

**CHARLOTTE COUNTY
ARTIFICIAL REEF MANAGEMENT PLAN**



July 2006

Charlotte County Marine Extension

25550 Harborview Rd.

Port Charlotte, FL 33980

PROGRAM HISTORY

Fishing, both commercial and recreational, has always been an important factor in the economic development of Charlotte County. It was the abundance of fish and other marine resources that first drew early settlers to this area. Today, people are still attracted to Charlotte County because of the fishing and other water related recreational pastimes. Over the past three decades the number of people that have settled in this area has increased tremendously. Also, the number of "seasonal" residents and tourists continues to grow each year. This increased fishing pressure and the continued destruction of estuarine habitats through development and pollution has placed a great strain on the marine resources of Charlotte County.

Artificial reefs are usually manmade structures or objects specifically placed in selected areas of the marine environment to provide or improve habitat for many types of fishes, plants and invertebrates. Fish and other marine organisms utilize artificial reefs as living space, nursery areas, and feeding grounds, as well as for protection. Artificial reefs provide structure and hard surfaced substrata for colonization by various plant and animal populations.

Areas with flat, featureless bottoms, typical of much of the Gulf of Mexico, often support populations limited in size and distribution due to the scarcity of suitable substrata. By providing substrata and therefore an opportunity for the establishment of a hierarchy of plant and animal species attached to or associated with the reefs, the resulting food web complex has the potential for ultimately increasing the numbers of fishes, crabs, lobsters, and other marine life.

Today most coastal states have very active marine artificial reef programs, and spend millions of dollars to develop reefs to be used by sport and commercial fishermen, as well as recreational divers. Florida is the nation's leader in the number of artificial reefs developed. From 1980 to 1997 over 480 publicly funded reefs were constructed; more than double the number of any other state.

Charlotte County first became involved with artificial reef construction in the late 1960's with the building of the Englewood Fish Haven.

Today the County maintains 8 reefs, which are either permitted or have held permits since the 1990's. Six are located in the near shore Gulf of Mexico waters and two are located within the Charlotte Harbor estuary.

REEF OBJECTIVES

- Enhance easily accessible recreational fishing and diving opportunities in the Gulf of Mexico waters.
- Create reef habitat for marine fish, crustaceans and encrusting organisms.
- Enhance recreational fishing opportunities and provide habitat for juvenile fish in inshore bay waters.
- Enhance recreational fishing success of shore-based anglers fishing from piers.

PROGRAM FUTURE AND FIVE YEAR CONSTRUCTION PLAN

New artificial reef habitat and existing habitat enhancement will provide recreational fishing and diving opportunities and provide habitat for juvenile fish. With the construction of the Tremblay 5 Mile reef in 2003 and the Novak (formally Gasparilla) 2.5 mile reef in 2003 the County has begun its inshore reef plan. Our inshore reef sites will have at least four major reef piles to be placed two per year. These sites will be easily accessible to boats that do not have LORAN, GPS or depth finders. Easily found reefs tend to be the most over-fished, it is not uncommon to see ten or more boats anchored over the these reefs on any given day, especially during the winter season when the boating population dramatically increases. As such, a system of “feeder” reefs will be used. A main pile will be deployed to attract the majority of the boaters while additional patch reefs around the site will receive less use and serve as “feeders” to the main reef pile. Input from the general public indicates a desire for additional reefs in the 2 - 5 mile range.

Five Year Plan Summary

Permit two new sites in the 2 – 5 mile range.

Permit a new deep water (100 ft.) site for large vessels

Reopen the Palm Island Ferry Reef for re-nourishment

Deploy materials of opportunity and reef modules at the Novak, Tremblay, and Palm Island Ferry reef sites

REEF MONITORING AND MAPPING

Charlotte County reefs will be monitored by the County. Divers will conduct mapping and monitoring of the reefs using commonly accepted practices. Attempts will be made to quantify colonization of reef materials by encrusting organisms. Fish species and density counts will be recorded for each reef. New reefs will be surveyed quarterly for the first year and at least annually during subsequent years. Attempts will be made to include all older reefs in our annual monitoring.

The location of all County sites with differential GPS will be the primary objective of our Monitoring and Mapping Plan. The long-range goal of the plan will be to have an accurate map of each reef site with descriptions of each material pile. A list of species present, divability, and fishability will also be made. Success evaluations will be made and recommendations for future renourishment.

Attempts will be made to quantify the usage of existing reefs. The inshore reefs >3 miles will be surveyed at varying times during the year (weekends, weekdays, and holidays in and out of season). Future attempts will be made to quantify usage an offshore reefs.

