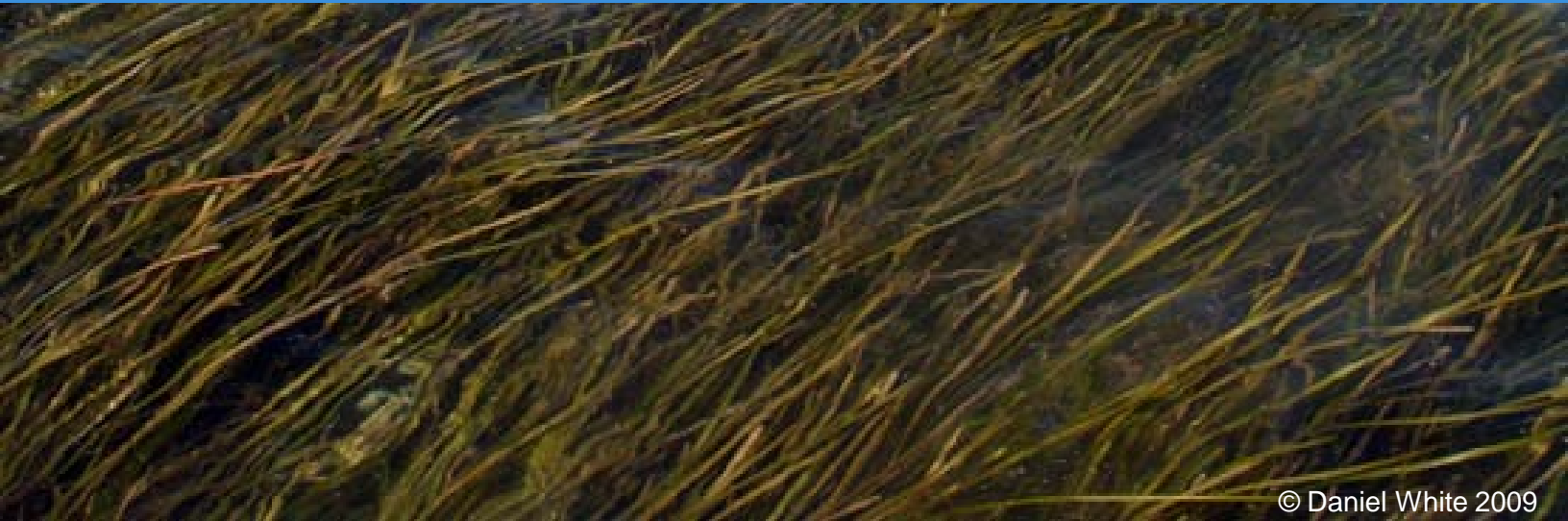


# Big Lagoon, Florida Seagrass Restoration Project

Alabama Chapter

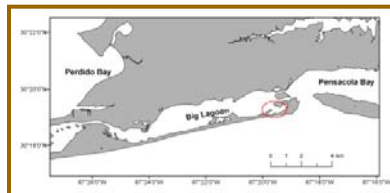
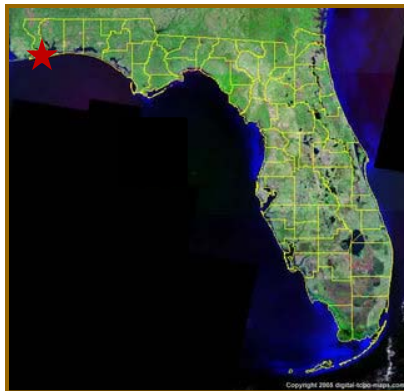


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## Birds as a Passive Fertilizer Delivery System

This project focuses on restoration of seagrass beds (*Thalassia testudinum*) damaged by boat propellers in the Big Lagoon area of the Ft. Pickens Aquatic Preserve and the Gulf Islands National Seashore, using *bird stakes* for avian roosting as a passive fertilizer delivery system.

The northern Gulf of Mexico coastal waters show evidence of nutrient limitation, specifically phosphorus, in seagrass beds.



### Fast Facts

More than 50% of the submerged aquatic vegetation (SAV) in Mobile Bay has been lost since the 1950's.

Prop scars cause habitat fragmentation and impact the overall ecosystem services provided by a healthy, intact seagrass bed.

The *bird stake* restoration technique has been used successfully to restore seagrass beds in Florida Bay, where seagrass grows in phosphate-limited systems.

Guano - bird fecal matter - is rich in phosphorus and nitrogen, and can provide a readily available and abundant source of these limiting nutrients. Thus, we expect that fertilizer additions through bird deposits will enhance seagrass growth, especially for opportunistic species like shoalgrass (*Halodule wrightii*), allowing for rapid colonization and restoration of the propeller-scarred seagrass beds. Efficient colonization by *H. wrightii* will provide habitat value and sediment stabilization benefits in the near-term and allow for the successional restoration of turtlegrass (*T. testudinum*) over time.

Since seagrass beds serve as critical nursery habitat for many commercially and recreationally important finfish and shellfish, several species will benefit from this project:

- shrimp (*Penaeus spp.*)
- blue crab (*Callinectes sapidus*)
- speckled trout (*Cynoscion nebulosus*)
- red drum (*Sciaenops ocellatus*)
- southern flounder (*Paralichthys lethostigma*)
- mangrove snapper (*Lutjanus griseus*)
- gag grouper (*Mycteroperca microlepis*)

In addition, endangered species, such as the West Indian manatee (*Trichechus manatus*), green sea turtle (*Chelonia mydas*) and loggerhead sea turtle (*Caretta caretta*) forage in seagrass beds.



The National Partnership between the NOAA Community-based Restoration Program and The Nature Conservancy implements innovative conservation activities that benefit marine, estuarine and riparian habitats across the United States. The NOAA Restoration Center has worked with community organizations to support locally-driven projects that provide strong on-the-ground habitat restoration components that offer educational and social benefits for people and their communities, as well as long-term ecological benefits.



## Working Together

The Nature Conservancy, Gulf Islands National Seashore, Florida Department of Environmental Protection Coastal and Aquatic Managed Areas' Ft. Pickens Aquatic Preserve and Dauphin Island Sea Lab are working together to monitor this simple, cost-effective seagrass restoration technique for application throughout the northern Gulf of Mexico.

*The mission of The Nature Conservancy is to preserve the plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.*

## for more information

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