

# Keeping New Hampshire's Coast Afloat

## *Financing Mechanisms for Resilience in Vulnerable Coastal Communities*

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### Executive Summary

The 2019-2021 Coastal Management Fellowship project, *Keeping New Hampshire's Coast Afloat*, will advance the adoption and use of alternative financing mechanisms for on-the-ground adaptation and resilience projects in coastal New Hampshire (NH) communities. Recognizing that a lack of funding for implementation projects is a major impediment to local progress on coastal flooding and stormwater management, the NH Department of Environmental Services Coastal Program (NHCP) and several partner organizations with aligned priorities, have identified two promising municipal funding mechanisms that coastal NH communities could use to help fill the funding gap: (1) a stormwater and flood mitigation utility fee structure and (2) a dedicated resilience fund and tax relief program. These programs would enable communities to raise funds to construct projects and access federal and state grant programs with match or repayment requirements. NHCP and the fellowship project partner organizations have prioritized addressing community funding needs in their respective organizational plans and agree that the timing to advance these financing options is ideal due to recent policy changes and increasing coastal and stormwater flooding issues. Despite similar organizational priorities, these partner organizations are in need of a fellow who can provide capacity and creative thinking to help them better coordinate and gather information to tackle this challenge. A fellow will join NHCP staff and partners to: (1) Lead the creation of a coordinated partnership program to advance coastal community understanding and implementation of local stormwater and flood mitigation utilities; and (2) Develop a municipal decision-support tool for adopting Coastal Resilience Incentive Zones (CRIZ) and a CRIZ fund under NH's Community Revitalization Tax Relief Program. The fellow will join a dynamic group of partners that have experience with the Coastal Management Fellowship program and are highly motivated to complete this much-needed project for coastal NH communities.

### 1. Background and Introduction

New Hampshire's (NH) coast is a vibrant place to live, work, and play. The 17 coastal zone communities (see Appendix B for map) are home to 11 percent of the state's population, several popular beaches, two nationally-recognized estuaries, and a diverse economy that supports over 100,000 jobs (NHCRHC 2016). In March 2018, two Nor'easters caused major flooding and damage in coastal NH communities, resulting in a Presidential Disaster Declaration and public assistance request of \$3.3 million. On 2018's sunnier days, towns like Hampton worried about almost weekly high tide flooding on neighborhood streets. Coastal NH communities expect more significant and chronic impacts from projected sea-level rise (SLR), with over 50 miles of roads and over 40 critical facilities vulnerable to the highest scenario of 6.6 feet of SLR (NHCRHC 2016). Many coastal NH communities have begun evaluating their risks and planning for change, completing assessments, plans, outreach campaigns, and adopting some regulations that enhance resilience to coastal and stormwater flooding. Communities now have detailed maps of SLR scenarios and statistics about assets vulnerable to SLR and floods. Communities have climate adaptation in their master and hazard mitigation plans, snazzy new high water mark signs, and stormwater best management practice (BMP) demonstration projects. Some communities now require new structures in the floodplain to be elevated and new buildings to capture more stormwater runoff. New federal and state regulations also require communities to take action: the [Small MS4 General Permit](#) was issued in 2017, requiring upgrades to municipal stormwater infrastructure to address non-point source pollution, and the [draft rules](#) for Dredge and Fill permits require applicants to accommodate SLR. A lot of this local progress has been supported by the [New Hampshire Department of Environmental Services Coastal Program](#) (NHCP) and [Watershed Assistance Section](#) (WAS), the

[Piscataqua Region Estuaries Partnership](#) (PREP), [the University of New Hampshire Stormwater Center](#) (UNHSC), [Rockingham](#) and [Strafford](#) Regional Planning Commissions (RPC and SRPC), the [Great Bay National Estuarine Research Reserve](#) (GBNERR), and other partners on the [New Hampshire Coastal Adaptation Workgroup](#) (NHCAW). These technical assistance providers have leveraged small grants through agencies like NOAA and the U.S. EPA to complete these foundational adaptation projects and build critical community capacity.

Communities and supporting organizations recognize, however, that this progress is only a drop in the bucket. Communities in NH and all over the United States are bumping up against a daunting barrier: ***how can they prioritize and pay for projects on the scale that is needed to achieve their resilience goals and comply with new regulations (Kresge Foundation 2016)?*** Raising roads, installing appropriate drainage infrastructure, replacing culverts, and floodproofing critical infrastructure, among other needed projects, are projects beyond the scope of most municipal budgets. Coastal NH communities are small rural or suburban towns and cities governed mostly by volunteers and part time staff, and their budgets are limited by NH's property tax-only structure and 'live free or die' attitudes. Even if SLR adaptation and stormwater management were the only issues these communities needed to address, the price-tag would be daunting. However, if communities do not start to take action to build resilience now, they risk becoming overwhelmed as conditions worsen. Currently, there are no local funding mechanisms in NH dedicated specifically to pay for stormwater and coastal flooding infrastructure and upgrades. While federal and state funding sources for projects exist through the Federal Emergency Management Agency (FEMA) [Hazard Mitigation Assistance](#) (HMA), the [Clean Water State Revolving Fund](#) (SRF), and other programs, grants require non-federal match dollars and loans require repayments provided by the municipality, which can be hard for small communities to secure. This implementation funding gap is one reason why only a few pilot implementation projects to store stormwater and build higher have been completed to date.

