

OPALUCH, URI
DHS Coastal Resilience Center
Research Project Work Plan
1/1/2016 – 12/31/2017

1. **Project Title.** Overcoming Barriers to Motivate Community Action to Enhance Resilience
2. **Principal Investigator.** James Opaluch, Environmental and Natural Resource Economics, University of Rhode Island
3. **Other Research Participants/Partners.** Austin Becker, Marine Affairs, Univ. of Rhode Island, Donald Robadue, and Pamela Rubinoff, Coastal Resources Center, Univ. of Rhode Island
4. **Short Project Description.**

To date there is little quantitative information on the ability of communities to adapt to the threat of coastal hazards (e.g., Corps of Engineers, 2012). This project will help increase community resilience by providing a better understanding of the barriers that communities face in adapting to coastal storm hazards, and by designing and testing interventions that can have the potential to overcome these barriers. We will combine individual interviews, group decision processes and policy simulation exercises to identify key barriers and to design interventions to overcome those barriers.

5. **Abstract.**

This research will help improve the resilience of communities that face risks from coastal storm hazards. We adopt insights from social science models of behavior change to develop programs to improve the adoption rates of actions that can reduce potential damages from major coastal storms. A principal finding of the literature on behavior change is that simply providing information is not generally sufficient to bring about changes in behavior (Scott 2002, Stern 2000). Rather, increasing the adoption rate of behaviors to mitigate storm effects is challenging (Kesete et al. 2014; Carson et al., 2013). Various theories of behavior change recognize that carefully planned and well-designed interventions can help to expedite change (e.g., Velicer et al. 1998; Moser and Ekstrom, 2014; Lindell and Perry, 2012).

This project focuses on improving the adoption rate of community-based and other collective actions, such as mitigating actions by groups of interacting stakeholders. We adopt a framework based on the insights from social science models of behavior change to identify barriers to adoption of mitigation actions by communities, and to develop measures that are designed specifically to overcome these barriers.

This research project is based on the hypothesis that there are multiple reasons for inadequate behavioral response to coastal storm hazards, and that the reasons vary across the types of decisions, the prior experience with hazards, and characteristics of community decision-makers. As a consequence, building resilience requires a systematic research program to understand the resistance of the community to adopting new behaviors, to identify barriers to adoption of hazard mitigating strategies, and to design effective policy interventions to overcome barriers for different groups of individuals, businesses and communities.

We adopt the DHS “Whole Community Approach” (e.g., Department of Homeland Security, 2014) to identify the barriers faced in adopting damage mitigation measures, and to design and test interventions to overcome these barriers. Interventions to increase adoption rates may include information tools to deepen the understanding of causes and consequences; improved information on specific feasible protective actions; economic incentives for the adoption of protective actions; new and/or changes in existing policies; and other interventions designed to specifically overcome the barriers that we identify in working with communities. The model is implemented with targeted stakeholder groups to improve our understanding of how to overcome obstacles at the community level, and thereby help to build community resilience.

Below we describe Phase 1 of the work plan, which embodies the first two years of the project.