

Coastal Resilience in the Southeast: NOAA Resources and Partnerships



Photo: Jill Gambill, University of Georgia Marine Extension Service

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NOAA Office for Coastal Management

Office for Coastal Management



Programs and Partnerships

Primary Programs

National Coastal Zone Management Program

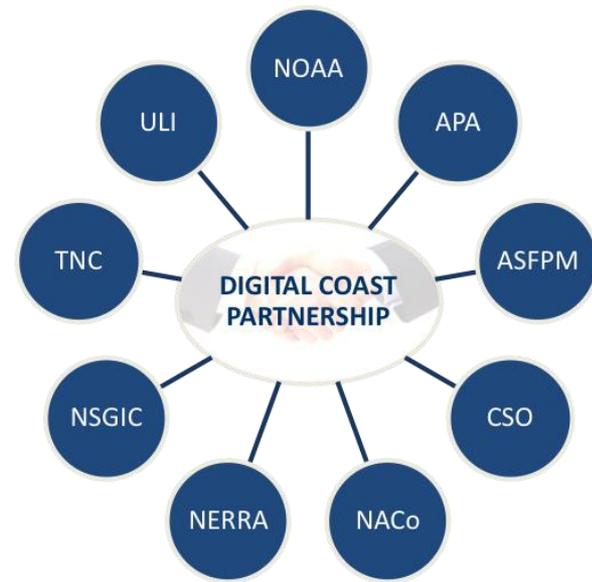
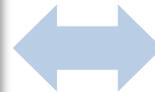
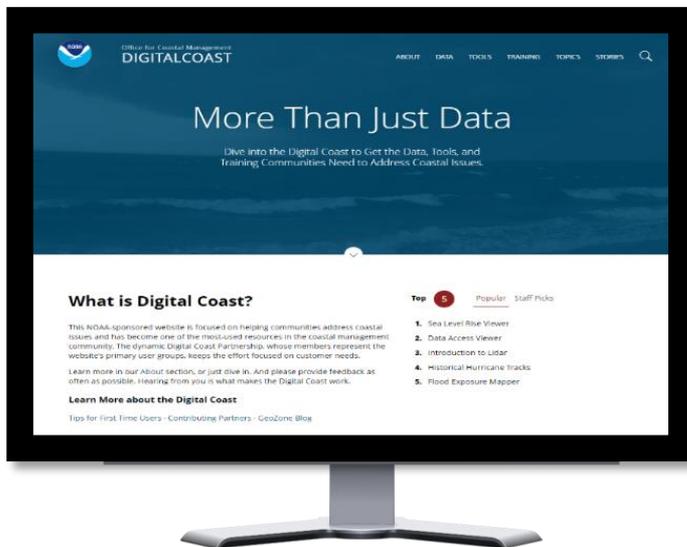
National Estuarine Research Reserves

Digital Coast

Coral Reef Conservation Program



Digital Coast Enabling Platform and Partnership



coast.noaa.gov/digitalcoast

Topics and Tools

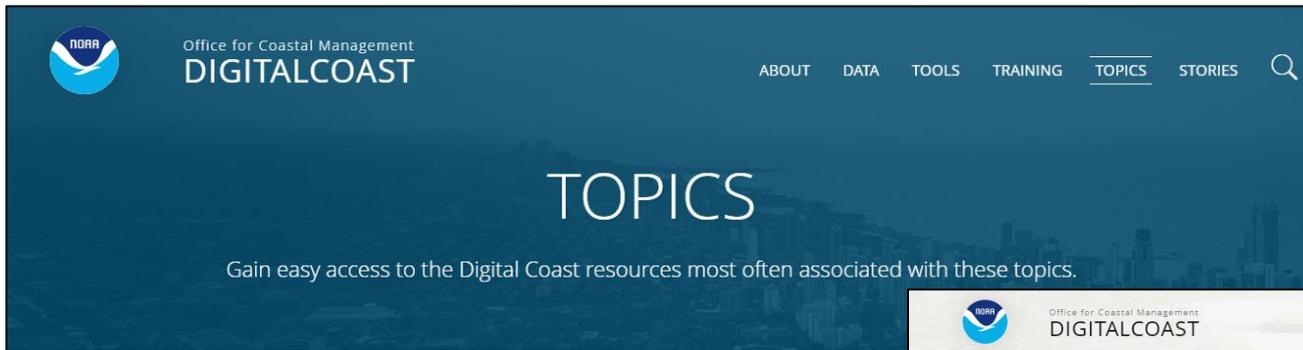
- Natural Infrastructure
- Visualization Tools
- Digital Coast Academy