Recognizing that the lack of on-the-ground implementation funding is a major impediment to local progress, NHCP, WAS, PREP, UNHSC, GBNERR, and the RPCs have identified two promising municipal funding mechanisms that coastal NH communities could use to help fill the funding gap: (1) a stormwater and flood mitigation utility fee structure and (2) a dedicated resilience fund and tax relief program. These programs, if implemented, would enable communities to raise funds to construct projects and access federal and state grant programs with match or repayment requirements (e.g., FEMA, SRF, etc.). Neither of these approaches have been implemented in NH to date, yet NHCP and partners agree that the timing is ideal to begin seriously considering their feasibility among coastal communities in light of the new MS4 permit and mounting stormwater and flooding challenges.

Exploring the potential for a stormwater and flood mitigation utility is a priority in NHCP's [Section 309 Assessment and Strategy](#), the WAS [Nonpoint Source Management Program Plan](#), PREP's 2010 [Comprehensive Conservation Management Plan](#) and 2018 [State of Our Estuaries Report](#), and the 2016 New Hampshire Coastal Risk and Hazards Commission (NHCRHC) [final report](#). A stormwater and flood mitigation utility would raise funds for stormwater and flood mitigation projects, including MS4 compliance projects, by charging property owners a regular fee based on their use of stormwater infrastructure, commonly calculated by the amount of impervious cover on their property. Property owners are able to reduce their fees through mitigating actions such as installing rain barrels or eliminating impervious cover. Stormwater and flood mitigation utilities are a popular mechanism for addressing the implementation funding gap in many communities around the county, including [Northampton, Massachusetts](#) and [Ann Arbor, Michigan](#). Drawing from successful models, in 2009 WAS and its partners conducted stormwater utility [feasibility studies](#) in two coastal cities, Dover and Portsmouth, and found that there was significant interest, but the timing was not quite right. Portsmouth put a utility on hold and Dover came close, but just short of passing a utility. After a decade

of limited coordination on the topic, NHCP, WAS, PREP, UNHSC, and GBNERR agree that, with the new MS4 permit placing increasing pressure on municipalities to manage stormwater and by broadening the utility concept to address related flood mitigation needs, communities are ready to restart conversations and revisit feasibility.

In 2017, following on the heels of the NHCRHC report, legislators passed an amendment to the state community revitalization tax relief incentive program, extending the tax relief benefits to coastal properties and enabling the creation of a non-lapsing coastal resilience fund ([RSA 79-E:4-a](#)). The program allows municipalities to establish Coastal Resilience Incentive Zones (CRIZ) within which property owners can obtain tax relief if they implement to-be-determined resilience actions such as elevating their homes above existing flood risk. The CRIZ fund can be used to fund municipal projects within the CRIZ, but the municipality must come up with the revenue source for the fund. Several coastal NH communities have expressed cautious interest in the program, but important details need to be evaluated first. NHCP and the RPCs are committed to evaluating the program feasibility and working with interested communities.

A fellow will provide much-needed capacity and creative thinking to help the project partners better coordinate and gather information that advances alternative resilience financing mechanisms for coastal NH communities. The *Afloat* project proposal was developed collaboratively with the named project partners in order to ensure that work completed with the fellow will meet multiple needs and enhance agency and partner coordination over the long-term.

## 2. Goals and Objectives

The goal of the *Afloat* project is to advance the adoption and use of alternative financing mechanisms for on-the-ground adaptation and resilience projects in coastal NH communities. To accomplish this goal, the fellow will:

- 1) Lead the creation of a coordinated partnership program to advance coastal community understanding and implementation of local stormwater and flood mitigation utilities; and
- 2) Develop a municipal decision-support tool for adopting Coastal Resilience Incentive Zones (CRIZ) and a non-lapsing CRIZ fund under the Community Revitalization Tax Relief Program.

## 3. Milestones and Outcomes

The following table presents the anticipated project milestones and outcomes associated with each project objective.

Milestones/Outcomes	Timeframe
<b>Objective 1. Lead the creation of a coordinated partnership program to advance coastal community understanding and implementation of stormwater and flood mitigation utilities.</b>	
<ul style="list-style-type: none"> <li>Track 1 Steering Committee (T1SC) meeting convened and quarterly meeting schedule established</li> <li>Track 1 work plan finalized</li> </ul>	Months 1-2
<ul style="list-style-type: none"> <li>Background research completed</li> <li>Community survey and interviews conducted/analyzed</li> </ul>	Months 2-6
<ul style="list-style-type: none"> <li>Stormwater funding roundtables planned and organized</li> <li>Promotional materials for stormwater funding roundtables disseminated</li> <li>Funding for technical assistance projects identified</li> <li>1-2 coastal NH communities selected for technical assistance projects</li> <li>Technical assistance project scoping completed</li> <li><a href="#">Does It Make Sense (DIMS)</a> studies completed for communities interested in stormwater utility feasibility studies</li> <li>Applications for technical assistance project funding submitted</li> </ul>	Months 6-12
<ul style="list-style-type: none"> <li>Stormwater funding roundtables convened</li> <li>Technical assistance project implemented</li> <li>Plan for sustaining coordinated partnership program developed</li> </ul>	Months 12-24

