FLORIDA COASTAL MANAGEMENT PROGRAM

COASTAL PARTNERSHIP INITIATIVE[1]

Grant Abstracts, FY 2017-2018

PROJECT: ***Citizen Seagrass Gardening***
RECIPIENT: City of Punta Gorda/Charlotte Harbor National Estuary Program
FCMP FUNDS: **$14,270**
ABSTRACT: Tape Grass (*Vallisneria americana*) and Ruppia (*Ruppia maritima)* will be grown and monitored in protective cages in the Tidal Caloosahatchee River by citizens recruited by the Charlotte Harbor National Estuary Program (CHNEP) and the Calusa Waterkeeper (formerly known as Caloosahatchee River Citizens Association or Riverwatch). Within the protective cages the mixture of seagrasses will be grown from nursery stock to establish seed-source colonies for restoration throughout the 13 mile reach of the river and tributaries between downtown Fort Myers and the Franklin Lock. The seed-source colonies will be created at 6 locations by planting Tape Grass and Ruppia shoots protected from herbivory (one of the limiting factors for seagrass success in the river) by mesh enclosures. The six sites will be selected within the study area for good Tape Grass and Ruppia restoration conditions, where restoration success can be monitored, and homeowners are willing to install and steward the exclusion cages adjacent to their property.

PROJECT: *Blackwater Maritime Heritage Trail – Phase I*
RECIPIENT: Bagdad Waterfronts Florida Partnership, Inc. / Santa Rosa County Board of County Commissioners
FCMP FUNDS: **$10,000**
ABSTRACT: The project is the creation of a maritime heritage trail, which will be a comprehensive visual guide that highlights the ecological, natural, recreational, historical, maritime, cultural and related points of interest in the waterways through Milton and Bagdad. The information included in the virtual trail is not currently available to residents and tourists. The trail will be valuable for the promotion of natural and recreational resources and will also educate users how to safely access points of interest and how to enjoy the coastal and marine resources without causing overuse or damage. The trail and its resources will be accessible through online platforms and through print media including brochures and water-resistant maps. Four upright kiosks will be installed at the following four waterfront recreational parks Carpenter's Park, Russell Harber Landing, Marquis Basin Boat Ramp and at the Bagdad Mill Park along the maritime trail which will also be a resource to park users. The guide will be developed using 360-degree, surface-level image mapping which will include no less than 25 miles of waterway, with visual recording and mapping of cultural, historic, key recreational and tourism point-of-interest contiguous to the trail.

PROJECT: *A.L. Kinsaul Park Shoreline Stabilization*
RECIPIENT: City of Lynn Haven
FCMP FUNDS: **$30,000**
ABSTRACT: The City of Lynn Haven is in Bay County and shares it southern boundary with the City of Panama City, the City has 25.9 miles of coastline which includes numerous bayous and canals. Its most prominent and vulnerable coastline is along North Bay. The City owns A. L. Kinsaul Park, an 11.6-acre park located at the end of West 5th Street that is used for outdoor recreation. The park houses soccer/football and baseball fields, playground, gazebo and picnic facilities. The park is in a VE flood zone which makes its shoreline exposed to erosion caused by water action, particularly during tropical storms and hurricanes. Over the

[1] The Coastal Partnership Initiative makes federal funds from the National Oceanic & Atmospheric Administration available to local governments of Florida's 35 coastal counties and municipalities that are required to include a coastal element in their comprehensive plan. Florida public colleges and universities, regional planning councils, national estuary programs and nonprofit organizations may also apply if an eligible local government agrees to participate as a partner.

past ten years a 350-linear foot portion of the shoreline has experienced extensive erosion. To prevent further erosion damage to the shoreline along the west side of Kinsaul Park the city proposes the installation of a 350-foot rip rap revetment system to protect the shoreline from wave action, future erosion, and silt runoff into the seagrass beds. The 350' shoreline has eroded considerably over the last 10 years which has reduced the area of the City park available for citizens to enjoy. It is estimated that 20 feet of shoreline has eroded, in addition to erosion an extensive area of seagrass beds has been affected by silt runoff. The proposed project will protect the shoreline of the park, prevent future silt runoff into North Bay, and protect natural environmental resources. The silt runoff into the seagrass has covered some of the beds over the years. Having the shoreline stabilized with rip rap will minimize future impact of the seagrass beds. The project includes the installation of approximately 505 tons of 6" to 12" diameter rip rap armor stone along the Kinsaul Park Shoreline for approximately 330 ft. The width of the rip rap protection is approximately 20 ft. and extends 10 ft. waterward of the mean high-water line.

