The Nature Conservancy
Protecting nature. Preserving life.

Living Shorelines and Oyster Reef Restoration in Pensacola Bay, FL

1st District, Representative Jeff Miller (R)

The Nature Conservancy recommends $8,000,000 over 5 years to create up to 8 miles of living shoreline and oyster reef in Pensacola Bay.

East Bay shoreline post-Hurricane Ida showing significant erosion and the need for living shoreline restoration. © Shelley Alexander

AT A GLANCE:

Description Restoration to enhance oyster reefs and salt marsh shorelines.

Project area 8 miles of living shoreline/oyster reef restoration.

Recent funding history FDEP has received funding for a portion of the project from the USFWS Coastal Program, NFWF oil recovery grant; since 2002, approximately of $2.59 million for estuarine restoration.

Estimated total cost $8,000,000 over 5 years

Project authority Florida Department of Environmental Protection

Other Investments Partners have received more than $2 million for restoration projects from various federal and state funding sources including NOAA, USFWS, Gulf of Mexico Foundation, Ocean Trust, FL Coastal Management Program, Garcon Restoration Trust Fund, and NFWF Shell Oil grant.

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 oyster reefs that historically were widespread throughout the Pensacola Bay area. Restoration up to 8 miles of living shoreline and oyster reef habitat will be accomplised by deploying oyster shell and other suitable substrate.

- Addresses impacts of the Deepwater Horizon oil spill to oyster reefs and associated ecosystem services that include reduced sustainable harvest, fish production, water filtration, nitrogen removal, protection of shorelines and marsh land, nursery habitat for fishes and invertebrate species, and food sources for a variety of species.

- The project will restore oyster reef habitat in a substrate limited water body as well as surrounding essential fish habitat; increase benthic productivity from oyster reef biodeposits to sediment; enhance recruitment and production of fish and mobile crustaceans; removal of suspended inorganics, phytoplankton, and detrital particles thereby reducing turbidity and improving water quality; and dissipate wave energy thereby protecting the shoreline and wet flatwood community on adjacent state and federal lands.

- In conjunction with NEPA's Minor Project Activities NAO 216-6 6.03.c.3(c), Restoration Actions NAO 216-6 6.03.b2, and Nao 216-6 6.03.b3, the proposed project is for a minor amelioration in which restoration actions will not have significant impacts on the human environment, but are intended to restore an ecosystem and habitat.

Project Scope

Creation of living shorelines that integrate oyster reef restoration, which will in turn protect and promote the expansion of coastal marsh and seagrass, is being applied throughout the Gulf of Mexico. Restoration will be planned for those areas where the science points to a high likelihood of success. The project will apply the most appropriate substrate for oyster larvae to settle and colonize; ultimately serving as nursery habitat for commercially and recreationally important finfish and shellfish; providing forage and nesting areas for birds, dampen wave energy, decrease shoreline erosion, stabilize sediments and decrease turbidity. The project will apply the expertise and lessons learned through years of experience by the partners as well as the living shoreline/oyster reef demonstration sites in Alabama, Mississippi, Louisiana, Texas and Florida. Additional sources of expertise and experience will be drawn from the many projects successfully funded through the national partnership between The Nature Conservancy and NOAA's Community-based Restoration Program.

The project provides a comprehensive science-based approach to restoration that includes pre-restoration monitoring to map and characterize the remaining oyster reefs in Pensacola Bay followed by development and

implementation of restoration activities. This information does not presently exist and is critical to understanding the restoration needs in this region prior to implementation of a restoration project.

Oysters provide essential services for the ecology and economy of the Gulf. © Karen Oeltjin

Project Status

The Project is identified as a high-priority site for restoration by the US Fish and Wildlife Service, Florida Department of Environmental Protection, and The Nature Conservancy. Initiation and completion of this project are contingent on funding availability. A pre-restoration monitoring plan is in development. The project accomplishments will include a GIS–based map and characterization report of the status of the oyster reefs in Pensacola Bay that will be available to partners and the public using the Gulf of Mexico's Restoration Decision Support System. In addition, the project will create up to 8 miles of living shoreline that integrates oyster reef restoration. The overall project timeline is 5 years. Initiation and completion of this project are contingent on funding availability.

Relationship to Existing Federal/State Plans

The project will address components of Florida's Wildlife Action Plan. The Initiative identifies nine marine habitat categories as having the highest relative threat status, which include bivalve reef, salt marsh and submerged aquatic vegetation. The proposed project is partially within the boundaries of the state's Yellow River Marsh Aquatic Preserve and is adjacent to Eglin Air Force Base. Although not officially occurring on DOD lands, the project would help to decrease erosion occurring along the west boundary of Eglin AFB that borders East Bay. This project supports The Nature Conservancy's Global Marine Team Strategic Plan (2008-2010) and TNC's Identification of Priority Sites for Conservation in the Northern Gulf of Mexico: An Ecoregional Plan (Beck et al. 2000). This project would further leverage other restoration efforts occurring across the Gulf of Mexico.

Benefits to Injured Natural Resources

This project will provide critical nursery habitat for numerous finfish and shellfish stocks and federal trust species including: Gulf sturgeon, gray snapper, gag grouper, seatrout, blue crab, and stone crab. Additionally, the restoration efforts for this project will provide habitat for transient birds and reptiles, including black skimmers, brown pelicans, common terns, great blue herons, great egrets, least terns, royal terns, tricolored herons, sea turtles and others, that were affected by the oil spill. This project will not only help in the recovery of these displaced populations specifically, but it will invest in their long-term habitat needs, providing areas for resting, forage and shelter into the future.

