

FLORIDA GULF OF MEXICO RESTORATION PROJECT SUBMITTAL FORM

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.
- Please submit one Form per project, if you have multiple projects - please submit one Form for each project.
- Please submit completed Forms to Restoration.Projects@dep.state.fl.us. Once your Form is successfully submitted, you will receive a confirmation email from the Florida Department of Environmental Protection.

Project Name:

SWARA: MARINE ECOSYSTEM ARTIFICIAL REEFS Initiative

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

South Walton Artificial Reef Association (SWARA) - 501(c)3 Non-Profit Organization - IRS EIN# 46-2802186

Andrew (Andy) McAlexander, President/Director

Ph #: (850) 259-8283

Email 1: info@waltonreefs.org

Email 2: andy@macfarmsfl.com

Project Location (Include a map, if possible, and the city, county, longitude/latitude, and watershed):

Walton County, Florida - Gulf of Mexico coastal shoreline (straddling 2nd coastal sandbar)

Approximate proposed latitude / longitude locations:

Topsail State Park 30.375323lat / -86.280527long

Grayton Beach State Park 30.322833lat / -86.157414long

Santa Clara Public Beach Access 30.311376lat / -86.11942 long

Inlet Bch Public Beach Access 30.266871lat / -85.996422long



Project Description (Describe all aspects of the project):

Phase I - Engineered site mapping & permitting of 4 MARINE ECOSYSTEM reef patches:

Water depth approx. 10-20' Patch area dimensions: 200' x 500'

Phase II - Artificial reef structure manufacturing & deployment:

Full deployment = 60 artificial reef structures within each patch (totaling 240 structures).

Phase III - Scientific research & monitoring of resulting marine habitats, reef structure maintenance management, public awareness & education.

***see attached reef structure photos & drawings in Environmental Benefits section**

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):

Phase I - Engineered site mapping & permitting (4 artificial reef patches)	\$72,496.00
Phase II - Artificial reef modules manufacture & full patch deployment (4 patches X 60 reef modules per patch site = 240 structures)	\$495,420.00
Phase III- 20yr. ongoing scientific research monitoring, education, & maintenance management (240 structures X \$69.33/yr = \$16,640 total annual cost X 20yrs)	\$332,800.00

Estimated Project TOTAL - 22yrs.

\$ 900,716.00

***see Cost Appendix Detail**

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]):

Other Funding Proposal Submissions (as of July 1, 2013):

1. Walton County Tourist Development Council (Phase I - FOUR reef patch permits)	\$76,980
*NOTE: TDC Decision to Fund tabled indefinitely on June 11, 2013	
2. Coastal Conservation Association (Ph I & II - ONE ecosystem reef patch w/ functional deployment)	\$63,610
3. Sandestin Owners Association (Ph I & II - ONE ecosystem reef w/ functional deployment)	\$63,610
TOTAL Funding submissions to date	\$204,200

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

100% Feasible. Artificial Reef permitting, construction, and deployment technology and feasibility is already well established around the state of Florida, in the Gulf of Mexico, including Walton County's neighbors along Northwest Florida's Panhandle coastline. With only 4 permitted reef patches, Walton County lags far behind the neighboring Panhandle counties 600+ reef patches; not to mention Florida's 2700+ reefs.

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]):

Within days of reef structure deployment fish begin to swarm. Within weeks, corals begin to grow & form on the structure. Marine invertebrates are naturally attracted to the concrete & limestone reef structures; which most closely mimics the region's naturally occurring substrate. Within 2 years significant coral growth occurs with fish, crab, and sea turtles finding protective habitat in an area of the gulf where the seabed is 95% barren sand flats. Walter Marine's 'REEFMAKER' structures are the preeminent artificial reef design, construction, & deployment

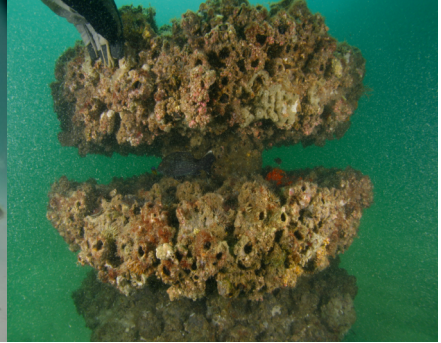
option in the northeastern Gulf region.

