

Federal Agency Perspectives

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OFFICE FOR COASTAL MANAGEMENT
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Local Sea Level Rise

Charleston, SC NOAA Tide Gauge (86 years record)

- **Trend:** Rise of 1.03 FT
- **Projections:** Increase in local relative sea level (with subsidence) starting from today...
 - NOAA intermediate low – just ocean expansion – additional 0.59 FT by 2050
 - NOAA high – ocean expansion and ice melt contribution – additional 1.79 FT by 2050

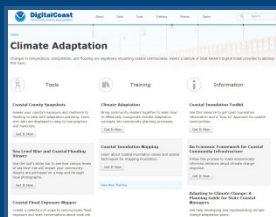


Healthy Coasts - Critical to Nation's Vitality

- 23 of 25 most densely populated counties
- 19 of 20 major cities
- 45% of GDP
- 51 million jobs
- 9 of 10 most costly storms

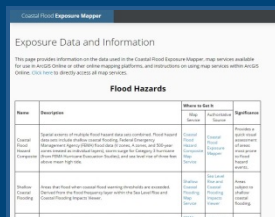


More than Just Data: Actionable Information!



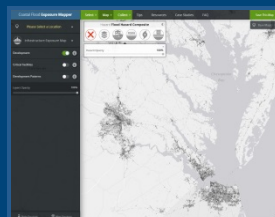
DISCOVER

Information on coastal hazards through the Coastal Adaptation Toolkit



DOWNLOAD

Sea level rise, FEMA flood zones, development, critical facilities and more for your community



MAP

Develop mash-ups with ESRI and OpenGIS map services



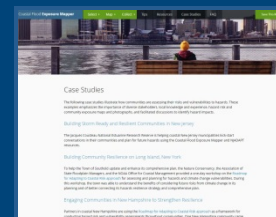
ANALYZE

Potential sea level rise, shallow coastal flooding impacts with the Coastal Flood Exposure Mapper



LEARN

How to map inundation with instructor-led trainings



SHARE

Outcomes with others through stories from the field.

