

## Sea Grant's Community Climate Adaptation Initiative

Sea Grant's Community Climate Adaptation Initiative (CCAI) helps coastal communities access the most current climate adaptation science and prepare for the long term consequences of climate variability and change. Since 2012, Sea Grant has provided \$1.5 million in funding to support projects in partnership with local leadership and relevant state, NOAA, and other Federal agencies and organizations to identify and address the vulnerabilities a coastal community may face in adapting to climate change.

### Sea Grant CCAI 2013 Projects

#### Santa Barbara Area Coastal Ecosystem Vulnerability Assessment for Coastal Communities



Coast of California. Image: Carey Batha, California Sea Grant Extension Fellow.

The Santa Barbara Area Coastal Ecosystem Vulnerability Assessment for Local Communities (SBA CEVALC) is creating a vulnerability assessment of coastal ecosystems for southern Santa Barbara County to assist the Cities of Santa Barbara, Carpinteria, and Goleta and the County of Santa Barbara in planning for adaptation to climate change. **California Sea Grant** is guiding development of the SBA CEVALC, working with community partners to distribute results locally and ensuring wide distribution outside the Santa Barbara area.

#### About Sea Grant:

The Sea Grant model integrates research, outreach, and education for science with real world impacts. To share and explain new research discoveries, engage citizens in decision-making processes, and empower stakeholders to address national, state, and local issues as they emerge, Sea Grant takes a multi-faceted approach to outreach through programs of education, extension, and communication. Specialists in each of these areas translate research into usable information and products for many audiences, ensuring that scientific information is delivered to those who need it, and in ways that are relevant.

Sea Grant experts implement national priorities at the local level, while also identifying citizens' needs in order to inform state and national research agendas. This two-way flow of services and information ensures that Sea Grant solutions meet demonstrated needs, help support businesses, and enable policy makers to make balanced, well-informed decisions.

To learn how to work with Sea Grant on climate adaptation and other projects, visit our website at [seagrants.noaa.gov](http://seagrants.noaa.gov) and explore the **National Sea Grant Resilience Toolkit** under "What We Do".

#### Reducing Flood Vulnerability of Chicago Critical Facilities

**Illinois-Indiana Sea Grant** is helping the City of Chicago make adaptive management decisions to reduce the vulnerability of critical facilities in the city to extreme precipitation, increasing the overall resilience of the most populous city (over 2.7 million) in the Great Lakes to climate change. The project team is developing a site vulnerability assessment tool and facility checklist, and working with facility managers to develop recommendations and emergency management steps to reduce facility vulnerability and impacts from flooding by making short- and long-term infrastructure changes.



Chicago 31<sup>st</sup> Street. Image: Matt Knighton.

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Hurricane Sandy. Image: NOAA.

**Sea Grant 2012 CCAI Projects:**

- Alaska: Climate change adaptation for at-risk Native villages
- Delaware: Integrated hazard and adaptation training in Delaware City
- Florida: Post-disaster recovery plans in Sarasota County
- Georgia: Climate adaptation plan for Tybee Island
- Maine: Coastal infrastructure resiliency in Ellsworth
- South Carolina: Community-driven climate-resilient zoning in Beaufort County
- Texas: Coastal resiliency tools for Corpus Christi metropolitan area
- USC: AdaptLA process to help Los Angeles plan for impacts of climate change
- Virginia: Hampton Roads Adaptation Forum

## Collaborative Climate Adaptation Planning for Urban Coastal Flooding

Hurricane Sandy was a painful reminder that coastal storms are among the world’s most costly and deadly disasters, capable of causing tens-to-hundreds of billions of dollars in damages and destroying entire neighborhoods. Coastal cities across the country are weighing their options for adapting to rising floods, yet there is limited quantitative information available to help make these decisions. **New Jersey Sea Grant’s** project included a collaboration between coastal flooding scientists and Jersey City planners to develop and test several options for adapting the region’s urban coasts to flooding and sea level rise. The project laid out a plan to leverage existing storm surge modeling to quantify the performance of a set of protective measures for Jersey City, including a variety of grey and green options such as storm surge barriers, deployable barriers, and wetlands.



Destruction from Sandy in Mantoloking, NJ. Image: New Jersey Sea Grant

## Implementing Comprehensive Community Planning in St. Marys, GA and Hyde County, NC



Harbor in St. Marys, GA. Image: Craig Douglas Gephart

The southeastern Atlantic coast is highly vulnerable to climate stressors and has experienced exceptional growth in both population and the built environment over the past several decades. Given the seriousness of this regional problem, the **Georgia Sea Grant** and **North Carolina Sea Grant** programs are leveraging key capacity strengths in service of developing Community resilience and adaptation plans for two partner communities: St. Marys, GA and Hyde County, NC. The innovative integration of the

Vulnerability Consequences Adaptation Planning Scenarios (VCAPS) facilitation, benefit/cost modeling, and explicit linkage of adaptation action to the Community Rating System (CRS) criteria action is expected to serve as an influential and replicable template for developing effective climate adaptation planning in coastal communities throughout the country.