PROJECT: *Hernando County Oyster and marsh Grass Habitat Restoration*
RECIPIENT: University of Florida / Hernando County Government,
FCMP FUNDS: **$29,090.00**
ABSTRACT: This community-based habitat restoration effort will be comprised of two distinct elements, one for each unique but connected habitat type to be addressed. Ultimately, both elements will dovetail to enhance health and promote stewardship of coastal resources in the immediate vicinity of Hernando Beach, the largest coastal community in Hernando County. Element one (summer 2017 – spring 2018) will engage volunteers from the community to take part in a medium-scale Eastern oyster Crassostrea virginica reef restoration project. Volunteers will receive instruction and hands-on experience using proven techniques to fabricate and deploy natural, highly effective oyster spat substrate. This substrate will be placed in permitted areas during seasonal periods when our team has established that oyster larvae are abundant and limited by available area to settle. Element two (fall 2017 and spring 2018) will engage students and teachers at Gulf Coast Academy of Science and Technology (GCA) in Spring Hill, Florida to establish and jumpstart a Grasses in Classes program that will eventually produce an annual crop of smooth cordgrass Spartina alterniflora for coastal marsh restoration adjacent to the new oyster reef site. GCA is a Hernando County-based Charter middle school with a mission to "…provide a unique education through weekly field experiences integrated with a hands-on advanced middle school curriculum." This focus makes GCA an ideal partner, as establishment of Sparina nurseries on school grounds will facilitate on-campus field experiences while nursery construction and marsh fieldwork will engage students in engineering and restoration ecology, respectively.

PROJECT: *Steinhatchee Boat Ramp Docking Area Improvement Project Phase II*
RECIPIENT: Taylor County Board of Commissioners
FCMP FUNDS: **$30,000.00**
ABSTRACT: Phase II of the rehabilitation of the docking area of the Steinhatchee Boat Ramp includes the installation of twelve (12) 6ft wide x 20ft long aluminum finger docks stabilized on 4" galvanized pilings. The finger docks will have textured surfaces for maximum slip resistance. Phase I of the dock rehabilitation project, which is being completed and funded with assistance provided by the Florida Boating Improvement Program (FBIP), will consist of the construction and installation of 260ft of 8ft x 20ft long aluminum poly tub floating docks securely anchored on 6" galvanized pilings with protective guard rails. Prior to the County acquiring the site, a developer had installed wooden docking with finger slips which were designed for light residential use. The existing dock area is in disrepair, does not have secure hand railings, or provide the stability required for year-round heavy recreational use. The finger docks were removed by the County shortly after acquiring the site due to lack of stability and creating a serious safety hazard. The Steinhatchee Docking Area Improvement Project Phase II addresses the critical need of providing safe and enhanced public access for the thousands of boaters who enjoy recreational fishing and boating on the Gulf and Steinhatchee River annually at Steinhatchee Boat Ramp. The project will accommodate public access needs at the boat ramp while providing measures needed to protect the adjacent coastal environment. At this time, there is not sufficient docking for passengers to safely and efficiently board boats at the boat ramp. The docks will provide boaters a safe boarding area and will

provide accessibility to all boaters. Steinhatchee is renowned in the Southeast for recreational fishing and boating, both on the Gulf and the Steinhatchee River, and the boat ramp is busy year-round. It is not unusual in the summer months for 400 to 450 boats to launch from the site daily on the weekends.

PROJECT: *Coastal Miami Restoration Project*
RECIPIENT: City of Miami
FCMP FUNDS: **$30,000.00**
ABSTRACT: The objective of the project is to make the wetland and dune ecosystems more accessible for educational and ecological purposes serving the local community while ensuring the continued protection and preservation of critical, unique and essential natural resources. The Coastal Partnership Initiative funds will be used for durable educational signage and wayfinding signage and for purchasing additional equipment to remove invasive/exotic plant species and revegetate native plant species on the Mabel Miller Trail at Virginia Key. The project will serve as a continuation of the work completed in 2013 with FCMP funds and will carefully extend the Virginia Key coastal hammock nature trail created in 2000, adjacent to and through both wetland and dune ecosystems.