DATA

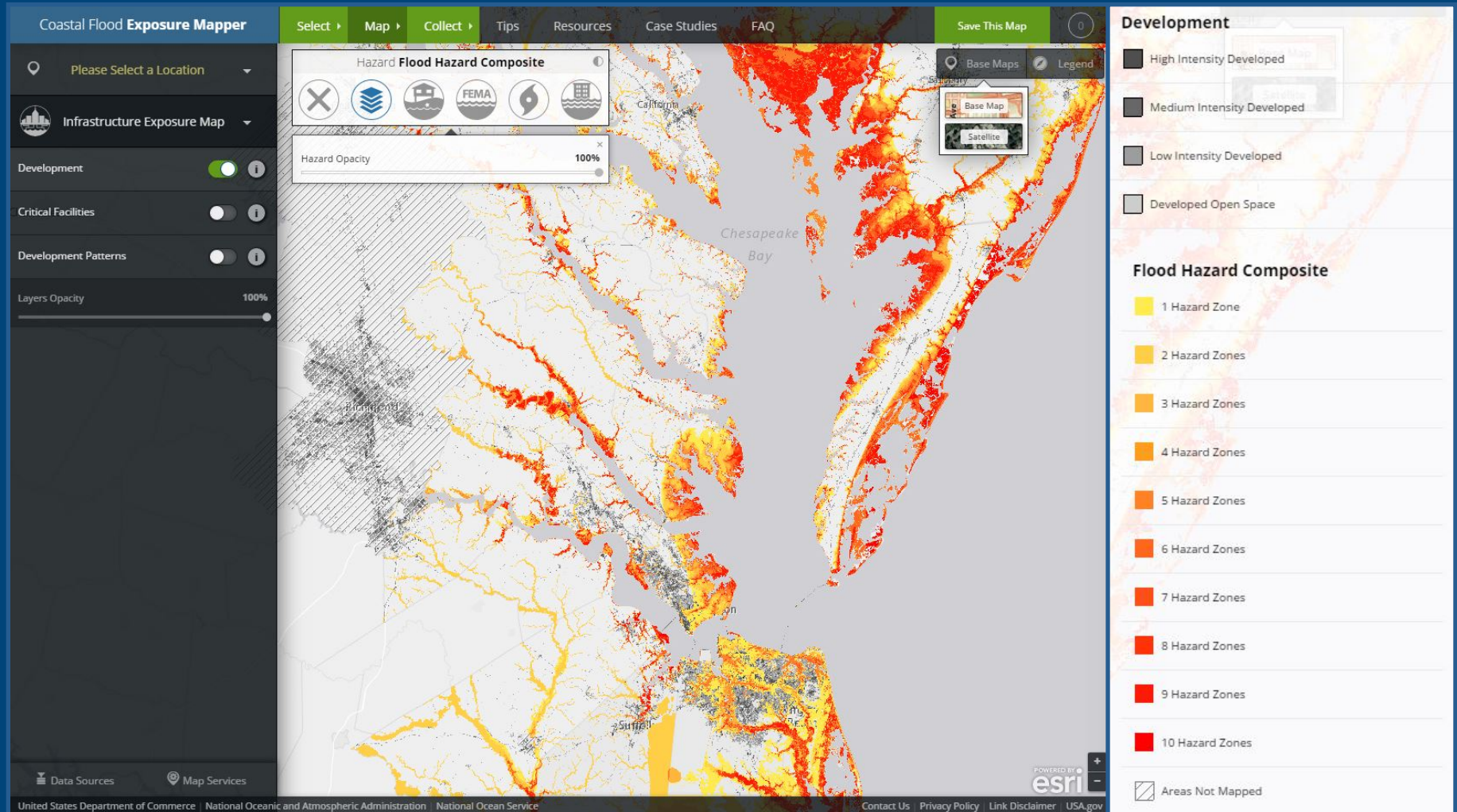
INFORMATION

ACTION



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Coastal Hazards Threaten Infrastructure



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Natural and Nature-Based Solutions



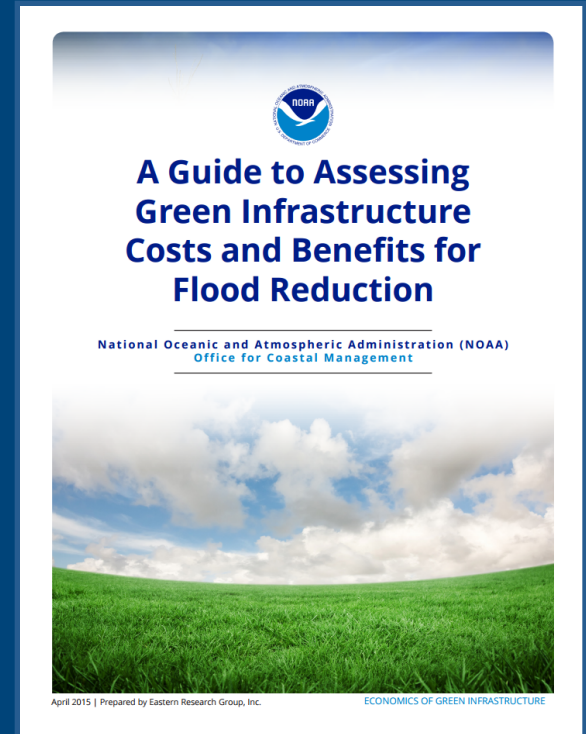
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NNBS Challenges

- **Sources of Uncertainty**
 - Baseline information
 - Future physical drivers
 - Species response
 - Technical guidance
 - Performance, longevity, self recovery
 - Monitoring, adaptive management, metrics
 - Financing and partnership
- **Use of Ecosystem Services for Decision Making**
 - Quantify benefits of integrated systems
 - Quantify monetary and socio-cultural value




Natural and Nature-Based Solutions



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Systems Approach to Geomorphic Engineering (SAGE)

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Systems Approach to Geomorphic Engineering


Integrating green and gray solutions in coastal landscape transformation



SAGE ...

is a **Community of Practice** of Federal, State, and Local Agencies, non-governmental organizations, academic institutions, engineers, and private businesses working together to:

- Use and promote green-gray approaches to ensure coastal community and shoreline resilience;
- Broaden science, engineering, policy and marketing activity both domestically and internationally;
- Engage community partners in [regional demonstrations](#).

 **Join the SAGE community**


Register to receive information about sage activities via email.

JOIN NOW >

Featured Tools

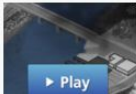
- **Searchable Project Database:** Multiple project types and sources.
- **Interactive Map:** Projects with known locations. The Map tool is best viewed using Firefox or Internet Explorer. Google Chrome is not currently supporting the map tool.

Spotlights




SAGE Living Shoreline Brochure


Numerous SAGE partners contributed to the content in this informative brochure that provides a helpful overview of the different types of shoreline solutions. This document is a great handout to help people learn about natural and nature-based shorelines.




Watch how communities use nature's services to prepare for coastal storms in this animated video from NOAA.

News


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Advancing Resilience

Sandy Funded Efforts in New Jersey

Regional Coastal Resilience Grants Program

Mitigation Federal Leadership Group Resilience Indicators

Federal Flood Risk Management Standard



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Questions?

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