

MAINTENANCE DREDGING OF EASTPOINT NAVIGATION CHANNEL

Perimeter planting plan for spoil disposal area to be created by ACOE

Introduction

The maintenance dredging of the Eastpoint navigation channel by the Army Corps of Engineers in the fall of 2021, will create approximately 26-acres of spoil disposal area, with a 3,000-foot linear border that will need vegetation. The estimated area for marsh planting will be roughly 5-acres. Franklin County will coordinate with the Apalachicola National Estuarine Research Reserve (ANERR) to implement and monitor the perimeter planting plan. The county will purchase the starter plants, *Spartina alterniflora*, and supplies. ANERR will coordinate with the Conservation Corps of the Forgotten Coast, to grow and propagate the plants over the next year at the co-managed native plant nursery, in order to create enough plants to complete the project. The Reserve has partnered with the Corps since 2016 to help protect vulnerable shorelines and create essential habitat through the installation of living shorelines. Coordination with the Corps helps the Reserve accomplish critical conservation projects while providing young adults in the county, an opportunity to learn about environmental issues and challenges and gain valuable experience.

Planting

The Reserve, in coordination with the Conservation Corps will be responsible for planting the Eastpoint Breakwater site. The dimensions of the planting area will be roughly 3,000 linear feet by 50-feet wide and will consist of *Spartina alterniflora* spaced on 2-foot centers, that will be planted following the completion of the channel dredging in the Spring of 2022. The site will be marked with flagged stakes to clearly define the planting area. The work shall be performed in a continuous manner from start to finish without interruption or variation and will continue until completed. Signage will be installed to dictate a marsh restoration site. The planting site will be mapped by ANERR on a Trimble GPS unit. The Reserve will access the site through Millender Park or by small boat from Eastpoint ramp.

Plants will be acquired through the Reserve's and the Conservation Corps native plant nursery. The source of all planting units delivered will be propagated plants collected from permitted donor marshes. Planting units shall be planted in a dug hole. Depth of the planting hole will be fixed so that the stem-root interface shall be positioned slightly below the normal ground. Smooth cordgrass, *Spartina alterniflora*, or *Sporobolus alterniflorus*, will be planted in the low-marsh zone (mean low water to mean high water). Plants will be on 2-foot centers and planted in the spring of 2022 to avoid peak storm season. (2-foot centers=4,500 plants; planting on 5-foot centers= 1,800 plants.) Plants will be planted to a depth of 8-10 inches to bury 3-4 inches of green stem, which is following established protocols for the region. The healthy marsh site to the west of the spoil disposal site will be used as a reference site and used to scale project success.

Monitoring for Success

The Reserve and the Corps will be responsible for planting and monitoring the site during the first three years. At least three permanently marked transects will be established to monitor percent coverage, stem density and average height along the transects to have accurate and repeatable sampling. A 1m² quadrat will be used along the transect line to collect data on the above parameters. The Reserve will check survivorship of plantings at 6 months following planting and at Year 1 to address performance criteria. Photopoints will also be established to visually document the site and to track change over time of the entire project area.

Methods- Monitoring

- Establish at least three fixed transects, evenly spaced, and parallel with elevation gradient. Run transect tape from landward extent of the project to the seaward edge. Avoid trampling along transect path during transect placement. Permanently mark each transect using PVC stakes.
- Place three (3) 1m² quadrats randomly within 2 meters of the transect line and within each vegetation zone or stratum. Within a single zone, quadrats shall be located at least 3 m apart. Orient quadrats parallel with the transect.
- For stem density – Within the 1m² quadrats, count all live rooted stems of any species found within at least one quarter of the quadrat.
- For culm height – Within the 1m² quadrats, measure the height of the tallest individual of each species found within the lower right quarter of the quadrat from the base of the plant to the top of the stem. (You could also measure all culm present and take the average.)

Performance Criteria-

At the end of the first year following planting, at least 80% of the planting shall demonstrate viability. If the planting effort is not deemed successful, a method of enhancement proposal shall be submitted to ANERR. The plan of corrective action shall be implemented within 90-days of written approval. If any of the above success criteria are not met, the County will be responsible for acquiring additional viable plants to replant in unsuccessful areas and will coordinate with ANERR on a replanting plan. Adaptive management actions such as replanting should be implemented if project goals are not reached within three years of project implementation.

Reporting- The Reserve will report all findings/activities to the County as needed.

Budget-

Perimeter Planting and Monitoring at Eastpoint Breakwater			
Species	Qty.	Price Each	Total
<i>Spartina alterniflora</i> - 4-inch pots Quote includes harvesting, transportation, propagation, delivery and planting. These plants will be split in the nursery and will result in 4,500 – 5,000 plants to be used at the site.	2250	\$2.25	\$5,062.50

Supplies/materials needed to: implement planting plan; access site; monitoring for up to three years to include GIS, photopoints, percent coverage/transects to determine success; supplemental planting as needed; debris removal and periodic maintenance.			\$437.50
		Total	\$5,500