REEF PERMITTING

Charlotte County currently has two valid reef permits; The Tremblay and the Novak reef sites. The opened sites have made it easier for private contractors to donate materials to the County. In order

to meet the goals of our five-year plan we will be opening four additional sites; the Palm Island Ferry 7 mile, 2 additional 2-5 mile sites and one deep site (100ft).

SITE SELECTION

The selection process for permitting a new site involves input from our Advisory Board members, evaluation of gaps in coverage of our existing artificial reefs, and available environmental resource information.

Bottom surveys will be conducted before permitting each site. The bottom survey will consist of driving transects in a North, South, East, and Westerly direction from the center coordinate while monitoring the bottom with a bottom machine. A cement cinderblock with a buoy will be deployed at the proposed center coordinate. Using a tape measure, County divers will survey a 10-meter radius around the center point. Within the area all species observed will be recorded. Divers will swim around the center location in a 5-foot radius pushing a 4-inch diver's knife into the sediments every 2 to 3 feet to search for any hard bottom. Additionally, divers will swim 100' out from the center point in a North, South, East, and Westerly direction searching for hard bottom.

- Bottom type – Only sites which have been determined to have a hard sand or rock base which can support the weight of the reef structures will be considered.
- Depth/Navigation – No reef materials will rise more than half the water depth measured at MLLW
- Seagrasses and Existing Livebottom – No sites with seagrasses or existing live-bottom will be considered for artificial reef development
- Accessibility – Accessibility is an important factor in selecting reef sites. User groups need to be able to access the reefs and well planned reef projects make more than one reef accessible on a single trip by considering the spacing proximity, depth, activity and targeted fish species.

PERMITTING

Reef permit applications are reviewed at the county level by the Charlotte County Sea Grant Advisory Committee. The Florida Department of Environmental Protection must review/issue artificial reef permits for the State inside nine miles in the Gulf of Mexico. At the Federal level, the US Army Corps of Engineers, the US Coast Guard and the US fish and Wildlife Service must review or issue permits for artificial reef construction.

DONATED REEF MATERIALS

All donated materials will be placed upon permitted sites and placement will be supervised by artificial reef program staff. Materials will be inspected by staff and pre deployment notifications will be given to U.S. Coast Guard, and the Fish and Wildlife Conservation Commission Division of Law Enforcement to allow them the opportunity to also inspect the materials. An Artificial Reef Materials Cargo Manifest will be issued by the County before deployment.

ACCEPTABLE MATERIAL TYPES

All materials used by the artificial reef program are constructed, donated or purchased at little cost. Clean concrete products such as culvert, pilings, bridge decking and other concrete “materials of opportunity” are materials of choice. Larger steel vessels and barges of 30 feet or more make excellent reef materials if they pass the Coast Guard inspection for seaworthiness and are free of pollutants. Barges receive special additions such as holes strategically placed in the sides for fish penetration and/or habitat materials added to the top. They are also deployed only in deeper water to avoid near shore currents.

All materials used for artificial reef construction are inspected by the artificial reef coordinator or representative. The reef coordinator or representative is also on site when all materials are placed on the reef site.

REEF DEPLOYMENTS

All reef materials are placed within the boundaries of the permitted reef site and verified by GPS. This is accomplished by marking the four corners of the site with marker buoys and marking each individual drop site with a marker before deployment.

After reef material placement, notification in latitude and longitude, to the nearest hundredth of a minute, is forwarded to the proper State and Federal agencies. A benchmark is set at each drop site to measure movement and all sites will have a site map on file to document layout. All new deployments will be added to the site map on a timely basis

PUBLIC INFORMATION AND EDUCATION

The location of artificial reefs in and around Charlotte County can be found in an artificial reefs publication printed by the marine agent, in the Boating and Angling Guide to Charlotte Harbor and on the Sea Grant web site. The Sea Grant marine agent addresses a large number of user groups each year where artificial reefs are a primary topic.

CHARLOTTE COUNTY ARTIFICIAL REEF PROGRAM ADVISORY BOARD

The Charlotte County Artificial Reef users group will be composed of the following groups:

Organization	Contact
Fantasea Scuba	Capt. Jim Joseph
Spare Time Dive Charters	Capt. Jeff Steele
US Coast Guard Auxiliary	Paul Marcuzzo
King Fisher Fleet	Capt. Ralph Allen
Next Tide Fishing Charter	Capt. Mike Mannis
Charlotte Harbor National Estuary Program	Maran Hilgendorf
Mote Marine Laboratory	Dr. Brad Robbins
Florida Gulf Coast University	Dr. Greg Tolley