PHOTOS of Escambia County Marine Ecosystem Artificial Reefs:

within weeks of deployment

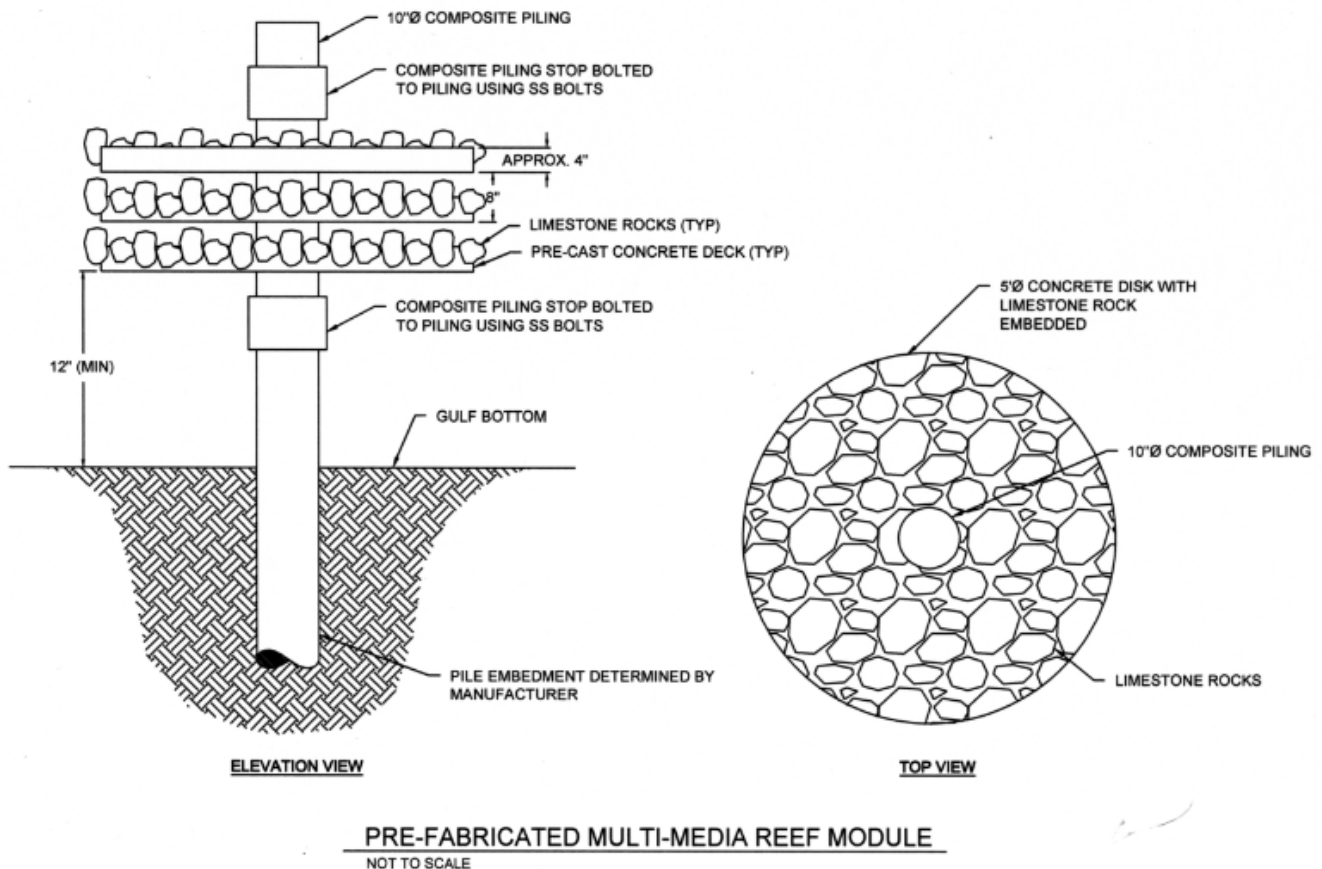
within months of deployment

within 2 years of deployment



The structures are seated into the seabed to prevent shifting during storm events; as evidenced by Escambia County marine ecosystem reefs of same design, which survived Hurricanes Ivan, Katrina, and other lesser storms without movement and damage-free.