Milestones/Outcomes	Timeframe
<b>Objective 2. Develop a municipal decision support tool for adopting Coastal Resilience Incentive Zones (CRIZ) and a non-lapsing CRIZ fund under the Community Revitalization Tax Relief Incentive Program.</b>	
<ul style="list-style-type: none"> <li>Track 2 Steering Committee (T2SC) meeting convened and quarterly meeting schedule established</li> <li>Track 2 work plan finalized</li> </ul>	Months 1-2
<ul style="list-style-type: none"> <li>Relevant background research completed</li> <li>Preliminary community needs assessment conducted</li> <li>Community tax relief program case study examples analyzed</li> </ul>	Months 2-8
<ul style="list-style-type: none"> <li>Conceptual options for delineating CRIZs, assessing tax relief, and creating CRIZ fund developed</li> <li>Draft decision support tool presented at CAW work session</li> <li>Decision support tool finalized</li> </ul>	Months 8-18
<ul style="list-style-type: none"> <li>Outreach and technical assistance strategy finalized</li> <li>1-2 outreach and/or technical assistance activities implemented</li> </ul>	Months 18-24

#### 4. Project Description

The *Afloat* project offers an exciting opportunity for a fellow to advance two categories of alternative funding mechanisms to support on-the-ground adaptation and resilience in coastal NH communities. As a result, the fellow's work plan and time will be divided across two overarching project tracks, which align with project objectives: Track 1) Coordinated partnership program to advance stormwater and flood mitigation utilities; and Track 2) Municipal decision support tool for implementing a CRIZ.

##### *Track 1: Coordinated Partnership Program to Advance Stormwater and Flood Mitigation Utilities*

As the challenges and costs of managing stormwater and mitigating flooding continue to grow, project partners NHCP, WAS, PREP, and UNHSC are interested in helping coastal NH communities develop viable funding approaches for local stormwater and flood mitigation programs, however as partners, their work on this topic has lacked coordination to date. The fellow will lead these partners, who will form the Track 1 Steering Committee (T1SC), in the creation of a coordinated partnership program to advance coastal watershed community understanding and implementation of available funding options through outreach and technical assistance.

##### *1.0) T1SC Partnership Coordination and Work Planning*

The fellow will begin by working with their NHCP supervisor, Nathalie Morison, and the T1SC members to finalize the Track 1 work plan. The fellow will hold a kick off T1SC meeting which will form the basis for the coordinated partnership of organizations that will inform the process throughout and ultimately take ownership of the fellow's Track 1 work when the fellowship is complete. The fellow will coordinate at minimum quarterly T1SC meetings and help the T1SC partners establish the mission, objectives, and roles of their coordinated partnership program focused on stormwater and flood mitigation financing. The fellow will help the T1SC to develop a plan for sustaining the partnership beyond the fellowship.

##### *1.1) Background Research and Stakeholder Assessment*

The fellow will complete background research (e.g., review publications and interview key stormwater practitioners in New England) to enhance the T1SC's understanding of available funding options for local stormwater and flood mitigation programs; best practices for engaging communities in stormwater and flood mitigation funding decisions; case studies from other New England communities; and previous stormwater funding efforts in NH (e.g., stormwater feasibility studies). The fellow will also conduct a survey of coastal NH communities and interviews with key stakeholders to assess community perspectives, needs, and interests related to developing a viable approach for funding their local stormwater and flood mitigation programs. This research will help inform the ultimate goals, objectives, and strategy of the coordinated partnership program. Project partners anticipate that the program will involve at least two facets: technical assistance and outreach, which are described in more detail below.

### *1.2) Outreach: Stormwater Funding Roundtable Series*

The fellow will help the T1SC develop and launch a stormwater funding roundtable series for municipal leaders modeled after the [pilot roundtable series](#) hosted by the EPA New England and the Consensus Building Institute in 2017. While the curriculum can be tailored to meet NH's needs, the pilot roundtable series employed lectures, visiting speakers, group collaboration, and field work to help participants identify and involve key stakeholders; develop community support for stormwater funding solutions; customize funding proposals to meet specific community needs; and pursue next steps based on insights gained through the series. The fellow will work with the T1SC to tailor the curriculum for coastal NH communities based on the results of the stakeholder assessment described above; plan and manage event logistics; and develop and implement a promotional strategy, including, for example, the creation and dissemination of promotional materials via social media, partner websites, and networks.

### *1.3) Technical Assistance: Implementation Project*

Using the results from the stakeholder assessment, the fellow will develop a method to rank coastal community interest in receiving customized technical assistance to advance local stormwater funding decisions, as well as criteria for selecting 1-2 technical assistance recipients. If needed, the fellow will also research and identify appropriate funding sources (e.g., NHCP Coastal Resilience Grants, Clean Water State Revolving Fund, etc.) to cover the costs associated with each of the technical assistance projects. Upon selection, the fellow will work with project partners and the selected communities to identify and scope their technical assistance needs (e.g., grant writing, mapping/modeling, tailored public outreach, feasibility study, process facilitation, ordinance and bylaw development, etc.) and prepare grant applications for funding. Should a community be interested in conducting a stormwater utility feasibility study, the fellow will first assist the community in conducting a [Does It Make Sense \(DIMS\)](#) study to determine whether they should proceed with a more detailed feasibility study. Finally, the fellow will serve as an assistant project manager responsible for overseeing project implementation and supporting project activities.

