

North Carolina Coastal Community Vulnerability and Resiliency Needs Assessment

North Carolina Coastal Management Fellowship Proposal

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Proposal submitted to NOAA Office for Coastal Management by the
North Carolina Division of Coastal Management
Department of Environmental Quality

Background and Introduction

Like many states, North Carolina has a wealth of data, information, tools and resources at the state and local levels that can help coastal communities plan for and implement measures that will increase their resilience to coastal hazards. In addition, several federal agencies have tools and resources that can be very helpful at the state and local levels. Local governments must constantly navigate a changing number of mandates for hazard mitigation and disaster recovery planning, and may not have the capacity to stay abreast of the range of tools and resources that are available to assist them. Along with planning mandates, local governments must keep up with state and federal standards and regulations that may need to be incorporated into local ordinances and permitting programs.

A number of large, costly storm events over the past decade have again reminded coastal communities of the need to become more resilient to episodic events, and continually-improving information about the nature and magnitude of chronic coastal hazards highlight the necessity of building in long-term resilience. The state has been working diligently on creating programmatic approaches to building resilience along oceanfront and inlet shorelines, and along estuarine shorelines as well. The Division of Coastal Management (DCM) has been finding ways to improve permitting efficiency, identify sand resources, increase the amount of beach-quality dredged material that is used for beach nourishment, and increase the use of living shorelines for estuarine erosion control. These efforts have a direct benefit on increasing community resiliency and the CMP will continue to refine and add to them in order to provide the best possible tools to local governments.

DCM is ideally positioned to assist local communities in discovering, accessing and understanding the tools and resources that are available to help them build short- and long-term resilience to coastal hazards into their operational and regulatory frameworks, and will be continuing this important work under our approved Section 309 Program Enhancement Strategy for 2016-2020. As a part of this strategy, DCM will begin developing a North Carolina Coastal Communities Resilience Guide in 2016. In order to ensure that the guide is relevant and responsive to the needs of coastal communities, DCM needs to perform a comprehensive vulnerability and needs assessment. The NOAA Coastal Fellow will be responsible for coordinating this assessment and preparing a detailed report.

Goals and Objectives

The overall goal of this project is to conduct a resilience evaluation and needs assessment for North Carolina coastal communities, and to prepare a report with the findings. The report will be generated from local input, and will be a critical building block for development the resilience guide. This project will ensure that the guide is responsive to specific needs identified by local governments. The parameters for the study will include vulnerability, local capacity, and data, technical and financial needs. The assessment will include interviews and regional workshops with local representatives. Following the data gathering and analysis phase, a second round of regional workshops may be conducted to ground truth the findings and ensure that the needs have been accurately captured in the final report.

Due to the size of North Carolina's coastal zone, the fellow will not be able to make individual contact with each county and local government. At the start of the fellowship a decision will be made as to how many and which communities to prioritize for direct contact, and how the other communities will be given the opportunity to participate.

Milestones and Outcomes

August 2016	Fellowship begins; orientation & networking
September – December 2016	Research on vulnerability and needs assessment methodologies; project team building; preparation & testing of research questions; project planning
January – June 2017	Evaluations/needs assessment data gathering through interviews and workshops; process evaluation & improvement
July – September 2017	Data analysis; process evaluation & improvement; summary reporting
October – December 2018	Additional data collection; data analysis; ground truthing; report drafting
January – April 2018	Complete draft report; circulate for review
May – July 2018	Finalize report; fellowship ends

Project Description

Coastal residents are increasingly hearing and using the term “resilience” and may have conceptual understanding of what the term means; however, whether most residents understand how to build resilience and how they can collectively contribute to it is unknown. DCM sees this as an opportunity to support communities that are would like to make progress towards this goal.

The benefits of resilience accrue to individual property owners, communities, residents, taxpayers, community managers, coastal managers, and many others—as all have a stake in improving community resilience. Benefits are realized in the form of, for example, decreased loss of life and property, minimized displacement, shorter disruptions to normal routines, faster recovery times, and less human suffering. Resilient communities are better prepared for short-term and long-term hazards, fare better during events, and recover faster. DCM can facilitate resilience improvements through providing technical assistance and training on assessing vulnerability, planning, project implementation, and interpretation of state and federal enforceable policies.

DCM plans to create, with the assistance of federal, state, local, and private sector partners, a guide to building community resilience to short-term and long-term coastal hazards. The guide will be targeted towards local governments, and will provide information on building resilience within their planning and operations functions. The guide will be published primarily online for ease of update, but limited hardcopies may also be printed. The guide will draw from existing tools and resources, such as Sea Grant’s Coastal Community Resilience Index and Hazard Mitigation Guidebook, FEMA’s National Disaster Recovery Framework, and the Office for Coastal Management’s numerous Digital Coast resources, and put them into a North Carolina context. This effort will also build upon lessons learned in the development of resilience guides in other states and regions, such as Florida’s Community Resiliency Initiative and the Great Lakes Coastal Resilience Planning Guide.