Natural Infrastructure



Natural Infrastructure Resources

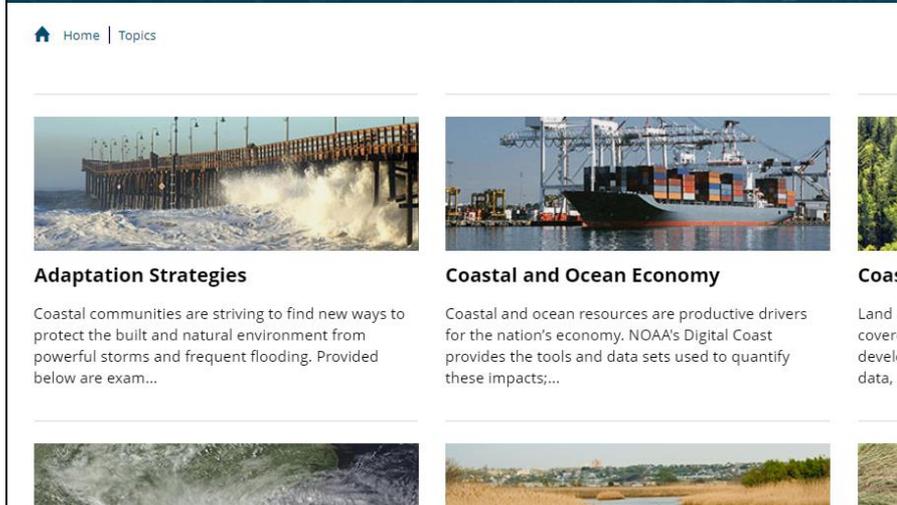


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ABOUT DATA TOOLS TRAINING TOPICS STORIES

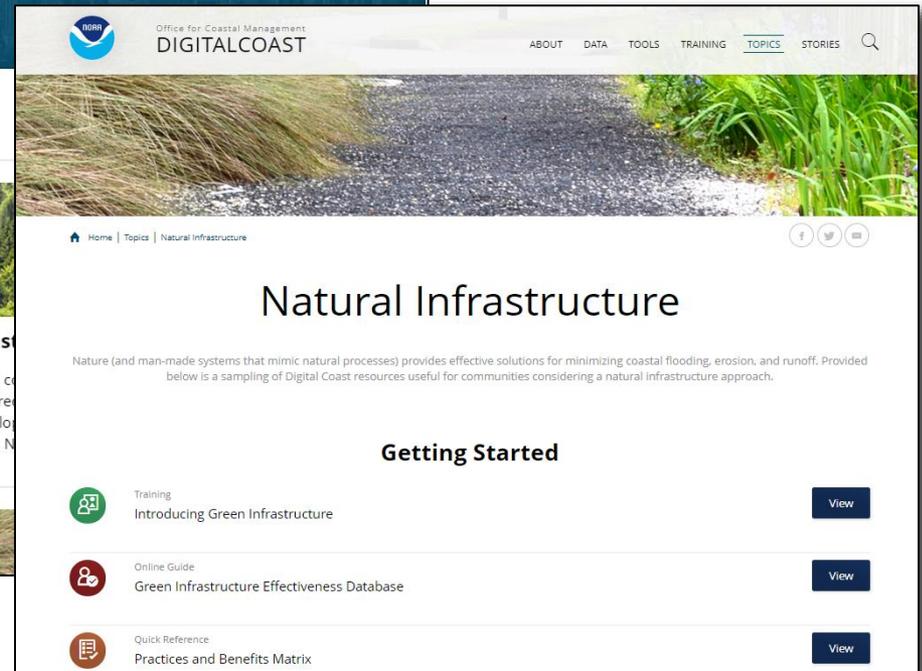
TOPICS

Gain easy access to the Digital Coast resources most often associated with these topics.



Home | Topics

- Adaptation Strategies**
Coastal communities are striving to find new ways to protect the built and natural environment from powerful storms and frequent flooding. Provided below are exam...
- Coastal and Ocean Economy**
Coastal and ocean resources are productive drivers for the nation's economy. NOAA's Digital Coast provides the tools and data sets used to quantify these impacts;...
- Coastal Land Use**
Land cover and development data, N...



