

# KITTERY PORT AUTHORITY TOWN HALL 200 ROGERS RD. KITTERY, ME 03904

Phone: 207-439-0452 ext 301 Email:kpa@kitteryme.org www.kitteryme.gov

Meeting Agenda October 7, 2021 6:00 P.M.

- 1. Call to Order / Attendance
- 2. Pledge of Allegiance
- 3. Agenda Amendments and Adoption
- 4. Acceptance of Previous Minutes: September 2, 2021
- 5. Harbormaster Report and Budget Report
- 6. All Items involving Town Officials or invited guests
  - a. Cameron Wake from the Climate Adaptation Committee Climate Action Plan
- 7. Public Hearing
- 8. Piers, Wharves & Floats

a. The Kittery Port Authority moves to accept an application from Ruth Lawrence 19 Pleasant Street, Kittery, ME 03904 (Map 4, Lot 35A) to replace windows and doors in an existing commercial boat house, address cosmetic issues and add a deck to the second story for an exit.

b. The Kittery Port Authority moves to accept an application from Nicholas and Meredith Starr 56 Tidewater Way, Kittery, ME 03904 (Map 47, Lot 18-3-2) for the construction of a 70'x3' fixed pier, 26'x3' gangway and a 10'x18' float. Agent is Duncan Mellor Civil Works New England.

c. The Kittery Port Authority moves to discuss preliminary plans for 35 Badgers Island West, Kittery, ME 03904 (Map 1, Lot 32) for a potential tidal docking structure for 14 slips.

9. Public Segment (Three Mins.)

- 10. Unfinished Business
- 11. New Business
  - a. Yearly By-law Review
  - b. Old Ferry Lane
- 12. Committee and Other Reports
  - a. Communications from the Chairperson -
- 13. Board Member Issues or Comments
- 14. Executive Session
- 15. Adjournment

PORT AUTHORITY MEETING

UNAPPROVED

# COUNCIL CHAMBERS

# SEPTEMBER 2, 2021

- 1 1. Call to Order / Attendance
- 2 Chair Philbrook called the meeting to order at 6:00 p.m.
- 3 Members present: Chair Philbrook, Bryan Bush, John McCollett, and Niles Pinkham.
- 4 Members absent: Vice Chair Patten, Steve Lawrence, and Alan Johnston.
- 5 2. Pledge of Allegiance
- 6 3. Agenda Amendments and Adoption
- 7 Chair Philbrook stated unless more KPA members attended tonight's meeting, items a.
- 8 and b. under Piers, Wharves, and Floats would be postponed to the October 2021 KPA
- 9 meeting due to the three absences of KPA board members.
- 10 Chair Philbrook cast one vote to accept the agenda as written.
- 11 4. Acceptance of Previous Minutes: July 1, 2021.
- Mr. McCollett mentioned for the record, that lines 74, and 75 on the July 1, 2021, KPA
- 13 minutes were not completely accurate, and said the float on Old Ferry Lane had been
- there since he believed 1958. Mr. McCollett also stated the Chair of the Port Authority at
- that time and the other board members accepted the float being there so he said he
- 16 went along with it.
- Chair Philbrook moved to approved the July 1, 2021 minutes as presented, secondedby Mr. Bush.
- 19 All were in favor.
- 5. Harbormaster Report and Budget Report
- 21 The Harbormaster reported it has been a very busy transient year. FY actual to date
- 22 (not in MUNIS yet) is approximately \$24,500, and it has been a very busy launch year
- as well, approximately \$7,500.00 (this number is based on MUNIS and an estimated
- value of daily launch fees added to it. The number is likely higher).
- 25 The Harbormaster stated that preparations were made for Hurricane Henri, thankfully
- the hurricane died out and missed us and the only damage was a tree branch fell onto a
- float at the Traip Ramp.

- The Harbormaster stated he made multiple patrols with officers from Kittery PD and
- 29 Maine Marine Patrol in main river for wakes and speed.
- 30 The Harbormaster stated he spoke with USCG Captain, of the Port in Portland about
- 31 the possibility of them installing larger heavy duty No Wake/Headway Speed buoys in
- 32 area of Memorial Bridge. The response from the USCG Captain, was that USCG does
- 33 not do that kind of navigational aids.
- The Harbormasters said he ordered, and received 5 new Slow No Wake collar buoys, 3

red channel marker buoys, and 3 green channel marker buoys, all would be installed

36 before next season. He also mentioned the kayak racks came in and will assemble

- them in the spring and install them for next season.
- The Harbormaster's boat responded with KPD/KFD regarding a missing 13-year-old boy
- 39 who might have gone to water's edge in Spruce Creek, a shoreline search was done,
- 40 and the child was later located at the school.
- 41 The Harbormaster responded to a report of a large fuel spill in the Back Channel, most
- of the fuel dissipated, but could not find the source. USCG was notified.
- The Harbormaster responded to a 28-foot boat that went aground on White Island shoal
- along with a USCG. 2 POB, vessel was damaged but it was able to come off on a swell
- 45 and the vessel was escorted back to its home dock as the props and the lower units
- 46 were damaged.
- The Harbormaster responded to a report of another fuel spill in Pepperrell Cove on the
- 48 West side. USCG was contacted and we checked the area on the Harbormaster boat.
- Again, most of the fuel dissipated, and required no further action.
- 50 The Harbormaster recovered an inflatable dinghy in the back channel, and was able to 51 locate the owner.
- 52 The Harbormaster responded to the Portsmouth Naval Shipyard for a report of 2 floats
- that had broken free somewhere in the river and came to rest along the shore of the
- shipyard. They were towed back to Traip and posted to try to find the owner. There's
- 55 been no responses yet.
- 56 The Harbormaster investigated a bicycle and kayak trailer combo that had been left at
- 57 Traip for several days. He located the owner on a sailboat in Casco Bay who forgot to
- notify anyone that the bike and the trailer would be in the lot for several days.
- 59 The Harbormaster stated he came up on a 40-foot boat broke down and it drifting down
- 60 the main river in the area of Henderson Point in outgoing tide. The owner was trying to
- tow with an 8-foot inflatable to safety. He said he had a KPD officer on the
- 62 Harbormaster's boat, and was able to put the boat on the hip and tow it to a KPYC
- 63 mooring until the Tow Boat US could tow the boat back to the Eliot mooring.

- 64 The Harbormaster stated he assisted Kittery Fire and Kittery PD by transporting
- 65 personnel and equipment to Rams Island in Spruce Creek after a campfire got out of 66 control.
- The Harbormaster responded to the Bistro restaurant lot after a report of 2 small
- children left in a vehicle and reported as a suspicious vehicle. He spoke with the vehicle
- 69 owner and the father of the children who said that the child fell asleep and he did not
- want to wake the child. KPD arrived and took over the incident.
- The Harbormaster responded to a woman who slipped on the Pepperrell Cove boat
- ramp while bringing kayaks down to the ramp to launch and hit her head. He also
- r3 suggested medical attention, she declined, but later went to York Hospital to be
- evaluated. He also mentioned that, DPW had a self-propelled walk behind street
- sweeper to use on the ramp that should help remove build up sediment on the ramp,
- and signs were posted about the slippery conditions as well.
- The Harbormaster responded to a report of a sailboat on the rocks in front of Ft.
- 78 McClary, the vessel had too short of an anchor chain out and drifted over the rocks. The
- boat was able to float off at next high tide. He assisted in moving the sailboat away from
- 80 the rocks in case of engine failure caused the boat to go back on to the rocks.
- 81 The Harbormaster responded to a report of a Kayaker who camped overnight on Horn
- Island. The person was pulled out of the water by an unknown boater and brought to
- 83 Pepperrell Cove and the medics were called. The patient was given water and put in the
- 84 Harbormaster's shack with the air conditioner on as the patient was overheated and
- 85 dehydrated, the patient was picked up by his wife and signed an ambulance treatment
- 86 refusal.
- The Harbormaster responded to Wood Island for report of a Seagull with a broken wing.
- 88 Maine Marine Patrol were called and went out to the island on the Harbormaster boat,
- 89 KPD brought a crate and gloves for the recovery. Marine Patrol transported the bird to
- 90 the Center for Wildlife.
- 6. All Items involving Town Officials or invited guests None
- 92 7. Public Hearing None
- 93 8. Piers, Wharves & Floats
- 94 a. The Kittery Port Authority moves to accept an application from Ruth Lawrence,
- 19 Pleasant Street, Kittery, ME 03904 (Map 4, Lot 35A) to replace windows and
- 96 doors in an existing commercial boat house, address cosmetic issues and add a
- 97 deck to the second story for an exit.
- 98 Postponed to the October 2021 KPA meeting.
- b. The Kittery Port Authority moves to accept an application from Nicholas and
  Meredith Starr, 56 Tidewater Way, Kittery, ME 03904 (Map 47, Lot 18-3-2) for the

- 101 construction of a 70'x3' fixed pier, 26'x3' gangway and a 10'x18' float. Agent is
- 102 Duncan Mellor, Civil Works New England.
- 103 Postponed to the October 2021 KPA meeting.
- 104 9. Public Segment (Three Mins.) None
- 105 10. Unfinished Business None
- 106 11. New Business
- 107 a. Yearly By-law Review
- The Chair as well as the other KPA members reviewed the upcoming changes in theKPA by-laws.
- 110 12. Committee and Other Reports None
- a. Communications from the Chairperson
- 112 Chair Philbrook stated the Chair from the Kittery Adaptation Committee, Cameron Wake
- 113 would be giving a presentation on the launching Climate Action Plan at the October
- 114 2021 KPA meeting. Chair Philbrook also mentioned the Kittery Adaptation Committee is
- currently looking for representation from the KPA or someone in the working water front.
- 116 Chair Philbrook ask the KPA members if they would like to still meet in person wearing
- 117 mask or start having ZOOM meetings again. The KPA members agreed to keep in
- 118 person meetings.
- 119 Chair Philbrook stated she was contacted by Pickering Marine about a potential project.
- 120 Dredging Pepperrell Cove up-date
- 121 Chair Philbrook gave an update on the status of the dredging at Pepperrell Cove.
- 122 13. Board Member Issues or Comments
- 123 Mr. Bush mentioned Sam Reid had extended an invitation to the KPA members to come 124 out and see the new facility at Wood Island.
- 125 Mr. Pinkham stated that insurance regulations were interfering with him volunteering to
- help the Harbormaster and the Deputy Harbormaster he asked if there was some way,
- 127 he could sign a waiver. Mr. Pinkham also mentioned letting someone put a float on the
- other side of his float, it would be another way of getting more boats in the water.
- 129 Mr. McCollett wanted to revisit the temporary moorings program.
- 130 Chair Philbrook discussed with the members some changes she would like to make in
- 131 the KPA's rules and regulations.

- 132 The KPA board members and the Harbormaster decided float out would be on October
- 133 18, 2021 at 10:17 a.m., and October 19, 2021 if it rains.
- 134 All were in favor.
- 135 14. Executive Session None
- 136 15. Adjournment
- 137 Chair Philbrook moved to adjourn at 7:15 p.m., seconded by Mr. Bush.
- 138 All were in favor.

# Submitted by Kim Tackett

Disclaimer: The following minutes constitute the author's understanding of the meeting. Whilst every effort has been made to ensure the accuracy of the information, the minutes are not intended as a verbatim transcript of comments at the meeting, but a summary of the discussion and actions that took place. For complete details, please refer to the video of the meeting on the Town of Kittery website.

# **Building a Flood Resilient Kittery:**

# **Working Waterfront and Transportation Corridors**

SUST 750 Sustainability Capstone

John Hurley, Parker Philbrick, Hallie Contois, Sarah Kfoury, and Steven Rizzo

Dr. Cameron Wake, Project Advisor

University of New Hampshire

May 2021

# Table of Contents

I.	Introduction	3
II.	Methods	5
D	esk Research and Background Information	5
	Iapping and Vulnerability Assessment	
Ir	nformative Discussions	6
III.	Results	6
Ν	Iassachusetts Current Practices	6
Ν	lew Hampshire Current Practices	7
M	Iaine Current Practices	7
	ittery Current Practices	
	020 Coastal Hazard Planning Best Practices Report	8
	ummary and Recommendations Report for the Town of Kittery, ME   Maine Flood Resilience	
	hecklist	
K	ittery Climate Adaptation Committee	8
	k Assessment	8
	ransportation Corridors	
Pa	arcel-by-Parcel Risk Assessment	12
Inf	ormative Discussions Summary	14
	imilar Themes Among Discussions: Transportation Corridor	14
	imilar Themes Among Discussions: Working Waterfront	
S	imilar Themes Among Discussions: Manufactured Capital	15
	imilar Themes Among Discussions: Natural Capital	
S	imilar Themes Among Discussions: Next Steps	15
IV.	Discussion	16
Κ	ey Vulnerabilities	16
V.	Recommendations	17
	ocal Programs	
	Vorking Waterfront	
	ransportation Corridors	
	Ianufactured Capital	
Ν	atural and Protected Areas (Natural Capital)	19
	reas with Economic Value (Tourism)	
Ε	ducation/Community Outreach	19
VI.	Conclusion	19
Ref	ferences	21
An	pendix A: Excel Analyses	22
	pendix B: Mapping and GIS Data	23
лþ	pendix D. Mapping and OIS Data	23

# List of Figures and Tables

Figure 1: Flood map of full town of Kittery		
Figure 2: An example of the flood risk to working waterfronts and two major transportation		
corridors in Kittery.	11	
Figure 3: Intersection of MaineDOT Roads layer and a 10.9-foot SLR flood scenario.	12	
Table 1: Length of Roadway at Risk by Scenario	10	
Table 2: Economic risk at studied sea level rise scenarios.	13	
Table 3: Land-Use-Based Risk Assessment	14	

## I. Introduction

In addition to being a long-term focus of scientific research, climate change is a common term in today's vernacular. Anthropogenic climate change is often represented as an increase in average global temperatures, primarily caused by anthropogenic release of carbon dioxide and other greenhouse gases, and it is responsible for major changes occurring in earth's climate system, ecosystems, and social systems. There are several positive feedback loops that enhance initial perturbations in the climate system, including the ice-albedo feedback loop. As the climate warms, sea ice melts. Less surface area of sea-ice then allows more solar radiation to be absorbed by the darker (lower albedo) ocean, further raising the temperature of the water, and subsequently the globe itself. The feedback loop continues as warmer temperatures melt more sea-ice. Higher temperatures in the atmosphere and the ocean produce unpredictable and often extreme weather patterns, and sea-level rise occurs due to both melting of polar ice sheets and glaciers, and expansion of ocean water as it becomes warmer.

Around the globe, coastal communities are at risk of catastrophic damage from flooding, storm surge, and rising seas driven by anthropogenic climate change. In New England, flooding is already a frequent occurrence, which causes extreme concern for coastal communities. Storm surges from Nor'easter storms combined with high tides have wreaked havoc on coastal communities, damaging private property as well as natural and manufactured capital (Duprey 2020). Natural capital consists of all the living and nonliving components of natural ecosystems, such as coastal salt marshes and floodplains. This type of capital can protect inland ecosystems and human made infrastructure by absorbing storm surges and flooding. Manufactured capital is infrastructure built by people and relied on by society, such as roads, buildings, telecommunication systems, stormwater collection systems, and seawalls. This type of infrastructure is often built to withstand a certain level of stress, but aging and increasingly-damaging weather events put this type of infrastructure at risk of being destroyed or not serving its intended purpose.

Kittery, Maine is a coastal town on Maine's southern border with a land area of 17.8 square miles, a population of approximately 9,500 (US Census), and over 30 miles of coastline. Kittery is bordered by York, ME and Eliot, ME inland, and is bordered by the Atlantic Ocean, Piscataqua River, Spruce Creek, and Spinney Creek on the coast. The town is a popular tourist destination and is the location of the Portsmouth Naval Shipyard. It is vulnerable to sea level rise due to the length of the coastline and the high amount of coastal development.

