Sustainability Fellowship
Building Coastal Flood Resilience in a Small Municipality
Kittery Climate Adaptation Committee
Kittery, Maine

About the Sustainability Fellows Program:
UNH Sustainability Fellowships pair exceptional students from across the U.S. with municipal, educational, corporate, and non-profit partners in New England to work on transformative sustainability initiatives each summer. Sustainability Fellows undertake challenging projects that are designed to create an immediate impact, offer a quality learning experience, and foster meaningful collaboration. Fellows work on-site with their mentors at partner organizations during the summer, supported by a network of Fellows, partners, alumni, and the UNH Team. Graduate students, exceptional undergraduate students, and recent graduates from any accredited college or university are eligible to apply.

A detailed description of one Fellowship follows. To learn more about the other Fellowships offered this year, and for application instructions, see: www.sustainableunh.unh.edu/sustainability-fellows.

About the Host Organization:
Kittery is the southern-most town in Maine. It is a coastal community with waterfront on both the Atlantic Ocean and Piscataqua River. It is also home to the Portsmouth Naval Shipyard and is a summer tourist destination. The town's population was 9,490 at the time of the 2010 census. The Kittery Town Council formed the Kittery Climate Adaptation Committee (CAC) in January of 2019 to address improving the Town’s energy efficiency; planning for the impacts of sea-level rise on town infrastructure; and addressing public health and safety associated with increased temperatures and extreme weather events. Each was identified as a priority for planning in the updated Comprehensive Plan, approved by voters in November 2018. Cameron Wake serves as chair, and Judy Spiller as co-chair, of the Kittery CAC.

About the Fellowship:
Kittery is vulnerable to coastal flooding from sea-level rise, storm surge, and groundwater rise. Addressing the challenges posed by climate change (and especially flooding) were highlighted in the town’s Comprehensive Plan and is the primary focus of the recently formed Kittery CAC (made up of 15 people appointed by the Town Council and including representatives from the Town Council, Planning Board, Conservation Commission, Parks Commission, business community, and residents). In addition, a recent survey of Kittery residents found that more than 80% of respondents thought it
was very important for the Town to plan for a warming climate with increased extreme weather and rising seas.

The goal of the summer project is threefold. 1) Build upon the research performed during the spring of 2020 by two groups of UNH Sustainability Dual Major students to fill in gaps and compile a set of best practices for building coastal flood resilience in small coastal municipalities. This should include issues related to zoning, ordinances, and projects related to infrastructure and natural resources. 2) Summarize the Town’s vulnerability to coastal flooding in a series of neighborhood maps, based on information and data currently being gathered by the Kittery CAC. 3) Develop a set of products to communicate the results to the residents, Town Committees and Boards, municipal staff, and students.

Outcomes:
1) A written report summarizing a suite of best practices for building coastal flood resilience in small coastal municipalities. This report should be submitted for review by the Kittery CAC a week before the end of the summer fellowship.
2) A series of neighborhood maps with extended captions and explanations describing key vulnerabilities under different sea-level rise scenarios.
3) A suite of products (this could include a brochure, web page, PowerPoint slide deck, short report, etc.) to communicate the results of the report and the maps to the residents, Town Committees and Boards, municipal staff, and students.

Impact:

The Fellow will have to develop a thorough understanding of the vulnerability of small coastal municipalities to coastal flooding and strategies to build resilience to coastal flooding. The Fellow will also develop skills in how to effectively communicate this information to broad audiences. And finally, the Fellow will gain an understanding of how small governments operate and how building consensus is critical to pursuing action on the challenges posed by our changing climate.

This information and communication products are critical steps to developing a broader understanding of the flooding risks posed by climate change and the best practices to build resilience to coastal flooding. The Kittery CAC will use this information as input to a Climate Action Plan and as a foundation to identify and pursue actions to build coastal resilience over the next several years.

While Kittery has been slow to act on the challenges presented by our changing climate, the inclusion of climate change in the Kittery Comprehensive Plan and subsequent formation of KCAC by the Town Council indicate that Kittery is now serious about addressing the climate challenge. This project therefore allows the Fellow to make a significant impact at an early stage in the Town’s efforts to address climate change. This information will also be used as part of a broader effort by six southern Maine communities to build resilience to coastal flooding. It is also possible that this work will be used by the recently formed Maine Climate Council as an example of what small communities can do to build resilience to climate change.
Desired Qualifications:
- An academic background in Environmental/Earth Sciences, Natural Resources, Water Management (or related fields of study), Communications, or Public Policy.
- Familiarity with community scale issues related to coastal flooding.
- Excellent written and oral communication skills, and organizational skills; ability to work independently and to collaborate effectively; comfortable engaging with stakeholders and presenting to town officials and public audiences.
- Familiarity with GIS software and applications.
- Interest in public administration, urban planning, community development, and related areas.

Work Location: Kittery, ME or Durham, NH, TBD

Mentors: Cameron Wake and Judy Spiller, Kittery Climate Adaptation Committee

Compensation: $6500 (taxable and distributed on a two-week payroll cycle over the course of the fellowship)

Expectations:
Fellows are expected to be primarily dedicated to their assigned projects throughout the summer, and also participate in a variety of networking activities, professional development opportunities, and presentations coordinated by UNHSI. Specifically, Fellows are expected to:
- Attend a mandatory orientation at UNH prior to the start of the fellowship term, May 26-28, 2020. (Travel scholarships may be available for students traveling from outside New England.)
- Work full-time on-site at the partner organization, June 1 - August 14, 2020
- Complete 400 hours of work, including work at host site as well as UNHSI activities, between May 26 – August 14, 2020.
- Complete a fellowship project according to the work plan (with adjustments as necessary).
- Participate in weekly webinars or advisory group meetings.
- Present work at mid-term and final poster sessions at UNH on July 10 and August 7. (Travel support available.)
- Engage in additional professional development, networking, and advisory activities as offered.
- Provide and receive feedback at the end of the fellowship.

Apply by February 10 at www.sustainableunh.unh.edu/sustainability-fellows.

Questions may be addressed to megan.carney@unh.edu.