

Sea Grant's Role in National Preparedness



Sea Grant Implements National Priorities at the Local Level

Coastal communities in the United States provide vital economic, social and recreational opportunities for millions of Americans. However, decades of population migration have transformed many natural coastal habitats into urban landscapes and intensified the use of finite coastal resources. Between 1970 and 2010, the population of the U.S. coastal watersheds has increased by 45 percent to a total of 164 million, or 52 percent of the nation's population. This population increase has resulted in greater vulnerability of coastal communities and environments to natural and technological hazards.

People living and doing business in coastal communities need to understand the risks associated with coastal hazards. Through the Hazard Resilient Coastal Communities focus area, NOAA Sea Grant helps these communities prepare for and respond to hazardous events.

Sea Grant's locally-based professionals (more than 360 extension agents) live in, and are closely connected to, the communities they serve. As both trusted residents and coastal experts charged with providing balanced and reliable science-based information, Sea Grant agents deliver solutions residents can use. Sea Grant agents' trusted reputations allow them to be effective liaisons within local governing bodies as well as providing access to isolated populations, even in the aftermath of a disaster.



Sea Grant has extension agents in every coastal and Great Lakes state and U.S. territory.

Hazard Resilient Coastal Communities

2009-2013 Strategic Focus Area

Sea Grant's Hazards activities are focused within three areas: helping communities and individuals understand the risks associated with living, working, and doing business along the coast; building community capacity to prepare for and respond to hazardous events; and helping communities respond effectively when events occur. Some highlights from 2013 are:

- **University of Southern California Sea Grant** developed *AdaptLA*, a sea-level rise adaptation planning tool for the city of Los Angeles
- **Louisiana Sea Grant** helped develop the Financial Resiliency Decision Support Tool for identifying risk-adjusted financial vulnerability to future natural disasters for local governments
- **Mississippi-Alabama Sea Grant** helped conduct a Vulnerability-Consequences Adaptation Planning Scenarios workshop for the City of Orange Beach, AL.
- **North Carolina Sea Grant** conducted post-Hurricane Ike damage assessments to determine why some homes survived and why others didn't.
- **Texas Sea Grant** introduced the Coastal Resilience Index (developed by Mississippi-Alabama Sea Grant) and implemented the guided self-assessment tool in six coastal communities.



Planting along 200 feet of shoreline in New Orleans' City Park. Image: Virginia Sea Grant

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 communications. 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.

SCIENCE SERVING AMERICA'S COASTS

National Sea Grant College Program

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Disaster Recovery Act of 2013

Sea Grant was actively engaged in the Sandy recovery effort, both long and short term. Sea Grant helped organize meetings to identify post-storm research priorities, and helped communities and coastal industries assess the damage to property, livelihoods, and natural resources. Sea Grant is also supporting research on risk communication with funds from the Disaster Recovery Act of 2013.



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

Highlights of Sea Grant's short-term response efforts include:

- Rapid-Response Research Funds were delivered to New York Sea Grant, New Jersey Sea Grant and Connecticut Sea Grant
- Sea Grant was able to connect programs with extensive tropical cyclone experience to mid-Atlantic programs to help adapt technical and educational materials in advance of Sandy, and shared advice and expertise after the storm.
- New York Sea Grant assisted federal, state and local official in assessing the breach of Fire Island, a barrier island fronting a portion of mainland Long Island containing 13,000 homes collectively valued at 10 billion dollars.



Shoreline erosion at a beachfront community. Image: Rhode Island Sea Grant

Highlights of Sea Grant's long-term recovery efforts include:

- New Jersey Sea Grant researchers are identifying the best possible ways to nourish beaches and dunes.
- A collaborative partnership between FEMA Recovery Directorate and Sea Grant is underway to facilitate a connection between FEMA regional recovery coordinators and respective Sea Grant Extension agents and specialists.
- **A \$1.8M Coastal Storm Awareness Project grant was awarded to Connecticut Sea Grant, New Jersey Sea Grant, and New York Sea Grant to improve public understanding and awareness of natural hazards and associated risks.**

Community Climate Adaptation Initiative

Recognizing the link between hazard resilience and climate adaptation, Sea Grant has been investing in a two-part Community Climate Adaptation Initiative since 2010. The first component focuses on building the adaptation capacity of each Sea Grant program and its partners through small institutional awards. The second component focuses on competitively funded demonstration projects that advance partnerships between Sea Grant programs and communities working on adaptation issues, and can serve as examples for other communities nationally.

In 2013, Sea Grant was able to fund \$500,000 for community-based competitive projects – four in total, across five Sea Grant programs:

- **California Sea Grant** - Santa Barbara Area Coastal Ecosystem Vulnerability Assessment for Coastal Communities (jointly funded with NOAA's Climate Program Office)
- **New Jersey Sea Grant** - Collaborative Climate Adaptation Planning for Urban Coastal Flooding
- **Illinois-Indiana Sea Grant** - Reducing Flooding Vulnerability of Chicago Critical Facilities
- **Georgia and North Carolina Sea Grants** - Implementing Comprehensive Community Planning in St. Marys, GA and Hyde County, NC



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



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