

# LIVING SHORELINES

Novel engineering approaches and alternative erosion control for Georgia's estuarine environments



## What are Living Shorelines?

Living Shorelines are a novel engineering approach that provide an alternative to conventional armored shorelines constructed to protect lands lying adjacent to estuarine waters from erosion. Living Shorelines use bioengineering in combination with native vegetation plantings to stabilize or enhance wetland habitats.

## Why Implement Living Shorelines?

Riverine and tidal creek erosion is a natural process along the Georgia coast but can, in certain instances, be exacerbated by anthropogenic influences. Historically, property owners have armored their shorelines by constructing rock revetments or bulkheads to combat tidal creek erosion. These armoring methods tend to disrupt the connectivity of the shoreline. Beginning in 2006, a new technique referred to as **Living Shorelines** began to be developed in coastal Georgia. Living Shorelines allow property owners to stabilize an eroding bank and maintain ecological connectivity along the shoreline.

*Living shorelines implement sustainable resources such as oyster shells and native vegetation to create a robust intertidal habitat which improves biodiversity and water quality. They also create upland and marine habitat connectivity and provide a habitat friendly alternative to conventional erosion control shoreline hardening methods*

**Ashantilly Living Shoreline:** Located on Sapelo Island, this was the first Living Shoreline project implemented on the Georgia coast. The Living Shoreline has successfully stabilized the bank throughout two major hurricanes and enhanced habitat with oyster recruitment and native salt marsh plant growth.



Before



After





Living Shoreline located on Little St. Simons Island, GA

## Living Shoreline Projects Goals and Outcomes

In Georgia, the primary goal of a Living Shoreline is to provide an alternative to traditional hardened shoreline engineering designs that hinder or disrupt the natural connections between aquatic environments and adjacent uplands. Secondary goals include the preservation of tidal exchange, sediment conservation, natural plant communities, and necessary shoreline dynamics associated with sea level rise.

Currently, there are seven successful Living Shorelines installed along the Georgia Coast and several more projects in the works. The Georgia Department of Natural Resources has worked and will continue to work with other local, state, and federal agencies and organizations including The Nature Conservancy, National Oceanic and Atmospheric Administration's Restoration Center, the Sapelo Island National Estuarine Research Reserve, the Environmental Protection Agency, and the Marine Extension Service to promote living shorelines as an alternative bank stabilization technique in Georgia.



### Advantages of Living Shoreline Technique:

Creates a vegetated buffer that absorbs and disperses wave energy thereby reducing erosion

Allows for animal access between upland and aquatic habitats

Mimics natural shoreline dynamics

Provides alternatives to the construction of rock revetments and bulkheads for erosion control

Can be equal to or less expensive than structures such as bulkheads and rock revetments

Preserves, creates, or maintains habitat for aquatic plants and animals

Restores critical feeding and nursery habitat for fish

Traps and retains land runoff containing nutrients and pollutants

### Contact Us

Give us a call for more information about living shorelines along the Georgia coast.  
(912) 264-7218

Visit us on the web:  
<http://coastalgadnr.org/LivingShorelines>

Email us:  
[meghan.angelina@dnr.ga.gov](mailto:meghan.angelina@dnr.ga.gov)  
[jaynie.gaskin@dnr.ga.gov](mailto:jaynie.gaskin@dnr.ga.gov)