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ABOUT DATA TOOLS TRAINING TOPICS STORIES

Natural Infrastructure

Nature (and man-made systems that mimic natural processes) provides effective solutions for minimizing coastal flooding, erosion, and runoff. Provided below is a sampling of Digital Coast resources useful for communities considering a natural infrastructure approach.

Getting Started

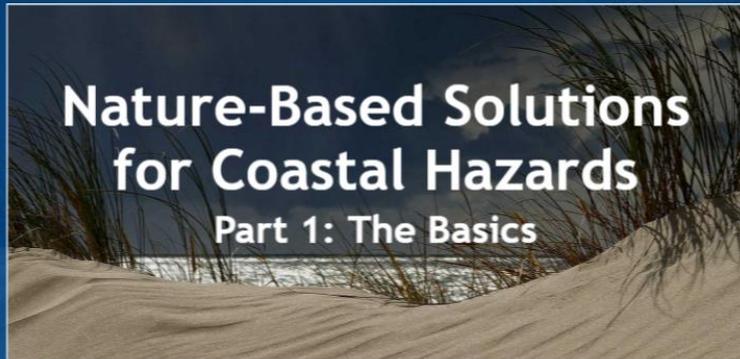
- Training: **Introducing Green Infrastructure** [View](#)
- Online Guide: **Green Infrastructure Effectiveness Database** [View](#)
- Quick Reference: **Practices and Benefits Matrix** [View](#)

coast.noaa.gov/digitalcoast/topics/green-infrastructure.html

Natural Infrastructure Training

Nature-Based Solutions for Coastal Hazards

Nature-Based Solutions for Coastal Hazards, Part 1: The Basics



There is no audio in this module.

Start

Part 1: The Basics
(Online)

Part 2: Developing a
Strategy (In-person)

coast.noaa.gov/digitalcoast/training/green.html

Natural Infrastructure Tool

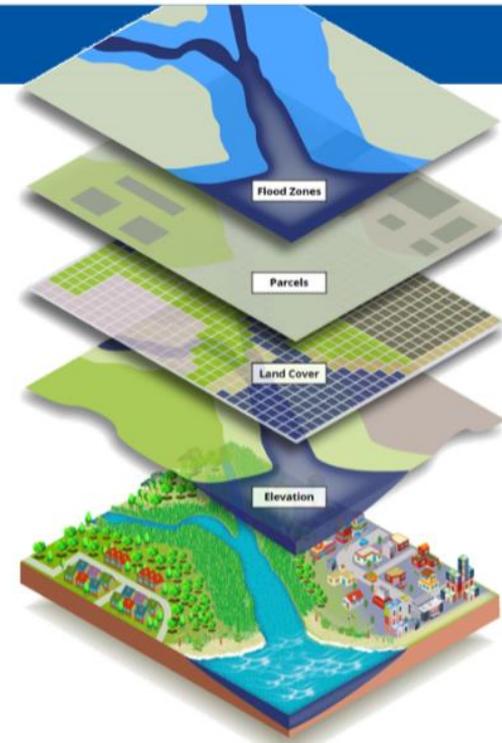
Green Infrastructure Mapping Guide

Green Infrastructure Mapping Guide

This guide supports spatial analysts mapping green infrastructure for resilience to coastal hazards. The guide helps analysts incorporate green infrastructure strategies into a GIS work plan, and rank and prioritize green infrastructure for their study area.

Ways to use this guide:

- Use the **work plan** to follow an example project and see how a spatial analyst looks at multiple criteria to generate a final prioritization layer.
- At each step, track a **case study** to see how others have approached the work, or access **detailed guidance** for completing the step.
- View or download **worksheets and templates** that will make the job easier. Access **related resources** or full case study reports.



Not familiar with green infrastructure?

Watch this short animation to see how green infrastructure supports coastal communities.

