



13th District, Representative Vern Buchanan (R)  
14th District, Representative Connie Mack (R)

16th District, Representative Thomas Rooney (R)

The Nature Conservancy recommends \$14,000,000 over five years to restore hydrologic functions, shellfish, seagrass, and mangrove habitats in Charlotte Harbor.



Roseate Spoonbill and Oyster Reefs in Charlotte Harbor Estuary. © M. Brown

#### AT A GLANCE:

**Description** Restoration of hydrologic functions, shellfish, seagrass, and mangrove habitats.

**Project area** Portions of the 350 square mile Charlotte Harbor Estuary.

**Recent funding history** A minimum of \$1,250,000 in funding has been received from NOAA, NFWF, SWFWMD, SCCF, FishAmerica Foundation and partners for estuarine restoration projects in Charlotte Harbor

**Estimated total cost** \$14,000,000 over five years

**Project authority** Florida Department of Environmental Protection's Coastal and Aquatic Managed Areas program, Florida SeaGrant, Southwest Florida Water Management District, Sanibel-Captiva Conservation Foundation, Florida Gulf Coast University and The Nature Conservancy

**Other Investments** None

### Project Criteria

Consistent with Section 1006 of the Oil Pollution Act, this project will:

- Contribute to making the environment and the public whole by restoring the estuarine complex of habitats and species that include oyster reefs, hard clam, scallops, seagrass and mangrove and associated fish species. By incorporating multiple ecosystem components on a large scale, the cumulative benefits supercede the benefits if multiple small projects were conducted piecemeal. The project includes restoration of an estimated 15 acres of oyster reef, 1,200 acres of seagrass, 100 acres of mangrove, clams and scallops throughout 30,000 acres of the estuary, and hydrologic restoration of approximately 200 acres of state and privately owned lands.
- Address impacts to shellfish, seagrass and mangrove habitats, and to their associated ecosystem services including fish production, water filtration, nitrogen removal, protection of shorelines and marsh land from storm surge, nursery habitat for fishes and invertebrate species, and food sources for a variety of recreationally and commercially important species.
- Restore estuarine habitats, particularly oyster reef, seagrass and mangrove. The meta populations in Charlotte Harbor are a source for larvae, propagules and spawning adults to those areas directly damaged by the oil spill through Gulf-wide circulation patterns, therefore making the restoration of these adjacent areas in the Gulf critical.
- Portions of the project have gone through the Florida State Clearinghouse and been approved under NEPA, CZMA, EO 12372, and Section 403.061(40) of the Florida Statutes, and is consistent with the FCMP. A multi-agency team of federal, state, local and nongovernmental partners has been formed to advance this project. Many of the project elements have received the required permits and could be initiated within 90 days of receipt of funding.

### Project Scope

Charlotte Harbor, the second largest estuary on Florida's Gulf coast, is a biologically diverse system and marine priority area for many governmental and non-governmental partners. Charlotte Harbor was designated an "estuary of national significance" in 1995 and became the Charlotte Harbor National Estuary Program (CHNEP). Salt water from the Gulf of Mexico mixes with freshwater sources from three large rivers. Declines in the extent of many of the estuarine habitats, including seagrass, oyster reefs, shellfish aggregations, mangroves and native shoreline habitats, are due to several factors including dredging, stormwater runoff, boat propeller scarring, development, mosquito ditching, and storms.

The project will use the most appropriate methodologies to improve habitat for commercially and recreationally important finfish and shellfish; restore forage and nesting areas for birds, reduce wave energy, shoreline erosion and

turbidity, and stabilize sediments. The project provides a science-based approach to restoration of the habitats that directly influence the estuarine health and related human economies of the greater Charlotte Harbor area. The project includes pre- and post-restoration monitoring, as needed, to map and characterize the affected habitats and active restoration of oyster reefs, seagrass and mangroves habitats, scallop and hard clam populations, and hydrologic restoration of adjacent lands.

### Project Status

The project is a high-priority for restoration by the US Fish and Wildlife Service, Florida Department of Environmental Protection, TNC and partners. Implementation of this project is contingent on funding availability. The project accomplishments will include a GIS-based map and characterization report of the status of oyster reefs in Charlotte Harbor that will be available to partners and the public through the Gulf of Mexico's Restoration Decision Support System. In addition, the project will restore an estimated 15 acres of oyster reef, 1,200 acres of seagrass, 100 acres of mangrove, clams and scallops throughout 30,000 acres of the estuary and include hydrologic restoration of approximately 200 acres of state and private owned lands. The partners are in various stages of implementation readiness, most with permits in hand. The overall project timeline is five years.



Volunteers planting mangroves in Charlotte Harbor.  
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### Relationship to Existing Federal/State Plans

As of 2010, 15% of the lands within the CNEP's designated area, over 460,000 acres, is under conservation management. These include the J.N. "Ding" Darling National Wildlife Refuge, six aquatic preserves, four state parks, two water management districts, Charlotte and Lee Counties, and cities and towns. The project addresses management and restoration needs identified in the Charlotte Harbor National Estuary Program's Comprehensive Conservation Management Plan, the Florida Wildlife Action Plan entitled "Florida's Wildlife Legacy Initiative," the management plans of the aquatic preserves, and the recently completed comprehensive management plan for J.N. "Ding" Darling National Wildlife Refuge. This project would further leverage other restoration efforts occurring across the Gulf of Mexico including those in Mississippi, Alabama, Louisiana, Texas, and other areas in Florida.

