PCB impacted sediment in existing salt marsh area within isolated and blind section of Witch Cove contiguous to tidal Sagamore Creek plus removal of a 6 inch layer of fill over an area of 235 SF inadvertently placed during prior remediation, totaling 11 CY of wetland sediment excavation, both to be restored with saltmarsh plantings. 2) Outside Zone AE, 470 SF of near vertical tidal cove shoreline above HOTL/below 11 ft MSL to be stabilized by armoring using boulders saved during prior remediation, plus 4-5 inch stone riprap; removal of 0.5 CY of soil to 1' deep with >50ppm PCBs in upland wooded area to be transported off site to licensed disposal facility; removal of 0.5 CY soil to 1' deep with >25<50 ppm PCBs to be placed under concrete cap, both excavations to be filled with clean soil and vegetated; within previously developed uplands, new 5,000 SF concrete pad encapsulating >25<50 ppm PCBs soils with additional lead presence; and restoration of degraded gravel areas as needed to be reestablished to resume site operations. Erosion controls will be emplaced, impacts to be temporary over 1 month period.
#### SECTION 3 - A/M PROJECT DESIGN TECHNIQUES

Check the appropriate boxes below in order to demonstrate that these items have been considered in the planning of the project. Use N/A (not applicable) for each technique that is not applicable to your project.

Env-Wt 311.07(b)(2)	For any project that proposes new permanent impacts of more than one acre or that proposes new permanent impacts to a Priority Resource Area (PRA), or both, whether any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs.	🔀 Check 🔲 N/A
Env-Wt 311.07(b)(3)	Whether alternative designs or techniques, such as different layouts, construction sequencing, or alternative technologies could be used to avoid impacts to jurisdictional areas or their functions and values.	☐ Check ⊠ N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(1) Env-Wt 311.10(c)(2)	The results of the functional assessment required by Env-Wt 311.03(b)(10) were used to select the location and design for the proposed project that has the least impact to wetland functions.	🔀 Check 🗌 N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(3)	Where impacts to wetland functions are unavoidable, the proposed impacts are limited to the wetlands with the least valuable functions on the site while avoiding and minimizing impacts to the wetlands with the highest and most valuable functions.	🔀 Check 🔲 N/A
Env-Wt 313.01(c)(1) Env-Wt 313.01(c)(2) Env-Wt 313.03(b)(1)	No practicable alternative would reduce adverse impact on the area and environments under the department's jurisdiction and the project will not cause random or unnecessary destruction of wetlands.	Check
Env-Wt 313.01(c)(3)	The project would not cause or contribute to the significant degradation of waters of the state or the loss of any PRAs.	Check
Env-Wt 313.03(b)(3) Env-Wt 904.07(c)(8)	The project maintains hydrologic connectivity between adjacent wetlands or stream systems.	🔀 Check 🔲 N/A
Env-Wt 311.10 A/M BMPs	Buildings and/or access are positioned away from high function wetlands or surface waters to avoid impact.	Check
Env-Wt 311.10 A/M BMPs	The project clusters structures to avoid wetland impacts.	Check
Env-Wt 311.10 A/M BMPs	The placement of roads and utility corridors avoids wetlands and their associated streams.	Check
A/M BMPs	The width of access roads or driveways is reduced to avoid and minimize impacts. Pullouts are incorporated in the design as needed.	Check
A/M BMPs	The project proposes bridges or spans instead of roads/driveways/trails with culverts.	Check

A/M BMPs	The project is designed to minimize the number and size of crossings, and crossings cross wetlands and/or streams at the narrowest point.	Check
Env-Wt 500 Env-Wt 600 Env-Wt 900	Wetland and stream crossings include features that accommodate aquatic organism and wildlife passage.	Check
Env-Wt 900	Stream crossings are sized to address hydraulic capacity and geomorphic compatibility.	Check
A/M BMPs	Disturbed areas are used for crossings wherever practicable, including existing roadways, paths, or trails upgraded with new culverts or bridges.	🗌 Check 🔀 N/A
SECTION 4 - NON-TID	AL SHORELINE STRUCTURES	
Env-Wt 313.03(c)(1)	The non-tidal shoreline structure has been designed to use the minimum construction surface area over surfaces waters necessary to meet the stated purpose of the structure.	🔀 Check 🔲 N/A
Env-Wt 313.03(c)(2)	The type of construction proposed for the non-tidal shoreline structure is the least intrusive upon the public trust that will ensure safe navigation and docking on the frontage.	Check
Env-Wt 313.03(c)(3)	The non-tidal shoreline structure has been designed to avoid and minimize impacts on the ability of abutting owners to use and enjoy their properties.	Check
Env-Wt 313.03(c)(4)	The non-tidal shoreline structure has been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.	🔀 Check 🔲 N/A
Env-Wt 313.03(c)(5)	The non-tidal shoreline structure has been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.	Check
Env-Wt 313.03(c)(6)	The non-tidal shoreline structure has been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.	Check

### APPENDIX G, COPY OF WPA APPLICATION FEE

(Per Section 12)



**APPENDIX I** 



US Army Corps

#### of Engineers ® Appendix B New England District **New Hampshire General Permits Required Information and USACE Section 404 Checklist**

### **Required Information**

In order for USACE to properly evaluate your application, applicants must submit the following information for all projects along with the NHDES Wetlands Bureau application or permit notification forms. Some projects may require more information. Check with USACE at (978) 318-8832 for project-specific requirements. For your convenience, this Appendix B is also attached to the NHDES Wetlands Bureau application and Permit by Notification forms.

- NHDES Wetlands Permit Application. See Attachment
- Request for Project Review Form by the NH DHR: https://www.nh.gov/nhdhr/review/rpr.htm. Attached
- Photographs of wetland/waterway to be impacted. See Attachment, Photos
- Purpose of the project. See Attachment, Purpose of Project, NHDES WPA, Section 2
- Legible, reproducible plans no larger than 11"x17" with bar scale. Provide locus map
- and plan views of the entire property. See Sheets 1-7, Attached Typical cross-section views of all wetland and waterway fill areas and wetland replication areas. Sheets 5-7
- · In navigable waters, show MLW and MHW elevations. Show the HTL elevations when fill is involved. In other waters, show the OHW elevation. See Sheet 2
- On each plan, show the following for the project: See Sheet 2
  - Vertical datum and the NAVD 1988 equivalent with the vertical units as U.S. feet. In coastal waters this may be mean higher high water (MHHW), MHW, MLW, mean lower low water (MLLW) or other tidal datum with the vertical units as U.S. feet. MLLW and MHHW are preferred. Provide the correction factor detailing how the vertical datum (e.g., MLLW) was derived using the latest National Tidal Datum Epoch for that area, typically 1983 - 2001.
  - Horizontal state plane coordinates in U.S. survey feet based on the Traverse Mercator Grid system for the State of New Hampshire (Zone 2800) NAD 83.
  - Project limits with existing and proposed conditions.
  - Limits of any FNP in the vicinity of the project area and horizontal State Plane Coordinates in U.S. survey feet for the limits of the proposed work closest to the FNP.
  - $_{\odot}$  Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below the OHW in inland waters and below the HTL in coastal waters.
  - Delineation of all waterways and wetlands on the project site.
- Use Federal delineation methods and include USACE wetland delineation data sheets (GC 2). Attached
   For activities involving discharges of dredged or fill material into waters of the U.S. Sheet 2
- For activities involving discharges of dredged or fill material into waters of the U.S., N/A include a statement describing how impacts to waters of the U.S. are to be avoided and minimized, and either a statement describing how impacts to waters of the U.S. are to be compensated for (or a conceptual or detailed mitigation plan) or a statement explaining why compensatory mitigation should not be required for the proposed impacts. Please contact USACE for guidance.



US Army Corps of Engineers ®

### of Engineers ® Appendix B New England District New Hampshire General Permits Required Information and USACE Section 404Checklist

#### **USACE Section 404 Checklist**

- 1. Attach any explanations to this checklist. Lack of information could delay a USACE permit determination.
- 2. All references to "work" include all work associated with the project construction and operation. Work
- includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
- 3. See GC 3 for information on single and complete projects.
- 4. Contact USACE at (978) 318-8832 with any questions.
- 5. The information requested below is generally required in the NHDES Wetland Application. See page 61 for NHDES references and Admin Rules as they relate to the information below.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See the following to determine if there is an impaired water in the vicinity of your work area. * <a href="https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/">https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/</a> <a href="https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment-site-nhdes.hub.arcgis.com/">https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment-site-nhdes.hub.arcgis.com/</a> <a href="https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment-site-nhdes.hub.arcgis.com/">https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment-site-nhdes.hub.arcgis.com/</a> <a href="https://www.des.state.nh.us/onestopdatamapper/onestopmapper.aspx">https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx</a>		x
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?		х
2.2 Are there proposed impacts to tidal SAS, prime wetlands, or priority resource areas? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at <u>https://www4.des.state.nh.us/NHB-DataCheck/</u> .	x	
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?		
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		x
2.5 The overall project site is more than 40 acres?		х
2.6 What is the area of the previously filled wetlands? 6 in depth fill by prior remediation	235	SE
2.7 What is the area of the proposed fill in wetlands?	0 SE	01
2.8 What % of the overall project sire will be previously and proposed filled wetlands? of 6,785 S	F 3.5%	)
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: <u>https://www4.des.state.nh.us/NHB-DataCheck/</u> . USFWS IPAC website: https://ipac.ecosphere.fws.gov/ See attached	x	

<ul> <li>3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at:</li> <li>PDF: <u>https://wildlife.state.nh.us/wildlife/wap-high-rank.html</u>.</li> <li>Data Mapper: <u>www.granit.unh.edu</u>.</li> <li>GIS: <u>www.granit.unh.edu/data/downloadfreedata/category/databycategory.html</u>.</li> </ul>		x
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		x
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		x
3.5 Are stream crossings designed in accordance with the GC 31?		х
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		Х
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of N/A flood storage?		
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the RPR Form ( <u>www.nh.gov/nhdhr/review</u> ) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 37 GC 14(d) of the GP document** See Attached	x	
6. Minimal Impact Determination (for projects that exceed 1 acre of permanent impact)	Yes	No
<ul> <li>Projects with greater than 1 acre of permanent impact must include the following:</li> <li>Functional assessment for aquatic resources in the project area.</li> <li>On and off-site alternative analysis.</li> <li>Provide additional information and description for how the below criteria are met.</li> </ul>		
6.1 Will there be complete loss of aquatic resources on site?		
6.2 Have the impacts to the aquatic resources been avoided and minimized to the greatest extent practicable?		
6.3 Will all aquatic resource function be lost?		
6.4 Does the aquatic resource (s) have regional significance (watershed or ecoregion)?		
6.5 Is there an on-site alternative with less impact?		
6.6 Is there an off-site alternative with less impact?		
6.7 Will there be a loss to a resource dependent species?		
6.8 Are indirect impacts greater than 1 acre within and adjacent to the project area?		

\*Although this checklist utilizes state information, its submittal to USACE is a federal requirement. \*\* If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.



## US Army Corps of Engineers ® New England District Required Information and USACE Section 404 Checklist

#### **NHDES Rule Citations**

Appendix B	NHDES Citation	NHDES Resource, Form & BMP
Requirements		
1. Impaired Wate	rs	
1.1	See Env-Wt 307.03 Protection	https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/
	of Water Quality Required &	https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment
	Env-Wt 306.05 a) 7	https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx
2. Wetlands		
2.1	N/A	N/A
2.2	Env 307.06; Env- Wt	NH Online Forms System - Coastal Resource Worksheet. Version 2.0
	311.01(a)(b) (c)	Wetlands Permitting: Protected Species and Habitat (nh.gov)
		Wetlands Permitting: Priority Resource Area (nh.gov)
		https://www4.des.state.nh.us/NHB-DataCheck/.
2.3	Env-Wt 313.03(b)(3); Env-Wt	See Chapter 7, Stream & Wetland Crossings:
	313.03(b)4)(7); Env-Wt 307.06	Wetlands Best Management Practice Techniques for Avoidance and Minimiz
		Wetlands-BMP-Manual-2019.pdf (neiwpcc.org) (& Env-Wt 900 for Stream
0.4		<u>Crossings)</u>
2.4	Env-Wt 604.02 (Tidal buller	
	buffere)	
2.5		Ν/Λ
2.5	N/A	Ν/Δ
2.0	$E_{nv}$ = W/t 311 04(a)	Standard application Section 11- NH Online Forms System - Standard
		Dredge and Fill Wetlands Permit Application . Version 3.5
2.8	N/A	N/A
3. Wildlife		
3.1	Env-Wt 103.69 "Protected	NHB DataCheck Tool: <u>https://www4.des.state.nh.us/NHB-DataCheck/</u> .
	species or habitat"; Env-Wt	Wetlands Permitting: Protected Species and Habitat (nh.gov)
	307.06, 311.01	Wetlands Permitting: Priority Resource Area (nh.gov)
3.2	Env-Wt 311.02; 313.03(b)(2),	Wetlands Permitting: Protected Species and Habitat (nh.gov)
	(4), (7)(16); Env-Wt	Wetlands Permitting: Priority Resource Area (nh.gov)
	313.03(b)(6) & See Env-Wt	
	808.19(g), Env-Wt 808.20	
3.3		
3.4	NA (Env: ) Mt 000) Mierce off ) Merd	N/A
3.5	(Env-Wt 900) <u>Microsoft Word -</u>	NH Opling Forms System - Wotland Permit Application Stream Crossing
	2020  docy (ph doy)	Worksheet Version 1.8
	<u>2020.000x (mi.gov)</u>	Stream Crossing Design (nh gov):
		<u>Stream crossing Design (mi.gov)</u> . https://www.ph.gov/dot/org/projectdevelopment/environment/units/program-
		management/documents/RR V 9 FINAL 3-14-19 pdf
		Best Management Practices for Routine Roadway Maintenance Activities
		in New Hampshire. 2019. New Hampshire Department of Transportation
4. Flooding/Floo	dplain Values	
4.1	Env-Wt 311.05; Env-Wt	Wetlands Permitting: Priority Resource Area (nh.gov)
	103.66	NH Online Forms System - Coastal Resource Worksheet. Version 2.0
	517.03(b); 517.06(a)(6);	New Hampshire Coastal Flood Risk Summary   NH Department of

	527.02(e); 527.04(d); Env-Wt 600 Env-Wt 900	Environmental Services (cited in Env-Wt 603.05) <u>NH Online Forms System - Wetland Permit Application Stream Crossing</u> <u>Worksheet. Version 1.8</u> <u>hydraulic-vulnerability-handout.pdf (nh.gov)</u>
4.2	Env-Wt 527.02 & 527.04 & 313.04 & Env-Wt 800; Wt 605.03 & 605.04	Yes, for permanent impacts to a PRA, impacts from public highway projects, & those projects where flood storage functions are lost when the mitigation threshold is reached. <u>Wetlands Mitigation   NH Department of Environmental Services</u>
5. Historical/Arc	heological Resources	
5.0	Env-Wt 311.02(f)(6)	
6. Minimal Impa	ct Determination	
6.0	F/V assessment: (Env-Wt 311.10); Env-Wt 603.04 (Coastal Functional Assessment) Alternatives: (Env-Wt 311.07(b)(2))	NH Online Forms System - Wetlands Functional Assessment Worksheet. Version 1.3 NH Online Forms System - Coastal Resource Worksheet. Version 2.0
6.1		Wetlands Permitting: Avoidance, Minimization, and Mitigation (nh.gov)
6.2	Env-Wt 102.12 ("Avoidance"), Env-Wt 102.13 ("Avoidance, minimization, mitigation"), Env-Wt 102.14 ("Avoid and minimize"), Env-Wt 311.01, Env-Wt 313.03 ("Avoidance & Minimization") Env-Wt 311.07	See <u>Wetlands Best Management Practice Techniques for Avoidance and</u> <u>Minimization</u> - <u>Wetlands-BMP-Manual-2019.pdf (neiwpcc.org)</u> referenced in Env-Wt 313.03(a); A/M written narrative ( <u>NH Online Forms System -</u> <u>Avoidance and Minimization Written Narrative. Version 2.0</u> ); Avoidance and Minimization Checklist: <u>NH Online Forms System - Avoidance and</u> <u>Minimization Checklist. Version 3.1</u>
6.3	Env-Wt 311.10, 603.04	See Functional Assessment worksheets above
6.4	Env-Wt 311.02, Env-Wt 312.04. Env-Wt 306.05, 307.06, 311.01	See Protected Species or Habitat (including exemplary natural communities)
6.5	Env-Wt 311.01, Env-Wt 311.07, Env-Wt 311.10 & 313.01 c)1)	See Avoidance & Minimization cites above & BMPs
6.6	(Env-Wt 313.01c) (1) & Env- Wt 311.07(b)(2))	
6.7	Env-Wt 311.10, Env-Wt 103.69, Env-307.06, see Avoidance & minimization cites	NH Online Forms System - Wetlands Functional Assessment Worksheet. Version 1.3; Wetlands Permitting: Priority Resource Area (nh.gov) NH Online Forms System - Coastal Resource Worksheet. Version 2.0
6.8	Env-Wt 102.05 (Water quality BMPs)	Practices to minimize or prevent direct or indirect discharge of sediment or other pollutants into surface waters and wetlands, listed in Env-Wt 307
6.9	Env-Wt 800	

New Hampshire Division of Historical Resources State Historic Preservation Office Attention: Review & Compliance 172 Pembroke Road, Concord, NH 03301   RECEIVED OCT 2 8 2024  Concord NH 03301  Receive by the New Hampshire Division of Historical Resources  NOV 11 2024  ARIES ENGINEENCE  Concord NA maina Restoration Project  Project Title Portsmouth Marina Restoration Project  Project Location 187 Wentworth Road and 5 Sagamore Grove  City/Town Portsmouth Marina Restoration Project  Project Accer Ack of aud and S Sagamore Grove  City/Town Portsmouth Marina Restoration Project  Project Location 187 Wentworth Road and 5 Sagamore Grove  City/Town Portsmouth Marina Restoration Project  Project Accer Ack of aug and Contact (if applicable) USEPA, TSCA Cleanup: Katherine Woodward  (Agency providing funds, licenses, or permite)  Permit Type and Permit or Job Reference # Self Implementing Plan Approved 1/31/2023  State Agency and Contact (if applicable) NHDES Wetlands Bureau: Kristen Duclos, Wetlands Specialist Permit Type and Permit or Job Reference # WPA; NHDES Site No. 198604143  APPLICANT INFORMATION  Applicant Name Tom Reis, President, Sea Level, LLC  Mailing Address PO Box 4094  Phone Number 603-436-1039  City Portsmouth State NH Zip 03802 Email info@substructure.com  CONTACT PERSON TO RECEIVE RESPONSE  Name/Company Iohonnett, Jay P., PE/ Aries Engineering, LLC  Mailing Address IO4 Pleasant Street Phone Number 603-228-0008  City C	Please mail the completed form and required	l material to:	DHR U	se Only
State Historic Preservation Office Attention: Review & Compliance 172 Pembroke Road, Concord, NH 03301       RECEIVED OCT 2 8 2024       Iog In Date 10 - 36 / 34 Response Date 11 - 1 - 2 Sent Date 11 - 2 Sent Date 12 - 2 Sent Date 12 - 2 Sent Date 12 - 2 Sent Date 12 - 2 S	New Hampshire Division of Historical Resou	urces	R&C #	7943mi
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	City Concord State <sup>N</sup>	NH Zip 03301	Email jjohonnett@aries	s-eng.com

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This form is updated periodically. Please download the current form at https://www.nhdhr.dncr.nh.gov/projectreview/project-review-compliance/requests-project-review. Please refer to the Request for Project Review Instructions for direction on completing this form. Submit one copy of this project review form for each project for which review is requested. Please include a self-addressed stamped envelope. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: https://www.nhdhr.dncr.nh.gov/projectreview/project-review-compliance/requests-project-review the R&C Specialist or contact at Elizabeth.A.Schneible@dncr.nh.gov or 603-271-2813.

#### PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- Attach the Project Mapping using EMMIT or relevant portion of a 7.5' USGS Map. (See RPR Instructions and R&C FAQs for guidance.)
- Attach a detailed narrative description of the proposed project.
- Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) (Informative photo captions are requested.)

A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in **Table 1**. (Blank table forms are available on the DHR website.) Please note, using EMMIT Guest View for an RPR records search does not provide the necessary in balance of the DHR review.

EMMIT or in-house records search conducted on 10/04/2024

#### <u>Architecture</u>

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area? The Yes No

If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s):

- Photographs of *each* resource or streetscape located within the project area, with captions, along with a mapped photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- ☐ If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.)

#### <u>Archaeology</u>

1

 $\checkmark$ 

Does the proposed undertaking involve ground-disturbing activity? ✓ Yes □ No If yes, submit all of the following information:

- Description of current and previous land use and disturbances.
- Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

DHR Comment/Finding Recommendation This Space for Division of Historical Resources Use Only

<b>Insufficient information to initiate review</b> . Additional information is needed in order to complete review.
🗌 No Potential to cause Effects 🔲 No Historic Properties Affected 🗌 No Adverse Effect 🗌 Adverse Effect
Comments:
If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.
Authorized Signatures Mark Mark & STAD

#### **APPENDIX I**

US ARMY CORPS OF ENGINEERS, NH GENERAL PERMIT CHECKLIST, LIST OF ATTACHMENTS

Attachment AA—NHDES Wetlands Permit Application (WPA), With NHDHR Review & Other Appendices

Attachment BB—Engineering Plans-Drawings-Sheets, 11" by 17"

Attachment CC—USFWS ICAP Review

#### MARINA RESTORATION PROJECT ENGINEERING PLANS

APPLICANT: TOM REIS, SEA LEVEL, INC. PREPARED BY: ARIES ENGINEERING, LLC / HALEY WARD, INC.

#### SHEET INDEX

- SHEET 1: SITE LOCUS AND SHEET INDEX
- SHEET 2: SITE PLAN AND EXISTING CONDITIONS SITE PLAN
- SHEET 3A PCB SAMPLE LOCATION PLAN
- SHEET 3B >50 PPM PCB POST-EXCAVATION SAMPLE LOCATION PLAN
- SHEET 3C <50 PPM PCB POST-EXCAVATION SAMPLE LOCATION PLAN
- SHEET 3D SELF-IMPLEMENTING CLEANUP PLAN (SIP) SHEET 4 CONCRETE PAD CROSS SECTION
- FINAL GRADING PLAN/SHORELINE STABILIZATION PLAN SHEET 5
- (WITH TIDAL SHORELINE STABILITY)
- SHEET 6 PLANTING PLAN WITH PLANTING SCHEDULE
- SHEET 7 TREE TYPES AND LOCATIONS























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Planting Schedule					
Key	Plant Type	Species	Size (feet)	Caliper Size	Quantity
GB	Tree	Gray Birch (Betula populifolia)	3-4	-	1
RC	Tree	Red Cedar (Juniperus virginana)	3-4	-	1
SD	Shrub	Silky dogwood (Cornus amomum)	2-3	-	3
SB	Shrub	Shadbush (Amelanchier candensis)	2-3	-	2
BCB	Shrub	Black Chokeberry (Aronia melanocarpa)	2-3	-	1
SR	Plugs	Salt Marsh Bullrush (Scirpus Robustus)	-	_	350
STGM	Seed	Salt Tolerant Grass Mix*	-	_	5 lb

#### NOTES:

- \*STGM species list includes: Canada Wild Rye (Elymus canadensis), Red 1. Fescue (Festuca rubra), Atlantic Coastal Panic Grass (Panicum amarum), Big Bluestem (Andropogon gerardii), Indian Grass (Sorghastrum nutans), Switch Grass (Panicum virgatum), and Path Rush (Juncus tenuis)
- Mean High Water (MHW) and Mean Low Water (MLW) lines are outside of 2. the Limit of Disturbance and beyond the area shown in the above cross section.

NOT TO SCALE

HORIZONTAL/VERTICAL Scales as shown









## United States Department of the Interior

FISH AND WILDLIFE SERVICE New England Ecological Services Field Office 70 Commercial Street, Suite 300 Concord, NH 03301-5094 Phone: (603) 223-2541 Fax: (603) 223-0104



07/18/2024 18:41:23 UTC

In Reply Refer To: Project code: 2024-0118282 Project Name: Portsmouth Marina Remediation Project

Federal Nexus: yes Federal Action Agency (if applicable):

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for 'Portsmouth Marina Remediation Project'

Dear Nyssa Seekamp:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 18, 2024, for "Portsmouth Marina Remediation Project" (here forward, Project). This project has been assigned Project Code 2024-0118282 and all future correspondence should clearly reference this number.

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northeast Determination Key (DKey), invalidates this letter. <u>Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.</u>

To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative effect(s)), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17). Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no further consultation with, or concurrence from, the Service is

required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13]).

The IPaC results indicated the following species is (are) potentially present in your project area and, based on your responses to the Service's Northeast DKey, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Roseate Tern ( <i>Sterna dougallii dougallii</i> )	Endangered	No effect
Rufa Red Knot (Calidris canutus rufa)	Threatened	No effect

**Conclusion** If there are no updates on listed species, no further consultation/coordination for this project is required for the species identified above. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional consultation with the Service should take place before project implements any changes which are final or commits additional resources.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Monarch Butterfly *Danaus plexippus* Candidate
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

To complete consultation for species that have reached a "May Affect" determination and/or species may occur in your project area and are not covered by this conclusion, please visit the "New England Field Office Endangered Species Project Review and Consultation" website for step-by-step instructions on how to consider effects on these listed species and/or critical habitats, avoid and minimize potential adverse effects, and prepare and submit a project review package if necessary: https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference the Project Code associated with this Project.

#### **Action Description**

You provided to IPaC the following name and description for the subject Action.

#### 1. Name

Portsmouth Marina Remediation Project

#### 2. Description

The following description was provided for the project 'Portsmouth Marina Remediation Project':

Sea Level, Inc. is undertaking the completion of a remediation project that was begun previously but remains incomplete. During the first remediation attempt a series of soil piles were left in the upland area and within the previously developed 100 foot Tidal Buffer Zone (TBZ). Additionally, a sump was created that disturbed a small portion of salt marsh. The piles of soil have been smoothed over and covered with a gravel base for stabilization until further remediation activities can occur. The purpose of this project is to complete the remediation and restore the disturbed salt marsh area.

The approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@43.05342615,-70.74499582496054,14z</u>



## QUALIFICATION INTERVIEW

- 1. As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully? *Yes*
- 2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

**Note:** This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

- 4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project? *No*
- 5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

**Note:** If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

Yes

- 8. Will the proposed project involve the use of herbicide where listed species are present? *No*
- 9. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

No

10. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

11. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

12. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

No

13. Will the proposed project affect wetlands where listed species are present?

This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

Yes

14. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

Yes

15. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?*Yes* 

16. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

No

17. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

No

18. Will the proposed project involve the removal of excess sediment or debris, dredging or instream gravel mining where listed species may be present?

Yes

19. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

Note New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

No

20. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

No

- 21. Will the proposed project involve blasting where listed species may be present? No
- 22. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

No

23. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

**Note**: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream.

Yes

- 24. Will earth moving activities result in sediment being introduced to streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography? No
- 25. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

Yes

26. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

Yes

27. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

No

28. Will the proposed project result in changes to beach dynamics that may modify formation of habitat over time?

**Note:** Examples of projects that result in changes to beach dynamics include 1) construction of offshore breakwaters and groins; 2) mining of sand from an updrift ebb tidal delta; 3) removing or adding beach sands; and 4) projects that stabilize dunes (including placement of sand fences or planting vegetation).

No

- 29. [Hidden Semantic] Is the project area located within the red knot AOI? Automatically answered Yes
- 30. If you have determined that the red knot is unlikely to occur within your project's action area or that your project is unlikely to have any potential effects on the red knot, you may wish to make a "no effect" determination for the red knot. Additional guidance on how to make this decision can be found in the project review section of your local Ecological Services Field Office's website. CBFO: https://www.fws.gov/office/chesapeake-bay-ecological-services/project-review ; MEFO: https://www.fws.gov/office/maine-ecological-services ; NJFO: https://www.fws.gov/office/new-jersey-field-office-project-review-guide ; NEFO: https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review#Step5 ; WVFO: https:// www.fws.gov/office/west-virginia-ecological-services/project-planning. If you are unsure, answer "No" and continue through the key.

Would you like to make a no effect determination for the red knot? *Yes* 

31. [Hidden Semantic] Is the project area located within the roseate tern AOI? **Automatically answered** *Yes* 

32. If you have determined that the roseate tern is unlikely to occur within your project's action area or that your project is unlikely to have any potential effects on the roseate tern, you may wish to make a "no effect" determination for the roseate tern. Additional guidance on how to make this decision can be found in the project review section of your local Ecological Services Field Office's website. CBFO: https://www.fws.gov/office/ chesapeake-bay-ecological-services/project-review ; MEFO: https://www.fws.gov/office/ maine-ecological-services ; NJFO: https://www.fws.gov/office/new-jersey-ecological-services/endangered-species-project-review#Step5 ; WVFO: https://www.fws.gov/office/west-virginia-ecological-services/project-planning. If you are unsure, answer "No" and continue through the key.

Would you like to make a no effect determination for the roseate tern? *Yes* 

- 33. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?
   Automatically answered
   No
- 34. [Semantic] Does the project intersect the Indiana bat critical habitat?Automatically answeredNo
- 35. [Semantic] Does the project intersect the candy darter critical habitat?Automatically answeredNo
- 36. [Semantic] Does the project intersect the diamond darter critical habitat?Automatically answeredNo
- 37. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?Automatically answeredNo
- 38. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

Automatically answered No

39. Do you have any other documents that you want to include with this submission? *No* 

## **PROJECT QUESTIONNAIRE**

- 1. Briefly describe the habitat within the construction/disturbance limits of the project site. *Tidal salt marsh wetland in coastal estuarine habitat. Salt march comprised primarily of intertidal mudflat with sparse vegetation.*
- 2. Approximately how many acres of trees would the proposed project remove? *0*
- 3. Approximately how many total acres of disturbance are within the disturbance/ construction limits of the proposed project?

0.16

## **IPAC USER CONTACT INFORMATION**

Agency: Private Entity Name: Nyssa Seekamp Address: 129 Route 125 City: Kingston State:  $\mathbf{NH}$ Zip: 03848 Email nseekamp14@gmail.com Phone: 6038193140



## United States Department of the Interior

FISH AND WILDLIFE SERVICE New England Ecological Services Field Office 70 Commercial Street, Suite 300 Concord, NH 03301-5094 Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To: Project Code: 2024-0118282 Project Name: Portsmouth Marina Remediation Project

07/18/2024 18:23:38 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

*Updated* 4/12/2023 - *Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.* 

#### About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

#### **Endangered Species Act Project Review**

Please visit the **"New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

**\*NOTE\*** Please <u>do not</u> use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

**Northern Long-eared Bat - (Updated 4/12/2023)** The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

#### https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at <u>newengland@fws.gov</u> to see if reinitiation is necessary.

#### Additional Info About Section 7 of the Act

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

#### https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

**Candidate species** that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

#### Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

Official Species List

# **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

#### New England Ecological Services Field Office

70 Commercial Street, Suite 300 Concord, NH 03301-5094 (603) 223-2541
# **PROJECT SUMMARY**

Project Code:	2024-0118282
Project Name:	Portsmouth Marina Remediation Project
Project Type:	Non-NPL Site Remediation
Project Description:	Sea Level, Inc. is undertaking the completion of a remediation project that
	was begun previously but remains incomplete. During the first
	remediation attempt a series of soil piles were left in the upland area and
	within the previously developed 100 foot Tidal Buffer Zone (TBZ).
	Additionally, a sump was created that disturbed a small portion of salt
	marsh. The piles of soil have been smoothed over and covered with a
	gravel base for stabilization until further remediation activities can occur.
	The purpose of this project is to complete the remediation and restore the
	disturbed salt marsh area.

# Project Location:

The approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@43.05342615,-70.74499582496054,14z</u>



Counties: Rockingham County, New Hampshire

# **ENDANGERED SPECIES ACT SPECIES**

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

# MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9045</u>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/10515</u>	Proposed Endangered
BIRDS NAME	STATUS
Roseate Tern Sterna dougallii dougallii Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/2083</u>	Endangered
Rufa Red Knot <i>Calidris canutus rufa</i> There is <b>proposed</b> critical habitat for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/1864</u>	Threatened
INSECTS NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9743</u>	Candidate

# **CRITICAL HABITATS**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# **IPAC USER CONTACT INFORMATION**

Agency:Private EntityName:Nyssa SeekampAddress:15 Park StreetCity:DoverState:NHZip:03820Emailnseekamp14@gmail.comPhone:6038193140



COASTAL RESOURCE WORKSHEET Water Division/Land Resources Management Wetlands Bureau <u>Check the Status of your Application</u>



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

## APPLICANT LAST NAME, FIRST NAME, M.I.: Sea Level, LLC and Goulemas Family Trust

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

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

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

The following information is required for projects in coastal areas.

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

The purpose and goal is to complete remediation of PCBs, stabilize slopes and revegetate 410 SF of marsh, with adjacent slopes hardscape stabilized; also 1 CY soil of upland soil (>11 FT MSL) removed, 770 SF covered with 6 in soil cover (>1<25 ppm PCBs) and 5,000 SF concrete cap installed over soils with >25<50 ppm PCBs and lead, see Sheet 5. Resources proposed for impact include previously developed tidal buffer zone (TBZ) and shoreland. The TBZ and salt marsh within which work is proposed is currently disturbed.

All screening information and associated maps are provided in Appendix J, Part 2--Figure J1. A Coastal Functional Assessment (CFA) is completed in Appendix L for Sagamore Creek and associated tidal wetlands which includes saltmarsh and mudflat, completed by Adel Fiorillo Mattson, PWS#832 and Patrick Seekamp, CWS# 00128. The CFA was completed utilizing the USACE Highway Methodology (HM) Supplement (1993), USACE New England District HM Workbook Supplement (1999) for all functions and values except Ecological Integrity, which was assessed using the Method for the Evaluation and Inventory of Vegetated Tidal Marshes in NH (June 1993).

The Vulnerability Assessment is provided in Appendix K.

For standard permit projects, provide:

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

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

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

Per Env 311.07c, an Avoidance and Minimization Checklist May 2020 NH W-06-050 has been completed in Appendix F, which demonstrates compliance with Env-Wt 311.07. This Checklist demonstrates also that impacts to functions and values of all jurisdictional areas have been avoided and minimized to the maximum extent practicable, as required by Env-Wt 313.03.

Recognizing the location cannot be moved for this remediation project, methods to protect natural resources are described in Appendix J, Part 3--Coastal Resource Worksheet Narrative.

Vulnerability Assessment is provided in Appendix K.

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

The project addresses the cited Env-Wt 307 and 313.01, see Appendix J, Part 3, Coastal Resource Worksheet Narrative. Provide a project design narrative that includes the following:

A discussion of how the proposed project:
<ul> <li>Uses best management practices and standard conditions in Env-Wt 307;</li> <li>Meets all avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;</li> <li>Meets approval criteria in Env-Wt 313.01;</li> <li>Meets evaluation criteria in Env-Wt 313.01(c);</li> <li>Meets CFA requirements in Env-Wt 603.04; and</li> <li>Considers sea-level rise and potential flooding evaluated pursuant to Env-Wt 603.05;</li> <li>A construction sequence, erosion/siltation control methods to be used, and a dewatering plan; and</li> <li>A discussion of how the completed project will be maintained and managed.</li> </ul>
See Appendix J, Part 3, Coastal Resource Worksheet Narrative, which addresses each of these requirements. For erosion/siltation control methods to be used, see Appendix E, Engineering Plans, Sheets 5-7. No dewatering is required. For Construction Sequence, see Sheet 5. For discussion of how completed project will be maintained and managed, see Appendix J, Part 4, Operations Monitoring & Maintenance Plan.
<ul> <li>Provide design plans that meet the requirements of Env-Wt 603.07 (refer to Section 5);</li> <li>Provide water depth supporting information required by Env-Wt 603.08 (refer to Section 6); and</li> <li>For any major project that proposes to construct a structure in tidal waters/wetlands or to extend an existing structure seaward, provide a statement from the Pease Development Authority Division of Ports and Harbors (DP&amp;H) chief harbormaster, or designee, for the subject location relative to the proposed structure's impact on navigation. If the proposed structure might impede existing public passage along the subject shoreline on foot or by non-motorized watercraft, the applicant shall explain how the impediments have been minimized to the greatest extent practicable.</li> <li>See Appendix J, Part 3, Narrative to Coastal Resource Worksheet concerning design plans and water depth supporting information. See also Section 5 of this Worksheet. No structures are proposed or exist.</li> </ul>

SECTION 2 - DATA SCREENING (Env-Wt 603.03, in addition to Env-Wt 306.05)						
Please use the Wetland Permit Planning Tool, or any other database or source, to indicate the presence of:						
Existing salt marsh and salt marsh migration pathways;						
Eelgrass beds;						
Documented shellfish sites;						
Projected sea-level rise; and						
🔀 100-year floodplain.						
Conduct data screening as described to identify documented essential fish habitat, and tides and currents that may be impacted by the proposed project, by using the following links:						
National Oceanic and Atmospheric Administration (NOAA) Tides & Currents; and						
NOAA Essential Fish Habitat Mapper.						
Verify or correct the information collected from the data screenings by conducting an on-site assessment of the subject property in accordance with Env-Wt 406 and Env-Wt 603.04.						
SECTION 3 - COASTAL FUNCTIONAL ASSESSMENT/ AVOIDANCE AND MINIMIZATION (Env-Wt 603.04; Env-Wt 605.01; Env-Wt 605.02; Env-Wt 605.03)						
Projects in coastal areas shall:						
Not impair the navigation, recreation, or commerce of the general public; and						
Minimize alterations in prevailing currents.						
An applicant for a permit for work in or adjacent to tidal waters/wetlands or the tidal buffer zone shall demonstrate that the following have been avoided or minimized as required by Env-Wt 313.04:						
Adverse impacts to beach or tidal flat sediment replenishment;						
Adverse impacts to the movement of sediments along a shore;						
Adverse impacts on a tidal wetland's ability to dissipate wave energy and storm surge; and						
Adverse impacts of project runoff on salinity levels in tidal environments.						
For standard permit applications submitted for minor or major projects:						
Attach a CFA based on the data screening information and on-site evaluation required by Env-Wt 603.03. The CFA for tidal wetlands or tidal waters shall be:						
Performed by a qualified coastal professional; and						
Completed using one of the following methods:						
a. The US Army Corps of Engineers (USACE) Highway Methodology Workbook, dated 1993, together with the USACE New England District <i>Highway Methodology Workbook Supplement</i> , dated 1999; or						
b. An alternative scientifically-supported method with cited reference and the reasons for the alternative method substantiated.						

For any project that would impact tidal wetlands, tidal waters, or associated sand dunes, the applicant shall:
Use the results of the CFA to select the location of the proposed project having the least impact to tidal wetlands, tidal waters, or associated sand dunes;
Design the proposed project to have the least impact to tidal wetlands, tidal waters, or associated sand dunes;
Where impact to wetland and other coastal resource functions is unavoidable, limit the project impacts to the least valuable functions, avoiding and minimizing impact to the highest and most valuable functions; and
Include on-site minimization measures and construction management practices to protect coastal resource areas.
Projects in coastal areas shall use results of this CFA to:
Kinimize adverse impacts to finfish, shellfish, crustacean, and wildlife;
Minimize disturbances to groundwater and surface water flow;
🔀 Avoid impacts that could adversely affect fish habitat, wildlife habitat, or both; and
Avoid impacts that might cause erosion to shoreline properties.
SECTION 4 - VULNERABILITY ASSESSMENT (Env-Wt 603.05) Refer to the New Hampshire Coastal Flood Risk Summary Part 1: Science and New Hampshire Coastal Flood Risk Summary Part II: Guidance for Using Scientific Projections or other best available science to:
Determine the time period over which the project is designed to serve.
1 month.
Identify the project's relative risk tolerance to flooding and potential damage or loss likely to result from flooding to buildings, infrastructure, salt marshes, sand dunes and other valuable coastal resource areas.
See Vulnerability Assessment, Appendix K.

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

The 2 ft sea level rise for mapping was employed (see Appendix J, J1).

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

See Appendix J, Figure J1.

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

See Appendix E, Engineering Plans, Sheets 2, 5 through 7.

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

See Appendix J, Figure J1f, used SLR Scenario 2 ft.

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

Pre-application meeting date held:

SECTION 5 - DESIGN PLANS (Env-Wt 603.07, in addition to Env-Wt 311) Submit design plans for the project in both plan and elevation views that clearly depict and identify all required elements.						
The plan view shall depict the following:						
The engineering scale used, which shall be no larger than one inch equals 50 feet;						
The location of tidal datum lines depicted as lines with the associated elevation noted, based on North American Vertical Datum of 1988 (NAVD 88), derived from <a href="https://tidesandcurrents.noaa.gov/datum_options.html">https://tidesandcurrents.noaa.gov/datum_options.html</a> , as described in Section 6.						
An imaginary extension of property boundary lines into the waterbody and a 20-foot setback from those property line extensions;						
The location of all special aquatic sites at or within 100 feet of the subject property;						
Existing bank contours;						
The name and license number, if applicable, of each individual responsible for the plan, including:						
a. The agent for tidal docking structures who determined elevations represented on plans; and						
<ul> <li>The qualified coastal professional who completed the CFA report and located the identified resources on the plan;</li> </ul>						
The location and dimensions of all existing and proposed structures and landscape features on the property;						
Tidal datum(s) with associated elevations noted, based on NAVD 88; and						
Location of all special aquatic sites within 100-feet of the property.						
The elevation view shall depict the following:						
The nature and slope of the shoreline;						
The location and dimensions of all proposed structures, including permanent piers, pilings, float stop structures, ramps, floats, and dolphins; and						
Water depths depicted as a line with associated elevation at highest observable tide, mean high tide, and mean low tide, and the date and tide height when the depths were measured. Refer to Section 6 for more instructions regarding water depth supporting information.						
See specific design and plan requirements for certain types of coastal projects:						
Overwater structures (Env-Wt 606).     Tidal shoreline stabilization (Env-Wt 609).						
<ul> <li>Dredging activities (Env-Wt 607).</li> <li>Protected tidal zone (Env-Wt 610).</li> </ul>						
Tidal beach maintenance (Env-Wt 608).     Sand Dunes (Env-Wt 611).						

SECTION 6 - WATER DEPTH SUPPORTING INFORMATION REQUIRED (Env-Wt 603.08)
Using current predicted NOAA tidal datum for the location, and tying field measurements to NAVD 88, field observations of at least three tide events, including at least one minus tide event, shall be located to document the range of the tide in the proposed location showing the following levels:
Mean lower low water;
Mean low water;
🔀 Mean high water;
Mean tide level;
Mean higher high water;
Highest observable tide line; and
Predicted sea-level rise as identified in the vulnerability assessment in Env-Wt 603.05.
The following data shall be presented in the application project narrative to support how water depths were determined:
The date, time of day, and weather conditions when water depths were recorded; and
The name and license number of the licensed land surveyor who conducted the field measurements.
For tidal stream crossing projects, provide:
Water depth information to show how the tier 4 stream crossing is designed to meet Env-Wt 904.07(c) and (d).
For repair, rehabilitation or replacement of tier 4 stream crossings:
Demonstrate how the requirements of Env-Wt 904.09 are met.
SECTION 7 - GENERAL CRITERIA FOR TIDAL BEACHES, TIDAL SHORELINE, AND SAND DUNES (Env-Wt 604.01)
Any person proposing a project in or on a tidal beach, tidal shoreline, or sand dune, or any combination thereof, shall evaluate the proposed project based on:
The standard conditions in Env-Wt 307;
The avoidance and minimization requirements in Env-Wt 311.07 and Env-Wt 313.03;
The approval criteria in Env-Wt 313.01;
The evaluation criteria in Env-Wt 313.05;
The project specific criteria in Env-Wt 600;
The CFA required by Env-Wt 603.04; and
The vulnerability assessment required by Env-Wt 603.05.
New permanent impacts to sand dunes that provide coastal storm surge protection for protected species or habitat shall not be allowed except:
To protect public safety; and
Only if constructed by a state agency, coastal resiliency project, or for a federal homeland security project.
Projects in or on a tidal beach, tidal shoreline, or sand dune shall support integrated shoreline management that:
Optimizes the natural function of the shoreline, including protection or restoration of habitat, water quality, and self-sustaining stability to flooding and storm surge; and
Protects upland infrastructure from coastal hazards with a preference for living shorelines over hardened shoreline practices.

SECTION 8 - GENERAL CRITERIA FOR TIDAL	BUFFER ZONES (Env-Wt 604.02)
The 100-foot statutory limit on the extent of a project in or on an undeveloped tidal buf	of the tidal buffer zone shall be measured horizontally. Any person proposing fer zone shall evaluate the proposed project based on:
The standard conditions in Env-Wt 307;	
🔀 The avoidance and minimization requir	ements in Env-Wt 311.07 and Env-Wt 313.03;
The approval criteria in Env-Wt 313.01;	
The evaluation criteria in Env-Wt 313.0	5;
🔀 The project specific criteria in Env-Wt 6	00;
🔀 The CFA required by Env-Wt 603.04; an	d
The vulnerability assessment required b	by Env-Wt 603.05.
Projects in or on a tidal buffer zone shall pr	eserve the self-sustaining ability of the buffer area to:
🔀 Provide habitat values;	
Protect tidal environments from potent	ial sources of pollution;
Provide stability of the coastal shoreline	e; and
Maintain existing buffers intact where t	he lot has disturbed area defined under RSA 483-B:4, IV.
SECTION 9 - GENERAL CRITERIA FOR TIDAL	WATERS/WETLANDS (Env-Wt 604.03)
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of	WATERS/WETLANDS (Env-Wt 604.03) anent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on:
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307;	WATERS/WETLANDS (Env-Wt 604.03) anent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on:
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307; The avoidance and minimization require	WATERS/WETLANDS (Env-Wt 604.03) anent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03;
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307; The avoidance and minimization require The approval criteria in Env-Wt 313.01;	WATERS/WETLANDS (Env-Wt 604.03) nanent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03;
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307; The avoidance and minimization require The approval criteria in Env-Wt 313.01; The evaluation criteria in Env-Wt 313.02	WATERS/WETLANDS (Env-Wt 604.03) nanent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03; 5;
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307; The avoidance and minimization require The approval criteria in Env-Wt 313.01; The evaluation criteria in Env-Wt 313.02 The project specific criteria in Env-Wt 6	WATERS/WETLANDS (Env-Wt 604.03) nanent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03; 5; 00;
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307; The avoidance and minimization require The approval criteria in Env-Wt 313.01; The evaluation criteria in Env-Wt 313.02; The project specific criteria in Env-Wt 603.04; an	wATERS/WETLANDS (Env-Wt 604.03) hanent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03; 5; 00; d
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307; The avoidance and minimization require The approval criteria in Env-Wt 313.01; The evaluation criteria in Env-Wt 313.02; The project specific criteria in Env-Wt 603.04; an The CFA required by Env-Wt 603.04; an The vulnerability assessment required by	WATERS/WETLANDS (Env-Wt 604.03) hanent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03; 5; 00; d by Env-Wt 603.05.
SECTION 9 - GENERAL CRITERIA FOR TIDAL Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of The standard conditions in Env-Wt 307; The avoidance and minimization require The approval criteria in Env-Wt 313.01; The evaluation criteria in Env-Wt 313.02; The project specific criteria in Env-Wt 603.04; an The CFA required by Env-Wt 603.04; an The vulnerability assessment required by Projects in tidal surface waters or tidal wet	WATERS/WETLANDS (Env-Wt 604.03) hanent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03; 5; 00; d by Env-Wt 603.05. lands shall:
<ul> <li>SECTION 9 - GENERAL CRITERIA FOR TIDAL</li> <li>Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of</li> <li>The standard conditions in Env-Wt 307;</li> <li>The avoidance and minimization require</li> <li>The approval criteria in Env-Wt 313.01;</li> <li>The evaluation criteria in Env-Wt 313.01;</li> <li>The project specific criteria in Env-Wt 313.02;</li> <li>The project specific criteria in Env-Wt 603.04; an</li> <li>The vulnerability assessment required to the self-sustaining stability to storm surge;</li> </ul>	A WATERS/WETLANDS (Env-Wt 604.03) anent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: ements in Env-Wt 311.07 and Env-Wt 313.03; 5; 00; d by Env-Wt 603.05. lands shall: al wetland, including protection or restoration of habitat, water quality, and
<ul> <li>SECTION 9 - GENERAL CRITERIA FOR TIDAL</li> <li>Except as allowed under Env-Wt 606, perm safety or homeland security. Evaluation of</li> <li>The standard conditions in Env-Wt 307;</li> <li>The avoidance and minimization require</li> <li>The approval criteria in Env-Wt 313.01;</li> <li>The evaluation criteria in Env-Wt 313.01;</li> <li>The project specific criteria in Env-Wt 313.01;</li> <li>The project specific criteria in Env-Wt 603.04; an</li> <li>The vulnerability assessment required b</li> <li>Projects in tidal surface waters or tidal wet</li> <li>Optimize the natural function of the tid self-sustaining stability to storm surge;</li> <li>Be designed with a preference for living</li> </ul>	WATERS/WETLANDS (Env-Wt 604.03) Inanent new impacts to tidal wetlands shall be allowed only to protect public impacts to tidal wetlands and tidal waters shall be based on: Interpretent in Env-Wt 311.07 and Env-Wt 313.03; 5; 00; d py Env-Wt 603.05. Interpretent for the stabilization practices; and

### **SECTION 10 – GUIDANCE**

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

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

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

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



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





## J1c. Essential Fish Habitat Report and Map

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EFH Report

## **EFH Mapper Report**

#### **EFH Data Notice**

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office Atlantic Highly Migratory Species Management Division

#### **Query Results**

CEU

Degrees, Minutes, Seconds: Latitude = 43° 3' 14" N, Longitude = 71° 15' 18" W Decimal Degrees: Latitude = 43.054, Longitude = -70.745

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

#### \*\*\* WARNING \*\*\*

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.

сгп					
Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
P	0	Atlantic Butterfish	Adult	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
P	Atlantic Cod		Adult, Eggs, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
P	Atlantic Herring		Adult, Juvenile, Larvae	New England	Amendment 3 to the Atlantic Herring FMP
R	Atlantic Mackerel		Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
	Θ	Atlantic Sea Scallop	ALL	New England	Amendment 14 to the Atlantic Sea Scallop FMP
P	Atlantic Wolffish		ALL	New England	Amendment 14 to the Northeast Multispecies FMP

https://www.habitat.noaa.gov/apps/efhmapper/efhreport/index.html

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Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
P	0	Bluefin Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
P	Bluefish		Adult, Juvenile	Mid-Atlantic	Bluefish
A	0	Little Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
P	0	Pollock	Eggs, Juvenile, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
P	Θ	Red Hake	Adult, Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
P	0	Smooth Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
P	Θ	Thorny Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
P	0	White Hake	Adult, Eggs, Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
P	Θ	Windowpane Flounder	Adult, Eggs, Juvenile, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
P	0	Winter Flounder	Eggs, Juvenile, Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
P	0	Winter Skate	Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP

### Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

#### Atlantic Salmon EFH / HAPC

Link	Data Caveat	Name	Designation	Lifestage	Management Council	FMP
R	Θ	Coastal Areas	EFH	All	New England	Amendment 3 to the Atlantic Salmon FMP

## HAPCs

Ι	ink	Data Caveats	HAPC Name	Management Council
		0	Inshore 20m Juvenile Cod	New England Fishery Management Council

https://www.habitat.noaa.gov/apps/efhmapper/efhreport/index.html

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#### EFH Report

#### 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: <u>open data inventory --></u> All EFH species have been mapped for the Greater Atlantic region,

Atlantic Highly Migratory Species EFH, Bigeye Sand Tiger Shark, Bigeye Sixgill Shark, Caribbean Sharpnose Shark, Galapagos Shark, Narrowtooth Shark, Sevengill Shark, Sixgill Shark, Smooth Hammerhead Shark, Smalltail Shark



https://www.habitat.noaa.gov/apps/efhmapper/efhreport/index.html











## Narrative For Coastal Resource Worksheet (CRW), Env Wt 307 and Envt Wt 311.09, Env-Wt 400, Env-Wt 500, Env-Wt 600, and Env-Wt 700, and RSA 482-A:11; and Env Wt 313.01 and 313.03

- <u>Env Wt 307</u>: The project addresses the proposed dredging, filling, and construction within a jurisdictional area, per <u>307.1</u>; complies with all conditions of US Army Corps NH state general permit for dredging per <u>307.2</u>; for <u>307.3</u> compliance,
  - (a) The Proposed project activities are being conducted in such a way as to not cause or contribute to any violation of:
    - The surface water quality standards specified in RSA 485-A:8 or Env-Wq 1700;
    - (2) The ambient groundwater quality standards established under RSA 485-C;
    - (3) The limitations on activities in a sanitary protective area established under Env-Dw 302.10 or Env-Dw 305.10; or
    - (4) Any provision of RSA 485-A, Env-Wq 1000, RSA 483-B, or Env-Wq 1400 that protects water quality.
  - (b) <u>Soil erosion control:</u> All work, including management of soil stockpiles, will be conducted so as to minimize erosion, minimize sediment transfer to surface waters or wetlands, and minimize turbidity in surface waters and wetlands using the techniques described in:
    - (1) Env-Wq 1505.02, Env-Wq 1505.04, Env-Wq 1506, and Env-Wq 1508; specifically, to comply with <u>Env-Wq 1506</u>, mulching will be anchored with mulch netting or tackifier so that either are not blown away by wind or washed away by flowing water, applied at a rate of 70 to 90 pounds per 1,000 square feet to a thickness of at least two (2) inches; or alternatively, if an erosion control blanket is employed, it would be placed within 24 hours after sowing seed in the area being covered, by being laid loosely over the soils, maintaining contact with the soil, and not stretched; and installed per the manufacturer's specifications and will be anchored at the top of the slope in a trench, unrolled in the direction of the water flow, overlapping the edges and stapling. The seeding will be installed and staked at the toe (at HOTL, or 8 FT MSL) and top of the slope, at Elev 11 FT MSL, replacing the existing coir logs which exist in part along this 11 FT MSL line.
    - (2) The applicable BMP manual for Wetlands and Waterways Minimization and Avoidance is being followed;
  - (c) <u>Water quality control measures</u> have been:
    - (1) Selected and implemented based on the size and nature of the project and the physical characteristics of the site, including slope, soil type, vegetative cover, and proximity to jurisdictional areas;
    - (2) Comprised of wildlife-friendly erosion control materials;
    - (3) Installed prior to start of work and in accordance with the manufacturer's recommended specifications or, if none, the applicable requirements of Env-Wq 1506 or Env-Wq 1508, and will consist of staked coir logs at top

and toe of slopes, see WPA Appendix E, Engineering Sheets 5-7 ("Sheets 5-7");

- (4) Is capable of:
  - a. Minimizing erosion;
  - b. Collecting sediment and suspended and floating materials; and
  - c. Filtering fine sediment;
- (5) Will be maintained so as to ensure continued effectiveness in minimizing erosion and retaining sediment on-site during and after construction;
- (6) Remain in place until all disturbed surfaces are stabilized to a condition in which soils on the site will not experience accelerated or unnatural erosion, using techniques such as achieving and maintaining a minimum of 85% vegetative cover using an erosion control seed mix that is certified by its manufacturer as not containing any invasive species; and will consist of tall fescue and creeping red fescue applied at a rate of .45 lbs/1,000 SF and birdsfoot trefoil applied at a rate of 0.2 lbs/1,000 SF; per the NH Stormwater Handbook, Volume 1, 2008, since the upland soils cap area lies within 50 feet of a surface water, only limestone fertilizer will be applied at a rate of 138 lbs/1,000 SF; and
- (7) If designed and installed as temporary methods, be removed upon completion of work when compliance with (6), above, is achieved;
- (d) Any sediment collected by water quality control measures shall be:
  - (1) Removed with sufficient frequency to prevent the discharge of sediment; and
  - (2) Placed in an upland location in a manner that prevents its erosion into a surface water or wetland.
- (e) All exposed soils and other fills shall be permanently stabilized within 3 days following final grading.
- (f) <u>Turbidity curtain</u>--this will be deployed prior to dredging activities to:
  - Enclose the area of dredging conducted along the shoreline of the tidal inlet to Sagamore Creek, and will not be installed during periods of high flow; and
  - (2) Will be removed after work within the turbidity control is completed, the contained water has returned to background clarity, and removing the structure will not cause or contribute to a violation of (c)(6), above.
- (g) The person in charge of construction equipment shall:
  - Inspect such equipment for leaking fuel, oil, and hydraulic fluid each day prior to entering surface waters or wetlands or operating in an area where such fluids could reach groundwater, surface waters, or wetlands;
  - (2) Repair any leaks prior to using the equipment in an area where such fluids could reach groundwater, surface waters, or wetlands;
  - (3) Maintain oil spill kits and diesel fuel spill kits, as applicable to the type(s) and amount(s) of oil and diesel fuel used, on site so as to be readily accessible at all times during construction; and
  - (4) Train each equipment operator in the use of the spill kits.
- (h) Equipment shall be staged and refueled in accordance with Env-Wt 307.15, ie it will not be stored, maintained or repaired within wetlands; and it is anticipated

that the 4-8 cubic yards of wetland sediment to be removed, will be excavated by long reach excavator from the top of a riprap slope outside wetlands areas.

- <u>ENV WT 307.4</u>: the project will avoid and minimize discharges of dredged material or placement of fill material during spawning or breeding seasons by using water quality protection techniques as specified in Env-Wt 307 and timing of project as specified in Env-Wt 307.10(g) or (h);
- 3. <u>ENV WT 307.5</u>: the contractor will not use imported soil or seed stock containing nuisance or invasive species, by following the Invasive Plant BMPs;
- 4. <u>ENV WT 307.6</u>: no threatened or endangered species exist within the work area;
- 5. <u>ENV WT 307.7</u>: the proposed activities are consistent with the Shoreland Water Quality Protection Act, specifically maintenance and protection of waterfront buffer, natural woodland buffer, and protected shoreland, through adherence to Env Wq 1400 and RSA 483-B;
- 6. <u>ENV WT 307.8</u>: water quality and environmental minimization measures will be in place to ensure that functions and values of prime wetlands and duly-established 100-foot buffers are protected to extent practicable during construction;
- 7. <u>ENV WT 307.09</u>: no structures within jurisdictional areas are proposed;
- 8. <u>ENV WT 307.10:</u> dredging will not affect setbacks, will occur during low flow conditions, and turbidity controls shall:
  - (a) Be installed prior to construction and maintained during construction such that no turbidity escapes the immediate dredge area; and
  - (b) Remain in place until suspended particles have settled and water at the work site has returned to normal clarity;
  - (c) Dredged materials shall be disposed of out of jurisdictional areas, at a licensed disposal facility;
  - (d) Dredged materials (11 CY max) are intended to be to live-loaded and transported off-site, thus no stockpiling in uplands areas is anticipated. If this does become necessary, such stockpiling shall be dewatered in sedimentation basins that are:
    - (1) Contained within turbidity controls that prevent turbid water from leaving the basins; and
    - (2) Located outside of any jurisdictional area. Also, no dredging shall occur in tidal waters during a fish migration or larval setting stage of fish and shellfish, unless required, which is between March 15 and November 15; and will be designed and implemented to ensure that there is no disruption of tidal flushing;
- 9. ENV WT <u>307.11</u>: proposed fill shall be clean wetland hydric soil for dredging restoration areas, and clean topsoil for upland areas, and clean 4 or 5 inch stone and boulders for planned riprap areas, which do not contain any material that could contaminate surface or groundwater or otherwise adversely affect the ecosystem in which it is used; the limits of fill are clearly identified on the drawings (see Sheets 5 through 7) and will be controlled in accordance with Env-Wt 307.03 to ensure that fill does not spill over or erode into any area where filling is not authorized; slopes

adjacent to the dredging area and transitioning from upland areas to the dredging area will during construction, be immediately stabilized (as specified in Env-Wq 1506 or Env-Wq 1508), to prevent erosion into adjacent wetlands or surface waters. Fill shall be not placed so as to direct flows onto adjacent or down-current property. No swamp or construction mats nor temporary fill are anticipated, and construction work will be accomplished by excavators stationed on existing upland soils or riprap.

