

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.)*

The Northern Gulf Super Project

Chotowahatchee_Bay_Oyster_Seeding_and_Water_Quality_Improvement_Project_____

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

This project will encompass the entire Choctawahatchee Bay, the far Eastern area of the Santa Rosa Sound, all of the connected bayous and tributaries flowing into the Bay. The Bay spans across both Walton and Okaloosa Counties and operations will be spread out throughout the bay, St. Andrews Bay, and Apalachicola bay. Operational base of the project will be located at 632 coquina Dr. , Lynn Haven, Fl. 32444. This is the new location as of Jan 1, 13, and contains the needed dock facilities and space required for the projects initial phases. Discussions are currently underway to obtain the old FAMU site, that was home to the mosquito research facility here in Panama City. The site as is, could be adapted to a functioning hatchery in a matter of weeks with very little cash outlay needed.

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

The Northern Gulf Super Project is designed to be a comprehensive full scope initiative that brings together a multitude of disciplines to achieve the largest wild stock replenishment effort in the world. This project will use an aquaculture base to improve population densities at all levels in the food chains found in both the bays and gulf. Secondly it will evolve to be the largest educational project in the nation, training young people in every aspect of the marine sciences realm. Economically it will push to revitalize an entire sector of seafood production in a sustainable manner that will self-perpetuate the entire project

First and foremost, the oysters will improve the water quality of the bay by helping to remove excessive nutrients produced by runoff into the bay, and consequently the algal blooms that develop from them. This will also reduce what is put into the Gulf of Mexico from the tidal outflow of the bay. The program will help to establish an oyster aquaculture industry in the bay that will benefit both the ecology of the bay, as well as provide a needed source of income for the local area economy. Educational programs written to help teach our younger people, especially, but open to the general public as well, will show the importance of the whole estuarine environment, and how we can become better stewards in helping to care for it, and nurture the health of this vital resource. The programs will show to what degree the life in the Gulf is dependent on the estuary, for use as a nursery, a filter for the surrounding watershed, a breeding area, and how our use of the bay affects the life it contains. The project as a whole will provide a stepping stone to the development of further projects for the fisheries enhancement of the region. First moving into the production of native blue crab and shrimp, then, moving further up the food chain to include most pelagic species, and the apex predators that are the mainstay of the commercial fishing industry, and a large part of the tourism draw to this area.

This project will evolve into a self-sustaining program that will continue to grow and benefit all of the ecosystems, businesses, and the communities surrounding the bay. Long after the initial set up costs and funding have been exhausted, funding the project itself generates, in perpetuity, will sustain and promote, expansion of this program, as well as the others I have briefly touched upon.

Many of the projects submitted to this Restorative Initiative, have taken a perspective of being a, "One shot deal". To use funding to make one time reparations to the environment, under the guise that once they are completed, the project will end. This aspect alone, should set this project distinctly apart from the others applying for funding. The attitude of this being a once in a lifetime occurrence, has been disproven by the catastrophic history of the past half a century alone. In my lifetime, I was first introduced to this particular type of ecological destruction by the blow out of the Ixtoc rig in the Southern Gulf off the Mexican coast, followed by the Valdez in Alaska, the American Trader in California, and the latest and greatest from the Deep-water Horizon in the Northern Gulf of Mexico. All of these incidents served to very nearly nullify the many other occasions of ships ramming each other while maneuvering in the Mississippi River, and a host of other intentional spills from the war with Iraq, to scrappers dismantling tankers without cleaning them first in India and Pakistan. Not to mention the chaos and huge unknown amounts of every kind of pollutant anyone can name that was put into the waters following several Hurricanes that wreaked absolute havoc along the coast over the past decades. When all these factors are included into the equation, and then multiplied by the overfishing that has decimated the population densities not only in the Gulf of Mexico, but on a global scale, the need to capitalize on our current situation becomes readily and obviously apparent. We have an opportunity to put a substantial amount of resources in to play here. For all of us to make the most concentrated and focused approach that will maximize the effort, and utilize the potential for a sustained productivity, that will benefit all of the aspects concerned, should be our highest priority. This can be best achieved through a variety of projects that have sustainability and longevity built into them. My priority is not to restore this region to the pre-spill conditions of 2010, but to go back to the conditions, and population densities that were found in this area during the 1940's at a minimum. With the technologies available today this is easily possible to do.

Current reports by both, National and International research agencies, have noted a 90% decline in the amount of oyster beds worldwide, in just the past 15-20 years. Considering the importance of this species to the environment, as a food source, and as an economic multiplier; it is a resource we can neither afford to lose, or simply fail to realize, and utilize, the base potential that the world markets, along with a combination of other forces that have recently come into play, to turn these events to an extreme advantage for our local economy, and the ecological health of our Bay.

