Aquatic Habitat Conservation & Restoration | Florida Fish and Wildlife Conservation Commission

## Oyster Reef Habitat Enhancement in St. Andrew Bay, Bay County, FL

### Introduction
St. Andrew Bay is exceptional among Florida’s Gulf Coast estuaries for its biological diversity and clear, high-salinity waters in which seagrasses flourish. Beginning in the 1970s, wastewater effluent and commercial shrimp farming negatively impacted seagrass in a portion of West Bay, one of four hydrologically connected bays in the St. Andrew Bay estuary system. This resulted in a cascading loss of over 200 acres of seagrass in West Bay, reducing its ability to support productive fisheries and wildlife habitat. Recent elimination of these adverse effects created conditions favorable for estuarine habitat enhancement efforts in West Bay.

### Objectives
Enhance St. Andrew Bay’s oyster population and reefs to:
- Enhance fisheries and wildlife habitat
- Absorb wave energy and provide shoreline protection
- Improve water quality
- Create conditions suitable for seagrass recovery
- Test new oyster reef enhancement and restoration techniques that could be used in other similar efforts

### Approach
The FWC and partners installed over four acres of oyster reef habitat along the western shoreline of West Bay in two phases over a 2-year period. Many volunteers also helped. The result is a restored habitat featuring 67 individual reefs stretching over two miles from north to south in roughly five feet of water. Most restored reefs consist of an outer wall of biodegradable oyster shell bags with a center filled with 1-2 feet of clean, recycled oyster shells. Reefs were constructed during fall, when oyster abundance in the plankton was high and oysters were likely to settle on shell materials. Settled oysters grew rapidly and “glued” loose shells together to make solid reef structures. The restored oyster reefs mimic natural reef shapes, with gaps between them to allow for natural water flow. Project funding came from the National Fish and Wildlife Foundation’s Gulf Environmental Benefits Fund and Shell Marine Habitat Program, and the FWC’s Marine Resources Trust Fund.

### Benefits
About 20 million oysters are living on restored reefs in St. Andrew Bay, with that oyster population filtering about 1 billion gallons of water a day. This is improving the clarity and quality of West Bay waters. Thirty-one species of fish and invertebrates, including pinfish, gray snapper, blue crabs and stone crabs, have been documented on the reefs. In their role as “condominiums of the sea,” the oyster reefs also are providing nursery habitat for dozens of estuarine species. Additionally, just one acre of oyster reef habitat can provide an economic value of about $4,000 a year in fisheries production. Restored oyster reefs in St. Andrews Bay also will help break up the energy of waves during storms, thus reducing sediment movement and bolstering shoreline protection.

Done in partnership with:

Aquatic Habitat Conservation and Restoration manages, enhances, and preserves aquatic habitat in Florida for the benefit of wildlife, aquatic life and the people of Florida. For more information, please email AquaticHabitat@MyFWC.com.