## ***Track 2: Municipal Decision Support Tool for Implementing Coastal Resilience Incentive Zones***

Building upon ongoing efforts to improve municipal capacity to fund and incentivize adaptation through implementation of the Coastal Resilience Incentive Zones (CRIZs), the fellow will work with NHCP and the Rockingham and Strafford Regional Planning Commissions (RPCs), which will form the T2SC, to develop preliminary guidance for adopting the CRIZs.

### *2.0) T2SC Coordination and Work Planning*

The fellow will work with NHCP supervisor, Nathalie Morison and the T2SC members to finalize the Track 2 work plan. The fellow will hold a kick off meeting with the T2SC partners and conduct regular T2SC meetings throughout the project, likely on a quarterly basis.

### *2.1) Background Research & Stakeholder Assessment*

The fellow will begin by reviewing the enabling legislation (RSA 79-E:4-a) and related informational materials and fact sheets, including but not limited to a CRIZ primer to be developed by NHCP, RPC, and SRPC as part of NHCP's FFY18 Project of Special Merit. The fellow will assist NHCP, RPC, and SRPC in completing a preliminary community needs assessment to identify gaps in technical information, potential pros and cons, and other important considerations for future implementation of the CRIZs. Finally, the fellow will research whether and how communities in and out of NH have implemented similar tax relief incentive programs and dedicated funds, as well as potential methods for assessing the value of adaptation strategies, potential revenue sources for the CRIZ fund, and potential funding sources to support additional research, outreach, and technical assistance needs.

## 2.2) CRIZ Municipal Decision Support Tool Development

Informed by this case study analysis and with input from the NH Coastal Adaptation Workgroup (NHCAW) Outreach Subcommittee and local stakeholders (e.g., municipal planning, assessor's office, and finance staff), the fellow will develop a set of conceptual options for adopting CRIZs in NH, including but not limited to, delineating the CRIZ; qualifying adaptation strategies and eligibility criteria; form, extent, and duration of tax relief; and structure, revenue sources, administration, and intended uses of CRIZ fund. To the extent practicable, the fellow will outline the advantages and disadvantages associated with each option and will highlight how an option might be applied in a specific coastal community. For example, upon identifying options for delineating a CRIZ, the fellow may use GIS to create maps of the potential CRIZ options for a specific municipality and quantify the number and assessed value of parcels affected under each of the mapped CRIZ options.

## 2.3) CRIZ Outreach and Technical Assistance Strategy & Implementation

Upon completion of the CRIZ Decision Support Tool, the fellow will develop recommendations and next steps related to advancing the adoption of CRIZs in coastal municipalities. In particular, the fellow will work with the CAW Outreach Subcommittee to develop an outreach and technical assistance strategy to disseminate the results of the fellowship project and advance implementation of CRIZs. The fellow will coordinate implementation of 1-2 outreach and/or technical assistance activities identified including, but not limited to, planning and organizing a "train-the-trainer" workshop for adaptation practitioners; presenting to municipal staff/officials; and designing and disseminating additional outreach materials.

### Project Work Plan:

Task	Timeframe
<b>1.0./2.0. Fellowship Orientation and Project Kick Off</b> a. Meet with Track 1 and Track 2 Steering Committees (T1SC, T2SC) members individually to learn about their visions and goals for the fellowship project b. Attend relevant project and workgroup meetings for partner initiatives c. Revise Track 1 and Track 2 work plans d. Convene T1SC and T2SC (separately) to review and finalize work plans and set SC expectations and schedule	Months 1-2
<b>1.1. Background Research &amp; Stakeholder Assessment</b> a. Review reports, enabling legislation, case studies, feasibility studies, etc. relevant to stormwater funding options in New England b. Interview key stormwater practitioners/technical assistance providers (e.g., NHDES WAS, UNH Stormwater Center, Regional Planning Commissions, EPA New England, New England Environmental Finance Center) c. Survey and interview staff/officials from coastal NH communities and Regional Planning Commissions to assess challenges, perspectives, needs, and interests related to establishing a stormwater and flood mitigation utility	Months 2-6
<b>1.2. Outreach: Stormwater Funding Roundtables</b> a. Work with T1SC and Consensus Building Institute to tailor stormwater funding roundtable curriculum for coastal NH communities b. Plan, organize, and convene stormwater funding roundtable series c. Design, create, and disseminate promotional materials for stormwater funding roundtable series	Months 6-24
<b>1.3. Technical Assistance: Implementation Project</b> a. Develop method to rank coastal watershed community interest in receiving technical assistance b. Identify funding sources for technical assistance projects c. Scope technical assistance project for 1-2 interested coastal NH communities d. Conduct <i>Does it Make Sense (DIMS)</i> studies for communities interested in stormwater utility feasibility study e. Prepare and submit application for technical assistance funding f. Oversee project implementation and support project activities as needed g. Develop plan to sustain coordinated technical assistance program with T1SC	Months 6-24