In the past year, oystermen in the Apalachicola Bay saw a 90% die off of the beds there, 90 % of Florida's oyster harvest comes from this bay.

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.)*

The overall costs of the entire project were estimated at 220 million in 2009, the design of this project was first started in 1982. In 2010 I had private funding pledges of 160 million. After the permitting , and disfunctionality problems exhibited by the regulatory agencies in the spill , the funding sources resended their offers, citing years of permitting problem in which they could not have the money idle.

The oyster project segment of this out lay is approximately 5million.

Anticipated Project Outcome with Respect to Screening Criteria

- 1) Enhanced water quality in the bay. By pinpointing outflows and setting in place natural filtering bases that will remove as much of the contaminates, and pollutants as is possible, while they are still concentrated in specific areas.
- 2) Enhanced marine habitat for all species that utilize the bay inshore reefs for protection.
- 3) Establishment of new oyster clutches throughout the bay.
- 4) Re-establish an oyster harvesting base, processing facilities, and a sustainable aquaculture program that will provide an economic boost to the area and promote the Gulf Fresh Seafood program already in place.
- 5) Development of educational programs to raise public awareness and to bring a better understanding of proper stewardship to the younger generation in elementary and high school. To build a base for aquaculture research and development with colleges here in the area surrounding the bay. To educate fishermen how to better utilize and incorporate aquaculture into their fisheries management methodology.
- 6) To expand this program to include all of the commercially viable species and strengthen the seafood producing sectors of our economy.
- 7) To help insure that the bay is as strong and resilient as it can possibly be, to help it cope with future catastrophic incidents that may occur.
- 8) Enhanced growth capabilities of the grass beds that are crucial to the ecology of the bay.
- 9) Create jobs and employment opportunities related to the seafood and aquaculture industry in the bay area.
- 10) Establish artificial reef structures throughout the bay benefiting all species that use the bays estuarine system
- 11) Builds offshore artificial reef sites on a scale that will have an appreciable impact on wild fish populations.
- 12) Restocks wild finfish species that have been decimated by overfishing and spills.
- 13) Provides an operational fleet of research vessels that can be utilized by other groups, without the purchase of additional vessels.

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.)*

The environmental benefits of this project will be immediate. As soon as the project is implemented and the oysters and apparatus are placed into the bay, the oysters will begin the water filtering that is their life process. The cages immediately become structural reefs in the bay that are host to an estimated 300 separate species found in the bay. Even though the oysters are confined to cages, the spawning process, and the larval spat produced, are not contained and will serve as seed to the bay, giving the wild beds an increased survivability and growth rate. By increasing the harvest of oysters raised through the aquaculture program, some of the demand placed upon the wild beds will be reduced in other oyster producing waters. The increase in cultured oysters verses the decrease in harvested wild oysters, should be directly proportional based on market demand. Increased wild population densities will reduce stress of commercial stocks in the Gulf. Reduction fisheries will augment the food base in the gulf as well as support nutrient loading by consumption of algae produced by the runoff of fertilizers into the systems.

Clarification of the bay waters will be beneficial to the grass beds of the bay, they themselves being an absolutely intricate and vital part of the estuarine system. As the water clears, more sunlight will penetrate the water column; these grasses depend on the sunlight to carry out the photosynthesis process in converting nutrients to food. The expansion of the grass beds will provide enhanced habitat for the juvenile fish and other marine organisms, that use these beds as their nursery. Both the oyster clutches developed, and the grass beds, help to control the erosion caused by tidal and out flow current, stabilizing the bottom, and reducing the natural turbidity that occurs from the erosion process.

There have been no adverse environmental concerns associated with any part of this project, habitat will be enhanced and the base ecological components that have been minimized over the years through development of the surrounding areas of the bay, will be strengthened and supported.

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.)*
While there are several groups concerned with enhancement of oyster clutches in the Bay, none are taking the approach or methodology of this particular program. The individual programs should complement each other, rather than interfere. Building strong alliances with State, County, Regional, and the NGO groups and especially schools and colleges, may also result in resource sharing, and further programs done on a joint application strategy.

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

All aspects of this project are within the highest regulatory standards, without exception.

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 Northern Gulf suffered catastrophic damage, much of which still, have not been fully uncovered, and the width of the scope to the affected generations may not become apparent for a number of years. Already under stress from decades of overfishing, population densities of wild stocks took an additional hit from the devastation to the estuarine systems during the spill. Revitalizing these areas is of the utmost importance, and should be held in the highest priority we have. Without a healthy nursery that an overwhelming percentage of all the species in the gulf inhabit at some point in their lives, we will continue to see a downward spiral of the biomass in the gulf.

