

POTENTIAL DEEPWATER HORIZON OIL SPILL RESTORATION PROJECTS: PROVIDING INFORMATION TO ASSIST WITH PROJECT ASSESSMENT

To help you propose projects to the State of Florida's Department of Environmental Protection (DEP), we developed this project submission form. You are not required to complete this form to submit a project. However, completion of the form will help DEP gather the information required to completely and accurately evaluate a project against the selection and evaluation criteria. Where appropriate in the form, please provide references to any additional supporting information.

Project Name: *(Include project number from DEP's existing list of submitted projects, if applicable.)*

B-4 Restoration Near Shore Small Area Artificial Reef Sites in Bay County-

Contact Information: Allen Golden, Bay County Board of County Commissioners (BOCC) and Scott Jackson, Bay County BOCC Cooperative Extension, University of Florida Sea Grant.

Allen Golden – 850-248-8250

Scott Jackson – 850-784-6105

Location for Project Implementation: *(For example, city and county, GIS coordinates if known.)*

Bay County, Florida (Panama City, Panama City Beach, and Mexico Beach)

Brief Project Narrative: *(Describe what the project will do.)*

This project will benefit nearshore ecology and fisheries stocks potentially impacted during the Gulf Oil spill. This project will include conservation strategies and best scientific information to accomplish this goal. Importantly, the restoration of fisheries stocks through artificial reef strategies provides new infrastructure proven through economic studies to benefit businesses and commerce associated with tourism, fishing, and diving.

Estimated Project Costs: *(Describe the costs of the project, including any assumptions for contingency and ongoing operations and maintenance. Identify other available funding sources such as matching funds, in kind contributions or state or federal dollars. If possible, attach a schedule of anticipated costs, by year, over the anticipated project life.)*

See attached

Bay County Board of County Commissioners – Fishing and Diving Reefs (7 permit sites, 441 modules) – \$927,551

City of Mexico Beach, Mexico Beach Artificial Reef Association, and Bay County BOCC – Bell Shoals Project for fishing, diving, kayaking, and snorkeling (1 permit site, 30 sculptures, 648 modules) \$1,513,193

City of Panama City Beach and Bay BOCC - Snorkel / Kayak Reef (1 permit site, 33 modules) - \$97,350

Total Requested: \$ 2,538,094

Anticipated Project Outcome with Respect to Screening Criteria

S1. Technically and administratively feasible: *(Briefly describe the critical technologies involved and any relevant past experience with similar projects.)*

The Bay County Artificial Reef Program is experienced in the management of artificial reef projects from deployment through evaluation monitoring. We continue to learn with each project, fine tuning our methods and strategies. In partnership with Florida Sea Grant Extension we seek to include the best science and research available at the time of project design and reef construction. What knowledge is gained in post-deployment monitoring is transferred to the next deployment and shared with the artificial reef research and building community. Bay County has been administering reef building activities since 1992 for 20 years.

S2. Provides environmental benefits: *(Briefly describe the nature, magnitude, and timing of any environmental benefits attributable to the project and any potential environmental costs associated with implementing or maintaining the project, e.g., loss of a habitat or conversion of habitat from one type to another during implementation.)*

Our post deployment monitoring experiences tell us that reefs are immediately inhabited by baitfish within days sometime hours placement. Some studies indicate 80% of the species diversity found on natural reefs occurs on artificial reefs within a couple of years. In approximately 5 years, 100 % of the species are represented and mimic the ecosystem of natural reef. These reefs will provide essential marine habitat for variety of fish, invertebrates, and plants.

Studies optimizing spacing distribution of materials will be followed to allow foraging halo for fish without diminishing the productivity of adjacent reef materials.

Research studies have shown, fish conservation strategies such as refugia or targeted juvenile reef construction, will be employed to help fish production better meet anticipated recreational fishing pressure. Reef designs for this project will utilize the research to benefit both fish and fisher.