- 10. ENV WT <u>307-12</u>: Following project completion, project area will be restored according to the following:
  - (a) Within 3 days of final grading or temporary suspension of work in an area that is in or adjacent to surface waters, all exposed soil areas shall be stabilized by:
    - (1) Seeding and mulching, if during the growing season; or
    - (2) Mulching with tackifiers within the growing season;
  - (b) Upon completion of construction, all disturbed wetland areas shall be stabilized with either wetland plantings (See **Sheets 5-7**) or seed mix. Salt marsh bulrush will be planted below 6 FT MSL, and salt tolerant grass mix will be planted from 6 FT MSL to the HOTL at 8 FT MSL; see details under Construction Sequence note on **Sheet 5**;
  - (c) Any seed mix used shall not contain plant species that are invasive species;
  - (d) Mulch used within an area being restored shall be natural straw or equivalent non-toxic, non-seed-bearing organic material;
  - (e) Wetland soils from areas vegetated with invasive species shall not be used in the area being restored;
  - (f) If any temporary impact area that is stabilized with seeding or plantings does not have at least 75% successful establishment of wetlands vegetation after 2 growing seasons, the area shall be replanted or reseeded, as applicable;
  - (g) If a temporary impact area is restored by seeding or plantings, then:
    - (1) The work shall not be deemed successful if the area is invaded by invasive species during the first full growing season following the completion of construction; and
    - (2) The person responsible for the work shall submit a remediation plan to the department that proposes measures to be taken to eradicate invasive species during this same period;
  - (h) any trees cut in an area of authorized temporary impacts shall be cut at ground level with the shrub and tree roots left intact, to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area.
- 11. <u>ENV WT 307-1</u>: work will occur within 10 feet of an abutting property line, but written consent of the abutter has been obtained.
- 12. ENV WT 307-14: rocks will not be removed from surface waters;
- 13. per <u>307-15</u>, heavy equipment such as excavator and loader will need to be operated in the shoreland and wetlands buffer jurisdictional areas, but no mobile heavy equipment working in wetlands buffer area will be stored, maintained, or repaired in wetlands, except that repairing or refueling in a wetland is allowed if equipment cannot practicably be removed and secondary containment is provided; Where construction

requires the operation of heavy equipment in wetlands, the equipment will either have low ground pressure, namely less than 4 psi, or not be located directly on wetland soils and vegetation.

- 14. Per <u>307-16</u>, adherence to approved plans will be maintained; and
- 15. per <u>307-18</u>, a construction monitoring plan (CMP) with inspection reports, water quality reports, and review of project wetland planting plan which has been prepared by a certified wetland scientist is provided as **Appendix J**, **Part 5** and **Sheets 5-7**. A report that describes the monitoring conducted and date(s) of inspections, and includes photos showing the extent of jurisdictional impacts, areas of restoration, and progress of any plantings will be provided at the conclusion of work, along with a description of the stability of and status of the wetland system, including a description of any necessary adjustments; and a schedule and description of measures to be taken during construction and after completion of the project will be provided in CMP.
- 16. <u>Env-Wt 311.09</u>, <u>Env-Wt 400</u>, <u>Env-Wt 500</u>, <u>Env-Wt 600</u>, <u>and Env-Wt 700</u>: These criteria have been met, including project-specific criteria established in Env-Wt 500 and Env-Wt 600</u>.
- 17. <u>Env Wt 800</u>, Compensatory Mitigation, and <u>Env-Wt 900</u>, Stream Crossings, are not applicable. Specifically, for <u>311.09</u>, since this project lies within the protected shoreland as defined by RSA 483-B, the following has been provided on Sheets 2, and 5-7:
  - (a) The reference line;
  - (b) The location of all existing structures between the primary building line and the reference line;
  - (c) The location of all proposed structures (no new structures are proposed);
  - (d) The landward limit of the 100-foot tidal buffer zone; and
  - (e) The total jurisdictional area within the protected shoreland to be impacted as a result of the project.
- 18. Compliance with <u>Env-Wt 400</u> has been achieved regarding requirements for wetland and hydric soil delineation, jurisdictional area delineation, and assessment/classification of type of impact.
- 19. Compliance with <u>Env Wt 500</u> is demonstrated for: natural aquatic vegetation removal and restoration; maintenance of current shoreland alignment and function; and application and design requirements for shoreland riprap installation.
- 20. For <u>Env Wt 600</u>, the Tidal Dredging Worksheet has been completed as WPA Appendix R, and requirements are met for shoreland design narrative and plans. Specifically, for <u>603.07</u>,
  - (a) design plans for the project in both plan and elevational views are provided in Sheets 1 through 7 which depict and identify all required elements, as described in Env-Wt 311 and (b) and (c), below.
  - (b) The plan view depicts the following:
    - (1) The engineering scale used, no larger than one inch equals 50 feet;
    - (2) The location of tidal datum lines depicted as a line with the associated elevation noted, based on NAVD 88, as described in Env-Wt 603.08;

- (3) An imaginary extension of property boundary lines into the waterbody and a 20-foot setback from those property line extensions;
- (4) The location of all special aquatic sites at or within 100 feet of the subject property, if any (none exist, See WPA Appendix C, which contains Wildlife Habitat Map, and WPA Appendix J, Current Shellfish Beds, and 2023 Eelgrass maps, all of which show no applicability to the project area);
- (5) Existing bank contours;
- (6) The name and license number of each individual responsible for the plan, including the certified wetland scientist who completed the CFA report and located the identified resources on the plan; and
- (7) The location and dimensions of all existing and proposed structures and landscape features on the property.
- (c) The elevational views in Sheets 1-7 depict the following:
  - (1) The nature and slope of the shoreline;
  - (2) Water depths depicted as a line with associated elevation at highest observable tide, mean high tide, and mean low tide, and the date and tide height when the depths were measured, as presented on Sheet 5, and as identified in <u>603.08</u> has been provided therein. The predicted sea-level rise is identified in the vulnerability assessment (see **Appendix K**) per Env-Wt 603.05.(b); and
- (d) A bathymetric survey is essentially provided in Sheet 5 for the purposes of this Application.
- 21. Regarding <u>ENV WT 607.04</u>,. A sediment dispersion modeling defined in <u>607.04</u> has not been undertaken, because only 0.5 to 1.0 feet of either marsh sediment with silty grain size (defined per 607.05(g)) or prior fill materials from prior remediation activities are being excavated. Avoidance and minimization BMPs have been provided in the narrative.
- 22. In accordance with <u>607.03(b)(2</u>), a pre-application meeting was held on April 6, 2023 with Kristin Duclos, Wetlands Permitting Specialist, and David Price, Eastern Region Supervisor, of NHDES Water Pollution Division, and a site visit subsequently on April 24, 2023.
- 23. Per <u>Env Wt 700</u>, wetlands/tidal buffers have been delineated by a Certified Wetlands Scientist, and there is no significant net loss of values of the prime wetland/buffer results from the proposed dredging and restoration activities, based on a functional assessment and impact analysis.
- 24. Finally, as required by <u>RSA 482-A:11, II</u> for a permit to dredge or fill, the work will not "infringe on the property rights or unreasonably affect the value or enjoyment of property of abutting owners".
- 25. <u>Env Wt 313.01</u>: The project meets the criteria of this regulation, regarding functional assessments and avoidance and minimization requirements specified in Env-Wt 313.03, since no practicable alternative exists. No compensatory mitigation is

required. No permanent impacts will remain due to avoidance and minimization activities, all applicable conditions specified in Env-Wt 307 have been met.

- 26. <u>Env Wt 313.03</u>: a demonstration has been made concerning temporary impacts to jurisdictional areas which avoids such impacts to the maximum extent practicable, and establishes that any unavoidable impacts have been minimized, as described in NH Wetlands Avoidance and Mitigation BMPs, as noted above. Furthermore:
  - (a) There is no practicable alternative that would have a less adverse impact on the area and environments under the department's jurisdiction;
  - (b) The project avoids and minimizes impacts to tidal marshes and non-tidal marshes where documented which could provide sources of nutrients for finfish, crustacea, shellfish, and wildlife of significant value;
  - (c) The project maintains hydrologic connections between adjacent wetlands;
  - (d) The project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A;
  - (e) The project avoids and minimizes impacts that eliminate, depreciate, or obstruct public commerce, navigation, or recreation;
  - (f) The project avoids and minimizes impacts to floodplain wetlands that provide flood storage;
  - (g) The project avoids and minimizes impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

## **APPENDIX J, Part 4**

## OPERATIONS MONITORING & MAINTENANCE (OMM) PLAN PORTSMOUTH MARINA RESTORATION PROJECT 185 - 187 WENTWORTH ROAD, PORTSMOUTH, NH

Prepared for: Mr. Tom Reis, President Sea Level, LLC 187 Wentworth Road Portsmouth, NH



October 17, 2024 Aries Project No. 2021-075 NHDES #198604143

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## OPERATIONS MONITORING AND MAINTENANCE PLAN SEA LEVEL, LLC. PORTSMOUTH MARINA RESTORATION PROJECT, 185 - 187 WENTWORTH ROAD, PORTSMOUTH, NH

## **1.0 - INTRODUCTION**

This Operations Monitoring and Maintenance (OMM) Plan ("Plan") is intended to identify procedures and requirements applicable to the portion of the Portsmouth Marina property owned by Sea Level, LLC at 185-187 Wentworth Road, Portsmouth, NH (the "site"), which will be restored in accordance with applicable federal, state, and local environmental regulations. These procedures and requirements will concern as-built structures or constructed features which will have been implemented and need to be maintained and monitored to verify that regulatory standards and protocols are being met and that the integrity and effectiveness of the constructed features will continue over the anticipated 25-year life of the remediated portion of the site.

The applicable environmental regulations and associated requirements are as follows:

- Federal TSCA, 40 CFR 761 et al, for an approved Self-Implementing Plan (SIP), approved September 9, 2016, supplemented by a SIP Addendum approved January 31, 2023 by the U.S. Environmental Protection Agency (EPA), TSCA Section, Region I;
- NH Department of Environmental Services (DES) requirements associated with the Wetlands Protection Act and NH Stormwater Management Standards;
- NHDES requirements for hazardous waste cleanup, noting that EPA regulations take precedence over state regulations for the specific parameter of concern, PCBs, which has been present on site in concentrations exceeding 50 ppm, the threshold which triggers EPA jurisdiction; and
- City of Portsmouth Conservation Commission (ConCom) Wetlands Protection Regulations, Article 10, and Planning Commission requirements for a Conditional Use Permit, as applicable.

Therefore, this OMM Plan will need to be updated once final regulatory approvals from the respective state, local and federal agencies have been issued. It is prepared at present as a technical submittal to accompany the Wetlands Protection Act Application (WPA) and related permit applications, especially the Coastal Resource Worksheet, as Part 4 of the Shoreland Permit Application, to demonstrate the commitment of the WPA Applicant, Sea Level, LLC, to provide long-term maintenance and care of the several different components of remediation measures which will be implemented at the site, which include the following:

• Uplands Final Cover Area, 760 SF in area, a level area above Mean Sea Level (MSL) Elevation 11 to 12 feet and borders the armored riprap which lines the cove. This Area covers PCBs >1<25 ppm with a six-inch clean soil cap vegetated



with wetland compatible or wildlife meadow mix; it is regulated by TSCA as a "Low Occupancy Area", with certain requirements thereto; and

Uplands Concrete Cap Area, 5,000 SF in area, covering PCBs >25<50 ppm and lead. It occurs at MSL Elevation 13 to 15 and has a dual design in addition to providing a TSCA cap compliant with 40 CFR 761(a)(7), allows heavier boat storage to occur within this footprint. This Cap is sloped at a 2% slope from east to west, allowing precipitation to drain via sheet flow to the western and northern edges of the cap where it encounters a two-foot-wide 2-inch stone flow level spreader/attenuation barrier which reduces flow prior to entry to a packaged underground stormwater treatment and retention system such as Stormtech or equivalent. This system is intended to be sufficiently sized in design to retain and slowly release into adjacent soils after treatment for oils, metals, and other residues found on the concrete surface, the full volume of rainwater from a 2-year, 24-hour storm (3-inch precipitation event).</p>

Other stormwater originating adjacent to the cap will drain via overland sheet flow down to the riprap area, either directly in the north direction and over the Final Soil Cover Area, or indirectly (for flow to the west) via the natural vegetated drainage swale which currently exists above MSL Elevation 12 feet, in an eastwest direction and downwards over the MSL Elevation 11 to 12 foot area to the riprap zone between MSL Elevation 8 to 11, with 8 feet being the Highest Observable Tide Line.

The anticipated limits of work and final layout and dimensions and components of the completed project components are identified in Engineering Plan/Sheet 5. Each component is addressed separately in the sections which follow.

## 2.0 - ACTIVITY AND USE RESTRICTION (AUR)

The U.S. EPA will accept a state-defined environmental deed restriction instrument as the legal mechanism by which the remediation area of the site containing final cleanup measures is assured to be maintained and monitored over the post-closure project life to continue to protect human health and the environment, in accordance with TSCA regulations established at 40 CFR 761(a)(8). Specific TSCA requirements pertinent to an AUR, and identified in EPA's January 23, 2023 approval letter, are as follows:

Within sixty (60) days of completing final property-wide remediation, Sea Level LLC shall submit to EPA a recorded deed restriction for the property in its entirety. The deed restriction shall include: a description of the extent and levels of contamination at the property following abatement; a description of the actions taken at the property; and a description of the use restrictions for the property; and the long-term monitoring and maintenance requirements on the property per the requirements of 40 CFR § 761.61(a)(8).



NHDES En Or 608 Contaminated Site Management provides for an Activity and Use Restriction (AUR) to provide this deed restriction. The Applicant will after completion of remediation activities, file an AUR Application (Attachment AA) which is completed at that time to identify the measures and activities it will undertake to provide assurance that regulatory requirements and environmental controls will remain in good condition.

Where the area subject to the AUR comprises only a portion of a lot, the AUR Application will include both of the following:

- a. A metes and bounds description of the restricted area and
- b. A recordable plan, prepared by a New Hampshire registered land surveyor that shows the location of the restricted area in relation to the property boundaries of the site.

Also necessary is the following information, which are identified in Sections 3, 4 and 5 of this document, unless provided below in parenthesis following the applicable requirement, or is stated on the AUR Application:

- 1. The time period during which the AUR shall be effective (25 years).
- 2. A precise description of the site activities and uses that will be prohibited on the site and allowed on the site.
- 3. A description of how the restrictions will eliminate the risks to human health and the environment.
- 4. A precise description of the measures to be taken to ensure compliance with the AUR.
- 5. A description of the procedures to be followed when an emergency requires immediate excavation of contaminated soil to repair utility lines or other infrastructure on the site, or to respond to other emergencies that might result in a significant risk to human health, evaluated pursuant to procedure specified in Env-Or 606.19(d)(2) and (3), from exposure to contaminants at the site, which shall include:
  - a. Notifying NHDES of such emergency condition; and
  - b. Limiting disturbance of contaminated media to the minimum necessary to adequately respond to the emergency; and
  - c. Undertaking specified precautions to reduce exposure of workers and neighbors of the site to contaminated media and
  - d. Preparation and implementation of a written plan for restoring the site to a condition consistent with the AUR.
- 6. An acknowledgement by the applicant that the AUR shall run with the land pursuant to Env-Or 608.01(b)(3).
- 7. An analysis of the long-term feasibility of maintaining the AUR.
- 8. An acknowledgement by the applicant to incorporate either in full or by reference to the AUR into all deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instruments conveying an


interest in and/or a right to use the property pursuant to Env-Or 608.01(b)(2).

- 9. The procedures for modifying and terminating the AUR pursuant to Env-Or 608.06 and Env-Or 608.07.
- 10. Title reference by which the property owner(s) acquired title to the property.
- 11.A schedule for self-certifying compliance with the AUR pursuant to Env-Or 608.01(e).

Future use restrictions and obligations which require the monitoring, maintenance and record keeping are anticipated to exist for the following permanent site remediation features, which are TSCA caps in accordance with 40 CFR 761(a): 1) impermeable concrete cap in upland soils, installed over a 5,000 square foot (SF) area at the site to prevent infiltration of precipitation to soils beneath which contain residual but legally compliant levels of environmental constituents of concern (PCBs >25<50 ppm and lead); and 2) a permeable cap (Final Cover) installed to prevent contact with subsurface levels of PCBs >1<25 ppm considered to exist below regulatory levels, as long as the six-inch-thick Final Cover over the affected 770 SF remains intact; and 3) maintenance of stormwater management controls and features which allow the two caps in Items 1 and 2 to remain intact and prevent human or wildlife contact with the PCBs/lead in soils.

To enforce the prevention of contact with the PCBs/lead in soils, the AUR will be selfcertified using the NHDES template (Attachment BB) recorded on the property deed by the Applicant once soil remedial activities are complete as planned for 2025, and will identify the following restrictions and conditions for the site consistent with EPA, NHDES, and City of Portsmouth issued permits and approvals:

- Low occupancy use, as described below with respect to the TSCA Cap;
- Construction Worker Caution, as described below;
- Industrial/Commercial land use restriction, meaning that residential development is prohibited;
- Future Building Construction restriction: Any commercial/industrial building constructed intended for regular occupancy must have a full concrete slab-on-grade floor;
- Any future disturbance of the AUR area, including by utility companies working for third parties, should only be undertaken under the supervision of a NH-Licensed Professional Engineer or Professional Geologist, who will prepare a Health and Safety Plan (HASP) consistent with 29 CFR 1910.120, and conducted in accordance with a Soil and Groundwater Management Plan (SMP), which in combination with a HASP will proscribe safe and environmentally compliant procedures and protocols to protect human health, safety, welfare and the environment while the temporary disturbance of the soils occurs;
- A notification that the caps must be maintained in perpetuity by any potential purchaser of the property; and



• A notification that the land has been used for PCB remediation waste disposal and is restricted to use as a low occupancy area as defined in 40 CR 761.3.

The SMP would need to address the following items:

- Be prepared by a NH-licensed professional and implemented prior to the commencement of any construction activity, or any planned (non-emergency) utility installation, repair or maintenance activity, which is likely to disturb or encounter soil or groundwater located below surface grade (current elevation at the date of the Notice of AUR) within the AUR area unless such activity is permitted as noted above. The SMP shall be prepared in accordance with the MCP (310 CMR 40.0030). The SMP should describe soil excavation, handling, storage, transport, and disposal procedures and include a description of engineering controls and air monitoring procedures necessary to ensure that onsite workers and receptors in the vicinity are not affected by fugitive dust or particles. Procedures for managing water encountered in the excavation should also be addressed in the SMP. On-site workers who may come into contact with impacted soils on the Property must be appropriately trained concerning the requirements of the SMP, must be informed of the requirements in the SMP, and the SMP must be made available on site; and
- Be supplemented by a health and safety plan ("HASP") prepared by a qualified professional and implemented prior to the commencement of any non-emergency utility installation, repair or maintenance activity, or construction activity which is likely to disturb or encounter soil or groundwater located below surface grade (current elevation assumed to be 11+ FT MSL at the date of the Notice of AUR) within the AUR area. The HASP shall require workers encountering subsurface soils and groundwater to be adequately protected and trained consistent with relevant federal and state occupational, health and safety requirements (e.g. 29 CFR 1910.120), and must otherwise be prepared in accordance with the guidelines discussed in the AUR. The HASP should consider the appropriate personal protection equipment (PPE) for construction workers and monitoring of the breathing zone air quality during Site construction and earth work activities. The HASP should clearly identify the location(s) and nature(s) of the capped materials which may be encountered.

The caps must be maintained in perpetuity and include the completion of annual inspections and maintenance activities, unless additional remedial actions are completed and their removal is approved by the appropriate regulatory agency(s);

- On-site construction and utility workers must be informed of the location and nature of contaminated soil within the AUR area and of the restrictions imposed by the AUR. Copies of the HASP and SMP must be available on site during any activities that may result in disturbance of contaminated soil or groundwater in the AUR area;
- Any soils removed from the AUR area in accordance with the AUR must be managed in a manner consistent with NHDES protocols and guidance, and in accordance with federal, state, and local regulations;



- The U.S. EPA requires notification from current and future owners thirty (30) days prior to any change in ownership of the property. Such notice must include the name, address, and telephone number of the new owner, and the name of the new owner's contact person. The current and future owners must also submit a letter to EPA, signed by the potential purchaser, stating whether it intends to maintain the TSCA cap, and whether it plans to maintain the TSCA-defined "low occupancy land use", or whether it intends to remove and dispose of additional PCB-contaminated soils off-site instead;
- The lessee/owner will restrict routine access to the AUR deed restricted area.
- The lessee must notify the owner of any planned or proposed soil disturbance activities in the AUR area at least 30 days prior to the activity;
- No site soils from the AUR area are to be transferred off-site with the prior approval of the owner;
- Lessee/owner will ensure that site access is secured when the site is not occupied;
- Lessee/owner will allow agency access, if requested;
- Sea Level, LLC. will provide sufficient financial assurance to enable annual inspections and maintenance activities.

## 3.0 - STORMWATER MANAGEMENT SYSTEM/OPERATIONS MONITORING AND MAINTENANCE PLAN (OMM PLAN)

EPA set forth in its January 31, 2023 SIP approval letter the following conditions pertinent to long term maintenance and monitoring:

- Within 30 days of completion of the work authorized under this Approval, Sea Level LLC shall submit for EPA's review and concurrence, a detailed OMM Plan for the caps and other pertinent features. Sea Level Inc. shall incorporate any changes to the OMM Plan required by EPA.
  - a. The OMM Plan shall include: a description of the activities that will be
  - b. The OMM Plan shall include a communications component which details how the maintenance and monitoring results will be communicated to the Site users, including building users, other on-site workers, and interested stakeholders, if requested.
  - c. The OMM Plan also shall include a worker training component for maintenance workers or for any person that will be conducting work that could impact the cap(s).
  - d. Sea Level Inc. shall submit the results of these long-term monitoring and maintenance activities to EPA. Based on its review of the results, EPA may determine that modification to the OMM Plan is necessary in order to monitor and/or evaluate the long-term effectiveness of the cap(s).
  - e. Activities required under the OMM Plan shall be conducted until such time that EPA determines, in writing, that such activities are no longer necessary.



This present OMM Plan is intended to address each of the above requirements. In addition to specific measures identified in Section 3.1, the findings of annual OMM Plan inspections will be communicated to site personnel, and filed with EPA and other regulatory entities as needed; and personnel conducting the inspections and providing maintenance activities, repairs or restoration work, will be trained in performance of their duties.

Consistent with the New Hampshire Stormwater Handbook:

- The owner shall conduct an annual summary inspection using a Stormwater Operation & Maintenance Checklist, which will be the OMM Plan Checklist in Attachment CC, and keep this inspection and log on-site. It can be provided to the City of Portsmouth ConCom if requested. The inspection will focus on inspection and maintenance activities including performances of Best Management Practices (BMPs); and,
- Should ownership of the site change, the owner will continue to be responsible until the succeeding owner shall notify the US EPA, NHDES, and as appropriate, the City of Portsmouth ConCom, that the succeeding owner has assumed such responsibility.

## 3.1 - Operations, Monitoring & Maintenance (OMM) Plan

Features of the OMM plan, which will meet the EPA requirements for a OMM Plan, including Best Management Practices (BMPs) are as follows:

### Housekeeping

The existing development has been designed to maintain an appropriate level of water quality treatment for stormwater discharge, which will occur via sheet flow to the low point of the cap areas and ultimately to the wetland areas. An OMM plan has been prepared and the owner (or its designee) is responsible for adherence to the OMM plan in a strict and complete manner.

### • Storing of Materials & Water Products

The trash and waste program for the site includes exterior dumpsters designed to capture trash and debris.

### Vehicle Washing

Outdoor vehicle washing has the potential to result in high loads of nutrients, metals, and hydrocarbons during dry weather conditions, as the detergent-rich water used to wash the grime off the vehicle enters the stormwater drainage system. The existing site status does not include any designated vehicle washing areas, although it is expected that any vehicle washing will take place on-site on a routine basis, but outside the 100-foot Tidal Buffer Zone.



## • Spill Prevention & Response

Sources of potential spill hazards include vehicle fluids, liquid fuels, pesticides, paints, solvents, and liquid cleaning products. The majority of the spill hazards would likely occur within the enclosed site buildings or on the 5,000 SF concrete cap (Engineering Sheet 5) which is provided for heavier boat storage. Other smaller boat storage will occur on NHDES-designated impervious gravel outside the limits of the two caps (soil or concrete). It is noted that this "impervious gravel" is 1-2 inch in size, is a combination of degraded and intact gravel. The degraded gravel has over time, due to its location adjacent to a woodland buffer, received leaf detritus which over time via natural biodegradation has covered its upper surface. However, both the degraded and intact gravel are quite pervious in function, and cover the majority of the site, as noted in the Shoreland Permit Application for this project. This gravel base allows rapid infiltration of stormwater even for design storm events.

The project design avoids the need for stormwater to enter the local municipal stormwater drainage system. However, there are spill hazards from vehicle fluids from hydraulic lines located outside of the building on the concrete cap which has the potential to enter the overland stormwater drainage system and are to be addressed as follows:

- Spill hazards of pesticides, paints, and solvents shall be remediated using the Manufacturers' recommended spill cleanup protocol.
- Vehicle fluids and liquid fuel spills shall be remediated according to the local and state regulations governing fuel spills.
- The owner shall have the following equipment and materials on hand to address a spill clean-up: brooms, dust pans, mops, rags, gloves, absorptive material and/or sand, and plastic or metal trash containers.
- All spills shall be cleaned up immediately after discovery.
- Spills of oil or hazardous material over US EPA and NHDES thresholds would be reported to the appropriate agencies, and cleanup operations undertaken by the owner, if small, or by a licensed spill response contractor.
- Should a spill occur, the pollution prevention plan will be adjusted to include measures to prevent another spill of a similar nature. A description of the spill, along with the causes and cleanup measures will be included in the updated pollution prevention plan.

## Management of Deicing Chemicals and Snow

Snow will be stockpiled on site until the accumulated snow becomes a hazard to the daily operations of the site. It will be the responsibility of the snow removal contractor to properly dispose of transported snow according to NHDES guidelines governing the proper disposal of snow. It will be the responsibility of the snow removal contractor to follow these guidelines and all applicable laws and regulations. The owner's maintenance staff (or its designee) will be responsible for the clearing of the sidewalk and building entrances. The owner may be required to use a deicing agent such as potassium chloride to maintain a safe walking



surface. If used, the de-icing agent for the walkways and building entrances will be kept within the storage rooms located within the building. If used, de-icing agents will not be stored outside. The owner's maintenance staff will limit the application of sand.

## Inspection Log Form

A OMM Plan Inspection Form (Attachment CC) will be kept summarizing inspections, maintenance, and any corrective actions taken. The log will include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, the location where the sediment and debris was disposed after removal will be indicated. The log will be made accessible to ConCom and NHDES upon request, and will be issued annually to EPA.

## • Stormwater Collection System – On-Site

The stormwater collection system is comprised of natural water quality swales, stone check dam/level spreaders at the north and west ends of the concrete cap, (see Engineering Sheets 4 and 5) and the packaged underground stormwater treatment and retention system described above. The packaged system will be maintained by periodic flushing or removal of solids as needed

## **3.2 - Inspection and Maintenance Frequency and Corrective Measures**

The following will be observed for this site:

## • Scope and Frequency of Inspections:

In accordance with NHDES Stormwater Handbook: Volume 2, the following areas, facilities, and measures will be inspected and the identified deficiencies will be corrected: Clean-out of stormwater control devices must include the removal and legal disposal of any accumulated sediments, trash, and debris. In any and all cases, operations, inspections, and maintenance activities shall utilize best practical measures to avoid and minimize impacts to wetland resource areas outside the footprint of the Limits of Work. An annual inspection at a minimum, and after severe storm events impacting the caps, is anticipated.

Proper construction, inspections, maintenance, and repairs are key elements in maintaining a successful stormwater management program on a developed property. Routine inspections ensure permit compliance and reduce the potential for deterioration of infrastructure or reduced water quality. For the purpose of this Stormwater Management Program, a significant rainfall event is considered an event of three (3) inches or more in a 24-hour period or at least 0.5 inches in a one-hour period.



### Construction Requirements:

During construction, expected to require only one month, inspections will be conducted every two weeks or after a 0.25" rainfall event in a 24-hour period per the EPA NPDES Phase II SWPPP, until the entire disturbed area is fully restabilized, which should occur within two months after completion of work. Upon full stabilization of the project and filing of an NOI, inspections need only be conducted after a significant rainfall event as described above or as described in the maintenance guidelines below.

### Invasive Species:

The NH Commissioner of Agriculture prohibits the collection, possession, importation, transportation, sale, propagation, transplantation, or cultivation of plants banned by NH LAW RSA 430:53 and NH Code Administrative Rules AGR 3800. The project shall meet all requirements and the intent of RSA 430:53 and AGR 3800 relative to invasive species.

## 4.0 - TSCA CAP

The TSCA Cap will be inspected on a yearly basis using the OMM Plan inspection form presented in Attachment CC. The TSCA Cap will be maintained as described below, and repaired as needed with the methods identified in the following sections.

### 4.1 - Cap Maintenance

Recommendations for routine maintenance of the TSCA cap as well as maintenance for asphalt damage and weathering are provided below, in the event repairs are needed. Engineering Sheets 4 and 5 depict the construction and extent of the concrete TSCA cap, which serves as an impermeable barrier.

### • Crack Filling or Sealing

This treatment should be used for small and medium cracks that are found to be 0.25 to 2 inches in width. The cracks should be cleaned with high pressure air blasting equipment over the entire length of the cracks prior to sealing. Small cracks (between 0.25 inch and 0.5 inch) should be widened to a minimum of 0.5 inch using a pavement saw where feasible. An appropriate sealant or Type II concrete should be applied to fill such cracks.

### • Full Depth Pavement Reconstruction

This repair method should be used where potholes or depressions greater than 3 inches in depth, or extensive spalling or surface degradation, are observed. The edges of the repair should be saw cut to the full depth of the concrete pavement and the existing subbase material removed if needed and replaced with a new 6-inch concrete cap and sub-base material, matching the original cap section.



Because Federal regulations indicate "repairs shall begin within 72 hours of discovery for any breaches which would impair the integrity of the cap" (40 CFR 761.61 (a) (7)), annual cap inspection and routine informal monitoring is recommended. It is expected that the new owner will perform the annual cap inspection and identify deficiencies or recommended actions, using the OMM Plan Inspection Form in Attachment CC.

## 4.2 - Record Keeping

Copies of the inspections and any maintenance or inspection follow-up activities should be maintained on-site. The facility must maintain a written record of all sampling and analyses of PCBs or notifications for 3 years from the date of the waste's generation. The records must be made available to US EPA and/or NHDES upon request, per 40 CFR 761.62 (b)(5).

### 4.3 - Change in Ownership

The US EPA requires notification from Sea Level LLC. thirty (30) days prior to any change in ownership of the property. Such notice must include the name, address, and telephone number of the new owner, and the name of the new owner's contact person. Sea Level LLC must also submit a letter, signed by the potential purchaser, stating whether it intends to maintain the TSCA cap, and whether it plans to maintain the low occupancy land use, or whether it intends to remove and dispose of additional PCB-contaminated soils off-site instead.

### 5.0 - FINAL SOIL COVER CAP

The Low Occupancy Final Soil Cover's location and dimensions are provided on Engineering Sheet 5, and its composition consists of six inches of clean soil cover/topsoil vegetated with wetland-compatible or wildlife habitat plants. The Cover will be inspected on a yearly basis using the form presented in Attachment CC, and will be maintained as described below, and repaired as needed with the methods identified in the following sections.

#### 5.1 - Cap Maintenance

The integrity of the Cover must be maintained, and repairs as needed must be made "in kind". If animal burrows are detected, the animal must be removed in accordance with local regulations on animal control, and the burrow sealed with loam (not sand or gravel). Stormwater controls (swales, check dams, level spreaders) must be repaired to original condition.

### 5.2 - Record Keeping

Copies of the inspections and any maintenance or inspection follow-up activities should be maintained on-site.



#### LIMITATIONS

Aries prepared this Post-Closure Operation and Maintenance (O & M) Plan for Soil RBDP Stormwater Management System (SMS), TSCA Cap, & Engineered Barriers; BUD Area; and Former Radiological Control Area on behalf of and for the exclusive use of Sea Level, LLC. (Client) solely for its use. This Plan shall not be transmitted to any other party, or relied upon by any other party, without Aries' written consent. However, Aries acknowledges the report may be conveyed to the U.S. EPA, New Hampshire Department of Environmental Services and other local, state, and federal agencies. Aries made the reported observations under the conditions stated herein. Aries based the report conclusions solely on the services described herein, and not on scientific tasks or procedures beyond the scope of described services.

In preparing this report, Aries relied on certain information provided by state officials, federal officials and other parties referenced herein, and on information contained in the files of federal, state and local agencies available to Aries at the time of the report. Although there may have been some degree of overlap in the information provided by these various sources, Aries did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this report.

Aries anticipates variations in actual site conditions beyond those interpreted, and would have to reevaluate the report conclusions and recommendations if additional site data are made available.

Laboratory testing was performed as part of the study. Where such analyses were conducted by an outside laboratory, Aries relied upon the data provided, and did not conduct an independent evaluation of the reliability of these data.

Aries conducted this report in general accordance with accepted consulting practices. Aries makes no warranty, either expressed or implied.



APPENDIX J, Part 4

NHDES

## Application for Activity and Use Restriction (AUR)





Env-Or 608

AN ACTIVITY AND USE RESTRICTION (AUR) is implemented under Env-Or 608 at sites where a New Hampshire Department of Environmental Services (NHDES) approved remedial action relies on the restriction of site activities and uses to achieve or maintain protection of human health and the environment.

#### SUBMIT:

- ONE SIGNED AND COMPLETED APPLICATION SUPPORTING INFORMATION
- SUPPORTING INFORMATION
- PROPOSED AUR DOCUMENT (using NHDES approved template)
- TO: NHDES/Waste Management Division Site Remediation Programs Groundwater Management Permit Coordinator P.O. Box 95, 29 Hazen Drive Concord, NH 03302-0095

SITE INFORMATION		
Site Name:	DES Site #:	
Address:		
City:	State:	Zip:
Тах Мар:	Lot Number:	
Deed Reference: County:	B	ook and Page:
SITE OWNER INFORMATION		
Site Owner Name:	Phone:	
Mailing		
Address:		
City:	State:	Zip:
Email:	Fax:	
Address: City: Email: CONTACT PERSON INFORMATION	State: Fax: V (complete only if different	Zip: than site owner)
Contact Person Name:	Phon	e:
Mailing		
Address:		
City:	State:	Zip:

IV.	SUPPORTING INFORMATION (Check Yes, "Y", if information is enclosed, or Not Applicable,
	"N/A", if requested information does not apply.)

Y	N/A		
		1.	Where the AUR applies to an entire lot, include at least one of the following:
			a. Recordable plan of the site prepared by a New Hampshire registered land surveyor; OR
			b. A reference by book and page number to a survey plan of the lot that has been recorded or registered in the registry of deeds for the county in which the site is located OR
			c. A reference by book and page number to a property description of the lot that has been recorded or registered in the registry of deeds for the county in which the site is located.
		2.	Where the area subject to the AUR comprises only a portion of a lot, include both of the following:
			<ul> <li>A metes and bounds description of the restricted area and</li> </ul>
			<ul> <li>A recordable plan, prepared by a New Hampshire registered land surveyor that shows the location of the restricted area in relation to the property boundaries of the site.</li> </ul>
		3.	The time period during which the AUR shall be effective.
		4.	A precise description of the site activities and uses that will be prohibited on the site and allowed on the site.
		5.	A description of how the restrictions will eliminate the risks to human health and the environment.
		6.	A precise description of the measures to be taken to ensure compliance with the AUR.
		7.	A description of the procedures to be followed when an emergency requires immediate excavation of contaminated soil to repair utility lines or other infrastructure on the site, or to respond to other emergencies that might result in a significant risk to human health, evaluated pursuant to procedure specified in Env-Or 606.19(d)(2) and (3), from exposure to contaminants at the site, which shall include: a. Notifying NHDES of such emergency condition; and b. Limiting disturbance of contaminated media to the minimum necessary to adequately respond to the emergency: and
			<ul> <li>Undertaking specified precautions to reduce exposure of workers and neighbors of the site to contaminated media and</li> </ul>
			d. Preparation and implementation of a written plan for restoring the site to a condition consistent with the AUR.
		8.	An acknowledgement by the applicant that the AUR shall run with the land pursuant to
		~	Env-Or 608.01(b)(3).
		9. 10	An analysis of the long-term reasibility of maintaining the AOR.
		10.	AUX acknowledgement by the applicant to incorporate either in full or by reference to the AUR into all deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instruments conveying an interest in and/or a right to use the property pursuant to Env-Or 608.01(b)(2).
		11.	The procedures for modifying and terminating the AUR pursuant to Env-Or 608.06 and Env-Or 608.07.

- 12. Title reference by which the property owner(s) acquired title to the property.
- 13. A schedule for self-certifying compliance with the AUR pursuant to Env-Or 608.01(e).
  - 14. The proposed AUR document that will be recorded if the AUR application is approved, including a block for the property owner(s) notarized signature (use NHDES template).

#### V. AUR ISSUANCE INFORMATION

- 1. Within 90 days from the receipt of a complete AUR application, NHDES shall notify the applicant in writing of its decision to approve or deny the application OR notify the applicant in writing that the information submitted is not sufficient to make a decision and request additional information from the applicant.
- 2. NHDES shall approve and AUR application if the application contains all items required by Env-Or 608.03 and the proposed AUR is consistent with Env-Or 608.01(b).
- 3. An AUR that is approved by NHDES shall become effective upon recordation.
- 4. Within 30 days of the date NHDES approves the AUR application pursuant to Env-Or 608.02(c), the applicant shall provide notice of the AUR to current holders of any interest in the site of the existence and location of the contamination subject to the AUR. Notice sent pursuant to the above shall be on a form provided by NHDES and via certified mail, return receipt requested.
- 5. Within 60 days of the date on which NHDES approves the AUR application pursuant to Env-Or 608.029(c), the applicant shall sign and acknowledge the document AND record the AUR document and a site plan prepared in accordance with Env-Or 608.03(a)(2) or (a)(3), (as applicable), in the registry of deeds on the chain of title for each lot that is subject to the AUR.
- 6. Within 30 days of recordation, the applicant shall submit a copy of the recorded AUR document and site plan to NHDES and the governing body of the municipality in which the site is located.

#### **VI. CERTIFICATION**

To the best of my knowledge, the data and information that I have submitted to obtain the Activity and Use Restriction (AUR) from the New Hampshire Department of Environmental Services are true and correct.

Date:	Signature:		
		Permit Applicant	
Name (print or type):			

No liability is incurred by the State by reason of any approval for Groundwater Management Permits. Approval by the New Hampshire Department of Environmental Services is based on the information supplied by the applicant. No guarantee is intended or implied by reason of any advice given by NHDES or its staff. APPENDIX J, Part 4



Self-Certification of Activity and Use Restriction

Waste Management Division Site Remediation Programs



Env-Or 608.01(a) and Env-Or 608.01(f)

Pursuant to N.H. Administrative Rules Env-Or 608.01(a), an Activity and Use Restriction (AUR) must be implemented at each site where a remedial action approved by the New Hampshire Department of Environmental Services (NHDES) relies on the restriction of site activities and uses to achieve or maintain protection of human health and the environment. Maintaining compliance with the conditions of the AUR is essential to ensure long term effectiveness of the remedial actions.

Pursuant to Env-Or 608.01(f), the owner of record of a site that is subject to an AUR must certify that all conditions of the AUR for the site are being met. This self-certification is accomplished by completing, signing and returning this form to NHDES within 30 days after receiving it.

#### SUBMIT TO:

NHDES/Waste Management Division Site Remediation Programs Groundwater Management Permit Compliance Coordinator P.O. Box 95, 29 Hazen Drive Concord, NH 03302-0095

SITE OR FACILITY INFORMATION		
Site or Facility Name:		
NHDES Site or Facility #:		
Address:		
City:	State:	Zip:
Тах Мар:	Lot Number:	
Recorded AUR: County:	Book and	Page:
OWNER INFORMATION		
Name:	Phone:	
Mailing Address:		
City:	State:	Zip:
Email:	Fax:	

IV.

**CONDITIONS** Please check (Yes, "Y" or No "N")

#### NHDES-S-02-013

#### ΥΝ

Are all conditions of the AUR being met? (If your answer is no, please provide a detailed explanation and what action will be taken to achieve compliance with all the conditions of the AUR.)

Have site conditions that required implementation of the AUR changed since recordation of the AUR? (If answer is yes, please describe in detail how site conditions changed and what actions will be taken to achieve compliance with the terms of the AUR.)

If detailed explanations are required for either question above, it may indicate the terms of the AUR require modification. In such a case NHDES refers the owner to the modification process requirements outlined in Env-Or 608.06.

#### V. CERTIFICATION

To the best of my knowledge and belief, the data and information that I have provided to the New Hampshire Department of Environmental Services under this Activity and Use Restriction (AUR) self-certification are true and correct.

Date:	Signature:	
Name (print or type):		(Owner)

No liability is incurred by the State by reason of any approval for Groundwater Management Permits. Approval by the New Hampshire Department of Environmental Services is based on the information supplied by the applicant. No guarantee is intended or implied by reason of any advice given by NHDES or its staff.

#### APPENDIX J, Part 4 ATTACHMENT CC OPERATIONS MONITORING AND MAINTENANCE (OMM) PLAN

Inspection Checklist

Sea Level, LLC 185-187 Wentworth Rd, Portsmouth, NH

BMP / System	Minimum Inspection Frequency	Minimum Inspection Requirement	Maintenance Threshold	Inspection Completed? (yes/no)
Stabilized Construction Entrance	Quarterly	Inspect adjacent roadway for sediment tracking Inspect gravel stone for sediment accumulation	Sweep adjacent roadways as soon as sediment is tracked Top dress with additional stone when necessary to prevent tracking	
Level Spreader (N & W End of Concrete Cap)	Quarterly	Inspect accumulated sediment level, rips, and tears	Repair or replace damaged sections Remove and dispose of accumulated sediment once level reaches 1/3 of barrier height	
Gravel Base	Annually	Inspect gravel for ruts and depth	Replace gravel as necessary, regrade as necessary to maintain design grades, remove any accumulated gravel washed from roadway	
Litter/Trash Removal	Routinely	Inspect dumpsters, outdoor waste receptacles area, and yard areas.	Site will be free of litter/trash.	
Deicing Agents	N/A	N/A	Use agents approved by ConCom as the primary agent for roadway safety during winter.	

BMP / System	Minimum Inspection Frequency	Minimum Inspection Requirement	Maintenance Threshold	Inspection Completed? (yes/no)
Stormwater Packaged System	Annually	Check for sediment accumulation & clogging.	More than 12" sediment depth	
Grass Lined Drainage Swale, Final Cover Area (Low Occupancy)	Spring and Fall and after every 3" of rain or greater in a 24- hour period, as needed	Check for sediment buildup Check for damaged vegetation, re-seed as needed Inspect for erosion rills or channels.	Remove excess sediment and any trash/debris. Loss of vegetation > 10 % of Final Cover or Drainage Swale Loss of > 1 in of total 6 in Final Cover	
Annual Report	1 time per year	Submit Annual Report to EPA, Other agencies upon request	EPA Requirement	

Inspection Notes:

Inspector: \_\_\_\_\_

Date of Inspection: \_\_\_\_\_

Date of Repairs: _	
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Repairs Verified	By:	
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NHDES WPA, APPENDIX J, Part 5 — Construction Monitoring Plan



2021-075

October 22, 2024

# CONSTRUCTION MONITORING PLAN FOR PORTSMOUTH MARINA RESTORATION PROJECT

#### Prepared by:

Aries Engineering, LLC 104 Pleasant Street Concord, NH 03301 (603) 228-0008

#### **Prepared for:**

Sea Level LLC 185-187 Wentworth House Road Portsmouth, New Hampshire 03801

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1.0 INTRODUCTION	L
1.1 Scope of Work	L

## ATTACHMENTS

Attachment A:

Inspection Reports



## **1.0 INTRODUCTION**

This Construction Monitoring Plan (CMP) is needed for this project per NH DES Env-Wt 307-18, which requires a CMP to contain inspection reports, water quality reports, and a review/implementation of a project wetland planting plan which has been prepared by a certified wetland scientist. Also, a report must be generated at project completion which describes the monitoring conducted and date(s) of inspections, and includes photos showing the extent of jurisdictional impacts, areas of restoration, and progress of any plantings, along with a description of the stability of and status of the wetland system, including a description of any necessary adjustments. The CMP must also include a schedule and description of measures to be taken during construction and after completion of the project.

## 1.1 Scope of Work

The specific activities included in this CMP are as follows:

- Inspection reports: a checklist of initial (Week 1) and at-completion (Week 4) inspections is presented in **Attachment A**;
- Water quality reports will be also be filed using the Attachment A form, before and after Week 1 of dredging and restoration activities in the wetland area. Only one (1) day of dredging is anticipated in the wetland area (see Engineering Sheets 1-7, WPA Appendix E), to remove a maximum of 12 inches of surficial, submerged sediment, generating 8 to 11 CY of sediment via shore-based excavator with dredge attachment. Installation of the marsh grasses (see Engineering Sheets 5-7) will be completed within Week 1. The water quality evaluation will be qualitative in nature, observing the relative absence or presence of sediment in the over-sediment water column before and after dredging, to the extent possible. This evaluation must necessarily take into account the potentially twice daily flushing of this wetland area, assuming that the natural berm at the eastern end of this cove area is surmounted by incoming tidal water;
- The review/implementation of a project wetland planting plan in Engineering Sheet
   6 which has been prepared by a certified wetland scientist before and after installation of different vegetative types (6 to 8 FT MSL), from Week 1 installation and then monthly for the next three months until vegetation is adequately established. This frequency of inspection is also documented in Attachment A, and will serve as the report which must be generated at project completion and is required to describe the monitoring conducted and date(s) of inspections;
- Photos showing the extent of jurisdictional impacts, areas of restoration, and progress
  of plantings will be obtained prior to Week 1, and monthly until Month 3, assuming
  that period of time is adequate to establish vegetation. A qualitative evaluation of the
  description of the stability of and status of the wetland vegetative system, including a
  description of any necessary adjustments, will also be included in the Attachment A
  form.



#### NHDES WPA, APPENDIX K, VULNERABILITY ASSESSMENT

#### APPENDIX K

# SECTION E. WORKSHEET AND PROJECT INVENTORY TABLE

This Worksheet and Project Inventory Table is a companion resource to be used while referencing the *New Hampshire Coastal Flood Risk Summary Part II: Guidance* for Using Coastal Flood Risk Projections (Guidance). The purpose of the Worksheet is to help decision makers work through the seven step approach for incorporating coastal flood risk projections in multiple local, state, and federal projects, including planning, regulatory, or site-specific efforts. The Guidance provides principles, step-by-step instructions, and key resources needed to fill out this Worksheet. Use of the Worksheet is voluntary. For some projects, the Worksheet will be a useful tool for decision makers working through the seven step process. For other projects, decision makers may find that only part of the Worksheet is useful, that they need to adjust the worksheet to tailor it to their project, or that they prefer to apply the Guidance to their project without using the Worksheet. Decision makers are expected to acquire additional data about their project in order to use the Guidance and complete the Worksheet.

The seven step approach recommended in the Guidance is intended for private, local, state, and federal planning, regulatory, and site-specific projects affecting or taking place in New Hampshire's 17 coastal zone municipalities, including Dover, Durham, Exeter, Greenland, Hampton, Hampton Falls, Madbury, New Castle, Newfields, Newington, Newmarket, North Hampton, Portsmouth, Rollinsford, Rye, Seabrook, and Stratham. The seven steps provide a framework to guide decision makers as they select appropriate coastal flood risk projections, begin assessing impacts of those projections, and consider actions to increase project resilience. The term "decision maker" refers broadly to project proponents, regulators, advisors, and stakeholders affected or served by a project. In the Guidance and Worksheet, project-specific considerations are provided for steps where Guidance application is likely to differ for planning, regulatory, or site-specific projects. Referenced resources that may be useful for completing the Worksheet appear at the end of each step in the Guidance. The Project Inventory Table is provided for decision makers working on detailed projects and/or projects that are broad in scale with multiple areas, facilities, structures, and/or resources to evaluate.

In order to fill out this worksheet, decision makers will need to reference the Guidance. Prior to beginning the worksheet, read the Guidance Section A *Purpose and Intended Use*, as well as Guidance Section B *Guiding Principles for Enhancing Coastal Flood Resilience*. Guidance Section C *Step-by-Step Approach for Selecting and Incorporating Coastal Flood Risk Projections* presents Steps 1-7 that are directly referenced throughout this Worksheet and Project Inventory Table.

## BACKGROUND

B.1 Preparer name:Pete McGlew, PG							
B.2 Preparer affiliation to the project: Environmental Consultant							
B.3 Preparer contact information: Email pmcglew@aries-eng.com Phone 603-228-0008							
B.4 Select the municip	B.4 Select the municipality or municipalities where the project takes place.						
Dover	🗌 Durham	Exeter	Greenland	Hampton	Hampton Falls		
🗌 Madbury	🗌 New Castle	Newfields	Newington	🗌 Newmarket	🗌 North Hampton		
Portsmouth	Rollinsford	🗌 Rye	Seabrook	Stratham			
B.5 Date: September 30, 2024							

## STEP 1 DEFINE PROJECT GOAL, TYPE, LOCATION, AND TIMEFRAME(S)

See Guidance Step 1, including Resources to Reference.

#### STEP 1.1 DEFINE THE PROJECT GOAL AND PROJECT TYPE.

1.1.1 Project name: Marina Restoration Project, 187 Wentworth Rd, Portsmouth, NH

#### 1.1.2 Project goal:

Remediate PCB waste, restore waterfront use (boat storage, marina support)

#### 1.1.3 Identify the project beneficiaries.

	Sea Level, LLC	;			
1.1.4	Select the project	ct type:	Site-specific	Other:	
1.1.5	Briefly describe t	the project activities.			

#### STEP 1.2 DEFINE AND INVENTORY THE PROJECT AREA.

1.2.1 Describe the project planning, regulatory, or site-specific area. If relevant (likely for site-specific projects) identify address and tax lot number.

See WPA attached, also Appendix D, Memo to NHDES 4-23-23

Optional: For detailed projects, use the Project Inventory Table, row 1, to list project sub-areas.

1.2.2 Identify important facilities, structures, and resources within the project area.

gravel upland area

tidal wetlands, shoreland

Optional: For detailed projects, use the Project Inventory Table, row 1, to list facilities, structures, and resources.

1.2.3 Identify important access and services relevant to the project.

## water, primary road direct

#### STEP 1.3 DEFINE THE TIMEFRAME(S) FOR THE PROJECT.

Optional: For detailed projects, use the Project Inventory Table, rows 2-3, to identify multiple timeframes.

1.3.1 Identify the planning horizon, regulatory timeframe, or useful life of the project. \_\_\_\_\_Years

1.3.2 Identify the year when the project timeframe ends. Year:  $\frac{2050}{2050}$ 

1.3.3 Identify likely incremental action points over the course of the project timeframe.

Incremental Action Point (Year)	Explanation
2037	50% design life

## **STEP 2 DETERMINE TOLERANCE FOR FLOOD RISK**

See Guidance Step 2, including Step 2 Table and Resources to Reference.

#### STEP 2.1 IDENTIFY PROJECT CHARACTERISTICS THAT INFLUENCE TOLERANCE FOR FLOOD RISK.

2.1.1 Identify and rank characteristics of the overall project that influence tolerance for flood risk using the table provided.

Project Characteristics that Influence Tolerance for Flood Risk	Very High	High	Medium	Low	N/A	Explanation
Value or replacement cost			.х.			medium cost
Capacity to adapt			x			medium ability to adapt
Implication for public safety & function			x			medium implication
Sensitivity to inundation			x			medium sensitivity
Other, if applicable:						

Optional: For detailed projects, use the Project Inventory Table, rows 4-7, to describe tolerance for flood risk characteristics of multiple features.

#### STEP 2.2 DETERMINE TOLERANCE FOR FLOOD RISK APPLICABLE TO THE PROJECT.

2.2.1 The tolerance for flood risk applicable to the overall project is:

Medium

🗌 High

🗌 Very Low

Explanation:

meets medium criteria. Re-established marina use can be repaired relatively quickly.

Low

Optional: For detailed projects, use the Project Inventory Table, row 8, to determine tolerance for flood risk of multiple features.

2.2.2 Consider the tolerance for flood risk of important access and services identified in Step 1.2 and possible implications for the project.

	access continues directly.	
2.2.3	Consider how the project goal and use of the project area may change over the course of the project timeframe and resulting changes	in
	tolerance for flood risk.	

no change anticipated

## STEP 3 SELECT AND ASSESS RELATIVE SEA-LEVEL RISE (RSLR) ESTIMATE(S)

See Guidance Step 3, including Step 3 Table A or B and Resources to Reference.

#### STEP 3.1 SELECT THE RSLR ESTIMATE(S) FOR THE PROJECT.

- 3.1.1 Based on tolerance for flood risk and project timeframe, select the RSLR or range of RSLR estimate(s) that the project should plan to, regulate for, or design for: <u>1.6</u> feet by <u>2050</u> year from 1.3.2
- 3.1.2 Based on tolerance for flood risk and incremental action points, select the RSLR or range of RSLR estimate(s) that the project should make incremental plans for. (Repeat for all incremental action point years).

Incremental Action Point (Year from 1.3.3)	RSLR (feet)
2037	1,3

Optional: For detailed projects, use the Project Inventory Table, row 9, to select RSLR estimate(s) for multiple, different features.

#### STEP 3.2 ASSESS RSLR IMPACTS TO THE PROJECT.

Mapping tools listed in Guidance Step 3 may assist with Step 3.2.

3.2.1 Identify the tidal datum used for the project.

NGVD29

NAVD88
--------

🗌 Other:

3.2.2 Select the tidal (non-storm) water reference levels that are most relevant to the project overall.

Mean Lower Low Water	Mean Low Water	🗌 Mean Sea Level	
🗌 Mean High Water	🗌 Mean Higher High Water	Highest Observable Tide Line	Other:

3.2.3 Calculate RSLR-adjusted elevations for the relevant tidal water reference line(s).

Tidal Water Reference Level	Present-Day Elevation (feet)	RSLR-Adjusted Elevation or Range of Elevations (feet)		
Mean Lower Low Water (MLLW)	-4.62	-3.02		
Mean Low Water (MLW)	-4.3	-2.7		
Mean Sea Level (MSL)				
Mean High Water (MHW)	3.81	5.41		
Mean Higher High Water (MHHW)	4.22	5.8		
Highest Observable Tide Line (HOTL)	7.9	9.5		
Other:				

3.2.4 If relevant, describe present-day sediment deposition and/or erosion dynamics at the site.

Not relevant just removing a limited zone of PCB containing sediment

- SECTION E
- 3.2.5 Evaluate risks to the project from RSLR-induced increases in tidal extent, water level, current velocities, and changes in sediment deposition and/or erosion using the table provided.

Risks from RSLR-Induced:	Very High	High	Medium	Low	N/A	Explanation
Increase in tidal extent			x			medium still allows sed removal
Increase in water level			x			medium still allows sed removal
Increase in current velocities			x			medium still allows sed removal
Changes in sediment deposition					x	n/a
Changes in erosion			x			medium still allows sed removal
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 10, to evaluate risks from RSLR-induced impacts to project features.

3.2.6 Describe how nearby landscape features and infrastructure such as undersized culverts and bridges, as well as future land use change may affect risks to the overall project from RSLR in the future.

Project interactions with RSLR and nearby landscape features and infrastructure:

nearby land use expected to continue as at present, homeowners mostly, state road parallel to site

Project interactions with RSLR and future land use change:

Limited changes in project area in past anticipated to remain in future

3.2.7 Evaluate the RSLR impacts on the overall project, natural resources, cultural and historic resources, public access, socially vulnerable populations, and other relevant project characteristics.

RSLR Impacts on:	Very High	High	Medium	Low	N/A	Explanation
Overall Project			x			medium to low anticipated
Natural Resource			x			medium
Cultural and Historic Resources			x			medium to low anticipated
Socially Vulnerable Populations			x			medium
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 11, to evaluate RSLR impacts for multiple project features.

## STEP 4 IDENTIFY AND ASSESS RSLR-ADJUSTED COASTAL STORMS

See Guidance Step 4, including Step 4 Table and Resources to Reference.

#### STEP 4.1 DETERMINE RSLR-ADJUSTED DESIGN FLOOD ELEVATION (DFE).

4.1.1 If relevant, identify the Flood Design Class or classes most closely associated with the project.

	Class	1
--	-------	---

Class 3
---------

🗌 Not applicable

С	ass	2

Class 4

Optional: For detailed projects, use the Project Inventory Table, row 12, to identify Flood Design Class for multiple project features.

4.1.2 Identify the present-day coastal storm(s) relevant to the project.

	1% annual	chance storm	(100-year)
--	-----------	--------------	------------

	0.2%	annual	chance	storm	(500-year)
--	------	--------	--------	-------	------------

□ Other:\_\_\_\_\_

4.1.3 Identify present-day FEMA Flood Insurance Rate Map Special Flood Hazard Area(s) flood zone(s) for the project area. AE Zone 🗌 AO Zone Coastal A Zone U VE Zone X Zone Other:\_\_\_\_\_ 4.1.4 If the project takes place in a FEMA Special Flood Hazard Area, identify the present-day Base Flood Elevation(s) (BFE) for the project area. 8 □ No BFE feet or Optional: For detailed projects, use the Project Inventory Table, rows 13-14, to identify Flood Zone and BFE for multiple project features. 4.1.5 Identify any freeboard requirements or recommendations associated with the project area related to present-day coastal flood protection. 0 feet 1 foot 2 feet Other: Optional: For detailed projects, use the Project Inventory Table, row 15, to identify freeboard for multiple project features. 4.1.6 Identify the present-day coastal storm DFE(s) for the project. For instructions on how to calculate DFE, see Guidance Step 4 Table. 11.6 feet Optional: For detailed projects, use the Project Inventory Table, row 16, to identify DFE for multiple project features.

4.1.7 For projects with no DFE or for which DFE is not applicable, describe how a present-day coastal storm might affect the project.

NA			

4.1.8 Identify RSLR-adjusted DFE(s) or range of DFE that the project should plan to, regulate for, or design for. For instructions on how to calculate RSLR-adjusted DFE, see Guidance Step 4 Table.

**11.6** feet

Optional: For detailed projects, use the Project Inventory Table, row 16, to identify RSLR-adjusted DFE for multiple project features.

#### STEP 4.2 ASSESS RSLR-ADJUSTED COASTAL STORM IMPACTS TO THE PROJECT.

Mapping tools listed in Guidance Step 4 Resources to Reference may assist with Step 4.2.

4.2.1 Evaluate risks to the project from RSLR-adjusted coastal storm induced increases in tidal extent, water level, current velocities, and changes in sediment deposition and/or erosion using the table provided.

Risks from RSLR-Adjusted Coastal Storms Resulting in:	Very High	High	Medium	Low	N/A	Explanation
Increase in flood extent			x			Medium can time work
Increase in flood water level			x			Medium can time work
Increase in storm current velocities			x			Medium can time work
Changes in sediment deposition			x			Medium can time work
Changes in erosion			x			Medium can time work
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 18, to evaluate risks from RSLR-adjusted coastal storm impacts on project features.

4.2.2 Describe how nearby landscape features and infrastructure such as undersized culverts and bridges, as well as future land use change may affect risks to the project from RSLR-adjusted coastal storms in the future.

Project interactions with RSLR-adjusted coastal storms and nearby landscape features and infrastructure:

NA

Project interactions with RSLR-adjusted coastal storms and future land use change:

Remove limited sediment within embayment no structures in immediate project area will time work to safe conditions

4.2.3 Assess the RSLR-adjusted coastal storm impacts on the overall project, natural resources, cultural and historic resources, public access, socially

vulnerable populations, and other relevant project characteristics.

