

Carrot Island Habitat Improvement Demonstration Project

FINAL REPORT
to the Albemarle-Pamlico National Estuary Program
Contract 3076
Contract dates: May 1 – August 31, 2010

Submitted by

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December 1, 2010

SUMMARY

The aim of this project is to improve and stabilize dredge spoil habitat through native plantings and fencing (to keep feral horses out) and protect water quality in the surrounding water bodies. Due to the short duration of the contract and various administrative delays, project supplies were obtained later than originally anticipated, thus pushing back project milestones (see Appendix A for updated timeline). Partial fence construction, pre-project vegetation monitoring and outreach were completed during the contract period. The fence was finished after the project period and plants were installed at the end of October and November.

MILESTONES

Task 1. Pre-project activities

Description

Newport Elementary School students will propagate approximately 400 seaside little bluestem plants in the classroom and donate them to the project; the Aquarium Horticulturist will grow approximately 1,100 additional seaside little bluestem plants. Reserve and NCAQ-PKS staff will sample the project site in August of 2010, prior to planting of vegetation, to establish a baseline vegetation dataset. Reserve staff will procure 1,500 native plants from a nursery and all supplies and transport them to the site as appropriate. Reserve and NCAQ-PKS staff will design and order interpretive signs to be used in outreach.

Update: Newport Elementary School students attempted to propagate the seaside little bluestem plants; however, due to unknown reasons, the plants all died. To offset this loss, the Cape May Germplasm located in Cape May, New Jersey, donated a 10 pound bag of seaside little bluestem seeds for the NCAQ-PKS Horticulturist to propagate. Reserve and NCAQ-PKS staff established a baseline vegetation dataset at the project site in August. Reserve staff procured all project supplies. Reserve and NCAQ-PKS staff designed, and ordered two interpretive signs (Appendix B) for display at the Carrot Island boardwalk (adjacent to the project site) and NCAQ-PKS.

Task 2. Habitat improvement field work

Description

Reserve staff, Town of Beaufort employees, and Reserve and Aquarium volunteers will help to install the fence prior to planting vegetation. Newport Elementary School students, Reserve and NCAQ-PKS staff and volunteers will plant vegetation in September of 2010. Successful establishment of the plants without supplemental water or nutrients requires fall planting.

Update: Reserve staff and volunteers installed fence posts during the summer months. Due to administrative delays, the wire mesh was not received until the end of the contract period. Mesh was installed at the end of October. Girlscouts,

Newport Middle School students, and Aquarium and Reserve staff installed plants over several days in October and November. The interpretive signs were installed during this period. Please note that APNEP approved – as written in the project proposal - installation of plants after the contract end date. Please see Appendix B for photos of the field work.

Task 3. Post-project monitoring

Description:

Success of the project will be measured by conducting vegetation and faunal monitoring in August of each year for at least three years.

Update: Pre-project vegetation and faunal monitoring was completed in August. This data will be a baseline for monitoring in subsequent years. We expect to see an increase in vegetative cover, along with an increase in species diversity and abundance.

Task 4. Outreach and education

Description:

The habitat improvement field work will involve public participation, including Newport Elementary School students and Reserve and NCAQ-PKS volunteers. Interpretive signs at the Carrot Island boardwalk and Aquarium will inform year-round visitors and field trip participants about the importance of habitat and protecting water quality. The effects of feral horses, a non-native species, will be covered on the boardwalk sign only. During the field trip season (March-October), Reserve educators and volunteers will integrate project information into guided tours as appropriate.

Update: During the Reserve's 2010 Public Field Trip Series, field trip leaders integrated project information into interpretive programs held at the boardwalk. The project was also featured as a "Hot Topic" on the Reserve's website. Outreach to project volunteers was accomplished through direct involvement in field work (227 man*hours).