S3. Does not conflict with any ongoing or planned response or remediation work: *(Briefly describe ongoing response activities in the project implementation area, if any, and why the project does or does not interfere with that work.)*

The design of this project will be completed with communication between regulatory agencies (Army Corps of Engineers and Florida Department of Environmental Protection). Communication and coordination will continue between representatives of local government, Naval Air Station, and Air Force Base during the execution of this project. Current beach re-nourishment activities have been cited on GIS map within 3 miles of shoreline. All planned reefing activities are outside this area and meet the constraints of all current siting requirements and are compatible with the planned activities of military, regulatory agencies, and local governments.

S4. Complies with applicable and relevant federal, state, local, and tribal laws and regulations: *(No information is needed for this screening criteria.)*

A pre-app meeting with state and federal regulators was held in July 2011 regarding use of Environmental Resource Permitting (ERP) as a strategy to complete the proposed project. Applications for two joint permits were processed and permits awarded by the Army Corps of Engineers and Florida Department of Environmental Protection.

As part of this process, other agencies such as the Coast Guard and Florida Fish and Wildlife will also review the permit request and provide feedback and comment.

This experience is strengthening our working relationship with regulators and paving the way for expedited ERP permitting in the future. ERP permits are fast tracked with “green tape” instead of caught up in bureaucratic “red tape” typical experience with previously larger permit applications. This is a new streamlined process enacted recently. Our recent working experience with regulators and ERP indicates improvements in time efficiency for approval is being achieved. Five additional ERP permits are funded by the Bay County BOCC in the next budget year beginning Oct 2012.

Bell Shoals project has a completed project in-hand for a 1nm x 3nm area from the ACOE and FDEP. The permits are valid for reef construction activities from Jun 6 2011 to Jun 6 2016.

Panama City Beach has expressed interest in permitting a kayak / snorkel reef in the Gulf of Mexico utilizing Walter’s Marine Ecosystem Reefs on jetted steel piling or similar product. The city will work closely with Bay County BOCC to secure necessary permit and monitoring survey required for ¼ nm square within 1,000 ft of shoreline in the Gulf of Mexico. A similar project has been permitted and constructed in Escambia County, FL with others being planned in Santa Rosa, Okaloosa, and Walton Counties.

Anticipated Project Outcome with Respect to Evaluation Criteria

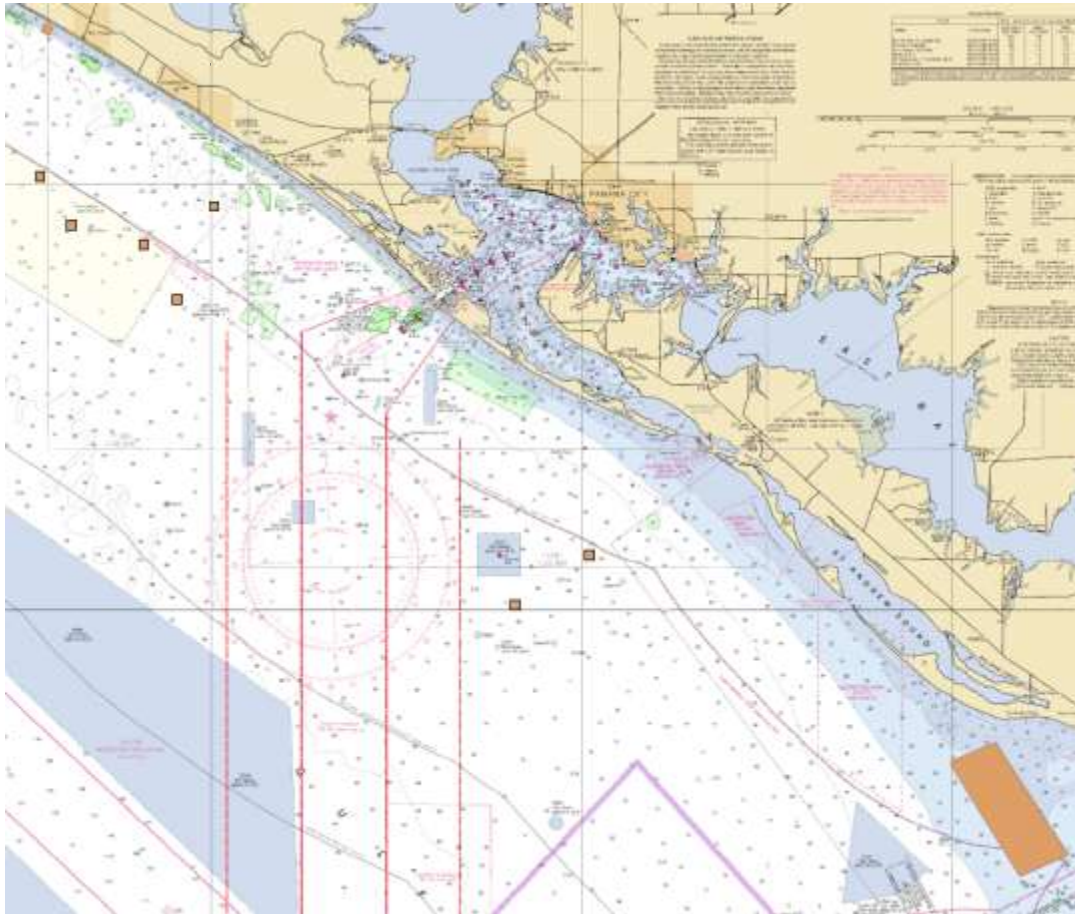
E1. Will restore, rehabilitate, or replace a natural resource or service¹ believed/demonstrated to have been injured as a result of the Deepwater Horizon oil spill or associated response activities: *(Briefly describe the nature of any relationship between the new/improved resources or services and those adversely impacted by the oil spill.)*

