

FLORIDA GULF OF MEXICO RESTORATION PROJECT SUBMITTAL FORM

Submit by Email

Form Purpose and Instructions:

- To assist the project proposal and review process, please complete this Submittal Form. Completion of the Form will contribute to the appropriate information being completely and accurately submitted for each project.
- Take as much space as needed for each question, but please keep responses as focused as possible. It may assist you to review all the questions before addressing any one question.
- If you have multiple projects – please submit one Form for each project.
- When you have completed the form hit the submit button in the upper right hand corner. Once your Form is successfully submitted, you will receive a confirmation email from the Florida Department of Environmental Protection.
- Submit all back-up maps, information, etc. to Restoration.Projects@dep.state.fl.us
- To submit updated information, please fill out this form and update fields as needed.

All of the following are **Required Fields** for project updates

New Project

☐

Update to Previous Submittal

☒

Project #

959

Project Name

NAS Pensacola, White Island & Escambia County Living Shoreline

Contact Information: *(Include at least one name, phone number, email address, and organization name if applicable)*

Shelly Marshall; 850-595-3460; smarshall@myescambia.com; Escambia County

Project Location:

(Include a map, if possible, and the city, county, watershed, longitude/latitude dec.deg, Parcel # if Applicable)

See attachment for map; Pensacola Bay Watershed; 30.21901, -87.15834

Location Description: This project will create living shoreline habitat along White Island, the eastern shore of NAS Pensacola, and the eroded southern shore of NAS Pensacola across from the Pensacola Pass.

Project Description:

(Describe all aspects of the project)

This living shoreline project will create 24,800 linear feet of rock and oyster reef breakwater and 205 acres of emergent marsh and SAV habitat. This project will remedy harm to the water quality, coastal marsh, SAV fishery habitat, and the marine living resources in the Pensacola Bay estuary. This living shoreline project will apply the expertise and lessons learned by FDEP and Escambia County scientists, who designed, constructed, and monitored the successful Project Greenshores living shoreline. The project's goals are as follows:

1. Create a rock and oyster reef breakwater to promote settlement and colonization of oyster larvae and other encrusting organisms to become a healthy, functioning oyster reef habitat.

2. Restore fringe emergent marsh habitat with specific value for invertebrates and coastal birds to increase foraging habitat for shorebirds, wading birds, and migratory birds.
3. Increase nursery and adult habitat available for recreationally and commercially important shellfish and finfish species in the region (e.g. spotted trout, red drum, black drum, mangrove snapper, gag grouper, spot, croaker, mullet, blue crab, stone crab, and shrimp.)
4. Promote the growth of SAV that supports a diversity of fish, shrimp, crabs, and other estuarine species.
5. Serve as natural shoreline stabilization approach (e.g. green infrastructure) to help prevent further shoreline erosion along the west shore of Pensacola Bay by attenuating wave energy, decreasing shoreline erosion, improving water clarity, decreasing turbidity, and improving water quality.
6. Help project the military mission, shoreline, and security of NAS Pensacola.

Estimated Project Costs:

(Describe the estimated costs of the project, including any assumptions for contingency and ongoing operations/maintenance. Identify other secured funding sources such as matching funds, in-kind contributions or state/federal dollars. In addition, if possible, complete and submit the Cost Appendix Sheet associated with this Form)

Planning & Design: Funded

Phase 1 Implementation of Site A (White Island): \$1,564,636

Phase 2 Implementation of Site B (eastern shore of NAS Pensacola): \$5,092,682

Phase 3 Implementation of Site C (southern shore of NAS Pensacola): \$7,092,682

Other Funding:

(Indicate if the project is submitted for any potential funding or if it may be used to leverage additional funding, if so, please describe the funding source [e.g. State/Federal Grants])

The Gulf Coast Ecosystem Restoration Council has funded planning, engineering, design, environmental compliance, and 166 permitting for the three proposed sites totaling \$231,314 in leveraging. Additionally, they have earmarked Phase 1 implementation of White Island for \$1,564,636 as a priority to them that they will consider funding in the future.

This project has also been submitted to Escambia County's RESTORE Direct Component (Pot 1) for potential leverage funds.

Technical Feasibility:

(Describe the technologies involved and any relevant past experience or proven success with similar projects)

This project is similar to the East Bay living shoreline project and addresses the same restoration needs of the Pensacola Bay Watershed. The project site along the western shore of Pensacola Bay has been identified by state and county scientists as a high priority for living shoreline restoration.

This type of project has been proven successful with the Project Greenshores site in Pensacola Bay.

Conflicts or Complements to Existing Efforts:

(Describe any ongoing activities in the project implementation area, if the project is part of another plan, and why the project does or does not interfere with that work. Please consider how the project may complement existing local, regional, and state efforts/plans/objectives)

Oyster reef restoration, emergent marsh restoration, and SAV restoration projects have been identified in the Pensacola Bay Surface Water Improvement and Management Plan (Northwest Florida Water Management District, 1988) and the Pensacola Bay Watershed Management Plan (West Florida Regional Planning Council, 2005) as high-priority projects to replace lost estuarine habitat. Subsequent project phases will further enhance habitat restoration in Pensacola Bay and protect the shoreline and military mission of NAS Pensacola.

