

# Sapelo Island National Estuarine Research Reserve





# National Estuarine Research Reserve System

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Applying Science and Education to Improve  
the Management of Estuaries



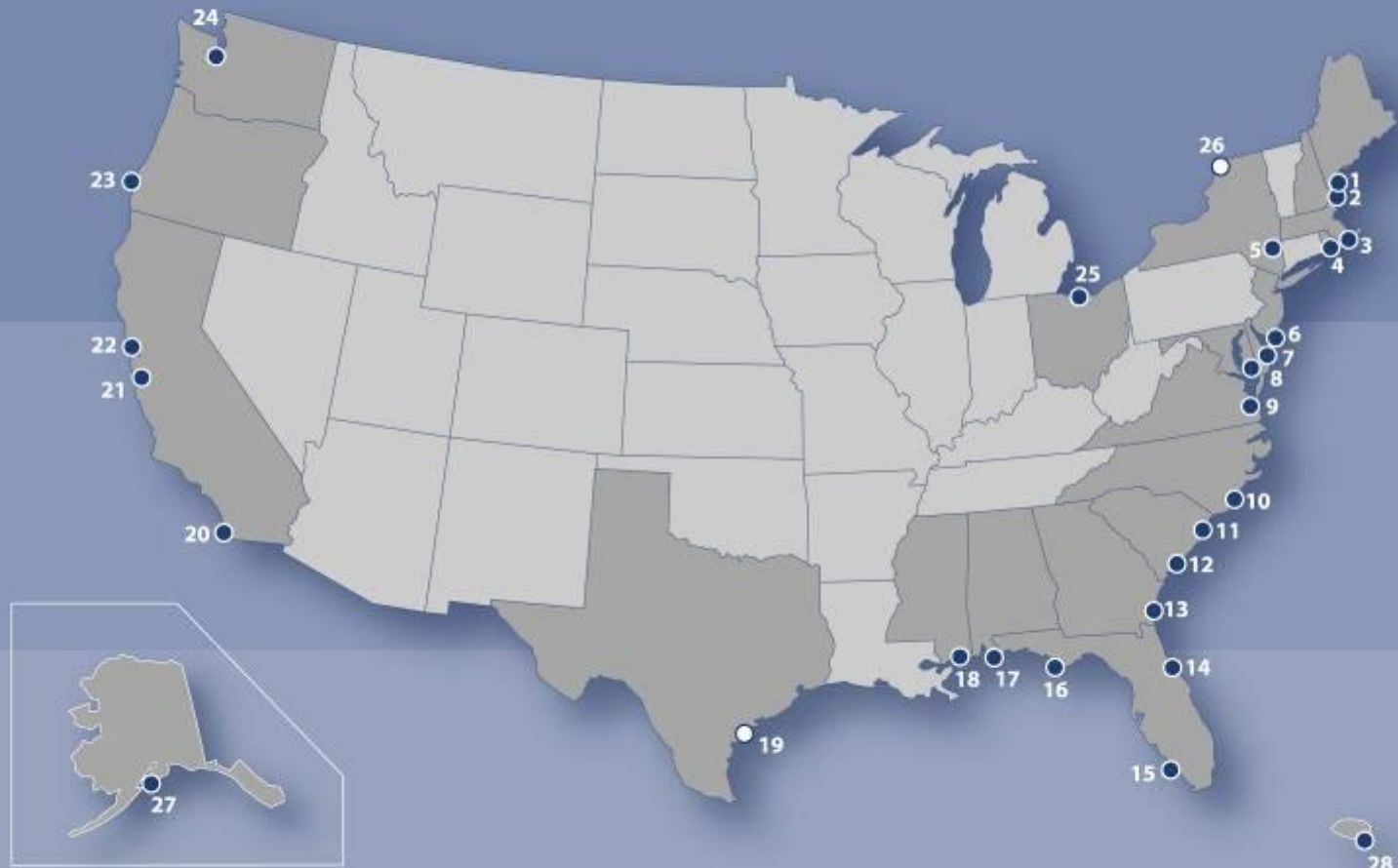
# National System



- Promoting stewardship of the nation's estuaries through science and education ...
- Using a system of locally owned and managed protected areas ...



# A Network of 26 Protected Areas ...



# protected for:

- Long-term research and monitoring
- Education
- Resource stewardship



# state-federal partnership



## State role

- Land ownership and management
- Staff
- Program implementation

## Federal role

- Funding (70%)
- National coordination
- Technical assistance



# Locally Relevant ... Nationally Significant

- K-12 and public education
- Monitoring and research efforts to address local issues
- Resources stewardship





# System-wide Monitoring Program

## Abiotic Monitoring

- Water quality
- Weather parameters

## Ecological Monitoring

- Habitat Change
- Eutrophication

## Land Use Changes



# Coastal Training Program



- Enhance the capacity to use scientific information for decision-making
- Increase networking and collaboration among coastal decision-makers and natural resource managers.