Task	Timeframe
<b>2.1. Background / Case Study Research</b> <ol style="list-style-type: none"> <li>Review enabling legislation and related guidance (e.g., RSA 79-E fact sheet and flow chart; CRIZ Primer)</li> <li>Review vulnerability assessments completed for coastal NH communities (e.g., Tides to Storms, C-RISE)</li> <li>Assist NHCP, RPC, and SRPC in finalizing a preliminary community needs assessment</li> <li>Compile and analyze case studies of similar tax relief programs and resilience funds</li> </ol>	Months 3-8
<b>2.2. CRIZ Implementation Roadmap Development</b> <ol style="list-style-type: none"> <li>Outline step-by-step process for coastal municipality to adopt CRIZs</li> <li>Develop conceptual options for delineating CRIZs and outline the advantages/disadvantages</li> <li>Create GIS maps of potential CRIZ options for a specific community and quantify value/impact</li> <li>Develop conceptual options for assessing tax relief in CRIZs</li> <li>Develop conceptual options for establishing a CRIZ fund</li> <li>Present draft decision support tool concepts and obtain input from stakeholders</li> <li>Finalize municipal decision support tool for implementing CRIZs</li> </ol>	Months 8-18
<b>2.3. CRIZ Outreach and Technical Assistance Strategy</b> <ol style="list-style-type: none"> <li>Develop CRIZ outreach and technical assistance strategy</li> <li>Implement 1-2 actions identified in CRIZ outreach and technical assistance strategy</li> </ol>	Months 18-24
<b>2.4. Other coastal resilience tasks</b> <ol style="list-style-type: none"> <li>Participate in monthly NHCAW outreach and bi-monthly full CAW meetings</li> <li>Assist NHCAW with regular workshops, NH Climate Summit, King Tide Photo Contest, and other events</li> <li>Assist with NHDES Shellfish Program water quality sampling and shoreline monitoring and NHCP field work</li> <li>Assist with GIS tasks, including NH Coastal Viewer management and WAS Stormwater Management best management practice mapping</li> </ol>	Months 1-24

## 5. Fellow Mentoring

The fellow will be mentored by Nathalie Morison, NHCP Coastal Resilience Specialist (a former NOAA Coastal Management Fellowship finalist and mentor to NHCP's current fellow). Nathalie will work closely with the fellow to solidify the work plan, execute the process, and meet project deliverables. Nathalie will also oversee the administrative details of the fellow's integration into the NHCP, including organizing trainings. Nathalie will work with the fellow in regular mentoring sessions to strategize about the fellow's longer-term career objectives and ensure their professional development goals are being met. The fellow will be fully integrated into the NHCP staff team and will be included in staff meetings as well as other staff-related activities. Other NHCP and PREP staff will be available to mentor the fellow as well, including NHCP Coastal Resilience Coordinator, Kirsten Howard (also a former fellow); NHCP Program Administrator, Steve Couture; and PREP Community Technical Assistance Program Manager, Abigail Lyon. NHCP enthusiastically supports training opportunities for the fellow. Previous fellows have enrolled in trainings provided by the University of New Hampshire and the New Hampshire Bureau of Education and Training on GIS, facilitation, public speaking, as well as substantive conferences related to project topics around the United States and in Canada.

## 6. Project Partners

The table below lists the project partners that have agreed to participate on the Track 1 and Track 2 steering committees.

Track 1 Steering Committee (T1SC):	Track 2 Steering Committee (T2SC):
<ul style="list-style-type: none"> <li><b>NHCP:</b> Nathalie Morison, Kirsten Howard</li> <li><b>WAS:</b> Barbara McMillan, Deb Loiselle</li> <li><b>PREP:</b> Abigail Lyon</li> <li><b>UNHSC:</b> Jamie Houle</li> <li><b>RPC:</b> Julie LaBranche</li> <li><b>GBNERR:</b> Steve Miller</li> </ul>	<ul style="list-style-type: none"> <li><b>NHCP:</b> Nathalie Morison, Kirsten Howard</li> <li><b>RPC:</b> Julie LaBranche</li> <li><b>SRPC:</b> Kyle Pimental</li> <li><b>GBNERR:</b> Steve Miller</li> </ul>

*Relevant Ongoing Projects, Initiatives, Collaboratives:*

Based on their interests, the fellow has the opportunity and flexibility to work closely with the NHCP partner organizations on additional related initiatives. Additional initiatives include, but are not limited to: PREP's Board Empowerment Series hosted in partnership with GBNERR, the New Hampshire Association of Conservation Commissions, and the Natural Resource Outreach Coalition (NROC); NROC's outreach matrix for MS4 communities; the Seacoast Stormwater Coalition Outreach Subcommittee; the NH Coastal Adaptation Workgroup (NHCAW); WAS stormwater best management practice mapping; the New Hampshire Coastal Viewer; and the NHCP and partner's FFY18 Project of Special Merit. The fellow will be engaged in activities conducted by the Northeast Regional Ocean Council, which often enables fellows working in the Northeast to interact with each other and meet other state Coastal Zone Management staff. The fellow will have the opportunity to conduct water quality monitoring with the NHDES Shellfish Program and engage in other field work activities conducted by NHCP and the University of New Hampshire, including but not limited to regular beach profiling, Great Bay shoreline clean ups, oyster spat counts, and habitat restoration projects. By participating in these initiatives, the fellow will gain access to a broad network of coastal management professionals in the Northeast.

## **7. Cost Share Description**

The \$15,000 cost sharing requirement for the 2019-2021 Coastal Management Fellowship will be funded with non-federal dollars from participating Project Team members, including the Piscataqua Region Estuaries Partnership (PREP) and NHDES. PREP will contribute \$7,500 in non-federal cash match for Year 1 of the fellowship. NHDES will contribute \$7,500 in state funds from the NHDES Shellfish Program budget for Year 2 of the fellowship. NHCP will provide the fellow with cubicle space in the NHDES Portsmouth, NH office; a laptop computer and monitor with access to software, including GIS; a phone; access to a shared state vehicle; and additional resources available to state employees, as needed. In addition to those trainings and conferences the fellow selects through their fellowship professional development funding, NHCP may be able to support travel expenses depending on program budget.