PROJECT: *Naples Bay Oyster Reef Restoration*
RECIPIENT: City of Naples
FCMP FUNDS: **$30,000.00**
ABSTRACT: This work is part of a larger project that will restore oyster reefs in Naples Bay, Florida. The goals of this project are to ultimately restore ecosystem integrity, health, and the potential for long-term sustainability. The objective for the portion of the project to be funded under this proposal is to purchase mesh oyster bags to enable the construction of oyster reefs in Naples Bay. Mesh bags will provide solid structure to the oyster reef to ensure the reef retains its integrity despite wave action, and will provide vertical relief which has been shown to be beneficial to oyster spat recruitment and survival success. Naples Bay, located within the City of Naples (Collier County, FL), is a long, linear estuary running approximately 3 miles north to south, and ranges between 100-1500 ft in width, with Gordon Pass being the one major inlet to the Gulf of Mexico. The Naples Bay/Gordon River estuary has three tributaries: Rock Creek, Gordon River Extension, and Haldeman Creek. The Golden Gate Canal also discharges an average of 250 cubic feet per second (cfs) freshwater to the northern end of the bay. This project restoration area was chosen based on previous studies and preliminary oyster reef restoration adjacent to the proposed site which began in 2005. In order to add greater vertical relief to help dampen the effect of the high boat wake energy impacting the oysters in this area, the preliminary reef restoration adjacent to the site was supplemented with additional oyster bags in 2007 and 2010-11. This reef displayed successful recruitment and is now well established, indicating the area is conducive to oyster reef restoration. The bottom substrate at the restoration site is a firm sand/shell base with no benthic resources, such as submerged aquatic vegetation (SAV), present within the proposed project footprint. Substrate mapping conducted using shallow seismic CHIRP (Compressed High Intensity Radar Pulse) and side-scan sonar in May 2005 has also shown that the substrate in this southern area of Naples Bay is more conducive to oyster growth than the northern half of the bay. Providing vertical relief and hard substrate for spat to settle on is a documented method for restoring impacted coastal areas and facilitating the growth of oyster reefs. The southeast shorelines of Naples Bay and Haldeman Creek have more natural substrate due to the presence of fringing mangroves, compared to western parts of Naples Bay that have more urbanized structures e.g. seawalls.

PROJECT: *Shoreline Habitat and Resilient Coasts (SHaRC)*
RECIPIENT: Apalachee Regional Planning Council
FCMP FUNDS: **$74,000**
ABSTRACT: Well-established contiguous marshes, seagrass meadows, and shellfish reefs provide habitat for a wide range of marine species, including recreational and commercially valuable seafood species and filter feeders that remove suspended particles to allow increased sunlight penetration needed for healthy seagrass beds. Additionally, these environments serve to attenuate wave energy, trap sediments, and protect shorelines from erosion. Shellfish reefs and emergent marsh are also capable of adjusting to gradual changes in water levels, thus allowing them to adapt to sea level rise. Currently, many of these habitats have declined and become highly fragmented along the shoreline of the Apalachicola Bay estuary. The Florida Fish and Wildlife Conservation Commission (2007 estimates that 70 percent of Florida's marine recreational fish require seagrass habitat at some stage in their life cycles. The myriad of environmental and economic benefits these habitats provide makes them worthy of efforts aimed at protecting and restoring them. Although a handful of shoreline habitat restoration projects have been implemented around the Apalachicola Bay estuary over the last few decades, they have been relatively small and disconnected, resulting in a patchwork of isolated habitats. Some areas have never been considered for restoration, even though there may be a major need. Additionally, there has never been a systematic and comprehensive analysis to identify and prioritize potential restoration sites within the bay. This project will assist in the protection and enhancement of these important resources and augment the valuable wildlife, water quality, and resiliency benefits they provide. This foundational approach will promote larger, more connected and more cost-effective restoration, targeting the areas of greatest need and, most importantly, can serve as a model for planning shoreline restoration across the Gulf Coast and beyond.

