

I am writing to see about engaging KDH in a proposal we are currently writing focused broadly on coastal resilience. This is a large-scale extension of the current networking project called C-COAST, an acronym that stands for Collaboratory for Coastal Adaptation over Space and Time (<https://ccoast.unc.edu/>). This large program is interested in the co-development of research questions and goals. A main area of focus in Dare and Hyde counties...broadly representing the sandy coastlines. Given that our townships are so cross-pollinated (people work in one town, live in another, and recreate everywhere...I am a perfect example), I really want to have buy-in from as many of our communities as possible. So, I am reaching out to as many of my contacts as I have across the northern towns, southern communities, and Ocracoke...including you!

I really believe this project, if funded, would help push our community in the right direction collectively through the co-development of plans based on science, culture, and understanding! I am excited to be part of this team again and hope Dare County and our towns will be willing to participate. Below is a summary we put together to provide a bit of context.

C-Coast: Science for and with NC coastal communities

The Collaboratory for Coastal Adaptation over Space and Time (C-CoAST) Coastlines and People Hub will integrate diverse perspectives and develop stakeholder-researcher collaborations to address how event/recovery-driven interactions between human and natural dynamics alter long-term risks and the resilience of coastal communities, ecosystems, and landscapes. A key goal will be to identify levers--actions of individuals, communities, governments, and other civil society groups—that can enable mutual resilience of communities, ecosystems, and landscapes. A community engagement effort led by Sea Grant will connect communities with over 30 natural and social science researchers to co-produce actionable research on community-envisioned mitigation and adaptation strategies; anticipated changes in community demographics, political and equity outcomes, and the built environment; Flooding and water quality issues and impacts; Risk and adaptive behavior; and public engagement in science. An array of two-way community activities throughout the project will be designed to integrate community member and researcher expertise on project topics of greatest interest to communities and with a process that meets them where they are on the pathway toward resilience. Law student interns will be available to provide analysis on legal barriers to implementation that are identified. The final product will be provided as an expanded version of the USGS Coastal Storm Modeling Tool (CMST), customized for NC communities (but useful to communities elsewhere whose landscapes are similar). The CSMT will be expanded to include a decision support system that shares the different scenarios (sea-level rise, storm climate, policy, land-use, mitigation, etc.) developed through co-produced participatory modeling research, the impacts of hazards superimposed on future landscapes associated with the different scenarios, forecasts for changes in community composition, development patterns and impacts of flooding and water quality on households and communities. The hope is to find a more permanent source of funding for C-CoAST, but regardless, a panel of C-CoAST experts will be appointed at the end of the project who can assist community members/staff in the use of the system, and update scenarios as options and policies change.

Engagement activities will support C-Coast science and provide a means for researchers and stakeholders to co-produce research that is responsive to community needs and produces actionable results. The project will begin with listening sessions so that researchers can understand community concerns and interests relating to coastal resilience, and so that community members can participate in the development and selection of research topics most of interest to their community. Engagement activities will support this process and provide a mechanism for researchers and stakeholders to co-produce research that is responsive to community needs and produces actionable results. For example,



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November 18, 2021

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If the proposal submitted by Dr. Laura J. Moore entitled *Large-Scale CoPe: The Collaboratory for Coastal Adaptation over Space and Time (C-CoAST) Hub for Transdisciplinary Understanding of Coupled Human-Natural Coastal Dynamics* is selected for funding by NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description or the Facilities, Equipment and Other Resources section of the proposal.

Sincerely,

Ben Sproul, Mayor