The New England states that border the Gulf of Maine have begun implementing programs to address climate change-related hazards. The Massachusetts Municipal Vulnerability Preparedness (MVP) grant program awards cities and towns with funding to complete vulnerability assessments and develop resiliency plans to mitigate the effects of climate change. Over 200 municipalities across Massachusetts have participated in the program (MAPC 2018). After cities and towns complete the vulnerability assessment, they can apply for the MVP Action Grant, which helps fund implementation of their policies and resilience strategies at a municipal level. Like the MVP Program, Massachusetts also has the Coastal Resilience Grant Program. This program funds technical support for municipalities across the state for education on climate impacts, vulnerability assessments, redesign of critical infrastructure, and shoreline restoration. Under this programt, many towns have written adaptation plans and some have implemented their plans. Common hazards that have been identified throughout Massachusetts' coastal towns have been sea level rise, coastal flooding, severe storm/storm surge, extreme cold, heat/drought, increased precipitation, and high winds. Recommendations for adapting to these hazards include wetland restoration, road system resiliency, improving reliability of critical infrastructure, increasing the height of seawalls, adapting critical transportation infrastructure to sea level rise, elevating low lying bridges, and maintaining barrier dunes and beaches.

Places like Nantucket and Gloucester have identified high risk infrastructure have developed plans to address their vulnerabilities. According to the Town of Nantucket Community Resilience Building Workshop Summary of Findings (2019), Nantucket identified sea level rise as the top hazard facing the town. They then identified wetland restoration, road system resiliency, and improving reliability of critical infrastructure, among others, as recommendations to improve resilience. Going forward, Nantucket will pursue the MVP Action Grant to address the recommendations. According to the Gloucester Community Resilience Workshop Summary of Findings (MAPC 2018), Gloucester identified sea level rise, extreme cold, heat/drought and high winds as the most significant climate change-related hazards facing the town. They also identified critical transportation infrastructure and facilities that are vulnerable. With the help of the MVP Program, they came up with recommendations such as increasing the height of their seawall, adapting their Wastewater Treatment Plant to sea level rise, elevating critical low-lying bridges, and dune restoration.

New Hampshire coastal towns have begun to identify the risk of sea-level rise and have implemented some ways in which their coasts can build more resilience. The New Hampshire Coastal Adaptation Workgroup, New Hampshire Coastal Risk and Hazards Commission, Rockingham Planning Commission, University of New Hampshire, and Seabrook-Hampton Estuary Alliance are all groups fully or partially directed towards making a more flood resilient New Hampshire Coast. Specifically, the City of Portsmouth is assessing the vulnerabilities of sea-level rise in this area and through the Coastal Resilience Initiative (Kirshen et al. 2013) and have been working towards developing strategies on ways that the community's infrastructure can be altered in order to mitigate the flood risk. Elevations were mapped to display where flooding is most likely to occur and how it will influence the infrastructure, saltmarsh, wetlands, etc. within that area. Similar to the City of Portsmouth, the towns of Seabrook, Hampton, and Hampton Falls are working towards protecting and preserving the estuary habitats in their recreational and commercial areas (SHEA, 2019). Along with studying "From Tides to Storms" and having meetings with the Coastal Hazards Adaptation Team, there have been discussions regarding outreach events, and the Seabrook-Hamptons Estuary Alliance has received grants from the NH Charitable Foundation to manage the local estuaries along with a Technical Assistance Grant which funds the discussion tables and a series of outreach projects (SHEA, 2019).

The *Maine Won't Wait* climate plan emphasizes the importance of greenhouse gas reduction in the long-term, but also recognizes that immediate adaptation action must be taken in the short-term. The plan is to incorporate official state sea-level rise projections into regulations by 2022, and to develop and implement updated land-use regulations, laws, and practices by 2024 (Maine Climate Council, 2019). This same plan looks to commit to managing 1.5 feet of sea level rise by 2050, and 3.9 feet of sea level rise by 2100. The plan also recommends preparing to manage for 3.0 feet of sea level rise by 2050 and 8.8 feet of sea level rise by 2100. With the flood risk increasing in coastal areas due to sea-level rise, it is also important to consider the future development and where and future influx of people moving into Maine will live (Schauffler, 2020). A key element for Maine to make the required changes is to appoint local leaders, adopt

plans, and use tools for climate resistance. These are the key steps presented in Strategy F of the Maine Won't Wait climate plan.

Cities and towns across the region, including Kittery, Maine, have begun to plan for how they will build resilience to the inevitable environmental, social, and economic repercussions of sealevel rise and coastal flooding. Kittery's coast is lined with natural and manufactured capital, from its small downtown with restaurants and shops to its schools to the Portsmouth Naval Shipyard to it forests and beaches and salt marshes. Much of this is at risk in the coming decades due to increased coastal flooding and sea-level rise. Kittery has made some initial efforts to address coastal flooding, such as the establishment of a Kittery Climate Adaptation Committee in April 2019 that will address the impacts of climate change by recommending policy changes, projects, and objectives. Kittery has also worked with FEMA to create a FEMA Flood Insurance Map overlay to their town GIS software to help residents see if their property is at risk. It is crucial to approach the issues in a way that considers the needs and possible contributions of the natural resources, current and future Kittery residents, policymakers, private landowners, owners of critical manufactured capital, coastal businesses, and tourists. While these are steps in the right direction, they are initial steps, and more will need to be done to help prepare Kittery for the future.

This paper seeks to: 1) assess waterfront natural and manufactured capital that is at risk for coastal flooding, 2) evaluate the resilience efforts in Kittery in relation to other efforts from other New England coastal communities, and 3) gather recommendations to mitigate the negative impacts of sea-level rise on Kittery, Maine.

## II. Methods

A variety of methods were used in this project to gather new information, synthesize existing knowledge, and develop comprehensive and organized results. These methods included research using the internet and reading reports to obtain information regarding the approaches to sea level rise taken by other towns, states, and independent groups. GIS software and Excel spreadsheets with and the assessed value of Kittery properties was used to produce summary tables of properties at risk of flooding and visual representations of flood risk. Interviews with key stakeholders were used to explore vulnerabilities to flooding and climate resilience efforts in Kittery.

#### Desk Research and Background Information

Three New England States and the town of Kittery, Maine were examined to better understand coastal resiliency projects and programs currently in place. The topics explored included reports by state officials, FEMA maps, grants and funding, and historic data. Since each state's approach is different, background information was collected in more than one way. Lists of city and town grants aided in the search for information regarding many flood protection efforts in Massachusetts. Maine and New Hampshire did not have an accessible collection of grant data, so background data was accumulated by looking through municipal websites, state grants, and projects carried out by the state and municipalities. All the information was organized by state and transferred over to excel files for ease of use and analysis. These excel sheets included town names, type of grant, and specific planning and actions the town was taking. This will allow the

information to be presented in a way that could be easily understood by the reader. This information will be used for future recommendations for the town of Kittery.

#### Mapping and Vulnerability Assessment

Geographic Information Systems software was used to visualize sea level rise/storm surge (SLR/SS) scenarios along the Kittery seacoast at high astronomical tide (HAT), HAT plus 3.9 feet of SLR, HAT plus 6.1 feet of SLR, and HAT plus 10.9 feet of SLR. Data for the maps was provided by the Maine Geological Survey and analyzed using ArcMap software. The maps produced were re-creations of SLR maps previously produced by the Alexandra Duprey on behalf of the Kittery Climate Action Committee (Duprey, 2020). These maps are considered "bathtub models" and assume a steady and even increase in hightide lines and does not account for damage caused waves. The maps were used to produce a comprehensive list of properties in Kittery that would be at risk of flooding at each of the SLR/SS scenarios. This was accomplished by using ArcMap's "Intersect" geoprocessing feature to create a table that combined the SLR/SS scenarios layer, computed by Christian Halsted of the Maine Geological Survey, with a layer of land parcels in Kittery. This list was then sorted using Microsoft Excel and property values were provided by the Kittery Planning Department. A visual assessment of flood risk on buildings was performed by observing flood ranges over aerial imagery on the map. This information allowed for a comprehensive assessment of flood risk to be produced that expanded on previous knowledge by offering both a visual representation of areas at risk as well as an approximate estimate of the value of properties at risk of flooding in each storm surge scenario. This information quantifies and supports the final recommendations.

#### Informative Discussions

To gather more information on past, current, and future programs, as well as known problems and possible solutions, select Kittery stakeholders and municipal staff were asked a series of questions. This included, but was not limited to, town planner and town officials, harbor master, Kittery Climate Adaptation Committee representatives, and state officials. Questions were curated to extract specific information relevant to the topic of study and were not intended to yield yes or no answers. All interviews took place via phone call or Zoom.

#### **III.** Results

#### Massachusetts Current Practices

Massachusetts towns have been making plans and implementing measures through the MVP Action Grant and the Coastal Resilience Grant Program to reduce damage from flooding due to sea level rise. The MVP Action Grant "offers financial resources to municipalities that are seeking to advance priority climate adaptation actions to address climate change impacts resulting from extreme weather, sea level rise, inland and coastal flooding, severe heat, and other climate impacts." We looked at towns along the coastline to better understand what may and may not work for the town of Kittery. Some of the common strategies across the state included plans for both natural capital, manufactured capital, and public education/awareness. In order to reduce wave energy, storm surge, and the damage from flooding, some towns have implemented a living shoreline along their beaches. A living shoreline uses trees, sand, dunes, rocks and other natural materials to accomplish this. Another common theme in MA was putting an emphasis on educating the public regarding flood risk, which is important to towns' push for more resiliency. Other measures that have been taken include the reconfiguration of existing structures, the creation of floodable parks in a vulnerable area, permeable pavement, the construction of higher seawalls, and raising existing roads out of a potential flood zone.

Towns in Massachusetts have benefited from the system of applying for state-funded grants, as these programs provide funds for vulnerability assessments, provide recommendations for further action, and provide a grant specifically for taking action by implementing policies. Kittery, and the surrounding NH and Maine seacoast towns would benefit from a grant program similar to the MA MVP Program.

#### New Hampshire Current Practices

Similar to towns of Massachusetts, New Hampshire has assessed the risk of coastal flooding and storm-surge (Wake et al. 2019) created a variety of potential plans, received grant money, as well as even implementation of some projects. Looking closely at the coastal communities of New Hampshire; specifically Rye, Seabrook, Hampton, North Hampton, Hampton Falls, New Castle, Portsmouth, and Durham, all have evaluated the risk of flooding in these communities and begun to brainstorm possible projects and plans (Rockingham Planning Commission, 2015). Although there has been plenty of risk assessment and planning, there has been minimal specific implementation in these towns and action focused projects. For example, there have only been ordinances and projects completed in Rye, Hampton, Portsmouth, and Durham. One exemplary project is the Wagon Hill Farm Restoration in Durham, NH. Due to the consistent erosion of marsh ecosystems on the shore of Wagon Hill Farm, the University of New Hampshire and the Town of Durham are working together to prevent erosiaon via the careful design and constructions of a living shoreline (Strafford Regional Planning Commission, 2021). This project will help to stabilize the shoreline while also protecting the shore from flooding by adding natural infrastructure.

#### Maine Current Practices

Most Maine towns are in the early stages of preparing for the risks of coastal flooding and stormsurges related to climate change. Towns that are similar to Kittery in terms of location and threat level include Kennebunk, Wells, and York, ME. These three towns are part of the *Tides, Taxes, and New Tactics: Planning for Sea Level Rise and Coastal Adaption in Southern Maine* program which has been created by SMPDC. As of May 2020, all of these towns are in the research and planning stages. Portland has begun the process of designing structural changes to high-risk areas that would make them more resilient against rising tides and coastal flooding, however that is about the extent that Maine towns have gone in terms of coastal flooding resilience (Woodard & Curran). Saco attempted to get a grant that would allow them to protect Camp Ellis, however, they were not successful in attaining the grant and have gone back to rework their plan.

#### Kittery Current Practices

We assessed the programs and committees currently in place in Kittery that will help with climate adaptation. Currently, there are no climate adaptation infrastructure projects underway. Kittery, however, has worked with different stakeholders and institutions to assess what is vulnerable, as well as best practices in the event of severe flooding.

#### 2020 Coastal Hazard Planning Best Practices Report

One report we identified was the 2020 Coastal Hazard Planning Best Practices Report. This project was completed in 2020 by Alexandra Duprey, a Sustainability Fellow at the University of New Hampshire. This report addressed the need for research on coastal hazard issues in Kittery. Due to its geographical location, Kittery has many natural and manufactured capital assets at risk of coastal flooding, as well as roads in flood paths that could leave people stranded. More specifically, this report was broken into five sections, each outlining a key aspect. One section addressed key vulnerabilities in Kittery related to sea level rise and storm surge. The next section performed basic vulnerability mapping at 4 flood scenarios:

- High Astronomical Tide (HAT) for the year 2020
- HAT + 3.9 feet of sea level rise/storm surge
- HAT + 6.1 feet of sea level rise/storm surge
- HAT + 10.9 feet of sea level rise/storm surge

These "bathtub" scenarios were overlaid on maps using GIS software. The report also identified current efforts (federal, state, regional and town level), created an overview of natural and manufactured capital strategies, and listed key recommendations with time frames for the town (Duprey 2020). We used the Duprey report as a basis for our GIS maps and risk assessment.

# Summary and Recommendations Report for the Town of Kittery, ME | Maine Flood Resilience Checklist (SMPDC 2020)

This report was identified as a summary report of a workshop with Kittery stakeholders, discussing sea level rise, best practices, and the Maine Flood Resilience Checklist. The Maine Flood Resilience Checklist (FRC) is an assessment tool developed by the Maine Coastal Program. The FRC was designed to aid Maine coastal communities in identifying local flood risks, as well as evaluating their vulnerability to flooding related hazards and identifying specific actions each community can take in enhancing flood resilience. The workshop identified regulatory and land use strategies, policy strategies, as well as future studies and information needed, and information that should be shared.

#### *Kittery Climate Adaptation Committee (https://www.kitteryme.gov/climate-adaptation-committee)*

The Kittery Climate Adaptation Committee was created by the Kittery Town Council in 2019 in response to studies and reports on coastal flooding, and was charged to seek ways to create a more resilient Kittery as climate change progresses and sea-levels continue to rise. The committee is able to make recommendations for ordinances, policies, projects, and objectives related to sea level rise; to address actions to make Town properties more flood resilient; to establish three distinct subcommittees: Built and Natural Landscape Impacts, Energy Efficiency and Public Health and Safety; and to work with neighboring communities and the state of Maine to create a more resilient community.

#### **Risk Assessment**

The risk assessment produced flood maps of Kittery and rough data on the flood risk to Kittery properties under different sea-level rise/storm surge. Figure 1 shows the whole of Kittery, including the parcel divisions and all the flooding scenarios considered in this analysis.

Figure 1 shows the full extent of the coastal flooding that is projected in Kittery. The Excel analysis used the intersection of the flood scenarios and the parcels to determine which parcels were at risk. The Map Package used to create these images will be available in the appendix. All maps and analysis used this data as the baseline.

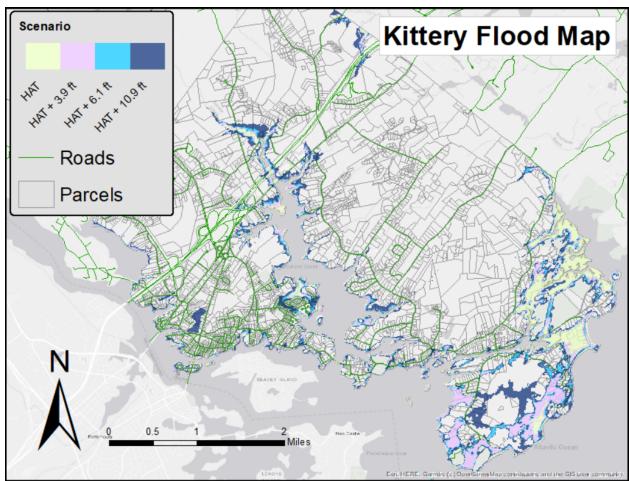


Figure 1: Map of town of Kittery showing potential flooding associate with the high astronomical tide (HAT) combined sea-level rise/storm surge scenarios of HAT +3.9 feet (current 100-yr storm), HAT + 6.1 feet (projected 2050 100-yr storm), and HAT +10.9 feet (projected 2100 100-yr storm)

## Transportation Corridors

The risk assessment attempted to assess the potential impact of sea level rise on important roadways in Kittery. The results will be presented here in the form of maps and tables.

