

PROJECT SUMMARIES



NOAA Resilience Projects with Sandy Disaster Relief Funding

July 2014

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Introduction

Under the 2013 Disaster Relief Appropriations Act for Sandy, the National Oceanic and Atmospheric Administration (NOAA) received \$2.56 million to support recovery planning efforts at the regional, state, and local levels. Using a competitive process, six projects were selected. Each project will last two years and is focused on helping communities successfully address the negative impacts associated with climate change and other coastal hazards. These investments will provide the foundation needed to increase coastal community resilience in New York, New Jersey, and Connecticut. The projects will work in conjunction with other recovery projects to expand the reach and effectiveness of recovery and adaptation efforts in the region.

New York/New Jersey Shoreline Restoration Trade-off Analysis

NOAA and Eastern Research Group Inc. will develop estimates of the economic value associated with Sandy-related restoration work by examining two restoration projects—one being undertaken by the U.S. Army Corps of Engineers in Jamaica Bay in New York, and the other by the U.S. Fish and Wildlife Service at Forsythe National Wildlife Refuge in New Jersey. Project tasks include enumerating the ecosystem services provided by these restoration efforts; articulating stakeholders benefits; selecting specific ecosystem services to assess; selecting the most appropriate valuation method; and estimating values. The results of this project will inform future restoration projects.

Funding: \$290,084

Duration: September 2013 to August 2015

Principal Investigator: Lou Nadeau, Eastern Research Group Inc., lou.nadeau@erg.com

NOAA contact: Pete Wiley, Pete.Wiley@noaa.gov

Technical Assistance for Resilient Coastal Communities in New Jersey

Rutgers University will provide technical training and assistance to impacted New Jersey communities. Efforts will include incorporating geospatial and analytical tools into regional planning efforts and the development of a statewide geospatial climate adaptation and resilience planning tool (NJADAPT) modeled after CalAdapt (<http://cal-adapt.org>). These funds will be administered through NOAA's Cooperative Institute for the North Atlantic Region, and several different parts of Rutgers will receive funding, including the Jacques Cousteau National Estuarine Research Reserve, the Center for Remote Sensing and Spatial Analysis, and the Bloustein School of Planning and Public Policy.

Funding: \$424,000

Duration: October 2013 to September 2015

Principal Investigator: Michael P. DeLuca, Rutgers, The State University of New Jersey, deluca@marine.rutgers.edu

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Coastal Resilience Network Projects

Four of the six projects supported by the 2013 Disaster Relief Appropriations Act used NOAA's Coastal Resilience Networks program (CRest) to competitively award projects in New York, New Jersey, and Connecticut.

New Jersey Resilient Coastal Communities

The New Jersey Department of Environmental Protection will enhance the hazard resilience of New Jersey communities by providing tools, information, guidance, and technical assistance useful for making informed decisions regarding hazard mitigation and adaptation measures. This project will build upon work of the New Jersey Coastal Management Program, the New Jersey Resiliency Network, the New Jersey Sea Grant Consortium, and academic institutions in the state. Existing tools will be modified to provide a user-friendly, comprehensive protocol for communities to use. This project will also inform revisions to the New Jersey Coastal Management Program's enforceable policies related to coastal development and resource protection.

Funding: \$454,221

Duration: June 2014 to May 2016

Principal Investigator: Elizabeth Semple, New Jersey Department of Environmental Protection, Elizabeth.Semple@dep.state.nj.us

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New Jersey Resilient Coastlines Initiative

The New Jersey chapter of The Nature Conservancy will work with conservation partners throughout New Jersey to help communities use natural infrastructure to increase the adaptive capacity of New Jersey's coastal areas. Outcomes of this effort include the development of a new restoration-focused application within the online Coastal Resilience Decision Support Tool; a common database of information provided through the Coastal Resilience website; the identification of common statewide metrics to be used to measure the effectiveness and the ecological, economic, and social benefits of coastal resilience projects across the state; and the identification of a suite of coastal habitat restoration and enhancement projects to improve habitat

resilience. Collaborators on this project include Rutgers University, Stevens Institute of Technology, American Littoral Society, Barnegat Bay Partnership, and the Partnership for the Delaware Estuary.

Funding: \$450,221

Duration: April 2014 to March 2016

Principal Investigator: Patricia Doerr, The Nature Conservancy of New Jersey,
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New York Climate Resilient Cities Pilot Project

The Trust for Public Land will undertake a pilot project to research, plan, and create strategic green infrastructure projects for Staten Island and Jamaica Bay in New York. The project team is researching how natural areas (green infrastructure) performed during Sandy and developing a web-based decision-support tool to identify priority sites for new green infrastructure projects. The team will also provide technical assistance to implement on-the-ground demonstration projects along New York City's waterfront. Trust for Public Land's partners for this effort include the City of New York, Columbia University's Center for Climate Systems Research, and the Consortium for Climate Risk in the Urban Northeast.

Funding: \$410,221

Duration: May 2014 to April 2016

Principal Investigator: Jad Daley, The Trust for Public Land, jad.daley@tpl.org

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Enhancing Coastal Resilience in Connecticut

The University of Connecticut's project will enhance coastal resilience in the state through several means. The project team will assess shorelines where wave, climate, coastal geomorphology, and land use are conducive to "living shoreline" protection strategies, and will conduct outreach and education programs for coastal homeowners, civic leaders, and engineers regarding options for shoreline protection. The funding will also support the newly established Center for Climate Resilience. Project outcomes include an assessment of existing patterns of coastal erosion; the identification of shoreline character and existing coastal protection approaches; the determination of storm wave characteristics at the shoreline to provide design guidelines for protection alternatives under current and future climate states; a review of available design guidelines for the deployment of "living shoreline" shore protection strategies; the development of a research agenda to enhance understanding of the effectiveness of the approach in Connecticut; the development of an online decision-support tool to be incorporated into the Environmental Conditions Online mapping site; and the incorporation of this information into coast-wide and in-depth community-level educational programs targeted at local land use officials.

Funding: \$425,221

Duration: May 2014 to April 2016

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