Tools for Building Community Resilience to Coastal Hazards

New Partners for Smart Growth
January 31, 2015
Planning Resources for Resilience

• **Communicating Exposure to Hazards**
  Coastal County Snapshots
  CanVis Visualization Software

• **Assessing Hazard Impacts**
  Sea Level Rise Viewer

• **Using Green Infrastructure to Adapt to Impacts**
  Green Infrastructure for Coastal Resilience Training
Coastal County Snapshots turn complex data into easy-to-understand stories, select a coastal county of interest and the website does the rest, providing information on flood exposure and resilience to coastal hazards.

Local officials can use the snapshots as a planning tool to assess their counties' flood exposure and resilience, and to understand the benefits provided by natural resources. The handouts generated by the snapshots highlight the benefits of working with governing bodies and citizen groups.

Features:

- Assesses a county's exposure and resilience to flooding
- Analyzes a county's dependence on the ocean or Great Lakes for a healthy economy
- Examines the benefits a county receives from its wetlands
- Compares counties to each other or for regional analysis
- Allows users to download PDF reports for the snapshot of their choice

Current topics include:

- Flood exposure
- Wetland benefits
- Ocean and Great Lakes jobs

coast.noaa.gov/digitalcoast/tools/snapshots
Flood Exposure, Wetland Benefits, and Ocean Jobs
Pamlico County, North Carolina

Protecting Wetlands = Coastal Communities That Are Safer, Cleaner, and More Economically Productive

Healthy wetlands provide more than just a pretty view. Wetlands are a pivotal part of the natural system, supplying numerous benefits for coastal communities. Even small areas can provide some level of benefit. The location, health, and size of individual wetlands also play a role. This snapshot demonstrates three key benefits of wetlands in Pamlico County.

Based on 2006 NOAA land cover.

More Economically Productive: Wetlands Support Fishing Economies

Coastal wetlands provide habitat for many aquatic species that contribute to local food supplies and fishing-related industries.

In addition to providing a base for commercial fishing jobs and revenue, wetlands also support recreational and charter fishing. These economic benefits extend beyond county boundaries.

Based on 2011 ENOW and 2011 ENOW for Self-Employed Workers.

Safer: Wetlands Reduce Flood Impacts

414 (86,670 acres) of Pamlico County’s land area is in the floodplain.

Wetlands, located in coastal and riverine floodplains, can protect people and their property, community infrastructure, and agricultural investments from floods. Wetlands act as natural sponges, holding back floodwaters and lowering flood heights.

Based on best available data of 2010 FEMA Flood Zones (100-year); 2006 NOAA land cover.

Date Printed: July, 2014

County Wetland Benefits Snapshot
Pamlico County, NC
Visualizing Flooding

CanVis

Contributing Partners: NOAA Office for Coastal Management, USDA National Agroforestry Center

Overview | In Action | Support | Get It Now

Use this easy-to-use visualization tool to “see” potential community impacts from coastal development or sea level rise.

Features

- Download your background picture
- Create a vision of the future by adding objects—docks, buildings, rising water, and more—to the photo using the expansive photo objects library

Learn more.

cost.noaa.gov/digitalcoast/tools/canvis
CanVis Tool

Visualizing and Communicating Alternatives

coast.noaa.gov/digitalcoast/tools/canvis
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Visualizing Sea Level Rise and Inundation

Sea Level Rise Viewer

Contributing Partners: NOAA Office for Coastal Management

Overview In Action Support Get It Now

Launch Viewer

Select a geography and use the slider bar to simulate various sea level rise scenarios (from one to six feet above the average highest tides) and the corresponding areas that would be impacted by flooding. Click the camera icons for pictures that depict how local landmarks could be affected. Additional tabs provide information about marsh impacts, nuisance flood frequency, and social and economic data.

Maps are not currently available for Alaska and Louisiana due to the accuracy of existing elevation data, the hydraulic complexity of the coast, and gaps in vertical datum transformation.

Features

- Models potential marsh migration due to sea level rise
- Examines how tidal flooding will become more frequent with sea level rise
- Enables access through mobile devices
- Produces shortened URLs for easy map sharing through email and social media
- Provides access to Web map services and underlying geospatial data
- Offers supporting documents and information on sea level rise mapping

Acknowledgments

The NOAA Office for Coastal Management acknowledges the many organizations that helped guide the development of this tool.

coast.noaa.gov/digitalcoast/tools/slr/
Visualizing Sea Level Rise and Inundation

cost.noaa.gov/digitalcoast/stories/tybee
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Understanding Green Infrastructure

Concepts and Practices

Introducing Green Infrastructure for Coastal Resilience

Contributing Partners: NOAA Office for Coastal Management

Overview

During this full-day introductory workshop, participants will learn fundamental green infrastructure concepts and practices that can play a critical role in making coastal communities more resilient to natural hazards. Local speakers will share expertise on local and regional ecosystems, existing green infrastructure projects of various scales, and ways in which green infrastructure has been integrated into planning processes.

Through presentations and group discussion, participants will learn about a range of natural assets and green infrastructure approaches that can improve coastal community resilience. Most importantly, participants will make valuable connections with a diverse group of both new and experienced green infrastructure practitioners.

Six hours of certification maintenance credits for this course have been approved by the American Institute of Certified Planners. Five core continuing education credits have been approved for certified floodplain managers.

What You Will Learn

After completing this course, participants will be able to

- Recognize green infrastructure terms and concepts
- Understand the ecological, economic, and societal benefits of green infrastructure
- Understand the wide variety of contexts and scales of approaches referred to as “green infrastructure” today
- Identify new or existing planning processes suitable for integrating green infrastructure concepts and techniques
- Identify local green infrastructure activities and experts with additional information and resources

Host Requirements

This training is provided by request and will be fulfilled as resources are available. Classes can be taught at the NOAA Office for Coastal Management training facility or brought to your organization. The office reserves the right to cancel the course in the event of low enrollment. The cost is minimal for participants and host organizations. Please review the on-site host responsibilities, costs, and site requirements. To apply to host a course at your location, please fill out our host form, and a trainer will contact you.

Contact Information

For additional course or individual registration information, e-mail oc.m.training.request@noaa.gov.

cost.noaa.gov/digitalcoast/training/green
Digital Coast

coast.noaa.gov/digitalcoast/
Partnership Organizations
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