Figure 2 shows an enlarged portion of the flood map, particularly the intersection of Route 1 and Interstate 95 over Spruce Creek. This image shows the extent of the flooding and demonstrates that a flood would close off these key transportation corridors. Figure 3 shows the impact of a projected 100-year flood in 2100 on the roads of Kittery.

Though difficult to pinpoint, this flooding scenario would create some level of flooding at over 50 locations in Kittery, Maine (Figure 3) with the length of roadwasy at risk of flooing ranging from 1,400 feet under the current HAT to over 32,000 feet under the HAT + 10.9 feet of sea-level rise/storm surge scenario (Table 1). Approximately 10 of these locations occur along Route 103, which is listed as a level 2 priority road. It is challenging at this time to accurately assess the potenmtial damage a flooded road may suffer.

*Table 1: Length of roadways at risk of flooding under high astronomical tide (HAT) and three sea-level rise/storm surge scenarios.* 

Risk at HAT Risk at HAT + 3.9 ft		Risk at HAT + 6.1 ft	Risk at HAT + 10.9 ft	
1,429 feet	6,550 feet	10,701 feet	32,113 feet	

Flooded roads could prevent passage through Kittery until roads drain and are repaired, if necessary. Bridges on Route 103 over Spruce Creek and on Crockett Neck Road were also determined to be at risk. Damage to a bridge would incur a high cost to the asset owner for repair and may close the transportation corridor for several months while repairs occur.

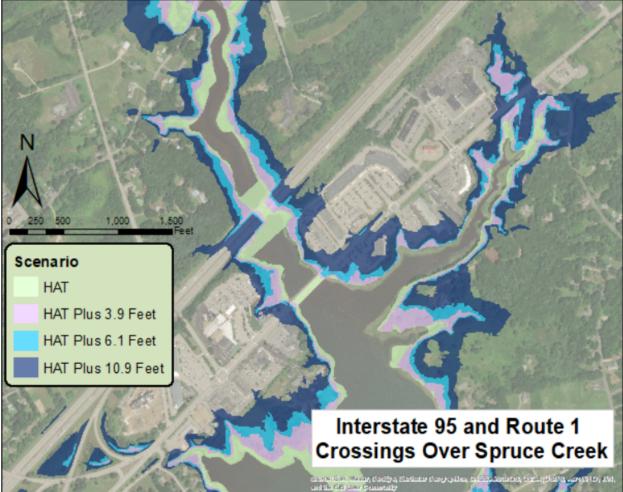


Figure 2: An example of the flood risk to working waterfronts and two major transportation corridors in Kittery for under high astronomical tide (HAT) and three sea-level rise/storm surge scenarios.

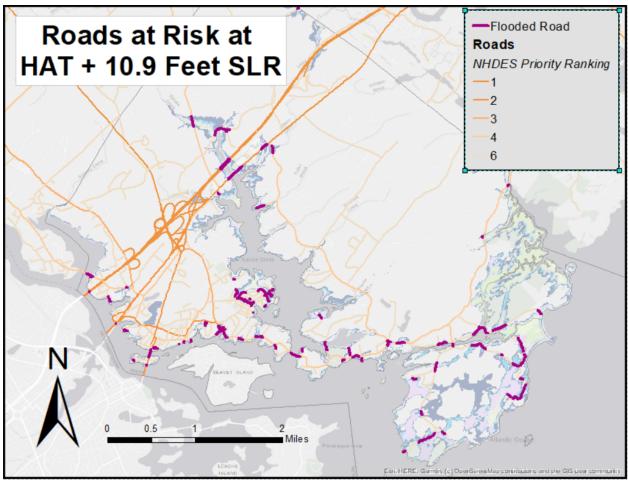


Figure 3: Map of road segments that could be flooded under a 10.9-foot sea-level rise/storm surge scenario. Road information from Maine DOT.

#### Parcel-by-Parcel Risk Assessment

The Town of Kittery has 4,438 parcels containing 4,845 assessed properties. As of the spring of 2021, the total assessed value of the parcels alone is \$965,061,617 and the total value of all property improvements is \$1,223,222,960, for a grand total of \$2,188,063,677 worth of real estate in the Town of Kittery, Maine. The following table is the result of a risk assessment based on GIS data, flood mapping, and assessed property values provided by the Town of Kittery.

	Number and Percentage of Parcels at Risk	Number and Percentage of Buildings at Risk	Value of Parcels at Risk	Value of Land Improvements at Risk	Total Economic Value at Risk
SLR Scenario	% of total number of assessed properties in Kittery	% of total number of assessed properties in Kittery	% of total town parcel values	% of total town improvements value	% of total town property value
H.A.T.	673	24	\$302 M	\$4.8 M	\$307 M
(2020)	13.9%	0.5%	31.34%	0.4%	14.0%
3.9 ft SLR	848	76	\$389 M	\$34 M	\$424 M
(100 yr flood 2020)	17.5%	1.6%	40.35%	2.8%	19.3%
6.1 ft SLR	943	156	\$410 M	\$75 M	\$485 M
(100 yr flood 2050)	19.5%	3.2%	42.5%	6.14%	22.2%
10.9 ft SLR	1281	426	\$493 M	\$193 M	\$687 M
(100 yr flood 2100)	26.4%	8.8%	51.07%	15.8%	31.4%

*Table 2: Assessed value of properties and buildings at risk of flooding during high astronomical tide (HAT) and three sea-level rise/storm surge scenarios.* 

These totals show the amount of property that will be at risk in any given scenario. The italicized percentages compare the at-risk value to the total value for the whole town of Kittery. For this assessment, protection provided by natural and manufactured capital was not considered, and the "at-risk value" as calculated includes the full cost of parcels and buildings regardless of whether the flooding came in contact with part or all of the building or parcel. For example, a parcel that is worth \$10,000 will be assessed as \$10,000 at risk regardless of whether a scenario shows 10% flooding or 100% flooding. Because of this, the true cost of damage will likely be a fraction of these totals. Another important factor is land use.

	# of At Risk at HAT + 10.9 ft SLR				
Type of Property	Properties with this Land Use in all of Kittery	Parcel Count	Building Count	Assessed Value at Risk	Tax Revenue at Risk
US GOVERNMENT-OWNED	22	21	2	\$ 59,484	
MUNICIPAL-OWNED	64	5	7	\$ 301,763	
MIXED USE	28	6	3	\$ 66,238	\$ 854
COMMERCIAL	203	48	23	\$ 1,893,302	\$ 24,423
INDUSTRIAL	27	7	0	\$ 35,740	\$ 461
FARMLAND	6	0	0	\$ -	
NON-MUNICIPAL PUBLIC WELFARE	93	26	4	\$ 69,325	
MIXED USE	14	2	2	\$ 29,223	\$ 376
RESIDENTIAL	4351	1128	385	\$ 6,337,949	\$ 81,759
COMMERCIAL HOUSING	16	3	0	\$ 17,941	\$ 231
STATE-OWNED	7	4	0	\$ 29,369	
Grand Total	4831	1250	426	\$ 8,840,339	\$ 218,002.83

Table 3: Assessed value of different types of property and buildings at risk of flooding from the during high astronomical tide (HAT) + 10.9 feet of sea-level rise/storm surge scenario.

This table gives an approximation of different types of properties are at risk in the 10.9 ft SLR/SS scenario. As shown, privately owned residential properties make up approximately three quarters of the value at risk. Commercial properties accounted for most of the remainder. This table also displays an estimate of property taxes at risk each year if major flooding or repeated damage makes property inhabitable for the future.

#### **Informative Discussions Summary**

A total of eight individuals were asked 6 questions to help gain more background information on Kittery and their current work on coastal resilience. These individuals were all stakeholders in the community, including municipal employees of Kittery, residents, and those with a connection to the working waterfront.

#### Similar Themes Among Discussions: Transportation Corridor

Out of all the discussions, one thing was blatantly clear. All of the people we spoke to acknowledged that sea level rise is happening, and Kittery needs build resilience to coastal flooding. Areas of concern varied. Most agreed that Interstate 95, Route 1, and Route 103 over Spruce Creek are of concern. Each of these roads lie low over the tidal Spruce Creek. In an event of a 100-year storm, flooding and damage could make it impossible for emergency vehicles to pass, and for residents to evacuate. Route 103 is also a unique case, as it was

determined the span sits on rollers on top of concrete pillars, and a storm surge event could lift the span off its foundation. Many said that since these are state and federal owned and managed, it is critcal that the Town of Kittery collaborate with the State of Maine in terms of developing and implementing solutions.

#### Similar Themes Among Discussions: Working Waterfront

Concern was also expressed regarding working waterfronts. Most agreed that the Portsmouth Naval Shipyard is of major concern, however, it is not in the town's jurisdiction, as it is federally owned and operated. Workers, including many Kittery residents, rely on it for their jobs, and it could cause national security issues if compromised. Tourism and related jobs could be threatened as well. Many expressed concerns with Fort Foster, and potential impacts could result in revenue and seasonal jobs. Many acknowledge that local restaurants and lobster wharfs on the water are at significant risk, and many have already experienced flooding during recent winter storms.

#### Similar Themes Among Discussions: Manufactured Capital

Many agree that homes and infrastructure are at risk. Most acknowledge concerns with the transportation corridors mentioned earlier, and say it will cause commute delays, and potentially very serious issues in emergency situations. One individual pointed out that these main roads may need to be eventually abandoned, and smaller neighborhood roads will become the main roads. Many also mentioned that high-value homes along the coast of Gerrish Island, as well as Spruce and Chauncey Creek and the Back Channel, will see increasing amounts of damage in future year. When asked about what Kittery would do in order to compensate for the loss of tax revenue if these properties were abandoned , most acknowledge that there is no plan, or said they do not know what could be done. There is also a consensus that new homes should not be built in current and potential future flood zones, and that is something the town should consider creating an ordinance for.

#### Similar Themes Among Discussions: Natural Capital

Many agreed that natural capital and ecosystems are at risk. Much of Kittery's "hard coast" is natural lands, granite ledge, and salt marshes. In an event of a 100-year storm, this would absorb much of the energy from large storm surges. But many expressed concern about the effect this would have on the wildlife. While not much is possible to protect this wildlife, some suggested that these ecosystems could be important for controlling flooding in Kittery. Some suggested that ordinances be created to restrict building in low-lying areas, which would allow storm surge to collect and protect infrastructure. Negative impacts on coastal habitats will also have negative impacts on the tourism industry, as people may not have the opportunity to use the beach or eat at coastal restaurants.

#### Similar Themes Among Discussions: Next Steps

There appears to be a consensus regarding next steps need to be taken now to build resilience to coastal flooding, now and in the future. Some suggest that Kittery hold community discussions,

not only to inform the public on coastal flooding risk, but also to gain information, ideas, and opinions. Kittery has already held several of these types of workshops, and more should be planned. Most people agreed that no more homes should be built on the coast, and that all land not built on should be conserved. Ordinances could be created that allows Kittery to prohibit building at certain low elevations or in certain floodplains. And conserving these areas will not only protect manufactured capital in the future but create natural capital that can reduce damage to manufactured capital. Some suggested that the town invest in infrastructure that is at risk, and others prefer a focus on building new infrastructure away from flood zones. Finally, a few suggested that Kittery should look into expanding and strengthening its stormwater management system and build it up in a way that allows for areas to flood during high tide, and drain effectively as the tide draws out.

# IV. Discussion

#### Key Vulnerabilities

The Route 1 and Interstate 95 bridges that run over Spruce Creek are highly vulnerable areas that are not only valuable to Kittery, but to the entire state. They are two of the primary transportation routes that allow the movement of tens of thousands of cars per day (even more on weekends) through Kittery and if they were damaged, detours would affect every vehicle person trying to travel north into Maine or southward into New Hampshire. A closure of 95 or Rt 1 would have significant economic and safety impacts on the entire state.

The Portsmouth Naval Shipyard is also rather vulnerable to coastal flooding. The shipyard sees minor coastal flooding at the current HAT scenario, as do its two main points of entry. Gate 2, located on Route 103, is how hundreds to thousands of workers get to and from work. Flooding will cause commuting delays, and could cut the island off from the mainland, making it impossible for people to leave and for emergency personnel to enter and exit. While this has been identified as a risk, it has been acknowledged that this is a federal matter, and that Kittery does not have much say as to what happens there. However, the flooding and closure of Route 103 by Gate 2 of the shipyard would also have wide ranging impacts on traffic flow in Kittery.

Figure 3 and the GIS data associated with it provides a starting point for a deeper risk assessment. The locations where flooding is most likely to occur will be the best location to install stormwater Best Management Practices (BMPs) or employ other resilience techniques.

Working waterfronts, including fishing piers, restaurants, and shops along the back channel are also at risk of flooding. This would affect boat access to the water and have a negative impact on the working waterfront jobs in Kittery. Along with working waterfront this would negatively affect recreational access to the ocean and businesses that source their seafood locally. Local wildlife may also suffer from runoff that may be washed into the ocean from the land's surface.

The parcel-based risk assessment performed using GIS and Excel shows an estimate of the potential maximum financial impact of flooding associated with each SLR scenario, based purely on elevation data, and focused only on property values. Other factors will also affect the results, such as lost business revenues, fewer Kittery residents in the long run, repeated home repairs and

mitigation, and damages to non-real estate property such as vehicles. Actual damages could be reduced by flood mitigation provided by natural and manufactured capital such as seawalls and waterproofed structures. Based on this study, a home that is at risk during a certain flood scenario is unlikely to be damaged to the full cost of the structure or property. A more likely scenario is partial property damage and possible water damage to basements, or ground-level structural damage. This damage can likely be repaired for a fraction of the cost of the property but may be damaged frequently. Properties that are at risk so frequently may require repairs multiple times a year, installation of flood resilience upgrades, or they may become completely unlivable, which poses a risk to individual homeowners and the town's tax revenue over time. In addition, our analysis only considered a "bathtub" model, and does not account for structural damage related to storm surge and waves.

# **V. Recommendations**

Currently, much of Kittery's response to climate adaptation is in the planning stages. Steps have been made in the right direction when it comes to the Kittery Climate Adaptation Committee, etc. However, we found that many other communities have already made it to the implementation phase for climate resiliency. Based on that, we have come up with recommendations for the following areas:

#### Local Programs

York, Wells, and Kennebunk are all part of the Tides, Taxes, and New Tactics program working with MIT SIC (Massachusetts Institute of Technology Science Impact Collaborative) with the goal of preparing coastal towns in Maine for rising sea levels and coastal flooding. We recommend that Kittery look into this program to see whether they can get any assistance from a group with experience in this field.

#### Working Waterfront

We recommend an in-depth assessment of all jobs and businesses that are at risk of flooding from the three SLR/SS scenarios. Not all jobs are at risk of flooding in Kittery, but many vital occupations are close sea level. Occupations such as lobstermen and fishermen, shipyard workers, and restaurant workers are at risk. Many businesses, such as Warren's Lobster House and SeaView Lobster Company already see flooding during significant weather events. The Town of Kittery and Kittery businesses and residents should begin to explore what to protect, what to adapt to, and what to retreat from. Another occupation at risk are emergency first responders. We recommend Kittery look at its transportation corridors and ensure there is safe passage to all parts of Kittery in the event of a major storm.

In Massachusetts, many coastal towns have plans in the works to better adapt to rising sea levels. For short term relief, Quincy has plans to construct a higher seawall. More concrete plans in the works include deployable flood walls in East Boston, permeable pavement in Winthrop, construction of living shorelines in Newbury, and preliminary analysis of storm tide pathways throughout Scituate. Similar to Quincy Massachusetts, Rye and Hampton, New Hampshire have also built both rock wall and sand barriers in hopes to protect the shoreline from sea-level rise (Rockingham Planning Commission, 2015).