The Artificial Reef Coordinator for Bay County is a SCUBA Diver and an active member of many dive groups in the area. The divers got to see first hand the impact from the Deepwater Horizon oil spill. We could see the oil in the water and on everything that came in contact with the water. Many friends that either had been diving or were interested in learning to dive stopped because of the oil. They may return to diving when the oil dissipates and it is safe. If we build Artificial Reefs that attract marine life to a healthy environment the divers will see first hand that this valuable resource has been restored. Visit <http://bit.ly/tHyFiG> for map of local impacts. Panama City Newsherald Oil article <http://x.co/pcoil> . Also included local dive group newsletter documenting oil spill observation.

¹ In this form, “Services” (or “natural resource services”) refers to the functions performed by a natural resource for the benefit of another natural resource and/or the public. Services can be “ecological services” – physical, chemical or biological functions that one natural resource provides for another (such as provision of food) – or “human services” – the use of natural resources used by humans that provide value to the public (such as hunting and fishing).

E2. Is located in, or nearby, resources or services injured by the deepwater horizon spill: (Briefly describe where the project would be implemented with respect to past/ongoing remediation work.)

Below is a map of the 9 proposed artificial reef permit locations noted as orange blocks. The Sites are within 4 nautical miles from Bay County Shoreline and outside of Shipping fairway and safety buffer. Green polygons designate borrow areas for beach sand restoration. The proposed artificial reef project does not interfere or detract from any known restoration activities.



E3. Is ready for implementation, e.g., design, permitting, and necessary impacts assessments have been completed: *(Briefly describe where in the permitting process the project stands along with an estimated date of when the project can be implemented if it is not currently ready.)*

The Bay County Board of County Commissioners plans to permit and build seven near shore Artificial Reef Sites within 24 months. The area of each site will be ¼ mile square and when furnished will hold up to 63 individual reef modules. The sites will be located in areas that will enhance marine life.

Two of the areas have already been located and permitted by Florida Department of Environmental Protection and the Army Corps of Engineers. Five more site locations are proposed with a very high possibility of approval. Permits for these sites have been funded by the Bay County Board of County Commissioners for the current budget year beginning Oct 1 2012.

The City of Mexico Beach, located in Bay County, in partnership with the Mexico Beach Artificial Reef Association holds an approved permit from FDEP and ACOE for a 1 nm x 3 nm area known as Bell Shoals. The site is located between 1 – 5 nm off the coast in depths of 15 – 30 feet. This area is accessible by all types of water craft and user groups including divers, snorkelers, and fishermen.