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.*

The Choctawhatchee Bay and the Northwest Florida Coast, was directly impacted by the spill. Although on the outermost edge of the spill radius, and the need for heavy remediation was slight, it will be from this area that populations will move west to repopulate areas that were more severely impacted. All of the area of this bay will be utilized. Additional site in St. Andrews Bay and Apalachicola will also be utilized. The net pens for finfish grow out will be approximately 3 miles offshore, the oyster cages will be inside these bays.

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.)*

Design work is complete. Officials in the FL DNR, are aware of the project and have offered consulting of implementation and design criteria, as well as placement of the individual components. Once submitted for final review, the governor's advisory council will make their decision, and put it forward. I have been told to expect this process to take six months.

Once funding is acquired, delivery of the cages, assembly and deployment will be completed in three months. Lead time for the hatcheries to produce the desired amount of seed spat can vary from 3 to 6 months, (temperatures at the hatchery is a factor). Refit for the required vessels can be completed in less than a month.

Permitting for the project is by far the most time consuming, and unpredictable, of all the variables contained within this project. It is sincerely hoped that this project will also help to shorten the permitting process and standardize permitting procedures.

The larger project of the net pens and hatcheries would be implemented over a four year period.

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).

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.)*

This project has been designed from the outset to be a profitable venture. In today's economic climate, trying to undertake this endeavor, on the basis of ongoing and continual grant resources, simply does not justify the cost outlay and gamble that would ensue in perpetuity thereafter. This is the initial cornerstone in an unprecedented marine restoration effort. Each additional step, adding to the scope and reach, of both revitalizing an industry of seafood production, and restocking wild population densities. With the exception of funding salaries, every dollar generated by this project will be reinvested to that end. The United States currently imports close to 90% of the seafood we consume. Half of the seafood that is imported, comes from aquaculture projects all over the globe, half again from third world countries that have but a fraction of the resources this country possess. We have an opportunity to open a vast market by capitalizing on a catastrophic incident that killed 11 people. The best legacy we can give to our children, the best monument we could raise to those that died, is to use this horror story to turn around years of poor management, over fishing, and habitat degradation. This again, is a keystone project, taken on by a private entity, with a vested interest in making it work. The technology to drive it is proven, some cultures have been cultivating oysters for centuries. The methodology is sound, with a proven track record of twenty years of development. The markets for the products that are produced have been well established for decades, the demand is increasing as supplies are dwindling. The regulatory framework is in place by the state, although it could stand some streamlining and tweaking. Profitable examples of this specific type of project operating now, are located all over the world. We are producing a full generation of young people from our colleges that, in order to pursue their chosen field of study in the marine sciences realm, are forced to leave this country. I can virtually guarantee the success of this project, based solely on the resources, the people, and the location, that this funding would bring together, and the goals that this project will realize. It will succeed because for the first time in our states history we will be using the innovation that has been developed and researched here, will be used to our own benefit, rather than shipping it overseas. It will succeed because it is based on a business model that is more than sustainable, it will be self-sustaining. Therein lies the key to its longevity, and that is what separates it from the pack. I do not wish to put a patch over a hole in a leaking boat, I want to build a whole new boat. And in the process, develop a completely new approach to managing the marine resource that is so precious and unique to this region. I intend to make a model program for the rest of the world to follow, exactly what this country has always provided.

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 of the individual components of this project are decades, if not centuries in the making. Aquaculture comprises fully half of all seafood consumed in this country. What sets this project apart, is that until now, it has never been done on this scale, to achieve these results and applications.

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

This project immediately distributes 13.5 million live oysters in the bay. They will begin filtering water as soon as they are immersed into it. The volume of water filtered, will increase proportionately as they mature. An adult oyster is capable of filtering 50 gallons of water per day, for a combined total of 675 million gallons per day. Additionally the offspring these oysters produce, will further add to that total. The cages holding the oysters will immediately be utilized as an artificial reef structure by marine life. All of these benefits will expand exponentially as the project expands.

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.)*

I have found very few people (out of thousands) that find any fault at all with this project, the few dissenting voices are concerned with being able to see the surface buoys of the nets, or with the amount of space the project uses offshore on the netpen sites, not being shared by the public domain. The seaward artificial reefs would be buoyed for tie up so that vessels could moor without dropping anchor.(Patterned after some of the project sanctuaries in the keys) The tourist draw to these sites, which would be incredibly huge, the largest manmade artificial reefs in the world, would constitute an industry by itself.

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:

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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").