

Engineering With Nature Case Examples of Practice

**Betsy Nicholson
NOAA Office for Coastal Management
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Organizational Perspective

- The Office for Coastal Management is the nation's federal lead for coastal management activities.
- The emphasis is on a partnership approach with all sectors, striving to find the best approach for addressing coastal issues.
- Major initiatives include the National Coastal Zone Management Program, the Coral Reef Conservation Program, the Digital Coast, and the National Estuarine Research Reserve System.
- All pieces have a role to play in promoting green or natural infrastructure for resilience to coastal hazards.



Current Projects

CZMA Partnerships



Digital Coast



Coastal Green Infrastructure

Data | Tools | Training | Case Studies

Other Recent Initiatives

- Regional Coastal Resilience Grants
- Coastal Resilience Networks Grants

Current Projects

CZMA Partnerships:

- National Coastal Zone Management Program
- National Estuarine Research Reserves
 - NERRS Science Collaborative



Current Projects

Digital Coast:

Menu | Resources

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.

[Get Started](#)

Not familiar with green infrastructure?
Watch this short animation to see how green infrastructure supports coastal communities.





A Guide to Assessing Green Infrastructure Costs and Benefits for Flood Reduction

National Oceanic and Atmospheric Administration (NOAA)
Office for Coastal Management



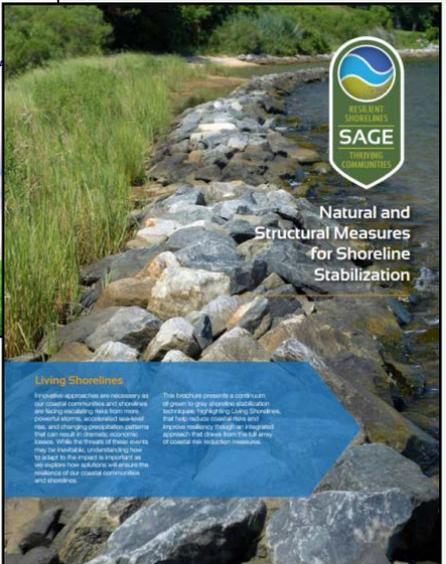


Natural and Structural Measures for Shoreline Stabilization

Living Shorelines

Proactive approaches are necessary as our coastal communities and shorelines are being reshaped. With rising sea levels, increased storm risk, and changing precipitation patterns that can lead to increased erosion, coastal communities are being reshaped. Living shorelines are a proactive approach that draws from the best of coastal risk reduction measures.

This brochure presents a continuum of options to help coastal communities better prepare for rising sea levels and erosion. Living shorelines are a proactive approach that draws from the best of coastal risk reduction measures.



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



Significant Outcomes/Value Produced

- Better coordination within NOAA and other agencies



Challenges

- State/local policies and regulatory structure
- Education and outreach on value living shorelines/GI and acceptable approaches
- Clear design guidelines



Future Opportunities

- Stronger partnerships
- Better coordination
- Revisions to state/local policies and regulatory structures
- Continued education
- Additional guidance