## **8. Strategic Focus Areas**

The *Afloat* project will primarily advance the *Resilient Coastal Communities* strategic focus area by building capacity to advance the adoption and use of alternative financing mechanisms for on-the-ground adaptation and resilience projects in coastal NH communities. An expected outcome from both Tracks of this project is to create better coordinated and resourced state and regional technical assistance providers and better informed and motivated municipalities on the topics of stormwater management and flood mitigation financing. The fellowship project will also support the *Healthy Coastal Ecosystems* focus area as the financing mechanisms advanced by this fellowship are intended to lead to restored water quality in the Great Bay and Hampton estuaries due to improved stormwater management as well as restored open space, better buffers, and an emphasis on nature-based flood and erosion control strategies. By bringing multiple agencies and partners together, the project will integrate their priorities and, ultimately, enable these groups to pool resources to restore critical coastal ecosystems and habitat. Finally, the fellowship project addresses the *Vibrant and Sustainable Economies* focus area and builds the capacity of coastal states and communities to foster ecologically sustainable economic development and activities by advancing sustainable funding mechanisms that reduce coastal flood risk to businesses and people and improve water quality for enhanced health and recreation.



## **Appendix A: Sources**

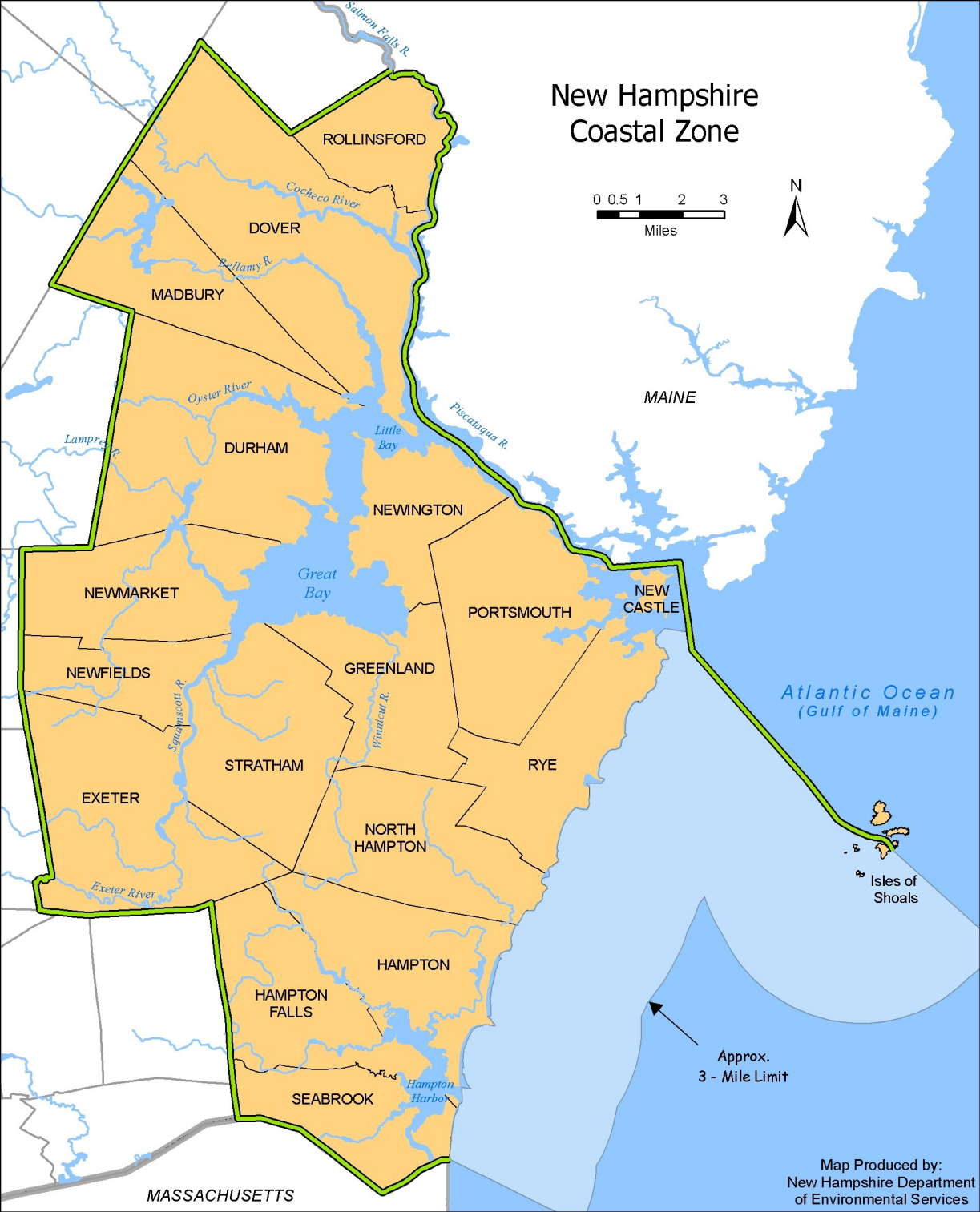
New Hampshire Coastal Risk and Hazards Commission (NHCRHC). 2016. *Preparing New Hampshire for Projected Storm Surge, Sea-Level Rise, and Extreme Precipitation*. <http://www.nhcrhc.org/final-report/>.

