

# USA Restoration Briefs

• University of South Alabama Oyster Reef and Fisheries Habitat Enhancement Program •

Volume One: Introduction to The USA Oyster Program

Winter 2010

## Highlights

- University of South Alabama (USA) received funding through NOAA Fisheries in 2002-2005 for the Alabama Oyster Reef Restoration Program to enhance and restore oyster habitat.
- In 2006 and 2008-09 the program was expanded to include enhancement of other fisheries habitats, including seagrass and off-shore hard bottom reef habitats.
- Program has four major components:
  1. Targeted research projects
  2. Assessment of marine habitats
  3. Habitat creation/restoration
  4. Public outreach
- These Restoration Briefs will be distributed quarterly to provide the public with information on the program's research conclusions, restoration science advances and application of these findings.

## Background



Alabama's coastal waters have historically produced oyster reefs that are of high ecological and economic significance, as well as an important part of local culture. Some areas of Mobile Bay still support oyster reefs of varying sizes, from a few square meters to tens of acres, but the overall coverage of oyster reefs in Mobile Bay has decreased over the last century. Numerous factors, many of which are of human-induced (e.g. destructive harvesting practices, poor water quality, and shrimp trawling), have contributed to this decline. As a result of these and other stressors, many historically productive areas currently have few live oyster reefs present.

In 2002, the University of South Alabama initiated a multi-disciplinary research program to enhance and restore oyster habitat in Alabama coastal waters. The Alabama Oyster Reef Restoration Program, funded through NOAA Fisheries in 2002 – 2005 was designed to build upon previous and current oyster reef restoration and enhancement efforts within the State of Alabama. With funding in 2006 and 2008-09, the program expanded its scope beyond oyster reefs to include other fisheries habitats such as seagrass meadows and offshore hard bottom reef areas. The resulting program has four major components: 1.) targeted research projects 2.) assessment and inventory of marine habitats 3.) habitat restoration, creation, enhancement and 4.) public outreach and education (see Fig. on back page).

## Previous & Current Research

- Quantifying fisheries benefits of oyster reefs
- Ecosystem services provided by oyster reefs
- Oyster larval transport in Mobile Bay
- Effects of nutrients on oyster ecology in Mobile Bay
- Challenges to oyster reef restoration
- Estimating the importance of northern Gulf of Mexico nursery habitats to adult fish populations
- Effects of hurricanes on growth of spotted sea trout
- Using side-scan sonar technology for assessment of current and historical extents of oyster and seagrass habitats
- Monitoring water quality conditions in Mobile Bay at the Middle Bay mooring
- Assessment of public awareness of benefits of oyster reef restoration

*More specific information on the results and conclusions of these projects will be included in future Restoration Briefs.*

Oyster reef restoration at Point Aux Pins.



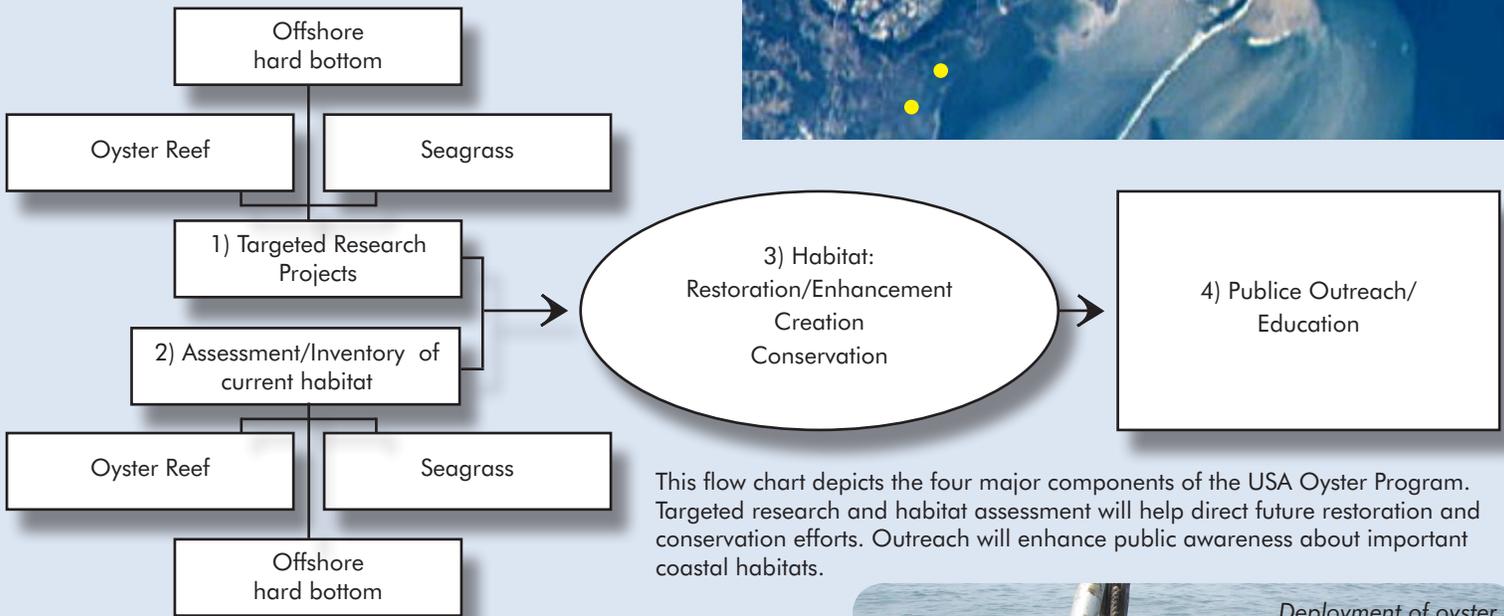
# Program Objectives

The Alabama Oyster Reef and Fisheries Habitat Enhancement Program has three long-term objectives:

- to assist in the development of a long-term strategy for sustained productivity of Alabama's oyster resources and the associated ecological and fishery benefits that accrue from healthy oyster-based habitat
- to develop the scientific understanding necessary to direct current and future fisheries habitat conservation, restoration and enhancement in Alabama coastal waters and adjacent areas
- to provide this information to state and federal management agencies, the fishing industry and the general public through outreach activities



Mobile Bay with locations of the oyster reefs that were restored through the USA Oyster Reef Restoration Program.



This flow chart depicts the four major components of the USA Oyster Program. Targeted research and habitat assessment will help direct future restoration and conservation efforts. Outreach will enhance public awareness about important coastal habitats.

## Purpose of Briefs

As part of the outreach component of this program, these Restoration Briefs have been designed to provide the public and resource managers with the information that has been learned and how those results can be applied in the region to help restore our critical marine habitats.

Look for these briefs every three months and learn more about oyster and fisheries habitat enhancement and restoration.



Deployment of oyster larvae settlement plates.

## Contact Information

**Sean Powers**

Restoration Program Manager

**Steven Scyphers**

Restoration Briefs Editor

Associate Professor of Marine Sciences  
 University of South Alabama  
 & Senior Marine Scientist II, DISL  
 Dauphin Island, AL 36528  
 (251) 861-2187  
 spowers@usouthal.edu

Ph.D. Student  
 University of South Alabama &  
 Dauphin Island Sea Lab  
 Dauphin Island, AL 36528  
 (251) 861-2178  
 sscyphers@disl.org