Panama City Beach has expressed interest in permitting a kayak / snorkel reef in the Gulf of Mexico utilizing Walter's Marine Ecosystem Reefs on jetted steel piling or similar product. The city will work closely with Bay County BOCC to secure necessary permit and monitoring survey required for ¼ nm square within 1,000 ft of shoreline in the Gulf of Mexico. A similar project has been permitted and constructed in Escambia County, FL with others being planned in Santa Rosa, Okaloosa, and Walton Counties.

As part of the permitting process, site survey must be completed to identify potential damage to any natural features such a limestone reefs or associated marine life. This applies to all project presented in this section. So, if a permit is granted or has been granted, all siting survey requirements have been met.

E4. Is cost effective: *(Briefly describe why you think the project is cost effective. Discuss whether this project is more cost effective than alternative projects which would provide similar resource or service benefits.)*

For every \$1 spent on artificial reefs in the Florida Panhandle, the conservative overall economic benefit of the artificial reef system over its average functioning life span is \$138 (source: John Dodrill, Natural Sciences Manager, Florida Fish & Wildlife Conservation Commission Artificial Reef Program). That is a 13,800% return on investment. (See E6)

E5. Has a high potential for long-term success as demonstrated by incorporating established/reliable methods and technologies: *(Briefly describe if/how critical methods and technologies that will be used to implement the project could be considered reliable or proven.)*

All artificial reef deployments are regulated so that materials utilized with have a minimum life of at least 20 years. Public projects, such as this one, are "over-engineered" and anticipated to last 50 years or longer, withstanding category 3 hurricane storm surge. Place of materials is a depths that minimize storm impacts and preserve the useful life of the reef materials. Reef materials have been studied and improved for the past 30 - 40 years by private reef manufacturing companies, university researchers, and recreational fishing charter captains. Today we benefit from their experience with improved concrete curing methods for the marine environment and design improvements that deflect wave energy.

E6. Is likely to provide benefits rapidly following implementation: *(Briefly describe the anticipated change in benefits anticipated over time.)*

One engineered concrete artificial reef vendor that has studied 500,000 reefs and 3,200 projects suggests 80% of the species diversity is present on an artificial reef in a few years and 100% in about 5 years. Our anecdotal experiences are that batfish seek shelter of the artificial reef structure within hours of deployment. Encrusting organisms such as barnacles, oysters, corals, and plants adopt reef materials as home with a year as do some of the large pelagic fish species such as grouper and snapper.

Artificial reef projects will provide economic and environmental benefits to the people and resources most impacted by oil spill.

E7. Has a high likelihood of public acceptance: *(Briefly describe evidence to support the given answer based on surveys or results and assessments from past projects. Known or likely opposition to a project should be recognized.)*

This project complements the Bay County Artificial Reef program providing much needed expansion of nearshore sites for the Charterfishing fleet (One of the Largest in the Gulf of Mexico) and recreational fishers and divers. Additionally, this project benefits local tourism which our number one industry in Bay County and includes numerous hospitality businesses including shops, hotels, and restaurants.

Representative of the community have reviewed and endorsed the location, and goals of the artificial reef project. All look forward to completion and reaping the anticipated revenues and ecological benefits.

No major objections have been noted nor are anticipated as these types of activities are routinely done and are a good fit for the tourism and fishing culture of Bay County.

WE WANT YOUR INPUT!

Submit this form via email to Jessica Kanes at Jessica.Kanes@dep.state.fl.us . If you have any questions or concerns about the process for submitting a project, please contact:

Jessica Kanes
Florida Department of Environmental Protection
Environmental Specialist I
(850) 670-7707
Jessica.Kanes@dep.state.fl.us
Apalachicola NERR/FDEP
108 Island Drive
Eastpoint, FL 32328

A current summary of projects is accessible through the Florida DEP's website at <http://www.dep.state.fl.us/deepwaterhorizon/projects.htm> (click on "View the list of restoration project ideas").