Job Creation and Economic Value

Crews will be needed to construct and deploy the living shoreline/ oyster reef restoration technologies that create the foundation for recovery of oyster reefs. Based on past jobs created by the Alabama ARRA project, this effort can provide immediate jobs for Florida residents affected by the oil spill.

Local and State Supporters

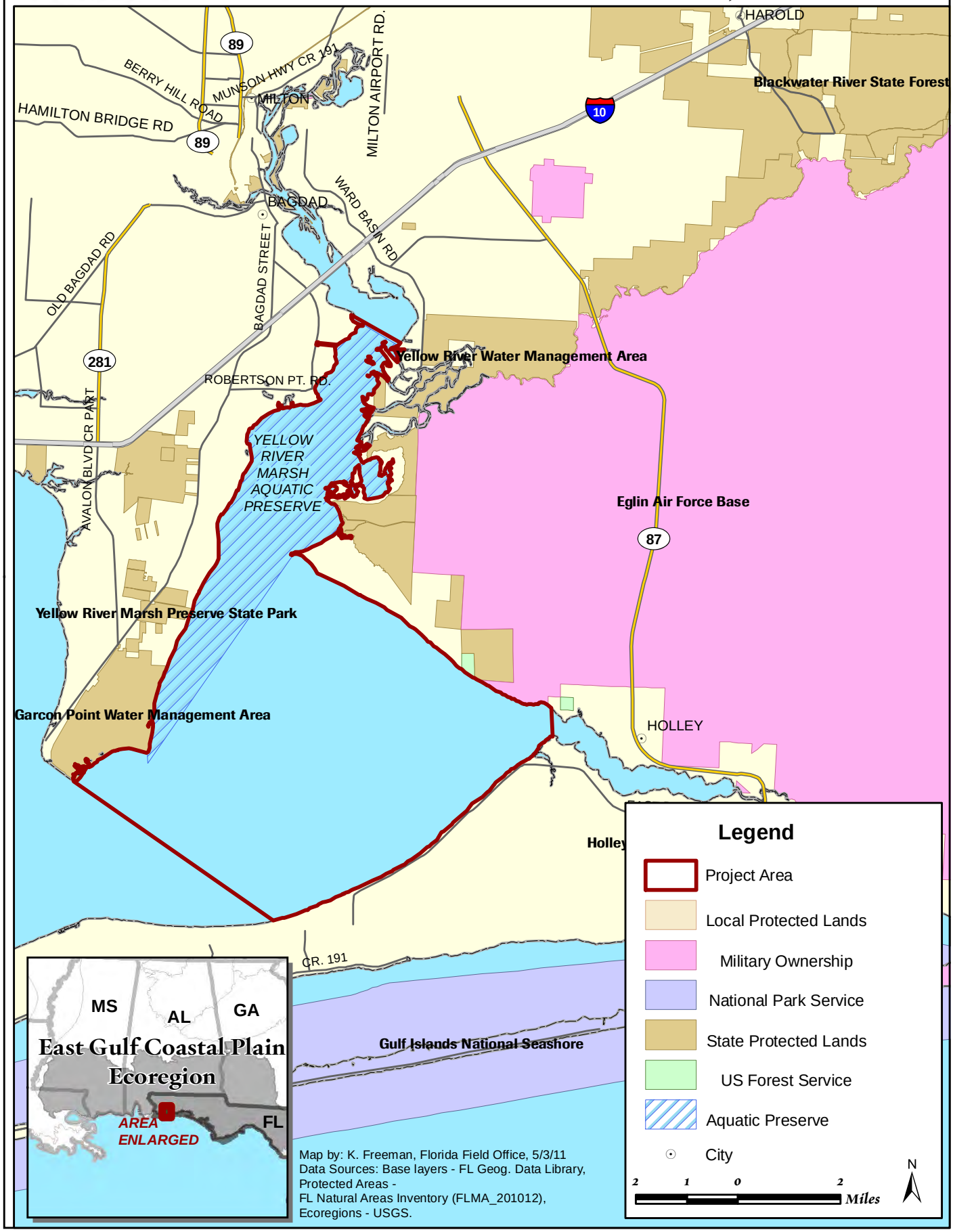
The project is supported by and will be managed through the Florida Department of Environmental Protection's Ecosystem Restoration and Coastal and Aquatic Managed Areas programs. Partners include The Nature Conservancy, Dauphin Island Sea Lab, US Fish and Wildlife Service Coastal Program Office, NOAA's Restoration Center.

The Nature Conservancy Worldwide Office
Kacky Andrews
Director of Large Aquatic Ecosystems
703/841-5321
kacky_andrews@tnc.org

The Nature Conservancy in Florida
Anne Birch
Coastal Restoration Director
321/956-7711
abirch@tnc.org

Florida Department of Environmental Protection
Amy Baldwin Moss
Ecosystem Restoration Manager
850/595-0559
Amy.Baldwin@dep.state.fl.us

Living Shoreline and Oyster Reef Restoration, Pensacola, FL
Gulf of Mexico Restoration Project



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.