Cross section DRAWING of marine ecosystem seabed seating:



Structural marine habitat & protection does not currently exist in Walton County's near shore coastal waters. The South Walton Artificial Reef Marine Ecosystem / Snorkel Reef initiative is an all new opportunity for scientific marine environmental research, monitoring, and education for future generations. Walton County is wholly unique, in that the near shore water depth immediately off the shoreline is the deepest water anywhere in the Gulf of Mexico; together with the coastal dune lakes that periodically mingle waters with gulf waters offers rare and singular environmental study opportunities.

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):

Studies have shown that artificial reef deployments around the state of Florida (reported to have the most permitted artificial reefs in the nation, with more than 2700 in number) set in motion a variety of benefits including economic activities that result in significant economic benefit to the coastal communities in close proximity to the reefs.

ECONOMIC BENEFITS:

*See attached study by University of Florida, Institute of Food and Agricultural Sciences - EDIS document FE649 (updated in 2011), outlining the number of artificial reef deployments in the 5 NW Florida Panhandle counties. With only 4 deployments, Walton County is severely deficient to our four neighboring counties which collectively boast number 598 deployments.

The study states that of the five Northwest Florida coastal counties, a total of \$414 million expenditures were associated with artificial reef use. Those expenditures supported 8,136 jobs and \$84 million in wages and salaries. Again, Walton County is severely deficient counting only 5% of the expenditure distribution.

SIGNIFICANT study conclusion:

"The BENEFIT-to-COST ratio is estimated to be 131, a value indicating an extremely high, positive return to the cost of developing and implementing the artificial reef programs within the five-county, northwest Florida region."

By this measure:

The Benefit-to-Cost Analysis Projection =

Expenditure:	\$ 900,716
Benefit Ratio	x 131
Community Benefit	\$117,993,796.00
(*22yr Annualized	\$5,363,354.00)

Note: *4.5% of Walton County Total 2014 proposed budget - \$120,503,000.00

SOCIAL BENEFITS & OPPORTUNITIES:

Creation of sustainable & protective marine habitat that in turn provides

Family friendly Eco-Edutainment, Eco-Tourism, and Employment Opportunities associated with

Standup Paddle Board and Kayak Fishing

(human propulsion fishing tournaments)

Snorkeling, Sport Diving, and Photography Fishing Safaris

Provides Research sites for marine reef monitoring field groups

Offers Memorial Reef program for final resting and charity fund-raising

Facilitates opportunities for and within the vibrant local Cultural Arts community

Stakeholders include: Recreational anglers, divers, and associated businesses; Community, County, State, and Federal governments; Tourism, Economic, Community Development and Cultural Arts interests, Academic and Volunteer research and monitoring groups, Artificial Reef Module Manufacturers, Environmental Organizations, and Media interests.

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]):

Deployment of reef structures will facilitate the compilation of valuable empirical research data that does not currently exist. There is some information suggesting some artificial reef structures may reduce storm related beach erosion via wave attenuation. Currently, this is not well studied or documented... and certainly not in Walton County's very deep coastal Gulf waters.

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):
Complies with Federal, State, Local, and Tribal Laws/Regulations (Describe any concerns or potential conflicts):

SWARA has been working with Taylor Engineering, the firm involved with Walton County's beach renourishment plans as well as Walton County's two recently permitted off-shore reef patches. By working with Taylor Engineering, SWARA is ensuring that new projects will not interfere with reclamation borrow sites and future plans. Additionally, SWARA's Marine Ecosystem Artificial Reef initiative proposes straddling the 2nd Coastal sandbar (a few hundreds yards from the shoreline) which complements Walton County's existing offshore patches which are located 3-7 miles offshore.

Additional SWARA plans include:

1) Permitting and deploying 9 Near Shore Fish Habitat reef patches located ½ - 1 mile off Walton County's Gulf Coastal shoreline for the purposes of creating marine habitat as well as recreational human propulsion fishing and skin diving opportunities for the benefit of marine environment, academia, residents, and tourists.