RSLR-Adjusted Coastal Storm Impacts on:	Very High	High	Medium	Low	N/A	Explanation
Overall Project			x			limited sed removal no structures
Natural Resources			x			limited sed removal no structures
Cultural and Historic Resources			×			limited sed removal no structures
Socially Vulnerable Populations			x			limited sed removal no structures
Other:						

Optional: For detailed approach, use the Project Inventory Table, row 19, to evaluate RSLR-adjusted coastal storm impacts for multiple project features.

## STEP 5 IDENTIFY AND ASSESS RSLR-INDUCED GROUNDWATER RISE

See Guidance Step 5, including Step 5 Table and Resources to Reference.

#### STEP 5.1 IDENTIFY RSLR-INDUCED GROUNDWATER RISE FOR THE PROJECT.

5.1.1 Identify the groundwater rise mapping status for the communities associated with the project area.

Mapped	Unmapped	🗆 Bot	h						
5.1.2 If the project area is mapped	, identify the RSLR-inducec	l groundwater rise estimate(s) or rang	ge of estimatesfeet						
5.1.3 If the project area is unmapped, identify the RSLR-induced groundwater rise estimates for the project.									
Commit to manage to:	feet	and be prepared to adapt to:	feet.						
Optional: For detailed projects,	use the Project Inventory Ta	ble, rows 20-21, to identify RSLR-induce	ed groundwater rise for project features.						

#### STEP 5.2 ESTIMATE DEPTH TO PRESENT-DAY AND FUTURE GROUNDWATER FOR THE PROJECT AREA.

5.2.1 Estimate the present-day depth to Seasonal High Water Table (SHWT). 5.2.1

Optional: For detailed projects, use the Project Inventory Table, row 22, to estimate present-day depth to SHWT for project features.

feet

feet

2.8-3.8

5.2.2 Determine estimated depth or range of depths to projected SHWT.

Optional: For detailed projects, use the Project Inventory Table, row 23, to estimate depth to projected SHWT for project features.

#### STEP 5.3 EVALUATE IMPACTS OF RSLR-INDUCED GROUNDWATER RISE FOR THE PROJECT.

5.3.1 Describe risks to the overall project from RSLR-induced groundwater rise.

] Very High	🗌 High	Medium	Low	🗌 No Risk	
Explanation:					
Consistent with map limits we propose.	ped groundwater eleva	tion the risk appears mediu	um to this marina boa	at storage facility.	No structures in the work

Optional: For detailed projects, use the Project Inventory Table, row 24, to describe risk from RSLR-induced groundwater rise on project features.

5.3.2 Assess the RSLR-induced groundwater rise impacts on the overall project, natural resources, cultural and historic resources, public access, socially vulnerable populations, and other relevant project characteristics.

RSLR-Induced Groundwater Rise Impacts on:	Very High	High	Medium	Low	N/A	Explanation
Overall Project			x			sed removal in embayment
Natural Resources			x			sed removal in embayment
Cultural and Historic Resources			x			sed removal in embayment
Socially Vulnerable Populations			x			sed removal in embayment
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 25, to evaluate RSLR-adjusted coastal storm impacts for multiple project features.

## STEP 6 IDENTIFY AND ASSESS EXTREME PRECIPITATION ESTIMATES.

See Guidance Step 6, including Step 6 Table and Resources to Reference.

#### STEP 6.1 ACCOUNT FOR PROJECTED INCREASES IN EXTREME PRECIPITATION.

- 6.1.1 Based on tolerance for flood risk, identify the percent increase in extreme precipitation for the project.
  - 15%

□ More than 15% Specify: \_\_\_\_\_%

Optional: For detailed projects, use the Project Inventory Table, row 26, to identify percent increase in extreme precipitation for multiple project features.

6.1.2 For projects involving hydrologic and/or hydraulic modeling, identify the following:

- Duration and recurrence interval(s) relevant to the project,
- Best available present-day extreme precipitation estimates for the selected duration and recurrence interval(s), and

• Projected extreme precipitation estimates for the selected duration and recurrence interval(s).

Duration and Recurrence Interval	Present-day Precipitation Estimate	Projected Precipitation Estimate

#### STEP 6.2 ASSESS PROJECTED EXTREME PRECIPITATION IMPACTS TO THE PROJECT.

For projects not involving hydrologic and/or hydraulic modeling, qualitatively assess projected extreme precipitation impacts.

For projects conducting hydrologic and/or hydraulic modeling, use modeling results to analyze projected extreme precipitation impacts.

6.2.1 Evaluate risks to the project from projected extreme precipitation using the following table.

Risks from Projected Extreme Precipitation Resulting in:	Very High	High	Medium	Low	N/A	Explanation
Increase in flood extent			x			can time PCB sed removal work
Increase in flood water level			x			can time PCB sed removal work
Increase in storm current velocities			x			can time PCB sed removal work
Changes in sediment deposition			×			can time PCB sed removal work
Changes in erosion			x			can time PCB sed removal work
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 27, to evaluate risks from projected extreme precipitation for multiple project features.

6.2.2 Describe how nearby landscape features and infrastructure such as undersized culverts and bridges, as well as future land use change may affect risks to the project from projected extreme precipitation.

Project interactions with projected extreme precipitation and nearby landscape features and infrastructure:

NA

Project interactions with projected extreme precipitation and future land use, including possible changes in impervious cover:

NA

6.2.3 Assess the projected extreme precipitation impacts on the overall project, natural resources, cultural and historic resources, public access, socially vulnerable populations, and other relevant project characteristics.

Projected Extreme Precipitation Impacts on:	Very High	High	Medium	Low	N/A	Explanation
Overall Project			x			no structures in work area, will time work
Natural Resources			x			no structures in work area, will time work
Cultural and Historic Resources			x			no structures in work area, will time work
Socially Vulnerable Populations			x			no structures in work area, will time work
Other:						

Optional: For detailed projects, use the Project Inventory Table, row 28, to assess projected extreme precipitation impacts on multiple project features.

## STEP 7 ASSESS CUMULATIVE RISK AND EVALUATE ADAPTATION OPTIONS

See Guidance Step 7, including Step 7 Tables A and B and Resources to Reference.

#### STEP 7.1 ASSESS CUMULATIVE COASTAL FLOOD RISK TO THE PROJECT.

7.1.1 Specify, based on responses to Steps 3-6, projected coastal flood risk impacts to the overall project.

Overall future coastal flood risk impacts to the project:	Very High	High	Medium	Low	N/A
RSLR (3.2.7)			x		
RSLR-adjusted coastal storms (4.2.3)			x		
RSLR-induced groundwater rise (5.3.2)			x		
Projected extreme precipitation (6.2.3)			x		

7.1.2 Describe how the cumulative impact of multiple coastal flood risks occurring together may affect the project.

Will be able to time the limited PCB sediment removal to fair weather. No structures are in the embayment where the sediment will be removed. Upslope on land has been operating as a marina and boat storage for decades.

7.1.3 Select the coastal flood risk(s) that are most impactful to the project and explain.

	RSLR
--	------

RSLR-adjusted coastal storms

RSLR-induced groundwater rise

Projected extreme precipitation INO coastal flood risk outweighs others

Explanation:

limited PCB sediment removal within embayment will time and work around specific issu

Optional: For detailed projects, use the Project Inventory Table, row 29, to specify coastal flood risks that are most impactful for multiple project features.

#### STEP 7.2 IDENTIFY AND EVALUATE POSSIBLE ADAPTATION OPTIONS TO MITIGATE COASTAL FLOOD RISK.

7.2.1 Identify adaptation options and select relevant action category(ies) for each option. Insert more rows if needed.

Option	Ontion	Action Category				
ÎD#	Option	No Action	Avoid	Accommodate	Resist	Relocate
1	Remove limited volume PCB Seds	×	×			
2	Refurbish existing rirprap after sed work	×	×	X		
3						
4						
5						

Use the table "Framework for Evaluating Adaptation Options" on the following page to complete Steps 7.2.2-7.2.3. Insert more rows if needed.

7.2.2 Identify additional "custom" criteria to evaluate adaptation options.

7.2.3 Evaluate adaptation options against each "effectiveness," "guiding principles," and "custom" criteria.
SECTION E

	FRAMEWORK FOR EVALUATING ADAPTATION OPTIONS												
		Evaluation Criteria											
		EF	FECTIVENE	SS			GUIDING F	RINCIPLES			CUS	ТОМ	
Option ID# from 7.2.1	Action Categories from 7.2.1	Mitigation of Flood Risk	Meets Project Goal	Short-Term or Long- Term	Cost	Contributes to Mal- Adaptation	Effect on Socially Vulnerable Populations	Effect on Natural Resources	Effect on Cultural and Historic Resources	Effect on Public access	Custom Criteria	Custom Criteria	
		High Medium Low	Yes/No	ST/LT	\$/\$\$/\$\$\$	Yes/No	Positive Neutral Negative	Positive Neutral Negative	Positive Neutral Negative	Positive Neutral Negative			
1	1,2	Low	Yes	ST	0\$	No	Neutral	Neutral	Neutral	Neutral			
2	1,2,3	Low	Yes	ST/SLT	\$10K	No	Neutral	Neutral	Neutral	Positive			
3													
4													
5													

Optional: For detailed projects, fill out this framework for each relevant column (project feature) in the Project Inventory Table.

# STEP 7.3 SELECT PREFERRED OPTION(S) AND PROCEED WITH PROJECT OR REVISIT AND REVISE PREVIOUS STEPS.

7.3.1 Describe adaptation option(s) selected for the project and considerations to ensure transparent disclosure of flood risk and future actions that may be necessary to further mitigate flood risk, particularly if a flexible adaptation approach is followed.

Project adaptations are to remove the shallow PCB sediments from the embayment when there is not high precipitation, flooding, tidal surges or high velocities from wind and waves. No other adaptations are proposed.

Optional: For detailed projects, use the Project Inventory Table, row 30, to describe preferred option(s) for multiple project features.

7.3.2 Should the project proceed with the adaptation options selected, revisit and revise previous steps, or not proceed?

□ Proceed

 $\Box$  Revisit and revise

Do not proceed

PROJECT INVENTORY TABLE			1
	1	Project Sub-area, Structures, Facilities, and/or Resources (list one feature per column; add columns if needed)	No structures in proposed project active area.
<b>PROJECT DEFINITION</b>	2	Project Timeframe (year)	2025
	3	Incremental Action Points (year(s))	2037
	4	Value or Replacement Cost (very high, high, medium, or low)	Low
	5	Capacity to Adapt (very high, high, medium, or low)	Medium
	6	Importance for Public Function and/or Safety (very high, high, medium, or low)	Medium
FLOOD RISK	7	Sensitivity to Inundation (very high, high, medium, or low)	Medium
	8	Tolerance for Flood risk (high, medium, low, very low)	Medium
	9	RSLR estimate (in feet)	by 2050 =1.6 feet
RELATIVE SEA-LEVEL RISE (RSLR)	10	Notes about RSLR impacts to the project from changed tidal extent, water level, current velocities, sediment deposition, erosion	Limited impacts
	11	RSLR impact (very high, high, medium, or low)	Medium
	12	Flood Design Class (1, 2, 3, 4)	2
	13	FEMA Flood Zone (AE, AO, Coastal A, VE, X)	AE
	14	BFE (in feet)	8
	15	Freeboard (in feet)	2
COASTAL STORMS	16	DFE (in feet)	11.6
	17	RSLR-adjusted DFE (in feet)	10
	18	Notes about RSLR–adjusted coastal storm impacts from changed tidal extent, water level, current velocities, sediment deposition, erosion	v water embayment on Sagamore Creek low velocity subject to tidal storn
	19	Coastal storm impact (very high, high, medium, or low)	medium
	20	Map status (mapped, unmapped)	Mapped
	21	RSLR-induced groundwater rise estimate (in feet)	1.2 to 2.2
RSLR-INDUCED	22	Present-day depth to SHWT (in feet)	5
GROUNDWATER RISE	23	Projected depth to RSLR-adjusted SHWT (in feet)	2.8 to 3.8
	24	Notes about RSLR-induced groundwater rise impacts	Marina & boat storage work area in creek
	25	Groundwater rise impact (very high, high, medium, or low)	Medium
PROJECTED EXTREME	26	Percent increase in extreme precipitation (15% or greater)	15%
PRECIPITATION	27	Notes about projected extreme precipitation impacts	can perform work when not extreme precipitation
	28	Projected extreme precipitation impact (very high, high, medium, or low)	Medium
	29	Which, if any, projected coastal flood risks outweigh others in terms of impacts to the project? (RSLR, RSLR- adjusted coastal storms, RSLR-induced groundwater rise, projected extreme precipitation)	No Risk outweighs the other
CUMULATIVE IMPACTS	30	Use framework in worksheet (Step 7.2.3) to identify and evaluate adaptation options for each structure, facilitiy, or resource, as needed.	No structures in project area only limited sediment removal

	2	3	4	5	6
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## APPENDIX L Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

# L - Coastal Functional Assessment Narrative

The completed Wetland Function - Value Evaluation Form, Ecological Integrity Worksheet and list of considerations and qualifiers are provided in Attachment L2. All data screening maps are provided in Attachment J1. Table 1 provides a summary of principal functions and values for Sagamore Creek and associated salt marsh and mudflats.

# 1 - Ecological Integrity

In general, the function of Ecological Integrity focuses on components of the unit such as invasive plant species, extent of tidal flow, level of human disturbance and buffer characteristics. All considerations and calculations are included in Attachment L2. The maximum score is 1.00 and the minimum score is 0.10. The Ecological Integrity (EI) of the Ecological Unit (EU) for Sagamore Creek and associated salt marsh and mudflats is 0.90. Therefore, Sagamore Creek scored high for Ecological Integrity of the EU. However, the EI for the Zone of Influence (ZI), which is more focused around the project site, scored 0.30 which is a low score for the ZI.

# 2 – Educational Potential

This value considers the ability of the wetlands to provide educational opportunities. This site is not known to currently provide these values and the area is too small and can only be accessed over private land. Therefore, this is not a principal value for this project area.

# 3 - Fish and Aquatic Life Habitat

This function considers the wetlands ability to support marine resources. The estuarine wetland includes salt marshes and tidal flats that are exposed at low tide. The salt marshes and tidal flats are "special aquatic sites" and the creek provides suitable spawning habitat for small resident fish. However, desktop data indicates that Sagamore Creek is not mapped as Essential Fish Habitat (Attachment J1). There is no eelgrass mapped in Sagamore Creek and, although shellfish areas are not mapped (Attachment J1), the creek does provide the potential for shellfish habitat within the mudflats but within the cove associated with the project site. Therefore, although suitable, Fish and Aquatic Life Habitat are not a principal function of Sagamore Creek and associated mudflats. The project proposes salt marsh restoration which will only benefit the tidal system as a whole.

# 4 - Flood Storage

This function considers the wetland effectiveness in reducing flood damage. The salt marsh restoration area is within the 100 year floodplain and will continue to provide some storage capacity because post remediation grads will be restored to pre-remediation grades. The adjacent sloping landscape provides little flood storage. This is a principal function of Sagamore Creek but not the narrow cove associated with the proposed project. The project does not propose any impact on flood storage function.

# 5 - Groundwater Recharge

This function considers the potential for the wetlands to interact with groundwater. The primary source of surface water is from incoming tides. The wetlands associated with Sagamore Creek do not support groundwater recharge as they are predominately salt water and tidal.

# 6 - Noteworthiness

This value considers the suitability of the wetlands to provide habitat for rare species. The NH NHB has identified the potential for the presence of rare species but has determined that the proposed project is not likely to have an impact on rare species. However, the proposed remediation and restoration work will be an overall benefit. The IPAC data indicates the potential presence of the endangered Northern Long-eared Bat (*Myotis septentrionalis*), threatened Red Knot (*Calidris canutus rufa*) and the endangered Roseate Tern (*Sterna dougallii dougallii*). The narrow tidal cove and previously developed tidal buffer zone associated with this project do not provide habitat for these mammal or avian species. Overall, the area surrounding the project site is suitable for rare species but this is not a principal value.

# 7 - Nutrient Trapping/Retention & Transformation

This function considers the wetlands ability to trap, retain or transform excess nutrients from adjacent uplands. The limited tidal marsh vegetation represents the majority of the capability to perform this function here making this a principal function. Additionally, the proposed restoration work will be an overall benefit.

# 8 - Production Export

This function considers the ability of the wetland to export nutrients to other areas. The high productivity of the tidal marsh and the presence of food resources within it and the creek, together with the tidal flushing of the creek make production export a suitable function of the creek, however, this is not a principal function of the narrow cove associated with the project site. The proposed project will not have any negative impact on the ability of the wetland complex to provide production export functions.

# 9 - Scenic Quality

This value considers the quality of the wetland from a visual perspective. Sagamore Creek and associated wetlands have visual quality but the visibility of these areas is not present at the project site due to the narrow cove so this is not considered a principal value. The proposed project will not detract from this value. The aesthetics of the restored area will be an improvement to the existing conditions.

# **10 – Sediment Trapping**

This function considers the wetlands ability to trap sediments. The major source of sediments come from the incoming tides and any sedimentation that occurs within the tidal wetland is natural. The tidal flushing limits the retention of toxicants and pathogens. The proposed project may protect Sagamore Creek and associated wetlands from upland toxicants or pathogen sources through the completion of the remediation work making this a principal function.

# 11 - Shoreline Anchoring

This function considers the ability of the wetland to maintain shoreline stability. Sagamore Creek and the project site are relatively low energy areas as indicated by the presence of mudflats and salt marshes but storm surges result in high energy flows. These areas provide for the deposition of sediments carried in by the tide making this a principal function.

# 12 - Uniqueness/Heritage

This value considers the wetlands with respect to local and/or geographical significance as well as the functions it provides. Sagamore Creek provides a significant number of principal functions and values to the community and the public but the project site does not offer these amenities and is therefore not a principal value. The proposed project will not impact the uniqueness or heritage of the area. Both the restoration and the remediation will be a benefit to the community.

# 13 - Wetland - Based Recreation

This value considers the ability of the wetlands to provide recreational opportunities. Sagamore Creek is frequently used by boaters and offers many other recreational opportunities, however; this is not the case in the narrow cove associated with the project site so recreation is not a principal value. The project will not create barriers to the recreational uses of the creek.

# 14 – Wetland-Dependent Wildlife Habitat

This function considers the effectiveness of the wetland to provide habitat to species particularly adapted to wetland environments. Sagamore Creek and the tidal marsh is mapped as Highest Ranked Habitat in The Wildlife Action Plan (Attachment J1). Wildlife particularly suited to wetlands are associated with the areas within Sagamore Creek. A list of observed and potential wildlife is provided with the Wetland Function - Value Evaluation Form in Attachment J1. Wildlife habitat is a suitable function of the narrow cove associated with the project site. The proposed restoration project will only serve to improve the ability of the wetlands to perform this function.

Wetland ID	Cowardin Classes	Ecological Integrity	Educational Potential	Fish/ & Aquatic Life Habitat	Flood Storage	Groundwater Recharge	Noteworthiness	Nutrient Trapping/Retention & Transformation	Production Export	Scenic Quality	Sediment/Toxicant Retention	Sediment Trapping	Uniqueness/Heritage	Wetland-Based Recreation	Wetland-Based Wildlife Habitat	Wetland Description:
Wetland A	E2US3	Y	N	N	N	N	N	Y	N	N	N	Ŷ	N	N	N	Tidal creek complex with mudflats and salt marsh. The project area includes previously disturbed salt marsh due to ongoing remediation efforts.

# Table 1. Summary of Principal Functions and Values

# L1. Wetland Functional Assessment Worksheets



WETLANDS FUNCTIONAL ASSESSMENT WORKSHEET Water Division/Land Resource Management Wetlands Bureau Check the Status of your Application



RSA/Rule: RSA 482-A / Env-Wt 311.03(b)(10); Env-Wt 311.10

# APPLICANT LAST NAME, FIRST NAME, M.I.: Sea Level LLC and Goulemas Family Trust

As required by Env-Wt 311.03(b)(10), an application for a standard permit for minor and major projects must include a functional assessment of all wetlands on the project site as specified in Env-Wt 311.10. This worksheet will help you compile data for the functional assessment needed to meet federal (US Army Corps of Engineers (USACE); if applicable) and NHDES requirements. Additional requirements are needed for projects in tidal area; please refer to the <u>Coastal Area</u> <u>Worksheet (NHDES-W-06-079)</u> for more information.

Both a desktop review and a field examination are needed to accurately determine surrounding land use, hydrology, hydroperiod, hydric soils, vegetation, structural complexity of wetland classes, hydrologic connections between wetlands or stream systems or wetland complex, position in the landscape, and physical characteristics of wetlands and associated surface waters. The results of the evaluation are to be used to select the location of the proposed project having the least impact to wetland functions and values (Env-Wt 311.10). This worksheet can be used in conjunction with the <u>Avoidance and Minimization Written Narrative (NHDES-W-06-089)</u> and the <u>Avoidance and Minimization</u> <u>Checklist (NHDES-W-06-050)</u> to address Env-Wt 313.03 (Avoidance and Minimization). If more than one wetland/ stream resource is identified, multiple worksheets can be attached to the application. All wetland, vernal pools, and stream identification (ID) numbers are to be displayed and located on the wetlands delineation of the subject property.

SECTION 1 - LOCATION (USACE HIGHWAY METHODOLOGY)							
ADJACENT LAND USE: Marina/ Residential	ADJACENT LAND USE: Marina/ Residential						
CONTIGUOUS UNDEVELOPED BUFFER ZONE PRESENT? Ves No							
DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT (in feet): <75 feet							
SECTION 2 - DELINEATION (USACE HIGHV	VAY METHODOLOGY; Env-Wt 311.10)						
CERTIFIED WETLAND SCIENTIST (if in a non-tidal area) or QUALIFIED COASTAL PROFESSIONAL (if in a tidal area) who prepared this assessment: Patrick Seekamp, CWS							
DATE(S) OF SITE VISIT(S): 10/01/20	DELINEATION PER ENV-WT 406 COMPLETED? 🛛 Yes 🔲 No						
CONFIRM THAT THE EVALUATION IS BASE	ED ON:						
Office and							
Field examination.							
METHOD USED FOR FUNCTIONAL ASSESS	MENT (check one and fill in blank if "other"):						
🔀 USACE Highway Methodology.							
Other scientifically supported method	(enter name/ title): Vegetated Tidal Wetlands						

SECTION 3 - WETLAND RESOURCE SUMMARY (USACE HIGH	WAY METHODOLOGY; Env-Wt 311.10)					
WETLAND ID: A	LOCATION: (LAT/ LONG) 43.05333/70.74555					
WETLAND AREA: 0.5 acres	DOMINANT WETLAND SYSTEMS PRESENT: Wetland/ Salt Marsh					
HOW MANY TRIBUTARIES CONTRIBUTE TO THE WETLAND?	COWARDIN CLASS:					
None	E2US3					
IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM?	IS THE WETLAND PART OF:					
🗌 Yes 🖾 No	🔀 A wildlife corridor or 🔲 A habitat island?					
if not, where does the wetland lie in the drainage basin?	IS THE WETLAND HUMAN-MADE?					
Coastal	Yes 🛛 No					
IS THE WETLAND IN A 100-YEAR FLOODPLAIN?	ARE VERNAL POOLS PRESENT?					
🔀 Yes 🔲 No	Yes 🛛 No (If yes, complete the Vernal Pool Table)					
ARE ANY WETLANDS PART OF A STREAM OR OPEN-WATER SYSTEM? Yes No	ARE ANY PUBLIC OR PRIVATE WELLS DOWNSTREAM/ DOWNGRADIENT? 🔲 Yes 🔀 No					
PROPOSED WETLAND IMPACT TYPE: Remediation and Restoration	PROPOSED WETLAND IMPACT AREA: 410 SF, 11 CY					
SECTION 4 - WETLANDS FUNCTIONS AND VALUES (USACE H	IIGHWAY METHODOLOGY; Env-Wt 311.10)					
The following table can be used to compile data on wetlands in the "Functions/ Values" column refer to the following fun	s functions and values. The reference numbers indicated ctions and values:					
1. Ecological Integrity (from RSA 482-A:2, XI)						
2. Educational Potential (from USACE Highway Methodo	ology: Educational/Scientific Value)					
3. Fish & Aquatic Life Habitat (from USACE Highway Me	thodology: Fish & Shellfish Habitat)					
4. Flood Storage (from USACE Highway Methodology: Fl	loodflow Alteration)					
5. Groundwater Recharge (from USACE Highway Metho	dology: Groundwater Recharge/Discharge)					
6. Noteworthiness (from USACE Highway Methodology:	Threatened or Endangered Species Habitat)					
7. Nutrient Trapping/Retention & Transformation (from	USACE Highway Methodology: Nutrient Removal)					
8. Production Export (Nutrient) (from USACE Highway N	1ethodology)					
9. Scenic Quality (from USACE Highway Methodology: V	isual Quality/Aesthetics)					
10. Sediment Trapping (from USACE Highway Methodolo	gy: Sediment /Toxicant Retention)					
11. Shoreline Anchoring (from USACE Highway Methodology: Sediment/Shoreline Stabilization)						
12. Uniqueness/Heritage (from USACE Highway Methodology)						
13. Wetland-based Recreation (from USACE Highway Methodology: Recreation)						
14. Wetland-dependent Wildlife Habitat (from USACE Hig	ghway Methodology: Wildlife Habitat)					
First, determine if a wetland is suitable for a particular function and value ("Suitability" column) and indicate the rationale behind your determination ("Rationale" column). Please use the rationale reference numbers listed in Appendix A of USACE <i>The Highway Methodology Workbook Supplement</i> . Second, indicate which functions and values are principal ("Principal Function/value?" column). As described in <i>The Highway Methodology Workbook Supplement</i> , "functions and values can be principal if they are an important physical component of a wetland ecosystem (function						

only) and/or are considered of special value to society, from a local, regional, and/or national perspective".

#### NHDES-W-06-049

"Important Notes" are to include characteristics the evaluator used to determine the principal function and value of the wetland.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	🛛 Yes 🔲 No	The Ecological Integrity of the Ecological Umt{EU) is 0.90 and the Zone of Influence (ZI) is 0.30	X Yes	Yes for the EU but no for the Zl.
2	🗌 Yes 🔀 No	None	☐ Yes ⊠ No	Project is located on private commercial property.
3	🛛 Yes 🔲 No	1,5	☐ Yes ⊠ No	Small fringe salt marsh at tip of tidal cove exposed at low tide.
4	☐ Yes ⊠ No	5,9,18	☐ Yes ⊠ No	Small fringe salt marsh at tip of tidal cove.
5	☐ Yes ⊠ No	10,15	☐ Yes ⊠ No	Tidal exchange is dominant hydrology.
6	🛛 Yes 🗌 No	1	☐ Yes ⊠ No	NHB report states no anticipated Impact.
7	🛛 Yes 🔲 No	2,3,4,6,7,8,11,12	🔀 Yes 🔲 No	Relatively small watershed with biggest threat being residential lawns and marina operation. Point source discharge present
8	🛛 Yes 🔲 No	1,2,4,6,7.10,14	☐ Yes ⊠ No	Assessment based on scale/slze of salt marsh fringe.
9	☐ Yes ⊠ No	2,6,8	☐ Yes ⊠ No	No primary viewing location available.
10	🛛 Yes 🗌 No	1,7,3,4,8	Yes	Small fringe salt marsh at upper reach of tidal cove.
11	🛛 Yes 🔲 No	1,5,6,10,11,12,13,15	📉 Yes 🔲 No	Signs of erosion are present. Proposed restoration and bank stabilization will enhance this function.
12	☐ Yes ⊠ No	1,2,13,22,23,31	☐ Yes ⊠ No	Old marina cribbing present in wetland.
13	☐ Yes ⊠ No	5,9	☐ Yes ⊠ No	Private marina

Irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

🔀 Yes

No

	Yes
$\boxtimes$	No

### SECTION 5 - VERNAL POOL SUMMARY (Env-Wt 311.10)

Delineations of vernal pools shall be based on the characteristics listed in the definition of "vernal pool" in Env-Wt 104.44. To assist in the delineation, individuals may use either of the following references:

- *Identifying and Documenting Vernal Pools in New Hampshire 3<sup>rd</sup> Ed.*, 2016, published by the New Hampshire Fish and Game Department; or
- The USACE *Vernal Pool Assessment* draft guidance dated 9-10-2013 and form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

All vernal pool ID numbers are to be displayed and located on the wetland delineation of the subject property.

"Important Notes" are to include documented reproductive and wildlife values, landscape context, and relationship to other vernal pools/wetlands.

Note: For projects seeking federal approval from the USACE, please attach a completed copy of The USACE "Vernal Pool Assessment" form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

VERNAL POOL ID NUMBER	DATE(S) OBSERVED	PRIMARY INDICATORS PRESENT (LIST)	SECONDAR INDICATOR PRESENT (LIS	Y S ST)	LENGTH OF HYDROPERIOD	IMPORTANT NOTES			
1			-						
2									
3									
4		_							
5									
SECTION 6 - STREAM RESOURCES SUMMARY									
DESCRIPT	DESCRIPTION OF STREAM: STREAM TYPE (ROSGEN):								
HAVE FISH	IERIES BEEN D	OCUMENTED?		DOES THE STREAM SYSTEM APPEAR STABLE?					

number are defined in Section 4.								
FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES				
1	Yes No		Yes No					
2	Yes No		Yes No					
3	Yes No		Yes No					
4	Yes No		Yes No					
5	Yes No		Yes No					
6	Yes No		Yes No					
7	Yes No		Yes No					
8	Yes No		Yes No					
9	Yes No		Yes No					
10	Yes No		Yes No					
11	Yes No		Yes No					
12	Yes No		Yes No					
13	Yes No		Yes No					
14	Yes No		Yes No					
SECTION 7 - ATTACHMENTS (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)								
Wildlife and vegetation diversity/abundance list.								
Photograph of wetland.								
🔀 Wetland delineation plans showing wetlands, vernal pools, and streams in relation to the impact area and								
surrounding landscape. Wetland IDs, vernal pool IDs, and stream IDs must be indicated on the plans.								

The following table can be used to compile data on stream resources. "Important Notes" are to include characteristics the evaluator used to determine principal function and value of each stream. The functions and values reference

For projects in tidal areas only: additional information required by Env-Wt 603.03/603.04. Please refer to the <u>Coastal Area Worksheet (NHDES-W-06-079)</u> for more information.

#### 4.1 Functional Assessment.

# Function 1 — Ecological Integrity

Tidal marshes are among the most productive and most disturbed ecosystems in the state. It is estimated that 50% of the tidal marshes in New Hampshire have been destroyed. Of the remaining 50%, most of them have been negatively impacted by coastal development to some degree. These impacts include filling and dredging within the EU, construction of roads, railroads or other impounding structures across the surface of the marsh, and adverse land-use in the area surrounding the EU. These impacts can result in the trapping of freshwater from upland drainage, as well as restricting flow of tidal waters that flood the EU. Both of these changes can alter the water and soil chemistry. allowing the EU to be dominated by invasive plant species (e.g. common reed, purple loosestrife), which can lead to the loss of function.

The Ecological Integrity of the marsh is a measure of the extent to which the natural ecosystem has been altered. EUs that have a high Average Functional Index (AFI) for Ecological Integrity have most likely undergone little alteration or degradation. A low AFI for Ecological Integrity indicates an EU that has suffered a high degree of degradation.

This function is divided into two parts. Part A assesses the Ecological Integrity within the EU. Part B assesses the Ecological Integrity of the Zone of Influence by looking at the current condition of the area surrounding the EU. By assessing the two areas separately, the user can gain a better understanding of the factors that influence the integrity of the EU. For example, if the AFI for Part A is high and the AFI for Part B is low, then the EU is being more negatively impacted by what is happening in the Zone of Influence than by a disruption of tidal flushing or extensive damage to the EU itself.

#### PART A: ECOLOGICAL INTEGRITY OF THE EU

#### Questions that may require field observation.

#### Question 1A. Percent of the marsh plant community dominated by invasive plant species.

**Directions** — Estimate the size of the area of the EU in which plants indicative of changes in the marsh community occur. These species may include common reed (Phragmites communis), purple loosestrife (Lythrum salicaria), or narrow leaf cattail (Typha angustifolia) or other freshwater or upland species that do not naturally occur in tidal marsh communities (see Appendix J).

> a. less than 5% of EU dominated by invasive species 1.0 0.5

> > 0.1

- b. 5% 20% of EU dominated by invasive species
- c. more than 20% of EU dominated by invasive species

**Rationale** — Invasive plant species may occur in the transition zone of a tidal marsh and not indicate disturbance. However, they can invade and eventually dominate disturbed tidal marshes, causing the loss of the natural diversity in the plant and animal communities. The disturbance can result from changes in drainage patterns caused by road construction, excessive development in the upland, fragmentation of the marsh system, or restriction of tidal flow.

#### Question 2A. Number of tidal restrictions.

**Directions** — Count the number of tidal restrictions from the EU to unrestricted tidal flow by the shortest route (see Figure 4-1). Do not consider the bridges over the major tidal rivers as a restriction. A list of the major tidal rivers can be found on page 12.





**Rationale** — The restriction of seawater to, and the detention of the freshwater in the marsh can cause changes in the salinity which in turn may affect the natural plant and animal communities of the marsh. The fragmentation of the system by the construction of roads or other types of impoundments and restrictions may influence all of the functions of the marsh. The present condition of the EU may be caused by the cumulative impact of two or more sequential restrictions of tidal flow (see Appendix J).

#### Question 3A. Type of tidal restriction.

1

**Directions** — Identify all the tidal restrictions between the EU and unrestricted tidal waters by the shortest route (See Figure 4-1). Determine which restriction is the most severe and apply the following criteria. Be sure to consider all tidal restrictions affecting flow into the EU (see Appendix J).

a.	no restriction affecting flow	1.0
b.	flow through bridge appears adequate	0.5
c.	flow through bridge appears inadequate and/or flow	
	restricted by culvert(s)	0.1

**Rationale** — The type of tidal restriction can be one of the main causes of degradation in an EU. A bridge that spans a tidal creek may allow adequate flow in the channel, but the approaches to the bridge are usually associated with the restriction of flow across the surface of the marsh. The presence and type of flow restriction may also cause freshwater flooding in the EU during springtime runoff or major rainstorms. In marsh systems such as the Little River in North Hampton, this flooding can damage surrounding roads and buildings.

There are many types of structures that can influence the free flow of tides, ranging from jetties to culverts. Each type of restriction has different effects on the hydrology of the marsh. For example, jetties, such as those at the mouths of Rye and Hampton Harbors, affect the flow of tidal waters in and out of the marsh. The level of information that will be collected using the Coastal Method will not allow for the evaluation of the effects of these changes in hydrology. However, some of the restrictions are so severe that there is a direct effect on the biotic communities of the EU.

Bridges and culverts in the marsh can be of two different types. The restriction with the least effect on a marsh is a structure spanning a tidal creek from headland to headland such as the Rt. 1A bridge over Parsons Creek in Rve. The other type is a road across the surface of the marsh with bridges or culverts over tidal creeks. The construction of the road across the marsh fragments the marsh and creates impoundments which prevent the free flow of tidal waters across the surface of the marsh at the point of construction. Even if the bridge is properly sized for the creek it spans, the amount of tidal water reaching the far side of the road is limited by the presence of the road. Culverts are the most restrictive and are often associated with degraded EUs because of the limited amount of tidal flow that reaches the far side of the culvert.

#### Question 4A. Ditching on the surface of the EU.

**Directions** — Determine from the base map or a site visit if man-made ditches are present in the EU and in what pattern.

a. no ditching within the EU	
b. ditches present in linear pattern	0.5
c. ditches present in grid pattern	0.1

c. ditches present in grid pattern

**Rationale** — Many of the larger marshes in New Hampshire were ditched either for agricultural purposes or in an attempt to help in the control of salt marsh mosquitoes. The effects of the ditching on the integrity of a marsh are not fully understood, but there is little doubt that the ditches do affect the functioning of the EU. Many times the spoils from the ditching were left on the surface of the marsh next to the ditch, trapping water and leading to the degradation of the marsh peat. A grid pattern of ditches and the associated spoils is more likely to have a negative impact on the EU by trapping both tidal waters and freshwater drainage from the surrounding upland on the marsh surface leading to the dieback of natural tidal marsh plant communities, degradation of the marsh peat and changes in water and soil chemistry.

#### PART B: ECOLOGICAL INTEGRITY OF THE ZONE OF INFLUENCE

#### Questions that may require field observation.

# Question 1B. Dominant land-use in the 500 foot Zone of Influence surrounding the EU.

**Directions** — Using the base map, determine the dominant land-use based on the current use of the land. The dominant land-use refers to the use which occupies the largest percentage of the Zone of Influence.

a. forested, fields, open water, or similar open space
b. agriculture or rural residential

1.0

0.5

0.1

1.0

0.5

- o. agriculture or rural residential
- commercial, industrial, high density residential or heavily used highways

**Rationale** — The *Coastal Method* assumes that marshes in areas which have low intensity use, such as forestry or open space, are least likely to have undergone past disturbances. In addition, these areas are most likely to remain undisturbed in the future.

# Question 2B. Ratio of the number of occupied buildings (including seasonally occupied) within the EU or within the Zone of Influence to the total area of EU.

**Directions** — Count the number of occupied buildings in the EU and/or within 500 feet of the EUs edge. Use the EU area as previously determined on the base map. Express the number of occupied buildings as a ratio to the area of the EU. If an occupied structure falls half in and half out of the Zone of Influence it should be counted as being in.

<u>number of occupied dwellings</u> = <u>buildings</u> total area of EU (acres) acre

- a. less than 0.1 building/ac.
- b. from 0.1 to 0.5 building/ac.
- c. more than 0.5 building/ac.

**Rationale** — Occupied buildings are an indicator of the human impact on the EU. These impacts can include increased runoff, nutrient loading from malfunctioning septic systems and use of fertilizers and increased activity in and around the EU. This activity can be detrimental to water quality and many plants and animals.

# Question 3B. Percent of the EU/upland border which has a buffer of woodland or idle land at least 500 feet in width.

**Directions** — Using the base map, measure the total length of the EU/upland border. Then measure the length of this border which has a 500 foot buffer zone of woodland or idle land. The 500 foot buffer zone will coincide with the Zone of Influence as mapped. **Do not include those areas bordered by agricultural use**. Express the length of the buffer as a percentage of the total length of the EU/upland border.

> length of 500 foot wide undeveloped buffer X 100 length EU/upland border

a.	more than 70%	1.0
b.	from 30% to 70%	0.5
c.	less than 30%	0.1

**Rationale** — A buffer zone (an uncut area of vegetation providing wildlife cover, and helping to control erosion and maintain water quality) increases the ecological integrity of a EU in several important ways. It provides habitat for upland animals, which may use a tidal marsh during parts of their life cycle, and habitat for water dependent wildlife species that require upland habitat for parts of their life cycle. The vegetation in an undisturbed buffer zone acts as a filter to absorb some of the contaminates from residential, agricultural or commercial development before they can enter the EU. During severe storm events the buffer zone can provide refuge for marsh animals to escape high winds and flooding. These undisturbed areas may also slowly evolve into tidal marsh as sea level rises. Agricultural land is not counted as a buffer zone because the application of fertilizers and pesticides can be harmful to the marsh ecosystem.

# Question 4B. Square footage of roads, driveways and parking lots within 150 feet of EU.

**Directions** — Determine the square footage of roads, driveways and other paved areas such as parking lots <u>within 150 feet</u> of the EU and express it as a ratio to the area of the EU (in acres).

square footage of roads and other paved areas (in sq. feet) area of EU (in acres)

a.	ratio less than 1500 sq. feet/acre	1.0
b.	ratio between 1500 - 6000 sq. feet/acre	0.5
c.	ratio greater than 6000 sq. feet/acre	0.1

**Rationale** — Roads, driveways, parking lots, and other paved areas are the focus of considerable disturbance including noise, air pollution and polluted runoff. All of these factors can have an negative effect on populations of plant and animals within the EU.

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The Ecological Integrity of the Ecological Unit is 0.90

The Ecological Integrity of the Zone of Influence is 0.30

APPENDIX L, Part 4 - L2 Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

# L2: Army Corps Appendix A - List of Considerations and Qualifiers

# Appendix A

# Wetland evaluation supporting documentation; Reproducible forms.

Below is an example list of considerations that was used for a New Hampshire highway project. Considerations are flexible, based on best professional judgment and interdisciplinary team consensus. This example provides a comprehensive base, however, and may only need slight modifications for use in other projects.



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

CONSIDERATIONS/QUALIFIERS

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



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

#### CONSIDERATIONS/QUALIFIERS

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

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

#### CONSIDERATIONS/QUALIFIERS

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

STOP HERE IF THIS WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE

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

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



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

CONSIDERATIONS/QUALIFIERS

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

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

CONSIDERATIONS/QUALIFIERS

- 1. Potential sources of excess sediment are in the watershed above the wetland.
- 2. Potential or known sources of toxicants are in the watershed above the wetland.
- 3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland.
- 4. Fine grained mineral or organic soils are present.
- 5. Long duration water retention time is present in this wetland.
- 6. Public or private water sources occur downstream.
- 7. The wetland edge is broad and intermittently aerobic.
- 8. The wetland is known to have existed for more than 50 years.
- 9. Drainage ditches have not been constructed in the wetland.
- STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.
- 10. Wetland is associated with an intermittent or perennial stream or a lake.
- 11. Channelized flows have visible velocity decreases in the wetland.
- Effective floodwater storage in wetland is occurring. Areas of impounded open water are present.
- 13. No indicators of erosive forces are present. No high water velocities are present.
- 14. Diffuse water flows are present in the wetland.
- 15. Wetland has a high degree of water and vegetation interspersion.
- 16. Dense vegetation provides opportunity for sediment trapping and/or signs of
- sediment accumulation by dense vegetation is present.
- 17. Other



#### NUTRIENT REMOVAL/RETENTION/TRANSFORMATION — This function

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

CONSIDERATIONS/QUALIFIERS

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



- 4. Potential sources of excess nutrients are present in the watershed above the wetland.
- 5. Wetland saturated for most of the season. Ponded water is present in the wetland.
- 6. Deep organic/sediment deposits are present.
- 7. Slowly drained fine grained mineral or organic soils are present.
- 8. Dense vegetation is present.
- 9. Emergent vegetation and/or dense woody stems are dominant.
- 10. Opportunity for nutrient attenuation exists.
- 11. Vegetation diversity/abundance sufficient to utilize nutrients.
- STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.
- 12. Waterflow through this wetland is diffuse.
- 13. Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation.
- 14. Water moves slowly through this wetland.
- 15. Other

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

#### CONSIDERATIONS/QUALIFIERS

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

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



#### CONSIDERATIONS/QUALIFIERS

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





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

CONSIDERATIONS/QUALIFIERS

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

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

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



#### CONSIDERATIONS/QUALIFIERS

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

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

#### CONSIDERATIONS/QUALIFIERS

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





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

#### CONSIDERATIONS/QUALIFIERS

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

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



#### CONSIDERATIONS/QUALIFIERS

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

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



CONSIDERATIONS/QUALIFIERS

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

WPA APPENDIX M -- Copy of Town Tax Map, Location of Project on property, and location, name, and address of abutters, recorded deeds for site properties with book and page numbers, and copies of certified postal receipts to abutters (Per Application Checklist, NH ENV-WT 311.06, 311.12, 311.13)



# List of Abutters to Portsmouth Marina and Goulemas Properties

3 Sagamore Grove (Map 201, Lot 7) Owners: Neste Brian Rv Tr (1/2 Int); Byrd Bradford Rv Tr (1/2 Int) Owners Address: 184 Walker Bungalow Rd, Portsmouth, NH 03801

6 Sagamore Grove (Map 201, Lot 5) Owners: Bosen Tina D Revocable Trust, Bosen Tina D Trustee Owners Address: 6 Sagamore Grove, Portsmouth, NH 03801

191 Wentworth House Road (Map 201, Lot 14) Owner: Boat House Rental LLC Owners Address: 200 Sagamore Rd, Rye, NH 03870

Wentworth House Road (Map 201, Lot 11) Owner: Live Free Real Estate LLC Owners Address: 314 Middle St, Portsmouth, NH 03801



C/H L-CHIP ROA335173

# WARRANTY DEED

KNOW EVERYONE BY THESE PRESENTS that I, J.P. Nadeau, of 507 State Street, Portsmouth, County of Rockingham and State of New Hampshire (hereinafter referred to as "Grantor"), for consideration paid grants to Sea Level LLC, of 185 Wentworth Road, Portsmouth, County of Rockingham and State of New Hampshire (hereinafter referred to as "Grantee"), with WARRANTY COVENANTS, all of Grantor's right, title and interest in the following described property, none of which is homestead property.

#### LEGAL DESCRIPTION

**Parcel 1:** A certain tract or parcel of land, with buildings located thereon, in Portsmouth, New Hampshire, bounded and described as follows:

Beginning at a point in the Northerly sideline of Wentworth House Road at the Southeasterly corner of land now or formerly of William F. Huber, thence running N 27° 10' E by land of said Huber one hundred fifty-six and six tenths (156.6) feet to a corner; thence turning and running S 79° 08' E by land now or formerly of Philip A. and Anita M. Hayes one hundred forty (140) feet, more or less, to Sagamore Creek; thence turning and running Southeasterly by said creek to land formerly of Michael and Dunya D. Kuchtey; thence turning and running S 15° 38' W by land of said Kuchtey about one hundred sixty (160) feet to Wentworth House Road; thence turning and running N 74° 22' W by said road one hundred eighty-seven and five tenths (187.5) feet to the point of beginning.

Subject to all covenants and conditions contained in deed of Wentworth Hotel, Inc., to Michael Kuchtey and Dunya D. Kuchtey, dated November 10, 1958 and recorded in the Rockingham County Registry of Deeds at Book 1487, Page 419.

<u>Parcel 2:</u> A certain lot or parcel of land together with the buildings located thereon, situate in Portsmouth, County of Rockingham, State of New Hampshire, on the Northerly side of Wentworth House Road, so-called, and more particularly bounded and described as follows:

Beginning at a point at the Southwesterly corner of land now or formerly of one Apostolides at the Southeasterly corner of the premises herein conveyed thence running in a Westerly direction by said Wentworth House Road one hundred eighty-three (183) feet to a point at land now or formerly of Sadie P. Gouse; thence turning and running at right angles in a general Northerly direction by said land of Gouse one hundred forty-four and fifty-eight hundredths (144.58) feet, more or less, to Sagamore Creek; thence turning and running in a general Easterly direction, following the course of said Sagamore Creek, to the Northwesterly corner of land of said Apostolides; thence turning and running in a Southerly direction by said

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Apostolides land one hundred seventy-five (175) feet, more or less, to said Wentworth House Road and the point of beginning.

<u>Parcel 3</u>: A certain parcel of land, with the buildings thereon, situate in Portsmouth, County of Rockingham and State of New Hampshire, bounded and described as follows:

Beginning at the Southwesterly corner of the parcel conveyed at a point in the Northerly sideline of Wentworth House Road; thence running North 09° 50' East by other land now or formerly of said Sadie Gouse about 210 feet to Sagamore Creek; thence turning and running in a general Easterly direction by said Creek to a point distant 150 feet Easterly at right angles from the first described course; thence turning and running South 09° 50' West by other land of said Sadie Gouse about 250 feet to Wentworth House Road; thence turning and running Westerly by said road about 150 feet to the point of beginning.

Also another parcel of land with the buildings thereon situated in said Portsmouth, and bounded and described as follows:

Beginning at a point on the Northerly side of Wentworth House Road at the Southeasterly corner of other land of this grantor; thence running North 09° 50' East by other land of this grantor about 185 feet to Sagamore Creek; thence running Easterly by said Creek about 40 feet to land conveyed to Nicholas Pesarik; thence turning and running South 22° 35' West by said land conveyed to said Pesarik passing through a drill hole in a ledge about 180 feet to Wentworth House Road and the point of beginning.

<u>Parcel 4</u>: A certain tract or parcel of land, together with the buildings thereon, situated on the Northerly side of Wentworth House Road in Portsmouth, County of Rockingham and State of New Hampshire, bounded and described as follows:

Beginning at a hub in the ground on the Northerly side of said road and at the Southwesterly corner of land now or formerly of Joseph LaCava thence turning and running North 69° 09' West by said Wentworth House Road 119.2 feet to land now or formerly of Peter and Florence Apostolides; thence turning and running North 22° 35' East by other land now or formerly of Sadie P. Gouse and passing through a drill hole in a ledge about 180 feet to Sagamore Creek; thence running in a general Southerly and Easterly direction by said Creek to land of Joseph LaCava; thence turning and running South 23° 26' West by land of said LaCava about 104 feet to Wentworth House Road and the point of beginning.

<u>Parcel 5</u>: A certain tract of land, with the buildings thereon, situate in Portsmouth, County of Rockingham and State of New Hampshire, bounded and described as follows:

Beginning at a hub on the Northerly side of Wentworth House Road at land now or formerly of Sadie P. Gouse; thence running North 23° 26' East by land now or formerly of Gouse to Sagamore Creek; thence turning and running Northeasterly by said creek to land now or formerly of Henry Chartrand; thence turning and running South 26° 30'

West by land now or formerly of said Chartrand to said Wentworth House Road; thence turning and running 66° 34' West by said road seventy five (75) feet to the point of beginning.

See also boundary agreement between Michael Kuchtey and Dunya D. Kuchtey and Ronald F. Eagan and Anne M. Eagan, dated June 17, 1968 and recorded in the Rockingham County Registry of Deeds at Book 1772, Page 192, as said agreement may affect the above description.

Parcels 1, 2, 3, 4 and 5 are also collectively depicted as one parcel located on the northerly side of Wentworth House Road on a plan entitled, "Plan of Land for Michael Kuchtey Revocable Trust, Wentworth Road, County of Rockingham, Portsmouth/Rye, NH, Scale 1"=50", by Millette, Sprague & Colwell, Inc., dated March 25, 1999 and recorded in the Rockingham County Registry of Deeds on July 20, 1999 as Plan Number D-27320, which parcel is bounded and described as follows"

Beginning at an iron rod on the Northerly sideline of Wentworth House Road at the Southeasterly corner of the within described parcel and the Southwesterly corner of land now or formerly of the B.R. Graves, Jr. Revocable Trust of 1992; thence running along the Northerly sideline of Wentworth House Road the following courses and distances: North 68° 01' 00" West for a distance of 75.00 feet to a point; North 70° 36' 00" West for a distance of 119.20 feet to a point; North 75° 07' 00" West for a distance of 150.97 feet to a point; North 78° 31' 34" West for a distance 187.01 feet to a point; and North 75° 19' 24" West for a distance 187.50 feet to an iron rod at the Southeasterly corner of land now or formerly of Michael A. Kuchtey; thence turning and running North 26° 12' 36" East along land of said Kuchtey for a distance of 156.60 feet to an iron pipe at land now or formerly of Lawrence E. Hayes; thence turning and running South 80° 05' 24" East along land of said Hayes for a distance of 140.00 feet to a point at the high water mark of Sagamore Creek; thence running in a Southeasterly direction along said high water mark (on a tie course of South 86° 48' 59" East for a distance of 174.75 feet); thence turning and running on a Northeasterly direction along said high water mark (on a tie course of North 72° 48' 54" East for a distance of 137.81 feet); thence turning and running in a Southeasterly direction along said high water mark (on tie courses of South 43° 01' 00" East for a distance of 80.94 feet; South 21° 22' 41" East for a distance of 80.31 feet; and South 68° 07' 25" East for a distance of 106.49 feet); thence turning and running in a Northeasterly direction along said high water mark (one a tie course of North 79° 28' 21" East for a distance of 81.44 feet) to a point at land now or formerly of The B.R. Graves, Jr. Revocable Trust of 1992; thence turning and running South 25° 03' 00" West along said Graves Trust land for a distance of 198.00 feet to the point of beginning.

<u>Parcel 6</u>: A certain parcel of land, with any buildings thereon, located on Wentworth Road, Portsmouth, County of Rockingham, State of New Hampshire, more particularly described follows:

Beginning at a point in the Southerly sideline of Wentworth Road, said point being two hundred eleven and eighteen hundredths (211.18) feet Easterly of the Northeast corner of

land now or formerly of Herman Odiorne; thence running South 19° 59' West by land of Ronald F. Eagan and Anne M. Eagan one hundred and no-tenths (100.00) feet to a corner; thence turning and running North 69° 09' West by land now or formerly of the Michael Kuchtey Revocable Trust dated July 2, 1996 seventy and no-tenths (70.0) feet to a corner; thence turning and running North 19° 59' East by other land now or formerly of said Kuchtey Trust one hundred and no-tenths (100.) feet to said Wentworth Road; thence turning and running South 69° 09' East by said road seventy and no-tenths (70.0) feet to the point of beginning.

See also boundary agreement between Michael Kuchtey and Dunya D. Kuchtey and Ronald F. Eagan and Anne M. Egan, dated June 17, 1968 and recorded in Rockingham Registry of Deeds at Book 1772, Page 192 as said agreement may affect the above description.

Parcel 6 is also depicted as one parcel located on the Southerly side of Wentworth House Road on a plan entitled, "Plan of Land for Michael Kuchtey Revocable Trust, Wentworth Road, County of Rockingham, Portsmouth/Rye, NH, Scale 1"=50", by Millette, Sprague & Colwell, Inc. dated March 25, 1999 and recorded in the Rockingham County Registry of Deeds on July 20, 1999 as Plan Number D-27320, which parcel is bounded and described as follows:

Beginning at an iron rod on the Southerly sideline of Wentworth House Road at the Northeasterly corner of the within described parcel and the Northwesterly corner of land now or formerly of The B.R. Graces, Jr. Revocable Trust of 1992; thence running South 19° 59' 00" West along said Graves Trust land for a distance of 100.00 feet to an iron rod; thence turning and running North 69° 09; 00" West along Parcel 2 above-described for a distance of 70.00 feet to an iron rod; thence turning and running North 69° 0 a distance of 100.00 feet to an iron rod; thence turning and running North 69° 09; 00" West along Parcel 2 above-described for a distance of 100.00 feet to an iron rod; thence turning and running North 19° 59' 00" East along Parcel 2 above-described for a distance of 100.00 feet to an iron rod on the Southerly sideline of Wentworth House Road; thence turning and running South 69° 09' 00" East along the Southerly sideline of said Wentworth House Road for a distance of 70.00 feet to the point of beginning.

<u>Parcel 7</u>: Two certain tracts of land together with any buildings thereon, partly in Portsmouth and partly in Rye, County of Rockingham, State of New Hampshire, further described as follows:

#### TRACT I:

Beginning at a pipe in the Southerly sideline of Wentworth Road at the Northeasterly corner of land now or formerly of Herman Odiorne, said pipe being also one hundred thirty-four (134) feet more or less Easterly of land now or formerly of the Mark Wentworth Home for Chronic Invalids; thence running South 76° 35' East one hundred twenty-six and twenty-three one-hundredths (126.23) feet to an iron pin at land now or formerly of Andrew J. and Kathleen P. DeLisle; thence turning and running South 19° 59' West one hundred (100) feet, more or less, by land of said DeLisle to an iron pin at a corner; thence turning and running South 69° 9' East by land of said DeLisle seventy (70) feet, more or less, to an iron pin at the Southeasterly corner of said land of DeLisle and in the Westerly sideline of land now or formerly of Paul F. and Ruth G. Brockway; thence turning and running South 19° 59' West by land of said Paul F. and Ruth O. Brockway

one hundred thirty-one (131) feet, more or less, to a pipe at a corner; thence turning and running South 89° 49' West by a poposed street or way two hundred twenty-five (225) feet to a pipe at a corner in said proposed street or way; thence turning and running South 0° 11' East fifty (50) feet to a pipe in the Southerly line of said proposed street or way; thence turning and running South 89° 49' West one hundred thirty-six and eighty-four one-hundredths (136.84) feet to a pipe in the Easterly sideline of the said Mark Wentworth Home for Chronic Invalids land; thence turning and running N 16° 45' East along said Mark Wentworth Home for Chronic Invalids two hundred fifty-five (255) feet to a pipe in the Southerly line of said Herman Odiorne; thence running and running N 16° 45' East along land of said Herman Odiorne one hundred thirty four (134) feet to the Southeasterly corner of land of said Odiorne; thence turning and running North 16° 45' East along land of said Herman Odiorne one hundred twenty (120) feet to the pipe in the Southerly sideline of Wentworth Road at the point of beginning.

#### TRACT II:

Beginning at a pipe situated one hundred twenty (120) feet Southerly of the Southerly line of Wentworth Road, said distance being measured along the Easterly sideline of land now or formerly of the Mark Wentworth Home for Chronic Invalids, thence turning and running South 16° 45' West two hundred fifty-five (255) feet along said land of Mark Wentworth Home for Chronic Invalids to a pipe at a corner in the conveyed premises; thence turning and running North 89° 45' East along land now or formerly of Helen Mulcahy one hundred thirty-six and eighty-four one hundredths (136.84) feet to a pipe at a corner in the conveyed premises; thence turning and running North 0° 11' West fifty (50) feet to a pipe at a corner in the conveyed premises; thence turning and running North 89° 49' East along a proposed street or way seventy-five (75) feet to a pipe at a corner in the conveyed premises; thence turning and running North 0° 11' West along other land herein conveyed one hundred (100) feet to a pipe at a corner in the conveyed premises; thence turning and running South 89° 49' West along other land herein conveyed seventy-five (75) feet to a pipe at a corner in the conveyed premises; thence turning and running North 0° 11' West along other land herein conveyed seventy-eight and eightythree one hundredths (78.83) feet to a pipe at land now or formerly of Herman Odiorne; thence turning and running North 76° 35' West along land now or formerly of said Hermand Odiorne sixty-four and thirty-five one hundreds (64.35) feet to the pipe at the place of beginning.

Meaning and intending to convey hereby lots No. 1 and No. 2 on a plan entitled "Plan showing property of Blanche M. Chartrand – Surveyed by Moulton Engineering Co., September 1953 and June 1955."

Also hereby conveying to the grantees, their heirs and assigns, the right to use in common with others a certain right of way as shown on said foregoing plan which runs from Wentworth Road Southerly and Westerly to and from land formerly of Frank Jones and now or formerly of Helen Mulcahy, said right of way adjoining said lots No. 1 and No. 2 in part and running to and from said Wentworth Road, with the right to use such right of way in common with others for all such purposes as may be necessary or useful for the use and occupation of the land hereby conveyed, in common with said Blanche M. Chartrand, her heirs and assigns.
See also boundary agreement between the Michael Kuchtey and Dunya D. Kuchtey and Ronald F. Eagen and Anne M. Eagen, dated June 17, 1968 and recorded in Rockingham Registry of Deeds at Book 1772, Page 192 as said agreement may affect the above description.

Parcel 7 is also depicted as one parcel located on the Southerly side of Wentworth House Road on a plan entitled, "Plan of Land for Michael Kuchtey Revocable Trust, Wentworth Road, County of Rockingham, Portsmouth/Rye, NH, Scale 1"=50", by Millette, Sprague & Colwell, Inc., dated March 25, 1999 as Plan Number D-27320, which parcel is bounded and described as follows:

Beginning at an iron rod on the Southerly sideline of Wentworth House Road at the Northwesterly corner of the within described parcel and the Northeasterly corner of land now or formerly of Gertrude A. Lamont; thence running South 76° 35' 00" East along the Southerly sideline of Wentworth House Road for a distance of 126.33 feet to a point; thence continuing South 69° 09' 00" East along said Wentworth House Road for a distance of 14.95 feet to an iron rod at the Northwesterly corner of land identified as Map R1, Lot 17 on the above-referenced plan; thence turning and running South 19° 59' 00" West along said Map R1, Lot 17 for a distance of 100.00 feet to an iron rod; thence turning and running South 69° 09' 00" East along said Map R1, Lot 17 for a distance of 70.00 feet to an iron rod at land now or formerly of The B.R. Graves, Jr. Revocable Trust of 1992; thence turning and running South 19° 59' 00" West along said Graves Trust land and land now or formerly of Bruce and Joanna Graves, and crossing the Portsmouth/Rye Town Line, for a distance of 131.00 feet to a point; thence turning and running South 89° 49' 00" West along land of said Graves and land now or formerly of Edmund J. and David L. Mulcahy, and crossing the Portsmouth/Rye Town Line for a distance of 225.00 feet to a point; thence turning and running South 00° 11' 00" East along said Mulcahy land for a distance of 50.07 feet to a point; thence turning and running South 89° 45' 15" West along said Mulcahy land for a distance of 136.81 feet to an iron pipe at land now or formerly of the City of Portsmouth Conservation Commission; thence turning and running North 16° 45' 00" East along said Conservation Commission land for a distance of 173.80 feet to an iron pipe; thence continuing North 16° 46' 51" East still along said Conservation Commission land for a distance of 80.99 feet to an iron pipe at land now or formerly of Gertrude A. Lamont; thence turning and running South 76° 40' 24" East along said Lamont land for a distance of 133.97 feet to an iron rod; thence turning and running North 16° 45' 00" East still along said Lamont land for a distance of 120.00 feet to the point of beginning.

