



Enhancing Coordination on Shoreline Management and Resilience Measures in New York State

Overview

Project Location

Hudson River National Estuarine Research Reserve

Project Duration

September 2015 to March 2017

Project Lead

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Project Type

Science Transfer – promoting the use of science

Project Partners

- Consensus Building Institute, Inc.
- Greenway Conservancy for the Hudson River Valley
- Hudson River National Estuarine Research Reserve
- New York State Department of Environmental Conservation
- New York State Department of State
- New York State Office of Parks, Recreation and Historic Preservation

Nature-based shoreline stabilization techniques have the potential to maintain and enhance important ecological services, provide greater resilience to physical forces, and be cost-competitive with traditional approaches. Over the past eight years, the Hudson River Sustainable Shorelines Project has engaged a regional research team to develop the information and tools needed by regulators, engineers, and resource managers to identify the best settings and approaches for nature-based shoreline protection in the Hudson Estuary. Other regions in the state have expressed interest in encouraging sustainable shoreline management, and passage of the 2014 New York State Community Risk and Resiliency Act, which calls for the development of guidance on “the use of resiliency measures that utilize natural resources and natural processes to reduce risk” by January 2017, has provided the opportunity to use the project’s findings and collaborative approach to bring various state agencies together to develop guidance on resilience measures.

This project supports the development of the guidance by facilitating the state agencies in their work to develop compatible terminology, regulatory approaches, and ecological and hazard mitigation principles. It will support the development of guidance on the use of natural and nature-based features to reduce risk and enhance resilience for riparian corridors, wetlands, forests, landscapes, ocean and estuarine coastlines, and rivers, streams, and lake shorelines. Nature-based features include ecologically enhanced shoreline protection (living shorelines) and site-level green infrastructure.

The team will collaboratively develop compatible terminology and conceptual frames; carry out a joint review of existing state policies, practices, and guidance; review relevant scientific and engineering literature; and identify needs, gaps, barriers, challenges, and opportunities for using natural and nature-based features across the state.

Anticipated Benefits

- Enhancement of the understanding across New York State agencies of available information and needs related to sustainable shoreline management and nature-based resilience.
- Identification of opportunities, barriers, and strategies for using natural and nature-based measures to reduce risk and enhance resilience.
- Collaboration and greater cohesiveness among state agency staff members involved with natural and nature-based measures to reduce risk and enhance resilience.

Project Approach

The Hudson River National Estuarine Research Reserve will work collaboratively with New York State agencies to capture what is known about the ability of nature-based shoreline stabilization approaches and other natural and nature-based features to reduce risk and enhance resilience. A core interagency team will guide two larger groups in examining approaches for shorelines and watersheds:

- Conduct a joint review of existing literature, policies, practices, and guidance.
- Explore opportunities for enhancing these programs and guidance.
- Make recommendations for new or updated decision-support frameworks.

The team will facilitate the information exchange among agencies and consensus on how and where to promote and implement nature-based shoreline protection and natural resilience measures in New York. The project will ultimately result in a significantly higher percentage of shoreline management projects that are designed to benefit natural habitats and reduce risk for human communities.

Anticipated Products and Targeted End Users

This project's collaborative process and products are intended to support New York State agencies, shoreline managers, and other decision makers that are considering nature-based shoreline approaches and other natural resilience measures. The project will help develop the following resources:

- An assessment of needs of the intended users of the guidance.
- An outline of federal and state regulatory policies and jurisdictions on coasts and water bodies throughout New York and how they interrelate, including maps and conceptual models as appropriate.
- A summary of available information related to risk reduction and community resilience benefits of natural and nature-based resilience measures.
- A mutually agreed-upon framework and recommendations for state guidance on natural resilience measures.

About the Science Collaborative

The National Estuarine Research Reserve System's Science Collaborative supports collaborative research that addresses coastal management problems important to the reserves. The Science Collaborative is managed by the University of Michigan's Water Center through a cooperative agreement with the National Oceanic and Atmospheric Administration (NOAA). Funding for the research reserves and this program comes from NOAA. Learn more at www.nerrs.noaa.gov or www.graham.umich.edu/water/nerrs.