Kresge Foundation. 2016. *Climate Adaptation: The State of the Practice in U.S. Communities*. <https://kresge.org/sites/default/files/library/climate-adaptation-the-state-of-practice-in-us-communities-full-report.pdf>

## **Appendix B: Map**

# New Hampshire Coastal Zone

0 0.5 1 2 3  
Miles



Atlantic Ocean  
(Gulf of Maine)

Isles of  
Shoals

Approx.  
3 - Mile Limit

## **Appendix C: Letters of Collaboration**



October 11, 2018

Margaret Allen  
TBG at NOAA's Office for Coastal Management  
2234 South Hobson Avenue  
Charleston, SC 29405

Subject: Letter of collaboration for the New Hampshire Coastal Program project proposal to the 2019 NOAA Coastal Management Fellowship Program

Dear Ms. Margaret Allen,

On behalf of the Piscataqua Region Estuaries Partnership, we are writing to express our commitment to the New Hampshire Department of Environmental Services Coastal Program (NHCP) Coastal Management Fellowship project proposal entitled, "Keeping New Hampshire's Coast Afloat: Financing Mechanisms for Resilience in Vulnerable Coastal Communities."

The recent U.S. Environmental Protection Agency Phase II Municipal Separate Storm Sewer (MS4) Permit places additional pressure on communities who are already facing limited budgets to manage stormwater runoff. Now more than ever, communities are in need of a dedicated source of funding to implement stormwater and floodplain management projects. This fellowship project, which seeks to advance the adoption of funding mechanisms for adaptation and resilience implementation projects in coastal New Hampshire, will build on existing projects at PREP to advance the discussion of stormwater funding mechanisms for our communities. The 2010 Comprehensive Conservation Management Plan, a guiding document for work related to water quality and natural resource protection developed with over 150 stakeholders from the region, includes exploration of stormwater utilities as a priority for the region. Additionally, PREP tracks communities in the Piscataqua Region watershed who have adopted stormwater utilities – or other funding mechanism – in the *State of Our Estuaries* report.

A Coastal Management Fellow will provide additional capacity at PREP to advance our work with communities on stormwater management, and continue work a previous fellow, Simone Barley-Greenfield started in 2015 to incorporate social indicators (stormwater management effort) into the 2018 *State of Our Estuaries* report. PREP and its partners benefit in a number of ways from having the added capacity of a fellow in the watershed. In previous years fellows have provided important note-taking services for regional meetings, assisted with short-term priority projects to advance shared initiatives like tracking progress on management goals, and being available to fill capacity gaps on important projects when they arise. Fellows working with PREP have the added opportunity of working with a number of our partners from state agencies, watershed organizations, communities, and more as part of our Management Committee, and to build and strengthen their skills and broaden their experiences covering a range of coastal and estuarine management activities.

If this project is selected, PREP will send a staff member to accompany the Coastal Program to the matching workshop, and if the project team secures a successful match, PREP commits to pay \$7,500 to cover the Year 1 match requirement for the project. PREP could not be more excited about this proposal and the opportunity it provides our communities to explore – and implement – dedicated funding mechanisms to build resiliency and protect water quality, as well as the opportunity to welcome and support a fellow here as part of our team.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. Rouillard".

Rachel Rouillard  
Director

A handwritten signature in dark ink, appearing to read "Abigail Lyon".

Abigail Lyon  
Community Technical Assistance Program Manager

October 11, 2018

Margaret Allen  
TBG at NOAA's Office for Coastal Management  
2234 South Hobson Avenue  
Charleston, SC 29405

Subject: Letter of collaboration for the New Hampshire Coastal Program project proposal to the 2019 NOAA Coastal Management Fellowship Program

Dear Ms. Margaret Allen:

On behalf of the Rockingham Planning Commission (RPC), I am writing to express our enthusiasm and commitment to serve as a collaborator on the New Hampshire Department of Environmental Services Coastal Program (NHCP) Coastal Management Fellowship project proposal entitled, "Keeping New Hampshire's Coast Afloat: Financing Mechanisms for Resilience in Vulnerable Coastal Communities."

Our coastal communities are increasingly in need of dedicated funding to acquire tools and information and conduct analyses necessary to guide local decisions about coastal management and implementation of floodplain management projects. Recent storms and rising seas already plague our communities with regular flooding events that repeatedly damage property and stress undersized and failing infrastructure.

This fellowship project, which seeks to advance the adoption of funding mechanisms for adaptation and resilience implementation projects in coastal New Hampshire, will build on the RPC's ongoing work with coastal communities to understand their vulnerabilities and risks and begin taking action to address them (Tides to Storms, 2015, and C-RiSe, 2017 at <http://www.rpc-nh.org/regional-community-planning/climate-change>). Our role in the upcoming NH coastal Program PSM project will further evaluate the potential of NH SB185 to help communities designate Coastal Resilience Incentive Zones offering tax relief for private property investments aimed at implementing flood reduction and prevention activities and structural retrofits in high risk flood areas.