Meaning and intending to convey all of the parcels of land with the buildings thereon as bounded and described in the deed from Witch Cove Properties, LLC to William H. Shaheen, et al dated December 17, 2002, recorded in the Rockingham county Registry of Deeds at Book 3922, Page 1165, the Grantor having acquired all right title and interest in said land and buildings by the following Warranty Deeds:

Deed of Priscilla Dalrymple, Trustee of the Walter G. Stanley Revocable Trust of 1994 to J.P. Nadeau dated April 13, 2006, recorded in the Rockingham County Registry of deeds at Book

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4648, Page 0685;

Deed of William H. Shaheen to J.P. Nadeau dated April 17, 2006, recorded in the Rockingham County Registry of Deeds at Book 4648, Page 0686; and

Deed of Bruce E. Nadeau to J.P. Nadeau dated April 11, 2006 recorded in the Rockingham County Registry of Deeds at Book 4648, Page 0687;

This Conveyance Is Subject To The Following Conditions, Restrictions And Encumbrances:

- a.) By accepting this Deed, the Grantee is accepting conveyance of the premises in its "as is" condition and without Grantor's warranting compliance with any zoning, land use and other governmental laws, rules and regulations, and particularly those governing the United States Environmental Protection Agency (USEPA) and the State of New Hampshire Department of Environmental Services (NHDES); and
- b.) By accepting this Deed, the Grantee is also accepting the responsibility for completing any and all USEPA and NHDES remediation requirements and will accept any Deed Notice provision they may require; and
- c.) The free use of one boat slip reserved to William H. Shaheen of 140 Washington Street, Second Floor, Dover, New Hampshire, for the duration of his life, for a boat not in excess of thirty (30) feet in length, which use he can assign for the use of others during his life.

Witness my hand this <u>15</u> day of August, 2016

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Witness

STATE OF NEW HAMPSHIRE ROCKINGHAM COUNTY

Dated: August <u>15</u>, 2016

**PERSONALLY APPEARED** the above named, J.P. Nadeau, and gave oath that the foregoing subscribed to by him is his own free act and deed, Before me;

Notary Public / Justice of the Peace Commission Expires: <u>5/9/17</u> Michelly Lacan

Return to:



#### WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, that Paul W. Cain Investments, LLC, a New Hampshire limited liability company, with an address of 19 Revolutionary Lane, Nottingham NH 03290, for consideration paid grant(s) to Jason Goulemas, Trustee of the Jason Goulemas 2002 Family Trust and Lisa M. Goulemas, Trustee of the Lisa M. Goulemas 2002 Family Trust and Lisa M. Goulemas, Cape Neddick, ME 03902, as tenants in common, with WARRANTY COVENANTS:

A certain tract or parcel of land with the buildings thereon situate in Portsmouth, Rockingham County, State of New Hampshire, and further bounded and described as follows:

Beginning at a hub in the ground on the easterly side of a private roadway leading from Sagamore Avenue in said Portsmouth through land now or formerly of William F. Huber known as Sagamore Grove and at a point bearing S  $14^{\circ}$  34' W a distance of thirty-one and eight-tenths (31.8) feet from a hub at the southeasterly corner of land of Leroy Terrio; thence running S  $65^{\circ}$  10' E by other land now or formerly of said William F. Huber two hundred six and four-tenths (206.4) feet to a hub; thence turning and running S  $41^{\circ}$  52' W, a distance of ninety (90) feet to a hub at other land now or formerly of said Huber; thence turning and running N  $79^{\circ}$  08' W by other land now or formerly of said Huber; thence turning and running N  $29^{\circ}$  44' E by said private to a hub at the private roadway aforesaid; thence turning and running N  $29^{\circ}$  44' E by said private road one hundred thirty-four and two-tenths (134.2) feet to the point of beginning. Together with the land lying easterly of the above described parcel including between the northerly and southerly sidelines of the parcel projected easterly to the cove, so-called.

Right of way over Private Roadway from Sagamore Avenue to the premises is hereby granted.

See also, Right of Way benefitting the within conveyed premises contained in deed of George D. Mavrikis and Marion B. Mavrikis to John B. Gibbons and Clarissa B. Gibbons, recorded in the Rockingham County Registry of Deeds, Book 1733, Page 8. Containing about 21,300 square feet.

Property address is 5 Sagamore Grove, Portsmouth New Hampshire, 03801

Meaning and intending to describe and convey the same premises conveyed to Paul W. Cain Investments, LLC by deed dated February 19, 2015 and recorded in the Rockingham County Registry of Deeds in Book 5595, Page 2404.

Executed this  $216^{\text{f}}$  day of December, 2016.

Paul W. Cam Investments, LLC Paul W. Cain

Duly authorized Member

State of New Hampshire County of Rockingham

Then personally appeared before me on this  $21^{87}$  day of December, 2016, the said Paul W. Cain, who acknowledged himself to be the duly authorized Member of Paul W. Cain Investments, LLC and acknowledged the foregoing to be his voluntary act and deed in said capacity.

Notary Public/Justice of the Peace



Aries Engineering, LLC **104 PLEASANT ST** CONCORD NH 03301-2902

\$5.54 **US POSTAGE** FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



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**USPS CERTIFIED MAIL** 9407 1118 9876 5452 7484 99

Brian Neste RV TR & Bradford Byrd RV TR **184 BUNGALOW ROAD** PORTSMOUTH NH 03801

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Reference	
USPS #	9407111898765452748499
USPS Mail Class	Certified with Electronic Delivery Confirmation
USPS Status	Your item was picked up at the post office at 3:38 pm on December 17, 2024 in PORTSMOUTH, NH 03801.
USPS History	Available for Pickup, 12/16/2024, 4:05 am, PORTSMOUTH, NH 03801 Notice Left (No Authorized Recipient Available), 12/14/2024, 4:32 pm, PORTSMOUTH, NH 03801 Out for Delivery, 12/14/2024, 7:56 am, PORTSMOUTH, NH 03801 Arrived at Post Office, 12/14/2024, 7:45 am, PORTSMOUTH, NH 03801 Arrived at USPS Facility, December 12, 2024, 8:12 pm, MANCHESTER, NH 03103
	Accepted at USPS Origin Facility, December 12, 2024, 6:57 pm, CONCORD, NH 03301 Shipping Label Created, USPS Awaiting Item, 12/12/2024, 2:57 pm, CONCORD, NH 03301

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Aries Engineering, LLC 104 PLEASANT ST CONCORD NH 03301-2902 \$5.54 US POSTAGE FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



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Boat House Rental LLC 200 SAGAMORE RD RYE NH 03870-2057

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Reference USPS # USPS Mail Class	9407111898765452747621 Certified with Electronic Delivery Confirmation
USPS Status	Your item was delivered to an individual at the address at 11:00 am on December 14, 2024 in RYE, NH 03870.
USPS History	Out for Delivery, 12/14/2024, 8:12 am, RYE, NH 03870 Arrived at Post Office, 12/14/2024, 8:01 am, RYE, NH 03870 Arrived at USPS Facility, December 12, 2024, 8:12 pm, MANCHESTER, NH 03103 Accepted at USPS Origin Facility, December 12, 2024, 6:57 pm, CONCORD, NH 03301 Shipping Label Created, USPS Awaiting Item, 12/12/2024, 3:02 pm, CONCORD, NH 03301

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Aries Engineering, LLC 104 PLEASANT ST CONCORD NH 03301-2902 \$5.54 US POSTAGE FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



063S0011718298

USPS CERTIFIED MAIL

Live Free Real Estate LLC 314 MIDDLE ST PORTSMOUTH NH 03801-5102

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Reference USPS # USPS Mail Class	9407111898765452747386 Certified with Electronic Delivery Confirmation
USPS Status	Your item was delivered to the front desk, reception area, or mail room at 12:32 pm on December 16, 2024 in PORTSMOUTH, NH 03801.
USPS History	No Access to Delivery Location, 12/14/2024, 1:03 pm, PORTSMOUTH, NH 03801 Arrived at USPS Facility, December 12, 2024, 8:10 pm, MANCHESTER, NH 03103 Accepted at USPS Origin Facility, December 12, 2024, 6:55 pm, CONCORD, NH 03301
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Tina D Bosen, Trustee **6 SAGAMORE GRV** 

PORTSMOUTH NH 03801-5547

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Photograph 1: Google Maps Street View – 187 Wentworth Road (prior to November 2021 fire destroyed 3-sided structure, work area to left of structure).



Photograph 2: April 2013 Google Earth Image – Approximate 2016-2017 PCB excavation extents outlined in purple with mapped photo key



APPENDIX N - Photograph Log Portsmouth Marina Restoration Project 187 Wentworth Hill Road Portsmouth, New Hampshire



Photograph 3b: Looking east to Sagamore Creek, east end of wetland remediation area in isolated cove in foreground, berm separates wetland remediation area from Witch Cove; July 2024





Photograph 4b: Looking east, east of wetland remediation area and berm, in vicinity of cribbed retaining wall and building foundation, at right; July 2024







Photograph 5b: Looking south, view of cribbed stone retaining wall, from A-10 eastward (see Sheet 5); July 2024





Photograph 6a: Looking west to abutter at 5 Sagamore Grove at northwest end of wetland remediation area; April 2024



Photograph 6b: Looking west to abutter at 5 Sagamore Grove at northwest end of wetland remediation area; July 2024







Photograph 8a: Looking east, storm drain pipe to left of rock underneath green ash tree, pipe above highest observable tide line; April 2024



Photograph 8b: Looking north, storm drain pipe underneath green ash tree, pipe above highest observable tide line; July 2024





Photograph 9b: Looking east from storm drain pipe, note eroded bank along right, shows entire wetland remediation area; July 2024







Photograph 10a: Looking east, also showing south bank and upland remediation area; April 2024



Photograph 10b: Looking east, also showing south bank and upland remediation area; July 2024





Photograph 11b: Looking west, showing prior upland remediation area; July 2024



NHDES-W-06-013



#### **APPENDIX O** Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

### STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION ATTACHMENT A: MINOR AND MAJOR PROJECTS Water Division/Land Resources Management Wetlands Bureau



Check the Status of your Application

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

#### APPLICANT'S NAME: Tom Reis, Sea Level, LLC and Goulemas Family Trust **TOWN NAME:** Portsmouth

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

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

#### PART I: AVOIDANCE AND MINIMIZATION

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

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

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

OBJECTIVE IS FINAL REMEDIATION OF PCBS INITIALLY ADDRESSED UNDER U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) APPROVAL ISSUED ON 9-9-2016 PER 40 CFR 761.61(A) (SEE 4-24-2023 MEMO TO NHDES, WPA APPENDIX D, FOR HISTORY AND REGULATORY REQUIREMENTS). THIS NEW CLEANUP OCCURRING WITHIN ZONE AE AND ADJACENT JURISDICTIONAL ZONES MUST BE UNDERTAKEN PER EPA DIRECTION TO REMOVE CONTAMINATED WETLAND SEDIMENT AND UPLAND SOILS. NO PRACTICABLE ALTERNATIVE EXISTS.

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

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

Impacts to salt marsh are direct but temporary, lasting < one month, and limited to 410 SF with the purpose of completing the remediation work. The original salt marsh disturbance under the previous remediation activities created a sump that ponds tidal flows and traps flotsam and debris within this small, narrow, blind cove. The area proposed for temporary impacts will be restored to match original grades and planted with native salt marsh vegetation to improve existing conditions to the extent possible given the tidal dynamics of the cove. The proposed native salt marsh plantings, in this area with currently limited such vegetation, will improve habitat. Under existing conditions, tidal flushing is the only contributor to nutrients for adjacent Sagamore Creek. Under proposed conditions tidal flushing will continue with the benefit of additional nutrients furnished through natural seasonal senescence (biological breakdown).

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

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

The narrow cove where work is proposed is tidally connected to Sagamore Creek. This will not change under proposed future conditions.

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

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

Proposed remediation activities limit the extent of disturbance to the absolute minimum, and have been defined by hundreds of samples analyzed by a licensed laboratory. Certain temporary (< 1 month) impacts to the following jurisdictional areas will occur: Zone AE: 410 SF; HOTL To Within 50 FT Waterfront Shoreline Buffer: 5,230 SF; HOTL to 75 FT Setback, 6,375 SF; and within 100 FT Tidal Buffer Zone, 6,375 SF. Mitigative measures are discussed in WPA Appendix J, Part 3, Narrative to Coastal Resource Worksheet and Appendix E, Engineering Plans, Sheets 1 through 7. The project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A, especially those in which there are exemplary natural communities, protected species and habitat, documented fisheries, or any combination thereof, as described further in Appendix J, Coastal Resource Worksheet. Remediation methodologies are driven by site cleanup/EPA regulatory requirements.

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

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

The narrow tidal cove where work is proposed is bordered by private property, and does not currently provide public commerce, naviation or recreation opportunities nor will the proposed project provide for this. The section of Witch Cove within which work will occur lies approximately 100 feet away from the main channel of Sagamore Creek. See also Coastal Resource Worksheet.

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

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

The proposed remediation project will improve flood storage by reducing floodplain by six inches within the 175 SF remediation footprint, and also within an adjacent 235 FT area previously filled in, to total 410 SF, see Sheet 5. Vegetation to be installed above the 11 FT MSL line will retard runoff, in combination with re-engineering the drainage swale south of the cove remediation area, which will be modified to a 4% grade from its current 2:1 slope, and which drains into the remediation footprint area during precipitation events. Sheet flow runoff from the concrete cap will be controlled by two feet of 2 inch stone installed around south and west perimeter edge with underdrain routed to packaged underground stormwater treatment system to treat and intercept runoff directed from this 2% sloped pad, see Sheets 4 and 5. Also, extensive existing gravel fill immediately outside the project limits of work (Sheets 2, 5-7) is permeable, thus little runoff occurs during precipitation events. Note that a 15 inch storm drain pipe discharging into this blind cove from the state/city roadways east of and outside the project area, will be capped with a 5 ft concrete plug, once the origin of that pipe is terminated by others and approved by regulators. This will also reduce significant stormwater discharge originating during precipitation events.

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

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

There are no riverine forested wetlands or scrub-shrub-marsh complexes of high ecological integrity associated with this proposed project.

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

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

The proposed project is in and adjacent to tidal, saltwater wetlands which do not provide for drinking water or which impact groundwater aquifer levels.

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

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

The proposed project is not associated with any stream channel, but Witch Cove is tributary to tidal Sagamore Creek.

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

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

No structures over surface waters are proposed.

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

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

No new structures are proposed within waters that intrude upon the public trust. To maintain slope stabilization, and to avoid the possibility of exposing adjacent soils containing PCBs >1<25 ppm covered by 6 inches of soil above the 11 FT MSL line, pre-existing boulders will be re-established along the eastern shoreline of the cove supplemented by 4 to 5 inch stone to create an armored rip rap from HOTL 8 FT to 11 FT MSL. The location of these boulders which have been saved are shown in the NHDES 4-26-23 Memo, WPA APPENDIX D, in photographs section and WPA, Appendix C, Wildlife Habitat photo.

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

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

No new shoreline structures are proposed so the project will not have any impact on abutting properties relative to shoreline structures nor will the the single abutter have diminished use and enjoyment of his/her property. Notification to abutter(s) has been confirmed in writing in WPA, Appendix M.

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

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

No new shoreline structures are proposed so the project will not have any impact on the public's right to navigation,

passage or use of the resource for commerce or recreation.

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

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

No new shoreline structures are proposed so the proposed project will not have any impact on water quality, aquatic vegetation, wildlife or finfish habitat. However, the proposed project may be beneficial for water quality by remediating hazardous waste and, beneficial through the addition of native salt marsh vegetation where there currently is none, and minor addition of increased flood storage.

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

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

No structures are contemplated. The number of future access points through wetlands or over the bank will remain unchanged, see Sheets 5-7. The shoreline stability will be greatly enhanced as described above.

#### PART II: FUNCTIONAL ASSESSMENT

#### REQUIREMENTS

Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).

FUNCTIONAL ASSESSMENT METHOD USED:

Army Corps of Engineers Highway Methodology and Method for the Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire was employed.

NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: PATRICK SEEKAMP, CWS

DATE OF ASSESSMENT: 10 OCT 2020/CONFIRMED 202

Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT:

For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable:

Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.

#### APPENDIX P

#### Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

#### NHDES WPA, Concurrent Review Request and Other Items (ENV WT 313.05, 311.06 (e)(g)(h)(i))

**Per NH ENV Wt 313.05:** because the proposed project requires both a Shoreland permit under the Shoreland Water Quality Protection Act (RSA 483-B) and a Wetlands permit under RSA 482-A, as they are proposing impacts regulated under these two statutes, the applicant is requesting that the permit applications for these permits be reviewed concurrently by the New Hampshire Department of Environmental Service (NHDES) Shoreland and Wetlands programs.

<u>Per NH Envt Wt 311.06 (a)</u>: Maps and Other Documents: A copy of a town tax map showing the subject property, the location of the project on the property, and the location of properties of abutters with each lot labeled with the name and mailing address of the abutter is provided in WPA Appendix M.

**Per NH Envt Wt 311.06(e):** Since the project is located in a protected tidal zone, a copy of the recorded deed with book and page numbers for the property is provided as **WPA Appendix M**.

<u>Per NH Envt Wt 311.06 (g)</u>: The NHB memo in WPA Appendix A contains the NHB identification number and results and recommendations from NHB as well as any consultation requests made to NHF&G pursuant to Fis 1004.01, communications and information related to the consultation, results of the consultation from NHF&G pursuant to Fis 1004.01, and any recommendation for actions necessary to prevent adverse impacts to species protected under Fis 1400.

**Per NH Envt Wt 311.06 (h), (i):** Regarding providing a statement of whether the applicant has received comments from the local conservation commission, or LAC, none have been received.

NHDES-W-06-075



#### APPENDIX Q Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

### TIDAL SHORELINE STABILIZATION PROJECT-SPECIFIC WORKSHEET FOR STANDARD APPLICATION Water Division/Land Resources Management Wetlands Bureau Check the Status of your Application



#### RSA/Rule: RSA 482-A/ Env-Wt 609

This worksheet summarizes the criteria and requirements for a Standard Permit for "Tidal Shoreline Stabilization" projects in tidal areas as outlined in Chapter Env-Wt 600. In addition to the project-specific criteria and requirements on this worksheet, all Standard Applications must meet the criteria and requirements listed in the <u>Standard Dredge and Fill</u> <u>Wetlands Permit Application Form (NHDES-W-06-012)</u> and the <u>Coastal Resource Worksheet (NHDES-W-06-079)</u>.

#### SECTION 1 - APPLICATION REQUIREMENTS (Env-Wt 609.02)

Applications for tidal shoreline stabilization projects shall demonstrate that:

The technique or combinations of techniques is based on best available scientific and engineering practices.

- The proposed technique or combination of techniques addresses:
  - Results of the avoidance and minimization narrative required in Env-Wt 311.07, the avoidance, minimization
    and mitigation demonstration required in Env-Wt 313.03 and Env-Wt 313.04, the coastal functional
    assessment (CFA) required in Env-Wt 603.04, and the project design narrative required in Env-Wt 603.06,
  - Any causes of erosion that can be identified,
  - The degree or extent of erosion,
  - Relative exposure based on shoreline geometry, shore orientation, intensity of boat traffic, influence of adjacent structures, storm surge, and extreme precipitation events,
  - Potential sea-level rise and vulnerability assessment under Env-Wt 603.05,
  - Potential marsh migration as a result of sea-level rise and
  - The design requirements of Env-Wt 514.04.

An application for a tidal shoreline stabilization shall include the following information:

Tidal shoreline stabilization shall be accomplished using living shoreline techniques, per Env-Wt 609.04(b), unless the applicant demonstrates that a living shoreline is not practicable.

Applicants proposing to install new rip-rap shall include the following information with the application:

- Evidence of erosion that cannot be stabilized solely with a soft stabilization design.
- A description of anticipated turbulence, flows, restricted space, fetch or similar factors that render vegetative and diversion methods physically impractical.
- An assessment of the potential for the proposed rip-rap to erode the shoreline of neighboring properties, based on an examination of the shoreline and modeling based on tides, average wave height and force, and the energy absorption of deflection or the proposed rip-rap.
- Specification of minimum and maximum stone sizes, existing contours and final proposed contours, the volume of rip-rap to be used, the minimum and maximum rip-rap thickness, and the type and thickness of bedding for the stone.

Cross-section and plan views of the proposed installation.

The relationship of the project to fixed points of reference, abutting properties, and features of the natural shoreline.

SECTION 2 - APPROVAL CRITERIA (Env-Wt 607.07; Env-Wt 607.08; Env-Wt 609.01; Env-Wt 609.09)		
<ul> <li>Applications for tidal shoreland stabilization projects shall:</li> <li>Maintain or enhance the natural process functions of the shoreline as the critical transition zone between the intertidal zone and upland tidal buffer zone/sand dune regimes.</li> <li>Provide wildlife habitat while providing protection against coastal hazards.</li> <li>Be compatible with the existing natural land cover and its functions.</li> <li>Address the known causes of erosion.</li> <li>Avoid adverse impacts to near shore ecosystem processes, habitats, and adjacent shoreline.</li> </ul>		
<ul> <li>The department shall not approve any tidal shoreline stabilization plan that proposes to install new rip-rap unless the applicant demonstrates that:</li> <li>Anticipated turbulence, flows, restricted space, fetch or similar factors render soft stabilization methods physically impractical, and</li> <li>Natural areas or naturalized soft shoreline stabilization on neighboring properties will not be damaged by the placement of the proposed rip-rap, or</li> <li>Rip-rap is a component used as a sill to stabilize the toe, but is not the primary or dominant component of a living shoreline stabilization design.</li> </ul>		
<ul> <li>The department shall not approve any tidal shoreline stabilization plan that proposes to install a wall unless:</li> <li>The wall is required to protect public infrastructure in situations where softer stabilization technique is shown to be impracticable.</li> </ul>		
SECTION 3 - DESIGN & CONSTRUCTION REQUIREMENTS (Env-Wt 609.05; Env-Wt 609.06)		
<ul> <li>Living shoreline design plans shall:</li> <li>Be prepared and stamped by a professional engineer and reviewed relative to delineations of wetlands and stamped by a certified wetland scientist in accordance with the "Guidance for Considering the Use of Living Shorelines" (National Oceanic and Atmospheric Administration, 2015).</li> </ul>		
<ul> <li>Be prepared to show that the project will:</li> <li>Use native vegetation, sand fill, and limited stone or wood as specified in Env-Wt 609.06 to provide shoreline stabilization and protection,</li> <li>Mimic the natural landscape and leave natural vegetation intact to the greatest extent practicable,</li> <li>If practicable, be based on the location of the highest observable tide line, water turbulence and soil conditions, add vegetation to existing sand beaches or dune or construct vegetated sand dunes,</li> <li>Design the sill to the lowest elevation possible that still ensure stabilization of the toe of the living shoreline,</li> <li>Maintain the shoreline's ability to absorb and mitigate storm impacts and adapt to the landward progression of the sea,</li> <li>Minimize or prevent wave reflection toward abutting properties,</li> <li>If space and soil conditions allow, cut back unstable banks to a flatter slope, seed and replant with native, non-invasive trees and shrubs, and</li> <li>Provide habitat for wildlife and aquatic species.</li> <li>Large wood debris and natural rock that is comparable to the natural-occurring rock found in the vicinity of the project may be incorporated into a soft tidal shoreline stabilization design as matrix material for a bio-engineering back etablication</li> </ul>		
Living shoreline techniques shall be required if the project is to replace an existing stabilization structure that: Has not functioned as required by Env-Wt 609.0, or Is not an existing legal structure.		

SECTION 4 - MAINTENANCE & REPAIR (Env-Wt 609.03; Env-Wt 609.08)	
Applications for repair or rehabilitation of existing tidal shoreland stabilization structures shall include an analysis by the engineer or qualified coastal professional to rate the conditions of the existing structure and the purpose for the repair based on the following:	
The degree of damage or extent of deterioration, as applicable, such as missing components, cracking, or weeping with erosion.	
Whether opportunities exist to use soft bank stabilization components or a combination of soft and hard components.	
The ability of the structure to withstand coastal flood risk in accordance with the vulnerability assessment required by Env-Wt 603.05.	
SECTION 5 - PROJECT CLASSIFICATION (Env-Wt 609.10; Env-Wt 609.11)	
Refer to Env-Wt 609.10 and Env-Wt 609.11 for project classification.	



#### APPENDIX R Portsmouth Marina, 185-187 Wentworth House Road, Portsmouth, NH

TIDAL DREDGING PROJECT-SPECIFIC WORKSHEET FOR STANDARD APPLICATION Water Division/Land Resources Management Wetlands Bureau



Check the Status of your Application

#### RSA/Rule: RSA 482-A/ Env-Wt 607

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

Pursuant to Env-Wt 607.01, this project type applies to:

- Maintenance and Improvement Dredging of Federal Navigation Projects (FNPs);
- New, improvement, and maintenance dredging associated with non-FNP projects that are in the direct interest of maintaining commerce for the well-being of the general public, such as shipping conveyance of fuel oil or road salt cargo and marinas; and
- Dredging that is necessary to:
  - (1) Remediate contaminated sites;
  - (2) Restore storm-driven sediment depositions that threaten public safety or hinder navigation; and
  - (3) Maintain intake and outflow infrastructure.

#### SECTION 1 - APPLICATION REQUIREMENTS (Env-Wt 607.05)

An application for a tidal dredge project shall include the following details:

Plans for tidal dredging projects shall include the following:

Location of the state boundary line for projects proposed in the Piscataqua River or Salmon Falls River;

- Location of each sediment sampling location, with a key to sampling findings;
- Projected dredge prism tied to bottom contours; and
- Proposed overdredge, not to exceed 2 feet;
- Disposal sites adequate to contain the volume of dredged material, including the volume of allowable over-depth dredging, shall be identified;
- Bankward slopes of the dredged area shall be no steeper than 3:1 to ensure that sloughing of the channel side slopes does not occur;
- Fishery habitat functions/services in the project areas, including an essential fish habitat study, shall be identified and characterized prior to any dredge and fill activities;
- The impacts of dredge or fills on fishery habitat shall be identified during proposed project reviews, including alterations of hydrology and water quality as a result of the proposed project;

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The coastal functional assessment (CFA) required in Env-Wt 603.04 shall include an assessment of the cumulative impact from past, current, and all reasonably foreseeable future dredge and fill operations that impact aquatic habitats and an anticipated dredge cycle;	
Sediment from the proposed dredge site shall be characterized according to the following:	
Benthic analysis;	
🔀 Grain size; and	
History of exposure to contamination sources, whether from a land-based discharge source or in-water source from a spill. If the results of the sediment characterization assessment above meet the formula for potential or known contamination, then testing of the sediment in the proposed dredge location shall be as required by:	
<ul> <li>Requirements for land-based solid or hazardous waste disposal as specified in Env-Sw 100- 2000, Env-Hw 100- 1200, and Env-Or 600; and</li> </ul>	
<ul> <li>Regional Implementation "Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters", US Environmental Protection Agency New England and US Army Corps of Engineers New England District, dated April 2004.</li> </ul>	
SECTION 2 - APPROVAL CRITERIA (Env-Wt 607.03)	
An application for a tidal dredge project shall meet the following criteria:	
Dredging in tidal waters or tidal wetlands shall not be allowed unless the primary purpose of the dredging is to:	
• Maintain or improve a FNP that provides a public benefit to commercial and industrial shipping, commercial fishing, existing working waterfront areas, or homeland security;	
Construct, maintain, or improve a marina, private association, or public facility; or	
Remediate contamination, remove storm-driven sediment, or maintain intake and outflow infrastructure;	
Dredging in tidal waters or tidal wetlands shall not be approved unless:	
• The project meets standard conditions of Env-Wt 307 and avoidance and minimization techniques in Env-Wt 607.02;	
• The project applicant participates in and follows guidance provided in a pre-application meeting with the department or the New Hampshire dredge management task force; and	
• The project is sponsored by the state so that:	
<ul> <li>All applications to the department for dredging of FNPs in tidal waters or tidal wetlands are submitted by the division of ports and harbors ("DP&amp;H") pursuant to RSA 12-G:45; and</li> </ul>	
<ul> <li>All other dredging projects in tidal waters/wetlands have DP&amp;H sponsorship or authorization for another entity, such as a municipality or private person, to act as an agent to apply for a permit from the department.</li> </ul>	
SECTION 3 - DESIGN & CONSTRUCTION REQUIREMENTS (Env-Wt 607.02; Env-Wt 607.06; Env-Wt 607.07; Env-Wt 607.08; Env-Wt 607.09)	
A tidal dredge project shall be designed and constructed as follows:	
The footprint and volume of material to be dredged shall be reduced to the maximum extent practicable;	
Sequential dredging shall be used when practicable to avoid dredging activity during specific time periods in environmentally sensitive areas, to avoid turbidity and sedimentation, bottom disruption, and noise in sensitive areas used by fishery resources during spawning, migration, and egg development;	

Avoidance and minimization techniques require avoidance of dredging in accordance with Env-Wt 607.05 in areas of high resource value identified by the CFA, including the following resource areas:
Areas that support shellfish beds;
Areas with submerged aquatic vegetation, areas that historically supported submerged aquatic vegetation, historic and maintained FNP areas that exhibit high resource value, and publicly funded restoration sites;
🔀 Intertidal and wetland habitat; or
Estuarine/salt marshes, and other high value habitat areas, including shorebird habitat and nesting areas, essential fish habitat, and other protected species or habitat;
New cable and pipeline crossings shall be aligned along the least environmentally damaging route, specifically to avoid sensitive habitats including rocky reefs, submerged aquatic vegetation, oyster reefs, shellfish beds, emergent marsh, and mud flats;
Pipelines and submerged cables shall be buried where possible to avoid impacts to invertebrate migratory patterns resulting from pipe exposure;
Open trenching for pipeline or cable installation shall not be used unless all other methods are not practicable. If open trenching is used, a method in which the trench is immediately backfilled shall be used to reduce the impact duration;
Existing rights-of-way shall be used whenever possible to lessen overall encroachment and disturbance of coastal areas;
Equipment access shall be limited to the immediate project area unless access requires use of a more environmentally sensitive access;
No dredged material shall be disposed in areas containing sensitive or unique marine benthic habitats, including spawning sites, feeding sites, and surface deposits of cobble or gravel substrate;
Prior to finalizing a dredge proposal, the applicant shall conduct an existing conditions bathymetric survey and submit it with the application to the department; and
Prior to finalizing a dredge proposal, the applicant shall submit information regarding the current and historic presence of submerged aquatic vegetation, as documented by the CFA in Env-Wt 603.04, within and adjacent to the proposed dredging footprint.
Dredge Methods:
For non-FNP projects, sediment dispersion modeling shall be done to characterize sediment resuspension and dispersion during operations, and modeling outputs shall be used to design operations, including measures to avoid and minimize impacts from suspended sediment and turbidity on living marine resources. Sediment dispersion models shall be field-verified to various sediment and hydraulic conditions to ensure they have been calibrated appropriately to predict sediment transport and dispersion; and
Dredging methods shall:
Be based on the nature of the sediment as determined by sediment characterization, results of contaminant testing, turbidity transport modeling, and resource vulnerabilities;
Be based on suitability of existing site conditions;
Be based on location and suitability of disposal options;
Represent the least environmentally-impacting practicable alternative; and

Be by one of the following means, listed in descending order of preference:	
<ul> <li>Mechanical closed, or enviro, bucket dredge;</li> </ul>	
Mechanical clamshell dredge;	
Mechanical open bucket dredge; or	
Suction dredge.	
Dredging Contaminated Sites:	
Areas of known contamination shall not be partially dredged, leaving freshly-exposed sources of contamination to be transported by currents and dispersed into uncontaminated areas; and	
For sites identified as contaminated, no dredging of contaminated sediments shall be allowed without complete removal of all contaminated material.	
Sedimentation Control:	
Dredging in fine sediments shall be avoided when possible to reduce turbidity plumes and the release of nutrients and contaminants that bind to fine particles, and	
All practicable methods for minimizing suspended sediment and turbidity shall be employed, including closed buckets when appropriate.	
Sediment Transport and Disposal:	
The applicant shall include in the application an explanation of how the dredged material will be transported and off-loaded to minimize dispersion of sediments;	
The CFA report shall be considered when assessing the potential impact of proposed disposal locations and determining the least impacting disposal location;	
Sediment disposal shall not negatively impact priority resource areas;	
Any unavoidable negative impacts from sediment disposal shall require compensatory mitigation;	
The primary acceptable means of disposal for uncontaminated sediments shall be for beneficial use, such as beach nourishment, dune restoration, and shoal creation associated with living shorelines;	
Near-shore disposal of dredged material with the intent of creating a berm to provide a sand source for a nearby sandy beach shall be considered beneficial use;	
If dredged materials will not be beneficially used, the disposal location shall be:	
Appropriate to the nature of the material; and	
Identified in the application;	
Contaminated sediment shall be disposed of at a facility authorized to accept such material;	
For non-FNP requests to place dredged material in state waters, the applicant shall evaluate the site evaluation criteria developed for selection or designation of dredged material disposal sites, in accordance with 40 CFR 228 and EPA's ocean dumping program described for Region I at <a href="https://www.epa.gov/ocean-dumping/managing-ocean-dumping-epa-region-1">https://www.epa.gov/ocean-dumping/managing-ocean-dumping-epa-region-1</a> .	

#### SECTION 4 - PROJECT CLASSIFICATION (Env-Wt 607.10)

Removal of sediments surrounding an intake or outflow structure shall be classified as minimum impact provided:

- (1) The sediments are removed by means of hand-held suction equipment;
- (2) Work is limited to the immediate mouth of the structure; and
- (3) The footprint of the activity does not exceed 500 square feet.

Except as provided above, all forms of dredging in tidal waters/wetlands shall be classified as major.
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Entity	:	SQFT		
Buildings		931.5		
		824.1		
		474.69		
		1136.6		
		4100		
		444.85		
		103.2		
		493.22		
		1001.19		
		182.5		
		95.16		
		4799.76		
Total		14586.77		
		1.000177		
Entity		SOFT		
Pavement	·	2464 64	1189 32	
ravement		2404.04	1075.02	
Fatit.			12/5.32	
Enury				
		6684.72		
Other Permeable Surfaces (Lawn etc)		14401.8899	5036.8111	
			2015.4271	
			2405.6524	
			3441.3926	
			1204.2673	
			298.3394	
Property Boundary Area as shown in CAD F	ïle	131660.4931		3.022497 <acre< td=""></acre<>
Gravel, Intact Gravel, Degraded Gravel, Rip	rap, Current Rip Rap,			
Woodland, Buldings, Pavement, Permeable	e Areas	130642.3256		
Remaining SQFT = Water+ Saltmarsh areas	5	1018.1675		
Entity	:	SQFT		
Salt Marsh Restoration		236.12		
RinBan		471,496		
Current BinBan		130 455		
Unland Area Regrade		773 34	409 77	
optana Area neglade		770.04	363 57	
Wotland Postoration		175.0	505.57	
		175.2		
Proposed Concrete		5000		
		63.32	00100 0000	
Intact Gravel (Red Hatch)		35006.8907	29126.6909	
			5880.1998	
Degraded Gravel (Green Hatch)		14557.6824		
Gravel Drive (Black Dots)		31973		
Woodland Blue Hatch		10364.7816	4210.3537	
			213.739	
			5940.6889	
Area Outside of 50' Offset (Part of Concrete	e and Gravel)	1135.11		
Sheet 5 Calcs				
Below HOTL		411.32		
Hotl to 50' (Rip, Regrade, Cncrete, Drain, -	Area Outside	5173.046		
HOTL to 11' Elev (RipRap onlv)		471.496		
HOTL to 75' Setback (Rip. Regrade, Cocrete	e, Drain)	6308.156		
50' to 75' Setback (Part of Concrete and Dr	ain)	1135 11		
Within 50' Buffer (All above except 50-75 a	nd Salt Marsh Bestore	5348 246		
Between 50 and 150		1135 11		
between of and 100		1100.11		

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Note: Tax map says property = 3.07 acres

WPA APPENDIX M -- Copy of Town Tax Map, Location of Project on property, and location, name, and address of abutters, recorded deeds for site properties with book and page numbers, and copies of certified postal receipts to abutters (Per Application Checklist, NH ENV-WT 311.06, 311.12, 311.13)



#### List of Abutters to Portsmouth Marina and Goulemas Properties

3 Sagamore Grove (Map 201, Lot 7) Owners: Neste Brian Rv Tr (1/2 Int); Byrd Bradford Rv Tr (1/2 Int) Owners Address: 184 Walker Bungalow Rd, Portsmouth, NH 03801

6 Sagamore Grove (Map 201, Lot 5) Owners: Bosen Tina D Revocable Trust, Bosen Tina D Trustee Owners Address: 6 Sagamore Grove, Portsmouth, NH 03801

191 Wentworth House Road (Map 201, Lot 14) Owner: Boat House Rental LLC Owners Address: 200 Sagamore Rd, Rye, NH 03870

Wentworth House Road (Map 201, Lot 11) Owner: Live Free Real Estate LLC Owners Address: 314 Middle St, Portsmouth, NH 03801



C/H L-CHIP ROA335173

#### WARRANTY DEED

KNOW EVERYONE BY THESE PRESENTS that I, J.P. Nadeau, of 507 State Street, Portsmouth, County of Rockingham and State of New Hampshire (hereinafter referred to as "Grantor"), for consideration paid grants to Sea Level LLC, of 185 Wentworth Road, Portsmouth, County of Rockingham and State of New Hampshire (hereinafter referred to as "Grantee"), with WARRANTY COVENANTS, all of Grantor's right, title and interest in the following described property, none of which is homestead property.

#### LEGAL DESCRIPTION

**Parcel 1:** A certain tract or parcel of land, with buildings located thereon, in Portsmouth, New Hampshire, bounded and described as follows:

Beginning at a point in the Northerly sideline of Wentworth House Road at the Southeasterly corner of land now or formerly of William F. Huber, thence running N 27° 10' E by land of said Huber one hundred fifty-six and six tenths (156.6) feet to a corner; thence turning and running S 79° 08' E by land now or formerly of Philip A. and Anita M. Hayes one hundred forty (140) feet, more or less, to Sagamore Creek; thence turning and running Southeasterly by said creek to land formerly of Michael and Dunya D. Kuchtey; thence turning and running S 15° 38' W by land of said Kuchtey about one hundred sixty (160) feet to Wentworth House Road; thence turning and running N 74° 22' W by said road one hundred eighty-seven and five tenths (187.5) feet to the point of beginning.

Subject to all covenants and conditions contained in deed of Wentworth Hotel, Inc., to Michael Kuchtey and Dunya D. Kuchtey, dated November 10, 1958 and recorded in the Rockingham County Registry of Deeds at Book 1487, Page 419.

<u>Parcel 2:</u> A certain lot or parcel of land together with the buildings located thereon, situate in Portsmouth, County of Rockingham, State of New Hampshire, on the Northerly side of Wentworth House Road, so-called, and more particularly bounded and described as follows:

Beginning at a point at the Southwesterly corner of land now or formerly of one Apostolides at the Southeasterly corner of the premises herein conveyed thence running in a Westerly direction by said Wentworth House Road one hundred eighty-three (183) feet to a point at land now or formerly of Sadie P. Gouse; thence turning and running at right angles in a general Northerly direction by said land of Gouse one hundred forty-four and fifty-eight hundredths (144.58) feet, more or less, to Sagamore Creek; thence turning and running in a general Easterly direction, following the course of said Sagamore Creek, to the Northwesterly corner of land of said Apostolides; thence turning and running in a Southerly direction by said

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Apostolides land one hundred seventy-five (175) feet, more or less, to said Wentworth House Road and the point of beginning.

<u>Parcel 3</u>: A certain parcel of land, with the buildings thereon, situate in Portsmouth, County of Rockingham and State of New Hampshire, bounded and described as follows:

Beginning at the Southwesterly corner of the parcel conveyed at a point in the Northerly sideline of Wentworth House Road; thence running North 09° 50' East by other land now or formerly of said Sadie Gouse about 210 feet to Sagamore Creek; thence turning and running in a general Easterly direction by said Creek to a point distant 150 feet Easterly at right angles from the first described course; thence turning and running South 09° 50' West by other land of said Sadie Gouse about 250 feet to Wentworth House Road; thence turning and running Westerly by said road about 150 feet to the point of beginning.

Also another parcel of land with the buildings thereon situated in said Portsmouth, and bounded and described as follows:

Beginning at a point on the Northerly side of Wentworth House Road at the Southeasterly corner of other land of this grantor; thence running North 09° 50' East by other land of this grantor about 185 feet to Sagamore Creek; thence running Easterly by said Creek about 40 feet to land conveyed to Nicholas Pesarik; thence turning and running South 22° 35' West by said land conveyed to said Pesarik passing through a drill hole in a ledge about 180 feet to Wentworth House Road and the point of beginning.

<u>Parcel 4</u>: A certain tract or parcel of land, together with the buildings thereon, situated on the Northerly side of Wentworth House Road in Portsmouth, County of Rockingham and State of New Hampshire, bounded and described as follows:

Beginning at a hub in the ground on the Northerly side of said road and at the Southwesterly corner of land now or formerly of Joseph LaCava thence turning and running North 69° 09' West by said Wentworth House Road 119.2 feet to land now or formerly of Peter and Florence Apostolides; thence turning and running North 22° 35' East by other land now or formerly of Sadie P. Gouse and passing through a drill hole in a ledge about 180 feet to Sagamore Creek; thence running in a general Southerly and Easterly direction by said Creek to land of Joseph LaCava; thence turning and running South 23° 26' West by land of said LaCava about 104 feet to Wentworth House Road and the point of beginning.

<u>Parcel 5</u>: A certain tract of land, with the buildings thereon, situate in Portsmouth, County of Rockingham and State of New Hampshire, bounded and described as follows:

Beginning at a hub on the Northerly side of Wentworth House Road at land now or formerly of Sadie P. Gouse; thence running North 23° 26' East by land now or formerly of Gouse to Sagamore Creek; thence turning and running Northeasterly by said creek to land now or formerly of Henry Chartrand; thence turning and running South 26° 30'

West by land now or formerly of said Chartrand to said Wentworth House Road; thence turning and running 66° 34' West by said road seventy five (75) feet to the point of beginning.

See also boundary agreement between Michael Kuchtey and Dunya D. Kuchtey and Ronald F. Eagan and Anne M. Eagan, dated June 17, 1968 and recorded in the Rockingham County Registry of Deeds at Book 1772, Page 192, as said agreement may affect the above description.

Parcels 1, 2, 3, 4 and 5 are also collectively depicted as one parcel located on the northerly side of Wentworth House Road on a plan entitled, "Plan of Land for Michael Kuchtey Revocable Trust, Wentworth Road, County of Rockingham, Portsmouth/Rye, NH, Scale 1"=50", by Millette, Sprague & Colwell, Inc., dated March 25, 1999 and recorded in the Rockingham County Registry of Deeds on July 20, 1999 as Plan Number D-27320, which parcel is bounded and described as follows"

Beginning at an iron rod on the Northerly sideline of Wentworth House Road at the Southeasterly corner of the within described parcel and the Southwesterly corner of land now or formerly of the B.R. Graves, Jr. Revocable Trust of 1992; thence running along the Northerly sideline of Wentworth House Road the following courses and distances: North 68° 01' 00" West for a distance of 75.00 feet to a point; North 70° 36' 00" West for a distance of 119.20 feet to a point; North 75° 07' 00" West for a distance of 150.97 feet to a point; North 78° 31' 34" West for a distance 187.01 feet to a point; and North 75° 19' 24" West for a distance 187.50 feet to an iron rod at the Southeasterly corner of land now or formerly of Michael A. Kuchtey; thence turning and running North 26° 12' 36" East along land of said Kuchtey for a distance of 156.60 feet to an iron pipe at land now or formerly of Lawrence E. Hayes; thence turning and running South 80° 05' 24" East along land of said Hayes for a distance of 140.00 feet to a point at the high water mark of Sagamore Creek; thence running in a Southeasterly direction along said high water mark (on a tie course of South 86° 48' 59" East for a distance of 174.75 feet); thence turning and running on a Northeasterly direction along said high water mark (on a tie course of North 72° 48' 54" East for a distance of 137.81 feet); thence turning and running in a Southeasterly direction along said high water mark (on tie courses of South 43° 01' 00" East for a distance of 80.94 feet; South 21° 22' 41" East for a distance of 80.31 feet; and South 68° 07' 25" East for a distance of 106.49 feet); thence turning and running in a Northeasterly direction along said high water mark (one a tie course of North 79° 28' 21" East for a distance of 81.44 feet) to a point at land now or formerly of The B.R. Graves, Jr. Revocable Trust of 1992; thence turning and running South 25° 03' 00" West along said Graves Trust land for a distance of 198.00 feet to the point of beginning.

<u>Parcel 6</u>: A certain parcel of land, with any buildings thereon, located on Wentworth Road, Portsmouth, County of Rockingham, State of New Hampshire, more particularly described follows:

Beginning at a point in the Southerly sideline of Wentworth Road, said point being two hundred eleven and eighteen hundredths (211.18) feet Easterly of the Northeast corner of

land now or formerly of Herman Odiorne; thence running South 19° 59' West by land of Ronald F. Eagan and Anne M. Eagan one hundred and no-tenths (100.00) feet to a corner; thence turning and running North 69° 09' West by land now or formerly of the Michael Kuchtey Revocable Trust dated July 2, 1996 seventy and no-tenths (70.0) feet to a corner; thence turning and running North 19° 59' East by other land now or formerly of said Kuchtey Trust one hundred and no-tenths (100.) feet to said Wentworth Road; thence turning and running South 69° 09' East by said road seventy and no-tenths (70.0) feet to the point of beginning.

See also boundary agreement between Michael Kuchtey and Dunya D. Kuchtey and Ronald F. Eagan and Anne M. Egan, dated June 17, 1968 and recorded in Rockingham Registry of Deeds at Book 1772, Page 192 as said agreement may affect the above description.

Parcel 6 is also depicted as one parcel located on the Southerly side of Wentworth House Road on a plan entitled, "Plan of Land for Michael Kuchtey Revocable Trust, Wentworth Road, County of Rockingham, Portsmouth/Rye, NH, Scale 1"=50", by Millette, Sprague & Colwell, Inc. dated March 25, 1999 and recorded in the Rockingham County Registry of Deeds on July 20, 1999 as Plan Number D-27320, which parcel is bounded and described as follows:

Beginning at an iron rod on the Southerly sideline of Wentworth House Road at the Northeasterly corner of the within described parcel and the Northwesterly corner of land now or formerly of The B.R. Graces, Jr. Revocable Trust of 1992; thence running South 19° 59' 00" West along said Graves Trust land for a distance of 100.00 feet to an iron rod; thence turning and running North 69° 09; 00" West along Parcel 2 above-described for a distance of 70.00 feet to an iron rod; thence turning and running North 69° 0 a distance of 100.00 feet to an iron rod; thence turning and running North 69° 09' 00" East along Parcel 2 above-described for a distance of 100.00 feet to an iron rod on the Southerly sideline of Wentworth House Road; thence turning and running South 69° 09' 00" East along the Southerly sideline of said Wentworth House Road for a distance of 70.00 feet to the point of beginning.

<u>Parcel 7</u>: Two certain tracts of land together with any buildings thereon, partly in Portsmouth and partly in Rye, County of Rockingham, State of New Hampshire, further described as follows:

#### TRACT I:

Beginning at a pipe in the Southerly sideline of Wentworth Road at the Northeasterly corner of land now or formerly of Herman Odiorne, said pipe being also one hundred thirty-four (134) feet more or less Easterly of land now or formerly of the Mark Wentworth Home for Chronic Invalids; thence running South 76° 35' East one hundred twenty-six and twenty-three one-hundredths (126.23) feet to an iron pin at land now or formerly of Andrew J. and Kathleen P. DeLisle; thence turning and running South 19° 59' West one hundred (100) feet, more or less, by land of said DeLisle to an iron pin at a corner; thence turning and running South 69° 9' East by land of said DeLisle seventy (70) feet, more or less, to an iron pin at the Southeasterly corner of said land of DeLisle and in the Westerly sideline of land now or formerly of Paul F. and Ruth G. Brockway; thence turning and running South 19° 59' West by land of said Paul F. and Ruth O. Brockway

one hundred thirty-one (131) feet, more or less, to a pipe at a corner; thence turning and running South 89° 49' West by a poposed street or way two hundred twenty-five (225) feet to a pipe at a corner in said proposed street or way; thence turning and running South 0° 11' East fifty (50) feet to a pipe in the Southerly line of said proposed street or way; thence turning and running South 89° 49' West one hundred thirty-six and eighty-four one-hundredths (136.84) feet to a pipe in the Easterly sideline of the said Mark Wentworth Home for Chronic Invalids land; thence turning and running N 16° 45' East along said Mark Wentworth Home for Chronic Invalids two hundred fifty-five (255) feet to a pipe in the Southerly line of said Herman Odiorne; thence running and running N 16° 45' East along land of said Herman Odiorne one hundred thirty four (134) feet to the Southeasterly corner of land of said Odiorne; thence turning and running North 16° 45' East along land of said Herman Odiorne one hundred twenty (120) feet to the pipe in the Southerly sideline of Wentworth Road at the point of beginning.

#### TRACT II:

Beginning at a pipe situated one hundred twenty (120) feet Southerly of the Southerly line of Wentworth Road, said distance being measured along the Easterly sideline of land now or formerly of the Mark Wentworth Home for Chronic Invalids, thence turning and running South 16° 45' West two hundred fifty-five (255) feet along said land of Mark Wentworth Home for Chronic Invalids to a pipe at a corner in the conveyed premises; thence turning and running North 89° 45' East along land now or formerly of Helen Mulcahy one hundred thirty-six and eighty-four one hundredths (136.84) feet to a pipe at a corner in the conveyed premises; thence turning and running North 0° 11' West fifty (50) feet to a pipe at a corner in the conveyed premises; thence turning and running North 89° 49' East along a proposed street or way seventy-five (75) feet to a pipe at a corner in the conveyed premises; thence turning and running North 0° 11' West along other land herein conveyed one hundred (100) feet to a pipe at a corner in the conveyed premises; thence turning and running South 89° 49' West along other land herein conveyed seventy-five (75) feet to a pipe at a corner in the conveyed premises; thence turning and running North 0° 11' West along other land herein conveyed seventy-eight and eightythree one hundredths (78.83) feet to a pipe at land now or formerly of Herman Odiorne; thence turning and running North 76° 35' West along land now or formerly of said Hermand Odiorne sixty-four and thirty-five one hundreds (64.35) feet to the pipe at the place of beginning.

Meaning and intending to convey hereby lots No. 1 and No. 2 on a plan entitled "Plan showing property of Blanche M. Chartrand – Surveyed by Moulton Engineering Co., September 1953 and June 1955."

Also hereby conveying to the grantees, their heirs and assigns, the right to use in common with others a certain right of way as shown on said foregoing plan which runs from Wentworth Road Southerly and Westerly to and from land formerly of Frank Jones and now or formerly of Helen Mulcahy, said right of way adjoining said lots No. 1 and No. 2 in part and running to and from said Wentworth Road, with the right to use such right of way in common with others for all such purposes as may be necessary or useful for the use and occupation of the land hereby conveyed, in common with said Blanche M. Chartrand, her heirs and assigns.

See also boundary agreement between the Michael Kuchtey and Dunya D. Kuchtey and Ronald F. Eagen and Anne M. Eagen, dated June 17, 1968 and recorded in Rockingham Registry of Deeds at Book 1772, Page 192 as said agreement may affect the above description.

Parcel 7 is also depicted as one parcel located on the Southerly side of Wentworth House Road on a plan entitled, "Plan of Land for Michael Kuchtey Revocable Trust, Wentworth Road, County of Rockingham, Portsmouth/Rye, NH, Scale 1"=50", by Millette, Sprague & Colwell, Inc., dated March 25, 1999 as Plan Number D-27320, which parcel is bounded and described as follows:

Beginning at an iron rod on the Southerly sideline of Wentworth House Road at the Northwesterly corner of the within described parcel and the Northeasterly corner of land now or formerly of Gertrude A. Lamont; thence running South 76° 35' 00" East along the Southerly sideline of Wentworth House Road for a distance of 126.33 feet to a point; thence continuing South 69° 09' 00" East along said Wentworth House Road for a distance of 14.95 feet to an iron rod at the Northwesterly corner of land identified as Map R1, Lot 17 on the above-referenced plan; thence turning and running South 19° 59' 00" West along said Map R1, Lot 17 for a distance of 100.00 feet to an iron rod; thence turning and running South 69° 09' 00" East along said Map R1, Lot 17 for a distance of 70.00 feet to an iron rod at land now or formerly of The B.R. Graves, Jr. Revocable Trust of 1992; thence turning and running South 19° 59' 00" West along said Graves Trust land and land now or formerly of Bruce and Joanna Graves, and crossing the Portsmouth/Rye Town Line, for a distance of 131.00 feet to a point; thence turning and running South 89° 49' 00" West along land of said Graves and land now or formerly of Edmund J. and David L. Mulcahy, and crossing the Portsmouth/Rye Town Line for a distance of 225.00 feet to a point; thence turning and running South 00° 11' 00" East along said Mulcahy land for a distance of 50.07 feet to a point; thence turning and running South 89° 45' 15" West along said Mulcahy land for a distance of 136.81 feet to an iron pipe at land now or formerly of the City of Portsmouth Conservation Commission; thence turning and running North 16° 45' 00" East along said Conservation Commission land for a distance of 173.80 feet to an iron pipe; thence continuing North 16° 46' 51" East still along said Conservation Commission land for a distance of 80.99 feet to an iron pipe at land now or formerly of Gertrude A. Lamont; thence turning and running South 76° 40' 24" East along said Lamont land for a distance of 133.97 feet to an iron rod; thence turning and running North 16° 45' 00" East still along said Lamont land for a distance of 120.00 feet to the point of beginning.

Meaning and intending to convey all of the parcels of land with the buildings thereon as bounded and described in the deed from Witch Cove Properties, LLC to William H. Shaheen, et al dated December 17, 2002, recorded in the Rockingham county Registry of Deeds at Book 3922, Page 1165, the Grantor having acquired all right title and interest in said land and buildings by the following Warranty Deeds:

Deed of Priscilla Dalrymple, Trustee of the Walter G. Stanley Revocable Trust of 1994 to J.P. Nadeau dated April 13, 2006, recorded in the Rockingham County Registry of deeds at Book

4648, Page 0685;

Deed of William H. Shaheen to J.P. Nadeau dated April 17, 2006, recorded in the Rockingham County Registry of Deeds at Book 4648, Page 0686; and

Deed of Bruce E. Nadeau to J.P. Nadeau dated April 11, 2006 recorded in the Rockingham County Registry of Deeds at Book 4648, Page 0687;

This Conveyance Is Subject To The Following Conditions, Restrictions And Encumbrances:

- a.) By accepting this Deed, the Grantee is accepting conveyance of the premises in its "as is" condition and without Grantor's warranting compliance with any zoning, land use and other governmental laws, rules and regulations, and particularly those governing the United States Environmental Protection Agency (USEPA) and the State of New Hampshire Department of Environmental Services (NHDES); and
- b.) By accepting this Deed, the Grantee is also accepting the responsibility for completing any and all USEPA and NHDES remediation requirements and will accept any Deed Notice provision they may require; and
- c.) The free use of one boat slip reserved to William H. Shaheen of 140 Washington Street, Second Floor, Dover, New Hampshire, for the duration of his life, for a boat not in excess of thirty (30) feet in length, which use he can assign for the use of others during his life.

Witness my hand this <u>15</u> day of August, 2016

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Witness

STATE OF NEW HAMPSHIRE ROCKINGHAM COUNTY

Dated: August <u>15</u>, 2016

**PERSONALLY APPEARED** the above named, J.P. Nadeau, and gave oath that the foregoing subscribed to by him is his own free act and deed, Before me;

Notary Public / Justice of the Peace Commission Expires: <u>5/9/17</u> Michelly Lacan

Return to:



#### WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, that Paul W. Cain Investments, LLC, a New Hampshire limited liability company, with an address of 19 Revolutionary Lane, Nottingham NH 03290, for consideration paid grant(s) to Jason Goulemas, Trustee of the Jason Goulemas 2002 Family Trust and Lisa M. Goulemas, Trustee of the Lisa M. Goulemas 2002 Family Trust and Lisa M. Goulemas, Cape Neddick, ME 03902, as tenants in common, with WARRANTY COVENANTS:

A certain tract or parcel of land with the buildings thereon situate in Portsmouth, Rockingham County, State of New Hampshire, and further bounded and described as follows:

Beginning at a hub in the ground on the easterly side of a private roadway leading from Sagamore Avenue in said Portsmouth through land now or formerly of William F. Huber known as Sagamore Grove and at a point bearing S  $14^{\circ}$  34' W a distance of thirty-one and eight-tenths (31.8) feet from a hub at the southeasterly corner of land of Leroy Terrio; thence running S  $65^{\circ}$  10' E by other land now or formerly of said William F. Huber two hundred six and four-tenths (206.4) feet to a hub; thence turning and running S  $41^{\circ}$  52' W, a distance of ninety (90) feet to a hub at other land now or formerly of said Huber; thence turning and running N  $79^{\circ}$  08' W by other land now or formerly of said Huber; thence turning and running N  $29^{\circ}$  44' E by said private to a hub at the private roadway aforesaid; thence turning and running N  $29^{\circ}$  44' E by said private road one hundred thirty-four and two-tenths (134.2) feet to the point of beginning. Together with the land lying easterly of the above described parcel including between the northerly and southerly sidelines of the parcel projected easterly to the cove, so-called.

Right of way over Private Roadway from Sagamore Avenue to the premises is hereby granted.

See also, Right of Way benefitting the within conveyed premises contained in deed of George D. Mavrikis and Marion B. Mavrikis to John B. Gibbons and Clarissa B. Gibbons, recorded in the Rockingham County Registry of Deeds, Book 1733, Page 8. Containing about 21,300 square feet.

Property address is 5 Sagamore Grove, Portsmouth New Hampshire, 03801

Meaning and intending to describe and convey the same premises conveyed to Paul W. Cain Investments, LLC by deed dated February 19, 2015 and recorded in the Rockingham County Registry of Deeds in Book 5595, Page 2404.

Executed this  $216^{\text{f}}$  day of December, 2016.

Paul W. Cam Investments, LLC Paul W. Cain

Duly authorized Member

State of New Hampshire County of Rockingham

Then personally appeared before me on this  $21^{8T}$  day of December, 2016, the said Paul W. Cain, who acknowledged himself to be the duly authorized Member of Paul W. Cain Investments, LLC and acknowledged the foregoing to be his voluntary act and deed in said capacity.