Florida Department of Environmental Protection - DWH Restoration Projects

Project Title: Bell Shoals

County, Municipality, or Agency: Bay County Board of County Commissioners

DATE: 09/10/2012 (12/11/2011)

Cost Items	Cost Estimate
Planning	
Contracts	
Feasibility & Siting	\$ 17,750.00
Engineering & Design ¹	\$ 13,750.00
Planning Administration ²	\$ 1,750.00
Permits	\$ 1,750.00
Planning Subtotal	\$ 35,000.00
Construction	
Contracts to construct & deploy 441 Artificial Reef Modules @\$1,600 ea.	\$ 705,600.00
Construction Administration	\$ 9,000.00
10% Funding Contingency	\$ 71,460.00
Construction Subtotal	\$ 786,060.00
Monitoring (20 years)	
Contracts	\$ 70,560.00
Monitoring Administration	\$ 26,250.00
10% Funding Contingency	\$ 9,681.00
Monitoring Subtotal	\$ 106,491.00
Project Cost	
TOTAL	\$ 927,551.00

¹ includes data collection, design, permitting, landrights, bid documentation prep, etc. necessary to bring a project to contract readiness

² Administration costs for each section include overhead and indirect costs to conduct that portion of project implementation

³ Should include construction cost detail such as projected unit costs for each construction item, mob/demob, plantings, and any corrective actions (if applicable)

Florida Department of Environmental Protection - DWH Restoration Projects

Project Title: Bell Shoals

County, Municipality, or Agency: Mexico Beach and MBRA

DATE: 09/10/2012 (1/27/2012)

Cost Items	Cost Estimate
Planning	
Contracts	completed
Feasibility	completed
Engineering & Design ¹	completed
Planning Administration ²	completed
[other]	
Planning Subtotal	In-Kind
Construction	
Contracts - Sculpture Installation	\$ 86,000.00
Construction Administration w/ Dive Team	\$ 30,000.00
Underwater Sculptures (30 @\$7,000ea)	\$ 210,000.00
Florida Limestone Artificial Reef Modules (260 @\$1495 ea.)	\$ 388,700.00
Ecosystem Reefs on 15' piling (206 @\$1840 ea.)	\$ 379,040.00
Grouper Reef Modules (182 @\$1395)	\$ 253,890.00
10% Contingency Funding	\$ 134,763.00
Construction Subtotal	\$ 1,482,393.00
Monitoring (20 years)	
Contracts	\$ 20,000.00
Monitoring Administration	\$ 8,000.00
10% Contingency Funding	\$ 2,800.00
Monitoring Subtotal	\$ 30,800.00
Project Cost	
TOTAL	\$ 1,513,193.00

¹ includes data collection, design, permitting, landrights, bid documentation prep, etc. necessary to bring a project to contract readiness

² Administration costs for each section include overhead and indirect costs to conduct that portion of project implementation

³ Should include construction cost detail such as projected unit costs for each construction item, mob/demob, plantings, and any corrective actions (if applicable)

Florida Department of Environmental Protection - DWH Restoration Projects

Project Title: Panama City Beach Nearshore Gulf Artificial Reefs

County, Municipality, or Agency: Panama City Beach

DATE: 09/10/2012 (1/27/2012)

Cost Items	Cost Estimate
Planning	
Contracts	
Feasibility	
Engineering & Design ¹	\$ 5,000.00
Planning Administration ²	\$ 500.00
[other]	
Planning Subtotal	\$ 5,500.00
Construction	
Contracts for 33 Reef Modules Constructed & Installed @ \$2,000 each	\$ 66,000.00
Construction Administration	\$ 500.00
10% Cost Contingency	\$ 6,650.00
Construction Subtotal	\$ 73,150.00
Monitoring (20 Years)	
Contracts	\$ 15,000.00
Monitoring Administration	\$ 2,000.00
10% Cost Contingency	\$ 1,700.00
Monitoring Subtotal	\$ 18,700.00
Project Cost	
TOTAL	\$ 97,350.00

¹includes data collection, design, permitting, landrights, bid documentation prep, etc. necessary to bring a project to contract readiness

² Administration costs for each section include overhead and indirect costs to conduct that portion of project implementation

³ Should include construction cost detail such as projected unit costs for each construction item, mob/demob, plantings, and any corrective actions (if applicable)