

EXHIBIT A
PROJECT SCOPE OF SERVICES
Hard Bottom Mapping and Characterization
within the Tampa Bay Watershed

PROJECT SUMMARY:

TBEP, in partnership with the Southwest Florida Water Management District (SWFWMD), has initiated research to identify important hard and live bottom habitats within Tampa Bay. Tampa Bay hard and live bottom habitats represent unique and diverse biological communities and often times provide vital habitat for commercially and recreationally important fisheries (e.g. sheepshead, snook, snappers, groupers, etc.). Recent information garnered from Tampa Bay Habitat Restoration Partnership Working Group meetings has indicated that hard and live bottom habitats most likely occur within the Pinellas County Aquatic Preserve, particularly in Middle to Lower Tampa Bay and Boca Ciega Bay. Therefore, the understanding of the distribution of these habitats within Tampa Bay is paramount to develop future habitat protection and restoration strategies. To date, pilot mapping efforts have been conducted in the Hillsborough and Manatee County portions of (southeastern) Tampa Bay.

The main goal of the Project will be for TBEP to develop hard and live bottom habitat maps within a preliminarily identified screening area within the Pinellas County Aquatic Preserve. TBEP will build upon an ongoing SWFWMD-led effort and lessons-learned from their project to develop hard and live bottom maps utilizing side scan sonar, sub-bottom profiling and video captures within Pinellas County waters. The initial screening area for developing maps is approximately 56.3 mi² (Figure 1). Once the maps are developed, future protection (and possibly restoration) strategies will be developed for Pinellas County hard and live bottom habitats, as part of the TBEP's Habitat Master Plan Update (2017-18).

The Project will create a final hard bottom GIS marine resource map in select areas identified within the 56.3 mi² screening area in southwestern Tampa Bay, from the Gandy to Skyway Bridges. The data collection and mapping elements will be completed by a contractor procured by the TBEP ("Contractor"). Findings from the Project will be used to refine protection and restoration targets for these habitats. Results will be documented in final Project reports, GIS Deliverables, and the 2017 Habitat Master Plan Update. All products will be further vetted through the Hard Bottom Working Group, Southwest Florida Seagrass Working Group, TBEP Dredging Advisory Group, and/or TBEP Technical Advisory Committee with additional direct input garnered from County.

DELIVERABLES:

- Semi-Annual Progress Reports (due by March 31, 2017 and September 30, 2017 for Fiscal Year 2016-2017, March 31, 2018 and September 30, 2018 for Fiscal Year 2017-2018, and March 31, 2019 and September 30, 2019 for Fiscal Year 2018-2019)
- Task Completion Reports, with Invoices as defined below
- Final Project Report summarizing work completed (due with final Semi-Annual Progress Report by September 30, 2019)
- Hydrographic data in a georeferenced raster file format
- 2017 Southwestern Tampa Bay Hard Bottom Map in a GIS (ESRI shapefile) format
- 2017 Southwestern Tampa Bay Hard Bottom Map associated metadata

TOTAL BUDGET: \$100,000.00

TASK DESCRIPTIONS:

TASK 1. Contractor Procurement

TBEP will develop and advertise a request for proposals (RFP) to secure Contractor to complete the overall mapping Project according to the best practices identified through a similar SWFWMD-led effort. TBEP will utilize its existing management framework to formally select Contractor from the RFP respondents, and initiate a formal Project agreement with Contractor that details the overall scope and scale of anticipated map products within the preliminarily identified screening area (Figure 1).

TASK 2. Project Development Plan

TBEP will develop a Project plan that will detail data collection, mapping and GIS elements of the Project. A final Project plan will be submitted for County approval and serve as the basis for the study. The plan will include, but not be limited to:

- a) Bathymetry data collection methodology.
- b) Bathymetry data collection site selection. Select sites will be jointly determined by TBEP and Pinellas County staff with input from TBEP's working groups and subcommittees.
- c) GIS habitat mapping methodology.
- d) GIS Deliverable format.

TASK 3. In-Situ Bathymetry Data Collection

Contractor will be tasked with in-situ data collection within the screening area identified in Figure 1. The methods to be employed for hard and live bottom data collection will include, but not be limited to:

- a) Side scan sonar: to document spatial extent of benthic topography;
- b) Sub-bottom profiling: to identify depth of consolidated and unconsolidated sediments, and;
- c) Underwater video for additional characterization of identified bottom signatures.

Data collected will be georeferenced via onboard GPS systems according to best practices identified through the SWFWMD-led effort. Contractor sonar and video data collection efforts have typically been limited to water depths greater than 4 foot due to vessel access issues. Additionally, the best practices determined from the SWFWMD-led project will guide data collection efforts in order to maximize the scope and scale of map products delineated within the screening area.

TASK 4. GIS Habitat Mapping

Contractor will be tasked with developing final, validated GIS Deliverables based on in-situ data collection efforts within the screening area, as follows:

- a) Contractor will post-process in-situ data to resolve hard and live bottom signatures within select sites within the screening area.
- b) Mapping of Project data will involve geospatial and descriptive interpretation and analysis. Classification of habitats in final map products will be conducted using National Oceanic and Atmospheric Administration's Coastal and Marine Ecological Classification Standard (CMECS) or equivalent.
- c) An accuracy assessment modeled after those completed under the SWFWMD-led effort will be completed.

TASK 5. Final Project Report & Map Deliverables

TBEP will coordinate the development of GIS Deliverables and a Final Project Report based on Contractor products developed in Tasks 3 & 4 above. The Final Project Report and Deliverables will be fully vetted through TBEP working group and committees with additional direct input garnered from County.

TASK 6. Pinellas County Hard and Live Bottom Protection (& Restoration) Target Development

TBEP will synthesize mapping results in its 2017 Habitat Master Plan Update (currently undergoing RFP reviews). The synthesis will include:

- a) A summary of the current areal extent of hard and live bottom habitats based on best available technology (e.g., aerial photography mapping and interpretation, as well as any products developed under this Project) within the major bay segments of Tampa Bay;
- b) Protection (and possibly restoration) targets for hard and live bottom habitats, based on feedback and input garnered from TBEP working groups and committees;
- c) Development of future management and restoration recommendations, incorporating resiliency to sea level rise, climate change and other perturbations.
- d) Identification of restoration activities (if appropriate) for hard and live bottom habitat long-term management within Tampa Bay.

PROJECT TIMELINE:

Task	Amended Schedule
Agreement Execution between Pinellas and TBEP	Complete
Task 1 - Contractor Procurement	1/11/2018
Task 2 – Project Development Plan	1/22/2018
Task 3 - Bathymetric Data Collection	10/31/2018
Task 4 - GIS Habitat Mapping	3/31/2019
Task 5 - Final Report and Map Deliverable	8/31/2019
Task 6 - HMPU Target Development	12/31/2019

PROJECT BUDGET:

Description	Pinellas County Share
Task 1: Contractor Procurement	\$2,500
Tasks 2 – 5: Project Plan, Data Collection, Map Creation, and Final Report Deliverables	\$95,000
Task 6: Target Development in HMPU	\$2,500