This project will complement other living shoreline projects in the bay such as Project Greenshore Site 1 as well as the currently being constructed Project Greenshores Site 2 and Sanders Beach living shoreline.

Complies with Federal, State, Local, and Tribal Laws/Regulations:

(Describe any concerns or potential conflicts)

This proposed living shoreline project will comply with all federal, state, and local laws/regulations.

Readiness for Implementation:

(Describe if the project has had any design or permitting work started or completed [attach permits or design work]. Please address any issues that may delay start or finish of the project)

This proposed project has been conceptually designed. The design is based on the very successful Project Greenshores. Complete planning and design has recently been funded and is currently underway.

Implementation methodology - The offshore breakwater reef base will be constructed with recycled concrete and limestone rock. Recycled and fossilized oyster shells will be added to the top of the reef base to attract oyster spat and increase spat recruitment. Channel gaps between the breakwater segments will be incorporated into the design to allow for the passage of nekton and the circulation of water. The engineered design of the breakwater will optimize its ability to attenuate wave energy and provide a protected environment for the establishment of emergent marsh vegetation and SAV. The dominant emergent marsh vegetation species that will be installed will be smooth cordgrass (*Spartina alterniflora*).

Environmental Benefits:

(Describe the nature, magnitude, and timing of any environmental benefits attributable to the project. If possible, describe potential environmental performance measures [e.g. pollutant reduction]. Please address any potential environmental impacts associated with implementing or maintaining the project [e.g. loss of a habitat or conversion of habitat from one type to another during implementation])

The environmental benefits are closely aligned with the projects goals. This project will remedy harm to the water quality, coastal marsh, SAV fishery habitat, and the marine living resources in the Pensacola Bay estuary. It will create a rock and oyster reef breakwater to promote settlement and colonization of oyster larvae and other encrusting organisms to become a healthy, functioning oyster reef habitat. Restore fringe emergent marsh habitat with specific value for invertebrates and coastal birds to increase foraging habitat for shorebirds, wading birds, and migratory birds. Increase nursery and adult habitat available for recreationally and commercially important shellfish and finfish species in the region (e.g. spotted trout, red drum, black drum, mangrove snapper, gag grouper, spot, croaker, mullet, blue crab, stone crab, and shrimp.). Promote the growth of SAV that supports a diversity of fish, shrimp, crabs, and other estuarine species. Serve as natural shoreline stabilization approach (e.g. green infrastructure) to help prevent further shoreline erosion along the west shore of Pensacola Bay by attenuating wave energy, decreasing shoreline erosion, improving water clarity, decreasing turbidity, and improving water quality.

Economic and Social Benefits:

(Describe the economic and social benefits including those related to the project's improved ecosystem services and any estimates on jobs created or preserved)

Increased fishery production and increased fishery economic opportunities will be provided by the new fishery habitat created. Water quality improvements will be important for ecotourism and recreational opportunities for tourism and local citizens.

Living shoreline projects are cost-effective because they are less expensive to construct and maintain than seawalls and riprap to stabilize eroding shorelines. Living shorelines provide the added benefit of increasing estuarine emergent marsh and SAV habitat and improving water quality that seawalls and riprap cannot provide. Minimal maintenance is needed.

The project is an excellent opportunity for environmental education and community outreach, including opportunities for school, church, and civic groups to help install emergent marsh vegetation at the living shoreline sites. Hundreds of community volunteers and civic groups participated in the installation of the vegetation at Project Greenshores. Other Educational opportunities will include local presentation on ecology, function, and intrinsic value of emergent marshes and oyster reefs in the Pensacola Bay Estuary. Education signs explaining the ecology of the estuarine habitats and water quality principles will be installed along the project's shoreline.

Community Resilience:

(Describe if the project assists Florida's ability to anticipate, withstand, or recover from hazards or threats [e.g. hurricane preparedness, establishing living shorelines])

Project Greenshores required no maintenance after Hurricane Ivan, which destroyed seawalls and other shoreline structures. It is expected that this similar project would hold up in future natural disasters. Living shorelines increase shoreline stabilization and community resilience by protecting the land, reducing wave energy and encouraging sedimentation.

Public Acceptance:

(Describe any known or potential public approval or opposition to the project)

The public is very supportive of living shoreline projects that increase fishery habitat and improve water quality.

Additional Information you wish to provide:

(Please include any maps, designs, drawings, photos or background resources that may assist in completely and accurately understanding the project. If these are too large to attach here, please email them to

Restoration.Projects@dep.state.fl.us

Cost Appendix Sheet

Cost Item

Cost Estimate

Planning

Contracts	
Feasibility	
Engineering, Design, Land Rights & Bid Prep	
Restoration Plan	
Site Visits & Cost of Site Selection	
Administration, Overhead and Indirect	
Other	

Planning Subtotal:

Construction

Contracts	13,750,000
Administration & Mobilization/Demobilization	
Other	
Construction Subtotal:	13,750,000

Monitoring

Contracts	100,000
Data Collection	
Monitoring Administration	
Other	
Monitoring Subtotal:	100,000

Project Cost

Supervision	
Subtotal:	13,850,000
Contingency (<i>traditionally calculated at 10% of the subtotal</i>)	1,385,000
TOTAL:	15,235,000

Estimated Costs by Year

Year 1	13,750,000
Year 2	100,000
Year 3	
Year 4	
Year 5	
Year 6	