Notary Public/Justice of the Peace



Aries Engineering, LLC **104 PLEASANT ST** CONCORD NH 03301-2902

\$5.54 **US POSTAGE** FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



063S0011718299

**USPS CERTIFIED MAIL** 9407 1118 9876 5452 7484 99

Brian Neste RV TR & Bradford Byrd RV TR **184 BUNGALOW ROAD** PORTSMOUTH NH 03801

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Reference	
USPS #	9407111898765452748499
USPS Mail Class	Certified with Electronic Delivery Confirmation
USPS Status	Your item was picked up at the post office at 3:38 pm on December 17, 2024 in PORTSMOUTH, NH 03801.
USPS History	Available for Pickup, 12/16/2024, 4:05 am, PORTSMOUTH, NH 03801 Notice Left (No Authorized Recipient Available), 12/14/2024, 4:32 pm, PORTSMOUTH, NH 03801 Out for Delivery, 12/14/2024, 7:56 am, PORTSMOUTH, NH 03801 Arrived at Post Office, 12/14/2024, 7:45 am, PORTSMOUTH, NH 03801 Arrived at USPS Facility, December 12, 2024, 8:12 pm, MANCHESTER, NH 03103
	Accepted at USPS Origin Facility, December 12, 2024, 6:57 pm, CONCORD, NH 03301 Shipping Label Created, USPS Awaiting Item, 12/12/2024, 2:57 pm, CONCORD, NH 03301

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Aries Engineering, LLC 104 PLEASANT ST CONCORD NH 03301-2902 \$5.54 US POSTAGE FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



063S0010282493



Boat House Rental LLC 200 SAGAMORE RD RYE NH 03870-2057

<u>վիսիվիսիվիսիվիսիվիսիվիսիվիսիվիսիվի</u>վինիվի

Reference USPS # USPS Mail Class	9407111898765452747621 Certified with Electronic Delivery Confirmation
USPS Status	Your item was delivered to an individual at the address at 11:00 am on December 14, 2024 in RYE, NH 03870.
USPS History	Out for Delivery, 12/14/2024, 8:12 am, RYE, NH 03870 Arrived at Post Office, 12/14/2024, 8:01 am, RYE, NH 03870 Arrived at USPS Facility, December 12, 2024, 8:12 pm, MANCHESTER, NH 03103 Accepted at USPS Origin Facility, December 12, 2024, 6:57 pm, CONCORD, NH 03301 Shipping Label Created, USPS Awaiting Item, 12/12/2024, 3:02 pm, CONCORD, NH 03301

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Aries Engineering, LLC 104 PLEASANT ST CONCORD NH 03301-2902 \$5.54 US POSTAGE FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



063S0011718298

USPS CERTIFIED MAIL

Live Free Real Estate LLC 314 MIDDLE ST PORTSMOUTH NH 03801-5102

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Reference USPS # USPS Mail Class	9407111898765452747386 Certified with Electronic Delivery Confirmation
USPS Status	Your item was delivered to the front desk, reception area, or mail room at 12:32 pm on December 16, 2024 in PORTSMOUTH, NH 03801.
USPS History	No Access to Delivery Location, 12/14/2024, 1:03 pm, PORTSMOUTH, NH 03801 Arrived at USPS Facility, December 12, 2024, 8:10 pm, MANCHESTER, NH 03103 Accepted at USPS Origin Facility, December 12, 2024, 6:55 pm, CONCORD, NH 03301
	Shipping Label Created, USPS Awaiting Item, 12/12/2024, 3:03 pm, CONCORD, NH 03301

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Aries Engineering, LLC **104 PLEASANT ST** CONCORD NH 03301-2902 \$5.54 **US POSTAGE** FIRST-CLASS IMI Dec 12 2024 Mailed from ZIP 03301 1 OZ FIRST-CLASS MAIL LETTER RATE 11923275



063S0011718298



Tina D Bosen, Trustee **6 SAGAMORE GRV** 

PORTSMOUTH NH 03801-5547

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Reference	
USPS #	9407111898765452747874
USPS Mail Class	Certified with Electronic Delivery Confirmation
USPS Status	Your item was delivered to an individual at the address at 11:20 am on December 17, 2024 in PORTSMOUTH, NH 03801.
USPS History	Out for Delivery, 12/17/2024, 6:10 am, PORTSMOUTH, NH 03801 Arrived at Post Office, 12/17/2024, 5:17 am, PORTSMOUTH, NH 03801 In Transit to Next Facility, 12/16/2024 In Transit to Next Facility, 12/15/2024 In Transit to Next Facility, 12/14/2024 Arrived at USPS Facility, December 12, 2024, 8:12 pm, MANCHESTER, NH 03103 Accepted at USPS Origin Facility, December 12, 2024, 6:57 pm, CONCORD, NH 03301 Shipping Label Created, USPS Awaiting Item, 12/12/2024, 3:00 pm, CONCORD, NH 03301

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## PORTSMOUTH 20258

# **NHDES STANDARD DREDGE & FILL APPLICATION**



**PREPARED BY:** McFARLAND JOHNSON

Peverly Hill Road Reconstruction

## **CITY OF PORTSMOUTH**

# PEVERLY HILL ROAD RECONSTRUCTION PROJECT

# NHDES STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

### NOVEMBER 2024

City of Portmouth Department of Public Works 680 Peverly Hill Road Portsmouth, NH 03801



53 Regional Drive Concord, NH 03301

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NHDES Standard Dredge and Fill Wetlands Permit Application Form



### STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION Water Division / Land Resources Management Check the Status of your Application



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

#### APPLICANT'S NAME: City of Portsmouth

#### TOWN NAME: Portsmouth

			File No.:
Administrative	Administrative	Administrative	Check No.:
Only	Only	Only	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 <u>Waiver Request Form</u>.

SEC	SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))				
Plea <u>Res</u> pro	Please use the <u>Wetland Permit Planning Tool (WPPT</u> ), the Natural Heritage Bureau (NHB) <u>DataCheck Tool</u> , the <u>Aquatic</u> <u>Restoration Mapper</u> , or other sources to assist in identifying key features such as: <u>Priority Resource Areas (PRAs</u> ), protected species or habitats, coastal areas, designated rivers, or designated prime wetlands.				
Has	s the required planning been completed?	●Yes No			
Doe	es 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 (NHFG) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04.	Yes ●No			
•	Protected species or habitat? If yes, species or habitat name(s): NHB Project ID #:	•Yes No			
•	Bog?	Yes No			
•	Floodplain wetland contiguous to a tier 3 or higher watercourse?	OYes 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			
ls tl	Is the property within a Designated River corridor? If yes, provide the following information:				
•	Name of Local River Management Advisory Committee (LAC): n/a				
•	A copy of the application was sent to the LAC on Month: Day: Year:				

For dredging projects, is the subject property contaminated?

If yes, list contaminant: N/A

Is there potential to impact impaired waters, class A waters, or outstanding resource waters?

For stream crossing projects, provide watershed size (see WPPT or Stream Stats):

N/A

Yesl 🔴

'es( 🌰 )No

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

Provide a description of the project and the purpose of the project, the need for the proposed impacts to jurisdictional areas, an outline-of the scope of work to be performed, and whether impacts are temporary or permanent.

The Peverly Hill Road Reconstruction Project in the City of Portsmouth includes reconstruction improvements of the roadbed, construction of an improved stormwater system, and narrowing of the roadway to provide two 11-foot travel lanes and 2-foot shoulders, a shared-use path on the south side of the roadway, and a pedestrian sidewalk on the north side of the roadway. The purpose of the project is to improve stormwater management as well as roadway safety, and to increase bicycle and pedestrian access. The project limits extend from NH Route 33 (Middle Road) to the intersection with West Road to tie into improvements completed as part of the Yoken's Plaza Development near US Route 1. The total project length is approximately 5,100 feet. See attached project description for additional details.

The proposed road reconstruction will require impacts to wetlands and prime wetland buffers for erosion control measures and stormwater storage. The following wetland impacts are anticipated: 4.230 square feet (SF) of permanent wetland impacts (310 SF are Prime Wetland), 2,443 SF of temporary wetland impacts (180 SF are Prime Wetland), 10,152 SF of permanent undeveloped tidal buffer zone (TBZ) impacts and 2.190 SF of temporary undeveloped TBZ impacts.

#### **SECTION 3 - PROJECT LOCATION**

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

ADDRESS: Peverly Hill Road between US Route 1 and NH Route 33

TOWN/CITY: Portsmouth

TAX MAP/BLOCK/LOT/UNIT: ROW

US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Sagamore Creek

(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): 43.05197, -70.77883

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: City of Portsmouth Department of Public Works, Attn: Peter Rice						
MAILING ADDRESS: 680 Peverly Hill Road						
TOWN/CITY: Portsmouth		STATE: NH	ZIP CODE: 03801			
EMAIL ADDRESS: phrice@cityofportsmouth.com						
FAX:	PHONE: (603) 427-1530	)				
ELECTRONIC COMMUNICATION: By initialing here, I here this application electronically.	eby authorize NHDES to cor	nmunicate all ma	atters relative to			
SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-	Wt 311.04(c))					
LAST NAME, FIRST NAME, M.I.: Perron, Christine						
COMPANY NAME: McFarland-Johnson, Inc.						
MAILING ADDRESS: 53 Regional Drive						
TOWN/CITY: Concord STATE: NH ZIP CODE: 03301						
EMAIL ADDRESS: cperron@mjinc.com						
AX: PHONE: 603-225-2978						
ELECTRONIC COMMUNICATION: By initialing here, I hereby authorize NHDES to communicate all matters relative to this application electronically. CJP						
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):

Env-Wt 400: Wetland boundaries and the ordinary high water/top-of-bank of water courses located within the project corridor were delineated in September and November 2017 and confirmed in March and April 2024. Wetlands and surface waters have been classified using the USFWS (Cowardin et al.) Wetland Classification System. There are Priority Resource Areas within the project area, including Prime Wetlands with 100-foot buffer, as well as Tidal Buffer Zone. Based on the resource classifications and proposed permanent and temporary impacts to wetlands, the proposed project is classified as a Major impact project.

Env-Wt 500: The proposed project falls under Env-Wt 527 Public Highways. The proposed project has been designed in accordance with the criteria specified in Env-Wt 527.04 and is consistent with RSA 482-A:1, 483, 483-B, 485-A, and 212-A. The purpose of the proposed project is to improve the road condition, stormwater management, and bicycle and pedestrian facilities along Peverly Hill Road between US Route 1 and NH Route 33. The project includes reconstruction of the roadbed, construction of an improved stormwater system, and narrowing of the roadway to provide two 11-foot travel lanes and 2-foot shoulders, a 10-foot wide shared-use path on the south side of the roadway, and a 5-foot-wide pedestrian sidewalk on the north side of the roadway. Five stormwater treatment areas will be constructed.

Env-Wt 600: A portion of the project falls within an undeveloped TBZ and impacts within the TBZ will be 10,152 SF. Impacts will be limited to the construction of a proposed gravel wetland. This stormwater treatment area will provide treatment for roadway runoff, which will ensure that water quality within Sagamore Creek is not impacted by roadway infrastructure. The primary functions and values of the TBZ are to help protect water quality of the adjacent tidal wetlands. The proposed gravel wetland will serve the same purpose as the prime wetland buffer. Additionally, the buffer will remain vegetated following construction. The area of disturbance will be seeded and plantings will be provided around the gravel wetland. For these reasons, a request to waive the requirement for mitigation of impacts to TBZ is included in this application.

Env-Wt 700: There are Designated Prime Wetlands within the proposed project; a portion of the project takes place within the prime wetland as well as the 100-foot buffer. A waiver for buffer impact is included in this application. The project will not result in the significant net loss of any of the values set forth in RSA 482-A:1.

Env-Wt 900: N/A - The project does not involve stream crossings.

#### 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 <u>Wetlands Best Management</u> <u>Practice Techniques For Avoidance and Minimization</u> and the <u>Wetlands Permitting: Avoidance, Minimization and</u> <u>Mitigation fact sheet</u>. 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 <u>Avoidance and Minimization Checklist</u>, the <u>Avoidance and Minimization Narrative</u>, 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 <u>pre-application meeting</u> 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).

NHDES-W-06-012

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

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

JURISDICTIONAL AREA		PERM.	PERM.	PERM.	TEMP.	TEMP.	TEMP.
		SF	LF	ATF	SF	LF	ATF
	Forested Wetland	3685			2085		
	Scrub-shrub Wetland	196			119		
sp	Emergent Wetland	39			59		
anc	Wet Meadow						
/etl	Vernal Pool						
>	Designated Prime Wetland	310			180		
	Duly-established 100-foot Prime Wetland						
	Buffer						
	Intermittent / Ephemeral Stream						
e	Perennial Stream or River						
Irfa	Lake / Pond						
Su	Docking - Lake / Pond						
	Docking - River						
S	Bank - Intermittent Stream						
ank	Bank - Perennial Stream / River						
ä	Bank / Shoreline - Lake / Pond						
	Tidal Waters						
	Tidal Marsh						
lal	Sand Dune						
Tic	Undeveloped Tidal Buffer Zone (TBZ)	10152			2190		
	Previously-developed TBZ						
	Docking - Tidal Water						
	TOTAL	14,382			4,633		
SEC	TION 12 - APPLICATION FEE (RSA 482-A:3, I)						
	MINIMUM IMPACT FEE: Flat fee of \$400.						
	NON-ENFORCEMENT RELATED, PUBLICLY-FUN	DED AND SU	JPERVISED	RESTORAT	ION PROJEC	CTS, REGARD	LESS OF
_	IMPACT CLASSIFICATION: Flat fee of \$400 (ref	er to RSA 48	2-A:3, 1(c)	for restricti	ons).		
	MINOR OR MAJOR IMPACT FEE: Calculate usin	ig the table b	pelow:				
Permanent and temporary (non-docking): 19015 SF × \$0.40 =						\$ 7606	
Seasonal docking structure: SF × \$2.00 =						\$	
Permanent docking structure: SF × \$4.00 = \$						\$	
Projects proposing shoreline structures (including docks) add \$400 = \$					\$		
						Total =	\$ 7606
The application fee for minor or major impact is the above calculated total or \$400, whichever is greater = $\frac{1}{2}$						\$ 7606	

#### NHDES-W-06-012

SECTION 13 - PROJECT CLASSIFICATION ( Indicate the project classification.	Env-Wt 306.05)					
Minimum Impact Project	Minor Project		Major Project			
SECTION 14 - REQUIRED CERTIFICATIONS	(Env-Wt 311.11)					
Initial each box below to certify:						
Initials: To the best of the signer's know	To the best of the signer's knowledge and belief, all required notifications have been provided.					
Initials: The information submitted on signer's knowledge and belief.	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: MAX The signer understands that: • The submission of false, 1. Deny the application 2. Revoke any approved 3. If the signer is a cerr practice in New Harr established by RSA	<ul> <li>The signer understands that:</li> <li>The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: <ol> <li>Deny the application.</li> <li>Revoke any approval that is granted based on the information.</li> </ol> </li> <li>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.</li> </ul>					
Initials: If the applicant is not the owner the signer that he or she is awar	r of the property, each re of the application b	h prop Deing f	erty owner signature shall constitu led and does not object to the filir	te certification by g.		
SECTION 13 - REQUIRED SIGNATURES (EN	/-Wt 311.04(d); Env-	Wt 31	1.11)			
SIGNATURE (OWNER):	PRINT NAM	PRINT NAME LEGIBLY: Peter Rice				
SIGNATURE (APPLICANT, IF DIFFERENT FROM C	OWNER): PRINT NAM	PRINT NAME LEGIBLY: DATE:				
signature (agent, if applicable): Christine Perron	PRINT NAM	PRINT NAME LEGIBLY: Christine Perron 11/8/24				
SECTION 16 - TOWN / CITY CLERK SIGNAT	URE (Env-Wt 311.04	l(f))				
As required by RSA 482-A:3, I(a)(1), I herek plans, and four USGS location maps with t	by certify that the ap he town/city indicate	plican ed bel	t has filed four application forms,	four detailed		
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".

Supplemental Project Description

#### **Supplemental Project Description**

The proposed project consists of reconstructing an approximately 1-mile section of Peverly Hill Road between West Road and Middle Road (NH Route 33) in Portsmouth, New Hampshire. Peverly Hill Road is a primary route for vehicles, bicyclists and pedestrians traveling to and from NH Route 33 and Interstate 95 to the west and Lafayette Road (US Route 1), Mirona Road, and Banfield Road to the east. The project area is characterized by a mix of land uses, including residential, business, commercial, industrial, and recreational and conservation lands. Peverly Hill Road also serves as a connector route to numerous recreation sites in this section of the City of Portsmouth.

The purpose of the project is to enhance safety for all modes of travel (vehicles, bicyclists, and pedestrians) in conformance with the City of Portsmouth's Complete Street Policy adopted in 2013. The need for the project is demonstrated by a lack of bicycle and pedestrian accommodations within the project area, through which motor vehicles travel at high rates of speed. There are also several locations with sight distance restrictions and drainage problems along the roadway that contribute to safety issues.

The existing roadway is a two-lane road connecting NH Route 33 and Interstate 95 to US Route 1. According to the latest traffic data, the average annual daily traffic (AADT) volume on Peverly Hill Road through the project area is 8,800 vehicles per day. The road does not currently have adequate drainage infrastructure, which results in areas of ponding on the travel lanes and erosion. The width of the existing paved roadway varies between 26 feet and 30 feet with a variable width gravel shoulder in many places. Auxiliary turn lanes are present at the intersection of Banfield Road and Mirona Road and at the intersection of Middle Road (NH Route 33). The majority of the roadway is uncurbed with small sections of sloped granite curb approaching Middle Road and another section from the intersection of Banfield and Mirona Roads east to the driveway of the Portsmouth Department of Public Works (DPW) located at 680 Peverly Hill Road. The existing condition of the roadway pavement is in poor condition with some signs of cracking rutting, and delamination.

There is approximately 1,200 feet of existing concrete sidewalk on the north side of the roadway that starts at the YMCA building (550 Peverly Hill Road) and continues east through the signalized intersection of Banfield and Mirona Roads to a point approximately 100 feet east of the DPW driveway. There is also sidewalk from the intersection of Peverly Hill Road and Middle Road to Sage Lane on the south side of the roadway. Two crosswalks are located within the project limits at the signalized intersections at Banfield and Mirona Roads and Middle Road.

#### **Proposed Action**

The proposed action would involve installing granite curb along both sides of Peverly Hill Road to provide a narrowed roadway cross section with a defined pavement edge. The roadway would be narrowed to two 11-foot travel lanes with 2-foot shoulders. A 10-foot shared use path with a 4-foot wide landscaped strip is proposed on the south side of Peverly Hill Road, and a 5.5-foot wide concrete sidewalk is proposed on the north side. The sidewalk on the north side of Peverly Hill Road would allow pedestrians to avoid crossing the roadway directly from their homes or business to access a safe pedestrian accommodation. The proposed shared use path and sidewalk would be constructed to meet ADA standards. Any existing sidewalks or ramps that are to remain that do not meet ADA Standards would be upgraded.



The existing auxiliary lanes would be maintained. In addition, the work would include reconstruction of the existing pavement surface and installation of a closed drainage system and water quality treatment.

The project will result in an increase in impervious of approximately 55,600 SF. There are five proposed BMPs for stormwater treatment, which will treat runoff from approximately 95% of new pavement. The project is proposing two sediment basins, two gravel wetlands, and an infiltration basin. Deep sump catch basins will also be used for pretreatment in off-line catch basins. The project as proposed meets Alteration of Terrain standards.

Proposed work will be primarily located within existing roadway right-of-way. However, strip right-of-way acquisitions and temporary construction easements will be necessary from privately-owned and publicly owned lands adjacent to the corridor. Easements will be secured over the next year and will be in place prior to construction.



## Figure 1 – USGS Location Map



## Attachment A: Minor and Major Projects



## STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION ATTACHMENT A: MINOR AND MAJOR PROJECTS Water Division/Land Resources Management Wetlands Bureau



Check the Status of your Application

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

#### **APPLICANT'S NAME:** Peter Rice

#### **TOWN NAME:** Portsmouth

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

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

#### PART I: AVOIDANCE AND MINIMIZATION

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

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

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

DUE TO THE LOCATION OF PEVERLY HILL ROAD AND ASSOCIATED INFRASTRUCTURE, THERE ARE LIMITED ALTERNATIVES FOR THE PROPOSED PROJECT. IMPACTS TO JURISDICTIONAL RESOURCE AREAS INCLUDING WETLANDS, STREAMS AND BANKS HAVE BEEN AVOIDED AND MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. THERE IS NO PRACTICABLE ALTERNATIVE THAT WOULD HAVE LESS ADVERSE IMPACT ON THE WETLANDS. THE WORK AS PROPOSED WILL REQUIRE TEMPORARY AND PERMANENT IMPACT ON WETLANDS, PRIME WETLANDS, AND PRIME WETLAND BUFFER. AT THE NORTHERN END OF THE PROJECT, IMPACTS WILL BE TO FORESTED FRESHWATER WETLANDS RESULTING FROM SLOPE AND DRAINAGE WORK. IMPACTS TO PRIME WETLANDS TO THE SOUTH OF THE PROJECT IN THE VICINITY OF BANFIELD ROAD AND SAGAMORE CREEK WILL ALSO RESULT FROM SLOPE AND DRAINAGE WORK.

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

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

N/A - The proposed project does not involve any impacts to tidal or non-tidal marshes

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

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

The project will maintain hydrologic connections between adjacent wetlands and streams. Impacts are limited to the perimeter of wetland systems and will not result in fragmentation of wetlands.
#### SECTION I.IV - JURISDICTIONAL IMPACTS (Env-Wt 313.03(b)(4))

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

Wetland impacts have been avoided and minimized to the maximum extent practicable. The proposed project is not anticipated to impact any exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and/or habitat and reproduction areas for species of special concern. Coordination with the NH Natural Heritage Bureau, NH Fish and Game, and the US Fish and Wildlife Service has occurred. Measures will be implemented to avoid or minimize impacts to species of concern. Appropriate sediment and erosion controls will be implemented throughout construction to avoid detrimental water quality impacts. Avoidance and minimization measures include refining and steepening roadway slopes to specifically avoid and minimize wetland and stream impacts. Stormwater treatment BMPs have also been incorporated into the design in order to treat runoff from additional pavement surfaces, thereby ensuring water quality of surface waters in the vicinity is maintained.

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

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

The project will improve pedestrian and bicycle access and safety. There will be no impacts to public commerce or navigation.

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

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

NA - The project will not impact floodplain wetlands.

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

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

The project will not impact riverine forested wetland systems. There are two locations of impacts to scrub-shrub wetlands and impacts have been minimized to the maximum extent possible. One location is at a small pocket of a PSS wetland located in the Prime Wetland buffer in a small island created by the Banfield Road intersection with Peverly Hill Road. There will be 196 SF of permanent impact along the edge of the wetland and 119 SF of temporary impact. The second location of impacts to a scrub-shrub marsh is within the Prime Wetland complex north of Banfield Road on the west side of Peverly Hill Road. This wetland is adjacent to Sagamore Creek and is associated with wetland number 6 in the City's prime wetland inventory. The project will result in 310 SF of permanent impact and 180 SF of temporary impact to this PSS wetland along its border with Peverly Hill Road.

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

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

The proposed wetland impacts are limited to the perimeter of wetlands adjacent to the existing roadway. The project will not result in impacts that would be detrimental to drinking water supplies or aquifer levels. Appropriate sediment and erosion controls will be implemented throughout construction to avoid detrimental water quality impacts.

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

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

The proposed wetland impacts are limited to the perimeter of wetlands adjacent to the existing roadway. The project will not result in impacts to stream channels. Appropriate sediment and erosion controls will be implemented throughout construction. Avoidance and minimization measures include refining and steepening roadway slopes to specifically avoid and minimize wetland and stream impacts. Stormwater treatment BMPs have also been incorporated into the design in order to treat runoff from additional pavement surfaces, thereby ensuring water quality of surface waters in the vicinity is maintained.

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

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

NA - The project will not require shoreline structures or result in any impact to surface waters.

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

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

NA - The project will not require docking or result in any impact to surface waters

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

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

NA - The project will not require shoreline structures or result in any impact to surface waters

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

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

NA - The project will not require shoreline structures or result in any impact to surface waters

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

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

NA - The project will not require shoreline structures or result in any impact to surface waters

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

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

NA - The project will not require shoreline structures or result in any impact to surface waters or banks.

#### PART II: FUNCTIONAL ASSESSMENT

#### REQUIREMENTS

Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).

FUNCTIONAL ASSESSMENT METHOD USED:

US Army Corps of Engineers New England District Highway Methodology Workbook Supplement, 1999 Edition

NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: CHRISTINE J. PERRON, CWS

DATE OF ASSESSMENT: 9/6/2024

Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT:

For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable:

Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.

## NHDES Avoidance and Minimization Checklist and Narrative



### AVOIDANCE AND MINIMIZATION WRITTEN NARRATIVE Water Division/Land Resources Management Wetlands Bureau <u>Check the Status of your Application</u>



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

#### **APPLICANT'S NAME: Peter Rice**

#### **TOWN NAME:** Portsmouth

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

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

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

No, the purpose of the project is to improve road conditions, improve stormwater management, and enhance safety for all modes of travel.

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

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

No, access will be along Peverly Hill Road and Greenleaf Ave.

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

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

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

No, the purpose of the project is to improve the 1-mile stretch of the existing Peverly Hill Road between West Road and Middle Road.

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

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

Due to the location of Peverly Hill Road and associated infrastructure, there are limited alternatives for the proposed project. Impacts to jurisdictional resource areas including wetlands, streams and banks have been avoided and minimized to the maximum extent practicable. There is no practicable alternative that would have less adverse impact on the wetlands. The work as proposed will require temporary and permanent impact on wetlands and prime wetland buffer. At the northern end of the project, impacts will be to forested freshwater wetlands resulting from slope and drainage work. Impacts to prime wetlands to the south of the project in the vicinity of Banfield Road and Sagamore Creek will also result from slope and drainage work.

#### SECTION 5 - CONFORMANCE WITH Env-Wt 311.10(c) (Env-Wt 311.07(b)(4))\*\* How does the project conform to Env-Wt 311.10(c)?

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

Functional assessment method used:

US Army Corps of Engineers New England District Highway Methodology Workbook Supplement, 1999 Edition

## NHDOT Natural Resource Agency Coordination Meeting Minutes

#### BUREAU OF ENVIRONMENT CONFERENCE REPORT

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting **DATE OF CONFERENCE:** August 21, 2024 **LOCATION OF CONFERENCE:** Virtual meeting held via Zoom

#### **ATTENDED BY:**

NHDOT Andrew O'Sullivan Jon Evans Mark Hemmerlein Leah Savage

ACOE Mike Hicks

USCG Absent

**EPA** Jean Brochi NHDES Karl Benedict Mary Ann Tilton Eben Lewis Chris Williams

**NHB** Madeline Severance

**NH Fish & Game** Mike Dionne Jennifer Buchanan

Federal Highway Jamie Sikora US Fish & Wildlife Absent

NH Transportation & Wildlife Workgroup Absent

**Consultants/ Public Participants** Christine Perron Brian Colburn Dave Defosses

#### **PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:** (minutes on subsequent pages)

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#### **Finalize Meeting Minutes**

Finalized and approved the July 17, 2024 meeting minutes.

#### Portsmouth, 20258 (X-A002(061)):

Christine Perron introduced the project, which will address an approximately 1-mile section of Peverly Hill Road between West Road and Middle Road (NH Route 33) in Portsmouth. The project was first discussed in November 2021. The purpose of today's meeting is to discuss proposed wetland impacts prior to submitting the permit application.

The project is a municipally managed project through the Local Public Agency (LPA) Program. The purpose of the project is to improve road conditions, improve stormwater management and enhance safety for all modes of travel (vehicles, bicyclists, pedestrians). The roadway will be narrowed to provide two 11-foot travel lanes, 2-foot shoulders, a shared-use path on the south side, and a pedestrian sidewalk on the north side.

The project is adjacent to a number of wetlands and crosses the freshwater stretch of Sagamore Creek near Banfield Road, which is a tributary to a large estuary and exemplary natural community. There will also be some work along Greenleaf Avenue, which is adjacent to this estuary. The entire Sagamore Creek wetland complex is a Prime Wetland with a 100 foot buffer. The exemplary natural communities associated with Sagamore Creek are all within the estuary, along with the associated plant species documented by the Natural Heritage Bureau. Blanding's turtle has been documented in the vicinity of the project and there will be continued coordination with NHFG to incorporate minimization measures. The lead federal agency for the project is FHWA and consultation on northern long-eared bat and likely tricolored bat will be carried out through FHWA.

The project will result in an increase in impervious of approximately 55,600 SF. There are five proposed BMPs for stormwater treatment, which will treat runoff from approximately 95% of new pavement.

As a municipal project, an Alteration of Terrain Permit will be required. A pre-application meeting was held for AOT and it was confirmed that the proposed treatment will meet AOT standards.

The project will result in approximately 4,300 SF of permanent wetland impacts and 2,500 SF of temporary wetland impacts. Impacts to the prime wetland buffer adjacent to Greenleaf Avenue will be approximately 10,000 SF. There are three locations of proposed impacts. The only impacts at Greenleaf Avenue are to the prime wetland buffer, which is also a tidal buffer zone. There will be no impacts to tidal wetlands.

At the northern end of the project, impacts will be to forested freshwater wetlands resulting from slope and drainage work. Impacts in the vicinity of Banfield Road and Sagamore Creek will occur in two freshwater scrub-shrub wetlands. One wetland is part of the prime wetland complex just to the north of Banfield Road. The second wetland is located in the island between Banfield and Peverly Hill Roads. This wetland is not part of the prime wetland complex, but is within the prime wetland buffer. Work within the upland 100' prime wetland buffer will consist of slope work along the roadway footprint and drainage work. Non-wetland impacts within this buffer have not been

quantified. Since the buffer in this area is developed and associated with the roadway footprint, a waiver for buffer impacts in this area is proposed.

The third location of proposed impacts is located along Greenleaf Avenue. There are no wetland impacts in this area and the project will not impact tidal wetlands. The only impacts along Greenleaf Avenue will be to the upland 100' prime wetland buffer. This area is also an undeveloped tidal buffer zone. The impacts here are associated with this proposed stormwater treatment BMP. While the BMP does represent an impact, the area will still remain undeveloped.

Of the total proposed permanent impacts to freshwater wetlands (4,314 SF), approximately 8 SF will be within a prime wetland. Permanent impacts within the undeveloped tidal buffer zone/prime wetland buffer will be 10,152 SF. Input on the need for mitigation for all wetland impacts and tidal buffer zone was requested.

Construction of the project is currently anticipated to start in late 2025. The wetland permit application will be submitted in September.

Karl Benedict noted that mitigation would be required for permanent impacts but said he would defer to MaryAnn Tilton and Eben Lewis. He also noted that a waiver for impacts to the developed upland prime wetland buffer would need to identify the wetland functions that were noted in the prime wetland designation. It wasn't clear to him if ARM Fund payments were allowed for prime wetland impacts. Andy O'Sullivan stated that he thought there was a recent legislative change that allowed for the use of ARM Fund payments, and a recent NHDOT project utilized an in-lieu fee payment for prime wetland impacts.

Mary Ann Tilton noted that the recent NHDOT project was allowed to make an ARM payment for impacts to sand dunes. NHDES has received legal guidance on the use of ARM payments for prime wetlands. The applicant needs to explain why the wetland was designated as prime and a finding of no significant net loss of functions and values needs to be made.

Eben Lewis reiterated that prime wetland impacts do require mitigation and an in lieu fee is allowable. He said that the application would need to parse out impacts in undeveloped tidal buffer zone vs developed vs prime wetland buffer that's already developed.

Chris Williams asked if the project would require an Individual Permit from the Corps. C. Perron answered that impacts would be below the threshold for an Individual Permit. C. Williams noted that a federal consistency review would be required since the project is federally funded. C. Perron said that a consistency review was completed during the NEPA phase.

Mike Dionne noted that, with the potential presence of Blanding's turtle, Fish & Game would prefer construction in winter and would prefer winter tree clearing for minimizing impacts to bats.

Madeline Severance noted that some of the plants listed in the NHB review could occur along the high water line and she asked for confirmation that there would be no impacts at the high water line. C. Perron confirmed this. M. Severance responded that suitable habitat for the species of concern would not be impacted and that standard erosion control measures should be utilized to protect the estuary during construction.

Mike Hicks asked if the tidal buffer zone is all upland. C. Perron confirmed that it is all upland. M. Hicks noted that, in that case, wetland impacts would be below the 5,000 SF mitigation threshold and the Corps would not be requiring mitigation.

Jean Brochi had no comments.

Jamie Sikora asked if the project was a Programmatic Categorical Exclusion or an individual Categorical Exclusion. Jon Evans responded that is was Programmatic, and he also confirmed that the coastal zone consistency review was completed in February 2022.

NHDES Prime Wetland Waiver



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



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

#### APPLICANT LAST NAME, FIRST NAME, M.I.:

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

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

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

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

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

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

#### PART I: WAIVER REQUEST FOR FORESTRY ACTIVITIES

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

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

\$200 for a project that would otherwise qualify for a Forestry SPN if it was not located in or near a designated prime wetland or duly-established 100-foot buffer.

5500 for a minor impact project that does not otherwise qualify as minimum or major impact project.

\$1,250 for a major impact project classified regardless of prime wetlands designation.

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

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

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

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

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

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

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

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

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

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

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

Please note:

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

#### PART II: WAIVER REQUEST FOR ACTIVITIES OTHER THAN FOREST MANAGEMENT

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

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

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

5500 for a minor impact project that does not otherwise qualify as minimum or major impact project.

\$1,250 for a major impact projects.

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

Provide a written description of the work to be performed.

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

Provide a list of the prime wetlands values identified by the municipality when the prime wetlands associated with the buffer was designated. Demonstrate that the project will not create a significant net loss of these wetland values.

#### SECTION 4 - REQUIRED ATTACHMENTS (Env-Wt 706.04)

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

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

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

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

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

Please note:

- As provided in Env-Wt 706.05, the department shall not issue a waiver under Env-Wt 706.01(b) prior to 14 days after receipt of the waiver request, provided however that a municipal conservation commission may request an extension on such waiver issuance, not to exceed 14 days, which the department shall grant if and as requested.
- The department shall not issue a waiver unless the department determines that there will be no significant net loss of wetland values as identified by the local conservation commission/local governing authority and in RSA 482-A:1.
- If the department determines that the criteria for issuing a waiver are met, the waiver shall be issued as part of the SPN or permit, as applicable.
- If the department is unable to determine, based on the information submitted, that the proposed work will not cause a significant net loss of wetland values, the department shall notify the applicant of what additional information is needed and establish a deadline in consultation with the applicant for the submission of the additional information.
- If the department determines that the project would not cause a significant net loss of wetland values if certain conditions were met, the department shall place such conditions on the waiver as are necessary to protect the prime wetlands resource.
- Any waiver issued shall be valid for the term of the permit or SPN with which it is associated, but may be extended.

## NHDES Wetlands Rule Waiver



### WETLANDS RULE WAIVER OR DWELLING OVER WATER WAIVER REQUEST FORM WATER DIVISION / LAND RESOURCES MANAGEMENT WETLANDS BUREAU



#### RSA/Rule: RSA 482-A/ Env-Wt 204

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

A person may request a waiver to requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interests of the public or the environment. A person may also request a waiver of standard for existing dwellings over water pursuant to RSA 482-A:26, III (b).

SECTION 1 - PROJECT LOCATION INFORMATION (Env-Wt 204.03(c))									
ADDRESS: Peverly Hill Road	TOWN/CITY: Portsmou	th	STATE: NH	ZIP CODE:03801					
TAX MAP/LOT NUMBER: <b>ROW</b>	TAX MAP/LOT NUMBER: ROW								
SECTION 2 - WAIVER REQUESTOR INFORI	MATION (Env-Wt 204.03	B(a))							
LAST NAME, FIRST NAME, M.I.: City of Ports	smouth Department of	Public Work	s, Attn: Pet	er Rice					
MAILING ADDRESS: 680 Peverly Hill Road	d								
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801							
EMAIL ADDRESS (if available): or if not FAX NUMBER: phrice@city	DAYTIME PHC	ONE NUMBER	603-427-1530						
SECTION 3 - APPLICANT INFORMATION (Env-Wt 204.03(b)) If request is being made on behalf of someone else, include the following information regarding the person being represented. If requestor is the applicant, check the following box and proceed to Section 4.									
LAST NAME, FIRST NAME, M.I.:									
MAILING ADDRESS:									
TOWN/CITY: STATE: ZIP CODE:									
EMAIL ADDRESS (if available):   DAYTIME PHONE NUMBER:     or if not FAX NUMBER:   DAYTIME PHONE NUMBER:									

#### **SECTION 4 - WAIVER INFORMATION**

#### SECTION 4A - WAIVER TO RULE Env-Wt 100-900

N/A - If you are not requesting a rule waiver, check this box and proceed to Section 4b

Provide the number of the specific section of each rule for which a waiver is sought (Env-Wt 204.03(d)):

#### Env-Wt 605.03

Provide a complete explanation of why a waiver is being requested, including an explanation of the operational and economic consequences of complying with the requirement and, if the requested waiver would extend the duration of a permit, the reason(s) why the permit holder was not able to complete the project within the specified time (Env-Wt 204.03(f)(1)):

Env-Wt 605.03 requires compensatory mitigation for all impacts to tidal surface waters, tidal wetlands, the tidal buffer zone, or sand dunes, or any combination thereof, that are intended to remain when the proposed project is completed. The proposed project will result in 10,152 SF of permanent impact to an undeveloped upland tidal buffer zone (TBZ) adjacent to Sagamore Creek for the construction of a gravel wetland. This stormwater treatment area will provide treatment for roadway runoff, which will ensure that water quality within Sagamore Creek is not impacted by roadway infrastructure. The treatment area is also required for compliance with Alteration of Terrain requirements. There are no alternative locations for treatment. Mitigation in the form of an in-lieu fee would be approximately \$80,000, a significant added cost to this public infrastructure project. Given this high cost, and because the only reason the TBZ will be impacted is for compliance with another state regulation (Alteration of Terrain), a waiver to the mitigation requirement is being requested.

If applicable, provide a complete explanation of the alternative that is proposed to be substituted for the requirement in Env-Wt, including written documentation or data, or both, to support the alternative (Env-Wt 204.03(g)):

One of the primary functions of the TBZ is to help protect water quality of the adjacent tidal wetlands. The proposed gravel wetland will serve the same purpose as the undeveloped TBZ. Additionally, the TBZ will remain vegetated following construction. The area of disturbance will be seeded and plantings will be provided around the gravel wetland.

#### SECTION 4B – DWELLING OVER WATERS WAIVER UNDER RSA 482-A:26, III(b).

N/A - If you are not requesting a standard waiver, check this box and proceed to Section 5)

Identify the specific standard to which a waiver is being requested (Env-Wt 204.03(e)): RSA 482-A:

Provide a complete explanation of why a waiver is being requested, including a complete explanation of how the statutory criteria of RSA 482-A:26, III(b) will be met (Env-Wt 204.03(f)(2)):

SECTION 5 - (applicable to	ADDITIONAL WAIVER Waivers of Rules and Sta	INFORMATION (Env-Wt 204.03(h); Env-Wt 204 andards under RSA 482-A:26, III(b))	4.03(i))		
Indicate when be needed (E	ther the waiver is needed nv-Wt 204.03(h)):	for a limited duration and, if so, an estimate of	when the waiver will no longer		
The duratio	n of the waiver would	be for the duration of the permit.			
Ducuida					
Provide a com Env-Wt 204.0	plete explanation of why 5 or 204.06, as applicable	<pre>n the applicant believes that having the waiver gr (Env-Wt 204.03(i)):</pre>	ranted will meet the criteria in		
he waiver waiver waroposed in unoff. The p	vould reduce the cost the TBZ is for the pur purposes and intent o	burden to a publicly funded infrastructure burden to a publicly funded infrastructure pose of protecting the environment throu f RSA 482-A will be met if the waiver is g	r the environment. Granting e project. The work ugh treatment of stormwater granted.		
SECTION 6 -	REQUIRED CERTIFICATI	ONS (Env-Wt 204.04)			
nitial each bo	ox and sign below to certi	ífy:			
Initials:	The information provid signer.	ed is true, complete, and not misleading to the l	knowledge and belief of the		
Initials:	The signer understands shall be subject to revo	that any waiver granted based on false, incomp cation; and	lete, or misleading information		
SECTION 7 - I	REQUESTOR SIGNATUR	E (Env-Wt 204.04)			
SIGNATURE (A	PPLICANT): *	PRINT NAME LEGIBLY: Peter Rice	DATE: 2/4/20		
SIGNATURE (REQUESTOR): PRINT NAME LEGIBLY: DATE:					

\*In lieu of an applicant signature, you may include a separate signed and dated authorization for the requestor to act on the person's behalf in connection with the request.

### Wetland Functions and Values Evaluation Forms

	wei	land Function-Va	lue	Evaluation Form	
Total area of wetland Unknown Human made? no	Is wetla	and part of a wildlife corridor? $\underline{Y}$	es	or a "habitat island"?_No	Wetland I.D. Stream A/ Wetlands B/C
Adjacent land use Commercial, residential, for	orested	Distance to nearest road	way o	r other development 5'	Prepared by: CH Date 9/6/2024
Dominant wetland systems present PUB/PEM1E	/PFO1E	Contiguous undevelope	d buf	fer zone present no	Wetland Impact: Type_PEM/PFO Area_unknown
Is the wetland a separate hydraulic system? <u>no</u>	If n	ot, where does the wetland lie in	the dr	rainage basin? mid	Evaluation based on:
How many tributaries contribute to the wetland?		Wildlife & vegetation diversity/	abund	ance (see attached list)	Office X Field Corps manual wetland delineation
Function/Value	Suitabilit Y / N	y Rationale P (Reference #)* F	rinci unct	pal ion(s)/Value(s) C	completed? Y × N omments
Groundwater Recharge/Discharge	N	2, 4, 7, 9		Wetlands are associated with	n/fringe wetlands of Sagamore Creek
Floodflow Alteration	Y	4, 5, 6, 8, 9, 10, 11, 13, 14, 15, 17, 18	X	Wetland is associated with Sagamore Cree	ek; commercial and residential use adjacent to wetland
Fish and Shellfish Habitat	Y	2, 3, 4, 8, 10, 11, 14, 15, 16, 17	X	Sagamore Creek is contiguous	with Piscataqua River and Atlantic Ocean
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 7, 10, 16	6	Sediment/toxicant from nearby roadway	s and commercial areas may be trapped in wetland
Nutrient Removal	Y	2, 3, 4, 7, 8, 9, 10		Excess nutrients from surroun	ding lawns may be trapped by wetland
Production Export	N	1, 7, 12		No evidence of use	e by wildlife
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4, 6, 7, 9, 12, 13, 14	X	Wetland borders Sagamore	Creek; has potential to trap sediment
🖢 Wildlife Habitat	N	6, 8, 13			
<b>A</b> Recreation	N	12		Limited potential for	or recreation
Educational/Scientific Value	N	11, 13		Limited potential for	or educational value
★ Uniqueness/Heritage	N	7, 10, 11, 12, 22		Limited potential for	or heritage value
Visual Quality/Aesthetics	N			Limited potential for	or aesthetic value
ES Endangered Species Habitat	Y		Х	NHB identified dwarf glasswort, marsh elder, saltmars	h agalinis, tundra alkali grass, and Blanding's turtle within the vicinity
Other					

			uv		
Total area of wetland Unknown Human made? no	Is wetla	and part of a wildlife corridor? yes	S	or a "habitat island"?	Wetland I.D. D Latitude 43.049478 Longitude -70.779129
Adjacent land use Commercial, residential, for	prested	Distance to nearest roadw	vay oi	r other development 5'	Prepared by: CH Date 9/6/2024
Dominant wetland systems present_PSS1E		Contiguous undeveloped	l buff	er zone present no	Wetland Impact: Type PSS Area Unknown
Is the wetland a separate hydraulic system? no	If n	ot, where does the wetland lie in t	he dr	ainage basin? mid	Evaluation based on:
How many tributaries contribute to the wetland?		_Wildlife & vegetation diversity/al	ounda	ance (see attached list)	Office $\times$ Field $X$ Corps manual wetland delineation completed? Y $\times$ N
Function/Value	Suitabilit Y / N	y Rationale Pr (Reference #)* Fu	inci incti	pal lon(s)/Value(s) C	omments
Groundwater Recharge/Discharge	N	2, 7, 9		Wetlands are associated with	n/fringe wetlands of Sagamore Creek
Floodflow Alteration	Y	4, 5, 6, 8, 9, 10, 11, 13, 14, 15, 17, 18	Х	Wetland is associated with Sagamore Cree	ek; commercial and residential use adjacent to wetland
-Fish and Shellfish Habitat	Y	2, 3, 4, 8, 10, 11, 14, 15, 16, 17	Х	Sagamore Creek is contiguous	vith Piscataqua River and Atlantic Ocean
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 7, 10, 16		Sediment/toxicant from nearby roadway	s and commercial areas may be trapped in wetland
Nutrient Removal	Y	2, 3, 4, 7, 8, 9, 10, 11, 13	Х	Excess nutrients from surroun	ding lawns may be trapped by wetland
Production Export	N	1, 7, 12		No evidence of use	e by wildlife
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4, 7, 9, 12, 13, 14	Х	Wetland borders Sagamore	Creek; has potential to trap sediment
← Wildlife Habitat	N	6, 8, 13			
A Recreation	N			Limited potential for	or recreation
Educational/Scientific Value	N			Limited potential for	or educational value
★ Uniqueness/Heritage	N			Limited potential for	or heritage value
Visual Quality/Aesthetics	N			Limited potential for	or aesthetic value
ES Endangered Species Habitat	Y			NHB identified dwarf glasswort, marsh elder, saltmars	h agalinis, tundra alkali grass, and Blanding's turtle within the vicinity
Other					

			iuc		
Total area of wetland unknown Human made? no	Is wetla	and part of a wildlife corridor?	es	or a "habitat island"?_ <b>NO</b>	Wetland I.D. E Latitude 43.055898 Longitude -70.781134
Adjacent land use Commercial, residential, for	orested	Distance to nearest road	way o	r other development 5'	Prepared by: CH Date
Dominant wetland systems present PF01E		Contiguous undevelope	d buff	er zone present <u>no</u>	Wetland Impact: Type_PF01EArea_unknown
Is the wetland a separate hydraulic system? no	If n	ot, where does the wetland lie in	the dr	ainage basin? mid	Evaluation based on:
How many tributaries contribute to the wetland?		Wildlife & vegetation diversity/a	ıbunda	ance (see attached list)	Office $X$ Field $X$ Corps manual wetland delineation completed? $Y X$ N
Function/Value	Suitabilit Y / N	y Rationale P (Reference #)* F	rinci unct	pal ion(s)/Value(s) C	omments
Groundwater Recharge/Discharge	N	2		Limited groundwat	er recharge potential
Floodflow Alteration	Y	1, 5, 6, 7, 8, 9		Some potential for flood rur	noff storage; ponded water present
Fish and Shellfish Habitat	N			Limited fish habitat	
Sediment/Toxicant Retention	Y	1, 2, 4, 7		Sediment/toxicant from nearby roadways	s and commercial areas may be trapped in wetland
Nutrient Removal	Y	1, 3, 4, 5, 7, 8, 9, 10	Х	Excess nutrients from surroun	ding lawns may be trapped by wetland
Production Export	Y	1, 2, 7, 12		Some potential for use by	higher trophic level consumers
Sediment/Shoreline Stabilization	N	3, 4		Potential for sediment from ne	arby roadway; no watercourse present
🖢 Wildlife Habitat	Y	7, 8, 14, 15, 19, 20, 21	Х	Wetland has potential to contain a hi	gh population of insects, amphibians and birds
<b>A</b> Recreation	N	12		Limited potential for	or recreation
Educational/Scientific Value	N	13		Limited potential for	or educational value
★ Uniqueness/Heritage	N	10		Limited potential for	or heritage value
Visual Quality/Aesthetics	N	7		Limited potential for	or aesthetic value
ES Endangered Species Habitat	Y		Х	NHB identified dwarf glasswort, marsh elder, saltmars	n agalinis, tundra alkali grass, and Blanding's turtle within the vicinity
Other					

\* Refer to backup list of numbered considerations.

Notes:

	vv Cti	and Function- v a	iuc		
Total area of wetland Unknown Human made? no	Is wetla	nd part of a wildlife corridor?	)	or a "habitat island"?_no	Wetland I.D. F Latitude 43.055451 Longitude -70.780126
Adjacent land use Residential, forested		Distance to nearest road	way o	r other development 5'	Prepared by: CH Date 9/6/2024
Dominant wetland systems present_PF01E		Contiguous undevelope	d buff	er zone present_no	Wetland Impact: Type_PFOArea_Unknown
Is the wetland a separate hydraulic system? <u>no</u>	If no	ot, where does the wetland lie in	the dr	ainage basin? mid	Evaluation based on:
How many tributaries contribute to the wetland?		Wildlife & vegetation diversity/a	abunda	ance (see attached list)	Office $X$ Field $X$ Corps manual wetland delineation
Function/Value	Suitability Y / N	y Rationale P (Reference #)* F	rinci uncti	pal ion(s)/Value(s) C	omments
Groundwater Recharge/Discharge	N	2, 15		Limited groundwat	er recharge potential
	Y	5, 6, 7, 8, 9, 15		Some potential for flood rur	noff storage; ponded water present
-Fish and Shellfish Habitat	N	1, 2		Limited fish habitat	
Sediment/Toxicant Retention	Y	1, 2, 4, 7		Sediment/toxicants from nearby roadway	ys and residential areas may be trapped in wetland
Nutrient Removal	Y	2, 3, 4, 5, 7, 8, 9, 10	Х	Excess nutrients from surroun	ding lawns may be trapped by wetland
Production Export	Y	1, 2, 7, 12		Some potential for use by	higher trophic level consumers
Sediment/Shoreline Stabilization	N	3, 4		Potential for sediment from ne	arby roadway; no watercourse present
🖢 Wildlife Habitat	Y	7, 8, 14, 15, 19, 20, 21	Х	Wetland has potential to contain a hi	gh population of insects, amphibians and birds
<b>A</b> Recreation	N	12		Limited potential for	or recreation
Educational/Scientific Value	N	13		Limited potential for	or educational value
★ Uniqueness/Heritage	N	10		Limited potential for	or heritage value
Visual Quality/Aesthetics	N	7, 9		Limited potential for	or aesthetic value
ES Endangered Species Habitat	Y		Х	NHB identified dwarf glasswort, marsh elder, saltmars	n agalinis, tundra alkali grass, and Blanding's turtle within the vicinity
Other					

			iiuu		
Total area of wetland 3168 sq. ft Human made? no	Is wetla	and part of a wildlife corridor?	0	or a "habitat island"?	Wetland I.D. G Latitude 43.055899 Longitude -70.780762
Adjacent land use Residential, Forested		Distance to nearest road	lway o	r other development 5'	Prepared by: CH Date 9/6/2024
Dominant wetland systems present PFO1E		Contiguous undevelope	ed buff	er zone present	Wetland Impact: Type_PFOArea
Is the wetland a separate hydraulic system? ho	If n	ot, where does the wetland lie in	the dr	ainage basin? mid	Evaluation based on:
How many tributaries contribute to the wetland?		Wildlife & vegetation diversity/	abunda	ance (see attached list)	Office $\times$ Field $\times$ Corps manual wetland delineation completed? Y $\times$ N
Function/Value	Suitabilit Y / N	y Rationale F (Reference #)* F	Princi Functi	pal on(s)/Value(s) C	omments
Groundwater Recharge/Discharge	N	2, 10		Limited groundwat	er recharge potential
Floodflow Alteration	Y	5, 7, 8, 9, 15		Some potential for flood rur	noff storage; ponded water present
-Fish and Shellfish Habitat	N			No fish habitat	
Sediment/Toxicant Retention	Y	1, 2, 4		Sediment/toxicant from nearby roadways	s and commercial areas may be trapped in wetland
Nutrient Removal	Y	3, 4, 7, 8, 9, 11		Excess nutrients from surroun	ding lawns may be trapped by wetland
Production Export	N	1, 7		Limited potential for use b	y higher trophic level consumers
Sediment/Shoreline Stabilization	N	3, 4		Potential for sediment from ne	arby roadway; no watercourse present
🖢 Wildlife Habitat	N	8		Limited potential for	or wildlife habitat
<b>A</b> Recreation	N	12		Limited potential for	or recreation
Educational/Scientific Value	N	16		Limited potential for	or educational value
★ Uniqueness/Heritage	N	10		Limited potential fo	or heritage value
Visual Quality/Aesthetics	N	9		Limited potential for	or aesthetic value
ES Endangered Species Habitat	Y		Х	NHB identified dwarf glasswort, marsh elder, saltmars	n agalinis, tundra alkali grass, and Blanding's turtle within the vicinity
Other					

Tax Parcels and Abutters



### PORTSMOUTH 20258 LIST OF PROJECT ABUTTERS (PROPERTIES ABUTTING WETLAND IMPACTS ARE SHOWN IN BOLD)

Mapping number	Abutter Name	Abutter address	Parcel ID
(Figure 2)			
1	MCCANN FAMILY REVOCABLE TRUST MCCANN M A & J M D TRUSTEES	921 MIDDLE RD	0232-0117-0001
2	PAFFORD, SCOTT R	969 MIDDLE RD	0232-0116-0000
3	CITY OF PORTSMOUTH DPW	1 PLAINS AVE	0242-0002-0000
4	CITY OF PORTSMOUTH DPW	1 PLAINS AVE	0242-0002-0000
5	CITY OF PORTSMOUTH DPW	1 PLAINS AVE	0242-0002-0000
6	CITY OF PORTSMOUTH DPW	1 PLAINS AVE	0242-0002-0000
7	ROMAN CATHOLIC BISHOP OF MANCHESTER CHURCH OF IMMAC CONCEPTION	MIDDLE RD	0242-0005-0000
8	See Attachment "Peverly Hill Road 0242-0004-0000 through 0242-0004-0056"	PEVERLY HILL RD	0242-0004-0000 through 0242-0004-0056
9	B&B PROPERTIES LLC	968 MIDDLE RD	0232-0090-0000
10	FRITZ IAN P; NEWCOMER SUSAN M	942 MIDDLE RD	0232-0089-0000
11	MOSCA MICHAEL J	46 PEVERLY HILL RD	0232-0091-0000
12	INNES DYANNA L	78 PEVERLY HILL RD	0232-0092-0000
13	TARLETON NATHAN M; TARLETON SHERRI M	74 LEAVITT AVE	0232-0088-0000
14	BLACK KENNETH T	82 PEVERLY HILL RD	0232-0093-0000
15	DIXON SUSAN L	106 LEAVITT AVE	0232-0087-0000
16	CITY OF PORTSMOUTH DPW	PEVERLY HILL RD	0232-0095-0000
17	ASRT LLC	138 LEAVITT AVE	0243-0050-0000
18	AJEI REAL ESTATE LLC	100 PEVERLY HILL RD	0243-0051-0000
19	CITY OF PORTSMOUTH DPW	PEVERLY HILL RD	0243-0052-0000
20	CITY OF PORTSMOUTH DPW	PEVERLY HILL RD	0243-0053-0000

21	NEW HOPE BAPTIST CHURCH	263 PEVERLY HILL RD	0242-0003-0000/
			0242-0003-000A-0000
22	BOSA JOHN W;	248 PEVERLY HILL RD;	0243-0054-0000;
	LOOR JOAN V;	248 PEVERLY HILL RD #1;	0243-0054-0001;
	BEEBE MYCHAL	248 PEVERLY HILL RD #2	0243-0054-0002
23	MURRAY CURT F; MCGANN ERIN E	260 PEVERLY HILL RD	0243-0055-0000
24	CHILDRENS GARDEN PROPERTY LLC	290 PEVERLY HILL RD	0243-0056-0000
25	COLBURN DEAN A	287 PEVERLY HILL RD	0255-0009-0000
26	Peverly Hill Road 0255-0008-0000 through	288 PEVERLY HILL RD	0255-0008-0000 through
	0255-0008-0009		0255-0008-0009
27	KELLEHER MARIE E REV TRUST	297 PEVERLY HILL RD	0255-0007-0000
	KELLEHER MARIE E TRUSTEE		
28	JONES FAMILY REVOCABLE TRUST	296 PEVERLY HILL RD	0243-0057-0000
	JONES DONALD E & MONA M TTEE		
29	SCHWARTZ JACOB H; DAVIS KRISTEN N	300 PEVERLY HILL RD	0243-0058-0000
30	TAPIA ZEIGLER ELIZABETH B; ZEIGLER BRYAN C	384 PEVERLY HILL RD	0243-0059-0000
31	STEVENS BOYD J STEVENS RHONDA H	303 PEVERLY HILL RD	0255-0006-0000
32	REIS THOMAS E & MARYBETH B REIS JAMES B & MEEGAN C	305 PEVERLY HILL RD	0255-0005-0000
33	FLEMING DONNA FLEMING SAROJ A	433 GREENLEAF AVE	0243-0008-0000
34	CROSBY LORIA A CROSBY CARL W JR	419 GREENLEAF AVE	0243-0007-0001
35	BLOUT MICHAEL J	404 GREENLEAF AVE	0243-0060-0000
36	SARGENT ADAM L LANTZ GRETCHEN M	394 GREENLEAF AVE	0243-0061-0000
37	CHAMBERLIN SUSAN W SCHERR ALBERT E IV	390 GREENLEAF AVE	0243-0062-0000
38	D'ANTONIO BENJAMIN	380 GREENLEAF AVE	0243-0063-0000
39	YAUN CHRISTOPHER D	360 GREENLEAF AVE	0243-0064-0000
40	KENICK JEAN	350 GREENLEAF AVE	0243-0065-0000
41	Greenleaf Ave 0243-0006-0000 through 0243-0006-S302	260 GREENLEAF AVE	0243-0006-0000 through
			0243-0006-\$302

42	KRUPP JUSTIN KRUPP ELIZABETH M	375 GREENLEAF AVE	0243-0007-0000
43	MORAN FAMILY REV TRUST MORAN THOMAS J & JANINE E TT	401 GREENLEAF AVE	0243-0007-000A
44	WESTGATE MARK E WESTGATE MARIA L	407 GREENLEAF AVE	0243-0007-0002
45	LIEN HSIU Y CHOE HYON S	423 PEVERLY HILL RD	0243-0009-0000
46	GALARNEAU THOMAS M GALARNEAU JESSICA A	437 PEVERLY HILL RD	0243-0010-0000
47	LEONARD STEVEN P	451 PEVERLY HILL RD	0243-0011-0000
48	SHORTILL KUMIKO ANEE	465 PEVERLY HILL RD	0243-0012-0000
49	535 PEVERLY HILL LLC	535 PEVERLY HILL RD	0244-0009-0000
50	HETT WALTER D TRUST HETT WALTER D TRUSTEE	PEVERLY HILL RD	0255-0003-0000
51	RUSSELL JULIA A REVO TRUST RUSSELL JULIA A TRUSTEE	515 PEVERLY HILL RD	0255-0004-0000
52	FRAZER LAURA	539 PEVERLY HILL RD	0244-0011-0000
53	ZAKHAROV EVGENIY V	541 PEVERLY HILL RD	0244-0012-0000
54	DOAN TONY ISHII JENNY G	575 PEVERLY HILL RD	0255-0003-0001
55	MACEACHERN CHARLES & SHERRY	545 PEVERLY HILL RD	0244-0010-000C
56	YOUNG MENS CHRISTIAN ASSOC	550 PEVERLY HILL RD	0244-0010-000A
57	HETT WALTER D TRUST HETT WALTER D TRUSTEE	BANFIELD RD	0255-0002-0000
58	SEACOAST FAMILY Y	PEVERLY HILL RD	0244-0010-000B
59	GSG REALTY PORTSMOUTH LLC	1 MIRONA RD	0253-0007-0000
60	BANFIELD ROAD LLC	15 BANFIELD RD	0254-0005-0000
61	MMCT REALTY LLC	2 MIRONA RD	0253-0006-0000
62	ALEXANDER NANCY H REVOC TRUST ALEXANDER NANCY H TRUSTEE	620 PEVERLY HILL RD	0254-0006-0000
63	PIKE INDUSTRIES INC	650 PEVERLY HILL RD	0254-0007-0000
64	BOURAS GROUP LLC	10 MIRONA RD	0253-0005-0001
65	20 MIRONA ROAD EXT LLC	20 MIRONA RD EXT	0253-0005-0000
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66	CITY OF PORTSMOUTH;	680 PEVERLY HILL RD	0254-0008-0000;
	MCM ACQUISITION 2017 LLC		0254-0008-0001
67	DPH REALTY LLC	30 MIRONA RD EXT	0253-0004-0000
68	LIGHTHOUSE MANUFACTURING LLC	35 MIRONA RD	0252-0003-0000
69	JMK REALTY LLC	700 PEVERLY HILL RD	0252-0002-0010
70	YOKENS TOWNHOMES LLC	951 PEVERLY HILL RD	0252-0005-0000
71	DSM MB II LLC	1500 LAFAYETTE RD	0252-0002-0000
72	SELIGMAN ASSET TRUST RICE NORMAN TRUSTEE	18 MOFFAT ST	0243-0068-0000
73	HONEYMAN J BRADLEY HONEYMAN SARAH	26 MOFFAT ST	0243-0069-0000

#### 0242-0004-0000 through 0242-0004-0056 Peverly Hill Road

Property ID	Site Address	Account	Owner Name	Owner Name 2	Owner Address	City	State	Zip
0242-0004-0000	83 PEVERLY HI	30759	PARSON WOODS INVESTMENTS LLC		11 LAFAYETTE RD	NORTH HAMPTO	NH	03862
0242-0004-0001	18 SAGE LN	54584	BARNES DANIEL J & NANCY D		18 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0002	24 SAGE LN	54585	DELUKE CAMILA & LOUIS JAMES		24 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0003	32 SAGE LN	54586	MARCELYNAS JOSEPH A & ANGELA J		32 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0004	40 SAGE LN	54587	134 PLEASANT ST LLC		PO BOX 853	NEW CASTLE	NH	03854
0242-0004-0005	46 SAGE LN	54588	PLOVANICH MOLLY E	TSUN ZHI YANG	46 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0006	54 SAGE LN	54589	RACZ JOSEPH J FAM REV TR	RACZ JOSEPH J TRUSTEE	54 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0007	58 SAGE LN	54590	DUBOIS GARY E & DIANE A		58 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0008	68 SAGE LN	54591	ROSEN ANDREW B	EVANS SHERRY	68 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0009	74 SAGE LN	54592	HART JUDY LIVING TRUST	HART JUDY TRUSTEE	74 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0010	84 SAGE LN	54593	MOHEDANO CASCADO DOMINGO	SANZ GALVEZ ISABEL	84 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0011	88 SAGE LN	54594	ROTZ ANDREW R RV TR (1/2 INT)	HOLZHAUER M F RV TR (1/2 INT)	88 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0012	98 SAGE LN	54595	BRITT AUSTIN PATRICK & SHAUNA		98 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0013	102 SAGE LN	54596	FERGUSON W & V LIVING TRUST	FERGUSON W D JR & V W TRUSTEES	102 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0014	112 SAGE LN	54597	MCDANIEL JAMES A III	MCDANIEL KATHLEEN	112 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0015	118 SAGE LN	54598	LEONARDI JOHN	DURAKOVIC MUBERA	118 SAGE LN UNIT	PORTSMOUTH	NH	03801
0242-0004-0016	126 SAGE LN	54599	BROWN FAMILY TRUST	BROWN THOMAS C & BONNIE L TT	126 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0017	130 SAGE LN	54600	BASILIERE ROBERT JAMES	BASILIERE JUDITH PEIRCE	130 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0018	140 SAGE LN	54601	TEBBENHOFF PETER H & KAREN L		140 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0019	144 SAGE I N	54602	VIVINETTO ANTHONY J & LISA A		144 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0020	150 SAGE I N	54603	KOBLINSKI REVOCABLE TRUST	KOBI INSKI PETER & DENISE TT	150 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0021	154 SAGE I N	54604	FITZGERALD CAROL A	FITZGERALD DANIEL JOHN	154 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0022	180 SAGE I N	54605	TWIN PINES REV TRUST OF 2023	GRENADER DENIS M & JOANIE TT	180 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0023	188 SAGE LN	54606	FALVEY MARY		188 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0024	190 SAGE LN	54607	LEEEMANS WREN FAM TR	I FEFMANS FRIC & WREN I YNN TT	190 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0025	198 SAGE I N	54608	STANFIELD BRIAN A & SARAH RUTH		198 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0026	202 SAGE I N	54609	VEALE PATRICK J & KAREN M		202 SAGE IN UNIT	PORTSMOUTH	NH	03801
0242-0004-0027	210 SAGE I N	54610	DUNBAR STUART		210 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0028	216 SAGE I N	54611	JELINEK WARREN FAM TRUST	JELINEK EDWARD R & MARY W TT	216 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0029	226 SAGE I N	54612	GUTER PATRICIA ANN TRUST	GUTER DONALD J & PATRICIA A TT	2501 M ST NW #206	WASHINGTON	DC	20037
0242-0004-0030	230 SAGE I N	54613	LUCAS FAMILY TRUST OF 2018	LUCAS THOMAS F & KRISTINA L TT	230 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0031	240 SAGE I N	54614	BROWN CHARLES H JR	FRASER BROWN CYNTHIA	240 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0032	244 SAGE I N	54615		I ITWAK JAMES & CAROL TT	244 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0033	270 SAGE I N	54616	PARSON WOODS INVESTMENTS LLC		11 I AFAYETTE RD	NORTH HAMPT(	NH	03862
0242-0004-0034	274 SAGE I N	54617	PARSON WOODS INVESTMENTS LLC		11 LAFAYETTE RD	NORTH HAMPTO	NH	03862
0242-0004-0035	81 SAGE I N	54618	WHITNEY ROBERT DEAN	WHITNEY DANA MARIE	81 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0036	89 SAGE I N	54619	DIFRANCESCO WILLIAM & ANN		89 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0037	99 SAGE I N	54620	GREENE JOHN JR & ANNELLEN		99 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0038	103 SAGE LN	54621	HARLEY ADAM CHRISTIAN	NEVES DONNA LYNN	103 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0039	113 SAGE LN	54622	SWEENEY JOAN C		113 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0040	119 SAGE LN	54623	MARSHALL JAMES & CHRISTINA		43 GRAND MIRAMA	HENDERSON	NV	89011
0242-0004-0041	127 SAGE LN	54624	COATE THOMAS	STARLING COATE MARCY	127 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0042	131 SAGE LN	54625	CLEMENS J W 2024 TR (50% INT)	CLEMENS K E 2024 TR (50% INT)	131 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0043	141 SAGE LN	54626	CONWAY KEVIN J & KIM L		141 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0044	153 SAGE I N	54627	VALENTINE RICHARD J		153 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0045	171 SAGE I N	54628	MARCOTTE PETER E & JOANNE		171 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0046	185 SAGE I N	54629	CARRIER BRUCE A & RACHAFI		185 SAGE LN	PORTSMOUTH	NH	03801
0242-0004-0047	195 SAGE I N	54630	DESMOND JEFFREY N	DESMOND KRYSTEN F	195 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0048	207 SAGE I N	54631	TEICHNER WILLIAM A	STEIN AMY L	207 SAGE I N	PORTSMOUTH	NH	03801
0242-0004-0049	217 SAGE LN	54632	CLARK HEATHER REV TRUST	CLARK HEATHER TRUSTEE	4 HUNTER DR	HAMPTON	NH	03842
0242-0004-0050	221 SAGE LN	54633	BIZIER RICHARD J & ROBERT A		4 HEMLOCK LN	ACTON	ME	01720
						-		

0242-0004-0051	231 SAGE LN	54634	PARSON WOODS INVESTMENTS LLC	11 LAFAYETTE RD	NORTH HAMPT(NH	03862
0242-0004-0052	235 SAGE LN	54635	PARSON WOODS INVESTMENTS LLC	11 LAFAYETTE RD	NORTH HAMPT( NH	03862
0242-0004-0053	245 SAGE LN	54636	PARSON WOODS INVESTMENTS LLC	11 LAFAYETTE RD	NORTH HAMPT(NH	03862
0242-0004-0054	251 SAGE LN	54637	HOEFLE SAMUEL & KELLY VILA	251 SAGE LN	PORTSMOUTH NH	03801
0242-0004-0055	259 SAGE LN	54638	PARSON WOODS INVESTMENTS LLC	11 LAFAYETTE RD	NORTH HAMPT(NH	03862
0242-0004-0056	265 SAGE LN	54639	PARSON WOODS INVESTMENTS LLC	11 LAFAYETTE RD	NORTH HAMPT(NH	03862

NHB DataCheck Results Letter



- To: Claire Hilsinger 125 Nagog Park Acton, MA 01720 chilsinger@mjinc.com
- From: NHB Review NH Natural Heritage Bureau Main Contact: Ashley Litwinenko - <u>nhbreview@dncr.nh.gov</u>
- cc: NHFG Review

Date: 05/02/2024 (valid until 05/02/2025)

Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game Permits: NHDES - Standard Dredge & Fill - Major, USACE - General Permit, USEPA - Stormwater Pollution Prevention

### NHB ID: NHB24-1272

Town:PortsmouthLocation:Peverly Hill Rd.