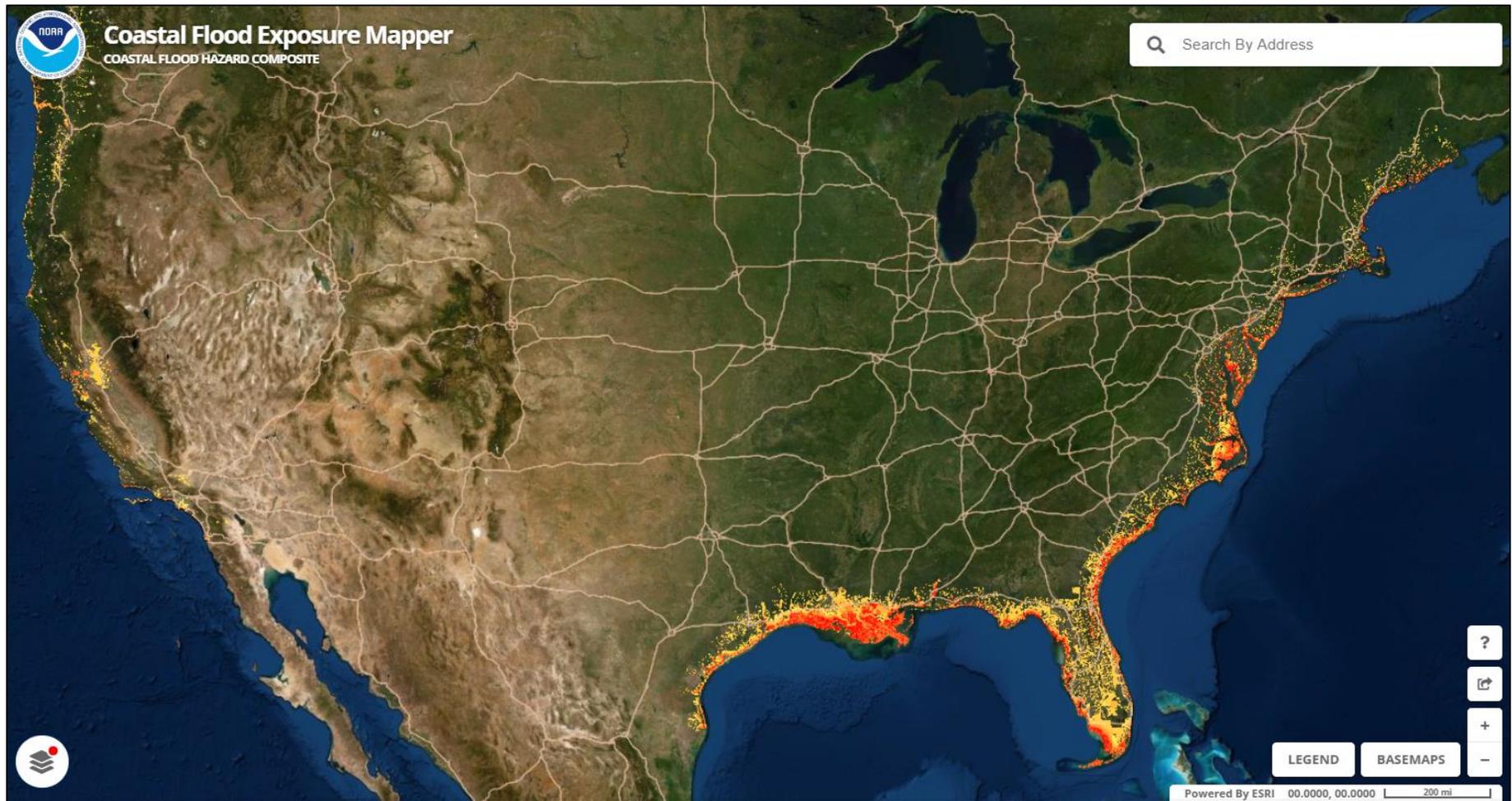
Click **Get Started** to begin.