An essential first step prior to developing the guide is to engage local communities in an assessment of their vulnerabilities and needs for support in building resilience to coastal hazards and disruptions. This project is designed to accomplish that essential first step. The fellow will work with DCM staff and, if they desire, can convene a small project steering committee to provide guidance and support. The fellow will need to conduct preliminary research into vulnerability and needs assessment methodologies, and will prepare a detailed project plan within the first few months of the fellowship.

Once the project plan is prepared, the fellow will spend the majority of their time in direct contact with local communities, meeting with them individually and in regional workshops to gather information about their hazards vulnerabilities and needs. This direct contact is a notable departure from some earlier research around the state that took a more theoretical approach to vulnerability and needs assessments.

DCM staff will facilitate introductions to enable the fellow to build a professional network among state, local and private partners. The fellow will also be able to draw on aid from DCM's public information officer, as well as our Coastal Training Program Coordinator, as needed.

The project will help the fellow to improve their knowledge and skills in project management, research, vulnerability and needs assessments, and hazard mitigation. The fellow will gain exposure to a wide network of professionals at the state and local levels, and will gain valuable experience in coastal management that will enhance their career prospects.

Fellow Mentoring

The fellow will be mentored by Tancred Miller, DCM's Coastal & Ocean Policy Manager. The fellow will have a private, fully-equipped office at DCM's central headquarters in Morehead City, in the same building as their mentor and other staff with whom they would need to have ongoing interactions. DCM has a 4-person policy team, and the fellow will be fully integrated into this group. Benefits of full integration will include exposure to a wide variety of high-level coastal management and coastal policy issues. The fellow will have daily access to all DCM staff, including regulatory, policy & planning, and Coastal Reserve. The fellow will also be introduced to a network of coastal professionals, and will be expected to develop good working relationships within the coastal management community.

Since the mentor also serves as the project lead for the resilience guide, the fellow will be integrally involved in all activities related to that project. DCM's policy group uses a team approach in our work. Due to the relatively small size of the group, communication is ongoing throughout the typical work day. Formal and ad hoc discussions are frequent, and all team members are expected to contribute equally to discussions and decision making.

The fellow will be expected to travel to, and participate in the five Coastal Resources Commission and Coastal Resources Advisory Council meetings that are held annually at various locations along the NC coast. The fellow will also be afforded opportunities for relevant travel throughout the Southeast, such as meetings of the Governors' South Atlantic Alliance, and the NOAA-sponsored Southeast & Caribbean Regional meetings. Requests for additional conference participation and training will be encouraged and strongly considered.

Project Partners

DCM already has strong established relationships with many of the partners that would be invited to be involved with this project. First and foremost are local governments, with whom the division interacts on a regular basis through our planning, policy development, and regulatory functions. The N.C. Coastal Reserve and National Estuarine Research Reserve, N.C. Sea Grant, and regional planning organizations will be key partners in outreach to communities.

This project integrates directly with the Coastal Communities Resilience Guide that DCM will begin developing in 2016. More specifically, this project will be an essential building block that will be used to determine the appropriate content for the resilience guide. The resilience guide is a task under North Carolina's Section 309 Program Assessment & Strategy for 2016-2020. One of the goals of the resilience guide project is to develop resilience case studies by selecting two or more coastal communities and assisting them with a self-assessment, planning, or implementation exercise. This project will help DCM to identify candidate communities for that task.

DCM has also been providing multi-year funding to East Carolina University, via our Section 309 award, for development of the N.C Coastal Atlas. The Atlas has been used in the past to display case studies of local resilience projects, and will be a useful tool to convey spatial data generated during this project.

Many other resources and tools for building resilience are already in existence at the state and local levels, and new ones are being created all the time. As one example, DCM has been working on decreasing the regulatory burden that property owners have encountered in constructing living shorelines and other alternatives to vertical erosion control structures, including outreach and training for property owners, real estate professionals, and marine contractors.

An increasing number of coastal communities have undertaken resilience projects in recent years, representing a growing awareness and interest at the local level. Communities such as Wilmington, New Bern, Plymouth, and Nags Head have taken advantage of federal and state resources offered for resilience building. In addition, most oceanfront communities have acknowledged the need for additional mitigation by adopting higher freeboard requirements and creating special revenue funds for beach & inlet management activities.

DCM is also working with FEMA to find ways to make more credits available to communities under the NFIP's Community Ratings System. This project will offer valuable insights into how communities can increase their scores and secure additional community-wide discounts under the NFIP.

Cost Share Description

The CMP will provide fully-equipped office space in Morehead City, including a computer, all necessary supplies, and access to a state-owned vehicle for any required travel. No special training or equipment is necessary. DCM has the required \$15,000 cash match available from state appropriations.

Strategic Focus Area

The proposed project directly addresses the Resilient Coastal Communities strategic focus area. By design, the project will lead local communities into vulnerability and resiliency needs assessments. Communities are already keenly aware of the chronic and episodic coastal hazards they face, but may be less aware of strategic vulnerabilities and available mitigation options. This project will gather information from across the coastal zone, which will be shared among the communities to build awareness and foster capacity building. Lessons learned will be shared directly through workshops, a comprehensive report, and visually through the Coastal Atlas. The project underpins the Coastal Community Resilience Guide, which will be a public resource for increasing understanding about hazards vulnerability and resilience.

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