UPDATED DELIVERABLES TIMELINE

2010 TASKS	Jan'10	Feb'10	Mar'10	Apr'10	May'10	Jun'10	Jul'10	Aug'10	Sep'10	Oct'10	Nov'10	Dec'10
Task 1: Pre-project activities												
Grow plants												
Procure supplies & signs												
Baseline monitoring												
Task 2: Project field work												
Install fence												
Plant vegetation												
Install signs										*		
Task 3: Post-project monitoring												
Field sampling												
Task 4: Outreach and education												
Fields trips												
Interpretive signs educate												
2011-2013 TASKS	Jan'11	Feb'11	Mar'11	Apr'11	May'11	Jun'11	Jul'11	Aug'11	Sep'11	Oct'11	Nov'11	Dec'11
Task 3: Post-project monitoring	Jan'12	Feb'12	Mar'12	Apr'12	May'12	Jun'12	Jul'12	Aug'12	Sep'12	Oct'12	Nov'12	Dec'12
Field sampling												
Task 4: Outreach and education												
Field trips												
Interpretive signs educate												

* Based on a pilot project to determine the feasibility of improving dredge spoil habitat with seaside little bluestem, an appropriate time for planting without the use of supplemental fresh water or nutrients is during the fall.

This falls outside of the suggested project completion date of July 31st; however, all supplies will be purchased ahead of time.

APPENDIX B: Figures and Photos



Figure 1. Interpretive sign installed on the Carrot Island boardwalk

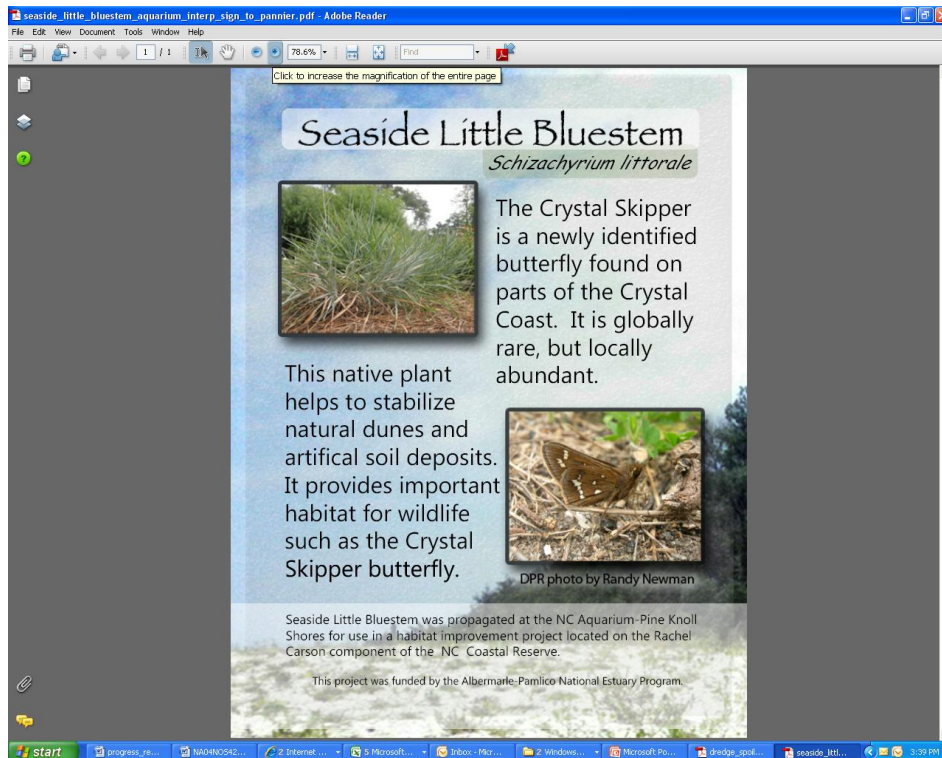


Figure 2. Screenshot of the interpretive sign that was installed at the Aquarium.



Volunteers installing fence posts on SW side of project site.



Volunteers working on NE side of project site. Carrot Island boardwalk is in the background.



Reserve volunteer installs seaside little bluestem plants.



Girlscouts install saltmeadow hay using dibblers.



Project site is to the right of the frame, inside the fence. The Carrot Island boardwalk is to the left of the frame.