#### Transportation Corridors

We recommend an immediate and comprehensive assessment of the Interstate 95, Route 1, and Route 103 bridges over Spruce Creek. As stated before, we identified these bridges as sites of concern. We acknowledge that these bridges are out of the jurisdiction of the town, but we recommend that Kittery begin coordinating with the State of Maine and the Federal government to ensure safe passage over Spruce Creek in the future. An immediate assessment and strong dialogue will ensure that these bridges will get the attention needed to prevent any issues or disaster. It is in the town's best interest to future-proof these roads, as blockage or bridge failure could create dangerous situations in case of emergency evacuation and create impassible situations for residents and emergency services. This goes for low-lying roads, culverts, and bridges as well.

We also recommend Kittery enhance their existing stormwater management systems to accommodate storm surge and flooding. Flooding on low lying roads will become prevalent during high tides, so it would be imperative that drainage be as fast as possible to eliminate ponding. Solutions could include additional, high volume culverts, or permeable pavement surfaces that towns such as Hull, Newbury, and Lynn have incorporated.

#### Manufactured Capital

We recommend an in-depth assessment of all properties we identified as at risk for coastal flooding, focusing on structures and manufactured capital. 31.4% of property value will be at risk of flooding by 2100. Using the "bathtub" model used in our report, as well as in *A Town in High Water: Coastal Hazard Planning Practices for Kittery* by A. Duprey, it is hard to estimate the true total economic value of manufactured capital that will be at risk. We encourage further research into the mechanics behind these flooding scenarios to understand, more in depth, what will be at risk. Using our models, we value the total economic value of buildings at risk for flooding to be \$195 million by 2100. Many of these properties may be abandoned. This will result in a large deficit of property tax revenue of upwards of \$200,000 per year at the current tax rate of \$12.90 per thousand dollars, without considering the lost income taxes and local business patronage if homeowners leave Kittery. Many of the coastal properties are worth significantly more than properties inland, which adds to the deficit. We recommend that Kittery educates landowners so they may undertake their own professional risk assessments, since individually assessing properties is outside the scope of this project. Kittery may offer resources to its citizens to help them in these efforts.

Since coastal properties will likely become unsafe to access, we recommend Kittery explore the route of land buybacks, or offer incentives to encourage inland land use and development, or build in existing areas that aren't at risk of flooding to eliminate sprawl. Encouraging development inland will reduce the risks of living in flood zones, protecting citizens and emergency services, and encouraging people to stay in Kittery.

A look at Portland's *Bayside Adapts* program allows for third party contractors to design shorelines that are highly adapted to rising tides and storm surges. Similar strategies can be used to obtain different insights and broaden the range of ideas for building resilience.

#### Natural and Conserved Areas (Natural Capital)

We found that, although rising seas will adversely alter coastal ecosystems, those coastal ecosystems also provide ecosystem services that protect inland residences and structures. We recommend a move to create ordinances to limit construction and development in low-lying areas. By keeping low-lying parcels undeveloped, they can act as storm water and energy storage, diverting it away from residences. Kittery already has this, in the form of Seapoint Beach and Fort Foster. They are beneficial in that they help defend against storm surge and protect areas further inland.

Durham, New Hampshire is where the Wagon Hill Farm living shoreline conservation project has been successfully implemented (Strafford Regional Planning Commission 2021). Not only does this project restore these living shorelines, but it assists in stormwater drainage along with minimizing the erosion in the area.

#### Areas of value for the visitor economy

Kittery Foreside, Fort Foster, and Seapoint Beach are all areas that attract visitors to Kittery. Along with tourism, there are many seasonal and full year jobs at risk in these areas from potential damage to infrastructure. Kittery could encourage business to redevelop outside of risk areas and build more resilient infrastructure. Kittery should also begin planning the future of its major tourism locations. There is no doubt that areas such as Fort Foster have great intrinsic value to the town, residents, and its visitors, but it will and has flooded and been damaged by strong coastal storms (e.g., March 2018). We recommend that Kittery investigate the potential loss of tourism revenue as sea-level rise and flood risk increase, with expected impacts on the tourism economy.

#### Education/Community Outreach

Community involvement will be key in raising awareness and implementing practices that will prepare Kittery for a more flood resilient future. Community outreach and public information sessions will be key in informing the public on safety risks involving coastal flooding, as well as gain information, ideas, and opinions from citizens to improve response by the Town and by residents. Examples of this can be seen in surrounding local coastal communities. In New Hampshire, they have assessed the vulnerabilities and provided awareness to the towns (Coastal Adaptation Hazards Commission, 2016; New Hampshire Coastal Risk and Hazards Commission, 2016). Kittery itself hosts the Kittery Block Party in Wallingford Square every summer. This would be an excellent place to share information pertinent to coastal adaptation. It is important that citizens of all ages and demographics be involved in this process. School programs could be implemented as well, or coastal adaptation programming could be incorporated in existing curriculum to help bring awareness in school-aged children.

# **VI.** Conclusion

Kittery's coast is already at risk of significant flooding from large coastal storms. Hurricane Sandy (2012) and Winter Strom Riley (2018) are more recent example that show New England is vulnerable to flooding from large coastal storms, and the science suggests that stronger hurricanes will likely become more prevalent as climate change continues to affect the planet and its weather

patterns. A basic assessment of quantitative and qualitative risk proves that Kittery's local economy, real estate market, and recreational spaces could suffer significantly in the case of a major coastal storm, and the risk will only increase in the future as sea-levels continue to rise. However substantial coastal resilience efforts can and should be considered, discussed, and implemented by the public sector, private sector, and residents to make Kittery a viable and vibrant place to live and work for many generations to come.

It is evident that there is a lot that Kittery could do to prepare for the future. Community involvement is likely the most important step, followed closely by a need to assess key transportation corridors. Planning for coastal adaptation will only be successful if a majority of residents agree that there is a problem, that they are at risk, and that they can help in preparing Kittery for the future. Kittery should begin working with the State and Federal governments to assess the transportation corridors that are not under municipal jurisdiction and develop a plan to future proof them. This report is represents an early step in a long journey of adaptations and improvements to make Kittery a great and resilient place to live for centuries to come.

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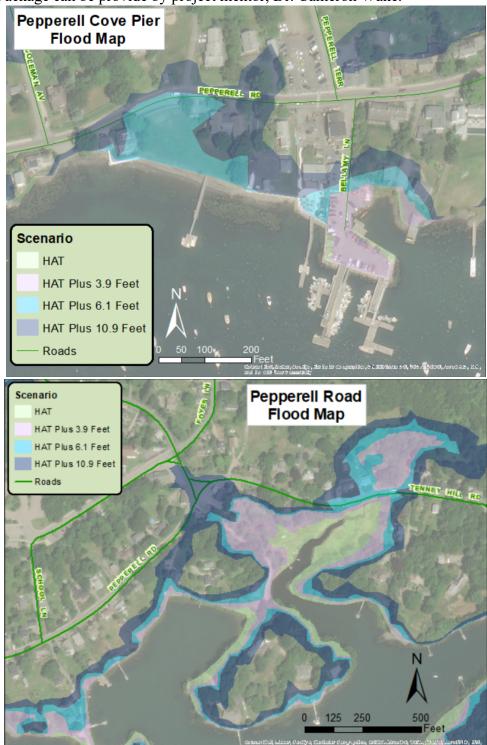
# Appendix A: Assessed Property Value at Risk Analyses

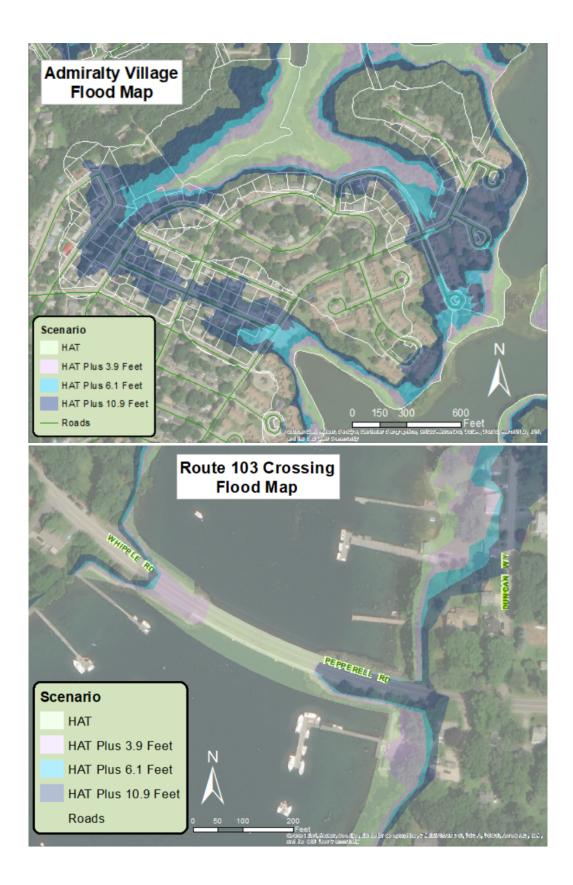
All analyses of properties that could be affected by sea-level rise and storm surge in Kittery are available in an Excel Workbook available from project mentor Dr. Cameron Wake (E-mail: cameron.wake@unh.edu)

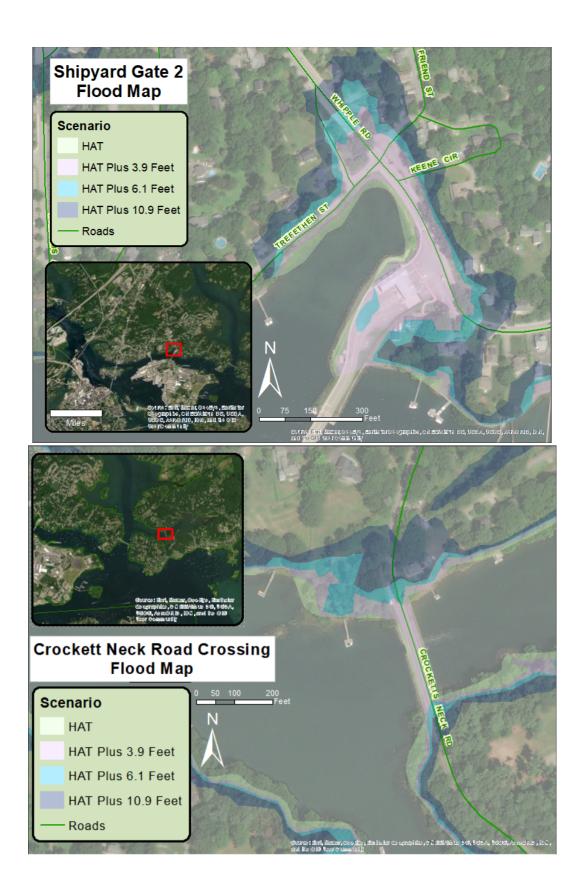
This file contains the Land Use Assessment, the Property Value Assessment, and the Roads at Risk Assessment, along with two other sheets containing source data.

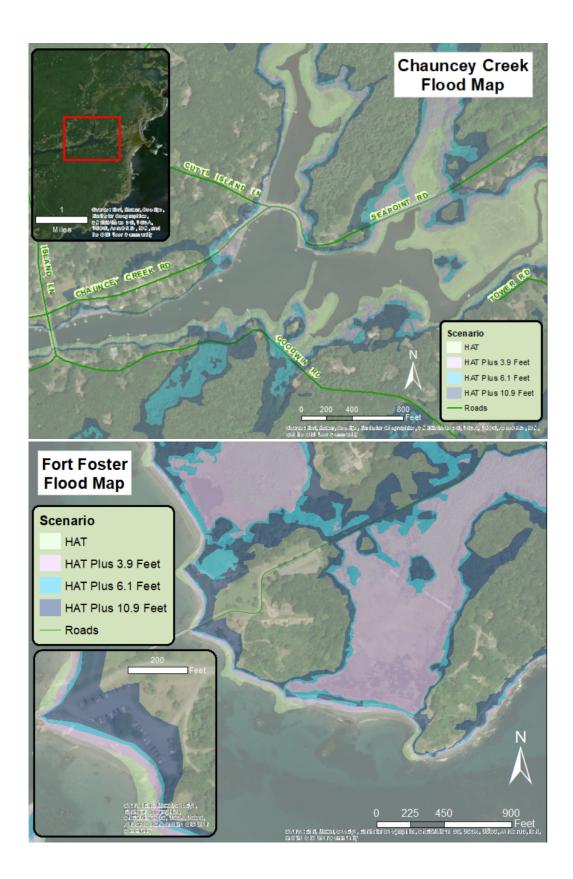
# **Appendix B: Mapping and GIS Data**

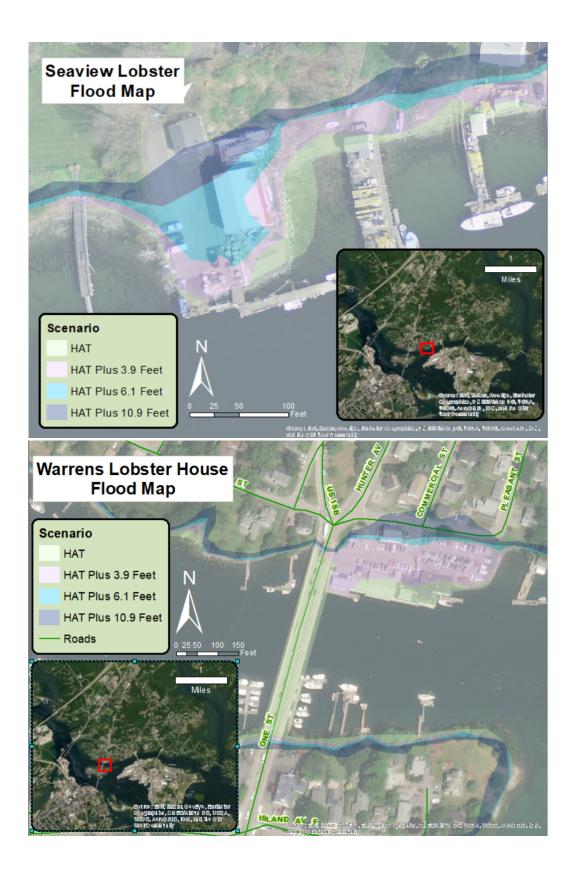
The Map Package can be provide by project mentor, Dr. Cameron Wake.











