

## ***Community Flood Resilience Planning in Hyde County, NC***

**Brinn, Daniel<sup>1</sup>** and Jessica Whitehead,<sup>2</sup> and Jason Evans<sup>3</sup>

<sup>1</sup>*Hyde County Soil and Water Conservation District*

<sup>2</sup>*NC Sea Grant*

<sup>3</sup>*Stetson University*

Residents of Hyde County, North Carolina, have been coping with the consequences of storm surges and flooding for hundreds of years. Today, mainland Hyde is the scene of rapid ecological transition in response to continued surges and sea level rise in combination with human modifications for agriculture and flood control, with pine uplands along the Pamlico Sound quickly becoming transitional and even salt marsh. Though Hyde County residents continue to display the resilience that has allowed them to continue farming some of the most productive land in North Carolina, maintaining and increasing their resilience into the future will be challenged by continued climate variability and especially by saltwater intrusion accelerated by sea level rise. Documenting current resilience, demonstrating actions that will increase future resilience, and planning to implement these actions are all priority steps for balancing and managing human and natural systems in coastal areas, especially rural ones like Hyde County.

Using funding from the National Sea Grant Community Climate Adaptation Initiative, Hyde County, NC, partnered with North Carolina Sea Grant, Georgia Sea Grant, Stetson University, and the University of Georgia's Carl Vinson Institute of Government to develop innovative local resilience adaptation planning processes. This team integrated local knowledge in Hyde County with North Carolina Sea Grant's (NCSG) expertise in facilitating the participatory Vulnerability Consequences Adaptation Planning Scenarios (VCAPS) process, as well as the expertise of Georgia Sea Grant (GaSG), Stetson University, and the University of Georgia's Carl Vinson Institute of Government (CVIOG) in developing GIS-based benefit/cost evaluations of resilience and resilience planning. The project included interviews about hazard resilience conducted with a variety of mainland Hyde County decision makers and stakeholders, coupled with a VCAPS workshop to help community residents diagram the consequences of flooding and surge events for Hyde County and generate a suite of potential adaptation options to reduce the negative consequences of critical flooding vulnerabilities on residences, businesses, distributed wastewater treatment, farming, and commercial fishing. This session emphasized a large and complex number of rural coastal flooding resilience issues, particularly in terms of saltwater intrusion. Iterative follow-up meetings for residents began in February 2015 with a participatory mapping exercise for Hyde County farmers and allowed the community to review and revise the cost-benefit scenarios developed using the user-generated VCAPS diagram. County officials worked with the project team and key stakeholders to obtain better understanding of these issues and establish connections with larger research projects that are studying saltwater intrusion risks in coastal North Carolina. Specific policy adaptation options for local government consideration for flood resiliency will be further developed in coordination with recommendations from the 2013 Community Rating Systems (CRS) guidebook. Additionally, the linkage of local adaptation actions to the CRS credit system can translate into potential reductions in National Flood Insurance Program (NFIP) premiums for community residents, providing a tangible near-term economic benefit that will increase the long-term likelihood of flooding adaptation recommendations being adopted by Hyde County.