

Exhibit B - Scope of Work New River Middle School Living Shoreline Feasibility Study in Broward County, FL

Project Manager

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Project Partners

Broward County Environmental Planning and Community Resilience Division (BCEPCRD) is providing staff and resources to provide technical guidance and to conduct natural resource surveys at the project site. The County will also take the lead in coordinating with adjacent property owners. The BCEPCRD anticipates contributing at least \$3,622.08 of in-kind resources for benthic surveys and a report.

Contact: Greg Ward

New River Middle School (NRMS) teachers and students will conduct pre-, during-, and post-construction surveys. The teachers are eager to initiate this project and for their students to have a hands-on opportunity to learn from its transition from a seawall to a living shoreline. Over the course of the next FY, the NRMS teachers and students will conduct bird, fish, and water quality surveys, contributing an estimated \$8,400 in in-kind services.

Contact: Katie O'Fallon

Project Description

Estuarine resources are severely depleted in Broward County as a result of extensive coastal development. Due to narrow waterways and excessive armoring of shorelines, few opportunities exist in the County for large-scale estuarine restoration projects. Living shorelines, in place of or in front of seawalls, are one option for adding mangrove and saltmarsh habitats to this urban system. The FWC, BCEPCRD, NRMS, Broward County's Parks and Recreation Division and TNC (the "project team") are interested in implementing living shorelines on highly visible public lands to gain public awareness and

appreciation for this alternative to hard-armoring. This team has identified the New River Middle School as an excellent location to build a demonstration project.

The New River Middle School project site, owned by The School Board Broward County, Florida, has approximately 500 ft of sea-walled shoreline on the South Fork of the New River. This school hosts a marine science magnet program and is an excellent candidate for installation of a living shoreline. The project is supported by the NRMS teaching and administrative staff; and will provide research and volunteer opportunities for students. Furthermore, the site is set back from the navigation channel and adjoining seawalls and there will be no interference with existing adjoining infrastructure.

Topography, bathymetry, and sediment analysis for this location have been acquired. Water quality monitoring will be conducted with FWC owned equipment. Funding has been acquired from FWC for the 19/20 fiscal year (July 1, 2019 – June 30, 2020) to provide the following deliverables for the New River Middle School living shoreline project:

- 1) Produce three or more feasible living shorelines design options.
- 2) Prepare and submit permit applications for the US Army Corps of Engineers, FL DEP, and Broward County for the chosen living shoreline design.

Project Size (Acres)

The project area is approximately 3.00 acres, including 500 ft of seawalled shoreline

Estimated Project timeline

- Aug 2019- BCEPCRD will conduct benthic resource surveys
- Oct 2019 - The School Board of Broward County, Florida and FWC will execute MOA
- Oct-Nov 2019- Identify contractor, finalize scope of work, and execute contract.
- Nov-Dec 2019- Contractor will consult with the BRT and The School Board of Broward County, Florida and will provide design options to the team.
- Dec 2019- Stakeholders and adjacent land owners will be informed of the potential plans and their concerns will be documented and addressed.
- Jan 2020- Final design plan will be selected by the BRT and submitted to the New River Middle School and The School Board of Broward County, Florida to be entered into the approval process
- Feb-March 2020- Contractor will prepare permit applications and will coordinate pre-application meetings with permitting agencies to be attended by regulators, contractor, and BRT.
- April 2020- All permit applications will be submitted by the contractor.

- April - May 2020- Contractor will continue to coordinate with the BRT and will respond to questions and RAI's from the permitting agencies.
- May 15, 2020- Final invoice will be submitted by contractor to FWC. BRT will take over management of the permit process if permit not yet issued.

***IMPORTANT NOTE-** Funding for project implementation has not been identified. Upon achieving a suitable approved design and obtaining permits, the project team will initiate searching for grant or agency funding to implement the project.

Sustainability

Long-term sustainability will be a consideration in selection of final project designs. Ultimately, project designs that will sustain more frequent and stronger storms and increases in tidal volume and amplitude will be given priority. A representative from Broward County Climate, Energy, and Sustainability Section is a member of the project team and will ensure the County's goals are incorporated into the final designs. Additionally, TNC is conducting risk analysis studies of living shoreline designs in Miami and will work with the project team to incorporate lessons learned from those studies into our designs.

Methods

Living shoreline designs will be developed based on the existing site conditions, viable habitat options, the status of existing seawalls, proximity of navigation channels, the interests of immediate neighbors (e.g. view of water, desire to attract birds, etc.), the necessary space and depths for ingress and egress of boat traffic, and any other factors identified during the design process. Methods to assess these factors are known and proven.

The project team will request that the contractor provide designs that include removal of the existing seawall in order to provide a natural sloping shoreline that can support native flora and fauna and will provide access for the students. The seawall at this site is adjacent to privately owned seawalls on both sides. The project design will likely require wing-walls in order to ensure stability to the neighboring properties. Project designs will not extend to the farthest extent of the property (ie there will be a significant buffer between the project and the school's boundaries with the neighbors).

The New River Middle School would like this project to become a "living classroom." The contractor will work closely with the project team to include accessibility, student opportunities and safety requirements when engineering the project design. The project will maximize opportunities to create ample and diverse habitats to benefit as many species as possible (e.g. seagrass, mangrove, bivalve, and bird foraging/nesting habitats). Additionally, it will be a priority to design a living shoreline that will require little to no maintenance.