JUL 19 2021 AM 9:55

# TOWN OF KITTERY

Map Lot:			
10000000000000000000000000000000000000	Subm	itted:	

#### **KITTERY PORT AUTHORITY**

Application for

#### PIERS, WHARFS, FLOATS AND OTHER MARINE-RELATED STRUCTURES

Contact: kpa@kitteryme.org

Website: kitteryme.gov

	E: Ten (10) sets of plans, applications, maps and other necessary information are required at submittal.
The	following application is submitted for the construction, modification, reconstruction of a:
1	Remodal of existing commercial boat house. Reeping the structure the same
1.	This project is an in-kind repair/replacement, which will not expand, move, or modify the style of the existing providing as
	structure:
	Yes, it is in-kind repair No, there will be modifications
2.	Property Owner(s): <u>Ruth Lawrence</u>
3.	Property Address: 19 Pleasant St., Kittery, Me 03904
4.	Telephone Number: $207-752-2685$ Email:
5.	Property Size (Acres/SF): 6,733 SF Zoning District(s): Foreside MU-KF
6.	The shore frontage of this property is $67$ feet, measured at the high water line in a straight line, stake to stake.
7.	This is my first Kittery Port Authority application for this property: Yes No No IN If No, please explain: 
8.	LEGAL INTEREST: The applicant demonstrates a legal interest in the property by including a copy of the following: Deed, Purchase and Sale Agreement
9.	CONSTRUCTION PLAN: Provide a description of the property showing all proposed construction showing
	the lot lines and exact positions of the proposed structure with dimensions and elevations from readily identifiable reference points.
App	Dicant Signature: Ruth Maurence Date: 1/1/21
Pro	perty Owner Signature: <u>Bretth Hausence</u> Date: <u>1/11/21</u> Date: <u>1/11/21</u>
	ent Name:Agent Firm:
Age	ent Phone:Agent Email:
-	QUIRED) (REQUIRED)
AD	PLICATION FEE (\$125) Include a check payable to the Town of Kittery. Additional fees may be charged for

APPLICATION FEE (\$125). Include a check payable to the Town of Kittery. Additional fees may be charged for direct costs (i.e. legal notices, engineering review, etc.) necessary to complete the review of the application per Town Code, Title 3, Chapter 3.3

Fee Paid, Amount: \_\_\_\_\_Date: \_\_\_\_\_

DEBRA L. ANDERSON, REGISTER OF DEEDS E-RECORDED Bk 17673 PG 478 Instr # 2018008985 03/07/2018 02:27:22 PM Pages 2 YORK CO

UPON RECORDING, PLEASE RETURN TO:

Forman, Clark, Pockell & Kalinski, P.A. P.O. Box 1330 Londonderry, New Hampshire 03053

#### WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, that I, Ronald B. Lawrence, a married person, presently having a mailing address of P.O. Box 221, Kittery Point, Maine 03905, for consideration paid of \$1.00, **GRANT TO** Ruth I. Lawrence and Ronald B. Lawrence, as Trustees of The Ruth I. Lawrence Revocable Trust, a revocable trust established pursuant to a revocable trust agreement dated September 28, 2000, by and between Ruth I. Lawrence, as Grantor and Ruth I. Lawrence and Ronald B. Lawrence, as Trustees and Presently having a mailing address of P.O. Box 221, Kittery Point, Maine 03905, the following, with Warranty Covenants:

A certain tract or parcel of land, together with the buildings and improvements thereon, if any, situated on the northeasterly shore of the Piscataqua River in the Town of Kittery, County of York and State of Maine, and being more particularly bounded and described as follows:

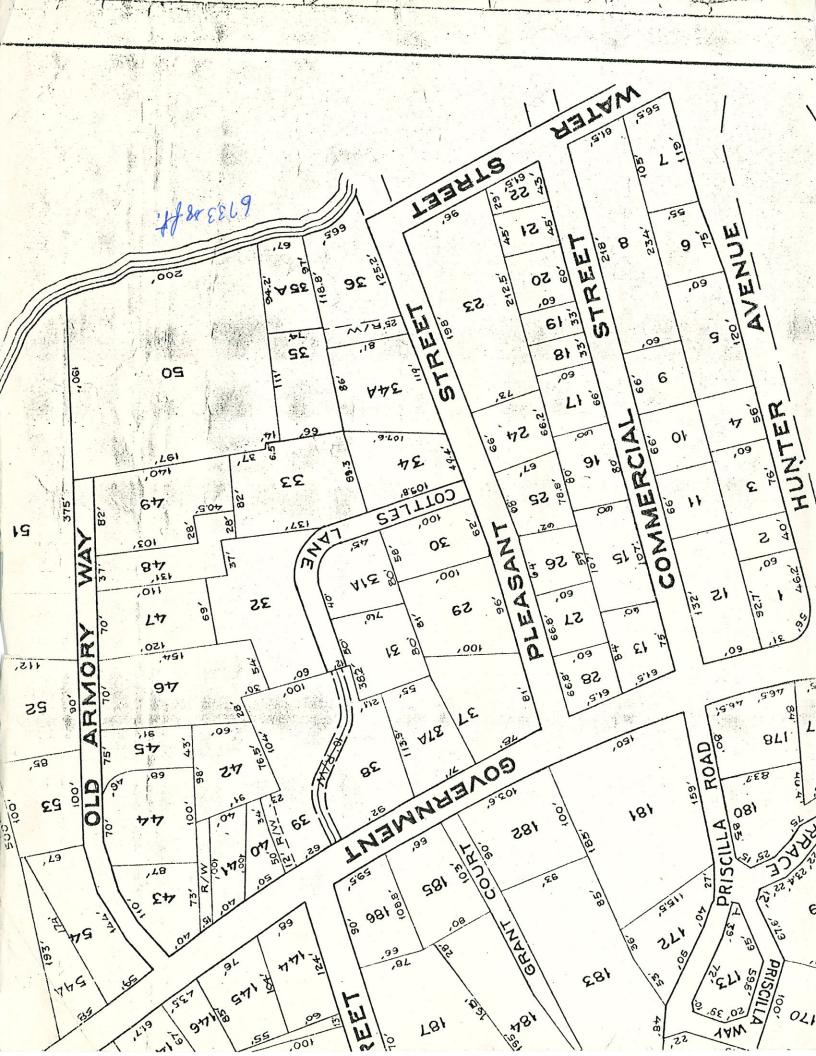
Commencing at a point adjoining the shore line to the Piscataqua River and land formerly of Manent, and more recently described in deed from Earl B. Smith, Jr., et al to Ignazio J. Geraci dated September 21, 1979, and recorded in the York County Registry of Deeds in Book 2569, Page 95, being the southerly corner of the parcel herein conveyed and running thence N 61° 07' W a distance of 67 feet by and along said shore line and a seawall designating the southwesterly boundary hereof, to a point adjoining land formerly of Helen L. Keene; thence turning and running in a northeasterly direction by and along said land of Keene a distance of 99 feet, more or less, to a point adjoining land now or formerly of George W. Tobey et al, which point lies 10 feet, more or less, southeasterly from the easterly direction by and along said land now or formerly of Tobey a distance of 74 feet, more or less, to a point adjoining the aforesaid land formerly of Manent, now of said Geraci; thence turning and running by said land of Geraci S 45° 08' W a distance of 48 feet, more or less, to a point; thence continuing by said land of S 38° 38' W a distance of 46.2 feet to the shore line of the Piscataqua River and the point of beginning.

Together with any rights which the Grantor may have in and to the land lying between an extension of the northwesterly and southeasterly boundaries hereof to the low water mark of said Piscataqua river and conveying also to the Grantee the right to use a 20 foot right of way leading from Pleasant Street, so-called, to and across the property now or formerly of George W. Tobey et al, the same is presently located for access to the parcel hereby conveyed.

SILEPLAN

		and for the	ALAPIKA
scription <u>Comu</u>	nercial Fish Pier <u>k changed</u> , <u>Kinterr</u> <u>ATABUA</u> <u>AIDER</u> Lot # <u>35A</u>	Owner's name RONALL Address POBOX 221 41 Kittery PT. 1	23 HALAY Ad.
,1 of project <u>XYAC</u>	<u>R CHANDER KITERY</u>	Address O DOX AAT	ne. 03905
Map $\#$ 4	Lot# 35A		
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An approximation of mean l	low-water is made by observation of	Date $\frac{4/24/0-}{2}$ f low tide using a 0.00 tide.	
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AUG 10 2021 PM 3:34

# TOWN OF KITTERY KITTERY PORT AUTHORITY

Map: 47	
Lot: 3	_
Date Submitted:	
Date Submitted:	23

# Application for

#### PIERS, WHARFS, FLOATS AND OTHER MARINE-RELATED STRUCTURES

	Contact: kpa@kitteryme.org Website: kitteryme.gov
The	E: Ten (10) sets of plans, applications, maps and other necessary information are required at submittal. following application is submitted for the construction, modification, reconstruction of a: Sidentral pier $70' \times 3'$ , $26' \times 3'$ gauguage and a $10' \times 18'$ float
	This project is an in-kind repair/replacement, which will not expand, move, or modify the style of the existing structure: Yes, it is in-kind repair No, there will be modifications
2.	Property Owner(s): Nicholas Star + Meredith Star
	Property Address: 56 Tidewater Way Kittery ME 03904
4.	Telephone Number: <u>860 - 983 - 4835</u> (REQUIRED) Email: <u>Nicholas Mistar @ gmail.com</u> (REQUIRED)
5.	Property Size (Acres/SF): 2,1 Acres Zoning District(s): R-RL
6.	The shore frontage of this property is $435$ feet, measured at the high water line in a straight line, stake to stake.
7.	This is my first Kittery Port Authority application for this property: Yes Ves No If No, please explain:
8.	LEGAL INTEREST: The applicant demonstrates a legal interest in the property by including a copy of the following: Deed, Purchase and Sale Agreement
1	CONSTRUCTION PLAN: Provide a description of the property showing all proposed construction showing the lot lines and exact positions of the proposed structure with dimensions and elevations from readily identifiable reference points.
An	Dicant Signature: Date: 8/9/2021
	perty Owner Signature: market the start Date: \$19/2021
Age	ent Name: Duncan Mellor Agent Firm: Chilworks New England Haight Engineeri
Age	ent Phone: <u>603 - 749 - 0443</u> QUIRED) Agent Email: <u>Amello &amp; cliftubrts ne. com</u> (REQUIRED)

**APPLICATION FEE (\$125).** Include a check payable to the Town of Kittery. Additional fees may be charged for direct costs (i.e. legal notices, engineering review, etc.) necessary to complete the review of the application per Town Code, Title 3, Chapter 3.3

Fee Paid, Amount:_	\$125.00	_Date:	8/	10/2	1
			01		

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## INSTRUCTIONS FOR FILLING OUT PORT AUTHORITY APPLICATION

- a. Attach Town Tax Map of Lot.
- b. Attach Plan of lot with location and dimensions of the proposed structures or alterations to existing structures.
- c. Attach list of abutters within 150 ft. (include those over water) of applicant's shorefront property line.
- d. Attach proof of legal interest in property.
- e. Attach a drawing of the proposed structure showing the top, side and end views with all principal dimensions. Side view showing elevation of top of deck above mean low water:
- A. Identify a fixed reference point on shore from which all seaward measurements are to be made.
- B. Piers are not to exceed 100 feet beyond the normal high water mark nor extend below the mean low water mark, whichever is shorter. Pier, ramp and floats may not extend more than 150 feet beyond high watermark.
- C. The maximum height of pier deck surface may not exceed 6 feet above the normal high water mark, and the handrails shall not exceed a height above the deck surface of 42" without the specific approval of the KPA.
- D. The Port Authority may grant a waiver from the specifications of these regulations provided that, due to special circumstances of the specific application, the granting of a waiver will not adversely impair the public health, safety and general welfare, use of public waters, navigation or harm the environment. All such waivers must be supported by sufficient findings of fact.

Submittals must be received a minimum of 21 days prior to a scheduled Port Authority meeting.

#### Port Authority Procedure (Sequence of Events):

- 1. The Port Authority meets the <u>first Thursday of every month</u>. The Chairperson prepares the agenda seven days prior to the meeting.
- 2. The Port Authority Chairperson reviews the application for completeness and, if complete, places the application on the KPA agenda for discussion at the next meeting.
- 3. The Port Authority reviews the application. Once accepted, a site walk may be scheduled, and a public hearing set for the following meeting.
- 4. The Port Authority issues a notice of decision following review at the public hearing.
- 5. Once the Port Authority approval is granted, an applicant must apply for a building permit with the Code Enforcement Officer. No building permit will be issued until all approvals and permits are received, and application related fees are paid in full.

#### Other Permits required by State and Federal Agencies (not inclusive):

Maine Department of Environmental Protection 312 Canco Road Portland, ME 04103 (207) 822-6300 US Army Corps of Engineers Maine Project Office 675 Western Avenue, #3 Manchester, ME 04351 (207) 623-8367

Department of Conservation (for structures below mean low water mark) Bureau of Parks and Lands State House Station #22 Augusta, ME 04333

**Planning Board** review may be required if there is upland development (Title 16.11 Marine Related Development). All Port Authority applications are reviewed by planning and code enforcement staff for Title 16 applicability at the time of application submittal and prior to review by the Port Authority.

MISCELLANEOUS PAYMENT RECPT#: 671214 TOWN OF KITTERY - LIVE 200 ROGERS ROAD KITTERY ME 03904

DATE: 08/10/21 TIME: 15:30 CLERK: 220codeca DEPT: CUSTOMER#: 0 PARCEL: 56 TIDEWATER WAY CHG: 10 DESIGNATED ACCO 125.00 AMOUNT PAID: 125.00 PAID BY: NICHOLAS STARR PAYMENT METH: CHECK 1045 REFERENCE: CV AMT TENDERED: 125.00 AMT APPLIED: 125.00 CHANGE: .00

NANCY E HAMMOND, REGISTER OF DEEDS E-RECORDED Bk 17974 PG 41 Instr # 2019022130 06/18/2019 08:37:38 AM Pages 3 YORK CO

Return to: Nicholas M. Starr 225 Walden Street, Apt. #2 Cambridge, MA 02140

# DLN 1001940060507

## **QUITCLAIM DEED**

KNOW ALL PERSONS BY THESE PRESENTS: That Nicholas M. Starr, of 225 Walden Street, Apt. #2, Cambridge, MA 02140, for consideration paid grant(s) to Nicholas M. Starr and Meredith Lindsey, of 225 Walden Street, Apt. #2, Cambridge, MA 02140, as Joint Tenants, with QUITCLAIM COVENANTS:

A certain lot or parcel of land, with the buildings thereon, situated in the Town of Kittery, County of York and State of Maine, identified as "Proposed Parcel B" on a plan entitled, "Proposed Division of Land For Property at 30 Haley Road Kittery, York County, Maine Owned By Michael E. Chenery and Mary J. Chenery," prepared by North Easterly Surveying, Inc. dated July 13, 2017, recorded at the York County Registry of Deeds at Plan Book 390, Page 30, and further described as follows:

Beginning at an iron rod located on the northerly sideline of an Existing 40' Right-of-Way, being the southeasterly-most corner of the parcel herein conveyed, and the southwesterly-most corner of Proposed Parcel A, as shown on said plan; thence, N 02° 08' 59" W along the sideline of Proposed Parcel A a distance of 194.54 feet to an iron rod; thence, N 50° 28' 38" W along the sideline of Proposed Parcel A a distance of 104.41 feet to an iron rod; thence N 82° 11' 04" W along the sideline of Proposed Parcel A a distance of 126 feet, more or less, to the southerly sideline of Wilson Creek; thence, in a generally southwesterly direction along the southerly sideline of Wilson Creek; a distance of 650 feet, more or less, to a point on the southerly sideline of said Wilson Creek; thence, S 82° 11' 04" E a distance of 435 feet, more or less, to an iron pipe; thence, continuing S 82° 11' 04" E a distance of 250 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 50 feet to an iron pipe; thence, S 07° 48' 56" W a distance of 162.81 feet to the point of beginning.

Also conveyed is a one-sixth undivided interest in and to the fee interest of a certain forty (40) foot wide strip of land which extends from the westerly sideline of the Haley Road in a south-westerly, southeasterly and northwesterly direction along Lots A, B, and C (all references to Lots A, B and/or C refer to the lots as identified on "Plan of Lots, Haley Road, Kittery, Maine for Howard Mann" dated June, 1985 by Anderson Associates and recorded with the York County Registry of Deeds in Plan Book 144, Page 36 - the above described "Proposed Parcel B" comes out of Lot B) and labeled a Right-of-Way as shown on the above referred to Plan and hereinafter referred to as the Right-of-Way. However, this one-sixth interest is conveyed subject to the following restrictions

and conditions which shall be considered as covenants running with the land and shall be binding on the grantees, their heirs and assigns and shall be enforceable at law or in equity by the owner or owners of Lots No. A, B, or C as shown on said Plan:

1. Said Right-of-Way shall only be used by the owners of Lots A, B, and C and their invited guests to gain access to and exit from Lots A, B, and C from the westerly sideline of the Haley Road, on foot or with vehicles.

2. No buildings or structures of any kind, whether of a permanent or temporary character, shall be erected or placed on said Right-of-Way.

3. No cars or other vehicles shall be parked or abandoned on said Right-of-Way.

4. Said Right-of-Way may be used by owners of A, B, and C for the installation and maintenance of utility line easements.

5. By their acceptance of this deed to a portion of Lot B, the grantees, their heirs and assigns agree to assume and be liable for one-sixth of the cost of repairing and maintaining that section of the Right-of-Way that abuts the length of Lot No. A and one-half of the cost of repairing and maintaining that section of the Right-of-Way that abuts the length of Lot No. B; and further agree to cooperate in all reasonable efforts to repair and maintain said section of the Right-of-Way that abuts Lots A and B and pay their share of all bills for repair and maintenance within thirty (30) days of when said bills are submitted. The owners of Lot B shall not be liable for the cost of repairing and maintaining that section of the Right-of-Way that abuts Lot C.

The above premises are further conveyed subject to certain "Notes" which "Notes" shall be binding on the grantees, their heirs and assigns.

Said Notes read as follows:

1. There shall be no aerials other than normal TV antennas.

2. There shall be no above ground pools or metal buildings.

3. There shall be no outdoor lighting of mercury vapor or so-called moonbeam type or any lighting

of more than 150 watts per unit.