PROJECT: *Development of Short-& Long-Term Strategies for Resiliency with Respects to Coastal Flooding in Miami-Dade County*
RECIPIENT: South Florida Water Management District
FCMP FUNDS: **$73,960**
ABSTRACT: The project is intended to train engineers, planners and decision makers on the adaptive pathway options by developing short-term and long-term options for mitigating flood risks in Miami-Dade County. Unlike previous individual basin studies, this investigation will cover the entire county and screen options using a simplified flood impact model based on Digital Elevation Model data, primary and possibly some secondary drainage systems, and the latest information on imagery and GIS coverages. Detailed models can then be used the future for a more in-depth analysis to further promising design options. A key feature of the project is to demonstrate the development of Dynamic Adaptive Pathways leading to flexible designs for both regional and local flood risk mitigation strategies. This project will benefit both the SFWMD staff and the decisions makers and the staff of local governments. Eventually, this will also benefit the wider communities in south Florida and in other communities across the coastal areas of the state. Coastal planners can incorporate the results from the proposed work to decide on strategic long- and short-term actions for dealing with flood risk in an area, underpinning of the needs to act and (in)effectiveness of certain measures, as well as costs and investment planning.

PROJECT: *Estuarine Restoration Teams in Florida: Laying the Foundation for Effective Regional Spoil Island Planning*
RECIPIENT: Indian River Lagoon Aquatic Preserve and Florida Fish & Wildlife Conservation Commission
FCMP FUNDS: **$20,952**
ABSTRACT: The Spoil Island Working Group (SIWG) will draft an updated Spoil Island management plan for the Indian River Lagoon regarding restoration, enhancement, and recreation based upon complementary partner goals and objectives and sound ecological principles. An updated draft would provide a framework and recommendations for future spoil island work based on existing data, and direct efforts to gather new data, where needed. The updated draft, along with stakeholder input, will align management decisions with goals outlined in the IRL Systems approved management plan. The plan will also be incorporated into the ongoing revision of the IRL NEP Comprehensive Conservation and Management Plan as part of the habitat restoration section being developed by the NERT/ECERT. Once completed, the management plan can be used as an example for other spoil islands throughout the state.

STATE AGENCY AND WATER MANAGEMENT DISTRICT PROJECTS[2]

PROJECT: *Aquatic Preserve Management Plan Updates, Year 1*
AGENCY: DEP/Florida Coastal Office
CONTACT: Earl Pearson
FCMP FUNDS: $40,000
ABSTRACT: The Florida Coastal Office (FCO) is responsible for managing the state's 41 Aquatic Preserves (AP). Effective and efficient oversight is critical for the long-term protection of these significant coastal resources. In support of their management responsibilities, FCO will use FCMP funds in FY 2016-17 to continue to update management plans for the state's AP and NERR systems. Management plans define specific key issues (ecosystem health, land use, water resources, human activities, geophysical conditions) and identify goals, objectives and strategies on how to address these issues through active management.

PROJECT: *Statewide Ecosystem Assessment Program of Florida's Coastal Aquatic Managed Areas, Year 1*
AGENCY: DEP/Florida Coastal Office
CONTACT: Cheryl Clark
FCMP FUNDS: $156,000
ABSTRACT: FCO and Florida Coastal Management Program partner agencies collect a variety of coastal resource ecological data (e.g., water quality, nutrient levels, bacteria/pathogens, submerged aquatic vegetation (SAV), etc.) within these place-based management locations. However, the types of data collected and methods used are not always consistent between and outside of these locations nor is always readily available in formats usable by managers, planners, policy makers and the public. This five (5)-year strategy will develop and pilot a comprehensive ecosystem assessment program which will synthesize, interpret and disseminate information about the ecological health (statuses and trends) of Florida's coastal resources. In Year 1, the Florida Coastal Office will form a Resource Assessment Data Team to identify: (1) the data resources available from ongoing monitoring programs within the stat; and (2) 1-3 key stressors and indicators, available data, data needs and gaps and evaluate the layout of a report which can be recommended for a statewide approach.

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[2] Program enhancement projects identified in the FCMP's Section 309 Assessment and Strategies, FY 2016-2020.