### Benefits to Injured Natural Resources

This project will provide critical nursery habitat for numerous finfish and shellfish stocks and federal trust species, especially while areas more affected by the recent Deepwater Horizon oil spill are being cleaned-up. The restoration efforts will help federally listed species such as sea turtles and the smalltooth sawfish, and other species including Atlantic sturgeon, snook, manatee, black skimmers, brown pelicans, great blue herons, great egrets, least terns, royal terns, and others, that were affected by the oil spill. This project will not only help in the recovery of these populations Gulf-wide, but it will also invest in their long-term habitat needs, providing areas for resting, forage and shelter into the future.

### Job Creation and Economic Value

A minimum of 11 jobs will be created to construct and deploy the various activities encompassed by this project. This project will help to support and increase the economy by improving or restoring commercial and recreational fisheries, as well as benefiting tourism and fisheries-related industries.

### Local and State Supporters

USFWS, NOAA's Restoration Center, Charlotte Harbor National Estuary Program, Florida Department of Environmental Protection Coastal and Aquatic Managed Areas program, Florida SeaGrant, Florida Gulf Coast University, Southwest Florida Water Management District, Sanibel-Captiva Conservation Foundation, Lee and Charlotte Counties, and the Friends of the Charlotte Harbor Aquatic Preserves.

#### The Nature Conservancy Worldwide Office

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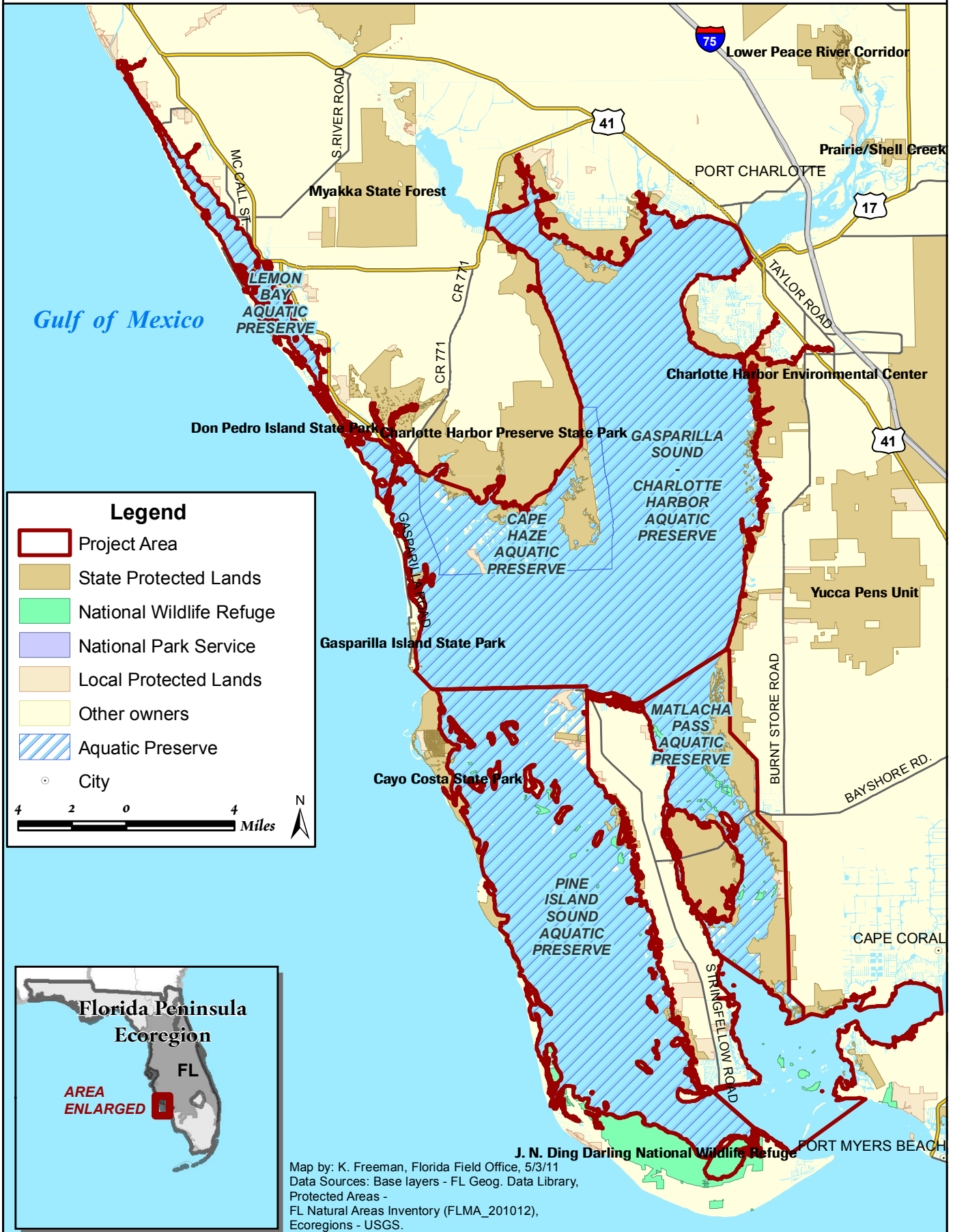
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# Ecosystem and Shellfish Restoration, Charlotte Harbor, FL

## Gulf of Mexico Restoration Project



**Legend**

- Project Area
- State Protected Lands
- National Wildlife Refuge
- National Park Service
- Local Protected Lands
- Other owners
- Aquatic Preserve
- City

4 2 0 4 Miles



J. N. Ding Darling National Wildlife Refuge  
Map by: K. Freeman, Florida Field Office, 5/3/11  
Data Sources: Base layers - FL Geog. Data Library,  
Protected Areas -  
FL Natural Areas Inventory (FLMA\_201012),  
Ecoregions - USGS.