2) Permitting and deploying Living Oyster Nursery Bed patches in East/Central Choctawhatchee Bay for the purposes of rejuvenating & restoring estuarine oyster populations, providing a significant natural water filtration system, creating scientific research & employment opportunities, and local food source for the community.

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):

To date:

1. Organizational costs (legal, accounting, state & federal filing fees) have been fronted, out-of-pocket, by SWARA's board of directors.

2. Nearly two thousand volunteer man-hours have been expended on background research, solicitation of bids, grant writing & funding proposals, one-on-one meetings & public presentations that necessitated out-of-pocket expenses associated with design & production of print materials, slide shows, and visual aids by key individuals in the organization.

LACK of FUNDS is the single hurdle to moving forward with IMMEDIATE project implementation:

Short Term - 1- 6 months: **\$72,496.00**

1. Funding for Phase I - Engineering and Permitting process.

A. Walton County government's official agreement for reef patch permits to be pulled in the County's name. County officials have agreed, in theory, upon procurement of funding.

Mid Term - 7-18 months: **\$495,420.00**

2. Funding for Phase II - reef module construction and deployment (full deployment)

Long Range - 19mos - 20 years: **\$332,800.00**

3. Funding for Phase III - 20 year ongoing maintenance & monitoring operations, research, and education.

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

***See attached:** South Walton community support documentation. We are not aware of any measurable or documented opposition to the artificial reef projects in Walton County Gulf coastal waters.

***See attached:** 2009 study conducted by Florida Sea Grant and University of Florida researchers entitled ECONOMIC IMPACTS of ARTIFICIAL REEFS- Southwest Florida (6 counties) public support survey results:

Non-Reef Users Support	66%
<u>Reef Users Support</u>	<u>89%</u>
Overall Support	78%

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):

Additional Information Available for viewing at DROP BOX link:

<https://www.dropbox.com/sh/u5s8lll1zwqmwvx/jTV0nQxW3f?n=156057872>

I. ATTACHMENTS:

*SWARA Org Documents:	Articles of Incorporation By-Laws IRS Designation of EIN#
*Public Support:	Letters Community Support - Signatures, Social Media 'Likes'
*News & Media:	DeFuniak Springs News Herald / Beach Breeze Walton Outdoors Feature
*Vendor Quotes	Walter Marine 'Reefmaker' Taylor Engineering

II. SOURCES & CITATIONS:

- *The Economic Benefits Associated with Florida's Artificial Reefs
EDIS document FE649, a publication of the Food and Resource Economics Department,
Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences,
Gainesville, FL. Published August 2006; revised 2011.
Please visit the EDIS website at <http://edis.ifas.ufl.edu>
- *Economic Impacts of Artificial Reefs ~ Southwest Florida
Study conducted by Florida Sea Grant and University of Florida researchers.
- *Reefmaker Artificial Reef Information

Cost Appendix Sheet	
Cost Item	Cost Estimate
Planning	
Contracts	\$0.00
Feasibility	\$0.00
Engineering, Design, Land Rights, & Bid Prep - Year 1	\$50,000.00
Restoration Plan	\$0.00
Site Visits & Cost of Site Selection - Permits - Year 1	\$1,800.00
Administration, Overhead, and Indirect - Year 1	\$11,240.00
Other - contingency - Year 1	\$9,456.00
Planning Subtotal:	\$72,496.00
Construction	
Contracts - Reef Module Manufacturer - Year 2	\$382,800.00
Mobilization/Demobilization/Verific Ops/Admin - Year 2	\$48,000.00
Other - contingency - Year 2	\$64,620.00
Construction Subtotal:	\$495,420.00
Monitoring	
Contracts	\$0.00
Data Collection - TOTAL of Years 3 - 20	\$140,000.00
Monitoring / Publication Ops /Admin - TOTAL of Years 3 - 20	\$180,000.00
Other - contingency - TOTAL of Years 3 - 20	\$12,800.00
Monitoring Subtotal:	\$332,800.00
Project Cost	
Supervision	
Subtotal:	\$900,716.00
Contingency - see by project phase I, II, III	
TOTAL:	\$900,716.00

Estimated Costs by Year	
Year 1	\$72,496.00
Year 2	\$495,420.00
Year 3	\$16,640.00
Year 4	\$16,640.00
Year 5	\$16,640.00
Year 6	\$282,880.00