**Project Description:** The Peverly Hill Road Reconstruction Project in the City of Portsmouth includes reconstruction improvements (depending on results of the geotechnical evaluation) of the roadbed, construction of an improved stormwater system, and narrowing the roadway to provide two 11-foot travel lanes and 2-foot shoulders, a shared-use path on the south side of the roadway, and a pedestrian sidewalk on the north side of the roadway. The project limits extend from NH Route 33 (Middle Road) to the intersection with West Road to tie into improvements completed as part of the Yoken's Plaza Development near US Route 1. The total project length is approximately 5,100 feet.

### **Next Steps for Applicant:**

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

**NHB Comments:** Please contact NHB and indicate what erosion and sediment controls are proposed in order to protect the nearby exemplary saltmarsh and its associated rare plants. Please also indicate if the work along Greenleaf Ave will impact the edge of the salt marsh.

**NHFG Comments:** Please refer to NHFG consultation requirements below.

#### **NHB** Consultation



NHB DataCheck Results Letter NH Natural Heritage Bureau Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing nhbreview@dncr.nh.gov.

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.

#### **NH Fish and Game Department Consultation**

If this NHB DataCheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB DataCheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to https://www.wildlife.nh.gov/wildlife-and-habitat/nongame-andendangered-species/environmental-review. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and must include the NHB DataCheck results letter number and "Fis 1004 consultation request" in the subject line.

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email NHFGreview@wildlife.nh.gov, and include the NHB DataCheck results letter number and "review request" in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.



### NHB DataCheck Results Letter NH Natural Heritage Bureau Please note: maps and NHB record pages are confidential and shall be redacted from public documents.

#### **NHB Database Records:**

The following record(s) have been documented in the vicinity of the proposed project. Please see the map and detailed information about the record(s) on the following pages.

Natural Community	State <sup>1</sup>	Federal	Notes
High salt marsh			
Intertidal flat			
Low salt marsh			
Salt marsh system			Inreats are primarily changes to the hydrology of the system, introduction of invasive species, and increased input of nutrients and pollutants.
Plant species	<b>State</b> <sup>1</sup>	Federal	Notes
dwarf glasswort ( <i>Salicornia</i> <i>bigelovii</i> )	Ε		Threats are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.
marsh elder ( <i>Iva frutescens</i> )	т		Threats are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.
saltmarsh agalinis (Agalinis maritima ssp. maritima)	Т		A wildflower that grows in very shallow, briefly flooded forb pannes in the high salt marsh. Threats are primarily alterations to the hydrology of the wetland (such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat), activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.
tundra alkali grass ( <i>Puccinellia pumila</i> )*	E		Primarily vulnerable to changes to the hydrology of its habitat, especially alterations that change water levels. It may also be susceptible to increased pollutants and nutrients carried in stormwater runoff.
Vertebrate species	State <sup>1</sup>	Federal	Notes
Blanding's Turtle ( <i>Emydoidea</i> <i>blandingii</i> )	E		Contact the NH Fish & Game Dept (see below).



### NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are confidential and shall be redacted from public documents.

<sup>1</sup>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 20 or more years ago.

#### For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section above.

<u>Disclaimer</u>: NHB's database can only tell you of <u>known</u> occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.

However, many areas have never been surveyed, or have only been surveyed for certain species. NHB recommends surveys to determine what species/natural communities are present onsite.

# NHFG Wildlife Correspondence

### **Christine J. Perron**

From:	FGC: NHFG review <nhfgreview@wildlife.nh.gov></nhfgreview@wildlife.nh.gov>
Sent:	Wednesday, August 21, 2024 11:45 AM
To:	Christine J. Perron
Cc:	FGC: NHFG review; Lewis, Eben
Subject:	NHB24-1272 Peverly Hill Road Portsmouth
Attachments:	Spotted_Blandings Flyer_2024.pdf
Follow Up Flag:	Follow up
Flag Status:	Completed

#### Good morning Christine,

New Hampshire Fish and Game has completed review of materials submitted for consultation for NHB24-1272 on 8/21/2024 (site plans dated 03/01/2024) prepared by Claire Hilsinger and Mcfarland Johnson. The project involves reconstruction improvements of the roadbed, construction of an improved storm water system, and narrowing the roadway to provide two 11-foot travel lanes and 2-foot shoulders, a shared[1]use path on the south side of the roadway, and a pedestrian sidewalk on the north side of the roadway. The project limits extend from NH Route 33 (Middle Road) to the intersection with West Road in Portsmouth, NH.

#### Permit applications associated with this project:

(note if you apply for other permits not listed below, you must notify NHFG and request a response to see if recommendations provided below can be applied to other permit applications. All anticipated permits that may be required or will be applied for MUST be identified on the NHB datacheck results letter or the NHB letter is not considered valid and cannot be applied to a consultation/permit application review).

#### NHDES- Wetland Standard Dredge & Fill-Minor (Not yet filed)

Based on the NHB DataCheck results letter and the information provided in the submission as well as in communications and materials provided during our consultation review, we request the following recommended permit conditions. THESE RECOMMENDED PERMIT CONDITIONS ARE APPLICABLE TO ALL STATE PERMITS LISTED ABOVE.

- For consideration in the AoT permit review process, please incorporate recommendations along with associated materials as detailed, into the final sheet plans as written below (update highlighted text as applicable) and provide to NHDES for final review and copy NHFG.
- For all other permits, please include recommended permit conditions in final plan sheets plans as written below (update highlighted text as applicable) and provide to NHDES for final review and copy NHFG. Permit reviewers will adopt/include NHFG permit conditions in the permit if approved.

#### NHB24-1272 New Hampshire Fish and Game Recommended Permit Conditions:

1. Blanding's Turtle (State Endangered) occur within the vicinity of the project area. All operators and personnel working on or entering the site shall be made aware of the potential presence of these species and shall be

provided flyers that help to identify these species, along with NHFG contact information. See Plan Sheet xxxxxx Include attached flyers to plan sheet set.

- 2. Rare species information (e.g. identification, observation and reporting of observations, when to contact NHFG immediately and NHFG contact information) shall be communicated during morning tailgate meetings prior to work commencement during while the project is under active construction.
- 3. All manufactured erosion and sediment control products, with the exception of turf reinforcement mats, utilized for, but not limited to, slope protection, runoff diversion, slope interruption, perimeter control, inlet protection, check dams, and sediment traps shall not contain plastic, or multifilament or monofilament polypropylene netting or mesh with an opening size of greater than 1/8 inches. See Plan Sheet xxxxxx
- 4. Turtles may be attracted to disturbed ground during nesting season. Turtle nesting season occurs approximately May 15th – June 30th. All turtle species nests and northern black racer nests are protected by NH laws. If a nest is observed or suspected, operators shall contact NHFG immediately for further consultation. The nest or suspected nest shall be marked (surrounding roped off or cone buffer deployed) and avoided; this shall be communicated to all personnel onsite. Site activities shall not occur in the area surrounding the nest or suspected nest until further guidance is provided by NHFG.
- 5. All observations of threatened or endangered species on the project site shall be reported immediately to the NHFG nongame and endangered wildlife environmental review program by phone at 603-271-2461 and by email at NHFGreview@wildlife.nh.gov, with the email subject line containing the NHB DataCheck tool results letter assigned number, the project name, and the term Wildlife Species Observation.
  - a. Photographs of the observed species and nearby elements of habitat or areas of land disturbance shall be provided to NHFG in digital format at the above email address for verification, as feasible.
- 6. In the event a threatened or endangered species is observed on the project site during the term of the permit, the species shall not be disturbed, handled, or harmed in any way prior to consultation with NHFG and implementation of corrective actions recommended by NHFG.
  - a. Site operators shall be allowed to relocate wildlife encountered if discovered within the active work zone if in direct harm from project activities. Wildlife shall be relocated in close proximity to the capture location but outside of the work zone and in the direction the individual was heading. NHFG shall be contacted immediately if this action occurs.
- 7. The NHFG, including its employees and authorized agents, shall have access to the property during the term of the permit. , along with NHFG contact information. *Include attached flyer to plan sheet set*.

NHFG has completed our review of materials submitted for consultation under FIS 1004. No further coordination with NHFG is requested at this time. Please note that additional or a new consultation may be required in accordance with Fis 1004.08(b)4 if there are changes in project design that is referenced above which might result in potential impacts to threatened and endangered species, whether suggested to avoid harm to the species, or which could serve to increase the potential of adverse impacts to species.

These recommendations have been transmitted to the applicable permitting agency. <u>Questions or concerns on NHFG</u> recommendations provided in this communication **must** follow FIS 1004.12 that requires a written request for further consultation provided within 10 days of receipt of this communication. Note that NHFG recommendations may be withdrawn pursuant to FIS 1004.13.

Patrick Fitzgibbons Wildlife Biologist NH Fish and Game Department Wildlife Division Concord, NH 03301 603-271-3017 New Hampshire Fish and Game requirements for environmental review consultation can be found at: <u>https://gencourt.state.nh.us/rules/state\_agencies/fis1000.html</u>. ALL requests for consultation and submittals should be sent via email to <u>NHFGreview@wildlife.nh.gov</u> or can be sent hardcopy by mail. The NHB datacheck results letter number needs to be included in the email subject line to read as "NHBxx-xxxx\_Project Name\_FIS 1004 Consultation Submittal".

The requirements for consultation (Fis 1004) shall not apply to the following: statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule. Review requests for these projects or other project types should be submitted to <u>NHFGreview@wildlife.nh.gov</u> or can be sent hardcopy by mail – email or mail subject line for these review requests should read **"NHBxx-xxxx\_Project Name\_ Env. Review Request"**.

Please provide shapefiles/KMZ/KMLs of the project site (and relevant features if applicable) with your submittal. Review statements provided in the NHB Datacheck Results letter for additional guidance.

From: Christine J. Perron <CPerron@mjinc.com>
Sent: Monday, August 12, 2024 5:30 PM
To: FGC: NHFG review <NHFGreview@wildlife.nh.gov>
Subject: Fis 1004 consultation request - NHB24-1272

#### EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Good afternoon,

Consultation materials are attached for a City of Portsmouth roadway improvement project.

Thanks, Christine



CHRISTINE J. PERRON, CWS REGIONAL ENVIRONMENTAL MANAGER

603-225-2978

CPERRON@MJINC.COM

WWW.MJINC.COM





### NHFG Wildlife Biologist Contacts:

Melissa Winters 603-479-1129 and Josh Megyesy 978-578-0802

- Turtles may be attracted to disturbed ground during nesting season (May 15th June 30th).
- Turtles are most active from April 15th October 15th.



### Blanding's turtle (State Endangered)

Large, dark/black domed shell with lighter speckles.

Distinct yellow throat/chin.

Semi-aquatic- uses both wetland and terrestrial habitats.



### Spotted turtle (State Threatened)

Small, mostly aquatic with black or dark brown with yellow spots.

Fairly flat shell compared to Blanding's turtle.

Spots vary in color and number.

Semi-aquatic - uses both wetland and terrestrial habitats.

Blanding's and spotted turtles are protected by state laws. It is illegal to capture, harass or harm these species, including their nests. Handle ONLY if necessary to move out of harms way. Move to the nearest location in the direction they were moving and contact NHFG. Do not disturb nests.

Report sightings in accordance with NHFG permit conditions. Contact NHFG Wildlife Biologist Melissa Winters 603-479-1129 (cell) and Josh Megyesy 978-578-0802 (group text preferred) if a turtle is observed nesting or a nest site is suspected within the project area. Please report promptly, noting specific location, project site and date – Photographs strongly encouraged to be included with report.

**USFWS Official Species List** 



# United States Department of the Interior

FISH AND WILDLIFE SERVICE New England Ecological Services Field Office 70 Commercial Street, Suite 300 Concord, NH 03301-5094 Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To: Project Code: 2022-0003545 Project Name: Peverly Hill Road-Portsmouth NH

10/31/2024 12:15:52 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

*Updated* 4/12/2023 - *Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.* 

### About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

### Endangered Species Act Project Review

Please visit the **"New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

**\*NOTE\*** Please <u>do not</u> use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

**Northern Long-eared Bat - (Updated 4/12/2023)** The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

### https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at <u>newengland@fws.gov</u> to see if reinitiation is necessary.

### Additional Info About Section 7 of the Act

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

#### https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

**Candidate species** that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

### **Migratory Birds**

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

Official Species List

# **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

### New England Ecological Services Field Office

70 Commercial Street, Suite 300 Concord, NH 03301-5094 (603) 223-2541

### **PROJECT SUMMARY**

Project Code:2022-0003545Project Name:Peverly Hill Road-Portsmouth NHProject Type:Road/Hwy - Maintenance/ModificationProject Description:The proposed project consists of reconstructing an approximately 1-mile<br/>section of Peverly Hill Road between West Street and Middle Road (NH<br/>Route 33) in Portsmouth, New Hampshire. The proposed project includes<br/>the reconstruction of existing pavement surface and installation of a<br/>closed drainage system that will eliminate the ponding conditions and<br/>provide water quality treatment.

Project Location:

The approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@43.05204176816707,-70.77874149950426,14z</u>



Counties: Rockingham County, New Hampshire

## **ENDANGERED SPECIES ACT SPECIES**

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9045</u>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/10515</u>	Proposed Endangered
INSECTS NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i>	Candidate

Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9743</u>

### **CRITICAL HABITATS**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

## **IPAC USER CONTACT INFORMATION**

Agency:McFarland JohnsonName:Christine PerronAddress:53 Regional DriveCity:ConcordState:NHZip:03301Emailcperron@mjinc.comPhone:6032252978

### LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

# USFWS Northern Long-Eared Bat and Tricolored Bat Consistency Letter



# United States Department of the Interior

FISH AND WILDLIFE SERVICE New England Ecological Services Field Office 70 Commercial Street, Suite 300 Concord, NH 03301-5094 Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To: Project code: 2022-0003545 Project Name: Peverly Hill Road-Portsmouth NH 10/31/2024 12:28:30 UTC

Federal Nexus: yes Federal Action Agency (if applicable): Federal Highway Administration

Subject: Technical assistance for 'Peverly Hill Road-Portsmouth NH'

Dear Christine Perron:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 31, 2024, for 'Peverly Hill Road-Portsmouth NH' (here forward, Project). This project has been assigned Project Code 2022-0003545 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.** 

### **Ensuring Accurate Determinations When Using IPaC**

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project. **Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (Dkey), invalidates this letter.** 

### Determination for the Northern Long-Eared Bat and Tricolored Bat

Based on your IPaC submission and a standing analysis completed by the Service, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Northern Long-eared Bat ( <i>Myotis septentrionalis</i> )	Endangered	May affect
Tricolored Bat (Perimyotis subflavus)	Proposed	May affect
	Endangered	

### Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

Monarch Butterfly Danaus plexippus Candidate

You may coordinate with our Office to determine whether the Action may cause prohibited take of the species listed above.

### Conclusion

Consultation with the Service is not complete. Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of "May Affect." A "May Affect" determination in this key indicates that the project, as entered, is not consistent with the questions in the key. Not all projects that reach a "May Affect" determination are anticipated to result in adverse impacts to listed species. These projects may result in a "No Effect", "May Affect, Not Likely to Adversely Affect", or "May Affect, Likely to Adversely Affect" determination depending on the details of the project. Please contact our New England Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats

### Action Description

You provided to IPaC the following name and description for the subject Action.

### 1. Name

Peverly Hill Road-Portsmouth NH

### 2. Description

The following description was provided for the project 'Peverly Hill Road-Portsmouth NH':

The proposed project consists of reconstructing an approximately 1-mile section of Peverly Hill Road between West Street and Middle Road (NH Route 33) in Portsmouth, New Hampshire. The proposed project includes the reconstruction of existing pavement surface and installation of a closed drainage system that will eliminate the ponding conditions and provide water quality treatment.

The approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@43.05204176816707,-70.77874149950426,14z</u>



# **DETERMINATION KEY RESULT**

Based on the answers provided, the proposed Action is consistent with a determination of "may affect" for a least one species covered by this determination key.

## **QUALIFICATION INTERVIEW**

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

**Note:** Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Is the action area wholly within Zone 2 of the year-round active area for northern longeared bat and/or tricolored bat?

Automatically answered No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered
No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

**Note:** This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

- 9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)? *No*
- 10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum?

**Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

#### Automatically answered

No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

No

12. Does the action area contain (1) talus or (2) anthropogenic or naturally formed rock shelters or crevices in rocky outcrops, rock faces or cliffs?

No

13. Will the action cause effects to a covered bridge?

No

14. Are trees present within 1000 feet of the action area?

**Note:** If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <u>https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.</u>

Yes

15. Does the action include the intentional exclusion of bats from a building or structure?

**Note:** Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

No

- 16. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) known or suspected to contain roosting bats?*No*
- 17. Will the action cause construction of one or more new roads open to the public?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

18. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic permanently or temporarily on one or more existing roads?

**Note:** For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

20. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

**Note:** For information regarding NSF/ANSI 60 please visit <u>https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects</u>

No

21. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

No

22. Will the action include drilling or blasting?

No

- 23. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)? *No*
- 24. Will the proposed action involve the use of herbicides or other pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

No

25. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

**Note:** Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <u>https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.</u>

No

26. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

**Note:** Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <u>https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.</u>

No

27. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

Yes

28. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

No

29. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

**Note:** A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property. *No* 

- 30. Does the project intersect with the 0- 9.9% forest density category?Automatically answeredNo
- 31. Does the project intersect with the 10.0- 19.9% forest density category map? Automatically answered

No

- 32. Does the project intersect with the 20.0- 29.9% forest density category map? Automatically answered *No*
- 33. Does the project intersect with the 30.0- 100% forest density category map?Automatically answeredYes
- 34. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 100 acres in total extent?

No

35. Will the proposed action result in the use of prescribed fire?

**Note:** If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

No

36. Does the action area intersect the northern long-eared bat species list area?

Automatically answered Yes

37. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

Automatically answered No

38. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

**Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered No

39. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?If unsure, answer "Yes."

**Note:** Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <u>https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.</u>

Yes

40. Are any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming suitable for northern long-eared bat roosting (i.e., live trees and/or snags  $\geq$ 3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities)?

**Note:** Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <u>https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.</u>

Yes

41. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Fall Swarming season** for northern long-eared bats in the action area?

**Note:** Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines at: <u>https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines</u>

Yes

42. Does the action area intersect the tricolored bat species list area?

Automatically answered

Yes

43. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

**Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered No

44. Has a presence/probable absence bat survey targeting the <u>tricolored bat and following the</u> <u>Service's Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines</u> been conducted within the project area?

No

45. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities?

(If unsure, answer ""Yes."")

**Note:** If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (Tillandsia usneoides), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see Appendix A in the <u>Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines</u>. *Yes* 

46. Do any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pine trees)?

**Note:** Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <u>https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.</u>

Yes

- 47. Will any tree cutting/trimming or other knocking or bringing down of trees be conducted during the Pup Season for tricolored bat?
  Note: Bat activity periods for your state can be found in Appendix L of the <u>Service's Range-wide Indiana Bat and</u> Northern long-eared Bat Survey Guidelines.
  Yes
- 48. Do you have any documents that you want to include with this submission? *No*

## **PROJECT QUESTIONNAIRE**

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

0.3

## **IPAC USER CONTACT INFORMATION**

Agency: McFarland Johnson Name: Christine Perron Address: 53 Regional Drive Concord City: State: NH 03301 Zip: Email cperron@mjinc.com Phone: 6032252978

### LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

Section 106 Effect Memo



Victoria F. Sheehan Commissioner THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



William Cass, P.E. Assistant Commissioner

PORTSMOUTH Peverly Hill Road Sidewalk Improvement/Complete Street Project X-A002(061) 20258 RPR 8013

### No Adverse Effect Memo

In order to assist the Federal Highway Administration (FHWA) in complying with Section 106 of the National Historic Preservation Act of 1966 and its amendments, the New Hampshire Depart of Transportation (NHDOT), in consultation with the New Hampshire Division of Historical Resources (SHPO), has reviewed this undertaking according to the standards and procedures detailed in the 2018 Programmatic Agreement regarding the Federal-Aid Highway Program in New Hampshire.

### **Project Description**

The City of Portsmouth proposes to rehabilitate Peverly Hill Road from the intersection of West Road west to the intersection of NH Route 33 (Middle Road). The project will consist of the reconstruction of Peverly Hill Road to provide both pedestrian and bicycle accommodations in compliance with the City's Complete Streets Policy. In addition, the portion of Greenleaf Avenue closest to Peverly Hill Road is included in the overall project area for a water quality treatment area.

The project will entail full roadway reconstruction with drainage improvement, utility relocation, sidewalk construction, construction of a multi-use path and landscaping features.

### **Identification**

### Above-Ground

A project area form was completed in 2018, with the recommendations for inventory following in 2020. The following was determined:

**Gardner-Hett Farm, 305 Peverly Hill Road, Portsmouth (POR1042)** is eligible under Criterion A for its association with agricultural history of the town of Portsmouth and the Southern New Hampshire Seacoast region and its continued agricultural use into the early twenty-first century.

The following resource were found not eligible:

- POR-IFHA Iofalla Historic Area
- POR-PPHA Prospect Park Historic Area
- POR-PHRA Peverly Hill Road Ranch Area
- POR-0025 Calvary Cemetery
- POR1041 303 Peverly Hill Road
- POR10-43 384 Peverly Hill Road
- POR1044 George Wiggin House
- POR1045 Willey-Sides-Wiggin House
- POR1048 Champagne House

# Archaeology

Survey investigation during a Phase IA/IB determined that no further archaeological survey will be required. Slope work within 25 feet of the unmarked cemetery known as the Willey-Lightford family burial ground will require monitoring during construction by a qualified archaeologist.

# Public Consultation

Public meetings were held on 2/3/16, 7/27/16, 3/27/19, 2/17/21, 4/19/21, 6/28/21, 7/12/21, and 10/14.21. No interested property owner with the project areas reached out to FHWA regarding Consulting Party status.

NHDHR was contacted via Request for Project Review in October 2017.

# **Determination of Effect**

**Gardner-Hett Farm, 303 Peverly Hill Road (POR1042):** The proposed project will require the removal of some vegetation and the taking of an edge of land location along Peverly Hill Road that abut the property. The edge of land will be used to accommodate the construction of a new shared-use path. The amount of property taken for the widening of the road right-of-way is minimal in relation to the acreage of fields, and the stone walls along the road in Parcel 255-2 will not be affected. The removal of trees and brush will not adversely affect the overall setting of the resource, as the fields will remain intact; the vegetation that will be removed is not part of an intentional landscape, and the trees in front of this parcel, though mature, are random and not part of a designed landscape. The wood fence, likely dating to the 1980s-1990s, will be retained, even if relocated away from the roadway. Further evaluation is available in the Effect Evaluation table completed in July 2020.

Stonewalls throughout the project area will not be impacted.

Based upon a review pursuant to 36 CFR 800.4, NHDOT has determined that no historic or archaeological resources are affected in the project area and no further survey work is needed. The result of identification and evaluation for the proposed contract is a finding of **No Adverse Effect**.

In accordance with the Advisory Council's regulations, we will continue to consult, as appropriate, as this project proceeds.

Jul LEdeln-

Jill Edelmann Cultural Resources Manager

12/22/2021

Date

Concurred with by the NH State Historic Preservation Officer:

hule SSHAD 12/23/21 Date ti Nadine Miller

Deputy State Historic Preservation Officer NH Division of Historical Resources

c.c. Marika Labash, NHDHR Jamie Sikora, FHWA Jon Evans, DOT Christine Perron, MJ

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# NH GP Appendix B – USACE Section 404 Checklist



US Army Corps of Engineers ®

# of Engineers ® Appendix B New England District New Hampshire General Permits Required Information and USACE Section 404Checklist

# **USACE Section 404 Checklist**

- 1. Attach any explanations to this checklist. Lack of information could delay a USACE permit determination.
- 2. All references to "work" include all work associated with the project construction and operation. Work
- includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
- 3. See GC 3 for information on single and complete projects.
- 4. Contact USACE at (978) 318-8832 with any questions.
- 5. The information requested below is generally required in the NHDES Wetland Application. See page 61 for NHDES references and Admin Rules as they relate to the information below.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See the following to determine if there is an impaired water in the vicinity of your work area. * https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/ https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment_ https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx	x	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to tidal SAS, prime wetlands, or priority resource areas? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at <u>https://www4.des.state.nh.us/NHB-DataCheck/</u> .	x	
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	NA	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	x	
2.5 The overall project site is more than 40 acres?		Х
2.6 What is the area of the previously filled wetlands?	unkr	nown
2.7 What is the area of the proposed fill in wetlands?	4230	) SF
2.8 What % of the overall project sire will be previously and proposed filled wetlands?	unkr	lown
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: <u>https://www4.des.state.nh.us/NHB-DataCheck/</u> . USFWS IPAC website: https://ipac.ecosphere.fws.gov/	x	

3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest		
Ranked Habitat in Ecological Region"? (These areas are colored magenta and green,		
respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological		
Condition.") Map information can be found at:		
PDF: <u>https://wildlife.state.nh.us/wildlife/wap-high-rank.html</u> .		v
• Data Mapper: <u>www.granit.unh.edu</u> .		^
• GIS: <u>www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.</u>		
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland,		
wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or		
industrial development?		X
3.5 Are stream crossings designed in accordance with the GC 31?	NA	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		Х
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of	NA	
flood storage?		
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the RPR Form		
(www.ph.gov/phdhr/review) with your DES file number shall be sent to the NH Division of	N/	
With the Decomposition of the section of the sectio	X	
Historical Resources as required on Page 37 GC 14(d) of the GP document**	X	
Historical Resources as required on Page 37 GC 14(d) of the GP document** 6. Minimal Impact Determination (for projects that exceed 1 acre of permanent impact)	X Yes	No
<ul> <li>Historical Resources as required on Page 37 GC 14(d) of the GP document**</li> <li>6. Minimal Impact Determination (for projects that exceed 1 acre of permanent impact)</li> <li>Projects with greater than 1 acre of permanent impact must include the following:</li> </ul>	X Yes	No
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\*Although this checklist utilizes state information, its submittal to USACE is a federal requirement. \*\* If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

# City of Portsmouth Peverly Hill Road Reconstruction Project

# **ACOE Appendix B Supplemental Narrative**

# 1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water?

Section 303(d) of the Clean Water Act requires each state to submit a list of impaired waters to the US EPA every two years to identify surface waters that are impaired by pollutants, not expected to meet water quality standards within a reasonable time and require the development of a Total Maximum Daily Load (TMDL) study. This list is prepared by NHDES as outlined in the Draft Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology. According to the NHDES 303(d) list (most recent available), there is chloride, *E. coli* and dissolved oxygen impairment in the Sagamore Creek watershed (NHRIV600031001-03). Additionally, there is aluminum, chlorophyll-a, copper, *Enterococcus*, estuarine bioassessments, lead, total nitrogen and dissolved oxygen impairment in Sagamore Creek/estuary (NHEST600031001-03).

The project is expected to result in an increase in impervious surface of 55,600 SF (1.3 acres) and there are five proposed BMPs for stormwater treatment, which will treat runoff from approximately 95% of new pavement.

The proposed project is not expected to result in an adverse impact on water quality and will not cause or contribute to surface water impairments.

## 2.1 Are there streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?

Sagamore Creek is a tidally influenced waterbody that flows through the project area under Peverly Hill Road just north of the intersections with Banfield Road and Mirona Road. No impacts are proposed to Sagamore Creek, and appropriate erosion and sediment controls will be in place during construction to protect nearby resources.

# 2.2 Are there proposed impacts to tidal SAS, prime wetlands, or priority resource areas?

Permanent impacts to Prime Wetland are expected to total 310 SF, and temporary impacts to Prime Wetland are expected to total 180 SF.

# 2.4 Would the project remove part or all of a riparian buffer?

Part of the Sagamore Creek riparian buffer within the island between Banfield Road and Peverly Hill Road falls within the permanent and temporary impact area. This wetland is not part of the prime wetland complex, but is within the prime wetland buffer. Work within the upland 100' prime wetland buffer will consist of slope work along the roadway footprint and drainage work.

# 2.7 What is the area of the proposed fill in wetlands?

The area of proposed fill in wetlands is 4,230 square feet (0.1 acre). This is the proposed area of permanent impact to wetlands, due to slope and drainage work as well as stormwater treatment BMPs.

3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project?

# City of Portsmouth Peverly Hill Road Reconstruction Project

# **ACOE Appendix B Supplemental Narrative**

The proposed project was submitted to and reviewed by the New Hampshire Natural Heritage Bureau (NHB) via the online NHB DataCheck Tool. According to the NHB DataCheck Results Letter (NHB24-1272) dated May 2, 2024, dwarf glasswort (*Salicornia* bigelovii), marsh elder (*Iva frutescens*), saltmarsh agalinis (*Agalinis maritima ssp. maritima*), tundra alkali grass (*Puccinellia pumila*), and Blanding's turtle (*Emydoidea blandingii*) have historically been documented in the vicinity of the project area. Additionally, the high salt marsh, intertidal flat, low salt marsh, and salt marsh system natural communities are present in the vicinity of the project area.

The United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) planning tool was accessed on October 31, 2024 to determine if federally listed species have the potential to occur in the project area. An Official Species List was generated for the proposed project area (see attached USFWS Official Species List). According USFWS Official Species List, the proposed project is located within the range of the federally endangered Northern long-eared bat (*Myotis septentrionalis*), proposed endangered tricolored bat (*Perimyotis subflavus*), and the monarch butterfly (*Danaus plexippus*), a candidate species currently undergoing review for potential listing. Total tree clearing is anticipated to be approximately 0.44 acres. Consultation was carried out with the USFWS, and it was determined that the project may affect Northern long-eared bat and tricolored bat. The proposed project area includes some potential monarch habitat, but the project would not permanently change that habitat, and no monarch conservation measures are included in the project at this time. Following construction, roadside areas would continue to provide potential habitat for the monarch butterfly.

# 5. Historic/Archaeological Resources

The Request for Project Review (RPR) was sent to NH DHR and Section 106 consultation was carried out. It was determined that the project would result in No Adverse Effect to historic resources.

# 6. Minimal Impact Determination

This project will not have greater than one acre of permanent impact to wetlands.

# Photographs



Photo 1: Stream A, Sagamore Creek, facing east upstream, from Peverly Hill Road (03/13/2024)



Photo 2: Wetland B (T.I.A. 9; P.I.A. 10), facing north along Peverly Hill Road (03/13/2024)





Photo 3: Wetland C/Stream A (T.I.A. 8; P.I.A. 9) facing east towards Peverly Hill Road (03/13/2024)



Photo 4: Wetland D (T.I.A. 7; P.I.A 8) facing north from Banfield Road/Peverly Hill Road intersection (03/13/2024)





Photo 5: Wetland E (T.I.A. 1 & 3; P.I.A. 2, 3 & 5) facing southeast along Peverly Hill Road (03/13/2024)



Photo 6: Wetland F (T.I.A. 4; P.I.A. 6) facing northeast along Moffat Street (03/13/2024)





Photo 7: Wetland F (T.I.A. 4; P.I.A. 6) facing southeast along Peverly Hill Road (03/13/2024)



Photo 8: Wetland G (T.I.A. 2; P.I.A. 4) facing southeast along Peverly Hill Road (03/13/2024)





Photo 9: Tidal buffer zone, Wetland I (T.I.A. 6; P.I.A. 7) east of Greenleaf Ave, facing northeast (03/13/2024)



Wetland Impact and Erosion Control Plan Set

# CITY OF PORTSMOUTH PEVERLY HILL ROAD LOCATION MAP WETLAND IMPACT AND EROSION CONTROL PLANS

She	Sheet Index					
SHEET SHEET TITLE						
CV-01	COVER					
WP-01	Wetland Impact and Erosion Control Plan 01					
WP-02	Wetland Impact and Erosion Control Plan 02					
WP-03	Wetland Impact and Erosion Control Plan 03					
WP-04	WETLAND IMPACT AND EROSION CONTROL PLAN 04					
WP-05	WETLAND IMPACT AND EROSION CONTROL PLAN 05					
WP-06	WETLAND IMPACT AND EROSION CONTROL PLAN 06					
WP-07	WETLAND IMPACT AND EROSION CONTROL PLAN 07					
WP-08	WETLAND IMPACT AND EROSION CONTROL PLAN 08					
WP-09	WETLAND IMPACT AND EROSION CONTROL PLAN 09					
WP-10	WETLAND IMPACT AND EROSION CONTROL PLAN 10					
EPSC-1	EROSION CONTROL NOTES					
EPSC-2	EROSION CONTROL DETAILS					

PEVERLY HILL RD. -

PORTSMOUTH, NH

PREPARED FOR:

PREPARED BY:

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

**OCTOBER 2024** 

**CITY OF PORTSMOUTH ROCKINGHAM COUNTY** NEW HAMPSHIRE

**PORTSMOUTH # 20258** CMAQ PROGRAM # X-A002(061)



**CITY OF PORTSMOUTH** 680 PEVERLY HILL ROAD PORTSMOUTH, NH 03801 (603) 427-1530 WWW.CITYOFPORTSMOUTH.COM



MCFARLAND JOHNSON PROJECT NUMBER: 18082.01



	W	/etland Impact	Summary Tab	le	
Location	Wetland Classification	Permanent Wetland (sf)	Temporary Wetland (sf)	Permanent Tidal Buffer Zone (sf)	Temporary Tidal Buffer Zone (sf)
I.A 1	PFO1E	2			
I.A 1	PFO1E		724		
I.A 2	PFO1E	172			
I.A 3	PFO1E	73			
I.A 2	PFO1E		114		
.A 4	PFO1E	647			
I.A 3	PFO1E		889		
I.A 5	PFO1E	2318			
.A 4	PFO1E		351		
.A 6	PFO1E	473			
.A 5	PFO1E		7		
.A 6	PWET 100/TBZ				2190
.A 7	PWET 100/TBZ			10152	
.A 7	PSS1E (Prime Wetland)		180		
.A 8	PSS1E (Prime Wetland)*	310			
.A 8	PSS1E		119		
.A 9	PSS1E	196			
.A 9	PEM1E/PFO1E		59		
A 10	PEM1E/PFO1E	39			
	Total	4230	2443	10152	2190

\*Impacts within prime wetland buffer at this location will be limited to roadway footprint/r

<u>LEGEND</u>

TEMPORARY IMPACTS

PERMANENT IMPACTS

DELINEATED WETLAND (DW)

PWET

PRIME WETLAND (PWET) <u>PWFT 100/TBZ</u> 100 FT PRIME WETLAND BUFFER (PWET100)/TIDAL BUFFER ZONE (TBZ) \_\_\_\_\_\_ 50 FT WATERFRONT BUFFER (WB) \_\_\_\_\_\_ PS 250 \_\_\_\_\_ 250' PROTECTED SHORELAND BUFFER (PS)









	CITY OF PORTSMOUTH NEW HAMPSHIRE		
	PEVERLY HILL	ROAD RECONST	RUCTION
BY Wetland Impact and			
	Erosio	n Control Plan 03	3
	SCALE: AS SHOWN	DESIGN: SJS	
	DRAWN: SJS	PROJECT: 18082.01	<b>WP-03</b>
	CHECKED: CJP	DATE: OCTOBER 2024	4 <b>OF</b> 13
	BY	CITY         PEVERLY HILL         BY         Wetl         Erosio         SCALE: AS SHOWN         DRAWN: SJS         CHECKED: CJP	CITY OF PORTSMOUTH NEW HAMPSHIRE         PEVERLY HILL ROAD RECONST         BY       Wetland Impact and Erosion Control Plan 03         SCALE:       AS SHOWN       DESIGN:       SJS         DRAWN:       SJS       PROJECT:       18082.01         CHECKED:       CJP       DATE:       OCTOBER 2024









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2. RECOGNIZIN IMPROVES S QUALITY. TI INSTALLATIO MEASURES. TO THE CO	G THAT IMMEDIAT SOIL AND MOISTUF HE CONTRACTOR S ON OF BOTH TEMF IMMEDIATE INSTA NTRACTOR AND P	E ATTENTION TO EROSION RE CONSERVATION AND RE SHALL GIVE HIGH PRIORITY PORARY AND PERMANENT LLATION OF PRACTICES US ROVIDES BENEFITS TO THE	CONTROL PRACTICES DRAMATICALLY EDUCES NEGATIVE IMPACTS ON WATER ( TO THE DAILY AND TIMELY EROSION AND SEDIMENT CONTROL SUALLY REDUCES LONG TERM COSTS E DEVELOPER AND THE PUBLIC GOOD.	<u>USE</u> STEEP CUTS AN BORROW AND AREAS
3. EROSION CO DETERMINED IMPROVE EF	ONTROL PRACTICE FROM EXISTING ROSION AND SEDIM	S ARE SHOWN ON THE PL TOPOGRAPHY. CHANGES /IENT CONTROL.	ANS WITH RESPECT TO LOCATION AS MAY BE INDICATED IN THE FIELD TO	WATERWAYS EM
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MULCI HAY ( SLOPE WIND AND	HING: MULCH ALI DR STRAW PER AG S 3:1 OR STEEPE BLOWN. USE JUT STAPLING MAY BE	L DISTURBED AREAS WITH CRE (70–90#/1,000 SQ. F ER AND FLATTER SLOPES TE (OR OTHER BIODEGRAD REQUIRED.	1–1/2 TO 2 TONS OF T.). ANCHOR ON ALL SUBJECT TO WASH OR ABLE) NETTING. STAKING	MAINTENANCE: TERM VEGETATI A. DISTURBED
T/	ABLE 1 - PL	ANT SELECTION AN	ND SEEDING RATES	B. CATCH BASI C. DRAINAGE A
SPECIES	PER ACRE	PER 1000 SQ.FT.	REMARKS	CLEANED AS D. THE SILT FE
WINTER RYE	2 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED AUGUST 15 TO SEPTEMBER 15	REPAIRED A CIRCUITING.

WINTER RYE	2 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO DEPTH OF ONE INCH.
OATS	2 1/2 BU OR 80 LBS.	2 LBS.	BEST FOR SPRING SEEDINGS. LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO DEPTH OF ONE INCH.
ANNUAL RYE	40 LBS.	1 LB.	GROWS QUICKLY. BUT IS OF SHORT GRASS DURATION USE WHERE APPEARANCES ARE IMPORTANT. COVER SEED WITH NO MORE THAN 1/4 INCH OF SOIL. WITH MULCH, SEEDING MAY BE DONE THROUGHOUT GROWING SEASON. OTHERWISE SEED EARLY SPRING OR BETWEEN AUGUST 15 & SEPTEMBER 15.

10. PERMANENT STABILIZATION OF DISTURBED AREAS:

SEED BED PREPARATION: TOPSOIL (SANDY LOAM, LOAM, OR SILT LOAM), FRIABLE, FREE OF TREE ROOTS, WEEDS, STONES MORE THAN 1-1/2 INCHES IN DIAMETER OR LENGTH SHALL BE PLACED OVER ALL DISTURBED AREAS IN A 4" (MINIMUM) THICK LAYER.

TOPSOIL: TOPSOIL SHALL BE FREE OF HERBICIDES AND TOXIC MATERIALS. TILL THREE INCHES DEEP MIXING IN THE FERTILIZER AND LIME. APPLY LIME AT RATES INDICATED IN TABLE "A".

SEEDING: SELECT APPROPRIATE SEEDING MIXTURE FROM TABLE "C". SPREAD SEED UNIFORMLY. FIRM SOIL BY ROLLING OR PACKING: IF NOT FEASIBLE, THEN RAKE LIGHTLY TO COVER SEEDS.

MULCHING: MULCH ALL DISTURBED AREAS WITH 1-1/2 TO 2 TONS OF HAY OR STRAW PER ACRE (70 - 90#/1,000 SQ. FT.). ANCHOR MULCH ON ALL SLOPES 3:1 OR STEEPER AND ON FLATTER SLOPES SUBJECT TO WASH (WATERWAYS AND/OR WINDBLOWN) USING BIODEGRADABLE NETTING (OR OTHER APPROVED BIODEGRADABLE MATTING MATERIAL), WITH STAKING AND STAPLING.

TABLE "A"-LIME APPLICATION RATES				
EXISTING SOIL DH	LIMESTONE .	TO BE ADDED		
	TONS/ACRE	POUNDS/CY		
4.0-4.4	3	12		
4.5-4.9	2	8		
5.0-5.4	1	4		
UNKNOWN	2	8		

INSPECTIONS: THE ENGINEER SHALL BE CONTACTED ON A REGULAR BASIS TO INSPECT ALL EROSION CONTROL PRACTICES AS WELL AS THE MAINTENANCE OF THE EROSION CONTROL COMPONENTS. REFER TO CONSTRUCTION SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. EROSION CONTROL PRACTICES SHALL BE IN STRICT ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. TO DIRECTING RUNOFF TO THEM.

13. ALL TREATMENT SWALES, DITCHES, AND LEVEL LIP SPREADERS SHALL BE STABILIZED PRIOR

THE "EROSION & SEDIMENT CONTROL PLAN".

- STABILIZED.

GRADE.

TABLE "	'C" – SE	EDING GUI	DE	
	SOIL DRAIN	NAGE		
SEEDING MIXTURE 1/	<u>DROUGHTY</u>	WELL DRAINED	MODERATELY WELL <u>DRAINED</u>	POORLY <u>DRAINED</u>
A	FAIR	GOOD	GOOD	FAIR
B	POOR	GOOD	FAIR	FAIR
C	POOR	GOOD	EXCELLENT	GOOD
D	FAIR	FAIR	GOOD	EXCELLENT
E	FAIR	EXCELLENT	EXCELLENT	POOR
A	GOOD	GOOD	GOOD	FAIR
C	GOOD	EXCELLENT	EXCELLENT	FAIR
D	GOOD	EXCELLENT	EXCELLENT	FAIR
A	GOOD	GOOD	GOOD	FAIR
B	GOOD	GOOD	FAIR	POOR
C	GOOD	EXCELLENT	EXCELLENT	FAIR
D	FAIR	GOOD	GOOD	EXCELLENT
F	FAIR	EXCELLENT	EXCELLENT	<u>2/</u>
G	FAIR	EXCELLENT	EXCELLENT	2/

E PM-NH-24 RECOMMENDATIONS REGARDING RECLAMATION OF EL PITS. \*

EDING MIXTURES AND RATES IN TABLE "D". NED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREAS AND

EGETATING NEW HAMPSHIRE SAND AND GRAVEL PITS; CAL NOTE PM-NH-24, UNITED STATES DEPARTMENT OF \_TURE, SOIL CONSERVATION SERVICE, REVISION APRIL, 1991.

SION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL ALL DISTURBED EN STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE OCCURRED:

GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED; 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;

3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN

TROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

DURING THE CONSTRUCTION PERIOD AND UNTIL SUCH TIME AS THE LONG ON IS ESTABLISHED TO A 70% VEGETATIVE STAND. REAS WILL BE FERTILIZED AND RESEEDED.

S WILL BE CHECKED AND CLEANED AS NECESSARY.

D GRASS TREATMENT SWALES SHALL BE CHECKED FREQUENTLY AND REQUIRED.

CES AND HAYABLE DIKES WILL BE CHECKED ON A REGULAR BASIS AND NECESSARY TO CORRECT ANY DAMAGE, DETERIORATION, AND SHORT-

12. REFER TO "EROSION AND SEDIMENT CONTROL PLAN" PRIOR TO ANY SITE DISTURBANCE. CONTACT ENGINEER FOR COPIES OF PLAN.

14. FOR SPECIAL WINTER CONSTRUCTION CONSIDERATIONS, THE CONTRACTOR SHALL REFER TO

15. THIS PROJECT SHALL BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430.53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

16. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPS ARE

17. CUT AND FILL SLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED

TABLE "D"	' – MIXTURES & RATES	
MIXTURE	POUNDS <u>PER_ACRE</u>	POUNDS PER <u>1,000 SQ. FT.</u>
A. TALL FESCUE CREEPING RED FESCUE REDTOP TOTAL	20 20 <u>2</u> 42	0.45 0.45 <u>0.05</u> 0.95
B. TALL FESCUE CREEPING RED FESCUE CROWN VETCH OR FLATPEA TOTAL	15 10 15 <u></u>	0.35 0.25 0.35 <u>0.95</u> or 1.35
C. TALL FESCUE CREEPING RED FESCUE BIRDSFOOT TREFOIL TOTAL	20 20 <u>8</u> 48	0.45 0.45 <u>0.20</u> 1.10
D. BIRDSFOOT TREFOIL REDTOP TOTAL	20 <u>10</u> 30	0.50 <u>0.20</u> 0.70
E. TALL FESCUE FLATPEA TOTAL	20 <u>30</u> 50	0.45 <u>0.75</u> 1.20
F. CREEPING RED FESCUE <u>1/</u> KENTUCKY BLUEGRASS <u>1/</u> TOTAL	50 <u>50</u> 100	1.15 <u>1.15</u> 2.30
G. TALL FESCUE $1/$	150	3.60
1/ FOR HEAVY USE ATHLETIC HAMPSHIRE COOPERATIVE EXTENS AND SEEDING RATES.	FIELDS CONSULT THE UNIVERSITY SION TURF SPECIALIST FOR CURRE	OF NEW ENT VARIETIES

OTHER SEED MIXTURES AND SEEDING RATES AS RECOMMENDED BY THE USDA -NATURAL RESOURCES CONSERVATION SERVICE MAY BE USED WITH PRIOR WRITTEN PERMISSION FROM THE ENGINEER.

# CONSTRUCTION SEQUENCE:

NOTE: THE FOLLOWING SEQUENCE IS PRELIMINARY AND THE LIKELY ORDER OF CONSTRUCTION BUT THE EXACT MEANS AND METHODS WILL ULTIMATELY BE DECIDED BY THE SELECTED CONTRACTOR.

- 1. INSTALL APPROPRIATE PERIMETER CONTROLS FOR SOIL EROSION AND SEDIMENT CONTROL
- 2. COMPLETE TREE CLEARING
- 3. CONSTRUCT STORMWATER BASINS
- 4. CONSTRUCT CROSS CULVERTS
- 5. CONSTRUCT NEW WATERMAIN
- 6. CONSTRUCT NEW EMBANKMENTS AND FILL SECTIONS
- 7. CONSTRUCT NEW CLOSED DRAINAGE SYSTEM
- 8. CONSTRUCT NEW ROADWAY SUBBASE
- 9. PAVE ROADWAY TO BINDER GRADE
- 10. CONSTRUCT CURBING
- 11. CONSTRUCT SIDEWALK AND MULTI-USE PATH
- 12. CONSTRUCT LOAM AND SEED
- 13. REMOVE PERIMETER CONTROLS

# WETLAND **EROSION CC**



# SPECIAL WINTER CONSIDERATIONS

THE MAJOR FOCUS OF WINTER EROSION AND SEDIMENT CONTROL IS THE PERIODS OF INTENSE RUNOFF ASSOCIATED WITH MID-WINTER THAWS AND RAINSTORMS, AND THE SPRING MELT.

FROZEN GROUND MAKES THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES VERY DIFFICULT. INSTALLATION SHOULD TAKE PLACE WELL BEFORE THE GROUND FREEZES. MAINTENANCE IN WINTER WILL BE MUCH MORE TIME CONSUMING AND DIFFICULT THAN IN THE SUMMER. THE OVERALL CONSTRUCTION SCHEDULE AND THE WEEKLY WORK SCHEDULE WILL BE DEVELOPED TO INCREASE TIME, EFFORT, AND MANPOWER DEVOTED TO MAINTAINING THE EROSION AND SEDIMENT CONTROL MEASURES.

INTENSE RUNOFF IN MID-WINTER THAWS AND RAINSTORMS, AND THE SPRING MELT PERIOD, CAN RESULT IN MORE SEVERE EROSION AND SEDIMENTATION PROBLEMS THAN RUNOFF FROM SUMMER STORMS. THE SOIL IS OFTEN COMPLETELY SATURATED WITH WATER, AND IS ALSO OFTEN UNDERLAIN BY A FROST LAYER. BOTH OF THESE FACTORS RESULT IN A GREATER PERCENTAGE OF THE RAIN OR MELTWATER RUNNING OVER THE GROUND SURFACE. WINTER AND SPRING RAINSTORMS ARE OFTEN HEAVIER AND MORE INTENSE THAN SUMMER SHOWERS. FOR THESE REASONS, EROSION AND SEDIMENTATION CAN BE ESPECIALLY SEVERE IN MID-WINTER THAWS AND THE SPRING MELT.

- 1. CONTROL MEASURES FOR WINTER CONSTRUCTION:
- A. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
- B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS; AND
- C. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF GRAVEL PER NHDOT ITEM 304.2.
- D. MINIMIZE DISTURBED AREA AND TIME OF DISTURBANCE: DISTURBED AREA AND LENGTH OF DISTURBANCE SHALL BE MINIMIZED ESPECIALLY BETWEEN OCTOBER 15TH AND MAY 1ST.
- E. GRASSED OR RIP RAPPED SWALES AND DITCHES: INSTALLATION WILL OCCUR BEFORE GROUND FREEZES. CHANNELS ARE TO BE STABILIZED WITH STONE, RIPRAP, OR VEGETATION IMMEDIATELY. INSPECTIONS ARE TO BE FREQUENT WITH REMOVAL OF ANY FLOW BLOCKAGE CAUSED BY ICE OR SEDIMENT.
- F. MULCHING: MULCH ALONE SHOULD NOT BE CONSIDERED AN ADEQUATE EROSION AND SEDIMENT CONTROL TECHNIQUE FOR AREAS THAT ARE DISTURBED IN THE WINTER OR SPRING. MULCH IS EASILY WASHED AWAY BY INTENSE RUNOFF FLOWING OVER SATURATED OR FROZEN SOIL. IT IS ESSENTIAL THAT MULCH BE LAID DOWN IN SUCH A WAY THAT IT WILL NOT BLOW OR WASH AWAY.
- G. SILT FENCE: INSTALLATION IS REQUIRED BEFORE THE GROUND FREEZES. OTHERWISE STAKES WILL BE DIFFICULT TO DRIVE. INSPECT FREQUENTLY AND REMOVE ANY COLLECTED SEDIMENT PERIODS IN ORDER TO PROVIDE AS MUCH CAPACITY AS POSSIBLE.
- H. SNOW FENCE: INSTALLATION IS REQUIRED BEFORE THE GROUND FREEZES OTHERWISE STAKES WILL BE DIFFICULT TO DRIVE. FENCES MUST BE PLACED LIBERALLY AROUND THE WORK SITE TO KEEP SOIL DISTURBANCE TO AN ABSOLUTE MINIMUM.
- I. STONE CHECK DAMS: PER DETAIL THE PLACEMENT WILL OCCUR IN SWALES AND DITCHES AFTER FINAL GRADING AND IS TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED.
- 2. INSPECTION AND MAINTENANCE

INSPECTION OF EROSION AND SEDIMENT CONTROL MEASURES IS REQUIRED MORE FREQUENTLY IN THE WINTER AND SPRING THAN IN THE SUMMER. CAREFUL ATTENTION MUST BE GIVEN TO WEATHER PREDICTIONS. INSPECTION OF ALL CONTROL MEASURES WILL BE ONGOING TO ENSURE THAT STRUCTURES WILL MANAGE THE POTENTIALLY HEAVY AND INTENSE RUNOFF. CONSTANT MAINTENANCE OF CRITICAL CONTROL MEASURES MAY BE NECESSARY DURING THE WINTER AND EARLY SPRING TO PREVENT FAILURE OR OVERLOADING OF CONTROL MEASURES. A SECOND LINE OF CONTROL WILL BE QUICKLY INSTALLED IF PROBLEMS OCCUR. A SUBSTANTIAL AMOUNT OF TIME, EQUIPMENT, AND MANPOWER SHALL BE DEVOTED TO EROSION AND SEDIMENT CONTROL.