4. There shall be no mobile or manufactured home allowed.

Meaning and intending to describe and convey the same premises conveyed to Nicholas M. Starr by virtue of a deed of Michael E. Chenery and Mary J. Chenery dated August 30, 2017 and recorded in the York County Registry of Deeds at Book 17554, Page 673.

Quitclaim Deed 30 Hatey Rd Kittery Maile

Executed this <u>~</u> day of <u>May</u>, 2019.

Nicholas M. Starr

State of M.A. County of Suffolk

Then personally appeared before me on this 2B day of  $May_$ , 2019, the said Nicholas M. Starr and acknowledged the foregoing to be his voluntary act and deed.

Siture E. Reeps Notary Public/Justice of the Peake Commission expiration: March 19, 2021



#### Abutters:

Parcel Number: 47-13 Property Address: 86 HALEY ROAD Address: ALLEY, ELAINE J Mailing Address: 86 HALEY ROAD KITTERY, ME 03904-5402

Parcel Number: 47-17-2 Name: HUNTRESS, BRUCE E HUNTRESS, CRISTINE M Mailing Address: 6 CREEK CROSSING KITTERY, ME 03904

Parcel Number: 47-18-3-1 50 TIDEWATER WAY Name: JABOUR, EVERETT G. & SUE L. JABOUR, JOHN V. Address: 50 TIDEWATER WAY KITTERY, ME 03904

Parcel Number: 47-18-4-1 Property Address: 78 TIDEWATER WAY Name: THE SUSANA LECLAIR REV. TRUST Mailing Address: PO BOX 936 YORK HARBOR, ME 03911

Parcel Number: 47-18-4-2 Property Address: 77 TIDEWATER WAY Name: THE SUSANA LECLAIR REV. TRUST Mailing Address: P.O. BOX 936 YORK HARBOR, ME 03911 Parcel Number: 47-25 Property Address: 340 US ROUTE 1 Name: SPRUCE CREEK RETAIL OUTLET LLC. Mailing Address: 117 KENDRICK STREET STE 350 NEEDHAM HEIGHTS, MA 02494

Parcel Number: 47-25a Property Address: 350 US ROUTE 1 Name: SPRUCE CREEK RETAIL OUTLET LLC. Mailing Address: 117 KENDRICK STREET STE 350 NEEDHAM HEIGHTS, MA 02494

#### PUBLIC NOTICE: NOTICE OF INTENT TO FILE

Please take notice that

Nicholas Starr of 56 Tidewater Way, Kittery, ME 03904

Section 307 of the federal Coastal Zone Management Act, 16 U.S.C. § 1456.

is intending to file a Natural Resources Protection Act permit application with Maine Department of Environmental Protection pursuant to the provisions of 38 M.R.S. §§ 480-A thru 480-BB on or about July 22, 2021. The application is for: Residential dock at Wilson Creek, Kittery.

A request for a public hearing or a request that the Board of Environmental Protection assume jurisdiction over this application must be received by the Department in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the application will be accepted throughout the processing of the application. For Federally licensed, permitted, or funded activities in the Coastal Zone, review of this application shall also constitute the State's consistency review in accordance with the Maine Coastal Program pursuant to

The application will be filed for public inspection at the Department of Environmental Protection's office in Portland during normal working hours. A copy of the application may also be seen at the municipal offices in Kittery, Maine. Written public comments may be sent to the regional office in Portland, where the application is filed for public inspection: MDEP, Southern Maine Regional Office, 312 Canco Road, Portland, Maine 04103

Department of Environmental Protection Bureau of Land & Water Quality												
17 State House					L Total Fees:							
Augusta, Maine 04333 Telephone: 207-287-7688					eived					-		
APPLICA	<b>TION F</b>	OR A NA	ATURA	L RES	OURC	ES PRO	ΓΕCΤΙΟ	N A	CT PI	ERM	ÎT	
1. Name of Applicant:	Nichol	as Starr			5.Name o	f Agent:	Civil	work	s New	Eng	land	
2. Applicant's Mailing Address:	56 Tidew	ater Way, K	ittery, Main	e 03904	6. Agent' Addres	s:	181 Wa	tson Ro	d, Dover, I	New Ha	ampshire, 03	3820
3. Applicant's Daytime Phone #:	960-9	82-483	5		Phone			-749	9-044	3		
4. Applicant's Email <i>A</i> (Required from <i>either</i> or agent):		nicholasr	nstarr@grr	nail.com		s Email Addı	d				rksne.c	om
9. Location of Activity (Nearest Road, Street	/: t, Rt.#) 5(	6 Tidew	ater W	ay	10. Town:	Kittery		11. Co	ounty:	York	ζ.	
12. Type of Resource: (Check all that apply)	Great I	stream or bro Pond Il Wetland	ook		13. Name	of Resourc	e: Wi	so	n Cr	eel	۲	
		ater Wetland d Special Sig				int of Impac .Ft.)	t:	Fill:				
	Signific	ant Wildlife Mountain			3.2	,a c <i>y</i>		Dredg	ing/Veg	Remov	al/Other:	
15. Type of Wetland: (Check all that apply)	Generation Forest	ed Shrub		Tier		OR FRESHV T	WATER V lier 2	VETL	ANDS	Tier	• 3	
	C Emerg			) - 4,999	sa ft.	<b>15,000</b> –	- 43,560 s	q. ft.	□ > 43.	560 s	q. ft. or	
	D Peatla			5,000-9,9	999 sq ft				🗆 smal	ler tha	an 43,560	
	Open Open			10,000-1	4,999 sq ft		Χ.		1	. ft., n or Tiei	iot eligibli r 1	е
16. Brief Activity Description:	The activit	ies involved ir	nclude consti			fixed pier and	a seasonal	float th	at will be	suppor	rted at low	tide.
17. Size of Lot or Par & UTM Locations		square	feet, or 🛛 🗗	2.1	acres UT	M Northing:	4775005 mN	י טי	M Easti	ng:	359534 mE	_
18. Title, Right or Inte		wn	lease	D pur	chase opti	on 🗆 writt	en agree	ment				
19. Deed Reference N	lumbers:	Book#: 17	974 Page	* 41	20. Ma	p and Lot N		Map 47	#:	Lot 18-3	3	
21. DEP Staff Previou Contacted:	isly		No		22. Part project:	of a larger	<ul><li>Yes</li><li>No</li></ul>	Afte Fac	er-the- t:		'es No	
23. Resubmission of Application?:	□ Yes→ ■ No	If yes, pr application					ious proje nager:	ect				
24. Written Notice of Violation?:		If yes, na	me of DEP ent staff in						ious We ration:	tland	Yes   No	
26. Detailed Direction to the Project Site	Going East	on Route 1 from the Kitte	ery Outlets turn right o	nto Haley rd imme	ediately after Yummi	es Candy Co. Take the fi	irst right onto the dirt	road and th	e destination will	be on the rig	ght in about a quar	rter mile.
27. TIEF	1				TIER	2/3 AND IN						
Title, right or interest documentation						Erosion Function					if	
Narrative Project Description     Copy of		Copy of	Public N	lotice/Publ	ic	required						
Plan or Drawing (8	<ul> <li>Plan or Drawing (8 1/2" x 11")</li> <li>Photos of Area</li> <li>U Wetlands Deline</li> </ul>				Compensation Plan (Attachment 4), if required							
	Attachment 1)		nt 1) that	contains t	he	Append						
Photos of Area	ance & Mir	Information			under Site Conditions		Stateme	ent/Co	py of cov	er lett	er to MHF	C
<ul> <li>Photos of Area</li> <li>Statement of Avoid</li> </ul>		r to MHPC	Alternat	ives Ana	lysis (Attac	chment 2)	Descrip	tion of	Previou	sly Mir	ed Peatla	ano.
<ul> <li>Photos of Area</li> <li>Statement of Avoid</li> </ul>		r to MHPC	Alternation Alternation	descriptio	n of how w	vetland	Descrip if required	tion of	Previou	sly Mir	ied Peatla	anu,
<ul> <li>Photos of Area</li> <li>Statement of Avoid</li> </ul>	cover lette	r to MHPC		descriptio	n of how w	vetland		tion of	Previou	sly Mir	ned Peatla	anu,

## <u>IMPORTANT</u>: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

#### **DEP SIGNATORY REQUIREMENT**

#### PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor a permit be issued.

## CORPS SIGNATORY REQUIREMENT

USC Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry shall be fines not more than \$10,000 or imprisoned not more than five years or both. I authorize the Corps to enter the property that is subject to this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

#### DEP SIGNATORY REQUIREMENT

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the address located on the front page of this application (see #4 for the applicant and #8 for the agent)."

Date: SIGNATURE OF AGENT/APPLICANT

NOTE: Any changes in activity plans must be submitted to the DEP and the Corps in writing and must be approved by both agencies prior to implementation. Failure to do so may result in enforcement action and/or the removal of the unapproved changes to the activity.

# **CIVILWORKS NEW ENGLAND**

181 WATSON ROAD P.O. BOX 1166 DOVER, NH 03821-1166 PHONE: 603.749.0443 FAX : 603.749.7348

#### MEMORANDUM

Date:July 19, 2021To:Regulatory AgenciesFrom:Duncan Mellor, PEPrincipal Coastal EngineerRe:Starr Dock-Kittery of 6-21-21, NRPA Attachments

#### Site Description:

The site is located in Kittery, Maine on the banks of tidal wetland area behind the Kittery Outlet Malls. The address of the site is 56 Tidewater Way in Kittery, Maine on Wilson Creek, off Spruce Creek. There is a slope of wooded area leading down to a steeper transition from woods to salt marsh. There is approximately 60 feet of salt marsh then a 1 to 2 foot drop to the mud flat. The slope of the mud flat from the edge to the low tide stream is shallow and constant.

#### Attachment 1 (Activity Description):

The activity that will be taking place includes constructing a permanent pier over the salt marsh and installing a removable floating dock connected to the pier with a gangway. The pier will be 70 feet long, plus a 13 ft long shore ramp in the woods, both 3.3 feet wide with at least 3.3 feet of vertical clearance from the salt marsh level to the bottom of the stringers. This height to width ratio is in accordance with "Shading Impacts of Small Docks and Piers on Salt Marsh Vegetation in Massachusetts Estuaries" by Logan et al. which concludes that a 1:1 height to width ratio allows for adequate biomass growth under the pier. The floating dock will have the dimensions of 18 feet long by 10 feet wide. The floating dock will have skids on the bottom which will limit the impact area of the floating dock on the environment during low tide. The skids will have dimensions 1 ft by 18 ft and will primarily rest on two 2 ft by 10 ft mooring blocks. Both the skids and blocks will be under the floating dock area.

The impact area of the pier is determined by the number of piles and the area of each pile. With 14 piles of diameter 6.5" (impact area of 0.23 square feet each) the total impact area of the pier will be 3.2 square feet. Of the 14 piles, eight are below the mean high water line (MHW) and six are above. Only four of the six above MHW are in the salt marsh with an impact area of 0.9 square feet. The piles below MHW have a total impact area of 1.8 square feet.

# **CIVILWORKS NEW ENGLAND**

## Attachment 2 (Alternative Analysis Report):

The proposed layout was selected to minimize impacts. A possible alternative approach for boat access could be walking across the salt marsh to an abutment securing the gangway and float. This would not provide all tide access and would damage the salt marsh grasses. The current approach of installing a pier and floating dock has some temporary construction phase impacts walking on the salt marsh, but lesser impacts once the dock is built.

Attachment 3 (Vicinity Map): See attached figures.

**Attachment 4 (Area Photographs):** See attached photos.

Attachment 5 (Drawings): See attached drawings.

**Attachment 6 (Additional Plans):** See attached plans.

## Attachment 7 (Construction Plan):

The construction of this project will have minimal impacts. The small diameter helical piles will be driven with a hand held auger system which eliminates the need for heavy equipment on the salt marsh and mud flats.

Attachment 8 (Erosion Control Plan)

Not applicable, no soil disturbing activity.

# **CIVILWORKS NEW ENGLAND**

#### **Attachment 9 (Site Condition Report)**

See attached existing conditions plan, report, and Appendix B.

#### Attachment 10 (Notice of Intent to File)

See attached document.

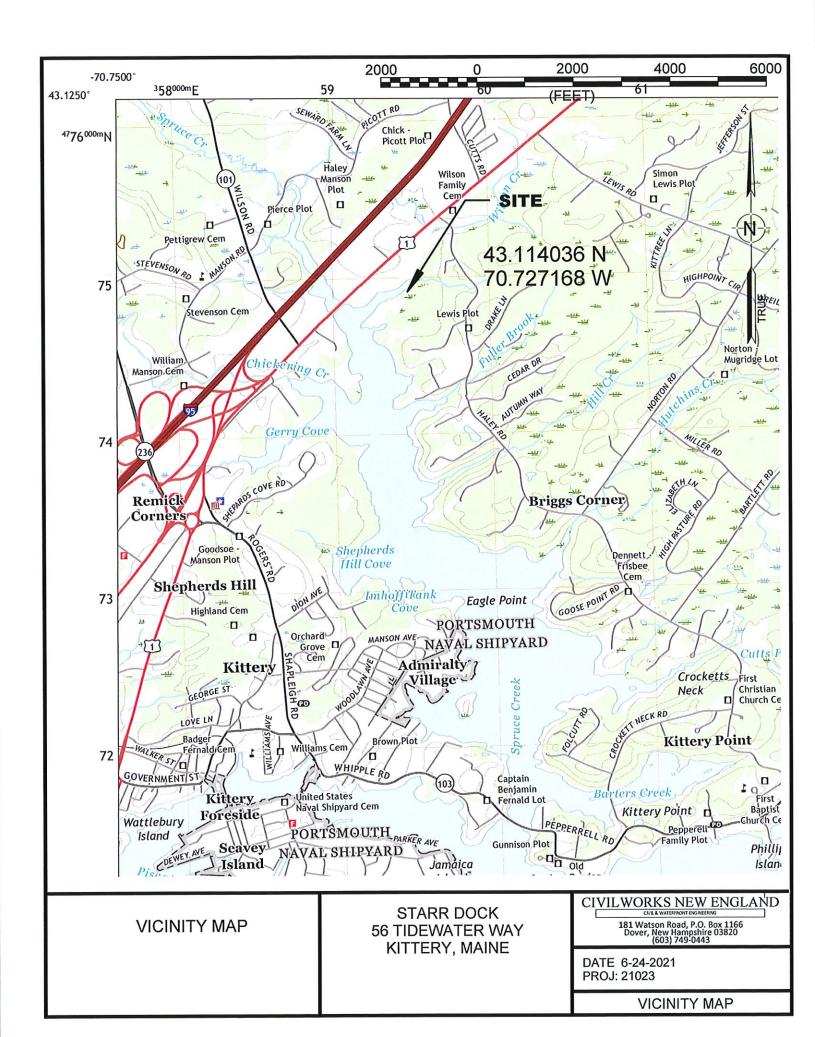
#### Attachment 11 (MHCP Submittal)

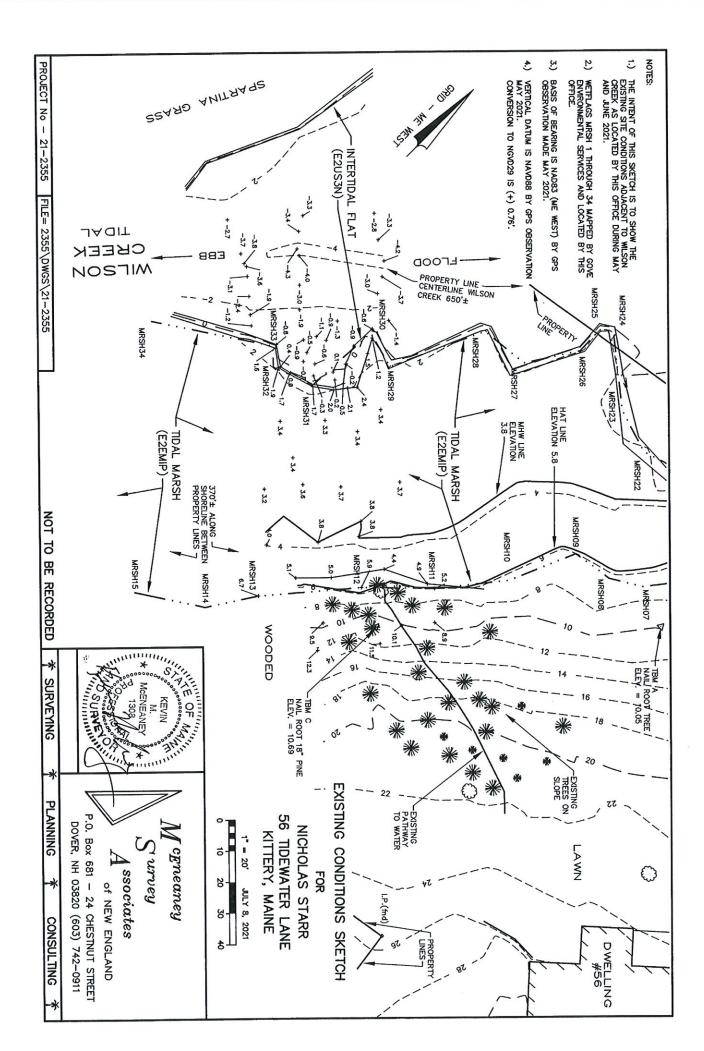
See attached form.