Get Started >

coast.noaa.gov/digitalcoast/training/gi-mapping.html

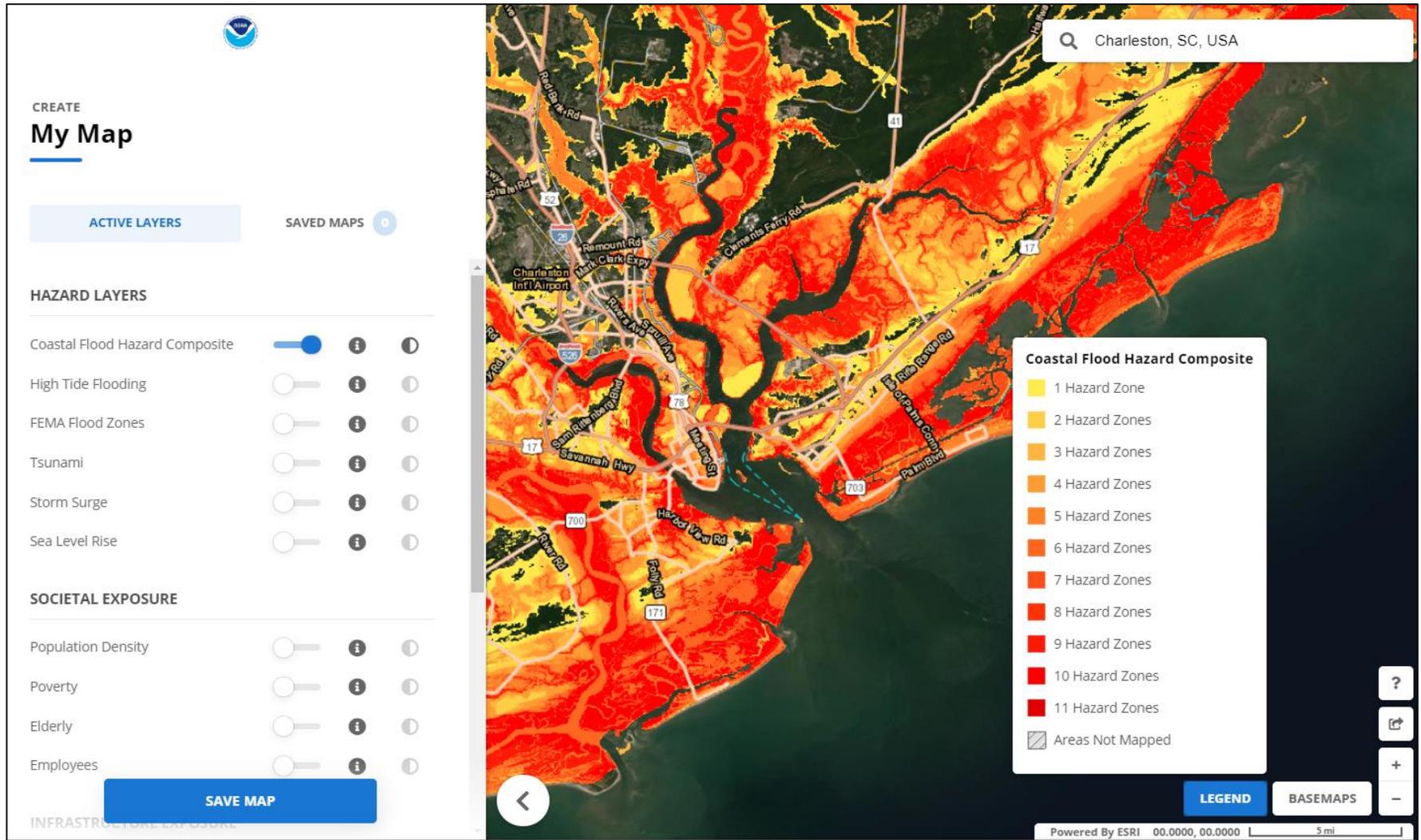
Visualization Tools

Coastal Flood Exposure Mapper



coast.noaa.gov/digitalcoast/tools/flood-exposure.html

Coastal Flood Exposure Mapper



Visualization Tools

Sea Level Rise Viewer

The screenshot shows the NOAA Digital Coast website interface for the Sea Level Rise Viewer tool. At the top left is the NOAA logo and the text "Office for Coastal Management DIGITALCOAST". A navigation menu includes "ABOUT", "DATA", "TOOLS" (which is underlined), "TRAINING", "TOPICS", and "STORIES", along with a search icon. Below the navigation is a breadcrumb trail: "Home | Tools | Sea Level Rise Viewer" and social media icons for Facebook, Twitter, and Email. The main heading is "Sea Level Rise Viewer". To the right of the heading are three buttons: "LAUNCH" (green), "DOWNLOAD DATA" (dark blue), and "ACCESS MAP SERVICES" (dark blue). Below the heading are three informational cards: "GEOGRAPHY" (Coastal areas of the U.S., including U.S. territories), "BASED ON" (Available elevation data), and "TIME COMMITMENT" (Approx. 15 minutes). Below these is the text "NOAA Office for Coastal Management" and the "Overview" section, which describes the tool's purpose: "Use this web mapping tool to visualize community-level impacts from coastal flooding or sea level rise (up to 10 feet above average high tides). Photo simulations of how future flooding might impact local landmarks are also provided, as well as data related to water depth, connectivity, flood frequency, socio-economic vulnerability, wetland loss and migration, and mapping confidence." The "Features" section follows, with four cards: "See Related Data" (5 items), "See Related Stories" (29 items), "See Related Tools" (9 items), and "See Related Training" (12 items).

NOAA Office for Coastal Management

Sea Level Rise Viewer

LAUNCH

DOWNLOAD DATA

ACCESS MAP SERVICES

GEOGRAPHY
Coastal areas of the U.S., including U.S. territories

BASED ON
Available elevation data

TIME COMMITMENT
Approx. 15 minutes

NOAA Office for Coastal Management

Overview

Use this web mapping tool to visualize community-level impacts from coastal flooding or sea level rise (up to 10 feet above average high tides). Photo simulations of how future flooding might impact local landmarks are also provided, as well as data related to water depth, connectivity, flood frequency, socio-economic vulnerability, wetland loss and migration, and mapping confidence.

Features

- See Related Data (5)
- See Related Stories (29)
- See Related Tools (9)
- See Related Training (12)

coast.noaa.gov/digitalcoast/tools/slr.html

Other Tools and Resources

Stories From the Field