3. FOLLOW-UP

INSTALLATION OF PERMANENT VEGETATIVE CONTROLS WILL BE REQUIRED AS EARLY AS IS PRACTICAL AT THE BEGINNING OF THE GROWING SEASON.

	IT IS A VIOLATION OF LAW FO DIRECT DIRECTION OF A LICE ARCHITECT, OR LAND SURVEYO THE STAMP OF A LICENSED ARCHITECT, LANDSCAPE ARCHIT AND INCLUDE THE NOTATION " OF SUCH ALTERATION, AND A	OR ANY PERSON, UNLESS THEY ARE INSED PROFESSIONAL ENGINEER, AR OR, TO ALTER AN ITEM IN ANY WAY. PROFESSIONAL IS ALTERED, THE FECT, OR LAND SURVEYOR SHALL ST ALTERED BY" FOLLOWED BY THEIR S SPECIFIC DESCRIPTION OF THE ALTEF	ACTING UNDER THE CHITECT, LANDSCAPE IF AN ITEM BEARING ALTERING ENGINEER, AMP THE DOCUMENT SIGNATURE, THE DATE RATION.
		OF PORTSMOUTH MOUTH, NEW HAMPSH	
BY	Erosic	on Control Notes	RUCTION
•	SCALE: AS SHOWN DRAWN: SJS CHECKED: CJP / BRC	DESIGN: SJS PROJECT: 18082.01 DATE: OCTOBER 2024	<b>EPSC-1</b>
	BY	IT IS A VIOLATION OF LAW FOR DIRECT DIRECTION OF A LICE ARCHITECT, OR LAND SURVEYO THE STAMP OF A LICENSED ARCHITECT, LANDSCAPE ARCHIT AND INCLUDE THE NOTATION ' OF SUCH ALTERATION, AND A <b>CITY O</b> <b>PEVERLY HILL</b> BY <b>EROSIC</b> SCALE: AS SHOWN DRAWN: SJS CHECKED: C.JP / BRC	IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, AR ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL ST AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR S OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTEF PORTSMOUTH, NEW HAMPSH PEVERLLY HILL ROAD RECONST BY Erosion Control Notes SCALE: AS SHOWN DESIGN: SJS DRAWN: SJS PROJECT: 18082.01 CHECKED: C.IP/BRC DATE: OCTOBER 2024



EGIONAL DRIVE	DRAWN:
DRD, NH 03301	CHECKE

D:CJP/BRC DATE: OCTOBER 2024

13 OF 13

**Construction Sequence** 

# STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION PEVERLY HILL ROAD RECONSTRUCTION PROJECT CITY OF PORTSMOUTH, NEW HAMPSHIRE November 2024

# **Anticipated Construction Sequence**

# Notes:

- The project is anticipated to advertise near the end of 2025.
- The start of construction is anticipated to be in the winter of 2025/2026. Construction will be phased with traffic being maintained using flagger-controlled one-way alternating two-way traffic during working hours. Outside of working hours, two-way traffic would be utilized.
- The work in the wetlands and buffers is expected to start in the winter of 2025/2026 and be complete by the summer of 2026.
- The remaining portion of the project would be performed in 2026 and 2027 with construction being completed prior to the end of the 2027 construction season.
- The following sequence is preliminary and the likely order of construction but the exact means and methods will ultimately be decided by the selected contractor.

### **Construction Sequence:**

- 1.) Install appropriate perimeter controls for soil erosion and sediment control
- 2.) Complete tree clearing
- 3.) Construct stormwater basins
- 4.) Construct cross culverts
- 5.) Construct new watermain
- 6.) Construct new embankments and fill sections
- 7.) Construct new closed drainage system
- 8.) Construct new roadway subbase
- 9.) Pave roadway to binder grade
- 10.) Construct curbing
- 11.) Construct sidewalk and multi-use path
- 12.)Construct loam and seed
- 13.) Remove perimeter controls



**CONSTRUCTION SEQUENCE - 1** 

Wetland Data Forms

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Peverly Hill Road	City/County: Portsmouth	Sampl	ling Date: 03/13/	2024
Applicant/Owner: NHDOT		State:NH	Sampling Point:	B-UPL
Investigator(s): C Hilsinger	Section, Township, Range:			
Landform (hillside, terrace, etc.): Terrace	Local relief (concave, convex, none):	none	Slope (%):	1-2
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.0500	Long: -70.7786	6	Datum: NAD	083
Soil Map Unit Name: 38A - Eldridge fine sandy loam, 0 to 3 percent	slopes	NWI classification:	UPL	
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes <u>x</u> No(li	no, explain in Rema	arks.)	
Are Vegetation, Soil, or Hydrologysignification	ntly disturbed? Are "Normal Circum	stances" present?	Yes <u>x</u> N	lo
Are Vegetation, Soil, or Hydrologynaturally	/ problematic? (If needed, explain a	any answers in Rem	arks.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u>X</u> NoX	Is the Sampled Area within a Wetland?	Yes	No_X
Wetland Hydrology Present?	Yes	No <u>X</u>	If yes, optional Wetland S	ite ID:	
Remarks: (Explain alternative procedu	ures here or in a	a separate report.)			
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is	required; chec	k all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)		Water-Stained Le	eaves (B9)	Drainage Pat	terns (B10)
High Water Table (A2)		Aquatic Fauna (E	313)	Moss Trim Li	nes (B16)
Saturation (A3)		Marl Deposits (B	15)	Dry-Season \	Nater Table (C2)
Water Marks (B1)		Hydrogen Sulfide	Odor (C1)	Crayfish Burr	rows (C8)
Sediment Deposits (B2)		Oxidized Rhizosp	oheres on Living Roots (C3)	Saturation Vi	sible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Red	uced Iron (C4)	Stunted or St	ressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Redu	uction in Tilled Soils (C6)	Geomorphic	Position (D2)
			(0-)		

Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquita	Shallow Aquitard (D3)		
Inundation Visible on A	erial Imager	y (B7)	Other (Explain in Remarks)	Microtopograph	nic Relief (D4)	
Sparsely Vegetated Col	ncave Surfa	ce (B8)		FAC-Neutral Te	∍st (D5)	
Field Observations:						
Surface Water Present?	Yes	No	Depth (inches):			
Water Table Present?	Yes	No	Depth (inches):			
Saturation Present?	Yes	No	Depth (inches):	Wetland Hydrology Present?	Yes	<u>No X</u>
(includes capillary fringe)						
Describe Recorded Data (st	ream gauge	, monitoring	g well, aerial photos, previous ins	pections), if available:		
Remarks:						

## **VEGETATION** – Use scientific names of plants.

Sampling Point: B-UPL

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant
4				Species Across All Strata: 4 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 25.0% (A/B)
7.				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15 )				OBL species 0 $x = 0$
1. Francula alnus	5	No	FAC	FACW species $0 \times 2 = 0$
2 Liquetrum vulgare		No	FACU	EAC species 20 x 3 = 60
2. Eigustrum vulgare		Vee		$\frac{1}{20} = \frac{1}{20} $
	15	Yes		FACO species $38$ $x = 152$
4. Lonicera morrowii	15	Yes	FACU	UPL species $5 \times 5 = 25$
5. <u>Malus sp</u>	5	No		Column Totals: 63 (A) 237 (B)
6				Prevalence Index = B/A =3.76
7				Hydrophytic Vegetation Indicators:
	48	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5 )				2 - Dominance Test is >50%
1. Solidago rugosa	15	Yes	FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
3.				data in Remarks or on a separate sheet)
4.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5				<sup>1</sup> Indicators of bydric soil and wetland bydrology must
6.				be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
9				at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	15	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 15 )				Woody vines – All woody vines greater than 3.28 ft in
1. Celastrus orbiculatus	5	Yes	UPL	height.
2.				
3.				Hydrophytic
4.				vegetation Present? Yes No X
	5	-Total Cover		
Pomarka: (Include photo numbers here ar an anot				1
Lots of dead shrubs and sumac in vicinity	ale Sileel.)			

SO	IL
----	----

Profile De	escription: (Describe	e to the d	epth needed to docu	ument th	e indicate	or or cont	firm the absence of indication	ators.)
Depth	Matrix		Redo	x Featur	es	2		
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks
0-5	2.5Y 3/3	100					Sandy	
5-12	2.5Y 4/3	100					Sandy	
							<u> </u>	
	-Concentration D-De		M-Poducod Matrix C	-Covo		tod Sand	Grains <sup>2</sup> Location: [	PL-Pore Lining M-Matrix
Hydric Sc	oil Indicators:	pielion, r		/S=C0ve		aleu Sanu	Indicators for Proble	matic Hydric Soils <sup>3</sup> :
Histo	sol (A1)		Polyvalue Belov	w Surface	e (S8) ( <b>LR</b>	RR,	2 cm Muck (A10)	(LRR K, L, MLRA 149B)
Histic	Epipedon (A2)		MLRA 149B)		. , .		Coast Prairie Red	dox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ice (S9) (	LRR R, N	ILRA 149	B) 5 cm Mucky Pear	t or Peat (S3) ( <b>LRR K, L, R</b> )
Hydro	ogen Sulfide (A4)		High Chroma Sa	ands (S1	1) ( <b>LRR Þ</b>	K, L)	Polyvalue Below	Surface (S8) (LRR K, L)
Strati	fied Layers (A5)		Loamy Mucky M	/lineral (F	1) (LRR I	<b>(, L</b> )	Thin Dark Surfac	e (S9) ( <b>LRR K, L</b> )
Deple	eted Below Dark Surfa	ce (A11)	Loamy Gleyed	Matrix (F:	2)		Iron-Manganese	Masses (F12) ( <b>LRR K, L, R</b> )
Thick	Dark Surface (A12)		Depleted Matrix	: (F3)			Piedmont Floodp	lain Soils (F19) ( <b>MLRA 149B</b> )
Sand	y Mucky Mineral (S1)		Redox Dark Sur	rface (F6	)		Mesic Spodic (TA	A6) ( <b>MLRA 144A, 145, 149B</b> )
Sand	y Gleyed Matrix (S4)		Depleted Dark S	Surface (	F7)		Red Parent Mate	rial (F21)
Sand	y Redox (S5)		Redox Depressi	ions (F8)			Very Shallow Da	k Surface (TF12)
Stripp	bed Matrix (S6)		Marl (F10) (LRF	₹ K, L)			Other (Explain in	Remarks)
Dark	Surface (S7)							
<sup>3</sup> Indicator	s of hydrophytic yeaet	ation and	wetland hydrology mu	ust be pro	esent. unle	ess disturk	ped or problematic.	
Restrictiv	ve Layer (if observed	):		<u></u>				
Type:								
Depth (i	inches):						Hydric Soil Present?	Yes <u>No X</u>
Remarks:				-				
This data	form is revised from N	Jorthcentr	al and Northeast Regi	ional Sur	plement \	/ersion 2.	0 to reflect the NRCS Field	Indicators of Hydric Soils
version 7.	0 March 2013 Errata.	(http://ww	w.nrcs.usda.gov/Inter	net/FSE_		ENTS/nrcs	s142p2_051293.docx)	

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site:	City/County:	Sampling Date:
Applicant/Owner:	S	ate: Sampling Point:
Investigator(s):	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):
Subregion (LRR or MLRA): Lat:	Long:	Datum:
Soil Map Unit Name:		NWI classification:
Are climatic / hydrologic conditions on the site typical for this tim	ne of year? Yes No (If ne	o, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signi	ficantly disturbed? Are "Normal Cire	cumstances" present? Yes No
Are Vegetation, Soil, or Hydrology nature	rally problematic? (If needed, expla	in any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in	a separate report.)	

# HYDROLOGY

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

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size:	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1	<u></u>		Number of Dominant Species
··			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
5			
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)			FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3.			UPL species x 5 =
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
5			Hydronhytic Vegetation Indicators:
6			1 - Rapid Test for Hydrophytic Vegetation
/			2 - Dominance Test is >50%
		= Total Cover	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size:)			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
2.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			
4			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6.			
7.			<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8			
9			and greater than or equal to 3.28 ft (1 m) tall.
10			
			of size, and woody plants less than 3.28 ft tall.
10		·	<b>Woody vines</b> $-$ All woody vines greater than 3.28 ft in
12			height.
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			
3			Hydrophytic
4			Vegetation Present? Yes No
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

SOIL	
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Depth _ Matrix	Red	ox Features					
<u>(inches)</u> Color (moist) %	Color (moist)		Type <sup>1</sup>	C2		Remark	S
		·					
		·					
		·					
Type: C=Concentration, D=Depletion, ydric Soil Indicators:	RM=Reduced Matrix, N	1S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=Pc Indicators for Prol	ore Lining, M=N Diematic Hydr	/latrix. ic Soils <sup>3</sup> :
Histosol (A1)       Polyvalue Below Su         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (A14)         Hydrogen Sulfide (A4)       Loamy Mucky Miner         Stratified Layers (A5)       Loamy Gleyed Matrix         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       Redox Dark Surface         Sandy Mucky Mineral (S1)       Depleted Dark Surface         Sandy Gleyed Matrix (S4)       Redox Depressions         Sandy Redox (S5)       Stripped Matrix (S6)         Dark Surface (S7) (LRR R, MLRA 149B) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be			S8) (LRF RR R, MI ) (LRR K 7)	R R, RA 149B) , L)	<ul> <li>2 cm Muck (A10) (LRR K, L, MLRA 149B)</li> <li>Coast Prairie Redox (A16) (LRR K, L, R)</li> <li>5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li>Dark Surface (S7) (LRR K, L)</li> <li>Polyvalue Below Surface (S8) (LRR K, L)</li> <li>Thin Dark Surface (S9) (LRR K, L)</li> <li>Iron-Manganese Masses (F12) (LRR K, L, R</li> <li>Piedmont Floodplain Soils (F19) (MLRA 149</li> <li>Mesic Spodic (TA6) (MLRA 144A, 145, 149E</li> <li>Red Parent Material (F21)</li> <li>Very Shallow Dark Surface (TF12)</li> <li>Other (Explain in Remarks)</li> </ul>		
Restrictive Layer (if observed): Type:							
Depth (inches):					Hydric Soil Present	? Yes	No
Project/Site:	City/County:	Sampling Date:					
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Applicant/Owner:	Sta	te: Sampling Point:					
Investigator(s):	Section, Township, Range:						
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):					
Subregion (LRR or MLRA): Lat:	Long:	Datum:					
Soil Map Unit Name:		NWI classification:					
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes No (If no	explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circ	umstances" present? Yes No					
Are Vegetation, Soil, or Hydrology natural	y problematic? (If needed, explai	n any answers in Remarks.)					

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in	a separate report.)	

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

Tree Stratum (Plot size:	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1	<u></u>		Number of Dominant Species
··			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
5			
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)			FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3.			UPL species x 5 =
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
5			Hydronhytic Vegetation Indicators:
6			1 - Rapid Test for Hydrophytic Vegetation
/			2 - Dominance Test is >50%
		= Total Cover	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size:)			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
2.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			
4			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6.			
7.			<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8			
9			and greater than or equal to 3.28 ft (1 m) tall.
10			
			of size, and woody plants less than 3.28 ft tall.
10		·	<b>Woody vines</b> $-$ All woody vines greater than 3.28 ft in
12			height.
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			
3			Hydrophytic
4			Vegetation Present? Yes No
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

SOIL	
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Depth _ Matrix	Red	ox Features					
<u>(inches)</u> Color (moist) %	Color (moist)		Type <sup>1</sup>			Remark	S
		·					
		·					
		·					
Type: C=Concentration, D=Depletion, ydric Soil Indicators:	RM=Reduced Matrix, N	1S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=Pc Indicators for Prol	ore Lining, M=N Diematic Hydr	Matrix. ic Soils <sup>3</sup> :
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA</li> </ul>	Polyvalue Bela MLRA 149E Thin Dark Sur Loamy Mucky Loamy Gleyed Depleted Matr Redox Dark S Depleted Dark Redox Depres 149B) d wetland hydrology mu	bw Surface ( <b>3</b> ) face (S9) ( <b>LI</b> Mineral (F1) I Matrix (F2) ix (F3) urface (F6) Surface (F7) sions (F8) ust be preser	S8) (LRF RR R, MI ) (LRR K 7)	R R, RA 149B) , L)	<ul> <li>2 cm Muck (A1</li> <li>Coast Prairie R</li> <li>5 cm Mucky Pe</li> <li>Dark Surface (3)</li> <li>Polyvalue Belo</li> <li>Thin Dark Surface</li> <li>Iron-Manganes</li> <li>Piedmont Floor</li> <li>Mesic Spodic (</li> <li>Red Parent Ma</li> <li>Very Shallow D</li> <li>Other (Explain</li> </ul>	0) (LRR K, L, ledox (A16) (Ll eat or Peat (S3 57) (LRR K, L) w Surface (S8) ace (S9) (LRR e Masses (F12 dplain Soils (F TA6) (MLRA 1 terial (F21) Park Surface (T in Remarks)	MLRA 149B) RR K, L, R) ) (LRR K, L, R) ) ) (LRR K, L) 2) (LRR K, L, R 19) (MLRA 149 44A, 145, 149I "F12)
Restrictive Layer (if observed): Type:							
Depth (inches):					Hydric Soil Present	? Yes	No

Project/Site:	City/County:	Sampling Date:
Applicant/Owner:	Sta	te: Sampling Point:
Investigator(s):	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):
Subregion (LRR or MLRA): Lat:	Long:	Datum:
Soil Map Unit Name:		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes No (If no	explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circ	umstances" present? Yes No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If needed, explai	n any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in	a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
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Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
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Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present?    Yes No Depth (inches):	
Water Table Present?     Yes No Depth (inches):       Saturation Present?     Yes No Depth (inches):	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Presented Data (stream gauge monitoring well period photos previous inspective)	Wetland Hydrology Present?       Yes No         tions) if available:
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	Wetland Hydrology Present?       Yes       No         ctions), if available:
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No ctions), if available:
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No trions), if available:
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes No

Tree Stratum (Plot size:	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1	<u></u>		Number of Dominant Species
··			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
5			
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)			FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3.			UPL species x 5 =
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
5			Hydronhytic Vegetation Indicators:
6			1 - Rapid Test for Hydrophytic Vegetation
/			2 - Dominance Test is >50%
		= Total Cover	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size:)			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
2.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			
4			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6.			
7.			<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8			
9			and greater than or equal to 3.28 ft (1 m) tall.
10			
			of size, and woody plants less than 3.28 ft tall.
10		·	<b>Woody vines</b> $-$ All woody vines greater than 3.28 ft in
12			height.
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			
3			Hydrophytic
4			Vegetation Present? Yes No
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

SOIL	
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Depth _ Matrix	Red	ox Features					
<u>(inches)</u> Color (moist) %	Color (moist)		Type <sup>1</sup>			Remark	S
		·					
		·					
Type: C=Concentration, D=Depletion, ydric Soil Indicators:	RM=Reduced Matrix, N	1S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=Pc Indicators for Prol	ore Lining, M=N Diematic Hydr	Matrix. ic Soils <sup>3</sup> :
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA</li> </ul>	Polyvalue Bela MLRA 149E Thin Dark Sur Loamy Mucky Loamy Gleyed Depleted Matr Redox Dark S Depleted Dark Redox Depres 149B) d wetland hydrology mu	bw Surface ( <b>3</b> ) face (S9) ( <b>LI</b> Mineral (F1) I Matrix (F2) ix (F3) urface (F6) Surface (F7) sions (F8) ust be preser	S8) (LRF RR R, MI ) (LRR K 7)	R R, RA 149B) , L)	<ul> <li>2 cm Muck (A1</li> <li>Coast Prairie R</li> <li>5 cm Mucky Pe</li> <li>Dark Surface (3)</li> <li>Polyvalue Belo</li> <li>Thin Dark Surface</li> <li>Iron-Manganes</li> <li>Piedmont Floor</li> <li>Mesic Spodic (</li> <li>Red Parent Ma</li> <li>Very Shallow D</li> <li>Other (Explain</li> </ul>	0) (LRR K, L, ledox (A16) (Ll eat or Peat (S3 57) (LRR K, L) w Surface (S8) ace (S9) (LRR e Masses (F12 dplain Soils (F TA6) (MLRA 1 terial (F21) Park Surface (T in Remarks)	MLRA 149B) RR K, L, R) ) (LRR K, L, R) ) ) (LRR K, L) 2) (LRR K, L, R 19) (MLRA 149 44A, 145, 149I "F12)
Restrictive Layer (if observed): Type:							
Depth (inches):					Hydric Soil Present	? Yes	No

Project/Site:	City/County:	Sampling Date:
Applicant/Owner:	Sta	te: Sampling Point:
Investigator(s):	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):
Subregion (LRR or MLRA): Lat:	Long:	Datum:
Soil Map Unit Name:		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes No (If no	explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circ	umstances" present? Yes No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If needed, explai	n any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in	a separate report.)	

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

Tree Stratum (Plot size:	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1	<u></u>		Number of Dominant Species
··			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
5			
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)			FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3.			UPL species x 5 =
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
5			Hydronhytic Vegetation Indicators:
6			1 - Rapid Test for Hydrophytic Vegetation
/			2 - Dominance Test is >50%
		= Total Cover	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size:)			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
2.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			
4			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6.			
7.			<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8			
9			and greater than or equal to 3.28 ft (1 m) tall.
10			
			of size, and woody plants less than 3.28 ft tall.
10		·	<b>Woody vines</b> $-$ All woody vines greater than 3.28 ft in
12			height.
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			
3			Hydrophytic
4			Vegetation Present? Yes No
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

SOIL	
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Depth _ Matrix	Red	ox Features					
<u>(inches)</u> Color (moist) %	Color (moist)		Type <sup>1</sup>	2		Remark	S
		·					
		·					
Type: C=Concentration, D=Depletion, ydric Soil Indicators:	RM=Reduced Matrix, N	1S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=Pc Indicators for Prol	ore Lining, M=N Diematic Hydr	Matrix. ic Soils <sup>3</sup> :
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA</li> </ul>	Polyvalue Bela MLRA 149E Thin Dark Suri Loamy Mucky Loamy Gleyed ) Depleted Matr Redox Dark S Depleted Dark Redox Depress 149B) d wetland hydrology mu	bw Surface ( <b>3</b> ) face (S9) ( <b>LI</b> Mineral (F1) I Matrix (F2) ix (F3) urface (F6) Surface (F7) sions (F8) ust be preser	S8) (LRF RR R, MI ) (LRR K 7)	R R, RA 149B) , L)	<ul> <li>2 cm Muck (A1</li> <li>Coast Prairie R</li> <li>5 cm Mucky Pe</li> <li>Dark Surface (3)</li> <li>Polyvalue Belo</li> <li>Thin Dark Surface</li> <li>Iron-Manganes</li> <li>Piedmont Floor</li> <li>Mesic Spodic (</li> <li>Red Parent Ma</li> <li>Very Shallow D</li> <li>Other (Explain</li> </ul>	0) (LRR K, L, ledox (A16) (Ll eat or Peat (S3 57) (LRR K, L) w Surface (S8) ace (S9) (LRR e Masses (F12 dplain Soils (F TA6) (MLRA 1 terial (F21) Park Surface (T in Remarks)	MLRA 149B) RR K, L, R) ) (LRR K, L, R) ) ) (LRR K, L) 2) (LRR K, L, R 19) (MLRA 149 44A, 145, 149I "F12)
Restrictive Layer (if observed): Type:							
Depth (inches):					Hydric Soil Present	? Yes	No

Project/Site:	City/County:	Sampling Date:
Applicant/Owner:	Sta	te: Sampling Point:
Investigator(s):	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):
Subregion (LRR or MLRA): Lat:	Long:	Datum:
Soil Map Unit Name:		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes No (If no	explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circ	umstances" present? Yes No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If needed, explai	n any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in	a separate report.)	

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

Tree Stratum (Plot size:	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1	<u></u>		Number of Dominant Species
··			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
5			
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)			FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3.			UPL species x 5 =
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
5			Hydronhytic Vegetation Indicators:
6			1 - Rapid Test for Hydrophytic Vegetation
/			2 - Dominance Test is >50%
		= Total Cover	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size:)			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
2.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			
4			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6.			
7.			<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8			
9			and greater than or equal to 3.28 ft (1 m) tall.
10			
			of size, and woody plants less than 3.28 ft tall.
10		·	<b>Woody vines</b> $-$ All woody vines greater than 3.28 ft in
12			height.
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			
3			Hydrophytic
4			Vegetation Present? Yes No
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

SOIL	
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Depth _ Matrix	Red	ox Features					
<u>(inches)</u> Color (moist) %	Color (moist)		Type <sup>1</sup>			Remark	S
		·					
		·					
Type: C=Concentration, D=Depletion, ydric Soil Indicators:	RM=Reduced Matrix, N	1S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=Pc Indicators for Prol	ore Lining, M=N Diematic Hydr	Matrix. ic Soils <sup>3</sup> :
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA</li> </ul>	Polyvalue Bela MLRA 149E Thin Dark Sur Loamy Mucky Loamy Gleyed Depleted Matr Redox Dark S Depleted Dark Redox Depres 149B) d wetland hydrology mu	bw Surface ( <b>3</b> ) face (S9) ( <b>LI</b> Mineral (F1) I Matrix (F2) ix (F3) urface (F6) Surface (F7) sions (F8) ust be preser	S8) (LRF RR R, MI ) (LRR K 7)	R R, RA 149B) , L)	<ul> <li>2 cm Muck (A1</li> <li>Coast Prairie R</li> <li>5 cm Mucky Pe</li> <li>Dark Surface (3</li> <li>Polyvalue Belo</li> <li>Thin Dark Surface</li> <li>Iron-Manganes</li> <li>Piedmont Floor</li> <li>Mesic Spodic (</li> <li>Red Parent Ma</li> <li>Very Shallow D</li> <li>Other (Explain</li> </ul>	0) (LRR K, L, ledox (A16) (Ll eat or Peat (S3 57) (LRR K, L) w Surface (S8) ace (S9) (LRR e Masses (F12 dplain Soils (F TA6) (MLRA 1 terial (F21) Park Surface (T in Remarks)	MLRA 149B) RR K, L, R) ) (LRR K, L, R) ) ) (LRR K, L) 2) (LRR K, L, R 19) (MLRA 149 44A, 145, 149I "F12)
Restrictive Layer (if observed): Type:							
Depth (inches):					Hydric Soil Present	? Yes	No

Project/Site: Peverly Hill Road	City/County: Portsmouth	Sampling Date: 03/13/2024
Applicant/Owner: NHDOT	State:	NH Sampling Point: F-UPL
Investigator(s): C Hilsinger	Section, Township, Range:	
Landform (hillside, terrace, etc.): Terrace, slope	Local relief (concave, convex, none): convex	Slope (%): 5
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.0554	Long: -70.7801	Datum: NAD83
Soil Map Unit Name: 510B/33A - Hoosic gravelly fine sandy loam, 3 to 8 percent	slopes/ Scitico silt loam, 0 to 5 precent slopes NWI class	sification: UPL
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes <u>x</u> No(If no, explai	n in Remarks.)
Are Vegetation, Soil, or Hydrologysignification	antly disturbed? Are "Normal Circumstances" p	present? Yes x No
Are Vegetation, Soil, or Hydrologynaturally	y problematic? (If needed, explain any answe	rs in Remarks.)

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

r						
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	No <u>X</u>	
Remarks: (Explain alternative proce	dures here or in	a separate report.)	1			
IIIDKOLOGI						
Wetland Hydrology Indicators:				Secondary Indicat	ors (minimum of two required)	
Primary Indicators (minimum of one	is required; cheo	ck all that apply)		Surface Soil C	Cracks (B6)	
Surface Water (A1)		Water-Stained Le	eaves (B9)	Drainage Patterns (B10)		
High Water Table (A2) Aquatic Fauna (B13) Mose				Moss Trim Lir	Moss Trim Lines (B16)	
Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2)				Vater Table (C2)		
Water Marks (B1) Hydrogen Sulfide Odor (C1) Cravfish Burrows (C8)				ows (C8)		
Sediment Deposits (B2)		Oxidized Rhizosp	oheres on Living Roots (C3)	Saturation Vis	ible on Aerial Imagery (C9)	
Drift Deposits (B3)		Presence of Red	uced Iron (C4)	Stunted or Str	essed Plants (D1)	
Algal Mat or Crust (B4)		Recent Iron Redu	uction in Tilled Soils (C6)	Geomorphic F	Position (D2)	
Iron Deposits (B5)	e (C7) Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Rel				phic Relief (D4)		
Sparsely Vegetated Concave St	urface (B8)			FAC-Neutral	Fest (D5)	
Field Observations						
Surface Water Present? Yes	No	Depth (inches):				
Water Table Present? Yes	No	Depth (inches):				
Saturation Present? Yes	No	Depth (inches):	Wetland Hv	drology Present?	Yes No X	
(includes capillary fringe)						
Describe Recorded Data (stream ga		woll agrial photos	provious inspections) if avai	labla:		
Describe Recorded Data (stream ga	uge, monitoring	weii, aenai priotos,	previous inspections); il avai			
Domorko						
Remarks:						

#### **VEGETATION** – Use scientific names of plants.

Sampling Point: F-UPL

Trop Stratum (Plot size: 20)	Absolute	Dominant Species2	Indicator	Dominanco Tost workshoot:	
<u>The Stratum</u> (Flot Size. <u>50</u> )	7	No	Sidius	Dominance rest worksheet.	
Rohinia pseudoacacia		Yes	FACU	Number of Dominant Species	
3 Retula nonulifolia	10	Yes	FAC		
4 Rhampus cathartica	7	<u> </u>	FAC	Total Number of Dominant Species Across All Strata: 8 (B)	
5 Prunus serotina	10	Vos	FACU		
	10	163	1700	Percent of Dominant Species	
7				Prevalence Index worksheet:	
	49	=Total Cover		Total % Cover of: Multiply by:	
Sapling/Shrub Stratum (Plot size: 15 )				$\frac{1}{\text{OBL species}} \qquad 0 \qquad \text{x1} = 0$	
1. Rhamnus cathartica	15	Yes	FAC	FACW species $0   x 2 = 0$	
2. Ligustrum vulgare	5	Yes	FACU	FAC species $32 \times 3 = 96$	
3. Rosa multiflora	5	Yes	FACU	FACU species 65 x 4 = 260	
4.				UPL species $5 \times 5 = 25$	
5.				Column Totals: 102 (A) 381 (B)	
6.				Prevalence Index = B/A = 3.74	
7.				Hydrophytic Vegetation Indicators:	
	25	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation	
Herb Stratum (Plot size: 5 )				2 - Dominance Test is >50%	
1. Alliaria petiolata	30	Yes	FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2.				4 - Morphological Adaptations <sup>1</sup> (Provide supporting	
3.				data in Remarks or on a separate sheet)	
4.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5.				<sup>1</sup> Indicators of hydric soil and wotland hydrology must	
6.				be present, unless disturbed or problematic.	
7			<u> </u>	Definitions of Vegetation Strata:	
8			·	Tree – Woody plants 3 in. (7.6 cm) or more in diameter	
9				at breast height (DBH), regardless of height.	
10				Sapling/shrub – Woody plants less than 3 in. DBH	
11				and greater than or equal to 3.28 ft (1 m) tall.	
12				Herb – All herbaceous (non-woody) plants, regardless	
	30	=Total Cover		of size, and woody plants less than 3.28 ft tall.	
Woody Vine Stratum (Plot size: 15 )				Woody vines – All woody vines greater than 3.28 ft in	
1. Celastrus orbiculatus	5	Yes	UPL	height.	
2				Hydrophytic	
3				Vegetation	
4.				Present?         Yes         No         X	
	5	=Total Cover			
Remarks: (Include photo numbers here or on a separ	ate sheet.)				
Lots of dead shrubs and sumac in vicinity					

SO	IL
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Depth       Matrix       Redox Features         Color (moist)       %       Type       Loc       Texture       Remarks         0-6       10YR 2/2       100       Sandy       gravelly         6-14       10YR 3/3       100       Sandy       gravelly         6-14       10YR 3/3       100       Sandy       gravelly         9       0       Sandy       gravelly       gravelly         9       0       0       Sandy       gravelly         9       0       0       0       Sandy       gravelly         9       0       0       0       0       Sandy       gravelly         9       0       0       0       0       Sandy       gravelly         9       0       0       0       0       0       0       0         9       0       0       0       0       0       0	Profile De	scription: (Describe	e to the de	epth needed to docu	ument th	e indicate	or or conf	irm the absence of indic	ators.)
(inches)       Color (most)       %       Loc       Lexture       Remarks         0-6       10YR 2/2       100       Sandy       gravely         6-14       10YR 3/3       100       Sandy       gravely         6-14       10YR 3/3       100       Sandy       gravely         6-14       10YR 3/3       100       Sandy       gravely         6       IoYR 2/2       IoW       Sandy       gravely         6       IoYR 2/3       100       Sandy       gravely         6       IoYR 2/2       IoW       Sandy       gravely         6       IoYR 2/2       IoW       Sandy       gravely         6       IoYR 2/2       IoW       Sandy       gravely         7       IoWR 2/2       IoWR 2/2       IoWR 2/2       IoWR 2/2         7       IoWR 2/2       IoWR 2/2       IoWR 2/2       IoWR 2/2         7       IoWR 2/2       IoWR 2/2       IoWR 2/2       IoWR 2/2         7       IoWR 2/2       IoWR 2/2       IoWR 2/2       IoWR 2/2         8       IoWR 2/2       IoWR 2/2       IoWR 2/2       IoWR 2/2         9       IoWR 2/2       IoWR 2/2       IoWR 2/2	Depth	Matrix		Redo	x Featur	es - 1	- 2	<b>-</b> .	
0-6       10YR 2/2       100       Sandy         6-14       10YR 3/3       100       Sandy       gravelly         9       100       Sandy       gravelly       gravelly         9       100       100       Sandy       gravelly         9       100       100       100       100       100         100       100       100       100       100       100       100         100       100       100       100       100       100       100       100         11       100 <td< td=""><td>(inches)</td><td>Color (moist)</td><td>%</td><td>Color (moist)</td><td>%</td><td>Type</td><td>Loc</td><td>lexture</td><td>Remarks</td></td<>	(inches)	Color (moist)	%	Color (moist)	%	Type	Loc	lexture	Remarks
6-14       10YR 3/3       100       Sandy       gravely         6-14       10YR 3/3       100       gravely       gravely         9       9       9       9       9         9       9       9       9       9         9       9       9       9       9         9       9       9       9       9         9       9       9       9       9       9         9       9       9       9       9       9       9         17 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Matrix.         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, Histosol (A2)       MLRA 149B)       Coast Praine Redox (A16) (LRR K, L, R)         9       Black Histic CA3       Thin Dark Surface (S9) (LRR K, L)       Coast Praine Redox (A16) (LRR K, L, R)         9       9       100       100 RM Kir (F2)       Polyvalue Below Surface (S3) (LRR K, L)         9       100 Am Surface (A11)       Loamy Gleyed Matrix (F3)       Polyvalue Selow Surface (S3) (LRR K, L)         9       100 Am Surface (A11)       Loamy Gleyed Matrix (F3)       Piedmont Floodplain Sols (F19) (MLRA 1448)         9       Sandy Below Dark Surface (F5) </td <td>0-6</td> <td>10YR 2/2</td> <td>100</td> <td></td> <td></td> <td></td> <td></td> <td>Sandy</td> <td></td>	0-6	10YR 2/2	100					Sandy	
Image: Solution is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soil Present?	6-14	10YR 3/3	100					Sandy	gravelly
Image: Solution of the second state									• •
Image: second									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>1</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S8) (LRR R, MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S8) (LRR K, L, R)         Polyvalue Below Surface (S8) (LRR K, L, R)       Polyvalue Below Surface (S8) (LRR K, L, R)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Mucky Mineral (F1) (LRR K, L)         Thick Dark Surface (A12)       Depleted Matrix (F2)         Sandy Mucky Mineral (F1)       Redox Dark Surface (F6)         Sandy Mucky Mineral (F1)       Redox Dark Surface (F7)         Sandy Mucky Mineral (F1)       Redox Depressions (F8)         Stripped Matrix (S4)       Depleted Dark Surface (F7)         Sandy Mucky Mineral (F10) (LRR K, L)       Other (Explain in Remarks)         Dark Surface (S7)       Matri (F10) (LRR K, L)         Stripped Matrix (S5)       Redox Dark Surface (F7)         Back Transe:       Hydric Soil Present?       Yes									
Image: space of the system									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)         Black Histic (A3)       High Chroma Sands (S11) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Mucky Mineral (F1) (LRR K, L)         Depleted Below Dark Surface (A12)       Depleted Matrix (F2)         Thick Dark Surface (A12)       Depleted Matrix (F3)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)         Sandy Redox (S6)       Matri (F10) (LRR K, L)         Stripped Matrix (S6)       Redox Dark Surface (F7)         Stripped Matrix (S6)       Matri (F10) (LRR K, L)         Dark Surface (S7)       Redox Dark Surface (F7)         Stripped Matrix (S6)       Matri (F10) (LRR K, L)         Dark Surface (S7)       Matrix (F3)         Stripped (ff observed):       Type:         Type:       Depleted Tore Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)									
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Edack Histic (A3)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A12)       Depleted Matrix (F2)         Depleted Matrix (F2)       Iron-Manganese Masses (F12) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)         Sandy Gleyed Matrix (S4)       Depleted Dark Surface (F7)         Sandy Gleyed Matrix (S6)       Mart (F10) (LRR K, L)         Dark Surface (S7)       Red Parent Material (F21) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (If observed):       Type:         Type:       Depleted Torm Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Interet/FSE_DOCUMENTS/nrcs142p2_051293.docx)									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histis Expland (A2)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LRR K, L)         Hydrogen Suffide (A4)       High Chroma Sands (S11) (LRR K, L)         Stratified Layers (A5)       Loamy Wlocky Mineral (F1) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Gleyed Matrix (F2)         Think Dark Surface (A12)       Depleted Matrix (F3)         Sandy Gleyed Matrix (S4)       Depleted Dark Surface (F6)         Sandy Gleyed Matrix (S4)       Depleted Dark Surface (F7)         Sandy Redox (S5)       Redox Depressions (F8)         Sinpled Matrix (S4)       Depleted Dark Surface (F7)         Sandy Redox (S5)       Mark (F10) (LRR K, L)         Stripped Matrix (S4)       Depleted Dark Surface (F7)         Bark Surface (S7)       Mark (F10) (LRR K, L)         Singent Matrix (S6)       Mark (F10) (LRR K, L)         Dark Surface (S7)       Mark (									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>2</sup> :         Histic Epipedon (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)         Polyvalue Below Surface (S9) (LRR K, L)       Polyvalue Below Surface (S9) (LRR K, L, R)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Gleyed Matrix (F2)         Thick Dark Surface (A12)       Depleted Matrix (F3)         Thick Dark Surface (A12)       Depleted Dark Surface (F6)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F7)         Sandy Gleyed Matrix (S4)       Depleted Dark Surface (F7)         Sandy Redox (S5)       Redox Depressions (F8)         Stripped Matrix (S6)       Marl (F10) (LRR K, L)         Dark Surface (S7)       Other (Explain in Remarks)         Type:       Depleted for Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)									
Image: Carlon concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)         Hydrogen Sulfide (A4)       High Chroma Sands (S11) (LRR K, L)       Polyvalue Below Surface (S9) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Mucky Mineral (F1) (LRR K, L)       Thin Dark Surface (S9) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Depleted Matrix (F2)       Trin Dark Surface (S9) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)       Mesic Spodic (TA6) (MLRA 144B)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F7)       Red Parent Material (F21)         Sandy Redox (S5)       Redox Dark Surface (F7)       Red Parent Material (F21)         Sandy Redox (S6)       Mart (F10) (LRR K, L)       Other (Explain in Remarks)         Dark Surface (S7)       Matrix (S6)       Mart (F10) (LRR K, L)         ************************************									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)         Histosol (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)         Hydrogen Sulfide (A4)       High Chroma Sands (S11) (LRR K, L)         Polyvalue Below Dark Surface (A11)       Loamy Mucky Mineral (F1) (LRR K, L)         Depleted Below Dark Surface (A12)       Depleted Matrix (F2)         Thin-Marganese Masses (F12) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F7)         Sandy Redox (S5)       Redox Depressions (F8)         Sandy Redox (S5)       Redox Depressions (F8)         Other (Explain in Remarks)       Other (Explain in Remarks)         Dark Surface (S7)       Mart (F10) (LRR K, L) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Referent?         Restrictive Layer (If observed):       Type:       Depleted Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>2</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, Latter Structure Structure Structure Structure Structure Structure Structure Latter Structure									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, LRA 149B)       2 cm Muck (A10) (LRR K, L, MLRA 149B)         Histic Epipedon (A2)       MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       5 cm Mucky Peat or Peat (S3) (LRR K, L, R)         Hydrogen Sulfide (A4)       High Chroma Sands (S11) (LRR K, L)       Polyvalue Below Surface (S9) (LRR K, L)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)       Thin Dark Surface (S9) (LRR K, L)         Thick Dark Surface (A12)       Depleted Matrix (F2)       Iron-Manganese Masses (F12) (LRR K, L, R)         Thick Dark Surface (A12)       Depleted Matrix (F3)       Piedmont Floodplain Soils (F19) (MLRA 149B)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         Stripped Matrix (S6)       Marl (F10) (LRR K, L)       Other (Explain in Remarks)         Dark Surface (S7)       Hedox Depressions (F8)       Very Shallow Dark Surface (TF12)         3 <sup>a</sup> Indicators of hydrophytic vegetation and wetland hydrology m									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, HLRA 149B)         Histosol (A2)       MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)         Hydrogen Sulfide (A4)       High Chroma Sands (S11) (LRR K, L)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Gleyed Matrix (F2)         Thic Dark Surface (A12)       Depleted Matrix (F3)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)         Sandy Redox (S5)       Redox Depressions (F8)         Sandy Redox (S5)       Redox Depressions (F8)         Dark Surface (S7)       Warf (F10) (LRR K, L) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Reemarks:         This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)       2 cm Muck (A10) (LRR K, L, MLRA 149B)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       5 cm Mucky Peat or Peat (S3) (LRR K, L, R)         Hydrogen Sulfide (A4)       High Chroma Sands (S11) (LRR K, L)       Polyvalue Below Surface (S8) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Mucky Mineral (F1) (LRR K, L)       Thin Dark Surface (S9) (LRR K, L, R)         Thick Dark Surface (A12)       Depleted Matrix (F2)       Iron-Manganese Masses (F12) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         Stripped Matrix (S6)       Marl (F10) (LRR K, L)       Other (Explain in Remarks)         Deplet (inches):       Depleted and Northeest Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)									
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2)       Indicators for Problematic Hydric Soils <sup>3</sup> :         Black Histic (A3)       MLRA 149B       Coast Prairie Redox (A16) (LRR K, L, R)         Hydrogen Sulfide (A4)       High Chroma Sands (S11) (LRR K, L)       Polyvalue Below Surface (S8) (LRR K, L)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)       Polyvalue Below Surface (S9) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Gleyed Matrix (F2)       Iron-Manganese Masses (F12) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Redox Dark Surface (F7)       Red Parent Material (F21)         Sandy Redox (S5)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         Stripped Matrix (S6)       Marl (F10) (LRR K, L)       Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       No _ X         Remarks:       This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)	<sup>1</sup> Type: C=	Concentration, D=Dep	pletion, RI	M=Reduced Matrix, C	S=Cove	red or Coa	ated Sand	Grains. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Histosol (A1)       Polyvalue Below Surface (S8) (LRR R, MLRA 149B)       2 cm Muck (A10) (LRR K, L, MLRA 149B)         Histic Epipedon (A2)       MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)         Black Histic (A3)       Thin Dark Surface (S9) (LRR R, MLRA 149B)       S cm Muck (A10) (LRR K, L, R)         Hydrogen Sulfide (A4)       High Chroma Sands (S11) (LRR K, L)       Polyvalue Below Surface (S8) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Mucky Mineral (F1) (LRR K, L)       Thin Dark Surface (S9) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Loamy Gleyed Matrix (F2)       Iron-Manganese Masses (F12) (LRR K, L, R)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Gleyed Matrix (S4)       Depleted Dark Surface (F7)       Red Parent Material (F21)         Sandy Redox (S5)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         Dark Surface (S7)       Mari (F10) (LRR K, L)       Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       No _ X         Remarks:       This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)	Hydric So	il Indicators:						Indicators for Probl	ematic Hydric Soils <sup>3</sup> :
Histic Epipedon (A2)       MLRA 149B)       Coast Prairie Redox (A16) (LRR K, L, R)         Black Histic (A3)	Histos	sol (A1)		Polyvalue Below	w Surface	e (S8) ( <b>LR</b>	R R,	2 cm Muck (A10	) (LRR K, L, MLRA 149B)
Black Histic (A3)	Histic	Epipedon (A2)		MLRA 149B)				Coast Prairie Re	dox (A16) ( <b>LRR K, L, R</b> )
Hydrogen Sulfide (A4)       High Chroma Sands (S11) (LRR K, L)       Polyvalue Below Surface (S3) (LRR K, L)         Stratified Layers (A5)       Loamy Mucky Mineral (F1) (LRR K, L)       Thin Dark Surface (S9) (LRR K, L)         Depleted Below Dark Surface (A11)       Loamy Gleyed Matrix (F2)       Iron-Manganese Masses (F12) (LRR K, L, R)         Thick Dark Surface (A12)       Depleted Matrix (F3)       Piedmont Floodplain Soils (F19) (MLRA 149B)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Redox (S5)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         Stripped Matrix (S6)       Marl (F10) (LRR K, L)       Other (Explain in Remarks)         Type:	Black	Histic (A3)		Thin Dark Surfa	ice (S9) (		ILRA 1498	B)5 cm Mucky Pea	at or Peat (S3) (LRR K, L, R)
Strained Layer (A5)	Hydro	gen Sulfide (A4)		High Chroma S	ands (S1	1) (LRR M (1) (LRR M	(, L)	Polyvalue Below	Surface (S8) (LRR K, L)
Depleted below Dark Sufface (A11)       Lbarly Gleyed Matrix (F2)       Indi-Warlgarlese Masses (F12) (LKK K, L, K)         Thick Dark Surface (A12)       Depleted Matrix (F3)       Piedmont Floodplain Soils (F19) (MLRA 149B)         Sandy Mucky Mineral (S1)       Redox Dark Surface (F6)       Mesic Spodic (TA6) (MLRA 144A, 145, 149B)         Sandy Gleyed Matrix (S4)       Depleted Dark Surface (F7)       Red Parent Material (F21)         Sandy Redox (S5)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         Stripped Matrix (S6)       Marl (F10) (LRR K, L)       Other (Explain in Remarks)         Dark Surface (S7)       Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):         Type:	Stratif	ted Layers (A5)	00 (111)		/IIneral (F Motrix (E	1) ( <b>LKK r</b>	<b>Λ, L</b> )		$\mathcal{L}(\mathbf{S9}) (\mathbf{L}\mathbf{K}\mathbf{K} \mathbf{K}, \mathbf{L})$
	Depie	Dark Surface (A12)	ce (ATT)	Loany Gleyeu I	(E3)	2)		IIOII-Manganese	Nasses (F12) (LRR R, L, R) Nain Soile (F19) (MI RA 1108)
	Sand	/ Mucky Mineral (S1)		Depleted Matrix Redox Dark Su	rface (F6	)		Mesic Spodic (T	A6) (MI RA 144A 145 149B)
Sandy Redox (S5)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         Stripped Matrix (S6)       Marl (F10) (LRR K, L)       Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):         Type:	Sandy	/ Gleved Matrix (S4)		Depleted Dark S	Surface (	, F7)		Red Parent Mate	erial (F21)
Stripped Matrix (S6)       Marl (F10) (LRR K, L)       Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Restrictive Layer (if observed):         Type:	Sandy	/ Redox (S5)		Redox Depress	ions (F8)	,		Very Shallow Da	irk Surface (TF12)
Dark Surface (S7) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed): Type: Depth (inches): Performation (Inche	Stripp	ed Matrix (S6)		Marl (F10) (LRF	<b>κ κ, L</b> )			Other (Explain ir	n Remarks)
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):         Type:         Depth (inches):         Depth (inches):         Remarks:         This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)	Dark S	Surface (S7)							
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):         Type:         Depth (inches):         Hydric Soil Present?         Yes         No         X         Remarks:         This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)									
Restrictive Layer (if observed):       Type:         Type:	<sup>3</sup> Indicators	of hydrophytic vegeta	ation and v	wetland hydrology mu	ust be pre	esent, unle	ess disturb	ed or problematic.	
Type:       Hydric Soil Present?       Yes       No       X         Depth (inches):       Hydric Soil Present?       Yes       No       X         Remarks:       This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)       Version 7.0 March 2013 Errata.	Restrictiv	e Layer (if observed)	):						
Depth (inches):       Hydric Soil Present?       Yes       No       X         Remarks:       This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)       Ves       No       X	Type:								
Remarks: This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)	Depth (i	nches):						Hydric Soil Present?	Yes NoX
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)	Remarks:								
Version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/internet/FSE_DOCOMENTS/nrcs142p2_051293.docx)	This data f	form is revised from N		al and Northeast Reg	ional Sup		/ersion 2.0	0 to reflect the NRCS Field	d Indicators of Hydric Soils
	version 7.0	D March 2013 Errata. (	(http://www	w.nrcs.usda.gov/Inter	net/FSE_		ENTS/nrcs	s142p2_051293.docx)	

Project/Site:	City/County:	Sampling Date:
Applicant/Owner:	Sta	te: Sampling Point:
Investigator(s):	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):
Subregion (LRR or MLRA): Lat:	Long:	Datum:
Soil Map Unit Name:		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes No (If no	explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circ	umstances" present? Yes No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If needed, explai	n any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in	a separate report.)	

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

Tree Stratum (Plot size:	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1	<u></u>		Number of Dominant Species
··			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
5			
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)			FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3.			UPL species x 5 =
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
5			Hydronhytic Vegetation Indicators:
6			1 - Rapid Test for Hydrophytic Vegetation
/			2 - Dominance Test is >50%
		= Total Cover	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size:)			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
2.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			
4			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6.			
7.			<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8			
9			and greater than or equal to 3.28 ft (1 m) tall.
10			
			of size, and woody plants less than 3.28 ft tall.
10		·	<b>Woody vines</b> $-$ All woody vines greater than 3.28 ft in
12			height.
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			
3			Hydrophytic
4			Vegetation Present? Yes No
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

SOIL	
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Depth _ Matrix	Red	ox Features					
<u>(inches)</u> Color (moist) %	Color (moist)		Type <sup>1</sup>			Remark	S
		·					
		·					
Type: C=Concentration, D=Depletion, ydric Soil Indicators:	RM=Reduced Matrix, N	1S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=Pc Indicators for Prol	ore Lining, M=N Diematic Hydr	Matrix. ic Soils <sup>3</sup> :
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA</li> </ul>	Polyvalue Bela MLRA 149E Thin Dark Sur Loamy Mucky Loamy Gleyed Depleted Matr Redox Dark S Depleted Dark Redox Depres 149B) d wetland hydrology mu	bw Surface ( <b>3</b> ) face (S9) ( <b>LI</b> Mineral (F1) I Matrix (F2) ix (F3) urface (F6) Surface (F7) sions (F8) ust be preser	S8) (LRF RR R, MI ) (LRR K 7)	R R, RA 149B) , L)	<ul> <li>2 cm Muck (A1</li> <li>Coast Prairie R</li> <li>5 cm Mucky Pe</li> <li>Dark Surface (3</li> <li>Polyvalue Belo</li> <li>Thin Dark Surface</li> <li>Iron-Manganes</li> <li>Piedmont Floor</li> <li>Mesic Spodic (</li> <li>Red Parent Ma</li> <li>Very Shallow D</li> <li>Other (Explain</li> </ul>	0) (LRR K, L, ledox (A16) (Ll eat or Peat (S3 57) (LRR K, L) w Surface (S8) ace (S9) (LRR e Masses (F12 dplain Soils (F TA6) (MLRA 1 terial (F21) Park Surface (T in Remarks)	MLRA 149B) RR K, L, R) ) (LRR K, L, R) ) ) (LRR K, L) 2) (LRR K, L, R 19) (MLRA 149 44A, 145, 149I "F12)
Restrictive Layer (if observed): Type:							
Depth (inches):					Hydric Soil Present	? Yes	No

Project/Site:	City/County:	Sampling Date:
Applicant/Owner:	Sta	te: Sampling Point:
Investigator(s):	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):
Subregion (LRR or MLRA): Lat:	Long:	Datum:
Soil Map Unit Name:		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes No (If no	explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circ	umstances" present? Yes No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If needed, explai	n any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in	a separate report.)	

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

Tree Stratum (Plot size:	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1	<u></u>		Number of Dominant Species
··			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
5			
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)			FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3.			UPL species x 5 =
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
5			Hydronhytic Vegetation Indicators:
6			1 - Rapid Test for Hydrophytic Vegetation
/			2 - Dominance Test is >50%
		= Total Cover	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size:)			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
2.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			
4			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6.			
7.			<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8			
9			and greater than or equal to 3.28 ft (1 m) tall.
10			
			of size, and woody plants less than 3.28 ft tall.
10		·	<b>Woody vines</b> $-$ All woody vines greater than 3.28 ft in
12			height.
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			
3			Hydrophytic
4			Vegetation Present? Yes No
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

SOIL	
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Depth _ Matrix	Red	ox Features					
<u>(inches)</u> Color (moist) %	Color (moist)		Type <sup>1</sup>	C2		Remark	S
		·					
		·					
Type: C=Concentration, D=Depletion, ydric Soil Indicators:	RM=Reduced Matrix, N	1S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=Pc Indicators for Prol	ore Lining, M=N Diematic Hydr	Matrix. ic Soils <sup>3</sup> :
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Dark Surface (S7) (LRR R, MLRA</li> </ul>	Polyvalue Bela MLRA 149E Thin Dark Sur Loamy Mucky Loamy Gleyed Depleted Matr Redox Dark S Depleted Dark Redox Depres 149B) d wetland hydrology mu	bw Surface ( <b>3</b> ) face (S9) ( <b>LI</b> Mineral (F1) I Matrix (F2) ix (F3) urface (F6) Surface (F7) sions (F8) ust be preser	S8) (LRF RR R, MI ) (LRR K 7)	R R, RA 149B) , L)	<ul> <li>2 cm Muck (A1</li> <li>Coast Prairie R</li> <li>5 cm Mucky Pe</li> <li>Dark Surface (3)</li> <li>Polyvalue Belo</li> <li>Thin Dark Surface</li> <li>Iron-Manganes</li> <li>Piedmont Floor</li> <li>Mesic Spodic (</li> <li>Red Parent Ma</li> <li>Very Shallow D</li> <li>Other (Explain</li> </ul>	0) (LRR K, L, ledox (A16) (Ll eat or Peat (S3 57) (LRR K, L) w Surface (S8) ace (S9) (LRR e Masses (F12 dplain Soils (F TA6) (MLRA 1 terial (F21) Park Surface (T in Remarks)	MLRA 149B) RR K, L, R) ) (LRR K, L, R) ) ) (LRR K, L) 2) (LRR K, L, R 19) (MLRA 149 44A, 145, 149I "F12)
Restrictive Layer (if observed): Type:							
Depth (inches):					Hydric Soil Present	? Yes	No

Project/Site:	City/County:	Sampling Date:
Applicant/Owner:	Sta	te: Sampling Point:
Investigator(s):	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):
Subregion (LRR or MLRA): Lat:	Long:	Datum:
Soil Map Unit Name:		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes No (If no	explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed? Are "Normal Circ	umstances" present? Yes No
Are Vegetation, Soil, or Hydrology natural	y problematic? (If needed, explai	n any answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present?	Yes	No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative proceed	lures here or in	a separate report.)	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living	Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Second	oils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present?    Yes No Depth (inches):	
Water Table Present?     Yes No Depth (inches):       Saturation Present?     Yes No Depth (inches):	Wetland Hydrology Present? Yes No
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Tree Stratum (Plot size:	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1	<u></u>		Number of Dominant Species
··			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
5			
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size:)			FACW species x 2 =
1			FAC species x 3 =
2			FACU species x 4 =
3.			UPL species x 5 =
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
5			Hydronhytic Vegetation Indicators:
6			1 - Rapid Test for Hydrophytic Vegetation
/			2 - Dominance Test is >50%
		= Total Cover	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size:)			4 - Morphological Adaptations <sup>1</sup> (Provide supporting
2.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.			
4			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6.			
7.			<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8			
9			and greater than or equal to 3.28 ft (1 m) tall.
10			
			of size, and woody plants less than 3.28 ft tall.
10		·	<b>Woody vines</b> $-$ All woody vines greater than 3.28 ft in
12			height.
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			
3			Hydrophytic
4			Vegetation Present? Yes No
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

SOIL	
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Depth _ Matrix	Red	ox Features					
<u>(inches)</u> Color (moist) %	Color (moist)		Type <sup>1</sup>			Remark	S
		·					
		·					
Type: C=Concentration, D=Depletion, ydric Soil Indicators:	RM=Reduced Matrix, N	1S=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL=Pc Indicators for Prol	ore Lining, M=N Diematic Hydr	Matrix. ic Soils <sup>3</sup> :
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Restrictive Layer (if observed): Type:							
Depth (inches):					Hydric Soil Present	? Yes	No



26 November, 2024

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

## Re: NHDES Minimum Impact Expedited Wetland Permit Application 50 Andrew Jarvis Drive, Portsmouth, New Hampshire

Dear Wetland Inspector:

This letter transmits a New Hampshire Department of Environmental Services (NHDES) Minimum Impact Expedited Wetland Permit Application request to impact approximately 609 square feet of freshwater wetlands to construct a public walking and biking path at the above referenced site.

Per Env-Wt 306.05, Certified Wetland Scientist Sam Hayden from Haley Ward classified all jurisdictional areas and identified the predominant functions of all relevant resources.

Attached to this application you will find a plan set which depicts the project area, jurisdictional areas, abutting parcels, existing structures, proposed work. Permanent impact areas are most clearly depicted and labeled on Grading Plan C4. The construction sequence and other notes regarding construction, erosion and sediment controls, and relevant construction details can be found on Detail Sheet D1 and D2. Please also find attached a USGS map showing the location of the project, a tax map with the parcel identified, a list of abutters and notification letters, and the results of consultation with the Natural Heritage Bureau (NHB).

Please contact me if you have any questions or concerns during your review.