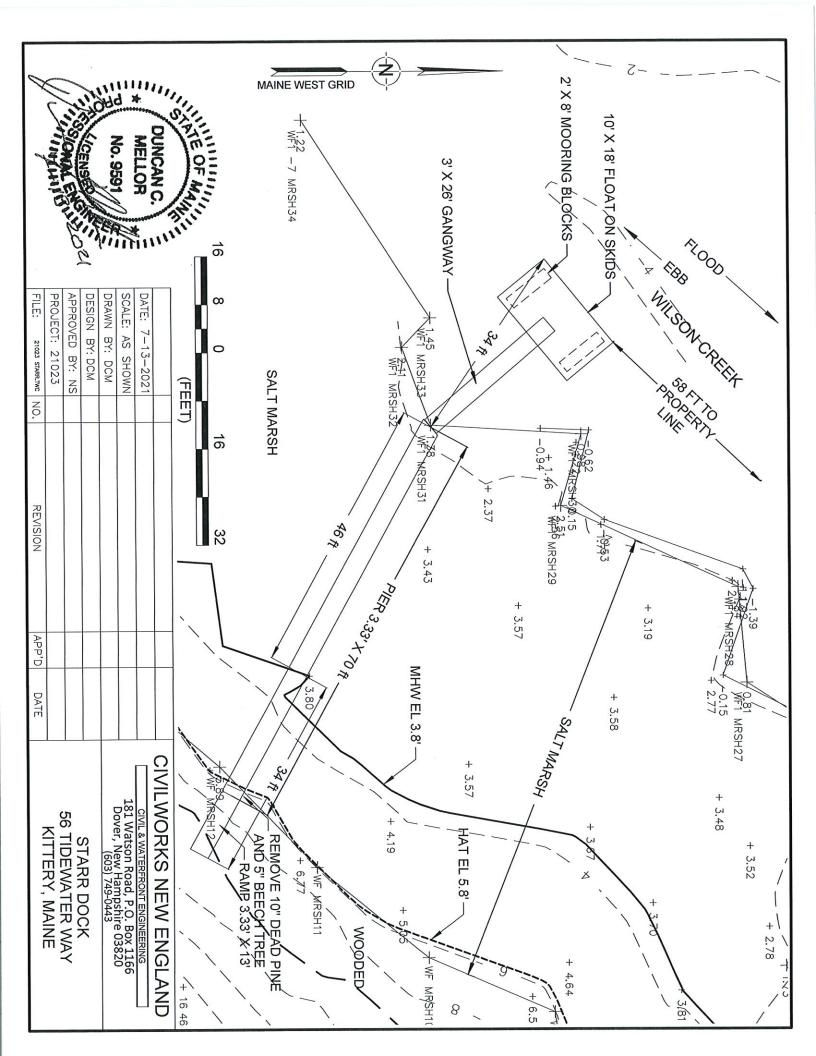
#### Attachment 12 (Functional Analysis) :

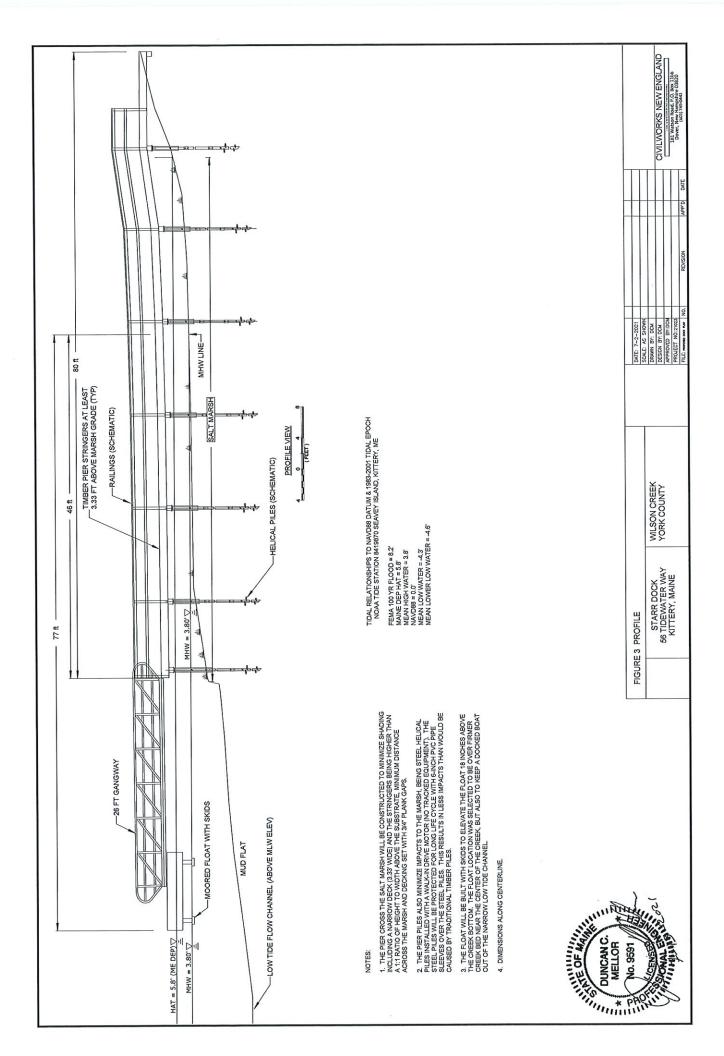
The proposed pier and float will be located on the salt marsh and mud flat intertidal zone while starting on the wooded slope. The benthic life density of the salt marsh and mud flat ranges from absent to abundant containing both plants and animals. The field observation was made on 06/21/2021 at 2:00 pm on an ebb tide, low tide occurred at 2:54 PM. During this field observation efforts were made to look in the mud at select spots and to lift up rocks and logs to check for wildlife.

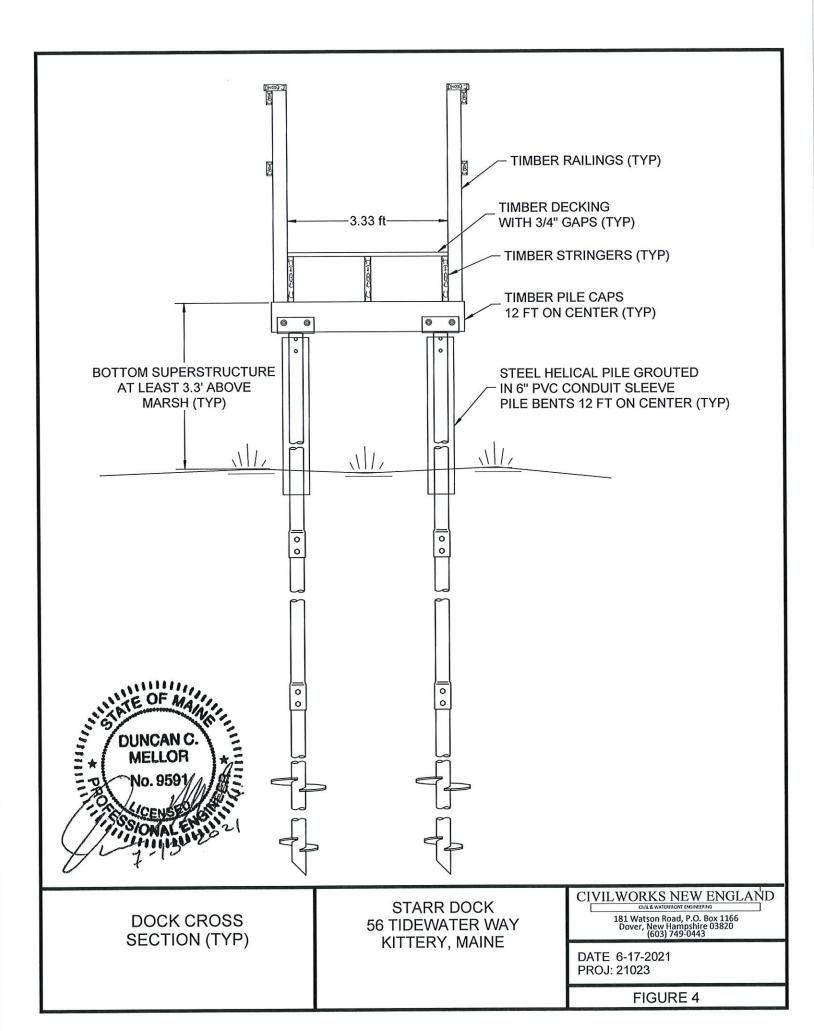
Eastern Mudsnail Tritia obsoleta Abundant in runoff streams Atlantic Ribbed Mussel Geukensia demissa Rare, only empty shells found Fiddler Crab Leptuca pugilator Rare, found on boundary of salt marsh and mud European Green Crab Carcinus maenas Rare, body found on edge of salt marsh Green Algae Chaetomorpha Abundant, algae mats found near mud flat edge













**Photo 1** The path from the owner's house to the proposed pier looking west (towards the channel). Taken 6-21-21 at 2:00 PM EST.



Photo 2 The location of the proposed ramp to the pier looking west. Taken 6-21-21 at 2:00 PM EST.



Photo 3 The location of the proposed pier looking east. Taken 6-21-21 at 2:00 PM EST.



Photo 4 The location of the proposed ramp and float looking west. Taken 6-21-21 at 2:00 PM EST.

# **APPENDIX A: MDEP VISUAL EVALUATION**

FIELD SURVEY CH (Natural Resources Protection Act, 2	38 M.R.S.	. §§ 480 A - Z)	
Name of applicant: Nicholas Starr Phone	: 960-9	982-4835	
Application Type: <u>NRPA</u> Permit			
Activity Type: (brief activity description) <u>Construction</u> o	<u>f pier</u>	and floating	dock
Activity Location: Town: <u>Kittery</u> County: <u>Y</u>	ork		
GIS Coordinates, if known:			
Date of Survey: <u>6-21-2021</u> Observer: <u>Matthew Dowli</u>	ngI	Phone: <u>603-749-</u>	0443
		e Between the Propose y and Resource (in Mil	
1.Would the activity be visible from:	0-1/4	1⁄4-1	1+
A. A National Natural Landmark or other outstanding natural feature?			
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge?			
C. A state or federal trail?			
D. A public site or structure listed on the National Register of Historic Places?			
E. A National or State Park?			
F. 1) A municipal park or public open space?			
2) A publicly owned land visited, in part, for the use, observation, enjoyment and appreciation of natural or man-made visual qualities?			
3) A public resource, such as the Atlantic Ocean, a great pond or a navigable river?	×		
2. What is the closest estimated distance to a similar activity?	$\boxtimes$		

5. Are any of the resources checked in question 1 used by the public □Yes during the time of year during which the activity will be visible?

(i.e., screened by summer foliage, but visible during other seasons)

3. What is the closest distance to a public facility

intended for a similar use?

4. Is the visibility of the activity seasonal?

A listing of National Natural Landmarks and other outstanding natural features in the State of Maine can be found at: www.nature.nps.gov/nnl/Registry/USA\_map/states/Maine/maine.htm . In addition, unique natural areas are listed in the Maine Atlas and Gazetteer published by DeLorme.

□Yes

(pink)

X

⊠No

XNo

- Most Maine State and National Wildlife Refuges, Sanctuaries, and Preserves and State Game Refuges are listed in the Maine Atlas and Gazetteer published by DeLorme.
- Most State and federal trails are listed in the Maine Atlas and Gazetteer published by DeLorme. In addition, the Maine Department of Conservation maintains a list of state parks with trails that can be searched by county at: <a href="http://www.state.me.us/doc/parks/programs/db\_search/index.html">www.state.me.us/doc/parks/programs/db\_search/index.html</a>
- Maine sites and structures listed on the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966, as amended, can be searched by town at: <a href="http://www.cr.nps.gov/nr/research/nris.htm">www.cr.nps.gov/nr/research/nris.htm</a>
- In addition, State historic sites can be found at: <u>www.state.me.us/doc/parks/programs/db\_search/index.html</u> A partial listing of historic sites in Maine can be found in the Maine Atlas and Gazetteer published by DeLorme.
- A listing of Maine State Parks can be found at: <u>www.state.me.us/doc/parks/programs/db\_search/index.html</u> or in the Maine Atlas and Gazetteer published by DeLorme. Acadia National Park on Mount Desert Island is Maine's only National Park.

For guidance on completing this field survey checklist, please contact Licensing staff in the Division of Land Resource Regulation at the following offices:

(Headquarters) Central Maine Regional Office 17 State House Station Ray Building, Hospital Street Augusta, Maine 04333 (207) 287-7688 or toll free at 1-800-452-1942 Eastern Maine Regional Office 106 Hogan Road Bangor, Maine 04401 (207) 941-4570 or toll free at 1-888-769-1137

Northern Maine Regional Office 1235 Central Drive Presque Isle, Maine 04769 (207) 764-0477 or toll free at 1-888-769-1053 Southern Maine Regional Office 312 Canco Road Portland, Maine 04103 (207) 822-6300 or toll free at 1-888-769-1036

## **APPENDIX B**

# MAINE'S COASTAL WETLANDS: COASTAL WETLAND CHARACTERIZATION GUIDELINES

(Partly derived from Maine's Coastal Wetlands: Volume II)

Guidelines for the sampling and assessment of coastal wetlands have been developed by the Department of Environmental Protection to standardize habitat characterizations and functional assessments of coastal wetlands as required by the Natural Resources Protection Act (NRPA). The NRPA requires all applicants to characterize coastal wetland areas occurring in the location or vicinity of a proposed activity. Intertidal and/or subtidal characterizations are required for the following activities: fill, crib-supported or subtidal piers, lobster pounds, shoreline stabilization, or dredging. Activities impacting over 500 square feet of coastal wetland require a functional assessment performed by a professional wetland scientist unless the Department determines that the activity will have minimal adverse impact on the functions and values of the wetland.

This checklist satisfies the requirement for Attachment 12, Wetland Delineation Report, described in Part II of the NRPA application for <u>coastal wetlands located only in intertidal areas and subtidal areas less than one foot in depth</u>. The checklist is required for all activities impacting coastal wetlands to provide information describing coastal habitats and assess their most critical functions and values with the least amount of sampling effort possible, providing DEP licensing staff and biologists with information. The information provided will be used to determine whether the Department will require further sampling and assessment. <u>This checklist does not substitute for any other NRPA application requirements</u>.

#### **SURVEY METHODS:**

Following the methods below, survey and photograph the activity area on an ebb tide.