# Visitor Center



# Friends of Sapelo



# Project Highlights



# Native Garden



## NATIVE PLANT GARDEN

### Why use native plants?

Choosing native plants allows developed landscapes to coexist with nature, rather than compete with it. Novice and professional gardeners are turning to native landscaping to manage storm water, reduce maintenance, and promote plant and wildlife conservation.

### For Stormwater Management

Using moisture-loving plants in rain gardens and wetland detention basins slows down and absorbs rainwater, thus reducing the quantity and velocity of storm water runoff while improving water quality.

### To Create Wildlife Habitat

A native plant garden or large planting with a diversity of trees, shrubs, perennials, and grasses provides food and shelter for insects, birds, amphibians, and mammals throughout the growing season. Native plants provide food for insects, and insects provide food for birds. With no insects, we would have no birds.



This native garden has been officially certified by Coastal Wildscapes

### For Less Maintenance

Compared with lawns and mulched tree, shrub, and perennial plantings, landscapes planted with appropriate native plants require less maintenance.

They require minimal watering (except during establishment and drought periods) and they need no chemical fertilizers or pesticides.

### For Beautification

Native wildflowers, flowering vines, shrubs, and trees offer a wide range of colors, textures and forms to create dynamic seasonal displays. Grasses and sedges have interesting flowers and seed heads and yellow-orange fall color. Shrubs and trees have fall color and berries that persist into the winter. Choosing a wide assortment of plants ensures seasonal interest, with the bonus of attracting colorful birds, butterflies and insects.

### For Resistance to Deer Browse

# Pollinator Garden

## What is a pollinator garden?

A pollinator garden is a place where there are trees, bushes and flowers that serve as host plants for caterpillars and provide nectar and protection for butterflies, bees, hummingbirds and other pollinators.



## Why a pollinator garden?

Without pollinators we could not grow food. Since plants are immobile, they require assistance with their reproduction, and that's where pollinators come in. They take pollen from one plant to another, thereby making plant reproduction possible. If plants aren't properly pollinated, they cannot bear fruit or produce new seeds with which to grow new plants. On a small scale, a lack of pollination results in a fruitless tree; on a large scale, it could mean a shortage to our food supply.



## Who are our pollinators?

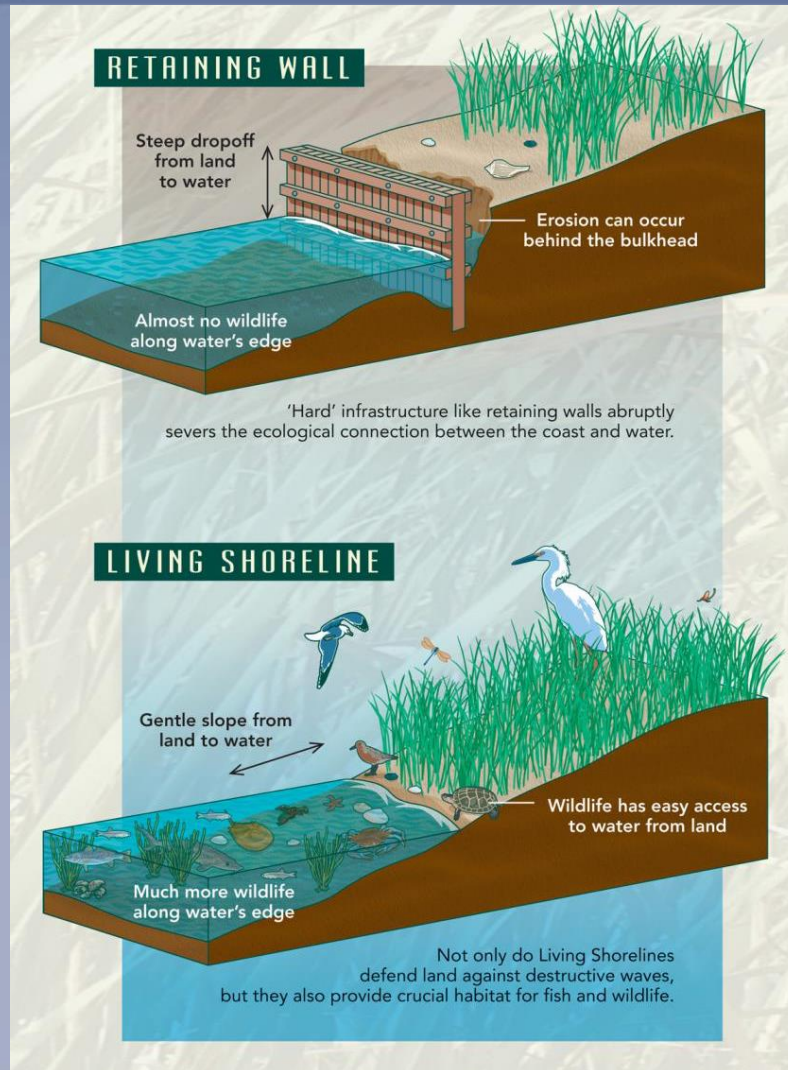
Bees, butterflies, moths, hummingbirds, beetles, wasps and even flies pollinate flowers.

