



The Nature Conservancy / Florida Chapter

INDIAN RIVER LAGOON

Oyster Reef Restoration Project

importance of oyster reefs

Oyster reefs:

- Improve water quality
- Stabilize creek banks and bottom areas
- Preserve shorelines
- Provide refuge for a variety of wildlife, including shrimp, blue crab, red fish and sea trout.

Oysters:

- Filter and clean water
- Are a food source for fish, birds and invertebrates



Oyster reefs provide habitat for a variety of wildlife © Mat Squillante

Background

Oysters are a keystone species in coastal ecosystems like the Indian River Lagoon. They grow in reefs that provide habitat for many types of commercially and recreationally important finfish and invertebrates, such as blue crab and shrimp.

Oysters are filter feeders, which makes them natural water purifiers. As they feed, they remove algae and sediments from coastal waters. This increases water clarity and increases the amount of sunlight that reaches submerged aquatic vegetation, such as seagrass, that provides habitat and feeding grounds for other wildlife.

Restoring this natural filtration “system” is critical to restoring and maintaining the overall health of the lagoon. The number of native oysters in the Indian River Lagoon has drastically declined since the late 1800s as a result of overfishing, habitat degradation, reduced water quality, increases in disease, and wakes from recreational boating in shallow areas.

Studies have shown that free-swimming oyster larvae will settle on virtually any available hard surface. However, their chance for survival is much greater when they settle on other oyster shells because these provide small oysters the best protection from predators.

Oyster Reef Restoration Project

The Nature Conservancy is coordinating a project to restore 60 to 80 oyster reefs in Mosquito Lagoon within the boundaries of Canaveral National Seashore. University of Central Florida Associate Professor Dr. Linda Walters and her students plan to restore reefs across approximately 40 acres with the help of volunteers. The restored reefs will increase the numbers of oysters and other wildlife that use oyster reefs for shelter.

Oyster reef restoration involves “planting” oyster shell or other hard substrate. In the Mosquito Lagoon project, reefs will be rebuilt using shells attached to mesh to provide



Volunteers create oyster mats © Holy Trinity Episcopal Academy

the structure for oyster larvae to settle on. Newly created reefs will be protected as sanctuaries where harvesting will not be allowed. This will help increase the number of oysters and will help improve their resistance to disease.



UCF student deploys finished oyster mat in Mosquito Lagoon © Linda Walters

How You Can Help

To meet our goal of restoring 40 acres of oyster reefs in Mosquito Lagoon, we need volunteers to help make 4,500 oyster shell “mats.” These mats serve as the building blocks for the oyster reefs.

Each 18” by 18” mat is made up of 36 oyster shells attached with zip ties. It’s a simple and fun activity that is a great project for a group to do in 1 to 2 hours.

Before mat-making begins, a Nature Conservancy representative will provide background information and basic mat-making instructions. Conservancy staff will deliver your completed mats to Dr. Walters for deployment into the lagoon.

For more information, and to sign up your group, contact:
 The Nature Conservancy
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 Melbourne, FL 32901
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project goals

1. With the help of volunteers, create 60 to 80 oyster reefs over approximately 40 acres in Mosquito Lagoon within the Canaveral National Seashore.
2. By restoring oyster reefs, increase diversity of wildlife in the lagoon.
3. Improve understanding of how oyster reefs serve as habitat for many commercially and recreationally important finfishes and invertebrates.

Project Funding

This project is being funded through the National Partnership grant between the National Oceanic and Atmospheric Administration Restoration Center and The Nature Conservancy. This project would not be possible without the support from the following partners:

- University of Central Florida
- Canaveral National Seashore
- Indian River Lagoon National Estuary Program
- St Johns River Water Management District
- Brevard County Watershed Action Volunteer Program
- Citizen volunteers throughout the lagoon region

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.