- 1. Walk throughout the activity area and note the location and measurements of all dominant habitat types. If not part of an application, complete an overhead drawing of the activity area. The overhead drawing should include the location and types of vegetation, boundaries of habitat types, sample locations, the location of spring high tide, mean high water and mean low water, and contours, if possible.
- 2. Take photographs of activity area and habitat types. (Include date, time, tide cycle and location of each photograph).
- 3. Search throughout the entire activity site, turning over rocks, wood, and algal mats, and look for any identifiable organisms present on the surface of the habitat, list the organisms found if known, and estimate their relative abundance. Complete the Checklist.
- 4. Using a clam rake or shovel, turn over sediments at random locations throughout the intertidal zone (at least one per zone, high, mid and low). Look for any identifiable organisms present in the sediments and estimate their relative abundance. Mark location on overhead drawing. Complete the Checklist.
- <u>PLEASE NOTE</u>: Some activities may require quantitative benthic analysis of the sediments. Examples of such activities include dredges, lobster pounds, and fill activities consisting of over 500 square feet. Determination of sampling requirements may be made through consultation with DEP licensing staff and biologists. Guidelines for quantitative benthic sampling can be provided on request.

#### **DEFINITIONS:**

#### Area of Impact:

Direct Impact: The footprint of a proposed activity; e.g. area of dredge, area covered by cribs, base of riprap.

<u>Indirect Impact</u>: The area surrounding a proposed activity that will potentially be affected by the activity; e.g. shoreline adjacent to riprap, salt marsh areas, shaded areas. NOTE: The area of indirect impact will vary from site to site and should be determined on a case by case basis by the consultant, the applicant, and DEP staff.

**Timing of Survey Work:** The date, time of day, and tidal height of sampling. Ideally, surveys should be conducted between May 1 and November 30 on an ebb or flood tide. Surveys may be conducted at other times of year, if necessary. Include the timing of low tide on the survey date. If the activity will extend into the low intertidal and/or shallow subtidal, the survey should be conducted on a negative or zero tide.

#### **Energy Levels:**

- Exposed/High energy: Area exposed to oceanic swell and wind waves. Wind fetch (i.e. direction of origin) unlimited. Water velocity exceeds 2 meters/second.
- <u>Partially exposed/Moderate energy</u>: Oceanic swell attenuated by offshore reefs, islands, or headlands, but shoreline is substantially exposed to wind waves. Typical of cobble or gravel fields. Water velocity between 1 and 2 meters/second.
- <u>Semi-protected/Low energy</u>: Shoreline protected from sea swell, but it may receive waves generated by moderate fetch. Typical of gravel or unconsolidated muddy sediments. Water velocity less than 1 meter/second.
- <u>Protected/Low energy</u>: No sea swell, little or no current, and restricted wind. Typical of unconsolidated muddy sediments. Water velocity less than 1 meter/second.

Drainage on Intertidal Flats: The amount of water left on intertidal area after ebb tide.

Habitats: description of activity site and adjacent areas <u>Sand Beach</u>: exposed environments containing at least 75% sand.

Boulder/cobble Beach: exposed environments dominated by boulders and/or loose rounded rocks.

Sand Flat: protected and semi-protected environment dominated by sandy sediment.

Mixed Coarse & Fines: semi-protected environment consisting of a mixture of rocks, boulders, gravel, sand, cobbles, and mud.

Rocky Shore: semi-protected to moderate consisting of rocks, boulders, or ledge.

Salt Marsh: persistent near shore emergent grass habitats.

Ledge: stable bedrock

Mud Flat: protected environments containing at least 75% mud

Eelgrass: intertidal and subtidal grass habitat.

# **Relative Abundance:** the frequency of an organism at or adjacent to the activity site <u>Absent:</u> Organism is physically absent from the specific area.

<u>Scattered or occasional</u>: A limited number of a specific organism found only after a thorough investigation of the habitat *or* organisms occurring in small (<1/2 square foot) patches or small clumps throughout the zone.

<u>Common</u>: Specific organism found readily with little investigation, but not visually obvious; found repeatedly and/or occurring in numerous patches throughout habitat.

Abundant: Specific organism is visually obvious throughout area with limited or no habitat disturbance.

# APPENDIX B: MDEP COASTAL WETLAND CHARACTERIZATION: INTERTIDAL & SHALLOW SUBTIDAL FIELD SURVEY CHECKLIST

NAME OF APPLICANT: <u>Nichola</u> APPLICATION TYPE: <u>NRPA Pe</u> ACTIVITY LOCATION: TOWN:	as Star: rmit Kittery	r	$_{-}$ PHONE: 96	50-982-483 York	5
ACTIVITY DESCRIPTION: □ fill	🛛 pier	□ lobster pour		e stabilization	
DATE OF SURVEY: 6-21-2021	<u> </u>	OBSERVE	R: <u>Matthew</u>	Dowling	
TIME OF SURVEY: 14:00		TIDE AT S	URVEY: <u>Ebb</u>	,	
SIZE OF DIRECT IMPACT OR FO Intertidal area: <u>3.2 square</u>			a: <u>0 square</u>	e feet	
SIZE OF INDIRECT IMPACT, if kn Intertidal area: <u>527</u>	own (squar square :	e feet):	al area: 0 squ	are feet	
HABITAT TYPES PRESENT (check □ sand beach □ boulder/cobble be □ ledge □ rocky shore ⊠ muc	each □ s	and flat □m		nes 🖾 salt ma	ırsh
ENERGY: ⊠ protected □ semi	-protected	□ par	tially exposed	□ expo	sed
DRAINAGE: 🛛 drains completely	□ standin	ig water [	⊐ pools □	Istream or chan	nel
SLOPE: □>20% □ 10-20%		5-10%	⊠ 0-5%	🗆 variat	ole
SHORELINE CHARACTER: □ bluff/bank (height from sprin	ng high tide	:) □ bea	ach □rocky	⊠ vegetated	
FRESHWATER SOURCES: □ strea	m 🗆	river	□ wetland	□ stormwat	er
MARINE ORGANISMS PRESENT					
mussels	absent □	occasional ⊠	common	abundant □	
clams					
marine worms					
rockweed	LX				
eelgrass	X				
lobsters	X				
other				X M	Mud Snails
SIGNS OF SHORELINE OR INTER	RTIDAL EF	ROSION?	□ yes	🛛 no	
PREVIOUS ALTERATIONS?			□ yes	🖾 no	
CURRENT USE OF SITE AND AD □ undeveloped   ⊠ residential	JACENT U □comr		□ degraded	□ recreationa	ıl
PLEASE SUBMIT THE FOLLOW					(pink)

☑ Photographs ☑ Overhead drawing

# Natural Resource Protection Act Application APPENDIX D: Project Description Worksheet for a Dock, Pier or Wharf Application.

Help us process your application more efficiently by completing this worksheet, which is supplemental to a NRPA application for a dock, pier or wharf. A completed Appendix D may be substituted for Block 14 of the application page.

# THIS IS AN APPLICATION FOR A.....

Commercial wharf

If yes, indicate type of commercial activity: \_\_\_\_\_\_ License number: \_\_\_\_\_\_ Number of fishermen using this wharf: \_\_\_\_\_\_

Public pier, dock or wharf

Common or shared recreational pier, dock or wharf

Private recreational pier, dock or wharf

□ Expansion or modification of an existing structure

Other, please indicate:

# TELL US ABOUT YOUR BOAT....

My boat(s) requires a draft of 1.5 feet. My boat(s) is 20 feet long.

**TELL US ABOUT YOUR PROJECT SITE....** For coastal piers and wharves, please complete Appendix B of the NRPA application. For freshwater docks, please describe the substrate and any vegetation: <u>See Appendix B</u>



**SCENIC CONSIDERATIONS...**Please complete Appendix A of the NRPA application.

# WHAT FACILITIES ARE NEARBY?

The nearest public boat launch is located in <u>Kittery</u> approximately <u>3.4</u> miles from the project location. (town) (distance)

The nearest public, commercial, or private marina is located in <u>Kittery</u> approximately <u>2.9</u> miles from the project location. (town)

I have inquired about slip or mooring availability at the nearest marina or public facility.

Yes, a slip or mooring is available. No, a slip or mooring is not available. Approximate expected time on waiting list: <u>200 people</u>

 $\boxtimes$  I have contacted the local Harbor Master.

Name:	Nicholas	Starr	Phone:_	960-982-4835	_

I currently use the following for my boat:  $\Box$  Mooring  $\Box$  Marina

# TELL US ABOUT YOUR PROPOSED PIER, DOCK OR WHARF...

# **MATERIALS:**

In the structure will be supported by pilings.

<u>14</u> pilings of <u>6.5</u> inches in diameter

☐ The structure will be supported by stacked, flow-through granite cribs.

\_\_\_\_\_ blocks, measuring \_\_\_\_\_ feet by \_\_\_\_\_ feet

□ The structure will be supported by solid fill.

\_\_\_\_\_ square feet of solid fill

□ Other:\_\_\_\_\_

# **DIMENSIONS:**

Length of fixed section:		83	feet
Width of fixed section:		3.33	feet
Length of ramp:		26	feet
Dimensions of float:		de by <u>18</u> fe	eet long
Distance the structure will extend below mean low	water (MLW	<i>)</i> : <u>0</u>	feet
Depth of water at the fixed end of the structure:		2.1	feet
Depth of water at the float at low tide:		0	feet
Depth of water at the float at high tide:		6	feet
Dimensions of any proposed buildings (e.g. bait she	ed):		
feet high by	/ feet w	ide by f	eet long

# ACCESS:

During construction, my project site will be accessed via:

🛛 Land

Beach/intertidal area

□ Water/barge

#### PUBLIC NOTICE: NOTICE OF INTENT TO FILE

Please take notice that

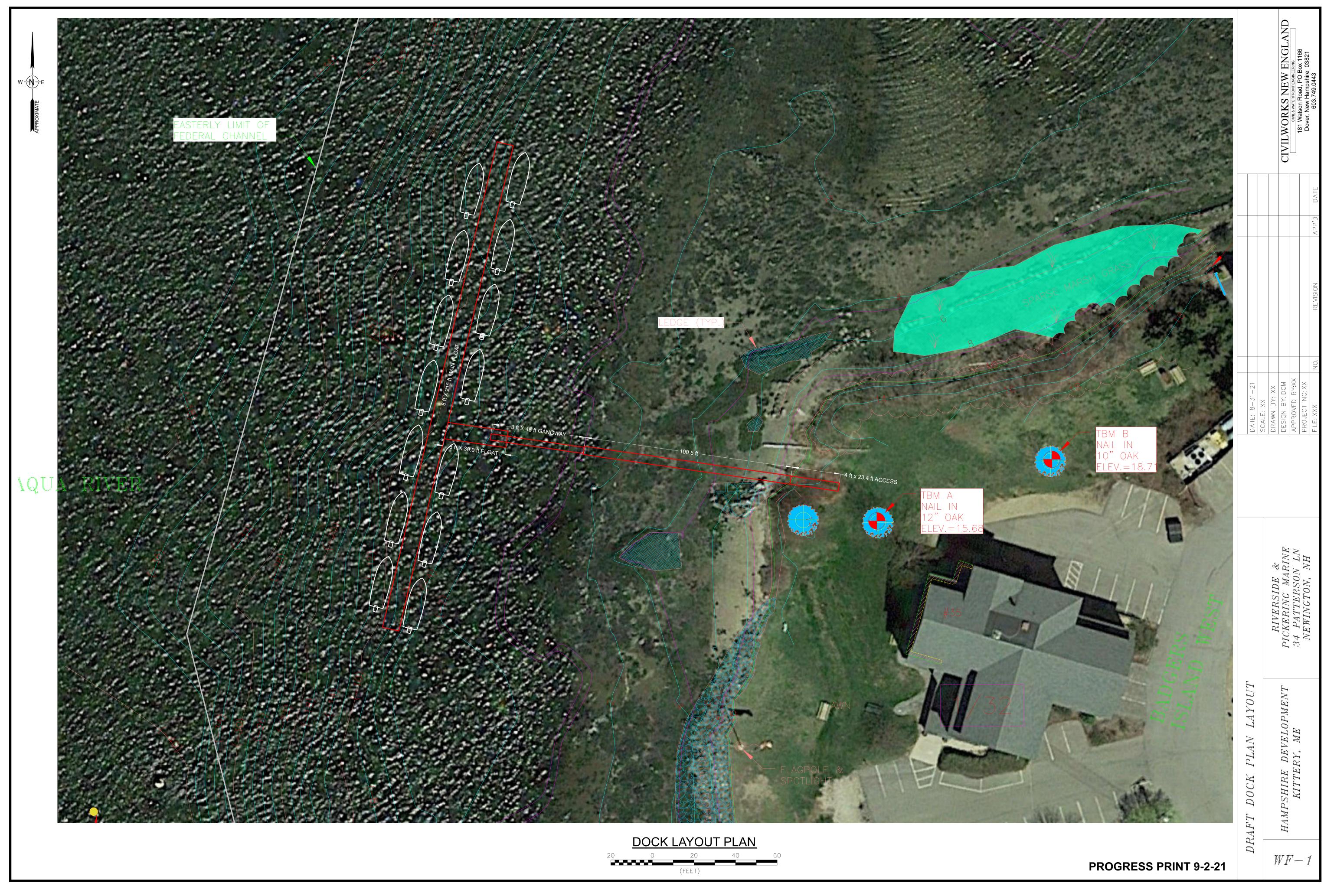
Nicholas Starr of 56 Tidewater Way, Kittery, ME 03904

is intending to file a Natural Resources Protection Act permit application with Maine Department of Environmental Protection pursuant to the provisions of 38 M.R.S. §§ 480-A thru 480-BB on or about July 22, 2021. The application is for: Residential dock at Wilson Creek, Kittery.

A request for a public hearing or a request that the Board of Environmental Protection assume jurisdiction over this application must be received by the Department in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the application will be accepted throughout the processing of the application. For Federally licensed, permitted, or funded activities in the Coastal Zone, review of this application shall

also constitute the State's consistency review in accordance with the Maine Coastal Program pursuant to Section 307 of the federal Coastal Zone Management Act, 16 U.S.C. § 1456.

The application will be filed for public inspection at the Department of Environmental Protection's office in Portland during normal working hours. A copy of the application may also be seen at the municipal offices in Kittery, Maine. Written public comments may be sent to the regional office in Portland, where the application is filed for public inspection: MDEP, Southern Maine Regional Office, 312 Canco Road, Portland, Maine 04103



DOCK L	_AYOU <sup>-</sup>	T PLAN
$\cap$	20	40

# **REGULAR MEETINGS.**

Except as superseded by these by-laws, Robert's Rules of Order, Newly Revised, 10<sup>th</sup> Edition, governs the conduct of meetings.

The regular meetings of the Port Authority are held in the Council Chambers of Town Hall, <u>generally</u> on the first Thursday of each calendar month. Public proceedings commence at 6:00 p.m. whether or not preceded by an executive session or workshop.

When said meeting falls on a holiday or is otherwise postponed, the regular meeting is held on the following Wednesday, at the same time and place.

The Port Authority Chair may cancel a regular meeting provided there are no permit applications waiting to be accepted or approved.

The date and venue of any regular meeting may be changed upon the vote of the Port Authority, provided, however, that said change in date, or venue, will still provide for at least one regular meeting in each month.

Minutes of all meetings and workshops must be recorded. Said minutes must be reviewed, corrected and approved by the Board at the next regular meeting. Copies of approved minutes are to be furnished to the Town Clerk, following approval.

Attendance of members is expected at all regular and special meetings. A member failing to attend three (3) regular meetings during one (1) fiscal year; without being excused by the Board forfeits the office.

# SPECIAL MEETINGS.

Special meetings may be called by the Chair or by four members of the Board. Notice of such meeting must, when possible, be given at least twelve hours before the time for holding the meeting. The call for the meeting must set forth the matters to be acted upon and nothing else may be considered.

Special meetings include public comment time as provided at regular meetings, but such public comment is limited to the matters on the agenda for the meeting. Notices of such meetings must include the name(s) of the person(s) requesting the meeting.

# QUORUM.

A quorum consists of four or more members. The Chair determines whether a quorum is present. A member who must abstain due to a legal conflict of interest in a particular case may not be counted in determining whether a quorum is present for that issue.

# ADJOURNMENT

All efforts will be made to conclude the business of any meeting no later than 10:00p.m., when automatic adjournment is ordered unless a member moves to extend the deadline for a certain period, or to a time specific, but in no case later than 11:00pm; and, which is duly seconded and approved by a simple majority.