Respectfully submitted,

SIN. Heh

Sam Hayden PWS, CWS Project Scientist, Haley Ward

581 Lafayette Road | 50101561397.04 | 2.26.2025 | Page 1



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## EXPEDITED MINIMUM IMPACT (EXP) WETLANDS PERMIT APPLICATION Water Division / Land Resources Management



**Check the Status of your Application** 

#### RSA/Rule: RSA 482-A/Env-Wt 100-900 (Env-Wt 310.01)

#### APPLICANT'S NAME: Atlas Commons, LLC

TOWN NAME: Portsmouth

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

SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; Env-Wt 603.03; Env-Wt 603.05)		
Please use the <u>Wetland Permit Planning Tool (WPPT</u> ), the Natural Heritage Bureau (NHB) <u>DataCheck Tool</u> , the <u>Aquatic</u> <u>Restoration Mapper</u> , or other sources to assist in identifying key features such as: <u>Priority Resource Areas (PRAs</u> ), <u>protected species or habitats</u> , coastal areas, designated rivers, or designated prime wetlands.		
Does the property contain a PRA? If yes, provide the following information:	OYes No	
<ul> <li>Does the project qualify for an Impact Classification Adjustment (such as an NH Fish and Gar Department (NHFG) and NHB agreement for a classification downgrade) or a Project-Type Exception (such as a Maintenance or Statutory Permit-by-Notification (SPN) project)? See Er 407.02 and Env-Wt 407.04).</li> </ul>	ne nv-Wt O <sup>Yes</sup> No	
<ul> <li>Protected species or habitat?</li> <li>If yes, species or habitat name(s):</li> <li>NHB Project ID #: NHB25-0348</li> </ul>	O <sup>Yes</sup> No	
• Bog?	OYes No	
Floodplain wetland contiguous to a tier 3 or higher watercourse?	O Yes No	
Designated prime wetland or duly-established 100-foot buffer?	OYes No	
Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	<b>Yes No</b>	
Is the property within a Designated River corridor? If yes, provide the following information:	OYes No	
Name of Local River Management Advisory Committee (LAC):		
A copy of the application was sent to the LAC on Month: Day Year:		
<ul><li>For dredging projects, is the subject property contaminated?</li><li>If yes, list contaminant(s):</li></ul>	OYes No	
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	Ves No	
For stream crossing projects, provide watershed size (see Wetland Permit Planning Tool or Streat N/A	am Stats):	

SECTION 2 - ELIGIBILITY (Env-Wt 306.03; Env-Wt 310.01; Env-Wt 310.03)		
You must confirm that your project meets <i>all</i> of the following statements to qualify for the EXP process:		
Ve The project qualifies as minimum impact project (Env-Wt 306.03).		
$\sqrt{1}_{P}$ The project does not include activities that are prohibited under RSA 482-A (Env-Wt 306.03(a)).		
<ul> <li>The project does not include any work in a jurisdictional area that was started without first obtaining the applicable approval (Env-Wt 306.03(b)).</li> </ul>		
<ul> <li>No work has been done on the subject property pursuant to another EXP or a Statutory Permit-by-Notification (SPN) within 12 months of the date this EXP will be issued. Alternatively, if any work has been done on the subject property pursuant to another EXP or a SPN within 12 months of the date this EXP will be issued, then you are submitting information, including a plan, with this application demonstrating that:</li> </ul>		
• The work proposed in this EXP application is wholly unrelated to and separate from the work already done under the EXP or SPN; and		
<ul> <li>The work proposed in this EXP application, when combined with work that has been done under previously issued EXPs or SPNs within the last 12 months, does not constitute a project for which a Standard Permit is required (Env-Wt 310.03(a)).</li> </ul>		
If the project is located in a PRA, it also qualifies for an impact classification adjustment under Env-Wt 407.02 or a project-type exception (PTE) under Env-Wt 407.04 (Env-Wt 310.01(d)(6)).		
My project meets all statements above. Proceed to Section 3.		
My project does not meet all of the statements above. Your project does not qualify for the EXP process. Your project either is not permittable or requires a Standard Permit.		
SECTION 3 - INFORMATION ON THE PROPOSED PROJECT (Env-Wt 310.01(c))		
Identify the rule(s)/provision(s) which make the project a minimum impact project. Refer to the project list below and the Expedited Minimum Impact (EXP) Project Classification Guidance Document.		
Aquatic Vegetation Control Projects (Env-Wt 510.08(a))		
Water Access Structure Construction Projects (Env-Wt 511.06(a))		
Beach Replenishment Projects (Env-Wt 511.07(a))		
Deck or Patio Repair Projects (Env-Wt 511.08(a))		
Breakwater Maintenance and Repair Projects (Env-Wt 512.07(b))		
Docking and Accessory Docking Structure Construction, Repair, and Replacement Projects (Env-Wt 513,24(a))		
Docking Structure Modification Projects (Env-Wt 513.25(a))		
Accessory Docking Structure Installation, Construction, Modification, Repair, and Replacement Projects (Env-Wt		
513.26(a))		
Canopy Projects (Env-Wt 513.27(a))		
Bank/Shoreline Stabilization Construction Projects (Env-Wt 514.07(a))		
Dug-in Basins and Boathouse Construction or Modification Projects (Env-Wt 515.06(a), (b))		
Dug-in Basins and Boathouse Maintenance and Repair Projects (Env-Wt 515.07(a))		
Intake and Outflow Structure Construction, Maintenance and Repair Projects (Env-Wt 516.05; Env-Wt 516.06(b))		
Trail or Pathway Projects (Env-Wt 517.06(a); Env-Wt 517.06(d))		
Boardwalk Projects (Env-Wt 517.07(a); (Env-Wt 517.09)		
Dry Hydrants and Other Non-Docking Structure Projects (Env-Wt 518.07(a)(1), (b))		
Pond Construction, Maintenance, and Repair Projects (Env-Wt 519.08(a), (b); Env-Wt 519.09(a))		
Residential Utility Installation Projects (Env-Wt 521.06(a)(7))		

Non-tidal Dredging Projects (Env-Wt 523.04(a))

Residential, Commercial, and Industrial Development Projects (Env-Wt 524.06(b))

Restoration/Enhancement Projects (Env-Wt 525.05)

Dam Construction, Reconstruction, or Replacement Projects (Env-Wt 526.06(a))

Dam Modification, Repair, or Maintenance Projects (Env-Wt 526.07(a))

Pubic Highway Projects (Env-Wt 527.06; Env-Wt 527.07)

Coastal Projects (Env-Wt 600)

Stream Crossing Projects (Env-Wt 903.01(e))

All Other Projects (Env-Wt 407.03)

Provide the project-specific information required by the rule(s)/provision(s). Refer to Chapters Env-Wt 400, Env-Wt 500, Env-Wt 600, and/or Env-Wt 900, as applicable, for project-specific application and design requirements. *Please see applicable standard <u>Project Specific Worksheets</u> for guidance.* 

## Per Env-Wt 517.06:

[517.06(a)(1)] The project proposes less than 3,000 sq ft of impact per crossing, the trail width is 8 ft through the wetland crossing, fill width measured at the toe of the side slope is less than 50 feet (18.5 ft, per plans), and fill length is less than 60 feet (40 ft, per plans).

[517.06(a)(2)] The project does not propose any impacts to habitats in 517.06(a)(2)

[517.06(a)(3)] The project will not impact protected species or habitat (See NHB Consultation).

[517.06(a)(4)] The project is not within or adjacent to designated Prime wetlands.

[517.06(a)(5)] The project does not propose to cross a perennial or intermittent stream

[517.06(a)(6)] The project does not propose a new or replacement bridge.

For projects located on waterbodies, provide the linear feet of shoreline frontage on the property: linear feet

(🔳 Not applicable)

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".

The project area is a parcel of land owned by the City of Portsmouth between the local highschool and a cul-de-sac adjacent to local shops and housing development. Currently, students and other residents are utilizing an unofficial walking trail that cuts through a privately held neighboring property. The purpose of this project is to provide an ADA compliant improved, lit walking / bike trail on city property for pedestrian and bike traffic.

609 sq. ft. of permanent impacts to freshwater wetlands are proposed for fill extensions supporting the trail. Constructions sequence and general construction notes are can be found on detail page D1 of the attached plan set.

Identify the type of jurisdictional resources to be impacted and the area of impact in square feet and/or linear feet:

609 sq. ft. of permanent impacts to freshwater wetlands (PFO1E) are proposed for fill extensions supporting the trail (~38 linear feet).

Impacts have been avoided to the greatest extent practicable in accordance with Env-Wt 313.03(a). The property is extremely narrow between the property line and the school facilities at this location, leaving no room to reroute around protected natural resources. In compliance with "Wetlands Best Management Practice Techniques for Avoidance in Minimization" for wetland crossings, a culvert is proposed at the crossing to maintain hydrologic connection across the proposed walking path.

(🔲 Not applicable)

(E rot applicable)			
SECTION 4 - PROJECT LOCATION (Env-W	t 310.01(b))		
ADDRESS: 581 Lafayette Road			
TOWN/CITY: Portsmouth			
TAX MAP/LOT NUMBER: 229 / 3			
US GEOLOGICAL SURVEY (USGS) TOPO N	IAP WATERBODY NAME:		
LATITUDE/LONGITUDE in decimal degree	es (to five decimal places): 43.0577.° No	orth	
	-70.7678° <sub>W</sub>	est	
SECTION 5 - APPLICANT (DESIRED PERM	IT HOLDER) INFORMATION (Env-Wt 310.	.01(a))	a starting and
If the applicant is a trust or a company, t name.	hen the name of the trust or company sh	ould be written	as the applicant's
NAME: Atlas Commons, LLC			
MAILING ADDRESS: 10 Plesant Street, S	Suite #300		
TOWN/CITY: Portsmouth		STATE: NH	ZIP CODE: 03801
PHONE: 603-427-0725	EMAIL ADDRESS (OPTIONAL): house@	mcnabbgroup.	com
ELECTRONIC COMMUNICATION: By initia this application electronically.	ling here, I hereby authorize NHDES to co	ommunicate all	matters relative to
SECTION 6 - AUTHORIZED AGENT INFOR	MATION (Env-Wt 310.01(a))	2000	mus ost 1 wiesto
If the agent is a company, then the name	e of the company should be written as the	e agent's name.	disconduction include
NAME: Sam Hayden			
MAILING ADDRESS: 200 Griffin Road, U	nit #3		
TOWN/CITY: Portsmouth		STATE: NH	ZIP CODE: 03801
PHONE: 2072839151	EMAIL ADDRESS (OPTIONAL): shayden	@haleyward.c	om
ELECTRONIC COMMUNICATION: By initia this application electronically.	ling here, I hereby authorize NHDES to co	ommunicate all	matters relative to

#### NHDES-W-06-052

SECTION 7 -	<b>PROPERTY OWNER INFORMA</b> r is a trust or a company, then	TION, IF DIFFERENT FROM APPLI the name of the trust or company	CANT (Env-Wt 310.01 should be written as	(a)) the owner's name.
NAME: City	of Portsmouth			
MAILING AD	DRESS: PO BOX 628			
TOWN/CITY	Portsmouth		STATE: NH	ZIP CODE: 03802
PHONE:		EMAIL ADDRESS (OPTIONAL):		
ELECTRONIC COMMUNICATION: By initialing here, I hereby authorize NHDES to communicate all matters relative to this application electronically.				
SECTION 8 -	APPLICATION FEE (RSA 482-A	:3, I)		
🔳 \$400 fo	r minimum impact projects. Pl	ease make your check or money c	order payable to: "Trea	surer - State of NH".
SECTION 9 -	REQUIRED CERTIFICATIONS (	Env-Wt 310.01(d))		
Initial each	box below to certify:			
Initials: MJB	The proposed project meets t	he conditions and limits of the ap	plicable minimum imp	act project rule.
Initials: MJB	All abutters have been notifie	d.		
Initials: MJB	If the project is to repair or re ( N/A)	place a docking structure, the doc	king structure is an ex	isting legal structure.
Initials: MJB	The proposal is the alternative 310.01(d)(4).	with the least adverse impact to jur	isdictional areas, as rec	uired by Env-Wt
Initials: MJB	The project is not an after-the	-fact application.		
Initials: MJB	The project is: • Not located in a PRA, • Is located in a PRA bu type exception under	or t is subject to a classification adju Env-Wt 407.04.	stment under Env-Wt	407.02 or a project-
Initials: MJB	The applicant is aware of the EXP and all applicable condition	limits of the EXP and understands ons in Env-Wt 307.	and will comply with	all conditions in the

Initials:			
mJi	Jo the best of the signer's knowledge and be	elief, all required notifications have been prov	vided.
Initials: MJB	The information submitted on or with the ap the signer's knowledge and belief.	pplication is true, complete, and not misleadir	ng to the best of
Initials:	<ul> <li>The signer understands that:</li> <li>The submission of false, incomplete, or n</li> <li>1. Deny the application.</li> </ul>	nisleading information constitutes grounds for	NHDES to:
тJв	<ol> <li>Revoke any approval that is granted</li> <li>If the signer is a certified wetland so to practice in New Hampshire, referestablished by RSA 310-A:1.</li> </ol>	d based on the information. cientist, licensed surveyor, or professional en r the matter to the joint board of licensure ar	gineer licensed nd certification
Initials: MJB	If the applicant is not the owner of the prope by the signer that he or she is aware of the ap	rty, each property owner signature shall const oplication being filed and does not object to th	itute certification e filing.
SECTION 10	) - REQUIRED SIGNATURES (Env-Wt 310.01(d		
SIGNATURE	(OWNER)*:	PRINT NAME LEGIBLY: Lann S. Canado City Manage	DATE:
*Note: If th provided th way where if your proj	e applicant is not the owner of the property, nat property owner signatures shall not be rec an easement will be obtained prior to the sta ect meets this exception: .	each property owner also shall sign and date juired for transportation projects adjacent to rt of construction (Env-Wt 311.11(d)). Check	the application existing rights-of- the following box
Marie	POPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY: Marie J. Bodi, CEO McNabb Properties, Ltd agent for Atlas Commons	, LLC DATE:
SIGNATURI	GENT, IF APPLICABLE):	PRINT NAME LEGIBLY: Marie J. Bodi, CEO McNabb Properties, Ltd agent for Atlas Commons	S, LLC DATE:
SECTION 1	V- CONSERVATION COMMISSION SIGNATUR	E (Env-Wt 310.01(h))**	
The signed	statement from the Conservation Commissio	on may be submitted electronically.	ion commission
the local g	overning body, has reviewed this application a r RSA 482-A:11.	and the municipality waives its right to interv	ene on the
AUTHORIZ	ED COMMISSION SIGNATURE:	PRINT NAME LEGIBLY:	DATE:

#### SECTION 12 - LOCAL RIVER MANAGEMENT ADVISORY COMMITTEE SIGNATURE (Env-Wt 310.01(i))\*\*

The signature below certifies that the LAC waives its right to intervene per RSA 482-A:11:

(N/A This project is **not** within a Designated River Corridor)

AUTHORIZED LAC REPRESENTATIVE SIGNATURE: PRINT NAME LEGIBLY: DATE:

\*\*Note: If the application is administratively complete, except for the signed statement from the Conservation Commission and/or LAC, the application will be processed under the application processing times established in RSA 482-A:3, XIV (Env-Wt 310.02(h)). The applicant may also indicate that they are applying for a minimum impact application under standard processing timelines.

#### SECTION 14 - TOWN / CITY CLERK SIGNATURE (Env-Wt 310.01(f))

As required by RSA 482-A:3, I(a)(1), I hereby certify that the municipality has received four copies of the application, including all attachments.

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 single, 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.

#### NHDES-W-06-052



# EXPEDITED MINIMUM IMPACT (EXP) WETLANDS PERMIT APPLICATION APPLICATION CHECKLIST



Keep this checklist for your reference. Do not submit it with your application.

APPLICATION CHECKLIST
Required for all applications:
The completed, dated, signed and certified application (Env-Wt 310.01).
Application fee of \$400, as determined in RSA 482-A:3, I (Env-Wt 310.01(e)). Make check or money order payable
to "Treasurer – State of NH".
US Army Corps of Engineers (ACE) "Appendix B, New Hampshire General Permits (GPs), Required Information and
<u>Corps Secondary Impacts Checklist</u> " and its required attachments (Env-Wt 307.02). This includes the <u>US Fish and</u> <u>Wildlife Service IPAC review</u> and New Hampshire <u>Section 106 Historic/Archaeological Resource review</u> .
A copy of the town tax map(s) showing the location of the proposed project in relation to abutters (Env-Wt 310.01(b)(2)).
A list of abutters' names and mailing addresses to cross-reference with the tax map (Env-Wt 310.01(b)(3)).
A copy of the appropriate US Geological Survey map with the property and project clearly marked (Env-Wt 310.01(b)(4)).
Photos that meet all of the following criteria:
Clearly show the area to be impacted,
Are mounted or printed no more than two per sheet on 8.5-inch x 11-inch paper, and
Are annotated to explain impact (Env-Wt 310.01(b)(6)).
The results and identification number of the NHB DataCheck (Env-Wt 310.01(b)(8)), as well as documentation of
any consultation request made to NHF&G with the consultation results and recommendations. See <u>Wetlands</u>
Permitting: Protected Species and Habitat fact sheet.
An accurate drawing showing the precise location, with detailed dimensions clearly annotated to document
existing site conditions and to show the proposed impacts to the jurisdictional areas (Env-Wt 310.01(c)(4)).
An accurate drawing to show the impact of the proposed activity on jurisdictional areas, including the following
(EIIV-W(I SLU.OI(C)(S)).
The seels if any used on the drawing
The scale, if any, used on the drawing,
If the drawing is not to scale, the dimensions of all existing and proposed structures, existing and proposed to clearly define the project
A labeled porth pointing arrow to indicate orientation
A lapered that elegativity indicates all symbols, line types, and sheding used on the plan
A legend that clearly indicates all symbols, line types, and shading used on the plan,
I he location of the jurisdictional areas delineated and associated wetland delineation notes, in accordance
The proposed construction converse including pro-construction through post construction activities and
the relative timing and progression of all work.
The location and type of siltation and turbidity controls indicated graphically and labeled or annotated as
necessary,

#### NHDES-W-06-052

For any project using a temporary coffer dam and for any repair of a tier 3 stream crossing, the date, signature, and seal of the licensed professional engineer who prepared or had responsibility for the
plan(s),
For restoration/enhancement projects, the information required to be shown on a map by Env-Wt 525,
🔲 For tidal minimum impact projects, the information required to be shown on a map by Env-Wt 600, and
For minimum impact stream crossing projects, the information required to be shown on a map by Env-Wt 900.
Plans or documentation showing that impacts have been avoided and minimized to the maximum extent practicable per Env-Wt 313.03(a).
The linear distance of the project from abutting property boundaries (Env-Wt 310.01(c)(7)).
Required for certain project type, as applicable:
The type of dock construction (Env-Wt 310.01(c)(8)).
The diameter of culvert(s) to be used for road or driveway crossings (Env-Wt 310.01(c)(8)).
The additional information specified in Env-Wt 522 for minimum impact agricultural applications (Env-Wt 310.01(c)(8)).
Plans for maintenance of retaining walls, as specified in Env-Wt 514 (if applicable; Env-Wt 310.01(c)(8)).
Specifications and plans for maintenance of rip-rap, as required by Env-Wt 514 (Env-Wt 310.01(c)(8)).
Any other project-specific plan, cross section, or information required under Env-Wt 500 and as described in the project-specific worksheet (Env-Wt 310.01(c)(8)).
Information required on the Coastal Resource Worksheet for coastal projects under Env-Wt 600.
Prime Wetlands information required under Env-Wt 700.
Information requested on the <u>Stream Crossing Worksheet</u> required by Env-Wt 900.



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Property ID	0229-0003-0000
Location	50 ANDREW JARVIS DR
Owner	CITY OF PORTSMOUTH



### MAP FOR REFERENCE ONLY NOT A LEGAL DOCUMENT

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

Geometry updated 09/26/2024

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







### The National Map Advanced Viewer





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#### Ambit Engineering Abutter Research

Name	50 ANDREW JARVIS DR	Date	2/18/2025	Job # 5010
			Mixed Use	
Address	581 Lafayette Road	Job Name	Development	
City, State	Portsmouth, NH	Town	Portsmouth	
		Research by	SNH	

#### Applicant/Owner(s)

Мар	Lot	Deed	Owner (s) First/Trust	Owner(s) Last, Trustee	Mailing Address	City	State	Zip	Street Address
229	3	1985/0379	CITY OF PORTSMOUTH SCH		PO BOX 628, P	Portsmouth	NH	03802	50 ANDREW JARVIS DR

Engineer Haley Ward, Inc. 200 Griffin Road, Unit #14 Portsmouth NH	03801
--	-------

#### **Other Consultants**

#### Abutters

Job Name	ed Use Developm	Job #	5010156.1397.03						
Мар	Lot	Deed	Owner (s) First/Trust	Owner(s) Last, Trustee	Mailing Address	City	Stat	e Zip	Street Address
228	1		City of Portsmouth	School	PO Box 628	Portsmouth	NH	3801	50 Andrew Jarvis Drive
228	7		City of Portsmouth	School	PO Box 628	Portsmouth	NH	3801	50 Andrew Jarvis Drive
229	7		RPL Properties LLC		62 Middle Dunstable Road	Nashua	NH	3062	LAFAYETTE RD
229	8b		ATLAS COMMONS LLC		10 PLEASANT ST STE 300	PORTSMOUTH	NH	03801	581 LAFAYETTE RD
229	6		Domer Realty LLC		545 Lafayette Road	Portsmouth	NH	3801	545 Lafayette Road
			St. Nicholas Greek Orthodox						
229	6A		Church		40 Andrew Jarvis Drive	Portsmouth	NH	3801	Lafayette Road
			INGWERSEN JOHN INGWERSEN						
228	6		CLAIRE MEA		332 JONES AVE	Portsmouth	NH	3801	332 JONES AVE
			INGWERSEN JOHN INGWERSEN						
228	6-1		CLAIRE MEA		332 JONES AVE	Portsmouth	NH	3801	332 JONES AVE
			DOERING MARGOT TRUST						
221	1		DOERING MARGOT TRUSTEE		300 Jones Ave	Portsmouth	NH	3801	300 Jones Ave
			BERGERON ROLAND R						330 A JONES AVE,
221	2		BERGERON LINDA R		330 A JONES AVE,	Portsmouth	NH	3801	PORTSMOUTH, NH 03801
221	2A		CITY OF PORTSMOUTH, DPW		PO BOX 628	Portsmouth	NH	3801	JONES AVE
221	92		CITY OF PORTSMOUTH, DPW						SOUTH ST
221	90		DAVPAT LLC		928 SOUTH STREET	PORTSMOUTH	NH	03801	962 SOUTH ST
221	93		WOOD FAMILY REVOCABLE TRUST	1066 SOUTH ST	1066 SOUTH ST	PORTSMOUTH	NH	03801	1066 SOUTH ST
229	04		RICCI ROBERT A JR TRUST	RICCI ROBERT A JR TRUSTEE	36 ARTWILL AVE	PORTSMOUTH	NH	03801	36 ARTWILL AVE
230	4		DRISCOLL BRIAN L	DRISCOLL ELIZABETH	76 SUMMIT AVE	PORTSMOUTH	NH	03801	76 SUMMIT AVE
230	6		CRONIN STEPHEN J	CRONIN DONNA L	77 SUMMIT AVE	PORTSMOUTH	NH	03801	77 SUMMIT AVE
230	9		FLECK CHARLES L JR	FLECK SARAH B	6158 E STATE ROAD 164	JASPER	IN	47546	6 ROCKAWAY ST

Job Name	ted Use Developm	Job #	5010156.1397.03						
Мар	Lot	Deed	Owner (s) First/Trust	Owner(s) Last, Trustee	Mailing Address	City	State	Zip	Street Address
230	11		AREND TORBEN O	AREND ELIZABETH M	1 ROCKAWAY ST	PORTSMOUTH	NH	03801	1 ROCKAWAY ST
230	24		CHURCH OF JESUS CHRIST	C/O TAX DIVISION	50 E NORTH TEMPLE ST FL 22	SALT LAKE CITY	UT	84150	65 ANDREW JARVIS DR



#### **Example Abutter Letter**

2/19/2024

City of Portsmouth (School) PO BOX 628 Portsmouth, NH 03810

#### Re: New Hampshire Minimum Impact Expedited Permit for Fill in Wetlands 518 Lafayette Road, Portsmouth Walking Path

Dear Property Owner,

Under NH RSA 482-A this letter is to inform you in accordance with State Law that a Minimum Impact Wetlands Permit will be filed with the New Hampshire Department of Environmental Services (DES) Wetlands Bureau for a permit to impact jurisdictional wetlands for the maintenance of an existing storm water swale, on behalf of your abutter, City of Portsmouth (Owner), and Atlas Commons, LLC (Applicant).

This letter is sent to inform you as an abutter to the above-referenced property (according to local Municipal records) that Atlas Commons, LLC, with permission from the City of Portsmouth, proposes construction of a public walking path that requires impacts to jurisdictional wetlands.

Plans are on file at this office, and once the application is filed, plans that show the proposed project and wetland impacts will be available for viewing during normal business hours at the office of the Portsmouth Clerk, Portsmouth town offices, or once received by DES, at the offices of the DES Wetlands Bureau, (8 a.m. to 4 p.m.) (603) 271-2147. It is suggested that you call ahead to the appropriate office to ensure the application is available for review.

Please feel free to call if you have any questions or comments.

Sincerely,

Sam Hayden EWS Project Scientist

CERTIFIED MAIL/Return Receipt Requested

581 Lafayette Road | 12.19.2024 | 5010156.1397.04 | Page 1













Certified Mail Restricted Delivery

Ricci Rober A Jr Trust

Ricci Robert A Jr. Trustee

**36 ARTWILL AVE** 

Portsmouth, NH 03801

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

Adult Signature Required Adult Signature Restricted Delivery \$

Postage

Total Pc

\$ Sent To

Street a

City, Sta.

5270

1770

**0**~

-0 -0 -0 -0

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Here



#### LAFAYETTE ROAD, PORTSMOUTH DES WETLANDS MINIMUM IMPACT EXPEDITED

Photo No. 1 Photo Date: 12/3/2024

Site Location: Off Lafayette Road, behind ball fields, Portsmouth, NH

**Description:** View facing south of freshwater wetland. Orange flag marks center line of proposed path. Ball fields visible in background.

Photo By: SNH







- To: Sam Hayden, HaleyWard 200 Griffin Road Unit #3 Portsmouth, NH 03801
- From: NH Natural Heritage Bureau
- **Date:** 2/13/2025 (valid until 2/13/2026)
- **Re:** Review by NH Natural Heritage Bureau of request submitted 1/31/2025
- **Permits:** NHDES Standard Dredge & Fill Minimum; or Expedited, USACE General Permit

NHB ID:	NHB25-0348	Applicant:	Sam Hayden
Location:	portsmouth 581 Lafayette Road		
Project Description:	impacts to 609 square feet footpath.	of freshwater	wetland to construct a new

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 1/31/2025 3:36:30 PM, and cannot be used for any other project.

Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

#### MAP OF PROJECT BOUNDARIES FOR: NHB25-0348

#### NHB25-0348



# MIXED USE DEVELOPMENT 581 LAFAYETTE ROAD PORTSMOUTH, NEW HAMPSHIRE SITE CONSTRUCTION **OFFSITE PUBLIC REALM IMPROVEMENTS**

#### **OWNER:**

CITY OF PORTSMOUTH PO BOX 628 PORTSMOUTH, NH 03802

#### **DEVELOPER:**

ATLAS COMMONS, LLC 10 PLEASANT STREET SUITE #300 PORTSMOUTH, NH 03801

#### LAND SURVEYOR & CIVIL ENGINEER:

HALEY WARD, INC. 200 GRIFFIN ROAD, UNIT 3 PORTSMOUTH, N.H. 03801 Tel. (603) 430-9282 Fax (603) 436-2315

### LIGHTING CONSULTANT:

EXPOSURE2LIGHTING 501 ISLINGTON ST UNIT 1A PORTSMOUTH, NH 03801 TEL. (603) 759-1043

#### LANDSCAPE ARCHITECT:

TERRA FIRMA LANDSCAPE ARCHITECTURE 163A COURT STREET PORTSMOUTH, NH 03801 TEL. (603) 430-8388





GRB General Residence B GRC General Residence C GA/MH Garden Apartment/Mobile Horr MRO Mixed Residential Office MRB Mixed Residential Business Gateway Corridor Gateway Center

General Business	
Business	
Waterfront Business	
Districts	
Office Research	
Industrial	
Waterfront Industrial	

#### **Airport Districts**

AIR AI **Other Districts** 

M

Airport Airport Industrial Pease Industrial ABC Airport Business Commercial

Municipal NRP Natural Resource Protection TC Transportation Corridor

INDEX OF SHEETS DWC No

C1	OVERALL PLAN
C2	EXISTING CONDITIONS PLAN
C3	SITE PLAN
C4&C5	GRADING PLAN
C6	TREE REMOVAL PLAN
C7	TREE PLANTING PLAN
L1	LIGHTING PLAN
P1	WALKWAY PLAN & PROFILE
D1-D2	DETAILS



## UTILITY CONTACTS

**ELECTRIC:** EVERSOURCE 1700 LAFAYETTE ROAD PORTSMOUTH, N.H. 03801 Tel. (603) 436-7708, Ext. 555.5678 ATTN: MICHAEL BUSBY, P.E. (MANAGER)

SEWER & WATER: PORTSMOUTH DEPARTMENT OF PUBLIC WORKS FAIRPOINT COMMUNICATIONS 680 PEVERLY HILL ROAD PORTSMOUTH, N.H. 03801 Tel. (603) 427-1530 ATTN: JIM TOW

NATURAL GAS: UNITIL 325 WEST ROAD PORTSMOUTH, N.H. 03801 Tel. (603) 294-5144 ATTN: DAVE BEAULIEU

CABLE: COMCAST 155 COMMERCE WAY PORTSMOUTH, N.H. 03801 Tel. (603) 679-5695 (X1037) ATTN: MIKE COLLINS

COMMUNICATIONS: JOE CONSIDINE 1575 GREENLAND ROAD GREENLAND, N.H. 03840 Tel. (603) 427-5525

DIG SAFF

CALL TOLL FREE

ME - NH

PERMIT LIST:

SCHOOL BOARD/CITY COUNCIL APPROVAL: PENDING TREES & GREENERY: PENDING

	LEGE	ND:
EXISTING	PROPOSED	
		PROPERTY LINE SETBACK
S	S	SEWER PIPE
SL	SL	SEWER LATERAL GAS LINE
D	D	STORM DRAIN
W	WS	WATER LINE WATER SERVICE
UGE	UGE	UNDERGROUND ELECTRIC
OHW	OHW UD	OVERHEAD ELECTRIC/WIRES FOUNDATION DRAIN
		EDGE OF PAVEMENT (EP)
97x3	98×0	SPOT ELEVATION
$\rightarrow$	•	UTILITY POLE
-Ŏ- '''''	- <u>+</u> -	WALL MOUNTED EXTERIOR LIGHTS
		TRANSFORMER ON CONCRETE PAD
		ELECTRIC HANDHOLD
100 000	130 G20	SHUT OFFS (WATER/GAS)
$\bowtie$		GATE VALVE
- Or	++++	HYDRANT
CB	CB	CATCH BASIN
$\bigcirc$	SMH	SEWER MANHOLE
	DMH	DRAIN MANHOLE
	() TMH	TELEPHONE MANHOLE
(14)	14	PARKING SPACE COUNT
PM		PARKING METER
LSA	$\begin{array}{cccc} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ \end{array} \qquad \qquad$	LANDSCAPED AREA
TBD CI COP DI PVC RCP AC VC EP EL. FF INV S = TBM TYP	TBD CI COP DI PVC RCP - VC EP EL. FF INV S = TBM TYP	TO BE DETERMINED CAST IRON PIPE COPPER PIPE DUCTILE IRON PIPE POLYVINYL CHLORIDE PIPE REINFORCED CONCRETE PIPE ASBESTOS CEMENT PIPE VITRIFIED CLAY PIPE EDGE OF PAVEMENT ELEVATION FINISHED FLOOR INVERT SLOPE FT/FT TEMPORARY BENCH MARK TYPICAL

SITE CONSTRUCTION PLANS OFFSITE PUBIC REALM IMPROVEMENTS 581 LAFAYETTE ROAD PORTSMOUTH, N.H.



WWW.HALEYWARD.COM

200 Griffin Road, Unit 3 Portsmouth, NH 03801 603.430.9282

PLAN SET SUBMITTAL DATE: 3 JANUARY 2025







HAMPSHIRE NE NAD 83	AMBIT ENGINEERING, INC. Civil Engineers & Land Surveyors 200 Griffin Road - Unit 3 Portsmouth, N.H. 03801-7114 Tel (603) 430-9282 Fax (603) 436-2315
NE NAD 83	<ul> <li>PAR (003) 430-2313</li> <li>NOTES: <ol> <li>PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 229 AS LOT 3.</li> <li>OWNERS OF RECORD: <ul> <li>CITY OF PORTSMOUTH</li> <li>JUNKINS AVENUE</li> <li>PORTSMOUTH, NH 03802</li> <li>1985/379</li> </ul> </li> <li>APPLICANT <ul> <li>ATLAS COMMONS, LLC</li> <li>10 PLEASANT STREET, SUITE 300</li> <li>PORTSMOUTH, NH 03801</li> <li>6474/1538</li> </ul> </li> <li>THE PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0270E, EFFECTIVE MAY 17, 2005</li> <li>EXISTING LOT AREA: (DEVELOPMENT LOT MAP 229 LOT 8B)</li> <li>98,124 S.F.</li> <li>2.2526 AC</li> </ol></li></ul> <li>PARCEL IS LOCATED IN THE GATEWAY NEIGHBORHOOD CORRIDOR (G1) DISTRICT.</li> <li>DIMENSIONAL REQUIREMENTS: <ul> <li>SEE ZONING ORDINANCE SECTION 10.5B22.10</li> </ul> </li> <li>THE PURPOSE OF THIS PLAN IS TO SHOW PUBLIC REALM IN ACCORDANCE WITH SECTION 10.5B7320.1 ON TAX MAP 229 LOT 3.</li> <li>PUBLIC REALM IMPROVEMENTS SHOWN HERON ARE SUBJECT TO CITY OF PORTSMOUTH SCHOOL DEPARTMENT REVIEW AND APPROVAL.</li> <li>VERTICAL DATUM IS NAVD8B. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBS.</li>
	COMMERCIAL DEVELOPMENT 581 LAFAYETTE ROAD PORTSMOUTH, N.H. 1 ADDED TOPOGRAPHY 1/3/25 0 ISSUED FOR COMMENT 11/21/24 NO. DESCRIPTION DATE REVISIONS
	SCALE: 1"=30' NOVEMBER 2024 EXISTING CONDITIONS PLAN D 1397.04



NH\S010156-McNabb\_Properties\1397.03-Lafayette Rd., Portsmouth-JRC\2023 Site Plan 1397.03\Plans & Specs\Site\Final Set revised 1-3-25\OVERALL 2024 Concept\_recover.dwg. 1/22/2



AMBIT ENGINEERING, INC. Civil Engineers & Land Surveyors 200 Griffin Road - Unit 3

200 Griffin Road - Unit 3 Portsmouth, N.H. 03801-7114 Tel (603) 430-9282 Fax (603) 436-2315

### NOTES:

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2) OWNERS OF RECORD:

CITY OF PORTSMOUTH 1 JUNKINS AVENUE PORTSMOUTH, NH 03802

- 1985/379
- APPLICANT ATLAS COMMONS, LLC 10 PLEASANT STREET, SUITE 300 PORTSMOUTH, NH 03801
  - 6474/1538

3) THE PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0270E, EFFECTIVE MAY 17, 2005

4) EXISTING LOT AREA: (DEVELOPMENT LOT MAP 229 LOT 8B)
 98,124 S.F.
 2.2526 AC

5) PARCEL IS LOCATED IN THE GATEWAY NEIGHBORHOOD CORRIDOR (G1) DISTRICT.

- 6) DIMENSIONAL REQUIREMENTS: SEE ZONING ORDINANCE SECTION 10.5B22.10
- 7) THE PURPOSE OF THIS PLAN IS TO SHOW PUBLIC REALM IN ACCORDANCE WITH SECTION 10.5B7320.1 ON TAX MAP 229 LOT 3.

OF PORTSMOUTH SCHOOL DEPARTMENT REVIEW AND APPROVAL.

- 8) PUBLIC REALM IMPROVEMENTS SHOWN HERON ARE SUBJECT TO CITY
- 9) SEE GRADING PLAN FOR LIMIT OF WETLAND FILL.

## COMMERCIAL DEVELOPMENT 581 LAFAYETTE ROAD PORTSMOUTH, N.H.







PLAN



HAMPSHIRE

NAD 83



AMBIT ENGINEERING, INC. Civil Engineers & Land Surveyors 200 Griffin Road - Unit 3 Portsmouth, N.H. 03801-7114 Tel (603) 430-9282 Fax (603) 436-2315

#### NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1–888–DIG–SAFE (1–888–344–7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY WITHIN 100 FEET OF UNDERGROUND UTILITIES. THE EXCAVATOR IS RESPONSIBLE TO MAINTAIN MARKS. DIG SAFE TICKETS EXPIRE IN THIRTY DAYS.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

4) WETLAND FILL SUBJECT TO STATE AND LOCAL PERMITS.

## COMMERCIAL DEVELOPMENT 581 LAFAYETTE ROAD PORTSMOUTH, N.H.





SCALE: 1"=20'



NOVEMBER 2024



WETLANDS WERE DELINEATED ON 1/7/25 BY SAM HAYDEN, CWS #321 ON THE BASIS OF HYDROPHYTIC VEGETATION, HYDRIC SOILS AND WETLAND HYDROLOGY IN ACCORDANCE WITH THE TECHNIQUES OUTLINED IN THE "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL, TECHNICAL REPORT Y-87-1", JANUARY 1987. THE HYDRIC SOIL COMPONENT WAS DETERMINED BY USING THE "FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 3", NEIWPCC WETLANDS



10156-McNabb\_Properties/1397.03-Lafayette Rd., Portsmouth-JRC/2023 Site Plan 1397.03/Plans & Specs/Site/Final Set revised 1-3-25/OVERALL 2024 Concept\_recover.dwg, 1,

HAMPSHIRE

NAD 83



AMBIT ENGINEERING, INC. Civil Engineers & Land Surveyors 200 Griffin Road - Unit 3 Portsmouth, N.H. 03801-7114 Tel (603) 430-9282 Fax (603) 436-2315

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## COMMERCIAL DEVELOPMENT 581 LAFAYETTE ROAD PORTSMOUTH, N.H.





GRADING

PLAN

SCALE: 1"=20'

C5

NOVEMBER 2024

FB 487 PG 1 -





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4) TREE REMOVAL SUBJECT TO REVIEW AND APPROVAL OF THE CITY OF PORTSMOUTH TREES AND GREENERY COMMITTEE.

5) INVÁSIVE TREES, SHRUBS, AND VINES SHALL BE CUT AS LOW AS POSSIBLE TO THE GROUND AND THE STUMP SHALL BE IMMEDIATELY PAINTED OR BRUSHED WITH AN AMPLE AMOUNT OF A "BRUSH KILLING" HERBICIDE. THE PLANT WILL DRAW THE HERBICIDE INTO THE ROOTS WHILE THE STUMP IS FRESHLY CUT.

### COMMERCIAL DEVELOPMENT 581 LAFAYETTE ROAD PORTSMOUTH, N.H.

2	NOTE 5	2/18/25	
1	PUBLIC REALM LOCATION	1/3/25	
0	ISSUED FOR COMMENT	12/11/24	
NO.	DESCRIPTION	DATE	
	REVISIONS		



SCALE: 1"=20'

TREE REMOVAL

PLAN

NOVEMBER 2024



FB 487 PG 1 -



**b**.1 **b**.0 **b**.0 **b**.0 **.** b.1 b.2 b.2 b.1 b.1 b.1 b.1 b.1 b.0 b.0 b.0Juminaire Schedule Qty b.0 b.1 b.1 b.1 b.2 b.3 b.3 b.3 b.3 b.2 b.1 b.1 b.1 b.1 b.0 b.0-10 b.0 b.1 b.1 b.1 b.3 b.5 b.6 b.6 b.5 b.2 b.1 b.1 b.1 b.0 **E** 2 0.1 0.2 0/3 5.5 1.4 / 2/6 6.3 7.3 4.0 2.8 1.7 0.4 0.2 0.1 0.1 1.0 /2.3, 4.5 7.6 9 7.5 5.3 3.2 5 6 0.8 0.3 0.1 0.1 b.1 \b.2 **b**.5 0.1 0.3 0 6 1 6 3.5 6.3 9.1 5.9 0 4.7 2.5 4.8 6.5 0.2 0.1 0.0 \$.9 2.0 4.3 17.2 8.7 8.4 \$.5 5.5 / 3.1 1.5 5.6 0.2 0.1 0.0 10.1 0.K  $1 \quad 0 \quad 4 \quad 4 \quad 9 \quad \sqrt{2.2} \quad 4.4 \quad 6.7 \quad 7.8 \quad 7.9 \quad 7.9$ tig 21 4.1 to 8.3 8.8 8. 0 8.4 1.8 3.1 1.4 1.6 5.2 5.1 5.1 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.5 5.6 5.7 .3 0.4 1.6 3.2 5.17 8.3 5.2 5.4 7. 4 8 /2.4 1. 0.4 0.2 0.1 0.1 0.1 0.0 1.1 0.3 0.2 04 04 0.4 3. 1.5 0.2 0 b.1 b.2 b.5 1.1 1.9 2.8 5.0 8.4 4.0/1. 0.1 0.2 0.3 0.5 0.7 1.3 3.2 3.2 2.8 1.200.6 0.0 0.1 0.1 0.2 0.2 0.4 0.5 0.5 0.5 0.4 0.3 0.2 0.2 0.3 0.2 0.1 0.1 0.0 0.0 0.00.0 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 ····· t.o t.o t.o t.o t.o GRAPHIC SCALE

STATE PLANE

			[MANUEAC]
Arrangement	Description	'l'ag	LST
Single	XWM-2-LED-3L-30-UE-CXX-XPMA / 4SQ XX S11G12 S CXX AB 4BC	12. POLE	INDUSTRIES, INC.
Single	MRM-LED-24L-SIL-FT-UNV-DIM-30-70CRI-CXX / 4SQ B3 S11G20 S CXX AB 4BC	20' POLE	LSI INDUSTRIES, INC.



HAMPSHIRE	AMBIT ENC Civil Engineers 200 Griffin Road - Portsmouth, N.H. 03 Tel (603) 430-9282 Fax (603) 436-2315	GINEERING, INC. 5 & Land Surveyors Unit 3 8801-7114	
NAD 83	<ul> <li>I LIGHTING DESIGN PROVIDED BY EXP 1/7/24. CONTACT: KEN SWEENEY 603- 2) ALL LIGHTS SHALL BE DARK SKY C DOWNWARD.</li> <li>3) LIGHTS SHALL COMPLY WITH ALL LC REGULATIONS.</li> <li>4) NUMBERS REPRESENT INITIAL FOOTC ABOVE GRADE.</li> </ul>	OSURE ESS ON -601–8080. OMPLIANT AND DIRECTED DCAL, STATE, AND FEDERAL CANDLE VALUES AT 3 FEET	
	<ul> <li>5) THIS LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS</li> <li>CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED</li> <li>CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY</li> <li>APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S</li> <li>LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE,</li> <li>TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.</li> <li>6) BASED ON THE INFORMATION PROVIDED, ALL DIMENSIONS AND</li> <li>LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS.</li> <li>THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF</li> <li>THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.</li> </ul>		
Ⴆ.o       Ⴆ.o         Ⴆ.o       Ⴆ.o	COMMERCIAL DEVELOPMEN 581 LAFAYE PORTSMOUT	NT TTE ROAD H, N.H.	
b.1 $b.0$ $b.0b.1$ $b.0$ $b.0$ $b.0b.1$ $b.0$ $b.0$ $b.0b.1$ $b.0$ $b.0$ $b.0$	1 PUBLIC REALM LOCATION	1/3/25	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0 ISSUED FOR COMMENT NO. DESCRIPTION REVISION	11/21/24 DATE S	
	SCALE: 1"=20'	NOVEMBER 2024	
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perties\1397.03-Lafayette Rd., Portsmouth-JRC\2023 Site Plan 1397.03\Plans & Specs\Site\Final Set revised 1-3-2!

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NEW HAMPSHIRE	AMBIT ENGINEERING, INC. Civil Engineers & Land Surveyors 200 Griffin Road - Unit 3 Portsmouth, N.H. 03801-7114 Tel (603) 430-9282 Fax (603) 436-2315
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	3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).
TRESPASSING ORS & VISITORS REGISTER AT MAIN OFFICE"	4) VERTICAL DATUM IS NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBS.
X	
	COMMERCIAL DEVELOPMENT 581 LAFAYETTE ROAD PORTSMOUTH, N.H.
	1REVISED SIDEWALK & PATH1/3/250ISSUED FOR COMMENT11/21/24NO.DESCRIPTIONDATEREVISIONS
	JOHN REW HAARDON JOHN SC JOHN RE - BROOMAL ENGLISHING
	SCALE: H1"=40' V1"=2' NOVEMBER 2024 WALKWAY PLAN & PROFILE P1
	FB 487 PG 1 5010156.1397.04

### EROSION CONTROL NOTES

#### CONSTRUCTION SEQUENCE

DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.

IF REQUIRED THE CONTRACTOR SHALL OBTAIN AN NPDES PHASE II STORMWATER PERMIT AND SUBMIT A NOTICE OF INTENT (N.O.I) BEFORE BEGINNING CONSTRUCTION AND SHALL HAVE ON SITE A STORMWATER POLLUTION PREVENTION PLAN (S.W.P.P.P.) AVAILABLE FOR INSPECTION BY THE PERMITTING AUTHORITY DURING THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THE S.W.P.P.P. AND INSPECTING AND MAINTAINING ALL BMP'S CALLED FOR BY THE PLAN. THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION (N.O.T.) FORM TO THE REGIONAL EPA OFFICE WITHIN 30 DAYS OF FINAL STABILIZATION OF THE ENTIRE SITE OR TURNING OVER CONTROL OF THE SITE TO ANOTHER OPERATOR.

THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT: OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY

THE CONTRACTOR AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER: AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR; A REPRESENTATIVE OF THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE

AND REPAIR ACTIVITIES: IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

INSTALL PERIMETER CONTROLS, i.e., SILTSOXX AND CATCH BASIN PROTECTION AROUND THE LIMITS OF DISTURBANCE BEFORE ANY EARTH MOVING OPERATIONS. THE USE OF HAYBALES IS NOT ALLOWED.

THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES. PLACE FODS AS NEEDED.

CUT AND GRUB ALL TREES, SHRUBS, SAPLINGS, BRUSH, VINES AND REMOVE OTHER DEBRIS AND RUBBISH AS REQUIRED.

ROUGH GRADE SITE.

LAYOUT AND INSTALL ELECTRICAL SERVICES. CAP AND MARK TERMINATIONS OR LOG SWING TIES.

CONNECT UTILITIES.

CONSTRUCT SIDEWALKS. PLACE CONCRETE AND BINDER LAYER OF PAVEMENT FOR PATHWAY.

REMOVE TRAPPED SEDIMENTS FROM COLLECTION DEVICES AS APPROPRIATE, AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF FINAL STABILIZATION OF THE SITE.

#### PROJECT DESCRIPTION

THE PROJECT CONSISTS OF CONSTRUCTING A BASKETBALL COURT AT THE END OF LEDGEWOOD DRIVE. BEGINNING AT THE COURT, A CONCRETE SIDEWALK THAT TRANSITIONS INTO RECYCLED ASPHALT WILL CONNECT TO THE PORTSMOUTH HIGH SCHOOL PARKING LOT ALONG THE RECREATION FIELD.

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 0.470 ACRES.

BASED ON THE USCS WEB SOIL SURVEY THE SOILS ON SITE CONSISTS OF URBAN LAND AND UDORTHENTS.

THE STORMWATER RUNOFF FROM THE SITE WILL HAVE MINIMAL IMPACT AND FLOW SIMILARLY TO THE EXISTING CONDITIONS. DRAINAGE WILL FOLLOW TOPOGRAPHY AND WILL FLOW TO THE SAGAMORE CREEK.

#### **GENERAL CONSTRUCTION NOTES**

THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" OF THE NHDOT, AND "STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE". THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED FOR MORE THAN 45 DAYS.

ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT FROSION

THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

DUST CONTROL: DUST CONTROL MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING

DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS. IF TEMPORARY STABILIZATION PRACTICES, SUCH AS TEMPORARY VEGETATION AND MULCHING, DO NOT ADEQUATELY REDUCE DUST GENERATION, APPLICATION OF WATER OR CALCIUM CHLORIDE SHALL BE APPLIED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

SILTSOXX SHALL BE PERIODICALLY INSPECTED DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM. ALL DAMAGED SILTSOXX SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED IN A SECURED LOCATION.

ALL FILLS SHALL BE PLACED AND COMPACTED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS.

ALL NON-STRUCTURAL, SITE-FILL SHALL BE PLACED AND COMPACTED TO 90% MODIFIED PROCTOR DENSITY IN LAYERS NOT EXCEEDING 18 INCHES IN THICKNESS UNLESS OTHERWISE NOTED.

FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIAL, TRASH, WOODY DEBRIS. LEAVES, BRUSH OR ANY DELETERIOUS MATTER SHALL NOT BE INCORPORATED INTO FILLS.

FILL MATERIAL SHALL NOT BE PLACED ON FROZEN FOUNDATION SUBGRADE.

DURING CONSTRUCTION AND UNTIL ALL DEVELOPED AREAS ARE FULLY STABILIZED, ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH ONE HALF INCH OF RAINFALL.

THE CONTRACTOR SHALL MODIFY OR ADD EROSION CONTROL MEASURES AS NECESSARY TO ACCOMMODATE PROJECT CONSTRUCTION.

ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

BASE COURSE GRAVELS HAVE BEEN INSTALLED ON AREAS TO BE PAVED - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED

- A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED

- EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.

- IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED.

STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA.

STABILIZATION MEASURES TO BE USED INCLUDE:

#### - TEMPORARY SEEDING: MULCHING.

ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN THESE AREAS, SILTSOXX, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES,

PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILTSOXX, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

#### MAINTENANCE AND PROTECTION

THE SILTSOXX BARRIER SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

SILTSOXX SHALL BE REMOVED ONCE SITE IS STABILIZED, AND DISTURBED AREAS RESULTING FROM SILTSOXX REMOVAL SHALL BE PERMANENTLY SEEDED.

THE CATCH BASIN INLET BASKET SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM REACHING THE DRAINAGE SYSTEM AND/OR CAUSING SURFACE FLOODING

SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT, OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED.

#### WINTER NOTES

ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.

ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS:

AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;

#### **STOCKPILES**

CULVERTS. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.

PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO 3. ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION 4 CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

#### CONCRETE WASHOUT AREA

THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE: THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FAILITY;

IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER; CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS; INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

#### ALLOWABLE NON-STORMWATER DISCHARGES

FIRE-FIGHTING ACTIVITIES: FIRE HYDRANT FLUSHING;

- WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
- WATER USED TO CONTROL DUST;
- POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING; ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED:
- PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
- UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION; UNCONTAMINATED GROUND WATER OR SPRING WATER:
- FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
- UNCONTAMINATED EXCAVATION DEWATERING; LANDSCAPE IRRIGATION.

#### WASTE DISPOSAL

12.

- WASTE MATERIA
- ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER:
- NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE; - ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
- HAZARDOUS WASTE - ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED
- BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER; - SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT. SANITARY WASTE
- ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

#### **BLASTING NOTES**

CONTRACTOR SHALL CONTACT THE NHDES AND/OR LOCAL JURISDICTION PRIOR TO COMMENCING ANY BLASTING ACTIVITIES. FOR ANY PROJECT FOR WHICH BLASTING OF BEDROCK IS ANTICIPATED, THE APPLICANT

- SHALL SUBMIT A BLASTING PLAN THAT IDENTIFIES: - WHERE THE BLASTING ACTIVITIES ARE ANTICIPATED TO OCCUR;
  - THE ESTIMATED QUANTITY OF BLAST ROCK IN CUBIC YARDS; AND - SITE-SPECIFIC BLASTING BEST MANAGEMENT PRACTICES.



THE PURPOSE AND DESIGN OF THE FODS TRACKOUT CONTROL SYSTEM IS TO EFFECTIVELY REMOVE MOST SEDIMENT FROM VEHICLE TIRES AS THEY EXIT A DISTURBED LAND AREA ONTO A PAVED STREET THIS MANUAL IS A PLATFORM FROM WHICH TO INSTALL A FODS TRACKOUT CONTROL SYSTEM. (NOTE: THIS IS NOT A ONE SIZE FITS ALL GUIDE.) THE INSTALLATION MAY NEED TO BE MODIFIED TO MEET THE EXISTING CONDITIONS, EXPECTATIONS, OR DEMANDS OF A PARTICULAR SITE. THIS IS A GUIDELINE. ULTIMATELY THE FODS TRACKOUT CONTROL SYSTEM SHOULD BE INSTALLED SAFELY WITH PROPER



MATERIALS, OR SUDDEN ABRUPT CHANGES IN ELEVATION.

THE SITE ONTO THE PAVED SURFACE.

BETWEEN THE MATS.

THE ABOVE STEPS.

ACROSS THE MATS.

### REMOVAL

THE ANCHORS SHOULD BE REMOVED. SYSTEM





AMBIT ENGINEERING, INC.





#### AMBIT ENGINEERING, INC. Civil Engineers & Land Surveyors

200 Griffin Road - Unit 3 Portsmouth, N.H. 03801-7114 Tel (603) 430-9282 Fax (603) 436-2315

#### NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN FNGINFFR.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

#### **City of Portsmouth Tree Planting Requirements**

The base of the City of Portsmouth Tree Planting Requirements is the ANSI A300 Part 6 Standard Practices for Planting and Transplanting. ANSI A300 Part 6 lays out terms and basic standards as set forth by industry but it is NOT the "end all" for the City of Portsmouth. The following are the City of Portsmouth, NH Tree Planting Requirements that are in addition to or that go beyond the ANSI A300 Part 6.

1. All planting holes shall be dug by hand- NO MACHINES. The only exceptions are new construction where new planting pits, planting beds with granite curbing, and planting sites with Silva Cells are being created. If a machine is used to dig in any of these situations and planting depth needs to be raised the material in the bottom of the planting hole MUST be firmed with machine to prevent sinking of the root

2. ALL Wire and Burlap shall be removed from the root ball AND planting hole.

3. The root ball of the tree shall be worked so that the root collar of the tree is visible and no girdling roots are present.

4. The root collar of the tree shall be 2"-3" above grade of planting hole for finished depth.

5. All plantings shall be backfilled with soil from the site and amended no more than 20% with Organic Compost. The only exceptions are new construction where engineered soil is being used in conjunction with Silva Cells and where new planting beds are being created.

6. All plantings shall be backfilled in three lifts and ALL lifts shall be watered so the planting will be set and free of air pockets- NO EXCEPTIONS.

7. An earth berm shall be placed around the perimeter of the planting hole except where curbed planting beds or pits are being used.

8. 2"-3" of mulch shall be placed over the planting area.

9. At the time the planting is complete the planting shall receive additional water to ensure complete hydration of the roots, backfill material and mulch layer.

10. Stakes and guys shall be used where appropriate and/or necessary. Guy material shall be nondamaging to the tree.

11. All planting stock shall be specimen quality, free of defects, and disease or injury. The City of Portsmouth, NH reserves the right to refuse/reject any plant material or planting action that fails to meet the standards set forth in the ANSI A300 Part 6 Standard Practices for Planting and Transplanting and/or The City of Portsmouth, NH Planting Requirements.

## COMMERCIAL DEVELOPMENT 581 LAFAYETTE ROAD PORTSMOUTH, N.H.

1	DETAILS	1/3/24	
0	ISSUED FOR COMMENT	11/21/24	
NO.	DESCRIPTION	DATE	
REVISIONS			



DETAILS

SCALE: 1"=20'

NOVEMBER 2024





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



#### **Robert R. Scott, Commissioner**

CITY OF PORTSMOUTH		
1 JUNKINS AVE		
PORTSMOUTH NH 03801		

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By_	K.E	H.				

February 05, 2025

Re: Request for More Information – Standard Dredge and Fill Wetlands Permit Application (RSA 482-A) NHDES File Number: 2024-03621 Subject Property: Whidden St, Portsmouth, Tax Map #ROW, Lot #ROW

Dear Applicant:

On February 5, 2025, the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau reviewed the above-referenced Standard Dredge and Fill Wetlands Permit Application (Application). Pursuant to RSA 482-A:3, XIV(a)(2) and Rules Env-Wt 100 through 900, NHDES Wetlands Bureau determined the following additional information is required to complete its evaluation of the Application:

- 1. As this project takes place within the protected tidal zone, please provide a copy of the full recorded deed with the associated book and page numbers for the property as recorded in the Rockingham County Registry of Deeds and as required in accordance with Env-Wt 311.06(e).
- 2. In accordance with Env-Wt 311.06(g), please provide copies of the written follow-up communications such as additional memos or email communications with the Natural Heritage Bureau (NHB) regarding the sensitive plant species located within the vicinity of the project as identified in the NHB DataCheck (NHB ID: NHB24-2788) and make any necessary changes to the application and plans to include all recommendations made by NHF&G required in accordance with Env-Wt 311.01(b).
- 3. The plans indicate that the proposed impacts will be taking place within 10 feet of the shared property lines with Portsmouth Tax Map #102, Lot #66 and Portsmouth Tax Map #109, Lot #1. Please either revise the plans to clearly show that the proposed impacts will be taking place at least 10 feet from all shared property lines as required in accordance with Env-Wt 307.13(b) or provide the written consent from all abutting property owners where impacts will occur within 10 feet of the shared property line as required in accordance with Env-Wt 307.13(d) as a part of the response to this letter.
- 4. The impacts associated with the installation of the proposed outlet apron for the outfall extension are considered permanent per Env-Wt 103.57. Please revise the plans to include the impacts associated with the outlet apron as permanent impacts and revise the limits of all temporary and permanent impacts shown as labeled and lightly shaded or stippled areas as required in accordance with Env-Wt 311.05(a)(18), and submit a revised copy of all applicable application materials that will be impacted by this change including but not limited to a revised impact area summary (see Section 11 on page 5 of 7 of the Standard Wetland Permit Application), a revised plan set, etc.
- 5. Please confirm the location of the highest observable tideline (HOTL) in accordance with Env-Wt 602.23 and depicted pursuant to Env-Wt 603.08(a)(6), and provide the date, time of day, and weather conditions when water depths were recorded and the name and license number of the licensed land surveyor who conducted the field measurements as required to support how the water depth of the HOTL was determined in accordance with Env-Wt 603.08(b).

File Number: 2024-03261 February 5, 2025 Page **2** of **2** 

- 6. The plans submitted with the Application by The Department of Public Works for the City of Portsmouth (Portsmouth DPW) are not stamped by a certified wetland scientist (CWS). In accordance with Env-Wt 311.05(b)(2), plan sheet(s) depicting wetland boundaries that have been submitted with an application for a standard permit that was prepared by a CWS must be stamped by the CWS who prepared the plan(s), or who oversaw the wetland boundary delineation if done by an apprentice or an associate who is not a certified wetland scientist.
- 7. Please revise the Portsmouth DPW plans sheet(s) depicting wetland boundaries to include notes that specify the date(s) on which the wetlands delineation was performed, and the means and methods of delineation as required in accordance with Env-Wt 311.05(b)(5).
- 8. Please revise the Portsmouth DPW plans to identify the specific wetland resource types and their locations on the property using the Cowardin classifications as required in accordance with Env-Wt 406.06(b), Env-Wt 311.05(a)(13), and Env-Wt 524.03(a)(4).
- 9. Please revise the plans to show the location of the 100-year flood boundary zone and water elevation as shown on the applicable FEMA Flood Insurance Rate Map in accordance with Env-Wt 311.05(a)(16) and Env-Wt 610.04(b).
- 10. Please provide a vulnerability assessment prepared in accordance with Env-Wt 603.05 and make any adjustments to the proposed plans as required as a result of the assessment.
- 11. In accordance with Env-Wt 603.08(a)(7) please depict the predicted sea-level rise as identified in the vulnerability assessment in Env-Wt 603.05 and identify areas of the proposed project site subject to flooding from the selected sea-level rise projection as required in accordance with Env-Wt 603.05(d).

Please submit the required information as soon as practicable. Pursuant to RSA 482-A:3, XIV(a)(2), **the required information must be received by NHDES Wetlands Bureau within 60 days of the date of this request (no later than April 6, 2025), or the Application will be denied**. Should additional time be necessary to submit the required information, an extension of the 60-day time period may be requested. Requests for additional time must be received prior to the deadline in order to be approved. In accordance with applicable statutes and regulations, the applicant is also expected to provide copies of the required information to the municipal clerk and all other interested parties.

Pursuant to RSA 482-A:3, XIV(a)(3), NHDES Wetlands Bureau will approve or deny the Application within 30 days of receipt of all required information, or schedule a public hearing, if required by RSA 482-A or associated rules.

If you have any questions, please contact me at Kristin.Duclos@des.nh.gov or (603) 559-1516.

Sincerely,

Kowto D.M.

Kristin L. Duclos Wetlands Specialist, Wetlands Bureau Land Resources Management, Water Division

Copied: Portsmouth Municipal Clerk/Conservation Commission Portsmouth Department of Public Works, c/o Peter Rice