Securing a NOAA Fellow will enhance our work in exploring the utility and applicability of SB185 for NH communities. A highly skilled post-graduate will offer valuable knowledge and skills and expand our research capacity for this project. RPC staff have had positive interactions working with previous fellows in past years including Kirsten Howard, Simone Barley-Greenfield, and most currently Vidya Balasubramanyam. These fellows are widely respected for their experience and dedication to inquiry and production of quality work. The opportunity for a fellow to interact with the RPC will also help them grow professionally by exposing them to municipal decision makers as well as diverse planning issues in the coastal region.

If this project is selected, the RPC commits to participate on the Track 2 Steering Committee with NHCP over the course of 2+ years through August 2021.

We are thrilled to partner with the NH Coastal Program on this project. Please contact me if you have any questions.

Sincerely,



Tim Roache, Executive Director



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SOMERSWORTH  
STRAFFORD  
WAKEFIELD

Margaret Allen  
TBG at NOAA's Office for Coastal Management  
2234 South Hobson Avenue  
Charleston, SC 29405

October 11, 2018

Re: Letter of collaboration for the New Hampshire Coastal Program project proposal to the 2019 NOAA Coastal Management Fellowship Program

Dear Ms. Allen:

On behalf of the Strafford Regional Planning Commission (SRPC), I am writing to express my commitment to the New Hampshire Department of Environmental Services Coastal Program (NHCP) Coastal Management Fellowship project proposal "Keeping New Hampshire's Coast Afloat: Financing Mechanisms for Resilience in Vulnerable Coastal Communities." SRPC's region is home to five inland coastal communities that all have expressed, in varying degrees, an increased need for dedicated funding to address existing flooding issues and to implement floodplain management activities.

This fellowship project seeks to advance the adoption of funding mechanisms for adaptation and resilience implementation projects in coastal New Hampshire. It will help to build on existing coastal adaptation work being done by SRPC. That work—a preliminary needs assessment on potential implementation of SB185—is the result of a collaboration between SRPC and NHCP.

SRPC acknowledges the significance of the Fellowship program, and views it as an opportunity for a post-graduate student to gain valuable experience and grow professionally. The organization has a long-standing working relationship with past Coastal Management Fellows including Kirsten Howard, Simone Barley-Greenfield, and Vidya Balasubramanyam. All were instrumental on a variety of projects over the years, including the development of master plan chapters, hazard mitigation planning and floodplain mapping, the completion of vulnerability assessments and other climate resiliency planning, and revisions to local stormwater regulations.

If this project is selected for funding, SRPC commits to participate on the Track 2 Steering Committee and support Track 2 tasks as needed through August 2021. SRPC and its team are excited about this opportunity.

Please feel free to contact me if you have any further questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Jennifer Czysz".

Jennifer Czysz, AICP  
Executive Director



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

**Robert R. Scott, Commissioner**



Margaret Allen  
TBG at NOAA's Office for Coastal Management  
2234 South Hobson Avenue  
Charleston, SC 29405

Subject: Letter of collaboration for the New Hampshire Coastal Program project proposal to the 2019 NOAA Coastal Management Fellowship Program.

Dear Ms. Margaret Allen,

On behalf of the New Hampshire Department of Environmental Services' (NHDES) Watershed Assistance Section (WAS), I am pleased to provide support and collaboration for the NHDES Coastal Program (NHCP) Coastal Management Fellowship project proposal entitled, "Keeping New Hampshire's Coast Afloat: Financing Mechanisms for Resilience in Vulnerable Coastal Communities." This project provides an excellent and exciting opportunity to support New Hampshire municipalities in securing dedicated funding to incorporate stormwater best management practices and floodplain management into their stormwater programs. Although a few surrounding New England municipalities have adopted stormwater utilities or other funding mechanisms, there are currently no stormwater utilities in New Hampshire. New Hampshire municipalities lack information to make a well informed decision and lack dedicated funding sources associated with the condition, costs, and needs related to their stormwater infrastructure.

Several circumstances make the timing for this project ideal. The 2017 Federal Stormwater Municipal Separate Stormwater Sewer System (MS4) permit was approved and New Hampshire coastal municipalities are requesting assistance to address the requirements and funding for implementation. The NHDES Clean Water State Revolving Loan Fund (CWSRF) provides principal forgiveness encouraging municipalities to implement a stormwater asset management program and provides additional planning funds that can assist with implementing a stormwater utility. This effort would build off of lessons learned from the WAS pilot stormwater feasibility study (2011). The New Hampshire Nonpoint Source Management Program Plan includes tasks associated with the objective "our partners have access to an array of funding opportunities to implement stormwater-related projects" – including stormwater utilities.

A Fellow participating in this project will be an invaluable resource and supplement the work WAS is currently doing with New Hampshire municipalities and watershed organizations. Past New Hampshire Coastal Fellows have demonstrated the skills that are needed to make this project a success. They have been engaged with our programs and earned the respect of our stakeholders.

If this project is funded, WAS commits Barbara McMillan and Deb Loiselle to participate as experienced project partners on the Track 1 Steering Committee. In addition to helping prepare the project planning this spring and summer, we anticipate sharing our past stormwater funding experiences, introducing our partners and stakeholders, and helping to facilitate this project with the new Fellow through 2021.

This is an outstanding opportunity to build capacity and become more resilient. We look forward to partnering on this project and working with the Fellow to make this possible.

Sincerely,

Stephen Landry, Supervisor  
NHDES Watershed Assistance Section