

NRDA Proposal: Replenishing/Enhancing Fishery Stocks in the Northern Gulf of Mexico

Eligibility

Sarasota Bay was named in the Water Quality Act of 1987 as an estuary of national significance – the only Gulf estuary legislatively designated by Congress accordingly. Under section 320 of the Act, the Bay and watershed lands are federally and comprehensively managed utilizing appropriate federal and state laws, stringent water quality regulations (numeric criteria), and local ordinances including comprehensive plans laying the groundwork for action. The State of Florida recognized the importance of the area in 2004 in forming a Special District to implement the Comprehensive Conservation and Management Plan (CCMP) for restoration and protection.

The CCMP contains major elements to restore lost habitats throughout the Bay and watershed to replenish natural resources (fish stocks), improve water quality and enhance recreational opportunities. Since CCMP approval in 1995, 90 projects have been permitted and completed to replenish natural resources damaged during the spill encompassing 1650+ acres of new habitat. Additionally, 4000 acres of new seagrass has been restored utilizing nutrient reduction and water quality techniques outlined in the TIG criteria. Accordingly, the Program has developed a vetted five-year master habitat restoration plan. The plan was incorporated into the Southwest Florida Regional Ecosystem Restoration Plan, authorized by the Gulf Council and incorporated into the FDEP portal.

The proposal here is to continue this successful work recognizing the connectivity between the northern Gulf reef fishery and the juvenile habitats provided in Sarasota Bay. Once federal funds are utilized on a property in Sarasota Bay, the property essentially becomes federally managed in perpetuity with approved management plans. The concept is to offset habitats and resources damaged in the spill utilizing an adjacent mitigation area.

Background

With approval of the Comprehensive Conservation and Management Plan for Sarasota Bay in 1995, the Sarasota Bay area embarked on a comprehensive initiative to increase fishery productivity in the Bay and nearshore Gulf waters. The approach addressed: seagrass recovery, oyster and artificial reef construction and wetland restoration. The projects were specifically designed to create habitats for commercially and recreationally important fish species. More recently, the Program is addressing fishery productivity in tidal creeks; and living shorelines to create mosaics of habitats. These mosaics are the key to restoring Gulf fishery through essential fish habitats.

To gauge performance, the program contracted with FWC in 2008 to conduct fishery independent monitoring. It is anticipated that this data will be able to show trends within a few years.

Water Quality and Seagrasses

Total seagrass acreage in Sarasota Bay has increased 4000 acres or 51% since 1989 with a 300% increase in continuous acres over the same period. The increase has occurred due to a 67% reduction in nitrogen pollution by: eliminating wastewater discharge, constructing storm water treatment systems and through educational programs designed to reduce non-point source pollution (fertilizer ordinances). Seagrass beds are prime juvenile habitat for reef species such as snapper and grouper; and for migratory redfish found in the northern Gulf.

Reefs

Twelve (12) artificial reefs have been created or enhanced since 1995 and four (4) oyster bars created in the Bay. The artificially reefs have been created as staging areas for offshore release of recreationally and commercially important reef species including grouper and snapper. SBEP monitoring has shown significant numbers of these reef species inhabiting the sites.

Wetlands

Approximately 90 restoration projects have been completed improving an estimated 1650 acres in Sarasota Bay. These systems include the excavation of tidal pools and creation of fringing marsh habitats to maximize fishery productivity. These sites also provide foraging areas for birds and other wildlife.

Tidal Creeks

Recent studies completed in southwest Florida suggest the tidal creeks are more important than originally believed from a fishery standpoint – particularly for Snook and Redfish.

Living Shorelines

Over 100 miles of hardened shorelines were created in the Bay area prior to the passage of the Clean Water Act of 1972. The reestablishment of living shorelines maybe extremely important in the restoration of fishery in the Gulf. Certainly, juvenile redfish, grouper and snapper utilize these environs during the juvenile stages.

Tidal Creeks

The SBEP recently completed the first comprehensive study of tidal creeks in Florida sampling sixteen creeks in SW Florida. Juvenile red drum and snapper were found in large numbers up in the creeks. Further analysis of creek utilization of important species is currently being funded by the SBEP.

Proposed Scope

The SBEP is poised to assist in replenishing fishery stocks in the Gulf by increasing the capacity of Sarasota Bay to produce commercially and recreationally important species; as well as forage fish to increase stocks in the Gulf. In this regard, the SBEP has worked with the community over the past year to develop a five-year master plan for habitat restoration. The master plan addresses the elements described above and is currently being implemented throughout the region as funding becomes available.

The local governments across this region are committed to utilizing BP spill money including (Restore pots 1, 2 and 3) and other sources.

Although Gag Grouper spawn in the northern Gulf, the larvae are transported in the loop current for refuge in the southern Gulf estuaries; and ultimately replenish spawning stock for succession.

The following projects in Sarasota Bay are proposed in this phase of work:

- South Lido Wetlands Restoration
- FISH Preserve Wetlands Restoration
- Palma Sola Bay Living Shoreline
- City of Sarasota Bay-front Living Shoreline
- Bay and Nearshore Gulf Artificial Reef Enhancement
- Siesta Key Pipeline (last direct discharge to the Bay)