Vulnerability Assessment: Tybee Island, Georgia

Partners: Tybee Island, Georgia Department of Natural Resources, Georgia Sea Grant – University of Georgia, Skidaway Institute of Oceanography

Products: Sea Level Rise Viewer and LIDAR Data

Outcome: The city of Tybee Island unanimously adopted an adaptation plan for current and future flooding problems.



Digital Coast Academy

Over 150 Learning Resources

- Classroom and online instructor-led
- Self-guided
- Case studies
- Publications and quick references
- Videos and webinars



Resilience Funding and Projects in the Southeast

- National Coastal Resilience Fund
- Regional Coastal Resilience Projects
- Sea Grant and Office for Coastal Management Regional Projects

National Coastal Resilience Fund

Funding available for coastal resilience projects that

- Provide communities with enhanced protection and buffering from impacts of sea level rise, changing flood patterns, coastal erosion, and increased frequency and intensity of storms;

AND

- Protect and restore habitat for fish and wildlife.

nfwf.org/coastalresilience

National Coastal Resilience Fund: 2018 Southeast Projects

- Living Shorelines for North Carolina Coastal Communities (North Carolina Coastal Federation)
- Habitat Restoration of Crab Bank Island Seabird Sanctuary to Protect Coastal Shorelines (Audubon South Carolina)
- Maintaining Coastal Protection of Florida's Reefs through Restoration of Resilient Corals (Mote Marine Laboratory)
- McCoys Creek Restoration Plan for Improved Wildlife Habitat and Flood Management (Groundwork Jacksonville)

National Coastal Resilience Fund: 2019 Southeast Projects

- City of Tybee Island Coastal Marsh and Community Resilience Adaptation (City of Tybee Island)
- Coastal Wetland Restoration and Community Resiliency in West Ashley, City of Charleston (Georgia Tech Research Corp.)
- Using Coral Reef Restoration to Enhance Coastal Resilience of South Florida Shorelines (University of Miami)
- Improving Natural Infrastructure in Currituck Sound, North Carolina (National Audubon Society)
- Re-naturalizing the Church Creek Drainage Basin (City of Charleston, South Carolina)

Regional Coastal Resilience Projects

Post-Disaster Planning in Georgia

coastalgadnr.org/DRRP

**Southeast and Caribbean Disaster
Resilience Partnership**



Regional Projects Supported by Sea Grant and Office for Coastal Management

Legal Analysis: State and Local Governments Facing Sea Level Rise in the Southeast (Complete)

Quantifying Impacts of Coastal Flooding on Access to Public and Private Infrastructure and Resulting Economic Impacts (Spring 2020)



***For more information or to request a briefing, please contact
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