## How to create a pollinator garden.

Plant native species of plants to provide food, and shelter for the pollinators. Provide a water source nearby. Avoid pesticides at all cost. Avoid chemical fertilizers.



# Living Shorelines





# Living Shoreline



# Rainbarrel Workshops



# Rainbarrels

- **35** workshops
- **407** participants

## Long-term evaluation

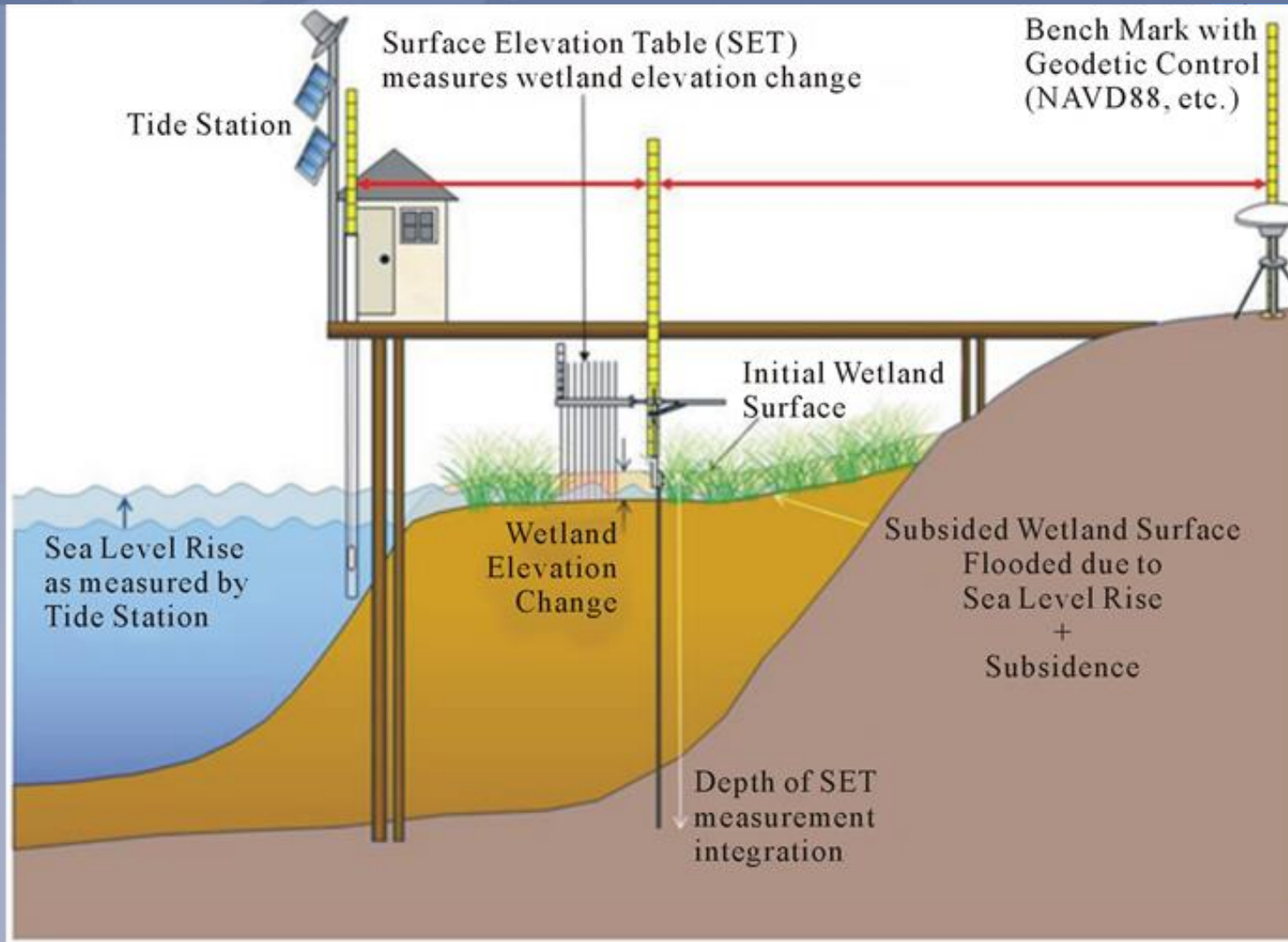
- I have installed my rain barrel as planned 89%
- I would like to add more rain barrels 60%

**Estimated # of gallons being collected annually >300,000 !!!**

- Estimate based on 298 35-gallon drums each collecting 1050 gallons/year calculated from the average rain events in coastal Georgia.





# Sentinel Sites



# Habitat Change Mapping

## Sapelo Island Changes

Sapelo Island Imagery Swipe  

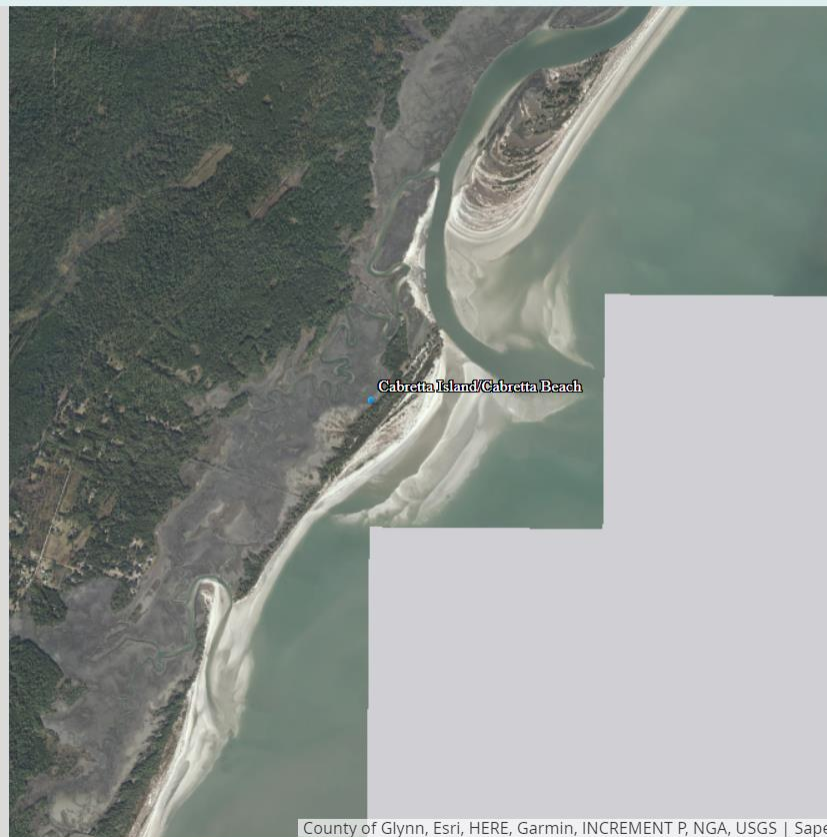
*Sapelo Island National Estuarine Research Reserve - 1942 & 2013 Imagery*




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### Long Tabby Sugar Mill

In the early 1800's, Long Tabby was the plantation headquarters of Thomas Spalding, whose agricultural holdings were among the largest in the South. The two-story tabby structure, built in 1809, was the site of Georgia's first sugar mill, supported by the adjacent tabby cane press. Long Tabby now serves as the administrative office for SINERR and Department of Natural Resources operations on Sapelo. The U.S. Post Office for Sapelo Island is also in Long Tabby.



County of Glynn, Esri, HERE, Garmin, INCREMENT P, NGA, USGS | Sapelo, NERRS | Esri, HERE 

# Gravel Pave Parking Area



# Additional highlights

- Habitat restoration
- Oyster reef ecological studies
- Invasive species monitoring
- SINERR also participates in the Georgia Coastal Ecosystems Long Term Ecological Research (GCE LTER) program and is involved with the development of International Ocean Observing Systems (IOOS) efforts in the NERR system and on the Georgia coast.



# Additional highlights

- Robust K-12 program including Teacher Workshops on the island
- 40<sup>th</sup> Anniversary in 2016
- Social Science studies
- Practicum Series for Planners
- Strength of partnerships





THANK YOU!



Suzanne VanParreren  
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Sapelo Island -  
National Estuarine Research Reserve

